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Technical Specification

**LTE;
Evolved Universal Terrestrial Radio Access (E-UTRA);
Requirements on User Equipments (UEs)
supporting a release-independent frequency band
(3GPP TS 36.307 version 11.7.0 Release 11)**



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Foreword

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

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1 Scope

The present document specifies requirements on UEs supporting a frequency band and inter-band/intra-band CA configurations that are independent of release.

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*.

- [1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 36.101 (Release 12): "Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) Radio Transmission and Reception".
- [3] 3GPP TS 36.133 (Release 12): "Evolved Universal Terrestrial Radio Access (E-UTRA); Requirements for Support of Radio Resource Management".
- [4] 3GPP TS 36.307 (Release 12): "Evolved Universal Terrestrial Radio Access (E-UTRA); Requirements on User Equipments (UEs) Supporting a release-independent frequency band".
- [5] 3GPP TS 36.133 (Release 11): "Evolved Universal Terrestrial Radio Access (E-UTRA); Requirements for Support of Radio Resource Management".
- [6] 3GPP TS 36.101 (Release 11): "Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) Radio Transmission and Reception".

3 Definitions and Abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in [1] apply.

3.2 Abbreviations

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

3A General

TSG-RAN has agreed that the standardisation of new frequency bands may be independent of a release, and that the standardisations of new inter-band/intra-band CA configurations also may be independent of a release for Rel-10 upwards. However, in order to implement a UE that conforms to a particular release but supports a band of operation or carrier aggregation of particular inter-band/intra-band CA configurations that is specified in a later release, it is necessary to specify some extra requirements.

For example, Band 19 is contained in the Release 9 specifications. In order to implement a UE conforming to Release 8 but supporting Band 19, it is necessary for the UE to additionally conform to some parts of the Release 9 specifications, such as the radio frequency and radio resource management requirements for the Band 19.

For another example on carrier aggregations, CA configuration CA_1A-19A is contained in the Release 11 specifications. In order to implement a UE conforming to Release 10 but supporting the CA configuration CA_1A-19A, it is necessary for the UE to additionally conform to some parts of the Release 11 specifications, such as the radio frequency and radio resource management requirements for the CA configuration CA_1A-19A.

All frequency bands are fully specified in this release of the specifications. The present document does not contain any requirements for UEs supporting frequency bands independent of release.

NOTE: See NOTE in clause 4.4 in [6].

4 Void

5 Void

6 Void

Void

8 Void

9 Void

10 Void

11 Void

12 Void

13 Void

14 Void

15 Void

16 Void

17 Void

18 Void

19 Void

20 Void

21 Void

22 Void

23 CA configuration CA_1A-18A Independent of Release

CA configuration CA_1A-18A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-10 upwards.

23.1 CA_1A-18A UE

UEs that conform to Release 11 and support CA_1A-18A shall support the following requirements in Release 12.

23.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_1A-18A specified in [2]. These requirements are:

Table 23.1.1-1: RF Requirements for CA_1A-18A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

23.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_1A-18A specified in [3] which are listed in Table B.2.4-1 of [4].

Table 23.1.2-1: Void

23.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_1A-18A specified in [2], which are listed in section B.3.3 of [4].

24 Void

25 Void

26 Void

27 Void

28 Void

29 Void

30 Void

31 CA configuration CA_2A-29A Independent of Release

CA configuration CA_2A-29A is specified in Release 11 and Release 12 but is defined as a release-independent CA configuration for Rel-10 upwards.

31.1 CA_2A-29A UE

UEs that conform to Release 11 and support CA_2A-29A shall support the following requirements in Release 12.

31.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_2A-29A specified in [2]. These requirements are:

Table 31.1.1-1: RF Requirements for CA_2A-29A UE

Section / Clause	Description
5.5	Operating bands
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
5.7	Channel arrangement
6.2.5A	Configured transmitted Power for CA
7.3.1A	Reference sensitivity power level minimum requirements for CA
7.5.1A	ACS minimum requirements for CA
7.6.1.1A	In-band blocking minimum requirements for CA
7.7.1A	Spurious response for CA
7.8.1A	Intermodulation characteristics minimum requirement for CA

31.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_2A-29A specified in [3] which are listed in Table B.2.4-1 of [4].

31.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_2A-29A specified in [2], which are listed in Table B.3.3-1 of [4].

32 CA configuration CA_4A-29A Independent of Release

CA configuration CA_4A-29A is specified in Release 11 and Release 12 but is defined as a release-independent CA configuration for Rel-10 upwards.

32.1 CA_4A-29A UE

UEs that conform to Release 11 and support CA_4A-29A shall support the following requirements in Release 12.

32.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_4A-29A specified in [2]. These requirements are:

Table 32.1.1-1: RF Requirements for CA_4A-29A UE

Section / Clause	Description
5.5	Operating bands
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
5.7	Channel arrangement
6.2.5A	Configured transmitted Power for CA
7.3.1A	Reference sensitivity power level minimum requirements for CA
7.5.1A	ACS minimum requirements for CA
7.6.1.1A	In-band blocking minimum requirements for CA
7.7.1A	Spurious response for CA
7.8.1A	Intermodulation characteristics minimum requirement for CA

32.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_4A-29A specified in [3] which are listed in Table B.2.4-1 of [4].

32.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_4A-29A specified in [2], which are listed in Table B.3.3-1 of [4].

33 Void

34 Void

35 Void

36 Void

37 Void

38 Void

39 Void

40 Void

41 Void

42 Band 30 Independent of Release

Band 30 is specified in Release 12 but is defined as a release-independent frequency band. This approach aligns the Band 30 with other frequency bands when considering features that have to be supported in different releases.

42.1 Band 30 UE

UEs that conform to Release 11 and support Band 30 shall support the following requirements in Release 12.

