ETSI TS 138 522 V16.4.0 (2020-07)

5G;
NR;
User Equipment (UE) conformance specification;
Applicability of radio transmission, radio reception and radio resource management test cases
(3GPP TS 38.522 version 16.4.0 Release 16)

Reference
RTS/TSGR-0538522vg40

Keywords
5G

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

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.

Legal Notice

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. These shall be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between 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.

The present document is one part of a multi-part Technical Specification (TS) covering the New Radio (NR) User Equipment (UE) conformance specification, which is divided in the following parts:

3GPP TS 38.521-1 [1]: NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Range 1 Standalone;

3GPP TS 38.521-2 [2]: NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 2: Range 2 Standalone;

3GPP TS 38.521-3 [3]: NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 3: Range 1 and Range 2 Interworking operation with other radios;

3GPP TS 38.521-4 [4]: NR; User Equipment conformance specification; Radio transmission and reception; Part 4: Performance;

3GPP TS 38.522: NR; User Equipment (UE) conformance specification; Applicability of RF and RRM test cases;

3GPP TS 38.533 [5]: NR; User Equipment (UE) conformance specification; Radio resource management;

1 Scope

The present document provides the Implementation Conformance Statement (ICS) proforma for 5G New Radio (NR) User Equipment (UE), in compliance with the relevant requirements.

The present document specifies the recommended applicability statement for the test cases included in 3GPP TS 38.521-1 [1], TS 38.521-2 [2], TS 38.521-3 [3], TS 38.521-4 [4] and TS 38.533 [5]. These applicability statements are based on the features implemented in the UE.

Special conformance testing functions can be found in 3GPP TS 38.509 [6] and the common test environments are included in 3GPP TS 38.508-1 [7]. Common implementation conformance statement (ICS) proforma can be found in 3GPP TS 38.508-2 [8].

The present document is valid for UE implemented according to 3GPP releases starting from Release 15 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 in e.g. test case title, description or applicability, message description or content).

[1] 3GPP TS 38.521-1: NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Range 1 Standalone

[2] 3GPP TS 38.521-2: NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 2: Range 2 Standalone

[3] 3GPP TS 38.521-3: NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 3: Range 1 and Range 2 Interworking operation with other radios

[4] 3GPP TS 38.521-4: NR; User Equipment conformance specification; Radio transmission and reception; Part 4: Performance

[5] 3GPP TS 38.533: NR; User Equipment (UE) conformance specification; Radio resource management

[6] 3GPP TS 38.509: 5GS; Special conformance testing functions for User Equipment (UE)

[7] 3GPP TS 38.508-1: 5GS; User Equipment (UE) conformance specification; Part 1: Common test environment

[8] 3GPP TS 38.508-2: 5GS; User Equipment (UE) conformance specification; Part 2: Common Implementation Conformance Statement (ICS) proforma

[9] 3GPP TR 21.905: Vocabulary for 3GPP Specifications

[10] 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)

[11] 3GPP TS 38.331: "NR; Radio Resource Control (RRC) protocol specification".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TR 21.905 [9] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in TR 21.905 [9].

EIRP(Link=Link angle, Meas=Link angle): measurement of the UE such that the link angle is aligned with the measurement angle. EIRP (indicator to be measured) can be replaced by EIS, Frequency, EVM, carrier Leakage, In-band emission and OBW. Beam peak search grids, TX beam peak direction, and RX beam peak direction can be selected to describe Link.

EIRP(Link=Link angle, Meas=beam peak direction): measurement of the EIRP of the UE such that the measurement angle is aligned with the beam peak direction within an acceptable measurement error uncertainty.

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

Inter-band carrier aggregation: Carrier aggregation of component carriers in different operating bands.

NOTE: Carriers aggregated in each band can be contiguous or non-contiguous.

Intra-band contiguous carrier aggregation: Contiguous carriers aggregated in the same operating band.

Intra-band non-contiguous carrier aggregation: Non-contiguous carriers aggregated in the same operating band.

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)

TRP(Link=Link angle): measurement of the TRP of the UE such that the measurement angle is aligned with the beam peak direction within an acceptable measurement uncertainty. TX beam peak direction and RX beam peak direction can be selected to describe Link.

NOTE: For requirements based on EIRP/EIS, the radiated interface boundary is associated to the far-field region

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 [9] 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 [9].

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

CA	Carrier Aggregation
EN-DC	E-UTRA NR-Dual Connection
FR1	Frequency Range 1 (410 MHz - 7125 MHz)
FR2	Frequency Range 2 (24250 MHz - 52600 MHz)
ICS	Implementation Conformance Statement
IXIT	Implementation eXtra Information for Testing
NR	New Radio
PIXIT	Protocol Implementation eXtra Information for Testing
SCS	System Conformance Statement
SUL	Supplementary UpLink
TC	Test Case
TRP	Total Radiated Power
UEUT	User Equipment Under Test

4 Recommended test case applicability

The applicability of each individual test is identified in the tables 4.1.1-1 / 4.1.2-1 / 4.1.3-1 / 4.1.4-1 / 4.2-1 / 4.2-2 / 4.2-3 / 4.2-4. 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 expressions that are based on parameters (ICS). The parameters (ICS) included in TS 38.508-2 [8] are used in the test case applicability condition without reference. Parameters (ICS) specified in TS 36.521-2 [10] shall be referred with proper reference.

Selection criteria of tested bands and tested CA configurations for each applicable test is formally expressed using group theory based on parameters (ICS) included in annex A of TS 38.508-2 [8] without reference.

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 4.1.1-1 / 4.1.2-1 / 4.1.3-1 / 4.1.4-1 / 4.2-1 / 4.2-2 / 4.2-3 / 4.2-4 have the following meaning:

Clause

The clause column indicates the clause number in TS 38.521-1 [1], TS 38.521-2 [2], TS 38.521-3 [3], TS 38.521-4 [4] and TS 38.533 [5] 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 38.521-1 [1], TS 38.521-2 [2], TS 38.521-3 [3], TS 38.521-4 [4] and TS 38.533 [5] 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 as defined in table 4.0-1:

R	recommended - the test case is recommended to all terminals supporting NR
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 a 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/DC Configurations Selection

This column defines a set of bands / CA/DC 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 4.0-2.
Ei	Derive the set based on CA/DC Configurations Selection Criteria Ei defined in table 4.0-3.
TBD	Band selection not defined at this time, in the meantime test all Bands / CA/DC Configurations
Text	For more complex selection criteria, or if the criteria are already specified somewhere else in the spec, text reference to the clause 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 PCx branch (i.e. different behaviour within one and the same TC, x=1,2,3,4) of common PCx RF test cases in table 4.1.1-1, table 4.1.2-1 and table 4.1.3-1. The PCx branches of common PCx test cases can be referenced by amending a "PCx" suffix to the test case clause number. For example for test case 6.2.1 the PC3 and PC2 branches can be identified by "6.2.1_PC3" and "6.2.1_PC2".

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 RF/RRM test cases in table 4.1.1-1, table 4.1.2-1 and table 4.1.3-1. 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 7.3.2 the 2Rx and 4Rx branches can be identified by "7.3.2_2Rx" and "7.3.2_4Rx". When the branch is “2RX, 4RX” or “xxx_2RX, xxx_4RX”, requirements of 2RX are tested for 2RX capability UE and requirements of 4RX are tested for 4RX capability UE.

Additional Information

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

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.

Editor's note: The above description will be updated when necessary, for example 1Tx and 2Tx differentiation.

4.0 Test case conditions and selection criteria

For the purposes of the present document, the applicability of conformance test cases conditions given in Table 4.0-1 apply. The ICS proformas used in Table 4.0-1 are defined in TS 38.508-2 [8] unless otherwise stated.

Table 4.0-1: Applicability of conformance test cases conditions

C001	IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-2/7 AND A.4.1-3/1 THEN R ELSE N/A
C002	IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-2/7 AND A.4.1-3/1 AND (A.4.1-2/3 OR A.4.1-2/5) THEN R ELSE N/A
C003	IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-2/7 AND A.4.1-3/1 AND (A.4.3.2-1/14 OR A.4.3.2-1/15) THEN R ELSE N/A
C004	IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-2/7 AND A.4.1-3/1 AND (A.4.1-4A/1 OR A.4.1-4A/2 OR A.4.1-4A/5) AND A.4.3.2A.1-2/1 THEN R ELSE N/A
C005	IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-2/7 AND A.4.1-3/1 AND A.4.1-4A/5 AND A.4.1-2/4 AND A.4.3.2A.1-1/1 AND A.4.1-3/1 THEN R ELSE N/A
C006	IF A.4.1-1/2 AND A.4.1-2/8 AND (A.4.1-3/1 OR A.4.1-3/4) THEN R ELSE N/A
C007	IF A.4.1-1/2 AND A.4.1-2/8 AND (A.4.1-3/1 OR A.4.1-3/4) AND A.4.3.2-1/22 THEN R ELSE N/A
C008	IF A.4.1-1/2 AND A.4.1-2/8 AND (A.4.1-3/1 OR A.4.1-3/4) AND NOT(A.4.3.2-1/22) THEN R ELSE N/A
C009	IF (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/5) AND A.4.1-4/1 THEN R ELSE N/A
C009m	IF (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/5) AND A.4.1-4/1 AND A.4.3.2-1/25 THEN R ELSE N/A
C010	IF (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/5) AND A.4.1-4/2 THEN R ELSE N/A
C010m	IF (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/5) AND A.4.1-4/2 AND A.4.3.2-1/25 THEN R ELSE N/A
C011	IF (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/5) AND A.4.1-4/3 THEN R ELSE N/A
C011m	IF (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/5) AND A.4.1-4/3 AND A.4.3.2-1/25 THEN R ELSE N/A
C012	IF (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/5) AND A.4.1-4/4 THEN R ELSE N/A
C012m	IF (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/5) AND A.4.1-4/4 AND A.4.3.2-1/25 THEN R ELSE N/A
C013	IF (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/5) AND (A.4.1-4/3 OR A.4.1-4/4) THEN R ELSE N/A
C014	IF (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/5) AND (A.4.1-4/1 OR A.4.1-4/2 OR A.4.1-4/3 OR A.4.1-4/4) THEN R ELSE N/A
C015	IF A.4.1-1/1 AND (A.4.1-3/1 OR A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/4 OR A.4.1-3/5) THEN R ELSE N/A
C015a	IF A.4.1-1/1 AND (A.4.1-3/1 OR A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/4 OR A.4.1-3/5) AND A.4.3.9-1/1 THEN R ELSE N/A
C015c	IF A.4.1-1/1 AND (A.4.1-3/1 OR A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/4 OR A.4.1-3/5) AND A.4.3.2-1/20 THEN R ELSE N/A
C016	IF A.4.1-1/2 AND (A.4.1-3/1 OR A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/4 OR A.4.1-3/5) THEN R ELSE N/A
C016a	IF A.4.1-1/2 AND (A.4.1-3/1 OR A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/4 OR A.4.1-3/5) AND A.4.3.9-1/1 THEN R ELSE N/A
C017	IF A.4.1-1/1 AND (A.4.1-3/1 OR A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/4 OR A.4.1-3/5) AND (NOT A.4.3.9-1/2 AND A.4.3.9-4/7 OR (A.4.3.9-4/1 OR A.4.3.9-4/2 OR A.4.3.9-4/3 OR A.4.3.9-4/66)) THEN R ELSE N/A
C017a	IF A.4.1-1/1 AND (A.4.1-3/1 OR A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/4 OR A.4.1-3/5) AND (NOT A.4.3.9-1/2 AND A.4.3.9-4/7 OR (A.4.3.9-4/1 OR A.4.3.9-4/2 OR A.4.3.9-4/3 OR A.4.3.9-4/66)) AND A.4.3.9-1/1 THEN R ELSE N/A
C017c	IF A.4.1-1/1 AND (A.4.1-3/1 OR A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/4 OR A.4.1-3/5) AND (NOT A.4.3.9-1/2 AND A.4.3.9-4/7 OR (A.4.3.9-4/1 OR A.4.3.9-4/2 OR A.4.3.9-4/3 OR A.4.3.9-4/66)) AND A.4.3.2-1/20 THEN R ELSE N/A
C018	IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-2/7 AND A.4.1-3/1 AND 4.3.2-1/9 THEN R ELSE N/A
C019	IF A.4.1-1/2 AND (A.4.1-3/1 OR A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/4 OR A.4.1-3/5) AND (NOT A.4.3.9-1/2 AND (A.4.3.9-4/38 OR A.4.3.9-4/41 OR A.4.3.9-4/77 OR A.4.3.9-4/78 OR A.4.3.9-4/79) OR (A.4.3.9-4/34, A.4.3.9-4/39 OR A.4.3.9-4/40 OR A.4.3.9-4/48 OR A.4.3.9-4/70)) THEN R ELSE N/A
C019a	IF A.4.1-1/2 AND (A.4.1-3/1 OR A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/4 OR A.4.1-3/5) AND (NOT A.4.3.9-1/2 AND (A.4.3.9-4/38 OR A.4.3.9-4/41 OR A.4.3.9-4/77 OR A.4.3.9-4/78 OR A.4.3.9-4/79) OR (A.4.3.9-4/34, A.4.3.9-4/39 OR A.4.3.9-4/40 OR A.4.3.9-4/48 OR A.4.3.9-4/70)) AND A.4.3.9-1/1 THEN R ELSE N/A
C020	IF (A.4.1-1/1 OR A.4.1-1/2) AND (A.4.1-3/2 OR A.4.1-3/3 OR A.4.1-3/5) THEN R ELSE N/A
C021	IF (A.4.1-4/1 OR A.4.1-4/2 OR A.4.1-4/3 OR A.4.1-4/5) AND A.4.1-3/2 THEN R ELSE N/A
C022	IF (A.4.1-4/4 AND OR A.4.1-4/5) A.4.1-3/2 THEN R ELSE N/A
C023	IF A.4.1-4/5 AND A.4.1-3/2 THEN R ELSE N/A
C024	IF A.4.1-1/1 AND A.4.1-2/7 AND A.4.1-3/1 THEN R ELSE N/A
C025	IF ((A.4.1-1/1 AND [10]A.4.1-1/1) OR (A.4.1-1/1 AND [10]A.4.1-1/2) OR (A.4.1-1/2 AND [10]A.4.1-1/1) OR (A.4.1-1/2 AND [10]A.4.1-1/2)) AND A.4.1-3/1 THEN R ELSE N/A
C026	IF (A.4.1-4/1 OR A.4.1-4/2 OR A.4.1-4/3 OR A.4.1-4/5) AND A.4.1-3/2 AND 4.3.6-1/11 THEN R ELSE N/A
C027	IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-3/1 THEN R ELSE N/A
C028	IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-3/1 AND 4.3.6-1/11 THEN R ELSE N/A

C029	IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-3/1 AND 4.3.2-1/9 THEN R ELSE N/A
C030	IF (A.4.1-4/1 OR A.4.1-4/2 OR A.4.1-4/3 OR A.4.1-4/5) AND A.4.1-3/2 AND 4.3.2-1/9 THEN R ELSE N/A
C031	IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-2/7 AND A.4.1-3/1 AND (A.4.1-4A/1 OR A.4.1-4A/2 OR A.4.1-4A/5) AND A.4.3.2A.1-1/1 THEN R ELSE N/A
C032	IF (A.4.1-4/1 OR A.4.1-4/2 OR A.4.1-4/3 OR A.4.1-4/5) AND A.4.1-3/2 AND (A.4.1-2/3 OR A.4.1-2/5) THEN R ELSE N/A
C033	IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-2/7 AND A.4.1-3/1 AND (A.4.1-4A/1 OR A.4.1-4A/2 OR A.4.1-4A/5) AND A.4.3.2A.1-1/2 THEN R ELSE N/A
C034	IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-2/7 AND A.4.1-3/1 AND A.4.3.6-1/6 THEN R ELSE N/A
C035	IF (A.4.1-4/1 OR A.4.1-4/2 OR A.4.1-4/3 OR A.4.1-4/5) AND A.4.1-3/2 AND A.4.3.6-1/6 THEN R ELSE N/A
C036	IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-2/7 AND A.4.1-3/1 AND (A.4.1-4A/1 OR A.4.1-4A/2 OR A.4.1-4A/5) AND A.4.3.2A.1-1/3 THEN R ELSE N/A
NOTE 1: Cxxxa applicability is defined for enhanced type X receiver for NR related tests.	
NOTE 2: Cxxxc applicability is defined for alternative additional DMRS position for co-existence with LTE CRS related tests.	
NOTE 3: Cxxxm applicability is defined for modified MPR behaviour related test.	

For the purposes of the present document, the tested bands selection criteria given in Table 4.0-2 apply. The ICS proformas used in Table 4.0-2 are defined in TS 38.508-2 [8] unless otherwise stated.

Table 4.0-2: Tested Bands Selection Criteria

Code	Tested Bands Selection Criteria	Comment
D001	(A.4.3.1-1 OR A.4.3.1-2) AND NOT (A.4.3.1-5 OR A.4.3.1-6)	All supported FR1 Bands without SUL/SDL bands
D002	A.4.3.1-4	All supported FR1 PC2 Bands
D003	A.4.3.1-5	All supported FR1 SUL Bands
D004	{1,2,3,5,7,8,12,20,25,28,34,38,39,40,41,50,51,65,66,70,71,74,75,76}	UE supported bands among n1,n2,n3,n5,n7,n8,n12,n20,n25,n28,n34,n38,n39,n40,n41,n50,n51,n65,n66,n70,n71,n74,n75,n76
D005	A.4.3.1-3	All supported FR2 Bands
D006	A.4.3.1-1 OR A.4.3.1-2	All supported FR1 Bands
D007	A.4.3.1-1 OR A.4.3.1-2 OR A.4.3.1-3	All supported NR Bands
D008	ANY((A.4.3.1-1 OR A.4.3.1-2) AND 10MHz)	Any band within the set supporting 10 MHz UE Channel BW
D009	ANY((A.4.3.1-1 OR A.4.3.1-2) AND 20MHz)	Any band within the set supporting 20 MHz UE Channel BW
D010	ANY((A.4.3.1-1 OR A.4.3.1-2) AND 40MHz)	Any band within the set supporting 40 MHz UE Channel BW
D011	A.4.3.9-4	All supported 4 Rx antenna ports Bands

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:

AND: Set intersection ($\cap$). {1,2} AND {2,3} = {2}
OR: Set union ($\cup$). {1,2} OR {2,3} = {1,2,3}
NOT: Set complement (\), full set being all bands. NOT{1} = {2 ...256}
Also note that this is set without repetitions so {1} AND {1} = {1}

The following basic sets are used:

{1,2}: Explicitly given band set
10MHz: All bands supporting 10 MHz

The following sets derived from pro-forma tables are also used:
TBD

For the purposes of the present document, the tested CA/DC configuration selection criteria given in Table 4.0-3 apply. The ICS proformas used in Table 4.0-3 are defined in TS 38.508-2 [8] unless otherwise stated.

