**3GPP TSG- Meeting # *R5-253535***

**Malta, Malta, 19th May 2025 - 23rd May 2025**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **38.903** | **CR** | **0996** | **rev** | **1** | **Current version:** | **18.6.0** |  |
|  | | | | | | | | |
| *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 |  | Core Network |  |

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| ***Title:*** | FR2 MU - Update list of test cases with testability issues in 38.903 | | | | | | | | | |
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| ***Source to WG:*** | Keysight Technologies | | | | | | | | | |
| ***Source to TSG:*** | R5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI15\_Test, 5GS\_NR\_LTE-UEConTest | | | | |  | ***Date:*** | | | 2025-05-08 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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)* | |
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| ***Reason for change:*** | | In SEM test case, for PC1, the agreed available SNR for FR2a is remarkable low, down to 3dB, and in case of FR2b, it is at the moment not testable.  In case of OBW SISO FR2 test case, in comparison to FR1, MBW has been reduced from 2\*CBW down to 1.5\*CBW in general and down to 1.3\*CBW for PC3 400MHz in FR2c in particular in order to avoid testability issues by achieving an acceptable MTSU given the OBW measurement requires a quite large SNR to avoid a threshold effect on the resulting MTSU.  In case of OBW MIMO FR2 test case, for PC3 400MHz in general and power classes other than PC3, testability is still FFS. All the testability aspects listed above should be captured in TR 38.903 as per AP#105.21. | | | | | | | | |
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| ***Summary of change:*** | | Added SEM, OBW SISO and OBW UL MIMO test cases to the list in section B.26. | | | | | | | | |
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| ***Consequences if not approved:*** | | List of test cases with testability issues will remain incomplete. | | | | | | | | |
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| ***Clauses affected:*** | | B.26 | | | | | | | | |
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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:*** | |  | | | | | | | | |
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| ***This CR's revision history:*** | | Revision :  -Updated according to progress in R5-251896r2. | | | | | | | | |

## <<< START OF CHANGES >>>

# B.26 FR2 RF test cases with testability issues related to MU

Editor’s note: This informational list of FR2 RF testability issues related to MU is incomplete and ongoing updates.

Table B.26-1: FR2 RF test cases with known testability issues related to MU

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| Clause | Requirement | FR2 RF Testability issues related to MU | Notes |
| 6.3.1 | Minimum output power | Low UL power | For several test points (details in sub-clause 6.3.1.5), Core requirement cannot be tested due to testability issue and test requirement includes relaxation to achieve impact from test system noise to measurement result = 1.0 dB (Minimum requirement + relaxation). |
| 6.3.2 | Transmit OFF power | Low UL power | For all FR2 bands and channel bandwidths, Core requirement cannot be tested due to testability issue and test requirement includes relaxation to achieve impact from test system noise to measurement result = 1.0 dB (Minimum requirement + relaxation). |
| 6.3.4.3 | Relative Power Tolerance | Starting power at ramp up/ramp down/alternating sub-test is TBD (6.3.4.3 MU dependent) | Testability issue due to narrow range for 1 dB TPC step core requirement and therefore testing is not recommended. |
| 6.3D.2 | Transmit OFF power for UL MIMO | The testability of this test case is pending further analysis on relaxation of the requirement for other than Band n257. | For several test points (see 6.3D.2.5 for details), Core requirement cannot be tested due to testability issue and test requirement includes relaxation to achieve impact from test system noise to measurement result = 1.0 dB (Minimum requirement + relaxation). |
| 6.5.1 | Occupied bandwidth | High SNR required for measurement | To avoid testability issues, MBW has been reduced from 2\*CBW (typical used value in FR1) down to 1.5\*CBW in general and even down to 1.3\*CBW for PC3 400MHz in FR2c. |
| 6.5.2.1 | Spectrum Emission Mask | Low Spurious Emission power | Testability in FR2b for PC1 is FFS.  For PC1 in FR2a, to avoid defining relaxations, accepted to use influence of noise remarkable higher than 1dB in the MTSU calculation. |
| 6.5.2.3 | Adjacent channel leakage ratio | Low adjacent channel power | Relaxation due to testability limits applied for several TC IDs and MPR values as defined in subclause 6.5.2.3.5 |
| 6.5.3.2 | Additional spurious emissions | Low Spurious Emission power | Relaxation due to testability limit applied to test requirements as per subclause 6.5.3.2.5 |
| 6.5D.2.1 | Occupied bandwidth for UL MIMO | High SNR required for measurement | Testability is FFS for PC3 FR2b and FR2c 400 MHz, PC3 FR2c 200 MHz and other power classes. |
| 7.4 | Maximum input power | High DL power | The test requirements deviate from minimum requirements by 26dB relaxation for 24.25 ~ 29.5 GHz and 34 dB relaxation for 37 ~ 40 GHz. |
| 7.5 | Adjacent channel selectivity (case 1) | High DL power | For several test points, Core requirement cannot be tested due to testability issue and test requirement for wanted signal and interferer includes relaxation to achieve feasible interferer power level. See details in subclause 7.5.5 |
| 7.6.2 | In-band blocking | High DL power | For several test points, Core requirement cannot be tested due to testability issue and test requirement for wanted signal and interferer includes relaxation to achieve feasible interferer power level. See details in subclause 7.6.2.5 |
| 7.9 | Receiver spurious emissions | Low Spurious Emission power | The testability of this test case is pending further analysis on relaxation of the requirement for band other than n257, n258, n259, n260 and n261 |

## <<< END OF CHANGES >>>