42.1.1 RF Requirements

The UE shall comply with the RF requirements for Band 30 specified [2]. The requirements are:

Table 42.1.1-1: RF Requirements for Band 30 UE

Section / Clause	Description
5.5	Operating bands
5.6	Channel bandwidth
5.7	Channel arrangement
6.2	Transmit power
6.3	Output power dynamics
6.6	Output RF spectrum emissions
6.7	Transmit intermodulation
7.3	Reference sensitivity power level
7.4	Maximum input level
7.5	Adjacent Channel Selectivity (ACS)
7.6	Blocking characteristics
7.7	Spurious response
7.8	Intermodulation characteristics

42.1.2 RRM Requirements

The UE shall comply with the RRM requirements for Band 30 specified in [3] which are listed in Table B.2.1-1 of [4].

Table 42.1.2-1: Void

42.1.3 Void

43 Band 31 Independent of Release

Band 31 is specified in Release 12 but is defined as a release-independent frequency band. This approach aligns the Band 31 with other frequency bands when considering features that have to be supported in different releases.

43.1 Band 31 UE

UEs that conform to Release 11 and support Band 31 shall support the following requirements in Release 12.

43.1.1 RF Requirements

The UE shall comply with the RF requirements for Band 31 specified [2]. The requirements are:

Table 43.1.1-1: RF Requirements for Band 31 UE

Section / Clause	Description
5.5	Operating bands
5.6	Channel bandwidth
5.7	Channel arrangement
6.2	Transmit power
6.3	Output power dynamics
6.6	Output RF spectrum emissions
6.7	Transmit intermodulation
7.3	Reference sensitivity power level
7.4	Maximum input level
7.5	Adjacent Channel Selectivity (ACS)
7.6	Blocking characteristics
7.7	Spurious response
7.8	Intermodulation characteristics

43.1.2 RRM Requirements

The UE shall comply with the RRM requirements for Band 31, for 5 MHz only, specified in [3] which are listed in Table B.2.1-1 of [4].

Table 43.1.2-1: Void

43.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the subset of demodulation performance and CSI reporting requirements specified in [2] which are listed in Table 43.1.3-2.

Table 43.1.3-1: Void**Table 43.1.3-2: Demodulation performance and CSI reporting requirements for Band 31 UE**

Section / Clause	Description	Test case
8.2.1.1.1	Single-antenna port performance	6, 7, 8
8.2.1.2.1	Transmit diversity performance	1
8.2.1.3.1	Open-loop spatial multiplexing performance	1B
8.2.1.4.1	Closed-loop spatial multiplexing performance	1A
8.2.1.4.2	Closed-loop spatial multiplexing performance	2A
8.5.1.2.1	Demodulation of PHICH	1A
9.2.1.1	CQI reporting definition under AWGN conditions	Table 9.2.1.1-2
9.3.2.1.1	CQI reporting under fading conditions	Table 9.3.2.1.1-3

44 CA configuration CA_1A-8A Independent of Release

CA configuration CA_1A-8A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-11 upwards.

44.1 CA_1A-8A UE

UEs that conform to Release 11 and support CA_1A-8A shall support the following requirements in Release 12.

44.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_1A-8A specified in [2]. These requirements are:

Table 44.1.1-1: RF Requirements for CA_1A-8A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

44.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_1A-8A specified in [3] which are listed in Table B.2.4-1 of [4].

Table 44.1.2-1: Void

44.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_1A-8A specified in [2], which are listed in section B.3.3 of [4].

45 CA configuration CA_2A-13A Independent of Release

CA configuration CA_2A-13A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-10 upwards.

45.1 CA_2A-13A UE

UEs that conform to Release 11 and support CA_2A-13A shall support the following requirements in Release 12.

45.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_2A-13A specified in [2]. These requirements are:

Table 45.1.1-1: RF Requirements for CA_2A-13A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

45.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_2A-13A specified in [3] which are listed in Table B.2.4-1 of [4].

Table 45.1.2-1: Void

45.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_2A-13A specified in [2], which are listed in section B.3.3 of [4].

46 CA configuration CA_3A-19A Independent of Release

CA configuration CA_3A-19A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-10 upwards.

46.1 CA_3A-19A UE

UEs that conform to Release 11 and support CA_3A-19A shall support the following requirements in Release 12.

46.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_3A-19A specified in [2]. These requirements are:

Table 46.1.1-1: RF Requirements for CA_3A-19A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

46.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_3A-19A specified in [3] which are listed in Table B.2.4-1 of [4].

Table 46.1.2-1: Void

46.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_3A-19A specified in [2], which are listed in section B.3.3 of [4].

47 CA configuration CA_3A-26A Independent of Release

CA configuration CA_3A-26A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-11 upwards.

47.1 CA_3A-26A UE

UEs that conform to Release 11 and support CA_3A-26A shall support the following requirements in Release 12.

47.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_3A-26A specified in [2]. These requirements are:

Table 47.1.1-1: RF Requirements for CA_3A-26A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

47.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_3A-26A specified in [3] which are listed in Table B.2.4-1 of [4].

Table 47.1.2-1: Void

47.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_3A-26A specified in [2], which are listed in section B.3.3 of [4].

48 CA configuration CA_3A-28A Independent of Release

CA configuration CA_3A-28A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-11 upwards.

48.1 CA_3A-28A UE

UEs that conform to Release 11 and support CA_3A-28A shall support the following requirements in Release 12.

48.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_3A-28A specified in [2]. These requirements are:

Table 48.1.1-1: RF Requirements for CA_3A-28A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

48.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_3A-28A specified in [3] which are listed in Table B.2.4-1 of [4].

Table 48.1.2-1: Void

48.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_3A-28A specified in [2], which are listed in section B.3.3 of [4].

49 CA configuration CA_19A-21A Independent of Release

CA configuration CA_19A-21A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-10 upwards.

49.1 CA_19A-21A UE

UEs that conform to Release 11 and support CA_19A-21A shall support the following requirements in Release 12.

