**3GPP TSG-RAN WG4 Meeting #110 R4-2402641**

**Athens, Greece, 26 Feb – 1 March, 2024**

**Agenda item:**  6.4

**Source:** Moderator (Ericsson)

**Title:** Topic summary for [110][301] BSRF\_Maintenance

**Document for:** Information

# Introduction

The scope of this topic summary is BS RF maintenance agenda items. Topics are divided according to the agenda:

**Up to Rel-16 maintenance for LTE and NR:**

1. BS RF requirements and BS conformance testing (4.2)

**Rel-17 maintenance for LTE and NR:**

1. BS RF requirements and BS conformance testing (5.2.2)

**Rel-18 maintenance for LTE and NR:**

1. NB-IoT/eMTC core & perf. requirements for NTN:   
   SAN RF requirement and conformance testing (6.2.2.1)
2. Other dedicated Rel-18 WIs: BS RF requirements (6.2.8.2)

**Rel-18 on-going work Items for LTE:**

1. IoT NTN enhancements: SAN RF requirements maintenance (9.4.2) *(no Tdocs)*

# Topic #1: BS RF requirements and BS conformance testing (up to Rel-16) (4.2)

## Companies’ contributions summary

**Discussion papers**

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| **T-doc number** | **Company** | **Title/Proposals** |
| [R4-2402110](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402110.zip) | Huawei, HiSilicon | (NR\_IAB) Discussion on IAB-MT scaling  Proposals: Eight proposals are given in the discussion summary. |
| [R4-2402798](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402798.zip) | Ericsson | (TEI16) Proposals on clean-up and improvements on BS specifications  Proposal 1: See attached work plan and draft changes on TS 38.141-1 |