Table 4.0-3: Tested CA/DC Configuration Selection Criteria

Code	Tested CA Configuration Selection Criteria	Comment
E001	A.4.3.2A.2.1-3 AND CARRIER_NO(2) AND NOT UL(A.4.3.2A.2.1-2)	All supported intra-band contiguous CA Configurations with 2 carriers in DL but no CA in UL
E002	A.4.3.2A.4.1-1 AND CARRIER_NO(2) AND NOT UL(A.4.3.2A.4.1-2)	All supported inter-band CA Configurations with 2 carriers in DL but no CA in UL
E003	A.4.3.2B.2.3.1-2 AND A.4.3.2B.2.3.2-2 AND A.4.3.2B.2.3.3-2	All supported inter-band EN-DC Configurations within FR1
E004	A.4.3.1-10	All supported TDD-TDD PC2 inter-band EN-DC Configurations within FR1

4.1 RF conformance test cases

NOTE: To determine applicability of a test case, supported CBW and SCS in the *RF-Parameters* IE (see TS 38.331 [11]) which conveys RF related capabilities for NR operation is taken into account.

Editor's Note: Handling of "Tested Bands" column and "Branch" column is FFS.

4.1.1 FR1 standalone conformance test cases

Table 4.1.1-1: Applicability of RF SA FR1 conformance test cases, ref. TS 38.521-1 [1]

Clause	TC Title	Release	Applicability		Tested Bands/CA-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6	**Transmitter Characteristics**						
6.2.1	UE maximum output power	Rel-15	C001	UEs supporting 5GS FR1	D001 D002	PC2 PC3	
6.2.2	Maximum Power Reduction (MPR)	Rel-15	C001	UEs supporting 5GS FR1	D001 D002	PC2 PC3	Test execution is not necessary if TS 38.521-1 6.5.2.4.1 is executed. Skip TC 6.2.2 if UE supports NSA and TS 38.521-3 TC 6.2B.2.3 has been executed.
6.2.3	UE additional maximum output power reduction	Rel-15	C001	UEs supporting 5GS FR1 PC3	D001 D002	PC2 PC3	Test execution is not necessary if TS 38.521-1 6.5.2.3 and 6.5.3.3 are executed. Skip TC 6.2.3 if UE supports NSA and TS 38.521-3 TC 6.2B.3.3 has been executed.
6.2.4	Configured transmitted power	Rel-15	C001	UEs supporting 5GS FR1	D001		PC3 requirements applied
6.2A.1.1	UE maximum output power for CA (2UL CA)	Rel-15	C004	UEs supporting 5GS FR1 and CA (2UL CA)	D001		
6.2A.2.1	Maximum Power Reduction (MPR) for CA (2 UL CA)	Rel-15	C004	UEs supporting 5GS FR1 and CA (2UL CA)	D001		Test execution is not necessary if TS 38.521-1 6.5A.2.4.1.1 is executed.
6.2A.3.1	UE additional maximum output power reduction for CA (2 UL CA)	Rel-15	C004	UEs supporting 5GS FR1 and CA (2UL CA)	D001		Test execution is not necessary if TS 38.521-1 6.5A.2.3 and 6.5A.3.3 are executed.
6.2C.1	Configured transmitted power for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.2C.3	UE maximum output power for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.2C.4	UE maximum output power reduction for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.2C.5	UE additional maximum output power reduction for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.2D.1	UE maximum output power for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		Maximum Output Power for UL-MIMO is tested as part of the MPR test case with using MPR=1.5dB suggested by RAN4.

Clause	TC Title	Release	Applicability		Tested Bands/CA-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.2D.2	UE maximum output power reduction for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		Test execution is not necessary if TS 38.521-1 6.5D.2.4.1 is executed.
6.2D.3	UE additional maximum output power reduction for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		Test execution is not necessary if TS 38.521-1 6.5D.2.3 and 6.5D.3.3 are executed.
6.2D.4	Configured transmitted power for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.3.1	Minimum output power	Rel-15	C001	UEs supporting 5GS FR1	D001		Skip TC 6.3.1 if UE supports NSA and TS 38.521-3 TC 6.3B.1.1 or 6.3B.1.2 or 6.3B.1.3 has been executed.
6.3.3.2	General ON/OFF time mask	Rel-15	C001	UEs supporting 5GS FR1	D001		Skip TC 6.3.3.2 if UE supports NSA and TS 38.521-3 TC 6.3B.3.1 or 6.3B.3.2 or 6.3B.3.3 has been executed.
6.3.3.4	PRACH time mask	Rel-15	C001	UEs supporting 5GS FR1	D001		Skip TC 6.3.3.4 if UE supports NSA and TS 38.521-3 TC 6.3B.4.1 or 6.3B.4.2 or 6.3B.4.3 has been executed.
6.3.3.6	SRS time mask	Rel-15	C001	UEs supporting 5GS FR1	D001		
6.3.4.2	Absolute power tolerance	Rel-15	C001	UEs supporting 5GS FR1	D001		NOTE 1
6.3.4.3	Relative power tolerance	Rel-15	C001	UEs supporting 5GS FR1	D001		
6.3.4.4	Aggregate power tolerance	Rel-15	C001	UEs supporting 5GS FR1	D001		NOTE 1
6.3A.1.1	Minimum output power for CA (2UL CA)	Rel-15	C004	UEs supporting 5GS FR1 and CA (2UL CA)	D001		
6.3A.3.1	Transmit ON/OFF time mask for CA (2UL CA)	Rel-15	C004	UEs supporting 5GS FR1 and CA (2UL CA)	D001		
6.3C.1	Minimum output power for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.3C.3	Transmit ON/OFF time mask for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.3C.4.1	Absolute power tolerance for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.3C.4.2	Power Control Relative power tolerance for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.3C.4.3	Aggregate power tolerance for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.3D.1	Minimum output power for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		

Clause	TC Title	Release	Applicability		Tested Bands/CA-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.3D.3	Transmit ON/OFF time mask for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.3D.4.1	Absolute power tolerance for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.3D.4.2	Relative power tolerance for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.3D.4.3	Aggregate power tolerance for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.4.1	Frequency error	Rel-15	C001	UEs supporting 5GS FR1	D001		Skip TC 6.4.1 if UE supports NSA and TS 38.521-3 TC 6.4B.1.1 or 6.4B.1.2 or 6.4B.1.3 has been executed.
6.4.2.1	Error Vector Magnitude	Rel-15	C001	UEs supporting 5GS FR1	D001		Skip TC 6.4.2.1 if UE supports NSA and TS 38.521-3 TC 6.4B.2.1.1 or 6.4B.2.2.1 or 6.4B.2.3.1 has been executed.
6.4.2.2	Carrier leakage	Rel-15	C001	UEs supporting 5GS FR1	D001		Skip TC 6.4.2.2 if UE supports NSA and TS 38.521-3 TC 6.4B.2.1.2 or 6.4B.2.2.2 or 6.4B.2.3.2 has been executed.
6.4.2.3	In-band emissions	Rel-15	C001	UEs supporting 5GS FR1	D001		Skip TC 6.4.2.3 if UE supports NSA and TS 38.521-3 TC 6.4B.2.2.3 or 6.4B.2.3.3 has been executed.
6.4.2.4	EVM equalizer spectrum flatness	Rel-15	C001	UEs supporting 5GS FR1	D001		Skip TC 6.4.2.4 if UE supports NSA and TS 38.521-3 TC 6.4B.2.1.4 or 6.4B.2.2.4 or 6.4B.2.3.4 has been executed.
6.4.2.5	EVM equalizer spectrum flatness for Pi/2 BPSK	Rel-15	C001	UEs supporting 5GS FR1	D001		

Clause	TC Title	Release	Applicability		Tested Bands/CA-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.4A.1.1	Frequency error for CA (2UL CA)	Rel-15	FFS	UEs supporting 5GS FR1 and CA (2UL CA)	FFS		NOTE 1
6.4A.2.1.1	Error Vector Magnitude for CA (2UL CA)	Rel-15	FFS	UEs supporting 5GS FR1 and CA (2UL CA)	FFS		NOTE 1
6.4A.2.2.1	Carrier leakage for CA (2UL CA)	Rel-15	FFS	UEs supporting 5GS FR1 and CA (2UL CA)	FFS		NOTE 1
6.4A.2.3.1	In-band emissions for CA (2UL CA)	Rel-15	FFS	UEs supporting 5GS FR1 and CA (2UL CA)	FFS		NOTE 1
6.4C.1	Frequency error for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.4C.2.1	Error Vector Magnitude for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.4C.2.2	Carrier leakage for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.4C.2.3	In-band emissions for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.4C.2.4	EVM equalizer spectrum flatness for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.4D.1	Frequency error for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.4D.2.1	Error Vector Magnitude for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.4D.2.2	Carrier leakage for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.4D.2.3	In-band emissions for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.4D.2.4	EVM equalizer spectrum flatness for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.4D.3	Time alignment error for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.4D.4	Requirements for coherent UL MIMO	FFS	FFS	FFS	FFS		NOTE 1
6.5.1	Occupied bandwidth	Rel-15	C001	UEs supporting 5GS FR1	D001		Skip TC 6.5.1 if UE supports NSA and TS 38.521-3 TC 6.5B.1.2 or 6.5B.1.3 has been executed.
6.5.2.2	Spectrum Emission Mask	Rel-15	C001	UEs supporting 5GS FR1	D001 D002	PC2 PC3	Skip TC 6.5.2.2 if UE supports NSA and TS 38.521-3 TC 6.5B.2.2.1 or 6.5B.2.3.1 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.5.2.3	Additional spectrum emission mask	Rel-15	C001	UEs supporting 5GS FR1	D001 D002	PC2 PC3	NOTE 1 Skip TC 6.5.2.3 if UE supports NSA and TS 38.521-3 TC 6.5B.2.3.2 has been executed.
6.5.2.4.1	NR ACLR	Rel-15	C001	UEs supporting 5GS FR1	D001 D002	PC2 PC3	Skip TC 6.5.2.4.1 if UE supports NSA and TS 38.521-3 TC 6.5B.2.2.3 or 6.5B.2.3.3 has been executed.
6.5.2.4.2	UTRA ACLR	Rel-15	C001	UEs supporting 5GS FR1 PC3	D001		PC3 requirements applied
6.5.3.1	General spurious emissions	Rel-15	C001	UEs supporting 5GS FR1	D001		Skip TC 6.5.3.1 if UE supports NSA and TS 38.521-3 TC 6.5B.3.1.1 or 6.5B.3.2.1 has been executed.
6.5.3.2	Spurious emission for UE co-existence	Rel-15	C001	UEs supporting 5GS FR1	D001		
6.5.3.3	Additional spurious emissions	Rel-15	C001	UEs supporting 5GS FR1	D001		Skip TC 6.5.3.3 if UE supports NSA and TS 38.521-3 TC 6.5B.4.3 has been executed.
6.5.4	Transmit intermodulation	Rel-15	C001	UEs supporting 5GS FR1	D001		Skip TC 6.5.4 if UE supports NSA and TS 38.521-3 TC 6.5B.5.3 has been executed.
6.5A.1.1	Occupied bandwidth for CA (2UL CA)	Rel-15	C004	UEs supporting 5GS FR1 and CA (2UL CA)	FFS		NOTE 1
6.5A.2.2.1	Spectrum emission mask for CA (2UL CA)	Rel-15	FFS	UEs supporting 5GS FR1 and CA (2UL CA)	FFS		NOTE 1
6.5A.2.4.1.1	NR ACLR for CA (2UL CA)	Rel-15	FFS	UEs supporting 5GS FR1 and CA (2UL CA)	FFS		NOTE 1
6.5A.2.4.2.1	UTRA ACLR for CA (2UL CA)	Rel-15	FFS	UEs supporting 5GS FR1 and CA (2UL CA)	FFS		NOTE 1
6.5A.3.1.1	General spurious emissions for CA (2UL CA)	Rel-15	FFS	UEs supporting 5GS FR1 and CA (2UL CA)	FFS		NOTE 1
6.5A.3.2.1	Spurious emissions for UE co-existence for CA (2UL CA)	Rel-15	FFS	UEs supporting 5GS FR1 and CA (2UL CA)	FFS		NOTE 1

Clause	TC Title	Release	Applicability		Tested Bands/CA-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.5A.4.1	Transmit intermodulation for CA (2UL CA)	Rel-15	FFS	UEs supporting 5GS FR1 and CA (2UL CA)	FFS		NOTE 1
6.5C.1	Occupied bandwidth for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.5C.2.2	Spectrum Emission Mask for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.5C.2.3	Additional spectrum emission mask for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.5C.2.4.1	NR ACLR for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.5C.2.4.2	UTRA ACLR for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.5C.3.1	General spurious emissions for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.5C.3.2	Spurious emission for UE co-existence for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.5C.3.3	Additional spurious emissions for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.5C.4	Transmit intermodulation for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
6.5D.1	Occupied bandwidth for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.5D.2.2	Spectrum Emission Mask for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.5D.2.3	Additional spectrum emission mask for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.5D.2.4.1	NR ACLR for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.5D.2.4.2	UTRA ACLR for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.5D.3.1	General spurious emissions for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.5D.3.2	Spurious emission for UE co-existence for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.5D.3.3	Additional spurious emissions for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
6.5D.4	Transmit intermodulation for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
7	**Receiver Characteristics**						
7.3.2	Reference sensitivity power level	Rel-15	C001	UEs supporting 5GS FR1	D001 D011	2Rx 4Rx	
7.3A.1	Reference sensitivity power level for 2DL CA	Rel-15	C031	UEs supporting 5GS FR1 and CA (2DL CA)	D001		
7.3A.2	Reference sensitivity level for CA (3DL CA)	FFS	FFS	FFS	FFS		NOTE 1
7.3A.3	Reference sensitivity level for CA (4DL CA)	FFS	FFS	FFS	FFS		NOTE 1
7.3C.2	Reference sensitivity power level for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		NOTE 1
7.3D.2	Reference sensitivity power level for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		

Clause	TC Title	Release	Applicability		Tested Bands/CA-Configurations Selection	Branch	Additional Information
			Condition	Comment			
7.4	Maximum input level	Rel-15	C001	UEs supporting 5GS FR1	D001		Skip TC 7.4 if UE supports NSA and TS 38.521-3 TC 7.4B.3 or 7.4B.4 has been executed.
7.4A.1	Maximum input level for CA (2DL CA)	Rel-15	C031	UEs supporting 5GS FR1 and CA (2DL CA)	D001		
7.4A.2	Maximum input level for CA (3DL CA)	Rel-15	C033	UEs supporting 5GS FR1 and CA (3DL CA)	D001		
7.4A.3	Maximum input level for CA (4DL CA)	FFS	FFS	FFS	FFS		NOTE 1
7.4D	Maximum input level for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
7.5	Adjacent channel selectivity	Rel-15	C001	UEs supporting 5GS FR1	D001		NOTE 1 Skip TC 7.5 if UE supports NSA and TS 38.521-3 TC 7.5B.2 or 7.5B.3 has been executed.
7.5A.1	Adjacent channel selectivity for 2DL CA	Rel-15	C031	UEs supporting 5GS FR1 and CA (2DL CA)	D001		
7.5A.2	Adjacent channel selectivity for 3DL CA	FFS	FFS	FFS	FFS		NOTE 1
7.5A.3	Adjacent channel selectivity for 4DL CA	FFS	FFS	FFS	FFS		NOTE 1
7.5D	Adjacent channel selectivity for UL-MIMO	FFS	FFS	FFS	FFS		
7.6.2	Inband Blocking	Rel-15	C001	UEs supporting 5GS FR1	D001		Skip TC 7.6.2 if UE supports NSA and TS 38.521-3 TC 7.6B.2.2 or 7.6B.2.3 has been executed.
7.6.3	Out-of-band blocking	Rel-15	C001	UEs supporting 5GS FR1	D001		
7.6.4	Narrow band blocking	Rel-15	C001	UEs supporting 5GS FR1	D004		Skip TC 7.6.4 if UE supports NSA and TS 38.521-3 TC 7.6B.4.2 or 7.6B.4.3 has been executed.
7.6A.2.1	In-band Blocking for CA (2DL CA)	Rel-15	C031	UEs supporting 5GS FR1 and CA (2DL CA)	D001		
7.6A.2.2	Inband blocking for CA (3DL CA)	Rel-15	C033	UEs supporting 5GS FR1 and CA (3DL CA)	D001		
7.6A.3.1	Out-of-band blocking for CA (2DL CA)	Rel-15	C031	UEs supporting 5GS FR1 and CA (2DL CA)	D001		

Clause	TC Title	Release	Applicability		Tested Bands/CA-Configurations Selection	Branch	Additional Information
			Condition	Comment			
7.6A.3.2	Out-of-band blocking for CA (3DL CA)	Rel-15	C033	UEs supporting 5GS FR1 and CA (3DL CA)	D001		
7.6A.3.3	Out-of-band blocking for CA (4DL CA)	Rel-15	C036	UEs supporting 5GS FR1 and CA (4DL CA)	D001		
7.6A.4.1	Narrow band blocking for CA (2DL CA)	Rel-15	C031	UEs supporting 5GS FR1 and CA (2DL CA)	D001		
7.6A.4.2	Narrow band blocking for CA (3DL CA)	Rel-15	C033	UEs supporting 5GS FR1 and CA (3DL CA)	D001		
7.6A.4.3	Narrow band blocking for CA (4DL CA)	Rel-15	C036	UEs supporting 5GS FR1 and CA (4DL CA)	D001		
7.6C.2	Inband blocking for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
7.6C.3	Out-of-band blocking for SUL	Rel-15	C002	UEs supporting 5GS FR1 and SUL	D003		
7.6D.2	Inband blocking for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
7.6D.3	Out-of-band blocking for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
7.6D.4	Narrow band blocking for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
7.7	Spurious response	Rel-15	C001	UEs supporting 5GS FR1	D001		
7.7A.1	Spurious response for CA (2DL CA)	Rel-15	C031	UEs supporting 5GS FR1 and CA (2DL CA)	D001		
7.7A.2	Spurious response for CA (3DL CA)	Rel-15	FFS	UEs supporting 5GS FR1 and CA (3DL CA)	FFS		NOTE 1
7.7A.3	Spurious response for CA (4DL CA)	Rel-15	FFS	UEs supporting 5GS FR1 and CA (4DL CA)	FFS		NOTE 1
7.7D	Spurious response for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		
7.8.2	Wide band Intermodulation	Rel-15	C001	UEs supporting 5GS FR1	D001		Skip TC 7.8.2 if UE supports NSA and TS 38.521-3 TC 7.8B.2.2 or 7.8B.2.3 has been executed.
7.8A.2.1	Wide band Intermodulation for CA (2DL CA)	Rel-15	C031	UEs supporting 5GS FR1 and CA (2DL CA)	D001		
7.8A.2.2	Wide band Intermodulation for CA (3DL CA)	Rel-15	C033	UEs supporting 5GS FR1 and CA (3DL CA)	D001		
7.8A.2.3	Wide band Intermodulation for CA (4DL CA)	Rel-15	C036	UEs supporting 5GS FR1 and CA (4DL CA)	D001		
7.8D.2	Wide band Intermodulation for UL-MIMO	Rel-15	C003	UEs supporting 5GS FR1 and UL-MIMO	D001		

Clause	TC Title	Release	Applicability		Tested Bands/CA-Configurations Selection	Branch	Additional Information
			Condition	Comment			
7.9	Spurious emissions	Rel-15	C001	UEs supporting 5GS FR1	D001		Skip TC 7.9 if UE supports NSA and TS 38.521-3 TC 7.9B.1 or 7.9B.2 or 7.9B.3 has been executed.
7.9A.1	Spurious emission for 2DL CA	Rel-15	C005	UEs supporting 5GS FR1 and inter-band 2DL CA with a DL-only band	E002		
NOTE 1: The test case is incomplete.							

