**3GPP TSG-RAN4 Meeting #105 *R4-2218620***

**Toulouse, France, 14th Nov 2022 - 18th Nov 2022**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.101-1** | **CR** | **1232** | **rev** | **-** | **Current version:** | **17.7.0** |  |
|  | | | | | | | | |
| *For* ***[HE](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)******[LP](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)*** *on using this form: comprehensive instructions can be found at  <http://www.3gpp.org/Change-Requests>.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | BigCR for High power UE for inter-band CA with power class 2 on single carrier uplink on FDD band | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | China Unicom | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | HPUE\_FR1\_FDD\_NR\_CADC\_R18-Core | | | | |  | ***Date:*** | | | 2022-11-07 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | To introduce PC2 on FDD carrier for CA\_n1A-n78A and CA\_n3A-n78A by 1Tx UE architecture, related requirements were agreed in RAN4-104bis-e meeting (R4-2217121). | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Includes PC2 for Tx and Rx requirements for DL\_n1A-n78A\_UL\_n1A and DL\_n3A-n78A\_UL\_n3A by1Tx UE architecture, as endorsed in draft CR R4-2220481 . | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Relevant high power UE requirements not supported. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | | **X** |  | Test specifications | | | | TS38.521-1 | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

===================Start of 1st changes=================

#### 5.5A.3.1 Configurations for inter-band CA (two bands)

Table 5.5A.3.1-1a: NR CA configurations and bandwidth combinations sets defined for inter-band CA (two bands)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration or single uplink carrier10 | NR Band | Channel bandwidth (MHz) (NOTE 3) | Bandwidth combination set |
| CA\_n1A-n3A | CA\_n1A-n3A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n3 | 5, 10, 15, 20, 25, 30 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n1A-n3B | - | n1 | 5, 10, 15, 20 | 0 |
|  |  | n3 | CA\_n3B\_BCS0 |  |
| CA\_n1B-n3A | CA\_n1A-n3A | n1 | CA\_n1B\_BCS0 | 0 |
|  |  | n3 | 5, 10, 15, 20, 25, 30 |  |
|  |  | n1 | CA\_n1B\_BCS0 | 1 |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n1A-n3(2A) | CA\_n1A-n3A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n3 | CA\_n3(2A)\_BCS0 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n3 | CA\_n3(2A)\_BCS0 |  |
|  |  | n1 | 5, 10, 15, 20 | 2 |
|  |  | n3 | CA\_n3(2A)\_BCS1 |  |
| CA\_n1(2A)-n3A | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n1(2A)-n3(2A) | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n3 | CA\_n3(2A)\_BCS1 |  |
| CA\_n1(2A)-n3B | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n3 | CA\_n3B\_BCS0 |  |
| CA\_n1A-n5A | CA\_n1A-n5A | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n5 | 5, 10, 15, 20 |  |
| CA\_n1(2A)-n5A | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n5 | 5, 10, 15, 20 |  |
| CA\_n1A-n7A | CA\_n1A-n7A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
| CA\_n1A-n7B | CA\_n1A-n7A  CA\_n7B | n1 | 5, 10, 15, 20 | 0 |
|  |  | n7 | CA\_n7B\_BCS0 |  |
| CA\_n1(2A)-n7A | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
| CA\_n1A-n8A | CA\_n1A-n8A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n8 | 5, 10, 15, 20 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n8 | 5, 10, 15, 20 |  |
| CA\_n1(2A)-n8A | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n8 | 5, 10, 15, 20 |  |
| CA\_n1A-n18A | CA\_n1A-n18A | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n18 | 5, 10, 15 |  |
| CA\_n1A-n20A | CA\_n1A-n20A | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n20 | 5, 10, 15, 20 |  |
| CA\_n1A-n28A | CA\_n1A-n28A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n28 | 5, 10, 15, 20 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n28 | 5, 10, 15, 20, 30 |  |
| CA\_n1(2A)-n28A | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n28 | 5, 10, 15, 20 |  |
| CA\_n1A-n38A | - | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n38 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n1(2A)-n38A | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n38 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n1A-n40A | CA\_n1A-n40A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n40 | 5, 10, 15, 20, 25, 30, 40, 50, 60, 80 |  |
| CA\_n1A-n40B | - | n1 | 5, 10, 15, 20 | 0 |
|  |  | n40 | CA\_n40B\_BCS0 |  |
| CA\_n1A-n41A | CA\_n1A-n41A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n41 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n41 | 10, 15, 20, 30, 40, 50, 60, 80, 90, 100 |  |
| CA\_n1A-n67A | - | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n67 | 5, 10, 15, 20 |  |
| CA\_n1A-n74A | CA\_n1A-n74A | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n74 | 5, 10, 15, 20 |  |
| CA\_n1A-n77A | CA\_n1A-n77A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n77 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n1A-n77(2A) | CA\_n1A-n77A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS0 |  |
| CA\_n1A-n77(3A) | CA\_n1A-n77A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n77 | CA\_n77(3A)\_BCS1 |  |
| CA\_n1A-n78A | n18  n788  CA\_n1A-n78A8 | n1 | 5, 10, 15, 20 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40 | 2 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n1 | 5, 10, 15, 20 | 3 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n1A-n78(2A) | CA\_n1A-n78A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS0 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n78 | CA\_n78(2A)\_BCS1 |  |
|  |  | n1 | 5, 10, 15, 20 | 2 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |
| CA\_n1A-n78C | CA\_n78C  CA\_n1A-n78A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n78 | CA\_n78C\_BCS0 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n78 | CA\_n78C\_BCS0 |  |
|  |  | n1 | 5, 10, 15, 20, 25, 30, 40 | 2 |
|  |  | n78 | CA\_n78C\_BCS0 |  |
| CA\_n1(2A)-n78A | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n1A-n79A | CA\_n1A-n79A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n1A-n79C | CA\_n1A-n79A | n1 | 5, 10, 15, 20 | 0 |
|  |  | n79 | CA\_n79C\_BCS0 |  |
| CA\_n1(2A)-n79A | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n79 | 40, 60, 80, 100 |  |
| CA\_n1(2A)-n79C | - | n1 | CA\_n1(2A)\_BCS0 | 0 |
|  |  | n79 | CA\_n79C\_BCS0 |  |

