# ETSI TS 136 521-2 V15.4.0 (2019-04)

**TECHNICAL SPECIFICATION**

LTE;
Evolved Universal Terrestrial Radio Access (E-UTRA);
User Equipment (UE) conformance specification;
Radio transmission and reception;
Part 2: Implementation Conformance Statement (ICS)
(3GPP TS 36.521-2 version 15.4.0 Release 15)

Reference

RTS/TSGR-0536521-2vf40

Keywords

LTE

*ETSI*

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00   Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

*Important notice*

The present document can be downloaded from:
http://www.etsi.org/standards-search

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the prevailing version of an ETSI deliverable is the one made publicly available in PDF format at www.etsi.org/deliver.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at
https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx

If you find errors in the present document, please send your comment to one of the following services:
https://portal.etsi.org/People/CommiteeSupportStaff.aspx

*ETSI*

# Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (https://ipr.etsi.org/).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

# Foreword

This Technical Specification (TS) has been produced by ETSI 3rd Generation Partnership Project (3GPP).

The present document may refer to technical specifications or reports using their 3GPP identities, UMTS identities or GSM identities. These should be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between GSM, UMTS, 3GPP and ETSI identities can be found under http://webapp.etsi.org/key/queryform.asp.

# Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

# Contents

# Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

x the first digit:

1 presented to TSG for information;

2 presented to TSG for approval;

3 or greater indicates TSG approved document under change control.

y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z the third digit is incremented when editorial only changes have been incorporated in the document.

# Introduction

The present document is part 2 of a multi-parts TS:

3GPP TS 36.521-1 [1]: Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) conformance specification Radio transmission and reception Part 1: Conformance testing.

**3GPP TS 36.521-2: Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) conformance specification Radio transmission and reception Part :2 Implementation Conformance Statement (ICS).**

3GPP TS 36.521-3 [2]: Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) conformance specification Radio transmission and reception Part 3: Radio Resource Management (RRM) Conformance Testing.

# 1          Scope

The present document provides the Implementation Conformance Statement (ICS) proforma for 3G Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE), in compliance with the relevant requirements, and in accordance with the relevant guidance given in ISO/IEC 9646-1 [3] and ISO/IEC 9646-7 [4]

The present document specifies the recommended applicability statement for the test cases included in 3GPP TS 36.521-1 [1] and 3GPP TS 36.521-3 [2]. These applicability statements are based on the features implemented in the UE.

Special conformance testing functions can be found in 3GPP TS 36.509 [5] and the common test environments are included in 3GPP TS 36.508 [6].

The present document is valid for UE implemented according to 3GPP releases starting from Release 8 up to the Release indicated on the cover page of the present document.

# 2          References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document in the same Release as the present document unless the context in which the reference is made suggests a different Release is relevant (information on the applicable release in a particular context can be found e.g. test case title, description or applicability, message description or content).

[1]          3GPP TS 36.521-1: "Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) conformance specification Radio transmission and reception Part 1: Conformance testing ".

[2]          3GPP TS 36.521-3: "Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) conformance specification Radio transmission and reception Part 3: Radio Resource Management Conformance Testing ".

[3]          ISO/IEC 9646-1: "Information technology - Open systems interconnection - Conformance testing methodology and framework - Part 1: General concepts".

[4]          ISO/IEC 9646-7: "Information technology - Open systems interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".

[5]          3GPP TS 36.509: " Evolved Universal Terrestrial Radio Access (E-UTRA); Special conformance testing functions for User Equipment ".

[6]          3GPP TS 36.508: "Evolved Universal Terrestrial Radio Access (E-UTRA); Common Test Environments for User Equipment (UE) Conformance Testing".

[7]          Void

[8]          3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[9]          3GPP TS 36.201: " LTE Physical Layer - General Description"

[10]          3GPP TS 36.302: " Evolved Universal Terrestrial Radio Access (E-UTRA); Services provided by the physical layer for E-UTRA".

[11]          3GPP TS 36.321: "Evolved Universal Terrestrial Radio Access (E-UTRA); Medium Access Control (MAC) protocol specification".

[12]         3GPP TS 36.322: "Evolved Universal Terrestrial Radio Access (E-UTRA); Radio Link Control (RLC) protocol specification".

[13]         3GPP TS 36.323: "Evolved Universal Terrestrial Radio Access (E-UTRA); Packet Data Convergence Protocol (PDCP) specification".

[14]         3GPP TS 36.331: "Evolved Universal Terrestrial Radio Access (E-UTRA); Radio Resource Control (RRC) Protocol Specification".

[15]         3GPP TS 24.301: "Non-Access-Stratum (NAS) protocol for Evolved Packet System (EPS); Stage 3"

[16]         3GPP TS 36.307: "Requirements on User Equipments (UEs) Supporting a release-independent frequency band".

[17]         3GPP TS 36.306: "Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) radio access capabilities".

[18]         3GPP TS 36.133: "Evolved Universal Terrestrial Radio Access (E-UTRA); Requirements for support of radio resource management".

[19]         3GPP TS 36.101: "E-UTRA UE radio transmission and reception".

# 3        Definitions, symbols and abbreviations

For the purposes of the present document, the following terms, definitions, symbols and abbreviations apply:

- such given in TR 21.905 [8]

- such given in ISO/IEC 9646-1 [3] and ISO/IEC 9646-7 [4]

NOTE:        Some terms and abbreviations defined in [3] and [4] are explicitly included below with small modification to reflect the terminology used in 3GPP.

## 3.1        Definitions

**Implementation Conformance Statement (ICS):** statement made by the supplier of an implementation or system claimed to conform to a given specification, stating which capabilities have been implemented

**ICS proforma:** document, in the form of a questionnaire, which when completed for an implementation or system becomes an ICS

**Implementation eXtra Information for Testing (IXIT):** A statement made by a supplier or implementer of an UEUT which contains or references all of the information (in addition to that given in the ICS) related to the UEUT and its testing environment, which will enable the test laboratory to run an appropriate test suite against the UEUT

**IXIT proforma:** A document, in the form of a questionnaire, which when completed for an UEUT becomes an IXIT

**Protocol Implementation Conformance Statement (PICS):** An ICS for an implementation or system claimed to conform to a given protocol specification

**Protocol Implementation eXtra Information for Testing (PIXIT):** An IXIT related to testing for conformance to a given protocol specification

**static conformance review**: A review of the extent to which the static conformance requirements are claimed to be supported by the UEUT, by comparing the answers in the ICS(s) with the static conformance requirements expressed in the relevant specification(s)

## 3.2 Symbols

No specific symbols have been identified so far.

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [8].

For the purposes of the present document, the following abbreviations apply:

| | |
|---|---|
| ICS | Implementation Conformance Statement |
| IXIT | Implementation eXtra Information for Testing |
| PICS | Protocol Implementation Conformance Statement |
| PIXIT | Protocol Implementation eXtra Information for Testing |
| RRM | Radio Resource Management |
| SCS | System Conformance Statement |
| TC | Test Case |
| UEUT | User Equipment Under Test |

# 4 Recommended test case applicability

The applicability of each individual test is identified in the tables 4.1-1 or 4.2-1. This is just a recommendation based on the purpose for which the test case was written.

The applicability of every test is formally expressed by the use of Boolean expression that are based on parameters (ICS) included in annex A of the present document.

Selection criteria of tested bands / CA-Configurations for each applicable test is formally expressed using group theory based on parameters (ICS) included in annex A of the present document.

Additional information related to the Test Case (TC), e.g. affecting its dynamic behaviour or its execution may be provided as well

The columns in tables 4.1-1 / 4.2-1 have the following meaning:

Clause

The clause column indicates the clause number in TS 36.521-1 [1] or respectively TS 36.521-3 [2] that contains the test body.

Title

The title column describes the name of the test and contains the clause title of the clause in TS 36.521-1 [1] or TS 36.521-3 [2] that contains the test body.

Release

The release column indicates the earliest release from which each test case is applicable. It may also indicate a range of releases or a single release to which a test case is applicable.

Applicability - Condition

The following notations are used for the applicability column:

R    recommended - the test case is recommended to all terminals supporting E-UTRA

O    optional - the test case is optional

N/A    not applicable - in the given context, the test case is not recommended.

Ci        conditional - the test is recommended ("R") or not ("N/A") depending on the support of other items. "i" is an integer identifying an unique conditional status expression which is defined immediately following the table. For nested conditional expressions, the syntax "IF ... THEN (IF ... THEN ... ELSE...) ELSE ..." is used to avoid ambiguities.

Applicability - Comments

This comments column contains a verbal description of the condition included in the applicability column.

Tested Bands / CA-Configurations Selection

This column defines a set of bands / CA Configurations the test is to be run for, if the test is applicable. If the set is empty, the test is considered as not applicable.

The following notations are used in the tested bands selection column:

Di        Derive the set based on Band Selection Criteria Di defined in table 4.1-1b.

Ei        Derive the set based on CA Configurations Selection Criteria Ei defined in table 4.1-1c.

TBD        Band selection not defined at this time, in the meantime test all Bands / CA Configurations

Text        For more complex selection criteria, or if the criteria are already specified somewhere else in the spec, text reference to the section is given.

Branch

This column contains indication if the test case may perform differently depending on the UE capabilities.

NOTE 1:  To meet the validation requirements from certification bodies then there is a need to uniquely reference the FDD and TDD branch (i.e. different behaviour within one and the same TC) of common FDD and TDD RF test cases in table 4.1-1. The FDD and TDD branches of common FDD and TDD test cases can be referenced by amending a "FDD" or "TDD" suffix to the test case clause number. For example for test case 6.2.2 the FDD and TDD branches can be identified by "6.2.2 FDD" and "6.2.2 TDD".

NOTE 2:  To meet the validation requirements from certification bodies then there is a need to uniquely reference the 2Rx (UE supports 2 Rx antenna ports in the tested band) and 4Rx (UE supports 4 Rx antenna ports in the tested band) branch of common 2Rx and 4Rx RRM test cases in table 4.2-1. The 2Rx and 4Rx branches of common 2Rx and 4Rx test cases can be referenced by amending a "2Rx" or "4Rx" suffix to the test case clause number. For example for test case 4.2.1 the 2Rx and 4Rx branches can be identified by "4.2.1_2Rx" and "4.2.1_4Rx".

Additional Information

This column contains additional information

## 4.1 RF conformance test cases

NOTE: To determine applicability of a test case, FGI support in combined or fdd-Add-UE-EUTRA-Capabilities or tdd-Add-UE-EUTRA-Capabilities is taken into account.

**Table 4.1-1: Applicability of RF conformance test cases, ref. TS 36.521-1 [1]**

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|--------------------------------------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| | | | | **Transmitter Characteristics** | | | |
| 6.2.2 | UE Maximum Output Power | Rel-8 | C186 | UE supporting E-UTRA Power Class 3 | D01 | FDD, TDD | Not req to be te in Band for Pow Class 2 |
| 6.2.2_1 | UE Maximum Output Power for HPUE | Rel-10 | C39 | UE supporting E-UTRA Power Class 1 or Power Class 2 | D04 | FDD, TDD | FDD is Power Class1 is for P Class 2 |
| 6.2.2A.1 | UE Maximum Output Power for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.2.2A.2 | UE Maximum Output Power for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| | | Rel-14 | C305 | UE supporting E-UTRA and eLAA | | | |
| 6.2.2A.3 | UE Maximum Output Power for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| 6.2.2A.4 | UE Maximum Output Power for CA (3UL CA) | Rel-13 | C19a | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E18 | TDD | |
| | | | C116a | UE supporting E-UTRA and inter-band DL CA and UL CA | E18 | FDD, TDD | |
| 6.2.2B | UE Maximum Output Power for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA Power Class 3 and UL-MIMO | D05 | FDD, TDD | |
| 6.2.2B_1 | HPUE Maximum Output Power for UL-MIMO | Rel-10 | C202 | UE supporting E-UTRA Power Class 2 and UL-MIMO | D05 | TDD | |
| 6.2.2E | UE Maximum Output Power for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0) | D01 | FDD, HD-FDD, TDD | |
| 6.2.2EA | UE Maximum Output Power for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.2.2EB | UE Maximum Output Power for UE category 1bis | Rel-13 | C122c | UE supporting E-UTRA and UE category 1bis | | | |
| 6.2.2F | UE Maximum Output Power for category NB1 and NB2 | Rel-13 | C112b | UE supporting category NB1 | D11 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D11 | HD-FDD | |
| 6.2.2FA | UE Maximum Output Power for category NB1 and NB2/Power Class 6 | Rel-14 | C325 | UE supporting category NB1 or NB2 | D11 | HD-FDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 6.2.2G.1 | UE Maximum Output Power for V2X Communication / Non-concurrent with E-UTRA uplink transmission | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 6.2.2G.2 | UE Maximum Output Power for V2X Communication / Simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmission | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 6.2.3EB | Maximum Power Reduction (MPR) for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | | | |
| 6.2.4EB | Additional Maximum Power Reduction (A-MPR) for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | | | |
| 6.2.5 | Configured UE transmitted Output Power | Rel-8 | C186 | UE supporting E-UTRA Power Class 3 | D01 | FDD, TDD | Not rec to be te in Band for Pov Class 2 |
| 6.2.5_1 | Configured UE transmitted Output Power for HPUE | Rel-10 | C39 | UE supporting E-UTRA Power Class 1 or Power Class 2 | D04 | FDD, TDD | FDD is Power Class1 is for P Class 2 |
| 6.2.5A.1 | Configured UE transmitted Output Power for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.2.5A.3 | Additional Maximum Power Reduction (A-MPR) for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| 6.2.5A.4 | Additional Maximum Power Reduction (A-MPR) for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| 6.2.5B | Configured transmitted power for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 6.2.5E | Configured transmitted power for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0) | D01 | FDD, HD-FDD, TDD | |
| 6.2.5EA | Configured UE transmitted Power for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.2.5EB | Configured UE transmitted Power for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Additional Information |
|--------|-------|---------|---------------|---------------|-------------------|--------|------------------------|
| | | | Condition | Comments | | | |
| 6.2.5F | Configured UE transmitted Output Power for category NB1 and NB2 | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |
| 6.2.5FA | Configured UE transmitted Output Power for category NB1 and NB2/Power Class 6 | Rel-14 | Cxx1 | UE supporting category NB1 or NB2 | D12, D13 | HD-FDD | |
| 6.2.5G.1 | Configured UE transmitted Output Power for V2X Communication / Non-concurrent with E-UTRA uplink transmission | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 6.2.5G.2 | Configured UE transmitted Output Power for V2X Communication / Simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmission | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 6.3.1 | Void | | | | | | |
| 6.3.2 | Minimum Output Power | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |
| 6.3.2A.1 | Minimum Output Power for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.3.2A.2 | Minimum Output Power for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| 6.3.2A.3 | Minimum Output Power for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and inter-band DL CA and UL CA | E02 | FDD | |
| 6.3.2A.4 | Minimum Output Power for CA (3UL CA) | Rel-13 | C19a | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E18 | TDD | |
| | | | C116a | UE supporting E-UTRA and inter-band DL CA and UL CA | E18 | FDD, TDD | |
| 6.3.2B | Minimum Output Power for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 6.3.2E | Minimum Output Power for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.3.2EA | Minimum Output Power for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.3.2EB | Minimum Output Power for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | | | |
| 6.3.2F | | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | HD-FDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|-------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| | Minimum Output Power for category NB1 and NB2 | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |
| 6.3.2G.1 | Minimum output power for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 6.3.2G.2 | Minimum output power for V2X Communication / Simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 6.3.3 | Transmit OFF Power | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |
| 6.3.3A.1 | Transmit OFF Power for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.3.3A.2 | UE Transmit OFF power for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| 6.3.3A.3 | Transmit OFF Power for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| 6.3.3B | UE Transmit OFF power for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 6.3.3E | UE Transmit OFF power for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.3.3EA | UE Transmit OFF power for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.3.3EB | UE Transmit OFF power for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | | | |
| 6.3.3G.1 | UE Transmit OFF power for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 6.3.3G.2 | UE Transmit OFF power for V2X Communication / Simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 6.3.4.1 | General ON/OFF time mask | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |
| 6.3.4.2.1 | PRACH time mask | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |
| 6.3.4.2.2 | SRS time mask | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|--------------------------------------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| 6.3.4A.1.1 | General ON/OFF time mask for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.3.4A.1.2 | General ON/OFF time mask for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| 6.3.4A.1.3 | General ON/OFF time mask for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| 6.3.4A.1.4 | General ON/OFF time mask for CA (3UL CA) | Rel-13 | C19a | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E18 | TDD | |
| | | | C116a | UE supporting E-UTRA and inter-band DL CA and UL CA | E18 | FDD, TDD | |
| 6.3.4B.1 | ON/OFF time mask for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 6.3.4C.1 | General ON/OFF time mask for Dual Connectivity | Rel-12 | C224 | UE supporting Dual Connectivity | E03 | FDD, TDD | |
| 6.3.4C.1_1 | General ON/OFF time mask for asynchronous Dual Connectivity | Rel-12 | C225 | UE supporting asynchronous Dual Connectivity | E03 | FDD, TDD | |
| 6.3.4E.1 | General ON/OFF time mask for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.3.4E.2 | Prach and SRC ON/OFF time mask for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.3.4EA.1 | General ON/OFF time mask for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.3.4EA.2.1 | PRACH time mask for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.3.4EA.2.2 | SRS time mask for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.3.4EB.1 | General ON/OFF time mask for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | | | |
| 6.3.4EB.2.1 | PRACH time mask for UE category 1bis | Rel13 | C112c | UE supporting E-UTRA and UE category 1bis | | | |
| 6.3.4EB.2.2 | SRS time mask for UE category 1bis | Rel13 | C112c | UE supporting E-UTRA and UE category 1bis | | | |
| 6.3.4F.1 | General ON/OFF time mask for category NB1 and NB2 | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |
| 6.3.4F.2 | | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | HD-FDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|------|--------|------|
| | | | Condition | Comments | | | |
| | NPRACH time mask for category NB1 and NB2 | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |
| 6.3.4G.1 | General ON/OFF time mask for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 6.3.4G.2 | General ON/OFF time mask for V2X Communication / Simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 6.3.4G.4 | PSSS/SSSS time mask for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 6.3.5.1 | Power Control Absolute Power Tolerance | Rel-8 | C186 | UE supporting E-UTRA Power Class 3 | D01 | FDD, TDD | |
| 6.3.5.2 | Power Control Relative Power Tolerance | Rel-8 | C186 | UE supporting E-UTRA Power Class 3 | D01 | FDD, TDD | |
| 6.3.5.3 | Aggregate Power Control Tolerance | Rel-8 | C186 | UE supporting E-UTRA Power Class 3 | D01 | FDD, TDD | Not rec to be te in Band for Pov Class 2 |
| 6.3.5A.1.1 | Power Control Absolute Power Tolerance for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.3.5A.1.2 | Power Control Absolute Power Tolerance for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | 6.3.5A. |
| | | Re | C305 | UE supporting E-UTRA and eLAA | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 6.3.5A.1.3 | Power Control Absolute Power Tolerance for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| 6.3.5A.2.1 | Power Control Relative Power Tolerance for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.3.5A.2.2 | Power Control Relative Power Tolerance for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| | | Rel-14 | C305 | UE supporting E-UTRA and eLAA | | | |
| 6.3.5A.2.3 | Power Control Relative Power Tolerance for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| 6.3.5A.3.1 | Aggregate Power Control Tolerance for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.3.5A.3.2 | Aggregate Power Control Tolerance for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| 6.3.5A.3.3 | Aggregate Power Control Tolerance for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| 6.3.5B.1 | Power Control Absolute power tolerance for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 6.3.5B.2 | Power Control Relative power tolerance for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 6.3.5B.3 | Aggregate power control tolerance for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 6.3.5C.2 | Power Control Relative power tolerance for Dual Connectivity | Rel-12 | C224 | UE supporting Dual Connectivity | E03 | FDD, TDD | |
| 6.3.5C.2_1 | Power Control Relative power tolerance for asynchronous Dual Connectivity | Rel-12 | C225 | UE supporting asynchronous Dual Connectivity | E03 | FDD, TDD | |
| 6.3.5E.1 | Power Control Absolute power tolerance for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|-|-------------------------------------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| 6.3.5E.2 | Power Control Relative power tolerance for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.3.5E.3 | Aggregate power control tolerance for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.3.5EA.1 | Power control for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.3.5EA.2 | Power Control Relative power tolerance for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.3.5EA.3 | Aggregate power control tolerance for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.3.5EA.3_1 | Aggregate power control tolerance for UE category M1 (CE Mode B) | Rel-13 | C156c | UE supporting E-UTRA and UE category M1 | D02 | HD-FDD | |
| 6.3.5EB.1 | Power Control Absolute power tolerance for UE category 1bis | Rel13 | C112c | UE supporting E-UTRA and UE category 1bis | | | |
| 6.3.5EB.2 | Power Control Relative power tolerance for UE category 1bis | Rel13 | C112c | UE supporting E-UTRA and UE category 1bis | | | |
| 6.3.5EB.3 | Aggregate power control tolerance for UE category 1bis | Rel13 | C112c | UE supporting E-UTRA and UE category 1bis | | | |
| 6.3.5F.1 | Power Control Absolute power tolerance for category NB1 and NB2 | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |
| 6.3.5F.2 | Power Control Relative power tolerance for category NB1 and NB2 | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |
| 6.3.5F.3 | Aggregate power control tolerance for category NB1 and NB2 | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |
| 6.3.5FA.1 | Power Control Absolute power tolerance for category NB1 and NB2/Power Class6 | Rel-14 | C325 | UE supporting category NB1 or NB2 | D12, D13 | HD-FDD | |
| 6.3.5FA.2 | Power Control Relative power tolerance for category NB1 and NB2/Power Class 6 | Rel-14 | C325 | UE supporting category NB1 or NB2 | D12, D13 | HD-FDD | |
| 6.3.5FA.3 | Aggregate power control tolerance for category NB1 and NB2/Power Class 6 | Rel-14 | C325 | UE supporting category NB1 or NB2 | D12, D13 | HD-FDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|-------------------------------------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| 6.3.5_1.1 | Power Control Absolute Power Tolerance for HPUE | Rel-10 | C39 | UE supporting E-UTRA Power Class 1 or Power Class 2 | D04 | FDD, TDD | FDD is Power Class1 is for P Class 2 |
| 6.3.5_1.2 | Power Control Relative Power Tolerance for HPUE | Rel-10 | C39 | UE supporting E-UTRA Power Class 1 or Power Class 2 | D04 | FDD, TDD | FDD is Power Class1 is for P Class 2 |
| 6.3.5_1.3 | Aggregate Power Control Tolerance for HPUE | Rel-10 | C39 | UE supporting E-UTRA Power Class 1 or Power Class 2 | D04 | FDD, TDD | FDD is Power Class1 is for P Class 2 |
| 6.3.5G.1 | Power Control Absolute power tolerance for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 6.3.5G.2 | Power Control Absolute power tolerance for V2X Communication / Simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 6.5.1 | Frequency Error | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |
| 6.5.1A.1 | Frequency Error for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.5.1A.2 | Frequency error for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| 6.5.1A.3 | Frequency Error for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| 6.5.1A.4 | Frequency error for CA (3UL CA) | Rel-13 | C19a | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E18 | TDD | |
| | | | C116a | UE supporting E-UTRA and inter-band DL CA and UL CA | E18 | FDD, TDD | |
| 6.5.1B | Frequency Error for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 6.5.1D.1 | Frequency error for ProSe Direct Discovery | Rel-12 | C163 | UE supporting E-UTRA and ProSe direct discovery | D10 | FDD, TDD | |
| 6.5.1D.2 | Frequency error for ProSe Direct Communication | Rel-12 | C162 | UE supporting E-UTRA and ProSe direct communication | D10 | FDD, TDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Additional Information |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 6.5.1E | Frequency Error for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.5.1EA | Frequency Error for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.5.1EA_1 | Frequency Error for UE category M1 (CEmodeB) | Rel-13 | C156c | UE supporting E-UTRA FDD and (UE category M1 and CE Mode B) | D02 | FDD, HD-FDD, TDD | |
| 6.5.1EB | Frequency Error for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | | FDD, T |
| 6.5.1F | Frequency Error for category NB1 and NB2 | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |
| 6.5.1G.1 | Frequency Error for V2X Communication / Non-concurrent with E-UTRA uplink transmission | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 6.5.1G.2 | Frequency error for V2X Communication / Simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 6.5.2.1 | Error Vector Magnitude (EVM) | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |
| 6.5.2.1_1 | Error Vector Magnitude (EVM) for UL 64QAM | Rel-13 | C147 | UE supporting E-UTRA and UL 64QAM | D01 | FDD, TDD | Note 1 |
| 6.5.2.1_2 | Error Vector Magnitude (EVM) for UL 256QAM | Rel-14 | C301 | UE supporting E-UTRA and UL 256QAM | D01 | FDD, TDD | |
| 6.5.2.1A | PUSCH-EVM with exclusion period | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |
| 6.5.2.1E.1 | Error Vector Magnitude for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.5.2.1E.2 | PUSCH-EVM with exclusion period for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.5.2.1EA.1 | Error Vector Magnitude (EVM) for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.5.2.1EA.2 | PUSCH-EVM with exclusion period for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.5.2.1EB | Error Vector Magnitude (EVM) for UE category | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | | FDD, T |
| 6.5.2.1F.1 | Error Vector Magnitude (EVM) for category NB1 and NB2 | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|--|--------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 6.5.2.1G.1 | Error Vector Magnitude (EVM) for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 6.5.2.2 | Carrier leakage | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |
| 6.5.2.2E | Carrier leakage for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.5.2.2EA | Carrier leakage for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.5.2.2EB | Carrier leakage for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | | FDD, T |
| 6.5.2.2F | Carrier leakage for category NB1 and NB2 | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |
| 6.5.2.2G.1 | Carrier leakage for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 6.5.2.3 | In-band emissions for non allocated RB | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |
| 6.5.2.3E | In-band emissions for non allocated RB for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.5.2.3EA | In-band emissions for non allocated RB for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.5.2.3EB | In-band emissions for non allocated RB for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | | FDD, T |
| 6.5.2.3F | In-band emissions for non allocated RB for category NB1 and NB2 | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |
| 6.5.2.3G.1 | In-band emissions for non-allocated RB for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 6.5.2.3G.2 | Introduction of In-band emissions for non-allocated RB for V2X Communication / Simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA- Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|--------------|--------------|-------|--------|--------------|
| | | | Condition | Comments | | | |
| 6.5.2.4 | EVM equalizer spectrum flatness | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |
| 6.5.2.4E | EVM equalizer spectrum flatness for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.5.2.4EA | EVM equalizer spectrum flatness for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.5.2.4EB | EVM equalizer spectrum flatness for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | | FDD, T |
| 6.5.2.4G.1 | Spectrum Emission Mask for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 6.5.2A.1.1 | Error Vector Magnitude (EVM) for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.5.2A.1.1_1 | EVM for CA (intra-band contiguous DL CA and UL CA) with UL 64QAM | Rel-13 | C148 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA and UL 64QAM. | E01 | FDD, TDD | Note 1 |
| 6.5.2A.1.1_2 | EVM for CA (intra-band contiguous DL CA and UL CA) with UL 256QAM | Rel-14 | C302 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA and UL 256QAM. | E01 | FDD, TDD | |
| 6.5.2A.1.2 | Error Vector Magnitude (EVM) for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| 6.5.2A.1.2_1 | Error Vector Magnitude (EVM) for CA (inter-band DL CA and UL CA) for UL 64QAM | Rel-13 | C160 | UE supporting E-UTRA and inter-band DL CA and UL CA and UL 64QAM | E03 | FDD, TDD | Note 1 |
| 6.5.2A.1.2_2 | Error Vector Magnitude (EVM) for CA (inter-band DL CA and UL CA) for UL 256QAM | Rel-14 | C303 | UE supporting E-UTRA and inter-band DL CA and UL CA and UL 256QAM. | E03 | FDD, TDD | |
| 6.5.2A.1.3 | Error Vector Magnitude (EVM) for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| 6.5.2A.1.3_1 | Error Vector Magnitude (EVM) for CA (intra-band non-contiguous DL CA and UL CA) for UL 64QAM | Rel-13 | C185 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA and UL 64QAM | E02 | FDD, TDD | |
| 6.5.2A.1.3_2 | Error Vector Magnitude (EVM) for CA (intra-band non-contiguous DL CA and UL CA) for UL 256QAM | Rel-14 | C304 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA and UL 256QAM | E02 | FDD, TDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|------|--------|-------|
| | | | **Condition** | **Comments** | | | |
| 6.5.2A.1.4 | Error Vector Magnitude (EVM) for CA (3UL CA) | Rel-13 | C19a | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E18 | TDD | |
| | | | C116a | UE supporting E-UTRA and inter-band DL CA and UL CA | E18 | FDD, TDD | |
| 6.5.2A.2.1 | Carrier leakage for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.5.2A.2.2 | Carrier leakage for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| 6.5.2A.2.4 | Carrier leakage for CA (3UL CA) | Rel-13 | C19a | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E18 | TDD | |
| | | | C116a | UE supporting E-UTRA and inter-band DL CA and UL CA | E18 | FDD, TDD | |
| 6.5.2A.2.3 | Carrier leakage for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| 6.5.2A.3.1 | In-band emissions for non allocated RB for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.5.2A.3.2 | In-band emissions for non allocated RB for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| 6.5.2A.3.4 | In-band emissions for non allocated RB for CA (3UL CA) | Rel-13 | C19a | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E18 | TDD | |
| | | | C116a | UE supporting E-UTRA and inter-band DL CA and UL CA | E18 | FDD, TDD | |
| 6.5.2A.3.3 | In-band emissions for non allocated RB for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| 6.5.2B.1 | Error Vector Magnitude for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 6.5.2B.2 | Carrier leakage for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 6.5.2B.3 | In-band emissions for non allocated RB for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|-----------|----------|-----|--------|-------------|
| | | | Condition | Comments | | | |
| 6.5.2B.4 | EVM equalizer spectrum flatness for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 6.6.1 | Occupied bandwidth | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |
| 6.6.1A.1 | Occupied bandwidth for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.6.1A.2 | 6.6.1A.2 Occupied bandwidth for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| | | Rel-14 | C305 | UE supporting E-UTRA and eLAA | | | |
| 6.6.1A.3 | Occupied bandwidth for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| 6.6.1B | Occupied bandwidth for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 6.6.1E | Occupied bandwidth for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.6.1EA | Occupied bandwidth for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.6.1EB | Occupied bandwidth for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | FDD, TDD | |
| 6.6.1F | Occupied bandwidth for category NB1 and NB2 | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | FDD, HD-FDD, TDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |
| 6.6.1G.1 | Occupied bandwidth for V2X Communication / Non-concurrent with E-UTRA uplink transmission | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 6.6.1G.2 | Occupied bandwidth for V2X Communication / Simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 6.6.2.1 | Spectrum Emission Mask | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |
| 6.6.2.1_1 | Spectrum Emission Mask for Multi-cluster PUSCH | Rel-10 | C100 | UE supporting E-UTRA and Multi-Cluster PUSCH | D07 | FDD, TDD | |
| 6.6.2.1A.1 | Spectrum Emission Mask for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.6.2.1A.2 | Spectrum Emission Mask for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | **Condition** | **Comments** | | | |
| 6.6.2.1A.3 | Spectrum Emission Mask for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| 6.6.2.1B | Spectrum Emission Mask for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 6.6.2.1E | Spectrum Emission Mask for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.6.2.1EA | Spectrum Emission Mask for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.6.2.1EB | Spectrum Emission Mask for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | FDD, TDD | |
| 6.6.2.1F | Spectrum Emission Mask for category NB1 and NB2 | Rel-13 | C112b | UE supporting category NB1 | D11 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D11 | HD-FDD | |
| 6.6.2.1G.1 | Spectrum Emission Mask for V2X Communication Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 6.6.2.1G.2 | Introduction of Spectrum Emission Mask for V2X Communication /Sidelink simultaneous with E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 6.6.2.2 | Additional Spectrum Emission Mask | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |
| 6.6.2.2_1 | Additional Spectrum Emission Mask for UL 64QAM | Rel-13 | C147 | UE supporting E-UTRA and UL 64QAM | D01 | FDD, TDD | Note 1 |
| 6.6.2.2_2 | Additional Spectrum Emission Mask for UL 256QAM | Rel-14 | C301 | UE supporting E-UTRA and UL 256QAM | D01 | FDD, TDD | |
| 6.6.2.2A.1 | Additional Spectrum Emission Mask for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C319 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.6.2.2A.1_1 | Additional Spectrum Emission Mask for CA (intra-band contiguous DL CA and UL CA) for UL 64QAM | Rel-13 | C326 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA and UL 64QAM. | E01 | FDD, TDD | Note 1, 4 |
| 6.6.2.2A.1_2 | Additional Spectrum Emission Mask for CA (intra-band contiguous DL CA and UL CA) for UL 256QAM | Rel-14 | C302 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA and UL 256QAM. | E01 | FDD, TDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Additional Information |
|--------|-------|---------|---------------|---|------|--------|----------|
| | | | **Condition** | **Comments** | | | |
| 6.6.2.2A.2 | Additional Spectrum Emission Mask for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| 6.6.2.2A.2_1 | Additional Spectrum Emission Mask for CA (inter-band DL CA and UL CA) for UL 64QAM | Rel-13 | C327 | UE supporting E-UTRA and inter-band DL CA and UL CA and UL 64QAM | E03 | FDD, TDD | Note 1, 4 |
| 6.6.2.2A.2_2 | Additional Spectrum Emission Mask for CA (inter-band DL CA and UL CA) for UL 256QAM | Rel-14 | C303 | UE supporting E-UTRA and inter-band DL CA and UL CA and UL 256QAM. | E03 | FDD, TDD | |
| 6.6.2.2A.3 | Additional Spectrum Emission Mask for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| | | | | | | | |
| | | | | | | | |
| 6.6.2.2B | Additional Spectrum Emission Mask for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 6.6.2.2E | Additional Spectrum Emission Mask for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.6.2.2EA | Additional Spectrum Emission Mask for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.6.2.2EB | Additional Spectrum Emission Mask for UE Category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | FDD, TDD | |
| 6.6.2.2G.1 | Additional Spectrum Emission Mask for V2X Communication / Non-concurrent with E-UTRA uplink transmission | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 6.6.2.2G.2 | Additional Spectrum Emission Mask for V2X Communication / Sidelink simultaneous with E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 6.6.2.3 | Adjacent Channel Leakage power Ratio | Rel-8 | C186 | UE supporting E-UTRA Power Class 3 | D01 | FDD, TDD | Not required to be tested in Band for Power Class 2 |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 6.6.2.3_1 | Adjacent Channel Leakage power Ratio for HPUE | Rel-10 | C39 | UE supporting E-UTRA Power Class 1 or Power Class 2 | D04 | FDD, TDD | FDD is Power Class1 is for P Class 2 |
| 6.6.2.3_2 | Adjacent Channel Leakage power Ratio for Multi-Cluster PUSCH | Rel-10 | C159 (Note 2) | UE supporting E-UTRA and Multi-Cluster PUSCH | D07 | FDD, TDD | |
| 6.6.2.3_3 | Adjacent Channel Leakage power Ratio for UL 64QAM | Rel-13 | C147 | UE supporting E-UTRA and UL 64QAM | D01 | FDD, TDD | Note 1 |
| 6.6.2.3_4 | Adjacent Channel Leakage power Ratio for Multi-Cluster PUSCH with UL 64QAM | Rel-13 | C149 | UE supporting E-UTRA and Multi-Cluster PUSCH and UL 64QAM | D07 | FDD, TDD | Note 1, 4 |
| 6.6.2.3_5 | Adjacent Channel Leakage power Ratio for UL 256QAM | Rel-14 | C301 | UE supporting E-UTRA and UL 64QAM | D01 | FDD, TDD | |
| 6.6.2.3_6 | Adjacent Channel Leakage power Ratio for Multi-Cluster PUSCH with UL 256QAM | Rel-14 | C318 | UE supporting E-UTRA and Multi-Cluster PUSCH and UL 256QAM | D07 | FDD, TDD | |
| 6.6.2.3A.1 | Adjacent Channel Leakage power Ratio for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.6.2.3A.1_1 | Adjacent Channel Leakage power Ratio for CA (intra-band contiguous DL CA and UL CA) for UL 64QAM | Rel-13 | C148 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA and UL 64QAM | E01 | FDD, TDD | Note 1 |
| 6.6.2.3A.1_2 | Adjacent Channel Leakage power Ratio for CA (intra-band contiguous DL CA and UL CA) for UL 256QAM | Rel-14 | C302 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA and UL 256QAM | E01 | FDD, TDD | |
| 6.6.2.3A.2 | Adjacent Channel Leakage power Ratio for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| 6.6.2.3A.2_1 | Adjacent Channel Leakage power Ratio for CA (inter-band DL CA and UL CA) for UL 64QAM | Rel-13 | C160 | UE supporting E-UTRA and inter band DL CA and UL CA and UL 64QAM | E03 | FDD, TDD | Note 1 |
| 6.6.2.3A.2_2 | Adjacent Channel Leakage power Ratio for CA (inter-band DL CA and UL CA) for UL 256QAM | Rel-13 | C303 | UE supporting E-UTRA and inter band DL CA and UL CA and UL 256QAM | E03 | FDD, TDD | |
| | | Rel-14 | C305 | UE supporting E-UTRA and eLAA | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 6.6.2.3A.3 | Adjacent Channel Leakage power Ratio for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| | | | | | | | |
| | | | | | | | |
| 6.6.2.3A.3_1 | Adjacent Channel Leakage power Ratio for CA (intra-band non-contiguous DL CA and UL CA) for UL 64QAM | Rel-13 | C161 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA and UL 64QAM | E02 | FDD, TDD | Note 1 |
| 6.6.2.3A.3_2 | Adjacent Channel Leakage power Ratio for CA (intra-band non-contiguous DL CA and UL CA) for UL 256QAM | Rel-14 | C304 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA and UL 256QAM | E02 | FDD, TDD | |
| 6.6.2.3B | Adjacent Channel Leakage power Ratio for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 6.6.2.3E | Adjacent Channel Leakage power Ratio for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.6.2.3EA | Adjacent Channel Leakage power Ratio for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.6.2.3EB | Adjacent Channel Leakage power Ratio for UE Category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | FDD, TDD | |
| 6.6.2.3F | Adjacent Channel Leakage power Ratio for category NB1 and NB2 | Rel-13 | C112b | UE supporting category NB1 | D11 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D11 | HD-FDD | |
| 6.6.2.3G.1 | Adjacent Channel Leakage power Ratio for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| | | | | | | | |
| | | | | | | | |
| 6.6.2.4 | Void | | | | | | |
| 6.6.3.1 | Transmitter Spurious emissions | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |
| 6.6.3.1_1 | Transmitter Spurious emissions for Multi-Cluster PUSCH | Rel-10 | C100 | UE supporting E-UTRA and Multi-Cluster PUSCH | D07 | FDD, TDD | |
| 6.6.3.1A.1 | Transmitter Spurious emissions for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Additional Information |
|---|---|---|---|---|---|---|---|
| | | | **Condition** | **Comments** | | | |
| 6.6.3.1A.2 | Transmitter Spurious emissions for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| | | Rel-14 | C305 | UE supporting E-UTRA and eLAA | | | |
| 6.6.3.1A.3 | Transmitter Spurious emissions for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| 6.6.3F.1 | Transmitter Spurious emissions for category NB1 | Rel-13 | C112b | UE supporting category NB1 | D11 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D11 | HD-FDD | |
| 6.6.3F.2 | Spurious emission band UE co-existence for category NB1 | Rel-13 | C112b | UE supporting category NB1 | D11 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D11 | HD-FDD | |
| 6.6.3.2 | Spurious emission band UE co-existence | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |
| 6.6.3.2A.1 | Spurious emission band UE co-existence for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.6.3.2A.2 | Spurious emission band UE co-existence for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| 6.6.3.2A.3 | Spurious emission band UE co-existence for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| 6.6.3.3 | Additional spurious emissions | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |
| 6.6.3.3_1 | Additional spurious emissions for UL 64QAM | Rel-13 | C147 | UE supporting E-UTRA and UL 64QAM | D01 | FDD, TDD | Note 1 |
| 6.6.3.3_2 | Additional spurious emissions for UL 256QAM | Rel-14 | C301 | UE supporting E-UTRA and UL 256QAM | D01 | FDD, TDD | |
| 6.6.3.3A.1 | Additional spurious emissions for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C319 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.6.3.3A.1_1 | Additional spurious emissions for CA (intra-band contiguous DL CA and UL CA) for UL 64QAM | Rel-13 | C326 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA and UL 64QAM. | E01 | FDD, TDD | Note 1, 4 |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Additi Inform |
|---|---|---|---|---|---|---|---|
| | | | **Condition** | **Comments** | | | |
| 6.6.3.3A.1_2 | Additional spurious emissions for CA (intra-band contiguous DL CA and UL CA) for UL 256QAM | Rel-14 | C302 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA and UL 256QAM. | E01 | FDD, TDD | |
| 6.6.3.3A.2 | Additional spurious emissions for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| | | Rel-14 | C305 | UE supporting E-UTRA and eLAA | | | |
| 6.6.3.3A.2_1 | Additional spurious emissions for CA (inter-band DL CA and UL CA) for UL 64QAM | Rel-13 | C327 | UE supporting E-UTRA and inter-band DL CA and UL CA and UL 64QAM | E03 | FDD, TDD | Note 1, 4 |
| 6.6.3.3A.3 | Additional spurious emissions for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD, TDD | |
| 6.6.3B.2 | Spurious emission band UE co-existence for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 6.6.3E.1 | Transmitter Spurious emissions for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.6.3E.2 | Transmitter Spurious Band UE co-existence for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.6.3EA.1 | Transmitter Spurious emissions for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.6.3EA.2 | Spurious emission band UE co-existence for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.6.3EA.3 | Additional spurious emissions for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.6.3EB.1 | Transmitter Spurious emissions for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | FDD, TDD | |
| 6.6.3EB.2 | Spurious emission band UE co-existence for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | FDD, TDD | |
| 6.6.3EB.3 | Additional spurious emissions for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | FDD, TDD | |
| 6.6.3E.3 | Additional spurious emissions for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|--------------|---|---------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 6.6.3G.1 | Transmitter Spurious emissions for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 6.6.3G.1_1 | Spurious emission band UE co-existence for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 6.6.3G.2 | Spurious emission for V2X Communication / Sidelink simultaneous with E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 6.6.3G.2_1 | Spurious emission band UE co-existence for V2X Communication / Sidelink simultaneous with E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 6.7 | Transmit intermodulation | Rel-8 | C113 | UE supporting E-UTRA | D01 | FDD, TDD | |
| 6.7A.1 | Transmit intermodulation for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD, TDD | |
| 6.7A.2 | Transmit intermodulation for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD, TDD | |
| 6.7B | Transmit intermodulation for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 6.7E | Transmit intermodulation for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0 | D01 | FDD, HD-FDD, TDD | |
| 6.7EA | Transmit intermodulation for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 6.7EB | Transmit intermodulation for UE Category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | FDD, TDD | |
| 6.7F | Transmit intermodulation for category NB1 | Rel-13 | C112b | UE supporting Category NB1 | D12, D13 | HD-FDD | |
| 6.7F | Transmit intermodulation for category NB1 | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |
| 6.7G.1 | Transmit intermodulation for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 6.7G.2 | Transmit intermodulation for V2X Communication / Simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 6.8B | Time alignment between transmitter branches for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| Receiver Characteristics | | | | | | | |
| 7.3 | Reference sensitivity level | Rel-8 | C113 | UE supporting E-UTRA | D15 | FDD, TDD | |
| 7.3_1 | Reference sensitivity level with 4 Rx antenna ports | Rel-10 | C113a | UE supporting E-UTRA with 4Rx antenna ports | D09 | FDD, TDD | |
| 7.3A.1 | Reference sensitivity level for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.3A.2 | Reference sensitivity level for CA (intra-band contiguous DL CA without UL CA) | Rel-10 | C20 | UE supporting E-UTRA and intra-band contiguous DL CA | E08 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.3A.3 | Reference sensitivity level for CA (inter-band DL CA without UL CA) | Rel-10 | C21 | UE supporting E-UTRA and inter-band DL CA | E10 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-12 | C146 | UE supporting E-UTRA and 2DL CA with FDD-TDD inter-band CA | | | |
| | | Rel-13 | C207 | UE supporting E-UTRA and 2DL CA with FDD-TDD inter-band CA under FS3 | | | |
| | | Rel-13 | C208 | UE supporting E-UTRA and 2DL CA with TDD-TDD inter-band CA under FS3 | | | |
| 7.3A.4 | Reference sensitivity level for CA (intra-band non-contiguous DL CA without UL CA) | Rel-11 | C43 | UE supporting E-UTRA and intra-band non-contiguous DL CA but no UL CA | E09 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.3A.5 | Reference sensitivity level for 3DL CA | Rel-10 | C121 | UE supporting E-UTRA and 3DL with CA configurations in Table 4.1-3 | E19 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Additional Information |
|--------|-------|---------|-----------|----------|---------|--------|--------|
| | | | Condition | Comments | | | |
| | | Rel-11 | C122 | UE supporting E-UTRA and 3DL with CA configurations in Table 4.1-3 | E19 | | |
| | | Rel-12 | C123 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 | E19 | | |
| | | Rel-13 | C268 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 under FS3 | E19 | | |
| | | Rel-13 | C269 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 under FS3 | E17 | | |
| 7.3A.6 | Reference sensitivity level for CA (inter-band DL CA and UL CA) | Rel-11 | C116 | UE supporting E-UTRA and inter-band DL CA and UL CA | E03 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.3A.7 | Reference sensitivity level for CA (intra-band non-contiguous DL CA and UL CA) | Rel-11 | C115 | UE supporting E-UTRA and intra-band non-contiguous DL CA and UL CA | E02 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.3A.9 | Reference sensitivity level for 4DL CA | Rel-11 | C187 | UE supporting E-UTRA and 4DL with CA configurations in Table 4.1-4 | E21 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-11 | C211 | UE supporting E-UTRA and 4DL with CA configurations in Table 4.1-4 | E21 | | |
| | | Rel-12 | C188 | UE supporting E-UTRA and 4DL CA with CA configurations in Table 4.1-4 | E21 | | |
| 7.3A.10 | Reference sensitivity level for 5DL CA | Rel-11 | C221 | UE supporting E-UTRA and 5DL with CA configurations in Table 4.1-5 | E15 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|-----------|----------|---------|--------|------|
| | | | **Condition** | **Comments** | | | |
| | | Rel-12 | C222 | UE supporting E-UTRA and 5DL CA with CA configurations in Table 4.1-5 | E15 | | |
| | | | C223 | UE supporting E-UTRA and 5DL CA with CA configurations in Table 4.1-5 | E15 | | |
| 7.3E | Reference sensitivity level for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0) | D01 | FDD, HD-FDD, TDD | |
| 7.3EA | Reference sensitivity level for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 7.3EB | Reference sensitivity level for UE category 1bis | Rel-14 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | FDD, HD-FDD, TDD | |
| 7.3B | Reference sensitivity level for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 7.3F.1 | Reference sensitivity level without repetitions for category NB1 | Rel-13 | C112b | UE supporting category NB1 | D11 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D11 | HD-FDD | |
| 7.3F.2 | Reference sensitivity level with repetitions for category NB1 | Rel-13 | C112b | UE supporting category NB1 | D11 | HD-FDD | |
| 7.3G.1 | Reference sensitivity level for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 7.3G.2 | Reference sensitivity level for V2X Communication / Simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 7.4 | Maximum input level | Rel-8 | C113 | UE supporting E-UTRA | D15 | FDD, TDD | |
| 7.4_1 | Maximum input level with 4 Rx antenna ports | Rel-10 | C168 | UE supporting E-UTRA with 4Rx antenna ports but not 256QAM in DL | D09 | FDD, TDD | |
| 7.4_H | 7.4_H Maximum input level for 256QAM in DL | Rel-12 | C113h | UE supporting E-UTRA and 256QAM in DL | D01 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.4A.1 | Maximum input level for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|---------------------------------------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| 7.4A.1_H | Maximum input level for CA (intra-band contiguous DL CA and UL CA) for 256QAM in DL | Rel-12 | C19h | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA and 256QAM in DL | E01 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.4A.2 | Maximum input level for CA (intra-band contiguous DL CA without UL CA) | Rel-10 | C20 | UE supporting E-UTRA and intra-band contiguous DL CA | E08 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.4A.2_H | Maximum input level for CA (intra-band contiguous DL CA without UL CA) for 256QAM in DL | Rel-12 | C20h | UE supporting E-UTRA and intra-band contiguous DL CA and 256QAM in DL | E08 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.4A.3 | Maximum input level for CA (inter-band DL CA without UL CA) | Rel-10 | C21 | UE supporting E-UTRA and inter-band DL CA | E10 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-12 | C146 | UE supporting E-UTRA and 2DL CA with FDD-TDD inter-band CA | | | |
| | | Rel-13 | C207 | UE supporting E-UTRA and 2DL CA with FDD-TDD inter-band CA under FS3 | | | |
| | | Rel-13 | C208 | UE supporting E-UTRA and 2DL CA with TDD-TDD inter-band CA under FS3 | | | |
| 7.4A.3_H | Maximum input level for CA (inter-band DL CA without UL CA) for 256QAM in DL | Rel-12 | C21h | UE supporting E-UTRA and inter-band DL CA and 256QAM in DL | E10 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.4A.4 | Maximum input level for CA (intra band non-contiguous DL CA without UL CA) | Rel-11 | C43 | UE supporting E-UTRA and intra-band non-contiguous DL CA but no UL CA | E09 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.4A.4_H | Maximum input level for CA (intra band non-contiguous DL CA without UL CA) for 256QAM in DL | Rel-12 | C43h | UE supporting E-UTRA and intra-band non-contiguous DL CA but no UL CA and 256QAM in DL | E09 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.4A.5 | Maximum input level for 3DL CA | Rel-10 | C121 | UE supporting E-UTRA and 3DL with CA configurations in Table 4.1-3 | E22 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|-------------------------------------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| | | Rel-11 | C122 | UE supporting E-UTRA and 3DL with CA configurations in Table 4.1-3 | | | |
| | | Rel-12 | C123 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 | | | |
| | | Rel-13 | C268 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 under FS3 | | | |
| | | Rel-13 | C269 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 under FS3 | | | |
| 7.4A.5_H | Maximum input level for 3DL CA for 256QAM in DL | Rel-12 | C122h | UE supporting E-UTRA and 3DL CA and 256QAM in DL | E22 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| | | Rel-13 | C268 | UE supporting E-UTRA and 3DL CA with FDD-TDD CA under FS3 | | | |
| | | Rel-13 | C269 | UE supporting E-UTRA and 3DL CA with TDD-TDD CA under FS3 | | | |
| 7.4A.7 | Maximum input level for 4DL CA | Rel-11 | C187 | UE supporting E-UTRA and 4DL with CA configurations in Table 4.1-4 | E23 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-11 | C211 | UE supporting E-UTRA and 4DL with CA configurations in Table 4.1-4 | | | |
| | | Rel-12 | C188 | UE supporting E-UTRA and 4DL CA with CA configurations in Table 4.1-4 | | | |
| 7.4A.7_H | Maximum input level for 4DL CA for 256QAM in DL | Rel-13 | C187h | UE supporting E-UTRA and 4DL CA with CA configurations in Table 4.1-4 and 256QAM in DL | E23 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 7.4A.8 | Maximum input level for 5DL CA | Rel-11 | C221 | UE supporting E-UTRA and 5DL with CA configurations in Table 4.1-5 | E15 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-12 | C222 | UE supporting E-UTRA and 5DL CA with CA configurations in Table 4.1-5 | | | |
| | | Rel-12 | C223 | UE supporting E-UTRA and 5DL CA with CA configurations in Table 4.1-5 | | | |
| 7.4A.8_H | Maximum input level for 5DL CA for 256QAM in DL | Rel-13 | C221h | UE supporting E-UTRA and 5DL with CA configurations in Table 4.1-5 and 256QAM in DL | E15 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| 7.4B | Maximum input level for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 7.4D.1 | Maximum input level for ProSe Direct Discovery | Rel-12 | C163 | UE supporting E-UTRA and ProSe direct discovery | D10 | FDD, TDD | |
| 7.4D.2 | Maximum input level for ProSe Direct Communication | Rel-12 | C162 | UE supporting E-UTRA and ProSe direct communication | D10 | FDD, TDD | |
| 7.4E | Maximum input level for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0) | D01 | FDD, HD-FDD, TDD | |
| 7.4EA | Maximum input level for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 7.4EB | Maximum input level for UE Category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | FDD, TDD | |
| 7.4EC | Maximum input level for UE category M2 | Rel-14 | C112d | UE supporting E-UTRA and UE category M2 | D01 | FDD, HD-FDD, TDD | |
| 7.4F | Maximum input level for category NB1 | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |
| 7.4G.1 | Maximum input level for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|------------|----------|------------------|--------|-------|
| | | | **Condition** | **Comments** | | | |
| 7.4G.2 | Maximum input level for V2X Communication / Simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 7.5 | Adjacent Channel Selectivity (ACS) | Rel-8 | C113 | UE supporting E-UTRA | D15 | FDD, TDD | |
| 7.5_1 | Adjacent Channel Selectivity (ACS) with 4 Rx antenna ports | Rel-10 | C113a | UE supporting E-UTRA with 4Rx antenna ports | D09 | FDD, TDD | |
| 7.5A.1 | Adjacent Channel Selectivity (ACS) for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.5A.2 | Adjacent Channel Selectivity (ACS) for CA (intra-band contiguous DL CA without UL CA) | Rel-10 | C20 | UE supporting E-UTRA and intra-band contiguous DL CA | E11 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.5A.3 | Adjacent Channel Selectivity (ACS) for CA (inter-band DL CA without UL CA) | Rel-10 | C21 | UE supporting E-UTRA and inter-band DL CA | E12 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-12 | C146 | UE supporting E-UTRA and 2DL CA with FDD-TDD inter-band CA | | | |
| | | Rel-13 | C207 | UE supporting E-UTRA and 2DL CA with FDD-TDD inter-band CA under FS3 | | | |
| | | Rel-13 | C208 | UE supporting E-UTRA and 2DL CA with TDD-TDD inter-band CA under FS3 | | | |
| 7.5A.4 | Adjacent Channel Selectivity (ACS) for CA (intra band non-contiguous DL CA without UL CA) | Rel-11 | C43 | UE supporting E-UTRA and intra-band non-contiguous DL CA but no UL CA | E09 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.5A.5 | Adjacent Channel Selectivity (ACS) for 3DL CA | Rel-10 | C121 | UE supporting E-UTRA and 3DL with CA configurations in Table 4.1-3 | E24 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-11 | C122 | UE supporting E-UTRA and 3DL with CA configurations in Table 4.1-3 | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|-----------|----------|----------|--------|--------|
| | | | **Condition** | **Comments** | | | |
| | | Rel-12 | C123 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 | | | |
| | | Rel-13 | C268 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 under FS3 | | | |
| | | Rel-13 | C269 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 under FS3 | | | |
| 7.5A.7 | Adjacent Channel Selectivity (ACS) for 4DL CA | Rel-11 | C187 | UE supporting E-UTRA and 4DL with CA configurations in Table 4.1-4 | E25 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-11 | C211 | UE supporting E-UTRA and 4DL with CA configurations in Table 4.1-4 | | | |
| | | Rel-12 | C188 | UE supporting E-UTRA and 4DL CA with CA configurations in Table 4.1-4 | | | |
| 7.5A.8 | Adjacent Channel Selectivity (ACS) for 5DL CA | Rel-11 | C221 | UE supporting E-UTRA and 5DL with CA configurations in Table 4.1-5 | E15 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-12 | C222 | UE supporting E-UTRA and 5DL CA with CA configurations in Table 4.1-5 | | | |
| | | Rel-12 | C223 | UE supporting E-UTRA and 5DL CA with CA configurations in Table 4.1-5 | | | |
| 7.5B | Adjacent Channel Selectivity (ACS) for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 7.5D.1 | Adjacent Channel Selectivity (ACS) for ProSe Direct Discovery | Rel-12 | C163 | UE supporting E-UTRA and ProSe direct discovery | D10 | FDD, TDD | |
| 7.5D.2 | Adjacent Channel Selectivity (ACS) for ProSe Direct Communication | Rel-12 | C162 | UE supporting E-UTRA and ProSe direct communication | D10 | FDD, TDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|------|--------|--------|--------|
| | | | **Condition** | **Comments** | | | |
| 7.5E | Adjacent Channel Selectivity (ACS) for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0) | D01 | FDD, HD-FDD, TDD | |
| 7.5EA | Adjacent Channel Selectivity (ACS) for category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 7.5EB | Adjacent Channel Selectivity (ACS) for UE Category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | | FDD, T |
| 7.5F | Adjacent Channel Selectivity (ACS) for category NB1 | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |
| 7.5G.1 | Adjacent channel selectivity (ACS) for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 7.5G.2 | Adjacent channel selectivity (ACS) for V2X Communication / Simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 7.6.1 | In-band blocking | Rel-8 | C113 | UE supporting E-UTRA | D15 | FDD, TDD | |
| 7.6.1_1 | In-band blocking with 4 Rx antenna ports | Rel-10 | C113a | UE supporting E-UTRA with 4Rx antenna ports | D09 | FDD, TDD | |
| 7.6.1A.1 | In-band blocking for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.6.1A.2 | In-band blocking for CA (intra-band contiguous DL CA without UL CA) | Rel-10 | C20 | UE supporting E-UTRA and intra-band contiguous DL CA | E11 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.6.1A.3 | In-band blocking for CA (inter-band DL CA without UL CA) | Rel-10 | C21 | UE supporting E-UTRA and inter-band DL CA | E12 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-12 | C146 | UE supporting E-UTRA and 2DL CA with FDD-TDD inter-band CA | | | |
| | | Rel-13 | C207 | UE supporting E-UTRA and 2DL CA with FDD-TDD inter-band CA under FS3 | | | |
| | | Rel-13 | C208 | UE supporting E-UTRA and 2DL CA with TDD-TDD inter-band CA under FS3 | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|--|--------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 7.6.1A.4 | In-band blocking for CA (intra-band non-contiguous DL CA without UL CA) | Rel-11 | C43 | UE supporting E-UTRA and intra-band non-contiguous DL CA but no UL CA | E09 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.6.1A.5 | In-band blocking for 3DL CA | Rel-10 | C121 | UE supporting E-UTRA and 3DL with CA configurations in Table 4.1-3 | E24 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-11 | C122 | UE supporting E-UTRA and 3DL with CA configurations in Table 4.1-3 | | | |
| | | Rel-12 | C123 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 | | | |
| | | Rel-13 | C268 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 under FS3 | | | |
| | | Rel-13 | C269 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3under FS3 | | | |
| 7.6.1A.7 | In-band blocking for 4DL CA | Rel-11 | C187 | UE supporting E-UTRA and 4DL with CA configurations in Table 4.1-4 | E25 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-11 | C211 | UE supporting E-UTRA and 4DL with CA configurations in Table 4.1-4 | | | |
| | | Rel-12 | C188 | UE supporting E-UTRA and 4DL CA with CA configurations in Table 4.1-4 | | | |
| 7.6.1A.8 | In-band blocking for 5DL CA | Rel-11 | C221 | UE supporting E-UTRA and 5DL with CA configurations in Table 4.1-5 | E15 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | **Condition** | **Comments** | | | |
| | | Rel-12 | C222 | UE supporting E-UTRA and 5DL CA with CA configurations in Table 4.1-5 | | | |
| | | Rel-12 | C223 | UE supporting E-UTRA and 5DL CA with CA configurations in Table 4.1-5 | | | |
| 7.6.1B | In-band blocking for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 7.6.1D.1 | In-band blocking for ProSe Direct Discovery | Rel-12 | C163 | UE supporting E-UTRA and ProSe direct discovery | D10 | FDD, TDD | |
| 7.6.1D.2 | In-band blocking for ProSe Direct Communication | Rel-12 | C162 | UE supporting E-UTRA and ProSe direct communication | D10 | FDD, TDD | |
| 7.6.1E | In-band blocking for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0) | D01 | FDD, HD-FDD, TDD | |
| 7.6.1EA | In-band blocking for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 7.6.1EB | In-band blocking for UE Category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | | FDD, T |
| 7.6.1F | In-band blocking for category NB1 | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |
| 7.6.1G.1 | In-band blocking for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 7.6.1G.2 | In-band blocking for V2X Communication / Simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 7.6.2 | Out of-band blocking | Rel-8 | C113 | UE supporting E-UTRA | D15 | FDD, TDD | |
| 7.6.2_1 | Out of-band blocking with 4 Rx antenna ports | Rel-10 | C113a | UE supporting E-UTRA with 4Rx antenna ports | D09 | FDD, TDD | |
| 7.6.2A.1 | Out of-band blocking for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.6.2A.2 | Out of-band blocking for CA (intra-band contiguous DL CA without UL CA) | Rel-10 | C20 | UE supporting E-UTRA and intra-band contiguous DL CA | E08 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|-----------|----------|--------|--------|-----------|
| | | | **Condition** | **Comments** | | | |
| 7.6.2A.3 | Out-of-band blocking for CA (inter-band DL CA without UL CA) | Rel-10 | C21 | UE supporting E-UTRA and inter-band DL CA | E10 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-12 | C146 | UE supporting E-UTRA and 2DL CA with FDD-TDD inter-band CA | | | |
| | | Rel-13 | C207 | UE supporting E-UTRA and 2DL CA with FDD-TDD inter-band CA under FS3 | E12 | | |
| | | Rel-13 | C208 | UE supporting E-UTRA and 2DL CA with TDD inter-band CA under FS3 | | | |
| 7.6.2A.4 | Out-of-band blocking for CA (intra-band non-contiguous DL CA without UL CA) | Rel-11 | C43 | UE supporting E-UTRA and intra-band non-contiguous DL CA but no UL CA | E09 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.6.2A.5 | Out-of-band blocking for 3DL CA | Rel-10 | C121 | UE supporting E-UTRA and 3DL with CA configurations in Table 4.1-3 | E19 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-11 | C122 | UE supporting E-UTRA and 3DL with CA configurations in Table 4.1-3 | | | |
| | | Rel-12 | C123 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 | | | |
| | | Rel-13 | C268 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 under FS3 | | | |
| | | Rel-13 | C269 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 under FS3 | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|--|--------------------------------------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| 7.6.2A.7 | Out-of-band blocking for 4DL CA | Rel-11 | C187 | UE supporting E-UTRA and 4DL with CA configurations in Table 4.1-4 | E21 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-11 | C211 | UE supporting E-UTRA and 4DL with CA configurations in Table 4.1-4 | | | |
| | | Rel-12 | C188 | UE supporting E-UTRA and 4DL CA with CA configurations in Table 4.1-4 | | | |
| 7.6.2A.8 | Out-of-band blocking for 5DL CA | Rel-11 | C221 | UE supporting E-UTRA and 5DL with CA configurations in Table 4.1-5 | E15 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-12 | C222 | UE supporting E-UTRA and 5DL CA with CA configurations in Table 4.1-5 | | | |
| | | Rel-12 | C223 | UE supporting E-UTRA and 5DL CA with CA configurations in Table 4.1-5 | | | |
| 7.6.2B | Out-of-band blocking for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 7.6.2D.1 | Out-of-band blocking for ProSe Direct Discovery | Rel-12 | C163 | UE supporting E-UTRA and ProSe direct discovery | D10 | FDD, TDD | |
| 7.6.2D.2 | Out-of-band blocking for ProSe Direct Communication | Rel-12 | C162 | UE supporting E-UTRA and ProSe direct communication | D10 | FDD, TDD | |
| 7.6.2E | Out of-band blocking for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0) | D01 | FDD, HD-FDD, TDD | |
| 7.6.2EA | Out-of-band blocking for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 7.6.2EB | Out-of-band blocking for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | | FDD, T |
| 7.6.2F | Out-of-band blocking for category NB1 | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|--|--------------------------------------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| 7.6.2G.1 | Out-of-band blocking for V2X Communication/ Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 7.6.2G.2 | Out-of-band blocking for V2X Communication / Simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 7.6.3 | Narrow band blocking | Rel-8 | C113 | UE supporting E-UTRA | D15 | FDD, TDD | |
| 7.6.3_1 | Out of band blocking with 4 Rx antenna ports | Rel-10 | C113a | UE supporting E-UTRA with 4Rx antenna ports | D09 | FDD, TDD | |
| 7.6.3A.1 | Narrow band blocking for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.6.3A.2 | Narrow band blocking for CA (intra-band contiguous DL CA without UL CA) | Rel-10 | C20 | UE supporting E-UTRA and intra-band contiguous DL CA | E08 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.6.3A.3 | Narrow band blocking for CA (inter-band DL CA without UL CA) | Rel-10 | C21 | UE supporting E-UTRA and inter-band DL CA | E10 | FDD_2Rx. FDD_4Rx. TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-12 | C146 | UE supporting E-UTRA and 2DL CA with FDD-TDD inter-band DL CA | | | |
| 7.6.3A.4 | Narrow band blocking for CA (intra-band non-contiguous DL CA without UL CA) | Rel-11 | C43 | UE supporting E-UTRA and intra-band non-contiguous DL CA but no UL CA | E09 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.6.3A.5 | Narrow band blocking for 3DL CA | Rel-10 | C121 | UE supporting E-UTRA and 3DL with CA configurations in Table 4.1-3 | E19 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-11 | C122 | UE supporting E-UTRA and 3DL with CA configurations in Table 4.1-3 | | | |
| | | Rel-12 | C123 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|--|-------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 7.6.3A.7 | Narrow band blocking for 4DL CA | Rel-11 | C187 | UE supporting E-UTRA and 4DL with CA configurations in Table 4.1-4 | E21 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-11 | TBD | UE supporting E-UTRA and 4DL with CA configurations in Table 4.1-4 | | | |
| | | Rel-12 | C188 | UE supporting E-UTRA and 4DL CA with CA configurations in Table 4.1-4 | | | |
| 7.6.3A.8 | Narrow band blocking for 5DL CA | Rel-11 | C221 | UE supporting E-UTRA and 5DL with CA configurations in Table 4.1-5 | E15 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-12 | C222 | UE supporting E-UTRA and 5DL CA with CA configurations in Table 4.1-5 | | | |
| | | Rel-12 | C223 | UE supporting E-UTRA and 5DL CA with CA configurations in Table 4.1-5 | | | |
| 7.6.3B | Narrow band blocking for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 7.6.3D.1 | Narrow band blocking for ProSe Direct Discovery | Rel-12 | C163 | UE supporting E-UTRA and ProSe direct discovery | D10 | FDD, TDD | |
| 7.6.3D.2 | Narrow band blocking for ProSe Direct Communication | Rel-12 | C162 | UE supporting E-UTRA and ProSe direct communication | D10 | FDD, TDD | |
| 7.6.3E | Narrow band blocking for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0) | D01 | FDD, HD-FDD, TDD | |
| 7.6.3EA | Narrow band blocking for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 7.6.3EB | Narrow band blocking for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | | FDD, T |
| 7.7 | Spurious response | Rel-8 | C113 | UE supporting E-UTRA | D15 | FDD, TDD | |
| 7.7_1 | Spurious response with 4 Rx antenna ports | Rel-10 | C113a | UE supporting E-UTRA with 4Rx antenna ports | D09 | FDD, TDD | |
| 7.7A.1 | Spurious response for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|------------------|--------|--------|
| | | | **Condition** | **Comments** | | | |
| 7.7A.2 | Spurious response for CA (intra-band contiguous DL CA without UL CA) | Rel-10 | C20 | UE supporting E-UTRA and intra-band contiguous DL CA | E08 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.7A.3 | Spurious response for CA (inter-band DL CA without UL CA) | Rel-10 | C21 | UE supporting E-UTRA and inter-band DL CA | E10 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-12 | C146 | UE supporting E-UTRA and 2DL CA with FDD-TDD inter-band CA | | | |
| | | Rel-13 | C207 | UE supporting E-UTRA and 2DL CA with FDD-TDD inter-band CA under FS3 | E12 | | |
| | | Rel-13 | C208 | UE supporting E-UTRA and 2DL CA with TDD inter-band CA under FS3 | | | |
| 7.7A.4 | Spurious response for CA (intra-band non-contiguous DL CA without UL CA) | Rel-11 | C43 | UE supporting E-UTRA and intra-band non-contiguous DL CA but no UL CA | E09 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.7A.5 | Spurious response for 3DL CA | Rel-10 | C121 | UE supporting E-UTRA and 3DL with CA configurations in Table 4.1-3 | E19 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-11 | C122 | UE supporting E-UTRA and 3DL with CA configurations in Table 4.1-3 | | | |
| | | Rel-12 | C123 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 | | | |
| | | Rel-13 | C268 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 under FS3 | | | |
| | | Rel-13 | C269 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 under FS3 | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 7.7A.7 | Spurious response for 4DL CA | Rel-11 | C187 | UE supporting E-UTRA and 4DL with CA configurations in Table 4.1-4 | E14 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-11 | C211 | UE supporting E-UTRA and 4DL with CA configurations in Table 4.1-4 | | | |
| | | Rel-12 | C188 | UE supporting E-UTRA and 4DL CA with CA configurations in Table 4.1-4 | | | |
| 7.7A.8 | Spurious response for 5DL CA | Rel-11 | C221 | UE supporting E-UTRA and 5DL with CA configurations in Table 4.1-5 | E15 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-12 | C222 | UE supporting E-UTRA and 5DL CA with CA configurations in Table 4.1-5 | | | |
| | | Rel-12 | C223 | UE supporting E-UTRA and 5DL CA with CA configurations in Table 4.1-5 | | | |
| 7.7B | Spurious response for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |
| 7.7D.1 | Spurious response for ProSe Direct Discovery | Rel-12 | C163 | UE supporting E-UTRA and ProSe direct discovery | D10 | FDD, TDD | |
| 7.7D.2 | Spurious response for ProSe Direct Communication | Rel-12 | C162 | UE supporting E-UTRA and ProSe direct communication | D10 | FDD, TDD | |
| 7.7E | Spurious response for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0) | D01 | FDD, HD-FDD, TDD | |
| 7.7EA | Spurious response for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 7.7EB | Spurious response for UE Category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | | FDD, T |
| 7.7F | Spurious response for category NB1 | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|-------------------------------------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| 7.7G.1 | Spurious response for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 7.7G.2 | Spurious response for V2X Communication / Simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 7.8.1 | Wide band Intermodulation | Rel-8 | C113 | UE supporting E-UTRA | D15 | FDD, TDD | |
| 7.8.1_1 | Wide band Intermodulation with 4 Rx antenna ports | Rel-10 | C113a | UE supporting E-UTRA with 4Rx antenna ports | D09 | FDD, TDD | |
| 7.8.1A.1 | Wide band Intermodulation for CA (intra-band contiguous DL CA and UL CA) | Rel-10 | C19 | UE supporting E-UTRA and intra-band contiguous DL CA and UL CA | E01 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.8.1A.2 | Wide band Intermodulation for CA (intra-band contiguous DL CA without UL CA) | Rel-10 | C20 | UE supporting E-UTRA and intra-band contiguous DL CA | E11 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.8.1A.3 | Wide band Intermodulation for CA (inter-band DL CA without UL CA) | Rel-10 | C21 | UE supporting E-UTRA and inter-band DL CA | E12 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-12 | C146 | UE supporting E-UTRA and 2DL CA with FDD-TDD inter-band CA | | | |
| | | Rel-13 | C207 | UE supporting E-UTRA and 2DL CA with FDD-TDD inter-band CA under FS3 | | | |
| | | Rel-13 | C208 | UE supporting E-UTRA and 2DL CA with TDD-TDD inter-band CA under FS3 | | | |
| 7.8.1A.4 | Wide band Intermodulation for CA (intra-band non-contiguous DL CA without UL CA) | Rel-11 | C43 | UE supporting E-UTRA and intra-band non-contiguous DL CA but no UL CA | E09 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.8.1A.5 | Wideband intermodulation for 3DL CA | Rel-10 | C121 | UE supporting E-UTRA and 3DL with CA configurations in Table 4.1-3 | E24 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Additional Information |
|--------|-------|---------|-----------|----------|------|--------|------|
| | | | **Condition** | **Comments** | | | |
| | | Rel-11 | C122 | UE supporting E-UTRA and 3DL with CA configurations in Table 4.1-3 | | | |
| | | Rel-12 | C123 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 | | | |
| | | Rel-13 | C268 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 under FS3 | | | |
| | | Rel-13 | C269 | UE supporting E-UTRA and 3DL CA with CA configurations in Table 4.1-3 under FS3 | | | |
| 7.8.1A.7 | Wideband intermodulation for 4DL CA | Rel-11 | C187 | UE supporting E-UTRA and 4DL with CA configurations in Table 4.1-4 | E25 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-11 | C211 | UE supporting E-UTRA and 4DL with CA configurations in Table 4.1-4 | | | |
| | | Rel-12 | C188 | UE supporting E-UTRA and 4DL CA with CA configurations in Table 4.1-4 | | | |
| 7.8.1A.8 | Wideband intermodulation for 5DL CA | Rel-11 | C221 | UE supporting E-UTRA and 5DL with CA configurations in Table 4.1-5 | E15 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx, FDD-TDD_2Rx, FDD-TDD_4Rx | |
| | | Rel-12 | C222 | UE supporting E-UTRA and 5DL CA with CA configurations in Table 4.1-5 | | | |
| | | Rel-12 | C223 | UE supporting E-UTRA and 5DL CA with CA configurations in Table 4.1-5 | | | |
| 7.8.1B | Wide band intermodulation for UL-MIMO | Rel-10 | C07 | UE supporting E-UTRA and UL_MIMO | D05 | FDD, TDD | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | **Condition** | **Comments** | | | |
| 7.8.1D.1 | Wide band Intermodulation for ProSe Direct Discovery | Rel-12 | C163 | UE supporting E-UTRA and ProSe direct discovery | D10 | FDD, TDD | |
| 7.8.1D.2 | Wide band Intermodulation for ProSe Direct Communication | Rel-12 | C162 | UE supporting E-UTRA and ProSe direct communication | D10 | FDD, TDD | |
| 7.8.1E | Wide band Intermodulation for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0) | D01 | FDD, HD-FDD, TDD | |
| 7.8.1EA | Wide band Intermodulation for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 7.8.1EB | Wide band Intermodulation for UE category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | | FDD, T |
| 7.8.1F | Wide band Intermodulation for category NB1 | Rel-13 | C112b | UE supporting category NB1 | D12, D13 | HD-FDD | |
| | | Rel-14 | C298 | UE supporting category NB2 | D12, D13 | HD-FDD | |
| 7.8.1G.1 | Wide band Intermodulation for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| 7.8.1G.2 | Wide band Intermodulation for V2X Communication / Simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmissions | Rel-14 | C320 | UE supporting E-UTRA and V2X Sidelink communication | E16 | FDD,TDD | |
| 7.9 | Spurious emissions | Rel-8 | C113 | UE supporting E-UTRA | D15 | FDD, TDD | |
| 7.9_1 | Spurious emissions with 4 Rx antenna ports | Rel-10 | C113a | UE supporting E-UTRA with 4Rx antenna ports | D09 | FDD, TDD | |
| 7.9A | Spurious emissions for CA | Rel-10 | C120 | UE supporting E-UTRA and inter-band DL CA with a DL-only band | E13 | FDD_2Rx, FDD_4Rx, TDD_2Rx, TDD_4Rx | |
| 7.9E | Spurious emissions for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA (UE category 0) | D01 | FDD, HD-FDD, TDD | |
| 7.9EA | Spurious emissions for UE category M1 | Rel-13 | C112a | UE supporting E-UTRA and UE category M1 | D01 | FDD, HD-FDD, TDD | |
| 7.9EB | Spurious emissions for UE Category 1bis | Rel-13 | C112c | UE supporting E-UTRA and UE category 1bis | D01 | | FDD, T |
| 7.9G.1 | Spurious emissions for V2X Communication / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | D14 | TDD | |
| **Performance Requirement** | | | | | | | |

*ETSI*

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|-----------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 8.2.1.1.1 | FDD PDSCH Single Antenna Port Performance | Rel-8 | C01 | UE supporting E-UTRA FDD | Each ""Test Number"" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | Test executi necess 8.2.1.1 or 8.2.1.1 is exec |
| 8.2.1.1.1 _1 | FDD PDSCH Single Antenna Port Performance (Release 9 and forward) | Rel-9 | C31 | UE supporting E-UTRA FDD (UE categories 1, 2) | Each ""Test Number"" to be performed once, in a chosen band supporting tested BW | | Test executi necess 8.2.1.1 or 8.2.1.1 is exec |
| 8.2.1.1.1 _A.1 | FDD PDSCH Single Antenna Port Performance for CA (2 DL CA) | Rel-10 | C102 | UE supporting E-UTRA FDD and intra-band contiguous DL CA or inter-band DL CA (UE Category >= 2) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | Test executi necess 8.2.1.1 or 8.2.1.1 or 8.2.1.1 or 8.13 or 8.13 or 8.13 or 8.13 is exec |
| | | Rel-11 | C103 | UE supporting E-UTRA FDD and Downlink Intra-band non-contiguous CA (UE Category >= 2) | | | |
| 8.2.1.1.1 _A.2 | FDD PDSCH Single Antenna Port Performance for CA (3DL CA) | Rel-10 | C124 | UE supporting E-UTRA FDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | Test executi necess 8.2.1.1 or 8.2.1.1 or 8.13 or 8.13 or 8.13 is exec |
| | | Rel-11 | C125 | UE supporting E-UTRA FDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) | | | |
| 8.2.1.1.1 _A.4 | FDD PDSCH Single Antenna Port Performance for CA (4DL CA) | Rel-11 | C214 | UE supporting E-UTRA FDD and 4DL CA configurations in Table 4.1-4 (UE Category >= 8) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | Test executi necess 8.2.1.1 or 8.13 or 8.13 is exec |
| 8.2.1.1.1 _A.5 | FDD PDSCH Single Antenna Port Performance for CA (5DL CA) | Rel-11 | C215 | UE supporting E-UTRA FDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >= 11) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | Test executi necess 8.13.1. execute |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | **Condition** | **Comments** | | | |
| | | Rel-12 | C216 | UE supporting E-UTRA FDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >= 11) | | | |
| 8.2.1.1.2 | FDD PDSCH Single Antenna Port Performance with 1 PRB in presence of MBSFN | Rel-8 | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.2.1 | FDD PDSCH Transmit Diversity 2x2 | Rel-8 | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.2.1 _1 | FDD PDSCH Transmit Diversity 2x2 (Release 9 and forward) | Rel-9 | C15 | UE supporting E-UTRA FDD (UE category 1) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.2.2 | FDD PDSCH Transmit Diversity 4x2 | Rel-8 | C09 | UE supporting E-UTRA FDD and operating bands supporting 1,4 MHz Bandwidth | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.2.2 _1 | FDD PDSCH Transmit Diversity 4x2 (Release 9 and forward) | Rel-9 | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.2.3 _C.1 | FDD PDSCH Transmit diversity 2x2 for eICIC (non-MBFSN ABS) | Rel-10 | C29 | UEs supporting E-UTRA FDD and Feature Group Indictor 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.2.3 _E.1 | FDD PDSCH Transmit diversity 2x2 for feICIC (non-MBFSN ABS) | Rel-11 | C77 | UE supporting E-UTRA FDD and CRS interference handling (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.2.4 | FDD PDSCH Transmit Diversity 2x2 with TM3 Interference Model - - Enhanced Performance Requirement Type A | Rel-11 | C44 | UE supporting E-UTRA FDD and the enhanced performance requirements type A for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|-----|---------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| 8.2.1.2.5 | FDD PDSCH Transmit Diversity 2x2 with TM2 Interference Model - - Enhanced Performance Requirement Type B | Rel-12 | C150 | UE supporting E-UTRA FDD and the enhanced performance requirements type B for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.2.6 | FDD PDSCH Transmit Diversity 2x2 with TM9 Interference Model - - Enhanced Performance Requirement Type B | Rel-12 | C150 | UE supporting E-UTRA FDD and the enhanced performance requirements type B for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.3.1 | FDD PDSCH Open Loop Spatial Multiplexing 2x2 | Rel-8 | C13b | UE supporting E-UTRA FDD (UE categories >=2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | Test executi necess 8.2.1.3 or 8.2.1.3 is exec |
| 8.2.1.3.1 _1 | FDD PDSCH Open Loop Spatial Multiplexing 2x2 (Release 11 and forward) | Rel-11 | C13b | UE supporting E-UTRA FDD (UE categories >=2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | Test executi necess 8.2.1.3 or 8.2.1.3 is exec |
| 8.2.1.3.1 _A.1 | FDD PDSCH Open Loop Spatial Multiplexing 2x2 for CA (2 DL CA) | Rel-10 | C101 | UE supporting E-UTRA FDD and intra-band contiguous DL CA or inter-band DL CA (UE Category >=2) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | If 8.2.1.3 is exec for a C. capabil test executi not necess for that capabil |
| | | Rel-11 | C103 | UE supporting E-UTRA FDD and intra-band non-contiguous DL CA (UE Category >= 2) | | | |
| 8.2.1.3.1 _A.2 | FDD PDSCH Open Loop Spatial Multiplexing 2x2 for CA (3DL CA) | Rel-10 | C124 | UE supporting E-UTRA FDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | |
| | | Rel-11 | C125 | UE supporting E-UTRA FDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | | | Condition | Comments | | | |
| 8.2.1.3.1_A.3 | FDD PDSCH Open Loop Spatial Multiplexing 2x2 for CA (4DL CA) | Rel-11 | C214 | UE supporting E-UTRA FDD and 4DL CA configurations in Table 4.1-4 (UE Category >= 8) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | |
| 8.2.1.3.1_A.4 | FDD PDSCH Open Loop Spatial Multiplexing 2x2 for CA (5DL CA) | Rel-11 | C215 | UE supporting E-UTRA FDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >= 11) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | |
| | | Rel-12 | C216 | UE supporting E-UTRA FDD and 5DL CA configurations in Table 4.1-5 (UE Category 8, >= 11) | | | |
| 8.2.1.3.1A_A.1 | FDD Soft buffer management test for CA (2 DL CA) | Rel-10 | C104 | UE supporting E-UTRA FDD and intra-band contiguous DL CA or inter-band DL CA (UE category 3 and 4) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | |
| | | Rel-11 | C106 | UE supporting E-UTRA FDD and Downlink Intra-band non-contiguous CA (UE categories 3 and 4) | | | |
| 8.2.1.3.1B | FDD PDSCH Open Loop Spatial Multiplexing 2x2 -- Enhanced Performance Requirement Type C | Rel-12 | C142 | UE supporting E-UTRA FDD and Enhanced Performance Requirement TypeC for LTE (UE Category >= 2) | Each ""Test Number"" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.3.1C | FDD PDSCH Open Loop Spatial Multiplexing 2x2 with TM1 Interference -- Enhanced Performance Requirement Type C | Rel-12 | C142 | UE supporting E-UTRA FDD and Enhanced Performance Requirement TypeC for LTE (UE Category >= 2) | Each ""Test Number"" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.3.2 | FDD PDSCH Open Loop Spatial Multiplexing 4x2 | Rel-8 | C13 b | UE supporting E-UTRA FDD (UE categories >=2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.3.3_C.1 | FDD PDSCH Open Loop Spatial Multiplexing 2x2 for eICIC (non-MBSFN ABS) | Rel-10 | C29 | UEs supporting E-UTRA FDD and Feature Group Indictor 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|-----------|----------|---------------------------------|--------|--------|
| | | | Condition | Comments | | | |
| 8.2.1.3.3 _C.2 | FDD PDSCH Open Loop Spatial Multiplexing 2x2 for eICIC (MBSFN ABS) | Rel-10 | C29 | UEs supporting E-UTRA FDD and Feature Group Indictor 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.3.3 _E.1 | FDD PDSCH Open Loop Spatial Multiplexing 2x2 for feICIC (non-MBSFN ABS) | Rel-11 | C77 | UE supporting E-UTRA FDD and CRS interference handling and Feature Group Indicator 115 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.4.1 | FDD PDSCH Closed Loop Single/Multi Layer Spatial Multiplexing 2x2 | Rel-8 only | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.4.1 _1 | FDD PDSCH Closed Loop Single/Multi Layer Spatial Multiplexing 2x2 (Release 9 and forward) | Rel-9 | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.4.1 _E.1 | FDD PDSCH Closed Loop Single/Multi Layer Spatial Multiplexing 2x2 for feICIC (non-MBSFN ABS) | Rel-11 | C77 | UE supporting E-UTRA FDD and CRS interference handling and Feature Group Indicator 115 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.4.1 _H | FDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 2x2 for 256QAM in DL | Rel-12 | C01h | UE supporting E-UTRA FDD and 256QAM in DL | | | |
| 8.2.1.4.2 | FDD PDSCH Closed Loop Single/Multi Layer Spatial Multiplexing 4x2 | Rel-8 only | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | Test executi necess 8.2.1.4 or 8.2.1.4 is exec |
| 8.2.1.4.2 _1 | FDD PDSCH Closed Loop Single/Multi Layer Spatial Multiplexing 4x2 (Release 9 and forward) | Rel-9 | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | Test executi necess 8.2.1.4 or 8.2.1.4 is exec |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|-----------|----------|---------|--------|--------|
| | | | Condition | Comments | | | |
| 8.2.1.4.2_A.1 | FDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for CA (2 DL CA) | Rel-10 | C102 | UE supporting E-UTRA FDD and intra-band contiguous DL CA or inter-band DL CA (UE Category >= 2) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | Test executi necess 8.2.1.4 or 8.2.1.4 or 8.2.1.4 or 8.13.1. or 8.13.1. or 8.13.1. or 8.13.1. is exec |
| | | Rel-11 | C103 | UE supporting E-UTRA FDD and intra-band non-contiguous DL CA (UE Category >= 2) | | | |
| 8.2.1.4.2_A.2 | FDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for CA (3DL CA) | Rel-10 | C124 | UE supporting E-UTRA FDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | Test executi necess 8.2.1.4 or 8.2.1.4 or 8.13.1. or 8.13.1. or 8.13.1. or 8.13.1. is exec |
| | | Rel-11 | C125 | UE supporting E-UTRA FDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) | | | |
| 8.2.1.4.2_A.3 | FDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for CA (4DL CA) | Rel-11 | C212 | UE supporting E-UTRA FDD and 4DL with CA configurations in Table 4.1-4 (UE Category >=≥ 5) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | Test executi necess 8.2.1.4 or 8.13.1. or 8.13.1. or 8.13.1. or 8.13.1. is exec |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 8.2.1.4.2_A.4 | FDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for CA (5DL CA) | Rel-11 | C212a | UE supporting E-UTRA FDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >=≥ 11) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | Test executi necess 8.13.1. or 8.13.1. or 8.13.1. or 8.13.1. is exec |
| | | Rel-12 | C212b | UE supporting E-UTRA FDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >= ≥ 11) | | | |
| 8.2.1.4.2 A | FDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 2x2 - Enhanced Performance Requirement Type C | Rel-12 | C142 | UE supporting E-UTRA FDD and Enhanced Performance Requirement TypeC for LTE (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | 8.2.1.4 |
| 8.2.1.4.3 | FDD PDSCH Closed Loop Single Layer Spatial Multiplexing 2x2 with TM4 Interference model - Enhanced Performance Requirement Type A | Rel-11 | C44 | UE supporting E-UTRA FDD and the enhanced performance requirements type A for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.4.3 A | FDD PDCSH Closed Loop Multi-Layer Spatial Multiplexing 4X2 for Dual Connectivity | Rel-12 | C169 | UE supporting E-UTRA FDD and Dual Connectivity (UE Category >= 3) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 8.2.1.4.4 | FDD PDSCH Closed Loop Single Layer Spatial Multiplexing 2x2 with TM4 Interference Model - Enhanced Performance Requirement Type B | Rel-12 | C150 | UE supporting E-UTRA FDD and the enhanced performance requirements type B for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.1.7_A.1 | FDD Carrier aggregation with power imbalance (intra-band contiguous DL CA) | Rel-10 | C22 | UE supporting E-UTRA FDD and intra-band contiguous DL CA | TBD | 2Rx, 4Rx | |
| 8.2.1.9 | FDD PDSCH in HST-SFN scenario | Rel-14 | C299 | UEs supporting E-UTRA FDD and high speed enhancement for measurement | | | |
| 8.2.2.1 | Void | | | | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|--------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 8.2.2.1.1 | TDD PDSCH Single Antenna Port Performance | Rel-8 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | Test executi necess 8.2.2.1 or 8.2.2.1 is exec |
| 8.2.2.1.1 _1 | TDD PDSCH Single Antenna Port Performance (Release 9 and forward) | Rel-9 | C54 | UE supporting E-UTRA TDD (UE categories 1, 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | Test executi necess 8.2.2.1 or 8.2.2.1 is exec |
| 8.2.2.1.1 _A.1 | TDD PDSCH Single Antenna Port Performance for CA (2DL CA) | Rel-10 | C110 | UE supporting E-UTRA TDD and intra-band contiguous DL CA or interband DL CA (UE Category >= 5) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | Test executi necess 8.2.2.1 is exec |
| | | Rel-11 | C109 | UE supporting E-UTRA TDD and Intra-band non-contiguous DL CA(UE Category >= 5) | | | |
| 8.2.2.1.1 _A.2 | TDD PDSCH Single Antenna Port Performance for CA (3DL CA) | Rel-10 | C128 | UE supporting E-UTRA TDD and 3DL with i CA configurations in Table 4.1-3 (UE Category >= 5) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | |
| | | Rel-11 | C129 | UE supporting E-UTRA TDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) | | | |
| 8.2.2.1.1 _A.3 | TDD PDSCH Single Antenna Port Performance for CA (4DL CA) | Rel-11 | C194 | CA configurations in Table 4.1-4 (UE Category >= 8) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | |
| 8.2.2.1.1 _A.4 | TDD PDSCH Single Antenna Port Performance for CA (5DL CA) | Rel-11 | C194a | UE supporting E-UTRA FDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >= 11) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | |
| | | Rel-12 | C194b | UE supporting E-UTRA FDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >= ≥ 11) | | | |
| 8.2.2.1.2 | TDD PDSCH Single Antenna Port Performance with 1PRB in the presence of MBSFN | Rel-8 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.2 | Void | | | | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 8.2.2.2.1 | TDD PDSCH Transmit Diversity 2x2 | Rel-8 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.2.1_1 | TDD PDSCH Transmit Diversity 2x2 (Release 9 and forward) | Rel-9 | C16 | UE supporting E-UTRA TDD (UE category 1) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.2.2 | TDD PDSCH Transmit Diversity 4x2 | Rel-8 | C10 | UE supporting E-UTRA TDD and operating bands supporting 1,4 MHz Bandwidth | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.2.2_1 | TDD PDSCH Transmit Diversity 4x2 (Release 9 and forward) | Rel-9 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.2.3_C.1 | TDD PDSCH Transmit diversity 2x2 for eICIC (non-MBFSN ABS) | Rel-10 | C30 | UEs supporting E-UTRA TDD and Feature Group Indictor 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.2.3_E.1 | TDD PDSCH Transmit diversity 2x2 for feICIC (non-MBFSN ABS) | Rel-11 | C78 | UE supporting E-UTRA TDD and CRS interference handling and ss-CCH interference handling and Feature Group Indicator 115 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.2.4 | TDD PDSCH Transmit Diversity 2x2 with TM3 Interference Model - Enhanced Performance Requirement Type A | Rel-11 | C45 | UE supporting E-UTRA TDD and the enhanced performance requirements type A for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.2.5 | TDD PDSCH Transmit Diversity 2x2 for eIMTA (when EIMTA-MainConfigServCell-r12 is configured) | Rel-12 | C274 | UE supporting E-UTRA TDD and eIMTA TDD UL-DL reconfiguration | | | |
| 8.2.2.2.6 | TDD PDSCH Transmit Diversity 2x2 with TM2 Interference Model - Enhanced Performance Requirement Type B | Rel-12 | C151 | UE supporting E-UTRA TDD and the enhanced performance requirements type B for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 8.2.2.2.7 | TDD PDSCH Transmit Diversity 2x2 with TM9 Interference Model - Enhanced Performance Requirement Type B | Rel-12 | C151 | UE supporting E-UTRA TDD and the enhanced performance requirements type B for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.3 | Void | | | | | | |
| 8.2.2.3.1 | TDD PDSCH Open Loop Spatial Multiplexing 2x2 | Rel-8 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | Test executi necess 8.2.2.3 or .2 is execut |
| 8.2.2.3.1_1 | TDD PDSCH Open Loop Spatial Multiplexing 2x2 (Release 11 and forward) | Rel-11 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | Test executi necess 8.2.2.3 or .2 is execut |
| 8.2.2.3.1_A.1 | TDD PDSCH Open Loop Spatial Multiplexing 2x2 for CA (2DL CA) | Rel-10 | C110 | UE supporting E-UTRA TDD and intra-band contiguous DL CA or interband DL CA (UE Category >= 5) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | If 8.2.2.3 is exec for a C. capabil test executi not necess for that capabil |
| | | Rel-11 | C109 | UE supporting E-UTRA TDD and intra-band non-contiguous DL CA (UE Category >= 5) | | | |
| 8.2.2.3.1_A.2 | TDD PDSCH Open Loop Spatial Multiplexing 2x2 for CA (**3**DL CA) | Rel-10 | C128 | UE supporting E-UTRA TDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | |
| | | Rel-11 | C129 | UE supporting E-UTRA TDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) | | | |
| 8.2.2.3.1_A.3 | TDD PDSCH Open Loop Spatial Multiplexing 2x2 for CA(4DL CA) | Rel-11 | C194 | UE supporting 4DL CA configurations in Table 4.1-4.(UE category >=8) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | |
| 8.2.2.3.1_A.4 | TDD PDSCH Open Loop Spatial Multiplexing 2x2 for CA (5DL CA) | Rel-11 | C194a | UE supporting E-UTRA FDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >=≥ 11) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | **Condition** | **Comments** | | | |
| | | Rel-12 | C194b | UE supporting E-UTRA FDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >= ≥ 11) | | | |
| 8.2.2.3.1A_A.1 | TDD Soft buffer management for CA (2 DL CA) | Rel-10 | C105 | UE supporting E-UTRA TDD and intra-band contiguous DL CA or inter-band DL CA (UE category 3 and 4) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | TBD |
| | | Rel-11 | C72 | UE supporting E-UTRA TDD and intra-band non-contiguous DL CA (UE category 3 and 4) | | | |
| 8.2.2.3.1B | TDD PDSCH Open Loop Spatial Multiplexing 2x2 - Enhanced Performance Requirement Type C | Rel-12 | C143 | UE supporting E-UTRA TDD and Enhanced Performance Requirement TypeC for LTE (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.3.1C | TDD PDSCH Open Loop Spatial Multiplexing 2x2 with TM1 Interference - Enhanced Performance Requirement Type C | Rel-12 | C143 | UE supporting E-UTRA TDD and Enhanced Performance Requirement TypeC for LTE (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.3.2 | TDD PDSCH Open Loop Spatial Multiplexing 4x2 | Rel-8 | C02 | UE supporting E-UTRA TDD (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.3.3_C.1 | TDD PDSCH Open Loop Spatial Multiplexing 2x2 for eICIC (non-MBSFN ABS) | Rel-10 | C30 | UEs supporting E-UTRA TDD and Feature Group Indictor 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.3.3_C.2 | TDD PDSCH Open Loop Spatial Multiplexing 2x2 for eICIC (MBSFN ABS) | Rel-10 | C30 | UEs supporting E-UTRA TDD and Feature Group Indictor 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Additi Inform |
|--------|-------|---------|---------------|---|---------------------------------------------|--------|----------------|
| | | | Condition | Comments | | | |
| 8.2.2.3.3 _E.1 | TDD PDSCH Open Loop Spatial Multiplexing 2x2 for feICIC (non-MBSFN ABS) | Rel-11 | C78 | UE supporting E-UTRA TDD and CRS interference handling and ss-CCH interference handling and Feature Group Indicator 115 (UE Category >= 2) | TBD | | |
| 8.2.2.4 | Void | | | | | | |
| 8.2.2.4.1 | TDD PDSCH Closed Loop Single/Multi Layer Spatial Multiplexing 2x2 | Rel-8 only | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.4.1 _1 | TDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 2x2 (Release 9 and forward) | Rel-9 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.4.1 _E.1 | TDD PDSCH Closed Loop Single/Multi Layer Spatial Multiplexing 2x2 for feICIC (non-MBSFN ABS) | Rel-11 | C78 | UE supporting E-UTRA TDD and CRS interference handling and ss-CCH interference handling and Feature Group Indicator 115 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.4.1 _H | TDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 2x2 for 256QAM in DL | Rel-12 | C02h | UE supporting E-UTRA TDD and 256QAM in DL | | | |
| 8.2.2.4.2 | TDD PDSCH Closed Loop Single/Multi Layer Spatial Multiplexing 4x2 | Rel-8 only | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | Test executi necess 8.2.2.4 or 8.2.2.4 is exec |
| 8.2.2.4.2 _1 | TDD PDSCH Closed Loop Single/Multi Layer Spatial Multiplexing 4x2 (Release 9 and forward) | Rel-9 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | Test executi necess 8.2.2.4 or 8.2.2.4 is exec |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|--------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 8.2.2.4.2_A.1 | TDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for CA (2DL CA) | Rel-10 | C110 | UE supporting E-UTRA TDD and intra-band contiguous DL CA or inter-band DL CA (UE Category >= 5) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | Test executi necess 8.2.2.4 or 8.2.2.4 or 8.13.2. or 8.13.2. or 8.13.2. or 8.13.2. is exec |
| | | Rel-11 | C109 | UE supporting E-UTRA TDD and Intra-band non-contiguous DL CA(UE Category >= 5) | | | |
| 8.2.2.4.2_A.2 | TDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for CA (3DL CA) | Rel-10 | C128 | UE supporting E-UTRA TDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | Test executi necess 8.2.2.4 or 8.13.2. or 8.13.2. or 8.13.2. or 8.13.2. is exec |
| | | Rel-11 | C129 | UE supporting E-UTRA TDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) | | | |
| 8.2.2.4.2_A.3 | TDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for CA (4DL CA) | Rel-11 | C194 | UE supporting E-UTRA TDD and 4DL CA configurations in Table 4.1-4 (UE Category >= 8) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | Test executi necess 8.13.2. or 8.13.2. or 8.13.2. or 8.13.2. is exec |
| 8.2.2.4.2_A.4 | TDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for CA (5DL CA) | Rel-11 | C194a | UE supporting E-UTRA FDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >=≥ 11) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | | | Condition | Comments | | | |
| | | Rel-12 | C194b | UE supporting E-UTRA FDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >= ≥ 11) | | | |
| 8.2.2.4.2A | TDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 2x2 - Enhanced Performance Requirement Type C | Rel-12 | C143 | UE supporting E-UTRA TDD and Enhanced Performance Requirement TypeC for LTE (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.4.3 | TDD PDSCH Closed Loop Single Layer Spatial Multiplexing 2x2 with TM4 Interference Model - Enhanced Performance Requirement Type A | Rel-11 | C45 | UE supporting E-UTRA TDD and the enhanced performance requirements type A for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.4.4 | TDD PDSCH Closed Loop Multi-Layer Spatial Multiplexing 4x2 for Dual Connectivity | Rel-12 | C170 | UE supporting E-UTRA TDD and Dual Connectivity (UE Category >= 5) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 8.2.2.4.5 | TDD PDSCH Closed Loop Single Layer Spatial Multiplexing 2x2 with TM4 Interference Model - Enhanced Performance Requirement Type B | Rel-12 | C151 | UE supporting E-UTRA TDD and the enhanced performance requirements type B for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.2.7_A.1 | TDD Carrier aggregation with power imbalance (intra-band contiguous DL CA) | Rel-10 | C24 | UE supporting E-UTRA TDD and intra-band contiguous DL CA | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | |
| 8.2.2.9 | TDD PDSCH in HST-SFN scenario | Rel-14 | C300 | UEs supporting E-UTRA TDD and high speed enhancement for measurement | | | |
| 8.2.3.1.1.1 | TDD FDD CA PDSCH Single Antenna Port Performance for FDD Pcell (2DL CA) | Rel-12 | C154 | UE supporting E-UTRA FDD and TDD and 2DL CA with FDD as PCell (UE Category >= 5) | TBD | 2Rx, 4Rx | |
| 8.2.3.1.1.2 | TDD FDD CA PDSCH Single Antenna Port Performance for FDD PCell (3DL CA) | Rel-12 | C133 | UE supporting E-UTRA FDD and TDD and 3DL CA with FDD as PCell (UE Category >= 5) | TBD | 2Rx, 4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|-----------|----------|-------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 8.2.3.1.1.3 | TDD FDD CA PDSCH Single Antenna Port Performance for FDD PCell (4DL CA) | Rel-12 | C133a | UE supporting E-UTRA FDD and TDD and 4DL CA with FDD as PCell (UE Category >= 8) | TBD | | |
| 8.2.3.1.1.4 | TDD FDD CA PDSCH Single Antenna Port Performance for FDD PCell (5DL CA) | Rel-12 | C133b | UE supporting E-UTRA FDD and TDD and 5DL CA with FDD as PCell (UE Category8, and Category 11 and onwards) | Refer to 36.521-1 8.1.2.3 | | |
| 8.2.3.1.2.1 | TDD FDD CA PDSCH Single Antenna Port Performance for TDD PCell(2DL CA) | Rel-12 | C155 | UE supporting E-UTRA FDD and TDD and 2DL CA with TDD as PCell (UE Category >= 5) | TBD | 2Rx, 4Rx | |
| 8.2.3.1.2.2 | TDD FDD CA PDSCH Single Antenna Port Performance for TDD PCell (3DL CA) | Rel-12 | C135 | UE supporting E-UTRA FDD and TDD and 3DL CA with TDD as PCell (UE Category >= 5) | TBD | 2Rx, 4Rx | |
| 8.2.3.1.2.3 | TDD FDD CA PDSCH Single Antenna Port Performance for TDD PCell (4DL CA) | Rel-12 | C135a | UE supporting E-UTRA FDD and TDD and 4DL CA with TDD as PCell (UE Category >= 8) | TBD | | |
| 8.2.3.1.2.4 | TDD FDD CA PDSCH Single Antenna Port Performance for TDD PCell (5DL CA) | Rel-12 | C135b | UE supporting E-UTRA FDD and TDD and 5DL CA with TDD as PCell (UE Category 8, and Category11 and onwards) | TBD | | |
| 8.2.3.2.1.1 | TDD FDD CA PDSCH Open Loop Spatial Multiplexing 2x2 for FDD PCell (2DL CA) | Rel-12 | C154 | UE supporting E-UTRA FDD and TDD and 2DL CA with FDD as PCell (UE Category >= 5) | TBD | 2Rx, 4Rx | |
| 8.2.3.2.1.2 | TDD FDD CA PDSCH Open Loop Spatial Multiplexing 2x2 for FDD PCell (3DL CA) | Rel-12 | C133 | UE supporting E-UTRA FDD and TDD and 3DL CA with FDD as PCell (UE Category >= 5) | TBD | 2Rx, 4Rx | |
| 8.2.3.2.1.3 | TDD FDD CA PDSCH Open Loop Spatial Multiplexing 2x2 for FDD PCell (4DL CA) | Rel-12 | C133a | UE supporting E-UTRA FDD and TDD and 4DL CA with FDD as PCell (UE Category >= 8) | Refer to 36.521-1 8.1.2.3 | | |
| 8.2.3.2.1.4 | TDD FDD CA PDSCH Open Loop Spatial Multiplexing 2x2 for FDD PCell (5DL CA) | Rel-12 | C133b | UE supporting E-UTRA FDD and TDD and 5DL CA with FDD as PCell (UE Category >= 8) | Refer to 36.521-1 8.1.2.3 | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 8.2.3.2.1 A | TDD FDD CA PDSCH Soft buffer management test for FDD PCell (2DL CA) | Rel-12 | C136 | UE supporting E-UTRA FDD and TDD and 2DL CA with FDD as PCell (UE categories 3 and 4) | TBD | 2Rx, 4Rx | |
| 8.2.3.2.2 .1 | TDD FDD CA PDSCH Open Loop Spatial Multiplexing 2x2 for TDD PCell (2DL CA) | Rel-12 | C155 | UE supporting E-UTRA FDD and TDD and 2DL CA with TDD as PCell (UE Category >= 5) | TBD | 2Rx, 4Rx | |
| 8.2.3.2.2 .2 | TDD FDD CA PDSCH Open Loop Spatial Multiplexing 2x2 for TDD PCell (3DL CA) | Rel-12 | C135 | UE supporting E-UTRA FDD and TDD and 3DL CA with TDD PCell (UE Category >= 5) | TBD | 2Rx, 4Rx | |
| 8.2.3.2.2 .3 | TDD FDD CA PDSCH Open Loop Spatial Multiplexing 2x2 for TDD PCell(4DL CA) | Rel-12 | C135a | UE supporting E-UTRA FDD and TDD and 4DL CA with TDD as PCell (UE Category >= 8) | Refer to 36.521-1 8.1.2.3 | | |
| 8.2.3.2.2 .4 | TDD FDD CA PDSCH Open Loop Spatial Multiplexing 2x2 for TDD PCell(5DL CA) | Rel-12 | C135b | UE supporting E-UTRA FDD and TDD and 5DL CA with TDD as PCell (UE Category 8, and Category11 and onwards) | Refer to 36.521-1 8.1.2.3 | | |
| 8.2.3.2.2 A | TDD FDD CA PDSCH Soft buffer management test for TDD PCell (2DL CA) | Rel-12 | C137 | UE supporting E-UTRA FDD and TDD and 2DL CA with TDD PCell (UE categories 3 and 4) | TBD | 2Rx, 4Rx | |
| 8.2.3.3.1 .1 | TDD FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for FDD PCell (2DL CA) | Rel-12 | C154 | UE supporting E-UTRA FDD and TDD and 2DL CA with FDD as PCell (UE Category >= 5) | TBD | 2Rx, 4Rx | |
| 8.2.3.3.1 .2 | TDD FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for FDD PCell (3DL CA) | Rel-12 | C133 | UE supporting E-UTRA FDD and TDD and 3DL CA with FDD as PCell (UE Category >= 5) | TBD | | |
| 8.2.3.3.1 .3 | TDD FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for FDD PCell (4DL CA) | Rel-12 | C133a | UE supporting E-UTRA FDD and TDD and 4DL CA with FDD as PCell (UE Category >= 8) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | |
| 8.2.3.3.1 .4 | TDD FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for FDD PCell (5DL CA) | Rel-12 | C133b | UE supporting E-UTRA FDD and TDD and 5DL CA with FDD as PCell (UE Category >= 8) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|------------------------------|--------|-------------|
| | | | Condition | Comments | | | |
| 8.2.3.3.2.1 | TDD FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for TDD PCell (2DL CA) | Rel-12 | C155 | UE supporting E-UTRA FDD and TDD and 2DL CA with TDD as PCell (UE Category >=5) | TBD | 2Rx, 4Rx | |
| 8.2.3.3.2.2 | TDD FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for TDD PCell (3DL CA) | Rel-12 | C135 | UE supporting E-UTRA FDD and TDD and 3DL CA with TDD as PCell (UE Category >= 5) | TBD | 2Rx, 4Rx | |
| 8.2.3.3.2.3 | TDD FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for TDD PCell (4DL CA) | Rel-12 | C135a | UE supporting E-UTRA FDD and TDD and 4DL CA with TDD as PCell (UE Category >= 8) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | |
| 8.2.3.3.2.4 | TDD FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for TDD PCell (5DL CA) | Rel-12 | C135b | UE supporting E-UTRA FDD and TDD and 5DL CA with TDD as PCell (UE Category 8, and Category11 and onwards) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | |
| 8.2.4.1.1 | LAA PDSCH CA Closed Loop Spatial Multiplexing Performance-4 Tx Antenna port with FDD as Pcell | Rel-13 | C209 | UE supporting E-UTRA FDD and downlink LAA with FDD as Pcell | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.2.4.1.2 | LAA PDSCH CA Closed Loop Spatial Multiplexing Performance-4 Tx Antenna port with TDD as Pcell | Rel-13 | C210 | UE supporting E-UTRA TDD and downlink LAA | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.1 | Void | | | | | | |
| 8.3.1.1.1_D | FDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 without a simultaneous transmission for eDL-MIMO | Rel-10 | C25 | UE supporting E-UTRA FDD and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.1.1.1_H | FDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 without a simultaneous transmission for eDL-MIMO for 256QAM in DL | Rel-12 | C25h | UE supporting E-UTRA FDD and eDL-MIMO and 256QAM in DL and Feature Group Indicator 103 | | | |
| 8.3.1.1.2_D | FDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 with a simultaneous transmission for eDL-MIMO | Rel-10 | C25 | UE supporting E-UTRA FDD and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Additional Information |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 8.3.1.1.3 | FDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 with TM9 Interference Model - Enhanced Performance Requirement Type A | Rel-11 | C40 | UE supporting E-UTRA FDD and Feature Group Indictor 103 and supporting the enhanced performance requirements type A for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.1.1.4 | FDD PDSCH Closed Loop Single-layer Spatial Multiplexing on antenna ports 7 or 8 with TM9 Interference Model - Enhanced Performance Requirement Type B | Rel-12 | C262 | UE supporting E-UTRA FDD and the enhanced performance requirements type B for LTE and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.1.1.6 | FDD PDSCH Closed Loop Single-layer Spatial Multiplexing on antenna ports 7 or 8 with TM3 interference model - Enhanced Performance Requirement Type B | Rel-12 | C150 | UE supporting E-UTRA FDD and the enhanced performance requirements type B for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.1.1.7 | FDD PDSCH Closed Loop Single-layer Spatial Multiplexing on antenna ports 7 or 8 with TM10 serving cell configuration and TM9 interference model - Enhanced Performance Requirement Type B | Rel-12 | C175 | UE supporting E-UTRA FDD, enhanced performance requirements type B and PDSCH Transmission mode 10 for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.1.1.9 | FDD PDSCH Single-layer Spatial Multiplexing for FD-MIMO | Rel-13 | C323 | UE supporting E-UTRA FDD and Feature Group Indicator 103 and dmrs-Enhancements-r13 | | | |
| 8.3.1.2.1 _D | FDD PDSCH Dual-layer Spatial Multiplexing for eDL-MIMO | Rel-10 | C25 | UE supporting E-UTRA FDD and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.1.2.1 _D_1 | FDD PDSCH Dual-layer Spatial Multiplexing for eDL-MIMO (Release 11 and forward) | Rel-11 | C25 | UE supporting E-UTRA FDD and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

