**3GPP T****SG-RAN WG4 Meeting #116bis revision of R4-2514453**

**Prague, Czech Republic, 13th – 18th October, 2025**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** |  | **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)*.* | | | | | | | | |
|  | | | | | | | | |

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Draft CR to TS 38.141-2 OTA test reduction for out-of-band blocking requirement | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_BS\_RF\_req\_evo-Perf | | | | |  | ***Date:*** | | | 2025-09-23 |
|  |  | | | |  | |  | | |  |
| ***Category:*** |  |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | This is draft CR to TS 38.141-2 with implementation of OTA test scope reduction for OTA out-of-band blocking requirement for BS type 1-O. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | For interfering and wanted signals for the OTA transmitter intermodulation requirement clarification with NOTE 4 is added to reflect potential agremeents from BS OTA test scope reductions. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | OTA test specification will not be reduced for agreed cases. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 7.6.4.2.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

<Start of changes>

7.6.4.2 Procedure

7.6.4.2.1 *BS type 1-O* procedure for out-of-band blocking

1) Place BS and the test antenna(s) according to annex E.2.4.1.

2) Align the BS and test antenna(s) according to the directions to be tested.

3) Connect test antenna(s) to the measurement equipment as shown in annex E.2.4.1.

4) The test antenna(s) shall be dual (or single) polarized covering the same frequency ranges as the *BS* and the blocking frequencies. If the test antenna does not cover both the wanted and interfering signal frequencies, separate test antennas for the wanted and interfering signal are required.

5) The OTA blocking interferer is injected into the test antenna, with the blocking interfererproducing specified interferer field strength level for each supported polarization. The interferer shall be *polarization matched* in-band and the polarization maintained for out-of-band frequencies.

6) Generate the wanted signal in receiver target reference direction, according to the applicable test configuration (see clause 4.8) using applicable reference measurement channel to the RIB, according to annex A.1.

7) For FDD operation, configure the beam peak direction for the transmitter units associated with the RIB under test according to the declared reference beam direction pair for the appropriate beam identifier with the carrier set-up and power allocation according to the applicable test configuration(s) (see clause 4.8). The transmitter may be turned OFF for the out-of-band blocker tests when the frequency of the blocker is such that no IM2 or IM3 products fall inside the bandwidth of the wanted signal.

8) Adjust the signal generators to the type of interfering signals, levels and the frequency offsets as specified for general test requirements in table 7.6.5.1.1-1. The distance between the test object and test antenna injecting the interferer signal is adjusted when necessary to ensure specified interferer signal level to be received.

9) The CW interfering signal shall be swept within the frequency range specified in clause 7.6.5.1.1 with the step size specified in table 7.6.4.1-1.

**Table 7.6.4.1-1: Interferer signal step size for FR1**

|  |  |  |
| --- | --- | --- |
| **Frequency range**  **(MHz)** | **Minimum supported *BS channel bandwidth* (MHz)** | **Measurement**  **step size**  **(MHz)** |
| FR1 | 5 | 1 |
|  | 10 | 3 |
|  | 20 | 6 |

10) Measure the performance of the wanted signal at the receiver unit associated with the RIB, as defined in the clause 7.6.5, for the relevant carriers specified by the test configuration in clause 4.7 and 4.8.

11) Repeat for all supported polarizations.

In addition, for *multi-band RIB*, the following steps shall apply:

12) For *multi-band RIB* and single band tests, repeat the steps above per involved band where single band test configurations and test models shall apply with no carrier activated in the other band.

<End of changes>