3GPP TSG-RAN WG4 Meeting # 99-e R4-2107823

Electronic Meeting, 12– 20 April, 2021

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.101-3** | **CR** | **0570** | **rev** | **1** | **Current version:** | **16.7.0** |  |
|  | | | | | | | | |
| *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 | **X** | Radio Access Network |  | Core Network |  |

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| ***Title:*** | CR for 38.101-3 to introduce the missing MSD requirements | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | DC\_R16\_1BLTE\_1BNR\_2DL2UL-Core | | | | |  | ***Date:*** | | | 2021-05-24 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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 can be 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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | 1. Some MSD requirements of DC\_1\_n77/DC\_3\_n77/DC\_3\_n78/DC\_4\_n78/DC\_66\_n78/ DC\_5\_n78/ DC\_8\_n77/DC\_8\_n78/ DC\_8\_n41/ DC\_12\_n66 are missing in Rel-16. Based on the endorsed CR R4-2105379, the MSD requirements are added. 2. Some MSD requirements of DC\_12\_n78/ DC\_18\_n77/ DC\_18\_n78/ DC\_19\_n77/ DC\_19\_n78/ DC\_28\_n77/ DC\_28\_n78/ DC\_20\_n38/ DC\_20\_n41/ DC\_20\_n77/ DC\_20\_n78/ DC\_26\_n41/ DC\_28\_n75/ DC\_28\_n50/ DC\_71\_n78 are missing in Rel-16. 3. Some editorial errors for DC\_28\_n50 and 28\_n75 were observed. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Adding the MSD requirement based on the following assumptions.   1. Based on the endorsed CR R4-2105379, the MSD requirements are added. 2. The MSD requirements are added for DC\_12\_n78/ DC\_18\_n77/ DC\_18\_n78/ DC\_19\_n77/ DC\_19\_n78/ DC\_28\_n77/ DC\_28\_n78/ DC\_20\_n38/ DC\_20\_n41/ DC\_20\_n77/ DC\_20\_n78/ DC\_26\_n41/ DC\_28\_n75/ DC\_28\_n50/ DC\_71\_n78. 3. Some editorial errors for DC\_28\_n50 and 28\_n75 were corrected. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | |  | | --- | | 1. Some MSD requirements of are still missing in Rel-16 | |  | | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 7.3B.2.3.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | | **X** |  | Test specifications | | | | TS 38.521-1 | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

## **<<Start of Change1>>**

##### 7.3B.2.3.1 Reference sensitivity exceptions due to UL harmonic interference for EN-DC in NR FR1

Sensitivity degradation is allowed for a band if it is impacted by UL harmonic interference from another band part of the same EN-DC configuration. Reference sensitivity exceptions for the victim band (high) are specified in Table 7.3B.2.3.1-1 with uplink configuration of the agressor band (low) specified in Table 7.3B.2.3.1-2.

Table 7.3B.2.3.1-1: Reference sensitivity exceptions (MSD) due to UL harmonic for EN-DC in NR FR1

