**3GPP TSG-RAN4 Meeting #103-e *R4-2208893***

**Online, , May 9-20, 2022**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.133** | **CR** | **2343** | **rev** | **1** | **Current version:** | **17.5.0** |  |
|  | | | | | | | | |
| *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 |  | Radio Access Network | **X** | Core Network |  |

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|  | | | | | | | | | | |
| ***Title:*** | CR to TS 38.133: Introduction of band n104 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_6GHz-Core | | | | |  | ***Date:*** | | | 2022-05-09 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***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 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:*** | | Add support for bands n104 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add n104 to the corresponding FR1 group | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | n104 won’t be correctly supported | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 3.5.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | Note this CR gives support for the introduction of the new 6 GHz licensed band n104. It will be revised, pending on the agreement on UE REFSENS for n104. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

*<Start of the change>*

### 3.5.2 NR operating bands in FR1

NR frequency bands grouping for FR1 is specified in Table 3.5.2-1.

Table 3.5.2-1: NR frequency band groups for FR1

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Group | NR FDD | | NR TDD | | NR SDL | | NR CCA10 | |
|  | Band group notation | Operating bands | Band group notation | Operating bands | Band group notation | Operating bands | Band group notation | Operating bands |
| A | NR\_FDD\_FR1\_A | n1, n18, n24, n70, n744, n91, n92, n93, n94 | NR\_TDD\_FR1\_A | n34, n389, n39, n40, n50, n51, n53, n101 | NR\_SDL\_FR1\_A | n67, n75, n76 | NR\_CCA\_FR1\_A | - |
| B | NR\_FDD\_FR1\_B | n65, n66, n743 | NR\_TDD\_FR1\_B | n387 | NR\_SDL\_FR1\_B | - | NR\_CCA\_FR1\_B | - |
| C | NR\_FDD\_FR1\_C | n30 | NR\_TDD\_FR1\_C | n48, n771, n78, n79 | NR\_SDL\_FR1\_C | - | NR\_CCA\_FR1\_C | - |
| D | NR\_FDD\_FR1\_D | n28 | NR\_TDD\_FR1\_D | n772 | NR\_SDL\_FR1\_D | - | NR\_CCA\_FR1\_D | - |
| E | NR\_FDD\_FR1\_E | n2, n5, n7 | NR\_TDD\_FR1\_E | n41, n90 | NR\_SDL\_FR1\_E | - | NR\_CCA\_FR1\_E | - |
| F | NR\_FDD\_FR1\_F | n266 | NR\_TDD\_FR1\_F | [n104] | NR\_SDL\_FR1\_F | - | NR\_CCA\_FR1\_F | - |
| G | NR\_FDD\_FR1\_G | n3, n8, n12, n13, n14, n20, n71, n85 | NR\_TDD\_FR1\_G | - | NR\_SDL\_FR1\_G | n29 | NR\_CCA\_FR1\_G | - |
| H | NR\_FDD\_FR1\_H | n25 | NR\_TDD\_FR1\_H | - | NR\_SDL\_FR1\_H | - | NR\_CCA\_FR1\_H | - |
| I | NR\_FDD\_FR1\_I | - | NR\_TDD\_FR1\_I |  | NR\_SDL\_FR1\_I | - | NR\_CCA\_FR1\_I | n46 |
| J | NR\_FDD\_FR1\_J | - | NR\_TDD\_FR1\_J | n478, n96 | NR\_SDL\_FR1\_J | - | NR\_CCA\_FR1\_J | n96 |
| NOTE 1: Except 3.8 GHz to 4.2 GHz.  NOTE 2: Only 3.8 GHz to 4.2 GHz.  NOTE 3: Except 1475.9 MHz to 1510.9 MHz.  NOTE 4: Only when the band is confined in 1475.9 MHz to 1510.9 MHz.  NOTE 5: These bands are used only in NR carrier aggregation with other NR bands according to NR CA band combinations specified in TS 38.101-1 [18] and TS 38.101-3 [20].  NOTE 6: The minimum Io condition is reduced by 0.5 dB when the carrier frequency of the assigned NR channel bandwidth is within 865-894 MHz.  NOTE 7: When this band is only used for V2X SL service, the band is exclusively used for NR V2X in particular regions.  NOTE 8: This band is unlicensed band used for V2X service. There is no expected network deployment in this band.  NOTE 9: When this band is only used for WAN service.  NOTE 10: Operating bands where operation on carrier frequencies with CCA is supported. | | | | | | | | |

*<End of the change>*

*<Start of the change>*

## B.1.2 Conditions for measurements on NR intra-frequency cells for cell re-selection

This clause defines the following conditions for NR intra-frequency measurements performed based on SSBs for cell re-selection: SSB\_RP and SSB Ês/Iot, applicable for a corresponding operating band.

The conditions are defined in Table B.1.2-1 for FR1 NR cells.

The conditions are defined in Table B.1.2-2 for FR2 NR cells.

Table B.1.2-1: Conditions for intra-frequency cell re-selection in FR1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | NR operating band groups Note1 | Minimum SSB\_RP | | SSB Ês/Iot |
| dBm / SCSSSB | | dB |
| SCSSSB = 15 kHz | SCSSSB = 30 kHz |
| **Conditions** | NR\_FDD\_FR1\_A, NR\_TDD\_FR1\_A | -124 | -121 | ≥ -4 |
| NR\_FDD\_FR1\_B | -123.5 | -120.5 |
| NR\_TDD\_FR1\_C | -123 | -120 |
| NR\_FDD\_FR1\_D, NR\_TDD\_FR1\_D | -122.5 | -119.5 |
| NR\_FDD\_FR1\_E, NR\_TDD\_FR1\_E | -122 | -119 |
| NR\_FDD\_FR1\_F[, NR\_TDD\_FR1\_F] | -121.5 | -118.5 |
| NR\_FDD\_FR1\_G | -121 | -118 |
| NR\_FDD\_FR1\_H | -120.5 | -117.5 |
| NOTE 1: NR operating band groups are defined in clause 3.5.2. | | | | |

*<End of the change>*