49.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_19A-21A specified in [2]. These requirements are:

Table 49.1.1-1: RF Requirements for CA_19A-21A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

49.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_19A-21A specified in [3] which are listed in Table B.2.4-1 of [4].

Table 49.1.2-1: Void

49.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_19A-21A specified in [2], which are listed in section B.3.3 of [4].

50 CA configuration CA_23A-29A Independent of Release

CA configuration CA_23A-29A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-11 upwards.

50.1 CA_23A-29A UE

UEs that conform to Release 11 and support CA_23A-29A shall support the following requirements in Release 12.

50.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_23A-29A specified in [2]. These requirements are:

Table 50.1.1-1: RF Requirements for CA_23A-29A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

50.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_23A-29A specified in [3] which are listed in Table B.2.4-1 of [4].

Table 50.1.2-1: Void

50.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_23A-29A specified in [2], which are listed in section B.3.3 of [4].

51 CA configuration CA_4A-4A Independent of Release

CA configuration CA_4A-4A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-11 upwards.

51.1 CA_4A-4A UE

UEs that conform to Release 11 and support CA_4A-4A shall support the following requirements in Release 12.

51.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_4A-4A specified in [2]. These requirements are:

Table 51.1.1-1: RF Requirements for CA_4A-4A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
7.1	General
7.3.1A	Minimum requirements (QPSK) for CA, (REFSENS)
7.4.1A	Minimum requirements for CA, (Maximum input level)
7.5.1A	Minimum requirements for CA, (Adjacent channel selectivity)
7.6.1.1A	Minimum requirements for CA, (In-band blocking)
7.6.2.1A	Minimum requirements for CA, (Out of band blocking)
7.6.3.1A	Minimum requirements for CA, (Narrow band blocking)
7.7.1A	Minimum requirements for CA, (Spurious response)
7.8.1A	Minimum requirements for CA, (Wideband intermodulation)

51.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_4A-4A specified in [3] which are listed in Table B.2.3-1 of [4].

Table 51.1.2-1: Void

51.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_4A-4A specified in [2], which are listed in section B.3.4 of [4].

52 CA configuration CA_3C Independent of Release

CA configuration CA_3C is specified in Release 12 but is defined as a release-independent CA configuration for Rel-10 upwards.

52.1 CA_3C UE

UEs that conform to Release 11 and support CA_3C shall support the following requirements in Release 12.

52.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_3C specified in [2]. These requirements are:

Table 52.1.1-1: RF Requirements for CA_3C UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A.1	Channel bandwidths per operating band for CA
6.2.2A	UE maximum output power for intra-band contiguous CA
6.2.3A	UE maximum output power for modulation/channel bandwidth for CA
6.2.5A	Configured transmitted power for CA
6.6.2.1A	Spectrum emission mask for CA
7.3.1A	Reference sensitivity power level minimum requirements for CA
7.6.1.1A	In-band blocking minimum requirements for CA
7.6.2.1A	Out-of-band blocking minimum requirements for CA

52.1.2 RRM Requirements

The UE shall comply with the RRM Requirements for CA_3C specified in [3] which are listed in Table B.2.2-1 of [4].

Table 52.1.1-2: Void

52.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_3C specified in [2], which are listed in section B.3.2 of [4].

53 CA configuration CA_1A-26A Independent of Release

CA configuration CA_1A-26A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-10 upwards.

53.1 CA_1A-26A UE

UEs that conform to Release 11 and support CA_1A-26A shall support the following requirements in Release 12.

53.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_1A-26A specified in [2]. These requirements are:

Table 53.1.1-1: RF Requirements for CA_1A-26A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

53.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_1A-26A specified in [3] which are listed in Table B.2.4-1 of [4].

Table 53.1.2-1: Void

53.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_1A-26A specified in [2], which are listed in section B.3.3 of [4].

54 CA configuration CA_2A-4A Independent of Release

CA configuration CA_2A-4A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-10 upwards.

54.1 CA_2A-4A UE

UEs that conform to Release 11 and support CA_2A-4A shall support the following requirements in Release 12.

54.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_2A-4A specified in [2]. These requirements are:

Table 54.1.1-1: RF Requirements for CA_2A-4A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

54.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_2A-4A specified in [3] which are listed in Table B.2.4-1 of [4].

Table 54.1.2-1: Void

54.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_2A-4A specified in [2], which are listed in section B.3.3 of [4].

55 CA configuration CA_2A-5A Independent of Release

CA configuration CA_2A-5A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-10 upwards.

55.1 CA_2A-5A UE

UEs that conform to Release 11 and support CA_2A-5A shall support the following requirements in Release 12.

55.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_2A-5A specified in [2]. These requirements are:

Table 55.1.1-1: RF Requirements for CA_2A-5A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

55.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_2A-5A specified in [3] which are listed in Table B.2.4-1 of [4].

Table 55.1.2-1: Void

55.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_2A-5A specified in [2], which are listed in section B.3.3 of [4].

56 CA configuration CA_23B Independent of Release

CA configuration CA_23B is specified in Release 12 but is defined as a release-independent CA configuration for Rel-10 upwards.

56.1 CA_23B UE

UEs that conform to Release 11 and support CA_23B shall support the following requirements in Release 12.

56.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_23B specified in [2]. These requirements are:

Table 56.1.1-1: RF Requirements for CA_23B UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A	Nominal Guard Band for CA Bandwidth Class B
5.6A1	Channel bandwidths per operating band for CA
7.3.1A	Minimum requirements (QPSK) for CA, (REFSENS)
7.4.1A	Minimum requirements for CA, (Maximum input level)
7.5.1A	Minimum requirements for CA, (Adjacent channel selectivity)
7.6.1.1A	Minimum requirements for CA, (In-band blocking)
7.6.2.1A	Minimum requirements for CA, (Out of band blocking)
7.6.3.1A	Minimum requirements for CA, (Narrow band blocking)
7.7.1A	Minimum requirements for CA, (Spurious response)
7.8.1A	Minimum requirements for CA, (Wideband intermodulation)
7.10.1A	Receiver image - Minimum requirements for CA

56.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_23B specified in [3] which are listed in Table B.2.2-1 of [4].

