**3GPP TSG-RAN WG5 Meeting # *R5-212562r2***

**Electronic Meeting, May 17 – May 28, 2021**

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| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** | **0071** | **rev** |  | **Current version:** |  |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network |  |

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| --- |
|  |
| ***Title:***  | Update of Applicability for inter-band EN-DC Including FR2 |
|  |  |
| ***Source to WG:*** | CMCC, Huawei, Apple, Qualcomm, Keysight, Ericsson, Bureau Veritas |
| ***Source to TSG:*** | R5 |
|  |  |
| ***Work item code:*** | NR\_CADC\_NR\_LTE\_DC\_R16-UEConTest |  | ***Date:*** | 2021-04-27 |
|  |  |  |  |  |
| ***Category:*** |  |  | ***Release:*** | Rel-17 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | Test Applicability for Inter-band EN-DC Including FR2 for R16 NR need to be updated. |
|  |  |
| ***Summary of change:*** | Test Applicability for Inter-band EN-DC Including FR2 for R16 NR have been updated. |
|  |  |
| ***Consequences if not approved:*** | The WP can not be completed. |
|  |  |
| ***Clauses affected:*** | 4.0, 4.1.3 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** | R1：Comments for E011, E012 and E013 have been updated.Clause affected has been added in the coversheet.R2: Comments for E011, E012, E013 and the corresponding TCs have been updated.  |

<<< START OF CHANGES >>>

## 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, Table 4.0-2 and Table 4.0-3 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 |
| C001a 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.4.3.1-7/3 THEN R ELSE N/A |
| C001b 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.4.3.5-1/1 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 |
| <<<Unchange skipped>>> |
| C011 IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-3/2 AND A.4.1-4/3 AND A.4.3.2B.2.0-2/1 THEN R ELSE N/A |
| C011a IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-3/2 AND A.4.1-4/3 AND A.4.3.2B.2.0-1/1 THEN R ELSE N/A |
| C011z IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-3/2 AND A.4.1-4/3 AND A.4.3.2B.2.0-2/1 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 AND A.4.1-4/4 AND A.4.3.2B.2.0-2/1 THEN R ELSE N/A |
| C012a IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-3/2 AND A.4.1-4/4 AND A.4.3.2B.2.0-1/1 THEN R ELSE N/A |
| C012b IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-3/2 AND A.4.1-4/4 AND A.4.3.2B.2.0-2A/2 THEN R ELSE N/A |
| C012c IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-3/2 AND A.4.1-4/4 AND A.4.3.2B.2.0-2A/3 THEN R ELSE N/A |
| C012d IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-3/2 AND A.4.1-4/4 AND A.4.3.2B.2.0-2A/4 THEN R ELSE N/A |
| C012e IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-3/2 AND A.4.1-4/4 AND A.4.3.2B.2.0-1/2 AND A.4.3.2B.2.0-1A/2 THEN R ELSE N/A |
| C012z IF (A.4.1-1/1 OR A.4.1-1/2) AND A.4.1-3/2 AND A.4.1-4/4 AND A.4.3.2B.2.0-2/1 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) AND NOT A.4.3.1-7a/2 THEN R ELSE N/A |
| <<<Unchange skipped>>> |
| NOTE 1: Cxxxx applicability is defined for enhanced type 1 receiver for NR related tests (A.4.3.9-1/1).NOTE 2: Cxxxy applicability is defined for alternative additional DMRS position for co-existence with LTE CRS related tests (A.4.3.2-1/20).NOTE 3: Cxxxz applicability is defined for modified MPR behaviour related test (A.4.3.2-1/25). |

<<< START OF CHANGES >>>

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 A.4.3.2B.2.0-1/1 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 A.4.3.2B.2.0-1/1 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 | UL(A.4.3.2B.2.1-2) AND A.4.3.2B.2.0-2/1 | All supported Intra-band contiguous EN-DC configurations in FR1(2UL CCs) |