<<Unchanged omitted>>

Table 5.5A.3.1-1c: NR CA configurations and bandwidth combinations sets defined for inter-band CA (two bands)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NR CA configuration | Uplink CA configuration or single uplink carrier10 | NR Band | Channel bandwidth (MHz) (NOTE 3) | Bandwidth combination set |
| CA\_n3A-n5A | CA\_n3A-n5A | n3 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n5 | 5, 10, 15, 20 |  |
| CA\_n3(2A)-n5A | - | n3 | CA\_n3(2A)\_BCS0 | 0 |
|  |  | n5 | 5, 10, 15, 20 |  |
| CA\_n3A-n7A | CA\_n3A-n7A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
| CA\_n3A-n7B | CA\_n3A-n7A  CA\_n7B | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n7 | CA\_n7B\_BCS0 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n7 | CA\_n7B\_BCS0 |  |
| CA\_n3(2A)-n7A | - | n3 | CA\_n3(2A)\_BCS0 | 0 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
|  |  | n3 | CA\_n3(2A)\_BCS1 | 1 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
| CA\_n3B-n7A | - | n3 | CA\_n3B\_BCS0 | 0 |
|  |  | n7 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
| CA\_n3A-n8A | CA\_n3A-n8A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n8 | 5, 10, 15, 20 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n8 | 5, 10, 15, 20 |  |
| CA\_n3(2A)-n8A | - | n3 | CA\_n3(2A)\_BCS0 | 0 |
|  |  | n8 | 5, 10, 15, 20 |  |
| CA\_n3A-n18A | CA\_n3A-n18A | n3 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n18 | 5, 10, 15 |  |
| CA\_n3A-n20A | CA\_n3A-n20A | n3 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n20 | 5, 10, 15, 20 |  |
| CA\_n3A-n28A | CA\_n3A-n28A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n28 | 5, 10, 15, 20 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n28 | 5, 10, 15, 20 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40, 50 | 2 |
|  |  | n28 | 5, 10, 15, 20, 30 |  |
| CA\_n3(2A)-n28A | - | n3 | CA\_n3(2A)\_BCS0 | 0 |
|  |  | n28 | 5, 10, 15, 20 |  |
| CA\_n3A-n34A | CA\_n3A-n34A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n34 | 5, 10, 15 |  |
| CA\_n3A-n38A | CA\_n3A-n38A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n38 | 5, 10, 15, 20, 40 |  |
| CA\_n3B-n38A | - | n3 | CA\_n3B\_BCS0 | 0 |
|  |  | n38 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n3(2A)-n38A | - | n3 | CA\_n3(2A)\_BCS1 | 0 |
|  |  | n38 | 5, 10, 15, 20, 25, 30, 40 |  |
| CA\_n3A-n40A | CA\_n3A-n40A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n40 | 5, 10, 15, 20, 25, 30, 40, 50, 60, 80 |  |
| CA\_n3A-n41A | n418  CA\_n3A-n41A8 | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n41 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30 | 1 |
|  |  | n41 | 10, 15, 20, 40, 50, 60 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40 | 2 |