*ETSI*

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|-----------|----------|---------------------------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| 8.3.1.2.2 | FDD PDSCH Dual-layer Spatial Multiplexing - Enhanced Performance Requirement Type C | Rel-12 | C144 | UE supporting E-UTRA FDD and Feature Group Indicator 103 and Enhanced Performance Requirement TypeC for LTE (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.1.3.1 _F | FDD PDSCH Performance with DCI format 2D, non Quasi Co-located Antenna Ports, Same Cell ID and single NZP CSI-RS resource for CoMP | Rel-11 | C50 | UE supporting E-UTRA FDD and Maximum CSI processes of One on a component carrier within a band with PDSCH transmission mode 10 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.1.3.2 _F | FDD PDSCH Performance with DCI format 2D, non Quasi Co-located Antenna Ports, Same Cell ID and multiple NZP CSI-RS resources for CoMP | Rel-11 | C52 | UE supporting E-UTRA FDD and Maximum CSI processes of Three or Four on a component carrier within a band with PDSCH transmission mode 10 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.1.3.3 _F | FDD PDSCH Performance with DCI format 2D, non Quasi Co-located Antenna Ports, Different Cell ID, Colliding CRS and single NZP CSI-RS resource for CoMP | Rel-11 | C117 | UE supporting E-UTRA FDD and Maximum CSI processes of One, Three or Four on a component carrier within a band with PDSCH transmission mode 10 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.2.1.1 | TDD PDSCH Single-layer Spatial Multiplexing on antenna port 5 (Release 8 and forward) | Rel-8 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.2.1.1 _1 | TDD PDSCH Single-layer Spatial Multiplexing on antenna port 5 (Release 9 and forward) | Rel-9 | C16 | UE supporting E-UTRA TDD (UE category 1) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.2.1.2 | TDD PDSCH Single-layer Spatial Multiplexing on antenna port 7 or 8 without a simultaneous transmission | Rel-9 only | C34 | UE supporting E-UTRA TDD and supporting enhanced dual layer TDD. | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|----------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| | | Rel-10 | C02 | UE supporting E-UTRA TDD. | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.2.1.2_D | TDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 without a simultaneous transmission for eDL-MIMO | Rel-10 | C26 | UE supporting E-UTRA TDD and Feature Group Indicator 104 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.2.1.2_H | TDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 without a simultaneous transmission for eDL-MIMO for 256QAM in DL | Rel-12 | C26h | UE supporting E-UTRA TDD and 256QAM in DL and Feature Group Indicator 104 | | | |
| 8.3.2.1.3 | TDD PDSCH Single-layer Spatial Multiplexing on antenna port 7 or 8 with a simultaneous transmission | Rel-9 only | C34 | UE supporting E-UTRA TDD and supporting enhanced dual layer TDD. | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| | | Rel-10 | C02 | UE supporting E-UTRA TDD. | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.2.1.3_D | TDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 with a simultaneous transmission for eDL-MIMO | Rel-10 | C26 | UE supporting E-UTRA TDD and Feature Group Indicator 104 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.2.1.4 | TDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 with TM9 Interference Model - Enhanced Performance Requirement Type A | Rel-11 | C41 | UE supporting E-UTRA TDD and Feature Group Indictor 103 and supporting the enhanced performance requirements type A for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.2.1.5 | TDD PDSCH Closed Loop Single-layer Spatial Multiplexing on antenna ports 7 or 8 with TM9 Interference Model - Enhanced Performance Requirement Type B | Rel-12 | C263 | UE supporting E-UTRA TDD and the enhanced performance requirements type B for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | **Condition** | **Comments** | | | |
| 8.3.2.1.7 | TDD PDSCH Closed Loop Single-layer Spatial Multiplexing on antenna ports 7 or 8 with TM3 interference model - Enhanced Performance Requirement Type B | Rel-12 | C151 | UE supporting E-UTRA TDD and the enhanced performance requirements type B for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.2.1.8 | TDD PDSCH Closed Loop Single-layer Spatial Multiplexing on antenna ports 7 or 8 with TM10 serving cell configuration and TM9 interference model - Enhanced Performance Requirement Type B | Rel-12 | C176 | UE supporting E-UTRA TDD, enhanced performance requirements type B and PDSCH Transmission mode 10 for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.2.1.10 | TDD PDSCH Single-layer Spatial Multiplexing for FD-MIMO | Rel-13 | C324 | UE supporting E-UTRA TDD and Feature Group Indicator 103 and dmrs-Enhancements-r13 | | | |
| 8.3.2.2.1 | TDD PDSCH Dual-layer Spatial Multiplexing | Rel-9 only | C34 | UE supporting E-UTRA TDD and supporting enhanced dual layer TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| | | Rel-10 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.2.2.1_D | TDD PDSCH Dual-layer Spatial Multiplexing for eDL-MIMO | Rel-10 | C25a | UE supporting E-UTRA TDD and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.2.2.1_D_1 | TDD PDSCH Dual-layer Spatial Multiplexing for eDL-MIMO (Release 11 and forward) | Rel-11 | C25a | UE supporting E-UTRA TDD and Feature Group Indicator 103 | TBD | | |
| 8.3.2.2.2 | TDD PDSCH Dual-layer Spatial Multiplexing - Enhanced Performance Requirement Type C | Rel-12 | C143 | UE supporting E-UTRA TDD and Enhanced Performance Requirement TypeC for LTE (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|--------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 8.3.2.4.1_F | TDD PDSCH Performance with DCI format 2D, non Quasi Co-located Antenna Ports, Same Cell ID and single NZP CSI-RS resource for CoMP | Rel-11 | C51 | UE supporting E-UTRA TDD and Maximum CSI processes of One on a component carrier within a band with PDSCH transmission mode 10 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.2.4.2_F | TDD PDSCH Performance with DCI format 2D, non Quasi Co-located Antenna Ports, Same Cell ID and multiple NZP CSI-RS resources for CoMP | Rel-11 | C53 | UE supporting E-UTRA TDD and Maximum CSI processes of Three or Four on a component carrier within a band with PDSCH transmission mode 10 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.2.4.3_F | TDD PDSCH Performance with DCI format 2D, non Quasi Co-located Antenna Ports, Different Cell ID, Colliding CRS and single NZP CSI-RS resource for CoMP | Rel-11 | C118 | UE supporting E-UTRA TDD and Maximum CSI processes of One, Three or Four on a component carrier within a band with PDSCH transmission mode 10 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.3.1.1 | LAA Dual-Layer Spatial Multiplexing with DM-RS with FDD as PCell | Rel-13 | C264 | UE supporting E-UTRA FDD and downlink LAA with FDD as Pcell and TM9 on LAA cells | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.3.3.1.2 | LAA Dual-Layer Spatial Multiplexing with DM-RS with TDD as Pcell | Rel-13 | C265 | UE supporting E-UTRA TDD and downlink LAA and TM9 on LAA cells | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.4.1.1 | FDD PCFICH/PDCCH Single-antenna Port Performance | Rel-8 | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.4.1.2 | Void | | | | | | |
| 8.4.1.2.1 | FDD PCFICH/PDCCH Transmit Diversity 2x2 | Rel-8 only | C09 | UE supporting E-UTRA FDD and operating bands supporting 1,4 MHz Bandwidth | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.4.1.2.1_1 | FDD PCFICH/PDCCH Transmit Diversity 2x2 (Release 9 and forward) | Rel-9 | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|-------------------------------------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| 8.4.1.2.2 | FDD PCFICH/PDCCH Transmit Diversity 4x2 | Rel-8 only | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.4.1.2.3 _E.1 | FDD PCFICH/PDCCH Transmit Diversity 2x2 for feICIC (non-MBSFN ABS) | Rel-11 | C77 | UE supporting E-UTRA FDD and CRS interference handling and Feature Group Indicator 115 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.4.1.2.3 _E.2 | FDD PCFICH/PDCCH Transmit Diversity 2x2 for feICIC (MBSFN ABS) | Rel-11 | C77 | UE supporting E-UTRA FDD and CRS interference handling and Feature Group Indicator 115 (UE) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.4.1.2.2 _1 | FDD PCFICH/PDCCH Transmit Diversity 4x2 (Release 9 and forward) | Rel-9 | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.4.1.2.3 _C.1 | FDD PCFICH/PDCCH Transmit Diversity 2x2 for eICIC (non-MBSFN ABS) | Rel-10 | C29 | UE supporting E-UTRA FDD and Feature Group Indicator 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.4.1.2.3 _C.2 | FDD PCFICH/PDCCH Transmit Diversity 2x2 for eICIC (MBSFN ABS) | Rel-10 | C29 | UEs supporting E-UTRA FDD and Feature Group Indictor 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.4.1.2.5 | FDD Enhanced Downlink Control Channel Performance Type A for PCFICH/PDCCH, 2 Tx Antenna Port under Asynchronous Network | Rel-13 | C285 | E-UTRA FDD UEs supporting Enhanced downlink control channel performance requirements type A | | | |
| 8.4.1.2.6 | FDD Enhanced Downlink Control Channel Performance Type A for PCFICH/PDCCH, 2 Tx Antenna Port with Non-Colliding CRS Dominant Interferer | Rel-13 | C285 | E-UTRA FDD UEs supporting Enhanced downlink control channel performance requirements type A | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 8.4.1.2.7 | FDD Enhanced Downlink Control Channel Performance Type B for PCFICH/PDCCH, 2 Tx Antenna Port with Colliding CRS Dominant Interferer | Rel-13 | C286 | E-UTRA FDD UEs supporting Enhanced downlink control channel performance requirements type B | | | |
| 8.4.1.2.8 | FDD Enhanced Downlink Control Channel Performance Type B for PCFICH/PDCCH, 2 Tx Antenna Port with Non-Colliding CRS Dominant Interferer | Rel-13 | C286 | E-UTRA FDD UEs supporting Enhanced downlink control channel performance requirements type B | | | |
| 8.4.2.1 | TDD PCFICH/PDCCH Single-antenna Port Performance | Rel-8 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.4.2.2 | Void | | | | | | |
| 8.4.2.2.1 | TDD PCFICH/PDCCH Transmit Diversity 2x2 | Rel-8 only | C10 | UE supporting E-UTRA TDD and operating bands supporting 1,4 MHz Bandwidth | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.4.2.2.1_1 | TDD PCFICH/PDCCH Transmit Diversity 2x2 (Release 9 and forward) | Rel-9 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.4.2.2.2 | TDD PCFICH/PDCCH Transmit Diversity 4x2 | Rel-8 only | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.4.2.2.2_1 | TDD PCFICH/PDCCH Transmit Diversity 4x2 (Release 9 and forward) | Rel-9 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.4.2.2.3_C.1 | TDD PCFICH/PDCCH Transmit Diversity 2x2 for eICIC (non-MBSFN ABS) | Rel-10 | C30 | UEs supporting E-UTRA TDD and Feature Group Indictor 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.4.2.2.3_C.2 | TDD PCFICH/PDCCH Transmit Diversity 2x2 for eICIC (MBSFN ABS) | Rel-10 | C30 | UEs supporting E-UTRA TDD and Feature Group Indictor 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | **Condition** | **Comments** | | | |
| 8.4.2.2.3_E.1 | TDD PCFICH/PDCCH Transmit Diversity 2x2 for feICIC (non-MBSFN ABS) | Rel-11 | C78 | UE supporting E-UTRA TDD and CRS interference handling and ss-CCH interference handling and Feature Group Indicator 115(UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.4.2.2.3_E.2 | TDD PCFICH/PDCCH Transmit Diversity 2x2 for feICIC (MBSFN ABS) | Rel-11 | C78 | UE supporting E-UTRA TDD and CRS interference handling and ss-CCH interference handling and Feature Group Indicator 115(UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.4.2.2.5 | TDD Enhanced Downlink Control Channel Performance Type A for PCFICH/PDCCH, 2 Tx Antenna Port with Colliding CRS Dominant Interferer | Rel-13 | C287 | E-UTRA TDD UEs supporting Enhanced downlink control channel performance requirements type A | | | |
| 8.4.2.2.6 | DD Enhanced Downlink Control Channel Performance Type A for PCFICH/PDCCH, 2 Tx Antenna Port with Non-Colliding CRS Dominant Interferer | Rel-13 | C287 | E-UTRA TDD UEs supporting Enhanced downlink control channel performance requirements type A | | | |
| 8.4.2.2.7 | TDD Enhanced Downlink Control Channel Performance Type B for PCFICH/PDCCH, 2 Tx Antenna Port with Colliding CRS Dominant Interferer | Rel-13 | C288 | E-UTRA TDD UEs supporting Enhanced downlink control channel performance requirements type B | | | |
| 8.4.2.2.8 | TDD Enhanced Downlink Control Channel Performance Type B for PCFICH/PDCCH, 2 Tx Antenna Port with Non-Colliding CRS Dominant Interferer | Rel-13 | C288 | E-UTRA TDD UEs supporting Enhanced downlink control channel performance requirements type B | | | |
| 8.4.3.1.1 | LAA PCFICH/PDCCH Transmit Diversity 2x2 with FDD as Pcell | Rel-13 | C209 | UE supporting E-UTRA FDD and downlink LAA with FDD as Pcell | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|-----------|----------|---------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 8.4.3.1.2 | LAA PCFICH/PDCCH Transmit Diversity 2x2 with TDD as Pcell | Rel-13 | C217 | UE supporting E-UTRA TDD and downlink LAA | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.5.1.1 | FDD PHICH Single-antenna Port Performance | Rel-8 | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.5.1.2 | Void | | | | | | |
| 8.5.1.2.1 | FDD PHICH Transmit Diversity 2x2 | Rel-8 only | C09 | UE supporting E-UTRA FDD and operating bands supporting 1,4 MHz Bandwidth | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.5.1.2.1 _1 | FDD PHICH Transmit Diversity 2x2 (Release 9 and forward) | Rel-9 | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.5.1.2.2 | FDD PHICH Transmit Diversity 4x2 | Rel-8 only | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.5.1.2.2 _1 | FDD PHICH Transmit Diversity 4x2 (Release 9 and forward) | Rel-9 | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.5.1.2.3 _C.1 | FDD PHICH Transmit Diversity 2x2 for eICIC (non-MBSFN ABS) | Rel-10 | C29 | UE supporting E-UTRA FDD and Feature Group Indicator 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.5.1.2.3 _E.1 | FDD PHICH Transmit Diversity 2x2 for feICIC (non-MBSFN ABS) | Rel-11 | C77 | UE supporting E-UTRA FDD and CRS interference handling and Feature Group Indicator 115 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.5.1.2.5 | FDD Enhanced Downlink Control Channel Performance Requirement Type A for PHICH- 2 Tx Antenna Ports under Asynchronous Network | Rel-13 | C285 | E-UTRA FDD UEs supporting Enhanced downlink control channel performance requirements type A | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 8.5.1.2.6 | FDD Enhanced Downlink Control Channel Performance Requirement Type A for PHICH - 2 Tx Antenna Ports with Non-Colliding CRS Dominant Interferer | Rel-13 | C285 | E-UTRA FDD UEs supporting Enhanced downlink control channel performance requirements type A | | | |
| 8.5.1.2.7 | FDD Enhanced Downlink Control Channel Performance Requirement Type B for PHICH - 2 Tx Antenna Ports with Colliding CRS Dominant Interferer | Rel-13 | C286 | E-UTRA FDD UEs supporting Enhanced downlink control channel performance requirements type B | | | |
| 8.5.1.2.8 | FDD Enhanced Downlink Control Channel Performance Requirement Type B for PHICH - 2 Tx Antenna Ports with Non-Colliding CRS Dominant Interferer | Rel-13 | C286 | E-UTRA FDD UEs supporting Enhanced downlink control channel performance requirements type B | | | |
| 8.5.2.1 | TDD PHICH Single-antenna Port Performance | Rel-8 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.5.2.2 | Void | | | | | | |
| 8.5.2.2.1 | TDD PHICH Transmit Diversity 2x2 | Rel-8 only | C10 | UE supporting E-UTRA TDD and operating bands supporting 1,4 MHz Bandwidth | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.5.2.2.1 _1 | TDD PHICH Transmit Diversity 2x2 (Release 9 and forward) | Rel-9 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.5.2.2.2 | TDD PHICH Transmit Diversity 4x2 | Rel-8 only | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.5.2.2.2 _1 | TDD PHICH Transmit Diversity 4x2 (Release 9 and forward) | Rel-9 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.5.2.2.3 _C.1 | TDD PHICH Transmit Diversity 2x2 for eICIC (non-MBSFN ABS) | Rel-10 | C30 | UEs supporting E-UTRA TDD and Feature Group Indictor 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|-------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 8.5.2.2.3_E.1 | TDD PHICH Transmit Diversity 2x2 for feICIC (non-MBSFN ABS) | Rel-11 | C78 | UE supporting E-UTRA TDD and CRS interference handling and ss-CCH interference handling and Feature Group Indicator 115(UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.5.2.2.5 | TDD Enhanced Downlink Control Channel Performance Requirement Type A for PHICH- 2 Tx Antenna Ports with Colliding CRS Dominant Interfere | Rel-13 | C287 | E-UTRA TDD UEs supporting Enhanced downlink control channel performance requirements type A | | | |
| 8.5.2.2.6 | TDD Enhanced Downlink Control Channel Performance Requirement Type A for PHICH - 2 Tx Antenna Ports with Non-Colliding CRS Dominant Interferer | Rel-13 | C287 | E-UTRA TDD UEs supporting Enhanced downlink control channel performance requirements type A | | | |
| 8.5.2.2.7 | TDD Enhanced Downlink Control Channel Performance Requirement Type B for PHICH- 2 Tx Antenna Ports with Colliding CRS Dominant Interferer | Rel-13 | C288 | E-UTRA TDD UEs supporting Enhanced downlink control channel performance requirements type B | | | |
| 8.5.2.2.8 | TDD Enhanced Downlink Control Channel Performance Requirement Type B for PHICH- 2 Tx Antenna Ports with Non-Colliding CRS Dominant Interferer | Rel-13 | C288 | E-UTRA TDD UEs supporting Enhanced downlink control channel performance requirements type B | | | |
| 8.7.1.1 | FDD sustained data rate performance (Rel-9 and forward) | Rel-9 | C76 | UE supporting E-UTRA FDD and not supporting 256QAM in DL (UE categories from1 to 4) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | It is not necess for CA and EPDC( UEs to tested test if 8.7.1.1 or 8.7.3 execute |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Additi Inform |
|--------|-------|---------|---------------|--|--------------------------------------------|--------|----------------|
| | | | Condition | Comments | | | |
| 8.7.1.1_1 | FDD sustained data rate performance (Rel-10 and forward) | Rel-10 | C42 | UE supporting E-UTRA FDD and not supporting 256QAM in DL (UE categories 6, 7) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | It is not necess for CA and EPDCC UEs to tested test if 8.7.1.1 r 8.7.3. execute |
| 8.7.1.1_2 | FDD sustained data rate performance for UE category 1bis | Rel-13 | C145d | UE supporting E-UTRA FDD (UE category 1bis) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.7.1.1_A.1 | FDD Sustained data rate performance for CA (2 DL CA ) | Rel-10 | C107 | UE supporting E-UTRA FDD and intra-band contiguous DL CA or inter-band DL CA and not supporting 256QAM in DL (UE category 3, 4, 6, 7, 9 and 10) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | Test executi necess 8.7.1.1 is exec |
| | | Rel-11 | C93 | UE supporting E-UTRA FDD and intra-band non-contiguous DL CA and not supporting 256QAM in DL (UE category 3, 4, 6, 7, 9 and 10) | | | |
| 8.7.1.1_A.2 | FDD Sustained data rate performance for CA (3DL CA) | Rel-10 | C126 | UE supporting E-UTRA FDD and 3DL with CA configurations in Table 4.1-3 and not supporting 256QAM in DL (UE category 9, 10, 11 and 12) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | Test executi necess 8.7.1.1 is exec |
| | | Rel-10 | C126a | UE supporting E-UTRA FDD and 3DL with CA configurations in Table 4.1-3 and supporting at most 40MHz aggregated bandwidth and not supporting 256QAM in DL (UE category 6 and 7) | Refer to 36.521-1 8.1.2.3 | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|--|--------------------------------------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| | | Rel-11 | C127 | UE supporting E-UTRA FDD and 3DL with CA configurations in Table 4.1-3 and not supporting 256QAM in DL (UE category 9, 10, 11 and 12) | TBD | | |
| | | Rel-11 | C127a | UE supporting E-UTRA FDD and 3DL with CA configurations in Table 4.1-3 and supporting at most 40MHz aggregated bandwidth and not supporting 256QAM in DL (UE category 6 and 7) | TBD | | |
| 8.7.1.1_A.4 | FDD Sustained data rate performance for CA (4DL CA) | Rel-11 | C189 | UE supporting E-UTRA FDD and 4DL with CA configurations in Table 4.1-4 and not supporting 256QAM in DL (UE category 11 and 12) | | 2Rx, 4Rx | Test executi necess 8.7.1.1 is exec |
| | | Rel-11 | C189a | UE supporting E-UTRA FDD and 4DL with CA configurations in Table 4.1-4 and supporting at most 60MHz aggregated bandwidth and not supporting 256QAM in DL (UE category 9 and 10) | | | |
| 8.7.1.1_A.5 | FDD Sustained data rate performance for CA (5DL CA) | Rel-11 | C266 | UE supporting E-UTRA FDD and 5DL with CA configurations in Table 4.1-5 and not supporting 256QAM in DL (UE DL category 11,12) | | 2Rx, 4Rx | |
| | | Rel-12 | C267 | UE supporting E-UTRA FDD and 5DL CA configurations in Table 4.1-5 and not supporting 256QAM in DL (UE DL category 11,12,15) | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| -8.7.1.1_H.1 | FDD sustained data rate performance (Single Carrier) for 256QAM in DL | Rel-12 | C42h | UE supporting E-UTRA FDD and 256QAM and UE DL category 13 | | | Test executi necess 8.7.1.1 is exec |
| 8.7.1.1_H.2 | FDD Sustained data rate performance for CA (2DL CA) for 256QAM in DL | Rel-12 | C107h | UE supporting E-UTRA FDD and 2DL CA and 256QAM in DL (UE DL category 11, 12 and 13) | | 2Rx, 4Rx | Test executi necess 8.7.1.1 is exec |
| 8.7.1.1_H.3 | FDD Sustained data rate performance for CA (3DL CA) for 256QAM in DL | Rel-12 | C126h | UE supporting E-UTRA FDD and 3DL CA ,and supporting 256QAM in DL (UE DL category 11, 12 and 15) | | 2Rx, 4Rx | Test executi necess 8.7.1.1 is exec |
| | | Rel-12 | C126ha | UE supporting E-UTRA FDD and 3DL CA ,and supporting 256QAM in DL and supporting at most 40MHz aggregated bandwidth (UE DL category 13) | | | Test executi necess 8.7.1.1 is exec |
| 8.7.1.1_H.4 | FDD Sustained data rate performance for CA (4DL CA) for 256QAM in DL | Rel-13 | C189h | UE supporting E-UTRA FDD and 4DL with CA configurations in Table 4.1-4 and supporting 256QAM in DL | | | Test executi necess 8.7.1.1 is exec |
| 8.7.1.1_H.5 | FDD Sustained data rate performance for CA (5DL CA) for 256QAM in DL | Rel-13 | C266h | UE supporting E-UTRA FDD and 5DL with CA configurations in Table 4.1-5 and supporting 256QAM in DL | | | |
| 8.7.2.1 | TDD sustained data rate performance (Rel-9 and forward) | Rel-9 | C111 | UE supporting E-UTRA TDD and not supporting 256QAM in DL (UE categories from 1 to 4) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | It is not necess for CA and EPDCC UEs to tested test if 8.7.2.1 or 8.7.4 execute |
| 8.7.2.1_1 | TDD sustained data rate performance (Rel-10 and forward) | Rel-10 | C73 | UE supporting E-UTRA TDD and not supporting 256QAM in DL (UE category 6 and 7) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | It is not necess for CA and EPDCC UEs to tested test if 8.7.2.1 r 8.7.4. execute |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|-----------|----------|------|--------|------|
| | | | Condition | Comments | | | |
| 8.7.2.1_2 | TDD sustained data rate performance for UE category 1bis | Rel-13 | C156f | UE supporting E-UTRA TDD (UE category 1bis) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.7.2.1_A.1 | TDD sustained data rate performance for CA (2DL CA) | Rel-10 | C74 | UE supporting E-UTRA TDD and intra-band contiguous DL CA or inter-band DL CA and not supporting 256QAM in DL (UE category 6, 7, 9 and 10) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | Test executi necess 8.7.2.1 is exec |
| | | Rel-11 | C75 | UE supporting E-UTRA TDD and intra-band non-contiguous DL CA and not supporting 256QAM in DL (UE category 6, 7, 9 and 10) | | | |
| 8.7.2.1_A.2 | TDD Sustained data rate performance for CA (3DL CA) | Rel-10 | C130 | UE supporting E-UTRA TDD and 3DL with CA configurations in Table 4.1-3 and not supporting 256QAM in DL (UE category 9, 10, 11 and 12) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | Test executi necess 8.7.2.1 is exec |
| | | Rel-11 | C131 | UE supporting E-UTRA TDD and 3DL with CA configurations in Table 4.1-3 and not supporting 256QAM in DL (UE category 9, 10, 11 and 12) | | | |
| 8.7.2.1_A.3 | TDD Sustained data rate performance for CA (4DL CA) | Rel-11 | C213 | UE supporting E-UTRA TDD and 4DL CA configurations in Table 4.1-3 (UE DL category 11, 12 and 15) | Refer to 36.521-1 8.1.2.3 | 2Rx, 4Rx | Test executi necess 8.7.2.1 is exec |
| 8.7.2.1_H.1 | TDD sustained data rate performance (Single Carrier) for 256QAM in DL | Rel-12 | C73h | UE supporting E-UTRA TDD and 256QAM in DL and UE DL category 13 | | | Test executi necess 8.7.2.1 is exec |
| 8.7.2.1_H.2 | TDD sustained data rate performance for CA (2DL CA) for 256QAM in DL | Rel-12 | C74h | UE supporting E-UTRA TDD and 2DL CA, and supporting 256QAM in DL (UE DL category 11, 12 and 13) | | 2Rx, 4Rx | Test executi necess 8.7.2.1 is exec |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|--------------|--------------|-----------------------------|--------|-------------|
| | | | **Condition** | **Comments** | | | |
| 8.7.2.1_H.3 | TDD Sustained data rate performance for CA (3DL CA) for 256QAM in DL | Rel-12 | C130h | UE supporting E-UTRA TDD and 3DL CA and supporting 256QAM in DL (UE DL Category 11, 12 and 15) | | 2Rx, 4Rx | Test executi necess 8.7.2.1 is exec |
| 8.7.3.1 | FDD sustained data rate performance for EPDCCH scheduling | Rel-11 | C55 | UE supporting E-UTRA FDD and EPDCCH | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.7.4.1 | TDD sustained data rate performance for EPDCCH scheduling | Rel-11 | C56 | UE supporting E-UTRA TDD and EPDCCH | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.7.5.1.1 | TDD FDD CA Sustained data rate performance for FDD PCell (2DL CA) | Rel-12 | C138 | UE supporting E-UTRA FDD and TDD and 2DL CA with FDD as PCell and not supporting 256QAM in DL (UE category 3, 4, 6, 7, 9 and 10) | TBD | 2Rx, 4Rx | Test executi necess 8.7.5.1 execut |
| 8.7.5.1.2 | TDD FDD CA Sustained data rate performance for FDD PCell (3DL CA) | Rel-12 | C139 | UE supporting E-UTRA FDD and TDD and 3DL CA with FDD as PCell and not supporting 256QAM in DL (UE category 9, 10, 11 and 12) | TBD | 2Rx, 4Rx | Test executi necess 8.7.5.1 execut |
| 8.7.5.1.3 | TDD FDD CA Sustained data rate performance for FDD PCell (4DL CA) | Rel-12 | C139a | UE supporting E-UTRA FDD and TDD and 4DL CA with FDD as PCell and not supporting 256QAM in DL (UE category 11 and 12) | TBD | 2Rx, 4Rx | Test executi necess 8.7.5.1 execut |
| 8.7.5.1.4 | TDD FDD CA Sustained data rate performance for FDD PCell (5DL CA) | Rel-12 | C139b | UE supporting E-UTRA FDD and TDD and 5DL CA with FDD as PCell and not supporting 256QAM in DL (UE DL category 15) | TBD | 2Rx, 4Rx | |
| 8.7.5.1_H.1 | TDD FDD CA Sustained data rate performance for FDD PCell (2DL CA) for 256QAM in DL | Rel-12 | C138h | UE supporting E-UTRA FDD and TDD and 2DL TDD-FDD CA with FDD as PCell and supporting 256QAM in DL (UE DL category 11, 12 and 13) | | 2Rx, 4Rx | Test executi necess 8.7.5.1 is exec |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|-----------|----------|--------------------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| 8.7.5.1_ H.2 | TDD FDD CA Sustained data rate performance for FDD PCell (3DL CA) for 256QAM in DL | Rel-12 | C139h | UE supporting E-UTRA FDD and TDD and 3DL TDD-FDD CA with FDD as PCell and supporting 256QAM in DL (UE DL Category 11, 12 and 15) | | 2Rx, 4Rx | Test executi necess 8.7.5.1 is exec |
| 8.7.5.1_ H.3 | TDD FDD CA Sustained data rate performance for FDD PCell (4DL CA) for 256QAM in DL | Rel-12 | C139ha | UE supporting E-UTRA FDD and TDD and 4DL TDD-FDD CA with FDD as PCell and supporting 256QAM in DL | | | Test executi necess 8.7.5.1 is exec |
| 8.7.5.1_ H.4 | TDD FDD CA Sustained data rate performance for FDD PCell (5DL CA) for 256QAM in DL | Rel-12 | C139hb | UE supporting E-UTRA FDD and TDD and 5DL TDD-FDD CA with FDD as PCell and supporting 256QAM in DL | | | |
| 8.7.5.2.1 | TDD FDD CA Sustained data rate performance for TDD PCell (2DL CA) | Rel-12 | C140 | UE supporting E-UTRA FDD and TDD and 2DL CA with TDD as PCell and not supporting 256QAM in DL (UE category 3, 4, 6, 7, 9 and 10) | TBD | 2Rx, 4Rx | Test executi necess 8.7.5.2 execut |
| 8.7.5.2.2 | TDD FDD CA Sustained data rate performance for TDD PCell (3DL CA) | Rel-12 | C141 | UE supporting E-UTRA FDD and TDD and 3DL CA with TDD as PCell and not supporting 256QAM in DL (UE category 9, 10, 11 and 12) | TBD | 2Rx, 4Rx | Test executi necess 8.7.5.2 execut |
| 8.7.5.2.3 | TDD FDD CA Sustained data rate performance for TDD PCell (4DL CA) | Rel-12 | C141a | UE supporting E-UTRA FDD and TDD and 4DL CA with TDD as PCell and not supporting 256QAM in DL (UE category 11 and 12) | TBD | 2Rx, 4Rx | Test executi necess 8.7.5.2 execut |
| 8.7.5.2.4 | TDD FDD CA Sustained data rate performance for TDD PCell (5DL CA) | Rel-12 | C141b | UE supporting E-UTRA FDD and TDD and 5DL CA with TDD as PCell and not supporting 256QAM in DL (UE category 15) | TBD | 2Rx, 4Rx | |
| 8.7.5.2_ H.1 | TDD FDD CA Sustained data rate performance for TDD PCell (2DL CA) for 256QAM in DL | Rel-12 | C140h | UE supporting E-UTRA FDD and TDD and 2DL TDD-FDD CA with TDD as PCell and supporting 256QAM in DL (UE DL Category 11, 12 and 13) | | 2Rx, 4Rx | Test executi necess 8.7.5.2 is exec |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | | | Condition | Comments | | | |
| 8.7.5.2_H.2 | TDD FDD CA Sustained data rate performance for TDD PCell (3DL CA) for 256QAM in DL | Rel-12 | C141h | UE supporting E-UTRA FDD and TDD and 3DL TDD-FDD CA with TDD as PCell and supporting 256QAM in DL (UE DL Category 11, 12 and 15) | | 2Rx, 4Rx | Test executi necess 8.7.5.2 is exec |
| 8.7.6.1 | FDD sustained data rate performance for Dual Connectivity 64QAM | Rel-12 | C171 | UE supporting E-UTRA FDD and Dual Connectivity and not supporting 256QAM in DL (UE Category 3, 4, 6, 7, 9, and 10) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 8.7.6.2 | FDD sustained data rate performance for Dual Connectivity 256QAM | Rel-12 | C173 | UE supporting E-UTRA FDD and Dual Connectivity and supporting 256QAM in DL | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 8.7.7.1 | TDD sustained data rate performance for Dual Connectivity 64QAM | Rel-12 | C172 | UE supporting E-UTRA TDD and Dual Connectivity and not supporting 256QAM in DL (UE Category 6, 7, 9, and 10) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 8.7.7.2 | TDD sustained data rate performance for Dual Connectivity 256QAM | Rel-12 | C174 | UE supporting E-UTRA TDD and Dual Connectivity and supporting 256QAM in DL | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 8.7.9.2 | FDD sustained data rate performance for 4 layer MIMO (single carrier) | Rel-10 | C226 | UE supporting E-UTRA FDD with 4Rx antenna ports and 4-layer spatial multiplexing (UE Category 6 and 7 and UE DL category 13) | One "Test Number" to be performed. The selected band shall lead to the largest equivalent aggregated bandwidth [Note 3] supported by UE. | | Test executi necess anothe case in clause is exec where equival aggreg bandwi can be achieve |
| 8.7.9.3 | FDD sustained data rate performance for 4 layer MIMO (2DL CA) | Rel-10 | C227 | UE supporting 2DL FDD CA with 4Rx antenna ports and 4-layer spatial multiplexing and intra-band contiguous DL CA or inter-band DL CA (UE Category 9, 10, 11 and 12 and UE DL category 9, 10, 11, 12 and 15) | One "Test Number" to be performed. The selected CA configuration shall lead to the largest equivalent aggregated bandwidth [Note 3] supported by UE. | | Test executi necess anothe case in clause is exec where equival aggreg bandwi can be achieve |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|----------------|---|---------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| | | Rel-11 | C228 | UE supporting 2DL FDD CA with 4Rx antenna ports and 4-layer spatial multiplexing and intra-band non-contiguous DL CA (UE Category 9, 10, 11 and 12 and UE DL category 9, 10, 11, 12 and 15) | | | |
| 8.7.9.4 | FDD sustained data rate performance for 4 layer MIMO (3DL CA) | Rel-10 | C229 | UE supporting 3DL FDD CA with 4Rx antenna ports and 4-layer spatial multiplexing and 3DL with CA configurations in Table 4.1-3 (UE Category 11 and 12 and UE DL category 11, 12, 15, 16 and 18) | One "Test Number" to be performed, in a chosen CA configuration, which leads to the largest equivalent aggregated bandwidth Note 3 supported by UE. | | Test executi necess anothe case in clause is exec where equival aggreg bandwi can be achieve |
| | | Rel-11 | C230 | UE supporting 3DL FDD CA with 4Rx antenna ports and 4-layer spatial multiplexing and 3DL with CA configurations in Table 4.1-3 and 4Rx antenna ports and 4-layer spatial multiplexing (UE Category 11 and 12 and UE DL category 11, 12, 15, 16 and 18) | | | |
| 8.7.9.5 | FDD sustained data rate performance for 4 layer MIMO (4DL CA) | Rel-11 | C236 | UE supporting 4DL FDD CA with 4Rx antenna ports and 4-layer spatial multiplexing and 4DL with CA configurations in Table 4.1-4 (UE DL category 15, 16, 18 and 19) | One "Test Number" to be performed, in a chosen CA configuration, which leads to the largest equivalent aggregated bandwidth Note 3 supported by UE. | | Test executi necess anothe case in clause is exec where equival aggreg bandwi can be achieve |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 8.7.9.6 | FDD sustained data rate performance for 4 layer MIMO (5DL CA) | Rel-11 | C237 | UE supporting 5DL FDD CA with 4Rx antenna ports and 4-layer spatial multiplexing and 5DL with CA configurations in Table 4.1-5 (UE DL category 15, 16, 18 and 19) | One "Test Number" to be performed, in a chosen CA configuration, which leads to the largest equivalent aggregated bandwidth Note 3 supported by UE. | | Test executi necess anothe case in clause is exec where equival aggreg bandwi can be achieve |
| | | Rel-12 | C238 | UE supporting 5DL FDD CA with 4Rx antenna ports and 4-layer spatial multiplexing and 5DL with CA configurations in Table 4.1-5 (UE DL category 15, 16, 18 and 19) | | | |
| 8.7.10.2 | TDD sustained data rate performance for 4 layer MIMO (single carrier) | Rel-10 | C239 | UE supporting E-UTRA TDD with 4Rx antenna ports and 4-layer spatial multiplexing (UE Category 6 and 7 and UE DL category 13) | One "Test Number" to be performed, in a chosen CA configuration, which leads to the largest equivalent aggregated bandwidth Note 3 supported by UE. | | Test executi necess anothe case in clause is exec where equival aggreg bandwi can be achieve |
| 8.7.10.3 | TDD sustained data rate performance for 4 layer MIMO (2DL CA) | Rel-10 | C240 | UE supporting 2DL TDD CA with 4Rx antenna ports and 4-layer spatial multiplexing and intra-band contiguous DL CA or inter-band DL CA (UE Category 9, 10, 11 and 12 and UE DL category 9, 10, 11, 12 and 15) | One "Test Number" to be performed, in a chosen CA configuration, which leads to the largest equivalent aggregated bandwidth Note 3 supported by UE. | | Test executi necess anothe case in clause is exec where equival aggreg bandwi can be achieve |
| | | Rel-11 | C241 | UE supporting 2DL TDD CA with 4Rx antenna ports and 4-layer spatial multiplexing and intra-band non-contiguous DL CA (UE Category 9, 10, 11 and 12 and UE DL category 9, 10, 11, 12 and 15) | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 8.7.10.4 | TDD sustained data rate performance for 4 layer MIMO (3DL CA) | Rel-10 | C242 | UE supporting 3DL TDD CA with 4Rx antenna ports and 4-layer spatial multiplexing and 3DL with CA configurations in Table 4.1-3 (UE Category 11 and 12 and UE DL category 11, 12, 15, 16 and 18) | One "Test Number" to be performed, in a chosen CA configuration, which leads to the largest equivalent aggregated bandwidth Note 3 supported by UE. | | Test executi necess anothe case in clause is exec where equival aggreg bandwi can be achieve |
| | | Rel-11 | C243 | UE supporting 3DL TDD CA with 4Rx antenna ports and 4-layer spatial multiplexing and 3DL with CA configurations in Table 4.1-3 (UE Category 11 and 12 and UE DL category 11, 12, 15, 16 and 18) | | | |
| 8.7.10.5 | TDD sustained data rate performance for 4 layer MIMO (4DL CA) | Rel-11 | C244 | UE supporting 4DL TDD CA with 4Rx antenna ports and 4-layer spatial multiplexing and 4DL with CA configurations in Table 4.1-4 (UE DL category 16, 18 and 19) | One "Test Number" to be performed, in a chosen CA configuration, which leads to the largest equivalent aggregated bandwidth Note 3 supported by UE. | | Test executi necess anothe case in clause is exec where equival aggreg bandwi can be achieve |
| 8.7.10.6 | TDD sustained data rate performance for 4 layer MIMO (5DL CA) | Rel-11 | C245 | UE supporting 5DL TDD CA with 4Rx antenna ports and 4-layer spatial multiplexing and 5DL with CA configurations in Table 4.1-5 (UE DL category 18 and 19) | One "Test Number" to be performed, in a chosen CA configuration, which leads to the largest equivalent aggregated bandwidth Note 3 supported by UE. | | Test executi necess anothe case in clause is exec where equival aggreg bandwi can be achieve |
| | | Rel-12 | C246 | UE supporting 5DL TDD CA with 4Rx antenna ports and 4-layer spatial multiplexing and 5DL with CA configurations in Table 4.1-5 (UE DL category 18 and 19) | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|--------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 8.7.11.2 | TDD FDD CA sustained data rate performance for 4 layer MIMO (2DL CA) | Rel-12 | C247 | UE supporting 2DL FDD-TDD CA with 4Rx antenna ports and 4-layer spatial multiplexing (UE Category 9, 10, 11 and 12 and UE DL category 9, 10, 11, 12 and 15) | One "Test Number" to be performed, in a chosen CA configuration, which leads to the largest equivalent aggregated bandwidth Note 3 supported by UE. | | Test executi necess anothe case in clause is exec where equival aggreg bandwi can be achieve |
| 8.7.11.3 | TDD FDD CA sustained data rate performance for 4 layer MIMO (3DL CA) | Rel-12 | C248 | UE supporting 3DL FDD-TDD CA with 4Rx antenna ports and 4-layer spatial multiplexing (UE Category 11 and 12 and UE DL category 11, 12, 15, 16 and 18) | One "Test Number" to be performed, in a chosen CA configuration, which leads to the largest equivalent aggregated bandwidth Note 3 supported by UE. | | Test executi necess anothe case in clause is exec where equival aggreg bandwi can be achieve |
| 8.7.11.4 | TDD FDD CA sustained data rate performance for 4 layer MIMO (4DL CA) | Rel-12 | C249 | UE supporting 4DL FDD-TDD CA with 4Rx antenna ports and 4-layer spatial multiplexing (UE DL category 15, 16, 18 and 19) | One "Test Number" to be performed, in a chosen CA configuration, which leads to the largest equivalent aggregated bandwidth Note 3 supported by UE. | | Test executi necess anothe case in clause is exec where equival aggreg bandwi can be achieve |
| 8.7.11.5 | TDD FDD CA sustained data rate performance for 4 layer MIMO (5DL CA) | Rel-12 | C250 | UE supporting 5DL FDD-TDD CA with 4Rx antenna ports and 4-layer spatial multiplexing (UE DL category 16, 18 and 19) | One "Test Number" to be performed, in a chosen CA configuration, which leads to the largest equivalent aggregated bandwidth Note 3 supported by UE. | | Test executi necess anothe case in clause is exec where equival aggreg bandwi can be achieve |
| 8.8.1.1 | FDD distributed EPDCCH performance | Rel-11 | C55 | UE supporting E-UTRA FDD and EPDCCH | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.8.1.2 | TDD distributed EPDCCH performance | Rel-11 | C56 | UE supporting E-UTRA TDD and EPDCCH | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 8.8.2.1 | FDD localized EPDCCH performance with TM9 | Rel-11 | C91 | UE supporting E-UTRA FDD and EPDCCH and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.8.2.2 | TDD localized EPDCCH performance with TM9 | Rel-11 | C92 | UE supporting E-UTRA TDD and EPDCCH and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.8.3.1 | FDD localized EPDCCH transmission with TM10 Type B quasi co-location type | Rel-11 | C57 | UE supporting E-UTRA FDD and EPDCCH and Multiple CSI processes on a component carrier within a band with PDSCH transmission mode 10 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.8.3.2 | TDD localized EPDCCH transmission with TM10 Type B quasi co-location type | Rel-11 | C58 | UE supporting E-UTRA TDD and EPDCCH and Multiple CSI processes on a component carrier within a band with PDSCH transmission mode 10 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.8.4.1 | FDD Enhanced Downlink Control Channel Performance Requirements Type A for EDPCCH - Localized Transmission with CRS Interference Model | Rel-13 | C289 | E-UTRA FDD UEs supporting Enhanced downlink control channel performance requirements type A | | | |
| 8.8.4.2 | TDD Enhanced Downlink Control Channel Performance Requirements Type A for EDPCCH - Localized Transmission with CRS Interference Model | Rel-13 | C290 | E-UTRA TDD UEs supporting Enhanced downlink control channel performance requirements type A | | | |
| 8.8.5.1 | TDD Enhanced Downlink Control Channel Performance Requirements Type A for EDPCCH - Distributed Transmission with TM9 Interference Model | Rel-13 | C290 | E-UTRA TDD UEs supporting Enhanced downlink control channel performance requirements type A | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|-------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 8.8.6.1 | FDD Enhanced Downlink Control Channel Performance Type A for EDPCCH-Distributed Transmission with TM3 Interference Model | Rel-13 | C289 | E-UTRA FDD UEs supporting Enhanced downlink control channel performance requirements type A | | | |
| 8.9.1.1.1 | Transmit diversity performance for UE category 0 (Cell-Specific Reference Symbols) | Rel-12 | C145 | UE supporting E-UTRA FDD (UE category 0) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.9.1.1.1_1 | FDD PDSCH Transmit Diversity 4x1 for UE category 1bis | Rel-13 | C145d | UE supporting E-UTRA FDD (UE category 1bis) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.9.1.1.2 | FDD closed-loop spatial multiplexing performance (Cell-Specific Reference Symbols) | Rel-12 | C145 | UE supporting E-UTRA FDD (UE category 0) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.9.1.1.2_1 | FDD PDSCH Closed Loop Single Layer Spatial Multiplexing 4x1 for UE Category 1bis | Rel-13 | C145d | UE supporting E-UTRA FDD (UE category 1bis) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.9.1.1.3 | FDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 for UE category 0 | Rel-12 | C157 | UE supporting E-UTRA FDD (UE category 0) and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.9.1.1.3_1 | FDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 for UE category 1bis | Rel-13 | C157a | UE supporting E-UTRA FDD (UE category 1bis) and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.9.1.2.1 | TDD PDSCH Transmit Diversity for UE category 0 | Rel-12 | C156 | UE supporting E-UTRA TDD (UE category 0) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.9.1.2.1_1 | TDD PDSCH Transmit Diversity for UE category 1bis | Rel-13 | C156f | UE supporting E-UTRA TDD (UE category 1bis) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.9.1.2.2 | TDD closed-loop spatial multiplexing performance (Cell-Specific Reference Symbols) | Rel-12 | C145 | UE supporting E-UTRA FDD (UE category 0) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | **Condition** | **Comments** | | | |
| 8.9.1.2.2 _1 | TDD PDSCH Closed Loop Single Layer Spatial Multiplexing 2x1 for UE Category 1bis | Rel-13 | C156f | UE supporting E-UTRA TDD (UE category 1bis) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.9.1.2.3 | TDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 for UE category 0 | Rel-12 | C158 | UE supporting E-UTRA TDD (UE category 0) and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.9.1.2.3 _1 | TDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 for UE category 1bis | Rel-13 | C158a | UE supporting E-UTRA TDD (UE category 1bis) and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.9.2.1.1 | FDD PHICH Transmit Diversity for UE category 0 | Rel-12 | C145 | UE supporting E-UTRA FDD (UE category 0) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.9.2.1.1 _1 | FDD PHICH Transmit Diversity for UE category 1bis | Rel-13 | C145d | UE supporting E-UTRA FDD (UE category 1bis) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.9.2.2.1 | TDD PHICH Transmit Diversity for UE category 0 | Rel-12 | C156 | UE supporting E-UTRA TDD (UE category 0) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.9.2.2.1 _1 | TDD PHICH Transmit Diversity for UE category 1bis | Rel-13 | C156f | UE supporting E-UTRA TDD (UE category 1bis) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.10.1.1.1 | FDD PDSCH Transmit Diversity 2x4 | Rel-10 | C113b | UE supporting E-UTRA FDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.1.1.2 | FDD PDSCH Open Loop Spatial Multiplexing 2x4 | Rel-10 | C113b | UE supporting E-UTRA FDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|--------------|--------------|----------------------|--------|---------------|
| | | | **Condition** | **Comments** | | | |
| 8.10.1.1.3 | FDD PDSCH Closed Loop Single Layer Spatial Multiplexing 2x4 with TM4 Interference Model – Enhanced Performance Requirement Type A | Rel-11 | C113d | UE supporting E-UTRA FDD with 4Rx antenna ports and the enhanced performance requirements type A for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.1.1.4 | FDD PDSCH Closed Loop Spatial Multiplexing 4x4 | Rel-10 | C113b | UE supporting E-UTRA FDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.1.1.5 | FDD PDSCH Single-layer Spatial Multiplexing 2x4 on antenna ports 7 or 8 with TM9 interference model – Enhanced Performance Requirement Type A | Rel-11 | C113e | UE supporting E-UTRA FDD with 4Rx antenna ports and the enhanced performance requirements type A for LTE and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.1.1.6 | FDD Dual-Layer Spatial Multiplexing 2x4 (User-Specific Reference Symbols) | Rel-10 | C113c | UE supporting E-UTRA FDD and Feature Group Indicator 103 and 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.1.1.7 | FDD Open-loop spatial multiplexing, 3 Layer Multiplexing with 4 Tx Antenna Ports | Rel-10 | C220 | UE supporting E-UTRA FDD with 4Rx antenna ports and 3-layer spatial multiplexing | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.1.1.8 | FDD Closed-loop spatial multiplexing performance, 4 Layers spatial multiplexing 4 Tx antennas | Rel-10 | C220 | UE supporting E-UTRA FDD with 4Rx antenna ports and 4-layer spatial multiplexing | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.1.1.9 | FDD 4 Layer Spatial Multiplexing (User-Specific Reference Symbols) | Rel-10 | C113c | UE supporting E-UTRA FDD and eDL-MIMO and Feature Group Indicator 103 and 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|--|-------------------------------------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| 8.10.1.2.1 | TDD PDSCH Transmit Diversity 2x4 | Rel-10 | C198 | UE supporting E-UTRA TDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.1.2.2 | TDD PDSCH Open Loop Spatial Multiplexing 2x4 | Rel-10 | C198 | UE supporting E-UTRA TDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.1.2.3 | TDD PDSCH Closed Loop Single Layer Spatial Multiplexing 2x4 with TM4 Interference Model – Enhanced Performance Requirement Type A | Rel-11 | C198 a | UE supporting E-UTRA TDD with 4Rx antenna ports and the enhanced performance requirements type A for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.1.2.4 | TDD PDSCH Closed Loop Spatial Multiplexing 4x4 | Rel-10 | C198 | UE supporting E-UTRA TDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.1.2.5 | TDD PDSCH Single-layer Spatial Multiplexing 2x4 on antenna ports 7 or 8 with TM9 interference model – Enhanced Performance Requirement Type A | Rel-11 | C198 c | UE supporting E-UTRA TDD with 4Rx antenna ports and the enhanced performance requirements type A for LTE and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.1.2.6 | TDD Dual-Layer Spatial Multiplexing 2x4 (User-Specific Reference Symbols) | Rel-10 | C198 b | UE supporting E-UTRA TDD with 4Rx antenna ports and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.1.2.7 | TDD Open-loop spatial multiplexing, 3 Layer Multiplexing with 4 Tx Antenna Ports | Rel-10 | C235 | UE supporting E-UTRA TDD with 4Rx antenna ports and 3-layer spatial multiplexing | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|--|--------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 8.10.1.2.8 | TDD Closed-loop spatial multiplexing performance, 4 Layers spatial multiplexing 4 Tx antennas | Rel-10 | C235 | UE supporting E-UTRA TDD with 4Rx antenna ports and 4-layer spatial multiplexing | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.1.2.9 | TDD 4 Layer Spatial Multiplexing (User-Specific Reference Symbols) | Rel-10 | C183 | UE supporting E-UTRA FDD and Feature Group Indicator 103 and 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.2.1.1 | FDD PCFICH/PDCCH Single-antenna Port Performance 1x4 | Rel-10 | C113b | UE supporting E-UTRA FDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.2.1.2 | FDD PCFICH/PDCCH Transmit Diversity Performance 2x4 | Rel-10 | C113b | UE supporting E-UTRA FDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.2.1.3 | FDD PCFICH/PDCCH Transmit Diversity Performance 4x4 | Rel-10 | C113b | UE supporting E-UTRA FDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.2.2.1 | TDD PCFICH/PDCCH Single-antenna Port Performance 1x4 | Rel-10 | C184 | UE supporting E-UTRA TDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.2.2.2 | TDD PCFICH/PDCCH Transmit Diversity Performance 2x4 | Rel-10 | C184 | UE supporting E-UTRA TDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.2.2.3 | TDD PCFICH/PDCCH Transmit Diversity Performance 4x4 | Rel-10 | C184 | UE supporting E-UTRA TDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 8.10.3.1.1 | FDD PHICH Single-antenna Port Performance 1x4 | Rel-10 | C113b | UE supporting E-UTRA FDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.3.1.2 | FDD PHICH Transmit Diversity Performance 2x4 | Rel-10 | C113b | UE supporting E-UTRA FDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.3.1.3 | FDD PHICH Transmit Diversity Performance 4x4 | Rel-10 | C113b | UE supporting E-UTRA FDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.3.2.1 | TDD PHICH Single-antenna Port Performance 1x4 | Rel-10 | C184 | UE supporting E-UTRA TDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.3.2.2 | TDD PHICH Transmit Diversity Performance 2x4 | Rel-10 | C184 | UE supporting E-UTRA TDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.3.2.3 | TDD PHICH Transmit Diversity Performance 4x4 | Rel-10 | C184 | UE supporting E-UTRA TDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.4.1.1 | FDD distributed EPDCCH performance 2x4 | Rel-10 | C164 | UE supporting E-UTRA FDD and EPDCCH with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.4.1.2 | TDD distributed EPDCCH performance 2x4 | Rel-10 | C165 | UE supporting E-UTRA TDD and EPDCCH with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Additi Inform |
|--------|-------|---------|-----------|----------|-------------------|--------|---------|
| | | | Condition | Comments | | | |
| 8.10.4.2.1 | FDD localized EPDCCH performance with TM9 2x4 | Rel-10 | C166 | UE supporting E-UTRA FDD and EPDCCH and Feature Group Indicator 103 with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.10.4.2.2 | TDD localized EPDCCH performance with TM9 2x4 | Rel-10 | C167 | UE supporting E-UTRA TDD and EPDCCH and Feature Group Indicator 103 with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 8.11.1.1.1 | FDD and half-duplex FDD Closed-loop spatial multiplexing performance for UE supporting CE | Rel-13 | C145e | UE supporting E-UTRA FDD and UE category M1 and TM6 in CE Mode A | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| | | Rel-14 | C145x | UE supporting E-UTRA FDD and UE category M2 and TM6 in CE Mode A | | | |
| 8.11.1.1.2 | FDD and half-duplex FDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 for UE supporting CE | Rel-13 | C145y | UE supporting E-UTRA FDD and UE category M1 and TM9 in CE Mode A | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| | | Rel-14 | C145z | UE supporting E-UTRA FDD and UE category M2 and TM9 in CE Mode A | | | |
| 8.11.1.1.3.1 | FDD and half-duplex FDD PDSCH Transmit Diversity 2x1 for UE category M1 | Rel-13 | C145a | UE supporting E-UTRA FDD and UE category M1 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.11.1.1.3.1_1 | FDD and half-duplex FDD PDSCH Transmit Diversity 2x1 for UE category M1 (CEmodeB) | Rel-13 | C156c | UE supporting E-UTRA FDD and (UE category M1 and CE Mode B) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.11.1.2.1 | TDD Closed-loop spatial multiplexing performance for UE category M1 (Cell-Specific Reference Symbols) | Rel-13 | C156x | UE supporting E-UTRA TDD and UE category M1 and TM6 in CE Mode A | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.11.1.2.2 | TDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 for UE category M1 | Rel-13 | C156e | UE supporting E-UTRA TDD and UE category M1 and TM9 in CE Mode A | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|------|------|------|--------|--------|
| | | | Condition | Comments | | | |
| 8.11.1.2.3.1 | TDD PDSCH Transmit Diversity for UE category M1 | Rel-13 | C156b | UE supporting E-UTRA TDD and UE category M1 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.11.1.2.3.1_1 | TDD PDSCH Transmit Diversity for UE category M1 (CEModeB) | Rel-13 | C156d | UE supporting E-UTRA TDD and UE category M1 and CE Mode B | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 8.11.2.1.1 | FDD demodulation of MPDCCH in CE Mode A | Rel-13 | C145b | UE supporting E-UTRA FDD and (UE category M1 or CE Mode A) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| | | Rel-14 | C314 | UE supporting E-UTRA FDD and (UE category M2 or CE Mode A) | | | |
| 8.11.2.1.2 | FDD and half-duplex FDD demodulation of MPDCCH in CE Mode B | Rel-13 | C156c | UE supporting E-UTRA FDD and (UE category M1 and CE Mode B) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| | | Rel-14 | C315 | UE supporting E-UTRA FDD and (UE category M1 and CE Mode B) | | | |
| 8.11.2.2.1 | TDD demodulation of MPDCCH in CE Mode A | Rel-13 | C156b | UE supporting E-UTRA TDD and (UE category M1 or UE category M2 or CE Mode A) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| | | Rel-14 | C316 | UE supporting E-UTRA TDD and (UE category M2 or CE Mode A) | | | |
| 8.11.2.2.2 | TDD demodulation of MPDCCH in CE Mode B | Rel-13 | C156d | UE supporting E-UTRA TDD and (UE category M1 or UE category M2 and CE Mode B) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| | | Rel-14 | C317 | UE supporting E-UTRA TDD and (UE category M1 and CE Mode B) | | | |
| | | | | | | | |
| 8.12.1.1.1 | Demodulation of NPDSCH (Cell-Specific Reference Symbols) in In-band mode for Category NB1 and NB2 | Rel-13 | C112b | UE supporting category NB1 | Each "Test Number" to be performed once, in a chosen band | | |
| | | Rel-14 | C298 | UE supporting category NB2 | Each "Test Number" to be performed once, in a chosen band | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|-----------|----------|--------------------------------------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| 8.12.1.1.2 | Demodulation of NPDSCH (Cell-Specific Reference Symbols) in standalone and Guard-band mode for category NB1 and NB2 | Rel-13 | C112b | UE supporting category NB1 | Each "Test Number" to be performed once, in a chosen band | | |
| | | Rel-14 | C298 | UE supporting category NB2 | Each "Test Number" to be performed once, in a chosen band | | |
| 8.12.1.1.3 | Demodulation of NPDSCH (Cell-Specific Reference Symbols) in standalone for NB2 | Rel-14 | C298 | UE supporting category NB2 | Each "Test Number" to be performed once, in a chosen band | | |
| 8.12.2.1.1 | Demodulation of NPDCCH single-antenna performance for category NB1 and NB2 | Rel-13 | C112b | UE supporting category NB1 | Each "Test Number" to be performed once, in a chosen band | | |
| | | Rel-14 | C298 | UE supporting category NB2 | Each "Test Number" to be performed once, in a chosen band | | |
| 8.12.2.1.2 | Demodulation of NPDCCH in In-band mode Transmit Diversity performance for Category NB1 and NB2 | Rel-13 | C112b | UE supporting category NB1 | Each "Test Number" to be performed once, in a chosen band | | |
| | | Rel-14 | C298 | UE supporting category NB2 | Each "Test Number" to be performed once, in a chosen band | | |
| 8.13.1.1.3 | FDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 with 256QAM (2DL CA) | Rel-10 | C278 | UE supporting E-UTRA FDD and intra-band contiguous DL CA or inter-band DL CA and 4 Rx antenna ports and 256QAM in DL (UE Category >= 5) | | | |
| | | Rel-11 | C279 | UE supporting E-UTRA FDD and intra-band non-contiguous DL CA and 4 Rx antenna ports and 256QAM in DL (UE Category >= 5) | | | |
| 8.13.1.1.4 | FDD PDSCH Closed Loop Four-Layer Spatial Multiplexing for CA (2DL CA) | Rel-11 | C280 | UE supporting E-UTRA FDD and 2DL CA with 4Rx antenna ports and 4-layer spatial multiplexing (UE Category >= 5) | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 8.13.1.1.1.2 | FDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 (2DL CA) | Rel-10 | C253 | UE supporting E-UTRA FDD and intra-band contiguous DL CA or inter-band DL CA (UE Category >= 5) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.3 | | Test executi necess 8.13.1. or 8.13.1. or 8.13.1. is exec |
| | | Rel-11 | C254 | UE supporting E-UTRA FDD and intra-band non-contiguous DL CA (UE Category >= 5) and 4Rx antenna ports | | | |
| 8.13.1.1.1.3 | FDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 (3DL CA) | Rel-10 | C255 | UE supporting E-UTRA FDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.6.5 | | Test executi necess 8.13.1. or 8.13.1. is exec |
| | | Rel-11 | C256 | UE supporting E-UTRA FDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) and 4Rx antenna ports | | | |
| 8.13.1.1.1.4 | FDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 (4DL CA) | Rel-11 | C257 | UE supporting E-UTRA FDD and 4DL with CA configurations in Table 4.1-4 (UE Category >= 5) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.6.5 | | Test executi necess 8.13.1. is exec |
| 8.13.1.1.1.5 | FDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 (5DL CA) | Rel-11 | C258 | UE supporting E-UTRA FDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >= 11) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.6.5 | | |
| | | Rel-12 | C259 | UE supporting E-UTRA FDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >= 11) and 4Rx antenna ports | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|------------------------------------------|--------|-------------|
| | | | Condition | Comments | | | |
| 8.13.1.2.2 | FDD Dual-Layer Spatial Multiplexing 2x4 (User-Specific Reference Symbols) (2DL CA) | Rel-10 | C253 | UE supporting E-UTRA FDD and intra-band contiguous DL CA or inter-band DL CA (UE Category >= 5) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.6.5 | | Test executi necess 8.13.1. 8.13.1. 8.13.1. execut |
| | | Rel-11 | C254 | UE supporting E-UTRA FDD and intra-band non-contiguous DL CA (UE Category >= 5) and 4Rx antenna ports | | | |
| 8.13.1.2.3 | FDD Dual-Layer Spatial Multiplexing 2x4 (User-Specific Reference Symbols) (3DL CA) | Rel-10 | C255 | UE supporting E-UTRA FDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.6.5 | | Test executi necess 8.13.1. 8.13.1. execut |
| | | Rel-11 | C256 | UE supporting E-UTRA FDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) and 4Rx antenna ports | | | |
| 8.13.1.2.4 | FDD Dual-Layer Spatial Multiplexing 2x4 (User-Specific Reference Symbols) (4DL CA) | Rel-11 | C257 | UE supporting E-UTRA FDD and 4DL with CA configurations in Table 4.1-4 (UE Category >= 5) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.6.5 | | Test executi necess 8.13.1. execut |
| 8.13.1.2.5 | FDD Dual-Layer Spatial Multiplexing 2x4 (User-Specific Reference Symbols) (5DL CA) | Rel-11 | C258 | UE supporting E-UTRA FDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >= 11) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.6.5 | | |
| | | Rel-12 | C259 | UE supporting E-UTRA FDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >= 11) and 4Rx antenna ports | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | **Condition** | **Comments** | | | |
| 8.13.1.3.1 | FDD PDSCH Closed Loop Single Layer Spatial Multiplexing 2x4 with TM4 Interference Model – Enhanced Performance Requirement Type A (2DL CA) | Rel-11 | C281 | UE supporting E-UTRA FDD and 2DL CA with 4Rx antenna ports and the enhanced performance requirements type A (UE Category >= 5) | | | |
| 8.13.1.4.1 | FDD PDSCH Single-layer Spatial Multiplexing 2x4 on antenna ports 7 or 8 with TM9 Interference Model - Enhanced Performance Requirement Type A (2DL CA) | Rel-11 | C282 | UE supporting E-UTRA FDD and 2DL CA with 4Rx antenna ports and the enhanced performance requirements type A and Feature Group Indictor 103 (UE Category >= 5) | | | |
| 8.13.2.1.1.2 | TDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 (2DL CA) | Rel-10 | C291 | UE supporting E-UTRA TDD and intra-band contiguous DL CA or inter-band DL CA (UE Category >= 5) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.3 | | Test executi necess 8.13.2. or 8.13.2. or 8.13.2. is exec |
| | | Rel-11 | C292 | UE supporting E-UTRA TDD and intra-band non-contiguous DL CA (UE Category >= 5) and 4Rx antenna ports | | | |
| 8.13.2.1.1.3 | TDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 (3DL CA) | Rel-10 | C293 | UE supporting E-UTRA TDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.6.5 | | Test executi necess 8.13.2. or 8.13.2. is exec |
| | | Rel-11 | C294 | UE supporting E-UTRA TDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) and 4Rx antenna ports | | | |
| 8.13.2.1.1.4 | TDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 (4DL CA) | Rel-11 | C295 | UE supporting E-UTRA TDD and 4DL with CA configurations in Table 4.1-4 (UE Category >= 5) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.6.5 | | Test executi necess 8.13.2. is exec |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|--------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 8.13.2.1.1.5 | TDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 (5DL CA) | Rel-11 | C296 | UE supporting E-UTRA TDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >= 11) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.6.5 | | |
| | | Rel-12 | C297 | UE supporting E-UTRA TDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >= 11) and 4Rx antenna ports | | | |
| 8.13.2.2.2 | TDD Dual-Layer Spatial Multiplexing 2x4 (User-Specific Reference Symbols) (2DL CA) | Rel-10 | C291 | UE supporting E-UTRA TDD and intra-band contiguous DL CA or inter-band DL CA (UE Category >= 5) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.6.5 | | Test executi necess 8.13.2. 8.13.2. 8.13.2. execute |
| | | Rel-11 | C292 | UE supporting E-UTRA TDD and intra-band non-contiguous DL CA (UE Category >= 5) and 4Rx antenna ports | | | |
| 8.13.2.2.3 | TDD Dual-Layer Spatial Multiplexing 2x4 (User-Specific Reference Symbols) (3DL CA) | Rel-10 | C293 | UE supporting E-UTRA TDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.6.5 | | Test executi necess 8.13.2. 8.13.2. execute |
| | | Rel-11 | C294 | UE supporting E-UTRA TDD and 3DL with CA configurations in Table 4.1-3 (UE Category >= 5) and 4Rx antenna ports | | | |
| 8.13.2.2.4 | TDD Dual-Layer Spatial Multiplexing 2x4 (User-Specific Reference Symbols) (4DL CA) | Rel-11 | C295 | UE supporting E-UTRA TDD and 4DL with CA configurations in Table 4.1-4 (UE Category >= 5) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.6.5 | | Test executi necess 8.13.2. execute |
| 8.13.2.2.5 | TDD Dual-Layer Spatial Multiplexing 2x4 (User-Specific Reference Symbols) (5DL CA) | Rel-11 | C296 | UE supporting E-UTRA TDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >= 11) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.6.5 | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Additi Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| | | Rel-12 | C297 | UE supporting E-UTRA TDD and 5DL with CA configurations in Table 4.1-5 (UE Category 8, >= 11) and 4Rx antenna ports | | | |
| 8.13.2.3.1 | TDD PDSCH Closed Loop Single Layer Spatial Multiplexing 2x4 with TM4 Interference Model – Enhanced Performance Requirement Type A (2DL CA) | Rel-11 | C283 | UE supporting E-UTRA TDD and 2DL CA with 4Rx antenna ports and the enhanced performance requirements type A (UE Category >= 5) | | | |
| 8.13.2.4.1 | TDD PDSCH Single-layer Spatial Multiplexing 2x4 on antenna ports 7 or 8 with TM9 Interference Model - Enhanced Performance Requirement Type A (2DL CA) | Rel-11 | C284 | UE supporting E-UTRA TDD and 2DL CA with 4Rx antenna ports and the enhanced performance requirements type A and Feature Group Indictor 103 (UE Category >= 5) | | | |
| 8.13.3.1.1.2 | TDD-FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 for FDD PCell (2DL CA) | Rel-12 | C306 | UE supporting E-UTRA FDD and TDD and 2DL CA with FDD as PCell (UE Category >= 5) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.3 | | Test executi necess 8.13.3. or 8.13.3. or 8.13.3. is exec |
| 8.13.3.1.1.3 | TDD-FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 for FDD PCell (3DL CA) | Rel-12 | C307 | UE supporting E-UTRA FDD and TDD and 3DL CA with FDD as PCell (UE Category >= 5) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.3 | | Test executi necess 8.13.3. or 8.13.3. is exec |
| 8.13.3.1.1.4 | TDD-FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 for FDD PCell (4DL CA) | Rel-12 | C308 | UE supporting E-UTRA FDD and TDD and 4DL CA with FDD as PCell (UE Category >= 8) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.3 | | Test executi necess 8.13.3. is exec |
| 8.13.3.1.1.5 | TDD-FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 for FDD PCell (5DL CA) | Rel-12 | C309 | UE supporting E-UTRA FDD and TDD and 5DL CA with FDD as PCell (UE Category >= 8) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.3 | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---------------|-------|--------|--------|
| | | | Condition | Comments | | | |
| 8.13.3.1.2.2 | TDD-FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 for TDD PCell (2DL CA) | Rel-12 | C310 | UE supporting E-UTRA FDD and TDD and 2DL CA with TDD as PCell (UE Category >=5) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.3 | | Test executi necess 8.13.3. or 8.13.3. or 8.13.3. is exec |
| 8.13.3.1.2.3 | TDD-FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 for TDD PCell (3DL CA) | Rel-12 | C311 | UE supporting E-UTRA FDD and TDD and 3DL CA with TDD as PCell (UE Category >= 5) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.3 | | Test executi necess 8.13.3. or 8.13.3. is exec |
| 8.13.3.1.2.4 | TDD-FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 for TDD PCell (4DL CA) | Rel-12 | C312 | UE supporting E-UTRA FDD and TDD and 4DL CA with TDD as PCell (UE Category >= 8) | Refer to 36.521-1 8.1.2.3 | | Test executi necess 8.13.3. is exec |
| 8.13.3.1.2.5 | TDD-FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 for TDD PCell (5DL CA) | Rel-12 | C322 | UE supporting E-UTRA FDD and TDD and 5DL CA with TDD as PCell (UE Category 8, and Category11 and onwards) and 4Rx antenna ports | Refer to 36.521-1 8.1.2.3 | | |
| 8.13.3.3.1 | TDD-FDD CA PDSCH Closed Loop Single Layer Spatial Multiplexing 2x4 with TM4 Interference Model-Enhanced Performance Requirement Type A for FDD Pcell (2DL CA) | Rel-12 | C231 | UE supporting E-UTRA FDD and TDD and 2DL CA with 4Rx antenna ports and the enhanced performance requirements type A for LTE and FDD as PCell (UE Category >=5) | | | |
| 8.13.3.3.2 | TDD-FDD CA PDSCH Closed Loop Single Layer Spatial Multiplexing 2x4 with TM4 Interference Model-Enhanced Performance Requirement Type A for TDD Pcell (2DL CA) | Rel-12 | C232 | UE supporting E-UTRA FDD and TDD and 2DL CA with 4Rx antenna ports and the enhanced performance requirements type A for LTE and TDD as PCell (UE Category >=5) | | | |
| 8.13.3.4.1 | TDD-FDD CA PDSCH Single-layer Spatial Multiplexing 2x4 on antenna ports 7 or 8 with TM9 Interference Model - Enhanced Performance Requirement Type A for FDD PCell (2DL CA) | Rel-12 | C233 | UE supporting E-UTRA FDD and TDD and 2DL CA with 4Rx antenna ports and Feature Group Indictor 103 and the enhanced performance requirements type A for LTE and FDD as PCell (UE Category >=5) | | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|----------|--------------------------------------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| 8.13.3.4.2 | TDD-FDD CA PDSCH Single-layer Spatial Multiplexing 2x4 on antenna ports 7 or 8 with TM9 Interference Model - Enhanced Performance Requirement Type A for TDD PCell (2DL CA) | Rel-12 | C234 | UE supporting E-UTRA FDD and TDD and 2DL CA with 4Rx antenna ports and Feature Group Indictor 103 and the enhanced performance requirements type A for LTE and TDD as PCell (UE Category >=5) | | | |
| 8.13.3.6.1 | TDD-FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 with 256QAM for FDD PCell (2DL CA) | Rel-12 | C251 | UE supporting E-UTRA FDD and TDD and 2DL CA with 4Rx antenna ports and 256QAM in DL and FDD as Pcell(UE Category >=5) | | | |
| 8.13.3.6.2 | TDD-FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x4 with 256QAM for TDD PCell (2DL CA) | Rel-12 | C252 | UE supporting E-UTRA FDD and TDD and 2DL CA with 4Rx antenna ports and 256QAM in DL and TDD as Pcell(UE Category >=5) | | | |
| | | | **Reporting of Channel State Information** | | | | |
| 9.2.1.1 | FDD CQI Reporting under AWGN conditions - PUCCH 1-0 | Rel-8 | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.2.1.2 | TDD CQI Reporting under AWGN conditions - PUCCH 1-0 | Rel-8 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.2.1.3_C.1 | FDD CQI Reporting under AWGN conditions - PUCCH 1-0 for eICIC (non-MBSFN ABS) | Rel-10 | C29 | UE supporting E-UTRA FDD and Feature Group Indicator 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | **Condition** | **Comments** | | | |
| 9.2.1.4_ C.1 | TDD CQI Reporting under AWGN conditions - PUCCH 1-0 for eICIC (non-MBSFN ABS) | Rel-10 | C30 | UEs supporting E-UTRA TDD and Feature Group Indictor 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.2.1.5_ E.1 | FDD CQI Reporting under AWGN conditions - PUCCH 1-0 for feICIC (non-MBSFN ABS) | Rel-11 | C77 | UE supporting E-UTRA FDD and CRS interference handling and Feature Group Indicator 115 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.2.1.6_ E.1 | TDD CQI Reporting under AWGN conditions - PUCCH 1-0 for feICIC (non-MBSFN ABS) | Rel-11 | C78 | UE supporting E-UTRA TDD and CRS interference handling and ss-CCH interference handling and Feature Group Indicator 115(UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.2.1.7 | FDD CQI Reporting under AWGN conditions - PUCCH 1-0 for 256QAM in DL | Rel-12 | C01h | UE supporting E-UTRA FDD and 256QAM in DL(UE category 11-12 and UE DL category >=11) | | 2Rx, 4Rx | |
| 9.2.1.8 | TDD CQI Reporting under AWGN conditions - PUCCH 1-0 for 256QAM in DL | Rel-12 | C02h | UE supporting E-UTRA TDD and 256QAM in DL(UE category 11-12 and UE DL category >=11) | | 2Rx, 4Rx | |
| 9.2.2.1 | FDD CQI Reporting under AWGN conditions - PUCCH 1-1 | Rel-8 | C13 b | UE supporting E-UTRA FDD (UE categories >=2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.2.2.2 | TDD CQI Reporting under AWGN conditions - PUCCH 1-1 | Rel-8 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|--|--------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 9.2.3.1_D | FDD CQI Reporting under AWGN conditions - PUCCH 1-1 for eDL-MIMO | Rel-10 | C25 | UE supporting E-UTRA FDD and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.2.3.2_D | TDD CQI Reporting under AWGN conditions - PUCCH 1-1 for eDL-MIMO | Rel-10 | C26 | UE supporting E-UTRA TDD and Feature Group Indicator 104 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.2.4.1_F | FDD CQI Reporting under AWGN conditions - Single CSI Process for CoMP | Rel-11 | C117 | UE supporting E-UTRA FDD and Maximum CSI processes of One, Three or Four on a component carrier within a band with PDSCH transmission mode 10 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.2.4.2_F | TDD CQI Reporting under AWGN conditions - Single CSI Process for CoMP | Rel-11 | C118 | UE supporting E-UTRA TDD and Maximum CSI processes of One, Three or Four on a component carrier within a band with PDSCH transmission mode 10 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.2.5 | TDD CQI Reporting under AWGN conditions – PUCCH 1-1 (when csi-SubframeSet –r12 and EIMTA-MainConfigServCell-r12 are configured) | Rel-12 | C275 | UE supporting E-UTRA TDD and eIMTA TDD UL-DL reconfiguration and Rel-12 CSI subframe sets (UE Category >= 2) | | | |
| 9.2.6.1 | LAA CQI Reporting under AWGN Conditions with Frame Structure Type 3 with FDD as Pcell (PUSCH 3-0) | Rel-13 | C209 | UE supporting E-UTRA FDD and downlink LAA with FDD as Pcell | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 9.2.6.2 | LAA CQI Reporting under AWGN Conditions with Frame Structure Type 3 with TDD as Pcell (PUSCH 3-0) | Rel-13 | C217 | UE supporting E-UTRA TDD and downlink LAA with TDD as Pcell | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.2.7.1 | LAA CQI Reporting under AWGN Conditions with Frame Structure Type 3 with FDD as Pcell (PUSCH 3-1) | Rel-13 | C218 | UE supporting E-UTRA FDD and downlink LAA with FDD as Pcell and TM9 on LAA cells | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.2.7.2 | LAA CQI Reporting under AWGN Conditions with Frame Structure Type 3 with TDD as Pcell (PUSCH 3-1) | Rel-13 | C219 | UE supporting E-UTRA TDD and downlink LAA and TM9 on LAA cells | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.3.1.1.1 | FDD CQI Reporting under fading conditions - PUSCH 3-0 | Rel-8 | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.3.1.1.2 | TDD CQI Reporting under fading conditions - PUSCH 3-0 | Rel-8 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.3.1.1.5 | TDD CQI Reporting under fading conditions – PUCCH 3-0 (when csi-SubframeSet –r12 is configured) | Rel-12 | C276 | UE supporting E-UTRA TDD and Rel-12 CSI subframe sets (UE category >= 1) | | | |
| 9.3.1.2.1_D | FDD CQI Reporting under fading conditions - PUSCH 3-1 for eDL-MIMO | Rel-10 | C25 | UE supporting E-UTRA FDD and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|--------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 9.3.1.2.2 _D | TDD CQI Reporting under fading conditions - PUSCH 3-1 for eDL-MIMO | Rel-10 | C25a | UE supporting E-UTRA TDD and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.3.1.2.3 | FDD CQI Reporting under fading conditions - PUSCH 3-1 for 256QAM in DL | Rel-12 | C260 | UE supporting E-UTRA FDD and 256QAM in DL(UE category 11-12 and UE DL category >=11) and Feature Group Indicator 103 | | 2Rx, 4Rx | |
| 9.3.1.2.4 | TDD CQI Reporting under fading conditions - PUSCH 3-1 for 256QAM in DL | Rel-12 | C261 | UE supporting E-UTRA TDD and 256QAM in DL(UE category 11-12 and UE DL category >=11) and Feature Group Indicator 103 | | 2Rx, 4Rx | |
| 9.3.1.2.6 | TDD CQI Reporting under fading conditions – PUCCH 3-1 (when csi-SubframeSet –r12 is configured with one CSI process) | Rel-12 | C277 | UE supporting E-UTRA TDD and Rel-12 CSI subframe sets and TM10 ( UE Category >= 1). | | 2Rx | |
| 9.3.1.3.1 _E.1 | FDD CQI Reporting under fading conditions - PUSCH 3-0 for feICIC (non-MBSFN ABS) | Rel-11 | C79 | UE supporting E-UTRA FDD and CRS interference handling and Feature Group Indicator 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.3.1.3.2 _E.1 | TDD CQI Reporting under fading conditions - PUSCH 3-0 for feICIC (non-MBSFN ABS) | Rel-11 | C80 | UE supporting E-UTRA TDD and CRS interference handling and ss-CCH interference handling and Feature Group Indicator 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.3.2.1.1 | FDD CQI Reporting under fading conditions - PUCCH 1-0 | Rel-8 | C13 b | UE supporting E-UTRA FDD (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|--------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 9.3.2.1.1_1 | FDD CQI Reporting under fading conditions - PUCCH 1-0 (Release 9 and forward) | Rel-9 | C15 | UE supporting E-UTRA FDD (UE category 1) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.3.2.1.2 | TDD CQI Reporting under fading conditions - PUCCH 1-0 | Rel-8 | C14 | UE supporting E-UTRA TDD (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.3.2.1.2_1 | TDD CQI Reporting under fading conditions - PUCCH 1-0 (Release 9 and forward) | Rel-9 | C16 | UE supporting E-UTRA TDD (UE category 1) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.3.2.2.1_D | FDD CQI Reporting under fading conditions - PUCCH 1-1 for eDL-MIMO | Rel-10 | C25x | UE supporting E-UTRA FDD and Feature Group Indicator 103 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.3.2.2.2_D | TDD CQI Reporting under fading conditions - PUCCH 1-1 for eDL-MIMO | Rel-10 | C28y | UE supporting E-UTRA TDD and Feature Group Indicators 104 and 110 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.3.3.1.1 | FDD CQI Reporting under fading conditions and frequency-selective interference - PUSCH 3-0 | Rel-8 | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.3.3.1.2 | TDD CQI Reporting under fading conditions and frequency-selective interference - PUSCH 3-0 | Rel-8 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |

| Clause | Title | Release | Applicability | | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|---|-------------------------------------------|--------|--------------|
| | | | Condition | | Comments | | | |
| 9.3.4.1.1 | FDD CQI Reporting under fading conditions - PUSCH 2-0 | Rel-9 | C32 | | UE supporting E-UTRA FDD and Feature Group Indicator 1 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.3.4.1.2 | TDD CQI Reporting under fading conditions - PUSCH 2-0 | Rel-9 | C37 | | UE supporting E-UTRA TDD and Feature Group Indicator 1 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.3.4.2.1 | FDD CQI Reporting under fading conditions - PUCCH 2-0 | Rel-9 | C36 | | UE supporting E-UTRA FDD and Feature Group Indicator 2 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.3.4.2.2 | TDD CQI Reporting under fading conditions - PUCCH 2-0 | Rel-9 | C38 | | UE supporting E-UTRA TDD and Feature Group Indicator 2 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|----------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 9.3.5.1.1 | FDD CQI Reporting under fading conditions - PUCCH 1-0 - Enhanced Performance Requirement Type A | Rel-11 | C44 | UE supporting E-UTRA FDD and the enhanced performance requirements type A for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.3.5.1.2 | TDD CQI Reporting under fading conditions - PUCCH 1-0 - Enhanced Performance Requirement Type A | Rel-11 | C45 | UE supporting E-UTRA TDD and the enhanced performance requirements type A for LTE | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.3.5.2.1 | FDD CQI Reporting under fading conditions - PUCCH 1-1 - Enhanced Performance Requirement Type A | Rel-11 | C44z | UE supporting E-UTRA FDD and the enhanced performance requirements type A for LTE (UE Category >= 2) and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.3.5.2.2 | TDD CQI Reporting under fading conditions - PUCCH 1-1 - Enhanced Performance Requirement Type A | Rel-11 | C45i | UE supporting E-UTRA TDD and the enhanced performance requirements type A for LTE (UE Category >= 2) and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.3.6.1_F.1 | FDD CQI Reporting under fading conditions with Single CSI process for CoMP | Rel-11 | C50a | UE supporting E-UTRA FDD and Maximum CSI processes of One on a component carrier within a band with PDSCH transmission mode 10 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.3.6.1_F.2 | FDD CQI Reporting under fading conditions with Three CSI processes for CoMP | Rel-11 | C96 | UE supporting E-UTRA FDD and Maximum CSI processes of Three on a component carrier within a band with PDSCH transmission mode 10 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.3.6.1_F.3 | FDD CQI Reporting under fading conditions with Four CSI processes for CoMP | Rel-11 | C97 | UE supporting E-UTRA FDD and Maximum CSI processes of Four on a component carrier within a band with PDSCH transmission mode 10 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |

*ETSI*

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 9.3.6.2_F.1 | TDD CQI Reporting under fading conditions with Single CSI process for CoMP | Rel-11 | C51a | UE supporting E-UTRA TDD and Maximum CSI processes of One on a component carrier within a band with PDSCH transmission mode 10 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.3.6.2_F.2 | TDD CQI Reporting under fading conditions with Three CSI processes for CoMP | Rel-11 | C98 | UE supporting E-UTRA TDD and Maximum CSI processes of Three on a component carrier within a band with PDSCH transmission mode 10 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.3.6.2_F.3 | TDD CQI Reporting under fading conditions with Four CSI processes for CoMP | Rel-11 | C99 | UE supporting E-UTRA TDD and Maximum CSI processes of Four on a component carrier within a band with PDSCH transmission mode 10 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.3.7.1 | FDD CQI Reporting under fading conditions - PUSCH 3-2 for eDL MIMO Enhancement | Rel-12 | C25 | UE supporting E-UTRA FDD and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | 9.3.7.1 |
| 9.3.7.2 | TDD CQI Reporting under fading conditions - PUSCH 3-2 for eDL MIMO Enhancement | Rel-12 | C25a | UE supporting E-UTRA TDD and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.3.8.1.1 | FDD CQI Reporting under fading conditions - PUCCH 1-1 (Cell-Specific Reference Symbols) TM4 - Enhanced Receiver Type B | Rel-12 | C152 | UE supporting E-UTRA FDD and the enhanced performance requirements type B for LTE (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.3.8.1.2 | TDD CQI Reporting under fading conditions - PUCCH 1-1 (Cell-Specific Reference Symbols) TM4 - Enhanced Receiver Type B | Rel-12 | C153 | UE supporting E-UTRA TDD and the enhanced performance requirements type B for LTE (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 9.3.8.2.1 | FDD CQI Reporting under fading conditions - PUCCH 1-1 (CSI Reference Symbol) TM9 - Enhanced Receiver Type B | Rel-12 | C152 | UE supporting E-UTRA FDD and the enhanced performance requirements type B for LTE (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.3.8.2.2 | TDD CQI Reporting under fading conditions - PUCCH 1-1 (CSI Reference Symbol) TM9 - Enhanced Receiver Type B | Rel-12 | C153 | UE supporting E-UTRA TDD and the enhanced performance requirements type B for LTE (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.3.8.3.1 | FDD CQI Reporting under fading conditions - PUCCH 1-1 (CSI Reference Symbol) TM10 with TM9 interference - Enhanced Receiver Type B | Rel-12 | C152 | UE supporting E-UTRA FDD and the enhanced performance requirements type B for LTE (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.3.8.3.2 | TDD CQI Reporting under fading conditions - PUCCH 1-1 (CSI Reference Symbol) TM10 with TM9 interference - Enhanced Receiver Type B | Rel-12 | C153 | UE supporting E-UTRA TDD and the enhanced performance requirements type B for LTE (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.4.1.1.1 | FDD PMI Reporting - PUSCH 3-1 (Single PMI) | Rel-8 | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.4.1.1.2 | TDD PMI Reporting - PUSCH 3-1 (Single PMI) | Rel-8 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.4.1.2.1 | FDD PMI Reporting - PUCCH 2-1 (Single PMI) | Rel-9 | C36 | UE supporting E-UTRA FDD and Feature Group Indicator 2 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | **Condition** | **Comments** | | | |
| 9.4.1.2.2 | TDD PMI Reporting - PUCCH 2-1 (Single PMI) | Rel-9 | C38 | UE supporting E-UTRA TDD and Feature Group Indicator 2 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.4.1.3.1_D | FDD PMI Reporting - PUSCH 3-1 (Single PMI) for eDL-MIMO | Rel-10 | C25 | UE supporting E-UTRA FDD and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.4.1.3.2_D | TDD PMI Reporting - PUSCH 3-1 (Single PMI) for eDL-MIMO | Rel-10 | C26 | UE supporting E-UTRA TDD and Feature Group Indicator 104 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.4.1.3.3 | FDD PMI Reporting with 12Tx Class A codebook – PUSCH 3-1 (Single PMI) for FD-MIMO | Rel-13 | C01 | UE supporting E-UTRA FDD | | 2Rx, 4Rx | |
| 9.4.1.4.1 | FDD PMI Reporting with 4Tx enhanced codebook - PUCCH 1-1 (Single PMI) for eDL MIMO Enhancement | Rel-12 | C25 | UE supporting E-UTRA FDD and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.4.1.4.2 | TDD PMI Reporting with 4Tx enhanced codebook - PUCCH 1-1 (Single PMI) for eDL MIMO Enhancement | Rel-12 | C25a | UE supporting E-UTRA TDD and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.4.2.1.1 | FDD PMI Reporting - PUSCH 1-2 (Multiple PMI) | Rel-8 only | C11 | UE supporting E-UTRA FDD and operating bands supporting 20 MHz Bandwidth (UE categories 2, 3, 4, 5) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 9.4.2.1.1 _1 | FDD PMI Reporting - PUSCH 1-2 (Multiple PMI) (Release 9 and forward) | Rel-9 | C01 | UE supporting E-UTRA FDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|---------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 9.4.2.1.2 | TDD PMI Reporting - PUSCH 1-2 (Multiple PMI) | Rel-8 only | C12 | UE supporting E-UTRA TDD and operating bands supporting 20 MHz Bandwidth (UE categories 2, 3, 4, 5) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.4.2.1.2_1 | TDD PMI Reporting - PUSCH 1-2 (Multiple PMI) (Release 9 and forward) | Rel-9 | C02 | UE supporting E-UTRA TDD | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.4.2.2.1 | FDD PMI Reporting - PUSCH 2-2 (Multiple PMI) | Rel-9 | C32 | UE supporting E-UTRA FDD and Feature Group Indicators 1 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.4.2.2.2 | TDD PMI Reporting - PUSCH 2-2 (Multiple PMI) | Rel-9 | C33 | UE supporting E-UTRA TDD and Feature Group Indicators 1 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.4.2.3.1_D | FDD PMI Reporting - PUSCH 1-2 (Multiple PMI) for eDL-MIMO | Rel-10 | C25 | UE supporting E-UTRA FDD and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.4.2.3.2_D | TDD PMI Reporting - PUSCH 1-2 (Multiple PMI) for eDL-MIMO | Rel-10 | C26 | UE supporting E-UTRA TDD and Feature Group Indicator 104 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.4.2.3.3 | FDD PMI Reporting with 4Tx enhanced codebook - PUSCH 1-2 (Multiple PMI) for eDL-MIMO Enhancement | Rel-12 | C25 | UE supporting E-UTRA FDD and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|--------------|--|-------------------------------------------|--------|-------------|
| | | | Condition | Comments | | | |
| 9.4.2.3.4 | TDD PMI Reporting with 4Tx enhanced codebook - PUSCH 1-2 (Multiple PMI) for eDL-MIMO Enhancement | Rel-12 | C25a | UE supporting E-UTRA TDD and eDL-MIMO Enhancement and Feature Group Indicator 103 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.5.1.1 | FDD RI Reporting - PUCCH 1-1 | Rel-8 and Rel-9 only | C13a | UE supporting E-UTRA FDD (UE Category 2-5) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.5.1.1_1 | FDD RI Reporting - PUCCH 1-1 (Release 10) | Rel-10 only | C13 | UE supporting E-UTRA FDD (UE Category 2-8) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.5.1.1_2 | FDD RI Reporting- PUCCH 1-1 (Release 11) | Rel-11 | C13b | UE supporting E-UTRA FDD (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.5.1.2 | TDD RI Reporting - PUSCH 3-1 | Rel-8 and Rel-9 only | C14a | UE supporting E-UTRA TDD (UE Category 2-5) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.5.1.2_1 | TDD RI Reporting - PUSCH 3-1 (Release 10) | Rel-10 only | C14 | UE supporting E-UTRA TDD (UE Category 2-8) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.5.1.2_2 | TDD RI Reporting- PUSCH 3-1 (Release 11) | Rel-11 | C14b | UE supporting E-UTRA TDD (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|---|---------------------------------------------|--------|-------------|
| | | | Condition | Comments | | | |
| 9.5.2.1_D | FDD RI Reporting - PUCCH 1-1 for eDL-MIMO | Rel-10 | C25x | UE supporting E-UTRA FDD and Feature Group Indicators 103 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.5.2.2_D | TDD RI Reporting - PUCCH 1-1 for eDL-MIMO | Rel-10 | C25y | UE supporting E-UTRA TDD and Feature Group Indicator 103 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.5.3.1_C.1 | FDD RI Reporting - PUCCH 1-0 for eICIC (non-MBSFN ABS) | Rel-10 | C29 | UE supporting E-UTRA FDD and Feature Group Indicator 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.5.3.2_C.1 | TDD RI Reporting - PUCCH 1-0 for eICIC (non-MBSFN ABS) | Rel-10 | C30 | UE supporting E-UTRA TDD and Feature Group Indicator 115 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.5.4.1_E.1 | FDD RI Reporting - PUCCH 1-0 for feICIC (non-MBSFN ABS) | Rel-11 | C77 | UE supporting E-UTRA FDD and CRS interference handling and Feature Group Indicator 115 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.5.4.2_E.1 | TDD RI Reporting - PUCCH 1-0 for feICIC (non-MBSFN ABS) | Rel-11 | C78 | UE supporting E-UTRA TDD and CRS interference handling and ss-CCH interference handling and Feature Group Indicator 115(UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 9.5.5.1_F.1 | FDD RI Reporting with Single CSI processes for CoMP | Rel-11 | C50 | UE supporting E-UTRA FDD and Maximum CSI processes of One on a component carrier within a band with PDSCH transmission mode 10 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.5.5.1_F.2 | FDD RI Reporting with Multiple CSI processes for CoMP | Rel-11 | C52 | UE supporting E-UTRA FDD and Maximum CSI processes of Three or Four on a component carrier within a band with PDSCH transmission mode 10 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.5.5.2_F.1 | TDD RI Reporting with Single CSI process for CoMP | Rel-11 | C51 | UE supporting E-UTRA TDD and Maximum CSI processes of One on a component carrier within a band with PDSCH transmission mode 10 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.5.5.2_F.2 | TDD RI Reporting with Multiple CSI processes for CoMP | Rel-11 | C53 | UE supporting E-UTRA TDD and Maximum CSI processes of Three or Four on a component carrier within a band with PDSCH transmission mode 10 (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | 2Rx, 4Rx | |
| 9.6.1.1_A.1 | FDD CQI Reporting under AWGN conditions - PUCCH 1-0 for CA (2 DL CA) | Rel-10 | C108 | UE supporting E-UTRA FDD and intra-band contiguous DL CA or inter-band DL CA (UE Category >= 3) | Refer to 36.521-1 9.1.1.2 | 2Rx, 4Rx | Test executi necess 9.6.1.1 is exec |
| | | Rel-11 | C103 | UE supporting E-UTRA FDD and intra-band non-contiguous DL CA(UE Category >= 3) | | | |
| 9.6.1.1_A.2 | FDD CQI Reporting under AWGN conditions - PUCCH 1-0 for CA (3 DL CA) | Rel-10 | C124 | UE supporting E-UTRA FDD and 3DL with intra-band contiguous CA, or 3DL with inter-band CA, or 3DL with intra-band contiguous and inter-band CA (UE Category >= 5) | Refer to 36.521-1 9.1.1.2 | 2Rx, 4Rx | Test executi necess 9.6.1.1 is exec |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|--|-----------------------------|--------|--------------|
|        |       |         | **Condition** | **Comments** | | | |
| | | Rel-11 | C125 | UE supporting E-UTRA FDD and 3DL with intra-band non-contiguous and inter-band CA, or 3DL with intra-band non-contiguous and intra-band contiguous CA (UE Category >= 5) | TBD | 2Rx, 4Rx | Test executi necess 9.6.1.1 is exec |
| 9.6.1.1_A.3 | FDD CQI Reporting under AWGN conditions - PUCCH 1-0 for CA (4DL CA) | Rel-11 | C192 | UE supporting E-UTRA FDD and 4DL with intra-band contiguous CA, or 4DL with inter-band CA, or 4DL with intra-band contiguous and inter-band CA (UE Category >= 8) | | 2Rx, 4Rx | |
| | | Rel-11 | C193 | UE supporting E-UTRA FDD and 4DL with intra-band non-contiguous and inter-band CA, or 4DL with intra-band non-contiguous and intra-band contiguous CA (UE Category >= 8) | | | |
| 9.6.1.1_A.4 | FDD CQI Reporting under AWGN conditions - PUCCH 1-0 for CA (5DL CA) | Rel-11 | C192 a | UE supporting E-UTRA FDD and 5DL with Intra-band contiguous and Inter-band CA or 5DL with Intra-band non-contiguous and Inter-band CA or 5DL with Intra-band non-contiguous and Intra-band contiguous CA (UE Category 8 and >=≥11) | | 2Rx, 4Rx | |
| | | Rel-12 | C193 a | UE supporting E-UTRA FDD and 5DL Inter-band CA (UE Category 8 and>= ≥11) | | | |
| 9.6.1.2_A.1 | TDD CQI Reporting under AWGN conditions - PUCCH 1-0 for CA (2DL CA) | Rel-10 | C114 | UE supporting E-UTRA TDD and intra-band contiguous DL CA (UE Category >=3) | Refer to 36.521-1 9.1.1.2 | 2Rx, 4Rx | Test executi necess 9.6.1.2 is exec |
| 9.6.1.2_A.2 | TDD CQI Reporting under AWGN conditions - PUCCH 1-0 for CA (3 DL CA) | Rel-10 | C128 | UE supporting E-UTRA TDD and 3DL with intra-band contiguous CA, or 3DL with inter-band CA, or 3DL with intra-band contiguous and inter-band CA (UE Category >= 5) | Refer to 36.521-1 9.1.1.2 | 2Rx, 4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|--|--------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| | | Rel-11 | C129 | UE supporting E-UTRA TDD and 3DL with intra-band non-contiguous and inter-band CA, or 3DL with intra-band non-contiguous and intra-band contiguous CA (UE Category >= 5) | | | |
| 9.6.1.2_A.3 | TDD CQI Reporting under AWGN conditions - PUCCH 1-0 for CA (4 DL CA) | Rel-11 | C270 | UE supporting E-UTRA TDD and 4DL with intra-band contiguous CA, or 4DL with inter-band CA, or 4DL with intra-band contiguous and inter-band CA (UE Category >= 8) | | | |
| | | Rel-11 | C271 | UE supporting E-UTRA TDD and 4DL with intra-band non-contiguous and inter-band CA, or 4DL with intra-band non-contiguous and intra-band contiguous CA (UE Category >= 8) | | | |
| 9.6.1.2_A.4 | TDD CQI Reporting under AWGN conditions - PUCCH 1-0 for CA (5 DL CA) | Rel-11 | C272 | UE supporting E-UTRA TDD and 5DL with intra-band contiguous CA, or 5DL with inter-band CA, or 5DL with intra-band contiguous and inter-band CA (UE Category 8 and >=11) | | | |
| | | Rel-11 | C273 | UE supporting E-UTRA TDD and 5DL with intra-band non-contiguous and inter-band CA, or 5DL with intra-band non-contiguous and intra-band contiguous CA (UE Category 8 and >=11) | | | |
| 9.6.1.3.1 | TDD FDD CA CQI Reporting under AWGN conditions - PUCCH 1-0 for FDD PCell (2DL CA) | Rel-12 | C132 | UE supporting E-UTRA FDD and TDD and 2DL CA with FDD as PCell (UE Category >= 3) | TBD | 2Rx, 4Rx | |
| 9.6.1.3.2 | TDD FDD CA CQI Reporting under AWGN conditions - PUCCH 1-0 for FDD PCell (3DL CA) | Rel-12 | C133 | UE supporting E-UTRA FDD and TDD and 3DL CA with FDD as PCell (UE Category >= 5) | TBD | 2Rx, 4Rx | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 9.6.1.3.3 | TDD FDD CA CQI Reporting under AWGN conditions - PUCCH 1-0 for FDD PCell (4DL CA) | Rel-12 | C133 a | UE supporting E-UTRA FDD and TDD and 4DL CA with FDD as PCell (UE Category >= 8) | TBD | 2Rx, 4Rx | |
| 9.6.1.3.4 | TDD FDD CQI Reporting under AWGN conditions – PUCCH 1-0 for FDD PCell (5DL CA) | Rel-12 | C133 b | UE supporting E-UTRA FDD and TDD and 5DL CA with FDD as PCell (UE Category 8, and Category 11 and onwards) | TBD | 2Rx, 4Rx | |
| 9.6.1.4.1 | TDD FDD CA CQI Reporting under AWGN conditions - PUCCH 1-0 for TDD PCell (2DL CA) | Rel-12 | C134 | UE supporting E-UTRA FDD and TDD and 2DL CA with TDD as PCell (UE Category >= 3) | TBD | 2Rx, 4Rx | |
| 9.6.1.4.2 | TDD FDD CA CQI Reporting under AWGN conditions - PUCCH 1-0 for TDD PCell (3DL CA) | Rel-12 | C135 | UE supporting E-UTRA FDD and TDD and 3DL CA with TDD as PCell (UE Category >= 5) | TBD | 2Rx, 4Rx | |
| 9.6.1.4.3 | TDD FDD CA CQI Reporting under AWGN conditions - PUCCH 1-0 for TDD PCell (4DL CA) | Rel-12 | C135 a | UE supporting E-UTRA FDD and TDD and 4DL CA with TDD as PCell (UE Category >= 8) | TBD | 2Rx, 4Rx | |
| 9.6.1.4.4 | TDD FDD CQI Reporting under AWGN conditions – PUCCH 1-0 for TDD PCell (5DL CA) | Rel-12 | C133 b | UE supporting E-UTRA FDD and TDD and 5DL CA with FDD as PCell (UE Category 8, and Category 11 and onwards) | TBD | 2Rx, 4Rx | |
| 9.7.1.1 | FDD and Half duplex FDD CQI reporting definition under AWGN conditions for UE category 0 | Rel-12 | C145 | UE supporting E-UTRA FDD (UE category 0) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.7_1.1.1 | FDD CQI reporting under AWGN conditions – PUCCH 1-0 for UE category 1bis | Rel-13 | C145 d | UE supporting E-UTRA FDD (UE category 1bis) | Each "Test Number" to be performed once, in a chosen band supporting | | |
| 9.7_1.1.2 | TDD CQI reporting under AWGN conditions - PUCCH 1-0 for UE category 1bis | Rel-13 | C156f | UE supporting E-UTRA TDD (UE category 1bis) | Each "Test Number" to be performed once, in a chosen band supporting | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|--|--------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 9.7_1.1.3 | FDD CQI reporting under fading conditions - PUSCH 3-0 for UE category 1bis | Rel-13 | C145 d | UE supporting E-UTRA FDD (UE category 1bis) | Each "Test Number" to be performed once, in a chosen band supporting | | |
| 9.7_1.1.4 | TDD CQI reporting under fading conditions - PUSCH 3-0 for UE category 1bis | Rel-13 | C156f | UE supporting E-UTRA TDD (UE category 1bis) | Each "Test Number" to be performed once, in a chosen band supporting | | |
| 9.7.1.2 | TDD CQI reporting definition under AWGN conditions for UE category 0 | Rel-12 | C119 | UE supporting E-UTRA TDD (UE category 0) | | | |
| 9.7.2.1 | FDD and Half duplex FDD CQI reporting definition under fading conditions for UE category 0 | Rel-12 | C145 | UE supporting E-UTRA FDD (UE category 0) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.7.2.2 | TDD CQI reporting definition under fading conditions for UE category 0 | Rel-12 | C156 | UE supporting E-UTRA TDD (UE category 0) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.8.1.1 | FDD and Half duplex FDD CQI reporting definition under AWGN conditions for UE category M1 | Rel-13 | C145 a | UE supporting E-UTRA FDD and UE category M1 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.8.1.2 | TDD CQI reporting definition under AWGN conditions for UE category M1 | Rel-13 | C156 a | UE supporting E-UTRA TDD and UE category M1 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.8.2.1 | FDD and Half-duplex FDD UE-selected subband CQI for UE category M1 | Rel-13 | C145 a | UE supporting E-UTRA FDD and UE category M1 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

*ETSI*

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|----------------|--|---------------------------------------------|--------|--------------|
| | | | **Condition** | **Comments** | | | |
| 9.8.2.2 | TDD UE-selected subband CQI for UE category M1 | Rel-13 | C156 a | UE supporting E-UTRA TDD and UE category M1 | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.9.1.1.1 | FDD CQI Reporting under AWGN conditions - PUCCH 1-0 with Rank 1 1x4 | Rel-10 | C113 b | UE supporting E-UTRA FDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.9.1.1.2 | TDD CQI Reporting under AWGN conditions - PUCCH 1-0 with Rank 1 1x4 | Rel-10 | C177 | UE supporting E-UTRA TDD with 4Rx antenna ports | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.9.1.2.1 | FDD CQI Reporting under AWGN conditions - PUCCH 1-1 with rank 2 4x4 | Rel-10 | C178 | UE supporting E-UTRA FDD and eDL-MIMO and Feature Group Indicator 103 with 4Rx antenna ports (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.9.1.2.2 | TDD CQI Reporting under AWGN conditions - PUCCH 1-1 with rank 2 8x4 | Rel-10 | C179 | UE supporting E-UTRA TDD and eDL-MIMO and Feature Group Indicator 104 with 4Rx antenna ports (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.9.1.3.1 | FDD CQI Reporting under AWGN conditions - PUCCH 1-1 with rank 4 4x4 | Rel-10 | C180 | UE supporting E-UTRA FDD with 4Rx antenna ports and 4-layer spatial multiplexing (UE Category >= 5) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.9.1.3.2 | TDD CQI Reporting under AWGN conditions - PUCCH 1-1 with rank 4 4x4 | Rel-10 | C181 | UE supporting E-UTRA TDD with 4Rx antenna ports and 4-layer spatial multiplexing (UE Category >= 5) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|---------------|--|--------------------------------------------|--------|--------------|
| | | | Condition | Comments | | | |
| 9.9.1.4.1 | FDD CQI Reporting under AWGN conditions - PUCCH 1-1 with rank 3 4x4 | Rel-10 | C182 | UE supporting E-UTRA FDD and eDL-MIMO and Feature Group Indicator 103 with 4Rx antenna ports (UE Category >= 5) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.9.1.4.2 | TDD CQI Reporting under AWGN conditions - PUCCH 1-1 with rank 3 4x4 | Rel-10 | C183 | UE supporting E-UTRA TDD and Feature Group Indicator 103 with 4Rx antenna ports (UE Category >= 5) | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.9.2.1.1 | FDD CQI Reporting under fading conditions - PUCCH 1-0 - Enhanced Performance Requirement Type A 1x4 | Rel-11 | C197 | UE supporting E-UTRA FDD with 4Rx antenna ports and the enhanced performance requirements type A for LTE | Each" Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 9.9.2.1.2 | TDD CQI Reporting under fading conditions - PUCCH 1-0 - Enhanced Performance Requirement Type A 1x4 | Rel-11 | C198 | UE supporting E-UTRA TDD with 4Rx antenna ports and the enhanced performance requirements type A for LTE | Each" Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 9.9.2.2.1 | FDD CQI Reporting under fading conditions - PUCCH 1-1 - Enhanced Performance Requirement Type A2 x4 | Rel-11 | C199 | UE supporting E-UTRA FDD with 4Rx antenna ports and the enhanced performance requirements type A for LTE (UE Category >= 2) and Feature Group Indicator 103 | Each" Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |

| Clause | Title | Release | Applicability | | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|--------|-------|---------|-----------|------|---------|-----------------------|--------|---------------|
| | | | Condition | | Comments | | | |
| 9.9.2.2.2 | TDD CQI Reporting under fading conditions - PUCCH 1-1 - Enhanced Performance Requirement Type A2 x4 | Rel-11 | C200 | | UE supporting E-UTRA TDD with 4Rx antenna ports and the enhanced performance requirements type A for LTE (UE Category >= 2) and Feature Group Indicator 103 | Each" Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 9.9.3.1.1 | TDD PMI Reporting - PUSCH 3-1 (Single PMI) 8x4 | Rel-10 | C179 | | UE supporting E-UTRA TDD and eDL-MIMO and Feature Group Indicator 104 with 4Rx antenna ports (UE Category >= 2) | Each" Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 9.9.4.1.1 | FDD RI Reporting- PUCCH 1-1 4x4 | Rel-10 | C203 | | UE supporting E-UTRA FDD with 4Rx antenna ports (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 9.9.4.1.2 | TDD RI Reporting- PUSCH 3-1 4x4 | Rel-10 | C204 | | UE supporting E-UTRA TDD with 4Rx antenna ports (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| 9.9.4.2.1 | FDD RI Reporting- PUCCH 1-1 for eDL-MIMO 4x4 | Rel-10 | C205 | | UE supporting E-UTRA FDD and eDL-MIMO and Feature Group Indicator 103 with 4Rx antenna ports (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |

| Clause | Title | Release | Applicability | | Tested Bands / CA-Configurations Selection | Branch | Addit Inform |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | | | |
| 9.9.4.2.2 | TDD RI Reporting- PUCCH 1-1 for eDL-MIMO 4x4 | Rel-10 | C206 | UE supporting E-UTRA TDD and eDL-MIMO and Feature Group Indicator 103 with 4Rx antenna ports (UE Category >= 2) | Each "Test Number" to be performed once, in a chosen band supporting tested BW and 4Rx antenna ports | | |
| **MBMS Performance Testing** | | | | | | | |
| 10.1 | FDD MBMS performance (Fixed Reference Channel) | Rel-9 | C03 | UE supporting E-UTRA FDD and MBMS | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 10.1_1 | FDD MBMS performance (Fixed Reference Channel) (Release 13 and forward) | Rel-13 | C03 | UE supporting E-UTRA FDD and MBMS | Performed once | | |
| 10.2 | TDD MBMS performance (Fixed Reference Channel) | Rel-9 | C04 | UE supporting E-UTRA TDD and MBMS | Each "Test Number" to be performed once, in a chosen band supporting tested BW | | |
| 10.2_1 | TDD MBMS performance (Fixed Reference Channel) (Release 13 and forward) | Rel-13 | C04 | UE supporting E-UTRA TDD and MBMS | Performed once | | |
| **V2X Sidelink Performance Testing** | | | | | | | |
| 14.2 | Demodulation of PSSCH / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | | | |
| 14.3 | Demodulation of PSCCH / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | | | |
| 14.4 | Power imbalance performance with two links / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C313 | UE supporting V2X Sidelink communication | | | |
| 14.8 | PSCCH/PSSCH decoding capability test / Non-concurrent with E-UTRA uplink transmissions | Rel-14 | C321 | UE supporting V2X Sidelink communication | | | |

Note 1: Due to UE capability signalling for UL 64QAM is introduced from Rel-12, this test case can optionally be executed with a 12 UE.