Table 4.1.1-1a: Void

Table 4.1.1-1b: Void

Table 4.1.1-1c: Void

4.1.2 FR2 standalone conformance test cases

Table 4.1.2-1: Applicability of RF SA FR2 conformance test cases, ref. TS 38.521-2 [2]

Clause	TC Title	Release	Applicability		Tested Bands/CA-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6	**Transmitter Characteristics**						
6.2.1.1	UE maximum output power - EIRP and TRP	Rel-15	C006	UEs supporting 5GS FR2	D005		NOTE 4 Skip TC 6.2.1.1 if UE supports NSA and TS 38.521-3 TC 6.2B.1.4.1 has been executed.
6.2.1.2	UE maximum output power - Spherical coverage	Rel-15	C007	UEs supporting 5GS FR2 and beam correspondence without UL beam sweeping	D005		NOTE 1 NOTE 4
6.2.2	UE maximum output power reduction	FFS	FFS	FFS			NOTE 1 Skip TC 6.2.2 if UE supports NSA and TS 38.521-3 TC 6.2B.2.4 has been executed.
6.2.3	UE maximum output power with additional requirements	Rel-15	C006	UEs supporting 5GS FR2	D005		NOTE 1 Skip TC 6.2.3 if UE supports NSA and TS 38.521-3 TC 6.2B.3.4 has been executed.
6.2A.1.1.1	UE maximum output power - EIRP and TRP for CA (2UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.2A.1.1.1 if UE supports NSA and TS 38.521-3 TC 6.2B.1.4_1.1.1 has been executed.
6.2A.1.1.2	UE maximum output power - EIRP and TRP for CA (3UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.2A.1.1.2 if UE supports NSA and TS 38.521-3 TC 6.2B.1.4_1.2.1 has been executed.
6.2A.1.1.3	UE maximum output power - EIRP and TRP for CA (4UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.2A.1.1.3 if UE supports NSA and TS 38.521-3 TC 6.2B.1.4_1.3.1 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.3.1	Minimum output power	Rel-15	C006	UEs supporting 5GS FR2	D005		NOTE 1 Skip TC 6.3.1 if UE supports NSA and TS 38.521-3 TC 6.3B.1.4 has been executed.
6.3.2	Transmit OFF power	FFS	FFS	FFS	FFS		NOTE 1
6.3.3.2	General ON/OFF time mask	Rel-15	C006	UEs supporting 5GS FR2	D005		NOTE 1
6.3.3.4	PRACH time mask	Rel-15	C006	UEs supporting 5GS FR2	D005		NOTE 1
6.3.4.2	Absolute power tolerance	Rel-15	C006	UEs supporting 5GS FR2	D005		NOTE 1
6.3.4.3	Relative power tolerance	Rel-15	C006	UEs supporting 5GS FR2	D005		NOTE 1
6.3.4.4	Aggregate power tolerance	Rel-15	C006	UEs supporting 5GS FR2	D005		NOTE 1
6.3A.1.1	Minimum output power for CA (2UL CA)	FFS	FFS	FFS	FFS		NOTE 1
6.3A.2.1	Transmit OFF power for CA (2UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.3A.2.1 if UE supports NSA and TS 38.521-3 TC 6.3B.2.4_1.1 has been executed.
6.3A.2.2	Transmit OFF power for CA (3UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.3A.2.2 if UE supports NSA and TS 38.521-3 TC 6.3B.2.4_1.2 has been executed.
6.3A.2.3	Transmit OFF power for CA (4UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.3A.2.3 if UE supports NSA and TS 38.521-3 TC 6.3B.2.4_1.3 has been executed.
6.3D.3.4	SRS time mask for UL-MIMO	FFS	FFS	FFS	FFS		NOTE 1
6.4.1	Frequency error	Rel-15	C006	UEs supporting 5GS FR2	D005		Skip TC 6.4.1 if UE supports NSA and TS 38.521-3 TC 6.4B.1.4 has been executed.
6.4.2.1	Error vector magnitude	Rel-15	C006	UEs supporting 5GS FR2	D005		NOTE 1 Skip TC 6.4.2.1 if UE supports NSA and TS 38.521-3 TC 6.4B.2.4.1 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.4.2.2	Carrier leakage	Rel-15	C006	UEs supporting 5GS FR2	D005		NOTE 1 Skip TC 6.4.2.2 if UE supports NSA and TS 38.521-3 TC 6.4B.2.4.2 has been executed.
6.4.2.3	In-band emissions	Rel-15	C006	UEs supporting 5GS FR2	D005		NOTE 1 Skip TC 6.4.2.3 if UE supports NSA and TS 38.521-3 TC 6.4B.2.4.3 has been executed.
6.4.2.4	EVM equalizer spectrum flatness	Rel-15	C006	UEs supporting 5GS FR2	D005		NOTE 1 Skip TC 6.4.2.4 if UE supports NSA and TS 38.521-3 TC 6.4B.2.4.4 has been executed.
6.4.2.5	EVM spectral flatness for pi/2 BPSK modulation	Rel-15	C006	UEs supporting 5GS FR2	D005		NOTE 1
6.4A.1.1	Frequency error for CA (2UL CA)	FFS	FFS	FFS	FFS		NOTE 1
6.4A.1.2	Frequency error for CA (3UL CA)	FFS	FFS	FFS	FFS		NOTE 1
6.4A.1.3	Frequency error for CA (4UL CA)	FFS	FFS	FFS	FFS		NOTE 1
6.4A.2.3.1	In-band emissions for CA (2UL CA)	Rel-15	FFS	UEs supporting 5GS FR2 CA (2UL CA)	FFS		NOTE 1
6.5.1	Occupied bandwidth	Rel-15	C006	UEs supporting 5GS FR2	D005		NOTE 1 Skip TC 6.5.1 if UE supports NSA and TS 38.521-3 TC 6.5B.1.4 has been executed.
6.5.2.1	Spectrum Emission Mask	Rel-15	C006	UEs supporting 5GS FR2	D005		Skip TC 6.5.2.1 if UE supports NSA and TS 38.521-3 TC 6.5B.2.4.1 has been executed.
6.5.2.3	Adjacent channel leakage ratio	Rel-15	C006	UEs supporting 5GS FR2	D005		Skip TC 6.5.2.3 if UE supports NSA and TS 38.521-3 TC 6.5B.2.4.3 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.5.3.1	Transmitter Spurious emissions	Rel-15	C006	UEs supporting 5GS FR2	D005		Skip TC 6.5.3.1 if UE supports NSA and TS 38.521-3 TC 6.5B.3.4.1 has been executed.
6.5.3.2	Spurious emission band UE co-existence	FFS	FFS	FFS	FFS		NOTE 1
6.5A.1.1	Occupied bandwidth for CA (2UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.5A.1.1 if UE supports NSA and TS 38.521-3 TC 6.5B.1.4_1.1 has been executed.
6.5A.1.2	Occupied bandwidth for CA (3UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.5A.1.2 if UE supports NSA and TS 38.521-3 TC 6.5B.1.4_1.2 has been executed.
6.5A.1.3	Occupied bandwidth for CA (4UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.5A.1.3 if UE supports NSA and TS 38.521-3 TC 6.5B.1.4_1.3 has been executed.
6.5A.2.1.1	Spectrum Emission Mask for CA (2UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.5A.2.1.1 if UE supports NSA and TS 38.521-3 TC 6.5B.2.4.1_1.1 has been executed.
6.5A.2.1.2	Spectrum Emission Mask for CA (3UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.5A.2.1.2 if UE supports NSA and TS 38.521-3 TC 6.5B.2.4.1_1.2 has been executed.
6.5A.2.1.3	Spectrum Emission Mask for CA (4UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.5A.2.1.3 if UE supports NSA and TS 38.521-3 TC 6.5B.2.4.1_1.3 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.5A.2.2.1	Adjacent channel leakage ratio for CA (2UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.5A.2.2.1 if UE supports NSA and TS 38.521-3 TC 6.5B.2.4.3_1.1 has been executed.
6.5A.2.2.2	Adjacent channel leakage ratio for CA (3UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.5A.2.2.2 if UE supports NSA and TS 38.521-3 TC 6.5B.2.4.3_1.2 has been executed.
6.5A.2.2.3	Adjacent channel leakage ratio for CA (4UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.5A.2.2.3 if UE supports NSA and TS 38.521-3 TC 6.5B.2.4.3_1.3 has been executed.
6.5A.3.1.1	Transmitter Spurious emissions for CA (2UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.5A.3.1.1 if UE supports NSA and TS 38.521-3 TC 6.5B.3.4.1_1.1 has been executed.
6.5A.3.1.2	Transmitter Spurious emissions for CA (3UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.5A.3.1.2 if UE supports NSA and TS 38.521-3 TC 6.5B.3.4.1_1.2 has been executed.
6.5A.3.1.3	Transmitter Spurious emissions for CA (4UL CA)	FFS	FFS	FFS	FFS		NOTE 1 Skip TC 6.5A.3.1.3 if UE supports NSA and TS 38.521-3 TC 6.5B.3.4.1_1.3 has been executed.
6.6	Beam correspondence	Rel-15	C008	UEs supporting 5GS FR2 and not beam correspondence without UL beam sweeping	D005		NOTE 1
7	**Receiver Characteristics**						

Clause	TC Title	Release	Applicability		Tested Bands/CA-Configurations Selection	Branch	Additional Information
			Condition	Comment			
7.3.2	Reference sensitivity power level	Rel-15	C006	UEs supporting 5GS FR2	D005		Skip TC 7.3.2 if UE supports NSA and TS 38.521-3 TC 7.3B.2.4 has been executed.
7.3.4	EIS spherical coverage	FFS	FFS	FFS	FFS		NOTE 1
7.4	Maximum input level	Rel-15	N/A	not recommended due to testability issues (NOTE 2)	N/A		NOTE 1
7.5	Adjacent channel selectivity	Rel-15	C006	UEs supporting 5GS FR2	D005		NOTE 1 Skip TC 7.5 if UE supports NSA and TS 38.521-3 TC 7.5B.4.1 has been executed.
7.6.2	In-band Blocking	Rel-15	C006	UEs supporting 5GS FR2	D005		NOTE 1 Skip TC 7.6.2 if UE supports NSA and TS 38.521-3 TC 7.6B.2.4 has been executed.
7.9	Spurious emissions	Rel-15	C006	UEs supporting 5GS FR2	D005		Skip TC 7.9 if UE supports NSA and TS 38.521-3 TC 7.9B.4 has been executed.

NOTE 1: The test case is incomplete.
NOTE 2: The test case applicability is set to N/A until the related testability issues are resolved.
NOTE 3: Void.
NOTE 4: All Power Class 3 UE supported bands needs to be tested to ensure the multiband relaxation declaration is compliant.

Table 4.1.2-1a: Void

Table 4.1.2-1b: Void

Table 4.1.2-1c: Void

4.1.3 NR interworking between NR FR1 and NR FR2 and between NR and LTE conformance test cases

Table 4.1.3-1: Applicability of RF EN-DC FR1 and FR2 conformance test cases, ref. TS 38.521-3 [3]

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6	**Transmitter Characteristics**						
6.2	**Transmitter power**						
6.2B	**Transmitter power for DC**						
6.2B.1	**UE Maximum Output Power for EN-DC**						
6.2B.1.1	UE Maximum Output Power for Intra-Band Contiguous EN-DC	Rel-15	C009	UEs supporting Intra-Band Contiguous EN-DC	D006		NOTE 1
6.2B.1.2	UE Maximum Output Power for Intra-Band Non-Contiguous EN-DC	Rel-15	C010	UEs supporting Intra-Band non-contiguous EN-DC within FR1	D006		NOTE 1
6.2B.1.3	UE Maximum Output Power for Inter-Band EN-DC within FR1	Rel-15	C011	UEs supporting Inter-Band EN-DC within FR1	E003 E004	PC3 PC2	
6.2B.1.4	**UE Maximum Output Power for Inter-Band EN-DC including FR2**						
6.2B.1.4.1	UE Maximum Output Power for Inter-Band EN-DC including FR2 - EIRP and TRP	Rel-15	C012	UEs supporting Inter-Band EN-DC including FR2	D005		NOTE 5 Skip TC 6.2B.1.4.1 if UE supports SA and TSC 38.521-2 TC 6.2.1.1 has been executed.
6.2B.1.4.2	UE Maximum Output Power for Inter-Band EN-DC including FR2 - Spherical Coverage	Rel-15	C012	UEs supporting Inter-Band EN-DC including FR2	D005		NOTE 1
6.2B.1.4_1	**UE Maximum Output Power for Inter-Band EN-DC including FR2 (>2 CCs)**						
6.2B.1.4_1.1	**UE Maximum Output Power for Inter-Band EN-DC including FR2 (3 CCs)**						
6.2B.1.4_1.1.1	UE Maximum Output Power for Inter-Band EN-DC including FR2 (3 CCs) - EIRP and TRP	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.2B.1.4_1.1.1 if UE supports SA and TS 38.521-2 TC 6.2A.1.1.1 has been executed.
6.2B.1.4_1.1.2	UE Maximum Output Power for Inter-Band EN-DC including FR2 (3 CCs) - Spherical Coverage	Rel-15	FFS	FFS	FFS		NOTE 1
6.2B.1.4_1.2	**UE Maximum Output Power for Inter-Band EN-DC including FR2 (4 CCs)**						

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.2B.1.4_1.2.1	UE Maximum Output Power for Inter-Band EN-DC including FR2 (4 CCs) - EIRP and TRP	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.2B.1.4_1.2.1 if UE supports SA and TS 38.521-2 TC 6.2A.1.1.2 has been executed.
6.2B.1.4_1.2.2	UE Maximum Output Power for Inter-Band EN-DC including FR2 (4 CCs) - Spherical Coverage	Rel-15	FFS	FFS	FFS		NOTE 1
6.2B.1.4_1.3	**UE Maximum Output Power for Inter-Band EN-DC including FR2 (5 CCs)**						
6.2B.1.4_1.3.1	UE Maximum Output Power for Inter-Band EN-DC including FR2 (5 CCs) - EIRP and TRP	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.2B.1.4_1.3.1 if UE supports SA and TS 38.521-2 TC 6.2A.1.1.3 has been executed.
6.2B.1.4_1.3.2	UE Maximum Output Power for Inter-Band EN-DC including FR2 (5 CCs) - Spherical Coverage	Rel-15	FFS	FFS	FFS		NOTE 1
6.2B.2	**UE Maximum Output Power reduction for EN-DC**						
6.2B.2.1	UE Maximum Output Power reduction for Intra-Band Contiguous EN-DC	Rel-15	C009m	UEs supporting Intra-Band Contiguous EN-DC and modified MPR behaviour	D006		
6.2B.2.2	UE Maximum Output Power reduction for Intra-Band Non-Contiguous EN-DC	Rel-15	C010m	UEs supporting Intra-Band non-contiguous EN-DC within FR1 and modified MPR behaviour	D006		
6.2B.2.3	UE Maximum Output Power reduction for Inter-Band EN-DC within FR1	Rel-15	C011m	UEs supporting Inter-Band EN-DC within FR1 and modified MPR behaviour	E003 E004	PC3 PC2	NOTE 5 Skip TC 6.2B.2.3 if UE supports SA and TS 38.521-1 TC 6.2.2 has been executed.
6.2B.2.4	UE Maximum Output Power reduction for Inter-Band EN-DC including FR2	Rel-15	C012m	UEs supporting Inter-Band EN-DC including FR2 and modified MPR behaviour	D005		NOTE 1 NOTE 5 Skip TC 6.2B.2.4 if UE supports SA and TS 38.521-2 TC 6.2.2 has been executed.
6.2B.3	**UE additional maximum output power reduction for EN-DC**						