| E003a | A.4.3.2B.2.1-2 AND A.4.3.2B.2.0-1/1 | All supported Intra-band contiguous EN-DC configurations in FR1(2DL CCs) |
| E004 | UL(A.4.3.2B.2.2-2) AND A.4.3.2B.2.0-2/1 | All supported Intra-band non-contiguous EN-DC configurations in FR1(2UL CCs) |
| E004a | A.4.3.2B.2.2-2 AND A.4.3.2B.2.0-1/1 | All supported Intra-band non-contiguous EN-DC configurations in FR1(2DL CCs) |
| E005 | UL(A.4.3.2B.2.3.1-2 OR A.4.3.2B.2.3.2-2 OR A.4.3.2B.2.3.3-2 OR A.4.3.2B.2.3.4-2 OR A.4.3.2B.2.3.5-2) AND A.4.3.2B.2.0-2/1 | All supported Inter-band EN-DC configurations within FR1 (2UL CCs) |
| E005a | A.4.3.2B.2.3.1-2 AND A.4.3.2B.2.0-1/1 | All supported Inter-band EN-DC configurations within FR1 (2DL CCs) |
| E006 | (A.4.3.2B.2.1-2 OR A.4.3.2B.2.2-2 OR A.4.3.2B.2.3.1-2 OR A.4.3.2B.2.3.2-2) AND A.4.3.2B.2.0-1/2 | All supported EN-DC configurations within FR1 (3DL CCs) |
| E007 | (A.4.3.2B.2.1-2 OR A.4.3.2B.2.2-2 OR A.4.3.2B.2.3.1-2 OR A.4.3.2B.2.3.2-2 OR A.4.3.2B.2.3.3-2) AND A.4.3.2B.2.0-1/3 | All supported EN-DC configurations within FR1 (4DL CCs) |
| E008 | (A.4.3.2B.2.1-2 OR A.4.3.2B.2.2-2 OR A.4.3.2B.2.3.1-2 OR A.4.3.2B.2.3.2-2 OR A.4.3.2B.2.3.3-2 OR A.4.3.2B.2.3.4-2) AND A.4.3.2B.2.0-1/4 | All supported EN-DC configurations within FR1 (5DL CCs) |
| E009 | (A.4.3.2B.2.1-2 OR A.4.3.2B.2.2-2 OR A.4.3.2B.2.3.1-2 OR A.4.3.2B.2.3.2-2 OR A.4.3.2B.2.3.3-2 OR A.4.3.2B.2.3.4-2 OR A.4.3.2B.2.3.5-2) AND A.4.3.2B.2.0-1/5 | All supported EN-DC configurations within FR1 (6DL CCs) |
| E010 | UL(A.4.3.2B.2.3.6-2 OR A.4.3.2B.2.3.7-2 OR A.4.3.2B.2.3.8-2 OR A.4.3.2B.2.3.9-2 OR A.4.3.2B.2.3.10-2) AND A.4.3.2B.2.0-2/1 | All supported Inter-band EN-DC configurations including FR2 (2UL CCs) |
| E010a | A.4.3.2B.2.3.6-2 AND A.4.3.2B.2.0-1/1 | All supported Inter-band EN-DC configurations including FR2 (2DL CCs) |
| E011 | UL(A.4.3.2B.2.3.6-2 OR A.4.3.2B.2.3.7-3) AND A.4.3.2B.2.0-2A/2 | All supported Inter-band EN-DC configurations including FR2 with 2 NR UL CCs |
| E011a | (A.4.3.2B.2.3.6-2 OR A.4.3.2B.2.3.7-3) AND A.4.3.2B.2.0-1/2 AND A.4.3.2B.2.0-1A/2 | All supported Inter-band EN-DC configurations including FR2 (3DL CCs(2NR DL CCs)) |
| E012 | UL(A.4.3.2B.2.3.1-2 OR A.4.3.2B.2.3.2-2 OR A.4.3.2B.2.3.3-2) AND A.4.3.2B.2.0-2A/3 | All supported Inter-band EN-DC configurations including FR2 with 3 NR UL CCs |
| E012a | (A.4.3.2B.2.3.1-2 OR A.4.3.2B.2.3.2-2 OR A.4.3.2B.2.3.3-2) AND A.4.3.2B.2.0-1/3 AND A.4.3.2B.2.0-1A/3 | All supported Inter-band EN-DC configurations including FR2 (4DL CCs(3NR DL CCs)) |
| E013 | UL(A.4.3.2B.2.3.1-2 OR A.4.3.2B.2.3.2-2 OR A.4.3.2B.2.3.3-2 OR A.4.3.2B.2.3.4-2) AND A.4.3.2B.2.0-2A/4 | All supported Inter-band EN-DC configurations including FR2 with 4 NR UL CCs  |
| E013a | (A.4.3.2B.2.3.1-2 OR A.4.3.2B.2.3.2-2 OR A.4.3.2B.2.3.3-2 OR A.4.3.2B.2.3.4-2) AND A.4.3.2B.2.0-1/4 AND A.4.3.2B.2.0-1A/4 | All supported Inter-band EN-DC configurations including FR2 (5DL CCs(4NR DL CCs)) |
| E014 | (A.4.3.2B.2.3.1-2 OR A.4.3.2B.2.3.2-2 OR A.4.3.2B.2.3.3-2 OR A.4.3.2B.2.3.4-2 OR A.4.3.2B.2.3.5-2) AND A.4.3.2B.2.0-1/5 AND A.4.3.2B.2.0-1A/5 | All supported Inter-band EN-DC configurations including FR2 (6DL CCs(5NR DL CCs)) |
| E015 | UL(A.4.3.2A.2.1-3 OR A.4.3.2A.3.1-3 OR A.4.3.2A.4.1-3 OR A.4.3.2A.4.2-3) AND A.4.3.2B.2.0-2/1 | All supported FR1 2UL CA configurations |
| E016 | (A.4.3.2A.2.1-3 OR A.4.3.2A.3.1-3 OR A.4.3.2A.4.1-3) AND A.4.3.2B.2.0-1/1 | All supported FR1 2DL CA configurations |