**Submitted CRs (Cat A CRs not listed)**

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| --- | --- | --- |
| **T-doc number** | **Company** | **Title / Summary of change** |
| [R4-2400047](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400047.zip) | CATT | (TEI15) Correction for 38.141-1 R15: declaration and table number  **Summary of change:** Correct above errors; 1. The EVM reference in 6.3.2.3 is not correct. 2. The declared number for the declared band combinations is not correct in Table 4.6-1. |
| [R4-2400077](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400077.zip) | CATT | (TEI15) Correction for TS 38.104 R15  **Summary of change:** Correct above errors; 1. The table number of CACLR in 9.7.3.2 is not correct. |
| [R4-2400580](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400580.zip) | Murata Manufacturing Co Ltd. | CR to TS 38.104 on correction of radiated performance requirement (Rel-16)  **Summary of change:** To correct the specification table, adding “normal” condition as needed. |
| [R4-2400653](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400653.zip) | Qualcomm Germany | (NR\_IAB-Perf) CR for TS 38.176-1, Correction on IAB-MT Output power dynamics test requirements  **Summary of change**: Output power dynamics test requirement for Local Area IAB-MT under 40MHz equals [Tx Dynamic range +/- (Relative power tolerance + TT)]. For Local area Tx Dynamic range is 10 dB, while Relative power tolerance is 5.5 dB and TT is 0.7/1 dB for <40MHz and <100MHz, respectively. Thus, upper bound should be 16.2 dB (16.5) for the two frequency ranges in Table 6.3.2.1.5-1. |
| [R4-2400656](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400656.zip) | Qualcomm Germany | (NR\_IAB-Perf) CR for TS 38.176-2, Correction on IAB-MT Output power dynamics test requirements  **Summary of change**: Output power dynamics test requirement for Local Area IAB-MT under 40MHz equals [Tx Dynamic range +/- (Relative power tolerance + TT)]. For Local area Tx Dynamic range is 10 dB, while Relative power tolerance is 5.5 dB and TT is 0.7/1 dB for <40MHz and <100MHz, respectively. Thus, upper bound should be 16.2 dB (16.5) for the two frequency ranges in Table 6.4.2.1.5.1-1 and 6.4.2.1.5.2-1  **Moderator’s note:** The CR has no change marks. |
| [R4-2400674](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400674.zip) | Nokia, Nokia Shanghai Bell | (LTE\_LAA-Perf) CR to TS 36.141 on correction of base station output power for Band 46  **Summary of change**: Add carrier frequency 4.2GHz < f ≤ 6.0GHz in the base station output power. |
| [R4-2400678](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400678.zip) | Nokia, Nokia Shanghai Bell | (NR\_unlic-Perf) CR to TS 38.141-1 on corrections of measurement uncertainties, test tolerances and requirements for bands n46, n96 and n102  **Summary of change**: 1) Correct the errors in the tables of the measurement uncertainties regarding the notes for bands n46, n96 and n102.  2) Include the measurement uncertainties of base station output power and transmitter OFF power for bands n46, n96 and n102 in the test tolerances and test requirements like other bands.  3) Include the measurement uncertainties of operating band unwanted emissions, reference sensitivity level, and in-channel selectivity for bands n46, n96 and n102 are included in the test tolerances like other bands. |
| [R4-2402111](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402111.zip) | Huawei, HiSilicon | (NR\_IAB-Core)CR for TS 38.174, Correction on scaling factor for IAB-MT type 1-O  **Summary of change**:  1) The definition of active tranmitter unit is updated to include IAB-MT type 1-O  2) Symbols NTXU,OTApercell NTXU,OTAactive NRXU,OTApercell NRXU,OTAactive are added to the list so scaling for IAB-MT type 1-O can be correctly described.  3) Text in sub-clause 9.1 is updated using the newly defined and corrected definitions and symbols  4) Text in sub-clause 9.3.1 is updated using the newly defined and corrected definitions and symbols  5) Minimum requirement sub- clauses 9.7.3.2, 9.7.4.3, 9.7.5.2.2, 9.7.5.2.3 and 9.7.5.2.4 updated to replace NTXU,countedpercell with NTXU,OTApercell.  6) Text in subclause 10.7.1 is updated using the newly defined and corrected definitions and symbols  7) Minimum requirements in sub-clause 10.7.3 updated to NRXU,countedpercell with NRXU,OTApercell. |
| [R4-2402114](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402114.zip) | Huawei, HiSilicon | (NR\_IAB-Perf) CR for TS 38.176-1, Correction due to scaling factor for IAB-MT type 1-O changes  **Summary of change**: The definition of active tranmitter unit is updated to include IAB-MT type 1-O |