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.2B.3.1	UE Additional Maximum Output Power reduction for Intra-band contiguous EN-DC	Rel-15	C009m	UEs supporting Intra-Band Contiguous EN-DC and modified MPR behaviour	D006		
6.2B.3.2	UE Additional Maximum Output Power reduction for Intra-Band Non-Contiguous EN-DC	Rel-15	FFS	FFS	FFS		NOTE 1
6.2B.3.3	UE additional Maximum Output power reduction for inter-band EN-DC within FR1	Rel-15	FFS	UEs supporting PC3 Inter-Band EN-DC within FR1	E003 E004	PC3 PC2	NOTE 1 NOTE 5 Skip TC 6.2B.3.3 if UE supports SA and TS 38.521-1 TC 6.2.3 has been executed.
6.2B.3.4	UE Additional Maximum Output Power reduction for Inter-Band EN-DC including FR2	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.2B.3.4 if UE supports SA and TS 38.521-2 TC 6.2.3 has been executed.
6.2B.4	**Configured output power for EN-DC**						
6.2B.4.1	**Configured output power level for EN-DC**						
6.2B.4.1.1	Configured Output Power Level for Intra-Band Contiguous EN-DC	Rel-15	C009	UEs supporting Intra-Band Contiguous EN-DC	D006		NOTE 1
6.2B.4.1.2	Configured Output Power for Intra-Band Non-Contiguous EN-DC	Rel-15	C010	UEs supporting Intra-Band Non-Contiguous EN-DC	D006		NOTE 1
6.2B.4.1.3	Configured Output Power for Inter-Band EN-DC within FR1	Rel-15	C011	UEs supporting Inter-Band EN-DC within FR1	D006		NOTE 1
6.3	**Output power dynamics**						
6.3B	**Output power dynamics for EN-DC**						
6.3B.1	**Minimum Output Power for EN-DC**						
6.3B.1.1	Minimum Output power for intra-band contiguous EN-DC	Rel-15	C009	UEs supporting intra-band contiguous EN-DC	D006		NOTE 5 Skip TC 6.3B.1.1 if UE supports SA and TS 38.521-1 TC 6.3.1 has been executed.
6.3B.1.2	Minimum output power for intra-band non-contiguous EN-DC	Rel-15	C010	UEs supporting intra-band non-contiguous EN-DC	D006		NOTE 5 Skip TC 6.3B.1.2 if UE supports SA and TS 38.521-1 TC 6.3.1 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.3B.1.3	Minimum output power for inter-band EN-DC within FR1	Rel-15	C011	UEs supporting inter-band EN-DC within FR1	D006		NOTE 5 Skip TC 6.3B.1.3 if UE supports SA and TS 38.521-1 TC 6.3.1 has been executed.
6.3B.1.4	Minimum Output Power for EN-DC Interband including FR2	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.3B.1.4 if UE supports SA and TS 38.521-2 TC 6.3.1 has been executed.
6.3B.2	**Transmit OFF Power for EN-DC**						
6.3B.2.4_1	**Transmit OFF Power for inter-band EN-DC including FR2 (>2 CCs)**						
6.3B.2.4_1.1	Transmit OFF Power for inter-band EN-DC including FR2 (3 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.3B.2.4_1.1 if UE supports SA and TS 38.521-2 TC 6.3A.2.1 has been executed.
6.3B.2.4_1.2	Transmit OFF Power for inter-band EN-DC including FR2 (4 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.3B.2.4_1.2 if UE supports SA and TS 38.521-2 TC 6.3A.2.2 has been executed.
6.3B.2.4_1.3	Transmit OFF Power for inter-band EN-DC including FR2 (5 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.3B.2.4_1.3 if UE supports SA and TS 38.521-2 TC 6.3A.2.3 has been executed.
6.3B.3	**Tx ON/OFF time mask for EN-DC**						
6.3B.3.1	Tx ON/OFF time mask for intra-band contiguous EN-DC	Rel-15	C009	UEs supporting intra-band contiguous EN-DC	D006		NOTE 5 Skip TC 6.3B.3.1 if UE supports SA and TS 38.521-1 TC 6.3.3.2 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.3B.3.2	Tx ON/OFF time mask for intra-band non-contiguous EN-DC	Rel-15	C010	UEs supporting intra-band non-contiguous EN-DC	D006		NOTE 5 Skip TC 6.3B.3.2 if UE supports SA and TS 38.521-1 TC 6.3.3.2 has been executed.
6.3B.3.3	Tx ON/OFF time mask for inter-band EN-DC within FR1	Rel-15	C011	UEs supporting inter-band EN-DC within FR1	D006		NOTE 5 Skip TC 6.3B.3.3 if UE supports SA and TS 38.521-1 TC 6.3.3.2 has been executed.
6.3B.3.4	Tx ON/OFF time mask for inter-band EN-DC including FR2	Rel-15	FFS	FFS	FFS		NOTE 1
6.3B.4	**PRACH Time Mask**						
6.3B.4.1	PRACH time mask for intra-band contiguous EN-DC	Rel-15	C009	UEs supporting intra-band contiguous EN-DC	D006		NOTE 5 Skip TC 6.3B.4.1 if UE supports SA and TS 38.521-1 TC 6.3.3.4 has been executed.
6.3B.4.2	PRACH Time Mask for intra-band non-contiguous EN-DC	Rel-15	C010	UEs supporting intra-band non-contiguous EN-DC	D006		NOTE 5 Skip TC 6.3B.4.2 if UE supports SA and TS 38.521-1 TC 6.3.3.4 has been executed.
6.3B.4.3	PRACH Time Mask for inter-band EN-DC within FR1	Rel-15	C011	UEs supporting inter-band EN-DC within FR1	D006		NOTE 5 Skip TC 6.3B.4.3 if UE supports SA and TS 38.521-1 TC 6.3.3.4 has been executed.
6.4	**Transmit signal quality**						
6.4B	**Transmit Signal Quality for EN-DC**						
6.4B.1	**Frequency Error for EN-DC**						
6.4B.1.1	Frequency Error for intra-band contiguous EN-DC	Rel-15	C009	UEs supporting Intra-Band Contiguous EN-DC	D006		NOTE 5 Skip TC 6.4B.1.1 if UE supports SA and TS 38.521-1 TC 6.4.1 has been executed.
6.4B.1.2	Frequency Error for intra-band non-contiguous EN-DC	Rel-15	C010	UEs supporting intra-band non-contiguous EN-DC	D006		NOTE 5 Skip TC 6.4B.1.2 if UE supports SA and TS 38.521-1 TC 6.4.1 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.4B.1.3	Frequency error for Inter-band EN-DC within FR1	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.4B.1.3 if UE supports SA and TS 38.521-1 TC 6.4.1 has been executed.
6.4B.1.4	Frequency Error for inter-band EN-DC including FR2	Rel-15	C012	UEs supporting Inter-Band EN-DC including FR2	D005		NOTE 5 Skip TC 6.4B.1.4 if UE supports SA and TS 38.521-2 TC 6.4.1 has been executed.
6.4B.1.4_1	**Frequency Error for inter-band EN-DC including FR2 (>2 CCs)**						
6.4B.1.4_1.1	Frequency Error for inter-band EN-DC including FR2 (3 CCs)	Rel-15	C012	UEs supporting Inter-Band EN-DC including FR2	D005		NOTE 1 NOTE 5
6.4B.1.4_1.2	Frequency Error for inter-band EN-DC including FR2 (4 CCs)	Rel-15	C012	UEs supporting Inter-Band EN-DC including FR2	D005		NOTE 1 NOTE 5
6.4B.1.4_1.3	Frequency Error for inter-band EN-DC including FR2 (5 CCs)	Rel-15	C012	UEs supporting Inter-Band EN-DC including FR2	D005		NOTE 1 NOTE 5
6.4B.2	**Transmit Modulation Quality EN-DC**						
6.4B.2.1	**Transmit Modulation Quality for intra-band contiguous EN-DC**						
6.4B.2.1.1	Error Vector Magnitude for intra-band contiguous EN-DC	Rel-15	C009	UEs supporting intra-band contiguous EN-DC	D006		NOTE 5 Skip TC 6.4B.2.1.1 if UE supports SA and TS 38.521-1 TC 6.4.2.1 has been executed.
6.4B.2.1.2	Carrier Leakage for intra-band contiguous EN-DC	Rel-15	C009	UEs supporting intra-band contiguous EN-DC	D006		NOTE 5 Skip TC 6.4B.2.1.2 if UE supports SA and TS 38.521-1 TC 6.4.2.2 has been executed.
6.4B.2.1.3	In-band Emissions for intra-band contiguous EN-DC	Rel-15	C009	UEs supporting intra-band contiguous EN-DC	D006		
6.4B.2.1.4	EVM Equalizer Flatness for intra-band contiguous EN-DC	Rel-15	C009	UEs supporting intra-band contiguous EN-DC	D006		NOTE 5 Skip TC 6.4B.2.1.4 if UE supports SA and TS 38.521-1 TC 6.4.2.4 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.4B.2.2	**Transmit Modulation Quality for intra-band non-contiguous EN-DC**						
6.4B.2.2.1	Error Vector Magnitude for intra-band non-contiguous EN-DC	Rel-15	C010	UEs supporting intra-band non-contiguous EN-DC	D006		NOTE 5 Skip TC 6.4B.2.2.1 if UE supports SA and TS 38.521-1 TC 6.4.2.1 has been executed.
6.4B.2.2.2	Carrier Leakage for intra-band non-contiguous EN-DC	Rel-15	C010	UEs supporting intra-band non-contiguous EN-DC	D006		NOTE 5 Skip TC 6.4B.2.2.2 if UE supports SA and TS 38.521-1 TC 6.4.2.2has been executed.
6.4B.2.2.3	In-band Emissions for intra-band non-contiguous EN-DC	Rel-15	C010	UEs supporting intra-band non-contiguous EN-DC	D006		NOTE 5 Skip TC 6.4B.2.2.3 if UE supports SA and TS 38.521-1 TC 6.4.2.3 has been executed.
6.4B.2.2.4	EVM Equalizer Flatness for intra-band non contiguous EN-DC	Rel-15	C010	UEs supporting intra-band non-contiguous EN-DC	D006		NOTE 5 Skip TC 6.4B.2.2.4 if UE supports SA and TS 38.521-1 TC 6.4.2.4 has been executed.
6.4B.2.3	**Transmit Modulation Quality for inter-band EN-DC within FR1**						
6.4B.2.3.1	Error Vector Magnitude for inter-band EN-DC within FR1	Rel-15	C011	UEs supporting inter-band EN-DC within FR1	D006		NOTE 5 Skip TC 6.4B.2.3.1 if UE supports SA and TS 38.521-1 TC 6.4.2.1 has been executed.
6.4B.2.3.2	Carrier Leakage for inter-band EN-DC within FR1	Rel-15	C011	UEs supporting inter-band EN-DC within FR1	D006		NOTE 5 Skip TC 6.4B.2.3.2 if UE supports SA and TS 38.521-1 TC 6.4.2.2 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.4B.2.3.3	In-band Emissions for inter-band EN-DC within FR1	Rel-15	C011	UEs supporting inter-band EN-DC within FR1	D006		NOTE 5 Skip TC 6.4B.2.3.3 if UE supports SA and TS 38.521-1 TC 6.4.2.3 has been executed.
6.4B.2.3.4	EVM Equalizer Flatness for inter-band EN-DC within FR1	Rel-15	C011	UEs supporting inter-band EN-DC within FR1	D006		NOTE 5 Skip TC 6.4B.2.3.4 if UE supports SA and TS 38.521-1 TC 6.4.2.4 has been executed.
6.4B.2.4	**Transmit Modulation Quality for inter-band EN-DC including FR2**						
6.4B.2.4.1	Error Vector Magnitude for inter-band EN-DC including FR2	Rel-15	C012	UEs supporting Inter-band including FR2	D005		NOTE 1 NOTE 5 Skip TC 6.4B.2.4.1 if UE supports SA and TS 38.521-2 TC 6.4.2.1 has been executed.
6.4B.2.4.2	Carrier Leakage for inter-band EN-DC including FR2	Rel-15	C012	UEs supporting Inter-band including FR2	D005		NOTE 1 NOTE 5 Skip TC 6.4B.2.4.2 if UE supports SA and TS 38.521-2 TC 6.4.2.2 has been executed.
6.4B.2.4.3	In-band Emissions for inter-band EN-DC including FR2	Rel-15	C012	UEs supporting Inter-band including FR2	D005		NOTE 1 NOTE 5 Skip TC 6.4B.2.4.3 if UE supports SA and TS 38.521-2 TC 6.4.2.3 has been executed.
6.4B.2.4.4	EVM Equalizer Flatness for inter-band EN-DC including FR2	Rel-15	C012	UEs supporting Inter-band including FR2	D005		NOTE 1 NOTE 5 Skip TC 6.4B.2.4.4 if UE supports SA and TS 38.521-2 TC 6.4.2.4 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.5B	**Output RF spectrum emissions for EN-DC**						
6.5B.1	**Occupied bandwidth for EN-DC**						
6.5B.1.1	Occupied bandwidth for Intra-Band Contiguous EN-DC	Rel-15	C009	UEs supporting intra-band contiguous EN-DC	D006		NOTE 1
6.5B.1.2	Occupied bandwidth for Intra-Band Non-Contiguous EN-DC	Rel-15	C010	UEs supporting intra-band non-contiguous EN-DC	D006		NOTE 1 NOTE 5 Skip TC6.5B.1.2 if UE supports SA and TS 38.521-1 TC 6.5.1 has been executed.
6.5B.1.3	Occupied bandwidth for Inter-Band EN-DC within FR1	Rel-15	C011	UEs supporting inter-band EN-DC within FR1	D006		NOTE 5 Skip TC6.5B.1.3 if UE supports SA and TS 38.521-1 TC 6.5.1 has been executed.
6.5B.1.4	Occupied bandwidth for Inter-Band EN-DC including FR2	Rel-15	C012	UEs supporting Inter-band including FR2	D005		NOTE 1 NOTE 5 Skip TC 6.5B.1.4 if UE supports SA and TS 38.521-2 TC 6.5.1 has been executed.
6.5B.1.4_1	**Occupied bandwidth for inter-band EN-DC including FR2 (>2 CCs)**						
6.5B.1.4_1.1	Occupied bandwidth for inter-band EN-DC including FR2 (3 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.5B.1.4_1.1 if UE supports SA and TS 38.521-2 TC 6.5A.1.1 has been executed.
6.5B.1.4_1.2	Occupied bandwidth for inter-band EN-DC including FR2 (4 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.5B.1.4_1.2 if UE supports SA and TS 38.521-2 TC 6.5A.1.2 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.5B.1.4_1.3	Occupied bandwidth for inter-band EN-DC including FR2 (5 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.5B.1.4_1.3 if UE supports SA and TS 38.521-2 TC 6.5A.1.3 has been executed.
6.5B.2	**Out of Band emissions for EN-DC**						
6.5B.2.1	**Out of Band Emissions for intra-band contiguous EN-DC**						
6.5B.2.1.1	Spectrum emissions mask for intra-band contiguous EN-DC	Rel-15	C009	UEs supporting intra-band contiguous EN-DC	D006		
6.5B.2.1.2	Additional spectrum emissions mask for intra-band contiguous EN-DC	Rel-15	C009	UEs supporting intra-band contiguous EN-DC	D006		
6.5B.2.1.3	Adjacent channel leakage ratio for intra-band contiguous EN-DC	Rel-15	C009	UEs supporting intra-band contiguous EN-DC	D006		
6.5B.2.2	**Out-of-band emissions for Intra-band non-contiguous EN-DC**						
6.5B.2.2.1	Spectrum emissions mask for intra-band non-contiguous EN-DC	Rel-15	C010	UEs supporting intra-band non-contiguous EN-DC	D006		NOTE 1 NOTE 5 Skip TC 6.5B.2.2.1 if UE supports SA and TS 38.521-1 TC 6.5.2.2 has been executed.
6.5B.2.2.3	Adjacent channel leakage ratio for intra-band non-contiguous EN-DC	Rel-15	C010	UEs supporting intra-band non-contiguous EN-DC	D006		NOTE 1 NOTE 5 Skip TC 6.5B.2.2.3 if UE supports SA and TS 38.521-1 TC 6.3.3.4 has been executed.
6.5B.2.3	**Out-of-band emissions for Inter-band EN-DC within FR1**						
6.5B.2.3.1	Spectrum emissions mask for Inter-band EN-DC within FR1	Rel-15	C011	UEs supporting Inter-band EN-DC within FR1	D006		NOTE 5 Skip TC 6.5B.2.3.1 if UE supports SA and TS 38.521-1 6.5.2.2 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.5B.2.3.2	Additional Spectrum emissions mask for Inter-band EN-DC within FR1	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.5B.2.3.2 if UE supports SA and TS 38.521-1 6.5.2.2 has been executed.
6.5B.2.3.3	Adjacent channel leakage ratio for inter-band EN-DC within FR1	Rel-15	C011	UEs supporting Inter-band EN-DC within FR1	D006		NOTE 5 Skip TC 6.5B.2.3.3 if UE supports SA and TS 38.521-1 6.5.2.4.1 has been executed.
6.5B.2.4	**Out-of-band emissions for Inter-band EN-DC including FR2**						
6.5B.2.4.1	Spectrum emissions mask for Inter-band EN-DC including FR2	Rel-15	C012	UEs supporting Inter-band including FR2	D005		NOTE 5 Skip TC 6.5B.2.4.1 if UE supports SA and TS 38.521-2 TC 6.5.2.1 has been executed.
6.5B.2.4.1_1	**Spectrum emissions mask for Inter-band EN-DC including FR2 (>2 CCs)**						
6.5B.2.4.1_1.1	Spectrum emissions mask for Inter-band EN-DC including FR2 (3 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.5B.2.4.1_1.1 if UE supports SA and TS 38.521-2 TC 6.5A.2.1.1 has been executed.
6.5B.2.4.1_1.2	Spectrum emissions mask for Inter-band EN-DC including FR2 (4 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.5B.2.4.1_1.2 if UE supports SA and TS 38.521-2 TC 6.5A.2.1.2 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.5B.2.4.1_1.3	Spectrum emissions mask for Inter-band EN-DC including FR2 (5 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.5B.2.4.1_1.3 if UE supports SA and TS 38.521-2 TC 6.5A.2.1.3 has been executed.
6.5B.2.4.3	Adjacent channel leakage ratio for Inter-band EN-DC including FR2 (2 CCs)	Rel-15	C012	UEs supporting Inter-band including FR2	D005		NOTE 1 NOTE 5 Skip TC 6.5B.2.4.3 if UE supports SA and TS 38.521-2 TC 6.5.2.3 has been executed.
6.5B.2.4.3_1	**Adjacent channel leakage ratio for Inter-band EN-DC including FR2 (>2 CCs)**						
6.5B.2.4.3_1.1	Adjacent channel leakage ratio for Inter-band EN-DC including FR2 (3 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.5B.2.4.3_1.1 if UE supports SA and TS 38.521-2 TC 6.5A.2.2.1 has been executed.
6.5B.2.4.3_1.2	Adjacent channel leakage ratio for Inter-band EN-DC including FR2 (4 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.5B.2.4.3_1.2 if UE supports SA and TS 38.521-2 TC 6.5A.2.2.2 has been executed.
6.5B.2.4.3_1.3	Adjacent channel leakage ratio for Inter-band EN-DC including FR2 (5 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.5B.2.4.3_1.3 if UE supports SA and TS 38.521-2 TC 6.5A.2.2.3 has been executed.
6.5B.3	**Spurious emissions for EN-DC**						