| E017 | (A.4.3.2A.2.1-3 OR A.4.3.2A.3.1-3 OR A.4.3.2A.4.1-3 OR A.4.3.2A.4.2-3) AND A.4.3.2B.2.0-1/2 | All supported FR1 3DL CA configurations |
| E018 | (A.4.3.2A.2.1-3 OR A.4.3.2A.3.1-3 OR A.4.3.2A.4.1-3 OR A.4.3.2A.4.2-3) AND A.4.3.2B.2.0-1/3 | All supported FR1 4DL CA configurations |
| E019 | ULSwitching(A.4.3.2A.4.1-3) | All supported FR1 2UL CA configurations with ULTxSwitching capability |

<<<Unchanged Sections Skipped>>>

### 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 (2UL CCs) | E003 |  | 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 (2UL CCs) | E004 |  | 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 (2UL CCs)  | E005 | PC3PC2 |  |
| **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 (2UL CCs) | E010 |  | NOTE 5Skip 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 (2UL CCs) | E010 |  | NOTE 1NOTE 5 |
| **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 1NOTE 5Skip 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)** |  |  |  |  |  |  |
| 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 1NOTE 5Skip 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 1NOTE 5Skip 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 | C009z | UEs supporting Intra-Band Contiguous EN-DC (2UL CCs) and modified MPR behaviour | E003 |  |  |
| 6.2B.2.2 | UE Maximum Output Power reduction for Intra-Band Non-Contiguous EN-DC | Rel-15 | C010z | UEs supporting Intra-Band non-contiguous EN-DC (2UL CCs) and modified MPR behaviour | E004 |  |  |
| 6.2B.2.3 | UE Maximum Output Power reduction for Inter-Band EN-DC within FR1 | Rel-15 | C011z | UEs supporting Inter-Band EN-DC within FR1 (2UL CCs) and modified MPR behaviour  | E005 | PC3PC2 | NOTE 5Skip 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 | C012z | UEs supporting Inter-Band EN-DC including FR2 (2UL CCs) and modified MPR behaviour | E010 |  | NOTE 1NOTE 5Skip 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** |  |  |  |  |  |  |
| 6.2B.3.1 | UE Additional Maximum Output Power reduction for Intra-band contiguous EN-DC | Rel-15 | C009z | UEs supporting Intra-Band Contiguous EN-DC (2UL CCs) and modified MPR behaviour | E003 |  |  |
| 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 | FFS | E005 | PC3PC2 | NOTE 1NOTE 5Skip 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 1NOTE 5Skip 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 (2UL CCs) | E003 |  | 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 (2UL CCs) | E004 |  | 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 (2UL CCs) | E005 |  | 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 (2UL CCs) | E003 |  | NOTE 5Skip 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 (2UL CCs) | E004 |  | NOTE 5Skip TC 6.3B.1.2 if UE supports SA and TS 38.521-1 TC 6.3.1 has been executed. |
| 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 (2UL CCs) | E005 |  | NOTE 5Skip 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 1NOTE 5Skip 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 1NOTE 5Skip 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 1NOTE 5Skip 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 1NOTE 5Skip 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 (2UL CCs) | E003 |  | NOTE 5Skip TC 6.3B.3.1 if UE supports SA and TS 38.521-1 TC 6.3.3.2 has been executed. |
| 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 (2UL CCs) | E004 |  | NOTE 5Skip 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 (2UL CCs) | E005 |  | NOTE 5Skip 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 (2UL CCs) | E003 |  | NOTE 5Skip 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 (2UL CCs) | E004 |  | NOTE 5Skip 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 (2UL CCs) | E005 |  | NOTE 5Skip TC 6.3B.4.3 if UE supports SA and TS 38.521-1 TC 6.3.3.4 has been executed. |
