**3GPP TSG-RAN WG4 Meeting # 105 *draft* R4-2220307**

**Toulouse, France, 14 - 18 November 2022**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **38.141-2** | **CR** | **xxxx** | **rev** |  | **Current version:** | **17.7.0** |  |
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| *For* [***HELP***](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 draft CR to TS38.141-2 FR2-2 RF conformance introduction | | | | | | | | | |
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| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
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| ***Work item code:*** | NR\_ext\_to\_71GHz-Perf | | | | |  | ***Date:*** | | | 2022-12-02 |
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| ***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)* | |
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| ***Reason for change:*** | | The following inputs were incorporated:   * R4-2220201: Changes are required in clauses 6.3 to 6.5 for extending current NR operation to 71GHz. * R4-2220287: This draft CR adds support for FR2-2 in TS 38.141-2, clause 4. Information agreed in way-forward R4-2214374 is implemented. This draft CR is following the work-split agreed in R4-2217365. * R4-2219970: As per worksplit in R4-2217365, in this draft CR we provide a placeholder to captured FR2-2 upates for sections 1,2,3, 6.7.1, 6.7.2, 6.7.3, 6.7.4, 7.6. * R4-2220200: Current table of span and number of measurement points for OBW measurements for FR2 is not applicable to FR2-2. * R4-2220204: For FR2-2, Capture update on clause 6.6 (EVM and TAE requirement) as well as EVM measurement interval update which changed to 80 slots (FR2-2) from 10 ms (FR1 and FR2-1). Annex L In-channel TX tests also needs to be updated. * R4-2220208: Introduce BS RF RX conformance testing for FR2-2. * R4-2220211: Based on the work split for FR2-2 BS conformance testing requirement in R4-2217365, this draft CR is to introduce conformance testing requirement for receiver spurious emission, receiver intermodulation. * R4-2220212: Based on the work split for FR2-2 BS conformance testing requirement in R4-2217365, this draft CR is to introduce conformance testing requirement for receiver in-channel selectivity. | | | | | | | | |
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| ***Summary of change:*** | | The following inputs were incorporated:   * R4-2220201: Required changes are made in clauses 6.3 to 6.5 (and related MU and TT in clause 4.1.2.2 and annex C.1) for extending current NR operation to 71GHz. * R4-2220287: The intention with this draft CR is to stimulate discussion and create a baseline for clause 4 as input for the big CR later to be created to add support for 71 GHz in TS 38.141-2. This is a revised version of R4-2218837. * R4-2219970:   + 1, 2, 3: placeholder for FR2-2 updates, if any.   + 6.7.1, 6.7.2, 6.7.3, 6.7.4, 7.6: FR2-2 requirements placeholder * R4-2220200: Add a table of span and number of measurement points for OBW measurements for FR2-2. * R4-2220204:   + In Clause 6.6,     - EVM and TAE requirements are updated for FR2-2     - EVM measurement interval updated to 80 slots for FR2-2     - EVM requirement with FR2-2 MU value [1.1]%   + In Annex L,     - Measurement interval is changed to 80 slots for FR2-2. All related text to be updated in Annex L. * R4-2220208:   + 1) Add MU for FR2-2 for OTA reference sensitivity level, OTA ACS, and OTA in-band blocking (General) in Table 4.1.2.3-2.   + 2) Add OTA reference sensitivity requirement for FR2-2 in Table 7.3.5.3-3.   + 3) Add OTA ACS requirement for FR2-2 in Table 7.5.1.5.3-1.   + 4) Aad OTA ACS interferer frequency offset for FR2-2 in Table 7.5.1.5.3-2.   + 5) Add ΔfOOB offset for FR2-2 in Table 7.5.2.5.3-0.   + 6) Add general OTA blocking requirement in Table 7.5.2.5.3-1.   + 7) Add TTOTA for OTA reference sensitivity level for FR2-2 in Table C.2-2. * R4-2220211: To introduce the conformance testing requirement for receiver spurious emission, receiver intermodulation in FR2-2. * R4-2220212: To introduce the conformance testing requirement for receiver in-channel selectivity in FR2-2. | | | | | | | | |
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| ***Consequences if not approved:*** | | The following inputs were incorporated:   * R4-2220201: Required changes are not made in clauses 6.3 to 6.5 for extending current NR operation to 71GHz. * R4-2220287: The additions necessary for FR2-2 can be summarized as:   + Addition of entries in table for maximum OTA test system uncertainty for FR2 OTA transmitter tests.   + Addition of maximum OTA test system uncertinty for FR2-2 radiated transmit power requirement (EIRP).   + Addition of entreis in table for maximum OTA test system uncertainty for FR2 OTA receiver tests.   + Addition of entries in table for signal to be used to build NR TCs for BS type 2-O.   + Addition of table for configurations of TDD for FR2-2 test models. * R4-2219970: Implementation of BS 2-O requirements would not be complete for FR2-2 range. * R4-2220200: Span and number of measurement points for OBW measurements for FR2-2 remain missing. * R4-2220204: Specification doesn’t describe FR2-2 requirements and measurements. * R4-2220208: The BS RF Rx conformance testings for FR2-2 in TS 38.141-1 would be missing. * R4-2220211: Conformance testing requirement for receiver spurious emission, receiver intermodulation in FR2-2 is missing. * R4-2220212: Conformance testing requirement for receiver in-channel selectivity in FR2-2 is missing. | | | | | | | | |
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| ***Clauses affected:*** | | 1,2,3, 4.1.2.2, 4.1.2.3, 6.3, 6.4, 6.5, 6.6, 6.7.1, 6.7.2, 6.7.2.4.2, 6.7.3, 6.7.4, 7.3.5.3, 7.5.1.5.3, 7.5.2.5.3, 7.6, 7.7, 7.8, 7.9, C.1, C.2, L | | | | | | | | |
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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 ... | | |
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| ***Other comments:*** | |  | | | | | | | | |
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| ***This CR's revision history:*** | |  | | | | | | | | |