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.5B.3.1	**Spurious Emissions for intra-band contiguous EN-DC**						
6.5B.3.1.1	General spurious emissions for intra-band contiguous EN-DC	Rel-15	C009	UEs supporting intra-band contiguous EN-DC	D006		NOTE 5 Skip TC 6.5B.3.1.1 if UE supports SA and TS 38.521-1 TC 6.5.3.1 has been executed.
6.5B.3.1.2	Spurious emission band UE co-existence for intra-band contiguous EN-DC	Rel-15	C009	UEs supporting intra-band contiguous EN-DC	D006		
6.5B.3.2	**Spurious Emissions for intra-band non-contiguous EN-DC**						
6.5B.3.2.1	General spurious emissions for intra-band non-contiguous EN-DC	Rel-15	C010	UEs supporting intra-band non-contiguous EN-DC	D006		NOTE 5 Skip TC 6.5B.3.2.1 if UE supports SA and TS 38.521-1 TC 6.5.3.1 has been executed.
6.5B.3.2.2	Spurious emission band UE co-existence for intra-band non-contiguous EN-DC	Rel-15	FFS	FFS	FFS		NOTE 1
6.5B.3.3	**Spurious emissions for Inter-band EN-DC within FR1**						
6.5B.3.3.1	General spurious emissions for Inter-band EN-DC within FR1	Rel-15	C011	UEs supporting Inter-band EN-DC within FR1	D006		
6.5B.3.3.2	Spurious emission band UE co-existence for Inter-band within FR1	Rel-15	C011	UEs supporting Inter-band EN-DC within FR1	D006		
6.5B.3.4	**Spurious emissions for Inter-band including FR2**						
6.5B.3.4.1	General Spurious Emissions for Inter-band including FR2	Rel-15	C012	UEs supporting Inter-band including FR2	D005		NOTE 1 NOTE 5 Skip TC 6.5B.3.4.1 if UE supports SA and TS 38.521-2 TC 6.5.3.1 has been executed.
6.5B.3.4.1_1	**General Spurious Emissions for Inter-band including FR2 (>2 CCs)**						

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
6.5B.3.4.1_1.1	General Spurious Emissions for Inter-band including FR2 (3 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.5B.3.4.1_1.1 if UE supports SA and TS 38.521-2 TC 6.5A.3.1.1 has been executed.
6.5B.3.4.1_1.2	General Spurious Emissions for Inter-band including FR2 (4 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.5B.3.4.1_1.2 if UE supports SA and TS 38.521-2 TC 6.5A.3.1.2 has been executed.
6.5B.3.4.1_1.3	General Spurious Emissions for Inter-band including FR2 (5 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 6.5B.3.4.1_1.3 if UE supports SA and TS 38.521-2 TC 6.5A.3.1.3 has been executed.
6.5B.3.4.2	Spurious emission band UE co-existence for Inter-band including FR2	Rel-15	C012	UEs supporting Inter-band including FR2	D005		NOTE 1
6.5B.4	**Additional Spurious Emissions**						
6.5B.4.1	Additional Spurious Emissions for Intra-band contiguous EN-DC	Rel-15	C009	UEs supporting intra-band contiguous EN-DC	D006		
6.5B.4.2	Additional Spurious Emissions for Intra-band non-contiguous EN-DC	Rel-15	C010	UEs supporting intra-band non-contiguous EN-DC	D006		NOTE 1
6.5B.4.3	Additional Spurious Emissions for Inter-band EN-DC	Rel-15	C011	UEs supporting inter-band EN-DC within FR1	D006		NOTE 5 Skip TC 6.5B.4.3 if UE supports SA and TC 38.521-1 TC 6.5.3.3 has been executed.
6.5B.5	**Transmit Intermodulation**						
6.5B.5.3	Transmit Intermodulation for Inter-band EN-DC within FR1	Rel-15	C011	UEs supporting Inter-band EN-DC within FR1	D006		NOTE 5 Skip TC 6.5B.5.3 if UE supports SA and TC 38.521-1 TC 6.5.4 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
7	**Receiver Characteristics**						
7.3	**Reference sensitivity**						
7.3A	**Reference sensitivity for CA without EN-DC**						
7.3B	**Reference sensitivity level for DC**						
7.3B.2	**Reference Sensitivity for EN-DC**						
7.3B.2.1	Reference sensitivity for intra-band contiguous EN-DC (2 CCs)	Rel-15	C009	UEs supporting intra-band contiguous EN-DC	D006		
7.3B.2.2	Reference sensitivity for Intra-band non-contiguous EN-DC (2 CCs)	Rel-15	C010	UEs supporting intra-band non-contiguous EN-DC	D006		NOTE 5 Skip TC 7.3B.2.2 if UE supports SA and TS 38.521-1 TC 7.3.2 has been executed.
7.3B.2.3	Reference sensitivity for Inter-band EN-DC within FR1	Rel-15	C011	UEs supporting inter-band EN-DC within FR1	D006		
7.3B.2.3_1	**Reference sensitivity for EN-DC within FR1 (>2 CCs)**						
7.3B.2.3_1.1	Reference sensitivity for EN-DC within FR1 (3 CCs)	Rel-15	FFS	FFS	FFS		
7.3B.2.4	Reference sensitivity for Inter-band EN-DC including FR2 (2 CCs)	Rel-15	C012	UEs supporting inter-band EN-DC including FR2	D006		NOTE 5 Skip TC 7.3B.2.4 if UE supports SA and TS 38.521-2 TC 7.3.2 has been executed.
7.3B.2.4_1	**Reference sensitivity for Inter-band EN-DC including FR2 (>2 CCs)**						
7.3B.2.4_1.1	Reference sensitivity for Inter-band EN-DC including FR2 (3 CCs)	Rel-15	C012	UEs supporting inter-band EN-DC including FR2	D006		NOTE 5 Skip TC 7.3B.2.4_1.1 if UE supports SA and TS 38.521-2 TC 7.3.2 has been executed.
7.4	**Maximum Input Level**						
7.4B	**Maximum Input Level for EN-DC**						
7.4B.1	Maximum Input Level for Intra-Band Contiguous EN-DC (2 CCs)	Rel-15	C009	UEs supporting Intra-Band Contiguous EN-DC	D006		
7.4B.2	Maximum Input Level for Intra-Band Non-Contiguous EN-DC (2 CCs)	Rel-15	C010	UEs supporting Intra-Band Non-Contiguous EN-DC	D006		
7.4B.3	Maximum Input Level for Inter-band EN-DC within FR1	Rel-15	C011	UEs supporting Inter-band EN-DC within FR1	D006		NOTE 5 Skip TC 7.4B.3 if UE supports SA and TS 38.521-1 TC 7.4 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
7.4B.4	Maximum Input Level for inter-band EN-DC including FR2 (2 CCs)	Rel-15	C012	UEs supporting Inter-band including FR2	D005		NOTE 1 NOTE 5 Skip TC 7.4B.4 if UE supports SA and TS 38.521-1 7.4 has been executed.
7.5B.1	Adjacent Channel Selectivity for intra-band contiguous EN-DC (2 CCs)	Rel-15	C009	UEs supporting intra-band contiguous EN-DC	D006		NOTE 1
7.5B.2	Adjacent Channel Selectivity for intra-band non-contiguous EN-DC (2 CCs)	Rel-15	C010	UEs supporting intra-band non-contiguous EN-DC	D006		NOTE 1 NOTE 5 Skip TC 7.5B.2 if UE supports SA and TS 38.521-1 TC 7.5 has been executed.
7.5B.3	Adjacent Channel Selectivity for inter-band EN-DC within FR1 (2 CCs)	Rel-15	C011	UEs supporting inter-band EN-DC within FR1	D006		NOTE 5 Skip TC 7.5B.3 if UE supports SA and TS 38.521-1 TC 7.5 has been executed.
7.5B.4	**Adjacent Channel Selectivity for inter-band EN-DC including FR2**						
7.5B.4.1	Adjacent Channel Selectivity for inter-band EN-DC including FR2 (2 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 7.5B.4 if UE supports SA and TS 38.521-2 TC 7.5 has been executed.
7.5B.4_1	**Adjacent Channel Selectivity for inter-band EN-DC including FR2 (>2 CCs)**						
7.5B.4_1.1	Adjacent Channel Selectivity for inter-band EN-DC including FR2 (3 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 7.5B.4_1.1 if UE supports SA and TS 38.521-2 TC 7.5A.1 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
7.5B.4_1.2	Adjacent Channel Selectivity for inter-band EN-DC including FR2 (4 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 7.5B.4_1.2 if UE supports SA and TS 38.521-2 TC 7.5A.2 has been executed.
7.5B.4_1.3	Adjacent Channel Selectivity for inter-band EN-DC including FR2 (5 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 7.5B.4_1.3 if UE supports SA and TS 38.521-2 TC 7.5A.3 has been executed.
7.5B.4_1.4	Adjacent Channel Selectivity for inter-band EN-DC including FR2 (6 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 7.5B.4_1.4 if UE supports SA and TS 38.521-2 TC 7.5A.4 has been executed.
7.6A	Blocking Characteristics for CA	Rel-15	FFS	FFS	FFS		NOTE 1
7.6B	**Blocking Characteristics for EN-DC in FR1**						
7.6B.2	**Inband blocking for EN-DC within FR1**						
7.6B.2.1	Inband blocking for intra-band contiguous EN-DC (2 CCs)	Rel-15	C009	UEs supporting Intra-Band Contiguous EN-DC	D006		
7.6B.2.2	Inband blocking for intra-band non-contiguous EN-DC (2 CCs)	Rel-15	C010	UEs supporting Intra-Band Non-Contiguous EN-DC	D006		NOTE 5 Skip TC 7.6B.2.2 if UE supports SA and TS 38.521-1 TC 7.6.2 has been executed.
7.6B.2.3	Inband blocking for inter-band EN-DC within FR1 (2 CCs)	Rel-15	C011	UEs supporting Inter-band EN-DC within FR1	D006		NOTE 5 Skip TC 7.6B.2.3 if UE supports SA and TS 38.521-1 TC 7.6. 2 has been executed.
7.6B.2.4	Inband blocking for inter-band EN-DC including FR2 (2 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 7.6B.2.4 if UE supports SA and TS 38.521-2 TC 7.6.2 has been executed.

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
7.6B.3	**Out-of-band blocking for EN-DC in FR1**						
7.6B.3.1	Out-of-band blocking for intra-band contiguous EN-DC (2 CCs)	Rel-15	C009	UEs supporting Intra-Band Contiguous EN-DC	D006		
7.6B.3.2	Out-of-band blocking for intra-band non-contiguous EN-DC (2 CCs)	Rel-15	C010	UEs supporting Intra-Band Non-Contiguous EN-DC	D006		NOTE 5 Skip TC 7.6B.3.2 if UE supports SA and TS 38.521-1 TC 7.6.3 has been executed.
7.6B.3.3	Out-of-band blocking for inter-band EN-DC within FR1 (2 CCs)	Rel-15	C011	UEs supporting Inter-band EN-DC within FR1	D006		
7.6B.4	**Narrow band blocking for EN-DC in FR1**						
7.6B.4.1	Narrow band blocking for intra-band contiguous EN-DC (2 CCs)	Rel-15	C009	UEs supporting Intra-Band Contiguous EN-DC	D006		
7.6B.4.2	Narrow band blocking for intra-band non-contiguous EN-DC (2 CCs)	Rel-15	C010	UEs supporting Intra-Band Non-Contiguous EN-DC	D006		NOTE 5 Skip TC 7.6B.4.2 if UE supports SA and TS 38.521-1 TC 7.6.4 has been executed.
7.6B.4.3	Narrow band blocking for inter-band EN-DC within FR1 (2 CCs)	Rel-15	C011	UEs supporting Inter-band EN-DC within FR1	D006		NOTE 5 Skip TC 7.6B.4.3 if UE supports SA and TS 38.521-1 TC 7.6.4 has been executed.
7.7	**Spurious Response**						
7.7B	**Spurious Response for EN-DC in FR1**						
7.7B.1	Spurious Response for intra-band contiguous EN-DC (2 CCs)	Rel-15	C009	UEs supporting Intra-Band Contiguous EN-DC	D006		
7.7B.2	Spurious Response for intra-band non-contiguous EN-DC (2 CCs)	Rel-15	C010	UEs supporting Intra-Band Non-Contiguous EN-DC	D006		NOTE 5 Skip TC 7.7B.2 if UE supports SA and TS 38.521-1 TC 7.7 has been executed.
7.7B.3	Spurious Response for inter-band EN-DC within FR1 (2 CCs)	Rel-15	C011	UEs supporting Inter-band EN-DC within FR1	D006		
7.8	**Intermodulation Characteristics**						
7.8B	**Intermodulation Characteristics for EN-DC in FR1**						
7.8B.2	**Wideband Intermodulation**						
7.8B.2.1	Wideband Intermodulation for intra-band contiguous EN-DC in FR1	Rel-15	C009	UEs supporting Intra-Band Contiguous EN-DC	D006		NOTE 1

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
7.8B.2.2	Wideband Intermodulation for intra-band non-contiguous EN-DC in FR1	Rel-15	C010	UEs supporting Intra-Band non-contiguous EN-DC	D006		NOTE 5 Skip TC 7.8B.2.2 if UE supports SA and TS 38.521-1 TC 7.8.2 has been executed.
7.8B.2.3	Wideband Intermodulation for inter-band EN-DC in FR1 (2 CCs)	Rel-15	C011	UEs supporting inter-band EN-DC within FR1	D006		NOTE 5 Skip TC 7.8B.2.3 if UE supports SA and TS 38.521-1 TC 7.8.2 has been executed.
7.8B.2.3_1	**Wideband Intermodulation for inter-band EN-DC within FR1 (>2 CCs)**						
7.8B.2.3_1.1	Wideband Intermodulation for EN-DC within FR1 (3 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1 NOTE 5 Skip TC 7.8B.2.3_1.1 if UE supports SA and TS 38.521-1 TC 7.8A.2.1 has been executed.
7.9	**Spurious Emissions**						
7.9B	**Spurious Emissions for EN-DC in FR1**						
7.9B.1	Spurious Emissions for intra-band contiguous EN-DC in FR1(2 CCs)	Rel-15	C009	UEs supporting Intra-Band Contiguous EN-DC	D006		NOTE 5 Skip TC 7.9B.1 if UE supports SA and TS 38.521-1 TC 7.9 has been executed.
7.9B.2	Spurious Emissions for intra-band non-contiguous EN-DC in FR1(2 CCs)	Rel-15	C010	UEs supporting Intra-Band non-contiguous EN-DC	D006		NOTE 5 Skip TC 7.9B.2 if UE supports SA and TS 38.521-1 TC 7.9 has been executed.
7.9B.3	Spurious Emissions for inter-band EN-DC within FR1 (2 CCs)	Rel-15	C011	UEs supporting inter-band EN-DC within FR1	D006		NOTE 5 Skip TC 7.9B.3 if UE supports SA and TS 38.521-1 TC 7.9 has been executed.
7.9B.3_1	**Spurious Emissions for inter-band EN-DC within FR1 (>2 CCs)**						
7.9B.4	Spurious Emissions for inter-band EN-DC including FR2 (2 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1
7.9B.4_1	**Spurious Emissions for inter-band EN-DC including FR2 (>2 CCs)**						

Clause	TC Title	Release	Applicability		Tested Bands/CA/DC-Configurations Selection	Branch	Additional Information
			Condition	Comment			
7.9B.4_1.1	Spurious Emissions for inter-band EN-DC including FR2 (3 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1
7.9B.4_1.2	Spurious Emissions for inter-band EN-DC including FR2 (4 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1
7.9B.4_1.3	Spurious Emissions for inter-band EN-DC including FR2 (5 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1
7.9B.4_1.4	Spurious Emissions for inter-band EN-DC including FR2 (6 CCs)	Rel-15	FFS	FFS	FFS		NOTE 1
NOTE 1: The test case is incomplete. NOTE 2: The test case applicability is set to N/A until the related testability issues are resolved. NOTE 3: Void. NOTE 4: All Power Class 3 UE supported bands needs to be tested to ensure the multiband relaxation declaration is compliant. NOTE 5: Test only one EN-DC combination per 5G NR band as LTE anchor agnostic approach is applied. E-UTRA is tested standalone using TS 36.521-1.							