| **6.3B.8** | **Power control for EN-DC** |  |  |  |  |  |  |
| **6.3B.8.1** | **Absolute power tolerance for EN-DC** |  |  |  |  |  |  |
| 6.3B.8.1.1 | Absolute Power Tolerance for intra-band contiguous EN-DC | Rel-15 | C009 | UEs supporting intra-band contiguous EN-DC (2 UL CCs)  | E003 |  | NOTE 5Skip TC 6.3B.8.1.1 if UE supports SA and TS 38.521-1 TC 6.3.4.2 has been executed. |
| 6.3B.8.1.2 | Absolute Power Tolerance for intra-band non-contiguous EN-DC | Rel-15 | C010 | UEs supporting intra-band non-contiguous EN-DC (2 UL CCs) | E004 |  | NOTE 5Skip TC 6.3B.8.1.2 if UE supports SA and TS 38.521-1 TC 6.3.4.2 has been executed. |
| 6.3B.8.1.3 | Absolute Power Tolerance for inter-band EN-DC within FR1 | Rel-15 | C011 | UEs supporting inter-band EN-DC within FR1 (2 UL CCs) | E005 |  | NOTE 5Skip TC 6.3B.8.1.3 if UE supports SA and TS 38.521-1 TC 6.3.4.2 has been executed. |
| 6.3B.8.1.4 | Absolute Power Tolerance for inter-band EN-DC including FR2 | Rel-15 | FFS | FFS | FFS |  | NOTE 1 |
| **6.3B.8.2** | **Relative power tolerance for EN-DC** |  |  |  |  |  |  |
| 6.3B.8.2.1 | Relative Power Tolerance for intra-band contiguous EN-DC | Rel-15 | C009 | UEs supporting intra-band contiguous EN-DC (2 UL CCs)  | E003 |  | NOTE 5Skip TC 6.3B.8.2.1 if UE supports SA and TS 38.521-1 TC 6.3.4.3 has been executed. |
| 6.3B.8.2.2 | Relative Power Tolerance for intra-band non-contiguous EN-DC | Rel-15 | C010 | UEs supporting intra-band non-contiguous EN-DC (2 UL CCs) | E004 |  | NOTE 5Skip TC 6.3B.8.2.2 if UE supports SA and TS 38.521-1 TC 6.3.4.3 has been executed. |
| 6.3B.8.2.3 | Relative Power Tolerance for inter-band EN-DC within FR1 | Rel-15 | C011 | UEs supporting inter-band EN-DC within FR1 (2 UL CCs) | E005 |  | NOTE 5Skip TC 6.3B.8.2.3 if UE supports SA and TS 38.521-1 TC 6.3.4.3 has been executed. |
| 6.3B.8.2.4 | Relative Power Tolerance for inter-band EN-DC including FR2 | Rel-15 | FFS | FFS | FFS |  | NOTE 1 |
| **6.3B.8.1** | **Aggregate power tolerance for EN-DC** |  |  |  |  |  |  |
| 6.3B.8.3.1 | Aggregate Power Tolerance for intra-band contiguous EN-DC | Rel-15 | C009 | UEs supporting intra-band contiguous EN-DC (2 UL CCs)  | E003 |  | NOTE 5Skip TC 6.3B.8.3.1 if UE supports SA and TS 38.521-1 TC 6.3.4.4 has been executed. |
| 6.3B.8.3.2 | Aggregate Power Tolerance for intra-band non-contiguous EN-DC | Rel-15 | C010 | UEs supporting intra-band non-contiguous EN-DC (2 UL CCs) | E004 |  | NOTE 5Skip TC 6.3B.8.3.2 if UE supports SA and TS 38.521-1 TC 6.3.4.4 has been executed. |
| 6.3B.8.3.3 | Aggregate Power Tolerance for inter-band EN-DC within FR1 | Rel-15 | C011 | UEs supporting inter-band EN-DC within FR1 (2 UL CCs) | E005 |  | NOTE 5Skip TC 6.3B.8.3.3 if UE supports SA and TS 38.521-1 TC 6.3.4.4 has been executed. |
| 6.3B.8.3.4 | Aggregate Power Tolerance for inter-band EN-DC including FR2 | Rel-15 | FFS | FFS | FFS |  | NOTE 1 |
| **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 (2UL CCs) | E003 |  | NOTE 5Skip 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 (2UL CCs) | E004 |  | NOTE 5Skip TC 6.4B.1.2 if UE supports SA and TS 38.521-1 TC 6.4.1 has been executed. |
| 6.4B.1.3 | Frequency error for Inter-band EN-DC within FR1 | Rel-15 | FFS | FFS | FFS |  | NOTE 1NOTE 5Skip 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 (2UL CCs) | E010 |  | NOTE 5Skip 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 | C012b | UEs supporting Inter-Band EN-DC including FR2 with 2 NR UL CCs | E011 |  | NOTE 5 |