|  | E-UTRA or NR Band / Channel bandwidth of the affected DL band / MSD | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| UL band | DL band | 5 MHz  (dB) | 10 MHz  (dB) | 15 MHz  (dB) | 20 MHz  (dB) | 25 MHz  (dB) | 30 MHz (dB) | 40 MHz  (dB) | 50 MHz  (dB) | 60 MHz  (dB) | 70 MHz  (dB) | 80 MHz  (dB) | 90 MHz  (dB) | 100 MHz  (dB) |
| 1, 3 | n772,13 |  | 23.9 | 22.1 | 20.9 | 19.8 | 19.0 | 17.9 | 16.8 | 16.0 | 15.4 | 14.8 | 14.3 | 13.8 |
|  | n773 |  | 1.1 | 0.8 | 0.3 |  |  |  |  |  |  |  |  |  |
| 2 | n482,13 | 27.3 | 24.4 | 22.4 | 21.2 |  |  | 18 | 17.1 | 16.3 |  | 15 | 14.5 | 14 |
|  | n483 | 1.9 | 1.4 | 0.9 | 0.4 |  |  | 0 | 0 | 0 |  | 0 | 0 | 0 |
| 2 | n782,13 |  | 23.9 | 22.1 | 20.9 | 19.8 | 19.0 | 17.9 | 16.8 | 16.0 | 15.4 | 14.8 | 14.3 | 13.8 |
|  | n783 |  | 1.1 | 0.8 | 0.3 |  |  |  |  |  |  |  |  |  |
| 3 | n782,13 |  | 23.9 | 22.1 | 20.9 | 19.8 | 19.0 | 17.9 | 16.8 | 16.0 | 15.4 | 14.8 | 14.3 | 13.8 |
|  | n783 |  | 1.1 | 0.8 | 0.3 |  |  |  |  |  |  |  |  |  |
| 4 | n782,13 |  | 23.9 | 22.1 | 20.9 | 19.8 | 19.0 | 17.9 | 16.8 | 16.0 | 15.4 | 14.8 | 14.3 | 13.8 |
|  | n783 |  | 1.1 | 0.8 | 0.3 |  |  |  |  |  |  |  |  |  |
| 5 | n786,7 |  | 10.5 | 8.9 | 7.8 | 7.1 | 6.5 | 5.4 | 4.2 | 3.5 | 2.9 | 2.3 | 2.1 | 1.4 |
| 8 | n418,9 | N/A | 13 | 11.3 | 10.1 |  | 8.3 | 7.0 | 6.1 | 5.5 |  | 4.3 | 3.9 | 3.5 |
| 8 | n776,7  n786,7 |  | 10.8 | 9.1 | 8 | 7.2 | 6.5 | 5.1 | 4.2 | 3.5 | 2.9 | 2.3 | 2.1 | 1.4 |
| 8 | n794,5 |  |  |  |  |  |  | 6.8 | 6.2 | 5.6 |  | 4.9 |  | 4.4 |
| n8 | 314 | N/A | N/A | N/A | N/A |  |  |  |  |  |  |  |  |  |
| n8 | 78,9,10 | 10 | 7.6 | 6.2 | 5.3 |  |  |  |  |  |  |  |  |  |
| 12 | n668,9,10 | 10 | 7.5 | 6.2 | 5.5 | 4.5 | 3.7 | 2.4 |  |  |  |  |  |  |
| 12 | n784,5 |  | 10.4 | 8.9 | 7.8 | 7.1 | 6.5 | 4.7 | 3.7 | 3 | [2.3] | 1.7 | 1.2 | 0.7 |
| n12 | 484,5 | 13 | 10.4 | 8.9 | 7.8 |  |  |  |  |  |  |  |  |  |
| n12 | 668,9,10 | 10 | 7.5 | 6.2 | 5.5 |  |  |  |  |  |  |  |  |  |
| 18，19 | n774,5  n784,5 |  | 10.4 | 8.9 | 7.8 | 7.1 | 6.5 | 4.7 | 3.7 | 3 | [2.3] | 1.7 | 1.2 | 0.7 |
| 28 | n502,13 | 27.8 | 24.6 | 22.8 | 21.6 |  | [19.5] | 18.5 | 17.5 | 16.7 |  | 15.4 |  |  |
|  | n503 | 1.9 | 1.4 | 0.9 | 0.4 |  |  |  |  |  |  |  |  |  |
| 28 | n512,13 | 27.8 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | n513 | 1.9 |  |  |  |  |  |  |  |  |  |  |  |  |
| 28 | n774,5 n784,5 |  | 10.4 | 8.9 | 7.8 | 7.1 | 6.5 | 4.7 | 3.7 | 3 | [2.3] | 1.7 | 1.2 | 0.7 |
| 20 | n388,9 | 12.9 | 10.3 | 8.4 | 7.4 | [6.7] | [6.1] | 5 |  |  |  |  |  |  |
| 20 | n41 | 12.9 | 10.3 | 8.4 | 7.4 |  | [6.1] | 5 | 4.3 | 3.9 |  | 3.1 | 2.7 | 2.1 |
| 20 | n776,7  n786,7 |  | 10.8 | 9.1 | 8 | [7.3] | [6.8] | 6 | 4.0 | 3.2 | [2.5] | 2.0 | 1.5 | 1.0 |
| 26 | n418,9 |  | 10.3 | 8.4 | 7.4 |  | [6.1] | 5 | 4.3 | 3.9 |  | 3.1 | 2.9 | 2.7 |
| 26 | n776,7  n786,7 |  | 10.8 | 9.1 | 8 | [7.3] | [6.8] | 6 | 4.0 | 3.2 | [2.5] | 2.0 | 1.5 | 1.0 |
| n28 | 18,9,10 | 10.2 | 7.6 | 6.2 | 5.3 |  |  |  |  |  |  |  |  |  |
| 28 | n75 | 28.1 | 25.3 | 24.0 | 22.8 | [21.6] | [20.4] | [19.2] | [18.0] |  |  |  |  |  |
| n28 | 112,10,13 | 24.8 | 21.8 |  |  |  |  |  |  |  |  |  |  |  |
| n28 | 424,5,10 | 14.1 | 10.4 | 8.9 | 7.9 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n71 | 211 | 4.6 | 1.0 | 0.7 | 0.6 |  |  |  |  |  |  |  |  |  |
|  | 212 | 1.7 | 1.0 | 0.7 | 0.6 |  |  |  |  |  |  |  |  |  |
| n71 | 76,7 | 14.6 | 11.7 | 10.1 | 9 |  |  |  |  |  |  |  |  |  |
| 66 | n482,13 | 27.3 | 24.4 | 22.4 | 21.2 |  |  | 18 | 17.1 | 16.3 |  | 15 | 14.5 | 14 |
|  | n483 | 1.9 | 1.4 | 0.9 | 0.4 |  |  | 0 | 0 | 0 |  | 0 | 0 | 0 |
| 66 | n782,13 |  | 23.9 | 22.1 | 20.9 | 19.8 | 19.0 | 17.9 | 16.8 | 16.0 | 15.4 | 14.8 | 14.3 | 13.8 |
|  | n783 |  | 1.1 | 0.8 | 0.3 |  |  |  |  |  |  |  |  |  |
| n66 | 482,13 | 27.3 | 24.4 | 22.4 | 21.2 |  |  |  |  |  |  |  |  |  |
|  | 483 | 1.9 | 1.4 | 0.9 | 0.4 |  |  |  |  |  |  |  |  |  |