Note 2: For a transition period until RAN5#72, this condition in version 13.0.0 of 36.521-2 shall be used. This is to ensure no test coverage is lost before the UL 64QAM test case becomes available.

Note 3: Equivalent aggregated bandwidth is defined as: $B_{agg} = \sum_{i=0}^{N-1} R_i B_i$ . Where $N$ is number of CCs, $R_i \in \{2,4\}$ and

$B_i \in \{5,10,15,20\}$ is MIMO layer and bandwidth of CC $i$ . The number of MIMO layer for CC $i$ in each CA configuration according to Table A.4.6.1-3, Table A.4.6.2-3, Table A.4.6.3-3, Table A.4.6.3-4 or Table A.4.6.3-5.

Note 4: For a transition period until RAN5#83, this condition in version 15.3.1 of 36.521-2 shall be used. This is to ensure no test coverage is lost before the UL 256QAM test cases become available.

**Table 4.1-1a: Applicability of RF conformance test cases Conditions**

| C01 | IF NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 THEN R ELSE N/A |
|-----|----------------------------------------------------------------|
| C01h | IF (A.4.1-1/1 AND A.4.5-1/18) THEN R ELSE N/A |
| C02 | IF NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 THEN R ELSE N/A |
| C02h | IF (A.4.1-1/2 AND A.4.5-1/18) THEN R ELSE N/A |
| C03 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 AND A.4.2-1/1) THEN R ELSE N/A |
| C04 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.2-1/1) THEN R ELSE N/A |
| C05 | Void |
| C06 | Void |
| C07 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.3-3b/2 AND A.4.2-1/3) THEN R ELSE N/A |
| C08 | Void |
| C09 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 AND A.4.3-3a/1) THEN R ELSE N/A |
| C10 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.3-3a/1) THEN R ELSE N/A |
| C11 | IF A.4.1-1/1 AND A.4.3-3a/6 AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5) THEN R ELSE N/A |
| C12 | IF A.4.1-1/2 AND A.4.3-3a/6 AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5) THEN R ELSE N/A |
| C13 | IF ((A.4.1-1/1) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8)) THEN R ELSE N/A |
| C13a | IF ((A.4.1-1/1) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5)) THEN R ELSE N/A |
| C13b | IF ((A.4.1-1/1) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12 )) THEN R ELSE N/A |
| C14 | IF ((A.4.1-1/2) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8)) THEN R ELSE N/A |
| C14a | IF ((A.4.1-1/2) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5)) THEN R ELSE N/A |
| C14b | IF ((A.4.1-1/2) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C15 | IF (A.4.1-1/1 AND A.4.3-4/1) THEN R ELSE N/A |
| C16 | IF (A.4.1-1/2 AND A.4.3-4/1) THEN R ELSE N/A |
| C17 | Void |
| C18 | Void |
| C19 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.1-1/2 AND A.4.6.1-2/2) THEN R ELSE N/A |
| C19a | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.1-1/3 AND A.4.6.1-2/3) THEN R ELSE N/A |
| C19h | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.1-1/2 AND A.4.6.1-2/2 AND A.4.5-1/18) THEN R ELSE N/A |
| C20 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.6.1-1/1 OR A.4.6.1-1/2) AND NOT A.4.6.1-2/2) THEN R ELSE N/A |
| C20h | IF ((A.4.1-1/1 OR A.4.1-1/2) AND (A.4.6.1-1/1 OR A.4.6.1-1/2) AND A.4.5-1/18) THEN R ELSE N/A |
| C21 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.3-1/1) THEN R ELSE N/A |
| C21h | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.3-1/1) AND A.4.5-1/18 THEN R ELSE N/A |
| C22 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 AND A.4.6.1-1/2) THEN R ELSE N/A |
| C23 | Void |
| C24 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.6.1-1/2) THEN R ELSE N/A |
| C25 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1) AND A.4.4-3a/103) THEN R ELSE N/A |
| C25a | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/2) AND A.4.4-3b/103) THEN R ELSE N/A |
| C25h | IF (A.4.1-1/1 AND A.4.4-3a/103 AND A.4.5-1/18) THEN R ELSE N/A |
| C25x | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 AND A.4.4-3a/103) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C25y | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/2 AND A.4.4-3b/103) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C26 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/2 AND A.4.4-3b/104)) THEN R ELSE N/A |
| C26h | IF (((A.4.1-1/1 AND A.4.4-3a/104) OR (A.4.1-1/2 AND A.4.4-3b/104)) AND A.4.5-1/18) THEN R ELSE N/A |
| C27 | Void |
| C28 | Void |
| C28y | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/2 AND A.4.4-3a/104 AND A.4.4-3a/110) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C29 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 AND A.4.4-3a/115) THEN R ELSE N/A |
| C30 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.4-3b/115) THEN R ELSE N/A |
| C31 | IF (A.4.1-1/1 AND (A.4.3-4/1 OR A.4.3-4/2)) THEN R ELSE N/A |
| C32 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 AND A.4.4-1a/1) THEN R ELSE N/A |
| C33 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.4-1b/1) THEN R ELSE N/A |
| C34 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.2-1/5) THEN R ELSE N/A |
| C35 | Void |
| C36 | IF NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 AND A.4.4-1a/2 THEN R ELSE N/A |

| C37 | IF NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.4-1b/1 THEN R ELSE N/A |
|---|---|
| C38 | IF NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.4-1b/2 THEN R ELSE N/A |
| C39 | IF(NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.3-3b/1 OR A.4.3-3b/4)) THEN R ELSE N/A |
| C40 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 AND A.4.4-3a/103 AND A.4.3-7/1) THEN R ELSE N/A |
| C41 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.4-3b/103 AND A.4.3-7/1) THEN R ELSE N/A |
| C42 | IF ((A.4.1-1/1) AND (NOT A.4.5-1/18) AND (A.4.3-4/6 OR A.4.3-4/7)) THEN R ELSE N/A |
| C42h | IF ((A.4.1-1/1) AND (A.4.3-4/6 OR A.4.3-4/7) AND A.4.5-1/18 AND A.4.3-4a/8) THEN R ELSE N/A |
| C43 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.2-1/1 AND NOT A.4.6.2-2/1) THEN R ELSE N/A |
| C43h | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.2-1/1 AND NOT A.4.6.2-2/1 AND A.4.5-1/18) THEN R ELSE N/A |
| C44 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 AND A.4.3-7/1) THEN R ELSE N/A |
| C44z | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 AND A.4.3-7/1 AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8) AND A.4.4-3a/103) THEN R ELSE N/A |
| C45 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.3-7/1) THEN R ELSE N/A |
| C45i | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.3-7/1 AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8) AND A.4.4-3b/103) THEN R ELSE N/A |
| C46 | Void |
| C47 | Void |
| C48 | Void |
| C49 | Void |
| C50 | IF (A.4.1-1/1 AND A.4.5-1/8 AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8)) THEN R ELSE N/A |
| C50a | IF (A.4.1-1/1 AND A.4.5-1/8) THEN R ELSE N/A |
| C51 | IF (A.4.1-1/2 AND A.4.5-1/8 AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8)) THEN R ELSE N/A |
| C51a | IF (A.4.1-1/2 AND A.4.5-1/8) THEN R ELSE N/A |
| C52 | IF (A.4.1-1/1 AND (A.4.5-1/11 OR A.4.5-1/12) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8)) THEN R ELSE N/A |
| C53 | IF (A.4.1-1/2 AND (A.4.5-1/11 OR A.4.5-1/12) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8)) THEN R ELSE N/A |
| C54 | IF (A.4.1-1/2 AND (A.4.3-4/1 OR A.4.3-4/2)) THEN R ELSE N/A |
| C55 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 AND A.4.2-1/6) THEN R ELSE N/A |
| C56 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.2-1/6) THEN R ELSE N/A |
| C57 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 AND A.4.2-1/6 AND (A.4.5-1/11 OR A.4.5-1/12)) THEN R ELSE N/A |
| C58 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.2-1/6 AND (A.4.5-1/11 OR A.4.5-1/12)) THEN R ELSE N/A |
| C59 | Void |
| C60 | Void |
| C61 | Void |
| C62 | void |
| C63 | void |
| C64 | Void |
| C65 | Void |
| C66 | Void |
| C67 | Void |
| C68 | Void |
| C69 | void |
| C70 | void |
| C71 | Void |
| C72 | IF ((A.4.1-1/2) AND (A.4.6.2-1/1) AND (A.4.3-4/3 OR A.4.3-4/4)) THEN R ELSE N/A |
| C73 | IF ((A.4.1-1/2) AND (NOT A.4.5-1/18) AND (A.4.3-4/6 OR A.4.3-4/7)) THEN R ELSE N/A |
| C73h | IF ((A.4.1-1/2) AND A.4.5-1/18 AND A.4.3-4a/8) THEN R ELSE N/A |
| C74 | IF ((A.4.1-1/2) AND (NOT A.4.5-1/18) AND (A.4.6.1-1/1 OR A.4.6.1-1/2 OR A.4.6.3-1/1) AND (A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/9 OR A.4.3-4/10)) THEN R ELSE N/A |
| C74h | IF ((A.4.1-1/2) AND (A.4.6.1-1/1 OR A.4.6.1-1/2 OR A.4.6.3-1/1) AND A.4.5-1/18 AND (A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/8)) THEN R ELSE N/A |
| C75 | IF ((A.4.1-1/2) AND (NOT A.4.5-1/18) AND (A.4.6.2-1/1) AND (A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/9 OR A.4.3-4/10)) THEN R ELSE N/A |
| C76 | IF A.4.1-1/1 AND (NOT A.4.5-1/18) AND (A.4.3-4/1 OR A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4) THEN R ELSE N/A |
| C77 | IF (A.4.1-1/1 AND A.4.5-2/1 AND A.4.4-3a/115 AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8)) THEN R ELSE N/A |
| C78 | IF (A.4.1-1/2 AND A.4.5-2/1 AND A.4.5-2/2 AND A.4.4-3b/115 AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8)) THEN R ELSE N/A |

| C79 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 AND A.4.5-2/1 AND A.4.4-3a/115) THEN R ELSE N/A |
|---|---|
| C80 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.5-2/1 AND A.4.5-2/2 AND A.4.4-3b/115) THEN R ELSE N/A |
| C81 | void |
| C82 | void |
| C83 | IF ((A.4.1-1/2) AND (A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/6 OR A.4.3-4/7) AND (A.4.6.3-1/1)) THEN R ELSE N/A |
| C84 | void |
| C85 | Void |
| C86 | Void |
| C87 | void |
| C88 | Void |
| C89 | Void |
| C90 | IF ((A.4.1-1/1) AND (A.4.6.2-1/1) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8)) THEN R ELSE N/A |
| C91 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 AND A.4.2-1/6 AND A.4.4-3a/103) THEN R ELSE N/A |
| C92 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.2-1/6 AND A.4.4-3b/103) THEN R ELSE N/A |
| C93 | IF ((A.4.1-1/1) AND (NOT A.4.5-1/18) AND (A.4.6.2-1/1) AND (A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/9 OR A.4.3-4/10)) THEN R ELSE N/A |
| C94 | Void |
| C95 | void |
| C96 | IF (A.4.1-1/1 AND A.4.5-1/11) THEN R ELSE N/A |
| C97 | IF (A.4.1-1/1 AND A.4.5-1/12) THEN R ELSE N/A |
| C98 | IF (A.4.1-1/2 AND A.4.5-1/11) THEN R ELSE N/A |
| C99 | IF (A.4.1-1/2 AND A.4.5-1/12) THEN R ELSE N/A |
| C100 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.5-1/13) THEN R ELSE N/A |
| C101 | IF ((A.4.1-1/1) AND (A.4.6.1-1/1 OR A.4.6.1-1/2 or A.4.6.3-1/1) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C102 | IF ((A.4.1-1/1) AND (A.4.6.1-1/1 OR A.4.6.1-1/2 OR A.4.6.3-1/1) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C103 | IF ((A.4.1-1/1) AND (A.4.6.2-1/1) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C104 | IF ((A.4.1-1/1) AND (A.4.6.1-1/1 OR A.4.6.1-1/2 OR A.4.6.3-1/1) AND (A.4.3-4/3 OR A.4.3-4/4)) THEN R ELSE N/A |
| C105 | IF ((A.4.1-1/2) AND (A.4.6.1-1/1 OR A.4.6.1-1/2 OR A.4.6.3-1/1) AND (A.4.3-4/3 OR A.4.3-4/4)) THEN R ELSE N/A |
| C106 | IF ((A.4.1-1/1) AND (A.4.6.2-1/1) AND (A.4.3-4/3 OR A.4.3-4/4)) THEN R ELSE N/A |
| C107 | IF ((A.4.1-1/1) AND (NOT A.4.5-1/18) AND (A.4.6.1-1/1 OR A.4.6.1-1/2 OR A.4.6.3-1/1) AND (A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/9 OR A.4.3-4/10)) THEN R ELSE N/A |
| C107h | IF ((A.4.1-1/1) AND (A.4.6.1-1/1 OR A.4.6.1-1/2 OR A.4.6.3-1/1) AND A.4.5-1/18 AND (A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/8)) THEN R ELSE N/A |
| C108 | IF ((A.4.1-1/1) AND (A.4.6.1-1/1 OR A.4.6.1-1/2 OR A.4.6.3-1/1) AND (A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8)) THEN R ELSE N/A |
| C109 | IF (A.4.1-1/2 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8) AND (A.4.6.2-1/1 OR A.4.6.3-1/1)) THEN R ELSE N/A |
| C110 | IF (A.4.1-1/2 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8) AND (A.4.6.1-1/1 OR A.4.6.1-1/2)) THEN R ELSE N/A |
| C111 | IF A.4.1-1/2 AND (NOT A.4.5-1/18) AND (A.4.3-4/1 OR A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4) THEN R ELSE N/A |
| C112 | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.3-4a/1) THEN R ELSE N/A |
| C112a | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.3-4aa/1) THEN R ELSE N/A |
| C112b | IF (A.4.1-1/8 AND A.4.3-4 c/1) THEN R ELSE N/A |
| C112c | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.3-4a/1a) THEN R ELSE N/A |
| C112d | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.3-4aa/1 AND A.4.3-4aa/2) THEN R ELSE N/A |
| C113 | IF (A.4.1-1/1 OR A.4.1-1/2) AND NOT(A.4.3-4a/1 OR A.4.3-4aa/1) THEN R ELSE N/A |
| C113a | IF (A.4.5-1/22) THEN R ELSE N/A |
| C113b | IF (A.4.1-1/1 AND A.4.5-1/37) THEN R ELSE N/A |
| C113c | IF (A.4.1-1/1 AND A.4.5-1/37 AND A.4.4-3a/103) THEN R ELSE N/A |
| C113d | IF (A.4.1-1/1 AND A.4.5-1/37 AND A.4.3-7/1) THEN R ELSE N/A |
| C113e | IF (A.4.1-1/1 AND A.4.5-1/37 AND A.4.3-7/1 AND A.4.4-3a/103) THEN R ELSE N/A |
| C113h | IF (A.4.5-1/18) THEN R ELSE N/A |
| C114 | IF (A.4.1-1/2 AND A.4.6.1-1/2) AND (A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10) THEN R ELSE N/A |
| C115 | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.2-1/1 AND A.4.6.2-2/1) THEN R ELSE N/A |

| | |
|---|---|
| C116 | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.3-1/1 AND A.4.6.3-2/1) THEN R ELSE N/A |
| C116a | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.3-1/1 AND A.4.6.3-2/1) THEN R ELSE N/A |
| C117 | IF (A.4.1-1/1 AND (A.4.5-1/8 OR A.4.5-1/11 OR A.4.5-1/12) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8)) THEN R ELSE N/A |
| C118 | IF (A.4.1-1/2 AND (A.4.5-1/8 OR A.4.5-1/11 OR A.4.5-1/12) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8)) THEN R ELSE N/A |
| C119 | IF A.4.1-1/2 AND A.4.3-4a/1 THEN R ELSE N/A |
| C120 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.3-1/5) THEN R ELSE N/A |
| C121 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4)) THEN R ELSE N/A |
| C122 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.6.3-1/2 OR A.4.6.2-1/2)) THEN R ELSE N/A |
| C122h | IF ((A.4.1-1/1 OR A.4.1-1/2) AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4 OR A.4.6.3-1/2 OR A.4.6.2-1/2)) AND A.4.5-1/18 THEN R ELSE N/A |
| C123 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/2) THEN R ELSE N/A |
| C124 | IF (A.4.1-1/1 AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C125 | IF (A.4.1-1/1 AND (A.4.6.3-1/2 OR A.4.6.2-1/2) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C126 | IF (A.4.1-1/1 AND (NOT A.4.5-1/18) AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND (A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C126a | IF (A.4.1-1/1 AND (NOT A.4.5-1/18) AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND (A.4.3-4/6 OR A.4.3-4/7) AND A.4.3-3a/9) THEN R ELSE N/A |
| C126h | IF (A.4.1-1/1 AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND A.4.5-1/18 AND (A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/10)) THEN R ELSE N/A |
| C126ha | IF (A.4.1-1/1 AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND A.4.5-1/18 AND ( A.4.3-4a/8) AND A.4.3-3a/9) THEN R ELSE N/A |
| C127 | IF (A.4.1-1/1 AND (NOT A.4.5-1/18) AND (A.4.6.3-1/2 OR A.4.6.2-1/2) AND (A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C127a | IF (A.4.1-1/1 AND (NOT A.4.5-1/18) AND (A.4.6.3-1/2 OR A.4.6.2-1/2) AND (A.4.3-4/6 OR A.4.3-4/7) AND A.4.3-3a/9) THEN R ELSE N/A |
| C128 | IF (A.4.1-1/2 AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C129 | IF (A.4.1-1/2 AND (A.4.6.3-1/2 OR A.4.6.2-1/2) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C130 | IF (A.4.1-1/2 AND (NOT A.4.5-1/18) AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND (A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C130h | IF (A.4.1-1/2 AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND A.4.5-1/18 AND (A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/10)) THEN R ELSE N/A |
| C131 | IF (A.4.1-1/2 AND (NOT A.4.5-1/18) AND (A.4.6.3-1/2 OR A.4.6.2-1/2) AND (A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C132 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/15 AND (A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C133 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/2 AND A.4.5-1/15 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C133a | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/3 AND A.4.5-1/15 AND (A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C133b | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/4 AND A.4.5-1/15 AND (A.4.3-4/8 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C134 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/14 AND (A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C135 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/2 AND A.4.5-1/14 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C135a | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/3 AND A.4.5-1/14 AND (A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C135b | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/4 AND A.4.5-1/14 AND (A.4.3-4/8 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C136 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/15 AND (A.4.3-4/3 OR A.4.3-4/4)) THEN R ELSE N/A |
| C137 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/14 AND (A.4.3-4/3 OR A.4.3-4/4)) THEN R ELSE N/A |
| C138 | IF (A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/15 AND (NOT A.4.5-1/18) AND (A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/9 OR A.4.3-4/10) THEN R ELSE N/A |
| C138h | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/15 AND A.4.5-1/18 AND (A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/10)) THEN R ELSE N/A |

| | |
|---|---|
| C139 | IF (A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/2 AND A.4.5-1/15 AND (NOT A.4.5-1/18) AND (A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) THEN R ELSE N/A |
| C139a | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/3 AND A.4.5-1/15 AND (NOT A.4.5-1/18) AND (A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C139b | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/4 AND A.4.5-1/15 AND (NOT A.4.5-1/18) AND A.4.3-4a/10) THEN R ELSE N/A |
| C139h | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/2 AND A.4.5-1/15 AND A.4.5-1/18 AND (A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/10)) THEN R ELSE N/A |
| C139ha | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/3 AND A.4.5-1/15 AND A.4.5-1/18 AND (A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/10)) THEN R ELSE N/A |
| C139hb | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/4 AND A.4.5-1/15 AND A.4.5-1/18 AND (A.4.3-4a/11)) THEN R ELSE N/A |
| C140 | IF (A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/14 AND (NOT A.4.5-1/18) AND (A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/9 OR A.4.3-4/10) THEN R ELSE N/A |
| C140h | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/14 AND A.4.5-1/18 AND (A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/8)) THEN R ELSE N/A |
| C141 | IF (A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/2 AND A.4.5-1/14 AND (NOT A.4.5-1/18) AND (A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) THEN R ELSE N/A |
| C141a | IF (A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/3 AND A.4.5-1/14 AND (NOT A.4.5-1/18) AND (A.4.3-4/11 OR A.4.3-4/12) THEN R ELSE N/A |
| C141b | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/4 AND A.4.5-1/14 AND (NOT A.4.5-1/18) AND A.4.3-4a/10 THEN R ELSE N/A) |
| C141h | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/2 AND A.4.5-1/14 AND A.4.5-1/18 AND (A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/10)) THEN R ELSE N/A |
| C142 | IF (NOT(A.4.3-4/1 OR A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 AND A.4.3-7/3) THEN R ELSE N/A |
| C143 | IF (NOT(A.4.3-4/1 OR A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.3-7/3) THEN R ELSE N/A |
| C144 | IF (NOT(A.4.3-4/1 OR A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 AND A.4.3-7/3 AND A.4.4-3a/103) THEN R ELSE N/A |
| C145 | IF A.4.1-1/1 AND A.4.3-4a/1 THEN R ELSE N/A |
| C145a | IF A.4.1-1/1 AND A.4.3-4aa/1 THEN R ELSE N/A |
| C145b | IF A.4.1-1/1 AND (A.4.3-4aa/1 OR A.4.5-1/25) THEN R ELSE N/A |
| C145c | Void |
| C145d | IF A.4.1-1/1 AND A.4.3-4a/1a THEN R ELSE N/A |
| C145e | IF A.4.1-1/1 AND A.4.3-4aa/1 AND A.4.5-1/63 THEN R ELSE N/A |
| C145x | IF A.4.1-1/1 AND A.4.3-4aa/2 AND A.4.5-1/63 THEN R ELSE N/A |
| C145y | IF A.4.1-1/1 AND A.4.3-4aa/1 AND A.4.5-1/51 THEN R ELSE N/A |
| C145z | IF A.4.1-1/1 AND A.4.3-4aa/2 AND A.4.5-1/51 THEN R ELSE N/A |
| C146 | IF (NOT(A.4.3-4a/1) AND (A.4.1-1/1 AND A.4.1-1/2) AND A.4.6.3-1/1) THEN R ELSE N/A |
| C147 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.5-1/17) THEN R ELSE N/A |
| C148 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.1-1/2 AND A.4.6.1-2/2 AND A.4.5-1/17) THEN R ELSE N/A |
| C149 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1 OR A.4.5-1/58) AND A.4.1-1/1 AND A.4.5-1/13 AND A.4.5-1/17) THEN R ELSE N/A |
| C150 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 AND A.4.3-7/4) THEN R ELSE N/A |
| C151 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.3-7/4) THEN R ELSE N/A |
| C152 | IF (NOT(A.4.3-4/1 OR A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/1 AND A.4.3-7/4) THEN R ELSE N/A |
| C153 | IF (NOT(A.4.3-4/1 OR A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.3-7/4) THEN R ELSE N/A |
| C154 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/15 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C155 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/14 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C156 | IF A.4.1-1/2 AND A.4.3-4a/1 THEN R ELSE N/A |
| C156a | IF A.4.1-1/2 AND A.4.3-4aa/1 THEN R ELSE N/A |
| C156b | IF A.4.1-1/2 AND (A.4.3-4aa/1 OR A.4.5-1/25) THEN R ELSE N/A |
| C156c | IF A.4.1-1/1 AND (A.4.3-4aa/1 AND A.4.5-1/26 THEN R ELSE N/A |
| C156d | IF A.4.1-1/2 AND (A.4.3-4aa/1 AND A.4.5-1/26 THEN R ELSE N/A |
| C156e | IF A.4.1-1/2 AND (A.4.3-4aa/1 OR A.4.5-1/25) AND A.4.5-1/51 THEN R ELSE N/A |
| C156f | IF A.4.1-1/2 AND A.4.3-4a/1a THEN R ELSE N/A |
| C156x | IF A.4.1-1/2 AND (A.4.3-4aa/1 OR A.4.5-1/25) AND A.4.5-1/63 THEN R ELSE N/A |
| C157 | IF A.4.1-1/1 AND A.4.3-4a/1 AND A.4.4-3a/103 THEN R ELSE N/A |
| C157a | IF A.4.1-1/1 AND A.4.3-4a/1a AND A.4.4-3a/103 THEN R ELSE N/A |
| C158 | IF A.4.1-1/2 AND A.4.3-4a/1 AND A.4.4-3b/103 THEN R ELSE N/A |
| C158a | IF A.4.1-1/2 AND A.4.3-4a/1a AND A.4.4-3b/103 THEN R ELSE N/A |
| C159 | IF (NOT(A.4.3-4a/1 OR A.4.5-1/17 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.5-1/13) THEN R ELSE N/A |

| | |
|---|---|
| C160 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.3-1/1 AND A.4.6.3-2/1 AND A.4.5-1/17) THEN R ELSE N/A |
| C161 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.2-1/1 AND A.4.6.2-2/1 AND A.4.5-1/17) THEN R ELSE N/A |
| C162 | IF A.4.5-1/23 THEN R ELSE N/A |
| C163 | IF A.4.5-1/24 THEN R ELSE N/A |
| C164 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.2-1/6 AND A.4.5-1/37) THEN R ELSE N/A |
| C165 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.2-1/6 AND A.4.5-1/38) THEN R ELSE N/A |
| C166 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.2-1/6 AND A.4.4-3a/103 AND A.4.5-1/37) THEN R ELSE N/A |
| C167 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.2-1/6 AND A.4.4-3a/103 AND A.4.5-1/38) THEN R ELSE N/A |
| C168 | IF (A.4.5-1/22 AND NOT A.4.5-1/18) THEN R ELSE N/A |
| C169 | IF A.4.1-1/1 AND A.4.2-1/8 AND NOT (A.4.3-4/1 OR A.4.3-4/2 OR A.4.3-4a/1) THEN R ELSE N/A |
| C170 | IF A.4.1-1/2 AND A.4.2-1/8 AND NOT (A.4.3-4/1 OR A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4a/1) THEN R ELSE N/A |
| C171 | IF A.4.1-1/1 AND A.4.2-1/8 AND (A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/9 OR A.4.3-4/10) AND (NOT A.4.5-1/18) THEN R ELSE N/A |
| C172 | IF A.4.1-1/2 AND A.4.2-1/8 AND (A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/9 OR A.4.3-4/10) AND (NOT A.4.5-1/18) THEN R ELSE N/A |
| C173 | IF A.4.1-1/1 AND A.4.2-1/8 AND A.4.5-1/18 THEN R ELSE N/A |
| C174 | IF A.4.1-1/2 AND A.4.2-1/8 AND A.4.5-1/18 THEN R ELSE N/A |
| C175 | IF (NOT(A.4.3-4a/1) AND A.4.1-1/1 AND A.4.5-1/12 AND A.4.3-7/4) THEN R ELSE N/A |
| C176 | IF (NOT(A.4.3-4a/1) AND A.4.1-1/2 AND A.4.5-1/12 AND A.4.3-7/4) THEN R ELSE N |
| C177 | IF (A.4.5-1/38) THEN R ELSE N/A |
| C178 | IF (A.4.4-3a/103 AND A.4.5-1/37 AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C179 | IF (A.4.4-3a/104 AND A.4.5-1/38 AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C180 | IF (A.4.5-1/37 AND A.4.5-1/46 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C181 | IF (A.4.5-1/38 AND A A.4.5-1/46 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C182 | IF (A.4.4-3a/103 AND A.4.5-1/37 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C183 | IF (A.4.4-3a/103 AND A.4.5-1/38 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C184 | IF (A.4.5-1/38) THEN R ELSE N/A |
| C185 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.2-1/1 AND A.4.6.2-2/1 AND A.4.5-1/17) THEN R ELSE N/A |
| C186 | IF A.4.3-3b/2 AND NOT(A.4.3-4a/1 OR A.4.3-4aa/1) THEN R ELSE N/A |
| C187 | IF ((A.4.1-1/1 OR A.4.1-1/2) AND ((A.4.1-1/2 AND A.4.6.1-1/4) OR A.4.6.3-1/6 OR A.4.6.3-1/7)) THEN R ELSE N/A |
| C187h | IF (A.4.1-1/1 OR A.4.1-1/2) AND ((A.4.1-1/2 AND A.4.6.1-1/4) OR ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/3) OR A.4.6.3-1/6 OR A.4.6.3-1/7 OR A.4.6.3-1/12 OR A.4.6.2-1/3 OR A.4.6.3-1/11) AND A.4.5-1/18 THEN R ELSE N/A |
| C188 | IF (A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/3 THEN R ELSE N/A |
| C189 | IF (A.4.1-1/1 AND (NOT A.4.5-1/18) AND (A.4.6-1/3) AND (A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C189a | IF (A.4.1-1/1 AND (NOT A.4.5-1/18) AND (A.4.6-1/3) AND (A.4.3-4/9 OR A.4.3-4/10) AND A.4.3-3a/10) THEN R ELSE N/A |
| C189a2 | Void |
| C189b | Void |
| C189h | IF A.4.1-1/1 AND A.4.5-1/18 AND (A.4.3-4a/10 OR A.4.3-4a/11) AND A.4.6-1/3 AND A.4.3-3a/10 AND (A.4.6.1-1/4 OR A.4.6.2-1/4 OR A.4.6.2-1/5 OR A.4.6.3-1/6 OR A.4.6.3-1/7) THEN R ELSE N/A |
| C190 | Void |
| C191 | Void |
| C192 | IF (A.4.1-1/1 AND (A.4.6.1-1/4 OR A.4.6.3-1/6 OR A.4.6.3-1/7) AND (A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C192a | IF (A.4.1-1/1 AND (NOT A.4.5-1/18) AND (A.4.6.2-1/6 OR A.4.6.2-1/7 OR A.4.6.2-1/8 OR A.4.6.3-1/8 OR A.4.6.3-1/13 OR A.4.6.3-1/15 OR A.4.6.3-1/16 OR A.4.6.3-1/17) AND (A.4.3-4/8 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C193 | IF (A.4.1-1/1 AND (A.4.6.3-1/10 OR A.4.6.2-1/3) AND (A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C193a | IF (A.4.1-1/1 AND (NOT A.4.5-1/18) AND A.4.6.3-1/14 AND (A.4.3-4/8 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C194 | IF (A.4.1-1/2 AND (A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) AND (A.4.6.1-1/4 OR A.4.6.2-1/4 OR 4.6.2-1/5 OR A.4.6.3-1/6 OR A.4.6.3-1/7 OR A.4.6.3-1/9 OR A.4.6.3-1/12 OR A.4.6.2-1/3 OR A.4.6.3-1/11)) THEN R ELSE N/A |

| | |
|---|---|
| C194a | IF (A.4.1-1/2 AND (A.4.3-4/8 OR A.4.3-4/11 OR A.4.3-4/12) AND (A.4.6.2-1/6 OR 4.6.2-1/7 OR A.4.6.3-1/8 OR A.4.6.3-1/13 OR A.4.6.3-1/15 OR A.4.6.3-1/16 OR A.4.6.3-1/17 OR A.4.6.3-1/18)) THEN R ELSE N/A |
| C194b | IF (A.4.1-1/2 AND (A.4.3-4/8 OR A.4.3-4/11 OR A.4.3-4/12) AND (A.4.6.1-1/5 OR A.4.6.3-1/14)) THEN R ELSE N/A |
| C195 | Void |
| C196 | Void |
| C197 | IF (A.4.5-1/37 AND A.4.3-7/1) THEN R ELSE N/A |
| C198 | IF (A.4.5-1/38 AND A.4.3-7/1) THEN R ELSE N/A |
| C198a | IF A.4.1-1/2 AND A.4.5-1/38 AND A.4.3-7/1 THEN R ELSE N/A |
| C198b | IF A.4.1-1/2 AND A.4.5-1/38 THEN R ELSE N/A |
| C198c | IF A.4.1-1/2 AND A.4.5-1/38 AND A.4.3-7/1 AND A.4.4-3b/103 THEN R ELSE N/A |
| C199 | IF A.4.5-1/37 AND A.4.3-7/1 AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) AND A.4.4-3a/103 THEN R ELSE N/A |
| C200 | IF A.4.5-1/38 AND A.4.3-7/1 AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) AND A.4.4-3b/103 THEN R ELSE N/A |
| C201 | Void |
| C202 | IF ((NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.3-3b/4 AND A.4.2-1/3) THEN R ELSE N/A |
| C203 | IF ((A.4.5-1/37) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12 )) THEN R ELSE N/A |
| C204 | IF ((A.4.5-1/38) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12 )) THEN R ELSE N/A |
| C205 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 AND A.4.4-3a/103 AND A.4.5-1/37) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C206 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/2 AND A.4.4-3b/103 AND A.4.5-1/38) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C207 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 AND A.4.1-1/2) AND A.4.6.3-1/1 AND A.4.5-1/32) THEN R ELSE N/A |
| C208 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND A.4.1-1/2 AND A.4.6.3-1/1 AND A.4.5-1/32) THEN R ELSE N/A |
| C209 | IF A.4.1-1/1 AND A.4.5-1/15 AND A.4.5-1/32 THEN R ELSE N/A |
| C210 | IF A.4.1-1/2 AND A.4.5-1/14 AND A.4.5-1/32 THEN R ELSE N/A |
| C211 | IF (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.6.3-1/12 OR A.4.6.2-1/3 OR A.4.6.3-1/11) THEN R ELSE N/A |
| C212 | IF (A.4.1-1/1 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) AND (A.4.6.3-1/6 OR A.4.6.3-1/7 OR A.4.6.3-1/12 OR A.4.6.2-1/3 OR A.4.6.3-1/11)) THEN R ELSE N/A |
| C212a | IF (A.4.1-1/1 AND (A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) AND (A.4.6.3-1/13 OR A.4.6.3-1/15 OR A.4.6.3-1/16 OR A.4.6.3-1/17 OR A.4.6.3-1/18 OR A.4.6.2-1/6 OR A.4.6.2-1/7 OR A.4.6.2-1/8)) THEN R ELSE N/A |
| C212b | IF (A.4.1-1/1 AND (A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) AND (A.4.6.3-1/14)) THEN R ELSE N/A |
| C213 | IF (A.4.1-1/2 AND (NOT A.4.5-1/18) AND (A.4.6-1/3 OR A.4.6.1-1/4 OR A.4.6.2-1/4 OR A.4.6.2-1/5 OR A.4.6.3-1/6 OR A.4.6.3-1/7 OR A.4.6.3-1/9 OR A.4.6.3-1/10 OR A.4.6.3-1/11 OR A.4.6.3-1/12) AND (A.4.3-4a/6 OR A.4.3-4a/7 OR A.4.3-4a/10)) THEN R ELSE N/A |
| C214 | IF (A.4.1-1/1 AND (A.4.6.3-1/6 OR A.4.6.3-1/7 OR A.4.6.3-1/10 OR A.4.6.2-1/4 OR A.4.6.2-1/5) AND (A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C215 | IF (A.4.1-1/1 AND (A.4.6.3-1/8 OR A.4.6.3-1/13 OR A.4.6.3-1/15) AND (A.4.3-4/8 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C216 | IF (A.4.1-1/1 AND A.4.6.3-1/14 AND (A.4.3-4/8 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C217 | IF A.4.1-1/2 AND A.4.5-1/15 AND A.4.5-1/32 THEN R ELSE N/A |
| C218 | IF A.4.1-1/1 AND A.4.5-1/15 AND A.4.5-1/32 AND A.4.5-1/56 THEN R ELSE N/A |
| C219 | IF A.4.1-1/2 AND A.4.5-1/32 AND A.4.5-1/56 THEN R ELSE N/A |
| C220 | IF A.4.1-1/1 AND (A.4.5-1/37 AND A.4.5-1/46) THEN R ELSE N/A |
| C221 | IF (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.6.3-1/13 OR A.4.6.3-1/15 OR A.4.6.3-1/16 OR A.4.6.3-1/17 OR A.4.6.3-1/18 OR A.4.6.2-1/6 OR A.4.6.2-1/7 OR A.4.6.2-1/8) THEN R ELSE N/A |
| C221h | IF (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.6.3-1/13 OR A.4.6.3-1/14 OR A.4.6.3-1/15 OR A.4.6.3-1/16 OR A.4.6.3-1/17 OR A.4.6.3-1/18 OR A.4.6.2-1/6 OR A.4.6.2-1/7 OR A.4.6.2-1/8 OR (A.4.1-1/2 AND A.4.6.1-1/5) OR ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/4)) AND A.4.5-1/18 THEN R ELSE N/A |
| C222 | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.3-1/14) OR (A.4.1-1/2 AND A.4.6.1-1/5) THEN R ELSE N/A |
| C223 | IF (A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/4 THEN R ELSE N/A |
| C224 | IF A.4.2-1/8 THEN R ELSE N/A |
| C225 | IF (A.4.2-1/8 AND A.4.5-1/27) THEN R ELSE N/A |
| C226 | IF (A.4.1-1/1 AND A.4.5-1/37 AND A.4.5-1/46 AND (A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4a/8)) THEN R ELSE N/A |

| | |
|---|---|
| C227 | IF (A.4.5-8/1 AND (A.4.6.1-1/1 OR A.4.6.1-1/2 OR A.4.6.3-1/1) AND (A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/4 OR A.4.3-4a/5 OR A.4.3-4a/6 OR A.4.3-4a/7 OR A.4.3-4a/10)) THEN R ELSE N/A |
| C228 | IF (A.4.5-8/1 AND A.4.6.2-1/1 AND (A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/4 OR A.4.3-4a/5 OR A.4.3-4a/6 OR A.4.3-4a/7 OR A.4.3-4a/10)) THEN R ELSE N/A |
| C229 | IF (A.4.5-8/4 AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND (A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/6 OR A.4.3-4a/7 OR A.4.3-4a/10 OR A.4.3-4a/11 OR A.4.3-4a/13)) THEN R ELSE N/A |
| C230 | IF (A.4.5-8/4 AND (A.4.6.3-1/2 OR A.4.6.2-1/2) AND (A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/6 OR A.4.3-4a/7 OR A.4.3-4a/10 OR A.4.3-4a/11 OR A.4.3-4a/13)) THEN R ELSE N/A |
| C231 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/15 AND (A.4.5-1/37 OR A.4.5-1/38) AND A.4.3-7/1 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C232 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/14 AND (A.4.5-1/37 OR A.4.5-1/38) AND A.4.3-7/1 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C233 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/15 AND (A.4.4-3a/103 AND A.4.4-3b/103) AND (A.4.5-1/37 OR A.4.5-1/38) AND A.4.3-7/1 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C234 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/14 AND (A.4.4-3a/103 AND A.4.4-3b/103) AND (A.4.5-1/37 OR A.4.5-1/38) AND A.4.3-7/1 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C235 | IF A.4.1-1/2 AND (A.4.5-1/38 AND A.4.5-1/46) THEN R ELSE N/A |
| C236 | IF (A.4.5-8/7 AND (A.4.6.1-1/4 OR A.4.6.2-1/4 OR A.4.6.2-1/5 OR A.4.6.3-1/6 OR A.4.6.3-1/7 OR A.4.6.3-1/9 OR A.4.6.3-1/10 OR A.4.6.3-1/11 OR A.4.6.3-1/12) AND (A.4.3-4a/10 OR A.4.3-4a/11 OR A.4.3-4a/13 OR A.4.3-4a/14)) THEN R ELSE N/A |
| C237 | IF (A.4.5-8/10 AND (A.4.6.1-1/5 OR A.4.6.2-1/6 OR A.4.6.2-1/7 OR A.4.6.2-1/8 OR A.4.6.3-1/8 OR A.4.6.3-1/13 OR A.4.6.3-1/15 OR A.4.6.3-1/16 OR A.4.6.3-1/17) AND (A.4.3-4a/10 OR A.4.3-4a/11 OR A.4.3-4a/13 OR A.4.3-4a/14)) THEN R ELSE N/A |
| C238 | IF (A.4.5-8/10 AND A.4.6.3-1/14 AND (A.4.3-4a/10 OR A.4.3-4a/11 OR A.4.3-4a/13 OR A.4.3-4a/14)) THEN R ELSE N/A |
| C239 | IF (A.4.1-1/2 AND A.4.5-1/38 AND A.4.5-1/46 AND (A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4a/8)) THEN R ELSE N/A |
| C240 | IF (A.4.5-8/2 AND (A.4.6.1-1/1 OR A.4.6.1-1/2 OR A.4.6.3-1/1 OR A.4.6.3-1/5) AND (A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4a/8)) THEN R ELSE N/A |
| C241 | IF (A.4.5-8/2 AND A.4.6.1-2/1 AND (A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4a/8)) THEN R ELSE N/A |
| C242 | IF (A.4.5-8/5 AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND (A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/6 OR A.4.3-4a/7 OR A.4.3-4a/10 OR A.4.3-4a/11 OR A.4.3-4a/13)) THEN R ELSE N/A |
| C243 | IF (A.4.5-8/5 AND (A.4.6. 2-1/2 OR A.4.6.3-1/2) AND (A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/6 OR A.4.3-4a/7 OR A.4.3-4a/10 OR A.4.3-4a/11 OR A.4.3-4a/13)) THEN R ELSE N/A |
| C244 | IF (A.4.5-8/8 AND (A.4.6.1-1/4 OR A.4.6.2-1/4 OR A.4.6.2-1/5 OR A.4.6.3-1/6 OR A.4.6.3-1/7 OR A.4.6.3-1/9 OR A.4.6.3-1/10 OR A.4.6.3-1/11 OR A.4.6.3-1/12) AND (A.4.3-4a/11 OR A.4.3-4a/13 OR A.4.3-4a/14)) THEN R ELSE N/A |
| C245 | IF (A.4.5-8/11 AND (A.4.6.1-1/5 OR A.4.6.2-1/6 OR A.4.6.2-1/7 OR A.4.6.2-1/8 OR A.4.6.3-1/8 OR A.4.6.3-1/13 OR A.4.6.3-1/15 OR A.4.6.3-1/16 OR A.4.6.3-1/17) AND (A.4.3-4a/13 OR A.4.3-4a/14)) THEN R ELSE N/A |
| C246 | IF (A.4.5-8/11 AND A.4.6.3-1/14 AND (A.4.3-4a/13 OR A.4.3-4a/14)) THEN R ELSE N/A |
| C247 | IF (A.4.5-8/3 AND (A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/4 OR A.4.3-4a/5 OR A.4.3-4a/6 OR A.4.3-4a/7 OR A.4.3-4a/10)) THEN R ELSE N/A |
| C248 | IF (A.4.5-8/6 AND (A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/6 OR A.4.3-4a/7 OR A.4.3-4a/10 OR A.4.3-4a/11 OR A.4.3-4a/13)) THEN R ELSE N/A |
| C249 | IF (A.4.5-8/9 AND (A.4.3-4a/10 OR A.4.3-4a/11 OR A.4.3-4a/13 OR A.4.3-4a/14)) THEN R ELSE N/A |
| C250 | IF (A.4.5-8/12 AND (A.4.3-4a/11 OR A.4.3-4a/13 OR A.4.3-4a/14)) THEN R ELSE N/A |
| C251 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/15 AND A.4.5-1/18 AND (A.4.5-1/37 OR A.4.5-1/38) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C252 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/14 AND A.4.5-1/18 AND (A.4.5-1/37 OR A.4.5-1/38) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C253 | IF ((A.4.1-1/1) AND (A.4.6.1-1/1 OR A.4.6.1-1/2 OR A.4.6.3-1/1) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) AND A.4.5-1/39) THEN R ELSE N/A |
| C254 | IF ((A.4.1-1/1) AND (A.4.6.2-1/1) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) AND A.4.5-1/39) THEN R ELSE N/A |
| C255 | IF (A.4.1-1/1 AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) AND A.4.5-1/39) THEN R ELSE N/A |

| C256 | IF (A.4.1-1/1 AND (A.4.6.3-1/2 OR A.4.6.2-1/2) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) AND A.4.5-1/39) THEN R ELSE N/A |
|---|---|
| C257 | IF (A.4.1-1/1 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) AND (A.4.6.3-1/6 OR A.4.6.3-1/7 OR A.4.6.3-1/12 OR A.4.6.2-1/3 OR A.4.6.3-1/11) AND A.4.5-1/39) THEN R ELSE N/A |
| C258 | IF (A.4.1-1/1 AND (A.4.3-4/8 OR A.4.3-4/11 OR A.4.3-4/12) AND (A.4.6.3-1/7 OR A.4.6.3-1/12 OR A.4.6.2-1/3) AND A.4.5-1/39) THEN R ELSE N/A |
| C259 | IF (A.4.1-1/1 AND (A.4.3-4/8 OR A.4.3-4/11 OR A.4.3-4/12) AND (A.4.6.3-1/14) AND A.4.5-1/39) THEN R ELSE N/A |
| C260 | IF (A.4.1-1/1 AND A.4.5-1/18 AND A.4.4-3a/103) THEN R ELSE N/A |
| C261 | IF (A.4.1-1/2 AND A.4.5-1/18 AND A.4.4-3b/103) THEN R ELSE N/A |
| C262 | IF (NOT(A.4.3-4a/1) AND A.4.1-1/1 AND A.4.3-7/4 AND A.4.4-3a/103) THEN R ELSE N/A |
| C263 | IF (NOT(A.4.3-4a/1) AND A.4.1-1/2 AND A.4.3-7/4 AND A.4.4-3b/103) THEN R ELSE N/A |
| C264 | IF A.4.1-1/1 AND A.4.5-1/15 AND A.4.5-1/32 AND A.4.5-1/56 THEN R ELSE N/A |
| C265 | IF A.4.1-1/2 AND A.4.5-1/14 AND A.4.5-1/32 AND A.4.5-1/56 THEN R ELSE N/A |
| C266 | IF (A.4.1-1/1 AND A.4.2-1/2 AND NOT A.4.5-1/18) AND (A.4.3-4/11 OR A.4.3-4/12) AND (A.4.6.1-1/5 OR A.4.6.3-1/8 OR A.4.6.3-1/13 OR A.4.6.3-1/14 OR A.4.6.3-1/15 OR A.4.6.3-1/16 OR A.4.6.3-1/17 OR A.4.6.3-1/18) THEN R ELSE N/A |
| C267 | IF (A.4.1-1/1 AND A.4.2-1/2 AND (NOT A.4.5-1/18) AND (A.4.3-4/11 OR A.4.3-4/12 OR A.4.3-4a/6 OR A.4.3-4a/7 OR A.4.3-4a/10) AND (A.4.6.1-1/5 OR A.4.6.2-1/6 OR A.4.6.2-1/7 OR A.4.6.2-1/8 OR A.4.6.3-1/8 OR A.4.6.3-1/13 OR A.4.6.3-1/14 OR A.4.6.3-1/15 OR A.4.6.3-1/16 OR A.4.6.3-1/17 OR A.4.6.3-1/18) THEN R ELSE N/A |
| C267h | IF A.4.1-1/1 AND A.4.2-1/2 AND (A.4.3-4a/10 OR A.4.3-4a/11) AND A.4.6-1/4 AND (A.4.6.1-1/5 OR A.4.6.2-1/6 OR A.4.6.2-1/7 OR A.4.6.2-1/8 OR A.4.6.3-1/8 OR A.4.6.3-1/13 OR A.4.6.3-1/14 OR A.4.6.3-1/15 OR A.4.6.3-1/16 OR A.4.6.3-1/17 OR A.4.6.3-1/18) AND A.4.5-1/18 THEN R ELSE N/A |
| C268 | IF (NOT(A.4.3-4a/1) AND (A.4.1-1/1 AND A.4.1-1/2) AND (A.4.6.3-1/2 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND A.4.5-1/32) THEN R ELSE N/A |
| C269 | IF (NOT(A.4.3-4a/1) AND A.4.1-1/2 AND (A.4.6.3-1/2 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND A.4.5-1/32) THEN R ELSE N/A |
| C270 | IF (A.4.1-1/2 AND (A.4.6.1-1/4 OR A.4.6.3-1/6 OR A.4.6.3-1/7 OR A.4.6.3-1/9) AND (A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C271 | IF (A.4.1-1/2 AND (A.4.6.3-1/10 OR A.4.6.2-1/4 OR A.4.6.2-1/5) AND (A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C272 | IF (A.4.1-1/2 AND (A.4.6.1-1/5 OR A.4.6.3-1/14 OR A.4.6.3-1/15 OR A.4.6.3-1/16) AND (A.4.3-4/8 AND (A.4.3-4/11 OR A.4.3-4/12))) THEN R ELSE N/A |
| C273 | IF (A.4.1-1/2 AND (A.4.6.3-1/17 OR A.4.6.2-1/6 OR A.4.6.2-1/7 OR A.4.6.2-1/8) AND (A.4.3-4/8 AND (A.4.3-4/11 OR A.4.3-4/12))) THEN R ELSE N/A |
| C274 | IF A.4.1-1/2 AND A.4.5-1/54 THEN R ELSE N/A |
| C275 | IF A.4.1-1/2 AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) AND A.4.5-1/54 AND A.4.5-1/55 THEN R ELSE N/A |
| C276 | IF A.4.1-1/2 AND A.4.5-1/55 THEN R ELSE N/A |
| C277 | IF A.4.1-1/2 AND A.4.5-1/8 AND A.4.5-1/55 THEN R ELSE N/A |
| C278 | IF (A.4.1-1/1 AND (A.4.6.1-1/1 OR A.4.6.1-1/2 OR A.4.6.3-1/1) AND A.4.5-1/18 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C279 | IF (A.4.1-1/1 AND A.4.6.2-1/1 AND A.4.5-1/18 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C280 | IF (A.4.1-1/1 AND A.4.6-1/1 AND A.4.5-1/37 AND A.4.5-1/46 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C281 | IF (A.4.1-1/1 AND A.4.6-1/1 AND A.4.5-1/37 AND A.4.3-7/1 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C282 | IF (A.4.1-1/1 AND A.4.6-1/1 AND A.4.5-1/37 AND A.4.3-7/1 AND A.4.4-3a/103 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C283 | IF (A.4.1-1/2 AND A.4.6-1/1 AND A.4.5-1/38 AND A.4.3-7/1 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C284 | IF (A.4.1-1/2 AND A.4.6-1/1 AND A.4.5-1/38 AND A.4.3-7/1 AND A.4.4-3b/103 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C285 | IF ((A.4.1-1/1) AND (A.4.3-7/6)) THEN R ELSE N/A |
| C286 | IF ((A.4.1-1/1) AND (A.4.3-7/7)) THEN R ELSE N/A |
| C287 | IF ((A.4.1-1/2) AND (A.4.3-7/6)) THEN R ELSE N/A |
| C288 | IF ((A.4.1-1/2) AND (A.4.3-7/7)) THEN R ELSE N/A |
| C289 | IF ((A.4.1-1/1) AND (A.4.3-7/6) AND (A.4.2-1/6)) THEN R ELSE N/A |
| C290 | IF ((A.4.1-1/2) AND (A.4.3-7/6) AND (A.4.2-1/6)) THEN R ELSE N/A |
| C291 | IF ((A.4.1-1/2) AND (A.4.6.1-1/1 OR A.4.6.1-1/2 OR A.4.6.3-1/1) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) AND A.4.5-1/39) THEN R ELSE N/A |

| C292 | IF ((A.4.1-1/2) AND (A.4.6.2-1/1) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) AND A.4.5-1/39) THEN R ELSE N/A |
|------|------|
| C293 | IF (A.4.1-1/2 AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) AND A.4.5-1/39) THEN R ELSE N/A |
| C294 | IF (A.4.1-1/2 AND (A.4.6.3-1/2 OR A.4.6.2-1/2) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) AND A.4.5-1/39) THEN R ELSE N/A |
| C295 | IF (A.4.1-1/2 AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12) AND (A.4.6.3-1/6 OR A.4.6.3-1/7 OR A.4.6.3-1/12 OR A.4.6.2-1/3 OR A.4.6.3-1/11) AND A.4.5-1/39) THEN R ELSE N/A |
| C296 | IF (A.4.1-1/2 AND (A.4.3-4/8 OR A.4.3-4/11 OR A.4.3-4/12) AND (A.4.6.3-1/7 OR A.4.6.3-1/12 OR A.4.6.2-1/3) AND A.4.5-1/39) THEN R ELSE N/A |
| C297 | IF (A.4.1-1/2 AND (A.4.3-4/8 OR A.4.3-4/11 OR A.4.3-4/12) AND (A.4.6.3-1/14) AND A.4.5-1/39) THEN R ELSE N/A |
| C298 | IF (A.4.1-1/8 AND A.4.3-4c/2) THEN R ELSE N/A |
| C299 | IF (A.4.1-1/1 AND A.4.3-7/5) THEN R ELSE N/A |
| C300 | IF (A.4.1-1/2 AND A.4.3-7/5) THEN R ELSE N/A |
| C301 | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.5-1/58) THEN R ELSE N/A |
| C302 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.1-1/2 AND A.4.6.1-2/2 AND A.4.5-1/58) THEN R ELSE N/A |
| C303 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.3-1/1 AND A.4.6.3-2/1 AND A.4.5-1/58) THEN R ELSE N/A |
| C304 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.2-1/1 AND A.4.6.2-2/1 AND A.4.5-1/58) THEN R ELSE N/A |
| C305 | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.3-1/1 AND A.4.6.3-2/1 AND A.4.5-1/62) THEN R ELSE N/A |
| C306 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/14 AND (A.4.5-1/37 OR A.4.5-1/38) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C307 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/2 AND A.4.5-1/14 AND (A.4.5-1/37 OR A.4.5-1/38) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C308 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/3 AND A.4.5-1/14 AND (A.4.5-1/37 OR A.4.5-1/38) AND (A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C309 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/4 AND A.4.5-1/14 AND (A.4.5-1/37 OR A.4.5-1/38) AND (A.4.3-4/8 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C310 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/15 AND (A.4.5-1/37 OR A.4.5-1/38) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C311 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/2 AND A.4.5-1/15 AND (A.4.5-1/37 OR A.4.5-1/38) AND (A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C312 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/3 AND A.4.5-1/15 AND (A.4.5-1/37 OR A.4.5-1/38) AND (A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C313 | IF (A.4.1-1/10 AND A.4.3-4d/2 AND A.4.5-7/1) THEN R ELSE N/A |
| C314 | IF A.4.1-1/1 AND (A.4.3-4aa/2 OR A.4.5-1/25) THEN R ELSE N/A |
| C315 | IF A.4.1-1/1 AND (A.4.3-4aa/2 AND A.4.5-1/26 THEN R ELSE N/A |
| C316 | IF A.4.1-1/2 AND (A.4.3-4aa/2 OR A.4.5-1/25) THEN R ELSE N/A |
| C317 | IF A.4.1-1/2 AND (A.4.3-4aa/2 AND A.4.5-1/26 THEN R ELSE N/A |
| C318 | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.5-1/13 AND A.4.5-1/58) THEN R ELSE N/A |
| C319 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.1-1/2 AND A.4.6.1-2/2 AND NOT(A.4.5-1/17)) THEN R ELSE N/A |
| C320 | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-1/10 AND A.4.5-1/66 AND A.4.5-1/67) THEN R ELSE N/A |
| C321 | IF (A.4.1-1/10 AND A.4.3-4d/2 AND A.4.5-7/1 AND A.4.5-1/70) THEN R ELSE N/A |
| C322 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/4 AND A.4.5-1/15 AND (A.4.5-1/37 OR A.4.5-1/38) AND (A.4.3-4/8 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C323 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/1 AND A.4.4-3a/103 AND A.4.3-7/8) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C324 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1) AND (A.4.1-1/2 AND A.4.4-3b/103 AND A.4.3-7/8) AND (A.4.3-4/2 OR A.4.3-4/3 OR A.4.3-4/4 OR A.4.3-4/5 OR A.4.3-4/6 OR A.4.3-4/7 OR A.4.3-4/8 OR A.4.3-4/9 OR A.4.3-4/10 OR A.4.3-4/11 OR A.4.3-4/12)) THEN R ELSE N/A |
| C325 | IF (A.4.1-1/8 AND (A.4.3-4c/1 or A.4.3-4c/2) THEN R ELSE N/A |
| C326 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1 OR A.4.5-1/58) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.1-1/2 AND A.4.6.1-2/2 AND A.4.5-1/17) THEN R ELSE N/A |
| C327 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1 OR A.4.5-1/58) AND (A.4.1-1/1 OR A.4.1-1/2) AND A.4.6.3-1/1 AND A.4.6.3-2/1 AND A.4.5-1/17) THEN R ELSE N/A |
| Note 1: | Cxxxh applicability is defined for small cell enhancements for physical layer related test. |

**Table 4.1-1b: Tested Bands Selection Criteria**

| Code | Selection | Comment |
|------|-----------|---------|
| D01 | A.4.3-3 | All supported Bands |
| D02 | A.4.3-3 AND FDD | All supported FDD Bands |
| D03 | A.4.3-3 AND TDD | All supported TDD Bands |
| D04 | A.4.3-3 AND {14, 31, 41, 72} | Band 14, 31, 41 or 72 if supported |
| D05 | A.4.3-3 AND A.4.5-3 | Bands supporting UL MIMO |
| D06 | A.4.3-3 AND NOT A.4.5-3 | Bands not supporting UL MIMO |
| D07 | A.4.3-3 AND A.4.5-4 | Bands supporting Multicluster PUSCH |
| D08 | A.4.3-3 AND NOT FALLBACK(A.4.6.1-3) | All supported Bands that are not part of contiguous CA configuration. |
| D09 | A.4.3-3 AND A.4.5-5 | Bands supporting 4 Rx antenna ports |
| D10 | A.4.3-3 AND A.4.5-6a | Bands supporting ProSe Direct |
| D11 | A.4.3-3 AND category NB1 and NB2 | All supported category NB1 and NB2 Bands |
| D12 | A.4.3-3 AND { category NB1 and NB2 Bands < 1GHz} | Lowest and highest category NB1 and NB2 Bands supported below 1GHz (Note 2) |
| D13 | A.4.3-3 AND { category NB1 and NB2 Bands > 1GHz} | Lowest and highest category NB1 and NB2 Bands supported above 1GHz (Note 3) |
| D14 | A.4.3-3 AND A.4.5-7 | Bands supporting V2X Sidelink Communication |
| D15 | A.4.3-3 AND NOT A.4.5-5 | Bands not supporting 4Rx antenna ports |
| Note 1: | Band Selection is based on set theory. For each feature, item number shall correspond to the Band number. The result is the set of bands for which the test shall be conducted. The following operators are used:<br>    AND:  Set intersection ($\cap$). {1,2} AND {2,3} = {2}<br>    OR:    Set union ($\cup$). {1,2} OR {2,3} = {1,2,3}<br>    NOT:  Set complement (\), full set being all bands. NOT{1} = {2 ...256}<br>      Also note that this is set without repetitions so {1} AND {1} = {1}<br>The following basic sets are used:<br>    FDD:          All FDD bands, currently {1...32, 65…70}<br>    TDD:          All TDD bands, currently {33...64}<br>    Category NB1:   All Category NB1 bands, currently {1, 2, 3, 5, 8, 11, 12, 13, 17, 18, 19, 20, 21, 25,, 26, 28, 31, 66, 70}<br>    {1,2}:         Explicitly given band set<br>The following sets derived from pro-forma tables are also used:<br>    A.4.X-Y:   All bands supporting the feature defined in A.4.X-Y. For A.4.3-3, all supported bands.<br>    FALLBACK(A.4.6.X-Y): Fallback bands of supported CA Combinations defined in Table A.4.6.X-Y | |
| Note 2: | Category NB1 Bands < 1GHz {5, 8, 12, 13, 17, 18, 19, 20, 26, 28, 31} | |
| Note 3: | Category NB1 Bands > 1GHz {1, 2, 3, 11, 21, 25, 66, 70} | |

**Table 4.1-1c: Tested CA Configurations Selection Criteria**

| Code | Selection | Comment |
|------|-----------|---------|
| E01 | UL(A.4.6.1-3) AND CARRIER_NO(2) | All supported intra-band contiguous CA Configurations wit 2 carriers in both UL and DL |
| E02 | UL(A.4.6.2-3) AND CARRIER_NO(2) | All supported intra-band non-contiguous CA Configuration with 2 carriers in both UL and DL |
| E03 | UL(A.4.6.3-3) AND CARRIER_NO(2) | All supported inter-band CA Configurations with 2 carriers in both UL and DL |
| E04 | A.4.6.1-3 AND CARRIER_NO(2) AND NOT UL(A.4.6.1-3) | All supported intra-band contiguous CA Configurations wit 2 carriers in DL but no CA in UL |
| E05 | A.4.6.2-3 AND CARRIER_NO(2) AND NOT UL(A.4.6.2-3) | All supported intra-band non-contiguous CA Configuration with 2 carriers in DL but no CA in UL |
| E06 | A.4.6.3-3 AND CARRIER_NO(2) AND NOT UL(A.4.6.3-3) | All supported inter-band CA Configurations with 2 carriers in DL but no CA in UL |
| E07 | ((A.4.6.1-3 AND NOT UL(A.4.6.1-3)) OR (A.4.6.2-3 AND NOT UL(A.4.6.2-3)) OR (A.4.6.3-3 AND NOT UL(A.4.6.3-3)) OR (A.4.6.3-4 AND NOT UL(A.4.6.3-4)) OR (A.4.6.3-5 AND NOT UL(A.4.6.3-5))) AND CARRIER_NO(3) | All supported 3DL CA without UL |
| E08 | E04 AND NOT DL_FALLBACKS | All supported intra-band contiguous CA Configurations wit 2 carriers in DL but no CA in UL, that are not fallbacks of 3DL CA |
| E09 | E05 AND NOT DL_FALLBACKS | All supported intra-band non-contiguous CA Configuration with 2 carriers in DL but no CA in UL that are not fallbacks of 3DL CA. |
| E10 | E06 AND NOT DL_FALLBACKS | All supported inter-band CA Configurations with 2 carriers in DL but no CA in UL that are not fallbacks of 3DL CA |
| E11 | E04 AND NOT (FALLBACK(A.4.6.2-3) OR FALLBACK(A.4.6.3-3) OR FALLBACK(A.4.6.3-4)) | All supported intra-band contiguous CA Configurations wit 2 carriers in DL but no CA in UL, that are not fallbacks of 3DL CA, except of class D intra-band 3DL CA. |
| E12 | E06 AND NOT (FALLBACK(A.4.6.2-3) OR FALLBACK(A.4.6.3-4)) | All supported inter-band CA Configurations with 2 carriers in DL that are not fallbacks of inter-band on inter-band + intra-band non-contiguous 3DL CA. |
| DL_FAL LBACKS | FALLBACK(A.4.6.1-3) OR FALLBACK(A.4.6.2-3) OR FALLBACK(A.4.6.3-3) OR FALLBACK(A.4.6.3-4) OR FALLBACK(A.4.6.3-5) | All DL Fallbacks of supported CA Configurations |
| DL_FAL LBACKS _EtoD | FALLBACK_EtoD(A.4.6.1-3) OR FALLBACK_EtoD(A.4.6.2-3) OR FALLBACK_EtoD(A.4.6.3-3) OR FALLBACK_EtoD(A.4.6.3-4) OR FALLBACK_EtoD(A.4.6.3-5) | All DL Fallbacks of supported CA Configurations where BW class for one sub-block has changed from class E to class D |
| DL_FAL LBACKS _BtoA | FALLBACK_EtoD(A.4.6.1-3) OR FALLBACK_EtoD(A.4.6.2-3) OR FALLBACK_EtoD(A.4.6.3-3) OR FALLBACK_EtoD(A.4.6.3-4) OR FALLBACK_EtoD(A.4.6.3-5) | All DL Fallbacks of supported CA Configurations where BW class for one sub-block has changed from class B to class A |
| DL_FAL LBACKS _LAA | FALLBACK_LAA(A.4.6.1-3) OR FALLBACK_LAA(A.4.6.2-3) OR FALLBACK_LAA(A.4.6.3-3) OR FALLBACK_LAA(A.4.6.3-4) OR FALLBACK_LAA(A.4.6.3-5) | All DL Fallbacks of supported CA Configurations where BW class for sub-block in LAA band has changed |
| E13 | E06 AND DL_ONLY_BAND | All supported inter-band CA Configurations with 2 carriers in DL where one of the bands is a DL-only band |
| E14 | ((A.4.6.1-3 AND NOT UL(A.4.6.1-3)) OR (A.4.6.2-3 AND NOT UL(A.4.6.2-3)) OR (A.4.6.3-3 AND NOT UL(A.4.6.3-3)) OR (A.4.6.3-4 AND NOT UL(A.4.6.3-4)) OR (A.4.6.3-5 AND NOT UL(A.4.6.3-5))) AND CARRIER_NO(4) | All supported 4DL CA without UL |
| E15 | ((A.4.6.1-3 AND NOT UL(A.4.6.1-3)) OR (A.4.6.2-3 AND NOT UL(A.4.6.2-3)) OR (A.4.6.3-3 AND NOT UL(A.4.6.3-3)) OR (A.4.6.3-4 AND NOT UL(A.4.6.3-4)) OR (A.4.6.3-5 AND NOT UL(A.4.6.3-5))) AND CARRIER_NO(5) | All supported 5DL CA without UL |
| E16 | A.4.5-7a | Bands supporting Inter-band con-current V2X configurations |
| E17 | A.4.5-7b | Bands supporting V2X Intra-band multi-carrier configurations |
| E18 | UL(A.4.6.1-3 OR A.4.6.2-3 OR A.4.6.3-3 OR A.4.6.3-4) AND CARRIER_NO(3) | All support 3DL CA with UL CA |
| E19 | E07 AND NOT DL_FALLBACKS OR E18 {AND DL_FALLBACKS} | All support 3DL CA without UL CA, that are not fallbacks o 4DL CA. OR All support 3DL CA with UL CA |

| E20 | UL({A.4.6.1-3 OR A.4.6.2-3} OR A.4.6.3-3 OR A.4.6.3-4 OR A.4.6.3-5) AND CARRIER_NO(4) | All support 4DL CA with UL CA |
|---|---|---|
| E21 | E14 AND NOT DL_FALLBACKS OR E20 {AND DL_FALLBACKS} | All support 4DL CA without UL CA, that are not fallbacks of 5DL CA. OR All support 4DL CA with UL CA |
| E22 | (E07 AND NOT DL_FALLBACKS) OR (E07 AND DL_FALLBACKS_EtoD) OR (E07 AND DL_FALLBACKS_BtoA) OR E18 | All supported 3DL CA without UL CA, that are not fallback of 4DL CA except class E to D and class B to A fallback. OR All supported 3DL CA with UL CA |
| E23 | (E14 AND NOT DL_FALLBACKS) OR (E07 AND DL_FALLBACKS_EtoD) OR (E14 AND DL_FALLBACKS_BtoA) OR E20 | All supported 4DL CA without UL CA, that are not fallback of 4DL CA except class E to D and class B to A fallback. OR All supported 4DL CA with UL CA |
| E24 | (E07 AND NOT DL_FALLBACKS_LAA) OR E18 | All supported 3DL CA without UL CA, that are not LAA fallbacks of 4DL CA. OR All supported 3DL CA with UL CA |
| E25 | (E14 AND NOT DL_FALLBACKS_LAA) OR E20 | All supported 4DL CA without UL CA, that are not LAA fallbacks of 5DL CA. OR All supported 4DL CA with UL CA |
| Note: | CA Configuration Selection is based on set theory. Each CA Configuration is designated by its name, including bands and BW classes, e.g. CA_1A-5A. The following operators are used:<br><br>AND: Set intersection ( ∩ ). {CA_1C,CA_1A-5A} AND {CA_1C, CA_2A-4A } = CA_1C<br>OR: Set union ( ∪ ). {CA_1C,CA_1A-5A} OR {CA_1C, CA_2A-4A } = {CA_1C,CA_1A-5A, CA_2A-4A}<br>NOT: Set complement (\), full set being all possible CA Configurations<br>Also note that this is set without repetitions so {CA_1C} AND {CA_1C} = {CA_1C}<br><br>The following basic sets are used:<br>FDD: All FDD-only CA Configurations<br>TDD: All TDD-only CA Configurations<br>FDD-TDD: All mixed CA Configurations<br>{CA_1C}: Explicitly given CA Configurations<br>CARRIER_NO(n): All CA Configurations with n Carriers, e.g. for n=2 CA_1C and CA_1A-5A would be a part of this set<br>BAND_NO(n): All CA Configurations containing n Bands, e.g.. for n=2, CA_1A-5A and CA_1A-41C are part of this set<br>BWCLASS(x): All CA Configurations containing BW Class x, e.g.. for x=C, CA_1C and CA_1A-41C are part of this set<br>DL_ONLY_BAND: All CA configurations containing a DL-only band, e.g. CA_20A-32A is part of this set<br><br>The following sets derived from pro-forma tables are also used:<br>A.4.6.X-Y: All supported DL CA Combinations defined in table A.4.6.X-Y<br>UL(A.4.6.X-Y): All DL CA Combinations that also support UL CA with any number of carriers >1, as per column "Supported CA Bandwidth Class(es) in UL" defined in table A.4.6.X-Y.<br>UL_2CC(A.4.6.X-Y): All DL CA Combinations that also support 2 Carrier UL CA, as per column "Supported CA Bandwidth Class(es) in UL" defined in table A.4.6.X-Y. Note that DL might support a larger number of carriers than UL.<br>UL_3CC(A.4.6.X-Y): All DL CA Combinations that also support 3 Carrier UL CA, as per column "Supported CA Bandwidth Class(es) in UL" defined in table A.4.6.X-Y<br>FALLBACK(A.4.6.X-Y): Fallback DL CA Combinations of supported CA Combinations defined in Table A.4.6.X-Y<br>FALLBACK_EtoD(A.4.6.X-Y): Fallback DL CA Combinations of supported CA Combinations defined in Table A.4.6.X-Y where BW class for one sub-block has changed from class E to class D<br>FALLBACK_BtoA(A.4.6.X-Y): Fallback DL CA Combinations of supported CA Combinations defined in Table A.4.6.X-Y where BW class for one sub-block has changed from class B to class A<br>FALLBACK_LAA(A.4.6.X-Y): Fallback DL CA Combinations of supported CA Combinations defined in Table A.4.6.X-Y where BW class for B46 or B49 band changed from class E to D, D to C or C to A<br>FALLBACK_UL(A.4.6.X-Y): Fallback DL and UL CA Combinations of supported CA Combinations defined in Table A.4.6.X-Y. This set only includes Combinations with same CA Capability in UL and DL |

**Table 4.1-2: Default Fallback Bands and Fallback CA Configurations**

| CA Configuration | Default Fallback Bands | Default Fallback CA Configurations (Note 3) |
|---|---|---|
| CA_XC (2 carrier intra-band contiguous) | X | - |
| CA_XB (2 carrier intra-band contiguous) | X | - |
| CA_XA-YA (2 carrier inter-band) | X,Y | - |
| CA_XA-XA (2 carrier intra-band non-contiguous) | X | - |
| CA_XD (3 carrier intra-band contiguous) | X | CA_XC |
| CA_XA-YA-ZA (3 carrier inter-band) | X,Y,Z | CA_XA-YA, CA_XA-ZA, CA_YA-ZA |
| CA_XC-YA(3 carrier intra-band contiguous + inter-band)[2] | X,Y | CA_XC, CA_XA-YA |
| CA_XB-YA(3 carrier intra-band contiguous + inter-band)[2] | X,Y | CA_XB, CA_XA-YA |
| CA_XA-XA-YA(3 carrier intra-band non-contiguous + inter-band)[2] | X,Y | CA_XA-YA, CA_XA-XA |
| CA_XC-XA(3 carrier intra-band non-contiguous + intra-band contiguous)[2] | X | CA_XC, CA_XA-XA |
| CA_XE (4 carrier intra-band contiguous) | X | CA_XD, |
| CA_XA-XD (4 carrier intra-band contiguous + inter-band with 2 bands)[2] | X | CA_XA-XC |
| CA_XC-YC (4 carrier intra-band contiguous + inter-band with 2 bands)[2] | X, Y | CA_XA-YC, CA_XC-YA |
| CA_XA-XA-YC (4 carrier intra-band non-contiguous + intra-band contiguous + inter-band with 2 bands) | X, Y | CA_XA-XA-YA, CA_XA-YC |
| CA_XA-YA-ZC (4 carrier intra-band contiguous + inter-band with 3 bands)[2] | X, Y, Z | CA_XA-YA-ZA, CA_XA-ZC CA_YA-ZC |
| CA_XC-XC (4 carrier intra-band non-contiguous + intra-band contiguous) | X | CA_XC-XA, CA_XA-XC |
| CA_XA-YA-YC (4 carrier intra-band non-contiguous + intra-band contiguous + inter-band with 2 bands) [2] | X, Y | CA_XA-YA-YA, CA_XA -YC, CA YA-YC |
| CA_XA-XA-YA-YA (4 carrier intra-band non-contiguous + inter-band with 2 bands)[2] | X, Y | CA_XA-XA-YA, CA_XA-YA-YA, |
| CA_XA-YA-ZA-RA (4 carrier inter-band with 4 bands) | X, Y, Z, R | CA_XA-YA-ZA, CA_XA-YA-RA, CA_XA-ZA-RA, CA_YA-ZA-RA, |
| CA_XF (5 carrier intra-band contiguous) | X | CA_XE |
| CA_XA-XE (5 carrier intra-band non-contiguous + intra-band contiguous) | X | CA_XE, CA_XA-XD |
| CA_XC-XD (5 carrier intra-band non-contiguous + intra-band contiguous) | X | CA_XC-XC, CA_XA-XD |
| CA_XA-YE (5 carrier intra-band contiguous + inter-band with 2 bands)[2] | X, Y | CA_XA-YD, CA_YE |
| CA_XC-YD (5 carrier intra-band contiguous + inter-band with 2 bands)[2] | X, Y | CA_XC-YC, CA_XA-YD |
| CA_XA-YA-ZD (5 carrier intra-band contiguous + inter-band with 3 bands)[2] | X, Y, Z | CA_XA-YA-ZC, CA_XA-ZD, CA_YA-ZD |
| CA_XA-YC-ZC (5 carrier intra-band contiguous + inter-band with 3 bands)[2] | X, Y, Z | CA_XA-YC-ZA, CA_XA-YA-ZC, CA_YC-ZC |
| CA_XA-YA-ZA-RC (5 carrier intra-band contiguous + inter-band with 4 bands)[2] | X, Y, Z, R | CA_XA-YA-ZA, CA_XA-YA-RC, CA_XA-ZA-RC, CA_YA-ZA-RC |
| CA_XA-YA-YD (5 carrier intra-band non-contiguous + intra-band contiguous + inter-band with 2 bands) [2] | X, Y | CA_XA-YA-YC, CA_XA-YD, CA_YA-YD |

| | | |
|---|---|---|
| CA_XA-YC-YC (5 carrier intra-band non-contiguous + intra-band contiguous + inter-band with 2 bands) [2] | X, Y | CA_XA-YC-YA, CA_XA-YA-YC, CA_YC-YC |
| CA_XA-XA-YD (5 carrier intra-band non-contiguous + intra-band contiguous + inter-band with 2 bands) [2] | X, Y | CA_XA-XA-YC, CA_XA-YD, |
| CA_XA-XC-YC (5 carrier intra-band non-contiguous + intra-band contiguous + inter-band with 2 bands) [2] | X, Y | CA_XA-XC-YA, CA_XA-XA-YC, CA_XC-YC |
| CA_XA-XA-YA-YC (5 carrier intra-band non-contiguous + intra-band contiguous + inter-band with 2 bands) [2] | X, Y | CA_XA-XA-YA-YA, CA_XA-XA-YC, CA_XA-YA-YC |
| CA_XA-YA-ZA-ZC (5 carrier intra-band non-contiguous + intra-band contiguous + inter-band with 3 bands) [2] | X, Y, Z | CA_XA-YA-ZA-ZA, CA_XA-YA-ZC, CA_XA-ZA-ZC, CA_YA-ZA-ZC |
| CA_XA-YA-YA-ZA-ZA (5 carrier intra-band non-contiguous + intra-band contiguous + inter-band with 3 bands) [2] | X, Y, Z | CA_XA-YA-YA-ZA, CA_XA-YA-ZA-ZA, CA_YA-YA-ZA-ZA, |
| CA_XA-YA-ZA-RA-RA (5 carrier intra-band non-contiguous + intra-band contiguous + inter-band with 4 bands) [2] | X, Y, Z, R | CA_XA-YA-ZA-RA, CA_XA-YA-RA-RA, CA_XA-ZA-RA-RA, CA_YA-ZA-RA-RA, |
| CA_XA-YA-ZA-RA-SA (5 carrier inter-band with 5 bands) | X, Y, R, S | CA_XA-YA-ZA-RA, CA_XA-YA-ZA-SA, CA_XA-YA-RA-SA, CA_XA-ZA-RA-SA, CA_YA-ZA-RA-SA |
| Note 1: Table used for deriving default fallbacks in sections A.4.6.1,2 and 3. Note 2: Also applicable for different band orderings (e.g.. YA-XC). Note 3: Only the CA fallback configuration with 1 less CC indicated. To get the full list of fallback configurations, all fallback configurations down to 2 carrier are recursively generated. | | |

**Table 4.1-3: 3DL CA Name/Release mapping**

| Number of Bands | 3CA Band Combinations | Release for test applicability | Name |
|---|---|---|---|
| 1 | CA_XD | Rel-10 | 3DL CA with TDD CA_XD |
| 2 | CA_XA-YB | Rel-11 | 3DL CA with FDD CA_XA-YB |
|  | CA_XA-YB | Rel-11 | 3DL CA with TDD CA_XA-YB |
|  | CA_XA-YB | Rel-12 | 3DL CA with FDD-TDD CA_XA-YB |
| 2 | CA_XA-YC | Rel-11 | 3DL CA with FDD CA_XA-YC |
|  | CA_XA-YC | Rel-11 | 3DL CA with TDD CA_XA-YC |
|  | CA_XA-YC | Rel-12 | 3DL CA with FDD-TDD CA_XA-YC |
| 3 | CA_XA-YA-ZA | Rel-10 | 3DL CA with FDD CA_XA-YA-ZA |
|  |  | Rel-10 | 3DL CA with TDD CA_XA-YA-ZA |
|  |  | Rel-12 | 3DL CA with FDD-TDD CA_XA-YA-ZA |
| 2 | CA_XA-XA-YA | Rel-11 | 3DL CA with FDD CA_XA-XA-YA |
| 1 | CA_XA-XA-XA | Rel-11 | 3DL CA with FDD CA_XA-XA-XA |

**Table 4.1-4: 4DL CA Name/Release mapping**

| Number of Bands | 4CA Band Combinations | Release for test applicability | Name |
|---|---|---|---|
| 1 | CA_XE | Rel-11 | 4DL CA with TDD CA_XE |
| 2 | CA_XA-XD | Rel-11 | 4DL CA with FDD CA_XA-XD |
| | | Rel-11 | 4DL CA with TDD CA_XA-XD |
| | | Rel-12 | 4DL CA with FDD-TDD CA_XA-XD |
| 2 | CA_XB-YB | Rel-10 | 4DL CA with FDD CA_XB-YB |
| | CA_XC-YB | Rel-10 | 4DL CA with FDD CA_XC-YB |
| | | Rel-12 | 4DL CA with FDD-TDD CA_XC-YB |
| 2 | CA_XC-YC | Rel-10 | 4DL CA with FDD CA_XC-YC |
| | | Rel-10 | 4DL CA with TDD CA_XC-YC |
| 1 | CA_XC-XC | Rel-11 | 4DL CA with TDD CA_XC-XC |
| 2 | CA_XA-XA-YB | Rel-11 | 4DL CA with FDD CA_XA-XA-YB |
| | CA_XA-YA-YB | Rel-11 | 4DL CA with FDD CA_XA-YA-YB |
| 3 | CA_XA-YA-ZB | Rel-11 | 4DL CA with FDD CA_XA-YA-ZB |
| 3 | CA_XA-YA-ZC | Rel-11 | 4DL CA with FDD CA_XA-YA-ZC |
| | | Rel-12 | 4DL CA with FDD-TDD CA_XA-YA-ZC |
| 2 | CA_XA-YA-YC | Rel-11 | 4DL CA with FDD CA_XA-YA-YC |
| | | Rel-12 | 4DL CA with FDD-TDD CA_XA-YA-YC |
| 2 | CA_XA-XC-YA | Rel-12 | 4DL CA with FDD-TDD CA_XA-XC-YA |
| 3 | CA_XA-YA-ZC | Rel-12 | 4DL CA with FDD-TDD_XA-YA-ZC |
| 2 | CA_XA-XA-YA-YA | Rel-11 | 4DL CA with FDD CA_XA-XA-YA-YA |
| 3 | CA_XA-YA-YA-ZA | Rel-11 | 4DL CA with FDD CA_XA-YA-YA-ZA |
| | | Rel-12 | 4DL CA with FDD-TDD CA_XA-YA-YA-ZA |
| 4 | CA_XA-YA-ZA-RA | Rel-11 | 4DL CA with FDD CA_XA-YA-ZA-RA |
| | | Rel-12 | 4DL CA with FDD-TDD CA_XA-YA-ZA-RA |

**Table 4.1-5: 5DL CA Name/Release mapping**

| Number of Bands | 5CA Band Combinations | Release for test applicability | Name |
|---|---|---|---|
| 1 | CA_XF | Rel-12 | 5DL CA with TDD CA_XF |
| 1 | CA_XA-XE | Rel-11 | 5DL CA with TDD CA_XA-XE |
| 1 | CA_XC-XD | Rel-11 | 5DL CA with FDD CA_XC-XD |
| | | Rel-11 | 5DL CA with TDD CA_XC-XD |
| 1 | CA_XA-XA-XD | FFS | 5DL CA with FDD CA_XA-XA-XD |
| | | FFS | 5DL CA with TDD CA_XA-XA-XD |
| 1 | CA_XA-XC-XC | FFS | 5DL CA with FDD CA_XA-XC-XC |
| | | FFS | 5DL CA with TDD CA_XA-XC-XC |
| 2 | CA_XA-YE | Rel-11 | 5DL CA with TDD CA_XA-YE |
| | | Rel-12 | 5DL CA with FDD-TDD CA_XA-YE |
| 2 | CA_XC-YD | Rel-11 | 5DL CA with FDD CA_XC-YD |
| | | Rel-11 | 5DL CA with TDD CA_XC-YD |
| | | Rel-12 | 5DL CA with FDD-TDD CA_XC-YD |
| 2 | CA_XA-YA-YD | Rel-11 | 5DL CA with TDD CA_XA-YA-YD |
| | | Rel-12 | 5DL CA with FDD-TDD CA_XA-YA-YD |
| 2 | CA_XA-YC-YC | Rel-11 | 5DL CA with FDD CA_XA-YC-YC |
| | | Rel-11 | 5DL CA with TDD CA_XA-YC-YC |
| | | Rel-12 | 5DL CA with FDD-TDD CA_XA-YC-YC |
| 2 | CA_XA-YA-YA-YC | FFS | 5DL CA with FDD CA_XA-XA-XA-YC |
| | | FFS | 5DL CA with TDD CA_XA-XA-XA-YC |
| | | FFS | 5DL CA with FDD-TDD CA_XA-XA-XA-YC |
| 2 | CA_XA-XA-YD | Rel-11 | 5DL CA with TDD CA_XA-XA-YD |
| | | Rel-12 | 5DL CA with FDD-TDD CA_XA-XA-YD |
| 2 | CA_XA-XC-YC | Rel-10 | 5DL CA with FDD CA_XA-XC-YC |
| | | Rel-10 | 5DL CA with TDD CA_XA-XC-YC |
| | | Rel-12 | 5DL CA with FDD-TDD CA_XA-XC-YC |
| 2 | CA_XA-XA-YA-YC | Rel-11 | 5DL CA with FDD CA_XA-XA-YA-YC |
| | | Rel-11 | 5DL CA with TDD CA_XA-XA-YA-YC |
| | | Rel-12 | 5DL CA with FDD-TDD CA_XA-XA-YA-YC |
| 2 | CA_XA-XA-YA-YA-YA | FFS | 5DL CA with FDD CA_XA-XA-YA-YA-YA |
| | | FFS | 5DL CA with TDD CA_XA-XA-YA-YA-YA |

| Number of Bands | 5CA Band Combinations | Release for test applicability | Name |
|---|---|---|---|
| | | FFS | 5DL CA with FDD-TDD CA_XA-XA-YA-YA-YA |
| 2 | CA_XA-XA-XA-YC | FFS | 5DL CA with FDD CA_XA-XA-XA-YC |
| | | FFS | 5DL CA with TDD CA_XA-XA-XA-YC |
| | | FFS | 5DL CA with FDD-TDD CA_XA-XA-XA-YC |
| 3 | CA_XA-YA-ZD | Rel-11 | 5DL CA with TDD CA_XA-YA-ZD |
| | | Rel-12 | 5DL CA with FDD-TDD CA_XA-YA-ZD |
| 3 | CA_XA-YC-ZC | Rel-11 | 5DL CA with FDD CA_XA-YC-ZC |
| | | Rel-11 | 5DL CA with TDD CA_XA-YC-ZC |
| | | Rel-12 | 5DL CA with FDD-TDD CA_XA-YC-ZC |
| 3 | CA_XA-YA-ZA-ZC | Rel-11 | 5DL CA with FDD CA_XA-YA-ZA-ZC |
| | | Rel-11 | 5DL CA with TDD CA_XA-YA-ZA-ZC |
| | | Rel-12 | 5DL CA with FDD-TDD CA_XA-YA-ZA-ZC |
| 3 | CA_XA-YA-ZA-ZA-ZA | FFS | 5DL CA with FDD CA_XA-YA-ZA-ZA-ZA |
| | | FFS | 5DL CA with TDD CA_XA-YA-ZA-ZA-ZA |
| | | FFS | 5DL CA with FDD-TDD CA_XA-YA-ZA-ZA-ZA |
| 3 | CA_XA-YA-YA-ZC | Rel-11 | 5DL CA with FDD CA_XA-YA-YA-ZC |
| | | Rel-11 | 5DL CA with TDD CA_XA-YA-YA-ZC |
| | | Rel-12 | 5DL CA with FDD-TDD CA_XA-YA-YA-ZC |
| 3 | CA_XA-YA-YA-ZA-ZA | Rel-11 | 5DL CA with FDD CA_XA-YA-YA-ZA-ZA |
| | | Rel-11 | 5DL CA with TDD CA_XA-YA-YA-ZA-ZA |
| | | Rel-12 | 5DL CA with FDD-TDD CA_XA-YA-YA-ZA-ZA |
| 4 | CA_XA-YA-ZA-RC | Rel-11 | 5DL CA with FDD CA_XA-YA-ZA-RC |
| | | Rel-11 | 5DL CA with TDD CA_XA-YA-ZA-RC |
| | | Rel-12 | 5DL CA with FDD-TDD CA_XA-YA-ZA-RC |
| 4 | CA_XA-YA-ZA-RA-RA | Rel-11 | 5DL CA with FDD CA_XA-YA-ZA-RA-RA |
| | | Rel-11 | 5DL CA with TDD CA_XA-YA-ZA-RA-RA |
| | | Rel-12 | 5DL CA with FDD-TDD CA_XA-YA-ZA-RA-RA |
| 5 | CA_XA-YA-ZA-RA-SA | Rel-12 | 5DL CA with FDD CA_XA-YA-ZA-RA-SA |
| | | Rel-12 | 5DL CA with TDD CA_XA-YA-ZA-RA-SA |
| | | Rel-12 | 5DL CA with FDD-TDD CA_XA-YA-ZA-RA-SA |

| Number of Bands | 5CA Band Combinations | Release for test applicability | Name |
|---|---|---|---|
| Note 1: | X, Y, Z, R and S in this table correspond to different bands i.e. X != Y != Z != R != S. | | |
| Note 2: | The band combinations with difference appearance order of bands/sub-blocks in the band combination string are not distinguished. E.g. CA_XA-YA-YD represents the set of CA_XA-YD-YA, YD-YA-XA, YA-XA-YD and YA-YD-XA. | | |

## 4.2      RRM conformance test cases

**Table 4.2-1: Applicability of RRM conformance test cases, ref. TS 36.521-3 [2]**

NOTE:      To determine applicability of a test case, FGI support in combined or fdd-Add-UE-EUTRA-Capabilities or tdd-Add-UE-EUTRA-Capabilities is taken into account.