| 6.4B.1.4\_1.2 | Frequency Error for inter-band EN-DC including FR2 (4 CCs) | Rel-15 | C012c | UEs supporting Inter-Band EN-DC including FR2 with 3 NR UL CCs | E012 |  | NOTE 5 |
| 6.4B.1.4\_1.3 | Frequency Error for inter-band EN-DC including FR2 (5 CCs) | Rel-15 | C012d | UEs supporting Inter-Band EN-DC including FR2 with 4 NR UL CCs | E013 |  | 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 (2UL CCs) | E003 |  | NOTE 5Skip 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 (2UL CCs) | E003 |  | NOTE 5Skip 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 (2UL CCs) | E003 |  |  |
| 6.4B.2.1.4 | EVM Equalizer Flatness for intra-band contiguous EN-DC | Rel-15 | C009 | UEs supporting intra-band contiguous EN-DC (2UL CCs) | E003 |  | NOTE 5Skip TC 6.4B.2.1.4 if UE supports SA and TS 38.521-1 TC 6.4.2.4 has been executed. |
| **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 (2UL CCs) | E004 |  | NOTE 5Skip 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 (2UL CCs) | E004 |  | NOTE 5Skip 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 (2UL CCs) | E004 |  | NOTE 5Skip 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 (2UL CCs) | E004 |  | NOTE 5Skip 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 (2UL CCs) | E005 |  | NOTE 5Skip 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 (2UL CCs) | E005 |  | NOTE 5Skip TC 6.4B.2.3.2 if UE supports SA and TS 38.521-1 TC 6.4.2.2 has been executed. |
| 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 (2UL CCs) | E005 |  | NOTE 5Skip 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 (2UL CCs) | E005 |  | NOTE 5Skip 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 (2UL CCs) | E010 |  | NOTE 1NOTE 5Skip 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 (2UL CCs) | E010 |  | NOTE 1NOTE 5Skip 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 (2UL CCs) | E010 |  | NOTE 1NOTE 5Skip 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 (2UL CCs) | E010 |  | NOTE 1NOTE 5Skip TC 6.4B.2.4.4 if UE supports SA and TS 38.521-2 TC 6.4.2.4 has been executed. |
| **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 (2UL CCs) | E003 |  | 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 (2UL CCs) | E004 |  | NOTE 1NOTE 5Skip 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 (2UL CCs) | E005 |  | NOTE 5Skip 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 (2UL CCs) | E010 |  | NOTE 1NOTE 5Skip 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 1NOTE 5Skip 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 1NOTE 5Skip TC 6.5B.1.4\_1.2 if UE supports SA and TS 38.521-2 TC 6.5A.1.2 has been executed. |
| 6.5B.1.4\_1.3 | Occupied bandwidth for inter-band EN-DC including FR2 (5 CCs) | Rel-15 | FFS | FFS | FFS |  | NOTE 1NOTE 5Skip 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 (2UL CCs) | E003 |  |  |
| 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 (2UL CCs) | E003 |  |  |
| 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 (2UL CCs) | E003 |  |  |
| **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 (2UL CCs) | E004 |  | NOTE 1NOTE 5Skip 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 (2UL CCs) | E004 |  | NOTE 1NOTE 5Skip TC 6.5B.2.2.3 if UE supports SA and TS 38.521-1 TC 6.5.2.4.1 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 (2UL CCs) | E005 |  | NOTE 5Skip TC 6.5B.2.3.1 if UE supports SA and TS 38.521-1 6.5.2.2 has been executed. |