Table 56.1.2-1: Void

56.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_23B specified in [2], which are listed in section B.3.2 of [4].

57 CA configuration CA_27B Independent of Release

CA configuration CA_27B is specified in Release 12 but is defined as a release-independent CA configuration for Rel-10 upwards.

57.1 CA_27B UE

UEs that conform to Release 11 and support CA_27B shall support the following requirements in Release 12.

57.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_27B specified in [2]. These requirements are:

Table 57.1.1-1: RF Requirements for CA_27B UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A	Nominal Guard Band for CA Bandwidth Class B
5.6A.1	Channel bandwidths per operating band for CA
7.3.1A	Reference sensitivity power level minimum requirements for CA
7.6.1.1A	In-band blocking minimum requirements for CA
7.6.2.1A	Out-of-band blocking minimum requirements for CA
7.6.3.1A	Narrow band blocking - Minimum requirements for CA
7.7.1A	Spurious response
7.8.1A	Wide band intermodulation - Minimum requirements for CA
7.10.1A	Receiver image - Minimum requirements for CA

57.1.2 RRM Requirements

The UE shall comply with the RRM Requirements for CA_27B specified in [3] which are listed in Table B.2.2-1 of [4].

Table 57.1.2-1: Void

57.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_27B specified in [2], which are listed in section B.3.2 of [4].

58 CA configuration CA_2A-12A Independent of Release

CA configuration CA_2A-12A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-11 upwards.

58.1 CA_2A-12A UE

UEs that conform to Release 11 and support CA_2A-12A shall support the following requirements in Release 12.

58.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_2A-12A specified in [2]. These requirements are:

Table 58.1.1-1: RF Requirements for CA_2A-12A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A.1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

58.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_2A-12A specified in [3] which are listed in Table B.2.4-1 of [4].

Table 58.1.2-1: Void

58.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_2A-12A specified in [2], which are listed in section B.3.3 of [4].

59 CA configuration CA_5A-7A Independent of Release

CA configuration CA_5A-7A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-10 upwards.

59.1 CA_5A-7A UE

UEs that conform to Release 11 and support CA_5A-7A shall support the following requirements in Release 12.

59.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_5A-7A specified in [2]. These requirements are:

Table 59.1.1-1: RF Requirements for CA_5A-7A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A.1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

59.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_5A-7A specified in [3] which are listed in Table B.2.4-1 of [4].

Table 59.1.2-1: Void

59.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_5A-7A specified in [2], which are listed in section B.3.3 of [4].

60 CA configuration CA_5A-25A Independent of Release

CA configuration CA_5A-25A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-11 upwards.

60.1 CA_5A-25A UE

UEs that conform to Release 11 and support CA_5A-25A shall support the following requirements in Release 12.

60.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_5A-25A specified in [2]. These requirements are:

Table 60.1.1-1: RF Requirements for CA_5A-25A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A.1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

60.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_5A-25A specified in [3] which are listed in Table B.2.4-1 of [4].

Table 60.1.2-1: Void

60.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_5A-25A specified in [2], which are listed in section B.3.3 of [4].

61 CA configuration CA_7A-28A Independent of Release

CA configuration CA_7A-28A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-10 upwards.

61.1 CA_7A-28A UE

UEs that conform to Release 11 and support CA_7A-28A shall support the following requirements in Release 12.

61.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_7A-28A specified in [2]. These requirements are:

Table 61.1.1-1: RF Requirements for CA_7A-28A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A.1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

61.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_7A-28A specified in [3] which are listed in Table B.2.4-1 of [4].

61.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_7A-28A specified in [2], which are listed in section B.3.3 of [4].

62 CA configuration CA_12A-25A Independent of Release

CA configuration CA_12A-25A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-11 upwards.

62.1 CA_12A-25A UE

UEs that conform to Release 11 and support CA_12A-25A shall support the following requirements in Release 12.

62.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_12A-25A specified in [2]. These requirements are:

Table 62.1.1-1: RF Requirements for CA_12A-25A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A.1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

62.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_12A-25A specified in [3] which are listed in Table B.2.4-1 of [4].

Table 62.1.2-1: Void

62.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_12A-25A specified in [2], which are listed in section B.3.3 of [4].

63 CA configuration CA_3A-3A Independent of Release

CA configuration CA_3A-3A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-11 upwards.

63.1 CA_3A-3A UE

UEs that conform to Release 11 and support CA_3A-3A shall support the following requirements in Release 12.

63.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_3A-3A specified in [2]. These requirements are:

Table 63.1.1-1: RF Requirements for CA_3A-3A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
7.1	General
7.3.1A	Minimum requirements (QPSK) for CA, (REFSENS)
7.4.1A	Minimum requirements for CA, (Maximum input level)
7.5.1A	Minimum requirements for CA, (Adjacent channel selectivity)
7.6.1.1A	Minimum requirements for CA, (In-band blocking)
7.6.2.1A	Minimum requirements for CA, (Out of band blocking)
7.6.3.1A	Minimum requirements for CA, (Narrow band blocking)
7.7.1A	Minimum requirements for CA, (Spurious response)
7.8.1A	Minimum requirements for CA, (Wideband intermodulation)

63.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_3A-3A specified in [3] which are listed in Table B.2.3-1 of [4].

Table 63.1.2-1: Void

63.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_3A-3A specified in [2], which are listed in section B.3.4 of [4].

64 CA configuration CA_7A-7A Independent of Release

CA configuration CA_7A-7A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-11 upwards.

64.1 CA_7A-7A UE

UEs that conform to Release 11 and support CA_7A-7A shall support the following requirements in Release 12.