| [R4-2402117](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402117.zip) | Huawei, HiSilicon | (NR\_IAB-Perf) CR for TS 38.176-2, Implimentaion of scaling factor for IAB-MT type 1-O  **Summary of change**:   1. The definition of *active tranmitter unit* is updated to include IAB-MT type 1-O 2. Symbols NTXU,OTApercell *NTXU,OTAactive* NRXU,OTApercell *NRXU,OTAactive* are added to the list so scaling for IAB-MT type 1-O can be correctly described. 3. The min 8 TRX restriction for IAB-DU type 1-O is inserted to the radiated requirements refernece points sub-clause (4.2) as in core 4. Number of active OTA transmiter and reciever declarations added to the table. 5. Text in sub-clause 6.1 is updated using the newly defined and corrected definitions and symbols 6. Text in sub-clause 6.3.1 is updated using the newly defined and corrected definitions and symbols 7. Test requirement sub- clauses 6.7.3.5.1, 6.7.4.5.1, 6.7.4.6.1, 6.7.4.6.2, 6.7.5.2.5, 6.7.5.5.5, updated with corrected IAB-MT requirement. 8. Sub-clause numbering in sub-clause 6.7.4.5 is not correct, it jumps from 6.7.4.5.1 to 6.7.4.6.1,2,3,4 – there is no 6.7.4.6 9. Text in sub-clause 7.7.1 is updated using the newly defined and corrected definitions and symbols 10. Test requirement sub- clause 7.7.5.1 updated with corrected IAB-MT requirement. 11. Definition of SNR using TAB connectors corrected (same as in sub-clasue 8.1.1.1) |
| [R4-2402120](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402120.zip) | Huawei, HiSilicon | (MB\_MSR\_RF) CR to 37.104: clarification on requirements for BS capable of multi-band operation  **Summary of change**: A sentence is added in clause 4.8 to exclude the frequency range of the Base Station RF bandwidth in the other supported band to this antenna connector. |
| [R4-2402123](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402123.zip) | Huawei, HiSilicon | (MB\_MSR\_RF) CR to 37.141: clarification on requirements for BS capable of multi-band operation  **Summary of change**: A sentence is added in clause 4.12 to exclude the frequency range of the Base Station RF bandwidth in the other supported band to this antenna connector. |
| [R4-2402126](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402126.zip) | Huawei, HiSilicon | (MB\_MSR\_RF) CR to 38.104: clarification on requirements for BS capable of multi-band operation  **Summary of change**: A sentence is added in clause 4.8 to exclude the frequency range of the Base Station RF bandwidth in the other supported band to this antenna connector. |
| [R4-2402129](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402129.zip) | Huawei, HiSilicon | (MB\_MSR\_RF) CR to 38.141-1: clarification on requirements for BS capable of multi-band operation  **Summary of change**: A sentence is added in clause 4.11 to exclude the frequency range of the Base Station RF bandwidth in the other supported band to this antenna connector. |
| [R4-2402132](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402132.zip) | Huawei, HiSilicon | (MB\_MSR\_RF) CR to 36.104: clarification on requirements for BS capable of multi-band operation  **Summary of change**: A sentence is added in clause 4.5 to exclude the frequency range of the Base Station RF bandwidth in the other supported band to this antenna connector. |
| [R4-2402135](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402135.zip) | Huawei, HiSilicon | (MB\_MSR\_RF) CR to 36.141: clarification on requirements for BS capable of multi-band operation  **Summary of change**: A sentence is added in clause 4.12 to exclude the frequency range of the transmitted carrier bandwidth in the other supported band to this antenna connector. |
| [R4-2402232](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402232.zip) | ZTE Corporation | (NR\_newRAT-Perf) CR to TS37.145-2: Addition of the missing band n70  **Summary of change**: Add the missing band n70 in Table 6.7.6.5.5.3-1 and delete repetitive words in clause 6.7.6.5.5 and 7.6.3.5. |
| [R4-2402233](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402233.zip) | ZTE Corporation | (NR\_newRAT-Perf) CR to TS37.145-2: Addition of some missing band numbers  **Summary of change**: Add some missing bands in clause 6.7.6.4.5, 6.7.6.5.5 and 7.6.3.5.  Delete duplicate words and rows in clause 6.7.6.4.5, 6.7.6.5.5 and 7.6.3.5. |
| [R4-2402234](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402234.zip) | ZTE Corporation | (NR\_newRAT-Perf) CR to TS37.145-2: Addition of some missing band numbers  **Summary of change**: Add some missing bands in clause 6.7.6.4.5, 6.7.6.5.5 and 7.6.3.5. Delete duplicate words in clause 6.7.6.5.5 and 7.6.3.5. |
| [R4-2402238](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402238.zip) | Nokia, Skyworks Solutions, Inc. | (NR\_unlic\_enh-Core) CR to TS 38.104 Rel-16 NR-U Nominal channel spacing  **Summary of change**:   * Clause 5.4.1.1: added NR-U nominal channel spacing equation, * Clause 5.4.1.1: added NR-U nominal channel spacing equation for intra-band contiguous CA.   (Reasons for change are captured in discussion paper [R4-2400364](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400364.zip).) |
| [R4-2402282](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402282.zip) | NEC | CR to 38.104: Correction on transmitter intermodulation additional requirements (Rel-15)  **Summary of change**: Correct the interference signal position. “Interfering signal centre offset from the carrier center frequency of the wanted signal” is corrected to “interfering signal centre offset from the edge of the wanted signal” |
| [R4-2402286](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402286.zip) | NEC | CR to 38.141-1: Correction on transmitter intermodulation additional requirements (Rel-15)  **Summary of change**: Correct the interference signal position.  “Interfering signal centre offset from the carrier center frequency of the wanted signal” is corrected to “interfering signal centre offset from the edge of the wanted signal” |