Table 4.1.3-1a: Void

Table 4.1.3-1b: Void

Table 4.1.3-1c: Void

4.1.4 Performance conformance test cases

Table 4.1.4-1: Applicability of performance test cases, ref. TS 38.521-4 [4]

Clause	TC Title	Release	Applicability		Tested Bands Selection	Additional Information
			Condition	Comment		
5	**Demodulation performance requirements (Conducted requirements)**					
5.2	**PDSCH demodulation requirements**					
5.2.2.1.1_1	2Rx FDD FR1 PDSCH mapping Type A performance - 2x2 MIMO with baseline receiver for both SA and NSA	Rel-15	C015	UEs supporting 5GS FDD FR1	D008 D010	Test case execution not necessary if 5.2.3.1.1_1 is executed
5.2.2.1.1_2	2Rx FDD FR1 PDSCH mapping Type A performance - 2x2 MIMO with enhanced receiver type 1 for both SA and NSA	Rel-15	C015a	UEs supporting 5GS FDD FR1 and Enhanced Receiver Type 1	D008	
5.2.2.1.2_1	2Rx FDD FR1 PDSCH mapping Type A and CSI-RS overlapped with PDSCH performance - 2x2 MIMO with baseline receiver for both SA and NSA	Rel-15	C015	UEs supporting 5GS FDD FR1	D008	Test case execution not necessary if 5.2.3.1.2_1 is executed
5.2.2.1.3_1	2Rx FDD FR1 PDSCH mapping Type B performance - 2x2 MIMO with baseline receiver for both SA and NSA	Rel-15	C015	UEs supporting 5GS FDD FR1	D008 D010	
5.2.2.1.4_1	2Rx FDD FR1 PDSCH Mapping Type A and LTE-NR coexistence performance - 4x2 MIMO with baseline receiver for both SA and NSA	Rel-15	C015c	UEs supporting 5GS FDD FR1 and additional DMRS for coexistence with LTE CRS	D008	Test case execution not necessary if 5.2.3.1.4_1 is executed
5.2.2.2.1_1	2Rx TDD FR1 PDSCH mapping Type A performance - 2x2 MIMO with baseline receiver for both SA and NSA	Rel-15	C016	UEs supporting 5GS TDD FR1	D009 D010	Test case execution not necessary if 5.2.3.2.1_1 is executed
5.2.2.2.1_2	2Rx TDD FR1 PDSCH mapping Type A performance - 2x2 MIMO with enhanced receiver type 1 for both SA and NSA	Rel-15	C016a	UEs supporting 5GS TDD FR1 and Enhanced Receiver Typer 1	D010	
5.2.2.2.2_1	2Rx TDD FR1 PDSCH mapping Type A and CSI-RS overlapped with PDSCH performance - 2x2 MIMO with baseline receiver for both SA and NSA	Rel-15	C016	UEs supporting 5GS TDD FR1	D010	Test case execution not necessary if 5.2.3.2.2_1 is executed
5.2.2.2.3_1	2Rx TDD FR1 PDSCH mapping Type B performance - – 2x2 MIMO with baseline receiver for both SA and NSA	FFS	FFS	FFS	FFS	NOTE 1
5.2.3.1.1_1	4Rx FDD FR1 PDSCH mapping Type A performance - 2x4 MIMO baseline receiver for both SA and NSA	Rel-15	C017	UEs supporting 5GS FDD FR1 and 4Rx antenna ports	D008 D009	
5.2.3.1.1_2	4Rx FDD FR1 PDSCH mapping Type A performance - 4x4 MIMO baseline receiver for both SA and NSA	Rel-15	C017	UEs supporting 5GS FDD FR1 and 4Rx antenna ports	D008 D009	
5.2.3.1.1_4	4Rx FDD FR1 PDSCH mapping Type A performance - 4x4 MIMO with enhanced receiver type 1 for both SA and NSA	Rel-15	C017a	UEs supporting 5GS FDD FR1 and 4Rx antenna ports and Enhanced Receiver Type 1	D008	
5.2.3.1.2_1	4Rx FDD FR1 PDSCH mapping Type A and CSI-RS overlapped with PDSCH performance - 4x4 MIMO with baseline receiver for both SA and NSA	Rel-15	C017	UEs supporting 5GS FDD FR1 and 4Rx antenna ports	D008	

Clause	TC Title	Release	Applicability		Tested Bands Selection	Additional Information
			Condition	Comment		
5.2.3.1.3_1	4Rx FDD FR1 PDSCH mapping Type B performance - 2x4 MIMO with baseline receiver for both SA and NSA	Rel-15	C017	UEs supporting 5GS FDD FR1 and 4Rx antenna ports	D008 D009	
5.2.3.1.4_1	4Rx FDD FR1 PDSCH Mapping Type A and LTE-NR coexistence performance - 4x4 MIMO with baseline receiver for both SA and NSA	Rel-15	C017c	UEs supporting 5GS FDD FR1 and 4Rx antenna ports and LTE-NR coexistence	D008	
5.2.3.2.1_1	4Rx TDD FR1 PDSCH mapping Type A performance - 2x4 MIMO with baseline receiver for both SA and NSA	Rel-15	C019	UEs supporting 5GS TDD FR1 and 4Rx antenna ports	D009 D010	
5.2.3.2.1_2	4Rx TDD FR1 PDSCH mapping Type A performance - 4x4 MIMO with baseline receiver for both SA and NSA	Rel-15	C019	UEs supporting 5GS TDD FR1 and 4Rx antenna ports	D010	
5.2.3.2.1_4	4Rx TDD FR1 PDSCH mapping Type A performance - 4x4 MIMO with enhanced receiver type 1 for both SA and NSA	Rel-15	C019a	UEs supporting 5GS TDD FR1 and Enhanced Receiver Type 1 and 4Rx antenna ports	D010	
5.2.3.2.2_1	4Rx TDD FR1 PDSCH mapping Type A and CSI-RS overlapped with PDSCH performance - 2x4 MIMO with baseline receiver for both SA and NSA	Rel-15	C019	UEs supporting 5GS TDD FR1 and 4Rx antenna ports	D009 D010	
5.2.3.2.3_1	4Rx TDD FR1 PDSCH mapping Type B performance - 2x4 MIMO with baseline receiver for both SA and NSA	Rel-15	C019	UEs supporting 5GS TDD FR1 and 4Rx antenna ports	D009 D010	
5.3.2.1.1	2Rx FDD FR1 PDCCH 1 Tx antenna performance for both SA and NSA	Rel-15	C015	UEs supporting 5GS FDD FR1	D008	Test case execution not necessary if 5.3.3.1.1 is executed
5.3.2.1.2	2Rx FDD FR1 PDCCH 2 Tx antenna performance for both SA and NSA	Rel-15	C015	UEs supporting 5GS FDD FR1	D008	Test case execution not necessary if 5.3.3.1.2 is executed
5.3.2.2.1	2Rx TDD FR1 PDCCH 1 Tx antenna performance for both SA and NSA	Rel-15	C016	UEs supporting 5GS TDD FR1	D010	Test case execution not necessary if 5.3.3.2.1 is executed
5.3.2.2.2	2Rx TDD FR1 PDCCH 2 Tx antenna performance for both SA and NSA	Rel-15	C016	UEs supporting 5GS TDD FR1	D010	Test case execution not necessary if 5.3.3.2.2 is executed
5.3.3.1.1	4Rx FDD FR1 PDCCH 1 Tx antenna performance for both SA and NSA	Rel-15	C017	UEs supporting 5GS FDD FR1 and 4Rx antenna ports	D008	
5.3.3.1.2	4Rx FDD FR1 PDCCH 2 Tx antenna performance for both SA and NSA	Rel-15	C017	UEs supporting 5GS FDD FR1 and 4Rx antenna ports	D008	
5.3.3.2.1	4Rx TDD FR1 PDCCH 1 Tx antenna performance for both SA and NSA	Rel-15	C019	UEs supporting 5GS TDD FR1 and 4Rx antenna ports	D010	
5.3.3.2.2	4Rx TDD FR1 PDCCH 2 Tx antenna performance for both SA and NSA	Rel-15	C019	UEs supporting 5GS TDD FR1 and 4Rx antenna ports	D010	
5.5.1	FR1 Sustained downlink data rate performance for single carrier	Rel-15	C001	UEs supporting 5GS FDD FR1 or TDD FR1 (SA)	D008 D009 D010	
6	**CSI reporting requirements (Conducted requirements)**					

Clause	TC Title	Release	Applicability		Tested Bands Selection	Additional Information
			Condition	Comment		
6.2.2.1.1.1	2Rx FDD FR1 periodic CQI reporting under AWGN conditions for both SA and NSA	Rel-15	C015	UEs supporting 5GS FDD FR1	D008	Test case execution not necessary if 6.2.3.1.1.1 is executed
6.2.2.1.2.1	2Rx FDD FR1 periodic wideband CQI reporting under fading conditions for both SA and NSA	Rel-15	C015	UEs supporting 5GS FDD FR1	D008	Test case execution not necessary if 6.2.3.1.2.1 is executed
6.2.2.1.2.2	2Rx FDD FR1 aperiodic subband CQI reporting under fading conditions for both SA and NSA	Rel-15	C015	UEs supporting 5GS FDD FR1	D008	Test case execution not necessary if 6.2.3.1.2.2 is executed
6.2.2.2.1.1	2Rx TDD FR1 periodic CQI reporting under AWGN conditions for both SA and NSA	Rel-15	C016	UEs supporting 5GS TDD FR1	D010	Test case execution not necessary if 6.2.3.2.1.1 is executed
6.2.2.2.2.1	2Rx TDD FR1 periodic wideband CQI reporting under fading conditions for both SA and NSA	Rel-15	C016	UEs supporting 5GS TDD FR1	D010	Test case execution not necessary if 6.2.3.2.2.1 is executed
6.2.2.2.2.2	2Rx TDD FR1 aperiodic subband CQI reporting under fading conditions for both SA and NSA	Rel-15	C016	UEs supporting 5GS TDD FR1	D010	Test case execution not necessary if 6.2.3.2.2.2 is executed
6.2.3.1.1.1	4Rx FDD FR1 periodic CQI reporting under AWGN conditions for both SA and NSA	Rel-15	C017	UEs supporting 5GS FDD FR1 and 4Rx antenna ports	D008	
6.2.3.1.2.1	4Rx FDD FR1 periodic wideband CQI reporting under fading conditions for both SA and NSA	Rel-15	C017	UEs supporting 5GS FDD FR1 and 4Rx antenna ports	D008	
6.2.3.1.2.2	4Rx FDD FR1 aperiodic subband CQI reporting under fading conditions for both SA and NSA	Rel-15	C017	UEs supporting 5GS FDD FR1 and 4Rx antenna ports	D008	
6.2.3.2.1.1	4Rx TDD FR1 periodic CQI reporting under AWGN conditions for both SA and NSA	Rel-15	C019	UEs supporting 5GS TDD FR1 and 4Rx antenna ports	D010	
6.2.3.2.2.1	4Rx TDD FR1 periodic wideband CQI reporting under fading conditions for both SA and NSA	Rel-15	C019	UEs supporting 5GS TDD FR1 and 4Rx antenna ports	D010	
6.2.3.2.2.2	4Rx TDD FR1 aperiodic subband CQI reporting under fading conditions for both SA and NSA	Rel-15	C019	UEs supporting 5GS TDD FR1 and 4Rx antenna ports	D010	
6.3.2.1.1	2Rx FDD FR1 Single PMI with 4Tx TypeI – SinglePanel codebook for both SA and NSA	Rel-15	C015	UEs supporting 5GS FDD FR1	D008	Test case execution not necessary if 6.3.3.1.1 is executed
6.3.2.1.2	2Rx FDD FR1 Single PMI with 8Tx TypeI – SinglePanel codebook for both SA and NSA	Rel-15	C015	UEs supporting 5GS FDD FR1	D008	Test case execution not necessary if 6.3.3.1.2 is executed
6.3.2.2.1	2Rx TDD FR1 Single PMI with 4Tx Type1 - SinglePanel codebook for both SA and NSA	Rel-15	C016	UEs supporting 5GS TDD FR1	D010	Test case execution not necessary if 6.3.3.2.1 is executed
6.3.2.2.2	2Rx TDD FR1 Single PMI with 8Tx Type1 - SinglePanel codebook for both SA and NSA	Rel-15	C016	UEs supporting 5GS TDD FR1	D010	Test case execution not necessary if 6.3.3.2.2 is executed

Clause	TC Title	Release	Applicability		Tested Bands Selection	Additional Information
			Condition	Comment		
6.3.3.1.1	4Rx FDD FR1 Single PMI with 4Tx Type1 -– SinglePanel codebook for both SA and NSA	FFS	FFS	FFS	FFS	NOTE 1
6.3.3.1.2	4Rx FDD FR1 Single PMI with 8Tx Type1 -– SinglePanel codebook for both SA and NSA	FFS	FFS	FFS	FFS	NOTE 1
6.3.3.2.1	4Rx TDD FR1 Single PMI with 4Tx Type1 -– SinglePanel codebook for both SA and NSA	FFS	FFS	FFS	FFS	NOTE 1
6.3.3.2.2	4Rx TDD FR1 Single PMI with 8Tx Type1 -– SinglePanel codebook for both SA and NSA	FFS	FFS	FFS	FFS	NOTE 1
6.4.2.1_1	2Rx FDD FR1 RI reporting for both SA and NSA	Rel-15	C015	UEs supporting 5GS FDD FR1	D008	Test case execution not necessary if 6.4.3.1_1 is executed
6.4.2.2_1	2Rx TDD FR1 RI reporting for both SA and NSA	Rel-15	C016	UEs supporting 5GS TDD FR1	D010	Test case execution not necessary if 6.4.3.2_1 is executed
6.4.3.2_1	4Rx TDD FR1 RI reporting for both SA and NSA	FFS	FFS	FFS	FFS	NOTE 1
7	**Demodulation performance requirements (Radiated requirements)**					
7.2.2.2.1_1	2Rx TDD FR2 PDSCH mapping Type A performance - 2x2 MIMO with baseline receiver for SA and NSA	FFS	FFS	FFS	FFS	NOTE 1
7.2.2.2.1_2	2Rx TDD FR2 PDSCH mapping Type A performance - 2x2 MIMO with enhanced type 1 receiver for SA and NSA	FFS	FFS	FFS	FFS	NOTE 1
7.3.2.2.1	2Rx TDD FR2 PDCCH 1 Tx antenna performance for both SA and NSA	FFS	FFS	FFS	FFS	NOTE 1
7.3.2.2.2	2Rx TDD FR2 PDCCH 2 Tx antenna performance for both SA and NSA	FFS	FFS	FFS	FFS	NOTE 1
8	**CSI reporting requirements (Radiated requirements)**					
8.3.2.2.1	2Rx TDD FR2 Single PMI with 2Tx Type1 -– SinglePanel codebook for both SA and NSA	FFS	FFS	FFS	FFS	NOTE 1
9	**Demodulation performance requirements for interworking**					
9.4B.1.1	SDR test for sustained downlink data rate performance for EN-DC within FR1	Rel-15	C020	UEs supporting 5GS FDD FR1 or TDD FR1 (NSA)	D008 D009 D010	
10	**CSI reporting requirements for interworking**					

NOTE 1: The test case is incomplete.
NOTE 2: Void.
NOTE 3: Void.

Table 4.1.4-1a: Void

Table 4.1.4-1b: Void

Table 4.1.4-1c: Void

4.2 RRM conformance test cases

Editor's Note: Test case 4.5.1.5 / 4.5.1.6 / 4.5.1.7 / 4.5.1.8 / 4.6.1.3 / 4.6.1.4 /4.6.1.6 / 6.5.1.5 / 6.5.1.6 / 6.5.1.7 / 6.5.1.8 / 6.6.1.3 / 6.6.1.4 / 6.6.1.6 applicability condition is FFS to account for *Support CSI-RS based RLM* PICS.

Table 4.2-1: Applicability of RRM EN-DC FR1 conformance test cases, ref. TS 38.533 [5]

Clause	TC Title	Release	Applicability		Additional Information	Branch
			Condition	Comment		
4.3	**RRC_CONNECTED state mobility**					
4.3.2	**RRC connection mobility control**					
4.3.2.2	**Random access**					
4.3.2.2.1	Contention based random access test in FR1 for PSCell in EN-DC	FFS	FFS	FFS		
4.3.2.2.2	Non-contention based random access test in FR1 for PSCell in EN-DC	Rel-15	C030	UEs supporting EN-DC FR1 and CSI-RS based PRACH		
4.4	**Timing**					
4.4.1	**UE Transmit Timing**					
4.4.1.1	EN-DC FR1 UE transmit timing accuracy	Rel-15	C021	UEs supporting EN-DC FR1		
4.4.2	**UE timer accuracy**					
4.4.3	**Timing Advance**					
4.4.3.1	EN-DC FR1 timing advance adjustment accuracy	Rel-15	C021	UEs supporting EN-DC FR1		
4.5	**Signalling characteristics**					
4.5.1	**Radio link monitoring**					
4.5.1.1	EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	Rel-15	C021	UEs supporting EN-DC FR1		
4.5.1.2	EN-DC FR1 radio link monitoring in-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	Rel-15	C021	UEs supporting EN-DC FR1		
4.5.1.3	EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with SSB-based RLM RS in DRX mode	Rel-15	C021	UEs supporting EN-DC FR1		
4.5.1.4	EN-DC FR1 radio link monitoring in-sync test for PSCell configured with SSB-based RLM RS in DRX mode	Rel-15	C021	UEs supporting EN-DC FR1		
4.5.1.5	EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode	Rel-15	FFS	UEs supporting EN-DC FR1 and CSI-RS-based RLM		
4.5.1.6	EN-DC FR1 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode	Rel-15	FFS	UEs supporting EN-DC FR1 and CSI-RS-based RLM		
4.5.1.7	EN-DC FR1 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode	Rel-15	FFS	UEs supporting EN-DC FR1 and CSI-RS-based RLM		
4.5.1.8	EN-DC FR1 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode	Rel-15	FFS	UEs supporting EN-DC FR1 and CSI-RS-based RLM		
4.5.2	**Interruption**					
4.5.2.1	EN-DC FR1 interruptions at transitions between active and non-active during DRX in synchronous EN-DC	Rel-15	C021	UEs supporting EN-DC FR1		
4.5.2.2	EN-DC FR1 interruptions at transitions between active and non-active during DRX in asynchronous EN-DC	Rel-15	C021	UEs supporting EN-DC FR1		

Clause	TC Title	Release	Applicability		Additional Information	Branch
			Condition	Comment		
4.5.2.3	EN-DC FR1 interruptions during measurements on deactivated NR SCC in synchronous EN-DC	Rel-15	C021	UEs supporting EN-DC FR1		
4.5.2.4	EN-DC FR1 interruptions during measurements on deactivated NR SCC in asynchronous EN-DC	Rel-15	C021	UEs supporting EN-DC FR1		
4.5.2.5	EN-DC FR1 interruptions during measurements on deactivated E-UTRAN SCC in synchronous EN-DC	Rel-15	C021	UEs supporting EN-DC FR1		
4.5.2.6	EN-DC FR1 interruptions during measurements on deactivated E-UTRAN SCC in asynchronous EN-DC	Rel-15	C021	UEs supporting EN-DC FR1		
4.5.3	**SCell activation and deactivation delay**					
4.5.3.1	EN-DC FR1 SCell activation and deactivation of known SCell in non-DRX for 160ms SCell measurement cycle	Rel-15	C021	UEs supporting EN-DC FR1		
4.5.3.2	EN-DC FR1 SCell activation and deactivation of known SCell in non-DRX for 320ms SCell measurement cycle	Rel-15	C021	UEs supporting EN-DC FR1		
4.5.3.3	EN-DC FR1 SCell activation and deactivation of unknown SCell in non-DRX	Rel-15	C021	UEs supporting EN-DC FR1		
4.5.4	**UE UL carrier RRC reconfiguration delay**					
4.5.5.1	EN-DC FR1 UE UL carrier RRC reconfiguration delay	Rel-15	C032	UEs supporting EN-DC FR1 and SUL		
4.5.5	**Beam failure detection and link recovery procedures**					
4.5.5.4	EN-DC FR1 CSI-RS-based beam failure detection and link recovery in DRX	FFS	FFS	FFS	NOTE 1	
4.5.6	**Active BWP switch delay**					
4.5.6.1	**DCI-based and timer-based active BWP switch**					
4.5.6.1.1	EN-DC FR1 DCI-based DL active BWP switch in non-DRX in synchronous EN-DC	FFS	FFS	FFS	NOTE 1	
4.5.6.1.2	EN-DC FR1 DCI-based DL active BWP switch with SCell in non-DRX in synchronous EN-DC	FFS	FFS	FFS	NOTE 1	
4.5.6.2	**RRC-based active BWP switch**					
4.5.6.2.1	EN-DC FR1 RRC-based DL active BWP switch in non-DRX in synchronous EN-DC	FFS	FFS	FFS	NOTE 1	
4.5.7	PSCell addition and release delay					
4.6	**Measurement procedures**					
4.6.1	**Intra-frequency measurements**					
4.6.1.1	EN-DC FR1 event-triggered reporting without gap in non-DRX	Rel-15	C021	UEs supporting EN-DC FR1		
4.6.1.2	EN-DC FR1 event-triggered reporting without gap in DRX	Rel-15	C021	UEs supporting EN-DC FR1		
4.6.1.3	EN-DC FR1 event-triggered reporting with gap in non-DRX	Rel-15	FFS	UEs supporting EN-DC FR1 and CSI-RS-based RLM		
4.6.1.4	EN-DC FR1 event-triggered reporting with gap in DRX	Rel-15	FFS	UEs supporting EN-DC FR1 and CSI-RS-based RLM		
4.6.1.5	EN-DC FR1 event-triggered reporting without gap in non-DRX with SSB time index detection	Rel-15	C021	UEs supporting EN-DC FR1		