| 6.5B.2.3.2 | Additional Spectrum emissions mask for Inter-band EN-DC within FR1 | Rel-15 | FFS | FFS | FFS |  | NOTE 1NOTE 5Skip 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 (2UL CCs) | E005 |  | NOTE 5Skip 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 (2UL CCs) | E010 |  | NOTE 5Skip 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 | C012b | UEs supporting Inter-Band EN-DC including FR2 with 2 NR UL CCs | E011 |  | NOTE 5Skip 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 | C012c | UEs supporting Inter-Band EN-DC including FR2 with 3 NR UL CCs | E012 |  | NOTE 5Skip 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. |
| 6.5B.2.4.1\_1.3 | Spectrum emissions mask for Inter-band EN-DC including FR2 (5 CCs) | Rel-15 | C012d | UEs supporting Inter-Band EN-DC including FR2 with 4 NR UL CCs | E013 |  | NOTE 5Skip 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 (2UL CCs) | E010 |  | NOTE 1NOTE 5Skip 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 1NOTE 5Skip 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 1NOTE 5Skip 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 1NOTE 5Skip 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** |  |  |  |  |  |  |
| **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 (2UL CCs) | E003 |  | NOTE 5Skip 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 (2UL CCs) | E003 |  |  |
| **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 (2UL CCs) | E004 |  | NOTE 5Skip 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 (2UL CCs) | E005 |  |  |
| 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 (2UL CCs) | E005 |  |  |
| **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 (2UL CCs) | E010 |  | NOTE 1NOTE 5Skip 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)** |  |  |  |  |  |  |
| 6.5B.3.4.1\_1.1 | General Spurious Emissions for Inter-band including FR2 (3 CCs) | Rel-15 | FFS | FFS | FFS |  | NOTE 1NOTE 5Skip 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 1NOTE 5Skip 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 1NOTE 5Skip 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 (2UL CCs) | E010 |  | 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 (2UL CCs) | E003 |  |  |
| 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 (2UL CCs) | E004 |  | 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 (2UL CCs) | E005 |  | NOTE 5Skip 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 (2UL CCs) | E005 |  | NOTE 5Skip TC 6.5B.5.3 if UE supports SA and TC 38.521-1 TC 6.5.4 has been executed. |
| **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 | C009a | UEs supporting intra-band contiguous EN-DC (2DL CCs) | E003a |  |  |
| 7.3B.2.2 | Reference sensitivity for Intra-band non-contiguous EN-DC (2 CCs) | Rel-15 | C010a | UEs supporting intra-band non-contiguous EN-DC (2DL CCs) | E004a |  | NOTE 5Skip 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 | C011a | UEs supporting inter-band EN-DC within FR1 (2DL CCs) | E005a |  |  |
| **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 | C012a | UEs supporting inter-band EN-DC including FR2 (2DL CCs) | E010a |  | NOTE 5Skip 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 | C012e | UEs supporting inter-band EN-DC including FR2 with 3 DL CCs (2NR DL CCs) | E011a |  | NOTE 5Skip TC 7.3B.2.4\_1.1 if UE supports SA and TS 38.521-2 TC 7.3A.2.1 has been executed. |
| 7.3B.4 | EIS Spherical Coverage for Inter-band EN-DC including FR2 | Rel-15 | C012a | UEs supporting inter-band EN-DC including FR2 (2DL CCs) | E010a |  | NOTE 5Skip TC 7.3B.4 if UE supports SA and TS 38.521-2 TC 7.3.4 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 | C009a | UEs supporting Intra-Band Contiguous EN-DC (2DL CCs) | E003a |  |  |
| 7.4B.2 | Maximum Input Level for Intra-Band Non-Contiguous EN-DC (2 CCs) | Rel-15 | C010a | UEs supporting Intra-Band Non-Contiguous EN-DC (2DL CCs) | E004a |  |  |