## Open issues summary

N/A

# Topic #2: BS RF requirements and BS conformance testing (Rel-17) (5.2.2)

## Companies’ contributions summary

**Discussion papers**

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| **T-doc number** | **Company** | **Title/Proposals** |
| [~~R4-2401289~~](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2401289.zip) | ~~NTT DOCOMO, INC.~~ | ~~Discussion on Tx intermodulation requirements maintenance in band n79~~  **~~(Withdrawn)~~** |
| [R4-2402536](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402536.zip) | NTT DOCOMO, INC. | Discussion on Tx intermodulation requirements maintenance in band n79  Observation 1: By introducing 10MHz BW for band n79, Tx Intermodulation shall be tested with 10MHz BW even if the BS doesn’t support 10MHz BW in current specification.  Observation 2: In current Tx intermodulation minimum requirements, the interfering signal type and interfering signal frequency position are not matching Japanese regulation.  Proposal 1: Add regional requirement tables for band n79 in Japan as follows (Tables 4, 5 and 6 in contribution) |

**Submitted CRs (Cat A CRs not listed)**

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| --- | --- | --- |
| **T-doc number** | **Company** | **Title / Summary of change** |
| [R4-2400034](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400034.zip) | CATT | (NR\_6GHz-Core) CR for TS 38.104, Correction on reference of PREFSENS for in-band blocking and out-of-band blocking for band n104  **Summary of change:**  1) Add “For band n104, PREFSENS depends on the BS channel bandwidth as specified in tables 7.2.2-1a, 7.2.2-2c, and 7.2.2-3c.” in Table 7.4.2.2-1.  2) Add “For band n104, PREFSENS depends on the BS channel bandwidth as specified in tables 7.2.2-1a, 7.2.2-2c, and 7.2.2-3c.” in Table 7.5.2-1.  **NOTE:** Resubmission of agreed CR [R4-2307363](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_107/Docs//R4-2307363.zip) in RAN4#107, since it was not implemented in R17 spec. |
| [R4-2400035](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400035.zip) | CATT | (NR\_NTN\_solutions-Core) CR for TS 38.108, Correction on general SAN transmitter spurious emission limits in FR1  **Summary of change**:   1. Change Prated,c,sys to Prated,t,sys in Table 6.6.5.2.1-1. 2. Change Prated,c,TRP to Prated,t,TRP in Table 9.7.5.2.2-1. |
| [R4-2400037](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400037.zip) | CATT | (NR\_NTN\_solutions-Perf) CR for TS 38.181, Correction on general SAN transmitter spurious emission limits in FR1  **Summary of change**:   1. Change Prated,c,sys to Prated,t,sys in Table 6.6.5.5.1.1-1. 2. Change Prated,c,TRP to Prated,t,TRP in Table 9.7.5.2.5.1-1. |
| [R4-2400059](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400059.zip) | CATT | (NR\_repeaters-Perf) CR for TS 38.115-1, Correction on manufacturer declarations  **Summary of change**: The manufacturer declarations are defined for repeater, not Base Station.  4.6 manufacturer declaration |
| [R4-2400061](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400061.zip) | CATT | (NR\_repeaters-Perf) CR for TS 38.115-2, Correction on BS related description issues  **Summary of change**: The manufacturer declaration are defined for repeater, not Base Station. The EVM are defined for repeater, not Base Station. 4.6 manufacturer declaration 6.6.1 Downlink repeater error vector magnitude 6.6.2 uplink repeater error vector magnitude |
| [R4-2400062](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400062.zip) | CATT | (NR\_IAB-Core) CR for TS 38.174, Correction on BS related description issues  **Summary of change**: The Symbols on BWChannel are defined for IAB, not Base Station.  The classes for IAB-DU are defined for IAB-DU, not Base Station. 3.2 Symbols 4.4.1 IAB-DU classes |
| [R4-2400065](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400065.zip) | CATT | (NR\_IAB-Perf) CR for TS 38.176-1, Correction on Classes for IAB-DU  **Summary of change**: The classes for IAB-DU are defined for IAB-DU, not Base Station.  4.3.1 IAB-DU classes |
| [R4-2400068](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400068.zip) | CATT | (NR\_IAB-Perf) CR for TS 38.176-2, Correction on Classes for IAB-DU  **Summary of change**: The classes for IAB-DU are defined for IAB-DU, not Base Station.  4.3.1 IAB-DU classes |