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| **E-UTRAN RRC_IDLE State Mobility** | | | | | | | |
| 4.2.1 | E-UTRAN FDD - FDD cell re-selection intra frequency case | Rel-8 | C01 | UE supporting E-UTRA FDD | | | 2Rx, 4Rx |
| 4.2.2 | E-UTRAN TDD - TDD cell re-selection intra frequency case | Rel-8 | C02 | UE supporting E-UTRA TDD | | | 2Rx, 4Rx |
| 4.2.3 | E-UTRAN FDD - FDD cell re-selection inter frequency case | Rel-8 | C01 | UE supporting E-UTRA FDD | | | 2Rx, 4Rx |
| 4.2.4 | E-UTRAN FDD - TDD cell re-selection inter frequency case | Rel-9 | C03 | UE supporting E-UTRA FDD and E-UTRA TDD | | | 2Rx, 4Rx |
| 4.2.5 | E-UTRAN TDD - FDD cell re-selection inter frequency case | Rel-9 | C03 | UE supporting E-UTRA FDD and E-UTRA TDD | | | 2Rx, 4Rx |
| 4.2.6 | E-UTRAN TDD - TDD cell re-selection inter frequency case | Rel-8 | C02 | UE supporting E-UTRA TDD | | | 2Rx, 4Rx |
| 4.2.7 | E-UTRAN FDD - FDD Inter frequency case in the existence of non-allowed CSG cell | Rel-9 | C01 | UE supporting E-UTRA FDD | | | 2Rx, 4Rx |
| 4.2.8 | E-UTRAN TDD - TDD Inter frequency case in the existence of non-allowed CSG cell | Rel-9 | C02 | UE supporting E-UTRA TDD | | | 2Rx, 4Rx |
| 4.2.9 | E-UTRAN FDD-FDD intra-frequency Cell Re-selection case for 5MHz bandwidth | Rel-8 | C49 | UE supporting E-UTRA FDD and only E-UTRA bands within band group FDD_N | | | |
| 4.2.10 | E-UTRAN FDD – FDD reselection using an increased number of carriers | Rel-12 | C01s | UE supporting E-UTRA FDD and Increased Carrier Monitoring E-UTRA | | | 2Rx, 4Rx |
| 4.2.11 | E-UTRAN TDD – TDD reselection using an increased number of carriers | Rel-12 | C01t | UE supporting E-UTRA TDD and Increased Carrier Monitoring E-UTRA | | | 2Rx, 4Rx |
| 4.2.12 | E-UTRAN FDD - FDD Intra frequency case for CE UE in normal coverage | Rel-13 | C94a | UE supporting E-UTRA FD-FDD and UE category M1 | | | |
| 4.2.13 | E-UTRAN HD - FDD Intra frequency case for CE UE in normal coverage | Rel-13 | C107a | UE supporting E-UTRA HD-FDD and UE category M1 | | | |
| 4.2.14 | E-UTRAN TDD - TDD Intra frequency case for CE UE in normal coverage | Rel-13 | C93a | UE supporting E-UTRA TDD and UE category M1 | | | |
| 4.2.15 | E-UTRAN FDD - FDD Intra frequency case for CE UE in enhanced coverage | Rel-13 | C94e | UE supporting E-UTRA FD-FDD and (UE category M1 and CE Mode B) | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 4.2.16 | E-UTRAN HD - FDD Intra frequency case for CE UE in enhanced coverage | Rel-13 | C94f | UE supporting E-UTRA HD-FDD and (UE category M1 and CE Mode B) | | | |
| 4.2.17 | E-UTRAN TDD - TDD Intra frequency case for CE UE in enhanced coverage | Rel-13 | C93e | UE supporting E-UTRA TDD and (UE category M1 and CE Mode B) | | | |
| 4.2.18 | HD-FDD Cell Re-selection Intra frequency case for Category NB1 UE In-Band mode under Normal Coverage | Rel-13 | C154 | UE supporting category NB1 | | | |
| | | Rel-14 | C218 | UE supporting category NB2 | | | |
| 4.2.19 | HD – FDD Intra frequency case for UE Category NB1 In-Band mode in enhanced coverage | Rel-13 | C154 | UE supporting category NB1 | | | |
| | | Rel-14 | C218 | UE supporting category NB2 | | | |
| 4.2.20 | E-UTRAN FDD – FDD Intra frequency case for UE Category 1bis | Rel-13 | C194 | UE supporting E-UTRA FDD and UE Category 1bis | | | |
| 4.2.21 | E-UTRAN TDD – TDD Intra frequency case for UE Category 1bis | Rel-13 | C195 | UE supporting E-UTRA TDD and UE Category 1bis | | | |
| 4.2.22 | E-UTRAN FDD - FDD cell re-selection intra frequency case for UE configured with highSpeedEnhancedMeasFlag | Rel-14 | C196 | UEs supporting E-UTRA FDD and high speed enhancement for measurement | | | |
| 4.2.23 | E-UTRAN TDD - TDD cell re-selection intra frequency case for UE configured with highSpeedEnhancedMeasFlag | Rel-14 | C197 | UEs supporting E-UTRA TDD and high speed enhancement for measurement | | | |
| 4.2.24 | HD – FDD Inter frequency case for UE Category NB1 In-Band mode in normal coverage | Rel-13 | C154 | UE supporting category NB1 | | | |
| 4.2.31 | E-UTRAN FDD – FDD Inter frequency case for UE Category 1bis | Rel-13 | C01 | UE supporting E-UTRA FDD and UE Category 1bis | | | |
| 4.2.25 | E-UTRAN FDD – FDD Inter frequency case for CE UE in normal coverage | Rel-13 | FFS | FFS | | | |
| 4.2.26 | E-UTRAN HD – FDD Inter frequency case for CE UE in normal coverage | Rel-13 | FFS | FFS | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 4.2.27 | E-UTRAN TDD – TDD Inter frequency case for CE UE in normal coverage | Rel-13 | FFS | FFS | | | |
| 4.2.32 | E-UTRAN FDD – TDD Inter frequency case for UE Category 1bis | Rel-13 | C03a | UE supporting E-UTRA FDD and E-UTRA TDD and UE Category 1bis | | | |
| 4.2.33 | E-UTRAN TDD – FDD Inter frequency case for UE Category 1bis | Rel-13 | C03a | UE supporting E-UTRA FDD and E-UTRA TDD and UE Category 1bis | | | |
| 4.2.34 | E-UTRAN TDD – TDD: Inter frequency case for UE Category 1bis | Rel-13 | C02m | UE supporting E-UTRA TDD and UE Category 1bis | | | |
| 4.3.1.1 | E-UTRA FDD - UTRAN FDD cell re-selection | Rel-8 | C04 | UE supporting E-UTRA FDD and UTRA FDD | | | 2Rx, 4Rx |
| 4.3.1.2 | E-UTRA FDD - UTRAN FDD cell re-selection: UTRA FDD is of lower priority | Rel-8 | C04 | UE supporting E-UTRA FDD and UTRA FDD | | | 2Rx, 4Rx |
| 4.3.1.3 | E-UTRAN FDD - UTRAN FDD cell re-selection in fading propagation conditions: UTRA FDD is of lower priority | Rel-8 | C04 | UE supporting E-UTRA FDD and UTRA FDD | | | 2Rx, 4Rx |
| 4.3.1.4 | E-UTRAN FDD - UTRAN FDD cell re-selection: UTRA FDD is of lower priority for 5MHz bandwidth | Rel-8 | C53 | UE supporting E-UTRA FDD and only E-UTRA bands within band group FDD_Nand UTRA FDD | | | |
| 4.3.1.5 | Idle mode FDD to UTRA FDD interRAT reselection | Rel-12 | C04l | UE supporting E-UTRA FDD, UTRA FDD and Increased Carrier Monitoring E-UTRA | | | 2Rx, 4Rx |
| 4.3.2 | E-UTRAN FDD - UTRAN TDD cell re-selection | Rel-8 | C06 | UE supporting E-UTRA FDD and UTRA TDD | | Rel-9 UTRA TDD | 2Rx, 4Rx |
| 4.3.2A | E-UTRA FDD to UTRA TDD cell re-selection for IncMon | Rel-12 | C04i | UE supporting E-UTRA FDD, UTRA TDD and Increased Carrier Monitoring E-UTRA | | | 2Rx, 4Rx |
| 4.3.3 | E-UTRAN TDD - UTRAN FDD cell re-selection | Rel-8 | C07 | UE supporting E-UTRA TDD and UTRA FDD | | | 2Rx, 4Rx |
| 4.3.3A | Idle mode TDD to UTRA FDD interRAT reselection | Rel-12 | C04j | UE supporting E-UTRA TDD, UTRA FDD and Increased Carrier Monitoring E-UTRA | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 4.3.4.1 | E-UTRA TDD - UTRAN TDD cell re-selection | Rel-8 | C05 | UE supporting E-UTRA TDD and UTRA TDD | | Rel-9 UTRA TDD | 2Rx, 4Rx |
| 4.3.4.2 | E-UTRAN TDD - UTRAN TDD cell re-selection: UTRA is of lower priority | Rel-8 | C05 | UE supporting E-UTRA TDD and UTRA TDD | | Rel-9 UTRA TDD | 2Rx, 4Rx |
| 4.3.4.3 | EUTRA TDD-UTRA TDD cell reselection in fading propagation conditions: UTRA TDD is of lower priority | Rel-8 | C05 | UE supporting E-UTRA TDD and UTRA TDD | | Rel-9 UTRA TDD | 2Rx, 4Rx |
| 4.3.4.4 | E-UTRA TDD to UTRA TDD cell re-selection for IncMon | Rel-12 | C04k | UE supporting E-UTRA TDD, UTRA TDD and Increased Carrier Monitoring E-UTRA | | | 2Rx, 4Rx |
| 4.4.1 | E-UTRAN FDD - GSM cell re-selection | Rel-8 | C08 | UE supporting E-UTRA FDD and GSM | | | 2Rx, 4Rx |
| 4.4.2 | E-UTRAN TDD - GSM cell re-selection | Rel-8 | C09 | UE supporting E-UTRA TDD and GSM | | | 2Rx, 4Rx |
| 4.5.1.1 | E-UTRAN FDD - HRPD Cell re-selection: HRPD is of lower priority | Rel-8 | C10 | UE supporting E-UTRA FDD and cdma2000 HRPD | | | 2Rx, 4Rx |
| 4.5.2.1 | E-UTRAN TDD - HRPD Cell Reselection: HRPD is of Lower Priority | Rel-9 | C34 | UE supporting E-UTRA TDD and cdma2000 HRPD | | | 2Rx, 4Rx |
| 4.6.1.1 | E-UTRAN FDD - cdma2000 1xRTT Cell re-selection: cdma2000 1x is of lower priority | Rel-8 | C11 | UE supporting E-UTRA FDD and cdma2000 1xRTT | | | 2Rx, 4Rx |
| 4.6.2.1 | E-UTRAN TDD-cdma2000 1X Cell Reselection: cdma2000 1X is of Lower Priority | Rel-9 | C35 | UE supporting E-UTRA TDD and cdma2000 1xRTT | | | 2Rx, 4Rx |
| **E-UTRAN RRC_CONNECTED State Mobility** | | | | | | | |
| 5.1.1 | E-UTRAN FDD - FDD Handover intra frequency case | Rel-8 | C01 | UE supporting E-UTRA FDD | | | 2Rx, 4Rx |
| 5.1.2 | E-UTRAN TDD - TDD Handover intra frequency case | Rel-8 | C02 | UE supporting E-UTRA TDD | | | 2Rx, 4Rx |
| 5.1.3 | E-UTRAN FDD - FDD Handover inter frequency case | Rel-8 | C01d | UE supporting E-UTRA FDD and Feature Group Indicators 5, 13 and 25 | | | 2Rx, 4Rx |
| 5.1.3_2 | E-UTRAN FDD – FDD Inter frequency handover for UE Category 1bis | Rel-13 | C01dh | UE supporting E-UTRA FDD and UE Category 1bis and Feature Group Indicators 5, 13 and 25 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 5.1.4 | E-UTRAN TDD - TDD Handover inter frequency case | Rel-8 | C02d | UE supporting E-UTRA TDD and Feature Group Indicators 5, 13 and 25 | | | 2Rx, 4Rx |
| 5.1.4_2 | E-UTRAN TDD – TDD Inter frequency handover for UE Category 1bis | Rel-13 | C02dh | UE supporting E-UTRA TDD and UE Category 1bis and Feature Group Indicators 5, 13 and 25 | | | |
| 5.1.5 | E-UTRAN FDD - FDD inter frequency handover: unknown target cell | Rel-8 | C01a | UE supporting E-UTRA FDD and Feature Group Indicators 13 and 25 | | | 2Rx, 4Rx |
| 5.1.5_2 | E-UTRAN FDD – FDD Inter frequency handover: unknown target cell for UE Category 1bis | Rel-13 | C01ah | UE supporting E-UTRA FDD and UE Category 1bis and Feature Group Indicators 13 and 25 | | | |
| 5.1.6 | E-UTRAN TDD-TDD inter frequency handover: unknown target cell | Rel-8 | C02a | UE supporting E-UTRA TDD and Feature Group Indicators 13 and 25 | | | 2Rx, 4Rx |
| 5.1.6_2 | E-UTRAN TDD – TDD Inter frequency handover: unknown Target Cell for UE Category 1bis | Rel-13 | C02ah | UE supporting E-UTRA TDD and UE Category 1bis and Feature Group Indicators 13 and 25 | | | |
| 5.1.7 | E-UTRAN FDD - TDD handover inter frequency case | Rel-9 | C21 | UE supporting E-UTRA FDD and E-UTRA TDD and Feature Group Indicators 5, 25 and 30 | | | 2Rx, 4Rx |
| 5.1.7_2 | E-UTRAN FDD – TDD Inter frequency handover for UE Category 1bis | Rel-13 | C21a | UE supporting E-UTRA FDD and E-UTRA TDD and UE Category 1bis and Feature Group Indicators 5, 25 and 30 | | | |
| 5.1.8 | E-UTRAN TDD - FDD handover inter frequency case | Rel-9 | C21 | UE supporting E-UTRA FDD and E-UTRA TDD and Feature Group Indicators 5, 25 and 30 | | | 2Rx, 4Rx |
| 5.1.8_2 | E-UTRAN TDD – FDD Inter frequency handover for UE Category 1bis | Rel-13 | C21a | UE supporting E-UTRA FDD and E-UTRA TDD and UE Category 1bis and Feature Group Indicators 5, 25 and 30 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|----------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 5.1.9 | E-UTRAN FDD-FDD Intra frequency handover for 5MHz bandwidth | Rel-8 | C49 | UE supporting E-UTRA FDD and only E-UTRA bands within band group FDD_N | | | |
| 5.1.10 | E-UTRAN FDD-FDD Handover intra frequency handover for UE category 0 | Rel-12 | C94 | UE supporting E-UTRA FD-FDD and UE Category 0 | | | |
| 5.1.11 | E-UTRAN HD-FDD Handover intra frequency handover for UE category 0 | Rel-12 | C110 | UE supporting E-UTRA HD-FDD and UE Category 0 | | | |
| 5.1.12 | E-UTRAN TDD-TDD Handover intra frequency handover for UE category 0 | Rel-12 | C93 | UE supporting E-UTRA TDD and UE Category 0 | | | |
| 5.1.13 | E-UTRAN FDD-FDD Intra frequency handover for CE UEs in CEModeA | Rel-13 | C94a | UE supporting E-UTRA FD-FDD and UE Category M1 | | | |
| 5.1.14 | E-UTRAN HD-FDD Intra frequency handover for CE UEs in CEModeA | Rel-13 | C107a | UE supporting E-UTRA HD-FDD and UE Category M1 | | | |
| 5.1.15 | E-UTRAN TDD Intra frequency handover for CE UEs in CEModeA | Rel-13 | C93a | UE supporting E-UTRA TDD and UE Category M1 | | | |
| 5.1.16 | E-UTRAN FDD-FDD Intra frequency handover for CE UEs in CEModeB | Rel-13 | C94e | UE supporting E-UTRA FD-FDD and (UE Category M1 and CE Mode B) | | | |
| 5.1.17 | E-UTRAN HD-FDD Intra frequency handover for CE UEs in CEModeB | Rel-13 | C94f | UE supporting E-UTRA HD-FDD and (UE Category M1 and CE Mode B) | | | |
| 5.1.18 | E-UTRAN TDD Intra frequency handover for CE UEs in CEModeB | Rel-13 | C93e | UE supporting E-UTRA TDD and (UE Category M1 and CE Mode B) | | | |
| 5.1.19 | E-UTRAN FDD – FDD Intra frequency handover for UE Category 1bis | Rel-13 | C194 | UE supporting E-UTRA FDD and UE Category 1bis | | | |
| 5.1.20 | E-UTRAN TDD – TDD Intra frequency handover for UE Category 1bis | Rel-13 | C195 | UE supporting E-UTRA TDD and UE Category 1bis | | | |
| 5.2.1 | E-UTRAN FDD - UTRAN FDD handover | Rel-8 | C04a | UE supporting E-UTRA FDD and UTRA FDD and Feature Group Indicators 8 and 22 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 5.2.2 | E-UTRAN TDD - UTRAN FDD handover | Rel-8 | C07a | UE supporting E-UTRA TDD and UTRA FDD and Feature Group Indicators 8 and 22 | | | 2Rx, 4Rx |
| 5.2.3 | E-UTRAN FDD - GSM handover | Rel-8 | C08e | UE supporting E-UTRA FDD and GSM and inter-RAT PS handover to GERAN and Feature Group Indicators 9, 15 and 23 | | | 2Rx, 4Rx |
| 5.2.4 | E-UTRAN TDD - UTRAN TDD handover | Rel-8 | C05a | UE supporting E-UTRA TDD and UTRA TDD and Feature Group Indicators 8 and 22 | | Rel-9 UTRA TDD | 2Rx, 4Rx |
| 5.2.5 | E-UTRAN FDD - UTRAN TDD handover | Rel-8 | C06a | UE supporting E-UTRA FDD and UTRA TDD and Feature Group Indicators 8 and 22 | | Rel-9 UTRA TDD | 2Rx, 4Rx |
| 5.2.6 | E-UTRA TDD - GSM handover | Rel-8 | C09f | UE supporting E-UTRA TDD and GSM and inter-RAT PS handover to GERAN and Feature Group Indicators 9, 15 and 23 | | | 2Rx, 4Rx |
| 5.2.7 | E-UTRAN FDD - UTRAN FDD handover: unknown target cell | Rel-8 | C04a | UE supporting E-UTRA FDD and UTRA FDD and Feature Group Indicators 8 and 22 | | | 2Rx, 4Rx |
| 5.2.8 | E-UTRAN FDD - GSM handover: unknown target cell | Rel-8 | C08a | UE supporting E-UTRA FDD and GSM and inter-RAT PS handover to GERAN and inter-RAT PS handover to GERAN and Feature Group Indicators 9 and 23 | | | 2Rx, 4Rx |
| 5.2.9 | E-UTRAN TDD - GSM handover: unknown target cell | Rel-8 | C09b | UE supporting E-UTRA TDD and GSM and Feature Group Indicators 9 and 23 | | | 2Rx, 4Rx |
| 5.2.10 | E-UTRAN TDD - UTRAN TDD handover: unknown target cell | Rel-8 | C05a | UE supporting E-UTRA TDD and UTRA TDD and Feature Group Indicators 8 and 22 | | Rel-9 UTRA TDD | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 5.2.11 | E-UTRAN FDD - UTRAN FDD handover for 5MHz Bandwidth | Rel-8 | C54 | UE supporting E-UTRA FDD and only E-UTRA bands within band group FDD_Nand UTRA FDD and Feature Group Indicators 8 and 22 | | | |
| 5.3.1 | E-UTRAN FDD - HRPD Handover | Rel-8 | C10a | UE supporting E-UTRA FDD and cdma2000 HRPD and Feature Group Indicators 12 and 26 | | | 2Rx, 4Rx |
| 5.3.2 | E-UTRAN FDD - cdma2000 1xRTT handover | Rel-8 | C11a | UE supporting E-UTRA FDD and cdma2000 1xRTT and Feature Group Indicators 11 and 24 | | | 2Rx, 4Rx |
| 5.3.3 | E-UTRAN FDD - HRPD handover: unknown target cell | Rel-8 | C10a | UE supporting E-UTRA FDD and cdma2000 HRPD and Feature Group Indicators 12 and 26 | | | 2Rx, 4Rx |
| 5.3.4 | E-UTRAN FDD - cdma2000 1xRTT handover: unknown target cell | Rel-8 | C11a | UE supporting E-UTRA FDD and cdma2000 1xRTT and Feature Group Indicators 11 and 24 | | | 2Rx, 4Rx |
| 5.3.5 | E-UTRAN TDD-HRPD Handover | Rel-9 | C36 | UE supporting E-UTRA TDD and cdma2000 HRPD and Feature Group Indicators 12 and 26. | | | 2Rx, 4Rx |
| 5.3.6 | E-UTRAN TDD-cdma2000 1X Handover | Rel-9 | C37 | UE supporting E-UTRA TDD and cdma2000 1xRTT and Feature Group Indicators 11 and 24. | | | 2Rx, 4Rx |
| **RRC Connection Mobility Control** | | | | | | | |
| 6.1.1 | E-UTRAN FDD Intra-frequency RRC Re-establishment | Rel-8 | C01 | UE supporting E-UTRA FDD | | | 2Rx, 4Rx |
| 6.1.1_2 | E-UTRAN FDD Intra-frequency RRC Re-establishment for UE Category 1bis | Rel-13 | C01m | UE supporting E-UTRA FDD and UE Category 1bis | | | |
| 6.1.2 | E-UTRAN FDD Inter-frequency RRC Re-establishment | Rel-8 | C01b | UE supporting E-UTRA FDD and Feature Group Indicator 25 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 6.1.2_2 | E-UTRAN FDD Inter-frequency RRC Re-establishment for UE Category 1bis | Rel-13 | C01n | UE supporting E-UTRA FDD and Feature Group Indicator 25 and UE Category 1bis | | | |
| 6.1.3 | E-UTRAN TDD Intra-frequency RRC Re-establishment | Rel-8 | C02 | UE supporting E-UTRA TDD | | | 2Rx, 4Rx |
| 6.1.3_2 | E-UTRAN TDD Intra-frequency RRC Re-establishment for UE Category 1bis | Rel-13 | C02m | UE supporting E-UTRA TDD and UE Category 1bis | | | |
| 6.1.4 | E-UTRAN TDD Inter-frequency RRC Re-establishment | Rel-8 | C02b | UE supporting E-UTRA TDD and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 6.1.4_2 | E-UTRAN TDD Inter-frequency RRC Re-establishment for UE Category 1bis | Rel-13 | C02n | UE supporting E-UTRA TDD and Feature Group Indicator 25 and UE Category 1bis | | | |
| 6.1.5 | E-UTRAN FDD Intra-frequency RRC Re-establishment for 5MHz Bandwidth | Rel-8 | C49 | UE supporting E-UTRA FDD and only E-UTRA bands within band group FDD_N | | | |
| 6.1.6 | E-UTRAN FD-FDD Intra-frequency RRC Re-establishment for UE category 0 | Rel-12 | C94 | UE supporting E-UTRA FD-FDD and UE Category 0 | | | |
| 6.1.7 | E-UTRAN HD-FDD Intra-frequency RRC Re-establishment for UE category 0 | Rel-12 | C107 | UE supporting E-UTRA HD-FDD and UE Category 0 | | | |
| 6.1.8 | E-UTRAN TDD Intra-frequency RRC Re-establishment for UE category 0 | Rel-12 | C93 | UE supporting E-UTRA TDD and UE Category 0 | | | |
| 6.1.9 | E-UTRAN FD-FDD Intra-frequency RRC Re-establishment for CE UE in CEModeA | Rel-13 | C94a | UE supporting E-UTRA FD-FDD and UE Category M1 | | | |
| 6.1.10 | E-UTRAN HD-FDD Intra-frequency RRC Re-establishment for CE UE in CEModeA | Rel-13 | C107a | UE supporting E-UTRA HD-FDD and UE Category M1 | | | |
| 6.1.11 | E-UTRAN TDD Intra-frequency RRC Re-establishment for CE UE in CEModeA | Rel-13 | C93a | UE supporting E-UTRA TDD and UE Category M1 | | | |
| 6.1.12 | E-UTRAN FD-FDD Intra-frequency RRC Re-establishment for UE in CEModeB | Rel-13 | C94e | UE supporting E-UTRA FD-FDD and CEModeB and UE Category M1 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|-----------|----------|----------------------|-----------------|--------|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 6.1.13 | E-UTRAN HD-FDD Intra-frequency RRC Re-establishment for UE in CEModeB | Rel-13 | C94f | UE supporting E-UTRA HD-FDD and CEModeB and UE Category M1 | | | |
| 6.1.14 | E-UTRAN TDD Intra-frequency RRC Re-establishment for UE in CEModeB | Rel-13 | C93e | UE supporting E-UTRA TDD and CEModeB and UE Category M1 | | | |
| 6.1.15 | HD-FDD Intra-frequency RRC Re-establishment for category NB1 UE in In-Band mode under normal coverage | Rel-13 | C162 | UE supporting category NB1 and User plane CIoT | | | |
| | | Rel-14 | C218 | UE supporting category NB2 | | | |
| 6.1.16 | HD-FDD Inter-frequency RRC Re-establishment for category NB1 UE in In-Band mode under Enhanced Coverage | Rel-13 | C162 | UE supporting category NB1 and User plane CIoT | | | |
| | | Rel-14 | C218 | UE supporting category NB2 | | | |
| 6.2.1 | E-UTRAN FDD - Contention Based Random Access Test | Rel-8 | C01 | UE supporting E-UTRA FDD | | | 2Rx, 4Rx |
| 6.2.1_2 | E-UTRAN FDD - Contention Based Random Access Test for UE Category 1bis | Rel-8 | C01m | UE supporting E-UTRA FDD and UE Category 1bis | | | |
| 6.2.2 | E-UTRAN FDD - Non-Contention Based Random Access Test | Rel-8 | C01 | UE supporting E-UTRA FDD | | | 2Rx, 4Rx |
| 6.2.2_2 | E-UTRAN FDD - Non-Contention Based Random Access Test for UE Category 1bis | Rel-8 | C01m | UE supporting E-UTRA FDD and UE Category 1bis | | | |
| 6.2.3 | E-UTRAN TDD - Contention Based Random Access Test | Rel-8 | C02 | UE supporting E-UTRA TDD | | | 2Rx, 4Rx |
| 6.2.3_2 | E-UTRAN TDD - Contention Based Random Access Test for UE Category 1bis | Rel-8 | C02m | UE supporting E-UTRA TDD and UE Category 1bis | | | |
| 6.2.4 | E-UTRAN TDD - Non-Contention Based Random Access Test | Rel-8 | C02 | UE supporting E-UTRA TDD | | | 2Rx, 4Rx |
| 6.2.4_2 | E-UTRAN TDD - Non-Contention Based Random Access Test for UE Category 1bis | Rel-8 | C02m | UE supporting E-UTRA TDD and UE Category 1bis | | | |
| 6.2.5 | E-UTRAN FDD - Contention Based Random Access Test for 5MHz Bandwidth | Rel-8 | C49 | UE supporting E-UTRA FDD and only E-UTRA bands within band group FDD_N | | | 2Rx, 4Rx |
| 6.2.6 | E-UTRAN FDD - Non-Contention Based Random Access Test for 5MHz Bandwidth | Rel-8 | C49 | UE supporting E-UTRA FDD and only E-UTRA bands within band group FDD_N | | | 2Rx, 4Rx |

*ETSI*

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 6.2.7 | E-UTRAN FDD - Non-Contention Based Random Access Test For SCell in sTAG | Rel-12 | C61 | UE supporting E-UTRA FDD and Uplink Carrier Aggregation and multiple timing advances | | | 2Rx, 4Rx |
| 6.2.8 | E-UTRAN TDD - Non-Contention Based Random Access Test For SCell in sTAG | Rel-12 | C62 | UE supporting E-UTRA TDD and Uplink Carrier Aggregation and multiple timing advances | | | 2Rx, 4Rx |
| 6.2.10 | E-UTRAN FDD Contention Based Random Access Test for CE UEs in Normal Coverage | Rel-13 | C94a | UE supporting E-UTRA FD-FDD and UE Category M1 | | | |
| 6.2.11 | E-UTRAN HD-FDD Contention Based Random Access Test for CE UEs in Normal Coverage | Rel-13 | C107a | UE supporting E-UTRA HD-FDD and UE Category M1 | | | |
| 6.2.12 | E-UTRAN TDD Contention Based Random Access Test for CE UEs in Normal Coverage | Rel-13 | C93a | UE supporting E-UTRA TDD and UE category M1 | | | |
| 6.2.13 | E-UTRAN FDD - Contention Based Random Access Test for CE UEs in Enhanced Coverage | Rel-13 | C94e | U supporting E-UTRA FD-FDD and( UE Category M1 and CE Mode B) | | | |
| 6.2.14 | E-UTRAN HD-FDD - Contention Based Random Access Test for CE UEs in Enhanced Coverage | Rel-13 | C94f | UE supporting E-UTRA HD-FDD and( UE Category M1 and CE Mode B) | | | |
| 6.2.15 | E-UTRAN TDD - Contention Based Random Access Test for CE UEs in Enhanced Coverage | Rel-13 | C93e | UE supporting E-UTRA TDD and( UE Category M1 and CE Mode B) | | | |
| 6.2.16 | Contention Based Random Access Test for UE category NB1 UEs In-band mode in normal coverage | Rel-13 | C154 | UE supporting category NB1 | | | |
| | | Rel-14 | C218 | UE supporting category NB2 | | | |
| 6.2.17 | Contention Based Random Access Test for UE category NB1 UEs In-band mode in Enhanced Coverage | Rel-13 | C154 | UE supporting category NB1 | | | |
| | | Rel-14 | C218 | UE supporting category NB2 | | | |
| 6.2.18 | Contention Based Random Access on Non-anchor Carrier Test for UE category NB1 UEs In-band mode in Enhanced Coverage | Rel-14 | C202 | UE supporting category NB1 and supporting NPRACH on non-anchor carrier | | | |
| 6.3.1 | Redirection from E-UTRAN FDD to UTRAN FDD | Rel-9 | C04 | UE supporting E-UTRA FDD and UTRA FDD | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 6.3.1_2 | Redirection from E-UTRAN FDD to UTRAN FDD for UE Category 1bis | Rel-9 | C04h | UE supporting E-UTRA FDD and UTRA FDD and UE Category 1bis | | | |
| 6.3.2 | Redirection from E-UTRAN TDD to UTRAN FDD | Rel-9 | C07 | UE supporting E-UTRA TDD and UTRA FDD | | | 2Rx, 4Rx |
| 6.3.2_2 | Redirection from E-UTRAN TDD to UTRAN FDD for UE Category 1bis | Rel-9 | C07d | UE supporting E-UTRA TDD and UTRA FDD and UE Category 1bis | | | |
| 6.3.3 | Redirection from E-UTRAN FDD to GERAN when System Information is provided | Rel-9 | C27 | UE supporting E-UTRA FDD and GERAN | | | 2Rx, 4Rx |
| 6.3.3_2 | Redirection from E-UTRAN FDD to GERAN when System Information is provided for UE Category 1bis | Rel-9 | C27a | UE supporting E-UTRA FDD and GERAN and UE Category 1bis | | | |
| 6.3.4 | Redirection from E-UTRAN TDD to GERAN when System Information is provided | Rel-9 | C28 | UE supporting E-UTRA TDD and GERAN | | | 2Rx, 4Rx |
| 6.3.4_2 | Redirection from E-UTRAN TDD to GERAN when System Information is provided for UE Category 1bis | Rel-9 | C28a | UE supporting E-UTRA TDD and GERAN and UE Category 1bis | | | |
| 6.3.5 | E-UTRA TDD RRC connection release redirection to UTRA TDD | Rel-9 | C26 | UE supporting E-UTRA TDD and UTRA TDD | | | 2Rx, 4Rx |
| 6.3.5_2 | E-UTRA TDD RRC connection release redirection to UTRA TDD for UE Category 1bis | Rel-9 | C26a | UE supporting E-UTRA TDD and UTRA TDD and UE Category 1bis | | | |
| 6.3.6 | E-UTRA FDD RRC connection release redirection to UTRA TDD | Rel-9 | C25 | UE supporting E-UTRA FDD and UTRA TDD | | | 2Rx, 4Rx |
| 6.3.6_2 | E-UTRA FDD RRC connection release redirection to UTRA TDD for UE Category 1bis | Rel-9 | C25a | UE supporting E-UTRA FDD and UTRA TDD and UE Category 1bis | | | |
| 6.3.7 | E-UTRA TDD RRC connection release redirection to UTRA TDD without SI provided | Rel-9 | C26 | UE supporting E-UTRA TDD and UTRA TDD | | | 2Rx, 4Rx |
| 6.3.7_2 | E-UTRA TDD RRC connection release redirection to UTRA TDD without SI provided for UE Category 1bis | Rel-9 | C26a | UE supporting E-UTRA TDD and UTRA TDD and UE Category 1bis | | | |
| 6.3.8 | E-UTRA FDD RRC connection release redirection to UTRA TDD without SI provided | Rel-9 | C25 | UE supporting E-UTRA FDD and UTRA TDD | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 6.3.8_2 | E-UTRA FDD RRC connection release redirection to UTRA TDD without SI provided for UE Category 1bis | Rel-9 | C25a | UE supporting E-UTRA FDD and UTRA TDD and UE Category 1bis | | | |
| 6.3.9 | Redirection from E-UTRAN FDD to UTRAN FDD without System Information | Rel-9 | C04 | UE supporting E-UTRA FDD and UTRA FDD | | | 2Rx, 4Rx |
| 6.3.9_2 | Redirection from E-UTRAN FDD to UTRAN FDD without System Information for UE Category 1bis | Rel-9 | C04h | UE supporting E-UTRA FDD and UTRA FDD and UE Category 1bis | | | |
| 6.3.10 | Redirection from E-UTRAN FDD to GERAN when System Information is not provided | Rel-9 | C27 | UE supporting E-UTRA FDD and GERAN | | | 2Rx, 4Rx |
| 6.3.10_2 | Redirection from E-UTRAN FDD to GERAN when System Information is not provided for UE Category 1bis | Rel-9 | C27a | UE supporting E-UTRA FDD and GERAN and UE Category 1bis | | | |
| 6.3.11 | Redirection from E-UTRAN TDD to GERAN when System Information is not provided | Rel-9 | C28 | UE supporting E-UTRA TDD and GERAN | | | 2Rx, 4Rx |
| 6.3.11_2 | Redirection from E-UTRAN TDD to GERAN when System Information is not provided for UE Category 1bis | Rel-9 | C28a | UE supporting E-UTRA TDD and GERAN and UE Category 1bis | | | |
| 6.3.12 | E-UTRAN TDD RRC connection release redirection to UTRAN FDD without SI provided | Rel-9 | C07 | UE supporting E-UTRA TDD and UTRA FDD | | | 2Rx, 4Rx |
| 6.3.12_2 | E-UTRAN TDD RRC connection release redirection to UTRAN FDD without SI provided for UE Category 1bis | Rel-9 | C07d | UE supporting E-UTRA TDD and UTRA FDD and UE Category 1bis | | | |
| **Timing and Signalling Characteristics** | | | | | | | |
| 7.1.1 | E-UTRAN FDD - UE Transmit Timing Accuracy | Rel-8 | C01c | UE supporting E-UTRA FDD and Feature Group Indicator 5 | | | 2Rx, 4Rx |
| 7.1.1_1 | E-UTRAN FDD - UE Transmit Timing Accuracy (Non DRx UE) | Rel-8 only | C23 | UE supporting E-UTRA FDD but not supporting Feature Group Indicator 5 | | | |
| 7.1.1_2 | E-UTRAN FDD - UE Transmit Timing Accuracy for UE category 1bis | Rel-13 | C214 | UE supporting E-UTRA FDD and Feature Group Indicator 5 and UE Category 1bis | | | |

*ETSI*

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 7.1.2 | E-UTRAN TDD - UE Transmit Timing Accuracy | Rel-8 | C02c | UE supporting E-UTRA TDD and Feature Group Indicator 5 | | | 2Rx, 4Rx |
| 7.1.2_1 | E-UTRAN TDD - UE Transmit Timing Accuracy (Non DRx UE) | Rel-8 only | C24 | UE supporting E-UTRA TDD but not supporting Feature Group Indicator 5 | | | |
| 7.1.2_2 | E-UTRAN TDD - UE Transmit Timing Accuracy for UE category 1bis | Rel-13 | C207 | UE supporting E-UTRA TDD and Feature Group Indicator 5 and UE Category 1bis | | | |
| 7.1.3 | E-UTRAN FDD - UE Transmit Timing Accuracy Tests for SCell | Rel-11 | C57 | UE supporting E-UTRA FDD and Uplink Carrier Aggregation and Feature Group Indicator 5 | | | |
| 7.1.3_1 | E-UTRAN FDD - UE Transmit Timing Accuracy Tests for SCell (Release 12 and forward) | Rel-12 | C57 | UE supporting E-UTRA FDD and Uplink Carrier Aggregation and Feature Group Indicator 5 | | | |
| 7.1.4 | E-UTRAN TDD - UE Transmit Timing Accuracy Tests for SCell | Rel-11 | C58 | UE supporting E-UTRA TDD and Uplink Carrier Aggregation and Feature Group Indicator 5 | Either TC 7.1.4 or TC 7.1.4A shall be executed. (Note 1) | | |
| 7.1.4A | E-UTRAN TDD - UE Transmit Timing Accuracy Tests for SCell for 20 MHz +10 MHz bandwidth | Rel-11 | C58a | UE supporting E-UTRA TDD and Uplink Carrier Aggregation and Feature Group Indicator 5 | Either TC 7.1.4 or TC 7.1.4A shall be executed. (Note 1) | | |
| 7.1.4_1 | E-UTRAN TDD - UE Transmit Timing Accuracy Tests for SCell (Release 12 and forward) | Rel-12 | C58 | UE supporting E-UTRA TDD and Uplink Carrier Aggregation and Feature Group Indicator 5 | | | |
| 7.1.5 | E-UTRAN FDD - UE Transmit Timing Accuracy Tests for 5MHz Bandwidth | Rel-8 | C56 | UE supporting E-UTRA FDD and only E-UTRA bands within band group FDD_Nand Feature Group Indicator 5 | | | |
| 7.1.6 | E-UTRAN FDD - UE Transmit Timing Accuracy Tests for SCell in sTAG | Rel-11 | C63 | UE supporting E-UTRA FDD and Uplink Carrier Aggregation and multiple timing advances and Feature Group Indicator 5 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 7.1.7 | E-UTRAN TDD - UE Transmit Timing Accuracy Tests for SCell in sTAG | Rel-11 | C64 | UE supporting E-UTRA TDD and Uplink Carrier Aggregation and multiple timing advance and Feature Group Indicator 5 | Either TC 7.1.7 or TC 7.1.7A or TC 7.1.7B shall be executed. (Note 1) | | |
| 7.1.7A | E-UTRAN TDD - UE Transmit Timing Accuracy Tests for SCell in sTAG for 20MHz +20MHz bandwidth | Rel-11 | C64a | UE supporting E-UTRA TDD and Uplink Carrier Aggregation and multiple timing advance and Feature Group Indicator 5 | Either TC 7.1.7 or TC 7.1.7A or TC 7.1.7B shall be executed. (Note 1) | | |
| 7.1.7B | E-UTRAN TDD - UE Transmit Timing Accuracy Tests for SCell in sTAG for 20MHz +10MHz bandwidth | Rel-11 | C64b | UE supporting E-UTRA TDD and Uplink Carrier Aggregation and multiple timing advance and Feature Group Indicator 5 | Either TC 7.1.7 or TC 7.1.7A or TC 7.1.7B shall be executed. (Note 1) | | |
| 7.1.10 | E-UTRAN FDD - UE Transmit Timing Accuracy Tests for Cat-M1 UE in CEModeA | Rel-13 | C94b | UE supporting E-UTRA FD-FDD and UE Category M1 and Feature Group Indicator 5 | | | |
| 7.1.11 | E-UTRAN HD-FDD - UE Transmit Timing Accuracy Tests for Cat-M1 UE in CEModeA | Rel-13 | C107c | UE supporting E-UTRA HD-FDD and UE Category M1 and Feature Group Indicator 5 | | | |
| 7.1.12 | E-UTRAN TDD – UE Transmit Timing Accuracy Tests for Cat-M1 UE in CEModeA | Rel-13 | C93c | UE supporting E-UTRA TDD and UE Category M1 and Feature Group Indicator 5 | | | |
| 7.1.14 | E-UTRAN FDD – UE Transmit Timing Accuracy Tests for Cat-M1 UE in CEModeB | Rel-13 | C94h | UE supporting E-UTRA FD-FDD and (UE category M1 and CE Mode B) and Feature Group Indicator 5 | | | |
| 7.1.15 | E-UTRAN HD-FDD – UE Transmit Timing Accuracy Tests for Cat-M1 UE in CEModeB | Rel-13 | C94i | UE supporting E-UTRA HD-FDD and (UE category M1 and CE Mode B) and Feature Group Indicator 5 | | | |
| 7.1.16 | E-UTRAN TDD – UE Transmit Timing Accuracy Tests for Cat-M1 UE in CEModeB | Rel-13 | C93k | UE supporting E-UTRA TDD and (UE category M1 and CE Mode B) and Feature Group Indicator 5 | | | |
| 7.1.17 | | Rel-13 | C154 | UE supporting category NB1 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|----------------|---------|----------------------|-----------------|--------|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| | HD-FDD Transmit Timing Accuracy Test for Category NB1 UE In-Band mode under Normal Coverage | Rel-14 | C218 | UE supporting category NB2 | | | |
| 7.1.18 | HD-FDD Transmit Timing Accuracy Test for Category NB1 UE In-band mode under Enhanced Coverage | Rel-13 | C155 | UE supporting category NB1 and Feature Group Indicators 5 | | | |
| | | Rel-14 | C218 | UE supporting category NB2 | | | |
| 7.2.1 | E-UTRAN FDD - UE Timing Advance Adjustment Accuracy | Rel-8 | C01 | UE supporting E-UTRA FDD | | | 2Rx, 4Rx |
| 7.2.1_2 | E-UTRAN FDD - UE Timing Advance Adjustment Accuracy for UE category 1bis | Rel-13 | C194 | UE supporting E-UTRA FDD and UE Category 1bis | | | |
| 7.2.2 | E-UTRAN TDD - UE Timing Advance Adjustment Accuracy | Rel-8 | C02 | UE supporting E-UTRA TDD | | | 2Rx, 4Rx |
| 7.2.2_2 | E-UTRAN TDD - UE Timing Advance Adjustment Accuracy for UE category 1bis | Rel-13 | C195 | UE supporting E-UTRA TDD and UE Category 1bis | | | |
| 7.2.3 | E-UTRAN FDD - UE Timing Advance Adjustment Accuracy Test for 5MHz Bandwidth | Rel-8 | C49 | UE supporting E-UTRA FDD and only E-UTRA bands within band group FDD_N | | | |
| 7.2.4 | E-UTRAN FDD - UE Timing Advance Adjustment Accuracy Test For SCell in sTAG | Rel-12 | C61 | UE supporting E-UTRA FDD and Uplink Carrier Aggregation and multiple timing advances | | | |
| 7.2.5 | E-UTRAN TDD - UE Timing Advance Adjustment Accuracy Test For SCell in sTAG | Rel-11 | C62 | UE supporting E-UTRA TDD and Uplink Carrier Aggregation and multiple timing advances | Either TC 7.2.5 or TC 7.2.5A or TC 7.2.5B shall be executed. (Note 1) | | |
| 7.2.5A | E-UTRAN TDD - UE Timing Advance Adjustment Accuracy Test for SCell in sTAG for 20MHz +20MHz bandwidth | Rel-11 | C62a | UE supporting E-UTRA TDD and Uplink Carrier Aggregation and multiple timing advances | Either TC 7.2.5 or TC 7.2.5A or TC 7.2.5B shall be executed. (Note 1) | | |
| 7.2.5B | E-UTRAN TDD - UE Timing Advance Adjustment Accuracy Test for SCell in sTAG for 20MHz +10MHz bandwidth | Rel-11 | C62b | UE supporting E-UTRA TDD and Uplink Carrier Aggregation and multiple timing advances | Either TC 7.2.5 or TC 7.2.5A or TC 7.2.5B shall be executed. (Note 1) | | |

*ETSI*

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 7.2.6 | E-UTRAN FDD Timing Advance Adjustment Accuracy Test for CE UE in CEModeA | Rel-13 | C94a | UE supporting E-UTRA FD-FDD and UE Category M1 | | | |
| 7.2.7 | E-UTRAN HD-FDD UE Timing Advance Adjustment Accuracy Test for CE UE in CEModeA | Rel-13 | C107a | UE supporting E-UTRA HD-FDD and UE Category M1 | | | |
| 7.2.8 | E-UTRAN TDD Timing Advance Adjustment Accuracy Test for CE UE in CEModeA | Rel-13 | C93a | UE supporting E-UTRA TDD and UE Category M1 | | | |
| 7.2.9 | HD-FDD UE Timing Advance Adjustment Accuracy Test for Category NB1 UE in Standalone Mode under Enhance Coverage | Rel-13 | C154 | UE supporting category NB1 | | | |
| | | Rel-14 | C218 | UE supporting category NB2 | | | |
| 7.2.10 | E-UTRAN FDD UE Timing Advance Adjustment Accuracy Test in CEModeB | Rel-13 | C94e | U supporting E-UTRA FD-FDD and (UE Category M1 and CE Mode B) | | | |
| 7.2.11 | E-UTRAN HD-FDD UE Timing Advance Adjustment Accuracy Test in CEModeB | Rel-13 | C94f | UE supporting E-UTRA HD-FDD and (UE Category M1 and CE Mode B) | | | |
| 7.2.12 | E-UTRAN TDD UE Timing Advance Adjustment Accuracy Test in CEModeB | Rel-13 | C93e | UE supporting E-UTRA TDD and (UE Category M1 and CE Mode B) | | | |
| 7.3.1 | E-UTRAN FDD Radio Link Monitoring Test for Out-of-Sync | Rel-8 | C01i | UE supporting E-UTRA FDD but not 4Rx antenna ports on all supported FDD operating bands | | | |
| 7.3.1_1 | E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync with 4 Rx antenna ports | Rel-10 | C140 | UE supporting E-UTRA FDD and 4Rx antenna ports on all supported FDD operating bands | | | |
| 7.3.2 | E-UTRAN FDD Radio Link Monitoring Test for In-Sync | Rel-8 | C01i | UE supporting E-UTRA FDD but not 4Rx antenna ports on all supported FDD operating bands | | | |
| 7.3.2_1 | E-UTRAN FDD Radio Link Monitoring Test for In-Sync with 4 Rx antenna ports | Rel-10 | C140 | UE supporting E-UTRA FDD and 4Rx antenna ports on all supported FDD operating bands | | | |
| 7.3.3 | E-UTRAN TDD Radio Link Monitoring Test for Out-of-Sync | Rel-8 | C02a | UE supporting E-UTRA TDD but not 4Rx antenna ports on all supported TDD operating bands | | | |

*ETSI*

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 7.3.3_1 | E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync with 4 Rx antenna ports | Rel-10 | C143 | UE supporting E-UTRA TDD and 4Rx antenna ports on all supported TDD operating bands | | | |
| 7.3.4 | E-UTRAN TDD Radio Link Monitoring Test for In-Sync | Rel-8 | C02i | UE supporting E-UTRA TDD but not 4Rx antenna ports on all supported TDD operating bands | | | |
| 7.3.4_1 | E-UTRAN TDD Radio Link Monitoring Test for In-sync with 4 Rx antenna ports | Rel-10 | C143 | UE supporting E-UTRA TDD and 4Rx antenna ports on all supported TDD operating bands | | | |
| 7.3.5 | E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX | Rel-8 | C01j | UE supporting E-UTRA FDD but not 4Rx antenna ports on all supported FDD operating bands and Feature Group Indicator 5 | | | |
| 7.3.5_1 | E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX with 4 Rx antenna ports | Rel-10 | C181 | UE supporting E-UTRA FDD and Feature Group Indicator 5 and 4Rx antenna ports on all supported FDD operating bands | | | |
| 7.3.6 | E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX | Rel-8 | C01j | UE supporting E-UTRA FDD but not 4Rx antenna ports on all supported FDD operating bands and Feature Group Indicator 5 | | | |
| 7.3.6_1 | E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX with 4 Rx antenna ports | Rel-10 | C181 | UE supporting E-UTRA FDD and 4Rx antenna ports on all supported FDD operating bands and Feature Group Indicator 5 | | | |
| 7.3.7 | E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX | Rel-8 | C02j | UE supporting E-UTRA TDD but not 4Rx antenna ports on all supported TDD operating bands and Feature Group Indicator 5 | | | |
| 7.3.7_1 | E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX with 4 Rx antenna ports | Rel-10 | C182 | UE supporting E-UTRA TDD and 4Rx antenna ports on all supported TDD operating bands and Feature Group Indicator 5 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 7.3.8 | E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX | Rel-8 | C02j | UE supporting E-UTRA TDD but not 4Rx antenna ports on all supported TDD operating bands and Feature Group Indicator 5 | | | |
| 7.3.8_1 | E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX with 4 Rx antenna ports | Rel-10 | C182 | UE supporting E-UTRA TDD and 4Rx antenna ports on all supported TDD operating bands and Feature Group Indicator 5 | | | |
| 7.3.9 | E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync under Time Domain Measurement Resource Restriction with Non MBSFN ABS (eICIC) | Rel-10 | C45 | UE supporting E-UTRA FDD and Feature Group Indicator 115 | | | |
| 7.3.10 | E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync under Time Domain Measurement Resource Restriction with Non MBSFN ABS (eICIC) | Rel-10 | C46 | UE supporting E-UTRA TDD and Feature Group Indicator 115 | | | |
| 7.3.11 | E-UTRAN FDD Radio Link Monitoring Test for In-sync under Time Domain Measurement Resource Restriction with Non MBSFN ABS (eICIC) | Rel-10 | C45 | UE supporting E-UTRA FDD and Feature Group Indicator 115 | | | |
| 7.3.12 | E-UTRAN TDD Radio Link Monitoring Test for In-sync under Time Domain Measurement Resource Restriction with Non MBSFN ABS (eICIC) | Rel-10 | C46 | UE supporting E-UTRA TDD and Feature Group Indicator 115 | | | |
| 7.3.13 | E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync under Time Domain Measurement Resource Restriction with MBSFN ABS (eICIC) | Rel-10 | C45 | UE supporting E-UTRA FDD and Feature Group Indicator 115 | | | |
| 7.3.14 | E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync under Time Domain Measurement Resource Restriction with MBSFN ABS (eICIC) | Rel-10 | C46 | UE supporting E-UTRA TDD and Feature Group Indicator 115 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 7.3.15 | E-UTRAN FDD Radio Link Monitoring Test for In-sync under Time Domain Measurement Resource Restriction with MBSFN ABS (eICIC) | Rel-10 | C45 | UE supporting E-UTRA FDD and Feature Group Indicator 115 | | | |
| 7.3.16 | E-UTRAN TDD Radio Link Monitoring Test for In-sync under Time Domain Measurement Resource Restriction with MBSFN ABS (eICIC) | Rel-10 | C46 | UE supporting E-UTRA TDD and Feature Group Indicator 115 | | | |
| 7.3.17 | E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync under Time Domain Measurement Resource Restriction with CRS assistance information and Non MBSFN ABS (feICIC) | Rel-11 | C59 | UE supporting E-UTRA FDD and CRS interference handling and Feature Group Indicator 115 | | | |
| 7.3.18 | E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync under Time Domain Measurement Resource Restriction with CRS assistance information and Non MBSFN ABS (feICIC) | Rel-11 | C60 | UE supporting E-UTRA TDD and CRS interference handling and ss-CCH interference handling and Feature Group Indicator 115 | | | |
| 7.3.19 | E-UTRAN FDD Radio Link Monitoring Test for In-sync under Time Domain Measurement Resource Restriction with CRS assistance information and Non-MBSFN ABS (feICIC) | Rel-11 | C59 | UE supporting E-UTRA FDD and CRS interference handling and Feature Group Indicator 115 | | | |
| 7.3.20 | E-UTRAN TDD Radio Link Monitoring Test for In-sync under Time Domain Measurement Resource Restriction with CRS assistance information and Non-MBSFN ABS (feICIC) | Rel-11 | C60 | UE supporting E-UTRA TDD and CRS interference handling and ss-CCH interference handling and Feature Group Indicator 115 | | | |
| 7.3.21 | E-UTRAN FDD Radio Link Monitoring Test for In-sync under Time Domain Measurement Resource Restriction with CRS assistance information and MBSFN ABS (feICIC) | Rel-11 | C59 | UE supporting E-UTRA FDD and CRS interference handling and Feature Group Indicator 115 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 7.3.22 | E-UTRAN TDD Radio Link Monitoring Test for In-sync under Time Domain Measurement Resource Restriction with CRS assistance information and MBSFN ABS (feICIC) | Rel-11 | C60 | UE supporting E-UTRA TDD and CRS interference handling and ss-CCH interference handling and Feature Group Indicator 115 | | | |
| 7.3.23 | E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync for 5MHz Bandwidth | Rel-8 | C49 | UE supporting E-UTRA FDD and only E-UTRA bands within band group FDD_N | | | |
| 7.3.24 | E-UTRAN FDD Radio Link Monitoring Test for In-sync for 5MHz Bandwidth | Rel-8 | C49 | UE supporting E-UTRA FDD and only E-UTRA bands within band group FDD_N | | | |
| 7.3.25 | E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX for 5MHz Bandwidth | Rel-8 | C56 | UE supporting E-UTRA FDD and only E-UTRA bands within band group FDD_Nand Feature Group Indicator 5 | | | |
| 7.3.26 | E-UTRAN FD-FDD Radio Link Monitoring Test for Out-of-sync for UE category 0 | Rel-12 | C94 | UE supporting E-UTRA FD-FDD and UE Category 0 | | | |
| 7.3.26_2 | E-UTRAN FD-FDD Radio Link Monitoring Test for Out-of-sync for UE Category 1bis | Rel-13 | C194 | UE supporting E-UTRA FD-FDD and UE Category 1bis | | | |
| 7.3.27 | E-UTRAN FD-FDD Radio Link Monitoring Test for In-sync for UE category 0 | Rel-12 | C94 | UE supporting E-UTRA FD-FDD and UE Category 0 | | | |
| 7.3.27_2 | E-UTRAN FD-FDD Radio Link Monitoring Test for In-sync for UE Category 1bis | Rel-13 | C194 | UE supporting E-UTRA FD-FDD and UE Category 1bis | | | |
| 7.3.28 | E-UTRAN FD-FDD Radio Link Monitoring Test for Out-of-sync in DRX for UE category 0 | Rel-12 | C95 | UE supporting E-UTRA FD-FDD and Feature Group Indicator 5 and UE Category 0 | | | |
| 7.3.28_2 | E-UTRAN FD-FDD Radio Link Monitoring Test for Out-of-sync in DRX for UE Category 1bis | Rel-13 | C214 | UE supporting E-UTRA FD-FDD and Feature Group Indicator 5 and UE Category 1bis | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 7.3.29 | E-UTRAN FD-FDD Radio Link Monitoring Test for In-sync in DRX for UE category 0 | Rel-12 | C95 | UE supporting E-UTRA FD-FDD and Feature Group Indicator 5 and UE Category 0 | | | |
| 7.3.29_2 | E-UTRAN FD-FDD Radio Link Monitoring Test for In-sync in DRX for UE Category 1bis | Rel-13 | C214 | UE supporting E-UTRA FD-FDD and Feature Group Indicator 5 and UE Category 1bis | | | |
| 7.3.30 | E-UTRAN HD-FDD Radio Link Monitoring Test for Out-of-sync for UE category 0 | Rel-12 | C110 | UE supporting E-UTRA HD-FDD and UE Category 0 | | | |
| 7.3.31 | E-UTRAN HD-FDD Radio Link Monitoring Test for In-sync for UE category 0 | Rel-12 | C110 | UE supporting E-UTRA HD-FDD and UE Category 0 | | | |
| 7.3.32 | E-UTRAN HD-FDD Radio Link Monitoring Test for Out-of-sync in DRX for UE category 0 | Rel-12 | C111 | UE supporting E-UTRA HD-FDD and Feature Group Indicator 5 and UE Category 0 | | | |
| 7.3.33 | E-UTRAN HD-FDD Radio Link Monitoring Test for In-sync in DRX for UE category 0 | Rel-12 | C111 | UE supporting E-UTRA HD-FDD and Feature Group Indicator 5 and UE Category 0 | | | |
| 7.3.34 | E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync for UE category 0 | Rel-12 | C93 | UE supporting E-UTRA TDD and UE Category 0 | | | |
| 7.3.34_2 | E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync for UE Category 1bis | Rel-13 | C195 | UE supporting E-UTRA TDD and UE Category 1bis | | | |
| 7.3.35 | E-UTRAN TDD Radio Link Monitoring Test for In-sync for UE category 0 | Rel-12 | C93 | UE supporting E-UTRA TDD and UE Category 0 | | | |
| 7.3.35_2 | E-UTRAN TDD Radio Link Monitoring Test for In-sync for UE Category 1bis | Rel-13 | C195 | UE supporting E-UTRA TDD and UE Category 1bis | | | |
| 7.3.36 | E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX for UE category 0 | Rel-12 | C96 | UE supporting E-UTRA TDD and Feature Group Indicator 5 and UE Category 0 | | | |
| 7.3.36_2 | E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX for UE Category 1bis | Rel-13 | C215 | UE supporting E-UTRA TDD and Feature Group Indicator 5 and UE Category 1bis | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 7.3.37 | E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX for UE category 0 | Rel-12 | C96 | UE supporting E-UTRA TDD and Feature Group Indicator 5 and UE Category 0 | | | |
| 7.3.37_2 | E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX for UE Category 1bis | Rel-13 | C215 | UE supporting E-UTRA TDD and Feature Group Indicator 5 and UE Category 1bis | | | |
| 7.3.38 | E-UTRAN FDD-FDD DC Radio Link Monitoring Test for Out-of-sync in DRX in synchronous DC | Rel-12 | C123b | UE supporting E-UTRA FDD and Dual Connectivity but not 4Rx antenna ports on all supported FDD operating bands | | | |
| 7.3.38_1 | E-UTRAN FDD-FDD DC Radio Link Monitoring Test for Out-of-sync in DRX in synchronous DC with 4 Rx antenna ports | Rel-12 | C185 | UE supporting E-UTRA FDD and Dual Connectivity and 4Rx antenna ports on all supported FDD operating bands | | | |
| 7.3.39 | E-UTRAN FDD-FDD DC Radio Link Monitoring Test for Out-of-sync in DRX in asynchronous DC | Rel-12 | C125a | UE supporting E-UTRA FDD and asynchronous Dual Connectivity but not 4Rx antenna ports on all supported FDD operating bands | | | |
| 7.3.39_1 | E-UTRAN FDD-FDD DC Radio Link Monitoring Test for Out-of-sync in DRX in asynchronous DC with 4 Rx antenna ports | Rel-12 | C186 | UE supporting E-UTRA FDD and asynchronous Dual Connectivity and 4Rx antenna ports on all supported FDD operating bands | | | |
| 7.3.40 | E-UTRAN TDD-TDD DC Radio Link Monitoring Test for Out-of-sync in DRX in synchronous DC | Rel-12 | C124 | UE supporting E-UTRA TDD and Dual Connectivity | | | |
| 7.3.41 | E-UTRAN FDD-FDD Radio Link Monitoring Test for In-sync in DRX in synchronous dual connectivity | Rel-12 | C123 | UE supporting E-UTRA FDD and Dual Connectivity | | | |
| 7.3.42 | E-UTRAN FDD-FDD DC Radio Link Monitoring Test for In-sync in DRX in asynchronous DC | Rel-12 | C125 | UE supporting E-UTRA FDD and asynchronous Dual Connectivity | | | |
| 7.3.43 | E-UTRAN TDD-TDD Radio Link Monitoring Test for In-sync in DRX in synchronous dual connectivity | Rel-12 | C124 | UE supporting E-UTRA TDD and Dual Connectivity | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 7.3.44 | E-UTRAN TDD-FDD DC Radio Link Monitoring Test for Out-of-sync in DRX in synchronous DC with PCell in FDD | Rel-12 | C123a | UE supporting E-UTRA FDD and E-UTRA TDD and Dual Connectivity | | | |
| 7.3.45 | E-UTRAN TDD-FDD DC Radio Link Monitoring Test for Out-of-sync in DRX in synchronous DC with PCell in TDD | Rel-12 | C123a | UE supporting E-UTRA FDD and E-UTRA TDD and Dual Connectivity | | | |
| 7.3.46 | E-UTRAN TDD-FDD Radio Link Monitoring Test for In-sync in DRX for PSCell in synchronous DC with PCell in FDD | Rel-12 | C123a | UE supporting E-UTRA FDD and E-UTRA TDD and Dual Connectivity | | | |
| 7.3.47 | E-UTRAN TDD-FDD Radio Link Monitoring Test for In-sync in DRX for PSCell in synchronous DC with PCell in TDD | Rel-12 | C123a | UE supporting E-UTRA FDD and E-UTRA TDD and Dual Connectivity | | | |
| 7.3.48 | E-UTRAN FD-FDD Radio Link Monitoring Test for Out-of-sync for CE UE in CEMode A | Rel-13 | C94a | UE supporting E-UTRA FD-FDD and UE Category M1 | | | |
| 7.3.49 | E-UTRAN FD-FDD Radio Link Monitoring Test for In-Sync for CE UE in CEMode A | Rel-13 | C94a | UE supporting E-UTRA FD-FDD and UE Category M1 | | | |
| 7.3.50 | E-UTRAN FD-FDD Radio Link Monitoring Test for Out-of-sync in DRX for CE UE configured in CEMode A | Rel-13 | C94a | UE supporting E-UTRA FD-FDD and UE Category M1 | | | |
| 7.3.51 | E-UTRAN FD-FDD Radio Link Monitoring Test for In-sync in DRX for CE UE configured in CEMode A | Rel-13 | C94a | UE supporting E-UTRA FD-FDD and UE Category M1 | | | |
| 7.3.52 | E-UTRAN HD-FDD Radio Link Monitoring Test for Out-of-sync in DRX for CE UE | Rel-13 | C107a | UE supporting E-UTRA HD-FDD and UE Category M1 | | | |
| 7.3.53 | E-UTRAN HD-FDD Radio Link Monitoring Test for In-sync for CE UE category | Rel-13 | C107a | UE supporting E-UTRA HD-FDD and UE Category M1 | | | |
| 7.3.54 | E-UTRAN HD-FDD Radio Link Monitoring Test for Out-of-sync in DRX for CE UE configured in CEMode A | Rel-13 | C107a | UE supporting E-UTRA HD-FDD and UE Category M1 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 7.3.55 | E-UTRAN HD-FDD Radio Link Monitoring Test for In-sync in DRX for CE UE configured in CEMode A | Rel-13 | C107a | UE supporting E-UTRA HD-FDD and UE Category M1 | | | |
| 7.3.56 | E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync for CE UE in CEMode A | Rel-13 | C93a | UE supporting E-UTRA TDD and UE Category M1 | | | |
| 7.3.57 | E-UTRAN TDD Radio Link Monitoring Test for In-Sync for CE UE in CEMode A | Rel-13 | C93a | UE supporting E-UTRA TDD and UE Category M1 | | | |
| 7.3.58 | E- UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX for CE UE configured in CEMode A | Rel-13 | C93c | UE supporting E-UTRA TDD and UE Category M1 and Feature Group Indicator 5 | | | |
| 7.3.59 | E- UTRAN TDD Radio Link Monitoring Test for In-sync in DRX for CE UE configured in CEMode A | Rel-13 | C93c | UE supporting E-UTRA TDD and UE Category M1 and Feature Group Indicator 5 | | | |
| 7.3.60 | HD-FDD Radio Link Monitoring Test for Out-of-sync in DRX for UE category NB1 In-band mode in normal coverage | Rel-13 | C155 | UE supporting category NB1 and Feature Group Indicators 5 | | | |
| | | Rel-14 | C218 | UE supporting category NB2 | | | |
| 7.3.61 | HD-FDD Radio Link Monitoring Test for Out-of-sync in DRX for UE category NB1 In-band mode in Enhanced Coverage | Rel-13 | C155 | UE supporting category NB1 and Feature Group Indicators 5 | | | |
| | | Rel-14 | C218 | UE supporting category NB2 | | | |
| 7.3.62 | HD-FDD Radio Link Monitoring Test for In-sync with DRX for UE Category NB1 In-Band mode in Enhanced Coverage | Rel-13 | C155 | UE supporting category NB1 and Feature Group Indicators 5 | | | |
| | | Rel-14 | C218 | UE supporting category NB2 | | | |
| 7.3.63 | HD-FDD Radio Link Monitoring Test for In-sync with DRX for UE Category NB1 In-Band mode in Normal Coverage | Rel-13 | C155 | UE supporting category NB1 and Feature Group Indicators 5 | | | |
| | | Rel-14 | C218 | UE supporting category NB2 | | | |
| 7.3.64 | HD-FDD Radio Link Monitoring Test for In-sync without DRX for UE Category NB1 In-Band mode in Normal Coverage | Rel-13 | C154 | UE supporting category NB1 | | | |
| | | Rel-14 | C218 | UE supporting category NB2 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 7.3.65 | HD-FDD Radio Link Monitoring Test for In-sync without DRX for UE Category NB1 In-Band mode in Enhanced Coverage | Rel-13 | C154 | UE supporting category NB1 | | | |
| | | Rel-14 | C218 | UE supporting category NB2 | | | |
| 7.3.66 | HD-FDD Radio Link Monitoring Test for Out-of-sync without DRX for UE Category NB1 Standalone mode in Normal Coverage | Rel-13 | C154 | UE supporting category NB1 | | | |
| | | Rel-14 | C218 | UE supporting category NB2 | | | |
| 7.3.67 | HD-FDD Radio Link Monitoring Test for Out-of-sync without DRX for UE Category NB1 guard band mode in Enhanced Coverage | Rel-13 | C154 | UE supporting category NB1 | | | |
| | | Rel-14 | C218 | UE supporting category NB2 | | | |
| 7.4.1 | E-UTRAN FDD-FDD DC interruption at transitions between active and non-active during DRX in synchronous DC | Rel-12 | C175 | UE supporting E-UTRA FDD, Dual Connectivity and Feature Group Indicator 5 | It is not necessary for DC ASYNCH UEs to be tested in this test if 7.4.3 case is executed. (Note 2) | | |
| 7.4.2 | E-UTRAN TDD-TDD DC interruption at transitions between active and non-active during DRX in synchronous DC | Rel-12 | C136 | UE supporting E-UTRA TDD, Dual Connectivity and Feature Group Indicator 5 | It is not necessary for DC ASYNCH UEs to be tested in this test if 7.4.4 case is executed. (Note 2) | | |
| 7.4.3 | E-UTRAN FDD-FDD Interruption at transitions between active and non-active during DRX in asynchronous dual connectivity | Rel-12 | C135 | UE supporting E-UTRA FDD, Dual Connectivity Asynch and Feature Group Indicator 5 | | | |
| 7.6.1 | E-UTRAN FDD-TDD CA interruption at SRS carrier based switching | Rel-14 | C200 | UE supporting E-UTRA FDD and TDD CA with FDD as PCell and SRS switching between component carriers | | | |
| 7.6.2 | E-UTRAN TDD-TDD CA interruption at SRS carrier based switching | Rel-14 | C201 | UE supporting E-UTRA TDD CA and SRS switching between component carriers | | | |
| **UE Measurements Procedures** | | | | | | | |

*ETSI*

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.1.1 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in asynchronous cells | Rel-8 | C01 | UE supporting E-UTRA FDD | | | 2Rx, 4Rx |
| 8.1.2 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells | Rel-8 | C01c | UE supporting E-UTRA FDD and Feature Group Indicator 5 | | | 2Rx, 4Rx |
| 8.1.3 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells with DRX | Rel-8 | C01c | UE supporting E-UTRA FDD and Feature Group Indicator 5 | | | 2Rx, 4Rx |
| 8.1.4 | Void | | | | | | |
| 8.1.5 | E-UTRAN FDD - FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps | Rel-9 | C13 | UE supporting E-UTRA FDD and intra-frequency SI acquisition in FDD for HO | | | 2Rx, 4Rx |
| 8.1.6 | E-UTRAN FDD - FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX | Rel-9 | C13 | UE supporting E-UTRA FDD and intra-frequency SI acquisition in FDD for HO | | | 2Rx, 4Rx |
| 8.1.7 | E-UTRAN FDD-FDD Intra-Frequency Event-Triggered Reporting under Time Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC) | Rel-10 | C45 | UE supporting E-UTRA FDD and Feature Group Indicator 115 | | | |
| 8.1.8 | E-UTRAN FDD-FDD Intra-Frequency Event-Triggered Reporting under Time Domain Measurement Resource Restriction with CRS Assistance Information and Non-MBSFN ABS (feICIC) | Rel-11 | C59 | UE supporting E-UTRA FDD and CRS interference handling and Feature Group Indicator 115 | | | |
| 8.1.9 | E-UTRAN FDD-FDD intra frequency event triggered reporting under fading propagation conditions in asynchronous cells for 5MHz bandwidth | Rel-8 | C49 | UE supporting E-UTRA FDD and only E-UTRA bands within band group FDD_N | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.1.10 | E-UTRAN FDD-FDD intra frequency event triggered reporting under fading propagation conditions in synchronous cells with DRX for 5MHz bandwidth | Rel-8 | C56 | UE supporting E-UTRA FDD and only E-UTRA bands within band group FDD_Nand Feature Group Indicator 5 | | | |
| 8.1.11 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in asynchronous cells for UE category 0 | Rel-12 | C94 | UE supporting E-UTRA FD-FDD and UE Category 0 | | | |
| 8.1.11_1 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in asynchronous cells for UE category 1bis | Rel-13 | C194 | UE supporting E-UTRA FDD and UE Category 1bis | | | |
| 8.1.11_2 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in asynchronous cells for UE category 1bis | Rel-13 | C194 | UE supporting E-UTRA FDD and UE Category 1bis | | | |
| 8.1.12 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells for UE category 0 | Rel-12 | C95 | UE supporting E-UTRA FD-FDD and Feature Group Indicator 5 and UE Category 0 | | | |
| 8.1.12_1 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells for UE category 1bis | Rel-13 | C194a | UE supporting E-UTRA FDD and Feature Group Indicator 5 and UE Category 1bis | | | |
| 8.1.12_2 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells for UE category 1bis | Rel-13 | C194a | UE supporting E-UTRA FDD and Feature Group Indicator 5 and UE Category 1bis | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.1.13 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells with DRX for UE category 0 | Rel-12 | C95 | UE supporting E-UTRA FD-FDD and Feature Group Indicator 5 and UE Category 0 | | | |
| 8.1.13_1 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells with DRX for UE category 1bis | Rel-13 | C194a | UE supporting E-UTRA FDD and Feature Group Indicator 5 and UE Category 1bis | | | |
| 8.1.13_2 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells with DRX for UE category 1bis | Rel-13 | C194a | UE supporting E-UTRA FDD and Feature Group Indicator 5 and UE Category 1bis | | | |
| 8.1.14 | E-UTRAN HD-FDD intra-frequency event triggered reporting under fading propagation conditions in asynchronous cells for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA HD-FDD and Feature Group Indicator 5 and UE Category 0 | | | |
| 8.1.15 | E-UTRAN HD-FDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA HD-FDD and Feature Group Indicator 5 and UE Category 0 | | | |
| 8.1.16 | E-UTRAN HD-FDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells with DRX for UE category 0 | Rel-12 | C112 | UE supporting E-UTRA HD-FDD and Feature Group Indicator 5 and UE Category 0 | | | |
| 8.1.17 | E-UTRAN TDD-TDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells for UE category 0 | Rel-12 | C96 | UE supporting E-UTRA TDD and Feature Group Indicator 5 and UE Category 0 | | | |

*ETSI*

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.1.17_1 | E-UTRAN TDD-TDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells for UE category 1bis | Rel-13 | C195a | UE supporting E-UTRA TDD and Feature Group Indicator 5 and UE Category 1bis | | | |
| 8.1.17_2 | E-UTRAN TDD-TDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells for UE category 1bis | Rel-13 | C195a | UE supporting E-UTRA TDD and Feature Group Indicator 5 and UE Category 1bis | | | |
| 8.1.18 | E-UTRAN TDD-TDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells with DRX for UE category 0 | Rel-12 | C96 | UE supporting E-UTRA TDD and Feature Group Indicator 5 and UE Category 0 | | | |
| 8.1.18_1 | E-UTRAN TDD-TDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells with DRX for UE category 1bis | Rel-13 | C195a | UE supporting E-UTRA TDD and Feature Group Indicator 5 and UE Category 1bis | | | |
| 8.1.18_2 | E-UTRAN TDD-TDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells with DRX for UE category 1bis | Rel-13 | C195a | UE supporting E-UTRA TDD and Feature Group Indicator 5 and UE Category 1bis | | | |
| 8.1.19 | E-UTRAN FD - FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps for UE category 0 | Rel-12 | C108 | UE supporting E-UTRA FD-FDD, CSG and intra-frequency SI acquisition in FDD for HO and Category 0 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.1.19_2 | E-UTRAN FDD - FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps for UE category 1bis | Rel13 | C108a | UE supporting E-UTRA FDD-FDD, CSG and intra-frequency SI acquisition in FDD for HO and Category 1bis | | | |
| 8.1.20 | E-UTRAN FDD – FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX for UE category 0 | Rel-12 | C108 | UE supporting E-UTRA FD-FDD, CSG and intra-frequency SI acquisition in FDD for HO and Category 0 | | | |
| 8.1.20_2 | E-UTRAN FDD - FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX for UE category 1bis | Rel-13 | C108b | UE supporting E-UTRA FDD-FDD, CSG and intra-frequency SI acquisition in FDD for HO, Feature Group Indicator 5 and Category 1bis | | | |
| 8.1.21 | E-UTRAN HD - FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps for UE category 0 | Rel-12 | C109 | UE supporting E-UTRA HD-FDD, CSG and intra-frequency SI acquisition in FDD for HO and Category 0 | | | |
| 8.1.22 | E-UTRAN HD- FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX for UE category 0 | Rel-12 | C109 | UE supporting E-UTRA HD-FDD, CSG and intra-frequency SI acquisition in FDD for HO and Category 0 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|-----------|----------|----------------------|---------------------|--------|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.1.23 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in asynchronous cells for CE UE in CEModeA | Rel-13 | C94a | UE supporting E-UTRA FD-FDD and UE Category M1 | | | |
| 8.1.24 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in asynchronous cells for CE UE in CEModeA | Rel-13 | C94a | UE supporting E-UTRA FD-FDD and UE Category M1 | | | |
| 8.1.25 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells for CE UE in CEModeA in DRX | Rel-13 | C94b | UE supporting E-UTRA FD-FDD and UE Category M1 and Feature Group Indicator 5 | | | |
| 8.1.26 | E-UTRAN HD-FDD intra-frequency event triggered reporting under fading propagation conditions in asynchronous cells for CE UE in CEModeA | Rel-13 | C107a | UE supporting E-UTRA HD-FDD and UE Category M1 | | | |
| 8.1.27 | E-UTRAN HD-FDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells for CE UE in CEModeA | Rel-13 | C107a | UE supporting E-UTRA HD-FDD and UE Category M1 | | | |
| 8.1.28 | E-UTRAN HD-FDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells for CE UE in CEModeA in DRX | Rel-13 | C107a | UE supporting E-UTRA HD-FDD and UE Category M1 | | | |
| 8.1.29 | E-UTRAN TDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells for CE UE in CEModeA | Rel-13 | C93a | UE supporting E-UTRA TDD and UE Category M1 | | | |

*ETSI*

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.1.30 | E-UTRAN TDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells for CE UE in CEModeA in DRX | Rel-13 | C93c | UE supporting E-UTRA TDD and UE Category M1 and Feature Group Indicator 5 | | | |
| 8.1.31 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in asynchronous cells for CE UE in CEModeB | Rel-13 | C94e | UE supporting E-UTRA FD-FDD and (UE category M1 and CE Mode B) | | | |
| 8.1.32 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells for CE UE in CEModeB | Rel-13 | C94e | UE supporting E-UTRA FD-FDD and (UE category M1 and CE Mode B) | | | |
| 8.1.33 | E-UTRAN HD-FDD Intra-frequency event triggered reporting under fading propagation conditions in asynchronous cells for CE UE in CEModeB | Rel-13 | C107a | UE supporting E-UTRA HD-FDD and UE Category M1 | | | |
| 8.1.34 | E-UTRAN HD-FDD Intra-frequency event triggered reporting under fading propagation conditions in synchronous cells for CE UE in CEModeB | Rel-13 | C107a | UE supporting E-UTRA HD-FDD and UE Category M1 | | | |
| 8.1.35 | E-UTRAN TDD Intra-frequency event triggered reporting under fading propagation conditions in synchronous cells for CE UE in CEModeB | Rel-13 | C93a | UE supporting E-UTRA TDD and UE Category M1 | | | |
| 8.1.36 | E-UTRAN FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps for CE UE in CEModeB | Rel-13 | C94g | UE supporting E-UTRA FD-FDD and (UE Category M1 and CE Mode B) and intra-frequency SI acquisition for HO | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.1.37 | E-UTRAN FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX for CE UE in CEModeB | Rel-13 | C94g | UE supporting E-UTRA FD-FDD and (UE Category M1 and CE Mode B) and intra-frequency SI acquisition for HO | | | |
| 8.1.40 | E-UTRAN FDD-FDD intra-frequency event triggered reporting for UE configured with highSpeedEnhancedMeasFlag in synchronous cells | Rel-14 | C205 | UE supporting E-UTRA FDD and highspeed measurement enhancement and Feature Group Indicator 5 | | | |
| 8.1.38 | E-UTRAN HD- FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps for CE UE in CEModeB | Rel-13 | FFS | FFS | | | |
| 8.1.39 | E-UTRAN HD-FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX for CE UE in CEModeB | Rel-13 | FFS | FFS | | | |
| 8.2.1 | E-UTRAN TDD-TDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells | Rel-8 | C02c | UE supporting E-UTRA TDD and Feature Group Indicator 5 | | | 2Rx, 4Rx |
| 8.2.2 | E-UTRAN TDD-TDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells with DRX | Rel-8 | C02c | UE supporting E-UTRA TDD and Feature Group Indicator 5 | | | 2Rx, 4Rx |
| 8.2.3 | E-UTRAN TDD - TDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps | Rel-9 | C15 | UE supporting E-UTRA TDD and intra-frequency SI acquisition in TDD for HO. | | | 2Rx, 4Rx |
| 8.2.4 | E-UTRAN TDD - TDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX | Rel-9 | C15 | UE supporting E-UTRA TDD and intra-frequency SI acquisition in TDD for HO | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|-----------|----------|------------------------|------------------|--------|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.2.5 | E-UTRAN TDD-TDD Intra-Frequency Event-Triggered Reporting under Time Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC) | Rel-10 | C46 | UE supporting E-UTRA TDD and Feature Group Indicator 115 | | | |
| 8.2.6 | E-UTRAN TDD-TDD Intra-Frequency Event-Triggered Reporting under Time Domain Measurement Resource Restriction with CRS Assistance Information and Non-MBSFN ABS (feICIC) | Rel-11 | C60 | UE supporting E-UTRA TDD and CRS interference handling and ss-CCH interference handling and Feature Group Indicator 115 | | | |
| 8.2.7 | E-UTRAN TDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps for UE category 0 | Rel-12 | C113 | UE supporting E-UTRA TDD, CSG. inter-frequency SI acquisition in TDD for HO and Feature Group Indicator 5 and UE Category 0 | | | |
| 8.2.7_2 | E-UTRAN TDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps for UE category 1bis | Rel-13 | C195a | UE supporting E-UTRA TDD, intra-frequency SI acquisition in TDD for HO and Feature Group Indicator 5 and UE Category 1bis | | | |
| 8.2.8 | E-UTRAN TDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX for UE category 0 | Rel-12 | C113 | UE supporting E-UTRA TDD, CSG. inter-frequency SI acquisition in TDD for HO and Feature Group Indicator 5 and UE Category 0 | | | |
| 8.2.8_2 | E-UTRAN TDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX for UE category 1bis | Rel-13 | C195a | UE supporting E-UTRA TDD, intra-frequency SI acquisition in TDD for HO and Feature Group Indicator 5 and UE Category 1bis | | | |
| 8.2.9 | E-UTRAN TDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps for CE UE in CEModeB | Rel-13 | C93f | UE supporting E-UTRA TDD and (UE Category M1 and CE Mode B) and intra-frequency SI acquisition for HO | | | |
| 8.2.10 | E-UTRAN TDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX for CE UE in CEModeB | Rel-13 | C93f | UE supporting E-UTRA TDD and (UE Category M1 and CE Mode B) and intra-frequency SI acquisition for HO | | | |

*ETSI*

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.3.1 | E-UTRAN FDD-FDD inter-frequency event triggered reporting under fading propagation conditions in asynchronous cells | Rel-8 | C01b | UE supporting E-UTRA FDD and Feature Group Indicator 25 | It is not necessary for CA UEs to be tested in this test if 8.20.1 case is executed. | | 2Rx, 4Rx |
| 8.3.1_2 | E-UTRAN FDD-FDD inter-frequency event triggered reporting under fading propagation conditions in asynchronous cells for UE category 1bis | Rel-13 | C212 | UE supporting E-UTRA FDD and Feature Group Indicator 25 and UE Category 1bis | | | |
| 8.3.2 | E-UTRAN FDD-FDD inter-frequency event triggered reporting when DRX is used under fading propagation conditions in asynchronous cells | Rel-8 | C01e | UE supporting E-UTRA FDD and Feature Group Indicators 5 and 25 | | | 2Rx, 4Rx |
| 8.3.2_2 | E-UTRAN FDD-FDD inter-frequency event triggered reporting when DRX is used under fading propagation conditions in asynchronous cells for UE category 1bis | Rel-13 | C214 | UE supporting E-UTRA FDD and Feature Group Indicators 5 and 25 and UE Category 1bis | | | |
| 8.3.3 | E-UTRAN FDD-FDD inter frequency event triggered reporting under AWGN propagation conditions in asynchronous cells with DRX when L3 filtering is used | Rel-8 | C01e | UE supporting E-UTRA FDD and Feature Group Indicators 5 and 25 | | | 2Rx, 4Rx |
| 8.3.3_2 | E-UTRAN FDD-FDD inter-frequency event triggered reporting under AWGN propagation conditions in asynchronous cells with DRX when L3 filtering is used for UE category 1bis | Rel-13 | C194c | UE supporting E-UTRA FDD and Feature Group Indicators 5 and 25 and UE category 1bis | | | |
| 8.3.4 | E-UTRAN FDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps | Rel-9 | C14 | UE supporting E-UTRA FDD and inter-frequency SI acquisition in FDD for HO | | | 2Rx, 4Rx |
| 8.3.5 | E-UTRAN FDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX | Rel-9 | C14 | UE supporting E-UTRA FDD and inter-frequency SI acquisition in FDD for HO | | | 2Rx, 4Rx |

*ETSI*

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.3.6 | E-UTRAN FDD-FDD Inter-frequency event triggered reporting without measurement gaps under AWGN propagation conditions in asynchronous cells | Rel-10 | C47 | UE supporting E-UTRA FDD and Feature Group Indicator 25 and Measurement without gaps | | | 2Rx, 4Rx |
| 8.3.7 | E-UTRAN FDD-FDD Inter-frequency event triggered reporting under fading propagation conditions in asynchronous cells for Increased Carrier Monitoring without Reduced Performance Group | Rel-12 | C01p | UE supporting E-UTRA FDD and Increased Carrier Monitoring E-UTRA and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.3.8 | FDD-FDD Inter-frequency correct reporting of measurement events with reduced performance group configured, non DRX | Rel-12 | C01p | UE supporting E-UTRA FDD and Increased Carrier Monitoring E-UTRA and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.3.9 | FDD-FDD Inter-frequency correct reporting of measurement events with reduced performance group configured, DRX | Rel-12 | C01q | UE supporting E-UTRA FDD and Increased Carrier Monitoring E-UTRA and Feature Group Indicator 5 and 25 | | | 2Rx, 4Rx |
| 8.4.1 | E-UTRAN TDD-TDD inter-frequency event triggered reporting under fading propagation conditions in synchronous cells | Rel-8 | C02b | UE supporting E-UTRA TDD and Feature Group Indicator 25 | It is not necessary for CA UEs to be tested in this test if 8.20.2 case is executed. | | 2Rx, 4Rx |
| 8.4.1_2 | E-UTRAN TDD-TDD inter-frequency event triggered reporting under fading propagation conditions in synchronous cells for UE category 1bis | Rel-13 | C213 | UE supporting E-UTRA TDD and Feature Group Indicator 25 and UE Category 1bis | | | |
| 8.4.2 | E-UTRAN TDD-TDD inter-frequency event triggered reporting when DRX is used under fading propagation conditions in synchronous cells | Rel-8 | C02e | UE supporting E-UTRA TDD and Feature Group Indicators 5 and 25 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.4.2_2 | E-UTRAN TDD-TDD inter-frequency event triggered reporting when DRX is used under fading propagation conditions in synchronous cells for UE category 1bis | Rel-13 | C215 | UE supporting E-UTRA TDD and Feature Group Indicators 5 and 25 and UE Category 1bis | | | |
| 8.4.3 | E-UTRAN TDD-TDD inter-frequency event triggered reporting under AWGN propagation conditions in synchronous cells with DRX when L3 filtering is used | Rel-8 | C02e | UE supporting E-UTRA TDD and Feature Group Indicators 5 and 25 | | | 2Rx, 4Rx |
| 8.4.3_2 | E-UTRAN TDD-TDD inter-frequency event triggered reporting under AWGN propagation conditions in synchronous cells with DRX when L3 filtering is used for UE category 1bis | Rel-13 | C195c | UE supporting E-UTRA TDD and Feature Group Indicators 5 and 25 and UE category 1bis | | | |
| 8.4.4 | E-UTRAN TDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps | Rel-9 | C16 | UE supporting E-UTRA TDD and inter-frequency SI acquisition in TDD for HO | | | 2Rx, 4Rx |
| 8.4.5 | E-UTRAN TDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX | Rel-9 | C16 | UE supporting E-UTRA TDD and inter-frequency SI acquisition in TDD for HO | | | 2Rx, 4Rx |
| 8.4.6 | E-UTRAN TDD-TDD Inter-frequency event triggered reporting for TDD UL/DL configuration 0 | Rel-12 | C02b | UE supporting E-UTRA TDD and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.4.6_2 | E-UTRAN TDD-TDD Inter-frequency event triggered reporting for TDD UL/DL configuration 0 for UE category 1bis | Rel-13 | C213 | UE supporting E-UTRA TDD and Feature Group Indicator 25 and UE Category 1bis | | | |
| 8.4.7 | E-UTRAN TDD-TDD Inter-frequency event triggered reporting under fading propagation conditions in asynchronous cells for Increased Carrier Monitoring without Reduced Performance Group | Rel-12 | C01o | UE supporting E-UTRA TDD and Increased Carrier Monitoring and Feature Group Indicator 25 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.4.8 | TDD-TDD Interfrequency correct reporting of measurement events with reduced performance group configured, non DRX | Rel-12 | C01o | E supporting E-UTRA TDD and Increased Carrier Monitoring E-UTRA and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.4.9 | TDD-TDD Inter-frequency correct reporting of measurement events with reduced performance group configured, DRX | Rel-12 | C01r | E supporting E-UTRA TDD and Increased Carrier Monitoring E-UTRA and Feature Group Indicator 5 and 25 | | | 2Rx, 4Rx |
| 8.5.1 | E-UTRAN FDD-UTRAN FDD event triggered reporting under fading propagation conditions | Rel-8 | C04g | UE supporting E-UTRA FDD and UTRA FDD and Feature Group Indicators 15 and 22 | It is not necessary for CA UEs to be tested in this test if 8.20.3 case is executed. | | 2Rx, 4Rx |
| 8.5.2 | E-UTRAN FDD-UTRAN FDD SON ANR cell search reporting under AWGN propagation conditions | Rel-8 | C04f | UE supporting E-UTRA FDD and UTRA FDD and Feature Group Indicators 5, 19 and 22 | | | 2Rx, 4Rx |
| 8.5.3 | E-UTRAN FDD - UTRAN FDD event triggered reporting when DRX is used under fading propagation conditions | Rel-8 | C04d | UE supporting E-UTRA FDD and UTRA FDD and Feature Group Indicators 5, 15 and 22 | | | 2Rx, 4Rx |
| 8.5.4 | E-UTRAN FDD - UTRAN FDD enhanced cell identification under AWGN propagation conditions | Rel-9 | C29 | UE supporting E-UTRA FDD and UTRA FDD and Feature Group Indicator 15 | | | 2Rx, 4Rx |
| 8.5.6 | E-UTRAN FDD - UTRAN FDD event triggered reporting without measurement gaps under AWGN propagation conditions | Rel-10 | C48 | UE supporting E-UTRA FDD and UTRA FDD and Feature Group Indicator 15 and 22 and Measurement without gaps | | | 2Rx, 4Rx |
| 8.5.7 | E-UTRAN FDD - UTRAN FDD event triggered reporting under fading propagation conditions for 5MHz bandwidth | Rel-8 | C55 | UE supporting E-UTRA FDD and only E-UTRA bands within band group FDD_Nand UTRA FDD and Feature Group Indicators 15 and 22 | | | |
| 8.5.8 | E-UTRA FDD InterRAT UTRA FDD correct reporting of measurement events with reduced performance group configured, non DRX | Rel-12 | C07h | UE supporting E-UTRA FDD and UTRA FDD, Increased Carrier Monitoring UTRA and Feature Group Indicators 15 and 22 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.6.1 | E-UTRAN TDD-UTRAN FDD event triggered reporting under fading propagation conditions | Rel-8 | C07b | UE supporting E-UTRA TDD and UTRA FDD and Feature Group Indicators 15 and 22 | | | 2Rx, 4Rx |
| 8.6.3 | E-UTRA TDD InterRAT UTRA FDD correct reporting of measurement events with reduced performance group configured, non DRX | Rel-12 | C07i | UE supporting E-UTRA TDD and UTRA FDD, Increased Carrier Monitoring UTRA and Feature Group Indicators 15 and 22 | | | 2Rx, 4Rx |
| 8.7.1 | E-UTRAN TDD-UTRAN TDD event triggered reporting under fading propagation conditions | Rel-8 Only | C05b | UE supporting E-UTRA TDD and UTRA TDD and Feature Group Indicators 15 and 22 | It is not necessary for CA UEs to be tested in this test if 8.20.4 case is executed. | | 2Rx, 4Rx |
| | | Rel-9 | C83 | UE supporting E-UTRA TDD and UTRA TDD and not supporting UTRA FDD Feature Group Indicators 15 and 22 | It is not necessary for CA UEs to be tested in this test if 8.20.4 case is executed. | | 2Rx, 4Rx |
| | | Rel-9 | C79 | UE supporting E-UTRA TDD and UTRA TDD and Feature Group Indicators 15 and 39 | It is not necessary for CA UEs to be tested in this test if 8.20.4 case is executed | | 2Rx, 4Rx |
| 8.7.2 | E-UTRAN TDD - UTRAN TDD cell search when DRX is used under fading propagation conditions | Rel-8 Only | C05d | UE supporting E-UTRA TDD and UTRA TDD and Feature Group Indicators 5, 15 and 22 | | Rel-9 UTRA TDD | 2Rx, 4Rx |
| | | Rel-9 | C84 | UE supporting E-UTRA TDD and UTRA TDD and not supporting UTRA FDD and Feature Group Indicators 5, 15 and 22 | | Rel-9 UTRA TDD | 2Rx, 4Rx |
| | | Rel-9 | C80 | UE supporting E-UTRA TDD and UTRA TDD and Feature Group Indicators 5, 15 and 39 | | Rel-9 UTRA TDD | 2Rx, 4Rx |
| 8.7.3 | E-UTRAN TDD - UTRAN TDD SON ANR cell search reporting under AWGN propagation conditions | Rel-8 Only | C120 | UE supporting E-UTRA TDD and UTRA TDD and Feature Group Indicators 19 and 22 | | Rel-9 UTRA TDD | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| | | Rel-9 | C121 | UE supporting E-UTRA TDD and UTRA TDD and not supporting UTRA FDD and Feature Group Indicators 22 and 37 | | Rel-9 UTRA TDD | 2Rx, 4Rx |
| | | Rel-9 | C122 | UE supporting E-UTRA TDD and UTRA TDD and Feature Group Indicators 37 and 39 | | Rel-9 UTRA TDD | 2Rx, 4Rx |
| 8.7.4 | E-UTRAN TDD - UTRAN TDD enhanced cell identification under AWGN propagation conditions | Rel-9 | C79 | UE supporting E-UTRA TDD and UTRA TDD and Feature Group Indicator 15 and 39 | | | 2Rx, 4Rx |
| | | Rel-9 | C31 | UE supporting E-UTRA TDD and UTRA TDD and not supporting UTRA FDD and Feature Group Indicator 15 and 22 | | | 2Rx, 4Rx |
| 8.7.5 | E-UTRA TDD InterRAT UTRA TDD correct reporting of measurement events with reduced performance group configured, non DRX | Rel-12 | C07e | UE supporting E-UTRA TDD and UTRA TDD, Increased Carrier Monitoring UTRA and Feature Group Indicators 15 and 22 | | | 2Rx, 4Rx |
| 8.7A.1 | E-UTRA FDD InterRAT UTRA TDD correct reporting of measurement events with reduced performance group configured, non DRX | Rel-12 | C07f | UE supporting E-UTRA FDD and UTRA TDD, Increased Carrier Monitoring UTRA and Feature Group Indicators 15 and 22 | | | 2Rx, 4Rx |
| 8.8.1 | E-UTRAN FDD-GSM event triggered reporting in AWGN | Rel-8 | C08f | UE supporting E-UTRA FDD and GSM and Feature Group Indicator s 15 and 23 | | | 2Rx, 4Rx |
| 8.8.2 | E-UTRAN FDD - GSM event triggered reporting when DRX is used in AWGN | Rel-8 | C08d | UE supporting E-UTRA FDD and GSM and Feature Group Indicators 5, 15 and 23 | | | 2Rx, 4Rx |
| 8.9.1 | E-UTRAN FDD-UTRAN TDD event triggered reporting in fading propagation conditions | Rel-8 Only | C06b | UE supporting E-UTRA FDD and UTRA TDD and Feature Group Indicators 15 and 22 | | Rel-9 UTRA TDD | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| | | Rel-9 | C85 | UE supporting E-UTRA FDD and UTRA TDD and not supporting UTRA FDD and Feature Group Indicators 15 and 22 | | Rel-9 UTRA TDD | 2Rx, 4Rx |
| | | Rel-9 | C77 | UE supporting E-UTRA FDD and UTRA TDD and Feature Group Indicators 15 and 39 | | Rel-9 UTRA TDD | 2Rx, 4Rx |
| 8.9.2 | E-UTRAN FDD - UTRAN TDD enhanced cell identification under AWGN propagation conditions | Rel-9 | C78 | UE supporting E-UTRA FDD and UTRA TDD and not supporting UTRA FDD and Feature Group Indicator 15 and 22 | | | 2Rx, 4Rx |
| | | Rel-9 | C77 | UE supporting E-UTRA FDD and UTRA TDD and Feature Group Indicators 15 and 39 | | | 2Rx, 4Rx |
| 8.10.1 | E-UTRAN TDD-GSM event triggered reporting in AWGN | Rel-8 | C09g | UE supporting E-UTRA TDD and GSM and Feature Group Indicators 15 and 23 | | | 2Rx, 4Rx |
| 8.10.2 | E-UTRAN TDD - GSM event triggered reporting when DRX is used in AWGN | Rel-8 | C09e | UE supporting E-UTRA TDD and GSM and Feature Group Indicators 5, 15 and 23 | | | 2Rx, 4Rx |
| 8.2.11 | E-UTRAN TDD-TDD intra-frequency event triggered reporting for UE configured with highSpeedEnhancedMeasFlag in synchronous cells | Rel-14 | C190 | UEs supporting E-UTRA TDD and high speed enhancement for measurement | | | |
| 8.11.1 | Multiple E-UTRAN FDD-FDD Inter-frequency event triggered reporting under fading propagation conditions | Rel-8 | C01b | UE supporting E-UTRA FDD and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.11.2 | E-UTRAN TDD - E-UTRAN TDD and E-UTRAN TDD Inter-frequency event triggered reporting under fading propagation conditions | Rel-8 | C02b | UE supporting E-UTRA TDD and Feature Group Indicator 25 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.11.3 | E-UTRAN FDD-FDD Inter-frequency and UTRAN FDD event triggered reporting under fading propagation conditions | Rel-8 | C04e | UE supporting E-UTRA FDD and UTRA FDD and Feature Group Indicators 22 and 25 | | | 2Rx, 4Rx |
| 8.11.4 | InterRAT E-UTRA TDD to E-UTRA TDD and UTRA TDD cell search | Rel-8 Only | C05e | UE supporting E-UTRA TDD and UTRA TDD and Feature Group Indicators 22 and 25 | | | 2Rx, 4Rx |
| | | Rel-9 | C86 | UE supporting E-UTRA TDD and UTRA TDD and not supporting UTRA FDD and Feature Group Indicators 22 and 25 | | | 2Rx, 4Rx |
| | | Rel-9 | C82 | UE supporting E-UTRA TDD and UTRA TDD and Feature Group Indicators 25 and 39 | | | 2Rx, 4Rx |
| 8.11.5 | Combined E-UTRAN FDD - E-UTRA FDD and GSM cell search; E-UTRA cells in fading; GSM cell in static propagation conditions | Rel-8 | C08b | UE supporting E-UTRA FDD and GSM and Feature Group Indicator 23 and 25 | | | 2Rx, 4Rx |
| 8.11.6 | Combined E-UTRAN TDD - E-UTRA TDD and GSM cell search; E-UTRA cells in fading; GSM cell in static propagation conditions | Rel-8 | C09a | UE supporting E-UTRA TDD and GSM and Feature Group Indicator 23 and 25 | | | 2Rx, 4Rx |
| 8.12.1 | Void | | | | | | |
| 8.13.1 | Void | | | | | | |
| 8.14.1 | E-UTRAN TDD-FDD Inter-frequency event triggered reporting under fading propagation conditions in asynchronous cells | Rel-9 | C22 | UE supporting E-UTRA FDD and E-UTRA TDD and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.14.2 | E-UTRAN TDD-FDD Inter-frequency event triggered reporting when DRX is used under fading propagation conditions in synchronous cells | Rel-9 | C38 | UE supporting E-UTRA FDD and E-UTRA TDD and Feature Group Indicators 4 and 25 | | | |