Clause	TC Title	Release	Applicability		Additional Information	Branch
			Condition	Comment		
4.6.1.6	EN-DC FR1 event-triggered reporting with gap in non-DRX with SSB time index detection	Rel-15	FFS	UEs supporting EN-DC FDD FR1 and CSI-RS based RLM		
4.6.2	**Inter-frequency measurements**					
4.6.2.1	EN-DC FR1-FR1 event-triggered reporting in non-DRX	Rel-15	C021	UEs supporting EN-DC FR1	Test 1	
			C026	UEs supporting EN-DC FR1, per FR Gap and Gap Pattern ID 4	Test 2	
4.6.2.2	EN-DC FR1-FR1 event-triggered reporting in DRX	Rel-15	C021	UEs supporting EN-DC FR1	Test 1 and 2	
			C026	UEs supporting EN-DC FR1, per FR Gap and Gap Pattern ID 4	Test 3 and 4	
4.6.2.5	EN-DC FR1-FR1 event-triggered reporting in non-DRX with SSB time index detection	Rel-15	C021	UEs supporting EN-DC FR1	Test 1	
			C026	UEs supporting EN-DC FR1, per FR Gap and Gap Pattern ID 4	Test 2	
4.6.2.6	EN-DC FR1-FR1 event-triggered reporting in DRX with SSB time index detection	Rel-15	C021	UEs supporting EN-DC FR1	Test 1 and 2	
			C026	UEs supporting EN-DC FR1, per FR Gap and Gap Pattern ID 4	Test 3 and 4	
4.6.4	**L1-RSRP for beam reporting**					
4.6.4.1	EN-DC FR1 SSB-based L1-RSRP measurement in non-DRX	Rel-15	C021	UEs supporting EN-DC FR1		
4.6.4.2	EN-DC FR1 SSB-based L1-RSRP measurement in DRX	Rel-15	C021	UEs supporting EN-DC FR1		
4.6.4.3	EN-DC FR1 CSI-RS-based L1-RSRP measurement in non-DRX	Rel-15	C021	UEs supporting EN-DC FR1		
4.6.4.4	EN-DC FR1 CSI-RS-based L1-RSRP measurement in DRX	Rel-15	C021	UEs supporting EN-DC FR1		
4.7	**Measurement performance requirements**					
4.7.1	**SS-RSRP**					
4.7.1.1	**Intra-frequency measurements**					
4.7.1.1.1	EN-DC FR1 SS-RSRP absolute measurement accuracy	Rel-15	C021	UEs supporting EN-DC FR1		
4.7.1.1.2	EN-DC FR1 SS-RSRP relative measurement accuracy	Rel-15	C021	UEs supporting EN-DC FR1		
4.7.1.2	**Inter-frequency measurements**					
4.7.1.2.1	EN-DC FR1-FR1 SS-RSRP absolute measurement accuracy	Rel-15	C021	UEs supporting EN-DC FR1		
4.7.1.2.2	EN-DC FR1-FR1 SS-RSRP relative measurement accuracy	Rel-15	C021	UEs supporting EN-DC FR1		
4.7.2	**SS-RSRQ**					
4.7.2.1	EN-DC FR1 SS-RSRQ measurement accuracy	Rel-15	C021	UEs supporting EN-DC FR1		
4.7.2.2.1	EN-DC FR1-FR1 SS-RSRQ absolute measurement accuracy	Rel-15	C021	UEs supporting EN-DC FR1		
4.7.2.2.2	EN-DC FR1-FR1 SS-RSRQ relative measurement accuracy	Rel-15	C021	UEs supporting EN-DC FR1		
4.7.3	**SS-SINR**					

Clause	TC Title	Release	Applicability		Additional Information	Branch
			Condition	Comment		
4.7.3.1	EN-DC FR1 SS-SINR measurement accuracy	Rel-15	C035	UEs supporting EN-DC FR1 and SS-SINR-meas		
4.7.3.2.1	EN-DC FR1-FR1 SS-SINR absolute measurement accuracy	Rel-15	C035	UEs supporting EN-DC FR1 and SS-SINR-meas		
4.7.3.2.2	EN-DC FR1-FR1 SS-SINR relative measurement accuracy	Rel-15	C035	UEs supporting EN-DC FR1 and SS-SINR-meas		
4.7.4	**L1-RSRP**					
4.7.4.1	EN-DC FR1 SSB-based L1-RSRP measurement accuracy	FFS	FFS	FFS	NOTE 1	
4.7.4.2	EN-DC FR1 CSI-RS-based L1-RSRP measurement accuracy	FFS	FFS	FFS	NOTE 1	
4.7.5	**SFTD**					
NOTE 1: The test case is incomplete. NOTE 2: Test X refers to the corresponding Sub-Test as defined in TS 38.533 [5].						

Table 4.2-1a: Void

Table 4.2-2: Applicability of RRM EN-DC FR2 conformance test cases, ref. TS 38.533 [5]

Clause	TC Title	Release	Applicability		Additional Information	Branch
			Condition	Comment		
5.3	**RRC_CONNECTED state mobility**					
5.3.2	**RRC connection mobility control**					
5.3.2.2	**Random access**					
5.4	**Timing**					
5.4.1	**UE transmit timing**					
5.4.1.1	EN-DC FR2 UE transmit timing accuracy	FFS	FFS	FFS	NOTE 1	
5.4.2	**UE timer accuracy**					
5.4.3	**Timing advance**					
5.4.3.1	EN-DC FR2 timing advance adjustment accuracy	FFS	FFS	FFS	NOTE 1	
5.5	**Signalling characteristics**					
5.5.1	**Radio link monitoring**					
5.5.1.1	EN-DC FR2 radio link monitoring out-of-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	FFS	FFS	FFS	NOTE 1	
5.5.1.2	EN-DC FR2 radio link monitoring in-sync test for PSCell configured with SSB-based RLM RS in non-DRX mode	FFS	FFS	FFS	NOTE 1	
5.5.1.3	EN-DC FR2 radio link monitoring out-of-sync test for PSCell configured with SSB-based RLM RS in DRX mode	FFS	FFS	FFS	NOTE 1	
5.5.1.4	EN-DC FR2 radio link monitoring in-sync test for PSCell configured with SSB-based RLM RS in DRX mode	FFS	FFS	FFS	NOTE 1	
5.5.2	**Interruption**					
5.5.2.1	EN-DC FR2 interruptions at transitions between active and non-active during DRX in synchronous EN-DC	FFS	FFS	FFS	NOTE 1	
5.5.2.2	EN-DC FR2 interruptions at transitions between active and non-active during DRX in asynchronous EN-DC	FFS	FFS	FFS	NOTE 1	
5.5.2.3	EN-DC FR2 interruptions during measurements on deactivated NR SCC in synchronous EN-DC	FFS	FFS	FFS	NOTE 1	
5.5.2.4	EN-DC FR2 interruptions during measurements on deactivated NR SCC in asynchronous EN-DC	FFS	FFS	FFS	NOTE 1	
5.5.2.5	EN-DC FR2 interruptions during measurements on deactivated E-UTRAN SCC in synchronous EN-DC	FFS	FFS	FFS	NOTE 1	
5.5.2.6	EN-DC FR2 interruptions during measurements on deactivated E-UTRAN SCC in asynchronous EN-DC	FFS	FFS	FFS	NOTE 1	
5.5.3	**SCell activation and deactivation delay**					
5.5.3.1	EN-DC FR2 SCell activation and deactivation intra-band in non-DRX	FFS	FFS	FFS	NOTE 1	
5.5.4	**UE UL carrier RRC reconfiguration delay**					
5.5.5	**Beam failure detection and link recovery procedures**					

5.5.5.5	EN-DC FR2 scheduling available restriction during SSB-based beam failure detection and link recovery in non-DRX	Rel-15	C022	UEs supporting EN-DC FR2	NOTE 1	
5.5.6	**Active BWP switch delay**					
5.5.6.1	**DCI-based and timer-based active BWP switch**					
5.5.6.1.1	EN-DC FR2 DCI-based DL active BWP switch in non-DRX in synchronous EN-DC	FFS	FFS	FFS	NOTE 1	
5.5.6.1.2	EN-DC FR2 DCI-based DL active BWP switch with SCell in non-DRX in synchronous EN-DC	FFS	FFS	FFS	NOTE 1	
5.5.6.2	**RRC-based active BWP switch**					
5.5.6.2.1	EN-DC FR2 RRC-based DL active BWP switch in non-DRX in synchronous EN-DC	FFS	FFS	FFS	NOTE 1	
5.5.7	**PSCell addition and release delay**					
5.5.7.1	EN-DC FR2 addition and release delay of known PSCell	FFS	FFS	FFS	NOTE 1	
5.5.8	**Active TCI state switch delay**					
5.5.8.1	EN-DC FR2 MAC-CE based active TCI state switch	Rel-15	C022	UEs supporting EN-DC FR2	NOTE 1	
5.5.8.2	EN-DC FR2 RRC based active TCI state switch	Rel-15	C022	UEs supporting EN-DC FR2	NOTE 1	
5.6	**Measurement procedures**					
5.6.1	**Intra-frequency measurements**					
5.6.2	**Inter-frequency measurements**					
5.6.2.1	EN-DC FR2-FR2 event-triggered reporting in non-DRX	Rel-15	C022	UEs supporting EN-DC FR2	NOTE 1	
5.6.2.2	EN-DC FR2-FR2 event-triggered reporting in DRX	Rel-15	C022	UEs supporting EN-DC FR2	NOTE 1	
5.6.2.3	EN-DC FR2-FR2 event-triggered reporting in non-DRX with SSB time index detection	Rel-15	C022	UEs supporting EN-DC FR2	NOTE 1	
5.6.2.4	EN-DC FR2-FR2 event-triggered reporting in DRX with SSB time index detection	Rel-15	C022	UEs supporting EN-DC FR2	NOTE 1	
5.6.2.5	EN-DC FR1-FR2 event-triggered reporting in non-DRX	Rel-15	C023	UEs supporting EN-DC FR1 and FR2	NOTE 1	
5.6.2.6	EN-DC FR1-FR2 event-triggered reporting in DRX	Rel-15	C023	UEs supporting EN-DC FR1 and FR2	NOTE 1	
5.6.2.7	EN-DC FR1-FR2 event-triggered reporting in non-DRX with SSB time index detection	Rel-15	C023	UEs supporting EN-DC FR1 and FR2	NOTE 1	
5.6.2.8	EN-DC FR1-FR2 event-triggered reporting in DRX with SSB time index detection	Rel-15	C023	UEs supporting EN-DC FR1 and FR2	NOTE 1	
5.6.3	**L1-RSRP for beam reporting**					
5.6.3.1	EN-DC FR2 SSB-based L1-RSRP measurement in non-DRX	Rel-15	C022	UEs supporting EN-DC FR2	NOTE 1	
5.6.3.2	EN-DC FR2 SSB-based L1-RSRP measurement in DRX	Rel-15	C022	UEs supporting EN-DC FR2	NOTE 1	
5.6.3.3	EN-DC FR2 CSI-RS-based L1-RSRP measurement in non-DRX	Rel-15	C022	UEs supporting EN-DC FR2	NOTE 1	
5.6.3.4	EN-DC FR2 CSI-RS-based L1-RSRP measurement in DRX	Rel-15	C022	UEs supporting EN-DC FR2	NOTE 1	
5.7	**Measurement performance requirements**					
5.7.1	**SS-RSRP**					
5.5.7.1	**EN-DC FR2 addition and release delay of known PSCell**	**FFS**	**FFS**	**FFS**	**NOTE 1**	

5.7.1.1	EN-DC FR2 SS-RSRP measurement accuracy	FFS	FFS	FFS	NOTE 1	
5.7.1.2	EN-DC FR2-FR2 SS-RSRP measurement accuracy	FFS	FFS	FFS	NOTE 1	
5.7.1.3	**Inter-frequency measurements between FR1 and FR2**					
5.7.1.3.1	EN-DC FR1-FR2 SS-RSRP absolute measurement accuracy	FFS	FFS	FFS	NOTE 1	
5.7.1.3.2	EN-DC FR1-FR2 SS-RSRP relative measurement accuracy	FFS	FFS	FFS	NOTE 1	
5.7.2	**SS-RSRQ**					
5.7.3	**SS-SINR**					
5.7.4	**L1-RSRP for beam reporting**					
NOTE 1: The test case is incomplete. NOTE 2: Void. NOTE 3: Void.						

Table 4.2-2a: Void

Table 4.2-3: Applicability of RRM NR SA FR1 conformance test cases, ref. TS 38.533 [5]

Clause	TC Title	Release	Applicability		Additional Information	Branch
			Condition	Comment		
6.1	**RRC_IDLE state mobility**					
6.1.1	**NR cell re-selection**					
6.1.1.1	NR SA FR1 cell re-selection	Rel-15	C001	UEs supporting 5GS NR SA FR1		
6.1.1.2	NR SA FR1-FR1 cell re-selection	Rel-15	C001	UEs supporting 5GS NR SA FR1		
6.1.2	**NR – E-UTRA cell re-selection**					
6.1.2.1	NR SA FR1 – E-UTRA cell re-selection to higher priority E-UTRA	Rel-15	C025	UEs supporting 5GS NR SA FR1 and E-UTRA		
6.1.2.2	NR SA FR1 – E-UTRA cell re-selection to lower priority E-UTRA	Rel-15	C025	UEs supporting 5GS NR SA FR1 and E-UTRA		
6.2	**RRC_INACTIVE state mobility**					
6.3	**RRC_CONNECTED state mobility**					
6.3.1	**Handover**					
6.3.1.1	NR SA FR1 handover with known target cell	Rel-15	C027	UEs supporting 5GS NR SA FR1		
6.3.1.2	NR SA FR1 handover with unknown target cell	Rel-15	C027	UEs supporting 5GS NR SA FR1		
6.3.1.3	NR SA FR1-FR1 handover with unknown target cell	Rel-15	C027	UEs supporting 5GS NR SA FR1		
6.3.1.4	NR SA FR1 – E-UTRA handover with known target cell	Rel-15	C025	UEs supporting 5GS NR SA FR1 and E-UTRA		
6.3.1.5	NR SA FR1 – E-UTRA handover with unknown target cell	Rel-15	C025	UEs supporting 5GS NR SA FR1 and E-UTRA		
6.3.2	**RRC connection mobility control**					
6.3.2.1	**RRC re-establishment**					
6.3.2.1.1	NR SA FR1 RRC re-establishment	Rel-15	C001	UEs supporting 5GS NR SA FR1		
6.3.2.1.2	NR SA FR1 - FR1 RRC re-establishment	Rel-15	C001	UEs supporting 5GS NR SA FR1		
6.3.2.1.3	NR SA FR1 - FR1 RRC re-establishment without serving cell timing	Rel-15	C001	UEs supporting 5GS NR SA FR1	NOTE 1	
6.3.2.2	**Random access**					
6.3.2.2.1	Contention based random access test in FR1 for NR standalone	Rel-15	C001	UEs supporting 5GS NR SA FR1		
6.3.2.2.2	Non-Contention based random access test in FR1 for NR standalone	Rel-15	C029	UEs supporting 5GS NR SA FR1 and CSI-RS based PRACH		
6.3.2.3	**RRC connection release with redirection**					
6.3.2.3.1	NR SA FR1 RRC connection release with redirection	Rel-15	C001	UEs supporting 5GS NR SA FR1		
6.3.2.3.2	NR SA FR1 – E-UTRA RRC connection release with redirection	Rel-15	C025	UEs supporting 5GS NR SA FR1 and E-UTRA		
6.4	**Timing**					
6.4.1	**UE transmit timing**					
6.4.1.1	NR SA FR1 transmit timing accuracy	Rel-15	C027	UEs supporting 5GS NR SA FR1		
6.4.2	**UE timer accuracy**					
6.4.3	**Timing advance**					
6.4.3.1	NR SA FR1 timing advance adjustment accuracy	Rel-15	C027	UEs supporting 5GS NR SA FR1		
6.5	**Signalling characteristics**					
6.5.1	**Radio Link Monitoring**					

Clause	TC Title	Release	Applicability		Additional Information	Branch
			Condition	Comment		
6.5.1.1	NR SA FR1 radio link monitoring out-of-sync test for PCell configured with SSB-based RLM RS in non-DRX mode	Rel-15	C027	UEs supporting 5GS NR SA FR1		
6.5.1.2	NR SA FR1 radio link monitoring in-sync test for PCell configured with SSB-based RLM RS in non-DRX mode	Rel-15	C027	UEs supporting 5GS NR SA FR1		
6.5.1.3	NR SA FR1 radio link monitoring out-of-sync test for PCell configured with SSB-based RLM RS in DRX mode	Rel-15	C027	UEs supporting 5GS NR SA FR1		
6.5.1.4	NR SA FR1 radio link monitoring in-sync test for PCell configured with SSB-based RLM RS in DRX mode	Rel-15	C027	UEs supporting 5GS NR SA FR1		
6.5.1.5	NR SA FR1 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode	Rel-15	FFS	UEs supporting 5GS NR SA FR1 and CSI-RS-based RLM		
6.5.1.6	NR SA FR1 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in non-DRX mode	Rel-15	FFS	UEs supporting 5GS NR SA FR1 and CSI-RS-based RLM		
6.5.1.7	NR SA FR1 radio link monitoring out-of-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode	Rel-15	FFS	UEs supporting 5GS NR SA FR1 and CSI-RS-based RLM		
6.5.1.8	NR SA FR1 radio link monitoring in-sync test for PSCell configured with CSI-RS-based RLM RS in DRX mode	Rel-15	FFS	UEs supporting 5GS NR SA FR1 and CSI-RS-based RLM		
6.5.2	**Interruption**					
6.5.2.1	NR SA FR1 interruptions during measurements on deactivated NR SCC	FFS	FFS	FFS	NOTE 1	
6.5.3	**Scell activation and deactivation delay**					
6.5.3.1	NR SA FR1 SCell activation and deactivation of known SCell in non-DRX for 160ms SCell measurement cycle	FFS	FFS	FFS	NOTE 1	
6.5.3.2	NR SA FR1 SCell activation and deactivation of known SCell in non-DRX for 320ms SCell measurement cycle	FFS	FFS	FFS	NOTE 1	
6.5.3.3	NR SA FR1 SCell activation and deactivation of unknown SCell in non-DRX	FFS	FFS	FFS	NOTE 1	
6.5.4	**UE UL carrier RRC reconfiguration delay**					
6.5.4.1	NR SA FR1 UE UL carrier RRC reconfiguration delay	FFS	FFS	FFS	NOTE 1	
6.5.5	**Link recovery procedures**					
6.5.5.1	NR SA FR1 SSB-based beam failure detection and link recovery in non-DRX	Rel-15	C001	UEs supporting 5GS NR SA FR1	NOTE 1	
6.5.5.2	NR SA FR1 SSB-based beam failure detection and link recovery in DRX	Rel-15	C001	UEs supporting 5GS NR SA FR1	NOTE 1	
6.5.5.3	NR SA FR1 CSI-RS-based beam failure detection and link recovery in non-DRX	Rel-15	C001	UEs supporting 5GS NR SA FR1	NOTE 1	
6.5.5.4	NR SA FR1 CSI-RS-based beam failure detection and link recovery in DRX	Rel-15	C001	UEs supporting 5GS NR SA FR1	NOTE 1	
6.5.6	**Active BWP switch delay**					