| [R4-2400578](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400578.zip) | Murata Manufacturing Co Ltd. | CR to TS 38.104 for editorial corrections of operating bands (Rel-17)  **Summary of change**: Specification table’s ruled lines are corrected. |
| [~~R4-2401290~~](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2401290.zip) | ~~NTT DOCOMO, INC.~~ | ~~(NR\_bands\_R17\_BWs-Core) CR for Tx intermodulation core requirements in band n79~~  **~~(Withdrawn)~~** |
| [~~R4-2401291~~](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2401291.zip) | ~~NTT DOCOMO, INC.~~ | ~~(NR\_bands\_R17\_BWs-Core) CR for Tx intermodulation requirements in band n79~~  **~~(Withdrawn)~~** |
| [~~R4-2401292~~](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2401292.zip) | ~~NTT DOCOMO, INC.~~ | ~~(NR\_bands\_R17\_BWs-Core) CR for OTA Tx intermodulation requirements in band n79~~  **~~(Withdrawn)~~** |
| [R4-2402294](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402294.zip) | NEC | CR to 38.106: NR repeater transmitter spurious emissions requirements (rel-17)  **Summary of change**:  Add text for the applicable range for UL tx spurious emissions. Correct the tx spurious requirements tables. Add n257 and n263 in the table for the step frequencies. |
| [R4-2402295](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402295.zip) | NEC | CR to 38.106: NR repeater transmitter spurious emissions requirements (rel-18)  **Summary of change**: Add text for the applicable rage for UL tx spurious emissions. Correct the tx spurious requirements tables. Add n257 and n263 in the table for the step frequencies. |
| [R4-2402296](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402296.zip) | NEC | CR to 38.115-1: NR repeater transmitter spurious emissions requirements (rel-17)  **Summary of change**:  Add text for the applicable range for UL tx spurious emissions. Correct the tx spurious requirements tables. |
| [R4-2402298](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402298.zip) | NEC | CR to 38.115-2: NR repeater transmitter spurious emissions requirements (rel-18)  **Summary of change**:  Correct the tx spurious requirements tables. Add n257 and n263 in the table for the step frequencies. |
| [R4-2402299](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402299.zip) | NEC | CR to 38.141-2: Measurement uncertainty for OBW in FR2-2 (Rel-17)  **Summary of change**:  Keep 600 kHz MU for BW of 400 MHz or smaller. Specify 2400 kHz MU for BW of 800 MHz or larger. |
| [R4-2402334](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402334.zip) | Ericsson | (TEI17) CR to TS 36.104 - BS spurious receiver protection note generalization R17  **Summary of change**: Generalize the note of the table on the spurious limit for protection of the BS receiver to all bands and not only to band 28 as it’s done currently. |
| [R4-2402336](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402336.zip) | Ericsson | (TEI17) CR to TS 36.141 - BS spurious receiver protection note generalization R17  **Summary of change**: Generalize the note of the table on the spurious limit for protection of the BS receiver to all bands and not only to band 28 as it’s done currently. |
| [R4-2402338](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402338.zip) | Ericsson | (TEI17) CR to TS 37.104 - BS spurious receiver protection note generalization R17  **Summary of change**: Generalize the note of the table on the spurious limit for protection of the BS receiver to all bands and not only to band 28 as it’s done currently. |
| [R4-2402340](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402340.zip) | Ericsson | (TEI17) CR to TS 37.141 - BS spurious receiver protection note generalization R17  **Summary of change**: Generalize the note of the table on the spurious limit for protection of the BS receiver to all bands and not only to band 28 as it’s done currently. |
| [R4-2402342](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402342.zip) | Ericsson | (TEI17) CR to TS 37.105 - BS spurious receiver protection note generalization R17  **Summary of change**: Generalize the note of the table on the spurious limit for protection of the BS receiver to all bands and not only to band 28 as it’s done currently. |
| [R4-2402344](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402344.zip) | Ericsson | (TEI17) CR to TS 37.145-1 - BS spurious receiver protection note generalization R17  **Summary of change**: Generalize the note of the table on the spurious limit for protection of the BS receiver to all bands and not only to band 28 as it’s done currently. |