|  |  | n41 | 10, 15, 20, 30, 40, 50, 60, 80, 90, 100 |  |
| CA\_n3A-n41B | CA\_n3A-n41A | n3 | 5, 10, 15, 20 | 0 |
|  |  | n41 | CA\_n41B\_BCS0 |  |
| CA\_n3A-n41C | CA\_n3A-n41A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n41 | CA\_n41C\_BCS0 |  |
| CA\_n3A-n41(2A) | CA\_n3A-n41A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n41 | CA\_n41(2A)\_BCS0 |  |
| CA\_n3A-n67A | - | n3 | 5, 10, 15, 20, 25, 30, 40, 50 | 0 |
|  |  | n67 | 5, 10, 15, 20 |  |
| CA\_n3A-n74A | CA\_n3A-n74A | n3 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n74 | 5, 10, 15, 20 |  |
| CA\_n3A-n75A | - | n3 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n75 | 5, 10, 15, 20, 25, 30, 40, 50 |  |
| CA\_n3A-n77A | CA\_n3A-n77A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n77 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
| CA\_n3A-n77(2A) | CA\_n77(2A)  CA\_n3A-n77A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n77 | CA\_n77(2A)\_BCS0 |  |
| CA\_n3A-n77(3A) | CA\_n3A-n77A | n3 | 5, 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n77 | CA\_n77(3A)\_BCS0 |  |
| CA\_n3A-n78A | n38  n788  CA\_n3A-n78A8 | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n78 | 10, 15, 20, 40, 50, 60, 80, 90, 100 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40, | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n3A-n78C | CA\_n78C  CA\_n3A-n78A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n78 | CA\_n78C\_BCS0 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n78 | CA\_n78C\_BCS0 |  |
| CA\_n3A-n78(2A) | CA\_n3A-n78A  CA\_n78(2A) | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n78 | CA\_n78(2A)\_BCS0 |  |
|  | CA\_n3A-n78A | n3 | 5, 10, 15, 20, 25, 30, 40 | 1 |
|  |  | n78 | CA\_n78(2A)\_BCS2 |  |
| CA\_n3(2A)-n78A | - | n3 | CA\_n3(2A)\_BCS0 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
|  |  | n3 | CA\_n3(2A)\_BCS1 | 1 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n3B-n78A | - | n3 | CA\_n3B\_BCS0 | 0 |
|  |  | n78 | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |  |
| CA\_n3A-n79A | CA\_n3A-n79A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
|  |  | n3 | 5, 10, 15, 20, 25, 30, 40, 50 | 1 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n3(2A)-n79A | CA\_n3A-n79A | n3 | CA\_n3(2A)\_BCS1 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n3A-n79C | CA\_n79C  CA\_n3A-n79A | n3 | 5, 10, 15, 20, 25, 30 | 0 |
|  |  | n79 | CA\_n79C\_BCS0 |  |
| CA\_n3(2A)-n79C | CA\_n3A-n79A | n3 | CA\_n3(2A)\_BCS1 | 0 |
|  |  | n79 | CA\_n79C\_BCS0 |  |
| CA\_n3B-n79A | - | n3 | CA\_n3B\_BCS0 | 0 |
|  |  | n79 | 40, 50, 60, 80, 100 |  |
| CA\_n3B-n79C | - | n3 | CA\_n3B\_BCS0 | 0 |
|  |  | n79 | CA\_n79C\_BCS0 |  |

