**3GPP TSG-RAN4 Meeting # 104-e *R4-221XXXX***

**Electronic meeting, August 15 – August 26, 2022**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **38.141-1** | **CR** | XXXX | **rev** | **-** | **Current version:** | **15.12.0** |  |
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| *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:***  | Big CR for TS 38.141-1 Maintenance RF part (Rel-15, CAT F) |
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| ***Source to WG:*** | MCC, Nokia |
| ***Source to TSG:*** | R4 |
|  |  |
| ***Work item code:*** | NR\_newRAT-Perf |  | ***Date:*** | 2022-08-10 |
|  |  |  |  |  |
| ***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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
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| ***Reason for change:*** | R4-2212503 Draft CR to 38.141-1: Clarification on RMS detection mode:RMS detection mode is defined for ACLR while the required measurement duration is not clarified. The corresponding changes for other requirements using RMS detection were agreed in RAN4#102-e meeting |
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| ***Summary of change:*** | R4-2212503 Draft CR to 38.141-1: Clarification on RMS detection mode:Clarification on required average time for ACLR is added |
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| ***Consequences if not approved:*** | R4-2212503 Draft CR to 38.141-1: Clarification on RMS detection mode:The clarification on ACLR RMS measurement is missing. |
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| ***Clauses affected:*** | 6.6.3.4.2 |
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|  | **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 change 1>

##### 6.6.3.4.2 Procedure

For *BS type 1-H* where there may be multiple *TAB connectors*, they may be tested one at a time or multiple *TAB connectors* may be tested in parallel as shown in annex D.1.1 for *BS type 1-C* or in annex D.3.1 for *BS type 1-H*. Whichever method is used the procedure is repeated until all *TAB connectors* necessary to demonstrate conformance have been tested.

1) Connect the *single-band connector* or *multi-band connector* under test to measurement equipment as shown in annex D.1.1 for *BS type 1-C* and in annex D.3.1 for *BS type 1-H*. All connectors not under test shall be terminated.

 The measurement device characteristics shall be:

- Measurement filter bandwidth: defined in clause 6.6.3.5.

- Detection mode: true RMS voltage or true average power.

The emission power should be averaged over an appropriate time duration to ensure the measurement is within the measurement uncertainty in Table 4.1.2.2-1.

2) For a connectors declared to be capable of single carrier operation only (D.16), set the representative connectors under test to transmit according to the applicable test configuration in clause 4.8 using the corresponding test models NR-FR1‑TM 1.1 in clause 4.9.2 at *rated carrier output power* Prated,c,AC for *BS type 1-C* and Prated,c,TABC for *BS type 1-H* (D.21).

 For a connector under test declared to be capable of multi-carrier and/or CA operation (D.15-D.16) set the connector under test to transmit on all carriers configured using the applicable test configuration and corresponding power setting specified in clauses 4.7 and 4.8 using the corresponding test models or set of physical channels in clause 4.9.2.

3) Measure ACLR for the frequency offsets both side of channel frequency as specified in table 6.6.3.5.2‑1. In multiple carrier case only offset frequencies below the lowest and above the highest carrier frequency used shall be measured.

4) For the ACLR requirement applied inside sub-block gap for non-contiguous spectrum operation, or inside *Inter RF Bandwidth gap* for multi-band operation:

a) Measure ACLR inside sub-block gap or *Inter RF Bandwidth gap* as specified in clause 6.6.3.5.2, if applicable.

b) Measure CACLR inside sub-block gap or *Inter RF Bandwidth gap* as specified in clause 6.6.3.5.2, if applicable.

5) Repeat the test with the channel set-up according to NR-FR1-TM 1.2 in clause 4.9.2.

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

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

#### 6.6.3.5 Test requirements

##### <End of change 1>