*ETSI*

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.14.3 | E-UTRAN TDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps | Rel-9 | C39a | UE supporting E-UTRA FDD and E-UTRA TDD and inter-frequency SI acquisition in TDD for HO and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.15.1 | E-UTRAN FDD-TDD Inter-frequency event triggered reporting under fading propagation conditions in asynchronous cells | Rel-9 | C22 | UE supporting E-UTRA FDD and E-UTRA TDD and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.15.2 | E-UTRAN FDD-TDD Inter-frequency event triggered reporting when DRX is used under fading propagation conditions in asynchronous cells | Rel-9 | C38 | UE supporting E-UTRA FDD and E-UTRA TDD and Feature Group Indicators 4 and 25 | | | 2Rx, 4Rx |
| 8.15.3 | E-UTRAN FDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps | Rel-9 | C39 | UE supporting E-UTRA FDD and E-UTRA TDD and inter-frequency SI acquisition in FDD for HO and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.1 | E-UTRAN FDD event triggered reporting under deactivated SCell in non-DRX | Rel-10 | C32 | UE supporting E-UTRA FDD and CA and Feature Group Indicator 111 | Either TC 8.16.1 or TC 8.16.5 or TC 8.16.9 or TC 8.16.13 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.2 | E-UTRAN TDD event triggered reporting under deactivated SCell in non-DRX | Rel-10 | C33 | UE supporting E-UTRA TDD and CA and Feature Group Indicator 111 | Either TC 8.16.2 or TC 8.16.6 or TC 8.16.10 or TC 8.16.14 or TC 8.16.21 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.3 | E-UTRAN FDD-FDD Event triggered reporting on deactivated SCell with PCell interruption in non-DRX | Rel-10 | C32 | UE supporting E-UTRA FDD and CA and Feature Group Indicator 111 | Either TC 8.16.3 or TC 8.16.7 or TC 8.16.11 or TC 8.16.15 shall be executed. (Note 1) | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.16.4 | E-UTRANTDD-TDD Event triggered reporting on deactivated SCell with PCell interruption in non-DRX | Rel-10 | C33 | UE supporting E-UTRA TDD and CA and Feature Group Indicator 111 | Either TC 8.16.4 or TC 8.16.8 or TC 8.16.12 or TC 8.16.16 or TC 8.16.22 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.5 | E-UTRAN FDD event triggered reporting under deactivated SCell in non-DRX for 20 MHz bandwidth | Rel-10 | C32c | UE supporting E-UTRA FDD and CA and Feature Group Indicator 111 | Either TC 8.16.1 or TC 8.16.5 or TC 8.16.9 or TC 8.16.13 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.6 | E-UTRAN TDD event triggered reporting under deactivated SCell in non-DRX for 20 MHz bandwidth | Rel-10 | C33c | UE supporting E-UTRA TDD and CA and Feature Group Indicator 111 | Either TC 8.16.2 or TC 8.16.6 or TC 8.16.10 or TC 8.16.14 or TC 8.16.21 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.7 | E-UTRA FDD event triggered reporting on deactivated SCell with PCell interruption in non-DRX for 20 MHz bandwidth | Rel-10 | C32c | UE supporting E-UTRA FDD and CA and Feature Group Indicator 111 | Either TC 8.16.3 or TC 8.16.7 or TC 8.16.11 or TC 8.16.15 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.8 | E-UTRAN TDD Event triggered reporting on deactivated SCell with PCell interruption in non-DRX for 20 MHz bandwidth | Rel-10 | C33c | UE supporting E-UTRA TDD and CA and Feature Group Indicator 111 | Either TC 8.16.4 or TC 8.16.8 or TC 8.16.12 or TC 8.16.16 or TC 8.16.22 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.9 | E-UTRAN FDD event triggered reporting under deactivated SCell in non-DRX for 10MHz+5MHz | Rel-11 | C32 | UE supporting E-UTRA FDD and CA and Feature Group Indicator 111 | Either TC 8.16.1 or TC 8.16.5 or TC 8.16.9 or TC 8.16.13 shall be executed. (Note 1) | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.16.10 | E-UTRAN TDD event triggered reporting under deactivated SCell in non-DRX for 10MHz+5MHz | Rel-11 | C33 | UE supporting E-UTRA TDD and CA and Feature Group Indicator 111 | Either TC 8.16.2 or TC 8.16.6 or TC 8.16.10 or TC 8.16.14 or TC 8.16.21 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.11 | E-UTRAN FDD event triggered reporting on deactivating SCell with PCell interruption in non-DRX for 10MHz+5MHz | Rel-11 | C32 | UE supporting E-UTRA FDD and CA and Feature Group Indicator 111 | Either TC 8.16.3 or TC 8.16.7 or TC 8.16.11 or TC 8.16.15 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.12 | E-UTRAN TDD event triggered reporting on deactivating SCell with PCell interruption in non-DRX for 10MHz+5MHz | Rel-11 | C33 | UE supporting E-UTRA TDD and CA and Feature Group Indicator 111 | Either TC 8.16.4 or TC 8.16.8 or TC 8.16.12 or TC 8.16.16 or TC 8.16.22 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.13 | E-UTRAN FDD event triggered reporting under deactivated SCell in non-DRX for 5 MHz+5MHz | Rel-10 | C32 | UE supporting E-UTRA FDD and CA and Feature Group Indicator 111 | Either TC 8.16.1 or TC 8.16.5 or TC 8.16.9 or TC 8.16.13 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.14 | E-UTRAN TDD event triggered reporting under deactivated SCell in non-DRX for 5 MHz+5MHz | Rel-10 | C33 | UE supporting E-UTRA TDD and CA and Feature Group Indicator 111 | Either TC 8.16.2 or TC 8.16.6 or TC 8.16.10 or TC 8.16.14 or TC 8.16.21 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.15 | E-UTRA FDD event triggered reporting on deactivated SCell with PCell interruption in non-DRX for 5MHz+5MHz bandwidth | Rel-10 | C32 | UE supporting E-UTRA FDD and CA and Feature Group Indicator 111 | Either TC 8.16.3 or TC 8.16.7 or TC 8.16.11 or TC 8.16.15 shall be executed. (Note 1) | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.16.16 | E-UTRA TDD event triggered reporting on deactivated SCell with PCell interruption in non-DRX for 5MHz+5MHz bandwidth | Rel-10 | C33 | UE supporting E-UTRA TDD and CA and Feature Group Indicator 111 | Either TC 8.16.4 or TC 8.16.8 or TC 8.16.12 or TC 8.16.16 or TC 8.16.22 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.17 | E-UTRAN FDD activation and deactivation of known SCell in non-DRX | Rel-10 | C32b | UE supporting E-UTRA FDD and CA and Feature Group Indicator 25 | Either TC 8.16.17 or TC 8.16.17A shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.17A | E-UTRAN FDD activation and deactivation of known SCell in non-DRX for 20MHz +20MHz bandwidth | Rel-10 | C32a | UE supporting E-UTRA FDD and CA and Feature Group Indicator 25 | Either TC 8.16.17 or TC 8.16.17A shall be executed. (Note 1) | | |
| 8.16.18 | E-UTRAN TDD activation and deactivation of known SCell in non-DRX | Rel-10 | C33b | UE supporting E-UTRA TDD and CA and Feature Group Indicator 25 | Either TC 8.16.18 or TC 8.16.18A shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.18A | E-UTRAN TDD activation and deactivation of known SCell in non-DRX for 20MHz +20MHz bandwidth | Rel-10 | C33a | UE supporting E-UTRA TDD and CA and Feature Group Indicator 25 | Either TC 8.16.18 or TC 8.16.18A shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.21 | E-UTRAN TDD event triggered reporting under deactivated SCell in non-DRX for 20MHz+10MHz | Rel-10 | C33d | UE supporting E-UTRA TDD and CA and Feature Group Indicator 111 | Either TC 8.16.2 or TC 8.16.6 or TC 8.16.10 or TC 8.16.14 or TC 8.16.21 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.22 | E-UTRAN TDD event triggered reporting on deactivating SCell with PCell interruption in non-DRX for 20MHz+10MHz | Rel-10 | C33d | UE supporting E-UTRA TDD and CA and Feature Group Indicator 111 | Either TC 8.16.4 or TC 8.16.8 or TC 8.16.12 or TC 8.16.16 or TC 8.16.22 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.16.23 | E-UTRAN TDD-FDD CA event triggered reporting under deactivated SCell in non-DRX with PCell in FDD | Rel-12 | C67 | UE supporting E-UTRA FDD and TDD and 2DL CA with FDD as PCell and Feature Group Indicator 111 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.16.24 | E-UTRAN TDD-FDD CA event triggered reporting under deactivated SCell in non-DRX with PCell in TDD | Rel-12 | C68 | UE supporting E-UTRA FDD and TDD and 2DL CA with TDD as PCell and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| 8.16.25 | E-UTRAN TDD-FDD CA event triggered reporting on deactivated SCell with PCell interruption in non-DRX with PCell in FDD | Rel-12 | C67 | UE supporting E-UTRA FDD and TDD and 2DL CA with FDD as PCell and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| 8.16.26 | E-UTRAN TDD-FDD CA event triggered reporting on deactivated SCell with PCell interruption in non-DRX with PCell in TDD | Rel-12 | C68 | UE supporting E-UTRA FDD and TDD and 2DL CA with TDD as PCell and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| 8.16.27 | E-UTRAN TDD-FDD 3 DL CA Event Triggered Reporting under Deactivated SCells in Non-DRX with PCell in FDD | Rel-12 | C167 | UE supporting E-UTRA FDD and TDD and 3DL CA with FDD as PCell and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| 8.16.28 | E-UTRAN TDD-FDD 3DL CA Event Triggered Reporting under Deactivated SCells in Non-DRX with PCell in TDD | Rel-12 | C168 | UE supporting E-UTRA FDD and TDD and 3DL CA with TDD as PCell and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| 8.16.29 | 3DL FDD CA Event Triggered Reporting under Deactivated SCells in Non-DRX | Rel-10 | C163 | UE supporting E-UTRA FDD and 3DL with intra-band contiguous CA, or 3DL with inter-band CA, or 3DL with intra-band contiguous and inter-band CA | | | 2Rx, 4Rx |
| | | Rel-11 | C164 | UE supporting E-UTRA FDD and 3DL with intra-band non-contiguous and inter-band CA, or 3DL with intra-band non-contiguous and intra-band contiguous CA | | | 2Rx, 4Rx |
| 8.16.30 | 3DL TDD CA Event Triggered Reporting under Deactivated SCells in Non-DRX | Rel-10 | C165 | UE supporting E-UTRA TDD and 3DL with intra-band contiguous CA, or 3DL with inter-band CA, or 3DL with intra-band contiguous and inter-band CA | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| | | Rel-11 | C166 | UE supporting E-UTRA TDD and 3DL with intra-band non-contiguous and inter-band CA, or 3DL with intra-band non-contiguous and intra-band contiguous CA | | | 2Rx, 4Rx |
| 8.16.31 | E-UTRAN TDD-FDD 3DL CA Event Triggered Reporting on Deactivated SCell with PCell and SCell Interruptions in Non-DRX and with PCell in FDD | Rel-12 | C167 | UE supporting E-UTRA FDD and TDD and 3DL CA with FDD as PCell and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| 8.16.32 | E-UTRAN TDD-FDD 3DL CA Event Triggered Reporting on Deactivated SCell with PCell and SCell Interruptions in Non-DRX and with PCell in TDD | Rel-12 | C168 | UE supporting E-UTRA FDD and TDD and 3DL CA with TDD as PCell and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| 8.16.33 | E-UTRAN FDD 3DL CA Event Triggered Reporting on Deactivated SCell with PCell and SCell Interruptions in Non-DRX | Rel-10 | C163 | UE supporting E-UTRA FDD and 3DL with intra-band contiguous CA, or 3DL with inter-band CA, or 3DL with intra-band contiguous and inter-band CA | | | 2Rx, 4Rx |
| | | Rel-11 | C164 | UE supporting E-UTRA FDD and 3DL with intra-band non-contiguous and inter-band CA, or 3DL with intra-band non-contiguous and intra-band contiguous CA | | | 2Rx, 4Rx |
| 8.16.34 | E-UTRAN TDD 3 DL CA Event Triggered Reporting on Deactivated SCell with PCell and SCell Interruptions in Non-DRX | Rel-10 | C165 | UE supporting E-UTRA TDD and 3DL with intra-band contiguous CA, or 3DL with inter-band CA, or 3DL with intra-band contiguous and inter-band CA | | | 2Rx, 4Rx |
| | | Rel-11 | C166 | UE supporting E-UTRA TDD and 3DL with intra-band non-contiguous and inter-band CA, or 3DL with intra-band non-contiguous and intra-band contiguous CA | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.16.35 | E-UTRAN TDD-FDD 3 DL CA activation and deactivation of known SCell in non-DRX with PCell in FDD | Rel-12 | C130 | UE supporting E-UTRA FDD and TDD and 3DL CA with FDD as PCell and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.36 | E-UTRAN TDD-FDD 3 DL CA activation and deactivation of known SCell in non-DRX with PCell in TDD | Rel-12 | C131 | UE supporting E-UTRA FDD and TDD and 3DL CA with TDD as PCell and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.37 | 3DL FDD CA activation and deactivation of known SCell in non-DRX | Rel-10 | C91 | UE supporting E-UTRA FDD and 3DL with intra-band contiguous CA, or 3DL with inter-band CA, or 3DL with intra-band contiguous and inter-band CA and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| | | Rel-11 | Ce92 | UE supporting E-UTRA FDD and 3DL with intra-band non-contiguous and inter-band CA, or 3DL with intra-band non-contiguous and intra-band contiguous CA and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.38 | 3DL TDD CA activation and deactivation of known SCell in non-DRX | Rel-10 | C132 | UE supporting E-UTRA TDD and 3DL with intra-band contiguous CA, or 3DL with inter-band CA, or 3DL with intra-band contiguous and inter-band CA and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| | | Rel-11 | C133 | UE supporting E-UTRA TDD and 3DL with intra-band non-contiguous and inter-band CA, or 3DL with intra-band non-contiguous and intra-band contiguous CA and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.39 | E-UTRA TDD-FDD 3DL CA Activation and Deactivation of Unknown SCell in Non-DRX with PCell in FDD | Rel-12 | C130 | UE supporting E-UTRA FDD and TDD and 3DL CA with FDD as PCell and Feature Group Indicator 25 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|-----------|----------|----------------------|------------------|--------|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.16.40 | E-UTRA TDD-FDD 3DL CA Activation and Deactivation of Unknown SCell in Non-DRX with PCell in TDD | Rel-12 | C131 | UE supporting E-UTRA FDD and TDD and 3DL CA with TDD as PCell and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.41 | 3DL FDD CA activation and deactivation of unknown SCell in non-DRX | Rel-10 | C91 | UE supporting E-UTRA FDD and 3DL with intra-band contiguous CA, or 3DL with inter-band CA, or 3DL with intra-band contiguous and inter-band CA and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| | | Rel-11 | C92 | UE supporting E-UTRA FDD and 3DL with intra-band non-contiguous and inter-band CA, or 3DL with intra-band non-contiguous and intra-band contiguous CA and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.42 | 3DL TDD CA activation and deactivation of unknown SCell in non-DRX | Rel-10 | C132 | UE supporting E-UTRA TDD and 3DL with intra-band contiguous CA, or 3DL with inter-band CA, or 3DL with intra-band contiguous and inter-band CA and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| | | Rel-11 | C133 | UE supporting E-UTRA TDD and 3DL with intra-band non-contiguous and inter-band CA, or 3DL with intra-band non-contiguous and intra-band contiguous CA and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.47 | 2DL/2UL FDD CA activation and deactivation of known PUCCH SCell without valid TA in non-DRX | Rel-13 | C206 | UE supporting E-UTRA FDD and CA and Feature Group Indicator 25 and PUCCH transmission on SCell in CA | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.16.48 | 2DL/2UL TDD CA activation and deactivation of known PUCCH SCell without valid TA in non-DRX | Rel-13 | C207 | UE supporting E-UTRA TDD and CA and Feature Group Indicator 25 and PUCCH transmission on SCell in CA | | | 2Rx, 4Rx |
| 8.16.49 | 2DL/2UL TDD-FDD CA (FDD PCell) activation and deactivation of known PUCCH SCell without valid TA in non-DRX | Rel-13 | C208 | UE supporting E-UTRA FDD and TDD and 3DL CA with FDD as PCell and Feature Group Indicator 25 and PUCCH transmission on SCell in CA | | | 2Rx, 4Rx |
| 8.16.50 | 2DL/2UL TDD-FDD CA (TDD PCell) activation and deactivation of known PUCCH SCell without valid TA in non-DRX | Rel-13 | C209 | UE supporting E-UTRA FDD and TDD and 3DL CA with TDD as PCell and Feature Group Indicator 25 and PUCCH transmission on SCell in CA | | | 2Rx, 4Rx |
| 8.16.51 | 4DL FDD CA Event Triggered Reporting with 3 deactivated SCells in Non-DRX | Rel-11 | C156 | UE supporting E-UTRA FDD and 4DL with inter-band CA, or 4DL with intra-band contiguous and inter-band CA, or 4DL with intra-band non-contiguous and inter-band CA, or 4DL with intra-band non-contiguous and intra-band contiguous CA, or 4DL with Intra-band non-contiguous and Intra-band non-contiguous CA and Feature Group Indicator 111 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.16.52 | 4DL TDD CA Event Triggered Reporting with 3 deactivated SCells in Non-DRX | Rel-11 | C161 | UE supporting E-UTRA TDD and 4DL intra-band contiguous CA, or 4DL with inter-band CA, or 4DL with intra-band contiguous and inter-band CA, or 4DL with intra-band non-contiguous and inter-band CA, or 4DL with intra-band non-contiguous and intra-band contiguous CA or 4DL with Intra-band non-contiguous and Intra-band non-contiguous CA. and Feature Group Indicator 111. | | | 2Rx, 4Rx |
| 8.16.53 | 4DL PCell in FDD CA Event Triggered Reporting with 3 Deactivated SCells in Non-DRX | Rel-12 | C187 | UE supporting E-UTRA FDD and TDD and 4DL CA with FDD as PCell and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| 8.16.54 | 4DL PCell in TDD CA Event Triggered Reporting with 3 Deactivated SCells in Non-DRX | Rel-12 | C188 | UE supporting E-UTRA FDD and TDD and 4DL CA with TDD as PCell and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| 8.16.55 | 4 DLFDD CA Event Triggered Reporting on Deactivated SCell with PCell and SCell Interruptions in Non-DRX | Rel-12 | C156 | UE supporting E-UTRA FDD and 4DL with inter-band CA, or 4DL with intra-band contiguous and inter-band CA, or 4DL with intra-band non-contiguous and inter-band CA, or 4DL with intra-band non-contiguous and intra-band contiguous CA, or 4DL with Intra-band non-contiguous and Intra-band non-contiguous CA and Feature Group Indicator 111 | | 2Rx, 4Rx | 2Rx, 4Rx |
| 8.16.56 | 4DL TDD CA Event Triggered Reporting on Deactivated SCell with PCell and SCell Interruptions in Non-DRX | Rel-12 | C189 | UE supporting E-UTRA TDD and 4DL CA and Feature Group Indicator 111 | | | 2Rx, 4Rx |

*ETSI*

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.16.57 | 4DL FDD CA activation and deactivation of know SCell in non-DRX | Rel-11 | C192 | UE supporting E-UTRA FDD and 4DL with inter-band CA, or 4DL with intra-band contiguous and inter-band CA, or 4DL with intra-band non-contiguous and inter-band CA, or 4DL with intra-band non-contiguous and intra-band contiguous CA, or 4DL with Intra-band non-contiguous and Intra-band non-contiguous CA and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.58 | 4DL TDD CA activation and deactivation of know SCell in non-DRX | Rel-11 | C193 | UE supporting E-UTRA TDD and 4DL with intra-band contiguous CA, or 4DL with inter-band CA, or 4DL with intra-band non-contiguous and inter-band CA, or 4DL with intra-band non-contiguous and intra-band contiguous CA, or 4DL with Intra-band non-contiguous and Intra-band non-contiguous CA, or 4DL with intra-band contiguous and inter-band CA and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.59 | 4DL PCell in FDD CA Activation and Deactivation of Known SCell in Non-DRX | Rel-12 | C190 | UE supporting E-UTRA FDD and TDD and 4DL CA with FDD as PCell and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.60 | 4DL PCell in TDD CA activation and deactivation of known SCell in non-DRX | Rel-12 | C191 | UE supporting E-UTRA FDD and TDD and 4DL CA with TDD as PCell and Feature Group Indicator 25 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.16.61 | 4DL FDD CA activation and deactivation of unknown SCell in non-DRX | Rel-11 | C192 | UE supporting E-UTRA FDD and 4DL with inter-band CA, or 4DL with intra-band contiguous and inter-band CA, or 4DL with intra-band non-contiguous and inter-band CA, or 4DL with intra-band non-contiguous and intra-band contiguous CA, or 4DL with Intra-band non-contiguous and Intra-band non-contiguous CA and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.62 | 4DL TDD CA activation and deactivation of unknown SCell in non-DRX | Rel-11 | C193 | UE supporting E-UTRA TDD and 4DL with intra-band contiguous CA, or 4DL with inter-band CA, or 4DL with intra-band contiguous, or 4DL with intra-band non-contiguous and inter-band CA, or 4DL with intra-band non-contiguous and intra-band contiguous CA, or 4DL with Intra-band non-contiguous and Intra-band non-contiguous CA and inter-band CA and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.63 | 4 DL PCell in FDD CA Activation and Deactivation of Unknown SCell in Non-DRX | Rel-12 | C190 | UE supporting E-UTRA FDD and TDD and 4DL CA with FDD as PCell and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.64 | 4DL Pcell in TDD CA activation and deactivation of unknown SCell in non-DRX | Rel-12 | C191 | UE supporting E-UTRA FDD and TDD and 4DL CA with TDD as PCell and Feature Group Indicator 25 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.16.65 | 5DL PCell in FDD CA Event Triggered Reporting with 4 Deactivated SCells in Non-DRX | Rel-11 | C169 | UE supporting E-UTRA FDD and TDD with FDD as PCell and 5DL with Intra-band contiguous and Inter-band CA, or 5DL with Intra-band non-contiguous and Inter-band CA and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| | | Rel-12 | C170 | UE supporting E-UTRA FDD and TDD with FDD as PCell and 5DL with Inter-band CA and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| 8.16.66 | 5DL PCell in TDD CA Event Triggered Reporting with 4 Deactivated SCells in Non-DRX | Rel-11 | C169 | UE supporting E-UTRA FDD and TDD with TDD as PCell and 5DL with Intra-band contiguous and Inter-band CA, or 5DL with Intra-band non-contiguous and Inter-band CA and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| | | Rel-12 | C170 | UE supporting E-UTRA FDD and TDD with TDD as PCell and 5DL with Inter-band CA and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| 8.16.67 | 5 DL FDD-TDD with PCell in FDD CA activation and deactivation of Unknown SCell in non-DRX | Rel-12 | C190a | UE supporting E-UTRA FDD and TDD and 5DL CA with FDD as PCell and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.68 | 5 DL FDD-TDD with PCell in TDD CA activation and deactivation of Unknown SCell in non-DRX | Rel-12 | C191a | UE supporting E-UTRA FDD and TDD and 5DL CA with TDD as PCell and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.69 | 5DL FDD CA activation and deactivation of unknown SCell in non-DRX | Rel-12 | C75c | UE supporting E-UTRA FDD and 5DL CA and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.70 | 5DL TDD CA activation and deactivation of unknown SCell in non-DRX | Rel-12 | C76c | UE supporting E-UTRA TDD and 5DL CA and Feature Group Indicator 25 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.16.71 | 5DL FDD CA Event Triggered Reporting with Deactivated SCells in Non-DRX | Rel-11 | C171 | UE supporting E-UTRA FDD and 5DL with Intra-band contiguous and Inter-band CA, or 5DL with Intra-band non-contiguous and Inter-band CA, or 5DL with Intra-band non-contiguous and Intra-band contiguous CA and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| | | Rel-12 | C172 | UE supporting E-UTRA FDD and 5DL with Inter-band CA and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| 8.16.72 | 5DL TDD CA Event Triggered Reporting with Deactivated SCells in Non-DRX | Rel-11 | C173 | UE supporting E-UTRA TDD and 5DL with Intra-band contiguous and Inter-band CA, or 5DL with Intra-band non-contiguous and Inter-band CA, or 5DL with Intra-band non-contiguous and Intra-band contiguous CA and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| | | Rel-12 | C174 | UE supporting E-UTRA TDD and 5DL with Intra-band contiguous CA, or 5DL with Inter-band CA and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| 8.16.73 | 5DL FDD CA Event Triggered Reporting on Deactivated SCell with PCell and SCell Interruptions in Non-DRX | Rel-12 | C75d | UE supporting E-UTRA FDD and 5DL CA and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| 8.16.74 | 5DL TDD CA Event Triggered Reporting on Deactivated SCell with PCell and SCell Interruptions in Non-DRX | Rel-12 | C76d | UE supporting E-UTRA TDD and 5DL CA and Feature Group Indicator 111 | | | 2Rx, 4Rx |
| 8.16.75 | 5DL PCell in FDD CA activation and deactivation of known SCell in non-DRX | Rel-12 | C190a | UE supporting E-UTRA FDD and TDD and 5DL CA with FDD as PCell and Feature Group Indicator 25 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.16.76 | 5DL PCell in TDD CA activation and deactivation of known SCell in non-DRX | Rel-12 | C191a | UE supporting E-UTRA FDD and TDD and 5DL CA with TDD as PCell and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.16.77 | 5DL FDD CA activation and deactivation of known SCell in non-DRX | Rel-12 | C75c | UE supporting E-UTRA FDD and 5DL CA and Feature Group Indicator 25 | | | 2Rx, 4Rx |
| 8.18.1 | E-UTRAN TDD-HRPD event triggered reporting under fading propagation conditions | Rel-9 | C40 | UE supporting E-UTRA TDD and cdma2000 HRPD and Feature Group Indicator 15 | | | 2Rx, 4Rx |
| 8.19.1 | E-UTRAN TDD-CDMA2000 1X event triggered reporting under fading propagation conditions | Rel-9 | C41 | UE supporting E-UTRA TDD and cdma2000 1xRTT and Feature Group Indicator 15 | | | 2Rx, 4Rx |
| 8.20.1 | E-UTRAN FDD-FDD Inter-frequency event triggered reporting under fading propagation conditions in asynchronous cells | Rel-10 | C18 | UE supporting E-UTRA FDD and CA | | | 2Rx, 4Rx |
| 8.20.2 | E-UTRAN TDD-TDD Inter-frequency event triggered reporting under fading propagation conditions in synchronous cells | Rel-10 | C19 | UE supporting E-UTRA TDD and CA | Either TC 8.20.2 or TC 8.20.2A or TC 8.20.2B shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.20.2A | E-UTRAN TDD-TDD Inter-frequency event triggered reporting under fading propagation conditions in synchronous cells for 20 MHz +20 MHz bandwidth | Rel-10 | C19a | UE supporting E-UTRA TDD and CA | Either TC 8.20.2 or TC 8.20.2A or TC 8.20.2B shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.20.2B | E-UTRAN TDD-TDD Inter-frequency event triggered reporting under fading propagation conditions in synchronous cells for 20 MHz +10 MHz bandwidth | Rel-10 | C19b | UE supporting E-UTRA TDD and CA | Either TC 8.20.2 or TC 8.20.2A or TC 8.20.2B shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.20.3 | E-UTRAN FDD - UTRAN FDD event triggered reporting under fading propagation conditions | Rel-10 | C43 | UE supporting E-UTRA FDD, CA and UTRA FDD and Feature Group Indicator 15 | | | 2Rx, 4Rx |

*ETSI*

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.20.4 | E-UTRAN TDD to UTRAN TDD cell search under fading propagation conditions | Rel-10 | C44 | UE supporting E-UTRA TDD, CA and UTRA TDD and Feature Group Indicator 15 | Either TC 8.20.4 or TC 8.20.4A or TC 8.20.4B shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.20.4A | E-UTRAN TDD to UTRAN TDD cell search under fading propagation conditions for 20 MHz + 20 MHz bandwidth | Rel-10 | C44a | UE supporting E-UTRA TDD, CA and UTRA TDD and Feature Group Indicator 15 | Either TC 8.20.4 or TC 8.20.4A or TC 8.20.4B shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.20.4B | E-UTRAN TDD to UTRAN TDD cell search under fading propagation conditions for 20 MHz + 10 MHz bandwidth | Rel-10 | C44b | UE supporting E-UTRA TDD, CA and UTRA TDD and Feature Group Indicator 15 | Either TC 8.20.4 or TC 8.20.4A or TC 8.20.4B shall be executed. (Note 1) | | 2Rx, 4Rx |
| 8.22.1 | E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells in DRX based on CRS based discovery signal | Rel-12 | C01ch | UE supporting E-UTRA FDD and CRS based discovery signals measurement and Feature Group Indicator 5 | | | |
| 8.22.2 | E-UTRAN TDD-TDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells with DRX | Rel-12 | C02ch | UE supporting E-UTRA TDD and CRS based discovery signals measurement and Feature Group Indicator 5 | | | |
| 8.22.3 | E-UTRAN FDD-FDD inter-frequency event triggered reporting under fading propagation conditions in DRX based on CRS based discovery signal | Rel-12 | C01eh | UE supporting E-UTRA FDD and CRS based discovery signals measurement and Feature Group Indicators 5 and 25 | | | |
| 8.22.4 | E-UTRAN TDD-TDD inter-frequency event triggered reporting under fading propagation conditions in DRX based on CRS based discovery signal | Rel-12 | C02eh | UE supporting E-UTRA TDD and CRS based discovery signals measurement and Feature Group Indicators 5 and 25 | | | |
| 8.22.5 | E-UTRAN FDD-FDD intra-frequency event triggered reporting in DRX based on CSI-RS based discovery signal | Rel-12 | C97 | UE supporting E-UTRA FDD and CSI-RS based discovery signals measurement and Feature Group Indicator 5 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|----------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.22.6 | E-UTRAN TDD-TDD intra-frequency event triggered reporting in DRX based on CSI-RS based discovery signal | Rel-12 | C98 | UE supporting E-UTRA TDD and CSI-RS based discovery signals measurement and Feature Group Indicator 5 | | | |
| 8.22.7 | E-UTRAN FDD-FDD Inter-frequency event triggered reporting in DRX based on CSI-RS based discovery signal | Rel-12 | C99 | UE supporting E-UTRA FDD and CSI-RS based discovery signals measurement and Feature Group Indicators 5 and 25 | | | |
| 8.22.8 | E-UTRAN TDD-TDD inter-frequency event triggered reporting under fading propagation condition in DRX based on CSI-RS based discovery signal | Rel-12 | C100 | UE supporting E-UTRA TDD and CSI-RS based discovery signals measurement and Feature Group Indicators 5 and 25 | | | |
| 8.22.9 | E-UTRAN FDD event triggered reporting under deactivated SCell in non-DRX based on CRS based discovery signal | Rel-12 | C126 | UE supporting E-UTRA FDD and CA and CRS based discovery signal measurement and Feature Group Indicators 111 | | | |
| 8.22.10 | E-UTRAN TDD event triggered reporting under deactivated SCell in non-DRX based on CRS based discovery signal | Rel-12 | C126 | UE supporting E-UTRA TDD and CA and CRS based discovery signal measurement and Feature Group Indicators 111 | | | |
| 8.22.11 | E-UTRAN FDD event triggered reporting under deactivated SCell in non-DRX based on CSI-RS based discovery signal | Rel-12 | C118 | UE supporting E-UTRA FDD and CA and CSI-RS based discovery signal measurement | | | |
| 8.22.12 | E-UTRAN TDD event triggered reporting under deactivated SCell in non-DRX based on CSI-RS based discovery signal | Rel-12 | C119 | UE supporting E-UTRA TDD and CA and CSI-RS based discovery signal measurement | | | |
| 8.23.1 | E-UTRAN FDD-FDD DC intra-frequency event triggered reporting with DRX in synchronous DC | Rel-12 | C134 | UE supporting E-UTRA FDD, Dual Connectivity and Feature Group Indicator 5 | It is not necessary for DC ASYNCH UEs to be tested in this test if 8.23.2 case is executed. (Note 2) | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.23.2 | E-UTRAN FDD-FDD DC intra-frequency event triggered reporting with DRX in asynchronous DC | Rel-12 | C135 | UE supporting E-UTRA FDD, Dual Connectivity Asynch and Feature Group Indicator 5 | | | |
| 8.23.3 | E-UTRAN TDD-TDD DC intra-frequency event triggered reporting with DRX in synchronous DC | Rel-12 | C136 | UE supporting E-UTRA TDD, Dual Connectivity and Feature Group Indicator 5 | | | |
| 8.23.4 | E-UTRAN FDD-FDD DC inter-frequency event triggered reporting with DRX in synchronous DC | Rel-12 | C137 | UE supporting E-UTRA FDD, Dual Connectivity and Feature Group Indicator 5 and 25 | It is not necessary for DC ASYNCH UEs to be tested in this test if 8.23.5 case is executed. (Note 2) | | |
| 8.23.5 | E-UTRAN FDD-FDD DC inter-frequency event triggered reporting with DRX in asynchronous DC | Rel-12 | C138 | UE supporting E-UTRA FDD, Dual Connectivity Asynch and Feature Group Indicator 5 and 25 | | | |
| 8.23.6 | E-UTRAN TDD-TDD DC inter-frequency event triggered reporting with DRX in synchronous DC | Rel-12 | C139 | UE supporting E-UTRA TDD, Dual Connectivity and Feature Group Indicator 5 and 25 | | | |
| 8.23.7 | E-UTRAN FDD-FDD Addition and Release Delay of known PSCell in Synchronous DC | Rel-12 | C176 | UE supporting E-UTRA FDD, Dual Connectivity | It is not necessary for DC ASYNCH UEs to be tested in this test if 8.23.2 case is executed. (Note 2) | | |
| 8.23.8 | E-UTRAN FDD-FDD Addition and Release Delay of known PSCell in Asynchronous DC | Rel-12 | C177 | UE supporting E-UTRA FDD, Dual Connectivity Asynch | | | |
| 8.23.9 | E-UTRAN TDD Addition and Release Delay of known PSCell in Synchronous DC | Rel-12 | C178 | UE supporting E-UTRA TDD, Dual Connectivity | | | |
| 8.25.1 | E-UTRAN FDD-WLAN Event Triggered Reporting in non-DRX under AWGN | Rel-13 | C179 | UE supporting E-UTRA FDD and WLAN Aggregation | | | |
| 8.25.2 | E-UTRAN TDD-WLAN Event Triggered Reporting in non-DRX under AWGN | Rel-13 | C180 | UE supporting E-UTRA TDD and WLAN Aggregation | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.26.1 | E-UTRAN FDD-FS3 Activation and deactivation of known FS3 SCell with FDD PCell in non-DRX | Rel-13 | C144 | UE supporting E-UTRA FDD and downlink LAA with FDD as Pcell and Feature Group Indicator 25 | | | |
| 8.26.2 | E-UTRAN TDD-FS3 Activation and deactivation of known FS3 SCell with TDD PCell in non-DRX | Rel-13 | C159 | UE supporting E-UTRA TDD and downlink LAA and Feature Group Indicator 25 | | | |
| 8.26.3 | E-UTRAN FDD-FS3 Event triggered reporting on deactivated FS3 SCell and FDD PCell interruption in non-DRX | Rel-13 | C145 | UE supporting E-UTRA FDD and downlink LAA with FDD as Pcell and Feature Group Indicator 111 | It is not necessary for LAA UEs to execute this test if 8.26.3A case is executed (Note 3) | | |
| 8.26.3A | E-UTRAN FDD-FS3 3DL Event triggered reporting on deactivated FS3 SCell and FDD PCell interruption in non-DRX | Rel-13 | C145a | UE supporting E-UTRA FDD and downlink LAA with FDD as Pcell and Feature Group Indicator 111 | | | |
| 8.26.4 | E-UTRAN TDD-FS3 Event triggered reporting on deactivated FS3 SCell and TDD PCell interruption in non-DRX | Rel-13 | C160 | UE supporting E-UTRA TDD and downlink LAA and Feature Group Indicator 111 | It is not necessary for LAA UEs to execute this test if 8.26.4A case is executed (Note 3) | | |
| 8.26.4A | E-UTRAN TDD-FS3 3DL Event triggered reporting on deactivated FS3 SCell and TDD PCell interruption in non-DRX | Rel-13 | C160a | UE supporting E-UTRA TDD and downlink LAA on two SCells and Feature Group Indicator 111 | | | |
| 8.26.5 | E-UTRAN FDD-FS3 Intra-frequency event triggered reporting in non-DRX for CRS based discovery signal | Rel-13 | C153 | UE supporting E-UTRA FDD and downlink LAA with FDD as Pcell and CRS based discovery signals Feature Group Indicator 111 | It is not necessary for LAA UEs to execute this test if 8.26.5A case is executed (Note 3) | | |
| 8.26.5A | E-UTRAN FDD-FS3 Intra-frequency event triggered reporting in non-DRX for CRS based discovery signal with 2 SCells | Rel-13 | C153a | UE supporting E-UTRA FDD and downlink LAA with FDD as Pcell and CRS based discovery signals Feature Group Indicator 111 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 8.26.6 | E-UTRAN TDD-FS3 Intra-frequency event triggered reporting in non-DRX for CRS based discovery signal | Rel-13 | C146 | UE supporting E-UTRA TDD and downlink LAA and CRS based discovery signals and Feature Group Indicator 111 | It is not necessary for LAA UEs to execute this test if 8.26.6A case is executed (Note 3) | | |
| 8.26.6A | E-UTRAN TDD-FS3 Intra-frequency event triggered reporting in non-DRX for CRS based discovery signal with 2 SCells | Rel-13 | C146a | UE supporting E-UTRA TDD and downlink LAA CRS based discovery signals and Feature Group Indicator 111 | | | |
| 8.26.7 | E-UTRAN FDD-FS3 Intra-frequency event triggered reporting in DRX for CRS based discovery signal | Rel-13 | C198 | UE supporting E-UTRA FDD and downlink LAA with FDD as Pcell and Feature Group Indicators 5 and 111 | | | |
| 8.26.8 | E-UTRAN TDD-FS3 Intra-frequency event triggered reporting in DRX for CRS based discovery signal | Rel-13 | C199 | UE supporting E-UTRA TDD and downlink LAA and Feature Group Indicator 5 and 111 | | | |
| 8.26.9 | E-UTRAN FDD-FS3 Inter-frequency event triggered reporting under fading propagation conditions in synchronous cells | Rel-13 | C147 | UE supporting E-UTRA FDD and downlink LAA with FDD as Pcell and Feature Group Indicator 25 | | | |
| 8.26.10 | E-UTRAN TDD-FS3 Inter-frequency event triggered reporting under fading propagation conditions in synchronous cells | Rel-13 | C148 | UE supporting E-UTRA TDD and downlink LAA and Feature Group Indicator 25 | | | |
| **Measurement Performance Requirements** | | | | | | | |
| 9.1.1.1 | FDD Intra Frequency Absolute RSRP Accuracy | Rel-8 to Rel-11 | C01f | UE supporting E-UTRA FDD and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.1.1.1_1 | FDD Intra Frequency Absolute RSRP Accuracy (Rel-12 and forward) | Rel-12 | C01f | UE supporting E-UTRA FDD and Feature Group Indicator 16 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.1.1.1_2 | FDD Intra frequency Absolute RSRP accuracy for UE category 1bis | Rel-13 | C01k | UE supporting E-UTRA FDD and UE Category 1bis and Feature Group Indicator 16 | | | |
| 9.1.1.2 | FDD Intra Frequency Relative Accuracy of RSRP | Rel-8 | C01f | UE supporting E-UTRA FDD and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.1.1.2_2 | FDD Intra Frequency Relative Accuracy of RSRP for UE category 1bis | Rel-13 | C01k | UE supporting E-UTRA FDD and UE Category 1bis and Feature Group Indicator 16 | | | |
| 9.1.2.1 | TDD Intra Frequency Absolute RSRP Accuracy | Rel-8 to Rel-11 | C02f | UE supporting E-UTRA TDD and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.1.2.1_1 | TDD Intra Frequency Absolute RSRP Accuracy (Rel-12 and forward) | Rel-12 | C02f | UE supporting E-UTRA TDD and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.1.2.1_2 | TDD Intra Frequency Absolute RSRP Accuracy for UE category 1bis | Rel-13 | C02k | UE supporting E-UTRA TDD and UE Category 1bis and Feature Group Indicator 16 | | | |
| 9.1.2.2 | TDD Intra Frequency Relative Accuracy of RSRP | Rel-8 | C02f | UE supporting E-UTRA TDD and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.1.2.2_2 | TDD Intra Frequency Relative Accuracy of RSRP for UE category 1bis | Rel-13 | C02k | UE supporting E-UTRA TDD and UE Category 1bis and Feature Group Indicator 16 | | | |
| 9.1.3.1 | FDD - FDD Inter Frequency Absolute RSRP Accuracy | Rel-8 to Rel-11 | C01g | UE supporting E-UTRA FDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.1.3.1_1 | FDD - FDD Inter Frequency Absolute RSRP Accuracy (Rel-12 and forward) | Rel-12 | C01g | UE supporting E-UTRA FDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.1.3.1_2 | FDD - FDD Inter Frequency Absolute RSRP Accuracy for UE category 1bis | Rel-13 | C01l | UE supporting E-UTRA FDD and UE category 1bis and Feature Group Indicators 16 and 25 | | | |
| 9.1.3.2 | FDD - FDD Inter Frequency Relative Accuracy of RSRP | Rel-8 to Rel-11 | C01g | UE supporting E-UTRA FDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.1.3.2_1 | FDD - FDD Inter Frequency Relative Accuracy of RSRP (Rel-12 and forward) | Rel-12 | C01g | UE supporting E-UTRA FDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.1.3.2_2 | FDD - FDD Inter Frequency Relative Accuracy of RSRP for UE category 1bis | Rel-13 | C01l | UE supporting E-UTRA FDD and UE category 1bis and Feature Group Indicators 16 and 25 | | | |
| 9.1.4.1 | TDD - TDD Inter Frequency Absolute RSRP Accuracy | Rel-8 to Rel-11 | C02g | UE supporting E-UTRA TDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.1.4.1_1 | TDD - TDD Inter Frequency Absolute RSRP Accuracy (Rel-12 and forward) | Rel-12 | C02g | UE supporting E-UTRA TDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.1.4.1_2 | TDD - TDD Inter Frequency Absolute RSRP Accuracy for UE category 1bis | Rel-13 | C02l | UE supporting E-UTRA TDD and UE category 1bis and Feature Group Indicators 16 and 25 | | | |
| 9.1.4.2 | TDD - TDD Inter Frequency Relative Accuracy of RSRP | Rel-8 to Rel-11 | C02g | UE supporting E-UTRA TDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.1.4.2_1 | TDD - TDD Inter Frequency Relative Accuracy of RSRP (Rel-12 and forward) | Rel-12 | C02g | UE supporting E-UTRA TDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.1.4.2_2 | TDD - TDD Inter Frequency Relative Accuracy of RSRP for UE category 1bis | Rel-13 | C02l | UE supporting E-UTRA TDD and UE category 1bis and Feature Group Indicators 16 and 25 | | | |
| 9.1.5.1 | FDD - TDD Inter Frequency Absolute RSRP Accuracy | Rel-9 to Rel-11 | C42 | UE supporting E-UTRA FDD and E-UTRA TDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.1.5.1_1 | FDD - TDD Inter Frequency Absolute RSRP Accuracy (Rel-12 and forward) | Rel-12 | C42 | UE supporting E-UTRA FDD and E-UTRA TDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.1.5.1_2 | FDD - TDD Inter Frequency Absolute RSRP Accuracy for UE category 1bis | Rel-13 | C42a | UE supporting E-UTRA FDD and E-UTRA TDD and UE category 1bis and Feature Group Indicators 16 and 25 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.1.5.2 | FDD - TDD Inter Frequency Relative Accuracy of RSRP | Rel-9 to Rel-11 | C42 | UE supporting E-UTRA FDD and E-UTRA TDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.1.5.2_1 | FDD - TDD Inter Frequency Relative Accuracy of RSRP (Rel-12 and forward) | Rel-12 | C42 | UE supporting E-UTRA FDD and E-UTRA TDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.1.5.2_2 | FDD - TDD Inter Frequency Relative Accuracy of RSRP for UE category 1bis | Rel-13 | C42a | UE supporting E-UTRA FDD and E-UTRA TDD and UE category 1bis and Feature Group Indicators 16 and 25 | | | |
| 9.1.6.1 | FDD Absolute RSRP Accuracy E-UTRA for Carrier Aggregation | Rel-10 and Rel-11 only | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.1.6.1 or TC 9.1.12.1 or TC 9.1.18.1 or TC 9.1.20.1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.6.1_1 | FDD Absolute RSRP Accuracy E-UTRA for Carrier Aggregation (Rel-12 and forward) | Rel-12 | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.1.6.1_1 or TC 9.1.12.1_1 or TC 9.1.18.1_1 or TC 9.1.20.1_1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.6.2 | FDD Relative RSRP Accuracy E-UTRA for Carrier Aggregation | Rel-10 and Rel-11 only | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.1.6.2 or TC 9.1.12.2 or TC 9.1.18.2 or TC 9.1.20.2 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.6.2_1 | FDD Relative RSRP Accuracy E-UTRA for Carrier Aggregation (Rel-12 and forward) | Rel-12 | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.1.6.2_1 or TC 9.1.12.2_1 or TC 9.1.18.2_1 or TC 9.1.20.2_1 shall be executed. (Note 1) | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.1.7.1 | TDD Absolute RSRP Accuracy E-UTRA for Carrier Aggregation | Rel-10 and Rel-11 only | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.1 or TC 9.1.13.1 or TC 9.1.19.1 or TC 9.1.21.1 or TC 9.1.24.1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.7.1_1 | TDD Absolute RSRP Accuracy E-UTRA for Carrier Aggregation (Rel-12 and forward) | Rel-12 | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.1_1 or TC 9.1.13.1_1 or TC 9.1.19.1_1 or TC 9.1.21.1_1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.7.2 | TDD Relative RSRP Accuracy E-UTRA for Carrier Aggregation | Rel-10 and Rel-11 only | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.2 or TC 9.1.13.2 or TC 9.1.19.2 or TC 9.1.21.2 or TC 9.1.24.2 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.7.2_1 | TDD Relative RSRP Accuracy E-UTRA for Carrier Aggregation (Rel-12 and forward) | Rel-12 | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.2_1 or TC 9.1.13.2_1 or TC 9.1.19.2_1 or TC 9.1.21.2_1 or TC 9.1.24.2_1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.8.1 | FDD Absolute RSRP Accuracy under Time-Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC) | Rel-10 and Rel-11 only | C45 | UE supporting E-UTRA FDD and Feature Group Indicator 115 | | | |
| 9.1.8.1_1 | FDD Absolute RSRP Accuracy under Time-Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC) (Rel-12 and forward) | Rel-12 | C45 | UE supporting E-UTRA FDD and Feature Group Indicator 115 | | | |
| 9.1.8.2 | FDD Relative RSRP under Time-Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC) | Rel-10 | C45 | UE supporting E-UTRA FDD and Feature Group Indicator 115 | | | |

*ETSI*

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.1.9.1 | TDD Absolute RSRP Accuracy under Time-Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC) | Rel-10 and Rel-11 only | C46 | UE supporting E-UTRA TDD and Feature Group Indicator 115 | | | |
| 9.1.9.1_1 | TDD Absolute RSRP Accuracy under Time-Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC) (Rel-12 and forward) | Rel-12 | C46 | UE supporting E-UTRA TDD and Feature Group Indicator 115 | | | |
| 9.1.9.2 | TDD Relative RSRP under Time-Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC) | Rel-10 | C46 | UE supporting E-UTRA TDD and Feature Group Indicator 115 | | | |
| 9.1.10.1 | FDD Absolute RSRP under Time-Domain Measurement Resource Restriction with MBSFN ABS (eICIC) | Rel-10 and Rel-11 only | C45 | UE supporting E-UTRA FDD and Feature Group Indicator 115 | | | |
| 9.1.10.1_1 | FDD Absolute RSRP under Time-Domain Measurement Resource Restriction with MBSFN ABS (eICIC) (Rel-12 and forward) | Rel-12 | C45 | UE supporting E-UTRA FDD and Feature Group Indicator 115 | | | |
| 9.1.10.2 | FDD Relative RSRP under Time-Domain Measurement Resource Restriction with MBSFN ABS (eICIC) | Rel-10 | C45 | UE supporting E-UTRA FDD and Feature Group Indicator 115 | | | |
| 9.1.11.1 | TDD Absolute RSRP under Time-Domain Measurement Resource Restriction with MBSFN ABS (eICIC) | Rel-10 and Rel-11 only | C46 | UE supporting E-UTRA TDD and Feature Group Indicator 115 | | | |
| 9.1.11.1_1 | TDD Absolute RSRP under Time-Domain Measurement Resource Restriction with MBSFN ABS (eICIC) (Rel-12 and forward) | Rel-12 | C46 | UE supporting E-UTRA TDD and Feature Group Indicator 115 | | | |
| 9.1.11.2 | TDD Relative RSRP under Time-Domain Measurement Resource Restriction with MBSFN ABS (eICIC) | Rel-10 | C46 | UE supporting E-UTRA TDD and Feature Group Indicator 115 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.1.12.1 | FDD Absolute RSRP Accuracy for E-UTRA Carrier Aggregation for 20 MHz | Rel-10 and Rel-11 only | C18a | UE supporting E-UTRA FDD and CA | Either TC 9.1.6.1 or TC 9.1.12.1 or TC 9.1.18.1 or TC 9.1.20.1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.12.1_1 | FDD Absolute RSRP Accuracy for E-UTRA Carrier Aggregation for 20 MHz (Rel-12 and forward) | Rel-12 | C18a | UE supporting E-UTRA FDD and CA | Either TC 9.1.6.1_1 or TC 9.1.12.1_1 or TC 9.1.18.1_1 or TC 9.1.20.1_1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.12.2 | FDD Relative RSRP Accuracy for E-UTRA Carrier Aggregation for 20 MHz | Rel-10 and Rel-11 only | C18a | UE supporting E-UTRA FDD and CA | Either TC 9.1.6.2 or TC 9.1.12.2 or TC 9.1.18.2 or TC 9.1.20.2 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.12.2_1 | FDD Relative RSRP Accuracy for E-UTRA Carrier Aggregation for 20 MHz (Rel-12 and forward) | Rel-12 | C18a | UE supporting E-UTRA FDD and CA | Either TC 9.1.6.2_1 or TC 9.1.12.2_1 or TC 9.1.18.2_1 or TC 9.1.20.2_1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.13.1 | TDD Absolute RSRP Accuracy for E-UTRA Carrier Aggregation for 20 MHz | Rel-10 and Rel-11 only | C19a | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.1 or TC 9.1.13.1 or TC 9.1.19.1 or TC 9.1.21.1 or TC 9.1.24.1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.13.1_1 | TDD Absolute RSRP Accuracy for E-UTRA Carrier Aggregation for 20 MHz (Rel-12 and forward) | Rel-12 | C19a | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.1_1 or TC 9.1.13.1_1 or TC 9.1.19.1_1 or TC 9.1.21.1_1 shall be executed. (Note 1) | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.1.13.2 | TDD Relative RSRP Accuracy for E-UTRA Carrier Aggregation for 20 MHz | Rel-10 and Rel-11 only | C19a | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.2 or TC 9.1.13.2 or TC 9.1.19.2 or TC 9.1.21.2 or TC 9.1.24.2 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.13.2_1 | TDD Relative RSRP Accuracy for E-UTRA Carrier Aggregation for 20 MHz (Rel-12 and forward) | Rel-12 | C19a | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.2_1 or TC 9.1.13.2_1 or TC 9.1.19.2_1 or TC 9.1.21.2_1 or TC 9.1.24.2_1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.14.1 | FDD Intra Frequency Absolute RSRP Accuracy under Time-Domain Measurement Resource Restriction with CRS Assistance Information and Non-MBSFN ABS (feICIC) | Rel-11 only | C59 | UE supporting E-UTRA FDD and CRS interference handling and Feature Group Indicator 115 | | | |
| 9.1.14.1_1 | FDD Intra Frequency Absolute RSRP Accuracy under Time-Domain Measurement Resource Restriction with CRS Assistance Information and Non-MBSFN ABS (feICIC) (Rel-12 and forward) | Rel-12 | C59 | UE supporting E-UTRA FDD and CRS interference handling and Feature Group Indicator 115 | | | |
| 9.1.14.2 | FDD Intra Frequency Relative RSRP Accuracy under Time-Domain Measurement Resource Restriction with CRS Assistance Information and Non-MBSFN ABS (feICIC) | Rel-11 | C59 | UE supporting E-UTRA FDD and CRS interference handling and Feature Group Indicator 115 | | | |
| 9.1.15.1 | TDD Intra Frequency Absolute RSRP Accuracy under Time-Domain Measurement Resource Restriction with CRS Assistance Information and Non-MBSFN ABS (feICIC) | Rel-11 only | C60 | UE supporting E-UTRA TDD and CRS interference handling and ss-CCH interference handling and Feature Group Indicator 115 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.1.15.1_1 | TDD Intra Frequency Absolute RSRP Accuracy under Time-Domain Measurement Resource Restriction with CRS Assistance Information and Non-MBSFN ABS (feICIC) (Rel-12 and forward) | Rel-12 | C60 | UE supporting E-UTRA TDD and CRS interference handling and ss-CCH interference handling and Feature Group Indicator 115 | | | |
| 9.1.15.2 | TDD Intra Frequency Relative RSRP Accuracy under Time-Domain Measurement Resource Restriction with CRS Assistance Information and Non-MBSFN ABS | Rel-11 | C60 | UE supporting E-UTRA TDD and CRS interference handling and ss-CCH interference handling and Feature Group Indicator 115 | | | |
| 9.1.16.1 | FDD Intra Frequency Absolute RSRP Accuracy for 5MHz Bandwidth | Rel-8 to Rel-11 | C50 | UE supporting E-UTRA FDD and E-UTRA bands within band group FDD_N and Feature Group Indicator 16 | | | |
| 9.1.16.1_1 | FDD Intra Frequency Absolute RSRP Accuracy for 5MHz Bandwidth (Rel-12 and forward) | Rel-12 | C50 | UE supporting E-UTRA FDD and E-UTRA bands within band group FDD_N and Feature Group Indicator 16 | | | |
| 9.1.16.2 | FDD Intra Frequency Relative Accuracy of RSRP for 5MHz Bandwidth | Rel-8 | C50 | UE supporting E-UTRA FDD and E-UTRA bands within band group FDD_N and Feature Group Indicator 16 | | | |
| 9.1.17.1 | FDD - FDD Inter Frequency Absolute RSRP Accuracy for 5MHz Bandwidth | Rel-8 to Rel-11 | C51 | UE supporting E-UTRA FDD and E-UTRA bands within band group FDD_N and Feature Group Indicators 16 and 25 | | | |
| 9.1.17.1_1 | FDD - FDD Inter Frequency Absolute RSRP Accuracy for 5MHz Bandwidth (Rel-12 and forward) | Rel-12 | C51 | UE supporting E-UTRA FDD and E-UTRA bands within band group FDD_N and Feature Group Indicators 16 and 25 | | | |
| 9.1.17.2 | FDD - FDD Inter Frequency Relative Accuracy of RSRP for 5MHz Bandwidth | Rel-8 to Rel-11 | C51 | UE supporting E-UTRA FDD and E-UTRA bands within band group FDD_Nand Feature Group Indicators 16 and 25 | | | |

*ETSI*

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.1.17.2_1 | FDD - FDD Inter Frequency Relative Accuracy of RSRP for 5MHz Bandwidth (Rel-12 and forward) | Rel-12 | C51 | UE supporting E-UTRA FDD and E-UTRA bands within band group FDD_N and Feature Group Indicators 16 and 25 | | | |
| 9.1.18.1 | FDD Absolute RSRP Accuracy for E-UTRA for Carrier Aggregation for 10MHz + 5MHz | Rel-11 only | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.1.6.1 or TC 9.1.12.1 or TC 9.1.18.1 or TC 9.1.20.1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.18.1_1 | FDD Absolute RSRP Accuracy for E-UTRA for Carrier Aggregation for 10MHz + 5MHz (Rel-12 and forward) | Rel-12 | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.1.6.1_1 or TC 9.1.12.1_1 or TC 9.1.18.1_1 or TC 9.1.20.1_1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.18.2 | FDD Relative RSRP Accuracy E-UTRA for Carrier Aggregation for 10MHz + 5MHz | Rel-11 only | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.1.6.2 or TC 9.1.12.2 or TC 9.1.18.2 or TC 9.1.20.2 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.18.2_1 | FDD Relative RSRP Accuracy E-UTRA for Carrier Aggregation for 10MHz + 5MHz (Rel-12 and forward) | Rel-12 | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.1.6.2_1 or TC 9.1.12.2_1 or TC 9.1.18.2_1 or TC 9.1.20.2_1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.19.1 | TDD Absolute RSRP Accuracy for E-UTRA Carrier Aggregation for 10MHz + 5MHz | Rel-11 only | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.1 or TC 9.1.13.1 or TC 9.1.19.1 or TC 9.1.21.1 or TC 9.1.24.1 shall be executed. (Note 1) | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.1.19.1_1 | TDD Absolute RSRP Accuracy for E-UTRA Carrier Aggregation for 10MHz + 5MHz (Rel-12 and forward) | Rel-12 | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.1_1 or TC 9.1.13.1_1 or TC 9.1.19.1_1 or TC 9.1.21.1_1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.19.2 | TDD Relative RSRP Accuracy for E-UTRA Carrier Aggregation for 10MHz + 5MHz | Rel-11 only | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.2 or TC 9.1.13.2 or TC 9.1.19.2 or TC 9.1.21.2 or TC 9.1.24.2 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.19.2_1 | TDD Relative RSRP Accuracy for E-UTRA Carrier Aggregation for 10MHz + 5MHz (Rel-12 and forward) | Rel-12 | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.2_1 or TC 9.1.13.2_1 or TC 9.1.19.2_1 or TC 9.1.21.2_1 or TC 9.1.24.2_1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.20.1 | FDD Absolute RSRP Accuracy for E-UTRA Carrier Aggregation for 5MHz + 5MHz bandwidth | Rel-10 and Rel-11 only | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.1.6.1 or TC 9.1.12.1 or TC 9.1.18.1 or TC 9.1.20.1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.20.1_1 | FDD Absolute RSRP Accuracy for E-UTRA Carrier Aggregation for 5MHz + 5MHz bandwidth (Rel-12 and forward) | Rel-12 | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.1.6.1_1 or TC 9.1.12.1_1 or TC 9.1.18.1_1 or TC 9.1.20.1_1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.20.2 | FDD Relative RSRP Accuracy for E-UTRA Carrier Aggregation for 5MHz + 5MHz bandwidth | Rel-10 and Rel-11 only | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.1.6.2 or TC 9.1.12.2 or TC 9.1.18.2 or TC 9.1.20.2 shall be executed. (Note 1) | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.1.20.2_1 | FDD Relative RSRP Accuracy for E-UTRA Carrier Aggregation for 5MHz + 5MHz bandwidth (Rel-12 and forward) | Rel-12 | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.1.6.2_1 or TC 9.1.12.2_1 or TC 9.1.18.2_1 or TC 9.1.20.2_1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.21.1 | TDD Absolute RSRP Accuracy for E-UTRA Carrier Aggregation for 5MHz + 5MHz | Rel-10 and Rel-11 only | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.1 or TC 9.1.13.1 or TC 9.1.19.1 or TC 9.1.21.1 or TC 9.1.24.1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.21.1_1 | TDD Absolute RSRP Accuracy for E-UTRAN Carrier Aggregation for 5MHz + 5MHz (Rel-12 and forward) | Rel-12 | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.1_1 or TC 9.1.13.1_1 or TC 9.1.19.1_1 or TC 9.1.21.1_1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.21.2 | TDD Relative RSRP Accuracy for E-UTRA Carrier Aggregation for 5MHz + 5MHz | Rel-10 and Rel-11 only | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.2 or TC 9.1.13.2 or TC 9.1.19.2 or TC 9.1.21.2 or TC 9.1.24.2 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.21.2_1 | TDD Relative RSRP Accuracy for E-UTRA Carrier Aggregation for 5MHz + 5MHz (Rel-12 and forward) | Rel-12 | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.2_1 or TC 9.1.13.2_1 or TC 9.1.19.2_1 or TC 9.1.21.2_1 or TC 9.1.24.2_1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.22 | FDD-TDD RSRP Accuracy E-UTRA for Carrier Aggregation with PCell in FDD | Rel-12 | C141 | UE supporting E-UTRA FDD and TDD and 2DL CA with FDD as PCell | | | 2Rx, 4Rx |
| 9.1.23 | FDD-TDD RSRP Accuracy E-UTRA for Carrier Aggregation with PCell in TDD | Rel-12 | C142 | UE supporting E-UTRA FDD and TDD and 2DL CA with TDD as PCell | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.1.24.1 | TDD Absolute RSRP Accuracy for E-UTRA Carrier Aggregation for 20MHz + 10MHz | Rel-10 and Rel-11 only | C19b | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.1 or TC 9.1.13.1 or TC 9.1.19.1 or TC 9.1.21.1 or TC 9.1.24.1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.24.1_1 | TDD Absolute RSRP Accuracy for E-UTRA Carrier Aggregation for 20MHz + 10MHz (Rel-12 and forward) | Rel-12 | C19b | UE supporting E-UTRA TDD and CA | | | 2Rx, 4Rx |
| 9.1.24.2 | TDD Relative RSRP Accuracy for E-UTRA Carrier Aggregation for 20MHz + 10MHz | Rel-10 and Rel-11 only | C19b | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.2 or TC 9.1.13.2 or TC 9.1.19.2 or TC 9.1.21.2 or TC 9.1.24.2 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.24.2_1 | TDD Relative RSRP Accuracy for E-UTRA Carrier Aggregation for 20MHz + 10MHz (Rel-12 and forward) | Rel-12 | C19b | UE supporting E-UTRA TDD and CA | Either TC 9.1.7.2_1 or TC 9.1.13.2_1 or TC 9.1.19.2_1 or TC 9.1.21.2_1 or TC 9.1.24.2_1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.1.25 | FDD intra-frequency absolute and relative RSRP accuracies in CRS based discovery signal | Rel-12 | C101 | UE supporting E-UTRA FDD and CRS based discovery signals measurement and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.1.26 | TDD intra-frequency absolute and relative RSRP accuracies in CRS based discovery signal | Rel-12 | C102 | UE supporting E-UTRA TDD and CRS based discovery signals measurement and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.1.27 | FDD-FDD inter-frequency absolute and relative RSRP accuracies in CRS based discovery signal | Rel-12 | C103 | UE supporting E-UTRA FDD and CRS based discovery signals measurement and Feature Group Indicator 16 and 25 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.1.28 | TDD-TDD inter-frequency absolute and relative RSRP accuracies in CRS based discovery signal | Rel-12 | C104 | UE supporting E-UTRA TDD and CRS based discovery signals measurement and Feature Group Indicator 16 and 25 | | | 2Rx, 4Rx |
| 9.1.29 | FDD intra frequency absolute and relative CSI-RSRP accuracies in CSI-RS based discovery signal | Rel-12 | C114 | UE supporting E-UTRA FDD and CSI-RS based discovery signal measurement and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.1.30 | TDD intra frequency absolute and relative CSI-RSRP accuracies in CSI-RS based discovery signal | Rel-12 | C115 | UE supporting E-UTRA TDD and CSI-RS based discovery signal measurement and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.1.31 | FDD-FDD inter-frequency absolute and relative CSI-RSRP accuracies in CSI-RS based discovery signal | Rel-12 | C116 | UE supporting E-UTRA FDD and CSI-RS based discovery signal measurement and Feature Group Indicator 16 and 25 | | | 2Rx, 4Rx |
| 9.1.32 | TDD-TDD inter-frequency absolute and relative CSI-RSRP accuracies in CSI-RS based discovery signal | Rel-12 | C117 | UE supporting E-UTRA TDD and CSI-RS based discovery signal measurement and Feature Group Indicator 16 and 25 | | | 2Rx, 4Rx |
| 9.1.33 | FDD absolute and relative RSRP accuracies for E-UTRAN Carrier Aggregation in CRS based discovery signal | Rel-12 | C128 | UE supporting E-UTRA FDD and CA and CRS based discovery signal measurement | | | 2Rx, 4Rx |
| 9.1.34 | TDD absolute and relative RSRP accuracies for E-UTRAN Carrier Aggregation in CRS based discovery signal | Rel-12 | C129 | UE supporting E-UTRA TDD and CA and CRS based discovery signal measurement | | | 2Rx, 4Rx |
| 9.1.35 | FDD absolute and relative CSI-RSRP accuracies for E-UTRAN Carrier Aggregation in CSI-RS based discovery signal | Rel-12 | C118 | UE supporting E-UTRA FDD and CA and CSI-RS based discovery signal measurement | | | 2Rx, 4Rx |
| 9.1.36 | TDD absolute and relative CSI-RSRP accuracies for E-UTRAN Carrier Aggregation in CSI-RS based discovery signal | Rel-12 | C119 | UE supporting E-UTRA TDD and CA and CSI-RS based discovery signal measurement | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.1.37 | 3DL PCell in FDD RSRP for E-UTRAN in Carrier Aggregation | Rel-12 | C69 | UE supporting E-UTRA FDD and TDD and 3DL CA with FDD as PCell | | | 2Rx, 4Rx |
| 9.1.38 | 3DL PCell in TDD RSRP for E-UTRAN in Carrier Aggregation | Rel-12 | C70 | UE supporting E-UTRA FDD and TDD and 3DL CA with TDD as PCell | | | 2Rx, 4Rx |
| 9.1.39 | 3DL FDD RSRP for E-UTRAN in Carrier Aggregation | Rel-10 and Rel-11 only | C71 | UE supporting E-UTRA FDD and 3DL with intra-band contiguous CA, or 3DL with inter-band CA, or 3DL with intra-band contiguous and inter-band CA | | | 2Rx, 4Rx |
| | | Rel-11 only | C72 | UE supporting E-UTRA FDD and 3DL with intra-band non-contiguous and inter-band CA, or 3DL with intra-band non-contiguous and intra-band contiguous CA | | | 2Rx, 4Rx |
| 9.1.39_1 | 3DL FDD RSRP for E-UTRAN in Carrier Aggregation(Rel-12 and forward) | Rel-12 | C75 | UE supporting E-UTRA FDD and 3DL CA | | | 2Rx, 4Rx |
| 9.1.40 | 3DL TDD RSRP for E-UTRAN in Carrier Aggregation | Rel-10 and Rel-11 only | C73 | UE supporting E-UTRA TDD and 3DL with intra-band contiguous CA, or 3DL with inter-band CA, or 3DLwith intra-band contiguous and inter-band CA | | | 2Rx, 4Rx |
| | | Rel-11 only | C74 | UE supporting E-UTRA TDD and 3DL with intra-band non-contiguous and inter-band CA, or 3DL with intra-band non-contiguous and intra-band contiguous CA | | | 2Rx, 4Rx |
| 9.1.40_1 | 3DL TDD RSRP for E-UTRAN in Carrier Aggregation (Rel-12 and forward) | Rel-12 | C76 | UE supporting E-UTRA TDD and 3DL CA | | | 2Rx, 4Rx |
| 9.1.41.1 | FD-FDD Intra Frequency Absolute RSRP Accuracy for UE category 0 | Rel-12 | C88 | UE supporting E-UTRA FD-FDD (UE Category 0) and Feature Group Indicator 16 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.1.41.2 | FD-FDD Intra Frequency Relative RSRP Accuracy for UE category 0 | Rel-12 | C88 | UE supporting E-UTRA FD-FDD (UE Category 0) and Feature Group Indicator 16 | | | |
| 9.1.42.1 | HD-FDD Intra Frequency Absolute RSRP Accuracy for UE category 0 | Rel-12 | C89 | UE supporting E-UTRA HD-FDD (UE category 0) and Feature Group Indicator 16 | | | |
| 9.1.42.2 | HD-FDD Intra Frequency Relative RSRP Accuracy for UE category 0 | Rel-12 | C89 | UE supporting E-UTRA HD-FDD (UE category 0) and Feature Group Indicator 16 | | | |
| 9.1.43.1 | TDD Intra Frequency Absolute RSRP Accuracy for UE category 0 | Rel-12 | C90 | UE supporting E-UTRA TDD (UE Category 0) and Feature Group Indicator 16 | | | |
| 9.1.43.2 | TDD Intra Frequency Relative RSRP Accuracy for UE category 0 | Rel-12 | C90 | UE supporting E-UTRA TDD (UE Category 0) and Feature Group Indicator 16 | | | |
| 9.1.44 | 4 DL CA PCell in FDD FDD-TDD RSRP for E-UTRAN in Carrier Aggregation | Rel-12 | C69a | UE supporting E-UTRA FDD and TDD and 4DL CA with FDD as PCell | | | 2Rx, 4Rx |
| 9.1.45 | 4 DL CA PCell in TDD FDD-TDD RSRP for E-UTRAN in Carrier Aggregation | Rel-12 | C70a | UE supporting E-UTRA FDD and TDD and 4DL CA with TDD as PCell | | | 2Rx, 4Rx |
| 9.1.46 | 4DL FDD RSRP for E-UTRAN in Carrier Aggregation | Rel-12 | C75a | UE supporting E-UTRA FDD and 4DL CA | | | 2Rx, 4Rx |
| 9.1.47 | 4DL TDD RSRP for E-UTRAN in Carrier Aggregation | Rel-12 | C76a | UE supporting E-UTRA TDD and 4DL CA | | | 2Rx, 4Rx |
| 9.1.48 | 5 DL PCell in FDD RSRP for E-UTRAN in Carrier Aggregation | Rel-12 | C69b | UE supporting E-UTRA FDD and TDD and 5DL CA with FDD as PCell | | | 2Rx, 4Rx |
| 9.1.49 | 5 DL PCell in TDD RSRP for E-UTRAN in Carrier Aggregation | Rel-12 | C70b | UE supporting E-UTRA FDD and TDD and 5DL CA with TDD as PCell | | | 2Rx, 4Rx |
| 9.1.50 | 5DL FDD RSRP for E-UTRAN in Carrier Aggregation | Rel-12 | C75b | UE supporting E-UTRA FDD and 5DL CA | | | 2Rx, 4Rx |
| 9.1.51 | 5DL TDD RSRP for E-UTRAN in Carrier Aggregation | Rel-12 | C76b | UE supporting E-UTRA TDD and 5DL CA | | | 2Rx, 4Rx |
| 9.1.52 | FD-FDD RSRP Intra frequency case for BL/CE UE in CEModeA | Rel-13 | C94c | UE supporting E-UTRA FD-FDD and UE Category M1 and Feature Group Indicator 16 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.1.53 | HD-FDD RSRP Intra frequency case for BL/CE UE in CEModeA | Rel-13 | C107d | UE supporting E-UTRA HD-FDD and UE Category M1 and Feature Group Indicator 16 | | | |
| 9.1.54 | TDD RSRP Intra frequency case for BL/CE UE in CEModeA | Rel-13 | C93b | UE supporting E-UTRA TDD and UE Category M1 and Feature Group Indicator 16 | | | |
| 9.1.55 | FS3 Intra frequency absolute and relative RSRP accuracies with FDD PCell | Rel-13 | C149 | UE supporting E-UTRA FDD and Downlink LAA with FDD as Pcell | | | 2Rx, 4Rx |
| 9.1.56 | FS3 Intra frequency absolute and relative RSRP accuracies with TDD PCell | Rel-13 | C152 | UE supporting E-UTRA TDD and Downlink LAA with TDD as PCell | | | 2Rx, 4Rx |
| 9.1.57 | FD-FDD RSRP Intra frequency case for BL/CE UE in CEModeB | Rel-13 | C107f | UE supporting E-UTRA FD-FDD and UE Category M1 and CE Mode B and Feature Group Indicator 16 | | | |
| 9.1.58 | HD-FDD RSRP Intra frequency case for BL/CE UE in CEModeB | Rel-13 | C107e | UE supporting E-UTRA HD-FDD and UE Category M1 and CE Mode B and Feature Group Indicator 16 | | | |
| 9.1.59 | TDD RSRP Intra frequency case for BL/CE UE in CEModeB | Rel-13 | C93d | UE supporting E-UTRA TDD and UE Category M1 and CE Mode B and Feature Group Indicator 16 | | | |
| 9.1.60 | FS3 absolute and relative CSI-RSRP accuracies for E-UTRAN Carrier Aggregation in CSI-RS based discovery signal with FDD PCell | Rel-13 | C150 | UE supporting E-UTRA FDD and Downlink LAA with FDD as Pcell and CSI-RS based discovery signals and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.1.61 | FS3 absolute and relative CSI-RSRP accuracies for E-UTRAN Carrier Aggregation in CSI-RS based discovery signal with TDD PCell | Rel-13 | C151 | UE supporting E-UTRA TDD and Downlink LAA and CSI-RS based discovery signals and Feature Group Indicator 16 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.1.69 | 4 DL RSRP for E-UTRAN in Carrier Aggregation with generic duplex modes | Rel-12 | C191b | UE supporting E-UTRA FDD and/or E-UTRA TDD and 4DL CA. Note: the UE shall execute only either 9.1.69 or the corresponding test from 9.1.44, 9.1.45, 9.1.46 and 9.1.47. | | | 2Rx, 4Rx |
| 9.1.70 | 5 DL RSRP for E-UTRAN in Carrier Aggregation with generic duplex modes | Rel-12 | C191c | UE supporting E-UTRA FDD and/or E-UTRA TDD and 5DL CA. Note: the UE shall execute only either 9.1.70 or the corresponding test from 9.1.48, 9.1.49, 9.1.50 and 9.1.51. | | | 2Rx, 4Rx |
| 9.2.1.1 | FDD Intra Frequency Absolute RSRQ Accuracy | Rel-8 | C01f | UE supporting E-UTRA FDD and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.2.1.1_2 | FDD Intra Frequency Absolute RSRQ Accuracy for UE Category 1bis | Rel-13 | C01k | UE supporting E-UTRA FDD and UE Category 1bis and Feature Group Indicator 16 | | | |
| 9.2.2.1 | TDD Intra Frequency Absolute RSRQ Accuracy | Rel-8 | C02f | UE supporting E-UTRA TDD and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.2.2.1_2 | TDD Intra Frequency Absolute RSRQ Accuracy for UE Category 1bis | Rel-13 | C02k | UE supporting E-UTRA TDD and UE Category 1bis and Feature Group Indicator 16 | | | |
| 9.2.3.1 | FDD - FDD Inter Frequency Absolute RSRQ Accuracy | Rel-8 | C01g | UE supporting E-UTRA FDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.2.3.1_2 | FDD - FDD Inter Frequency Absolute RSRQ Accuracy for UE Category 1bis | Rel-13 | C01l | UE supporting E-UTRA FDD and UE category 1bis and Feature Group Indicators 16 and 25 | | | |
| 9.2.3.2 | FDD - FDD Inter Frequency Relative Accuracy of RSRQ | Rel-8 | C01g | UE supporting E-UTRA FDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.2.3.2_2 | FDD - FDD Inter Frequency Relative Accuracy of RSRQ for UE Category 1bis | Rel-13 | C01l | UE supporting E-UTRA FDD and UE category 1bis and Feature Group Indicators 16 and 25 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.2.4.1 | TDD - TDD Inter Frequency Absolute RSRQ Accuracy | Rel-8 to Rel-11 | C02g | UE supporting E-UTRA TDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.2.4.1_1 | TDD - TDD Inter Frequency Absolute RSRQ Accuracy (Rel-12 and forward) | Rel-12 | C02g | UE supporting E-UTRA TDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.2.4.1_2 | TDD - TDD Inter Frequency Absolute RSRQ Accuracy for UE Category 1bis | Rel-13 | C02l | UE supporting E-UTRA TDD and UE category 1bis and Feature Group Indicators 16 and 25 | | | |
| 9.2.4.2 | TDD -TDD Inter Frequency Relative Accuracy of RSRQ | Rel-8 to Rel-11 | C02g | UE supporting E-UTRA TDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.2.4.2_1 | TDD -TDD Inter Frequency Relative Accuracy of RSRQ (Rel-12 and forward) | Rel-12 | C02g | UE supporting E-UTRA TDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.2.4.2_2 | TDD -TDD Inter Frequency Relative Accuracy of RSRQ for UE Category 1bis | Rel-13 | C02l | UE supporting E-UTRA TDD and UE category 1bis and Feature Group Indicators 16 and 25 | | | |
| 9.2.4A.1 | FDD - TDD Inter Frequency Absolute RSRQ Accuracy | Rel-9 | C42 | UE supporting E-UTRA FDD and E-UTRA TDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.2.4A.1_2 | FDD - TDD Inter Frequency Absolute RSRQ Accuracy for UE Category 1bis | Rel-13 | C42a | UE supporting E-UTRA FDD and E-UTRA TDD and UE category 1bis and Feature Group Indicators 16 and 25 | | | |
| 9.2.4A.2 | FDD - TDD Inter Frequency Relative Accuracy of RSRQ | Rel-9 | C42 | UE supporting E-UTRA FDD and E-UTRA TDD and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.2.4A.2_2 | FDD - TDD Inter Frequency Relative Accuracy of RSRQ for UE Category 1bis | Rel-13 | C42a | UE supporting E-UTRA FDD and E-UTRA TDD and UE category 1bis and Feature Group Indicators 16 and 25 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.2.5.1 | FDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation | Rel-10 | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.2.5.1 or TC 9.2.11.1 or TC 9.2.21.1 or TC 9.2.23.1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.2.5.2 | FDD Relative RSRQ Accuracy E-UTRA for Carrier Aggregation | Rel-10 | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.2.5.2 or TC 9.2.11.2 or TC 9.2.21.2 or TC 9.2.23.2 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.2.6.1 | TDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation | Rel-10 | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.2.6.1 or TC 9.2.12.1 or TC 9.2.22.1 or TC 9.2.24.1 or TC 9.2.27.1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.2.6.2 | TDD Relative RSRQ Accuracy for E-UTRA Carrier Aggregation | Rel-10 | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.2.6.2 or TC 9.2.12.2 or TC 9.2.22.2 or TC 9.2.24.2 or TC 9.2.27.2 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.2.7.1 | FDD RSRQ under Time Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC) | Rel-10 | C45 | UE supporting E-UTRA FDD and Feature Group Indicator 115 | | | |
| 9.2.8.1 | TDD RSRQ under Time Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC) | Rel-10 | C46 | UE supporting E-UTRA TDD and Feature Group Indicator 115 | | | |
| 9.2.9.1 | FDD Absolute RSRQ under Time Domain Measurement Resource Restriction with MBSFN ABS (eICIC) | Rel-10 | C45 | UE supporting E-UTRA FDD and Feature Group Indicator 115 | | | |
| 9.2.10.1 | TDD Absolute RSRQ under Time Domain Measurement Resource Restriction with MBSFN ABS (eICIC) | Rel-10 | C46 | UE supporting E-UTRA TDD and Feature Group Indicator 115 | | | |

*ETSI*

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|-----------|----------|-----------------------|---------------------|--------|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.2.11.1 | FDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation for 20MHz | Rel-10 | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.2.5.1 or TC 9.2.11.1 or TC 9.2.21.1 or TC 9.2.23.1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.2.11.2 | FDD Relative RSRQ Accuracy for E-UTRA Carrier Aggregation for 20MHz | Rel-10 | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.2.5.2 or TC 9.2.11.2 or TC 9.2.21.2 or TC 9.2.23.2 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.2.12.1 | TDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation for 20MHz | Rel-10 | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.2.6.1 or TC 9.2.12.1 or TC 9.2.22.1 or TC 9.2.24.1 or TC 9.2.27.1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.2.12.2 | TDD Relative RSRQ Accuracy for E-UTRA Carrier Aggregation for 20MHz | Rel-10 | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.2.6.2 or TC 9.2.12.2 or TC 9.2.22.2 or TC 9.2.24.2 or TC 9.2.27.2 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.2.15.1 | FDD RSRQ Accuracy under Time Domain Measurement Resource Restriction with CRS Assistance Information and Non-MBSFN ABS (feICIC) | Rel-11 | C59 | UE supporting E-UTRA FDD and CRS interference handling and Feature Group Indicator 115 | | | |
| 9.2.16.1 | TDD RSRQ Accuracy under Time Domain Measurement Resource Restriction with CRS Assistance Information and Non-MBSFN ABS (feICIC) | Rel-11 | C60 | UE supporting E-UTRA TDD and CRS interference handling and ss-CCH interference handling and Feature Group Indicator 115 | | | |
| 9.2.17.1 | FDD Intra Frequency Absolute RSRQ Accuracy for 5MHz Bandwidth | Rel-8 | C50 | UE supporting E-UTRA FDD and E-UTRA bands within band group FDD_N and Feature Group Indicator 16 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.2.18.1 | FDD - FDD Inter Frequency Absolute RSRQ Accuracy for 5MHz Bandwidth | Rel-8 | C51 | UE supporting E-UTRA FDD and E-UTRA bands within band group FDD_N and Feature Group Indicators 16 and 25 | | | |
| 9.2.18.2 | FDD - FDD Inter Frequency Relative Accuracy of RSRQ for 5MHz Bandwidth | Rel-8 | C51 | UE supporting E-UTRA FDD and E-UTRA bands within band group FDD_N and Feature Group Indicators 16 and 25 | | | |
| 9.2.19.1 | FDD-FDD Inter Frequency absolute WB-RSRQ | Rel-11 | C01h | UE supporting E-UTRA FDD and WB-RSRQ measurement and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.2.20.1 | TDD-TDD Inter Frequency absolute WB-RSRQ | Rel-11 | C02h | UE supporting E-UTRA TDD and WB-RSRQ measurement and Feature Group Indicators 16 and 25 | | | 2Rx, 4Rx |
| 9.2.21.1 | FDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation for 10MHz+5MHz | Rel-11 | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.2.5.1 or TC 9.2.11.1 or TC 9.2.21.1 or TC 9.2.23.1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.2.21.2 | FDD Relative RSRQ Accuracy for E-UTRA Carrier Aggregation for 10MHz+5MHz | Rel-11 | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.2.5.2 or TC 9.2.11.2 or TC 9.2.21.2 or TC 9.2.23.2 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.2.22.1 | TDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation for 10MHz+5MHz | Rel-11 | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.2.6.1 or TC 9.2.12.1 or TC 9.2.22.1 or TC 9.2.24.1 or TC 9.2.27.1 shall be executed. (Note 1) | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.2.22.2 | TDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation for 10MHz+5MHz | Rel-11 | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.2.6.2 or TC 9.2.12.2 or TC 9.2.22.2 or TC 9.2.24.2 or TC 9.2.27.2 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.2.23.1 | FDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation for 5MHz+5MHz | Rel-10 | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.2.5.1 or TC 9.2.11.1 or TC 9.2.21.1 or TC 9.2.23.1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.2.23.2 | FDD Relative RSRQ Accuracy for E-UTRA Carrier Aggregation for 5MHz+5MHz | Rel-10 | C18 | UE supporting E-UTRA FDD and CA | Either TC 9.2.5.2 or TC 9.2.11.2 or TC 9.2.21.2 or TC 9.2.23.2 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.2.24.1 | TDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation for 5MHz+5MHz | Rel-10 | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.2.6.1 or TC 9.2.12.1 or TC 9.2.22.1 or TC 9.2.24.1 or TC 9.2.27.1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.2.24.2 | TDD Relative RSRQ Accuracy for E-UTRA Carrier Aggregation for 5MHz+5MHz | Rel-10 | C19 | UE supporting E-UTRA TDD and CA | Either TC 9.2.6.2 or TC 9.2.12.2 or TC 9.2.22.2 or TC 9.2.24.2 or TC 9.2.27.2 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.2.25.1 | Absolute RSRQ Accuracy for E-UTRAN TDD-FDD Carrier Aggregation with PCell in FDD | Rel-12 | C67 | UE supporting E-UTRA FDD and TDD and 2DL CA with FDD as PCell | | | 2Rx, 4Rx |
| 9.2.25.2 | Relative RSRQ Accuracy for E-UTRAN TDD-FDD Carrier Aggregation with PCell in FDD | Rel-12 | C67 | UE supporting E-UTRA FDD and TDD and 2DL CA with FDD as PCell | | | 2Rx, 4Rx |
| 9.2.26.1 | Absolute RSRQ Accuracy for E-UTRAN TDD-FDD Carrier Aggregation with PCell in TDD | Rel-12 | C142 | UE supporting E-UTRA FDD and TDD and 2DL CA with TDD as PCell | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.2.26.2 | Relative RSRQ Accuracy for E-UTRAN TDD-FDD Carrier Aggregation with PCell in TDD | Rel-12 | C142 | UE supporting E-UTRA FDD and TDD and 2DL CA with TDD as PCell | | | 2Rx, 4Rx |
| 9.2.27.1 | TDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation for 20MHz+10MHz | Rel-10 | C19b | UE supporting E-UTRA TDD and CA | Either TC 9.2.6.1 or TC 9.2.12.1 or TC 9.2.22.1 or TC 9.2.24.1 or TC 9.2.27.1 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.2.27.2 | TDD Relative RSRQ Accuracy for E-UTRA Carrier Aggregation for 20MHz+10MHz | Rel-10 | C19b | UE supporting E-UTRA TDD and CA | Either TC 9.2.6.2 or TC 9.2.12.2 or TC 9.2.22.2 or TC 9.2.24.2 or TC 9.2.27.2 shall be executed. (Note 1) | | 2Rx, 4Rx |
| 9.2.28 | FDD intra-frequency absolute RSRQ accuracy with CRS based discovery signal | Rel-12 | C101 | UE supporting E-UTRA FDD and CRS based discovery signals measurement and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.2.29 | TDD intra-frequency absolute RSRQ accuracy with CRS based discovery signal | Rel-12 | C102 | UE supporting E-UTRA TDD and CRS based discovery signals measurement and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.2.30 | FDD-FDD inter-frequency absolute and relative RSRQ accuracies with CRS based discovery signal | Rel-12 | C103 | UE supporting E-UTRA FDD and CRS based discovery signals measurement and Feature Group Indicator 16 and 25 | | | 2Rx, 4Rx |
| 9.2.31 | TDD-TDD inter-frequency absolute and relative RSRQ accuracies with CRS based discovery signal | Rel-12 | C104 | UE supporting E-UTRA TDD and CRS based discovery signals measurement and Feature Group Indicator 16 and 25 | | | 2Rx, 4Rx |
| 9.2.32 | FDD absolute and relative RSRQ accuracy for E-UTRAN Carrier Aggregation in CRS based discovery signal | Rel-12 | C128 | UE supporting E-UTRA FDD and CA and CRS based discovery signal measurement | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.2.33 | TDD absolute and relative RSRQ accuracy for E-UTRAN Carrier Aggregation in CRS based discovery signal | Rel-12 | C129 | UE supporting E-UTRA TDD and CA and CRS based discovery signal measurement | | | 2Rx, 4Rx |
| 9.2.38 | 3DL PCell in FDD RSRQ for E-UTRAN in Carrier Aggregation | Rel-12 | C69 | UE supporting E-UTRA FDD and TDD and 3DL CA with FDD as PCell | | | 2Rx, 4Rx |
| 9.2.39 | 3 DL PCell in TDD RSRQ for E-UTRAN in Carrier Aggregation | Rel-12 | C70 | UE supporting E-UTRA FDD and TDD and 3DL CA with TDD as PCell | | | 2Rx, 4Rx |
| 9.2.40 | 3 DL FDD RSRQ for E-UTRAN in Carrier Aggregation | Rel-10 | C71 | UE supporting E-UTRA FDD and 3DL with intra-band contiguous CA, or 3DL with inter-band CA, or 3DL with intra-band contiguous and inter-band CA | | | 2Rx, 4Rx |
| | | Rel-11 | C72 | UE supporting E-UTRA FDD and 3DL with intra-band non-contiguous and inter-band CA, or 3DL with intra-band non-contiguous and intra-band contiguous CA | | | 2Rx, 4Rx |
| 9.2.41 | 3DL TDD RSRQ for E-UTRAN in Carrier Aggregation | Rel-10 | C73 | UE supporting E-UTRA TDD and 3DL with intra-band contiguous CA, or 3DL with inter-band CA, or 3DL with intra-band contiguous and inter-band CA | | | 2Rx, 4Rx |
| | | Rel-11 | C74 | UE supporting E-UTRA TDD and 3DL with intra-band non-contiguous and inter-band CA, or 3DL with intra-band non-contiguous and intra-band contiguous CA | | | 2Rx, 4Rx |
| 9.2.42.1 | FD-FDD Intra Frequency Absolute RSRQ Accuracy for UE category 0 | Rel-12 | C88 | UE supporting E-UTRA FD-FDD (UE Category 0) and Feature Group Indicator 16 | | | |
| 9.2.43.1 | HD-FDD Intra Frequency Absolute RSRQ Accuracy for UE category 0 | Rel-12 | C89 | UE supporting E-UTRA HD-FDD (UE Category 0) and Feature Group Indicator 16 | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|--|------------------------|--|--|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.2.44.1 | TDD Intra Frequency Absolute RSRQ Accuracy for UE category 0 | Rel-12 | C90 | UE supporting E-UTRA TDD (UE Category 0) and Feature Group Indicator 16 | | | |
| 9.2.45 | 4 DL CA PCell in FDD FDD-TDD RSRQ for E-UTRAN in Carrier Aggregation | Rel-12 | C69a | UE supporting E-UTRA FDD and TDD and 4DL CA with FDD as PCell | | | |
| 9.2.46 | 4DL PCell in TDD RSRQ for E-UTRAN in Carrier Aggregation | Rel-12 | C70a | UE supporting E-UTRA FDD and TDD and 4DL CA with TDD as PCell | | | |
| 9.2.47 | 5 DL PCell in FDD RSRQ for E-UTRAN in Carrier Aggregation | Rel-12 | C69b | UE supporting E-UTRA FDD and TDD and 5DL CA with FDD as PCell | | | |
| 9.2.48 | 5 DL PCell in TDD RSRQ for E-UTRAN in Carrier Aggregation | Rel-12 | C70b | UE supporting E-UTRA FDD and TDD and 5DL CA with TDD as PCell | | | |
| 9.2.51 | FS3 Intra frequency absolute and relative RSRQ accuracies with FDD PCell | Rel-13 | C149 | UE supporting E-UTRA FDD and Downlink LAA with FDD as Pcell | | | 2Rx, 4Rx |
| 9.2.52 | FS3 Intra frequency absolute and relative RSRQ accuracies with TDD PCell | Rel-13 | C152 | UE supporting E-UTRA TDD and Downlink LAA with TDD as PCell | | | 2Rx, 4Rx |
| 9.2.56 | 4 DL RSRQ for E-UTRAN in Carrier Aggregation with generic duplex modes | Rel-12 | C191b | UE supporting E-UTRA FDD and/or E-UTRA TDD and 4DL CA. Note: the UE shall execute only either 9.2.56 or the corresponding test from 9.2.45, 9.2.46, 9.2.53 or 9.2.54 | | | 2Rx, 4Rx |
| 9.2.57 | 5 DL RSRQ for E-UTRAN in Carrier Aggregation with generic duplex modes | Rel-12 | C191c | UE supporting E-UTRA FDD and/or E-UTRA TDD and 5DL CA. Note: the UE shall execute only either 9.2.57 or the corresponding test from 9.2.47, 9.2.48, 9.2.49 or 9.2.50. | | | 2Rx, 4Rx |
| 9.3.1 | E-UTRAN FDD - UTRA FDD CPICH RSCP absolute accuracy | Rel-9 | C04 | UE supporting E-UTRA FDD and UTRA FDD | | | 2Rx, 4Rx |
| 9.3.2 | E-UTRAN TDD - UTRA FDD CPICH RSCP absolute accuracy | Rel-9 | C07 | UE supporting E-UTRA TDD and UTRA FDD | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.3.3 | E-UTRAN FDD - UTRA FDD CPICH RSCP absolute accuracy for 5MHz bandwidth | Rel-9 | C52 | UE supporting E-UTRA FDD and E-UTRA bands within band group FDD_Nand UTRA FDD | | | |
| 9.4.1 | E-UTRAN FDD - UTRA FDD CPICH Ec/No absolute accuracy | Rel-9 | C04 | UE supporting E-UTRA FDD and UTRA FDD | | | 2Rx, 4Rx |
| 9.4.2 | E-UTRAN TDD - UTRA FDD CPICH Ec/No absolute accuracy | Rel-9 | C07 | UE supporting E-UTRA TDD and UTRA FDD | | | 2Rx, 4Rx |
| 9.4.3 | E-UTRAN FDD - UTRA FDD CPICH Ec/No absolute accuracy for 5MHz bandwidth | Rel-9 | C52 | UE supporting E-UTRA FDD and E-UTRA bands within band group FDD_N and UTRA FDD | | | |
| 9.5.1 | E-UTRAN FDD - UTRA TDD PCCPCH RSCP absolute accuracy | Rel-9 | C65 | UE supporting E-UTRA FDD and UTRA TDD and Feature Group Indicators 39 | | | 2Rx, 4Rx |
| | | Rel-9 | C105 | UE supporting E-UTRA FDD and UTRA TDD and Feature Group Indicators 22 and not supporting UTRA FDD | | | 2Rx, 4Rx |
| 9.5.2 | E-UTRAN TDD - UTRA TDD PCCPCH RSCP absolute accuracy | Rel-9 | C66 | UE supporting E-UTRA TDD and UTRA TDD and Feature Group Indicators 39 | | | 2Rx, 4Rx |
| | | Rel-9 | C106 | UE supporting E-UTRA TDD and UTRA TDD and Feature Group Indicators 22 and not supporting UTRA FDD | | | 2Rx, 4Rx |
| 9.6.1 | GSM RSSI accuracy for E-UTRAN FDD | Rel-9 | C08g | UE supporting E-UTRA FDD and GSM and Feature Group Indicator 16 and 23 | | | 2Rx, 4Rx |
| 9.6.2 | GSM RSSI accuracy for E-UTRAN TDD | Rel-9 | C09h | UE supporting E-UTRA TDD and GSM and Feature Group Indicator 16 and 23 | | | 2Rx, 4Rx |
| 9.9.1.1 | FDD Intra Frequency Serving Cell Absolute RSRP Accuracy | Rel-10 and Rel-11 only | C01f | UE supporting E-UTRA FDD and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.9.1.1_1 | FDD Intra Frequency Serving Cell Absolute RSRP Accuracy (Rel-12 and forward) | Rel-12 | C01f | UE supporting E-UTRA FDD and Feature Group Indicator 16 | | | 2Rx, 4Rx |

| Clause | Title | Release | Applicability | | Additional Information | | |
|--------|-------|---------|---------------|---|------------------------|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 9.9.1.2 | FDD Intra Frequency Serving Cell Absolute RSRQ Accuracy | Rel-10 | C01f | UE supporting E-UTRA FDD and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.9.2.1 | TDD Intra Frequency Serving Cell Absolute RSRP Accuracy | Rel-10 and Rel-11 only | C02f | UE supporting E-UTRA TDD and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.9.2.1_1 | TDD Intra Frequency Serving Cell Absolute RSRP Accuracy (Rel-12 and forward) | Rel-12 | C02f | UE supporting E-UTRA TDD and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.9.2.2 | TDD Intra Frequency Serving Cell Absolute RSRQ Accuracy | Rel-10 | C02f | UE supporting E-UTRA TDD and Feature Group Indicator 16 | | | 2Rx, 4Rx |
| 9.11.1 | FS3 average RSSI accuracy case (PCell using FDD) | Rel-13 | C157 | UE supporting E-UTRA FDD and Downlink LAA with FDD as Pcell and RSSI measurement | | | 2Rx, 4Rx |
| 9.11.2 | FS3 average RSSI accuracy case (PCell using TDD) | Rel-13 | C158 | UE supporting E-UTRA TDD and Downlink LAA with TDD as Pcell and RSSI measurement | | | 2Rx, 4Rx |
| 9.12.1 | FS3 channel occupancy test (PCell using FDD) | Rel-13 | C157 | UE supporting E-UTRA FDD and Downlink LAA with FDD as Pcell and channel occupancy measurement | | | 2Rx, 4Rx |
| 9.12.2 | FS3 channel occupancy test (PCell using TDD) | Rel-13 | C158 | UE supporting E-UTRA TDD and Downlink LAA with TDD as Pcell and channel occupancy measurement | | | 2Rx, 4Rx |
| **V2V Communications** | | | | | | | |
| 11.1 | V2V UE Transmission Timing Accuracy Test | Rel-14 | C203 | UE supporting V2X Sidelink communication | | | |
| 11.2 | Interruptions due to V2V sidelink communication | Rel-14 | C204 | UE supporting V2X Sidelink communication | | | |
| **V2X Communications** | | | | | | | |
| 12.1.1 | V2X UE Transmission Timing Accuracy Test for eNB as Timing Reference | Rel-14 | C204 | UE supporting E-UTRA and V2X Sidelink communication | | | |
| 12.1.2 | V2X UE Transmission Timing Accuracy Test for SyncRef UE as Timing Reference | Rel-14 | C216 | UE supporting V2X Sidelink communication and SLSS transmission and reception | | | |

| Clause | Title | Release | Applicability | | Additional Information | | |
|---|---|---|---|---|---|---|---|
| | | | Condition | Comments | Number of TC Executions | Release on other RAT | Branch |
| 12.4 | Congestion Control Measurement Test for V2X UE | Rel-14 | C217 | UE supporting V2X Sidelink communication and congestion control | | | |