| 7.4B.3 | Maximum Input Level for Inter-band EN-DC within FR1 | Rel-15 | C011a | UEs supporting Inter-band EN-DC within FR1 (2DL CCs) | E005a |  | NOTE 5Skip TC 7.4B.3 if UE supports SA and TS 38.521-1 TC 7.4 has been executed. |
| 7.4B.4 | Maximum Input Level for inter-band EN-DC including FR2 (2 CCs) | Rel-15 | C012a | UEs supporting Inter-band including FR2 (2DL CCs) | E010a |  | NOTE 1NOTE 5Skip 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 | C009a | UEs supporting intra-band contiguous EN-DC (2DL CCs) | E003a |  | NOTE 1 |
| 7.5B.2 | Adjacent Channel Selectivity for intra-band non-contiguous EN-DC (2 CCs) | Rel-15 | C010a | UEs supporting intra-band non-contiguous EN-DC (2DL CCs) | E004a |  | NOTE 5Skip 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 | C011a | UEs supporting inter-band EN-DC within FR1 (2DL CCs) | E005a |  | NOTE 5Skip 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 1NOTE 5Skip 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 1NOTE 5Skip TC 7.5B.4\_1.1 if UE supports SA and TS 38.521-2 TC 7.5A.1 has been executed. |
| 7.5B.4\_1.2 | Adjacent Channel Selectivity for inter-band EN-DC including FR2 (4 CCs) | Rel-15 | FFS | FFS | FFS |  | NOTE 1NOTE 5Skip 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 1NOTE 5Skip 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 1NOTE 5Skip 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 | C009a | UEs supporting Intra-Band Contiguous EN-DC (2DL CCs) | E003a |  |  |
| 7.6B.2.2 | Inband blocking for intra-band non-contiguous EN-DC (2 CCs) | Rel-15 | C010a | UEs supporting Intra-Band Non-Contiguous EN-DC (2DL CCs) | E004a |  | NOTE 5Skip 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 | C011a | UEs supporting Inter-band EN-DC within FR1 (2DL CCs) | E005a |  | NOTE 5Skip TC 7.6B.2.3 if UE supports SA and TS 38.521-1 TC 7.6.2 has been executed.  |
| 7.6B.2.3\_1.1 | Inband blocking for EN-DC within FR1 (3 CCs) | Rel-15 | C045 | UEs supporting intra-band contiguous EN-DC within FR1 with 3 DL CCs or inter-band EN-DC within FR1 with 3 DL CCs (2NR DL CCs) | E006 |  |  |
| 7.6B.2.3\_1.2 | Inband blocking for EN-DC within FR1 (4 CCs) | Rel-15 | C046 | UEs supporting intra-band contiguous EN-DC within FR1 with 4 DL CCs or inter-band EN-DC within FR1 with 4 DL CCs (3NR DL CCs) | E007 |  |  |
| 7.6B.2.3\_1.3 | Inband blocking for EN-DC within FR1 (5 CCs) | Rel-16 | C047 | UEs supporting inter-band EN-DC within FR1 with 5 DL CCs (4 NR DL CCs) | E008 |  | NOTE 1Skip TC 7.6B.2.3\_1.3 if UE supports NSA and TS 38.521-1 TC 7.6A.2.3 has been executed. |
| 7.6B.2.4 | Inband blocking for inter-band EN-DC including FR2 (2 CCs) | Rel-15 | FFS | FFS | FFS |  | NOTE 1NOTE 5Skip TC 7.6B.2.4 if UE supports SA and TS 38.521-2 TC 7.6.2 has been executed. |
| **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 | C009a | UEs supporting Intra-Band Contiguous EN-DC (2DL CCs) | E003a |  |  |
| 7.6B.3.2 | Out-of-band blocking for intra-band non-contiguous EN-DC (2 CCs) | Rel-15 | C010a | UEs supporting Intra-Band Non-Contiguous EN-DC (2DL CCs) | E004a |  | NOTE 5Skip 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 | C011a | UEs supporting Inter-band EN-DC within FR1 (2DL CCs) | E005a |  |  |
| 7.6B.3.3\_1.1 | Out-of-band blocking for EN-DC within FR1 (3 CCs) | Rel-15 | C048 | UEs supporting intra-band contiguous EN-DC in FR1 with 3 DL CCs | E006 |  |  |
| 7.6B.3.3\_1.2 | Out-of-band blocking for EN-DC within FR1 (4 CCs) | Rel-15 | C049 | UEs supporting intra-band contiguous EN-DC in FR1 with 4 DL CCs | E007 |  |  |