| 71 | n784,5 |  | 10.4 | 8.9 | 7.8 | 7.1 | 6.5 | 4.7 | 3.7 | 3 | [2.3] | 1.7 | 1.2 | 0.7 |
|  | NOTE 1: Void  NOTE 2: The requirements should be verified for UL EARFCN or NR ARFCN of the aggressor (lower) band (superscript LB) such that in MHz and  with carrier frequency in the victim (higher) band in MHz and the channel bandwidth configured in the lower band.  NOTE 3: The requirements are only applicable to channel bandwidths no larger than 20 MHz and with a carrier frequency at  MHz offset from  in the victim (higher band) with , whereandare the channel bandwidths configured in the aggressor (lower) and victim (higher) bands in MHz, respectively.  NOTE 4: These requirements apply when there is at least one individual RE within the uplink transmission bandwidth of the aggressor (lower) band for which the 5th transmitter harmonic is within the downlink transmission bandwidth of a victim (higher) band.  NOTE 5: The requirements should be verified for UL EARFCN of the aggressor (lower) band (superscript LB) such that in MHz and  with carrier frequency in the victim (higher) band in MHz and the channel bandwidth configured in the lower band.  NOTE 6: These requirements apply when there is at least one individual RE within the uplink transmission bandwidth of the aggressor (lower) band for which the 4th transmitter harmonic is within the downlink transmission bandwidth of a victim (higher) band.  NOTE 7: The requirements should be verified for UL EARFCN of the aggressor (lower) band (superscript LB) such that in MHz and  with carrier frequency in the victim (higher) band in MHz and the channel bandwidth configured in the lower band.  NOTE 8: These requirements apply when there is at least one individual RE within the uplink transmission bandwidth of the aggressor (lower) for which the 3rd transmitter harmonic is within the downlink transmission bandwidth of a victim (higher) band.  NOTE 9 The requirements should be verified for UL EARFCN of the aggressor (lower) band (superscript LBsuch that  in MHz and  with the carrier frequency in the victim (higher) band in MHz and  the channel bandwidth configured in the low band.  NOTE 10: Applicable for the operations with 2 or 4 antenna ports supported in the band with carrier aggregation configured.  NOTE 11: These requirements apply when the lower edge frequency of the 5 MHz uplink channel in Band 71 is located at or below 668 MHz and the downlink channel in Band 2 is located with its upper edge at 1990 MHz.  NOTE 12: These requirements apply when the lower edge frequency of the 10 MHz, 15 MHz, or 20 MHz uplink channel in Band 71 is located at or below 668 MHz and the downlink channel in Band 2 is located with its upper edge at 1990 MHz.  NOTE 13: These requirements apply when there is at least one individual RE within the uplink transmission bandwidth of the aggressor (lower) band for which the 2nd transmitter harmonic is within the downlink transmission bandwidth of a victim (higher) band and a range ∆FHD above and below the edge of this downlink transmission bandwidth. The value ∆FHD depends on the EN-DC band combination: ∆FHD = 10 MHz for DC\_1\_n77, DC\_2\_n48, DC\_2\_n77, DC\_48\_n66, DC\_66\_n48, DC\_66\_n77, DC\_3\_n77, DC\_3\_n78, DC\_11\_n28 and DC\_28\_n50, DC\_28\_n51, DC\_66\_n78.  NOTE 14: No requirements apply when there is at least one individual RE within the uplink transmission bandwidth of the low band for which the 2nd transmitter harmonic is within the downlink transmission bandwidth of the high band. The reference sensitivity for all active downlink component carriers is only verified when this is not the case (the requirements specified in clause 7.3.1 from TS 36.101-1 apply unless otherwise specified).  NOTE 15: MSD test point can be chosen according to supported BW and lowest SCS supported by the UE. | | | | | | | | | | | | | |