**Table 4.2-1a: Applicability of RRM conformance test cases Conditions**

| | |
|---|---|
| C01 | IF (NOT(A.4.3-4a/1 OR A.4.3-4a/1a OR A.4.3-4aa/1)) AND A.4.1-1/1 THEN R ELSE N/A |
| C01a | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.4-1a/13 AND A.4.4-1a/25) THEN R ELSE N/A |
| C01ah | IF A.4.1-1/1 AND A.4.4-1a/13 AND A.4.4-1a/25 AND A.4.3-4a/1a) THEN R ELSE N/A |
| C01b | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.4-1a/25) THEN R ELSE N/A |
| C01c | IF (A.4.1-1/1 AND A.4.4-1a/5) THEN R ELSE N/A |
| C01ch | IF (A.4.1-1/1 AND A.4.5-1/19 AND A.4.4-1a/5) THEN R ELSE N/A |
| C01d | IF (A.4.1-1/1 AND A.4.4-1a/5 AND A.4.4-1a/13 AND A.4.4-1a/25) THEN R ELSE N/A |
| C01dh | IF (A.4.1-1/1 AND A.4.4-1a/5 AND A.4.4-1a/13 AND A.4.4-1a/25 AND A.4.3-4a/1a) THEN R ELSE N/A |
| C01e | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.4-1a/5 AND A.4.4-1a/25) THEN R ELSE N/A |
| C01eh | IF (A.4.1-1/1 AND A.4.5-1/19 AND A.4.4-1a/5 AND A.4.4-1a/25) THEN R ELSE N/A |
| C01f | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.4-1a/16) THEN R ELSE N/A |
| C01g | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.4-1a/16 AND A.4.4-1a/25) THEN R ELSE N/A |
| C01h | IF (A.4.1-1/1 AND A.4.4-1a/16 AND A.4.4-1a/25 AND A.4.5-1/7) THEN R ELSE N/A |
| C01i | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND NOT(A.4.5-1/40)) THEN R ELSE N/A |
| C01j | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.4-1a/5 AND NOT( A.4.5-1/40)) THEN R ELSE N/A |
| C01k | IF (A.4.1-1/1 AND A.4.4-1a/16 AND A.4.3-4a/1a) THEN R ELSE N/A |
| C01m | IF A.4.3-4a/1a AND A.4.1-1/1 THEN R ELSE N/A |
| C01n | IF A.4.3-4a/1a AND (A.4.1-1/1 AND A.4.4-1a/25) THEN R ELSE N/A |
| C01l | IF (A.4.1-1/1 AND A.4.4-1a/16 AND A.4.4-1a/25 AND A.4.3-4a/1a) THEN R ELSE N/A |
| | |
| | |
| C01o | IF (NOT(A.4.3-4a/1 OR A.4.3-4a/1a)) AND (A.4.5-1/71 AND A.4.1-1/2 AND A.4.4-1a/25 AND A.4.5-2aa/1) THEN R ELSE N/A |
| C01p | IF (NOT(A.4.3-4a/1 OR A.4.3-4a/1a)) AND (A.4.5-1/71 AND A.4.1-1/1 AND A.4.4-1a/25 AND A.4.5-2aa/1) THEN R ELSE N/A |
| C01q | IF (NOT(A.4.3-4a/1 OR A.4.3-4a/1a)) AND (A.4.5-1/71 AND A.4.1-1/1 AND A.4.4-1a/5 AND A.4.4-1a/25 AND A.4.5-2aa/1) THEN R ELSE N/A |
| C01r | IF (NOT(A.4.3-4a/1 OR A.4.3-4a/1a)) AND (A.4.5-1/71 AND A.4.1-1/2 AND A.4.4-1a/5 AND A.4.4-1a/25 AND A.4.5-2aa/1) THEN R ELSE N/A |
| C01s | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND A.4.1-1/1 AND A.4.5-1/71 THEN R ELSE N/A |
| C01t | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND A.4.1-1/2 AND A.4.5-1/71 THEN R ELSE N/A |
| C02 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND A.4.1-1/2 THEN R ELSE N/A |
| C02a | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.4-1b/13 AND A.4.4-1b/25 AND NOT(A.4.5-1/41)) THEN R ELSE N/A |
| C02ah | IF (A.4.1-1/2 AND A.4.4-1b/13 AND A.4.4-1b/25 AND A.4.3-4a/1a) THEN R ELSE N/A |
| C02b | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.4-1b/25) THEN R ELSE N/A |
| C02c | IF (A.4.1-1/2 AND A.4.4-1b/5) THEN R ELSE N/A |
| C02ch | IF (A.4.1-1/2 AND A.4.5-1/19 AND A.4.4-1b/5) THEN R ELSE N/A |
| C02d | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.4-1b/5 AND A.4.4-1b/13 AND A.4.4-1b/25) THEN R ELSE N/A |
| C02dh | IF (A.4.1-1/2 AND A.4.4-1b/5 AND A.4.4-1b/13 AND A.4.4-1b/25 AND A.4.3-4a/1a) THEN R ELSE N/A |
| C02e | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.4-1b/5 AND A.4.4-1b/25) THEN R ELSE N/A |
| C02eh | IF (A.4.1-1/2 AND A.4.5-1/19 AND A.4.4-1b/5 AND A.4.4-1b/25) THEN R ELSE N/A |
| C02f | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.4-1b/16) THEN R ELSE N/A |
| C02g | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.4-1b/16 AND A.4.4-1b/25) THEN R ELSE N/A |
| C02h | IF (A.4.1-1/2 AND A.4.4-1b/16 AND A.4.4-1b/25 AND A.4.5-1/7) THEN R ELSE N/A |
| C02i | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (NOT(A.4.1-1/2 AND A.4.5-1/41)) THEN R ELSE N/A |
| C02j | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.4-1a/5 AND NOT(A.4.5-1/41)) THEN R ELSE N/A |
| C02k | IF (A.4.1-1/2 AND A.4.4-1b/16 AND A.4.3-4a/1a) THEN R ELSE N/A |
| C02l | IF (A.4.1-1/2 AND A.4.4-1b/16 AND A.4.4-1b/25 AND A.4.3-4a/1a) THEN R ELSE N/A |
| C02m | IF A.4.3-4a/1a AND A.4.1-1/2 THEN R ELSE N/A |
| C02n | IF A.4.3-4a/1a AND (A.4.1-1/2 AND A.4.4-1b/25) THEN R ELSE N/A |
| C03 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/2) THEN R ELSE N/A |
| C03a | IF (A.4.1-1/1 AND A.4.1-1/2 AND A.4.3-4a/1a) THEN R ELSE N/A |
| C04 | IF (NOT(A.4.3-4a/1 OR A.4.3-4a/1a OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/3) THEN R ELSE N/A |
| C04a | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/3 AND A.4.4-1a/8 AND A.4.4-1a/22) THEN R ELSE N/A |
| C04b | Void |
| C04c | Void |
| C04d | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/3 AND A.4.4-1a/5 AND A.4.4-1a/15 AND A.4.4-1a/22) THEN R ELSE N/A |

| C04e | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/3 AND A.4.4-1a/22 AND A.4.4-1a/25) THEN R ELSE N/A |
|---|---|
| C04f | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/3 AND A.4.4-1a/5 AND A.4.4-1a/19 AND A.4.4-1a/22) THEN R ELSE N/A |
| C04g | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/3 AND A.4.4-1a/15 AND A.4.4-1a/22) THEN R ELSE N/A |
| C04h | IF (A.4.3-4a/1a AND A.4.1-1/1 AND A.4.1-1/3) THEN R ELSE N/A |
| C04i | IF (A.4.5-1/76 AND A.4.1-1/1 AND A.4.1-1/4 AND THEN R ELSE N/A |
| C04j | IF (A.4.5-1/76 AND A.4.1-1/2 AND A.4.1-1/3 AND THEN R ELSE N/A |
| C04k | IF (A.4.5-1/76 AND A.4.1-1/2 AND A.4.1-1/4 AND THEN R ELSE N/A |
| C04l | IF (A.4.5-1/76 AND A.4.1-1/1 AND A.4.1-1/3 AND THEN R ELSE N/A |
| C05 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/4) THEN R ELSE N/A |
| C05a | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/4 AND A.4.4-1b/8 AND A.4.4-1b/22) THEN R ELSE N/A |
| C05b | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/4 AND A.4.4-1b/15 AND A.4.4-1b/25) THEN R ELSE N/A |
| C05c | Void |
| C05d | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/4 AND A.4.4-1b/5 AND A.4.4-1b/15 AND A.4.4-1b/25) THEN R ELSE N/A |
| C05e | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/4 AND A.4.4-1b/22 AND A.4.4-1b/25) THEN R ELSE N/A |
| C06 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/4) THEN R ELSE N/A |
| C06a | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/4 AND A.4.4-1a/8 AND A.4.4-1a/22) THEN R ELSE N/A |
| C06b | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/4 AND A.4.4-1a/15 AND A.4.4-1a/22) THEN R ELSE N/A |
| C07 | IF (NOT(A.4.3-4a/1 OR A.4.3-4a/1a OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/3) THEN R ELSE N/A |
| C07a | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/3 AND A.4.4-1b/8 AND A.4.4-1b/22) THEN R ELSE N/A |
| C07b | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/3 AND A.4.4-1b/15 AND A.4.4-1b/22) THEN R ELSE N/A |
| C07c | Void |
| C07d | IF (A.4.3-4a/1a AND A.4.1-1/2 AND A.4.1-1/3) THEN R ELSE N/A |
| C07e | IF (A.4.5-1/76 AND A.4.1-1/2 AND A.4.1-1/4 AND A.4.4-1b/15 AND A.4.4-1b/22) THEN R ELSE N/A |
| C07f | IF (A.4.5-1/76 AND A.4.1-1/1 AND A.4.1-1/4 AND A.4.4-1b/15 AND A.4.4-1b/22) THEN R ELSE N/A |
| C07h | IF (A.4.5-1/76 AND A.4.1-1/1 AND A.4.1-1/3 AND A.4.4-1b/15 AND A.4.4-1b/22) THEN R ELSE N/A |
| C07i | IF (A.4.5-1/76 AND A.4.1-1/2 AND A.4.1-1/3 AND A.4.4-1b/15 AND A.4.4-1b/22) THEN R ELSE N/A |
| C08 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/5) THEN R ELSE N/A |
| C08a | IF (A.4.1-1/1 AND A.4.1-1/5 AND A.4.5-1/16 AND A.4.4-1a/9 AND A.4.4-1a/23) THEN R ELSE N/A |
| C08b | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/5 AND A.4.4-1a/23 AND A.4.4-1a/25) THEN R ELSE N/A |
| C08c | Void |
| C08d | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/5 AND A.4.4-1a/5 AND A.4.4-1a/15 AND A.4.4-1a/23) THEN R ELSE N/A |
| C08e | IF (A.4.1-1/1 AND A.4.1-1/5 AND A.4.5-1/16 AND A.4.4-1a/9 AND A.4.4-1a/15 AND A.4.4-1a/23) THEN R ELSE N/A |
| C08f | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/5 AND A.4.4-1a/15 AND A.4.4-1a/23) THEN R ELSE N/A |
| C08g | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/5 AND A.4.4-1a/16 AND A.4.4-1a/23) THEN R ELSE N/A |
| C09 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/5) THEN R ELSE N/A |
| C09a | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/5 AND A.4.4-1b/23 AND A.4.4-1b/25) THEN R ELSE N/A |
| C09b | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/5 AND A.4.5-1/16 AND A.4.4-1b/9 AND A.4.4-1b/23) THEN R ELSE N/A |
| C09c | Void |
| C09d | Void |
| C09e | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/5 AND A.4.4-1b/5 AND A.4.4-1b/15 AND A.4.4-1b/23) THEN R ELSE N/A |
| C09f | IF (A.4.1-1/2 AND A.4.1-1/5 AND A.4.5-1/16 AND A.4.4-1b/9 AND A.4.4-1b/15 AND A.4.4-1b/23) THEN R ELSE N/A |
| C09g | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/5 AND A.4.4-1b/15 AND A.4.4-1b/23) THEN R ELSE N/A |
| C09h | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/5 AND A.4.4-1b/16 AND A.4.4-1b/23) THEN R ELSE N/A |
| C10 | IF (A.4.1-1/1 AND A.4.1-1/6) THEN R ELSE N/A |

| C10a | IF (A.4.1-1/1 AND A.4.1-1/6 AND A.4.4-1a/12 AND A.4.4-1a/26) THEN R ELSE N/A |
|---|---|
| C11 | IF (A.4.1-1/1 AND A.4.1-1/7) THEN R ELSE N/A |
| C11a | IF (A.4.1-1/1 AND A.4.1-1/7 AND A.4.4-1a/11 AND A.4.4-1a/24) THEN R ELSE N/A |
| C12 | Void |
| C13 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.5-1/2) THEN R ELSE N/A |
| C14 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.5-1/3) THEN R ELSE N/A |
| C15 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.5-1/44) THEN R ELSE N/A |
| C16 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.5-1/45) THEN R ELSE N/A |
| C17 | Void |
| C18 | IF (A.4.1-1/1 AND A.4.2-1/2) THEN R ELSE N/A |
| C18a | IF (A.4.1-1/1 AND A.4.2-1/2) AND A.4.3-3a/7 THEN R ELSE N/A |
| C18b | Void |
| C19 | IF (A.4.1-1/2 AND A.4.2-1/2) THEN R ELSE N/A |
| C19a | IF (A.4.1-1/2 AND A.4.2-1/2) AND A.4.3-3a/7 THEN R ELSE N/A |
| C19b | IF (A.4.1-1/2 AND A.4.2-1/2) AND A.4.3-3a/8 THEN R ELSE N/A |
| C20 | Void |
| C21 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND A.4.1-1/1 AND A.4.1-1/2 AND (A.4.4-1a/5 AND A.4.4-1b/5) AND (A.4.4-1a/25 AND A.4.4-1b/25) AND (A.4.4-1a/30 AND A.4.4-1b/30) THEN R ELSE N/A |
| C22 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/2 AND (A.4.4-1a/25 AND A.4.4-1b/25)) THEN R ELSE N/A |
| C21a | IF (A.4.1-1/1 AND A.4.1-1/2) AND (A.4.4-1a/5 AND A.4.4-1b/5) AND (A.4.4-1a/25 AND A.4.4-1b/25) AND (A.4.4-1a/30 AND A.4.4-1b/30) AND A.4.3-4a/1a THEN R ELSE N/A |
| C23 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND NOT A.4.4-1a/5) THEN R ELSE N/A |
| C24 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND NOT A.4.4-1b/5) THEN R ELSE N/A |
| C25 | IF (NOT(A.4.3-4a/1 OR A.4.3-4a/1a OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/4) THEN R ELSE N/A |
| C25a | IF (A.4.3-4a/1a AND A.4.1-1/1 AND A.4.1-1/4) THEN R ELSE N/A |
| C26 | IF (NOT(A.4.3-4a/1 OR A.4.3-4a/1a OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/4) THEN R ELSE N/A |
| C26a | IF (A.4.3-4a/1a AND A.4.1-1/2 AND A.4.1-1/4) THEN R ELSE N/A |
| C27 | IF (NOT(A.4.3-4a/1 OR A.4.3-4a/1a OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/5) THEN R ELSE N/A |
| C27a | IF (A.4.3-4a/1a AND A.4.1-1/1 AND A.4.1-1/5) THEN R ELSE N/A |
| C28 | IF (NOT(A.4.3-4a/1 OR A.4.3-4a/1a OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/5) THEN R ELSE N/A |
| C28a | IF (A.4.3-4a/1a AND A.4.1-1/2 AND A.4.1-1/5) THEN R ELSE N/A |
| C29 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/3 AND A.4.4-1a/15) THEN R ELSE N/A |
| C30 | Void |
| C31 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND (A.4.1-1/4 AND NOT A.4.1-1/3) AND A.4.4-1b/15 AND A.4.4-1b/22) THEN R ELSE N/A |
| C32 | IF (A.4.1-1/1 AND A.4.2-1/2 AND A.4.4-3a/111) THEN R ELSE N/A |
| C32a | IF (A.4.1-1/1 AND A.4.2-1/2 AND A.4.4-1a/25) AND A.4.3-3a/7 THEN R ELSE N/A |
| C32b | IF (A.4.1-1/1 AND A.4.2-1/2 AND A.4.4-1a/25) THEN R ELSE N/A |
| C32c | IF (A.4.1-1/1 AND A.4.2-1/2 AND A.4.4-3a/111) AND A.4.3-3a/7 THEN R ELSE N/A |
| C33 | IF (A.4.1-1/2 AND A.4.2-1/2 AND A.4.4-3b/111) THEN R ELSE N/A |
| C33a | IF (A.4.1-1/2 AND A.4.2-1/2 AND A.4.4-1b/25) AND A.4.3-3a/7 THEN R ELSE N/A |
| C33b | IF (A.4.1-1/2 AND A.4.2-1/2 AND A.4.4-1b/25) THEN R ELSE N/A |
| C33c | IF (A.4.1-1/2 AND A.4.2-1/2 AND A.4.4-3b/111 ) AND A.4.3-3a/7 THEN R ELSE N/A |
| C33d | IF (A.4.1-1/2 AND A.4.2-1/2 AND A.4.4-3b/111) AND A.4.3-3a/8 THEN R ELSE N/A |
| C34 | IF (A.4.1-1/2 AND A.4.1-1/6) THEN R ELSE N/A |
| C35 | IF (A.4.1-1/2 AND A.4.1-1/7) THEN R ELSE N/A |
| C36 | IF (A.4.1-1/2 AND A.4.1-1/6 AND A.4.4-1b/12 AND A.4.4-1b/26) THEN R ELSE N/A |
| C37 | IF (A.4.1-1/2 AND A.4.1-1/7 AND A.4.4-1b/11 AND A.4.4-1b/24) THEN R ELSE N/A |
| C38 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/2 AND (A.4.4-1a/4 AND A.4.4-1b/4) AND (A.4.4-1a/25 AND A.4.4-1b/25)) THEN R ELSE N/A |
| C39 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/2 AND A.4.5-1/ 3 AND (A.4.4-1a/25 AND A.4.4-1b/25)) THEN R ELSE N/A |
| C39a | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/2 AND A.4.5-1/45 AND (A.4.4-1a/25 AND A.4.4-1b/25)) THEN R ELSE N/A |
| C40 | IF (A.4.1-1/2 AND A.4.1-1/6 AND A.4.4-1b/15) THEN R ELSE N/A |
| C41 | IF (A.4.1-1/2 AND A.4.1-1/7 AND A.4.4-1b/15) THEN R ELSE N/A |
| C42 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/2 AND (A.4.4-1a/16 AND A.4.4-1b/16) AND (A.4.4-1a/25 AND A.4.4-1b/25)) THEN R ELSE N/A |
| C42a | IF (A.4.1-1/1 AND A.4.1-1/2 AND (A.4.4-1a/16 AND A.4.4-1b/16) AND (A.4.4-1a/25 AND A.4.4-1b/25) AND A.4.3-4a/1a) THEN R ELSE N/A |
| C43 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/3 AND A.4.2-1/2 AND A.4.4-1a/15) THEN R ELSE N/A |
| C44 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/4 AND A.4.2-1/2 AND A.4.4-1b/15) THEN R ELSE N/A |

| C44a | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/4 AND A.4.2-1/2 AND A.4.4-1b/15) AND A.4.3-3a/7 THEN R ELSE N/A |
|------|------|
| C44b | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/4 AND A.4.2-1/2 AND A.4.4-1b/15) AND A.4.3-3a/8 THEN R ELSE N/A |
| C45 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.4-3a/115) THEN R ELSE N/A |
| C46 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.4-3b/115) THEN R ELSE N/A |
| C47 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.4-1a/25 AND NOT A.4.5-1/4) THEN R ELSE N/A |
| C48 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/3 AND A.4.4-1a/15 AND A.4.4-1a/22 AND NOT A.4.5-1/5) THEN R ELSE N/A |
| C49 | IF (A.4.1-1/1 AND A.4.5-1/6) THEN R ELSE N/A |
| C50 | IF (A.4.1-1/1 AND A.4.3-3/31 AND A.4.4-1a/16) THEN R ELSE N/A |
| C51 | IF (A.4.1-1/1 AND A.4.3-3/31 AND A.4.4-1a/16 AND A.4.4-1a/25) THEN R ELSE N/A |
| C52 | IF (A.4.1-1/1 AND A.4.3-3/31 AND A.4.1-1/3) THEN R ELSE N/A |
| C53 | IF (A.4.1-1/1 AND A.4.5-1/6 AND A.4.1-1/3) THEN R ELSE N/A |
| C54 | IF (A.4.1-1/1 AND A.4.5-1/6 AND A.4.1-1/3 AND A.4.4-1a/8 AND A.4.4-1a/22) THEN R ELSE N/A |
| C55 | IF (A.4.1-1/1 AND A.4.5-1/6 AND A.4.1-1/3 AND A.4.4-1a/15 AND A.4.4-1a/22) THEN R ELSE N/A |
| C56 | IF (A.4.1-1/1 AND A.4.5-1/6 AND A.4.4-1a/5) THEN R ELSE N/A |
| C57 | IF (A.4.1-1/1 AND ((A.4.6.1-1/1 OR A.4.6.1-1/2) AND (A.4.6.1-2/1 OR A.4.6.1-2/2)) AND A.4.4-1a/5) THEN R ELSE N/A |
| C58 | IF (A.4.1-1/2 AND ((A.4.6.1-1/1 OR A.4.6.1-1/2) AND (A.4.6.1-2/1 OR A.4.6.1-2/2)) AND A.4.4-1b/5) THEN R ELSE N/A |
| C58a | IF (A.4.1-1/2 AND ((A.4.6.1-1/1 OR A.4.6.1-1/2) AND (A.4.6.1-2/1 OR A.4.6.1-2/2)) AND A.4.4-1b/5) AND A.4.3-3a/8 THEN R ELSE N/A |
| C59 | IF (A.4.1-1/1 AND A.4.5-2/1 AND A.4.4-3a/115) THEN R ELSE N/A |
| C60 | IF (A.4.1-1/2 AND A.4.5-2/1 AND A.4.5-2/2 AND A.4.4-3b/115) THEN R ELSE N/A |
| C61 | IF (A.4.1-1/1 AND (((A.4.6.1-1/1 AND A.4.6.1-2/1) OR (A.4.6.1-1/2 AND A.4.6.1-2/2)) OR (A.4.6.2-1/1 AND A.4.6.2-2/1) OR (A.4.6.3-1/1 AND A.4.6.3-2/1)) AND A.4.5-2/3) THEN R ELSE N/A |
| C62 | IF (A.4.1-1/2 AND (((A.4.6.1-1/1 AND A.4.6.1-2/1) OR (A.4.6.1-1/2 AND A.4.6.1-2/2)) OR (A.4.6.2-1/1 AND A.4.6.2-2/1) OR (A.4.6.3-1/1 AND A.4.6.3-2/1)) AND A.4.5-2/3) THEN R ELSE N/A |
| C62a | IF (A.4.1-1/2 AND (((A.4.6.1-1/1 AND A.4.6.1-2/1) OR (A.4.6.1-1/2 AND A.4.6.1-2/2)) OR (A.4.6.2-1/1 AND A.4.6.2-2/1) OR (A.4.6.3-1/1 AND A.4.6.3-2/1)) AND A.4.5-2/3 AND A.4.3-3a/7 ) THEN R ELSE N/A |
| C62b | IF (A.4.1-1/2 AND (((A.4.6.1-1/1 AND A.4.6.1-2/1) OR (A.4.6.1-1/2 AND A.4.6.1-2/2)) OR (A.4.6.2-1/1 AND A.4.6.2-2/1) OR (A.4.6.3-1/1 AND A.4.6.3-2/1)) AND A.4.5-2/3 AND A.4.3-3a/8) THEN R ELSE N/A |
| C63 | IF (A.4.1-1/1 AND (((A.4.6.1-1/1 AND A.4.6.1-2/1) OR (A.4.6.1-1/2 AND A.4.6.1-2/2)) OR (A.4.6.2-1/1 AND A.4.6.2-2/1) OR (A.4.6.3-1/1 AND A.4.6.3-2/1)) AND A.4.5-2/3 AND A.4.4-1a/5) THEN R ELSE N/A |
| C64 | IF (A.4.1-1/2 AND (((A.4.6.1-1/1 AND A.4.6.1-2/1) OR (A.4.6.1-1/2 AND A.4.6.1-2/2)) OR (A.4.6.2-1/1 AND A.4.6.2-2/1) OR (A.4.6.3-1/1 AND A.4.6.3-2/1)) AND A.4.5-2/3 AND A.4.4-1b/5) THEN R ELSE N/A |
| C64a | IF (A.4.1-1/2 AND (((A.4.6.1-1/1 AND A.4.6.1-2/1) OR (A.4.6.1-1/2 AND A.4.6.1-2/2)) OR (A.4.6.2-1/1 AND A.4.6.2-2/1) OR (A.4.6.3-1/1 AND A.4.6.3-2/1)) AND A.4.5-2/3 AND A.4.4-1b/5 AND A.4.3-3a/7) THEN R ELSE N/A |
| C64b | IF (A.4.1-1/2 AND (((A.4.6.1-1/1 AND A.4.6.1-2/1) OR (A.4.6.1-1/2 AND A.4.6.1-2/2)) OR (A.4.6.2-1/1 AND A.4.6.2-2/1) OR (A.4.6.3-1/1 AND A.4.6.3-2/1)) AND A.4.5-2/3 AND A.4.4-1b/5 AND A.4.3-3a/8) THEN R ELSE N/A |
| C65 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/4 AND A.4.4-2a/39) THEN R ELSE N/A |
| C66 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/4 AND A.4.4-2b/39) THEN R ELSE N/A |
| C67 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/15 AND (A.4.4-3a/111 AND A.4.4-3b/111)) THEN R ELSE N/A |
| C68 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/14 AND (A.4.4-3a/111 AND A.4.4-3b/111)) THEN R ELSE N/A |
| C69 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/2 AND A.4.5-1/15) THEN R ELSE N/A |
| C69a | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/3 AND A.4.5-1/15) THEN R ELSE N/A |
| C69b | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/4 AND A.4.5-1/15) THEN R ELSE N/A |
| C70 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/2 AND A.4.5-1/14) THEN R ELSE N/A |
| C70a | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/3 AND A.4.5-1/14) THEN R ELSE N/A |
| C70b | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/4 AND A.4.5-1/14) THEN R ELSE N/A |
| C71 | IF (A.4.1-1/1 AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4)) THEN R ELSE N/A |
| C72 | IF (A.4.1-1/1 AND (A.4.6.3-1/2 OR A.4.6.2-1/2)) THEN R ELSE N/A |
| C73 | IF (A.4.1-1/2 AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4)) THEN R ELSE N/A |
| C74 | IF (A.4.1-1/2 AND (A.4.6.3-1/2 OR A.4.6.2-1/2)) THEN R ELSE N/A |
| C75 | IF (A.4.1-1/1 AND A.4.6-1/2) THEN R ELSE N/A |
| C75a | IF (A.4.1-1/1 AND A.4.6-1/3) THEN R ELSE N/A |
| C75b | IF (A.4.1-1/1 AND A.4.6-1/4) THEN R ELSE N/A |
| C75c | IF (A.4.1-1/1 AND A.4.6-1/4 AND A.4.4-1a/25) THEN R ELSE N/A |
| C75d | IF (A.4.1-1/1 AND A.4.6-1/4 AND A.4.4-1a/111) THEN R ELSE N/A |
| C76 | IF (A.4.1-1/2 AND A.4.6-1/2) THEN R ELSE N/A |

| C76a | IF (A.4.1-1/2 AND A.4.6-1/3) THEN R ELSE N/A |
|---|---|
| C76b | IF (A.4.1-1/2 AND A.4.6-1/4) THEN R ELSE N/A |
| C76c | IF (A.4.1-1/2 AND A.4.6-1/4 AND A.4.4-1b/25) THEN R ELSE N/A |
| C76d | IF (A.4.1-1/2 AND A.4.6-1/4 AND A.4.4-1b/111) THEN R ELSE N/A |
| C77 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/4 AND A.4.4-1a/15 AND A.4.4-2a/39) THEN R ELSE N/A |
| C78 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/4 AND A.4.4-1a/15 AND A.4.4-1a/22) THEN R ELSE N/A |
| C79 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/4 AND A.4.4-1b/15 AND A.4.4-2b/39) THEN R ELSE N/A |
| C80 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/4 AND A.4.4-1b/5 AND A.4.4-1b/15 AND A.4.4-2b/39) THEN R ELSE N/A |
| C81 | Void |
| C82 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/4 AND A.4.4-1b/25 AND A.4.4-2b/39) THEN R ELSE N/A |
| C83 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND (A.4.1-1/4 AND NOT A.4.1-1/3) AND A.4.4-1b/15 AND A.4.4-1b/25) THEN R ELSE N/A |
| C84 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND (A.4.1-1/4 AND NOT A.4.1-1/3) AND A.4.4-1b/5 AND A.4.4-1b/15 AND A.4.4-1b/25) THEN R ELSE N/A |
| C85 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND (A.4.1-1/4 AND NOT A.4.1-1/3) AND A.4.4-1a/15 AND A.4.4-1a/22) THEN R ELSE N/A |
| C86 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND (A.4.1-1/4 AND NOT A.4.1-1/3) AND A.4.4-1b/22 AND A.4.4-1b/25) THEN R ELSE N/A |
| C87 | Void |
| C88 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND NOT A.4.3-7/2 AND A.4.3-4a/1 AND A.4.4-1a/16) THEN R ELSE N/A |
| C89 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.3-4a/1 AND A.4.3-7/2 AND A.4.4-1a/16) THEN R ELSE N/A |
| C90 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.3-4a/1 AND A.4.4-1b/16) THEN R ELSE N/A |
| C91 | IF (A.4.1-1/1 AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND A.4.4-1a/25) THEN R ELSE N/A |
| C92 | IF (A.4.1-1/1 AND (A.4.6.3-1/2 OR A.4.6.2-1/2) AND A.4.4-1a/25) THEN R ELSE N/A |
| C93 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND A.4.1-1/2 AND A.4.3-4a/1 THEN R ELSE N/A |
| C93a | IF A.4.1-1/2 AND A.4.3-4aa/1 THEN R ELSE N/A |
| C93b | IF A.4.1-1/2 AND A.4.3-4aa/1 AND A.4.4-1a/16 THEN R ELSE N/A |
| C93c | IF A.4.1-1/2 AND A.4.3-4aa/1 AND A.4.4-1a/5 THEN R ELSE N/A |
| C93d | IF A.4.1-1/2 AND A.4.3-4aa/1 AND A.4.5-1/26 AND A.4.4-1a/16 THEN R ELSE N/A |
| C93e | IF A.4.1-1/2 AND (A.4.3-4aa/1 AND A.4.5-1/26) THEN R ELSE N/A |
| C93f | IF A.4.1-1/2 AND (A.4.3-4aa/1 AND A.4.5-1/26) AND A.4.5-1/2 THEN R ELSE N/A |
| C94 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND A.4.1-1/1 AND NOT A.4.3-7/2 AND A.4.3-4a/1 THEN R ELSE N/A |
| C94a | IF A.4.1-1/1 AND NOT A.4.3-7/2AND A.4.3-4aa/1 THEN R ELSE N/A |
| C94b | IF A.4.1-1/1 AND NOT A.4.3-7/2 AND A.4.3-4aa/1 AND A.4.4-1a/5 THEN R ELSE N/A |
| C94c | IF A.4.1-1/1 AND NOT A.4.3-7/2 AND A.4.3-4aa/1 AND A.4.4-1a/16 THEN R ELSE N/A |
| C94d | Void |
| C94e | IF A.4.1-1/1 AND NOT A.4.3-7/2 AND (A.4.3-4aa/1 AND A.4.5-1/26) THEN R ELSE N/A |
| C94f | IF A.4.1-1/1 AND A.4.3-7/2 AND (A.4.3-4aa/1 AND A.4.5-1/26) THEN R ELSE N/A |
| C94g | IF A.4.1-1/1 AND NOT A.4.3-7/2 AND (A.4.3-4aa/1 AND A.4.5-1/26) AND A.4.5-1/2 THEN R ELSE N/A |
| C94h | IF A.4.1-1/1 AND NOT A.4.3-7/2 AND (A.4.3-4aa/1 AND A.4.5-1/26) AND A.4.4-1a/5 THEN R ELSE N/A |
| C94i | IF A.4.1-1/1 AND A.4.3-7/2 AND (A.4.3-4aa/1 AND A.4.5-1/26) AND A.4.4-1a/5 THEN R ELSE N/A |
| C94k | Void |
| C94m | Void |
| C95 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND A.4.1-1/1 AND NOT A.4.3-7/2 AND A.4.4-1a/5 AND A.4.3-4a/1 THEN R ELSE N/A |
| C96 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND A.4.1-1/2 AND A.4.4-1b/5 AND A.4.3-4a/1 THEN R ELSE N/A |
| C97 | IF (A.4.1-1/1 AND A.4.5-1/20 AND A.4.4-1a/5) THEN R ELSE N/A |
| C98 | IF (A.4.1-1/2 AND A.4.5-1/20 AND A.4.4-1b/5) THEN R ELSE N/A |
| C99 | IF (A.4.1-1/1 AND A.4.5-1/20 AND A.4.4-1a/5 AND A.4.4-1a/25) THEN R ELSE N/A |
| C100 | IF (A.4.1-1/2 AND A.4.5-1/20 AND A.4.4-1b/5 AND A.4.4-1b/25) THEN R ELSE N/A |
| C101 | IF (A.4.1-1/1 AND A.4.5-1/19 AND A.4.4-1a/16) THEN R ELSE N/A |
| C102 | IF (A.4.1-1/2 AND A.4.5-1/19 AND A.4.4-1b/16) THEN R ELSE N/A |
| C103 | IF (A.4.1-1/1 AND A.4.5-1/19 AND A.4.4-1a/16 AND A.4.4-1a/25) THEN R ELSE N/A |
| C104 | IF (A.4.1-1/2 AND A.4.5-1/19 AND A.4.4-1b/16 AND A.4.4-1b/25) THEN R ELSE N/A |
| C105 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/1 AND A.4.1-1/4 AND (NOT A.4.1-1/3) AND A.4.4-1a/22) THEN R ELSE N/A |
| C106 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/4 AND (NOT A.4.1-1/3) AND A.4.4-1b/22) THEN R ELSE N/A |

| | |
|---|---|
| C107 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND A.4.1-1/1 AND A.4.3-4a/1 AND A.4.3-7/2 THEN R ELSE N/A |
| C107a | IF A.4.1-1/1 AND A.4.3-7/2 AND A.4.3-4aa/1 THEN R ELSE N/A |
| C107b | Void |
| C107c | IF A.4.1-1/1 AND A.4.3-7/2 AND A.4.3-4aa/1 AND A.4.4-1a/5 THEN R ELSE N/A |
| C107d | IF A.4.1-1/1 AND A.4.3-7/2 AND A.4.3-4aa/1 AND A.4.4-1a/16 THEN R ELSE N/A |
| C107e | IF A.4.1-1/1 AND A.4.3-7/2 AND A.4.3-4aa/1 AND A.4.5-1/26 AND A.4.4-1a/16 THEN R ELSE N/A |
| C107f | IF A.4.1-1/1 AND NOT A.4.3-7/2 AND A.4.3-4aa/1 AND A.4.5-1/26 AND A.4.4-1a/16 THEN R ELSE N/A |
| C108 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND A.4.1-1/2 AND NOT A.4.3-7/2 AND A.4.5-1/1 AND A.4.5-1/2 AND A.4.3-4a/1 THEN R ELSE N/A |
| C108a | IF (A.4.3-4a/1a AND A.4.1-1/1) AND A.4.5-1/1 AND A.4.5-1/2 AND THEN R ELSE N/A |
| C108b | IF (A.4.3-4a/1a AND A.4.1-1/1) AND A.4.5-1/1 AND A.4.5-1/2 AND A.4.4-1a/5 THEN R ELSE N/A |
| C109 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND A.4.1-1/2 AND A.4.5-1/1 AND A.4.5-1/2 AND A.4.3-4a/1 AND A.4.3-7/2 THEN R ELSE N/A |
| C110 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND A.4.1-1/1 AND A.4.3-7/2 AND A.4.3-4a/1 THEN R ELSE N/A |
| C111 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND A.4.1-1/1 AND A.4.3-7/2 AND A.4.4-1a/5 AND A.4.3-4a/1 THEN R ELSE N/A |
| C112 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND A.4.1-1/1 AND A.4.4-1a/5 AND A.4.3-4a/1 AND A.4.3-7/2 THEN R ELSE N/A |
| C113 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND A.4.1-1/2 AND A.4.5-1/1 AND A.4.5-1/44 AND A.4.4-1b/5 AND A.4.3-4a/1 THEN R ELSE N/A |
| C114 | IF (A.4.1-1/1 AND A.4.5-1/20 AND A.4.4-1a/16) THEN R ELSE N/A |
| C115 | IF (A.4.1-1/2 AND A.4.5-1/20 AND A.4.4-1b/16) THEN R ELSE N/A |
| C116 | IF (A.4.1-1/1 AND A.4.5-1/20 AND A.4.4-1a/16 AND A.4.4-1a/25) THEN R ELSE N/A |
| C117 | IF (A.4.1-1/2 AND A.4.5-1/20 AND A.4.4-1b/16 AND A.4.4-1b/25) THEN R ELSE N/A |
| C118 | IF (A.4.1-1/1 AND A.4.2-1/2 AND A.4.5-1/20) THEN R ELSE N/A |
| C119 | IF (A.4.1-1/2 AND A.4.2-1/2 AND A.4.5-1/20) THEN R ELSE N/A |
| C120 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/4 AND A.4.4-1b/19 AND A.4.4-1b/22) THEN R ELSE N/A |
| C121 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND (A.4.1-1/4 AND NOT A.4.1-1/3) AND A.4.4-1b/22 AND A.4.4-2b/37) THEN R ELSE N/A |
| C122 | IF (NOT(A.4.3-4a/1 OR A.4.3-4aa/1)) AND (A.4.1-1/2 AND A.4.1-1/4 AND A.4.4-2b/37 AND A.4.4-2b/39) THEN R ELSE N/A |
| C123 | IF A.4.1-1/1 AND A.4.2-1/8 THEN R ELSE N/A |
| C123a | IF A.4.1-1/1 AND A.4.1-1/2 AND A.4.2-1/8 THEN R ELSE N/A |
| C123b | IF A.4.1-1/1 AND A.4.2-1/8 AND A.4.5-1/40 THEN R ELSE N/A |
| C124 | IF A.4.1-1/2 AND A.4.2-1/8 THEN R ELSE N/A |
| C125 | IF A.4.1-1/1 AND A.4.5-1/27 THEN R ELSE N/A |
| C125a | IF A.4.1-1/1 AND A.4.5-1/27 AND A.4.5-1/40 THEN R ELSE N/A |
| C126 | IF (A.4.1-1/1 AND A.4.2-1/2 AND A.4.5-1/19 AND A.4.4-3a/111) THEN R ELSE N/A |
| C127 | Void |
| C128 | IF (A.4.1-1/1 AND A.4.2-1/2 AND A.4.5-1/19) THEN R ELSE N/A |
| C129 | IF (A.4.1-1/2 AND A.4.2-1/2 AND A.4.5-1/19) THEN R ELSE N/A |
| C130 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/2 AND A.4.5-1/15 AND A.4.4-1a/25) THEN R ELSE N/A |
| C131 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/2 AND A.4.5-1/14 AND A.4.4-1a/25) THEN R ELSE N/A |
| C132 | IF (A.4.1-1/2 AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND A.4.4-1b/25) THEN R ELSE N/A |
| C133 | IF (A.4.1-1/2 AND (A.4.6.3-1/2 OR A.4.6.2-1/2) AND A.4.4-1a/25) THEN R ELSE N/A |
| C134 | IF A.4.1-1/1 AND A.4.2-1/8 AND A.4.4-1a/5 THEN R ELSE N/A |
| C135 | IF A.4.1-1/1 AND (A.4.2-1/8 AND A.4.5-1/27) AND A.4.4-1a/5 THEN R ELSE N/A |
| C136 | IF A.4.1-1/2 AND A.4.2-1/8 AND A.4.4-1b/5 THEN R ELSE N/A |
| C137 | IF A.4.1-1/1 AND A.4.2-1/8 AND (A.4.4-1a/5 AND A.4.4-1a/25) THEN R ELSE N/A |
| C138 | IF A.4.1-1/1 AND (A.4.2-1/8 AND A.4.5-1/27) AND (A.4.4-1a/5 AND A.4.4-1a/25) THEN R ELSE N/A |
| C139 | IF A.4.1-1/2 AND A.4.2-1/8 AND (A.4.4-1b/5 AND A.4.4-1b/25) THEN R ELSE N/A |
| C140 | IF (A.4.1-1/1 AND A.4.5-1/40) THEN R ELSE N/A |
| C141 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/15) THEN R ELSE N/A |
| C142 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/1 AND A.4.5-1/14) THEN R ELSE N/A |
| C143 | IF (A.4.1-1/2 AND A.4.5-1/41) THEN R ELSE N/A |
| C144 | IF (A.4.1-1/1 AND A.4.5-1/32 AND A.4.4-1a/25) THEN R ELSE N/A |
| C145 | IF (A.4.1-1/1 AND A.4.5-1/32 AND A.4.4-3a/111 AND A.4.6-1/1) THEN R ELSE N/A |
| C145a | IF (A.4.1-1/1 AND A.4.5-1/15 AND A.4.5-1/32 AND A.4.4-1a/111 AND (NOT A.4.6.1-1/1)) THEN R ELSE N/A |
| C146 | IF (A.4.1-1/2 AND A.4.5-1/19 AND A.4.5-1/32 AND A.4.4-3a/111 AND A.4.6-1/1) THEN R ELSE N/A |
| C146a | IF (A.4.1-1/2 AND A.4.5-1/19 AND A.4.5-1/32 AND A.4.4-3a/111 AND (NOT A.4.6-1/1)) THEN R ELSE N/A |
| C147 | IF (A.4.1-1/1 AND A.4.5-1/19 AND A.4.5-1/32 AND A.4.4-3 a/111) THEN R ELSE N/A |
| C148 | IF (A.4.1-1/1 AND A.4.5-1/19 AND A.4.5-1/32 AND A.4.4-3 a/111) THEN R ELSE N/A |
| C149 | IF (A.4.1-1/1 AND A.4.5-1/32) THEN R ELSE N/A |
| C150 | IF (A.4.1-1/1 AND A.4.5-1/57 AND A.4.5-1/32 AND A.4.5-1/61) THEN R ELSE N/A |

| C151 | IF (A.4.1-1/2 AND A.4.5-1/57 AND A.4.5-1/32 AND A.4.5-1/61) THEN R ELSE N/A |
|------|------|
| C152 | IF (A.4.1-1/2 AND A.4.5-1/32) THEN R ELSE N/A |
| C153 | IF (A.4.1-1/1 AND A.4.5-1/32 AND A.4.5-1/19 AND A.4.4-3a/111 AND A.4.6-1/1) THEN R ELSE N/A |
| C153a | IF (A.4.1-1/1 AND A.4.5-1/32 AND A.4.5-1/19 AND A.4.4-3a/111 AND (NOT A.4.6-1/1)) THEN R ELSE N/A |
| C154 | IF (A.4.1-1/8 AND A.4.3-4c/1) THEN R ELSE N/A |
| C155 | IF (A.4.1-1/8 AND A.4.3-4c/1 AND A.4.4-1a/5) THEN R ELSE N/A |
| C156 | IF A.4.1-1/1 AND (A.4.6.3-1/6 OR A.4.6.3-1/7 OR A.4.6.3-1/12 OR A.4.6.3-1/11 OR A.4.6.2-1/4 OR A.4.6.2-1/5) AND A.4.4-3a/111 THEN R ELSE N/A |
| C157 | IF (A.4.1-1/1 AND A.4.5-1/19 AND A.4.5-1/32 AND A.4.5-1/33) THEN R ELSE N/A |
| C158 | IF (A.4.1-1/2 AND A.4.5-1/19 AND A.4.5-1/32 AND A.4.5-1/33) THEN R ELSE N/A |
| C159 | IF (A.4.1-1/2 AND A.4.5-1/32 AND A.4.4-1a/25) THEN R ELSE N/A |
| C160 | IF (A.4.1-1/2 AND A.4.5-1/32 AND A.4.4-3a/111 AND A.4.6-1/1) THEN R ELSE N/A |
| C160a | IF (A.4.1-1/2 AND A.4.5-1/32 AND A.4.4-1a/111 AND (NOT A.4.6.1-1/1)) THEN R ELSE N/A |
| C161 | IF A.4.1-1/2 AND (A.4.6.1-1/4 OR A.4.6.3-1/6 OR A.4.6.3-1/7 OR A.4.6.3-1/12 OR A.4.6.3-1/11 OR A.4.6.2-1/4 OR A.4.6.2-1/5) AND A.4.4-3a/111 THEN R ELSE N/A |
| C162 | IF (A.4.1-1/8 AND A.4.3-4c/1 AND A.4.5-1/34) THEN R ELSE N/A |
| C163 | IF (A.4.1-1/1 AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND A.4.4-3a/111) THEN R ELSE N/A |
| C164 | IF (A.4.1-1/1 AND (A.4.6.3-1/2 OR A.4.6.2-1/2) AND A.4.4-3a/111) THEN R ELSE N/A |
| C165 | IF (A.4.1-1/2 AND (A.4.6.1-1/3 OR A.4.6.3-1/3 OR A.4.6.3-1/4) AND A.4.4-3b/111) THEN R ELSE N/A |
| C166 | IF (A.4.1-1/2 AND (A.4.6.3-1/2 OR A.4.6.2-1/2) AND A.4.4-3b/111) THEN R ELSE N/A |
| C167 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/2 AND A.4.5-1/15 AND (A.4.4-3a/111 AND A.4.4-3b/111)) THEN R ELSE N/A |
| C168 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/2 AND A.4.5-1/14 AND (A.4.4-3a/111 AND A.4.4-3b/111)) THEN R ELSE N/A |
| C169 | IF (A.4.1-1/1 AND A.4.1-1/2) AND (A.4.6.2-1/6 OR A.4.6.3-1/13 OR A.4.6.2-1/8 OR A.4.6.3-1/15 OR A.4.6.3-1/16 OR A.4.6.3-1/17) AND A.4.4-3a/111 THEN R ELSE N/A |
| C170 | IF (A.4.1-1/1 AND A.4.1-1/2) AND (A.4.6.3-1/14) AND A.4.4-3a/111 THEN R ELSE N/A |
| C171 | IF A.4.1-1/1 AND (A.4.6.3-1/13 OR A.4.6.3-1/15 OR A.4.6.3-1/16 OR A.4.6.3-1/17 OR A.4.6.2-1/6 OR A.4.6.2-1/7 OR A.4.6.2-1/8) AND A.4.4-3a/111 THEN R ELSE N/A |
| C172 | IF A.4.1-1/1 AND (A.4.6.3-1/14) AND A.4.4-3a/111 THEN R ELSE N/A |
| C173 | IF A.4.1-1/2 AND (A.4.6.3-1/13 OR A.4.6.3-1/15 OR A.4.6.3-1/16 OR A.4.6.3-1/17 OR A.4.6.2-1/6 OR A.4.6.2-1/7 OR A.4.6.2-1/8) AND A.4.4-3a/111 THEN R ELSE N/A |
| C174 | IF A.4.1-1/2 AND (A.4.6.3-1/14 OR A.4.6.1-1/5) AND A.4.4-3a/111 THEN R ELSE N/A |
| C175 | IF A.4.1-1/1 AND A.4.2-1/8 AND A.4.4-1a/5 THEN R ELSE N/A |
| C176 | IF A.4.1-1/1 AND A.4.2-1/8 THEN R ELSE N/A |
| C177 | IF (A.4.1-1/1 AND (A.4.2-1/8 AND A.4.5-1/27) THEN R ELSE N/A |
| C178 | IF A.4.1-1/2 AND A.4.2-1/8 THEN R ELSE N/A |
| C179 | IF (A.4.1-1/1 AND A.4.1-1/9) AND (A.4.2-1/9 OR A.4.2-1/10) THEN R ELSE N/A |
| C180 | IF (A.4.1-1/2 AND A.4.1-1/9) AND (A.4.2-1/9 OR A.4.2-1/10) THEN R ELSE N/A |
| C181 | IF (A.4.1-1/1 AND A.4.4-1a/5 AND A.4.5-1/40) THEN R ELSE N/A |
| C182 | IF (A.4.1-1/2 AND A.4.4-1a/5 AND A.4.5-1/41) THEN R ELSE N/A |
| C183 | Void |
| C184 | Void |
| C185 | IF (A.4.1-1/1 AND A.4.2-1/8 AND A.4.5-1/40) THEN R ELSE N/A |
| C186 | IF (A.4.1-1/1 AND A.4.5-1/27 AND A.4.5-1/40) THEN R ELSE N/A |
| C187 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/3 AND A.4.5-1/15 AND (A.4.4-3a/111 AND A.4.4-3b/111)) THEN R ELSE N/A |
| C188 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/3 AND A.4.5-1/14 AND (A.4.4-3a/111 AND A.4.4-3b/111)) THEN R ELSE N/A |
| C189 | IF (A.4.1-1/2 AND A.4.6-1/3 AND A.4.4-3b/111) THEN R ELSE N/A |
| C190 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/3 AND A.4.5-1/15 AND (A.4.4-1a/25 AND A.4.4-1b/25)) THEN R ELSE N/A |
| C190a | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/4 AND A.4.5-1/15 AND (A.4.4-1a/25 AND A.4.4-1b/25)) THEN R ELSE N/A |
| C191 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/3 AND A.4.5-1/14 AND (A.4.4-1a/25 AND A.4.4-1b/25)) THEN R ELSE N/A |
| C191a | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.6-1/4 AND A.4.5-1/14 AND (A.4.4-1a/25 AND A.4.4-1b/25)) THEN R ELSE N/A |
| C191b | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.6-1/3) THEN R ELSE N/A |
| C191c | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.6-1/4) THEN R ELSE N/A |
| C192 | IF (A.4.1-1/2 AND (A.4.6.3-1/6 OR A.4.6.3-1/7 OR A.4.6.3-1/9 OR A.4.6.3-1/10 OR A.4.6.3-1/11 OR A.4.6.3-1/12 OR A.4.6.2-1/4 OR A.4.6.2-1/5) AND A.4.4-1b/25) THEN R ELSE N/A |
| C193 | IF (A.4.1-1/2 AND (A.4.6.1-1/4 OR A.4.6.3-1/6 OR A.4.6.3-1/7 OR A.4.6.3-1/9 OR A.4.6.3-1/10 OR A.4.6.3-1/11 OR A.4.6.3-1/12 OR A.4.6.2-1/4 OR A.4.6.2-1/5) AND A.4.4-1b/25) THEN R ELSE N/A |
| C194 | IF (A.4.1-1/1 AND A.4.3-4a/1a) THEN R ELSE N/A |
| C194a | IF (A.4.1-1/1 AND A.4.3-4a/1a AND A.4.4-1a/5) THEN R ELSE N/A |

| C194b | IF (A.4.1-1/1 AND A.4.3-4a/1a AND A.4.4-1a/25) THEN R ELSE N/A |
|---|---|
| C194c | IF (A.4.1-1/1 AND A.4.3-4a/1a AND A.4.4-1a/5 AND A.4.4-1a/25) THEN R ELSE N/A |
| C195 | IF (A.4.1-1/22 AND A.4.3-4a/a) THEN R ELSE N/A |
| C195a | IF (A.4.1-1/2 AND A.4.3-4a/1a AND A.4.4-1b/5) THEN R ELSE N/A |
| C195b | IF (A.4.1-1/2 AND A.4.3-4a/1a AND A.4.4-1b/25) THEN R ELSE N/A |
| C195c | IF (A.4.1-1/2 AND A.4.3-4a/1a AND A.4.4-1b/5 AND A.4.4-1b/25) THEN R ELSE N/A |
| C196 | IF (A.4.1-1/1 AND A.4.3-7/5) THEN R ELSE N/A |
| C197 | IF (A.4.1-1/2 AND A.4.3-7/5) THEN R ELSE N/A |
| C198 | IF (A.4.1-1/1 AND 4.4-1a/5 AND A.4.5-1/19 AND A.4.5-1/32 AND A.4.4-3a/111 AND A.4.6-1/1) THEN R ELSE N/A |
| C199 | IF (A.4.1-1/2 AND 4.4-1a/5 AND A.4.5-1/19 AND A.4.5-1/32 AND A.4.4-3a/111 AND A.4.6-1/1) THEN R ELSE N/A |
| C200 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.2-1/8 AND A.4.5-1/59) THEN R ELSE N/A |
| C201 | IF (A.4.1-1/2 AND A.4.2-1/8 AND A.4.5-1/59) THEN R ELSE N/A |
| C202 | IF (A.4.1-1/8 AND A.4.3-4c/1 AND A.4.5-1/60) THEN R ELSE N/A |
| C203 | IF (A.4.1-1/10 AND A.4.3-4d/2 AND A.4.5-7/1) THEN R ELSE N/A |
| C204 | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-1/10 AND A.4.3-4d/2 AND A.4.5-7/1) THEN R ELSE N/A |
| C205 | IF (A.4.1-1/1 AND A.4.4-1a/5 AND A.4.5-1/64) THEN R ELSE N/A |
| C206 | IF (A.4.1-1/1 AND A.4.2-1/2 AND A.4.4-1a/25 AND A.4.5-1/65) THEN R ELSE N/A |
| C207 | IF (A.4.1-1/2 AND A.4.2-1/2 AND A.4.4-1b/25 AND A.4.5-1/65) THEN R ELSE N/A |
| C208 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.2-1/2 AND A.4.5-1/15 AND A.4.4-1b/25 AND A.4.5-1/65) THEN R ELSE N/A |
| C209 | IF ((A.4.1-1/1 AND A.4.1-1/2) AND A.4.2-1/2 AND A.4.5-1/14 AND A.4.4-1b/25 AND A.4.5-1/65) THEN R ELSE N/A |
| C210 | IF (A.4.1-1/1 AND A.4.3-4a/1a AND A.4.4-1a/5) THEN R ELSE N/A |
| C211 | IF (A.4.1-1/2 AND A.4.3-4a/1a AND A.4.4-1a/5) THEN R ELSE N/A |
| C212 | IF (A.4.1-1/1 AND A.4.3-4a/1a AND A.4.4-1a/25) THEN R ELSE N/A |
| C213 | IF (A.4.1-1/2 AND A.4.3-4a/1a AND A.4.4-1a/25) THEN R ELSE N/A |
| C214 | IF (A.4.1-1/1 AND A.4.3-4a/1a AND A.4.4-1a/5 AND A.4.4-1a/25) THEN R ELSE N/A |
| C215 | IF (A.4.1-1/2 AND A.4.3-4a/1a AND A.4.4-1a/5 AND A.4.4-1a/25) THEN R ELSE N/A |
| C216 | IF ((A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-1/10 AND A.4.5-1/49) THEN R ELSE N/A |
| C217 | IF (A.4.1-1/10 AND A.4.3-4d/2 AND A.4.5-7/1 AND A.4.5-1/68) THEN R ELSE N/A |
| C218 | IF (A.4.1-1/8 AND A.4.3-4c/2) THEN R ELSE N/A |

**Table 4.2-1b: Number of TC Executions - Notes**

| Note 1: | The Carrier Aggregation TCs verify the same core requirement(s) however with different channel bandwidth configurations, this according to the guidance in TS 36.521-3, Annex C.3.3 [2]. |
|---|---|
| Note 2: | The Dual Connectivity TCs verify the same RRM requirements(s) however with different synchronous or asynchronous DC scenarios, this according to the guidance in TS 36.521-3, Annex 3A.5 [2]. |
| Note 3: | Unique FS3 Event triggered reporting tests are defined for one or more FS3 cells. Therefore, only the test case specific to the number of FS3 cells needs to be executed. |

# Annex A (normative):ICS proforma for E-UTRA User Equipment

Notwithstanding the provisions of the copyright related to the text of the present document, The Organizational Partners of 3GPP grant that users of the present document may freely reproduce the ICS proforma in this annex so that it can be used for its intended purposes and may further publish the completed ICS.

## A.1 Guidance for completing the ICS proforma

### A.1.1 Purposes and structure

The purpose of this ICS proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in relevant specifications may provide information about the implementation in a standardised manner.

The ICS proforma is subdivided into clauses for the following categories of information:

- instructions for completing the ICS proforma;

- identification of the implementation;

- identification of the protocol;

- ICS proforma tables (for example: UE implementation types, Teleservices, etc).

### A.1.2 Abbreviations and conventions

The ICS proforma contained in this annex is comprised of information in tabular form in accordance with the guidelines presented in ISO/IEC 9646-7 [4].

Item column

The item column contains a number which identifies the item in the table.

Item description column

The item description column describes in free text each respective item (e.g. parameters, timers, etc.). It implicitly means "is <item description> supported by the implementation?".

Reference column

The reference column gives reference to the relevant 3GPP core specifications.

Release column

The release column indicates the earliest release from which the capability or option is relevant.

Comments column

This column is left blank for particular use by the reader of the present document.

References to items

For each possible item answer (answer in the support column) within the ICS proforma there exists a unique reference, used, for example, in the conditional expressions. It is defined as the table identifier, followed by a solidus character "/", followed by the item number in the table. If there is more than one support column in a table, the columns shall be discriminated by letters (a, b, etc.), respectively.

EXAMPLE 1: A.4.1-1/2 is the reference to the answer of item 2 in table A.4.1-1.

## A.1.3 Instructions for completing the ICS proforma

The supplier of the implementation may complete the ICS proforma in each of the spaces provided. More detailed instructions are given at the beginning of the different clauses of the ICS proforma.

# A.2 Identification of the User Equipment

Identification of the User Equipment should be filled in so as to provide as much detail as possible regarding version numbers and configuration options.

The product supplier information and client information should both be filled in if they are different.

A person who can answer queries regarding information supplied in the ICS should be named as the contact person.

## A.2.1 Date of the statement

.......................................................................................................................................................................

## A.2.2 User Equipment Under Test (UEUT) identification

UEUT name:

.......................................................................................................................................................................

.......................................................................................................................................................................

Hardware configuration:

.......................................................................................................................................................................

.......................................................................................................................................................................

.......................................................................................................................................................................

Software configuration:

.......................................................................................................................................................................

.......................................................................................................................................................................

.......................................................................................................................................................................

## A.2.3 Product supplier

Name:

.......................................................................................................................................................................

Address:

.......................................................................................................................................................................

.......................................................................................................................................................................

.......................................................................................................................................................................

Telephone number:

.......................................................................................................................................................................

Facsimile number:

.......................................................................................................................................................................

E-mail address:

..................................................................................................................................................................................

Additional information:

..................................................................................................................................................................................

..................................................................................................................................................................................

..................................................................................................................................................................................

# A.2.4    Client

Name:

..................................................................................................................................................................................

Address:

..................................................................................................................................................................................

..................................................................................................................................................................................

..................................................................................................................................................................................

Telephone number:

..................................................................................................................................................................................

Facsimile number:

..................................................................................................................................................................................

E-mail address:

..................................................................................................................................................................................

Additional information:

..................................................................................................................................................................................

..................................................................................................................................................................................

..................................................................................................................................................................................

# A.2.5    ICS contact person

Name:

..................................................................................................................................................................................

Telephone number:

..................................................................................................................................................................................

Facsimile number:

..................................................................................................................................................................................

E-mail address:

..................................................................................................................................................................................

Additional information:

..................................................................................................................................................................................

..................................................................................................................................................................................

# A.3 Identification of the protocol

This ICS proforma applies to the 3GPP standards listed in the normative references clause of the present document.

# A.4 ICS proforma tables

## A.4.1 UE Implementation Types

**Table A.4.1-1: UE Radio Technologies**

| Item | UE Radio Technologies | Ref. | Release | Comments |
|------|----------------------|------|---------|----------|
| 1 | E-UTRA FDD | 36.101 | Rel-8 | |
| 2 | E-UTRA TDD | 36.101 | Rel-8 | |
| 3 | UTRA FDD | 25.101 | R99 | |
| 4 | UTRA TDD | 25.102 | R99 | |
| 5 | GSM | 45.005 | R99 | |
| 6 | cdma2000 HRPD | C.S0024-A | Rel-8 | |
| 7 | cdma2000 1xRTT | C.S0002-A | Rel-8 | |
| 8 | NB-IoT | 36.101 | Rel-13 | |
| 9 | WLAN | IEEE Std 802.11 | | |
| 10 | V2X Sidelink Communication | 36.101 | Rel-14 | |

## A.4.2 UE Service Capabilities

**Table A.4.2-1: UE Radio Technologies**

| Item | UE Radio Technologies | Ref. | Release | Comments |
|------|----------------------|------|---------|----------|
| 1 | LTE MBMS | 36.101 | Rel-9 | |
| 2 | LTE CA | 36.101 | Rel-10 | |
| 3 | UL-MIMO | 36.306, 4.3.4.6 | Rel-10 | |
| 4 | Void | | | |
| 5 | Enhanced Dual Layer TDD | 36.306, 4.3.4.5 | Rel-9 | |
| 6 | EPDCCH | 36.306, 4.3.4.18 | Rel-11 | |
| 7 | FDD - TDD CA | 36.306, 4.3.4.28 | Rel-12 | |
| 8 | Support of DC | 36.306, 4.3.5.9 | Rel-12 | The UE supports of synchronous dual connectivity and power control mode 1 |
| 9 | Support of E-UTRAN WLAN Aggregation - LWA | 36.306, 4.3.18, 4.3.25, 4.3.27, 7.10.2 | Rel-13 | |
| 10 | Support of E-URAN WLAN Aggregation with IPsec Tunnel - LWIP | 36.306, 4.3.18, 4.3.24, 4.3.27, 7.10.2 | Rel-13 | |

## A.4.3 Baseline Implementation Capabilities

**Table A.4.3-1: Supported protocols**

| Item | Supported protocols | Ref. | Release | Comments |
|------|---------------------|------|---------|----------|
| 1 | EPS Mobility Management | 24.301, 5 | Rel-8 | For NB-IoT the release is from Rel-13 |
| 2 | EPS Session Management | 24.301, 6 | Rel-8 | For NB-IoT the release is from Rel-13 |
| 3 | GPRS Mobility Management | 23.060 | R99 | For NB-IoT the release is from Rel-13 |
| 4 | Radio Resource Control | 36.331 | Rel-8 | For NB-IoT the release is from Rel-13 |
| 5 | Packet Data Convergence Protocol | 36.323 | Rel-8 | For NB-IoT the release is from Rel-13 |
| 6 | Radio Link Control | 36.322 | Rel-8 | For NB-IoT the release is from Rel-13 |
| 7 | Medium Access Control | 36.321 | Rel-8 | For NB-IoT the release is from Rel-13 |
| 8 | Physical Layer | 36.201 36.302 | Rel-8 | For NB-IoT the release is from Rel-13 |

**Table A.4.3-2: Special Conformance Testing Functions**

| Item | Special Conformance Testing Functions | Ref. | Release | Comments |
|------|---------------------------------------|------|---------|----------|
| 1 | UE test loop | 36.509 | Rel-8 | For NB-IoT the release is from Rel-13 |
| 2 | Max UE test loop UL RLC SDU size 65535 bits | 36.509 | Rel-8 | |

**Table A.4.3-3: RF Baseline Implementation Capabilities**

| Item | RF Baseline Implementation Capabilities | Ref. | Release | Comments |
|------|------------------------------------------|------|---------|----------|
| 1 | Frequency band: 1920-1980, 2110-2170 MHz | 36.101, 5.5 | Rel-8 | FDD and HD-FDD Band 1 |
| 2 | Frequency band: 1850-1910, 1930-1990 MHz | 36.101, 5.5 | Rel-8 | FDD and HD-FDD Band 2 |
| 3 | Frequency band: 1710-1785, 1805-1880 MHz | 36.101, 5.5 | Rel-8 | FDD and HD-FDD Band 3 |
| 4 | Frequency band: 1710-1755, 2110-2155 MHz | 36.101, 5.5 | Rel-8 | FDD Band 4 |
| 5 | Frequency band: 824-849, 869-894 MHz | 36.101, 5.5 | Rel-8 | FDD and HD-FDD Band 5 |
| 6 | Frequency band: 830-840, 875-885 MHz | 36.101, 5.5 | Rel-8 | FDD Band 6 |
| 7 | Frequency band: 2500-2570, 2620-2690 MHz | 36.101, 5.5 | Rel-8 | FDD Band 7 |
| 8 | Frequency band: 880-915, 925-960 MHz | 36.101, 5.5 | Rel-8 | FDD and HD-FDD Band 8 |
| 9 | Frequency band: 1749.9-1784.9, 1844.9-1879.9 MHz | 36.101, 5.5 | Rel-8 | FDD Band 9 |
| 10 | Frequency band: 1710-1770, 2110-2170 MHz | 36.101, 5.5 | Rel-8 | FDD Band 10 |
| 11 | Frequency band: 1427.9-1447.9, 1475.9-1495.9 MHz | 36.101, 5.5 | Rel-8 | FDD and HD-FDD Band 11 |
| 12 | Frequency band: 699-716, 729-746 MHz | 36.101, 5.5 | Rel-8 | FDD and HD-FDD Band 12 |
| 13 | Frequency band: 777-787, 746-756 MHz | 36.101, 5.5 | Rel-8 | FDD and HD-FDD Band 13 |
| 14 | Frequency band: 788-798, 758-768 MHz | 36.101, 5.5 | Rel-8 | FDD Band 14 |
| 15 | Reserved | 36.101, 5.5 | Rel-8 | FDD Band 15 |
| 16 | Reserved | 36.101, 5.5 | Rel-8 | FDD Band 16 |
| 17 | Frequency band: 704-716, 734-746 MHz | 36.101, 5.5 | Rel-8 | FDD and HD-FDD Band 17 |
| 18 | Frequency band: 815-830, 860-875 MHz | 36.101, 5.5 | Rel-9 | FDD and HD-FDD Band 18 |
| 19 | Frequency band: 830-845, 875-890 MHz | 36.101, 5.5 | Rel-9 | FDD and HD-FDD Band 19 |
| 20 | Frequency band: 832-862, 791-821MHz | 36.101, 5.5 | Rel-9 | FDD and HD-FDD Band 20 |
| 21 | Frequency band: 1447.9-1462.9, 1495.9-1510.9 MHz | 36.101, 5.5 | Rel-9 | FDD and HD-FDD Band 21Band 21 |
| 22 | Frequency band: 3410-3490, 3510-3590 MHz | 36.101, 5.5 | Rel-10 | FDD Band 22 |
| 23 | Frequency band: 2000-2020, 2180-2200 MHz | 36.101, 5.5 | Rel-10 | FDD Band 23 |
| 24 | Frequency band: 1626.5-1660.5, 1525-1559 MHz | 36.101, 5.5 | Rel-10 | FDD Band 24 |
| 25 | Frequency band: 1850-1915, 1930-1995 MHz | 36.101, 5.5 | Rel-10 | FDD and HD-FDD Band 25 |
| 26 | Frequency band: 814-849, 859-894 MHz | 36.101, 5.5 | Rel-11 | FDD and HD-FDD Band 26 |
| 27 | Frequency band: 807-824, 852-869 MHz | 36.101, 5.5 | Rel-11 | FDD Band 27 |
| 28 | Frequency band: 703-748, 758-803 MHz | 36.101, 5.5 | Rel-11 | FDD and HD-FDD Band 28 |
| 29 | Frequency band: N/A, 717-728 MHz | 36.101, 5. 5 | Rel-11 | FDD Band 29 |
| 30 | Frequency band: 2305-2315, 2350-2360 MHz (Note 2) | 36.101, 5.5 | Rel-12 | FDD Band 30 |
| 31 | Frequency band: 452.5-457.5, 462.5-467.5 MHz | 36.101, 5.5 | Rel-12 | FDD and HD-FDD Band 31 |
| 32 | Frequency band: N/A, 1452-1496 MHz | 36.101, 5.5 | Rel-12 | FDD Band 32 |
| 33 | Frequency band: 1900-1920, 1900-1920 MHz | 36.101, 5.5 | Rel-8 | TDD Band 33 |
| 34 | Frequency band: 2010-2025, 2010-2025 MHz | 36.101, 5.5 | Rel-8 | TDD Band 34 |
| 35 | Frequency band: 1850-1910, 1850-1910 MHz | 36.101, 5.5 | Rel-8 | TDD Band 35 |
| 36 | Frequency band: 1930-1990, 1930-1990 MHz | 36.101, 5.5 | Rel-8 | TDD Band 36 |
| 37 | Frequency band: 1910-1930, 1910-1930 MHz | 36.101, 5.5 | Rel-8 | TDD Band 37 |
| 38 | Frequency band: 2570-2620, 2570-2620 MHz | 36.101, 5.5 | Rel-8 | TDD Band 38 |
| 39 | Frequency band: 1880-1920, 1880-1920 MHz | 36.101, 5.5 | Rel-8 | TDD Band 39 |
| 40 | Frequency band: 2300-2400, 2300-2400 MHz | 36.101, 5.5 | Rel-8 | TDD Band 40 |
| 41 | Frequency band: 2496-2690, 2496-2690 MHz | 36.101, 5.5 | Rel-10 | TDD Band 41 |
| 42 | Frequency band: 3400-3600, 3400-3600 MHz | 36.101, 5.5 | Rel-10 | TDD Band 42 |
| 43 | Frequency band: 3600-3800, 3600-3800 MHz | 36.101, 5.5 | Rel-10 | TDD Band 43 |
| 44 | Frequency band: 703-803, 703-803 MHz | 36.101, 5.5 | Rel-11 | TDD Band 44 |
| 45 | Frequency band: 1447-1467, 1447-1467 MHz | 36.101, 5.5 | Rel-13 | TDD Band 45 |
| 46 | Frequency band: 5150-5925, 5250-5925 MHz | 36.101, 5.5 | Rel-13 | TDD Band 46 |
| 47 | Frequency band: 5855-5925, 5855-5925 MHz | 36.101, 5.5 | Rel-14 | TDD Band 47 |

| ... | | | | |
|---|---|---|---|---|
| 48 | Frequency band: 3550-3700, 3550-3700 MHz | 36.101, 5.5 | Rel-14 | TDD Band 48 |
| ... | | | | |
| 65 | Frequency band: 1920-2010, 2110-2200 MHz | 36.101, 5.5 | Rel-13 | FDD Band 65 |
| 66 | Frequency band: 1710-1780, 2110-2200 MHz | 36.101, 5.5 | Rel-13 | FDD and HD-FDD Band 66 |
| ... | | | | |
| 68 | Frequency band: 698-728, 753-783 MHz | 36.101, 5.5 | Rel-15 | FDD Band 68 |
| 69 | Frequency band: N/A, 2570-2620 MHz | 36.101, 5.5 | Rel-14 | FDD Band 69 |
| 70 | Frequency band: 1695-1710, 1995-2020 MHz | 36.101, 5.5 | Rel-14 | FDD and HD-FDD Band 70 |
| 71 | Frequency band: 663-698, 617-652 MHz | 36.101, 5.5 | Rel-15 | FDD and HD-FDD Band 71 |
| 72 | Frequency band: 451-456, 461-466 MHz | 36.101, 5.5 | Rel-15 | FDD and HD-FDD Band 72 |
| 74 | Frequency band: 1427-1470, 1475-1518 MHz | 36.101, 5.5 | Rel-15 | FDD and HD-FDD Band 74 |
| Note 1: | The values indicated in column "Release" are to be understood as the specifications release version in which a band was introduced and not as a mandate that a UE conforming to particular release shall support a particular band. For further guidance to release independent bands see TS 36.307 [16] | | | |
| Note 2: | The uplink transmission is not allowed at this band for the UE with the externally vehicle-mounted antennas. | | | |

**Table A.4.3-3a: RF Additional Baseline Implementation Capabilities**

| Item | RF Additional Baseline Implementation Capabilities | Ref. | Comments |
|------|---------------------------------------------------|------|----------|
| 1 | Support of 1.4 MHz channel bandwidth | 36.101, 5.6.1 | Operating bands supporting 1.4 MHz Bandwidth: 2, 3, 4, 5, 8, 12, 23, 25, 26, 27, 31, 35, 36, 65, 66, 72, 74 |
| 2 | Support of 3 MHz channel bandwidth | 36.101, 5.6.1 | Operating bands supporting 3 MHz Bandwidth: 2, 3, 4, 5, 8, 12, 23, 25, 26, 27, 28, 31, 35, 36, 44, 65, 66, 72, 74 |
| 3 | Support of 5 MHz channel bandwidth | 36.101, 5.6.1 | All operating bands support 5 MHz Bandwidth except band 46 and Band 47 |
| 4 | Support of 10 MHz channel bandwidth | 36.101, 5.6.1 | All operating bands support 10 MHz Bandwidth except band 31, 46 and 72 |
| 5 | Support of 15 MHz channel bandwidth | 36.101, 5.6.1 | Operating bands supporting 15 MHz Bandwidth: 1, 2, 3, 4, 7, 9, 10, 18, 19, 20, 21, 22, 23, 25, 26, 28, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 48, 65, 66, 70, 74 |
| 6 | Support of 20 MHz channel bandwidth | 36.101, 5.6.1 | Operating bands supporting 20MHz Bandwidth: 1, 2, 3, 4, 7, 9, 10, 20, 22, 23, 25, 28, 33, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 65, 66, 70[1], 74 |
| 7 | Support of 20 MHz for both PCell and SCell | 36.101, 5.6.1 | |
| 8 | Support of 20 MHz for PCell and 10 MHz for SCell | 36.101, 5.6.1 | |
| 9 | Support at most 40 MHz aggregated bandwidth | 36.101, 5.6.1 | |
| 10 | Support at most 60 MHz aggregated bandwidth | 36.101, 5.6.1 | |
| 11 | Support at most 80 MHz aggregated bandwidth | 36.101, 5.6.1 | |
| Note 1: | [1] For the 20 MHz channel bandwidth, the additional baseline implementation capabilities are restricted to E-UTRA operation when carrier aggregation is configured. | | |

**Table A.4.3-3b: Additional UE Power Class implementation Capabilities**

| Item | RF baseline UE Baseline implementation capability | Ref. | Comments |
|------|---------------------------------------------------|------|----------|
| 1 | UE Power Class 1 | 36.101, 6.2.2 | Applicable to Bands 14, 31, 72 |
| 2 | UE Power Class 3 | 36.101, 6.2.2 | All applicable E-UTRA and NB-IoT bands |
| 3 | UE Power Class 5 | 36.101, 6.2.2E 36.306, 4.3.5.20 | All applicable E-UTRA and NB-IoT bands 20dBm |
| 4 | UE Power Class 2 | 36.101, 6.2.2 | Applicable to Band 41 and Band 47 |

**Table A.4.3-4: UE Category**

| Item | UE Category | Ref. | Release | Comments |
|------|-------------|------|---------|----------|
| 1 | Category 1 | 36.306, 4.1 | Rel-8 | |
| 2 | Category 2 | 36.306, 4.1 | Rel-8 | |
| 3 | Category 3 | 36.306, 4.1 | Rel-8 | |
| 4 | Category 4 | 36.306, 4.1 | Rel-8 | |
| 5 | Category 5 | 36.306, 4.1 | Rel-8 | Support for 64QAM in UL |
| 6 | Category 6 | 36.306, 4.1 | Rel-10 | |
| 7 | Category 7 | 36.306, 4.1 | Rel-10 | |
| 8 | Category 8 | 36.306, 4.1 | Rel-10 | Support for 64QAM in UL |
| 9 | Category 9 | 36.306, 4.1 | Rel-11 | |
| 10 | Category 10 | 36.306, 4.1 | Rel-11 | |
| 11 | Category 11 | 36.306, 4.1 | Rel-11 | |
| 12 | Category 12 | 36.306, 4.1 | Rel-11 | |

**Table A.4.3-4a: UE Downlink Category**

**Table A.4.3-4a: UE Downlink Category**

| Item | UE Category | Ref. | Release | Comments |
|------|-------------|------|---------|----------|
| 1 | Category DL 0 | 36.306, 4.1A | Rel-12 | Only in combination with Category UL 0 |
| 1a | Category DL 1bis | 36.306, 4.1A | Rel-13 | Only in combination with Category UL 1bis |
| 2 | Category DL 6 | 36.306, 4.1A | Rel-12 | Only in combination with Category UL 5 |
| 3 | Category DL 7 | 36.306, 4.1A | Rel-12 | Only in combination with Category UL 13 |
| 4 | Category DL 9 | 36.306, 4.1A | Rel-12 | Only in combination with Category UL 5 |
| 5 | Category DL 10 | 36.306, 4.1A | Rel-12 | Only in combination with Category UL 13 |
| 6 | Category DL 11 | 36.306, 4.1A | Rel-12 | Only in combination with Category UL 5 |
| 7 | Category DL 12 | 36.306, 4.1A | Rel-12 | Only in combination with Category UL 13 |
| 8 | Category DL 13 | 36.306, 4.1A | Rel-12 | Only in combination with Category UL 3 or Category UL 5 or Category UL 7 or Category UL 13 |
| 9 | Category DL 14 | 36.306, 4.1A | Rel-12 | Only in combination with Category UL 8 |
| 10 | Category DL 15 | 36.306, 4.1A | Rel-12 | Only in combination with Category UL 3 or Category UL 5 or Category UL 7 or Category UL 13 |
| 11 | Category DL 16 | 36.306, 4.1A | Rel-12 | Only in combination with Category UL 3 or Category UL 5 or Category UL 7 or Category UL 13 |
| 12 | Category DL 17 | 36.306, 4.1A | Rel-13 | Only in combination with Category UL 14 |
| 13 | Category DL 18 | 36.306, 4.1A | Rel-13 | Only in combination with Category UL 3 or Category UL 5 or Category UL 7 or Category UL 13 or Category UL 15 |
| 14 | Category DL 19 | 36.306, 4.1A | Rel-13 | Only in combination with Category UL 3 or Category UL 5 or Category UL 7 or Category UL 13 or Category UL 15 |
| 15 | Category DL 4 | 36.306, 4.1A | Rel-12 | Only in combination with Category UL 5 |
| 16 | Category DL 20 | 36.306, 4.1A | Rel-14 | Only in combination with Category UL 3 or Category UL 5 or Category UL 7 or Category UL 13 or Category UL 15 or Category UL 16 or Category UL 18 or Category UL 20 or Category UL 21 |

| 17 | Category DL 21 | 36.306, 4.1A | Rel-14 | Only in combination with Category UL 3 or Category UL 5 or Category UL 7 or Category UL 13 or Category UL 15 or Category UL 16 or Category UL 18 or Category UL 20 |
|----|----------------|--------------|--------|---|

**Table A.4.3-4aa: Additional UE Downlink Category**

| Item | UE Category | Ref. | Release | Comments |
|------|-------------|------|---------|----------|
| 1 | Category DL M1 | 36.306, 4.1A | Rel-13 | Only in combination with Category UL M1 |
| 2 | Category DL M2 (NOTE 1) | 36.306, 4.1A | Rel-14 | Only in combination with Category UL M2 |
| NOTE 1:  A UE indicating Category M2 shall also indicate Category M1. | | | | |

**Table A.4.3-4b: UE Uplink Category**

| Item | UE Category | Ref. | Release | Comments |
|------|-------------|------|---------|----------|
| 1 | Category UL 0 | 36.306, 4.1A | Rel-12 | Only in combination with Category DL 0 |
| 1a | Category UL 1bis | 36.306, 4.1A | Rel-13 | Only in combination with Category DL 1bis |
| 2 | Category UL 3 | 36.306, 4.1A | Rel-12 | Only in combination with Category DL 13, Category DL 15 or Category DL 16 |
| 3 | Category UL 5 | 36.306, 4.1A | Rel-12 | Only in combination with Category DL 6, Category DL 9, Category DL 11, Category DL 13, Category DL 15 or Category DL 16 |
| 4 | Category UL 7 | 36.306, 4.1A | Rel-12 | Only in combination with Category DL 13, Category DL 15 or Category DL 16 |
| 5 | Category UL 8 | 36.306, 4.1A | Rel-12 | Only in combination with Category DL 14 |
| 6 | Category UL 13 | 36.306, 4.1A | Rel-12 | Only in combination with Category DL 7, Category DL 10, Category DL 12, Category DL 13, Category DL 15 or Category DL 16 |
| 7 | Category UL 14 | 36.306, 4.1A | Rel-13 | Only in combination with Category DL 17 |
| 8 | Category UL 15 | 36.306, 4.1A | Rel-13 | Only in combination with Category DL 12 or Category DL 16 or Category DL 18 or Category DL 19 or Category DL 20 |
| 9 | Category UL 16 | 36.306, 4.1A | Rel-14 | Only in combination with Category DL 6, Category DL 9, Category DL 11, Category DL 13, Category DL 15, Category DL 16. Category DL 18, Category DL 19, Category DL 20 |
| 10 | Category UL 17 | 36.306, 4.1A | Rel-14 | Only in combination with Category DL 14 |
| 11 | Category UL 18 | 36.306, 4.1A | Rel-14 | Only in combination with Category DL 7, Category DL 10, Category DL 12, Category DL 13, Category DL 15, Category DL 16. Category DL 18, Category DL 19, Category DL 20 |

| 12 | Category UL 19 | 36.306, 4.1A | Rel-14 | Only in combination with Category DL 17 |
|----|----------------|--------------|--------|------------------------------------------|
| 13 | Category UL 20 | 36.306, 4.1A | Rel-14 | Only in combination with Category DL 12, Category DL 16, Category DL 18, Category DL 19, Category DL 20 |
| 14 | Category UL 21 | 36.306, 4.1A | Rel-14 | Only in combination with Category DL 19 or Category DL 20 |

**Table A.4.3-4ba: Additional UE Uplink Category**

| Item | UE Category | Ref. | Release | Comments |
|------|-------------|------|---------|----------|
| 1 | Category UL M1 | 36.306, 4.1A | Rel-12 | Only in combination with Category DL M1 |
| 2 | Category UL M2 (NOTE 1) | 36.306, 4.1A | Rel-14 | Only in combination with Category DL M2 |
| NOTE 1: A UE indicating Category M2 shall also indicate Category M1. | | | | |

**Table A.4.3-4c: UE Category NB**

| Item | UE Category | Ref. | Release | Comments |
|------|-------------|------|---------|----------|
| 1 | Category NB1 | 36.306, 4.1C | Rel-13 | |
| 2 | Category NB2 | 36.306, 4.1C | Rel-14 | |

**Table A.4.3-4d: UE Category Sidelink**

| Item | UE Category | Ref. | Release | Comments |
|------|-------------|------|---------|----------|
| 1 | SL-C Category 1 | 36.306, 4.1B | Rel-14 | |
| 2 | SL-C Category 2 | 36.306, 4.1B | Rel-14 | |

**Table A.4.3-5: Void**

**Table A.4.3-6: Void**

**Table A.4.3-7: Additional capabilities**

| Item | Additional capabilities | Ref. | Release | Comments |
|------|------------------------|------|---------|----------|
| 1 | Enhanced performance requirements type A for LTE | 36.101, 8 | Rel-11 | Support for Enhanced performance requirements type A |
| 2 | Support of Type B Half-duplex FDD operation | 36.211, 6,2,5 36.306, 4.2.6 | Rel-12 | Support of Half-duplex FDD operation type B for category 0 and category M1 and category M2 UE |
| 3 | Enhanced performance requirements type C for LTE | 36.101, 8 | Rel-12 | Support for Enhanced performance requirements type C |
| 4 | Enhanced performance requirements type B for LTE | 36.101, 8 36.306, 4.3.4.35 | Rel-12 | Support for Enhanced performance requirements type B |
| 5 | Enhanced measurement in high speed scenario | 36.306,4.3.3 3.1 | Rel-14 | Support measurement enhancements in high speed scenario |
| 6 | Enhanced downlink control channel performance requirements type A for LTE | 36.101, 8 | Rel-13 | Support for Enhanced downlink control channel performance requirements type A for LTE |
| 7 | Enhanced downlink control channel performance requirements type B for LTE | 36.101, 8 | Rel-13 | Support for Enhanced downlink control channel performance requirements type B for LTE |
| 8 | DMRS enhancements for TM9 | 36.306, 4.3.28.4 | Rel-13 | Support for DMRS enhancements in TM9 |

**Table A.4.3-8: Void**

## A.4.4 Feature group indicators

In Table A.4.4-1a and Table A.4.4-1b, a 'VoLTE capable UE' corresponds to a UE that is capable of the "Voice domain preference for E-UTRAN" defined in TS 24.301 [15] being set to "IMS PS voice only", "IMS PS voice preferred, CS voice as secondary" or "CS voice preferred, IMS PS voice as secondary" (Ref TS 36.331 [14], clause B.1)

When a UE supports E-UTRA FDD only, it's required to indicate combined FGI capabilities in Table A.4.4-1a, Table A.4.4-2a and Table A.4.4-3a; when a UE supports E-UTRA TDD only, it's required to indicate combined FGI capabilities in Table A.4.4-1b, Table A.4.4-2b and Table A.4.4-3b; when a UE supports E-UTRA FDD/TDD dual mode with same FGI capabilities on FDD and TDD, it's required to indicate both FGI capabilities in Table A.4.4-1a, Table A.4.4-2a, Table A.4.4-3a, Table A.4.4-1b, Table A.4.4-2b and Table A.4.4-3b and make sure those FDD and TDD tables are identical.

Note 1: From Rel-11 onwards 3GPP TSG RAN has discontinued the usage of FGI bits. Instead it has introduced a different mechanism to accomplish the same purposes based on the principles described in TS 36.306 [17] clause 4. This new principles where applicable have been catered for in section A.4.5, e.g. Table A.4.5-2.

**Table A.4.4-1:Void**

**Table A.4.4-1a: Feature group indicators 1-32 for FDD**

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|---|---|---|---|---|---|---|---|
| 1 | Support of<br>- Intra-subframe frequency hopping for PUSCH scheduled by UL grant<br>- DCI format 3a (TPC commands for PUCCH and PUSCH with single bit power adjustments)<br>- Aperiodic CQI/PMI/RI reporting on PUSCH: Mode 2-0 - UE selected subband CQI without PMI<br>- Aperiodic CQI/PMI/RI reporting on PUSCH: Mode 2-2 - UE selected subband CQI with multiple PMI | - set to 1 by category M1 UE that has implemented and successfully tested "Aperiodic CQI/PMI/RI reporting on PUSCH: Mode 2-0 - UE selected subband CQI without PM" | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_1_F | Corresponding to the Index of Indicator, the leftmost binary bit 1. Set to true if supporting all functionalities in the feature group. |
| 2 | Support of<br>- Simultaneous CQI and ACK/NACK on PUCCH, i.e. PUCCH format 2a and 2b<br>- Absolute TPC command for PUSCH<br>- Resource allocation type 1 for PDSCH<br>- Periodic CQI/PMI/RI reporting on PUCCH: Mode 2-0 - UE selected subband CQI without PMI<br>- Periodic CQI/PMI/RI reporting on PUCCH: Mode 2-1 - UE selected subband CQI with single PMI | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_2_F | Corresponding to the Index of Indicator, the leftmost binary bit 2. Set to true if supporting all functionalities in the feature group. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|-----------|---------|------|----------|----------|
| 3 | Support of<br>- Semi-persistent scheduling<br>- TTI bundling<br>- 5bit RLC UM SN<br>- 7bit PDCP SN | - can only be set to 1 if the UE has set bit number 7 to 1. | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_3_F | Corresponding to the Index of Indicator, the leftmost binary bit 3. Set to true if supporting all functionalities in the feature group. |
| | Support of<br>- 5bit RLC UM SN<br>- 7bit PDCP SN | - can only be set to 1 if the UE has set bit number 7 to 1. | Yes, if UE supports VoLTE | Rel-9, Rel-10 | | | |
| | | | Yes, if UE supports VoLTE. Yes, if UE supports SRVCC to EUTRAN from GERAN. | Rel-11 | | | |
| 4 | Support of<br>- Short DRX cycle | - can only be set to 1 if the UE has set bit number 5 to 1. | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_4_F | Corresponding to the Index of Indicator, the leftmost binary bit 4. Set to true if supporting all functionalities in the feature group. |
| 5 | Support of<br>- Long DRX cycle<br>- DRX command MAC control element | | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_5_F | Corresponding to the Index of Indicator, the leftmost binary bit 5. Set to true if supporting all functionalities in the feature group. |
| | | | Yes | Rel-9 | | | |
| 6 | Support of<br>- Prioritized bit rate | | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_6_F | Corresponding to the Index of Indicator, the leftmost binary bit 6. Set to true if supporting all functionalities in the feature group. |
| | | | Yes | Rel-9 | | | |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|------|---------|------|----------|----------|
| 7 | Support of<br>- RLC UM | - can only be set to 0 if the UE does not support voice | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_7_F | Corresponding to the Index of Indicator, the leftmost binary bit 7. Set to true if supporting all functionalities in the feature group. |
| | | | Yes, if UE supports VoLTE | Rel-9 | | | |
| | | | Yes, if UE supports VoLTE. Yes, if UE supports SRVCC to EUTRAN from GERAN. | Rel-11 | | | |
| 8 | Support of<br>- EUTRA RRC_CONNECTED to UTRA CELL_DCH PS handover | - can only be set to 1 if the UE has set bit number 22 to 1 | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_8_F | Corresponding to the Index of Indicator, the leftmost binary bit 8. Set to true if supporting all functionalities in the feature group. |
| | Support of<br>- EUTRA RRC_CONNECTED to UTRA FDD or UTRA TDD CELL_DCH PS handover, if the UE supports either only UTRAN FDD or only UTRAN TDD<br><br>- EUTRA RRC_CONNECTED to UTRA FDD CELL_DCH PS handover, if the UE supports both UTRAN FDD and UTRAN TDD | | Yes (except for category M1 UE), if UE supports UTRA FDD | Rel-9 | | | |
| 9 | Support of<br>- EUTRA RRC_CONNECTED to GERAN GSM_Dedicated handover | - related to SR-VCC<br>- can only be set to 1 if the UE has set bit number 23 to 1 | | Rel-8, Rel-9, Rel-10 | 36.331, Annex B.1 | pc_FeatrGrp_9_F | Corresponding to the Index of Indicator, the leftmost binary bit 9. Set to true if supporting all functionalities in the feature group. |
| | | | Yes (except for category M1 UE), if UE supports SRVCC to EUTRAN from GERAN. | Rel-11 | | | |
| 10 | Support of<br>- EUTRA RRC_CONNECTED to GERAN (Packet_)Idle by Cell Change Order<br>- EUTRA RRC_CONNECTED to GERAN (Packet_)Idle by Cell Change Order with NACC (Network Assisted Cell Change) | | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_10_F | Corresponding to the Index of Indicator, the leftmost binary bit 10. Set to true if supporting all functionalities in the feature group. |
| 11 | Support of<br>- EUTRA RRC_CONNECTED to CDMA2000 1xRTT CS Active handover | - can only be set to 1 if the UE has sets bit number 24 to 1 | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_11_F | Corresponding to the Index of Indicator, the leftmost binary bit 11. Set to true if supporting all functionalities in the feature group. |

*ETSI*

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|------------------------------------------------------------------------------------------------------------|---------|------|----------|----------|
| 12 | Support of<br>- EUTRA RRC_CONNECTED to CDMA2000 HRPD Active handover | - can only be set to 1 if the UE has set bit number 26 to 1 | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_12_F | Corresponding to the Index of Indicator, the leftmost binary bit 12. Set to true if supporting all functionalities in the feature group. |
| 13 | Support of<br>- Inter-frequency handover (within FDD or TDD) | - can only be set to 1 if the UE has set bit number 25 to 1 | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_13_F | Corresponding to the Index of Indicator, the leftmost binary bit 13. Set to true if supporting all functionalities in the feature group. |
| | | | Yes (except for category M1 UE), unless UE only supports band 13 | Rel-9 | | | |
| 14 | Support of<br>- Measurement reporting event: Event A4 - Neighbour > threshold<br>- Measurement reporting event: Event A5 - Serving < threshold1 & Neighbour > threshold2 | | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_14_F | Corresponding to the Index of Indicator, the leftmost binary bit 14. Set to true if supporting all functionalities in the feature group. |
| | | | Yes (except for category M1 UE) | Rel-9 | | | |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|-----------------------------------------------------------------------------------------------------------|---------|------|----------|----------|
| 15 | Support of<br>- Measurement reporting event: Event B1 - Neighbour > threshold for UTRAN FDD or UTRAN TDD, if the UE supports either only UTRAN FDD or only UTRAN TDD and has set bit number 22 to 1<br><br>- Measurement reporting event: Event B1 - Neighbour > threshold for UTRAN FDD or UTRAN TDD, if the UE supports both UTRAN FDD and UTRAN TDD and has set bit number 22 or 39 to 1, respectively<br><br>- Measurement reporting event: Event B1 - Neighbour > threshold for GERAN, 1xRTT or HRPD, if the UE has set bit number 23, 24 or 26 to 1, respectively | - can only be set to 1 if the UE has set at least one of the bit number 22, 23, 24, 26 or 39 to 1.<br>- even if the UE sets bits 41, it shall still set bit 15 to 1 if measurement reporting event B1 is tested for all RATs supported by UE<br>- If a category M1 UE does not support this feature group, this bit shall be set to 0. | Yes for FDD, if UE supports only UTRAN FDD and does not support UTRAN TDD or GERAN or 1xRTT or HRPD | Rel-8<br><br>Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_15_F | Corresponding to the Index of Indicator, the leftmost binary bit 15. Set to true if supporting all functionalities in the feature group. |
| 16 | | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_16_F | Corresponding to the Index of Indicator, the leftmost binary bit 16. Set to true if supporting all functionalities in the feature group. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|------------------------------------------------------------------------------------------------------------|---------|------|----------|----------|
| | Support of<br>- Intra-frequency periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells*;<br>- Inter-frequency periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells*, if the UE has set bit number 25 to 1; and<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells* for UTRAN, GERAN, 1xRTT or HRPD, if the UE has set bit number 22, 23, 24 or 26 to 1, respectively.<br><br>NOTE: Event triggered periodical reporting (i.e. with *triggerType* set to *event* and with *reportAmount* > 1) is a mandatory functionality of event triggered reporting and therefore not the subject of this bit.<br><br>Support of<br>- Intra-frequency periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells*<br><br>- Inter-frequency periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells*, if the UE has set bit number 25 to 1<br><br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells* for UTRAN FDD or UTRAN TDD, if the UE supports either only UTRAN FDD or only UTRAN TDD and has set bit number 22 to 1<br><br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells* for UTRAN FDD or UTRAN TDD, if the UE supports both UTRAN FDD and UTRAN TDD and has set bit number 22 or 39 to 1, respectively<br><br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells* for GERAN, 1xRTT or HRPD, if the UE has set bit number 23, 24 or 26 to 1, respectively.<br><br>NOTE: Event triggered periodical reporting (i.e., with *triggerType* set to *event* and with *reportAmount* > 1) is a mandatory functionality of event triggered reporting and therefore not the subject of this bit. | | Yes | Rel-9 | | | |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|----------------------|-------|------------------------------------------------------------------------------------------------------------|---------|------|----------|----------|
| 17 | Support of<br>Intra-frequency ANR features including:<br>- Intra-frequency periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells*<br>- Intra-frequency periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* | - can only be set to 1 if the UE has set bit number 5 to 1.<br>- If a category M1 UE does not support this feature group, this bit shall be set to 0. | Yes | Rel-8<br><br>Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_17_F | Corresponding to the Index of Indicator, the leftmost binary bit 17. Set to true if supporting all functionalities in the feature group. |
| 18 | Support of<br>Inter-frequency ANR features including:<br>- Inter-frequency periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells*<br>- Inter-frequency periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* | - can only be set to 1 if the UE has set bit number 5 to 1.<br>- If a category M1 UE does not support this feature group, this bit shall be set to 0. | Yes, unless UE only supports band 13 | Rel-8<br><br>Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_18_F | Corresponding to the Index of Indicator, the leftmost binary bit 18. Set to true if supporting all functionalities in the feature group. |
| 19 | Support of<br>Inter-RAT ANR features including:<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells* for GERAN, if the UE has set bit number 23 to 1<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCellsForSON* for UTRAN, 1xRTT or HRPD, if the UE has set bit number 22, 24 or 26 to 1, respectively<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* for UTRAN, GERAN, 1xRTT or HRPD, if the UE has set bit number 22, 23, 24 or 26 to 1, respectively | - can only be set to 1 if the UE has set bit number 5 to 1 and the UE has set at least one of the bit number 22, 23, 24 or 26 to 1. | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_19_F | Corresponding to the Index of Indicator, the leftmost binary bit 19. Set to true if supporting all functionalities in the feature group. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|---|---|---|---|---|---|---|---|
| | Support of<br>Inter-RAT ANR features including:<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells* for GERAN, if the UE has set bit number 23 to 1<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCellsForSON* for UTRAN FDD or UTRAN TDD, if the UE supports either only UTRAN FDD or only UTRAN TDD and has set bit number 22 to 1<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCellsForSON* for UTRAN FDD or UTRAN TDD, if the UE supports both UTRAN FDD and UTRAN TDD and has set bit number 22 or 39 to 1, respectively<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCellsForSON* for 1xRTT or HRPD, if the UE has set bit number 24 or 26 to 1, respectively<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* for UTRAN FDD or UTRAN TDD, if the UE supports either only UTRAN FDD or only UTRANTDD and has set bit number 22 to 1<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* for UTRAN FDD or UTRAN TDD, if the UE supports both UTRAN FDD and UTRAN TDD and has set bit number 22 or 39 to 1, respectively<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* for GERAN, 1xRTT or HRPD, if the UE has set bit number 23, 24 or 26 to 1, respectively | - can only be set to 1 if the UE has set bit number 5 to 1 and the UE has set at least one of the bit number 22, 39, 23, 24 or 26 to 1.<br>- even if the UE sets bits 33 to 37, it shall still set bit 19 to 1 if inter-RAT ANR features are tested for all RATs for which inter-RAT measurement reporting is indicated as tested | | Rel-9 | | | |
| 20 | If bit number 7 is set to ' 0':<br>- SRB1 and SRB2 for DCCH + 8x AM DRB<br>If bit number 7 is set to ' 1':<br>- SRB1 and SRB2 for DCCH + 8x AM DRB<br>- SRB1 and SRB2 for DCCH + 5x AM DRB + 3x UM DRB<br><br>NOTE: UE which indicate support for a DRB combination also support all subsets of the DRB combination. Therefore, release of DRB(s) never results in an unsupported DRB combination. | | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_20_F | Corresponding to the Index of Indicator, the leftmost binary bit 20. Set to true if supporting all functionalities in the feature group. |

*ETSI*

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|---------------------------------------------------------------------------------------------------------|---------|------|----------|----------|
| | | - Regardless of what bit number 7 and bit number 20 is set to, UE shall support at least SRB1 and SRB2 for DCCH + 4x AM DRB<br>- Regardless of what bit number 20 is set to, if bit number 7 is set to ' 1', UE shall support at least SRB1 and SRB2 for DCCH + 4x AM DRB + 1x UM DRB | Yes | Rel-9 | | | |
| 21 | Support of<br>- Predefined intra- and inter-subframe frequency hopping for PUSCH with N_sb > 1<br><br>- Predefined inter-subframe frequency hopping for PUSCH with N_sb > 1 | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_21_F | Corresponding to the Index of Indicator, the leftmost binary bit 21. Set to true if supporting all functionalities in the feature group. |
| 22 | Support of<br>- UTRAN measurements, reporting and measurement reporting event B2 in E-UTRA connected mode | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_22_F | Corresponding to the Index of Indicator, the leftmost binary bit 22. Set to true if supporting all functionalities in the feature group. |
| | Support of<br>- UTRAN FDD or UTRAN TDD measurements, reporting and measurement reporting event B2 in E-UTRA connected mode, if the UE supports either only UTRAN FDD or only UTRAN TDD<br><br>- UTRAN FDD measurements, reporting and measurement reporting event B2 in E-UTRA connected mode, if the UE supports both UTRAN FDD and UTRAN TDD | | Yes for FDD, if UE supports UTRA FDD | Rel-9 | | | |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|---------------------------------------------------------------------------------------------------------|---------|------|----------|----------|
| 23 | Support of<br>- GERAN measurements, reporting and measurement reporting event B2 in E-UTRA connected mode | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_23_F | Corresponding to the Index of Indicator, the leftmost binary bit 23. Set to true if supporting all functionalities in the feature group. |
| 24 | Support of<br>- 1xRTT measurements, reporting and measurement reporting event B2 in E-UTRA connected mode | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_24_F | Corresponding to the Index of Indicator, the leftmost binary bit 24. Set to true if supporting all functionalities in the feature group. |
| | | | Yes, if UE supports enhanced 1xRTT CSFB | Rel-9 | | | |
| 25 | Support of<br>- Inter-frequency measurements and reporting in E-UTRA connected mode<br><br>NOTE: The UE setting this bit to 1 and indicating support for FDD and TDD frequency bands in the UE capability signalling implements and is tested for FDD measurements while the UE is in TDD, and for TDD measurements while the UE is in FDD. | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_25_F | Corresponding to the Index of Indicator, the leftmost binary bit 25. Set to true if supporting all functionalities in the feature group. |
| | | | Yes, unless UE only supports band 13 | Rel-9 | | | |
| 26 | Support of<br>- HRPD measurements, reporting and measurement reporting event B2 in E-UTRA connected mode | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_26_F | Corresponding to the Index of Indicator, the leftmost binary bit 26. Set to true if supporting all functionalities in the feature group. |
| | | | Yes, if UE supports HRPD | Rel-9 | | | |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|-----------------------------------------------------------------------------------------------------------|---------|------|----------|----------|
| 27 | Support of<br>- EUTRA RRC_CONNECTED to UTRA CELL_DCH CS handover<br>Support of<br>- EUTRA RRC_CONNECTED to UTRA FDD or UTRA TDD CELL_DCH CS handover, if the UE supports either only UTRAN FDD or only UTRAN TDD<br><br>- EUTRA RRC_CONNECTED to UTRA FDD CELL_DCH CS handover, if the UE supports both UTRAN FDD and UTRAN TDD | - related to SR-VCC<br>- can only be set to 1 if the UE has set bit number 8 to 1 and supports SR-VCC from EUTRA defined in TS 24.008<br>- If a category M1 UE does not support this feature group, this bit shall be set to 0. | Yes for FDD, if UE supports VoLTE and UTRA FDD | Rel-8<br><br>Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_27_F | Corresponding to the Index of Indicator, the leftmost binary bit 27. Set to true if supporting all functionalities in the feature group. |
| 28 | Support of<br>- TTI bundling | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | Yes for FDD | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_28_F | Corresponding to the Index of Indicator, the leftmost binary bit 28. Set to true if supporting all functionalities in the feature group. |
| 29 | Support of<br>- Semi-Persistent Scheduling | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_29_F | Corresponding to the Index of Indicator, the leftmost binary bit 29. Set to true if supporting all functionalities in the feature group. |
| 30 | Support of<br>- Handover between FDD and TDD | - can only be set to 1 if the UE has set bit number 13 to 1 | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_30_F | Corresponding to the Index of Indicator, the leftmost binary bit 30. Set to true if supporting all functionalities in the feature group. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|---|---------|------|----------|----------|
| 31 | Support of<br>- Indicates whether the UE supports the mechanisms defined for cells broadcasting multi band information i.e. comprehending multiBandInfoList, disregarding in RRC_CONNECTED the related system information fields and understanding the EARFCN signalling for all bands, that overlap with the bands supported by the UE, and that are defined in the earliest version of TS 36.101 [42] that includes all UE supported bands. | - In this release of the protocol, this bit will never be mandated to be set to 1<br>- This FGI bit concerns an optional release independent feature (as it was difficult to introduce this from REL-8 when using regular UE capability signalling) | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_31_F | Corresponding to the Index of Indicator, the leftmost binary bit 31. Set to true if supporting all functionalities in the feature group. |
| | | | | Rel-9 | | | |
| | | | Yes | Rel-10 | | | |
| 32 | Undefined | | | Rel-8 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 32. |

**Table A.4.4-1b: Feature group indicators 1-32 for TDD**

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|---|---|---|---|---|---|---|---|
| 1 | Support of<br>- Intra-subframe frequency hopping for PUSCH scheduled by UL grant<br>- DCI format 3a (TPC commands for PUCCH and PUSCH with single bit power adjustments)<br>- Aperiodic CQI/PMI/RI reporting on PUSCH: Mode 2-0 - UE selected subband CQI without PMI<br>- Aperiodic CQI/PMI/RI reporting on PUSCH: Mode 2-2 - UE selected subband CQI with multiple PMI | - set to 1 by category M1 UE that has implemented and successfully tested "Aperiodic CQI/PMI/RI reporting on PUSCH: Mode 2-0 - UE selected subband CQI without PM" | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_1_T | Corresponding to the Index of Indicator, the leftmost binary bit 1. Set to true if supporting all functionalities in the feature group. |
| 2 | Support of<br>- Simultaneous CQI and ACK/NACK on PUCCH, i.e. PUCCH format 2a and 2b<br>- Absolute TPC command for PUSCH<br>- Resource allocation type 1 for PDSCH<br>- Periodic CQI/PMI/RI reporting on PUCCH: Mode 2-0 - UE selected subband CQI without PMI<br>- Periodic CQI/PMI/RI reporting on PUCCH: Mode 2-1 - UE selected subband CQI with single PMI | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_2_T | Corresponding to the Index of Indicator, the leftmost binary bit 2. Set to true if supporting all functionalities in the feature group. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|---|---|---|---|---|---|---|---|
| 3 | Support of<br>- Semi-persistent scheduling<br>- TTI bundling<br>- 5bit RLC UM SN<br>- 7bit PDCP SN | - can only be set to 1 if the UE has set bit number 7 to 1. | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_3_T | Corresponding to the Index of Indicator, the leftmost binary bit 3.<br>Set to true if supporting all functionalities in the feature group. |
| | Support of<br>- 5bit RLC UM SN<br>- 7bit PDCP SN | - can only be set to 1 if the UE has set bit number 7 to 1. | Yes, if UE supports VoLTE | Rel-9, Rel-10 | | | |
| | | | Yes, if UE supports VoLTE.<br>Yes, if UE supports SRVCC to EUTRAN from GERAN. | Rel-11 | | | |
| 4 | Support of<br>- Short DRX cycle | - can only be set to 1 if the UE has set bit number 5 to 1. | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_4_T | Corresponding to the Index of Indicator, the leftmost binary bit 4.<br>Set to true if supporting all functionalities in the feature group. |
| 5 | Support of<br>- Long DRX cycle<br>- DRX command MAC control element | | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_5_T | Corresponding to the Index of Indicator, the leftmost binary bit 5.<br>Set to true if supporting all functionalities in the feature group. |
| | | | Yes | Rel-9 | | | |
| 6 | Support of<br>- Prioritized bit rate | | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_6_T | Corresponding to the Index of Indicator, the leftmost binary bit 6.<br>Set to true if supporting all functionalities in the feature group. |
| | | | Yes | Rel-9 | | | |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|---|---|---|---|---|---|---|---|
| 7 | Support of<br>- RLC UM | - can only be set to 0 if the UE does not support voice | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_7_T | Corresponding to the Index of Indicator, the leftmost binary bit 7. Set to true if supporting all functionalities in the feature group. |
| | | | Yes, if UE supports VoLTE | Rel-9 | | | |
| | | | Yes, if UE supports VoLTE. Yes, if UE supports SRVCC to EUTRAN from GERAN. | Rel-11 | | | |
| 8 | Support of<br>- EUTRA RRC_CONNECTED to UTRA CELL_DCH PS handover | - can only be set to 1 if the UE has set bit number 22 to 1 | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_8_T | Corresponding to the Index of Indicator, the leftmost binary bit 8. Set to true if supporting all functionalities in the feature group. |
| | Support of<br>- EUTRA RRC_CONNECTED to UTRA FDD or UTRA TDD CELL_DCH PS handover, if the UE supports either only UTRAN FDD or only UTRAN TDD<br><br>- EUTRA RRC_CONNECTED to UTRA FDD CELL_DCH PS handover, if the UE supports both UTRAN FDD and UTRAN TDD | | Yes, if UE supports UTRA | Rel-9 | | | |
| 9 | Support of<br>- EUTRA RRC_CONNECTED to GERAN GSM_Dedicated handover | - related to SR-VCC<br>- can only be set to 1 if the UE has set bit number 23 to 1 | | Rel-8, Rel-9, Rel-10 | 36.331, Annex B.1 | pc_FeatrGrp_9_T | Corresponding to the Index of Indicator, the leftmost binary bit 9. Set to true if supporting all functionalities in the feature group. |
| | | | Yes (except for category M1 UE), if UE supports SRVCC to EUTRAN from GERAN. | Rel-11 | | | |
| 10 | Support of<br>- EUTRA RRC_CONNECTED to GERAN (Packet_)Idle by Cell Change Order<br>- EUTRA RRC_CONNECTED to GERAN (Packet_)Idle by Cell Change Order with NACC (Network Assisted Cell Change) | | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_10_T | Corresponding to the Index of Indicator, the leftmost binary bit 10. Set to true if supporting all functionalities in the feature group. |
| 11 | Support of<br>- EUTRA RRC_CONNECTED to CDMA2000 1xRTT CS Active handover | - can only be set to 1 if the UE has sets bit number 24 to 1 | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_11_T | Corresponding to the Index of Indicator, the leftmost binary bit 11. Set to true if supporting all functionalities in the feature group. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|------|---------|------|----------|----------|
| 12 | Support of<br>- EUTRA RRC_CONNECTED to CDMA2000 HRPD Active handover | - can only be set to 1 if the UE has set bit number 26 to 1 | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_12_T | Corresponding to the Index of Indicator, the leftmost binary bit 12. Set to true if supporting all functionalities in the feature group. |
| 13 | Support of<br>- Inter-frequency handover (within FDD or TDD) | - can only be set to 1 if the UE has set bit number 25 to 1 | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_13_T | Corresponding to the Index of Indicator, the leftmost binary bit 13. Set to true if supporting all functionalities in the feature group. |
| | | | Yes (except for category M1 UE), unless UE only supports band 13 | Rel-9 | | | |
| 14 | Support of<br>- Measurement reporting event: Event A4 - Neighbour > threshold<br>- Measurement reporting event: Event A5 - Serving < threshold1 & Neighbour > threshold2 | | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_14_T | Corresponding to the Index of Indicator, the leftmost binary bit 14. Set to true if supporting all functionalities in the feature group. |
| | | | Yes (except for category M1 UE) | Rel-9 | | | |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|----------------------|-------|----------|---------|------|----------|----------|
| 15 | Support of<br>- Measurement reporting event: Event B1 - Neighbour > threshold for UTRAN FDD or UTRAN TDD, if the UE supports either only UTRAN FDD or only UTRAN TDD and has set bit number 22 to 1<br><br>- Measurement reporting event: Event B1 - Neighbour > threshold for UTRAN FDD or UTRAN TDD, if the UE supports both UTRAN FDD and UTRAN TDD and has set bit number 22 or 39 to 1, respectively<br><br>- Measurement reporting event: Event B1 - Neighbour > threshold for GERAN, 1xRTT or HRPD, if the UE has set bit number 23, 24 or 26 to 1, respectively | - can only be set to 1 if the UE has set at least one of the bit number 22, 23, 24, 26 or 39 to 1.<br>- even if the UE sets bits 41, it shall still set bit 15 to 1 if measurement reporting event B1 is tested for all RATs supported by UE<br>- If a category M1 UE does not support this feature group, this bit shall be set to 0. | Yes for FDD, if UE supports only UTRAN FDD and does not support UTRAN TDD or GERAN or 1xRTT or HRPD | Rel-8<br><br><br>Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_15_T | Corresponding to the Index of Indicator, the leftmost binary bit 15. Set to true if supporting all functionalities in the feature group. |
| 16 | | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_16_T | Corresponding to the Index of Indicator, the leftmost binary bit 16. Set to true if supporting all functionalities in the feature group. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|---------------------------------------------------------------------------------------------------------|---------|------|----------|----------|
| | Support of<br>- Intra-frequency periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells*;<br>- Inter-frequency periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells*, if the UE has set bit number 25 to 1; and<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells* for UTRAN, GERAN, 1xRTT or HRPD, if the UE has set bit number 22, 23, 24 or 26 to 1, respectively.<br><br>NOTE: Event triggered periodical reporting (i.e. with *triggerType* set to *event* and with *reportAmount* > 1) is a mandatory functionality of event triggered reporting and therefore not the subject of this bit.<br><br>Support of<br>- Intra-frequency periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells*<br><br>- Inter-frequency periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells*, if the UE has set bit number 25 to 1<br><br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells* for UTRAN FDD or UTRAN TDD, if the UE supports either only UTRAN FDD or only UTRAN TDD and has set bit number 22 to 1<br><br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells* for UTRAN FDD or UTRAN TDD, if the UE supports both UTRAN FDD and UTRAN TDD and has set bit number 22 or 39 to 1, respectively<br><br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells* for GERAN, 1xRTT or HRPD, if the UE has set bit number 23, 24 or 26 to 1, respectively.<br><br>NOTE: Event triggered periodical reporting (i.e., with *triggerType* set to *event* and with *reportAmount* > 1) is a mandatory functionality of event triggered reporting and therefore not the subject of this bit. | | Yes | Rel-9 | | | |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|-----------------------------------------------------------------------------------------------------------|---------|------|----------|----------|
| 17 | Support of<br>Intra-frequency ANR features including:<br>- Intra-frequency periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells*<br>- Intra-frequency periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* | - can only be set to 1 if the UE has set bit number 5 to 1.<br>- If a category M1 UE does not support this feature group, this bit shall be set to 0 | Yes | Rel-8<br><br>Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_17_T | Corresponding to the Index of Indicator, the leftmost binary bit 17. Set to true if supporting all functionalities in the feature group. |
| 18 | Support of<br>Inter-frequency ANR features including:<br>- Inter-frequency periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells*<br>- Inter-frequency periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* | - can only be set to 1 if the UE has set bit number 5 to 1.<br>- If a category M1 UE does not support this feature group, this bit shall be set to 0 | Yes, unless UE only supports band 13 | Rel-8<br><br>Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_18_T | Corresponding to the Index of Indicator, the leftmost binary bit 18. Set to true if supporting all functionalities in the feature group. |
| 19 | Support of<br>Inter-RAT ANR features including:<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells* for GERAN, if the UE has set bit number 23 to 1<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCellsForSON* for UTRAN, 1xRTT or HRPD, if the UE has set bit number 22, 24 or 26 to 1, respectively<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* for UTRAN, GERAN, 1xRTT or HRPD, if the UE has set bit number 22, 23, 24 or 26 to 1, respectively | - can only be set to 1 if the UE has set bit number 5 to 1 and the UE has set at least one of the bit number 22, 23, 24 or 26 to 1. | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_19_T | Corresponding to the Index of Indicator, the leftmost binary bit 19. Set to true if supporting all functionalities in the feature group. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|----------------------------------------------------------------------------------------------------------|---------|------|----------|----------|
| | Support of<br>Inter-RAT ANR features including:<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells* for GERAN, if the UE has set bit number 23 to 1<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCellsForSON* for UTRAN FDD or UTRAN TDD, if the UE supports either only UTRAN FDD or only UTRAN TDD and has set bit number 22 to 1<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCellsForSON* for UTRAN FDD or UTRAN TDD, if the UE supports both UTRAN FDD and UTRAN TDD and has set bit number 22 or 39 to 1, respectively<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCellsForSON* for 1xRTT or HRPD, if the UE has set bit number 24 or 26 to 1, respectively<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* for UTRAN FDD or UTRAN TDD, if the UE supports either only UTRAN FDD or only UTRANTDD and has set bit number 22 to 1<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* for UTRAN FDD or UTRAN TDD, if the UE supports both UTRAN FDD and UTRAN TDD and has set bit number 22 or 39 to 1, respectively<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* for GERAN, 1xRTT or HRPD, if the UE has set bit number 23, 24 or 26 to 1, respectively | - can only be set to 1 if the UE has set bit number 5 to 1 and the UE has set at least one of the bit number 22, 39, 23, 24 or 26 to 1.<br>- even if the UE sets bits 33 to 37, it shall still set bit 19 to 1 if inter-RAT ANR features are tested for all RATs for which inter-RAT measurement reporting is indicated as tested | | Rel-9 | | | |
| 20 | If bit number 7 is set to '0':<br>- SRB1 and SRB2 for DCCH + 8x AM DRB<br><br>If bit number 7 is set to '1':<br>- SRB1 and SRB2 for DCCH + 8x AM DRB<br>- SRB1 and SRB2 for DCCH + 5x AM DRB + 3x UM DRB<br><br>NOTE: UE which indicate support for a DRB combination also support all subsets of the DRB combination. Therefore, release of DRB(s) never results in an unsupported DRB combination. | | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_20_T | Corresponding to the Index of Indicator, the leftmost binary bit 20. Set to true if supporting all functionalities in the feature group. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|-------|---------|------|----------|----------|
| | | - Regardless of what bit number 7 and bit number 20 is set to, UE shall support at least SRB1 and SRB2 for DCCH + 4x AM DRB<br>- Regardless of what bit number 20 is set to, if bit number 7 is set to '1', UE shall support at least SRB1 and SRB2 for DCCH + 4x AM DRB + 1x UM DRB | Yes | Rel-9 | | | |
| 21 | Support of<br>- Predefined intra- and inter-subframe frequency hopping for PUSCH with N_sb > 1<br>- Predefined inter-subframe frequency hopping for PUSCH with N_sb > 1 | - If a category M1 UE does not support this feature group, this bit shall be set to 0 | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_21_T | Corresponding to the Index of Indicator, the leftmost binary bit 21. Set to true if supporting all functionalities in the feature group. |
| 22 | Support of<br>- UTRAN measurements, reporting and measurement reporting event B2 in E-UTRA connected mode | - If a category M1 UE does not support this feature group, this bit shall be set to 0 | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_22_T | Corresponding to the Index of Indicator, the leftmost binary bit 22. Set to true if supporting all functionalities in the feature group. |
| | Support of<br>- UTRAN FDD or UTRAN TDD measurements, reporting and measurement reporting event B2 in E-UTRA connected mode, if the UE supports either only UTRAN FDD or only UTRAN TDD<br><br>- UTRAN FDD measurements, reporting and measurement reporting event B2 in E-UTRA connected mode, if the UE supports both UTRAN FDD and UTRAN TDD | | Yes for FDD, if UE supports UTRA FDD | Rel-9 | | | |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|---|---|---|---|---|---|---|---|
| 23 | Support of<br>- GERAN measurements, reporting and measurement reporting event B2 in E-UTRA connected mode | - If a category M1 UE does not support this feature group, this bit shall be set to 0 | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_23_T | Corresponding to the Index of Indicator, the leftmost binary bit 23. Set to true if supporting all functionalities in the feature group. |
| 24 | Support of<br>- 1xRTT measurements, reporting and measurement reporting event B2 in E-UTRA connected mode | - If a category M1 UE does not support this feature group, this bit shall be set to 0 | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_24_T | Corresponding to the Index of Indicator, the leftmost binary bit 24. Set to true if supporting all functionalities in the feature group. |
| | | | Yes, if UE supports enhanced 1xRTT CSFB | Rel-9 | | | |
| 25 | Support of<br>- Inter-frequency measurements and reporting in E-UTRA connected mode<br>NOTE: The UE setting this bit to 1 and indicating support for FDD and TDD frequency bands in the UE capability signalling implements and is tested for FDD measurements while the UE is in TDD, and for TDD measurements while the UE is in FDD. | - If a category M1 UE does not support this feature group, this bit shall be set to 0 | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_25_T | Corresponding to the Index of Indicator, the leftmost binary bit 25. Set to true if supporting all functionalities in the feature group. |
| | | | Yes, unless UE only supports band 13 | Rel-9 | | | |
| 26 | Support of<br>- HRPD measurements, reporting and measurement reporting event B2 in E-UTRA connected mode | - If a category M1 UE does not support this feature group, this bit shall be set to 0 | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_26_T | Corresponding to the Index of Indicator, the leftmost binary bit 26. Set to true if supporting all functionalities in the feature group. |
| | | | Yes, if UE supports HRPD | Rel-9 | | | |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|-----------------------------------------------------------------------------------------------------------|---------|------|----------|----------|
| 27 | Support of<br>- EUTRA RRC_CONNECTED to UTRA CELL_DCH CS handover<br>Support of<br>- EUTRA RRC_CONNECTED to UTRA FDD or UTRA TDD CELL_DCH CS handover, if the UE supports either only UTRAN FDD or only UTRAN TDD<br><br>- EUTRA RRC_CONNECTED to UTRA FDD CELL_DCH CS handover, if the UE supports both UTRAN FDD and UTRAN TDD | - related to SR-VCC<br>- can only be set to 1 if the UE has set bit number 8 to 1 and supports SR-VCC from EUTRA defined in TS 24.008<br>- If a category M1 UE does not support this feature group, this bit shall be set to 0 | Yes for FDD, if UE supports VoLTE and UTRA FDD | Rel-8<br><br>Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_27_T | Corresponding to the Index of Indicator, the leftmost binary bit 27. Set to true if supporting all functionalities in the feature group. |
| 28 | Support of<br>- TTI bundling | - If a category M1 UE does not support this feature group, this bit shall be set to 0 | Yes for FDD | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_28_T | Corresponding to the Index of Indicator, the leftmost binary bit 28. Set to true if supporting all functionalities in the feature group. |
| 29 | Support of<br>- Semi-Persistent Scheduling | - If a category M1 UE does not support this feature group, this bit shall be set to 0 | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_29_T | Corresponding to the Index of Indicator, the leftmost binary bit 29. Set to true if supporting all functionalities in the feature group. |
| 30 | Support of<br>- Handover between FDD and TDD | - can only be set to 1 if the UE has set bit number 13 to 1 | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_30_T | Corresponding to the Index of Indicator, the leftmost binary bit 30. Set to true if supporting all functionalities in the feature group. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|-----------------------|-------|------------------------------------------------------------------------------------------------------------|---------|------|----------|----------|
| 31 | Support of<br>- Indicates whether the UE supports the mechanisms defined for cells broadcasting multi band information i.e. comprehending multiBandInfoList, disregarding in RRC_CONNECTED the related system information fields and understanding the EARFCN signalling for all bands, that overlap with the bands supported by the UE, and that are defined in the earliest version of TS 36.101 [42] that includes all UE supported bands. | - In this release of the protocol, this bit will never be mandated to be set to 1<br>- This FGI bit concerns an optional release independent feature (as it was difficult to introduce this from REL-8 when using regular UE capability signalling) | | Rel-8 | 36.331, Annex B.1 | pc_FeatrGrp_31_T | Corresponding to the Index of Indicator, the leftmost binary bit 31. Set to true if supporting all functionalities in the feature group. |
| | | | | Rel-9 | | | |
| | | | Yes | Rel-10 | | | |
| 32 | Undefined | | | Rel-8 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 32. |