| **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 | C009a | UEs supporting Intra-Band Contiguous EN-DC (2DL CCs) | E003a |  |  |
| 7.6B.4.2 | Narrow band blocking for intra-band non-contiguous EN-DC (2 CCs) | Rel-15 | C010a | UEs supporting Intra-Band Non-Contiguous EN-DC (2DL CCs) | E004a |  | NOTE 5Skip 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 | C011a | UEs supporting Inter-band EN-DC within FR1 (2DL CCs) | E005a |  | NOTE 5Skip TC 7.6B.4.3 if UE supports SA and TS 38.521-1 TC 7.6.4 has been executed.  |
| 7.6B.4.3\_1.1 | Narrow band blocking for EN-DC within FR1 (3 CCs) | Rel-15 | C045 | UEs supporting intra-band contiguous EN-DC within FR1 with 3 DL CCs or inter-band EN-DC within FR1 with 3 DL CCs (2NR DL CCs) | E006 |  |  |
| 7.6B.4.3\_1.2 | Narrow band blocking for EN-DC within FR1 (4 CCs) | Rel-15 | C046 | UEs supporting intra-band contiguous EN-DC within FR1 with 4 DL CCs or inter-band EN-DC within FR1 with 4 DL CCs (3NR DL CCs) | E007 |  |  |
| 7.6B.4.3\_1.3 | Narrow band blocking for EN-DC within FR1 (5 CCs) | Rel-16 | C047 | UEs supporting inter-band EN-DC within FR1 with 5 DL CCs (4 NR DL CCs) | E008 |  | Skip TC 7.6B.4.3\_1.3 if UE supports NSA and TS 38.521-1 TC 7.6A.4.3 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 | C009a | UEs supporting Intra-Band Contiguous EN-DC (2DL CCs) | E003a |  |  |
| 7.7B.2 | Spurious Response for intra-band non-contiguous EN-DC (2 CCs) | Rel-15 | C010a | UEs supporting Intra-Band Non-Contiguous EN-DC (2DL CCs) | E004a |  | NOTE 5Skip 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 | C011a | UEs supporting Inter-band EN-DC within FR1 (2DL CCs) | E005a |  |  |
| 7.7B.3\_1.1 | Spurious Response for EN-DC within FR1 (3 CCs) | Rel-15 | C048 | UEs supporting intra-band contiguous EN-DC in FR1 with 3 DL CCs | E006 |  |  |
| 7.7B.3\_1.2 | Spurious Response for EN-DC within FR1 (4 CCs) | Rel-15 | C049 | UEs supporting intra-band contiguous EN-DC in FR1 with 4 DL CCs | E007 |  |  |
| **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 | C009a | UEs supporting Intra-Band Contiguous EN-DC (2DL CCs) | E003a |  | NOTE 1 |
| 7.8B.2.2 | Wideband Intermodulation for intra-band non-contiguous EN-DC in FR1 | Rel-15 | C010a | UEs supporting Intra-Band non-contiguous EN-DC (2DL CCs) | E004a |  | NOTE 5Skip 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 | C011a | UEs supporting inter-band EN-DC within FR1 (2DL CCs) | E005a |  | NOTE 5Skip 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 1NOTE 5Skip 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 | C009a | UEs supporting Intra-Band Contiguous EN-DC (2DL CCs) | E003a |  | NOTE 5Skip 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 | C010a | UEs supporting Intra-Band non-contiguous EN-DC (2DL CCs) | E004a |  | NOTE 5Skip 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 | C011a | UEs supporting inter-band EN-DC within FR1 (2DL CCs) | E005a |  | NOTE 5Skip 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)** |  |  |  |  |  |  |
| 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/branch is incomplete for any Band/CA/DC Configuration but has basic test configurations already. NOTE 1 can be removed only when the test case/branch is complete for at least one Band / CA/DC Configuration for at least one feature included in the test case/branch. Detailed completion status can be found in the corresponding test case section in 38.521-3.NOTE 2: Void.NOTE 3: Void.NOTE 4: Void.NOTE 5: Test only one EN-DC combination per 5G NR band as LTE anchor agnostic approach is applied.  |

Table 4.1.3-1a: Void

Table 4.1.3-1b: Void

Table 4.1.3-1c: Void

<< END OF CHANGES >>