**3GPP TSG-RAN5 Meeting #97 *R5-226801r3***

**Toulouse, France, 14th Nov 2022 - 18th Nov 2022**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **38.521-1** | **CR** | **1986** | **rev** | **-** | **Current version:** | **17.6.1** |  |
|  |
| *For* ***[HE](http://www.3gpp.org/3G_Specs/CRs.htm%22%20%5Cl%20%22_blank)******[LP](http://www.3gpp.org/3G_Specs/CRs.htm%22%20%5Cl%20%22_blank)*** *on using this form: comprehensive instructions can be found at <http://www.3gpp.org/Change-Requests>.* |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network |  |

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| ***Title:***  | Add new test case 6.5G.3.3 |
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| ***Source to WG:*** | China Telecom Corporation Ltd., Huawei, HiSilicon |
| ***Source to TSG:*** | R5 |
|  |  |
| ***Work item code:*** | NR\_RF\_TxD-UEConTest |  | ***Date:*** | 2022-11-04 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***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 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:*** | Add new test case 6.5G.3.3 Additional spurious emissions for Tx Diversity |
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| ***Summary of change:*** | Add new test case 6.5G.3.3 Additional spurious emissions for Tx Diversity |
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| ***Consequences if not approved:*** | The TxD WP will not complete. |
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| ***Clauses affected:*** | 6.5G.3.3(new) |
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|  | **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:*** | r1: 1. Merge R5-226912 and add Huawei as co-source.
2. Add power class 3.
3. Correct editor’s note and test description.

r2:1. Correct test applicability

r3：1. Change test applicability.
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| ***This CR's revision history:*** |  |

### <Start of Changes>

#### 6.5G.3.3 Additional spurious emissions for Tx Diversity

Editor’s note: The following aspects are either missing or not yet determined:

- Tests for network signalling values other than NS\_04 are incomplete due to lack of test requirement in 6.2G.3.

6.5G.3.3.1 Test purpose

To verify that UE transmitter does not cause unacceptable interference to other channels or other systems in terms of transmitter spurious emissions under the deployment scenarios where additional requirements are specified.

6.5G.3.3.2 Test applicability

This test case applies to all types of NR Power Class 1.5, Power Class 2 and Power Class 3 UE release 15 and forward that support Tx diversity.

6.5G.3.3.3 Minimum conformance requirements

For UE supporting Tx diversity, the requirements for Spurious emissions which are caused by unwanted transmitter effects such as harmonics emission, parasitic emissions, intermodulation products and frequency conversion products apply to the sum of the emissions from all UE transmit antenna connectors.

The requirements specified in clause 6.5.3.3 apply.

The normative reference for this requirement is TS 38.101-1 [2] subclause 6.5G.3.

6.5G.3.3.4 Test description

Same test description as specified in clause 6.5.3.3.4 with following exceptions:

Steps 3 and 4 of Test procedure as in 6.5.3.3.4.2 is replaced by:

3. Measure the sum of the mean power of the UE at each antenna connector in the channel bandwidth of the radio access mode, which shall meet the requirements described in Clauses 6.2G.3.5. The period of measurement shall be at least the continuous duration of 1ms over consecutive active uplink slots and uplink symbols. For TDD, only slots consisting of only UL symbols are under test.

4. Measure the sum power of the transmitted signal at all antenna connectors with a measurement filter of bandwidths according to Tables 6.5.3.3.3.1 to 6.5.3.3.3.27 as appropriate. The centre frequency of the filter shall be stepped in contiguous steps according to the same table the measured power shall be verified for each step. The measurement period shall capture the active time slots.

6.5G.3.3.5 Test requirement

This clause specifies the requirements for the specified NR band for an additional spectrum emission requirement with protected bands as indicated from Table 6.5.3.3.5.1 to Table 6.5.3.3.5.27 for different NS\_values.

The measured UE mean power in the channel bandwidth, derived in step 3, shall fulfil requirements specified as 6.2G.3.5.

The measured power derived in step 4 shall meet the requirements for the specified NR band for an additional spurious emission requirement with protected bands as indicated in clause 6.5.3.3.5 for different NS values.

NOTE: For measurement conditions at the edge of each frequency range, the lowest frequency of the measurement position in each frequency range should be set at the lowest boundary of the frequency range plus MBW/2. The highest frequency of the measurement position in each frequency range should be set at the highest boundary of the frequency range minus MBW/2. MBW denotes the measurement bandwidth defined for the protected band.

### <End of Changes>