## ===================End of 1st changes=================

## ===================Start of 2nd changes=================

### 7.3A.4 Reference sensitivity exceptions due to UL harmonic interference for CA

Sensitivity degradation is allowed for different combinations of UL configurations and DL channel bandwidths if a band in frequency range 1 is impacted by UL harmonic interference from another band which belongs to NR band in frequency range 1 of the same downlink CA configuration. Reference sensitivity exceptions and uplink/downlink configurations due to UL harmonic from a PC3 aggressor NR UL band for either single band uplink or PC3 or PC2 CA are specified in Table 7.3A.4-1. For these exceptions, only the listed test points in Table 7.3A.4-1 are needed to be tested.

<<Unchanged omitted>>

Table 7.3A.4-1a: NR-U reference sensitivity measurement exclusion region in MHz.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| NR Band / Harmonic order / Channel BW in UL | | | | | | | | | |
| Band | Harmonic order | 5MHz | 10MHz | 15MHz | 20 MHz | 25 MHz | 30 MHz | 40MHz | 50 MHz |
| n7 | 2 | +/- 10 | +/- 20 | +/- 30 | +/- 40 | +/- 50 | +/- 60 | +/- 80 | +/- 100 |
| n25 | 3 | +/- 15 | +/- 23 | +/- 35 | +/- 45 |  |  | +/- 90 |  |
| n66 | 3 | +/- 15 | +/- 23 | +/- 35 | +/- 45 |  |  | +/- 90 |  |
| n48 | 2 | +/- 10 | +/- 20 | +/- 30 | +/- 40 |  |  | +/- 80 |  |
| NOTE 1: Even though UL harmonic does not fall directly into NR-U band the exclusion region still applies.  NOTE 2: The center of the exclusion region is obtained by multiplying the UL channel center frequency by the harmonic order. | | | | | | | | | |

For a PC2 aggressor NR UL band for NR DL CA FR1, the maximum amount of degradation is specified in Table 7.3A.4-2a for a UE not indicating *txDiversity-r16* [15].

**Table 7.3A.4-2a: Reference sensitivity exceptions and uplink/downlink configurations due to UL harmonic from a PC2 aggressor NR UL band for NR DL CA FR1 for UE not supporting Tx Diversity**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **UL band** | **DL band** | **UL BW** | **SCS of UL band** | **UL RB Allocation** | **DL BW** | **MSD** | **UL/DL fc condition** | **UL/DL harmonic order** |
| **(MHz)** | **(kHz)** | **LCRB** | **(MHz)** | **(dB)** |
| n3 | n78 | 5 | 15 | 25 (RBstart=0) | 10 | 27.1 | NOTE 2 | UL2/DL1  direct-hit |
| n3 | n78 | 10 | 15 | 50 (RBstart=0) | 100 | 16.6 | NOTE 2 | UL2/DL1  direct-hit |
| NOTE 2: The requirements should be verified for UL NR-ARFCN of the aggressor (high) band (superscript HB) such that in MHz and  with carrier frequency in the victim (lower) band in MHz and  the channel bandwidth configured in the higher band. | | | | | | | | |

====================End of 2nd changes================