Clause	TC Title	Release	Applicability		Additional Information	Branch
			Condition	Comment		
6.5.6.1	**DCI-based and timer-based active BWP switch**					
6.5.6.1.1	NR SA FR1 DCI-based DL active BWP switch in non-DRX	FFS	FFS	FFS	NOTE 1	
6.5.6.2	**RRC-based active BWP switch**					
6.5.6.2.1	NR SA FR1 RRC-based DL active BWP switch in non-DRX	FFS	FFS	FFS	NOTE 1	
6.6	**Measurement procedures**					
6.6.1	**Intra-frequency measurements**					
6.6.1.1	NR SA FR1 event-triggered reporting without gap in non-DRX	Rel-15	C027	UEs supporting 5GS NR SA FR1		
6.6.1.2	NR SA FR1 event-triggered reporting without gap in DRX	Rel-15	C027	UEs supporting 5GS NR SA FR1		
6.6.1.3	NR SA FR1 event-triggered reporting with gap in non-DRX	Rel-15	FFS	UEs supporting 5GS NR SA FR1 and CSI-RS-based RLM		
6.6.1.4	NR SA FR1 event-triggered reporting with gap in DRX	Rel-15	FFS	UEs supporting 5GS NR SA FR1 and CSI-RS-based RLM		
6.6.1.5	NR SA FR1 event-triggered reporting without gap in non-DRX with SSB index reading	Rel-15	C024	UEs supporting 5GS NR FDD SA FR1		
6.6.1.6	NR SA FR1 event-triggered reporting with gap in non-DRX with SSB index reading	Rel-15	FFS	UEs supporting 5GS NR FDD SA FR1 and CSI-RS-based RLM		
6.6.2	**Inter-frequency measurements**					
6.6.2.1	NR SA FR1-FR1 event-triggered reporting in non-DRX	Rel-15	C001	UEs supporting 5GS NR SA FR1	Test 1	
			C028	UEs supporting NA SA FR1, per FR Gap and Gap Pattern ID 4	Test 2	
6.6.2.2	NR SA FR1-FR1 event-triggered reporting in DRX	Rel-15	C001	UEs supporting 5GS NR SA FR1	Test 1 and 2	
			C028	UEs supporting NA SA FR1, per FR Gap and Gap Pattern ID 4	Test 3 and 4	
6.6.2.5	NR SA FR1-FR1 event-triggered reporting in non-DRX with SSB time index detection	Rel-15	C001	UEs supporting 5GS NR SA FR1	Test 1	
			C028	UEs supporting NA SA FR1, per FR Gap and Gap Pattern ID 4	Test 2	
6.6.2.6	NR SA FR1-FR1 event-triggered reporting in DRX with SSB time index detection	Rel-15	C001	UEs supporting 5GS NR SA FR1	Test 1 and 2	
			C028	UEs supporting NA SA FR1, per FR Gap and Gap Pattern ID 4	Test 3 and 4	
6.6.3	**Inter-RAT measurements**					
6.6.3.1	NR SA FR1 – E-UTRAN event-triggered reporting in non-DR	Rel-15	C025	UEs supporting 5GS NR SA FR1 and E-UTRAN		
6.6.3.2	NR SA FR1 – E-UTRAN event-triggered reporting in DRX	Rel-15	C025	UEs supporting 5GS NR SA FR1 and E-UTRAN		
6.6.4	**L1-RSRP for beam reporting**					
6.6.4.1	NR SA FR1 SSB-based L1-RSRP measurement in non-DRX	Rel-15	C001	UEs supporting 5GS NR SA FR1		

Clause	TC Title	Release	Applicability		Additional Information	Branch
			Condition	Comment		
6.6.4.2	NR SA FR1 SSB-based L1-RSRP measurement in DRX	Rel-15	C001	UEs supporting 5GS NR SA FR1		
6.6.4.3	NR SA FR1 CSI-RS-based L1-RSRP measurement in non-DRX	Rel-15	C001	UEs supporting 5GS NR SA FR1		
6.6.4.4	NR SA FR1 CSI-RS-based L1-RSRP measurement in DRX	Rel-15	C001	UEs supporting 5GS NR SA FR1		
6.7	**Measurement performance requirements**					
6.7.1	**SS-RSRP**					
6.7.1.1	**Intra-frequency measurements**					
6.7.1.1.1	NR SA FR1 SS-RSRP absolute measurement accuracy	Rel-15	C001	UEs supporting 5GS NR SA FR1		
6.7.1.1.2	NR SA FR1 SS-RSRP relative measurement accuracy	Rel-15	C001	UEs supporting 5GS NR SA FR1		
6.7.1.2	**Inter-frequency measurements**					
6.7.1.2.1	NR SA FR1-FR1 SS-RSRP absolute measurement accuracy	Rel-15	C001	UEs supporting 5GS NR SA FR1		
6.7.1.2.2	NR SA FR1-FR1 SS-RSRP relative measurement accuracy	Rel-15	C001	UEs supporting 5GS NR SA FR1		
6.7.2	**SS-RSRQ**					
6.7.2.1	NR SA FR1 SS-RSRQ measurement accuracy	Rel-15	C001	UEs supporting 5GS NR SA FR1		
6.7.2.2.1	NR SA FR1-FR1 SS-RSRQ absolute measurement accuracy	Rel-15	C001	UEs supporting 5GS NR SA FR1		
6.7.2.2.2	NR SA FR1-FR1 SS-RSRQ relative measurement accuracy	Rel-15	C001	UEs supporting 5GS NR SA FR1		
6.7.3	**SS-SINR**					
6.7.3.1	NR SA FR1 SS-SINR measurement accuracy	Rel-15	C034	UEs supporting 5GS NR SA FR1 and SS-SINR-meas		
6.7.3.2.1	NR SA FR1-FR1 SS-SINR absolute measurement accuracy	Rel-15	C034	UEs supporting 5GS NR SA FR1 and SS-SINR-meas		
6.7.3.2.2	NR SA FR1-FR1 SS-SINR relative measurement accuracy	Rel-15	C034	UEs supporting 5GS NR SA FR1 and SS-SINR-meas		
6.7.4	**L1-RSRP for beam reporting**					
6.7.4.1	NR SA FR1 SSB-based L1-RSRP measurement accuracy	FFS	FFS	FFS	NOTE 1	
6.7.4.2	NR SA FR1 CSI-RS-based L1-RSRP measurement accuracy	FFS	FFS	FFS	NOTE 1	
6.7.5	**E-UTRAN RSRP**					
6.7.6	**E-UTRAN RSRQ**					
6.7.6.1	NR SA FR1 – E-UTRAN RSRQ measurement accuracy	FFS	FFS	FFS	NOTE 1	
6.7.7	**E-UTRAN RS-SINR**					
6.7.7.1	NR SA FR1 – E-UTRAN RS-SINR measurement accuracy	FFS	FFS	FFS	NOTE 1	

NOTE 1: The test case is incomplete.
NOTE 2: Test X refers to the corresponding Sub-Test as defined in TS 38.533 [5].

Table 4.2-3a: Void

Table 4.2-4: Applicability of RRM NR SA FR2 conformance test cases, ref. TS 38.533 [5]

Clause	TC Title	Release	Applicability		Additional Information	Branch
			Condition	Comment		
7.1	**RRC_IDLE state mobility**					
7.1.1	**NR cell re-selection**					
7.1.1.1	NR SA FR2 cell re-selection	FFS	FFS	FFS	NOTE 1	
7.1.1.2	NR SA FR2-FR2 cell re-selection	FFS	FFS	FFS	NOTE 1	
7.2	**RRC_INACTIVE state mobility**					
7.3	**RRC_CONNECTED state mobility**					
7.3.1	**Handover**					
7.3.2	**RRC connection mobility control**					
7.3.2.1	**RRC re-establishment**					
7.3.2.1.1	NR SA FR2 RRC re-establishment	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.3.2.1.2	NR SA FR2 - FR2 RRC re-establishment	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.3.2.1.3	NR SA FR2 - FR2 RRC re-establishment without serving cell timing	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.3.2.2	**Random access**					
7.3.2.3	**RRC connection release with redirection**					
7.3.2.3.1	NR SA FR2 RRC connection release with redirection	FFS	FFS	FFS	NOTE 1	
7.4	**Timing**					
7.4.1	**UE transmit timing**					
7.4.2	**UE timer accuracy**					
7.4.3	**Timing advance**					
7.5	**Signalling characteristics**					
7.5.1	**Radio Link Monitoring**					
7.5.1.9	NR SA FR2 radio link monitoring UE scheduling restrictions	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.5.2	**Interruption**					
7.5.3	**Scell activation and deactivation delay**					
7.5.4	**UE UL carrier RRC reconfiguration delay**					
7.5.5	**Beam failure detection and link recovery procedures**					
7.5.5.1	NR SA FR2 SSB-based beam failure detection and link recovery in non-DRX	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.5.5.2	NR SA FR2 SSB-based beam failure detection and link recovery in DRX	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.5.5.3	NR SA FR2 CSI-RS-based beam failure detection and link recovery in non-DRX	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.5.5.4	NR SA FR2 CSI-RS-based beam failure detection and link recovery in DRX	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.5.6	**Active BWP switch delay**					
7.5.6.1	**Intra-frequency measurements**					
7.5.6.1.1	NR SA FR2 2DL CA DCI-based DL active BWP switch in non-DRX	FFS	FFS	FFS	NOTE 1	
7.5.6.1.2	NR SA FR1-FR2 DCI-based DL active BWP switch in non-DRX	FFS	FFS	FFS	NOTE 1	

Clause	TC Title	Release	Applicability		Additional Information	Branch
			Condition	Comment		
7.5.6.1.3	NR SA FR2 DCI-based DL active BWP switch in non-DRX	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.5.6.2	**RRC-based active BWP switch**					
7.5.6.2.1	NR SA FR2 RRC-based DL active BWP switch in non-DRX	FFS	FFS	FFS	NOTE 1	
7.6	**Measurement procedures**					
7.6.1	**Intra-frequency measurements**					
7.6.1.1	NR SA FR2 event-triggered reporting without gap in non-DRX	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.6.1.2	NR SA FR2 event-triggered reporting without gap in DRX	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.6.1.3	NR SA FR2 event-triggered reporting with gap in non-DRX	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.6.1.4	NR SA FR2 event-triggered reporting with gap in DRX	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.6.2	**Inter-frequency measurements**					
7.6.2.1	NR SA FR2-FR2 event-triggered reporting in non-DRX	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.6.2.2	NR SA FR2-FR2 event-triggered reporting in DRX	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.6.2.3	NR SA FR2-FR2 event-triggered reporting in non-DRX with SSB time index detection	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.6.2.4	NR SA FR2-FR2 event-triggered reporting in DRX with SSB time index detection	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.6.2.5	NR SA FR1-FR2 event-triggered reporting in non-DRX	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.6.2.6	NR SA FR1-FR2 event-triggered reporting in DRX	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.6.2.7	NR SA FR1-FR2 event-triggered reporting in non-DRX with SSB time index detection	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.6.2.8	NR SA FR1-FR2 event-triggered reporting in DRX with SSB time index detection	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.6.3	**L1-RSRP for beam reporting**					
7.6.3.1	NR SA FR2 SSB-based L1-RSRP measurement in non-DRX	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.6.3.2	NR SA FR2 SSB-based L1-RSRP measurement in DRX	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.6.3.3	NR SA FR2 CSI-RS-based L1-RSRP measurement in non-DRX	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.6.3.4	NR SA FR2 CSI-RS-based L1-RSRP measurement in DRX	Rel-15	C006	UEs supporting 5GS NR SA FR2	NOTE 1	
7.7	**Measurement performance requirements**					
7.7.1	**SS-RSRP**					
7.7.1.1	NR SA FR2 SS-RSRP measurement accuracy	FFS	FFS	FFS	NOTE 1	
7.7.1.2	NR SA FR2-FR2 SS-RSRP measurement accuracy	FFS	FFS	FFS	NOTE 1	

Clause	TC Title	Release	Applicability		Additional Information	Branch
			Condition	Comment		
7.7.1.3	**Inter-frequency measurements between FR1 and FR2**					
7.7.1.3.1	NR SA FR1-FR2 SS-RSRP measurement accuracy	FFS	FFS	FFS	NOTE 1	
7.7.2	**SS-RSRQ**					
7.7.3	**SS-SINR**					
7.7.4	**L1-RSRP for beam reporting**					
NOTE 1: The test case is incomplete. NOTE 2: Void. NOTE 3: Void.						

Table 4.2-4a: Void

Table 4.2-5: Applicability of E-UTRA – NR Inter-RAT conformance test cases, ref. TS 38.533 [5]

Clause	TC Title	Release	Applicability		Additional Information	Branch
			Condition	Comment		
NOTE 1: The test case is incomplete.						

Annex A (informative): Change history

Change history							
Date	**Meeting**	**TDoc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**New version**
2017-08	RAN5#76	R5-173911	-	-	-	Draft skeleton	0.0.1
2018-01	RAN5#1-5G-NR Adhoc	R5-180107	-	-	-	Updated after RAN5#1-5G-NR Adhoc: - Foreword, scope, references, definitions, symbols and abbreviations, recommended test case applicability updated - Sub-clause 4.1.1, 4.1.2, 4.1.3 and 4.1.4 added - Change history added	0.1.0
2018-03	RAN5 #78	R5-181687	-	-	-	TP for Clause 4.1.1 Range 1 standalone conformance test cases	0.2.0
2018-03	RAN5 #78	R5-181688	-	-	-	TP for Clause 4.1.2 Range 2 standalone conformance test cases	0.2.0
2018-03	RAN5 #78	R5-181689	-	-	-	TP for Clause 4.1.3 NR interworking between NR range1 and NR range2 and between NR and LTE conformance test cases	0.2.0
2018-04	RAN5#2-5G-NR Adhoc	R5-182013	-	-	-	TP for Clause 3 Definitions, symbols and abbreviations	0.3.0
2018-04	RAN5#2-5G-NR Adhoc	R5-182047	-	-	-	TP for Clause 4 Recommended test case applicability	0.3.0
2018-08	RAN5#80	R5-185209	-	-	-	TP for Clause 4.1.1 of TS 38.522	1.0.1
2018-08	RAN5#80	R5-185210	-	-	-	TP for Clause 4.1.2 of TS 38.522	1.0.1
2018-08	RAN5#80	R5-185211	-	-	-	TP for Clause 4.1.3 of TS 38.522	1.0.1
2018-09	RAN#81	-	-	-	-	raised to v15.0.0 with editorial changes only	15.0.0
2018-12	RAN#82	R5-186501	0013	-	F	Applicability rules implementation in 38.522	15.1.0
2018-12	RAN#82	R5-188223	0015	-	F	Applicability for RRM NR tests	15.1.0
2018-12	RAN#82	R5-187566	0016	-	F	Update note in section 4.1 to include CBW and SCS in RF test applicability	15.1.0
2018-12	RAN#82	R5-187849	0014	1	F	Adding applicability for new 38.521-1 CA TCs	15.1.0
2018-12	RAN#82	R5-187881	0008	1	F	Update Clause 1 Scope of TS 38.522	15.1.0
2018-12	RAN#82	R5-187884	0011	1	F	TP for Clause 4.1.2 of TS 38.522	15.1.0
2018-12	RAN#82	R5-187922	0017	-	F	Removing FR2 test case 7.4 from TS 38.522 due to testability issue	15.1.0
2019-01	RAN#82	R5-187882	0009	1	F	Update Clause 3 of TS 38.522	15.1.1
2019-01	RAN#82	R5-187883	0010	1	F	TP for Clause 4.1.1 of TS 38.522	15.1.1
2019-01	RAN#82	R5-187885	0012	1	F	TP for Clause 4.1.3 of TS 38.522	15.1.1
2019-03	RAN#83	R5-191722	0021	-	F	addition of applicability for BFD and measurement	15.2.0
2019-03	RAN#83	R5-192507	0020	1	F	TP for TS 38.522	15.2.0
2019-03	RAN#83	R5-192508	0022	1	F	Addition of RRM Test Cases Applicability	15.2.0
2019-06	RAN#84	R5-195444	0027	1	F	TP for TS 38.522	15.3.0
2019-06	RAN#84	-	-	-	-	Administrative release upgrade to match the release of 3GPP TS 38.508-1 and TS 38.521-1 which were upgraded at RAN#84 to Rel-16 due to Rel-16 relevant CR(s)	16.0.0
2019-06	RAN#84	-	-	-	-	Addition of missing Table part of R5-195444 and part of a note.	16.0.1
2019-06	RAN#84	-	-	-	-	Formatted big tables to landscape	16.0.2
2019-09	RAN#85	R5-197650	0030	1	-	TP for TS 38.522	16.1.0
2019-09	RAN#85	R5-197650	0030	1	-	Added missing changes of R5-197650	16.1.1
2019-12	RAN#86	R5-199089	0032	2	-	TP for TS 38.522	16.2.0
2020-03	RAN#87	R5-201036	0033	1	F	TP and format updated for TS 38.522	16.3.0
2020-06	RAN#88	R5-202958	0040	1	F	R16 TDD ENDC PC2 TP for TS 38.522	16.4.0
2020-06	RAN#88	R5-203114	0037	2	F	TP updated to applicability table	16.4.0

History

Document history		
V16.4.0	July 2020	Publication