Table 7.3B.2.3.1-2: Uplink configuration for reference sensitivity exceptions due to UL harmonic interference for EN-DC in NR FR1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | E-UTRA or NR Band / Channel bandwidth of the affected DL band / UL RB allocation of the agressor band | | | | | | | | | | | | | | |
| UL band | DL band | | SCS of UL band  (kHz) | 5  MHz  (LCRB) | 10 MHz  (LCRB) | 15 MHz  (LCRB) | 20 MHz  (LCRB) | 25 MHz  (LCRB) | 30 MHz  (LCRB) | 40 MHz  (LCRB) | 50 MHz  (LCRB) | 60 MHz  (LCRB) | 70 MHz  (LCRB) | 80 MHz  (LCRB) | 90 MHz  (LCRB) | 100 MHz  (LCRB) |
| 1 | n77 | | 15 |  | 25 | 36 | 50 | 64 | 80 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 2 | n48 | | 15 | 12 | 25 | 36 | 50 |  |  | 100 | 100 | 100 |  | 100 | 100 | 100 |
| 2 | n78 | | 15 |  | 25 | 36 | 50 |  |  | 50 | 50 | 50 |  | 50 | 50 | 50 |
| 3 | n77, n78 | | 15 |  | 25 | 36 | 50 | 64 | 80 | 50 | 50 | 50 | 100 | 50 | 50 | 50 |
| 4 | n78 | | 15 |  | 25 | 36 | 50 | 64 | 80 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 5 | n78 | | 15 | 8 | 16 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 8 | n41 | | 15 |  | 16 | 25 | 25 |  | 25 | 25 | 25 | 25 |  | 25 | 25 | 25 |
| 8 | n77  n78 | | 15 |  | 16 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 8 | n79 | | 15 |  |  |  |  |  |  | 25 | 25 | 25 |  | 25 |  | 25 |
| n8 | 7 | | 15 | 8 | 16 | 25 | 25 |  |  |  |  |  |  |  |  |  |
| 12 | n66 | | 15 | 8 | 16 | 20 | 20 | 20 | 20 | 20 |  |  |  |  |  |  |
| 12 | n78 | | 15 |  | 10 | 15 | 20 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| n12 | 48 | | 15 | 5 | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |
| n12 | 66 | | 15 | 8 | 16 | 20 | 20 |  |  |  |  |  |  |  |  |  |
| 18 | n77,  n78 | | 15 |  | 16 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 19 | n77, n78 | | 15 |  | 16 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 20 | n38 | | 15 | 8 | 16 | 25 | 25 | 25 | 25 | 25 |  |  |  |  |  |  |
| 20 | n41 | | 15 | 8 | 16 | 25 | 25 |  | 25 | 25 | 25 | 25 |  | 25 | 25 | 25 |
| 20 | n77, n78 | | 15 |  | 16 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 26 | n41 | | 15 |  | 16 | 25 | 25 |  | 25 | 25 | 25 | 25 |  | 25 | 25 | 25 |
| 26 | n77,  n78 | | 15 |  | 16 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| n28 | 1 | | 15 | 8 | 16 | 25 | 25 |  |  |  |  |  |  |  |  |  |
| 28 | n75 | | 15 | 8 | 16 | 25 | 25 | 25 | 25 | 25 | 25 |  |  |  |  |  |
| 28 | n50 | | 15 | 12 | 25 | 25 | 25 |  | 25 | 25 | 25 | 25 |  | 25 |  |  |
| 28 | n51 | | 15 | 12 |  |  |  |  |  |  |  |  |  |  |  |  |
| n28 | 11 | | 15 | 12 | 25 |  |  |  |  |  |  |  |  |  |  |  |
| n28 | 42 | | 15 | 5 | 10 | 15 | 20 |  |  |  |  |  |  |  |  |  |
|  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 28 | n77,  n78 | | 15 |  | 10 | 15 | 20 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 66 | n48 | | 15 | 12 | 25 | 36 | 50 |  |  | 100 | 100 | 100 |  | 100 | 100 | 100 |
| 66 | n78 | | 15 |  | 25 | 36 | 50 | 64 | 80 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| n66 | 48 | | 15 | 12 | 25 | 36 | 50 |  |  |  |  |  |  |  |  |  |
| n71 | 2 | | 15 | 254  85 | 254  85 | 204  85 | 204  85 |  |  |  |  |  |  |  |  |  |
| n71 | 7 | | 15 | 8 | 16 | 25 | 25 |  |  |  |  |  |  |  |  |  |
| 71 | n78 | | 15 |  | 10 | 15 | 20 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
|  | | NOTE 1: The UL configuration applies regardless of the channel bandwidth of the UL band unless the UL resource blocks exceed that specified in Table 7.3.1-2 in TS 36.101 [4] or Table 7.3.2-3 in TS 38.101-1 [2] for the uplink bandwidth in which case the allocation according to Table 7.3.1-2 in TS 36.101 [4] or Table 7.3.2-3 in TS 38.101-1 [2] applies  NOTE 2: Void  NOTE 3: Unless stated otherwise, UL resource blocks shall be centred within the transmission bandwidth configuration for the channel bandwidth.  NOTE 4: These requirements apply when the lower edge frequency of the 5 MHz uplink channel in Band 71 is located at or below 668 MHz and the downlink channel in Band 2 is located with its upper edge at 1990 MHz.  NOTE 5: These requirements apply when the lower edge frequency of the 10 MHz, 15 MHz, or 20 MHz uplink channel in Band 71 is located at or below 668 MHz and the downlink channel in Band 2 is located with its upper edge at 1990 MHz.  NOTE 6: If the aggressor band is NR band, the test SCS and UL RB can be adjusted according to supported BW and lowest SCS supported by the UE | | | | | | | | | | | | | | |

