**3GPP TSG-RAN WG4 Meeting #96-e R4-2011756**

Electronic Meeting, August 17th – 28th, 2020

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| *CR-Form-v11.2* |
| **CHANGE REQUEST** |
|  |
|  | **TS38.101-3** | **CR** | **0304** | **rev** | **1** | **Current version:** | **15.10.0** |  |
|  |
| *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 missing DC\_1A\_n40A Cross Band Noise MSD for large NR UL BW in 38.101-3 |
|  |  |
| ***Source to WG:*** | Qualcomm Incorporated |
| ***Source to TSG:*** | R4 |
|  |  |
| ***Work item code:*** | NR\_newRAT-Core |  | ***Date:*** | 2020-08-23 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-15 |
|  | *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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
|  |  |
| ***Reason for change:*** | Missing cross band noise MSD for various interband ENDC band combinations with large NR UL BW |
|  |  |
| ***Summary of change:*** | Cross band noise MSD must be added to the following interband ENDC band combinations:1. DC\_1A\_n40A is missing MSD = 21.5dB for n40 UL BW = 80MHz due to 5th order distortion
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| ***Consequences if not approved:*** | UE cannot meet REFSENS for interband ENDC combinations  |
|  |  |
| ***Clauses affected:*** | 7.3B.2.3.4 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  |  |
| ***affected:*** | **x** |  |  Test specifications | 38.521-1 |
| ***(show related CRs)*** |  | **X** |  O&M Specifications |   |
|  |  |
| ***Other comments:*** |  |

< start of changes >

##### 7.3B.2.3.4 Reference sensitivity exceptions due to cross band isolation for EN-DC in NR FR1

Sensitivity degradation is allowed for a band if it is impacted by UL of another band part of the same EN-DC configuration due to cross band isolation issues. Reference sensitivity exceptions for the victim band are specified in Table 7.3B.2.3.4-1 with uplink configuration of the agressor band specified in Table 7.3B.2.3.4-2.

Table 7.3B.2.3.4-1: Reference sensitivity exceptions (MSD) due to cross band isolation 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) | 80 MHz(dB) | 90 MHz(dB) | 100 MHz(dB) |
| 1 | n40 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |  |  |
| n40 | 1 | 8.3 | 8.3 | 8.3 | 8.3 |  |  |  |  |  |  |  |  |
| n40 | 13 | 21.5 | 21.5 | 21.5 | 21.5 |  |  |  |  |  |  |  |  |
| n41 | 25 | 0.6 | 0.6 | 0.6 | 0.6 |  |  |  |  |  |  |  |  |
| n77 | 411 | 4.5 | 4.5 | 4.5 | 4.5 |  |  |  |  |  |  |  |  |
| 41 | n77 |  | 8.3 | 8.3 | 8.3 |  |  | 6.3 | 5.3 | 4.5 | 4.0 | 3.9 | 3.8 |
| 3 | n51 | 6.4 |  |  |  |  |  |  |  |  |  |  |  |
| 30 | n66 | 8.3 | 8.3 | 8.3 | 8.3 |  |  | 8.3 |  |  |  |  |  |
| n78 | 71 | 4.5 | 4.5 | 4.5 | 4.5 |  |  |  |  |  |  |  |  |
| n78 | 38 | 3.3 | 3.3 | 3.3 | 3.3 |  |  |  |  |  |  |  |  |
| n78 | 411 | 4.5 | 4.5 | 4.5 | 4.5 |  |  |  |  |  |  |  |  |
| n78 | 46 |  |  |  | 7 |  |  |  |  |  |  |  |  |
| 41 | n78 |  | 8.3 | 8.3 | 8.3 |  |  | 6.3 | 5.3 | 4.5 | 4.0 | 3.9 | 3.8 |
| NOTE 1: Applicable only when harmonic mixing MSD for this combination is not applied. NOTE 2: The DL victim band should be configured using the lowest SCS that is compatible with the highest CBW for which an MSD is specified.NOTE 3: Applicable only for n40 UL BW = 80MHz. |

Table 7.3B.2.3.4-2: Uplink configuration for reference sensitivity exceptions due to cross band isolation for EN-DC in NR FR1

|  |  |
| --- | --- |
|  | 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) | 30 MHz(LCRB) | 40 MHz(LCRB) | 50 MHz(LCRB) | 60 MHz(LCRB) | 80 MHz(LCRB) | 90 MHz(LCRB) | 100 MHz(LCRB) |
| 1 | n40 | 15 | 25 | 50 | 75 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |  |  |
| n40 | 1 | 15 | 25 | 50 | 75 | 100 |  |  |  |  |  |  |  |  |
| n403 | 1 | 30 |  | 50 | 50 | 50 |  |  |  |  |  |  |  |  |
| n41 | 25 | 30 | 160 | 160 | 160 | 160 |  |  |  |  |  |  |  |  |
| n77 | 41 | 30 | 270 | 270 | 270 | 270 |  |  |  |  |  |  |  |  |
| 41 | n77 | 15 |  | 100 | 100 | 100 |  |  | 100 | 100 | 100 | 100 | 100 | 100 |
| 3 | n51 | 15 | 25 |  |  |  |  |  |  |  |  |  |  |  |
| 30 | n66 | 15 | 25 | 25 | 25 | 25 |  |  | 25 |  |  |  |  |  |
| n78 | 7 | 30 | 270 | 270 | 270 | 270 |  |  |  |  |  |  |  |  |
| n78 | 38 | 30 | 270 | 270 | 270 | 270 |  |  |  |  |  |  |  |  |
| n78 | 41 | 30 | 270 | 270 | 270 | 270 |  |  |  |  |  |  |  |  |
| n78 | 46 | 30 |  |  |  | 270 |  |  |  |  |  |  |  |  |
| 41 | n78 | 15 |  | 100 | 100 | 100 |  |  | 100 | 100 | 100 | 100 | 100 | 100 |
| NOTE 1: The UL configuration applies regardless of the channel bandwidth of the UL band. UL resource blocks allocation in the table shall be further limited to 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].NOTE 2: When the maximum UL RB allocation “LCRB” value is less than the maximum transmission bandwidth configuration “NRB” defined in Table 5.3.2-1 in 38.101-1 [2] for the specified UL band SCS, the UL band should be configured using the lowest CBW that is compatible with the maximum specified LCRB valueNOTE 3: NOTE 3: Applicable only for n40 UL BW = 80MHz. |

< end of changes >