64.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_7A-7A specified in [2]. These requirements are:

Table 64.1.1-1: RF Requirements for CA_7A-7A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
7.1	General
7.3.1A	Minimum requirements (QPSK) for CA, (REFSENS)
7.4.1A	Minimum requirements for CA, (Maximum input level)
7.5.1A	Minimum requirements for CA, (Adjacent channel selectivity)
7.6.1.1A	Minimum requirements for CA, (In-band blocking)
7.6.2.1A	Minimum requirements for CA, (Out of band blocking)
7.6.3.1A	Minimum requirements for CA, (Narrow band blocking)
7.7.1A	Minimum requirements for CA, (Spurious response)
7.8.1A	Minimum requirements for CA, (Wideband intermodulation)

64.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_7A-7A specified in [3] which are listed in Table B.2.3-1 of [4].

64.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_7A-7A specified in [2], which are listed in section B.3.4 of [4].

65 CA configuration CA_23A-23A Independent of Release

CA configuration CA_23A-23A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-11 upwards.

65.1 CA_23A-23A UE

UEs that conform to Release 11 and support CA_23A-23A shall support the following requirements in Release 12.

65.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_23A-23A specified in [2]. These requirements are:

Table 65.1.1-1: RF Requirements for CA_23A-23A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
7.1	General
7.3.1A	Minimum requirements (QPSK) for CA, (REFSENS)
7.4.1A	Minimum requirements for CA, (Maximum input level)
7.5.1A	Minimum requirements for CA, (Adjacent channel selectivity)
7.6.1.1A	Minimum requirements for CA, (In-band blocking)
7.6.2.1A	Minimum requirements for CA, (Out of band blocking)
7.6.3.1A	Minimum requirements for CA, (Narrow band blocking)
7.7.1A	Minimum requirements for CA, (Spurious response)
7.8.1A	Minimum requirements for CA, (Wideband intermodulation)

65.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_23A-23A specified in [3] which are listed in Table B.2.3-1 of [4].

Table 65.1.2-1: Void

65.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_23A-23A specified in [2], which are listed in section B.3.4 of [4].

66 CA configuration CA_3A-27A Independent of Release

CA configuration CA_3A-27A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-10 upwards.

66.1 CA_3A-27A UE

UEs that conform to Release 11 and support CA_3A-27A shall support the following requirements in Release 12.

66.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_3A-27A specified in [2]. These requirements are:

Table 66.1.1-1: RF Requirements for CA_3A-27A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A.1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

66.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_3A-27A specified in [3] which are listed in Table B.2.4-1 of [4].

66.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_3A-27A specified in [2], which are listed in Table B.3.3-1 of [4].

67 CA configuration CA_39C Independent of Release

CA configuration CA_39C is specified in Release 12 but is defined as a release-independent CA configuration for Rel-10 upwards.

67.1 CA_39C UE

UEs that conform to Release 11 and support CA_39C shall support the following requirements in Release 12.

67.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_39C specified in [2]. These requirements are:

Table 67.1.1-1: RF Requirements for CA_39C UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A.1	Channel bandwidths per operating band for CA
6.2.2A	UE maximum output power for intra-band contiguous CA
6.2.3A	UE maximum output power for modulation/channel bandwidth for CA
6.2.4A	UE maximum output power with additional requirements for CA
6.2.5A	Configured transmitted power for CA
6.6.2.1A	Spectrum emission mask for CA
6.6.3.2A	Spurious emission band UE co-existence for CA
7.3.1A	Reference sensitivity power level minimum requirements for CA
7.6.1.1A	In-band blocking minimum requirements for CA
7.6.2.1A	Out-of-band blocking minimum requirements for CA

67.1.2 RRM Requirements

The UE shall comply with the following RRM Requirements for CA_39C specified in [3] which are listed in Table B.2.2-1 of [4].

68 CA configuration CA_39A-41A Independent of Release

CA configuration CA_39A-41A is specified in Release 12 but is defined as a release-independent CA configuration for Rel-10 upwards.

68.1 CA_39A-41A UE

UEs that conform to Release 11 and support CA_39A-41A shall support the following requirements in Release 12.

68.1.1 RF Requirements

The UE shall comply with the RF requirements for CA_39A-41A specified in [2]. These requirements are:

Table 68.1.1-1: RF Requirements for CA_39A-41A UE

Section / Clause	Description
5.5A	Operating bands for CA
5.6A1	Channel bandwidths per operating band for CA
6.2.5A	Configured transmitted Power for CA
7.3.1	Minimum requirements (QPSK)

68.1.2 RRM Requirements

The UE shall comply with the RRM requirements for CA_39A-41A specified in [3] which are listed in Table B.2.4-1 of [4].

68.1.3 Demodulation performance and CSI reporting Requirements

The UE shall comply with the demodulation performance and CSI reporting requirements for CA_39A-41A specified in [2], which are listed in Table B.3.3-1 of [4].

69 Void

Annex A (informative) :

Frequency arrangement for overlapping operating bands

The following information is provided in order to assist a UE derive the DL EARFCN and UL EARFCN in a multi-band environment, in which multiple overlapping operating bands may be indicated in the fields *freqBandIndicator* and *multiBandInfoList* of SIB1.

The overlapping bands, independent of release, which may be indicated in a cell are shown in Table A-1 for applicable E-UTRA bands. The DL EARFCN and UL EARFCN are derived according to [2].

Table A-1: Overlapping bands (multi-band environments) for each E-UTRA band

E-UTRA Operating Band	Overlapping E-UTRA operating bands	Duplex Mode
2	25	FDD
3	9	FDD
4	10	FDD
5	18, 19, 26	FDD
9	3	FDD
10	4	FDD
12	17	FDD
17	12	FDD
18	5, 26, 27	FDD
19	5, 26	FDD
25	2	FDD
26	5, 18, 19, 27	FDD
27	18, 26	FDD
33	39	TDD
38	41	TDD
39	33	TDD
41	38	TDD

Annex B (normative): Common Requirements

B.1 Purpose of annex

The purpose of Annex B is to group the requirements that are common for several bands or CA configurations in this specification and use the common tables as references.