Table 7.3B.2.3.1-3: Reference sensitivity QPSK PREFSENS (EN-DC with n46)

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| E-UTRA or NR Band / Channel bandwidth of the affected DL band / MSD | | | | | | | | | | | | |
| UL band | DL band | 5  MHz  (dB) | 10 MHz  (dB) | 15 MHz  (dB) | 20 MHz  (dB) | 25 MHz  (dB) | 40 MHz  (dB) | 50 MHz  (dB) | 60 MHz  (dB) | 80 MHz  (dB) | 90 MHz  (dB) | 100 MHz  (dB) |
| 2 | n461 |  |  |  | N/A |  | N/A |  | N/A | N/A |  |  |
| n46 | 22,3 | 28 | 28 | 28 | 28 |  |  |  |  |  |  |  |
| 66 | n46 |  |  |  | N/A |  | N/A |  | N/A | N/A |  |  |
| NOTE 1: These requirements apply when there is at least one individual RE within the downlink (victim) transmission bandwidth which falls into the reference sensitivity exclusion region as specified in Table 6.x.1.7-2 and Table 6.x.1.7-3.  NOTE 2: These requirements apply when there is at least one individual RE within the uplink transmission bandwidth of the aggressor (higher) band and when the frequency range of relative higher band’s uplink channel bandwidth or uplink 1st adjacent channel bandwidth is fully or partially overlapped with the downlink transmission bandwidth of a victim (lower) band.  NOTE 3:   The requirements for a victim (lower) band apply for UL EARFCN of the aggressor (higher) band (superscript HB) such that cid:image004.png@01D629D8.2A3DDB60  in MHz with cid:image005.png@01D629D8.2A3DDB60  the DL carrier frequency in the lower band and the UL carrier frequency in the higher band, both in MHz. . | | | | | | | | | | | | |

