**3GPP TSG-RAN WG4 Meeting #104-bis *R4-*** ***2215960***

**Electronic Meeting, October 10 – 19, 2022**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.114** | **CR** | **draftCR** | **rev** |  | **Current version:** | **17.1.0** |  |
|  | | | | | | | | |
| *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:*** | Draft CR to TS 38.114 Clause 4.5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_repeaters-Core/Perf | | | | |  | ***Date:*** | | | 2022-09-26 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | Test configurations for NR repeater is not defined in the specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The missing content of clause 4.5 is introduced, based on the agreement in R4-2210506. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The specification is incomplete. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  |  | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  |  | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  |  | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

---------- start of changes----------

## 4.5 NR repeaters test configurations

The present clause defines the NR repeaters test configurations that shall be used for demonstrating conformance. A single NR repeater carrier shall be used for testing of single-carrier capable NR repeaters.

The signal's channel bandwidth and subcarrier spacing used to build NR Test Configurations shall be selected according to table 4.7.2-1 in TS 38.115-1 [3] clause 4.7 for *NR repeaters type 1-C*, and table 4.7.2.1-1 in TS 38.115-2 [4] clause 4.7 for *NR repeaters type 2-O*. The passband frequency range declared per *operating band* in TS 38.115-1 [3] clause 4.6, and TS 38.115-2 [4] clause 4.6 shall be used.

For other NR repeaters, the test configurations in table 4.5-1 and table 4.5-2 shall be used. The NR repeaters test configurations (RTCx) are defined in TS 38.115-1 [3], clause 4.7 for *NR repeaters type 1-C* and in TS 38.115-2 [4], clause 4.7 for *NR repeaters type 2-O*.

Table 4.5-1: Test configurations for *NR repeaters type 1-C*

| Repeater test case | Repeater capable of single or multiple passbands in a single band | | | Repeater capable of multi-band operation | |
| --- | --- | --- | --- | --- | --- |
|  | Single passband repeater | Multiple passband capable repeater with identical parameters per passband | Multiple passband capable repeater with different parameters per passband | Common connector | Separate connectors |
| Emission tests | RTC1 | RTC1, RTC2 | RTC1, RTC2 | RTC1/2 (Note 1), RTC4 | RTC1/2 (Note 1, 2), RTC4 (Note 2) |
| Immunity tests | RTC1 | RTC1, RTC2 | RTC1, RTC2 | RTC1/2 (Note 1), RTC4 | RTC1/2 (Note 1, 2), RTC4 (Note 2) |
| NOTE 1: RTC1 and/or RTC2 shall be applied in each supported operating band.  NOTE 2: For single-band operation test, other antenna connector(s) is (are) terminated. | | | | | |

Table 4.5-2: Test configurations for *NR repeaters type 2-O*

| Repeater test case | Repeater capable of single or multiple passbands in a single band | | |
| --- | --- | --- | --- |
|  | Single passband repeater | Multiple passband capable repeater with identical parameters per passband | Multiple passband capable repeater with different parameters per passband |
| Emission tests | RTC1 | RTC1, RTC2 | RTC1, RTC2 |
| Immunity tests | RTC1 | RTC1, RTC2 | RTC1, RTC2 |

# 5 Performance assessment

---------- end of changes----------

**Note: The content in clause 4.6 and clause 4.7 in TS 38.115-2 are not updated yet, please refer to R4-2214802 “TP to TS 38.115-2 Manufacturer declarations for NR FR2 repeaters” for clause 4.6, and R4-2214786 “TP to TS 38.115-2: Test Configurations and Requirement applicability” for clause 4.7, which were endorsed during RAN4#104.**