**Table A.4.4-2: Void**

**Table A.4.4-2a: Feature group indicators 33-64 for FDD**

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|------------------------------------------------------------------------------------------------------------|---------|------|----------|----------|
| 33 | Inter-RAT ANR features for UTRAN including:<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCellsForSON*<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* | - can only be set to 1 if the UE has set bit number 5 and bit number 22 to 1. | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_33_F | Corresponding to the Index of Indicator, the leftmost binary bit 33. Set to true if supporting all functionalities in the feature group. |
| 34 | Inter-RAT ANR features for GERAN including:<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells*<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* | - can only be set to 1 if the UE has set bit number 5 and bit number 23 to 1. | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_34_F | Corresponding to the Index of Indicator, the leftmost binary bit 34. Set to true if supporting all functionalities in the feature group. |
| 35 | Inter-RAT ANR features for 1xRTT including:<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCellsForSON*<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* | - can only be set to 1 if the UE has set bit number 5 and bit number 24 to 1. | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_35_F | Corresponding to the Index of Indicator, the leftmost binary bit 35. Set to true if supporting all functionalities in the feature group. |
| 36 | Inter-RAT ANR features for HRPD including:<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCellsForSON*<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* | - can only be set to 1 if the UE has set bit number 5 and bit number 26 to 1. | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_36_F | Corresponding to the Index of Indicator, the leftmost binary bit 36. Set to true if supporting all functionalities in the feature group. |
| 37 | Inter-RAT ANR features for UTRAN TDD including:<br>- Inter-RAT periodical measurement reporting where triggerType is set to periodical and purpose is set to reportStrongestCellsForSON<br>- Inter-RAT periodical measurement reporting where triggerType is set to periodical and purpose is set to reportCGI | - can only be set to 1 if the UE has set bit number 5 and at least one of the bit number 22 (for UEs supporting only UTRA TDD) or the bit number 39 to 1. | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_37_F | Corresponding to the Index of Indicator, the leftmost binary bit 37. Set to true if supporting all functionalities in the feature group. |
| 38 | -EUTRA RRC_CONNECTED to UTRA TDD CELL_DCH PS handover, if the UE supports both UTRAN FDD and UTRAN TDD | - can only be set to 1 if the UE has set bit number 39 to 1. | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_38_F | Corresponding to the Index of Indicator, the leftmost binary bit 38. Set to true if supporting all functionalities in the feature group. |
| 39 | -UTRAN TDD measurements, reporting and measurement reporting event B2 in E-UTRA connected mode, if the UE supports both UTRAN FDD and UTRAN TDD | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_39_F | Corresponding to the Index of Indicator, the leftmost binary bit 39. Set to true if supporting all functionalities in the feature group. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|-----------------------------------------------------------------------------------------------------------|---------|------|----------|----------|
| 40 | -EUTRA RRC_CONNECTED to UTRA TDD CELL_DCH CS handover, if the UE supports both UTRAN FDD and UTRAN TDD | - related to SR-VCC<br>- can only be set to 1 if the UE has set bit number 38 to 1. | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_40_F | Corresponding to the Index of Indicator, the leftmost binary bit 40. Set to true if supporting all functionalities in the feature group. |
| 41 | Measurement reporting event: Event B1 - Neighbour > threshold for UTRAN FDD, if the UE supports UTRAN FDD and has set bit number 22 to 1 | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | Yes for FDD, unless UE has set bit number 15 to 1 | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_41_F | Corresponding to the Index of Indicator, the leftmost binary bit 41. Set to true if supporting all functionalities in the feature group. |
| 42 | DCI format 3a (TPC commands for PUCCH and PUSCH with single bit power adjustments) | | | Rel-13 | 36.331, Annex B.1 | pc_FeatrGrp_42_F | Corresponding to the Index of Indicator, the leftmost binary bit 42. |
| 43 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 43. |
| 44 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 44. |
| 45 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 45. |
| 46 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 46. |
| 47 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 47. |
| 48 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 48. |
| 49 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 49. |
| 50 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 50. |
| 51 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 51. |
| 52 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 52. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|---|---|---|---|---|---|---|---|
| 53 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 53. |
| 54 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 54. |
| 55 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 55. |
| 56 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 56. |
| 57 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 57. |
| 58 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 58. |
| 59 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 59. |
| 60 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 60. |
| 61 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 61. |
| 62 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 62. |
| 63 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 63. |
| 64 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 64. |

**Table A.4.4-2b: Feature group indicators 33-64 for TDD**

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|-----------|---------|------|----------|----------|
| 33 | Inter-RAT ANR features for UTRAN including:<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCellsForSON*<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* | - can only be set to 1 if the UE has set bit number 5 and bit number 22 to 1. | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_33_T | Corresponding to the Index of Indicator, the leftmost binary bit 33. Set to true if supporting all functionalities in the feature group. |
| 34 | Inter-RAT ANR features for GERAN including:<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCells*<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* | - can only be set to 1 if the UE has set bit number 5 and bit number 23 to 1. | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_34_T | Corresponding to the Index of Indicator, the leftmost binary bit 34. Set to true if supporting all functionalities in the feature group. |
| 35 | Inter-RAT ANR features for 1xRTT including:<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCellsForSON*<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* | - can only be set to 1 if the UE has set bit number 5 and bit number 24 to 1. | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_35_T | Corresponding to the Index of Indicator, the leftmost binary bit 35. Set to true if supporting all functionalities in the feature group. |
| 36 | Inter-RAT ANR features for HRPD including:<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportStrongestCellsForSON*<br>- Inter-RAT periodical measurement reporting where *triggerType* is set to *periodical* and *purpose* is set to *reportCGI* | - can only be set to 1 if the UE has set bit number 5 and bit number 26 to 1. | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_36_T | Corresponding to the Index of Indicator, the leftmost binary bit 36. Set to true if supporting all functionalities in the feature group. |
| 37 | Inter-RAT ANR features for UTRAN TDD including:<br>- Inter-RAT periodical measurement reporting where triggerType is set to periodical and purpose is set to reportStrongestCellsForSON<br>- Inter-RAT periodical measurement reporting where triggerType is set to periodical and purpose is set to reportCGI | - can only be set to 1 if the UE has set bit number 5 and at least one of the bit number 22 (for UEs supporting only UTRA TDD) or the bit number 39 to 1. | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_37_T | Corresponding to the Index of Indicator, the leftmost binary bit 37. Set to true if supporting all functionalities in the feature group. |
| 38 | -EUTRA RRC_CONNECTED to UTRA TDD CELL_DCH PS handover, if the UE supports both UTRAN FDD and UTRAN TDD | - can only be set to 1 if the UE has set bit number 39 to 1. | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_38_T | Corresponding to the Index of Indicator, the leftmost binary bit 38. Set to true if supporting all functionalities in the feature group. |
| 39 | -UTRAN TDD measurements, reporting and measurement reporting event B2 in E-UTRA connected mode, if the UE supports both UTRAN FDD and UTRAN TDD | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_39_T | Corresponding to the Index of Indicator, the leftmost binary bit 39. Set to true if supporting all functionalities in the feature group. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|------------|---------|------|----------|----------|
| 40 | -EUTRA RRC_CONNECTED to UTRA TDD CELL_DCH CS handover, if the UE supports both UTRAN FDD and UTRAN TDD | - related to SR-VCC <br> - can only be set to 1 if the UE has set bit number 38 to 1. | | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_40_T | Corresponding to the Index of Indicator, the leftmost binary bit 40. Set to true if supporting all functionalities in the feature group. |
| 41 | Measurement reporting event: Event B1 - Neighbour > threshold for UTRAN FDD, if the UE supports UTRAN FDD and has set bit number 22 to 1 | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | Yes for FDD, unless UE has set bit number 15 to 1 | Rel-9 | 36.331, Annex B.1 | pc_FeatrGrp_41_T | Corresponding to the Index of Indicator, the leftmost binary bit 41. Set to true if supporting all functionalities in the feature group. |
| 42 | DCI format 3a (TPC commands for PUCCH and PUSCH with single bit power adjustments) | | | Rel-13 | 36.331, Annex B.1 | pc_FeatrGrp_42_T | Corresponding to the Index of Indicator, the leftmost binary bit 42. |
| 43 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 43. |
| 44 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 44. |
| 45 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 45. |
| 46 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 46. |
| 47 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 47. |
| 48 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 48. |
| 49 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 49. |
| 50 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 50. |
| 51 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 51. |
| 52 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 52. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|------|---------|------|----------|----------|
| 53 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 53. |
| 54 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 54. |
| 55 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 55. |
| 56 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 56. |
| 57 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 57. |
| 58 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 58. |
| 59 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 59. |
| 60 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 60. |
| 61 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 61. |
| 62 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 62. |
| 63 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 63. |
| 64 | Undefined | | | Rel-9 | 36.331, Annex B.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 64. |

**Table A.4.4-3: Void**

**Table A.4.4-3a: Feature group indicators 101-132 for FDD**

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|----------------------------------|---------|------|----------|----------|
| 101 | - DMRS with OCC (orthogonal cover code) and SGH (sequence group hopping) disabling | - if the UE supports two or more layers for spatial multiplexing in UL, this bit shall be set to 1. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_101_F | Corresponding to the Index of Indicator, the leftmost binary bit 101. Set to true if supporting all functionalities in the feature group. |
| | | - If a category 0 UE does not support this feature, this bit shall be set to 0. | | Rel-12 | | | |
| 102 | - Trigger type 1 SRS (aperiodic SRS) transmission (Up to X ports)<br><br>NOTE: X = number of supported layers on given band | | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_102_F | Corresponding to the Index of Indicator, the leftmost binary bit 102. Set to true if supporting all functionalities in the feature group. |
| 103 | - PDSCH transmission mode 9 when up to 4 CSI reference signal ports are configured | - for Category 8 UEs, this bit shall be set to 1. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_103_F | Corresponding to the Index of Indicator, the leftmost binary bit 103. Set to true if supporting all functionalities in the feature group. |
| 104 | - PDSCH transmission mode 9 for TDD when 8 CSI reference signal ports are configured | - if the UE does not support TDD, this bit is irrelevant (capability signalling exists for FDD for this feature), and this bit shall be set to 0.<br>- for Category 8 UEs, this bit shall be set to 1. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_104_F | Corresponding to the Index of Indicator, the leftmost binary bit 104. Set to true if supporting all functionalities in the feature group. |
| 105 | - Periodic CQI/PMI/RI reporting on PUCCH: Mode 2-0 - UE selected subband CQI without PMI, when PDSCH transmission mode 9 is configured<br>- Periodic CQI/PMI/RI reporting on PUCCH: Mode 2-1 - UE selected subband CQI with single PMI, when PDSCH transmission mode 9 and up to 4 CSI reference signal ports are configured | - this bit can be set to 1 only if indices 2 (Table B.1-1) and 103 are set to 1. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_105_F | Corresponding to the Index of Indicator, the leftmost binary bit 105. Set to true if supporting all functionalities in the feature group. |
| | | - For UEs capable of TDD-FDD CA, this bit can be set to 1 for both FDD and TDD if index 2 is set to 1 for both FDD and TDD, and index 103 is set to 1 either for FDD and TDD. | | Rel-12 | | | |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|----------------------|-------|------|---------|------|----------|----------|
| 106 | - Periodic CQI/PMI/RI/PTI reporting on PUCCH: Mode 2-1<br>- UE selected subband CQI with single PMI, when PDSCH transmission mode 9 and 8 CSI reference signal ports are configured | - this bit can be set to 1 only if the UE supports PDSCH transmission mode 9 with 8 CSI reference signal ports (i.e., for TDD, if index 104 is set to 1, and for FDD, if *tm9-With-8Tx-FDD-r10* is set to ' supported') and if index 2 (Table B.1-1) is set to 1. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_106_F | Corresponding to the Index of Indicator, the leftmost binary bit 106.<br>Set to true if supporting all functionalities in the feature group. |
| | | - For UEs capable of TDD-FDD CA, this bit can be set to 1 for both FDD and TDD if either index 104 is set to 1 or tm9-With-8Tx-FDD-r10 is set to' supported', and if index 2 is set to 1 for both FDD and TDD. | | Rel-12 | | | |
| 107 | - Aperiodic CQI/PMI/RI reporting on PUSCH: Mode 2-0 - UE selected subband CQI without PMI, when PDSCH transmission mode 9 is configured<br>- Aperiodic CQI/PMI/RI reporting on PUSCH: Mode 2-2 - UE selected subband CQI with multiple PMI, when PDSCH transmission mode 9 and up to 4 CSI reference signal ports are configured | - this bit can be set to 1 only if indices 1 (Table B.1-1) and 103 are set to 1. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_107_F | Corresponding to the Index of Indicator, the leftmost binary bit 107.<br>Set to true if supporting all functionalities in the feature group. |
| 108 | - Aperiodic CQI/PMI/RI reporting on PUSCH: Mode 2-2 - UE selected subband CQI with multiple PMI, when PDSCH transmission mode 9 and 8 CSI reference signal ports are configured | - this bit can be set to 1 only if the UE supports PDSCH transmission mode 9 with 8 CSI reference signal ports (i.e., for TDD, if index 104 is set to 1, and for FDD, if *tm9-With-8Tx-FDD-r10* is set to' supported') and if index 1 (Table B.1-1) is set to 1. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_108_F | Corresponding to the Index of Indicator, the leftmost binary bit 108.<br>Set to true if supporting all functionalities in the feature group. |
| 109 | - Periodic CQI/PMI/RI reporting on PUCCH Mode 1-1, submode 1 | - this bit can be set to 1 only if the UE supports PDSCH transmission mode 9 with 8 CSI reference signal ports (i.e., for TDD, if index 104 is set to 1, and for FDD, if *tm9-With-8Tx-FDD-r10* is set to' supported'). | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_109_F | Corresponding to the Index of Indicator, the leftmost binary bit 109.<br>Set to true if supporting all functionalities in the feature group. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|---|---------|------|----------|----------|
| | | - For UEs capable of TDD-FDD CA, this bit can be set to 1 for both FDD and TDD if either index 104 is set to 1 or tm9-With-8Tx-FDD-r10 is set to 'supported'. | | Rel-12 | | | |
| 110 | - Periodic CQI/PMI/RI reporting on PUCCH Mode 1-1, submode 2 | - this bit can be set to 1 only if the UE supports PDSCH transmission mode 9 with 8 CSI reference signal ports (i.e., for TDD, if index 104 is set to 1, and for FDD, if *tm9-With-8Tx-FDD-r10* is set to 'supported'). | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_110_F | Corresponding to the Index of Indicator, the leftmost binary bit 110. Set to true if supporting all functionalities in the feature group. |
| | | - For UEs capable of TDD-FDD CA, this bit can be set to 1 for both FDD and TDD if either index 104 is set to 1 or tm9-With-8Tx-FDD-r10 is set to 'supported'. | | Rel-12 | | | |
| 111 | - Measurement reporting trigger Event A6 | - this bit can be set to 1 only if the UE supports carrier aggregation. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_111_F | Corresponding to the Index of Indicator, the leftmost binary bit 111. Set to true if supporting all functionalities in the feature group. |
| 112 | - SCell addition within3 the Handover to EUTRA procedure | - this bit can be set to 1 only if the UE supports carrier aggregation and the Handover to EUTRA procedure. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_112_F | Corresponding to the Index of Indicator, the leftmost binary bit 112. Set to true if supporting all functionalities in the feature group. |
| 113 | - Trigger type 0 SRS (periodic SRS) transmission on X Serving Cells<br><br>NOTE: X = number of supported component carriers in a given band combination | - this bit can be set to 1 only if the UE supports carrier aggregation in UL. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_113_F | Corresponding to the Index of Indicator, the leftmost binary bit 113. Set to true if supporting all functionalities in the feature group. |
| 114 | - Reporting of both UTRA CPICH RSCP and Ec/N0 in a Measurement Report | - this bit can be set to 1 only if index 22 (Table B.1-1) is set to 1. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_114_F | Corresponding to the Index of Indicator, the leftmost binary bit 114. Set to true if supporting all functionalities in the feature group. |

*ETSI*

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|---|---|---|---|---|---|---|---|
| 115 | - time domain ICIC RLM/RRM measurement subframe restriction for the serving cell<br>- time domain ICIC RRM measurement subframe restriction for neighbour cells<br>- time domain ICIC CSI measurement subframe restriction | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_115_F | Corresponding to the Index of Indicator, the leftmost binary bit 115.<br>Set to true if supporting all functionalities in the feature group. |
| 116 | - Relative transmit phase continuity for spatial multiplexing in UL | - this bit can be set to 1 only if the UE supports two or more layers for spatial multiplexing in UL. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_116_F | Corresponding to the Index of Indicator, the leftmost binary bit 116.<br>Set to true if supporting all functionalities in the feature group. |
| 117 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 117. |
| 118 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 118. |
| 119 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 119. |
| 120 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 120. |
| 121 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 121. |
| 122 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 122. |
| 123 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 123. |
| 124 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 124. |
| 125 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 125. |
| 126 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 126. |
| 127 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 127. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|-----------------------------------------------------------------------------------------------------------|---------|------|----------|----------|
| 128 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 128. |
| 129 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 129. |
| 130 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 130. |
| 131 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 131. |
| 132 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 132. |

**Table A.4.4-3b: Feature group indicators 101-132 for TDD**

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|------------------------------------------------------------------------------------------------------------|---------|------|----------|----------|
| 101 | - DMRS with OCC (orthogonal cover code) and SGH (sequence group hopping) disabling | - if the UE supports two or more layers for spatial multiplexing in UL, this bit shall be set to 1. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_101_T | Corresponding to the Index of Indicator, the leftmost binary bit 101. Set to true if supporting all functionalities in the feature group. |
| | | - If a category 0 UE does not support this feature, this bit shall be set to 0. | | Rel-12 | | | |
| 102 | - Trigger type 1 SRS (aperiodic SRS) transmission (Up to X ports)<br><br>NOTE: X = number of supported layers on given band | | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_102_T | Corresponding to the Index of Indicator, the leftmost binary bit 102. Set to true if supporting all functionalities in the feature group. |
| 103 | - PDSCH transmission mode 9 when up to 4 CSI reference signal ports are configured | - for Category 8 UEs, this bit shall be set to 1. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_103_T | Corresponding to the Index of Indicator, the leftmost binary bit 103. Set to true if supporting all functionalities in the feature group. |
| 104 | - PDSCH transmission mode 9 for TDD when 8 CSI reference signal ports are configured | - if the UE does not support TDD, this bit is irrelevant (capability signalling exists for FDD for this feature), and this bit shall be set to 0.<br>- for Category 8 UEs, this bit shall be set to 1. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_104_T | Corresponding to the Index of Indicator, the leftmost binary bit 104. Set to true if supporting all functionalities in the feature group. |
| 105 | - Periodic CQI/PMI/RI reporting on PUCCH: Mode 2-0 - UE selected subband CQI without PMI, when PDSCH transmission mode 9 is configured<br>- Periodic CQI/PMI/RI reporting on PUCCH: Mode 2-1 - UE selected subband CQI with single PMI, when PDSCH transmission mode 9 and up to 4 CSI reference signal ports are configured | - this bit can be set to 1 only if indices 2 (Table B.1-1) and 103 are set to 1. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_105_T | Corresponding to the Index of Indicator, the leftmost binary bit 105. Set to true if supporting all functionalities in the feature group. |
| | | - For UEs capable of TDD-FDD CA, this bit can be set to 1 for both FDD and TDD if index 2 is set to 1 for both FDD and TDD, and index 103 is set to 1 either for FDD and TDD. | | Rel-12 | | | |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|------|---------|------|----------|----------|
| 106 | - Periodic CQI/PMI/RI/PTI reporting on PUCCH: Mode 2-1<br>- UE selected subband CQI with single PMI, when PDSCH transmission mode 9 and 8 CSI reference signal ports are configured | - this bit can be set to 1 only if the UE supports PDSCH transmission mode 9 with 8 CSI reference signal ports (i.e., for TDD, if index 104 is set to 1, and for FDD, if *tm9-With-8Tx-FDD-r10* is set to' supported') and if index 2 (Table B.1-1) is set to 1. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_106_T | Corresponding to the Index of Indicator, the leftmost binary bit 106.<br>Set to true if supporting all functionalities in the feature group. |
| | | - For UEs capable of TDD-FDD CA, this bit can be set to 1 for both FDD and TDD if either index 104 is set to 1 or tm9-With-8Tx-FDD-r10 is set to 'supported', and if index 2 is set to 1 for both FDD and TDD. | | Rel-12 | | | |
| 107 | - Aperiodic CQI/PMI/RI reporting on PUSCH: Mode 2-0 - UE selected subband CQI without PMI, when PDSCH transmission mode 9 is configured<br>- Aperiodic CQI/PMI/RI reporting on PUSCH: Mode 2-2 - UE selected subband CQI with multiple PMI, when PDSCH transmission mode 9 and up to 4 CSI reference signal ports are configured | - this bit can be set to 1 only if indices 1 (Table B.1-1) and 103 are set to 1. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_107_T | Corresponding to the Index of Indicator, the leftmost binary bit 107.<br>Set to true if supporting all functionalities in the feature group. |
| 108 | - Aperiodic CQI/PMI/RI reporting on PUSCH: Mode 2-2 - UE selected subband CQI with multiple PMI, when PDSCH transmission mode 9 and 8 CSI reference signal ports are configured | - this bit can be set to 1 only if the UE supports PDSCH transmission mode 9 with 8 CSI reference signal ports (i.e., for TDD, if index 104 is set to 1, and for FDD, if *tm9-With-8Tx-FDD-r10* is set to ' supported') and if index 1 (Table B.1-1) is set to 1. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_108_T | Corresponding to the Index of Indicator, the leftmost binary bit 108.<br>Set to true if supporting all functionalities in the feature group. |
| 109 | - Periodic CQI/PMI/RI reporting on PUCCH Mode 1-1, submode 1 | - this bit can be set to 1 only if the UE supports PDSCH transmission mode 9 with 8 CSI reference signal ports (i.e., for TDD, if index 104 is set to 1, and for FDD, if *tm9-With-8Tx-FDD-r10* is set to' supported'). | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_109_T | Corresponding to the Index of Indicator, the leftmost binary bit 109.<br>Set to true if supporting all functionalities in the feature group. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|------|---------|------|----------|----------|
| | | - For UEs capable of TDD-FDD CA, this bit can be set to 1 for both FDD and TDD if either index 104 is set to 1 or tm9-With-8Tx-FDD-r10 is set to 'supported'. | | Rel-12 | | | |
| 110 | - Periodic CQI/PMI/RI reporting on PUCCH Mode 1-1, submode 2 | - this bit can be set to 1 only if the UE supports PDSCH transmission mode 9 with 8 CSI reference signal ports (i.e., for TDD, if index 104 is set to 1, and for FDD, if *tm9-With-8Tx-FDD-r10* is set to' supported'). | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_110_T | Corresponding to the Index of Indicator, the leftmost binary bit 110. Set to true if supporting all functionalities in the feature group. |
| | | - For UEs capable of TDD-FDD CA, this bit can be set to 1 for both FDD and TDD if either index 104 is set to 1 or tm9-With-8Tx-FDD-r10 is set to' supported'. | | Rel-12 | | | |
| 111 | - Measurement reporting trigger Event A6 | - this bit can be set to 1 only if the UE supports carrier aggregation. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_111_T | Corresponding to the Index of Indicator, the leftmost binary bit 111. Set to true if supporting all functionalities in the feature group. |
| 112 | - SCell addition within the Handover to EUTRA procedure | - this bit can be set to 1 only if the UE supports carrier aggregation and the Handover to EUTRA procedure. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_112_T | Corresponding to the Index of Indicator, the leftmost binary bit 112. Set to true if supporting all functionalities in the feature group. |
| 113 | - Trigger type 0 SRS (periodic SRS) transmission on X Serving Cells<br><br>NOTE: X = number of supported component carriers in a given band combination | - this bit can be set to 1 only if the UE supports carrier aggregation in UL. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_113_T | Corresponding to the Index of Indicator, the leftmost binary bit 113. Set to true if supporting all functionalities in the feature group. |
| 114 | - Reporting of both UTRA CPICH RSCP and Ec/N0 in a Measurement Report | - this bit can be set to 1 only if index 22 (Table B.1-1) is set to 1. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_114_T | Corresponding to the Index of Indicator, the leftmost binary bit 114. Set to true if supporting all functionalities in the feature group. |

*ETSI*

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|---|---|---|---|---|---|---|---|
| 115 | - time domain ICIC RLM/RRM measurement subframe restriction for the serving cell<br>- time domain ICIC RRM measurement subframe restriction for neighbour cells<br>- time domain ICIC CSI measurement subframe restriction | - If a category M1 UE does not support this feature group, this bit shall be set to 0. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_115_T | Corresponding to the Index of Indicator, the leftmost binary bit 115.<br>Set to true if supporting all functionalities in the feature group. |
| 116 | - Relative transmit phase continuity for spatial multiplexing in UL | - this bit can be set to 1 only if the UE supports two or more layers for spatial multiplexing in UL. | | Rel-10 | 36.331, Annex C.1 | pc_FeatrGrp_116_T | Corresponding to the Index of Indicator, the leftmost binary bit 116.<br>Set to true if supporting all functionalities in the feature group. |
| 117 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 117. |
| 118 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 118. |
| 119 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 119. |
| 120 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 120. |
| 121 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 121. |
| 122 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 122. |
| 123 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 123. |
| 124 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 124. |
| 125 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 125. |
| 126 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 126. |
| 127 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 127. |

| Item | Additional information | Notes | If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release | Release | Ref. | Mnemonic | Comments |
|------|------------------------|-------|------------------------------------------------------------------------------------------------------------|---------|------|----------|----------|
| 128 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 128. |
| 129 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 129. |
| 130 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 130. |
| 131 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 131. |
| 132 | Undefined | | | Rel-10 | 36.331, Annex C.1 | | Corresponding to the Index of Indicator, the leftmost binary bit 132. |

## A.4.5 Additional information

**Table A.4.5-1: Additional UE radio access capabilities**

| Item | Additional capabilities | Ref. | Release | Comments |
|------|-------------------------|------|---------|----------|
| 1 | Support of CSG | 36.331, Annex B.2 | Rel-8 | |
| 2 | Support of intra-frequency SI acquisition for HO in FDD | 36.306, 4.3.11.1 | Rel-9 | |
| 3 | Support of inter-frequency SI acquisition for HO in FDD | 36.306, 4.3.11.2 | Rel-9 | |
| 4 | Need for inter-frequency gaps (Note 1) | 36.306, 4.3.6.1 | Rel-8 | |
| 5 | Need for inter-RAT gaps (Note 1) | 36.306, 4.3.6.1 | Rel-8 | |
| 6 | Support of E-UTRA bands within band group FDD_Nonly | 36.133, Annex A.3.7.2 | Rel-12 | |
| 7 | Support of rsrqMeasWideband | 36.306, 4.3.6.2 | Rel-11 | |
| 8 | Support of Maximum CSI processes of One on a component carrier within a band with PDSCH transmission mode 10 | 36.306, 4.3.5.5 | Rel-11 | |
| 9 | Void | | | |
| 10 | Disable E-UTRA capability if IMSVoIP not supported by the network | 23.221, 7.2a, 24.301, 4.5 | Rel-8 | pc_Disable_E-UTRA_NOIMSVoIP |
| 11 | Support of Maximum CSI processes of Three on a component carrier within a band with PDSCH transmission mode 10 | 36.306, 4.3.5.5 | Rel-11 | |
| 12 | Support of Maximum CSI processes of Four on a component carrier within a band with PDSCH transmission mode 10 | 36.306, 4.3.5.5 | Rel-11 | |
| 13 | Support of multiClusterPUSCH-WithinCC-r10 | 36.306, 4.3.4.13 | Rel-10 | |
| 14 | Support of FDD-TDD CA with PCell in TDD band | 36.306, 4.3.4.28 | | The UE may not send the IE tdd-FDD-CA-PCellDuplex-r12 |
| 15 | Support of FDD-TDD CA with PCell in FDD band | 36.306, 4.3.4.28 | | The UE may not send the IE tdd-FDD-CA-PCellDuplex-r12 |
| 16 | Support of interRAT-PS-HO-ToGERAN | 36.306, 4.3.7.11 | Rel-8 | |
| 17 | Support of 64QAM in UL | 36.306, 4.3.4.39 | Rel-12 | |
| 18 | Support of 256QAM in DL | 36.306, 4.3.5.7 | Rel-12 | |
| 19 | Support CRS based discovery signals measurement | 36.306, 4.3.6.9 | Rel-12 | |
| 20 | Support CSI-RS based discovery signals measurement | 36.306, 4.3.6.10 | Rel-12 | |
| 21 | Support the behaviour on DL signals and physical channels when SCell is deactivated and discovery signals measurement is configured | 36.306, 4.3.4.38 | Rel-12 | |
| 22 | Support of 4Rx antenna ports | 36.101, 7.2 | Rel-13 | |
| 23 | Support of ProSe direct communication | 36.306, 4.3.21.1 | Rel-12 | |
| 24 | Support of ProSe direct discovery | 36.306, 4.3.21.3 | Rel-12 | |
| 25 | Support of CE mode A | 36.306, 4.3.8.3 | Rel-13 | Mandatory for CAT M1 UE |
| 26 | Support of CE mode B | 36.306, 4.3.29.1 | Rel-13 | |
| 27 | Support of DC ASYNCH | 36.306, 4.3.29.2 | Rel-12 | The UE supports asynchronous dual connectivity and power control mode 2 |
| 28 | Support of DC SCG DRB | 36.306, 4.3.20.2 | Rel-12 | The UE supports dual connectivity and DRB type of SCG bearer |
| 29 | Support of DC Split DRB | 36.306, 4.3.20.1 | Rel-12 | The UE supports dual connectivity and DRB type of Split bearer |
| 30 | Support of MPR for intra-band contiguous carrier aggregation bandwidth class C with non-contiguous resource allocation | 36.306, 4.3.5.10 36.101, H.1 | Rel-10 | ModifiedMPR_Behavior bit 0 (leftmost bit) |
| 31 | Support of A-MPR associated with NS_05 for Band 1 | 36.306, 4.3.5.10 36.101, H.1 | Rel-10 | ModifiedMPR_Behavior bit 1 |
| 32 | supports downlink LAA operation | 36.306, 4.3.23.1 | Rel-13 | |
| 33 | supports measurement and reporting for RSSI and channel occupancy | 36.306, 4.3.6.19 | Rel-13 | |
| 34 | Support of User plane CIoT | 24.301, 5.3.15 | Rel-13 | |
| 35 | Support of EMM-REGISTERED without PDN | 24.301, 5.3.15 | Rel-13 | |
| 36 | Support of EMM-REGISTERED with PDN | 24.301, 5.3.15 | Rel-13 | |
| 37 | Support of 4Rx antenna ports in at least one FDD frequency band | 36.101, 7.2 | Rel-13 | |

| 38 | Support of 4Rx antenna ports in at least one TDD frequency band | 36.101, 7.2 | Rel-13 | |
| 39 | Support of FDD-TDD CA with PCell in FDD band and SCell with 4Rx supported TDD RF band | 36.306, 4.3.4.28, 36.101, 7.2 | Rel-13 | |
| 40 | Support of 4Rx antenna ports on all supported FDD operating bands | 36.101, 8.1.2.6.1, 36.133, A.3.8.1 | Rel-13 | UE with same FDD band support declared in tables 4.3-3 and A.4.5-5 |
| 41 | Support of 4Rx antenna ports on all supported TDD operating bands | 36.101, 8.1.2.6.1, 36.133, A.3.8.1 | Rel-13 | UE with same TDD band support declared in tables 4.3-3 and A.4.5-5 |
| 42 | Support of A-MPR associated with NS_04 for Band 41 | 36.306, 4.3.5.10 36.101, H.1 | Rel-12 | ModifiedMPR_Behavior bit 2 |
| 43 | Support of RSSI and Channel occupancy reporting | 36.306, 4.3.6.19 | Rel-13 | Support of RSSI and Channel Occupancy. |
| 44 | Support of intra-frequency SI acquisition in TDD for HO | 36.306, 4.3.11.1 | Rel-9 | |
| 45 | Support of inter-frequency SI acquisition in TDD for HO | 36.306, 4.3.11.2 | Rel-9 | |
| 46 | Support of 4-layer spatial multiplexing with transmission mode 3 and transmission mode 4 | 36.306, 4.3.5.14. | Rel-10 | |
| 47 | Void | | | |
| 48 | Support of autonomous resource selection mode with full sensing for V2X sidelink communication | 36.306, 4.3.21.15 | Rel-14 | |
| 49 | Support of SLSS transmission and reception for V2X sidelink communication | 36.306, 4.3.21.17 | Rel-14 | |
| 50 | Support of maximum transmit power associated with Power class 2 V2X UE | 36.306, 4.3.21.22 | Rel-14 | |
| 51 | Support of TM-9 in CE Mode A | 36.306 4.3.29.10 | Rel-13 | |
| 52 | Support of TM-9 in CE Mode B | 36.306 4.3.29.11 | Rel-13 | |
| 53 | Support of 4-layer spatial multiplexing with transmission mode 9 and transmission mode 10 | 36.306, 4.3.4.7 | Rel-10 | |
| 54 | Support of TDD UL/DL reconfiguration for TDD serving cell(s) via monitoring PDCCH with eIMTA-RNTI on a TDD PCell, and HARQ feedback according to UL and DL HARQ reference configurations | 36.306 4.3.4.31 | Rel-12 | |
| 55 | Support of Rel-12 DL CSI subframe set configuration | 36.306 4.3.4.29 | Rel-12 | |
| 56 | Support of tm9 operation on LAA cell(s). | 36.306, 4.3.23.6 | Rel-13 | |
| 57 | Supports of RRM measurements on LAA cell(s) based on CSI-RS-based DRS. | 36.306, 4.3.23.3 | Rel-13 | |
| 58 | Support of 256QAM in UL | 36.306 4.3.4.73 | Rel-14 | |
| 59 | Support of SRS switching between a band pair | 36.306, 4.3.5.24, 4.3.5.25 | Rel-14 | |
| 60 | Support of NPRACH on non-anchor carrier | 36.306, 4.3.30.1 | Rel-14 | |
| 61 | Support of csi-RS-DiscoverySignalsMeas-r12 | 36.331, 6.3.6 | Rel-12 | |
| 62 | Support of UL LAA | 36.306, 4.3.23.8 | Rel-14 | |
| 63 | Support of TM-6 in CE Mode A | 36.306 4.3.29.12 | Rel 13 | |
| 64 | Support of high speed measurement enhancements | 36.306 4.3.33.1 | Rel-14 | |
| 65 | Support of PUCCH transmission on SCell in CA | 36.306 4.3.4.47 | Rel-13 | |
| 66 | Support of simultaneous E-UTRA V2X sidelink and E-UTRA uplink transmissions | 36.306 4.3.5.27 | Rel-14 | |
| 67 | Support of transmitting PSCCH/PSSCH using dynamic scheduling | 36.306 4.3.21.14 | Rel-14 | |
| 68 | Support of Channel Busy Ratio measurement and reporting of Channel Busy Ratio measurement to eNB for V2X sidelink communication | 36.306 4.3.21.18 | Rel-14 | |
| 69 | Support of transmission and reception in the configuration of non-adjacent PSCCH and PSSCH for V2X sidelink communication | 36.306 4.3.21.21 | Rel-14 | |
| 70 | Support of reception of 20 PSCCH in a subframe and decoding of 136 RBs per subframe counting both PSCCH and PSSCH in a band for V2X sidelink communication | 36.306 4.3.21.13 | Rel-14 | |

| 71 | Support of Increased UE carrier monitoring E-UTRA | 36.306 4.3.6.6 | Rel-12 | |
| 72 | Support of codebookConfig 1 for non-precoded EBF/ FD-MIMO operation in TM9 | 36.306 4.3.28.6 | Rel-13 | |
| 73 | Support of codebookConfig 2 for non-precoded EBF/ FD-MIMO operation in TM9 | 36.306 4.3.28.6 | Rel-13 | |
| 74 | Support of codebookConfig 3 for non-precoded EBF/ FD-MIMO operation in TM9 | 36.306 4.3.28.6 | Rel-13 | |
| 75 | Support of codebookConfig 4 for non-precoded EBF/ FD-MIMO operation in TM9 | 36.306 4.3.28.6 | Rel-13 | |
| 76 | Support of Increased UE carrier monitoring UTRA | 36.306 4.3.6.7 | Rel-12 | |
| Note 1: Need for inter-frequency gaps or inter-RAT gaps indicates that the UE does not support corresponding measurement without gaps. | | | | |

**Table A.4.5-2: Additional UE radio access capabilities (Mandatory for Rel-11 and onward)**

| Item | Additional capabilities | Ref. | Release | Status (Note 1) | Support (Note 2) | Comments |
|---|---|---|---|---|---|---|
| 1 | UE supports CRS interference handling | 36.306, 4.3.4.15 | Rel-11 | O.01 | | This is a Rel-11 Mandatory feature |
| 2 | UE supports ss-CCH interference handling | 36.306, 4.3.4.20 | Rel-11 | O.01 | | This is a Rel-11 Mandatory feature |
| 3 | UE supports multiple timing advances for each band combination supported by the UE | 36.306, 4.3.5.3 | Rel-11 | O.01 | | This is a Rel-11 Mandatory feature (Note 3) |
| Note 1: From Rel-11 onwards 3GPP TSG RAN has discontinued the usage of FGI bits (see A.4.4). Instead it has introduced a different mechanism to accomplish the same purposes based on the following principles (TS 36.306 [17] clause 4): 'For optional features, the UE radio access capability parameter indicates whether the feature has been implemented and successfully tested. For mandatory features with the UE radio access capability parameter, the parameter indicates whether the feature has been successfully tested.' Reflecting this situation, in the present table the status for Mandatory features would be indicated as conditional Optional (O.xx) until IOT testing availability is ensured. The decision when IOT testing availability can be considered ensured is made by 3GPP TSG RAN. After the 3GPP TSG RAN decision that IOT testing is available, the status of the capability parameter will be changed to Mandatory (M) and the release from which this requirement apply would be explicitly stated. | | | | | | |
| Note 2: If indicated "Yes" the feature shall be implemented and successfully tested for the corresponding release. | | | | | | |
| Note 3: It is mandatory for UEs of this release of the specification to support this capability for band combinations having an UL on multiple FDD bands (see 36.306, 4.3.5.3). In the context of evaluating the status of the capability this would depend on the indication for UL support provided in Table A.4.3.3.3-3 i.e. if for at least one CA configurations for Inter-band CA the UE indicates A-A then the Support of multiple timing advances for this CA configuration is Mandatory. | | | | | | |

**Table A.4.5-2a: Additional UE radio access capabilities Conditions**

| O.01 | IF The feature has been IOT-ed THEN Support shall be indicated ELSE Support shall not be indicated |
|---|---|

**Table A.4.5-3: UL MIMO Capabilities**

| Item | RF Baseline Implementation Capabilities | Ref. | Comments |
|------|------------------------------------------|------|----------|
| 1 | Frequency band: 1920-1980, 2110-2170 MHz | 36.101, 5.5 | FDD Band 1 |
| 2 | Frequency band: 1850-1910, 1930-1990 MHz | 36.101, 5.5 | FDD Band 2 |
| 3 | Frequency band: 1710-1785, 1805-1880 MHz | 36.101, 5.5 | FDD Band 3 |
| 4 | Frequency band: 1710-1755, 2110-2155 MHz | 36.101, 5.5 | FDD Band 4 |
| 5 | Frequency band: 824-849, 869-894 MHz | 36.101, 5.5 | FDD Band 5 |
| 6 | Frequency band: 830-840, 875-885 MHz | 36.101, 5.5 | FDD Band 6 |
| 7 | Frequency band: 2500-2570, 2620-2690 MHz | 36.101, 5.5 | FDD Band 7 |
| 8 | Frequency band: 880-915, 925-960 MHz | 36.101, 5.5 | FDD Band 8 |
| 9 | Frequency band: 1749.9-1784.9, 1844.9-1879.9 MHz | 36.101, 5.5 | FDD Band 9 |
| 10 | Frequency band: 1710-1770, 2110-2170 MHz | 36.101, 5.5 | FDD Band 10 |
| 11 | Frequency band: 1427.9-1447.9, 1475.9-1495.9 MHz | 36.101, 5.5 | FDD Band 11 |
| 12 | Frequency band: 699-716, 729-746 MHz | 36.101, 5.5 | FDD Band 12 |
| 13 | Frequency band: 777-787, 746-756 MHz | 36.101, 5.5 | FDD Band 13 |
| 14 | Frequency band: 788-798, 758-768 MHz | 36.101, 5.5 | FDD Band 14 |
| 15 | Reserved | 36.101, 5.5 | FDD Band 15 |
| 16 | Reserved | 36.101, 5.5 | FDD Band 16 |
| 17 | Frequency band: 704-716, 734-746 MHz | 36.101, 5.5 | FDD Band 17 |
| 18 | Frequency band: 815-830, 860-875 MHz | 36.101, 5.5 | FDD Band 18 |
| 19 | Frequency band: 830-845, 875-890 MHz | 36.101, 5.5 | FDD Band 19 |
| 20 | Frequency band: 832-862, 791-821MHz | 36.101, 5.5 | FDD Band 20 |
| 21 | Frequency band: 1447.9-1462.9, 1495.9-1510.9 MHz | 36.101, 5.5 | FDD and HD-FDD Band 21 |
| 22 | Frequency band: 3410-3490, 3510-3590 MHz | 36.101, 5.5 | FDD Band 22 |
| 23 | Frequency band: 2000-2020, 2180-2200 MHz | 36.101, 5.5 | FDD Band 23 |
| 24 | Frequency band: 1626.5-1660.5, 1525-1559 MHz | 36.101, 5.5 | FDD Band 24 |
| 25 | Frequency band: 1850-1915, 1930-1995 MHz | 36.101, 5.5 | FDD Band 25 |
| 26 | Frequency band: 814-849, 859-894 MHz | 36.101, 5.5 | FDD Band 26 |
| 27 | Frequency band: 807-824, 852-869 MHz | 36.101, 5.5 | FDD Band 27 |
| 28 | Frequency band: 703-748, 758-803 MHz | 36.101, 5.5 | FDD Band 28 |
| 29 | Frequency band: N/A, 717-728 MHz | 36.101, 5.5 | FDD Band 29 |
| 30 | Frequency band: 2305-2315, 2350-2360 MHz (Note 1) | 36.101, 5.5 | FDD Band 30 |
| 31 | Frequency band: 452.5-457.5, 462.5-467.5 MHz | 36.101, 5.5 | FDD Band 31 |
| ... | | | |
| 33 | Frequency band: 1900-1920, 1900-1920 MHz | 36.101, 5.5 | TDD Band 33 |
| 34 | Frequency band: 2010-2025, 2010-2025 MHz | 36.101, 5.5 | TDD Band 34 |
| 35 | Frequency band: 1850-1910, 1850-1910 MHz | 36.101, 5.5 | TDD Band 35 |
| 36 | Frequency band: 1930-1990, 1930-1990 MHz | 36.101, 5.5 | TDD Band 36 |
| 37 | Frequency band: 1910-1930, 1910-1930 MHz | 36.101, 5.5 | TDD Band 37 |
| 38 | Frequency band: 2570-2620, 2570-2620 MHz | 36.101, 5.5 | TDD Band 38 |
| 39 | Frequency band: 1880-1920, 1880-1920 MHz | 36.101, 5.5 | TDD Band 39 |
| 40 | Frequency band: 2300-2400, 2300-2400 MHz | 36.101, 5.5 | TDD Band 40 |
| 41 | Frequency band: 2496-2690, 2496-2690 MHz | 36.101, 5.5 | TDD Band 41 |
| 42 | Frequency band: 3400-3600, 3400-3600 MHz | 36.101, 5.5 | TDD Band 42 |
| 43 | Frequency band: 3600-3800, 3600-3800 MHz | 36.101, 5.5 | TDD Band 43 |
| 44 | Frequency band: 703-803, 703-803 MHz | 36.101, 5.5 | TDD Band 44 |
| 45 | Frequency band: 1447-1467, 1447-1467 MHz | 36.101, 5.5 | TDD Band 45 |
| ... | | | |
| 48 | Frequency band: 3550-3700, 3550-3700 MHz | 36.101, 5.5 | TDD Band 48 |
| 65 | Frequency band: 1920-2010, 2110-2200 MHz | 36.101, 5.5 | FDD Band 65 |
| 66 | Frequency band: 1710-1780, 2110-2200 MHz | 36.101, 5.5 | FDD Band 66 |
| ... | | | |
| 68 | Frequency band: 698-728, 753-783 MHz | 36.101, 5.5 | FDD Band 68 |
| … | | | |
| 70 | Frequency band: 1695-1710, 1995-2020 MHz | 36.101, 5.5 | FDD Band 70 |
| … | | | |
| 72 | Frequency band: 451-456, 461-466 MHz | 36.101, 5.5 | FDD Band 72 |
| ... | | | |
| 74 | Frequency band: 1427-1470, 1475-1515 MHz | 36.101, 5.5 | FDD Band 74 |
| Note 1: | The uplink transmission is not allowed at this band for the UE with the externally vehicle-mounted antennas. | | |

**Table A.4.5-4: nonContiguousUL-RA-WithinCC-Info-r10 Capabilities**
**(required for MultiClusterPUSCH-WithinCC-r10)**

| Item | RF Baseline Implementation Capabilities | Ref. | Comments |
|------|------------------------------------------|------|----------|
| 1 | Frequency band: 1920-1980, 2110-2170 MHz | 36.101, 5.5 | FDD Band 1 |
| 2 | Frequency band: 1850-1910, 1930-1990 MHz | 36.101, 5.5 | FDD Band 2 |
| 3 | Frequency band: 1710-1785, 1805-1880 MHz | 36.101, 5.5 | FDD Band 3 |
| 4 | Frequency band: 1710-1755, 2110-2155 MHz | 36.101, 5.5 | FDD Band 4 |
| 5 | Frequency band: 824-849, 869-894 MHz | 36.101, 5.5 | FDD Band 5 |
| 6 | Frequency band: 830-840, 875-885 MHz | 36.101, 5.5 | FDD Band 6 |
| 7 | Frequency band: 2500-2570, 2620-2690 MHz | 36.101, 5.5 | FDD Band 7 |
| 8 | Frequency band: 880-915, 925-960 MHz | 36.101, 5.5 | FDD Band 8 |
| 9 | Frequency band: 1749.9-1784.9, 1844.9-1879.9 MHz | 36.101, 5.5 | FDD Band 9 |
| 10 | Frequency band: 1710-1770, 2110-2170 MHz | 36.101, 5.5 | FDD Band 10 |
| 11 | Frequency band: 1427.9-1447.9, 1475.9-1495.9 MHz | 36.101, 5.5 | FDD Band 11 |
| 12 | Frequency band: 699-716, 729-746 MHz | 36.101, 5.5 | FDD Band 12 |
| 13 | Frequency band: 777-787, 746-756 MHz | 36.101, 5.5 | FDD Band 13 |
| 14 | Frequency band: 788-798, 758-768 MHz | 36.101, 5.5 | FDD Band 14 |
| 15 | Reserved | 36.101, 5.5 | FDD Band 15 |
| 16 | Reserved | 36.101, 5.5 | FDD Band 16 |
| 17 | Frequency band: 704-716, 734-746 MHz | 36.101, 5.5 | FDD Band 17 |
| 18 | Frequency band: 815-830, 860-875 MHz | 36.101, 5.5 | FDD Band 18 |
| 19 | Frequency band: 830-845, 875-890 MHz | 36.101, 5.5 | FDD Band 19 |
| 20 | Frequency band: 832-862, 791-821MHz | 36.101, 5.5 | FDD Band 20 |
| 21 | Frequency band: 1447.9-1462.9, 1495.9-1510.9 MHz | 36.101, 5.5 | FDD Band 21 |
| 22 | Frequency band: 3410-3490, 3510-3590 MHz | 36.101, 5.5 | FDD Band 22 |
| 23 | Frequency band: 2000-2020, 2180-2200 MHz | 36.101, 5.5 | FDD Band 23 |
| 24 | Frequency band: 1626.5-1660.5, 1525-1559 MHz | 36.101, 5.5 | FDD Band 24 |
| 25 | Frequency band: 1850-1915, 1930-1995 MHz | 36.101, 5.5 | FDD Band 25 |
| 26 | Frequency band: 814-849, 859-894 MHz | 36.101, 5.5 | FDD Band 26 |
| 27 | Frequency band: 807-824, 852-869 MHz | 36.101, 5.5 | FDD Band 27 |
| 28 | Frequency band: 703-748, 758-803 MHz | 36.101, 5.5 | FDD Band 28 |
| 29 | Frequency band: N/A, 717-728 MHz | 36.101, 5.5 | FDD Band 29 |
| 30 | Frequency band: 2305-2315, 2350-2360 MHz (Note 1) | 36.101, 5.5 | FDD Band 30 |
| 31 | Frequency band: 452.5-457.5, 462.5-467.5 MHz | 36.101, 5.5 | FDD Band 31 |
| ... | | | |
| 33 | Frequency band: 1900-1920, 1900-1920 MHz | 36.101, 5.5 | TDD Band 33 |
| 34 | Frequency band: 2010-2025, 2010-2025 MHz | 36.101, 5.5 | TDD Band 34 |
| 35 | Frequency band: 1850-1910, 1850-1910 MHz | 36.101, 5.5 | TDD Band 35 |
| 36 | Frequency band: 1930-1990, 1930-1990 MHz | 36.101, 5.5 | TDD Band 36 |
| 37 | Frequency band: 1910-1930, 1910-1930 MHz | 36.101, 5.5 | TDD Band 37 |
| 38 | Frequency band: 2570-2620, 2570-2620 MHz | 36.101, 5.5 | TDD Band 38 |
| 39 | Frequency band: 1880-1920, 1880-1920 MHz | 36.101, 5.5 | TDD Band 39 |
| 40 | Frequency band: 2300-2400, 2300-2400 MHz | 36.101, 5.5 | TDD Band 40 |
| 41 | Frequency band: 2496-2690, 2496-2690 MHz | 36.101, 5.5 | TDD Band 41 |
| 42 | Frequency band: 3400-3600, 3400-3600 MHz | 36.101, 5.5 | TDD Band 42 |
| 43 | Frequency band: 3600-3800, 3600-3800 MHz | 36.101, 5.5 | TDD Band 43 |
| 44 | Frequency band: 703-803, 703-803 MHz | 36.101, 5.5 | TDD Band 44 |
| 45 | Frequency band: 1447-1467, 1447-1467 MHz | 36.101, 5.5 | TDD Band 45 |
| ... | | | |
| 65 | Frequency band: 1920-2010, 2110-2200 MHz | 36.101, 5.5 | FDD Band 65 |
| 66 | Frequency band: 1710-1780, 2110-2200 MHz | 36.101, 5.5 | FDD Band 66 |
| ... | | | |
| 68 | Frequency band: 698-728, 753-783 MHz | 36.101, 5.5 | FDD Band 68 |
| … | | | |
| 70 | Frequency band: 1695-1710, 1995-2020 MHz | 36.101, 5.5 | FDD Band 70 |
| … | | | |
| 72 | Frequency band: 451-456, 461-466 MHz | 36.101, 5.5 | FDD Band 72 |
| ... | | | |
| 74 | Frequency band: 1427-1470, 1475-1518 MHz | 36.101, 5.5 | FDD Band 74 |
| Note 1: The uplink transmission is not allowed at this band for the UE with the externally vehicle-mounted antennas. | | | |

**Table A.4.5-5: 4 Rx antenna ports Capabilities**

| Item | Ref. | Release | Band | Supported | Comments |
|------|------|---------|------|-----------|----------|
| 1 | 36.101, 7.2 | Rel-13 | FDD Band 1 | | |
| 2 | 36.101, 7.2 | Rel-13 | FDD Band 2 | | |
| 3 | 36.101, 7.2 | Rel-13 | FDD Band 3 | | |
| 4 | 36.101, 7.2 | Rel-15 | FDD Band 4 | | |
| ... | | | | | |
| 7 | 36.101, 7.2 | Rel-13 | FDD Band 7 | | |
| ... | | | | | |
| 20 | 36.101, 7.2 | Rel-13 | FDD Band 20 | | |
| 21 | 36.101, 7.2 | Rel-14 | FDD Band 21 | | |
| ... | | | | | |
| 25 | 36.101, 7.2 | Rel-14 | FDD Band 25 | | |
| ... | | | | | |
| 34 | 36.101, 7.2 | Rel-15 | FDD Band 34 | | |
| ... | | | | | |
| 39 | 36.101, 7.2 | Rel-13 | TDD Band 39 | | |
| 40 | 36.101, 7.2 | Rel-14 | TDD Band 40 | | |
| 41 | 36.101, 7.2 | Rel-13 | TDD Band 41 | | |
| 42 | 36.101, 7.2 | Rel-13 | TDD Band 42 | | |
| 66 | 36.101, 7.2 | Rel-15 | FDD Band 66 | | |

**Table A.4.5-6: Void**

**Table A.4.5-6a: E-UTRA ProSe Communication Capabilities**

| Item | RF Baseline Implementation Capabilities | Ref. | Comments |
|------|------------------------------------------|------|----------|
| 1 | Frequency band: 1710-1785, 1805-1880 MHz | 36.101, 5.5 | FDD Band 3 |
| 2 | Frequency band: 2500-2570, 2620-2690 MHz | 36.101, 5.5 | FDD Band 7 |
| 3 | Frequency band: 788-798, 758-768 MHz | 36.101, 5.5 | FDD Band 14 |
| 4 | Frequency band: 832-862, 791-821MHz | 36.101, 5.5 | FDD Band 20 |
| 5 | Frequency band: 814-849, 859-894 MHz | 36.101, 5.5 | FDD Band 26 |
| 6 | Frequency band: 703-748, 758-803 MHz | 36.101, 5.5 | FDD Band 28 |
| 7 | Frequency band: 452.5-457.5, 462.5-467.5 MHz | 36.101, 5.5 | FDD Band 31 |
| 8 | Frequency band: 698-728, 753-783 MHz | 36.101, 5.5 | FDD Band 68 |
| 9 | Frequency band: 451-456, 461-466 MHz | 36.101, 5.5 | FDD Band 72 |

**Table A.4.5-6b: E-UTRA ProSe Discovery Capabilities**

| Item | RF Baseline Implementation Capabilities | Ref. | Comments |
|------|------------------------------------------|------|----------|
| 1 | Frequency band: 1850-1910, 1930-1990 MHz | 36.101, 5.5 | FDD Band 2 |
| 2 | Frequency band: 1710-1785, 1805-1880 MHz | 36.101, 5.5 | FDD Band 3 |
| 3 | Frequency band: 1710-1755, 2110-2155 MHz | 36.101, 5.5 | FDD Band 4 |
| 4 | Frequency band: 2500-2570, 2620-2690 MHz | 36.101, 5.5 | FDD Band 7 |
| 5 | Frequency band: 788-798, 758-768 MHz | 36.101, 5.5 | FDD Band 14 |
| 6 | Frequency band: 832-862, 791-821MHz | 36.101, 5.5 | FDD Band 20 |
| 7 | Frequency band: 814-849, 859-894 MHz | 36.101, 5.5 | FDD Band 26 |
| 8 | Frequency band: 703-748, 758-803 MHz | 36.101, 5.5 | FDD Band 28 |
| 9 | Frequency band: 452.5-457.5, 462.5-467.5 MHz | 36.101, 5.5 | FDD Band 31 |
| 10 | Frequency band: 2496-2690, 2496-2690 MHz | 36.101, 5.5 | TDD Band 41 |
| 11 | Frequency band: 698-728, 753-783 MHz | 36.101, 5.5 | FDD Band 68 |
| 12 | Frequency band: 451-456, 461-466 MHz | 36.101, 5.5 | FDD Band 72 |

**Table A.4.5-7: E-UTRA V2X Sidelink Communication**

| Item | RF Baseline Implementation Capabilities | Ref. | Comments |
|------|------------------------------------------|------|----------|
| 1 | Frequency band: 5855-5925, 5855-5925 MHz | 36.101, 5.5 | TDD Band 47 |

**Table A.4.5-7a: Supported Inter-band con-current V2X configurations**

| Inter-band con-current V2X configurations | Release | Comments |
|---|---|---|
| V2X_3A-47A | Rel-14 | - |
| V2X_5A-47A | Rel-14 | - |
| V2X_7A-47A | Rel-14 | - |
| V2X_8A-47A | Rel-14 | - |
| V2X_20A-47A | Rel-14 | - |
| V2X_34A-47A | Rel-14 | - |
| V2X_39A-47A | Rel-14 | - |
| V2X_41A-47A | Rel-14 | - |

**Table A.4.5-7b: Supported V2X intra-band multi-carrier configurations**

| V2X intra-band multi-carrier configurations | Release | Comments |
|---|---|---|
| V2X_47B | Rel-14 | - |

**Table A.4.5-8: Supported CA configurations with multi layer spatial multiplexing**

| Item | Configuration | Release | Ref. | Comments |
|---|---|---|---|---|
| 1 | 2DL FDD CA, with 4Rx antenna ports and 4-layer spatial multiplexing with TM 3 and TM 4 | Rel-10 | 36.101, 5.6A 36.306, 4.3.5.14 | - |
| 2 | 2DL TDD CA, with 4Rx antenna ports and 4-layer spatial multiplexing with TM 3 and TM 4 | Rel-10 | 36.101, 5.6A 36.306, 4.3.5.14 | - |
| 3 | 2DL FDD-TDD CA, with 4Rx antenna ports and 4-layer spatial multiplexing with TM 3 and TM 4 | Rel-12 | 36.101, 5.6A 36.306, 4.3.5.14 | - |
| 4 | 3DL FDD CA, with 4Rx antenna ports and 4-layer spatial multiplexing with TM 3 and TM 4 | Rel-10 | 36.101, 5.6A 36.306, 4.3.5.14 | - |
| 5 | 3DL TDD CA, with 4Rx antenna ports and 4-layer spatial multiplexing with TM 3 and TM 4 | Rel-10 | 36.101, 5.6A 36.306, 4.3.5.14 | - |
| 6 | 3DL FDD-TDD CA, with 4Rx antenna ports and 4-layer spatial multiplexing with TM 3 and TM 4 | Rel-12 | 36.101, 5.6A 36.306, 4.3.5.14 | - |
| 7 | 4DL FDD CA, with 4Rx antenna ports and 4-layer spatial multiplexing with TM 3 and TM 4 | Rel-11 | 36.101, 5.6A 36.306, 4.3.5.14 | - |
| 8 | 4DL TDD CA, with 4Rx antenna ports and 4-layer spatial multiplexing with TM 3 and TM 4 | Rel-11 | 36.101, 5.6A 36.306, 4.3.5.14 | - |
| 9 | 4DL FDD-TDD CA, with 4Rx antenna ports and 4-layer spatial multiplexing with TM 3 and TM 4 | Rel-12 | 36.101, 5.6A 36.306, 4.3.5.14 | - |
| 10 | 5DL FDD CA, with 4Rx antenna ports and 4-layer spatial multiplexing with TM 3 and TM 4 | Rel-11 | 36.101, 5.6A 36.306, 4.3.5.14 | - |
| 11 | 5DL TDD CA, with 4Rx antenna ports and 4-layer spatial multiplexing with TM 3 and TM 4 | Rel-11 | 36.101, 5.6A 36.306, 4.3.5.14 | - |
| 12 | 5DL FDD-TDD CA, with 4Rx antenna ports and 4-layer spatial multiplexing with TM 3 and TM 4 | Rel-12 | 36.101, 5.6A 36.306, 4.3.5.14 | - |
| NOTE: | At least one component carrier in a CA configuration shall support 4Rx antenna ports and 4-layer spatial multiplexing with TM 3 and TM 4. | | | |

## A.4.6    CA Physical Layer Baseline Implementation Capabilities

**Table A.4.6-1: Downlink CA capabilities (for one or more of the supported CA configurations in Tables A.4.6.1-3, A.4.6.2-3, A.4.6.3-3, A.4.6.3-4, A.4.6.3-5)**

| Item | Bandwidth Class | Ref. | Comments |
|------|----------------|------|----------|
| 1 | DL CA with 2 carriers | 36.101, 5.6A 36.331, 6.3.6 | (NOTE 1) |
| 2 | DL CA with 3 carriers | 36.101, 5.6A 36.331, 6.3.6 | |
| 3 | DL CA with 4 carriers | 36.101, 5.6A 36.331, 6.3.6 | |
| 4 | DL CA with 5 carriers | 36.101, 5.6A 36.331, 6.3.6 | |
| Note 1: | A UE that supports operating Band 66 (Table A.4.3-3) and CA operation in any CA band shall support the DL CA configurations CA_66B, CA_66C and CA_66A-66A, as specified in Note 6, in Table 5.5-1, in TS 36.101 [19]. | | |

**Table A.4.6-2: Uplink CA capabilities (for one or more of the supported CA configurations in Tables A.4.6.1-3, A.4.6.2-3, A.4.6.3-3, A.4.6.3-4, A.4.6.3-5)**

| Item | Bandwidth Class | Ref. | Comments |
|------|----------------|------|----------|
| 1 | UL CA with 2 carriers | 36.101, 5.6A 36.331, 6.3.6 | |
| 2 | UL CA with 3 carriers | 36.101, 5.6A 36.331, 6.3.6 | Not used in any valid CA configurations in TS 36.101 yet |

## A.4.6.1    Intra-band contiguous CA Physical Layer Baseline Implementation Capabilities

**Table A.4.6.1-1: Downlink Intra-band contiguous CA Bandwidth Class capabilities (for one or more of the supported CA configurations in Table A.4.6.1-3)**

| Item | Bandwidth Class | Ref. | Comments |
|------|----------------|------|----------|
| 1 | DL Intra-band contiguous CA BW Class B | 36.101, 5.6A 36.331, 6.3.6 | |
| 2 | DL Intra-band contiguous CA BW Class C | 36.101, 5.6A 36.331, 6.3.6 | |
| 3 | DL Intra-band contiguous CA BW Class D | 36.101, 5.6A 36.331, 6.3.6 | |
| 4 | DL Intra-band contiguous CA BW Class E | 36.101, 5.6A 36.331, 6.3.6 | |
| 5 | DL Intra-band contiguous CA BW Class F | 36.101, 5.6A 36.331, 6.3.6 | |

**Table A.4.6.1-2: Uplink Intra-band contiguous CA Bandwidth Class capabilities (for one or more of the supported CA configurations in Table A.4.6.1-3)**

| Item | Bandwidth Class | Ref. | Comments |
|------|----------------|------|----------|
| 1 | UL Intra-band contiguous CA BW Class B | 36.101, 5.6A 36.331, 6.3.6 | Not used in any valid CA configurations in TS 36.101 yet |
| 2 | UL Intra-band contiguous CA BW Class C | 36.101, 5.6A 36.331, 6.3.6 | |
| 3 | UL Intra-band contiguous CA BW Class D | 36.101, 5.6A 36.331, 6.3.6 | |

**Table A.4.6.1-3: Supported CA configurations for Intra-band contiguous CA**

**Table A.4.6.1-3: Supported CA configurations for Intra-band contiguous CA**

| E-UTRA CA configuration / Item (Note 1) | Release | Supported | Supported CA Bandwidth Class(es) in UL (Note 2,7) | Supported Bandwidth Combination Set(s) (Note 3) | Fallback Bands Exception (Note 5,8) | Fallback CA configurations Exceptions (Note 6,8) | Supported band(s) for 4 layer spatial multiplexing (Note 10) |
|---|---|---|---|---|---|---|---|
| CA_1C | Rel-10 | | | | - | - | |
| CA_2C | Rel-12 | | | | - | - | |
| CA_3C | Rel-12 | | | | - | - | |
| CA_5B | Rel-13 | | | | - | - | |
| CA_7B | Rel-13 | | | | - | - | |
| CA_7C | Rel-11 | | | | - | - | |
| CA_8B | Rel-13 | | | | - | - | |
| CA_12B | Rel-12 | | | | - | - | |
| CA_23B | Rel-12 | | | | - | - | |
| CA_27B | Rel-12 | | | | - | - | |
| CA_38C | Rel-11 | | | | - | - | |
| CA_39C | Rel-12 | | | | - | - | |
| CA_40C | Rel-10 | | | | - | - | |
| CA_40D | Rel-12 | | | | - | - | |
| CA_40E | Rel-11 | | | | | | |
| CA_41C | Rel-11 | | | | - | - | |
| CA_41D | Rel-12 | | | | - | - | |
| CA_41F | Rel-12 | | | | | | |
| CA_42C | Rel-12 | | | | - | - | |
| CA_42D | Rel-13 | | | | - | - | |
| CA_42E | Rel-13 | | | | - | - | |
| CA_66B (NOTE 9) | Rel-13 | | | | - | - | |
| CA_66C (NOTE 9) | Rel-13 | | | | - | - | |
| CA_66D | Rel-13 | | | | - | - | |
| CA_70C | Rel-14 | | | | - | - | |

| | |
|---|---|
| Note 1: | Notation used for intra-band contiguous CA Bands is according to TS 36.101 [2] Table 5.6A.1-1, e.g. 'CA_1C' indicates CA operation on E-UTRA band 1 with DL CA Bandwidth Class C. |
| Note 2: | The UL CA capabilities as per Table A.4.6-2 can be supported on a single or multiple CA Band(s). The UE supplier shall indicate all supported UL CA Bandwidth Class(es), in uplink of the supported CA Band(s), as per TS 36.101 [2] Table 5.6A.1-1. For this release of specification valid choices are 'N', 'XB' and 'XC', where X is the band. For example, for CA_1C, N would mean only DL CA, '1C' would mean both DL and UL CA. |
| Note 3: | The UE supplier shall indicate the supported Bandwidth Combination Set(s) as per TS 36.101 [2] Table 5.6A.1-1. |
| Note 4: | Reference to all items is 36.101, 5.6A and 36.331, 6.3.6 |
| Note 5: | Fallback Bands Exceptions column is used for the FALLBACK() operator in "Tested Band Selection Criteria" (Table 4.1-1b). FALLBACK(A.4.6.1-3) shall return a set of all fallback bands of the supported CA Configurations, i.e. a union of bands included in each CA Configuration, derived according to Table A.4.1-2, with the following additional conditions:<br>Band is not listed in the Fallback Band Exceptions for the considered CA Configuration<br>Maximum allowed channel BW in the band is included in at least one of the supported Bandwidth Combination Sets supported by the considered CA Configuration |
| Note 6: | Fallback CA configurations Exceptions column is used for the FALLBACK() and FALLBACK_UL() operators in "Tested CA Configurations Criteria" (Table 4.1-1c). FALLBACK(A.4.6.1-3) shall return a set of all fallback CA Configurations of supported CA Configurations, derived according to Table A.4.1-2, with the following additional conditions:<br>Fallback CA Configuration is not listed in "Fallback CA Configurations Exceptions"<br>Maximum allowed channel BW in each Fallback CA Configuration band is included in at least one of the supported CA Configuration Bandwidth Combination Sets.<br>FALLBACK_UL(A.4.6.1-3) shall return FALLBACK(A.4.6.1-3) AND UL(A.4.6.1-3) |
| Note 7: | UL(A.4.6.1-3) shall return all supported CA Configurations where at least one UL CA Bandwidth Class was declared in column "Supported CA Bandwidth Class(es) in UL".<br>UL_2CC(A.4.6.1-3) shall return all supported CA Configurations where at least one 2 Carrier UL CA Bandwidth Class was declared in column "Supported CA Bandwidth Class(es) in UL".<br>UL_3CC(A.4.6.1-3) shall return all supported CA Configurations where at least one 3 Carrier UL CA Bandwidth Class was declared. |
| Note 8: | The exceptions columns are pre-filled, please do not fill out. Exceptions are possible if there are big differences between CA Configuration and Fallback CA Configuration/band definitions. For example, CA_18A-28A uses only a part of B28, so 28 will be listed as an exception. |
| Note 9: | A UE that supports operating Band 66 (Table A.4.3-3) and CA operation in any CA band shall support the DL CA configurations CA_66B, CA_66C and CA_66A-66A, as specified in Note 6, in Table 5.5-1, in TS 36.101 [19]. |
| Note 10: | The UE supplier shall indicate the frequency bands where 4 layer spatial multiplexing is supported in the supported CA Configurations. |

### A.4.6.2 Intra-band non-contiguous CA Physical Layer Baseline Implementation Capabilities

**Table A.4.6.2-1: Downlink Intra-band non-contiguous CA Bandwidth Class capabilities (for one or more of the supported CA configurations in Table A.4.6.2-3)**

| Item | Bandwidth Class | Ref. | Comments |
|---|---|---|---|
| 1 | DL Intra-band non-contiguous CA BW Class Combination A-A | 36.101, 5.6A 36.331, 6.3.6 | |
| 2 | DL Intra-band non-contiguous CA BW Class Combination A-C/C-A | 36.101, 5.6A 36.331, 6.3.6 | |
| 3 | Void | | |
| 4 | DL Intra-band non-contiguous CA BW Class Combination A-D/D-A | 36.101, 5.6A 36.331, 6.3.6 | |
| 5 | DL Intra-band non-contiguous CA BW Class Combination C-C | 36.101, 5.6A 36.331, 6.3.6 | |
| 6 | DL Intra-band non-contiguous CA BW Class Combination A-E | 36.101, 5.6A 36.331, 6.3.6 | |
| 7 | DL Intra-band non-contiguous CA BW Class Combination B-D or C-D | 36.101, 5.6A 36.331, 6.3.6 | |
| 8 | DL Intra-band non-contiguous CA BW Class Combination A-C-C or A-B-C | 36.101, 5.6A 36.331, 6.3.6 | |
| 9 | DL Intra-band non-contiguous CA BW Class Combination A-A-A | 36.101, 5.6A 36.331, 6.3.6 | with three sub-blocks |

**Table A.4.6.2-2: Uplink Intra-band non-contiguous CA Bandwidth Class capabilities (for one or more of the supported CA configurations in Table A.4.6.2-3)**

| Item | Bandwidth Class | Ref. | Comments |
|------|-----------------|------|----------|
| 1 | UL Intra-band non-contiguous CA BW Class Combination A-A | 36.101, 5.6A<br>36.331, 6.3.6 | |

**Table A.4.6.2-3: Supported CA configurations for Intra-band non-contiguous CA**

| E-UTRA CA configuration / Item (Note 1) | Release | Supported | Supported CA Bandwidth Class(es) in UL (Note 2,7) | Supported Bandwidth Combination Set(s) (Note 3) | Fallback Bands Exception (Note 5,8) | Fallback CA configurations Exceptions (Note 6,8) | Supported band(s) for 4 layer spatial multiplexing (Note 10) |
|---|---|---|---|---|---|---|---|
| CA_2A-2A | Rel-12 | | | | - | - | |
| CA_3A-3A | Rel-12 | | | | - | - | |
| CA_4A-4A | Rel-12 | | | | - | - | |
| CA_5A-5A | Rel-13 | | | | - | - | |
| CA_7A-7A | Rel-12 | | | | - | - | |
| CA_23A-23A | Rel-12 | | | | - | - | |
| CA_25A-25A | Rel-11 | | | | - | - | |
| CA_41A-41A | Rel-11 | | | | - | - | |
| CA_41A-41C | Rel-12 | | | | - | - | |
| CA_41C-41A | Rel-12 | | | | - | - | |
| CA_42A-42A | Rel-12 | | | | - | - | |
| CA_42A-42C | Rel-13 | | | | - | - | |
| CA_66A-66A (NOTE 9) | Rel-13 | | | | | | |
| CA_66A-66A-66A | Rel-15 | | | | - | - | |
| CA_66A-66C | Rel-14 | | | | - | - | |

| | |
|---|---|
| Note 1: | Notation used for intra-band contiguous CA Bands is according to TS 36.101 [2] Table 5.6A.1-3, e.g. 'CA_2A-2A' indicates CA intra-band non-contiguous operation on E-UTRA band 2 with DL CA Bandwidth Class A-A. |
| Note 2: | The UL CA capabilities as per Table A.4.6-2 can be supported on a single or multiple CA Band(s). The UE supplier shall indicate all supported UL CA Bandwidth Class(es), in uplink of the supported CA Band(s), as per TS 36.101 [2] Table 5.6A.1-3. For this release of specification valid choices are 'N', 'XA-XA' and 'XC', where X is the band. For example, for CA_4A-4A, 'N' would mean only DL CA, '4A-4A' would mean both DL and UL CA. |
| Note 3: | The UE supplier shall indicate the supported Bandwidth Combination Set(s) as per TS 36.101 [2] Table 5.6A.1-3. |
| Note 4: | Reference to all items is 36.101, 5.6A and 36.331, 6.3.6 |
| Note 5: | Fallback Bands Exceptions column is used for the FALLBACK() operator in "Tested Band Selection Criteria" (Table 4.1-1b). FALLBACK(A.4.6.2-3) shall return a set of all fallback bands of the supported CA Configurations, i.e. a union of bands included in each CA Configuration, derived according to Table A.4.1-2, with the following additional conditions: |
| | 1. Band is not listed in the Fallback Band Exceptions for the considered CA Configuration |
| | 2. Maximum allowed channel BW in the band is included in at least one of the supported Bandwidth Combination Sets supported by the considered CA Configuration |
| Note 6: | Fallback CA configurations Exceptions column is used for the FALLBACK() and FALLBACK_UL() operators in "Tested CA Configurations Criteria" (Table 4.1-1c). FALLBACK(A.4.6.2-3) shall return a set of all fallback CA Configurations of supported CA Configurations, derived according to Table A.4.1-2, with the following additional conditions: |
| | 1. Fallback CA Configuration is not listed in "Fallback CA Configurations Exceptions" |
| | 2. Maximum allowed channel BW in each Fallback CA Configuration band is included in at least one of the supported CA Configuration Bandwidth Combination Sets. |
| Note 7: | UL(A.4.6.2-3) shall return all supported CA Configurations where at least one >1 Carrier UL CA Bandwidth Class was declared in column "Supported CA Bandwidth Class(es) in UL". |
| | UL_2CC(A.4.6.2-3) shall return all supported CA Configurations where at least one 2 Carrier UL CA Bandwidth Class was declared in column "Supported CA Bandwidth Class(es) in UL". |
| | UL_3CC(A.4.6.2-3) shall return all supported CA Configurations where at least one 3 Carrier UL CA Bandwidth Class was declared. |
| Note 8: | The exceptions columns are pre-filled, please do not fill out. Exceptions are possible if there are big differences between CA Configuration and Fallback CA Configuration/band definitions. For example, CA_18A-28A uses only a part of B28, so 28 will be listed as an exception. |
| Note 9: | A UE that supports operating Band 66 (Table A.4.3-3) and CA operation in any CA band shall support the DL CA configurations CA_66B, CA_66C and CA_66A-66A, as specified in Note 6, in Table 5.5-1, in TS 36.101 [19]. |
| Note 10: | The UE supplier shall indicate the frequency bands where 4 layer spatial multiplexing is supported in the supported CA Configurations. |

## A.4.6.3 Inter-band CA Physical Layer Baseline Implementation Capabilities

**Table A.4.6.3-1: Downlink Inter-band CA Bandwidth Class Combination capabilities (for one or more of the supported CA configurations in Table A.4.6.3-3, A.4.6.3-4, A.4.6.3-5)**

| Item | Bandwidth Class | Ref. | Comments |
|------|-----------------|------|----------|
| 1 | DL Inter-band CA BW Class Combination A-A | 36.101, 5.6A 36.331, 6.3.6 | |
| 2 | DL Inter-band CA BW Class Combination A-A-A (two bands) | 36.101, 5.6A 36.331, 6.3.6 | |
| 3 | DL Inter-band CA BW Class Combination A-A-A (three bands) | 36.101, 5.6A 36.331, 6.3.6 | |
| 4 | DL Inter-band CA BW Class Combination A-C or A-B (two bands) | 36.101, 5.6A 36.331, 6.3.6 | |
| 5 | DL Inter-band CA BW Class Combination A-A where one of the bands is DL-only | 36.101, 5.5 | |
| 6 | DL Inter-band CA BW Class Combination A-A-A-A (four bands) | 36.101, 5.6A 36.331, 6.3.6 | |
| 7 | DL Inter-band CA BW Class Combination A-A-C or A-A-B (three bands) | 36.101, 5.6A 36.331, 6.3.6 | |
| 8 | DL Inter-band CA BW Class Combination A-A-A-C (four bands) | 36.101, 5.6A 36.331, 6.3.6 | |
| 9 | DL Inter-band CA BW Class Combination A-D or C-C or C-B (two bands) | 36.101, 5.6A 36.331, 6.3.6 | |
| 10 | DL Inter-band CA BW Class Combination A-A-C or A-A-B (two bands) | 36.101, 5.6A 36.331, 6.3.6 | |
| 11 | DL Inter-band CA BW Class Combination A-A-A-A (two bands) | 36.101, 5.6A 36.331, 6.3.6 | |
| 12 | DL Inter-band CA BW Class Combination A-A-A-A (three bands) | 36.101, 5.6A 36.331, 6.3.6 | |
| 13 | DL Inter-band CA BW Class Combination A-A-A-B or A-A-A-C (three bands) | 36.101, 5.6A 36.331, 6.3.6 | |
| 14 | DL Inter-band CA BW Class Combination A-A-A-A-A (five bands) | 36.101, 5.6A 36.331, 6.3.6 | |
| 15 | DL Inter-band CA BW Class Combination A-A-D (three bands) | 36.101, 5.6A 36.331, 6.3.6 | |
| 16 | DL Inter-band CA BW Class Combination A-A-A-B or A-A-A-C (four bands) | 36.101, 5.6A 36.331, 6.3.6 | |
| 17 | DL Inter-band CA BW Class Combination A-A-A-A-A (four bands) | 36.101, 5.6A 36.331, 6.3.6 | |
| 18 | DL Inter-band CA BW Class Combination A-A-A-C or A-A-A-B (two bands) | 36.101, 5.6A 36.331, 6.3.6 | |

**Table A.4.6.3-2: Uplink Inter-band CA Bandwidth Class Combination capabilities (for one or more of the supported CA configurations in Table A.4.6.3-3, A.4.6.3-4, A.4.6.3-5)**

| Item | Bandwidth Class | Ref. | Comments |
|------|-----------------|------|----------|
| 1 | UL Inter-band CA BW Class Combination A-A | 36.101, 5.6A 36.331, 6.3.6 | |
| 2 | UL Inter-band CA BW Class Combination A-A-A (two bands) | 36.331, 6.3.6 | |
| 3 | DL Inter-band CA BW Class Combination A-C (two bands) | 36.101, 5.6A 36.331, 6.3.6 | |

**Table A.4.6.3-3: Supported CA configurations for Inter-band CA (two bands)**

| E-UTRA CA configuration / Item (Note 1) | Release | Supported | Supported CA Bandwidth Class(es) in UL (Note 2,7) | Supported UL Bands (Note 9) | Supported Bandwidth Combination Set(s) (Note 3) | Fallback Bands Exception (Note 5) | Fallback CA configurations Exceptions (Note 6) | Supported band(s) for 4 layer spatial multiplexing (Note 10) |
|---|---|---|---|---|---|---|---|---|
| CA_1A-3A | Rel-12 | | | | | - | - | |
| CA_1A-3C | Rel-13 | | | | | - | - | |
| CA_1A-5A | Rel-10 | | | | | - | - | |
| CA_1A-7A | Rel-12 | | | | | - | - | |
| CA_1A-8A | Rel-12 | | | | | - | - | |
| CA_1A-11A | Rel-12 | | | | | - | - | |
| CA_1A-18A | Rel-11 | | | | | - | - | |
| CA_1A-19A | Rel-11 | | | | | - | - | |
| CA_1A-20A | Rel-12 | | | | | - | - | |
| CA_1A-21A | Rel-11 | | | | | - | - | |
| CA_1A-26A | Rel-12 | | | | | - | - | |
| CA_1A-28A | Rel-12 | | | | | - | - | |
| CA_1A-40A | Rel-13 | | | | | | | |
| CA_1A-41A | Rel-12 | | | | | - | - | |
| CA_1A-41C | Rel-12 | | | | | - | - | |
| CA_1A-42A | Rel-12 | | | | | - | - | |
| CA_1A-42C | Rel-12 (1UL) Rel-14 (2UL) | | | | | - | - | |
| CA_1A-46C | Rel-14 | | | | | - | - | |
| CA_1A-46D | Rel-14 | | | | | - | - | |
| CA_1A-46E | Rel-14 | | | | | - | - | |
| CA_1C-3A | Rel-14 | | | | | - | - | |
| CA_2A-2A-4A-4A | Rel-13 | | | | | - | - | |
| CA_2A-2A-5A | Rel-12 | | | | | - | - | |
| CA_2A-2A-7A | Rel-15 | | | | | - | - | |
| CA_2A-2A-12A | Rel-13 | | | | | - | - | |
| CA_2A-2A-12B | Rel-13 | | | | | - | - | |
| CA_2A-2A-13A | Rel-12 | | | | | - | - | |
| CA_2A-2A-14A | Rel-15 | | | | | - | - | |
| CA_2A-2A-29A | Rel-14 | | | | | - | - | |
| CA_2A-2A-30A | Rel-13 | | | | | - | - | |
| CA_2A-2A-66A | Rel-13 | | | | | | | |
| CA_2A-2A-71A | Rel-15 | | | | | - | - | |
| CA_2A-4A | Rel-12 | | | | | - | - | |
| CA_2A-4A-4A | Rel-12 | | | | | - | - | |
| CA_2A-5A | Rel-12 | | | | | - | - | |
| CA_2A-5B | Rel-14 | | | | | - | - | |
| CA_2A-7A | Rel-13 | | | | | - | - | |
| CA_2A-7A-7A | Rel-14 | | | | | - | - | |
| CA_2A-7C | Rel-14 | | | | | - | - | |
| CA_2A-12A | Rel-12 | | | | | - | - | |
| CA_2A-12B | Rel-12 | | | | | - | - | |
| CA_2A-13A | Rel-12 | | | | | - | - | |
| CA_2A-14A | Rel-15 | | | | | - | - | |
| CA_2A-17A | Rel-11 | | | | | - | - | |
| CA_2A-28A | Rel-13 | | | | | - | - | |
| CA_2A-29A | Rel-11 | | | 2 | | - | - | |
| CA_2A-30A | Rel-12 | | | | | - | - | |
| CA_2A-66A-66A | Rel-14 | | | | | - | - | |
| CA_2A-66A | Rel-14 | | | | | - | - | |
| CA_2A-66C | Rel-14 | | | | | - | - | |
| CA_2A-71A | Rel-15 | | | | | - | - | |
| CA_2C-5A | Rel-13 | | | | | - | - | |
| CA_2C-29A | Rel-12 | | | 2 | | - | - | |
| CA_2C-66A | Rel-15 | | | | | - | - | |
| CA_2C-66A-66A | Rel-15 | | | | | - | - | |
| CA_3A-3A-7A-7A | Rel-11 | | | | | - | - | |
| CA_3A-5A | Rel-11 | | | | | - | - | |

| CA_3A-7A | Rel-11 | | | | | - | - | |
| CA_3A-7B | Rel-13 | | | | | - | - | |
| CA_3A-7C | Rel-12 | | | | | - | - | |
| CA_3A-8A | Rel-11 | | | | | - | - | |
| CA_3A-11A | Rel-14 | | | | | - | - | |
| CA_3A-18A | Rel-15 (1UL, 2UL) | | | | | | | |
| CA_3A-19A | Rel-12 | | | | | - | - | |
| CA_3A-20A | Rel-11 | | | | | - | - | |
| CA_3A-21A | Rel-14 (1UL, 2UL) | | | | | - | - | |
| CA_3A-26A | Rel-12 | | | | | - | - | |
| CA_3A-27A | Rel-12 | | | | | - | - | |
| CA_3A-28A | Rel-12 (1UL) Rel-14 (2UL) | | | | | - | - | |
| CA_3A-32A | Rel-14 | | | | | - | - | |
| CA_3A-38A | Rel-13 | | | | | - | - | |
| CA_3A-40A | Rel-13 | | | | | | | |
| CA_3A-41A | Rel-13 | | | | | - | - | |
| CA_3A-42A | Rel-12 (1UL) Rel-14 (2UL) | | | | | - | - | |
| CA_3A-42C | Rel-12 (1UL) Rel-14 (2UL) | | | | | - | - | |
| CA_3A-46A | Rel-14 | | | | | - | - | |
| CA_3A-46C | Rel-14 | | | | | - | - | |
| CA_3A-46D | Rel-14 | | | | | - | - | |
| CA_3A-46E | Rel-14 | | | | | - | - | |
| CA_3A-69A | Rel-14 | | | 3 | | - | - | |
| CA_3C-5A | Rel-13 | | | | | - | - | |
| CA_3C-7A | Rel-12 | | | | | - | - | |
| CA_3C-7C | Rel-13 | | | | | - | - | |
| CA_3C-8A | Rel-14 | | | | | - | - | |
| CA_3C-28A | Rel-13 | | | | | - | - | |
| CA_4A-4A-5A | Rel-12 | | | | | - | - | |
| CA_4A-4A-7A | Rel-12 | | | | | - | - | |
| CA_4A-4A-12A | Rel-12 | | | | | - | - | |
| CA_4A-4A-13A | Rel-12 | | | | | - | - | |
| CA_4A-4A-29A | Rel-13 | | | | | - | - | |
| CA_4A-4A-30A | Rel-13 | | | | | - | - | |
| CA_4A-4A-71A | Rel-15 | | | | | - | - | |
| CA_4A-5A | Rel-11 | | | | | - | - | |
| CA_4A-7A-7A | Rel-14 | | | | | - | - | |
| CA_4A-7A | Rel-11 | | | | | - | - | |
| CA_4A-7C | Rel-14 | | | | | - | - | |
| CA_4A-12A | Rel-11 | | | | | - | - | |
| CA_4A-12B | Rel-12 | | | | | - | - | |
| CA_4A-13A | Rel-11 | | | | | - | - | |
| CA_4A-17A | Rel-11 | | | | | - | - | |
| CA_4A-27A | Rel-12 | | | | | - | - | |
| CA_4A-28A | Rel-13 | | | | | | | |
| CA_4A-29A | Rel-11 | | | 4 | | - | - | |
| CA_4A-30A | Rel-12 | | | | | - | - | |
| CA_4A-71A | Rel-15 | | | | | - | - | |
| CA_5A-5A-66A | Rel-14 | | | | | - | - | |
| CA_5A-7A | Rel-12 | | | | | - | - | |
| CA_5A-12A | Rel-11 | | | | | - | - | |
| CA_5A-13A | Rel-12 | | | | | - | - | |
| CA_5A-17A | Rel-11 | | | | | - | - | |
| CA_5A-25A | Rel-12 | | | | | - | - | |
| CA_5A-30A | Rel-12 | | | | | - | - | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CA_5A-40A | Rel-13 | | | | | - | - |
| CA_5A-40C | Rel-13 | | | | | - | - |
| CA_5A-46A | Rel-14 | | 5 | | | - | - |
| CA_5A-66A | Rel-14 | | | | | - | - |
| CA_5A-66A-66A | Rel-14 | | | | | - | - |
| CA_5B-30A | Rel-14 | | | | | - | - |
| CA_5B-66A | Rel-14 | | | | | - | - |
| CA_5B-66A-66A | Rel-14 | | | | | - | - |
| CA_7A-8A | Rel-12 | | | | | - | - |
| CA_7A-12A | Rel-12 | | | | | - | - |
| CA_7A-20A | Rel-11 | | | | | - | - |
| CA_7A-22A | Rel-13 | | | | | - | - |
| CA_7A-28A | Rel-12 | | | | | - | - |
| CA_7A-66A | Rel-14 | | | | | - | - |
| CA_7B-28A | Rel-13 | | | | | - | - |
| CA_7A-42A-42A | Rel-13 | | | | | - | - |
| CA_8A-11A | Rel-12 | | | | | - | - |
| CA_8A-20A | Rel-11 | | | | | - | - |
| CA_8A-27A | Rel-15 | | | | | - | - |
| CA_8A-28A | Rel-14 | | 8 | | | - | - |
| CA_8A-40A | Rel-12 | | | | | - | - |
| CA_8A-41A | Rel-13 | | | | | - | - |
| CA_8A-41C | Rel-13 | | | | | - | - |
| CA_8A-42A | Rel-13 | | | | | - | - |
| CA_8A-42C | Rel-13 | | | | | - | - |
| CA_8A-46A | Rel-14 | | 8 | | | - | - |
| CA_11A-18A | Rel-11 | | | | | - | - |
| CA_11A-28A | Rel-14 | | | | | - | - |
| CA_11A-46A | Rel-14 | | 11 | | | - | - |
| CA_12A-25A | Rel-12 | | | | | - | - |
| CA_12A-30A | Rel-12 | | | | | - | - |
| CA_12A-66A | Rel-14 | | | | | - | - |
| CA_12A-66A-66A | Rel-14 | | | | | - | - |
| CA_13A-46A | Rel-14 | | 13 | | | - | - |
| CA_13A-66A | Rel-14 | | | | | | |
| CA_13A-66A-66A | Rel-14 | | | | | - | - |
| CA_14A-30A | Rel-15 | | | | | - | - |
| CA_14A-66A | Rel-15 | | | | | - | - |
| CA_14A-66A-66A | Rel-15 | | | | | - | - |
| CA_18A-28A | Rel-12 | | | | | 28 | - |
| CA_19A-21A | Rel-12 | | | | | - | - |
| CA_19A-28A | Rel-13 | | | | | 28 | - |
| CA_19A-42A | Rel-12 (1UL) Rel-14 (2UL) | | | | | - | - |
| CA_19A-42C | Rel-12 (1UL) Rel-14 (2UL) | | | | | - | - |
| CA_19A-46A | Rel-14 | | | | | - | - |
| CA_19A-46C | Rel-14 | | | | | - | - |
| CA_19A-46D | Rel-14 | | | | | - | - |
| CA_19A-46E | Rel-14 | | | | | - | - |
| CA_20A-28A | Rel-14 | | | | | 28 | - |
| CA_20A-32A | Rel-12 | | 20 | | | - | - |
| CA_20A-40A | Rel-13 | | | | | - | - |
| CA_20A-42A-42A | Rel-13 | | | | | - | - |
| CA_21A-28A | Rel-14 (1UL, 2UL) | | | | | - | - |
| CA_21A-42A | Rel-13 (1UL) Rel-14 (2UL) | | | | | - | - |

| CA_21A-42C | Rel-13 (1UL) Rel-14 (2UL) | | | | | - | - | |
|---|---|---|---|---|---|---|---|---|
| CA_21A-46A | Rel-14 | | | | | - | - | |
| CA_21A-46C | Rel-14 | | | | | - | - | |
| CA_21A-46D | Rel-14 | | | | | - | - | |
| CA_21A-46E | Rel-14 | | | | | - | - | |
| CA_20A-67A | Rel-12 | | | 20 | | - | - | |
| CA_23A-29A | Rel-12 | | | 23 | | - | - | |
| CA_25A-41A | Rel-13 | | | | | - | - | |
| CA_26A-41A | Rel-12 | | | | | - | - | |
| CA_26A-41C | Rel-12 | | | | | - | - | |
| CA_26A-46A | Rel-14 | | | 26 | | - | - | |
| CA_28A-41A | Rel-13 | | | | | - | - | |
| CA_28A-41C | Rel-13 | | | | | - | - | |
| CA_28A-42A | Rel-13 | | | | | - | - | |
| CA_28A-42C | Rel-13 | | | | | - | - | |
| CA_28A-46A | Rel-14 | | | 28 | | - | - | |
| CA_29A-30A | Rel-12 | | | 30 | | - | - | |
| CA_29A-66A | Rel-14 | | | 66 | | - | - | |
| CA_29A-66A-66A | Rel-14 | | | 66 | | - | - | |
| CA_29A-66C | Rel-14 | | | 66 | | - | - | |
| CA_29A-70A | Rel-14 | | | 70 | | - | - | |
| CA_29A-70C | Rel-15 | | | 70 | | - | - | |
| CA_30A-66A | Rel-14 | | | | | - | - | |
| CA_30A-66A-66A | Rel-14 | | | | | - | - | |
| CA_38A-40A-40A | Rel-13 | | | | | - | - | |
| CA_38A-40C | Rel-13 | | | | | - | - | |
| CA_39A-41A | Rel-12 | | | | | - | - | |
| CA_39A-41C | Rel-12 | | | | | - | - | |
| CA_39A-41D | Rel-13 | | | | | - | - | |
| CA_39C-41C | Rel-13 | | | | | - | - | |
| CA_39A-46A | Rel-14 | | | 39 | | - | - | |
| CA_40A-46A | Rel-14 | | | 40 | | - | - | |
| CA_41A-42A | Rel-12 | | | | | - | - | |
| CA_41A-42C | Rel-13 | | | | | - | - | |
| CA_41C-42A | Rel-13 | | | | | - | - | |
| CA_41C-42C | Rel-13 | | | | | - | - | |
| CA_46A-46A-66A | Rel-14 | | | 66 | | - | - | |
| CA_46A-66A | Rel-14 | | | 66 | | - | - | |
| CA_46A-66A-66A | Rel-14 | | | 66 | | - | - | |
| CA_46A-66C | Rel-14 | | | 66 | | - | - | |
| CA_46A-70A | Rel-14 | | | 70 | | - | - | |
| CA_46C-66A | Rel-14 | | | 66 | | - | - | |
| CA_66A-66A-70A | Rel-15 | | | | | - | - | |
| CA_66A-66A-70C | Rel-15 | | | | | - | - | |
| CA_66A-66A-71A | Rel-15 | | | | | - | - | |
| CA_66A-70A | Rel-15 | | | | | - | - | |
| CA_66A-70C | Rel-15 | | | | | - | - | |
| CA_66C-70A | Rel-15 | | | | | - | - | |
| CA_66C-70C | Rel-15 | | | | | - | - | |
| CA_66C-71A | Rel-15 | | | | | - | - | |
| CA_70A-71A | Rel-15 | | | | | - | - | |
| CA_70C-71A | Rel-15 | | | | | - | - | |

| | | |
|---|---|---|
| Note 1: | Notation used for intra-band contiguous CA Bands is according to TS 36.101 [2] Table 5.6A.1-2, e.g. 'CA_1A-3A' indicates interband CA operation on E-UTRA band 1 with DL CA Bandwidth Class A and on E-UTRA band 3 with DL CA Bandwidth Class A | |
| Note 2: | The UL CA capabilities as per Table A.4.6-2 can be supported on a single or multiple CA Band(s). The UE supplier shall indicate all supported UL CA Bandwidth Class(es), in uplink of the supported CA Band(s), as per TS 36.101 [2] Table 5.6A.1-2. For this release of specification valid choices are 'N', 'XA-XA' and 'XC', where X is the band. For example, for full UL CA support in CA_18A-28A, UE shall indicate 18A-28A. For no UL CA 'N'. | |
| Note 3: | The UE supplier shall indicate the supported Bandwidth Combination Set(s) as per TS 36.101 [2] Table 5.6A.1-2. | |
| Note 4: | Reference to all items is 36.101, 5.6A and 36.331, 6.3.6 | |
| Note 5: | Fallback Bands Exceptions column is used for the FALLBACK() operator in "Tested Band Selection Criteria" (Table 4.1-1b). FALLBACK(A.4.6.3-3) shall return a set of all fallback bands of the supported CA Configurations, i.e. a union of bands included in each CA Configuration, derived according to Table A.4.1-2, with the following additional conditions: | |
| | 1. Band is not listed in the Fallback Band Exceptions for the considered CA Configuration | |
| | 2. UL is supported in the band for the considered CA Configuration, according to Supported UL Bands Column | |
| | 3. Maximum allowed channel BW in the band is included in at least one of the supported Bandwidth Combination Sets supported by the considered CA Configuration | |
| Note 6: | Fallback CA configurations Exceptions column is used for the FALLBACK() and FALLBACK_UL() operators in "Tested CA Configurations Criteria" (Table 4.1-1c). FALLBACK(A.4.6.3-3) shall return a set of all fallback CA Configurations of supported CA Configurations, derived according to Table A.4.1-2, with the following additional conditions: | |
| | 1. Fallback CA Configuration is not listed in "Fallback CA Configurations Exceptions" | |
| | 2. UL is supported in each Fallback CA Configuration band that is not downlink-only, according to Supported UL Bands Column | |
| | 3. Maximum allowed channel BW in each Fallback CA Configuration band is included in at least one of the supported CA Configuration Bandwidth Combination Sets. | |
| | FALLBACK_UL(A.4.6.3-3) shall return FALLBACK(A.4.6.3-3) AND UL(A.4.6.3-3) | |
| Note 7: | UL(A.4.6.3-3) shall return all supported CA Configurations where at least one UL CA Bandwidth Class was declared in column "Supported CA Bandwidth Class(es) in UL". | |
| | UL_2CC(A.4.6.3-3) shall return all supported CA Configurations where at least one 2 Carrier UL CA Bandwidth Class was declared in column "Supported CA Bandwidth Class(es) in UL". | |
| | UL_3CC(A.4.6.3-3) shall return all supported CA Configurations where at least one 3 Carrier UL CA Bandwidth Class was declared. | |
| Note 8: | The exceptions columns are pre-filled, please do not fill out. Exceptions are possible if there are big differences between CA Configuration and Fallback CA Configuration/band definitions. For example, CA_18A-28A uses only a part of B28, so 28 will be listed as an exception | |
| Note 9: | List all the CA Combination bands where UL is supported | |
| Note 10: | The UE supplier shall indicate the frequency bands where 4 layer spatial multiplexing is supported in the supported CA Configurations. | |