B.2 Common RRM requirements

B.2.1 Common RRM requirements for a band independent of release

The requirements and test cases listed in Table B.2.1-1 are specified in [5].

Table B.2.1-1: Common RRM requirements for a band independent of release

Section / Clause	Description
4 ^{Note 1}	E-UTRAN RRC_IDLE state mobility
5	E-UTRAN RRC_CONNECTED state mobility
6 ^{Note 2}	RRC Connection Mobility Control
7 ^{Note 3}	Timing and signalling characteristics
8 ^{Note 4}	UE Measurements Procedures in RRC_CONNECTED State
9 ^{Note 5}	Measurements performance requirements for UE
A.4 ^{Note 1}	E-UTRAN RRC_IDLE state
A.5	E-UTRAN RRC_CONNECTED Mode Mobility
A.6 ^{Note 2}	RRC Connection Control
A.7 ^{Note 3}	Timing and Signalling Characteristics
A.8 ^{Note 4}	UE Measurements Procedures
A.9 ^{Note 5}	Measurement Performance Requirements
<p>NOTE 1: All requirements and the corresponding test cases shall apply, except:</p> <ul style="list-style-type: none"> - for supporting the corresponding band in Rel-9 and below: clause 4.3 (Minimization of Drive Tests). <p>NOTE 2: All requirements and the corresponding test cases shall apply, except:</p> <ul style="list-style-type: none"> - for supporting the corresponding band in Rel-8: clauses 6.3 (RRC Connection Release with Redirection), 6.4 (CSG Proximity Indication for E-UTRAN and UTRAN). <p>NOTE 3: All requirements and corresponding test cases shall apply, except those defined in sections 7.4 and 7.5.</p> <p>NOTE 4: All requirements and corresponding test cases shall apply, except:</p> <ul style="list-style-type: none"> - for supporting the corresponding band in Rel-8: clauses 8.1.2.5 (E-UTRAN OTDOA Intra-Frequency RSTD Measurements), 8.1.2.6 (E-UTRAN Inter-Frequency OTDOA Measurements), 8.1.2.7 (E-UTRAN E-CID Measurements). <p>NOTE 5: All requirements and corresponding test cases shall apply, except:</p> <ul style="list-style-type: none"> - for supporting the corresponding band in Rel-8: clauses 9.1.9 (UE Rx-Tx time difference), 9.1.10 (Reference Signal Time Difference). <p>NOTE 6: All requirements and test cases in this table shall apply, except those defined for: carrier aggregation; measurements under time-domain measurement resource restriction with or without CRS assistance information, in addition to the exceptions listed above.</p>	

B.2.2 Common RRM requirements for an intra-band contiguous CA configuration

The requirements and test cases listed in Table B.2.2-1 are specified in [5].

Table B.2.2-1: Common RRM requirements for a single-band CA configuration independent of release

Section / Clause	Description
7.1	UE transmit timing
7.7	SCell Activation and Deactivation Delay for E-UTRA Carrier Aggregation
8.3	Measurements for E-UTRA carrier aggregation
8.4	OTDOA RSTD Measurements for E-UTRAN carrier aggregation
9.1.11	Carrier aggregation measurement accuracy
9.1.12	Reference Signal Time Difference (RSTD) Measurement Accuracy Requirements for Carrier Aggregation
A.7	Timing and Signalling Characteristics
A.8	UE Measurements Procedures
A.9	Measurement Performance Requirements
NOTE:	Only requirements and test cases defined for intra-band contiguous carrier aggregation shall apply.

B.2.3 Common RRM requirements for an intra-band non-contiguous CA configuration

The requirements and test cases listed in Table B.2.3-1 are specified in [5].

Table B.2.3-1: Common RRM requirements for a single-band CA configuration independent of release

Section / Clause	Description
7.1	UE transmit timing
7.7	SCell Activation and Deactivation Delay for E-UTRA Carrier Aggregation
8.3	Measurements for E-UTRA carrier aggregation
8.4	OTDOA RSTD Measurements for E-UTRAN carrier aggregation
9.1.11	Carrier aggregation measurement accuracy
9.1.12	Reference Signal Time Difference (RSTD) Measurement Accuracy Requirements for Carrier Aggregation
A.7	Timing and Signalling Characteristics
A.8	UE Measurements Procedures
A.9	Measurement Performance Requirements
NOTE:	Only requirements and test cases defined for intra-band non-contiguous carrier aggregation shall apply.

Editor's note: references to this section are to be revisited when intra-band non-contiguous CA requirements are finalized in TS 36.101.

B.2.4 Common RRM requirements for an inter-band CA configuration

The requirements and test cases listed in Table B.2.4-1 are specified in [5].

Table B.2.4-1: Common RRM requirements for a band-combination CA configuration

Section / Clause	Description
7.1	UE transmit timing
7.7	SCell Activation and Deactivation Delay for E-UTRA Carrier Aggregation
8.3	Measurements for E-UTRA carrier aggregation
8.4	OTDOA RSTD Measurements for E-UTRAN carrier aggregation
9.1.11	Carrier aggregation measurement accuracy
9.1.12	Reference Signal Time Difference (RSTD) Measurement Accuracy Requirements for Carrier Aggregation
A.7	Timing and Signalling Characteristics
A.8	UE Measurements Procedures
A.9	Measurement Performance Requirements
NOTE: Only requirements and test cases defined for inter-band carrier aggregation shall apply.	

B.3 Common UE performance requirements

B.3.1 Common UE performance requirements and tests for a band independent of release

The requirements and test cases listed in Table B.3.1-1 are specified in [6].