Table 7.3B.2.3.1-4: n46 Reference sensitivity measurement exclusion region in MHz

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Licensed Component Carriers / E-UTRA Band / Harmonic order / Channel BW in UL | | | | | |
| Band | Harmonic order | 5MHz | 10MHz | 15MHz | 20MHz |
| 2 | 3 | +/- 15 | +/- 23 | +/- 35 | +/- 45 |
| 66 | 3 | +/- 15 | +/- 23 | +/- 35 | +/- 45 |
| NOTE 1: Even though UL harmonic does not fall directly into n46 the exclusion region still applies.  NOTE 2: The center of the exclusion region is obtained by multiplying the uplink channel center frequency by the harmonic order. | | | | | |

Table 7.3B.2.3.1-5: Uplink configuration for reference sensitivity exceptions due to receiver harmonic mixing for EN-DC paring with n46

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| E-UTRA or NR Band / SCS / Channel bandwidth of the affected DL band / UL RB allocation of the agressor band | | | | | | | | | | | | | |
| UL band | DL band | SCS of UL band  (kHz) | 5 MHz  (LCRB) | 10 MHz  (LCRB) | 15 MHz  (LCRB) | 20 MHz  (LCRB) | 25 MHz  (LCRB) | 40 MHz  (LCRB) | 50 MHz  (LCRB) | 60 MHz  (LCRB) | 80 MHz  (LCRB) | 90 MHz  (LCRB) | 100 MHz  (LCRB) |
| n46 | 2 | 15 | 25 | 50 | 75 | 100 |  |  |  |  |  |  |  |

## **<<End of Change1>>**