**Table A.4.6.3-4: Supported CA configurations for Inter-band CA (three bands)**

| E-UTRA CA configuration / Item (Note 1) | Release | Supported | Supported CA Bandwidth Class(es) in UL (Note 2,7) | Supported UL Bands (Note 9) | Supported Bandwidth Combination Set(s) (Note 3) | Fallback Bands Exception (Note 5,8) | Fallback CA configurations Exceptions (Note 6,8) | Supported band(s) for 4 layer spatial multiplexing (Note 10) |
|---|---|---|---|---|---|---|---|---|
| CA_1A-3A-5A | Rel-12 | | | | | - | - | |
| CA_1A-3A-7A | Rel-13 | | | | | - | - | |
| CA_1A-3A-8A | Rel-12 | | | | | - | - | |
| CA_1A-3A-11A | Rel-14 | | | | | - | - | |
| CA_1A-3A-18A | Rel-15 | | | | | | | |
| CA_1A-3A-19A | Rel-12 (1UL) Rel-14 (2UL) | | | | | - | - | |
| CA_1A-3A-20A | Rel-12 | | | | | - | - | |
| CA_1A-3A-21A | Rel-14 (1UL, 2UL) | | | | | - | - | |
| CA_1A-3A-26A | Rel-12 | | | | | - | - | |
| CA_1A-3A-28A | Rel-13 | | | | | - | - | |
| CA_1A-3A-40A | Rel-13 | | | | | - | - | |
| CA_1A-3A-41A | Rel-14 | | | | | - | - | |
| CA_1A-3A-42A | Rel-13 (1UL) Rel-14 (2UL) | | | | | - | - | |
| CA_1A-3A-42C | Rel-13 (1UL) Rel-14 (2UL) | | | | | - | - | |
| CA_1A-3C-8A | Rel-14 | | | | | - | - | |
| CA_1A-5A-7A | Rel-12 | | | | | - | - | |
| CA_1A-7A-8A | Rel-13 | | | | | - | - | |
| CA_1A-7A-20A | Rel-12 | | | | | - | - | |
| CA_1A-8A-11A | Rel-13 | | | | | - | - | |
| CA_1A-8A-28A | Rel-14 | | | 1, 8 | | 28 | 1A-28A | |
| CA_1A-8A-40A | Rel-13 | | | | | - | - | |
| CA_1A-11A-18A | Rel-13 | | | | | | | |
| CA_1A-11A-28A | Rel-14 | | | | | | | |
| CA_1A-18A-28A | Rel-12 | | | | | 28 | 1A-28A | |
| CA_1A-19A-21A | Rel-12 (1UL) Rel-14 (2UL) | | | | | - | - | |
| CA_1A-19A-28A | Rel-13 | | | | | 28 | 1A-28A | |
| CA_1A-19A-42A | Rel-13 (1UL) Rel-14 (2UL) | | | | | - | - | |
| CA_1A-19A-42C | Rel-13 (1UL) Rel-14 (2UL) | | | | | - | - | |
| CA_1A-21A-28A | Rel-14 | | | | | - | - | |
| CA_1A-21A-42A | Rel-13 (1UL) Rel-14 (2UL) | | | | | - | - | |
| CA_1A-21A-42C | Rel-13 (1UL) Rel-14 (2UL) | | | | | - | - | |
| CA_1A-28A-42A | Rel-14 | | | | | - | - | |
| CA_1A-28A-42C | Rel-14 | | | | | - | - | |
| CA_1A-41A-42A | Rel-14 | | | 1, 42 | | 41 | 41A-42A | |
| CA_1A-41A-42C | Rel-14 | | | 1, 42 | | 41 | 41A-42C | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CA_1A-41C-42A | Rel-14 | | | 1, 42 | | 41 | 41C-42A | |
| CA_1A-41C-42C | Rel-14 | | | 1, 42 | | 41 | 41C-42C | |
| CA_2A-2A-4A-5A | Rel-13 | | | | | - | - | |
| CA_2A-2A-4A-71A | Rel-15 | | | | | | | |
| CA_2A-2A-5A-12A | Rel-13 | | | | | - | - | |
| CA_2A-2A-5A-30A | Rel-14 | | | | | - | - | |
| CA_2A-2A-7A-66A | Rel-15 | | | | | - | - | |
| CA_2A-2A-12A-30A | Rel-14 | | | | | - | - | |
| CA_2A-2A-14A-30A | Rel-15 | | | | | - | - | |
| CA_2A-2A-14A-66A | Rel-15 | | | | | - | - | |
| CA_2A-2A-14A-66A-66A | Rel-15 | | | | | - | - | |
| CA_2A-2A-29A-30A | Rel-14 | | | | | - | - | |
| CA_2A-2A-66A-71A | Rel-15 | | | | | - | - | |
| CA_2A-4A-4A-5A | Rel-13 | | | | | - | - | |
| CA_2A-4A-5A | Rel-12 | | | | | - | - | |
| CA_2A-4A-7A | Rel-13 | | | | | - | - | |
| CA_2A-4A-7A-7A | Rel-14 | | | 2, 4 | | | | |
| CA_2A-4A-12A | Rel-12 | | | | | - | - | |
| CA_2A-4A-13A | Rel-12 | | | | | - | - | |
| CA_2A-4A-29A | Rel-12 | | | | | - | - | |
| CA_2A-4A-71A | Rel-15 | | | | | - | - | |
| CA_2A-5A-12A | Rel-12 | | | | | - | - | |
| CA_2A-5A-12B | Rel-13 | | | | | - | - | |
| CA_2A-5A-13A | Rel-12 | | | | | - | - | |
| CA_2A-5A-30A | Rel-12 | | | | | - | - | |
| CA_2A-5A-66A | Rel-14 | | | | | - | - | |
| CA_2A-5B-30A | Rel-14 | | | | | - | - | |
| CA_2A-5B-66A | Rel-14 | | | | | - | - | |
| CA_2A-5B-66A-66A | Rel-15 | | | | | - | - | |
| CA_2A-7A-12A | Rel-13 | | | | | - | - | |
| CA_2A-7A-66A | Rel-14 | | | | | - | - | |
| CA_2A-12A-30A | Rel-12 | | | | | - | - | |
| CA_2A-12A-66A | Rel-14 | | | | | - | - | |
| CA_2A-12A-66A-66A | Rel-14 | | | | | - | - | |
| CA_2A-13A-66A | Rel-14 | | | | | - | - | |
| CA_2A-14A-30A | Rel-15 | | | | | - | - | |
| CA_2A-14A-66A | Rel-15 | | | | | - | - | |
| CA_2A-14A-66A-66A | Rel-15 | | | | | - | - | |
| CA_2A-29A-30A | Rel-12 | | | | | - | - | |
| CA_2A-29A-66A | Rel-14 | | | | | - | - | |
| CA_2A-30A-66A | Rel-14 | | | | | - | - | |
| CA_2A-30A-66A-66A | Rel-14 | | | | | - | - | |
| CA_2A-66A-71A | Rel-15 | | | | | - | - | |
| CA_2A-66A-66A-71A | Rel-15 | | | | | | | |
| CA_2A-66C-71A | Rel-15 | | | | | | | |
| CA_2C-5A-30A | Rel-13 | | | | | - | - | |
| CA_2C-12A-30A | Rel-13 | | | | | - | - | |
| CA_2C-29A-30A | Rel-13 | | | | | - | - | |
| CA_3A-7A-8A | Rel-13 | | | | | - | - | |
| CA_3A-7A-20A | Rel-12 | | | | | - | - | |
| CA_3A-7A-28A | Rel-13 | | | | | - | - | |
| CA_3A-8A-11A | Rel-14 | | | | | - | - | |
| CA_3A-8A-27A | Rel-13 | | | | | - | - | |
| CA_3A-8A-28A | Rel-14 | | | 3, 8 | | 28 | 3A-28A | |
| CA_3A-8A-40A | Rel-13 | | | | | - | - | |
| CA_3A-11A-28A | Rel-14 | | | | | - | - | |
| CA_3A-19A-21A | Rel-14 (1UL, 2UL) | | | | | - | - | |
| CA_3A-19A-42A | Rel-13 (1UL) Rel-14 (2UL) | | | | | - | - | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CA_3A-19A-42C | Rel-13 (1UL) Rel-14 (2UL) | | | | - | - | |
| CA_3A-20A-32A | Rel-14 | | | | - | - | |
| CA_3A-21A-28A | Rel-14 | | | | - | - | |
| CA_3A-21A-42A | Rel-14 (1UL, 2UL) | | | | - | - | |
| CA_3A-21A-42C | Rel-14 | | | | - | - | |
| CA_3A-28A-41A | Rel-14 | | | | - | - | |
| CA_3A-28A-42A | Rel-14 | | | | - | - | |
| CA_3A-28A-42C | Rel-14 | | | | - | - | |
| CA_3A-41A-42A | Rel-13 | | | | - | - | |
| CA_3A-7C-28A | Rel-13 | | | | - | - | |
| CA_3C-7A-28A | Rel-13 | | | | - | - | |
| CA_3C-7C-28A | Rel-13 | | | | - | - | |
| CA_4A-5A-12A | Rel-12 | | | | - | - | |
| CA_4A-5A-13A | Rel-12 | | | | - | - | |
| CA_4A-5A-30A | Rel-12 | | | | - | - | |
| CA_4A-7A-12A | Rel-12 | | | | - | - | |
| CA_4A-12A-30A | Rel-12 | | | | - | - | |
| CA_4A-29A-30A | Rel-12 | | | | - | - | |
| CA_4A-4A-5A-30A | Rel-13 | | | | - | - | |
| CA_4A-4A-12A-30A | Rel-13 | | | | - | - | |
| CA_4A-4A-29A-30A | Rel-13 | | | | - | - | |
| CA_5A-30A-66A | Rel-14 | | | | - | - | |
| CA_5B-30A-66A | Rel-14 | | | | - | - | |
| CA_5B-30A-66A-66A | Rel-15 | | | | - | - | |
| CA_7A-8A-20A | Rel-12 | | | | - | - | |
| CA_8A-11A-28A | Rel-14 | | 8, 11 | | 28 | 11A-28A | |
| CA_12A-30A-66A | Rel-14 | | | | - | - | |
| CA_14A-30A-66A | Rel-15 | | | | - | - | |
| CA_14A-30A-66A-66A | Rel-15 | | | | - | - | |
| CA_19A-21A-42A | Rel-14 | | | | - | - | |
| CA_19A-21A-42C | Rel-14 | | | | - | - | |
| CA_21A-28A-42A | Rel-14 | | | | - | - | |
| CA_21A-28A-42C | Rel-14 | | | | - | - | |
| CA_29A-46A-66A | Rel-14 | | 66 | | - | 29A-46A | |
| CA_29A-66A-66A-70A | Rel-15 | | 66, 70 | | - | - | |
| CA_29A-66A-66A-70C | Rel-15 | | 66, 70 | | - | - | |
| CA_29A-66A-70A | Rel-15 | | 66, 70 | | - | - | |
| CA_29A-66A-70C | Rel-15 | | 66, 70 | | - | - | |
| CA_29A-66C-70A | Rel-15 | | 66, 70 | | - | - | |
| CA_29A-66C-70C | Rel-15 | | 66, 70 | | - | - | |
| CA_66A-66A-70A-71A | Rel-15 | | | | - | - | |
| CA_66A-66A-70C-71A | Rel-15 | | | | - | - | |
| CA_66A-70A-71A | Rel-15 | | | | - | - | |
| CA_66A-70C-71A | Rel-15 | | | | - | - | |
| CA_66C-70A-71A | Rel-15 | | | | - | - | |
| CA_66C-70C-71A | Rel-15 | | | | - | - | |

| | |
|---|---|
| Note 1: | Notation used for intra-band contiguous CA Bands is according to TS 36.101 [2] Table 5.6A.1-2a, e.g. 'CA_1A-3A-19A' indicates CA operation on E-UTRA bands 1, 3 and 19, each with CA Bandwidth class A. |
| Note 2: | The UL CA capabilities as per Table A.4.6-2 can be supported on a single or multiple CA Band(s). The UE supplier shall indicate all supported UL CA Bandwidth Class(es), in uplink of the supported CA Band(s), as per TS 36.101 [2] Table 5.6A.1-2a. The UE shall also indicate in which bands is UL supported. For this release of specification valid choices are 'N', 'XA-YA' etc, where X,Y,Z are the bands. For example, for UL support in B1+B3, and B3+B19, for CA_1A-3A-19A, UE shall indicate '1A-3A','3A-19A', |
| Note 3: | The UE supplier shall indicate the supported Bandwidth Combination Set(s) as per TS 36.101 [2] Table 5.6A.1-2a. |
| Note 4: | Reference to all items is 36.101, 5.6A and 36.331, 6.3.6 |
| Note 5: | Fallback Bands Exceptions column is used for the FALLBACK() operator in "Tested Band Selection Criteria" (Table 4.1-1b). FALLBACK(A.4.6.3-4) shall return a set of all fallback bands of the supported CA Configurations, i.e. a union of bands included in each CA Configuration, derived according to Table A.4.1-2, with the following additional conditions: 1. Band is not listed in the Fallback Band Exceptions for the considered CA Configuration 2. UL is supported in the band for the considered CA Configuration, according to Supported UL Bands Column 3. Maximum allowed channel BW in the band is included in at least one of the supported Bandwidth Combination Sets supported by the considered CA Configuration |
| Note 6: | Fallback CA configurations Exceptions column is used for the FALLBACK() and FALLBACK_UL() operators in "Tested CA Configurations Criteria" (Table 4.1-1c). FALLBACK(A.4.6.3-4) shall return a set of all fallback CA Configurations of supported CA Configurations, derived according to Table A.4.1-2, with the following additional conditions: 1. Fallback CA Configuration is not listed in "Fallback CA Configurations Exceptions" 2. UL is supported in each Fallback CA Configuration band that is not downlink-only, according to Supported UL Bands Column 3. Maximum allowed channel BW in each Fallback CA Configuration band is included in at least one of the supported CA Configuration Bandwidth Combination Sets. |
| Note 7: | UL(A.4.6.3-4) shall return all supported CA Configurations where at least one >1 Carrier UL CA Bandwidth Class was declared in column "Supported CA Bandwidth Class(es) in UL" UL_2CC(A.4.6.3-4) shall return all supported CA Configurations where at least one 2 Carrier UL CA Bandwidth Class was declared in column "Supported CA Bandwidth Class(es) in UL". UL_3CC(A.4.6.3-4) shall return all supported CA Configurations where at least one 3 Carrier UL CA Bandwidth Class was declared. |
| Note 8: | The exceptions columns are pre-filled, please do not fill out. Exceptions are possible if there are big differences between CA Configuration and Fallback CA Configuration/band definitions. For example, CA_18A-28A uses only a part of B28, so 28 will be listed as an exception. |
| Note 9: | List all the CA Combination bands where UL is supported. |
| Note 10: | The UE supplier shall indicate the frequency bands where 4 layer spatial multiplexing is supported in the supported CA Configurations. |

**Table A.4.6.3-5: Supported CA configurations for Inter-band CA (four bands)**

| E-UTRA CA configuration / Item (Note 1) | Release | Supported | Supported CA Bandwidth Class(es) in UL (Note 2,7) | Supported UL Bands (Note 9) | Supported Bandwidth Combination Set(s) (Note 3) | Fallback Bands Exception (Note 5,8) | Fallback CA configurations Exceptions (Note 6,8) | Supported band(s) for 4 layer spatial multiplexing (Note 10) |
|---|---|---|---|---|---|---|---|---|
| CA_1A-3A-7A-8A | Rel-13 | | | | | - | - | |
| CA_1A-3A-7A-20A | Rel-14 | | | | | - | - | - |
| CA_1A-3A-7A-32A | Rel-15 | | | | | | | |
| CA_1A-3A-8A-40A | Rel-13 | | | | | - | - | |
| CA_1A-3A-19A-21A | Rel-14 | | | | | - | - | |
| CA_1A-3A-19A-42A | Rel-13 (1UL) Rel-14 (2UL) | | | | | - | - | |
| CA_1A-3A-19A-42C | Rel-13 (1UL) Rel-14 (2UL) | | | | | - | - | |
| CA_1A-3A-21A-28A | Rel-14 | | | | | - | - | |
| CA_1A-3A-21A-42A | Rel-14 | | | | | - | - | |
| CA_1A-3A-21A-42C | Rel-14 | | | | | - | - | |
| CA_1A-3A-28A-42A | Rel-14 | | | | | - | - | |
| CA_1A-3A-28A-42C | Rel-14 | | | | | - | - | |
| CA_1A-19A-21A-42A | Rel-13 (1UL) Rel-14 (2UL) | | | | | - | - | |
| CA_1A-19A-21A-42C | Rel-13 | | | | | - | - | |
| CA_1A-21A-28A-42A | Rel-14 | | | | | - | - | |
| CA_1A-21A-28A-42C | Rel-14 | | | | | - | - | |
| CA_2A-2A-14A-30A-66A | Rel-15 | | | | | - | - | |
| CA_2A-4A-5A-12A | Rel-13 | | | | | - | - | |
| CA_2A-4A-5A-29A | Rel-13 | | | | | - | - | |
| CA_2A-4A-5A-30A | Rel-13 | | | | | - | - | |
| CA_2A-4A-7A-12A | Rel-13 | | | | | - | - | |
| CA_2A-4A-12A-30A | Rel-13 | | | | | - | - | |
| CA_2A-4A-29A-30A | Rel-13 | | | | | - | - | |
| CA_2A-5A-30A-66A | Rel-14 | | | | | - | - | |
| CA_2A-5B-30A-66A | Rel-14 | | | | | - | - | |
| CA_2A-12A-30A-66A | Rel-14 | | | | | - | - | |
| CA_2A-12A-30A-66A-66A | Rel-15 | | | | | - | - | |
| CA_2A-14A-30A-66A | Rel-15 | | | | | - | - | |
| CA_2A-14A-30A-66A–66A | Rel-15 | | | | | - | - | |
| CA_2A-29A-30A-66A | Rel-15 | | | | | - | - | |
| CA_3A-7A-20A-32A | Rel-14 | | | | | - | - | |
| CA_3A-19A-21A-42A | Rel-14 | | | | | - | - | |

| Note 1: | Notation used for intra-band contiguous CA Bands is according to TS 36.101 [2] Table 5.6A.1-2b, e.g. 'CA_1A-3A-19A-42A' indicates CA operation on E-UTRA bands 1, 3, 19 and 42, each with CA Bandwidth class A. |
|---|---|
| Note 2: | The UL CA capabilities as per Table A.4.6-2 can be supported on a single or multiple CA Band(s). The UE supplier shall indicate all supported UL CA Bandwidth Class(es), in uplink of the supported CA Band(s), as per TS 36.101 [2] Table 5.6A.1-2b. The UE shall also indicate in which bands is UL supported. For this release of specification valid choices are 'N', 'XA-YA' etc, where X,Y,Z are the bands. For example, for UL support in B1+B3, and B3+B19, for CA_1A-3A-19A-42A, UE shall indicate '1A-3A','3A-19A', |
| Note 3: | The UE supplier shall indicate the supported Bandwidth Combination Set(s) as per TS 36.101 [2] Table 5.6A.1-2b. |
| Note 4: | Reference to all items is 36.101, 5.6A and 36.331, 6.3.6 |
| Note 5: | Fallback Bands Exceptions column is used for the FALLBACK() operator in "Tested Band Selection Criteria" (Table 4.1-1b). FALLBACK(A.4.6.3-4) shall return a set of all fallback bands of the supported CA Configurations, i.e. a union of bands included in each CA Configuration, derived according to Table A.4.1-2, with the following additional conditions:<br>    1.  Band is not listed in the Fallback Band Exceptions for the considered CA Configuration<br>    2.  UL is supported in the band for the considered CA Configuration, according to Supported UL Bands Column<br>    3.  Maximum allowed channel BW in the band is included in at least one of the supported Bandwidth Combination Sets supported by the considered CA Configuration |
| Note 6: | Fallback CA configurations Exceptions column is used for the FALLBACK() and FALLBACK_UL() operators in "Tested CA Configurations Criteria" (Table 4.1-1c). FALLBACK(A.4.6.3-4) shall return a set of all fallback CA Configurations of supported CA Configurations, derived according to Table A.4.1-2, with the following additional conditions:<br>    4.  Fallback CA Configuration is not listed in "Fallback CA Configurations Exceptions"<br>    5.  UL is supported in each Fallback CA Configuration band that is not downlink-only, according to Supported UL Bands Column<br>    6.  Maximum allowed channel BW in each Fallback CA Configuration band is included in at least one of the supported CA Configuration Bandwidth Combination Sets. |
| Note 7: | UL(A.4.6.3-4) shall return all supported CA Configurations where at least one >1 Carrier UL CA Bandwidth Class was declared in column "Supported CA Bandwidth Class(es) in UL"<br>UL_2CC(A.4.6.3-4) shall return all supported CA Configurations where at least one 2 Carrier UL CA Bandwidth Class was declared in column "Supported CA Bandwidth Class(es) in UL".<br>UL_3CC(A.4.6.3-4) shall return all supported CA Configurations where at least one 3 Carrier UL CA Bandwidth Class was declared. |
| Note 8: | The exceptions columns are pre-filled, please do not fill out. Exceptions are possible if there are big differences between CA Configuration and Fallback CA Configuration/band definitions. For example, CA_18A-28A uses only a part of B28, so 28 will be listed as an exception. |
| Note 9: | List all the CA Combination bands where UL is supported. |
| Note 10: | The UE supplier shall indicate the frequency bands where 4 layer spatial multiplexing is supported in the supported CA Configurations. |

## A.4.7 Category M1 UE Centre Frequency Implementation

**Table A.4.7-1: Category M1 UE Centre Frequency Implementation**

| Band | UE implementation on Centre Frequency (Note1) | |
|---|---|---|
| | **Centre of Channel bandwidth** | **Centre of narrowband** |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 7 | | |
| 8 | | |
| 11 | | |
| 12 | | |
| 13 | | |
| 18 | | |
| 19 | | |
| 20 | | |
| 21 | | |
| 26 | | |
| 27 | | |
| 28 | | |
| 31 | | |
| 39 | | |
| 41 | | |
| Note 1: | UE vendor updates one of the two columns across all supported bands | |

# Annex B (informative):
# Change history

| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New |
|------|-------|----------|-----|-----|-----------------|-----|-----|
| 2008-03 | | | | | Skeleton proposed for RAN5#38 Malaga | | 0.0.1 |
| 2008-06 | | | | | Updated after RAN5#39bis:<br>- Editorial update and alignment with 36.523-2<br>- TC included in 36.521-1 and 36.521-3 included<br>- Some Conditions for TC selections introduce | 0.0.1 | 0.1.0 |
| 2008-08 | | | | | Updated after RAN5#40:<br>- Editorial update in regard to changing spec names, etc.<br>- FDD and TDD split (R5-083839)<br>- RRM TC numbers aligned with 36.521-3 v030 | 0.1.1 | 0.2.0 |
| 2008-10 | | | | | Update after RAN5#40bis:<br>- Table split in different clauses for Conformance and RRM test cases<br>- Extension of applicability tables to include Additional information column<br>- Change of applicability of TCs that apply to any E-UTRA device into "R" - recommended<br>- Updated TCs in accordance to 36.521-1 v110 and 36.521-3 v040<br>- Some editorial updates | 0.2.0 | 0.3.0 |
| 2008-11 | | | | | Update After RAN5#41 (R5-055360):<br>- Renamed 8.1.1, added new 8.1.2,<br>- Added new TCs to RRM section Measurement Performance Requirements<br>- Added Table A.4.3-2 with reference to test loop functions in 36.509<br>- Some editorial changes<br>- Normative References updated<br>- Change RRM TC titles to reflect their applicability to FDD only | 0.3.0 | 2.0.0 |
| 2008-12 | RAN#42 | RP-080970 | | | Approval of version 2.0.0 at RAN#42, then put to version 8.0.0. | 2.0.0 | 8.0.0 |
| 2008-01 | | | | | Editorial corrections. | 8.0.0 | 8.0.1 |
| 2009-05 | RAN#44 | RP-090448 | 0001 | | CR to 36.521-2: Applicability changes and additions for RRM test cases | 8.0.1 | 8.1.0 |
| 2009-05 | RAN#44 | RP-090448 | 0002 | | LTE-RF: Applicability for Output Power Dynamics test cases | 8.0.1 | 8.1.0 |
| 2009-09 | RAN#45 | R5-094035 | 0003 | - | Correction CR to 36.521-2: Applicability changes to introduce additional RRM tests | 8.1.0 | 8.2.0 |
| 2009-09 | RAN#45 | R5-094572 | 0004 | - | Applicability for Output Power Dynamics test cases | 8.1.0 | 8.2.0 |
| 2009-09 | RAN#45 | R5-094710 | 0005 | - | Resubmission-Correction CR to 36.521-2: Applicability changes to introduce additional RRM tests | 8.1.0 | 8.2.0 |
| 2009-09 | RAN#45 | R5-094768 | 0006 | - | Update of RRM Conformance test applicability for SON | 8.1.0 | 8.2.0 |
| 2009-09 | RAN#45 | R5-094999 | 0007 | - | Correction CR to 36.521-2: Applicability changes to RF PDSCH Demodulation tests | 8.1.0 | 8.2.0 |
| 2009-12 | RAN#46 | R5-095519 | 0008 | - | Correction CR to 36.521-2: Applicability changes to update the Demodulation of PDSCH (FDD) tests based on the CR merge results from RAN5#44 | 8.2.0 | 8.3.0 |
| 2009-12 | RAN#46 | R5-095778 | 0009 | | Update of RRM Conformance test applicability for RLM in DRX test cases | 8.2.0 | 8.3.0 |
| 2009-12 | RAN#46 | R5-095841 | 0010 | - | CR to 36.521-2: Applicability additions for new RRM (FDD) tests | 8.2.0 | 8.3.0 |
| 2010-03 | RAN#47 | R5-100358 | 0011 | - | CR to 36.521-2 Rel-8 Introduction of Applicability for E-UTRAN FDD - FDD Intra Frequency Cell Search with DRX when L3 filtering is used | 8.3.0 | 8.4.0 |
| 2010-03 | RAN#47 | R5-100561 | 0012 | - | CR to 36.521-2: Update baseline implementation capabilities with extended LTE1500 operating bands | 8.3.0 | 8.4.0 |
| 2010-03 | RAN#47 | R5-100872 | 0013 | - | CSI: Following up corrections to tests titles and RI clause structure | 8.3.0 | 8.4.0 |
| 2010-03 | RAN#47 | - | - | - | Moved to v9.0.0 with no change | 8.4.0 | 9.0.0 |
| 2010-06 | RAN#48 | R5-103147 | 0014 | - | Adding band 20, 800MHZ in EU to TS36.521-2 | 9.0.0 | 9.1.0 |
| 2010-06 | RAN#48 | R5-103757 | 0015 | - | Introduction of feature group indicator in applicability for RRM test cases | 9.0.0 | 9.1.0 |
| 2010-09 | RAN#49 | R5-104246 | 0017 | - | CR to 36.521-2 on Correction to cell search | 9.1.0 | 9.2.0 |
| 2010-09 | RAN#49 | R5-104264 | 0018 | - | Addition of applicability for new RRM test cases | 9.1.0 | 9.2.0 |
| 2010-09 | RAN#49 | R5-104372 | 0019 | - | Update of Applicability for Demodulation test cases and UE implementation Types for UTRA TDD | 9.1.0 | 9.2.0 |
| 2010-09 | RAN#49 | R5-104840 | 0020 | - | 36521-2 General update to add-remove TCs applicability correct, TC titles and numbers and editorials | 9.1.0 | 9.2.0 |
| 2010-09 | RAN#49 | R5-105056 | 0021 | - | Applicability of a new Rel-9 downlink sustained data rate performance test cases | 9.1.0 | 9.2.0 |
| 2010-12 | RAN#50 | R5-106118 | 0022 | - | CR to 36.521-2: Update baseline implementation capabilities for EUTRA TDD LTE band 41 | 9.2.0 | 9.3.0 |
| 2011-03 | RAN#51 | R5-110536 | 0023 | - | Defining new bands 42 and 43 (3500MHz) | 9.3.0 | 9.4.0 |
| 2011-03 | RAN#51 | R5-110955 | 0024 | - | CR to 36.521-2: General update to add, remove, and correct applicability of RRM TCs | 9.3.0 | 9.4.0 |

| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New |
|---|---|---|---|---|---|---|---|
| 2011-06 | RAN#52 | R5-112131 | 0025 | - | Correction to Band 12 frequency range in 36.521-2 | 9.4.0 | 9.5.0 |
| 2011-06 | RAN#52 | R5-112212 | 0026 | - | Adding Band 24 to TS 36.521-2 | 9.4.0 | 9.5.0 |
| 2011-06 | RAN#52 | R5-112378 | 0027 | - | Update of FGI bit definitions for rel-9 | 9.4.0 | 9.5.0 |
| 2011-06 | RAN#52 | R5-112821 | 0028 | - | Add release applicability for spatial multiplexing test cases | 9.4.0 | 9.5.0 |
| 2011-06 | RAN#52 | R5-112857 | 0029 | - | Addition of applicability for new RRM test cases 4.3.4.3 and 8.4.3 | 9.4.0 | 9.5.0 |
| 2011-06 | RAN#52 | R5-112865 | 0030 | - | Addition of applicability for new MBMS test cases 10.1 and 10.2 | 9.4.0 | 9.5.0 |
| 2011-09 | RAN#53 | R5-113306 | 0031 | - | Adding band 25 to TS36.521-2 | 9.5.0 | 9.6.0 |
| 2011-09 | RAN#53 | R5-113625 | 0033 | - | Introduction of applicability of Rel-9 Scenarios | 9.5.0 | 9.6.0 |
| 2011-09 | RAN#53 | R5-113626 | 0034 | - | Introduction of applicability of PDSCH performance tests for low UE categories | 9.5.0 | 9.6.0 |
| 2011-09 | RAN#53 | R5-114025 | 0035 | - | Test Cases 6.2.3 and 6.2.4 Applicability Clarification | 9.5.0 | 9.6.0 |
| 2011-09 | RAN#53 | R5-114070 | 0036 | - | Update baseline implementation capabilities for FDD LTE Band 23 in 36.521-2 | 9.5.0 | 9.6.0 |
| 2011-09 | RAN#53 | R5-114074 | 0037 | - | Applicability for new R9 RRM test cases | 9.5.0 | 9.6.0 |
| 2011-09 | RAN#53 | R5-114096 | 0038 | - | Missing FGIs in RRM Test Case Applicabilities in 36.521-2 | 9.5.0 | 9.6.0 |
| 2011-12 | RAN#54 | R5-115128 | 0039 | - | Correction the content of A.4.4-1_16 in 36.521-2 | 9.6.0 | 9.7.0 |
| 2011-12 | RAN#54 | R5-115134 | 0040 | - | Correction to the test case condition of C12 in 3GPP TS 36.521-2 | 9.6.0 | 9.7.0 |
| 2011-12 | RAN#54 | R5-115186 | 0041 | - | Adding band 22 (3500MHz FDD) to 36.521-2 | 9.6.0 | 9.7.0 |
| 2011-12 | RAN#54 | R5-115785 | 0042 | - | Requirement change in UE spurious emissions for Band 7 and 38 co-existence (Rel-8 only) | 9.6.0 | 9.7.0 |
| 2011-12 | RAN#54 | R5-115422 | 0043 | - | Update of FGI bit table in 36.521-2 | 9.6.0 | 9.7.0 |
| 2011-12 | RAN#54 | R5-115813 | 0044 | - | RF: Update of the applicability list | 9.6.0 | 9.7.0 |
| 2011-12 | RAN#54 | - | - | - | Moved to Rel-10 with no change | 9.7.0 | 10.0.0 |
| 2012-03 | RAN#55 | R5-120340 | 0046 | - | Addition of FGI bit 16 into test cases 9.1.x.x and 9.2.x.x | 10.0.0 | 10.1.0 |
| 2012-03 | RAN#55 | R5-120534 | 0047 | - | Introduction to Applicability for RSRQ for E-UTRA Carrier Aggregation | 10.0.0 | 10.1.0 |
| 2012-03 | RAN#55 | R5-120596 | 0048 | - | Updates to applicability for newly introduced CA feature chapter8 test cases in 36.521-2 | 10.0.0 | 10.1.0 |
| 2012-03 | RAN#55 | R5-120811 | 0049 | - | Correction to FGI bits in test case 8.5.2 | 10.0.0 | 10.1.0 |
| 2012-03 | RAN#55 | R5-120812 | 0050 | - | Addition of FGI bit 15 into test cases configuring event 1B | 10.0.0 | 10.1.0 |
| 2012-03 | RAN#55 | R5-120832 | 0051 | - | Update of FGI bit table in TS36.521-2 | 10.0.0 | 10.1.0 |
| 2012-03 | RAN#55 | R5-120836 | 0052 | - | Introduction to CA Applicability for Transmitter Characteristics tests MPR and ACLR | 10.0.0 | 10.1.0 |
| 2012-03 | RAN#55 | R5-120838 | 0053 | - | RF/RRM: Applicability for new added RRM test cases | 10.0.0 | 10.1.0 |
| 2012-03 | RAN#55 | R5-120840 | 0054 | - | Applicability for new UL MIMO test case | 10.0.0 | 10.1.0 |
| 2012-06 | RAN#56 | R5-121185 | 0055 | - | Updates to applicability for newly introduced CA feature TDD chapter 8 test cases in 36.521-2 | 10.1.0 | 10.2.0 |
| 2012-06 | RAN#56 | R5-121219 | 0056 | - | Adding operating band 26 to TS 36.521-2 | 10.1.0 | 10.2.0 |
| 2012-06 | RAN#56 | R5-121904 | 0057 | - | Addition of applicability for E-UTRAN Inter frequency case reselection in the existence of non-allowed CSG cell | 10.1.0 | 10.2.0 |
| 2012-06 | RAN#56 | R5-121965 | 0058 | - | Applicability for new UL MIMO test cases | 10.1.0 | 10.2.0 |
| 2012-06 | RAN#56 | R5-121966 | 0059 | - | Updates to applicability for Transmit timing tests in 36.521-2 | 10.1.0 | 10.2.0 |
| 2012-06 | RAN#56 | R5-121967 | 0060 | - | Applicability for new R9 RRM test cases | 10.1.0 | 10.2.0 |
| 2012-06 | RAN#56 | R5-121990 | 0061 | - | Addition of applicability for CA TCs | 10.1.0 | 10.2.0 |
| 2012-09 | RAN#57 | R5-123093 | 0062 | - | Updates to applicability for Chapter9 absolute and relative RSRP measurement test cases for carrier aggregation. | 10.2.0 | 10.3.0 |
| 2012-09 | RAN#57 | R5-123165 | 0063 | - | Introduction of Applicability for E-UTRAN Event Triggered reporting on deactivated SCell with PCell interruption in non-DRX for CA | 10.2.0 | 10.3.0 |
| 2012-09 | RAN#57 | R5-123169 | 0064 | - | Correction to Applicability for RSRQ for E-UTRA Carrier Aggregation | 10.2.0 | 10.3.0 |
| 2012-09 | RAN#57 | R5-123170 | 0065 | - | Introduction of eDL MIMO to UE service capabilities | 10.2.0 | 10.3.0 |
| 2012-09 | RAN#57 | R5-123533 | 0066 | - | Update of References in 36.521-2 v980 (pointer) | 10.2.0 | 10.3.0 |
| 2012-09 | RAN#57 | R5-123542 | 0067 | - | TS 36.521-2:TDD CA test cases applicability correction | 10.2.0 | 10.3.0 |
| 2012-09 | RAN#57 | R5-123788 | 0068 | - | Clarification of the release of UTRAN-EUTRAN Inter-RAT RRM test cases in 36.521-2 | 10.2.0 | 10.3.0 |
| 2012-09 | RAN#57 | R5-123856 | 0069 | - | Applicability for new RRM test cases | 10.2.0 | 10.3.0 |
| 2012-09 | RAN#57 | R5-123858 | 0070 | - | Introduction of Applicability for ACS for CA and UE config Tx output power for CA | 10.2.0 | 10.3.0 |
| 2012-09 | RAN#57 | R5-123909 | 0071 | - | TS 36.521-2:New UE categories addition | 10.2.0 | 10.3.0 |
| 2012-09 | RAN#57 | R5-123942 | 0072 | - | Applicability update for test cases in TS36.521-1 with single BW requirements not defined for all operating bands, rel-8 | 10.2.0 | 10.3.0 |
| 2012-09 | RAN#57 | R5-123993 | 0073 | - | Update applicability of UL-MIMO related conformance test cases | 10.2.0 | 10.3.0 |
| 2012-09 | RAN#57 | R5-123997 | 0074 | - | TS 36.521-2:Applicability for new CQI test cases | 10.2.0 | 10.3.0 |
| 2012-12 | RAN#58 | R5-125251 | 0075 | - | Removing FGI bit 5 from section four RRM test cases | 10.3.0 | 10.4.0 |
| 2012-12 | RAN#58 | R5-125390 | 0076 | - | Adding bands 28 and 44 to TS36.521-2 | 10.3.0 | 10.4.0 |
| 2012-12 | RAN#58 | R5-125821 | 0077 | - | Correction to Additional Information for RRM 4.3.4.3 | 10.3.0 | 10.4.0 |
| 2012-12 | RAN#58 | R5-125833 | 0078 | - | Introduction of Band 27 to TS 36.521-2 | 10.3.0 | 10.4.0 |

| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New |
|---|---|---|---|---|---|---|---|
| 2012-12 | RAN#58 | R5-125836 | 0079 | - | Update applicability of UL-MIMO related conformance test cases | 10.3.0 | 10.4.0 |
| 2012-12 | RAN#58 | R5-125920 | 0080 | - | Applicability removal of RRM TC8.12.1 | 10.3.0 | 10.4.0 |
| 2012-12 | RAN#58 | R5-126049 | 0081 | - | Updates to the applicability of CA RF Tx tests | 10.3.0 | 10.4.0 |
| 2012-12 | RAN#58 | R5-124138 | 0082 | - | Updates to the applicability of CA RF Performance tests | 10.3.0 | 10.4.0 |
| 2012-12 | RAN#58 | R5-124168 | 0083 | - | Updates to the applicability of CA RF Rx tests | 10.3.0 | 10.4.0 |
| 2012-12 | RAN#58 | R5-124169 | 0084 | - | Applicability for new RRM CA related TCs | 10.3.0 | 10.4.0 |
| 2013-03 | RAN#59 | R5-130177 | 0085 | - | Introduction of new rel-10 Reporting of RI test cases into applicability specification | 10.4.0 | 10.5.0 |
| 2013-03 | RAN#59 | R5-130297 | 0086 | - | Introduction of eDL-MIMO applicability | 10.4.0 | 10.5.0 |
| 2013-03 | RAN#59 | R5-130306 | 0087 | - | Updates to applicability for newly introduced eICIC feature chapter9 RRM test cases | 10.4.0 | 10.5.0 |
| 2013-03 | RAN#59 | R5-130445 | 0090 | - | Correction to CA physical layer implementation capabilities | 10.4.0 | 10.5.0 |
| 2013-03 | RAN#59 | R5-130464 | 0091 | - | Correction of FGI bit 8 in 36.521-2 | 10.4.0 | 10.5.0 |
| 2013-03 | RAN#59 | R5-130802 | 0092 | - | Addition of applicability for RRM TCs 9.1.7.1 and 9.1.7.2 | 10.4.0 | 10.5.0 |
| 2013-03 | RAN#59 | R5-130807 | 0093 | - | Applicability correction to Spurious emission band UE co-existence(36.521-2) | 10.4.0 | 10.5.0 |
| 2013-03 | RAN#59 | R5-130997 | 0098 | - | Addition of applicability statement for 6 new eICIC test cases | 10.4.0 | 10.5.0 |
| 2013-03 | RAN#59 | R5-130375 | 0088 | - | Updates to CA physical layer baseline implementation capabilities for CA band 7 | 10.5.0 | 11.0.0 |
| 2013-03 | RAN#59 | R5-130379 | 0089 | - | Updates to CA physical layer baseline implementation capabilities for CA band 41 | 10.5.0 | 11.0.0 |
| 2013-03 | RAN#59 | R5-130927 | 0094 | - | Updates on the supported CA configurations for CA_38, CA_3-7 and CA_7-20 | 10.5.0 | 11.0.0 |
| 2013-03 | RAN#59 | R5-130928 | 0095 | - | Addition of CA physical layer implementation capabilities for CA_4-5 and CA_4-13 | 10.5.0 | 11.0.0 |
| 2013-03 | RAN#59 | R5-130929 | 0096 | - | Updates of Inter-Band CA combinations CA_3-20 and CA_2-29 | 10.5.0 | 11.0.0 |
| 2013-03 | RAN#59 | R5-130930 | 0097 | - | CA_2-17 and CA_4-17 addition to supported capabilities in 36.521-2 | 10.5.0 | 11.0.0 |
| 2013-06 | RAN#60 | R5-131155 | 0100 | - | Introduction of new rel-11 Reporting of RI test cases into applicability specification | 11.0.0 | 11.1.0 |
| 2013-06 | RAN#60 | R5-131159 | 0101 | - | Introduction of Maximum Input Level test case for CA (inter-band DL CA without UL CA) into applicability specification | 11.0.0 | 11.1.0 |
| 2013-06 | RAN#60 | R5-131212 | 0102 | - | Correction of applicability conditions for TC 8.2.1.1.1_1: TC 8.2.1.2.1_1 and TC 8.3.2.1.1_1 in 36.521-2 | 11.0.0 | 11.1.0 |
| 2013-06 | RAN#60 | R5-131444 | 0103 | - | Addition of applicability for Configured UE transmitted Output Power for inter-band CA | 11.0.0 | 11.1.0 |
| 2013-06 | RAN#60 | R5-131525 | 0104 | - | Corrections of eDL-MIMO applicability to align with reporting of CSI | 11.0.0 | 11.1.0 |
| 2013-06 | RAN#60 | R5-131712 | 0105 | - | Corrections to Table 4.1-1a "Applicability of RF conformance test cases Conditions" and Table 4.2-1a: Applicability of RRM conformance test cases Conditions | 11.0.0 | 11.1.0 |
| 2013-06 | RAN#60 | R5-131912 | 0106 | - | 36.521-2: Inter-band CA configurations update | 11.0.0 | 11.1.0 |
| 2013-06 | RAN#60 | R5-131914 | 0107 | - | Addition of applicability for FDD RF TCs 9.3.4.1.1, 9.3.4.2.1, 9.4.1.2.1, 9.4.2.2.1 and TDD RF TCs 9.3.4.1.2, 9.3.4.2.2, 9.4.1.2.2 and 9.4.2.2.2 | 11.0.0 | 11.1.0 |
| 2013-06 | RAN#60 | R5-131927 | 0108 | - | Updates to applicability for newly introduced eICIC feature chapter9 RRM test cases in 36.521-2 | 11.0.0 | 11.1.0 |
| 2013-06 | RAN#60 | R5-132013 | 0109 | - | 36.521-2 specification clean up | 11.0.0 | 11.1.0 |
| 2013-06 | RAN#60 | R5-132015 | 0110 | - | Update of FGI tables in TS 36.521-2 | 11.0.0 | 11.1.0 |
| 2013-06 | RAN#60 | R5-132111 | 0111 | - | Removal of Spurious emission UE co-existence test case 6.6.3.2_1 from 36.521-2 | 11.0.0 | 11.1.0 |
| 2013-09 | RAN#61 | R5-133125 | 0112 | - | editorial correction for RRM test case Condition C46 | 11.1.0 | 11.2.0 |
| 2013-09 | RAN#61 | R5-133143 | 0113 | - | Addition of applicability for test cases 7.3.13 and 7.3.15 | 11.1.0 | 11.2.0 |
| 2013-09 | RAN#61 | R5-133251 | 0114 | - | Addition of Band 31 to 36.521-2 | 11.1.0 | 11.2.0 |
| 2013-09 | RAN#61 | R5-133315 | 0115 | - | Applicability for new CA TCs for 20MHz | 11.1.0 | 11.2.0 |
| 2013-09 | RAN#61 | R5-133347 | 0116 | - | eICIC RRM: Applicability for some new added eICIC test cases | 11.1.0 | 11.2.0 |
| 2013-09 | RAN#61 | R5-133350 | 0117 | - | CA RF: Applicability for some new added CA test cases | 11.1.0 | 11.2.0 |
| 2013-09 | RAN#61 | R5-133403 | 0118 | - | CA RRM: Corrections to applicability of CA RRM TC-s | 11.1.0 | 11.2.0 |
| 2013-09 | RAN#61 | R5-133816 | 0119 | - | Update applicability of test cases required to support PUSCH 2-2 | 11.1.0 | 11.2.0 |
| 2013-09 | RAN#61 | R5-133825 | 0120 | - | eICIC RF: Applicability for some new added eICIC test cases | 11.1.0 | 11.2.0 |
| 2013-09 | RAN#61 | R5-133827 | 0121 | - | Correction to applicability of TC 8.3.2.1.2, 8.3.2.1.3 and 8.3.2.2.1 | 11.1.0 | 11.2.0 |
| 2013-09 | RAN#61 | R5-133839 | 0122 | - | Correction of applicability for FDD RF TCs 9.3.4.1.1, 9.3.4.2.1 & 9.4.1.2.1and TDD RF TCs 9.3.4.1.2, 9.3.4.2.2 & 9.4.1.2.2 | 11.1.0 | 11.2.0 |
| 2013-09 | RAN#61 | R5-133840 | 0123 | - | Addition of applicabilities for inter-freq/RAT without measurement gaps TCs | 11.1.0 | 11.2.0 |
| 2013-09 | RAN#61 | R5-133841 | 0124 | - | Correction to the reference information of chapter 2. | 11.1.0 | 11.2.0 |
| 2013-09 | RAN#61 | R5-133849 | 0125 | - | RRM: Update of applicability of some test cases | 11.1.0 | 11.2.0 |

| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New |
|---|---|---|---|---|---|---|---|
| 2013-09 | RAN#61 | R5-133868 | 0126 | - | Addition of UE capability information Bandwidth Combination Set for Carrier Aggregation in ICS proforma tables | 11.1.0 | 11.2.0 |
| 2013-09 | RAN#61 | R5-133872 | 0127 | - | Update RF performance test applicability table for LTE B14 public safety high power UE | 11.1.0 | 11.2.0 |
| 2013-09 | RAN#61 | R5-133875 | 0128 | - | Addition of applicability for new TCs 8.3.1.1.3 and 8.3.2.1.4 | 11.1.0 | 11.2.0 |
| 2013-09 | RAN#61 | R5-133891 | 0129 | - | Applicability addition for CA test cases | 11.1.0 | 11.2.0 |
| 2013-09 | RAN#61 | R5-133897 | 0130 | - | Addition of the applicability of TC7.3.14 & TC7.3.16 | 11.1.0 | 11.2.0 |
| 2013-12 | RAN#62 | R5-134129 | 0131 | - | RRM: Corrections of applicability of some test cases | 11.2.0 | 11.3.0 |
| 2013-12 | RAN#62 | R5-134164 | 0132 | - | Introduction of UE TM3 Demodulation Performance under High Speed Applicability | 11.2.0 | 11.3.0 |
| 2013-12 | RAN#62 | R5-134281 | 0134 | - | Addition of applicability for Sustained data rate test(FDD) for category 6 and 7 UEs | 11.2.0 | 11.3.0 |
| 2013-12 | RAN#62 | R5-134285 | 0135 | - | Removal of 6.2.5A.2 from applicability table | 11.2.0 | 11.3.0 |
| 2013-12 | RAN#62 | R5-134293 | 0136 | - | Correction to applicabilities for inter-freq/RAT without measurement gaps TCs | 11.2.0 | 11.3.0 |
| 2013-12 | RAN#62 | R5-134315 | 0137 | - | Removal of comma separated conditions | 11.2.0 | 11.3.0 |
| 2013-12 | RAN#62 | R5-134883 | 0138 | - | Addition of applicability for new TCs 7.4A.4 and 7.5A.4 | 11.2.0 | 11.3.0 |
| 2013-12 | RAN#62 | R5-134893 | 0142 | - | Addition of applicabilities of LTE Type A performance requirements | 11.2.0 | 11.3.0 |
| 2013-12 | RAN#62 | R5-134895 | 0139 | - | Removal of redundant not applicable to any device tests from applicability table | 11.2.0 | 11.3.0 |
| 2013-12 | RAN#62 | R5-134279 | 0133 | - | Addition of Rel-12 CA band combinations(CA_3-19 and CA_19-21) to Table A.4.6.3-3 | 11.3.0 | 12.0.0 |
| 2013-12 | RAN#62 | R5-135011 | 0141 | - | Updates of Table A.4.6.3-3 for CA 1A-26A | 11.3.0 | 12.0.0 |
| 2013-12 | RAN#62 | R5-135032 | 0140 | - | Applicability for new RRM test cases for 5MHz bandwidth | 11.3.0 | 12.0.0 |
| 2014-03 | RAN#63 | R5-140390 | 0143 | - | LTE Type A performance requirements - Adding a new test case 9.3.5.1.2 | 12.0.0 | 12.1.0 |
| 2014-03 | RAN#63 | R5-140426 | 0144 | - | Updates to Intra-band non-contiguous CA applicability | 12.0.0 | 12.1.0 |
| 2014-03 | RAN#63 | R5-140526 | 0145 | - | Addition of applicability for TC 8.2.2.2.4 and TC 8.2.2.4.3 | 12.0.0 | 12.1.0 |
| 2014-03 | RAN#63 | R5-140808 | 0146 | - | Correction the applicability for test case 8.2.1.3.2. | 12.0.0 | 12.1.0 |
| 2014-03 | RAN#63 | R5-140809 | 0147 | - | Update applicability table for LTE B14 public safety high power UE test cases | 12.0.0 | 12.1.0 |
| 2014-03 | RAN#63 | R5-140817 | 0148 | - | Applicability for new DL CoMP test cases | 12.0.0 | 12.1.0 |
| 2014-03 | RAN#63 | R5-140870 | 0150 | - | Corrections the applicability of test cases 8.16.3 and 8.16.4 | 12.0.0 | 12.1.0 |
| 2014-03 | RAN#63 | R5-140871 | 0151 | - | Correcting applicability in 8.2.2.1.1_1 and 8.2.2.2.1_1 for UE categories 1 and/or 2 | 12.0.0 | 12.1.0 |
| 2014-03 | RAN#63 | R5-140897 | 0152 | - | Addition of Applicability for EPDCCH New Test Cases | 12.0.0 | 12.1.0 |
| 2014-03 | RAN#63 | R5-140923 | 0153 | - | Introduction of UE CA Inter-band uplink capabilities | 12.0.0 | 12.1.0 |
| 2014-03 | RAN#63 | R5-141020 | 0154 | - | Addition of test applicability of WB-RSRQ measurement | 12.0.0 | 12.1.0 |
| 2014-03 | RAN#63 | R5-141035 | 0155 | - | Applicability for new CA RRM TCs 7.1.3+7.1.4 | 12.0.0 | 12.1.0 |
| 2014-06 | RAN#64 | R5-142113 | 0157 | - | Addition of CA 3A-28A to 36.521-2 | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-142337 | 0158 | - | Applicability update for CA band Combo CA_2A-13A | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-142345 | 0159 | - | Addition of CA band combination CA_39A-41A to Table A.4.6.3-3 in TS 36.521-2 | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-142347 | 0160 | - | Updates of Table A.4.6.3-3 for CA_3A-26A and CA_3A-27A | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-142583 | 0161 | - | Update of FGI definitions in TS 36.521-2 | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-142674 | 0162 | - | Definition correction to UL and DL category tables | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-142772 | 0163 | - | Addition of CA_2A-4A and CA_5A-7A to 36.521-2 Annex A4 | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-142782 | 0164 | - | Introduction of TC 7.6.xA.4 and 7.7A.4 applicabilities | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-142799 | 0165 | - | Addition of applicability for TC 6.6.3B.2 | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-143000 | 0166 | - | Conditions C19, C20, C21 | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-143016 | 0167 | - | Addition of RF test cases applicability for eICIC | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-143017 | 0168 | - | Addition of RRM test cases applicability for eICIC | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-143028 | 0169 | - | LTE Type A performance requirements - Adding test case 8.2.1.4.3 | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-143030 | 0170 | - | Condition C43 | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-143053 | 0171 | - | Correction to the applicability of the test case 7.6.2A.3 and 7.7A.3. | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-143054 | 0172 | - | Correction of the condition of test case 8.7.1.1 | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-143055 | 0173 | - | Correction of the condition of the test cases 8.2.1.1.1_A.2, 8.2.1.3.1_A.1, 8.2.1.3.1_A.2 and 8.2.1.4.2_A.2 | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-143056 | 0174 | - | Correction of the condition for the test cases 8.2.1.1.1_A.1, 8.2.1.4.2_A.1 and 8.2.2.1.1_A.1 | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-143060 | 0175 | - | Introduction of feICIC applicability statement for CSI test cases | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-143061 | 0176 | - | Introduction of feICIC applicability statement for RRM test cases | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-143078 | 0177 | - | Applicability for new CoMP TDD TCs | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-143083 | 0178 | - | Addition of applicability for newly added RRM test cases | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-143084 | 0179 | - | Addition of CA_27B related information into A.4.6 in TS 36.521-2 | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-143119 | 0180 | - | Update of applicability for EPDCCH test cases | 12.1.0 | 12.2.0 |
| 2014-06 | RAN#64 | R5-143145 | 0181 | - | Condition on no UL CA in C20 and C21 | 12.1.0 | 12.2.0 |

| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New |
|------|-------|----------|------|-----|-----------------|-----|-----|
| 2014-06 | RAN#64 | R5-143215 | 0182 | - | Addition of applicability for new TM3, soft buffer management and SDR test cases | 12.1.0 | 12.2.0 |
| 2014-09 | RAN#65 | R5-144109 | 0183 | - | Introduction of feICIC applicability statement for Performance test cases (resubmission of R5-143075 not implemented) | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144121 | 0184 | - | Corrections to feICIC applicability statement for CSI test cases | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144200 | 0185 | - | Applicability for newly added 5MHz+5 MHz and 10MHz+5MHz BW RRM test cases | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144245 | 0186 | - | Corrections to applicability conditions for RRM test cases | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144329 | 0187 | - | Update of FGI definitions in TS 36.521-2 | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144449 | 0188 | - | Applicability update for CA band Combo CA_7A-28A | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144484 | 0189 | - | Update Tx intra-band contiguous DL CA without UL CA TCs applicability to include BW Class B | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144504 | 0190 | - | New CA band combination CA_NC_42 and CA_4-27-Update to 36.521-2 | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144512 | 0191 | - | Addition of applicability for CA band combo CA_2A-5A | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144800 | 0192 | - | Correction to RF Baseline capabilities with Band 29 | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144837 | 0193 | - | Update test applicability for intra band non-contiguous CA test cases | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144848 | 0194 | - | Update test applicability for inter band and intra band contiguous CA test cases | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144849 | 0195 | - | Addition of CA_2A-2A to 36.521-2 Annex A4 | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144864 | 0202 | - | Addition of operating band 30 to TS36.521-2 | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144871 | 0196 | - | Correction to Merge UE category tables | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144877 | 0197 | - | CA: Review of CA capabilities tables | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144878 | 0198 | - | Addition of applicability for newly added performance test cases | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144911 | 0199 | - | Update applicabilities for serving cell RSRP and RSRQ absolute accuracy TCs | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144919 | 0200 | - | Update the applicability conditions for TCs 8.8.2.1 and 8.8.2.2 | 12.2.0 | 12.3.0 |
| 2014-09 | RAN#65 | R5-144921 | 0201 | - | Addition of applicability for SDR test case 8.7.1.1_A.3 | 12.2.0 | 12.3.0 |
| 2014-12 | RAN#66 | R5-145017 | 0202 | - | Correction to 6.7A title number | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145180 | 0203 | - | New CA band combination CA_1A-3A - Updates of Table A.4.6.3-3 | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145226 | 0204 | - | Introduction of CA_42C into TS36.521-2 | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145244 | 0205 | - | New CA band combination CA_41-42 update to 36.521-2 section A.4.6.3 | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145262 | 0206 | - | Applicability table update for RRM CA test cases in clause 8 and 9 to avoid redundant testing | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145359 | 0207 | - | Addition of applicability for TCs of activation and deactivation of known SCell | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145361 | 0208 | - | Removing SDR test applicability for Rel-11 and 12 inter-band CA | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145396 | 0209 | - | New CA band combination CA_18A-28A - Updates of Table A.4.6.3-3 | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145440 | 0210 | - | New CA band combination 1+11 and 8+11 û Introduction of 1+11 and 8+11 to 36.521-2 | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145478 | 0211 | - | Correction to feICIC applicability statement for PHICH test cases | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145529 | 0212 | - | Updates to applicability of CA demodulation tests for release independence | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145821 | 0213 | - | Update of applicability statements for mandatory Rel-11 capabilities, CoMP, and more | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145822 | 0214 | - | Update of FGI definitions in TS 36.521-2 | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145823 | 0215 | - | Updates the applicable release for soft buffer management and TDD SDR CA tests in part 2 | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145842 | 0216 | - | Corrections to applicabilities for COMP | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145869 | 0217 | - | Applicability for FDD TC 8.2.1.1.1_A.3 and TDD TC 8.2.2.1.1_A.3+TC 8.2.2.4.2_A.3 for CA | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145873 | 0218 | - | Update to TM9 test case applicability | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145905 | 0219 | - | Applicability for newly added RRM TCs for testing of SCell in sTAG | 12.3.0 | 12.4.0 |
| 2014-12 | RAN#66 | R5-145981 | 0220 | - | Update to Additional information section to handle IMSVoIP not supported in 36.521-2 | 12.3.0 | 12.4.0 |
| 2015-03 | RAN#67 | R5-150298 | 0221 | - | Introduction of CA_1A-7A to TS 36.521-2 | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150304 | 0222 | - | Corrections to title of RRM test case 8.7.1 in applicability table | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150365 | 0223 | - | CA: Corrections to CA capability tables | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150374 | 0224 | - | Introduction of RF applicability for CA band combinations 5+25 and 12+25 | 12.4.0 | 12.5.0 |

| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New |
|------|-------|----------|-----|-----|-----------------|-----|-----|
| 2015-03 | RAN#67 | R5-150444 | 0225 | - | New CA band combination CA_1A-28A - Updates of Table A.4.6.3-3 | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150524 | 0226 | - | Addition of CA_1A-20A to TS 36.521-2 | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150546 | 0227 | - | Addition of 2A-12A and 5A-13A 2DL Interband CA to 36.521-2 | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150558 | 0228 | - | Applicability conditions added to TCs 9.1.12.x and 9.2.11.x | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150564 | 0229 | - | Addition of CA_2A-2A-13A to TS 36.521-2 | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150805 | 0230 | - | Update of FGI definitions in TS 36.521-2 | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150830 | 0231 | - | Addition of CA_2-30 to Annex A.4.6 of TS 36.521-2. | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150831 | 0232 | - | Addition of CA_4-30 to Annex A.4.6 of TS 36.521-2. | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150832 | 0233 | - | Addition of CA_5-30 to Annex A.4.6 of TS 36.521-2. | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150858 | 0234 | - | Update of applicability statements for CoMP - TCs being split | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150872 | 0235 | - | Addition of applicability for 3DL CA test cases | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150876 | 0236 | - | Addition of applicability for CA_39C in TS36.521-2 | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150882 | 0238 | - | Addition of applicability for newly added 20MHz+10MHz RRM test cases | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150883 | 0239 | - | Addition of applicability for newly added RSRP accuracy RRM test cases | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150904 | 0240 | - | Addition of a new table for Supported CA configurations for Inter-band CA (three bands) | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150914 | 0241 | - | Addition of applicability for Multi-Cluster PUSCH with One Uplink Carrier test cases | 12.4.0 | 12.5.0 |
| 2015-03 | RAN#67 | R5-150923 | 0242 | - | CA demod test case variants merge in 36.521-2 | 12.4.0 | 12.5.0 |
| 2015-06 | RAN#68 | R5-151156 | 0245 | - | Correction of applicability conditions for RRM test case 5.3.5 and 5.3.6 | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-151164 | 0246 | - | CA RF: Correction to condition description | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-151461 | 0261 | - | Updates to 36.521-2 regarding merging of TDD CA test cases | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-151463 | 0262 | - | Addition of applicability of TD-LTE to UTRA TDD periodic measurements | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-151509 | 0263 | - | Introduction of applicability for test cases 9.6.1.1-A.2 and 9.6.1.2-A.2: FDD/TDD CQI Reporting under AWGN conditions – PUCCH 1-0 (3DL CA) | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-151826 | 0250 | 2 | Addition and correction of applicability for TDD sustained data rate performance | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-151827 | 0254 | 1 | Update applicabilities of merged TDD CA cases | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-151828 | 0258 | 2 | Correction of applicability for TDD sustained data rate performance | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-151829 | 0268 | 1 | Correction to PICS items referenced in C32b and C33b applicability conditions. | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-151892 | 0248 | 1 | Addition of frequency E-UTRA band 32 | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-151949 | 0259 | 1 | Applicability update of FDD-TDD RSRP accuracy test cases for FDD-TDD CA. | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-152009 | 0253 | 1 | Addition of applicability for newly added 20MHz+20MHz and 20MHz+10MHz CA RRM test cases | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-152016 | 0264 | 1 | Introduction to applicability for 2UL CA RF test cases (Tx and Rx) | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-152019 | 0260 | 1 | Addition of UE category 0 ICS and test cases | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-152023 | 0251 | 1 | Update of CA Physical Layer Baseline Implementation Capabilities for Rel-12 CA 2UL configurations | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-152029 | 0243 | 1 | Introduction of Band Selection Concept and new 3DL CA Combinations to 36.521-2 | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-152036 | 0255 | 1 | Addition of applicability for newly introduced RSRP accuracy RRM test cases | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-152037 | 0256 | 1 | Addition of applicability for newly added FDD CA RSRP accuracy RRM test cases | 12.5.0 | 12.6.0 |
| 2015-06 | RAN#68 | R5-152129 | 0270 | - | CoMP TCs applicability update | 12.5.0 | 12.6.0 |
| 2015-09 | RAN#69 | R5-153062 | 0271 | - | Introduction of LTE eDL_MIMO applicability for TCs | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153162 | 0273 | - | Test applicability for TC 9.7.1.2 | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153236 | 0278 | - | Addition of additional capabilities for Enhanced performance requirements type C for LTE | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-154023 | 0279 | 1 | RF: Applicability of CSI requirements to UE Category 1 (for 36.521-2) | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153388 | 0286 | - | Correction to applicability of feICIC test cases. | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153416 | 0287 | - | Correction to information of feature group indicators | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153477 | 0290 | - | 521-2 change applicability for Rel-10 CA RSRP relative accuracy tests | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153479 | 0292 | - | 521-2 change applicability for Rel-11 CA RSRP relative accuracy tests | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153480 | 0293 | - | Introduction of 2DL CA test skipping if 3DL CA is tested in 36.521-1 Chapter 7 | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153481 | 0294 | - | 521-2 Addition of test applicabilities for Rel-12 CA RSRP relative accuracy tests | 12.6.0 | 12.7.0 |

| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New |
|------|-------|----------|-----|-----|-----------------|-----|-----|
| 2015-09 | RAN#69 | R5-153503 | 0296 | - | Correction to applicability content in Table 4.1-1, 4.1-1a. for 36.521-1 | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153528 | 0299 | - | Update of FGI definitions in TS 36.521-2 | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153580 | 0300 | - | Correction of applicability condition TC 9.6.1.1_A.1 non-contiguous part | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153614 | 0302 | - | Applicability for Receiver Spurious emissions test case for Carrier aggregation in DL-only bands | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153689 | 0306 | - | Applicability for new RRM TCs 7.1.3_1+7.1.4_1 | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153813 | 0283 | 1 | Correction of L2G PSHO applicability for TS 36.521-2 spec | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153828 | 0280 | 1 | Addition of applicabilities for 3DL CA test cases | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153846 | 0298 | 1 | Addition of applicability of SU-MIMO conformance tests | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153860 | 0282 | 1 | Addition of test applicabilities of some test cases for 2UL CA | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153861 | 0291 | 1 | Proposal for missing Selection Criteria in table 4.1 | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153896 | 0281 | 1 | Addition of applicabilities for 3DL CA RRM test cases | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153897 | 0289 | 1 | Implementation of 36.521-1 Chapter 8.1 and 9.1 test selection rules in Table 4.1-1 testcases | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153910 | 0276 | 1 | Corrections to MTC test applicabilities | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153911 | 0297 | 1 | Correction of MTC UE test case applicability | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153929 | 0272 | 1 | Addition of applicability for newly introduced 20MHz+20MHz and 20MHz+10MHz cases (Rel-12) | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153932 | 0274 | 1 | Addition of applicability for newly introduced TC8.16.18A (Rel-10) | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153933 | 0275 | 1 | Addition of applicability for newly introduced TC7.1.4A (Rel-11) | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153935 | 0277 | 1 | Correction to applicability of EUTRA TDD to UTRA TDD connected mode measurements | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153946 | 0301 | 1 | Adding applicability for TC 8.2.1.7_A.1 | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-153948 | 0305 | 1 | Applicability corrections for test case 8.2.1.4.2_A.1 | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | R5-154013 | 0295 | 1 | Addition of UE category 0 test cases | 12.6.0 | 12.7.0 |
| 2015-09 | RAN#69 | - | - | - | update of the "non-specific references" in section 2 according to the approved R5-153582 and an action point on ETSI MCC | 12.6.0 | 12.7.0 |
| 2015-12 | RAN#70 | R5-155275 | 0314 | - | Introduction of applicabilities of 2 test cases for 2UL CA Tx test cases | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155301 | 0316 | - | Introduction of test applicability for TC 6.6.2.2A.1 | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155318 | 0319 | - | Update of UE categories for R8 in 36.521-2 | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155319 | 0320 | - | Update of UE categories for R10 in 36.521-2 | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155323 | 0322 | - | Update of UE categories for R11 in 36.521-2 | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155544 | 0326 | - | Correction to conditions C32 and C35 in Table 4.1-1 and Table 4.1-1a | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155545 | 0327 | - | Correction to conditions of Table 4.1-1a | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155556 | 0328 | - | Correction of RRM Condition C77 | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155558 | 0329 | - | Correction of RRM Condition C79 | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155560 | 0330 | - | Correction of RRM Condition C80 | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155563 | 0332 | - | Correction of RRM Condition C81 | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155565 | 0334 | - | Correction of RRM Condition C82 | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155635 | 0339 | - | Release indication corrections in table A.4.1-1: UE Radio Technologies | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155750 | 0341 | - | Addition of test cases in Table 4.1-1: Applicability of RF conformance test cases. | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155777 | 0342 | - | Test applicability for Intra Frequency RSRP Accuracy for UE category 0 Test Cases | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155843 | 0309 | 1 | Update of applicability of SU-MIMO conformance tests | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155870 | 0323 | 1 | Applicability updates on inter-band CA receiver test cases | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155871 | 0324 | 1 | Correction of applicability for FDD-TDD CA | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155872 | 0336 | 1 | Applicability update to FDD-TDD CA test cases | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155873 | 0335 | 1 | Introduction of applicability expression for new 3DL CA RRM test case TC 8.16.41 | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-155874 | 0340 | 1 | 36.521-2: CA_2A-2A-13A update | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-156050 | 0308 | 1 | Addition of applicability for newly introduced MTC RRM tests | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-156060 | 0331 | 1 | Addition of applicability for 2UL CA test cases 6.2.5A.3 and 6.2.5A.4 | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-156061 | 0333 | 1 | Addition of applicability for 2UL CA test cases 6.2.4A.3, 6.3.5A.3.2 and 6.6.3.3A.3 | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-156093 | 0313 | 1 | LTE Type B performance requirements - Addition of applicability for 6 new NAICS test cases | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-156107 | 0325 | 1 | Correction to test case condition for the test cases 9.5.1.x | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-156132 | 0338 | 2 | Applicability for new SCE-L1 test cases | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-156135 | 0318 | 2 | Update of test applicabilities for R12 RRM cases in 36.521-2 | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-156136 | 0337 | 1 | Update of the 1.4MHz MBMS test applicability | 12.7.0 | 12.8.0 |
| 2015-12 | RAN#70 | R5-156087 | 0315 | 1 | Introduction of test applicabilities for UL 64QAM cases | 12.8.0 | 13.0.0 |
| 2016-03 | RAN#71 | R5-160037 | 0343 | - | LTE Type B performance requirements - Addition of applicability for test cases 8.2.1.4.4 and 8.2.2.4.5 | 13.0.0 | 13.1.0 |

| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New |
|------|-------|----------|-----|-----|-----------------|-----|-----|
| 2016-03 | RAN#71 | R5-160054 | 0344 | - | Addition of applicability for 2UL CA TC 6.5.2A.1.2, 6.5.2A.1.3, 6.5.2A.2.2 and 6.5.2A.2.3 | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160069 | 0345 | - | Introduction of applicability of Tx test case 6.5.2A.3.2 | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160071 | 0347 | - | Introduction of applicability of Tx test case 6.6.3.1A.3 | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160073 | 0346 | 2 | Introduction of applicability of Tx test case 6.5.2A.3.3 | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160108 | 0349 | - | Removal of technical content in 36.521-2 v12.8.0 and substitution with pointer to the next Release | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160126 | 0353 | - | Correction to applicability condition C22. | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160273 | 0362 | - | Applicability for new SCE RRM test cases | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160372 | 0368 | - | Rel-8 UE category correction | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160373 | 0369 | - | Rel-10 UE category correction | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160511 | 0375 | - | New CA band combination CA_41A-42C - Updates of Table A.4.6.3-3 | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160530 | 0378 | - | Addition of CA Physical Layer Baseline Implementation Capabilities for the new CA configuration | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160575 | 0381 | - | Correction to the applicability of RRM test cases 9.5.1 and 9.5.2 | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160593 | 0382 | - | Corrections to applicabilities of TDD FDD CA chapter 8 TCs | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160694 | 0385 | - | Applicability for newly added UL CA test cases | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160714 | 0351 | 1 | Test applicability for Intra Frequency RSRQ Accuracy for UE category 0 Test Cases | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160806 | 0355 | 1 | Correction of applicability conditions C57 and C58 | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160807 | 0356 | 1 | Missing applicability for TC 7.8.1A.4 | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160808 | 0357 | 1 | Correction of Tested CA-Configurations for TC 7.5A.4 and TC 7.6.1A.4 | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160816 | 0366 | 1 | Addition of some Rel-13 defined CA combinations to TS 36.521-2 | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160817 | 0373 | 1 | CA_20A-67A: Update of CA Physical Layer Baseline Implementation | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160818 | 0376 | 1 | Correction to condition C25x | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160851 | 0379 | 1 | Applicability of new RF NAICS test cases | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160857 | 0361 | 1 | MTC applicability of RF test cases | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160885 | 0360 | 1 | Adding applicability of RRM test cases for LC_MTC_LTE-UEConTest. | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-160962 | 0387 | - | Adding applicability statements to MTC RRM test cases | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-161027 | 0363 | 1 | Applicability for new LTE_CA_Rel12_2UL test case 6.6.3.2A.3 | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-161036 | 0359 | 1 | Applicability for new DL 256QAM RF and BB test cases | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-161055 | 0352 | 1 | Adding applicability of RRM test cases for LC_MTC_LTE-UEConTest | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-161058 | 0377 | 1 | Correction to conditions used item "support 256QAM in DL" | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-161067 | 0370 | 1 | 36.521-2 Test point reduction for UL 64QAM multi-cluster ACLR tests | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-161069 | 0374 | 1 | Add test case 8.16.17A and update release for test cases 8.16.18A | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-161074 | 0348 | 1 | Addition of test case applicability for eDL MIMO Enhancement test cases | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-161083 | 0384 | 1 | Introduction of applicability expression for new 3DL CA RRM test case TC 8.16.42 | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-161084 | 0358 | 1 | Adding applicability of TC 8.16.39 and 8.16.40 for LTE_CA_Rel12_3DL-UEConTest | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-161108 | 0364 | 1 | Addition of applicability for Reference sensitivity with 4Rx antenna ports | 13.0.0 | 13.1.0 |
| 2016-03 | RAN#71 | R5-161116 | 0380 | 2 | Split FGI table for FDD and TDD and update related test case applicability | 13.0.0 | 13.1.0 |
| 2016-06 | RAN#72 | R5-162022 | 0388 | - | Adding missing ICS for UE supporting multiple timing advances | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162197 | 0395 | - | 7.6.1_1 In-band blocking with 4 Rx antenna ports test applicability | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162229 | 0396 | - | Introduction of test applicability for newly introduced UL 64QAM test cases | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162250 | 0397 | - | Addition of applicabilities for 2 Tx test cases 6.5.1D.1 and 6.5.1D.2 | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162256 | 0398 | - | Addition of applicability for test case 8.10.4.1.1 with 4 Rx antenna ports | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162257 | 0399 | - | Addition of applicability for test case 8.10.4.1.2 with 4 Rx antenna ports | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162259 | 0400 | - | Addition of applicability for test case 8.10.4.2.1 with 4 Rx antenna ports | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162260 | 0401 | - | Addition of applicability for test case 8.10.4.2.2 with 4 Rx antenna ports | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162298 | 0406 | - | Applicability of new RF NAICS test cases | 13.1.0 | 13.2.0 |

| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New |
|------|-------|----------|-----|-----|-----------------|-----|-----|
| 2016-06 | RAN#72 | R5-162403 | 0408 | - | Addition of CA Physical Layer Baseline Implementation Capabilities for CA_1A-3A-7A and CA_3A-7A-8A to 36.521-2 | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162487 | 0413 | - | Addition of applicability for Additional spurious emissions for CA (inter-band DL CA and UL CA) | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162488 | 0414 | - | Update to the applicability for SCE RRM test cases | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162489 | 0415 | - | Correction to applicability table for EUTRA TDD to UTRA TDD Son test case | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162503 | 0416 | - | New some Rel-13 defined CA combinations - Updates of Table A.4.6.3-3 | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162546 | 0419 | - | Correction to condition C73h | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162547 | 0420 | - | Correction to condition C28y | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162565 | 0421 | - | Applicability for 4Rx antenna ports test cases | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162574 | 0422 | - | Applicability for 2UL CA test cases | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162650 | 0424 | - | Band 65 introduction to 36.521-2 | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162822 | 0402 | 1 | Editorial corrections of the condition table in the TS 36.521-2 | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162824 | 0411 | 1 | Modification to feICIC RRM test cases applicability | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162825 | 0407 | 1 | Minor correction to FGI FDD and TDD tables | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162826 | 0409 | 1 | Correction to applicability of RRM test cases condition in table 4.2-1a | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162827 | 0410 | 1 | Correction to RF applicability condition for feICIC | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162828 | 0417 | 1 | Correction of Tested CA Configurations Selection Criteria | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162829 | 0423 | 1 | New CA band combination CA_8A-40A – Updates of Table A.4.6.3-3 | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162850 | 0391 | 1 | Update of CA Physical Layer Baseline Implementation Capabilities for new CA configuration in Annex A.4.6 | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162864 | 0390 | 1 | Addition of applicability for TC 7.9_1 Spurious emissions with 4 Rx antenna ports | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162873 | 0392 | 1 | Add applicability for test case 6.2.4A.2 | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-162956 | 0394 | 1 | Addition of test cases in Table 4.1-1: Applicability of RF conformance test cases. | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-163019 | 0427 | - | Introduction of CA Physical Layer Baseline Implementation for CA_1A-8A-11A | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-163105 | 0426 | 1 | Introduction of ICS and applicability for new e-MTC RF test cases | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-163109 | 0389 | 1 | Add B66 information in TS 36.521-2 | 13.1.0 | 13.2.0 |
| 2016-06 | RAN#72 | R5-163118 | 0425 | 1 | Applicability CR to 36.521-2 for new DC test cases | 13.1.0 | 13.2.0 |
| 2016-09 | RAN#73 | R5-165030 | 0428 | - | Update of CA Physical Layer Baseline Implementation Capabilities for new CA configuration in Annex A.4.6 | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165090 | 0430 | - | Applicability of new RF and RRM test cases for CAT-M1 UE and UE in enhanced coverage | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165196 | 0432 | - | Applicability of new added ProSe RF test cases | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165197 | 0433 | - | Applicability of new added NAICS demodulation test cases | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165212 | 0435 | - | New CA band combination CA_1A-40A and CA_3A-40A - Updates of Table A.4.6.3-3 | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165213 | 0436 | - | Correction of applicability conditions to test cases 9.5.2.1_D and 9.5.2.2_D | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165214 | 0437 | - | Correction to applicability of RF test cases condition in table 4.1-1a | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165216 | 0438 | - | Correction to incorrect test case number and title in Table 4.2-1 | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165249 | 0439 | - | Applicabilities for new 4Rx Test Cases - CQI reporting / AWGN | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165271 | 0440 | - | Change of names of 3DL TCs | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165315 | 0443 | - | Update applicability for PCFICH/PDCCH performance with 4Rx antenna ports test cases | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165361 | 0444 | - | Addition of CA Physical Layer Baseline Implementation Capabilities for CA_1A-3A-28A to 36.521-2. | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165399 | 0445 | - | Updates of physical layer baseline implementation capability for CA_1A-3C | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165416 | 0448 | - | Additional CA Physical Layer Baseline Implementation Capabilities for new CA combinations to TS36.521-2 | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165434 | 0452 | - | Introduction of test applicability for NB-IoT test cases 6.2.5F, 6.5.2.1F.1 and 6.5.2.2F | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165445 | 0453 | - | Introduction of test applicability for UL 64QAM+UL intra-band non-contiguous CA EVM test | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165493 | 0454 | - | Correction to applicability of Power Class 3 only UL TCs | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165504 | 0456 | - | Introduction of Band 45 into 36.521-2 | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165515 | 0457 | - | Correction to applicability of Multi-Cluster TCs | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165533 | 0458 | - | Supplementation of SCE RRM test cases applicability | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165627 | 0460 | - | Applicability of new RF NAICS test cases | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165647 | 0461 | - | Correction to applicability condition for EUTRA TDD to UTRA TDD | 13.2.0 | 13.3.0 |

| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New |
|------|-------|----------|-----|-----|-----------------|-----|-----|
| 2016-09 | RAN#73 | R5-165656 | 0462 | - | Correction to test cases release information for test cases 9.3.3 and 9.4.3 | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165662 | 0464 | - | Update of applicability for RRM 3 DL CA activation and deactivation test cases | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165824 | 0465 | - | 36.521-2 4CC Band combinations addition (CA_2A-2A-4A-4A and CA_2A-4A-5A-30A) | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165830 | 0466 | - | Correction to applicability for RF test cases in TS 36.521-2 table 4.1-1 | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-165984 | 0451 | 1 | Introduction of ICS proforma tables for NB-IoT in 36.521-2 | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-166014 | 0429 | 1 | Adding missing test cases 6.3.5_1.1, 6.3.5_1.2, 6.3.5_1.3 to table 4.1-1, 36.521-2 | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-166016 | 0449 | 1 | Correction to test cases not applicable for UE category 1 | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-166017 | 0450 | 1 | Correction for UL 64QAM test cases to TS36.521-2 | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-166018 | 0463 | 1 | Additional new PICS items to handle CA test cases bandwidth configurations of 20MHz+20MHz and 20MHz+10MHz in 3GPP TS 36.521-3 | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-166019 | 0467 | 1 | Addition of modifiedMPR-behavior capability | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-166049 | 0441 | 1 | Introduction of CA physical layer capabilities for CA_8A-42A (2DL) and CA_8A-42C (3DL) | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-166088 | 0447 | 1 | Update of Feature Group Indicators for eMTC | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-166332 | 0442 | 2 | Cleanup TS36.521-2 for XML compliant | 13.2.0 | 13.3.0 |
| 2016-09 | RAN#73 | R5-166057 | 0459 | 1 | New CA band combination CA_1A-41A-42A - Updates of Table A.4.6.3-3 | 13.3.0 | 14.0.0 |
| 2016-12 | RAN#74 | R5-168040 | 0469 | - | Updates of Table A.4.6.3-3 to 36.521-2 for CA_1A-3A-41A | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-168261 | 0475 | - | Update to the applicability in identification of a new CGI E-UTRA cell using autonomous gaps | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-168391 | 0479 | - | Band 66 Intra-band CA applicability dependency to 36.521-2 | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-168393 | 0480 | - | Correction to Band 65 capabilities in 36.521-2 | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-168486 | 0483 | - | Maintenance of the tables in 4.1, 4.2 TS36.521-2 for XML conversion | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-168488 | 0484 | - | Maintenance of tables in A.4 TS36.521-2 for XML conversion | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-168501 | 0489 | - | Maintenance of the tables in 4.1, 4.2, A.4 TS36.521-2 for XML conversion | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-168533 | 0492 | - | Correction of title of 256 QAM DL test case 7.4A.3_H | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-168624 | 0499 | - | CA_20A-28A: Update of CA Physical Layer Baseline Implementation | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-168733 | 0502 | - | Correction to applicability test conditions C120, C93a, C93b, C94a, C94b, C94c C94d, C107a, C107b, C107c and C107d | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-168748 | 0503 | - | Addition of missing CA Configurations selection in table 4.1-1 for some RF test cases 7.4.X | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-168846 | 0509 | - | CA_70C applicability information to 36.521-2 | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-168860 | 0511 | - | Correction to TS 36.521-2 Tested Bands Selection Criteria D10 | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-168905 | 0512 | - | CA_3A-20A-32A: Update of CA Physical Layer Baseline Implementation | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-168918 | 0513 | - | Addition of CA Physical Layer Baseline Implementation for CA_3A-7A-28A, CA_3A-7B, CA_7A-22A, CA_7B, CA_7B-28A, CA_7C-28A and CA_20A-40A | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-169046 | 0517 | - | Applicability test case 6.7EA | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-169090 | 0518 | - | Applicability of Dual Connectivity RF and RRM test cases | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-169163 | 0497 | 1 | Applicability of Rel-13 CA RF and RRM test cases | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-169515 | 0468 | 1 | Correction to applicability condition of RRM TC 8.7.3 | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-169516 | 0510 | 1 | Correction to TS 36.521-2 Applicability Tables 4.1-1a & 4.2-1a | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-169518 | 0496 | 1 | Additional new PICS items to handle LAA test cases | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-169530 | 0478 | 1 | Introduction of applicability for new NB-IoT test cases | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-169554 | 0500 | 1 | New CA band combination CA_1A-11A-18A - Updates of Table A.4.6.3-3 | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-169589 | 0508 | 1 | Applicability for E-UTRAN HD-FDD intra-frequency event triggered reporting under fading propagation conditions for Cat-M1 UE in CEModeA TCs | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-169590 | 0477 | 1 | Addition of applicability for Dual Connectivity RRM test cases | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-169617 | 0491 | 1 | Add test cases 6.3.2A.2, 6.5.1A.2 and 6.6.2.3A.2 in Table 4.1-1 | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-169651 | 0481 | 1 | Band 70 applicability information to 36.521-2 | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-169731 | 0507 | 1 | Addition of test case applicability for 4Rx RF/RRM test cases | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-169733 | 0495 | 1 | Applicability of eMTC RF and RRM test cases | 14.0.0 | 14.1.0 |
| 2016-12 | RAN#74 | R5-169734 | 0490 | 2 | Update to the applicability in the power control test cases for HPUE | 14.0.0 | 14.1.0 |
| 2017-03 | RAN#75 | R5-170524 | 0519 | - | Update of CA Physical Layer Baseline Implementation Capabilities for R14 CA configuration to 36.521-2 | 14.1.0 | 14.2.0 |

| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New |
|------|-------|----------|-----|-----|-----------------|-----|-----|
| 2017-03 | RAN#75 | R5-170544 | 0520 | - | Update TS 36.521-2 with Addition of LTE Band 48 | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-170628 | 0523 | - | Resubmission of R5-170022 Introduction of test applicability for TC 6.3.5F.3, 8.12.1.1.2 and 8.12.2.1.1 | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-170812 | 0528 | - | Correction of description of TC 8.2.2.4.2_1 FDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 (Release 9 and Forward) | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-170888 | 0537 | - | Corrections to Table 4.2-1 and 4.2-1.a. | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171194 | 0542 | - | Correction to applicability of 2CA TDD FDD RRM test cases | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171348 | 0547 | - | Correction to Band 70 RF additional baseline implementation capabilities | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171350 | 0548 | - | CA_29A-66A, CA_29A-66A-66A, CA_29A-66C, CA_46A-66A addition to 36.521-2 | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171519 | 0541 | 1 | Maintenance of the tables in 4.1, 4.2, A.4 TS36.521-2 for XML conversion | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171702 | 0536 | 1 | Addition of frequency bands 46, 47, 48, 67, 68, 69 into Tables A.4.3-3, A.4.5-3 and A.4.5-4. | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171712 | 0532 | 1 | Introduction of CA_1A-8A-28A to section A4.6 | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171715 | 0533 | 1 | Introduction of CA_3A-8A-28A to section A4.6 | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171718 | 0534 | 1 | Introduction of CA_3A-28A-41A to section A4.6 | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171721 | 0530 | 1 | Introduction of CA_8A-28A to section A4.6 | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171722 | 0531 | 1 | Introduction of CA_11A-28A to section A4.6 | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171726 | 0526 | 1 | Realignment and rename of the Table A.4.3.4-a0 for UE category NB | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171893 | 0544 | 1 | Applicability update for 4Rx test cases | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171894 | 0522 | 1 | Addition of applicability for 4Rx test cases 9.9.4.1.1/9.9.4.1.2/9.9.4.2.1/9.9.4.2.2 | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171920 | 0543 | 1 | LAA: Applicability addition of LAA test cases | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171925 | 0539 | 1 | Introduction of applicability for new NB-IoT test cases | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171935 | 0540 | 1 | New CA band combinations CA_1A-41A-42C and 1A-41C-42A - Updates of Table A.4.6.3-4 | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171944 | 0549 | - | Correction to 2DL CA downlink capabilities | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171962 | 0525 | 3 | Applicability of Rel-13 CA RF and RRM test cases | 14.1.0 | 14.2.0 |
| 2017-03 | RAN#75 | R5-171970 | 0524 | 1 | Applicability of eMTC RF and RRM test cases | 14.1.0 | 14.2.0 |
| 2017-06 | RAN#76 | R5-172112 | 0550 | - | Addition of 14 CA configurations containing Band 66 to 36.521-2 | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-172158 | 0552 | - | New CA band combination CA_1A-41C-42C - Updates of Table A.4.6.3-4 | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-172356 | 0555 | - | Update to Additional UE radio access capabilities for NS_04 | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-172425 | 0558 | - | Addition of CA_2A-66A, CA_5A-66A and CA_13A-66A to TS 36.521-2 | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-172524 | 0560 | - | Introduction of CA_1A-11A-28A to Annex A4.6.3 | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-172528 | 0561 | - | Introduction of CA_8A-11A-28A to Annex A4.6.3 | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-172687 | 0563 | - | Maintenance of the tables 4.1, 4.1-1a, 4.2 in TS36.521-2 for XML conversion | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-172695 | 0564 | - | Correction to RRM applicability condition C132 | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-172697 | 0565 | - | Addition of new CA configuration CA_3A-69A to 36.521-2 | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-172699 | 0566 | - | Addition of new CA configuration CA_2A-2A-12A to 36.521-2 | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-172721 | 0569 | - | Applicability correction for eDL-MIMO test cases in part 2 | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-172726 | 0571 | - | Applicability of eMTC RF and RRM test cases | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-172734 | 0572 | - | Add Applicability for TS 36.521-2 Test case 8.22.11 and 8.22.12 | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-173207 | 0556 | 1 | Remove MPR/A-MPR test cases from Applicability spec | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-173224 | 0553 | 1 | New CA band combination CA_3C-8A - Updates of Table A.4.6.3-3 | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-173282 | 0557 | 1 | LAA: Applicability update of LAA test cases | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-173308 | 0570 | 1 | Applicability of Rel-13 CA RF and RRM test cases | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-173324 | 0576 | 1 | Update of CA Physical Layer Baseline Implementation Capabilities for new CA configuration in Annex A.4.6 | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-173327 | 0577 | - | Update test applicabilities for NB-IoT test cases 6.1.15 and 6.1.16 | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-173350 | 0551 | 1 | NB-IoT bands 11, 25, 31, and 70 introduction to 36.521-2 | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-173367 | 0574 | 1 | Corrections to Applicability Conformance and Conditions for intra/inter-frequency SI acquisition for HO | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-173413 | 0562 | 1 | Correction to FD-FDD only test case comment and condition | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-173419 | 0554 | 1 | Remove applicability of SDR test cases for 4Rx | 14.2.0 | 14.3.0 |
| 2017-06 | RAN#76 | R5-173420 | 0568 | 1 | 4Rx updates to RF/RRM applicability specification | 14.2.0 | 14.3.0 |
| 2017-09 | RAN#77 | R5-173701 | 0579 | - | New CA band combination CA_1A-3C-8A - Updates of Table A.4.6.3-4 | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-173938 | 0584 | - | Addition of test applicability of LAA test case 9.2.6.2 | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-173969 | 0586 | - | Introduction of CA_1A-3A-11A to Annex | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-173976 | 0587 | - | Introduction of CA_3A-8A-11A to Annex | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-173977 | 0588 | - | Introduction of CA configuration CA_2A-7A | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-173986 | 0589 | - | Introduction of CA_3A-11A-28A to Annex | 14.3.0 | 14.4.0 |

| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New |
|------|-------|----------|----|----|------------------|-----|-----|
| 2017-09 | RAN#77 | R5-174025 | 0592 | - | Addition of new CA Configuration CA_3A-38A to TS 36.521-2 | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-174144 | 0596 | - | Addition of new CA configurations to 36.521-2 | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-174154 | 0597 | - | Addition of 1.4 and 3 MHz to 36.521-2 for Band 65 | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-174224 | 0601 | - | Editorial Change to correct applicability comment to TC8.16.52 | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-174225 | 0602 | - | Corrected applicability and condition to 3DL CA tests required event A6 [TEI11] | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-174226 | 0603 | - | Corrected applicability and condition to 3DL CA tests required event A6 [TEI12] | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-174417 | 0614 | - | Corrections to applicability Conformance and Conditions | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175015 | 0581 | 1 | Applicability of CA RF and RRM test cases | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175022 | 0578 | 1 | Addition of CA_29A-70A, CA_29A-46A-66A, CA_46A-66A-66A, CA_46A-66C, CA_46A-70A to 36.521-2 | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175028 | 0591 | 1 | Addition of a few Band 46 CA Configurations to TS 36.521-2 | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175029 | 0598 | 1 | Introduction of CA_3A-32A to Table A.4.6.3-3 | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175063 | 0593 | 1 | Update applicability of performance TCs | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175072 | 0615 | - | NB-IoT band 21 introduction to 36.521-2 | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175080 | 0595 | 1 | Applicability addition of 7.4.1, 7.4.2, 7.4.3 | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175081 | 0611 | 1 | Introduction of new DC test cases | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175082 | 0608 | 1 | Introduction of new RF Dual Connectivity test cases | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175108 | 0585 | 1 | Addition of V2V applicability PICS for RF/RRM test cases | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175131 | 0605 | 1 | Addition of the Rel-13 CA combinations into A.4.6 | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175147 | 0583 | 1 | Addition of NB-IoT test applicabilities for multiple test cases | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175148 | 0599 | 1 | Removal of redundant capability tables for Category NB1 | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175167 | 0606 | 1 | Addition of applicability statements for new LWA test cases 8.25.1 & 8.25.2 | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175172 | 0604 | 1 | Addition of the Rel-14 CA combinations into A.4.6 | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175195 | 0600 | 1 | Update to applicability for TDD-FDD 2DL CA with 4Rx performance test cases | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175196 | 0590 | 1 | Addition of new 4Rx SDR test cases - applicability | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175198 | 0612 | 1 | Editorial change to the content of comment and condition of the test cases 8.2.1.3.1, 8.2.1.3.1_1 and 8.2.1.3.2 in Table 4.1-1 and 4.1-1a. | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175200 | 0580 | 1 | Applicability of eMTC RF and RRM test cases | 14.3.0 | 14.4.0 |
| 2017-09 | RAN#77 | R5-175211 | 0609 | 1 | Applicability updates for 4Rx test cases | 14.3.0 | 14.4.0 |
| 2017-12 | RAN#78 | R5-176035 | 0616 | - | Addition of new 4Rx SDR test cases - applicability | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-176303 | 0623 | - | Added FDD Band 69 to RF ICS | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-176396 | 0627 | - | Applicabilities addition of test cases 8.13.3.6.1 and 8.13.3.6.2 | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-176397 | 0628 | - | Editorial Change to Clause number in Table 4.1-1 | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-176426 | 0635 | - | Correction to applicability condition of 4Rx CQI test cases | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-176447 | 0637 | - | Test tolerance, Addition of test applicability of RRM test case 8.4.6 | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-176561 | 0646 | - | Editorial correction of title for 4Rx chapter 9 TCs in 36.521-2 | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-176613 | 0649 | - | Editorial correction to the baseline implementation capability for Band 30 | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-176702 | 0656 | - | Applicability changes for RRM 4Rx tests | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-176797 | 0660 | - | Applicability for new 4Rx CA demodulation test cases | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-177093 | 0642 | 1 | Change of eMTC demodulation test cases numbering, part 2 | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-177326 | 0652 | 1 | Correction to e-MTC TM9 PDSCH applicability | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-177328 | 0621 | 1 | Updated to LAA RRM test cases condition | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-177329 | 0622 | 1 | Added missing RF test cases to applicability table | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-177330 | 0632 | 1 | Correction to applicability condition for RRM test cases | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-177331 | 0647 | 1 | Corrected to RRM test cases 8.16.x and relevant condition | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-177345 | 0634 | 1 | Addition of UE capability of 4-layer MIMO for different transmission modes | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-177402 | 0648 | 1 | applicability spec updates for Cat1bis TCs | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-177406 | 0644 | 1 | Applicability statement for HST rrm&rf TCs | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-177431 | 0625 | 1 | eLAA: Applicability update to test cases | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-177444 | 0619 | 1 | Applicability of legacy LTE RF/RRM test cases for CAT-M1 UE | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-177445 | 0624 | 1 | Updated test condition to RF section 8 & 9 test cases for missing TM9 | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-177446 | 0661 | 1 | Addition of test cases branch column for RF/Demod test cases | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-177447 | 0629 | 1 | Applicability and ICS for CA RF and RRM test cases | 14.4.0 | 14.5.0 |
| 2017-12 | RAN#78 | R5-177377 | 0620 | 1 | Added FDD Band 71 to RF ICS | 14.5.0 | 15.0.0 |
| 2018-03 | RAN#79 | R5-180334 | 0665 | - | Addition of FDD Band 72 to RF ICS in 36.521-2 | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-180335 | 0666 | - | Addition of FDD Band 68 to RF ICS in 36.521-2 | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-180419 | 0670 | - | Addition of test applicabilities of eIMTA new test cases. | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-180557 | 0676 | - | Addition of applicability and ICS for 4Rx with CA | 15.0.0 | 15.1.0 |

| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New |
|---|---|---|---|---|---|---|---|
| 2018-03 | RAN#79 | R5-180811 | 0684 | - | Test Case Applicability and Conditions for LTE DL Control Channel Interference Mitigation | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-180830 | 0685 | - | Corrections to Applicability test conditions related to eDL-MIMO | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-180839 | 0686 | - | Correction to applicability of TC 7.6.3A.3 | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181006 | 0694 | - | Correction to test case conditions C196 and C197 for RRM in Table 4.2-1a | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181049 | 0697 | - | Applicability of RRM Incmon test cases | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181100 | 0700 | - | Applicability for new 4Rx CA demodulation test cases | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181108 | 0701 | - | Introduction of CA_3A-7A-20A (3DL-2U)L to Annex A | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181535 | 0678 | 1 | Addition of new R14 CA configurations to 36.521-2 | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181536 | 0689 | 1 | Update of test applicability for 9.6.1.3.4 and 9.6.1.4.4 in 36.521-1 | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181548 | 0691 | 1 | Correction to test applicability for LAA performance test cases | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181552 | 0677 | 1 | Correct RRM LAA test applicability in 36521-2 | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181553 | 0687 | 1 | Updates to Applicability of RF conformance test case 8.7.1.1_A.5 | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181554 | 0690 | 1 | Correction to test applicability for LAA RRM test cases | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181555 | 0699 | 1 | [Editorial] Update of the 4Rx capable bands | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181562 | 0663 | 1 | Corrections to applicability of 4Rx SDR test cases | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181596 | 0682 | 1 | Cat1bis RRM RSRQ applicability | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181597 | 0692 | 1 | Correction to the comment content for test cases 5.1.20 and 5.2.10 | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181604 | 0672 | 1 | Addition of applicability for TC8.12.1.1.3 | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181608 | 0675 | 1 | Added applicability to TS 36.521-2 for eHST RF test cases | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181609 | 0693 | 1 | Correction to test case conditions C179 and C180 for RRM in Table 4.2-1a | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181612 | 0698 | 1 | Addition of the Band 74 information into TS 36.521-2 | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181614 | 0680 | 1 | Introduction of test applicabilities for UL 256QAM | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181640 | 0669 | 1 | Addition of test applicability of RRM SRS test cases | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181667 | 0704 | 1 | eLAA: Applicability spec update | 15.0.0 | 15.1.0 |
| 2018-03 | RAN#79 | R5-181695 | 0671 | 2 | Editorial change to applicability condition for RRM TC8.7.4 | 15.0.0 | 15.1.0 |
| 2018-06 | RAN#80 | R5-182653 | 0714 | - | Addition of test applicability for eNB RRM test case 6.2.18 | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-182683 | 0716 | - | Addition of applicabilities 4 test cases for UL 256QAM | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-182729 | 0718 | - | Correction to applicability spec for LAA Section 9 RRM test cases | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-183947 | 0719 | 1 | Addition of applicability for LAA SDR cases | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-182797 | 0723 | - | eLAA: Applicability Update for eLAA test cases | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-182920 | 0731 | - | Applicability for new 4Rx TDD FDD CA demodulation test cases | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-183276 | 0733 | 1 | Cat1bis applicability CR | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-183736 | 0709 | 1 | Applicability and ICS for CA RF and RRM test cases | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-183737 | 0725 | 1 | Addition of new Name_Release mapping table for test applicability for DL CA | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-183753 | 0707 | 1 | Correction to eMTC TM6 PDSCH applicability | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-183755 | 0706 | 1 | Applicability for TC 9.2.4.1_1 and 9.2.4.2_1 | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-183759 | 0730 | 1 | Test Applicability for TDD - TDD Inter Frequency RSRQ Accuracy | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-183767 | 0713 | 1 | Correction of wrong references to ICS proforma tables (editorial) | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-183800 | 0715 | 1 | Addition of test applicability for V2V RF and RRM test cases | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-183812 | 0722 | 1 | High_Speed_test: Addition of applicability of FDD event reporting test case | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-183834 | 0721 | 1 | Added new ICS information for UE Category M2 | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-183846 | 0728 | 1 | 4Rx Test Case Redundancy | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-183893 | 0708 | 1 | Adding applicability for new UL 256QAM test case, 6.2.3_6 | 15.1.0 | 15.2.0 |
| 2018-06 | RAN#80 | R5-183898 | 0727 | 1 | Corrections to table "Table 4.1-1a" and "Table 4.2-1a" Applicability of test case Conditions from 3GPP TS 36.521-2 | 15.1.0 | 15.2.0 |
| 2018-09 | RAN#81 | R5-184294 | 0740 | - | Addition of test applicability for Rel-13 B5C new TC 8.16.47-50 | 15.2.0 | 15.3.0 |
| 2018-09 | RAN#81 | R5-184325 | 0741 | - | 36.521-2 updates for category M2 test cases | 15.2.0 | 15.3.0 |
| 2018-09 | RAN#81 | R5-184581 | 0746 | - | Applicability C20 updated for intra-band contigous DL CA tests | 15.2.0 | 15.3.0 |
| 2018-09 | RAN#81 | R5-184584 | 0749 | - | Table format correct and removed redundant line for RF clause 6 test cases | 15.2.0 | 15.3.0 |
| 2018-09 | RAN#81 | R5-184809 | 0758 | - | Correction to Applicability Condition of TS 36.521-1 Test Cases 6.6.2.2A.1 and 6.6.3.3A.1 | 15.2.0 | 15.3.0 |
| 2018-09 | RAN#81 | R5-184892 | 0761 | - | 4Rx branches in some 4DL CA and 5DL CA Demodulation test cases | 15.2.0 | 15.3.0 |
| 2018-09 | RAN#81 | R5-184980 | 0766 | - | Cat1bis test cases applicability | 15.2.0 | 15.3.0 |
| 2018-09 | RAN#81 | R5-184982 | 0767 | - | Resubmission of Cat1bis applicability CR | 15.2.0 | 15.3.0 |
| 2018-09 | RAN#81 | R5-185374 | 0738 | 1 | Addition of test applicabilities of multiple V2X test cases | 15.2.0 | 15.3.0 |

| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New |
|------|-------|----------|-----|-----|-----------------|-----|-----|
| 2018-09 | RAN#81 | R5-185376 | 0763 | 1 | Add a new test condition for test case 8.13.3.1.2.5. | 15.2.0 | 15.3.0 |
| 2018-09 | RAN#81 | R5-185389 | 0753 | 1 | Applicabilities addition of test cases 8.3.1.1.9 and 8.3.2.1.10 | 15.2.0 | 15.3.0 |
| 2018-09 | RAN#81 | R5-185407 | 0751 | 1 | Addition of applicability for TC6.6.3.3_2 | 15.2.0 | 15.3.0 |
| 2018-09 | RAN#81 | R5-185428 | 0755 | 1 | Applicability for New UL 256QAM test cases: 6.6.2.2_2 and 6.6.2.3A.3_2 | 15.2.0 | 15.3.0 |
| 2018-09 | RAN#81 | R5-185442 | 0768 | - | Applicability and ICS for CA RF and RRM test cases | 15.2.0 | 15.3.0 |
| 2018-09 | RAN#81 | R5-185453 | 0744 | 1 | Addition of applicability of RRM IncMon test cases | 15.2.0 | 15.3.0 |
| 2018-09 | RAN#81 | R5-185528 | 0748 | 1 | Table format correct and removed redundant line for RF clause 7 test cases | 15.2.0 | 15.3.0 |
| 2018-09 | RAN#81 | R5-185541 | 0742 | 1 | Correction of applicability to TS 36.521-2 for HPUE RF test cases | 15.2.0 | 15.3.0 |
| 2018-09 | RAN#81 | R5-185549 | 0757 | 1 | Correction to band selection criteria applicability for HPUE devices that support Power Class 1 & 2 | 15.2.0 | 15.3.0 |
| 2018-12 | RAN#82 | R5-186585 | 0785 | - | Update the test applicability for Rel-14 NB-IOT RF test cases | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-186586 | 0786 | - | Update the test applicability for Rel-14 NB-IOT RRM test cases | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-186591 | 0787 | - | Addition of new CA configurations into 36.521-2 | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-188204 | 0791 | 1 | Applicability and ICS for CA RF and RRM test cases | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-187095 | 0792 | - | Addition of applicability and ICS for Tx test cases for UL 256QAM CA | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-188236 | 0796 | 1 | Correction to tested CA configuration selection criteria for Rx tests | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-187310 | 0797 | - | Editorial change to applicability condition for TC8.2.1.3.1_A.1 | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-187330 | 0798 | - | Applicability addition of test case 6.6.3.3A.1_2 | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-187339 | 0799 | - | Addition of new UL 256QAM test cases - applicability | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-187341 | 0800 | - | Introduction of CA configurations CA_2A-66C-71A and CA_2C-66A-66A | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-187358 | 0801 | - | Addition of applicability of feMTC test cases | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-187448 | 0802 | - | Addition of Rel-13 CA configurations | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-187478 | 0804 | - | Introduction of FD-MIMO test cases in 36.521-2 | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-187495 | 0805 | - | Correction to Reference Sensitivity Level "Tested Bands / CA-Configurations Selection" | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-187925 | 0784 | 1 | Applicability for IncMon RRM Test Cases | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-187975 | 0789 | 1 | Introduction of Power Class 1 for B31 and B72 | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-187981 | 0790 | 1 | Addition of B72 for test cases with 5MHz channel bandwidth | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-187989 | 0795 | 1 | Added ICS item for missing Category DL and UL | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-188041 | 0780 | 1 | Addition CA 2A2A29A and CA 2A2A29A30A 36.521-2 | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-188042 | 0781 | 1 | Addition CA 2A29A66A 36.521-2 | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-188043 | 0782 | 1 | Addition CA 2A30A66A66A 36.521-2 | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-188044 | 0783 | 1 | Addition CA 7A66A and CA 2A7A66A 36.521-2 | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-188045 | 0774 | 1 | Addition CA 2A2A7A and CA 2A2A7A66A 36.521-2 | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-188046 | 0775 | 1 | Addition CA 2A2A14A and CA 2A2A14A30A and CA 2A2A14A66A and CA 2A2A14A30A66A 36.521-2 | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-188047 | 0776 | 1 | Addition CA 2A12A30A66A66A 36.521-2 | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-188048 | 0777 | 1 | CA 2A14A30A66A66A 36.521-2 | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-188049 | 0778 | 1 | Addition CA 2A14A66A66A and CA 2A2A14A66A66A 36.521-2 | 15.3.0 | 15.4.0 |
| 2018-12 | RAN#82 | R5-188050 | 0779 | 1 | Addition CA 2A29A30A66A 36.521-2 | 15.3.0 | 15.4.0 |

# History

| Document history | | |
|---|---|---|
| V15.2.0 | July 2018 | Publication |
| V15.3.0 | October 2018 | Publication |
| V15.4.0 | April 2019 | Publication |
| | | |
| | | |