Table B.3.1-1: Common UE performance requirements and tests for a band independent of release

Section / Clause	Description
8	Performance requirement
9.2	CQI reporting under AWGN conditions
9.3	CQI reporting under fading conditions
9.4	Reporting of Precoding Matrix Indicator (PMI)
9.5	Reporting of Rank Indicator (RI)

B.3.2 Common UE performance requirements and tests for an intra-band contiguous CA configuration

The requirements and test cases listed in Table B.3.2-1 are specified in [6].

Table B.3.2-1: Common UE performance requirements and tests for an intra-band contiguous CA configuration

Section / Clause	Description
8	Performance requirement
9.6	Additional requirements for carrier aggregation
NOTE: Only requirements and test cases defined for intra-band contiguous carrier aggregation shall apply.	

B.3.3 Common UE performance requirements and tests for an inter-band CA configuration

The requirements and test cases listed in Table B.3.3-1 are specified in [6].

Table B.3.3-1: Common UE performance requirements and tests for an inter-band CA configuration

Section / Clause	Description
8	Performance requirement
9.6	Additional requirements for carrier aggregation
NOTE: Only requirements and test cases defined for inter-band carrier aggregation shall apply.	

B.3.4 Common UE performance requirements and tests for an intra-band non-contiguous CA configuration

Editor's note: the content of this section is TBD.

Annex C (informative): Change history

Table C.1: Change History

Date	TSG#	TSG Doc.	CR	Subject	Old	New
11-2009	RP#46	RP-091141		TS36.307 V0.1.0 approved by RAN (Originally in R4-095022)	-	0.1.0
02-2010	R4#54	R4-100419		For release 9 version, replace sections 4 to 6 as "Void" and add a new void section as section 7.	0.1.0	0.2.0
03-2010	RP#47	RP-100162		TS36.307 v1.0.0 for approval	0.2.0	1.0.0
03-2010	RP#47	RP-100162		Approved by RAN	1.0.0	9.0.0
09-2010	RP-49	RP-100927	2	CR LTE_TDD_2600_US spectrum band definition additions to TS 36.307 V900	9.0.0	9.1.0
				Correction of section numbering	9.1.0	9.1.1
12-2010	RP-50	RP-101356	008	Band 42 and 43 parameters for UMTS/LTE 3500 (TDD) for TS 36.307	9.1.1	9.2.0
12-2010	RP-50	RP-101361	005	Introduction of L-band in TS 36.307	9.1.1	9.2.0
12-2010	RP-50	RP-101344	016	CR creating the rel-10 of the 36.307 specification	9.2.0	9.3.0
12-2010	RP-50	RP-101356	012	Band 42 and 43 parameters for UMTS/LTE 3500 (TDD) for TS 36.307	9.2.0	9.3.0
12-2010	RP-50			Raised to Rel-10 with no technical change	9.3.0	10.0.0
01-2011				Correction to history table	10.0.0	10.0.1
06-2011	RP-52	RP-110804	015	Add Expanded 1900 MHz Band (Band 25) in 36.307	10.0.1	10.1.0
06-2011	RP-52	RP-110812	022	Add 2GHz S-Band (Band 23) in 36.307 (Rel 10)	10.0.1	10.1.0
09-2011	RP-53	RP-111255	025	Add Band 22 for LTE/UMTS 3500 (FDD) to TS 36.307	10.1.0	10.2.0
03-2012	RP-55	RP-120305	029	Introduction of Band 26/XXVI to TS 36.307	10.2.0	11.0.0
2012-06	RP-56	RP-120789	043	Introduction of CA_1A-19A to TS 36.307	11.0.0	11.1.0
2012-06	RP-56	RP-120793	049	Introduction of APAC700(FDD) into TS 36.307 Rel-11	11.0.0	11.1.0
2012-06	RP-56	RP-120793	053	Introduction of APAC700(TDD) into TS 36.307 Rel-11	11.0.0	11.1.0
2012-06	RP-56	RP-120791	057	Introduction of e850_LB (Band 27) to TS 36.307	11.0.0	11.1.0
2012-09	RP-57	RP-121335	059	Introduction of CA_1A-21A to TS 36.307	11.1.0	11.2.0
2012-09	RP-57	RP-121295	070r1	Relation between EARFCN for overlapping bands with multiple FBI indication	11.1.0	11.2.0
2012-09	RP-57	RP-121338	072	36.307 CR for LTE_CA_B7	11.1.0	11.2.0
2012-09	RP-57	RP-121337	073	TS 36.307 CR for CA_38	11.1.0	11.2.0
2012-09	RP-57	RP-121327	074	Introduction of CA_B7_B20 in 36.307	11.1.0	11.2.0
2012-09	RP-57	RP-121329	075	Introduction of CA band combination Band3 + Band5 to TS 36.307	11.1.0	11.2.0
2012-09	RP-57	RP-121331	076	Introduction of CA_3A-20A to TS 36.307	11.1.0	11.2.0
2012-09	RP-57	RP-121334	077	Add requirements for inter-band CA of B_1-18 in TS36.307	11.1.0	11.2.0
2012-09	RP-57	RP-121333	078	Introduction of CA_8_20 RF requirements into TS36.307	11.1.0	11.2.0
2012-09	RP-57	RP-121324	079	Introduction of CA_B3_B7 in 36.307	11.1.0	11.2.0
2012-12	RP-58	RP-121890	086	Introduction of CA_4A-5A into 36.307	11.2.0	11.3.0
2012-12	RP-58	RP-121889	088	Introduction of CA band combination Band4 + Band13 to TS 36.307 (Rel-11)	11.2.0	11.3.0

2012-12	RP-58	RP-121896	091	Introduction of Band 5 + Band 17 inter-band CA configuration into 36.307	11.2.0	11.3.0
2012-12	RP-58	RP-121884	092	Introduction of CA_3A-8A to TS 36.307	11.2.0	11.3.0
2012-12	RP-58	RP-121894	093	Introduction of CA_B5_B12 in 36.307	11.2.0	11.3.0
2012-12	RP-58	RP-121887	095	Introduction of CA_4-12 into TS 36.307 (Rel-11)	11.2.0	11.3.0
2012-12	RP-58	RP-121882	097	[Rel-11] Introduction of inter-band CA_11-18 into TS36.307	11.2.0	11.3.0
2012-12	RP-58	RP-121861	099	Release-independent implementation of carrier aggregation configuration CA_4-7	11.2.0	11.3.0
2012-12	RP-58	RP-121901	101	Introduction of Band 29	11.2.0	11.3.0
2012-12	RP-58	RP-121718	0102	Introduction of CA band combination Band2 + Band17 to TS 36.307 (Rel-11)	11.2.0	11.3.0
2012-12	RP-58	RP-121720	0104	Introduction of CA band combination Band4 + Band17 to TS 36.307 (Rel-11)	11.2.0	11.3.0
2013-06	RP-60	RP-130771	107r1	Introduction of CA 1+8 into TS36.307(Rel-11)	11.3.0	11.4.0
2013-06	RP-60	RP-130782	110r1	Introduction of LTE Advanced inter-band Carrier Aggregation of Band 3 and Band 28 to TS 36.307 Rel-11	11.3.0	11.4.0
2013-06	RP-60	RP-130785	113	Introduction of LTE Advanced inter-band Carrier Aggregation of Band 23 and Band 29 to TS 36.307 (Rel-11)	11.3.0	11.4.0
2013-06	RP-60	RP-130779	116	Introduction of LTE Advanced inter-band Carrier Aggregation of Band 3 and Band 26 to TS 36.307 (Rel-11)	11.3.0	11.4.0
2013-06	RP-60	RP-130777	119	Introduction of CA_3A-19A to TS 36.307	11.3.0	11.4.0
2013-06	RP-60	RP-130783	122	Introduction of CA_19A-21A to TS 36.307	11.3.0	11.4.0
2013-06	RP-60	RP-130787	128	Introduction of CA_4A-4A into 36.307 Rel-11	11.3.0	11.4.0
2013-06	RP-60	RP-130775	130	Introduction of CA_2A-13A to TS 36.307	11.3.0	11.4.0
2013-06	RP-60	RP-130791	135r1	Introduction of Band 30	11.3.0	11.4.0
2013-06	RP-60	RP-130790	142	Introduction of LTE 450 into TS 36.307 R11	11.3.0	11.4.0
09-2013	RP-61	RP-131300	152	36.307 CR for LTE_CA_C_B3 (Rel-11)	11.4.0	11.5.0
09-2013	RP-61	RP-131303	155	Band 31 release independence for UE demodulation performance	11.4.0	11.5.0
09-2013	RP-61	RP-131285	158	[Rel-11] Modify requirements for CA_1A-18A in TS36.307	11.4.0	11.5.0
09-2013	RP-61	RP-131296	159	[Rel-11] Add requirements for CA_1A-26A into TS36.307	11.4.0	11.5.0
09-2013	RP-61	RP-131297	162	Introduction of CA_2A-4A to TS 36.307	11.4.0	11.5.0
09-2013	RP-61	RP-131298	166	Introduction of inter-band CA Band 2+5	11.4.0	11.5.0
12-2013	RP-62	RP-131965	174	Introduction of CA_23A-23A to TS 36.307	11.5.0	11.6.0
12-2013	RP-62	RP-131946	177r1	Introduction of CA band combination Band2 + Band12 to TS 36.307	11.5.0	11.6.0
12-2013	RP-62	RP-131954	180r1	Introduction of CA band combination Band12 + Band25 to TS 36.307	11.5.0	11.6.0
12-2013	RP-62	RP-131959	183	Introduction of LTE_CA_C_B27 to 36.307 (Rel-11)	11.5.0	11.6.0
12-2013	RP-62	RP-131939	189r1	Correction to release independent specification	11.5.0	11.6.0
12-2013	RP-62	RP-131957	191	Introduction of CA_23B to TS 36.307	11.5.0	11.6.0
12-2013	RP-62	RP-131961	193	Introduction of Intra-band non-contiguous CA in band 3 to TS 36.307	11.5.0	11.6.0
12-2013	RP-62	RP-131950	199	Introduction of CA band combination Band5 + Band25 to TS 36.307	11.5.0	11.6.0
12-2013	RP-62	RP-131948	203r1	Introduction of CA band combination B5 + B7 to TS 36.307	11.5.0	11.6.0

					0	
12-2013	RP-62	RP-131952	206	Introduction of CA band combination B7 + B28 to TS 36.307	11.5.0	11.6.0
12-2013	RP-62	RP-131925	215	UE performance requirements in release independent specification for CA	11.5.0	11.6.0
12-2013	RP-62	RP-131963	218	Introduction of CA_7A-7A to TS 36.307 Rel-11	11.5.0	11.6.0
12-2013	RP-62	RP-131924	223	Introducing 'General' clause with note referring to note in clause 4.4 in TS36.101, editorial corrections and modifications to Forward and Scope clauses	11.5.0	11.6.0
03-2014	RP-63	RP-140375	231r1	CR on UE performance requirements in release independent specification	11.6.0	11.7.0
03-2014	RP-63	RP-140371	234	Release independence of Band 14 HPUE	11.6.0	11.7.0
03-2014	RP-63	RP-140375	244r1	Correction to release independent specification	11.6.0	11.7.0
03-2014	RP-63	RP-140386	226r2	Introduction of CA band combination Band 3 and Band 27 to TS 36.307	11.6.0	11.7.0
03-2014	RP-63	RP-140188	247	Addition of bandwidth combination set for CA_2A-29A and CA_4A-29A	11.6.0	11.7.0
03-2014	RP-63	RP-140387	196r1	Introduction of CA_39A-41A to TS 36.307	11.6.0	11.7.0
03-2014	RP-63	RP-140388	209r2	Introduction of CA_39C to TS 36.307	11.6.0	11.7.0

History

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