| [R4-2402346](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402346.zip) | Ericsson | (TEI17) CR to TS 37.145-2 - BS spurious receiver protection note generalization R17  **Summary of change**: Generalize the note of the table on the spurious limit for protection of the BS receiver to all bands and not only to band 28 as it’s done currently. |
| [R4-2402348](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402348.zip) | Ericsson | (TEI17) CR to TS 38.104 - BS spurious receiver protection note generalization R17  **Summary of change**: Generalize the note of the table on the spurious limit for protection of the BS receiver to all bands and not only to band 28 as it’s done currently. |
| [R4-2402350](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402350.zip) | Ericsson | (TEI17) CR to TS 38.141-1 - BS spurious receiver protection note generalization R17  **Summary of change**: Generalize the note of the table on the spurious limit for protection of the BS receiver to all bands and not only to band 28 as it’s done currently. |
| [R4-2402352](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402352.zip) | Ericsson | (TEI17) CR to TS 38.141-2 - BS spurious receiver protection note generalization R17  **Summary of change**: Generalize the note of the table on the spurious limit for protection of the BS receiver to all bands and not only to band 28 as it’s done currently. |
| [R4-2402473](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402473.zip) | Ericsson | (TEI17) CR to TS 38.104: Clean up of operating band definitions tables in subclause 5.2  **Summary of change**:  The changes can be summarized as:   1. All notes have been collected in a separate column at the right. 2. The unit MHz is moved from all rows in the frequency column to the table heading at the first row. |
| [R4-2402476](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402476.zip) | Ericsson | ( OTA\_BS\_testing-Perf) CR to TR 37.941: Corrections and final touch related to the introduction of FR2-2  **Summary of change**:  Summary of changes:   1. In subclause 3.1, addition of definiton of FR2-2. 2. In subclause 6.3.3, addition of FR2-1. 3. In subclause 6.3.4.2, editorial correction. 4. In clause 17, addition of missing information related to FR2-2. 5. In clause 18, addition of missing information related to FR2-2. 6. In Annex C.1, editorial corrections (a lot of spelling issues). |
| [R4-2402477](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402477.zip) | Ericsson | (NR\_ext\_to\_71GHz-Perf) CR to TS 38.141-2: Improvements of information related to test certainty and test tolerence in Subclause 4.1.2.2, Subclause 4.1.2.3, Annex C.1 and Annex C.2  **Summary of change**:   1. In table 4.1.2.2-2, align format for maximum OTA test system uncertinaty. Format used for 24.25 to 29.5 GHz and 37 to 43.5 GHz is aligned with other frequency ranges. 2. In table 4.1.2.3-2, removal of (). 3. In table C.1-2, column 3 the descption of applicable frequency interval is updated. 4. In table C.2-2, column 3 the descption of applicable frequency interval is updated. |
| [R4-2402479](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402479.zip) | Ericsson | (AAS\_BS\_LTE\_UTRA-Core) CR to TS 37.105: Correction of OBUE requirement applicability in Table 6.6.5.2.2-0  **Summary of change**:  For the case for NR band operation above 1 GHz and no support for UTRA the correct applicability table reference is added. |
| [R4-2402537](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402537.zip) | NTT DOCOMO, INC. | (NR\_bands\_R17\_BWs-Core) CR for Tx intermodulation core requirements in band n79  **Summary of change**: Added requirements 6.7.2.2, 6.7.3.3 and 9.8.3 for BS type 1-C/1-H/1-O Co-location Tx intermodulation regional requirements for Band n79. |
| [R4-2402538](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402538.zip) | NTT DOCOMO, INC. | (NR\_bands\_R17\_BWs-Core) CR for Tx intermodulation requirements in certain region  **Summary of change**: Added requirements 6.7.5.1.2, 6.7.5.2.3 for BS type 1-C/1-H Co-location Tx intermodulation regional requirements for Band n79. |
| [R4-2402539](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402539.zip) | NTT DOCOMO, INC. | (NR\_bands\_R17\_BWs-Core) CR for OTA Tx intermodulation requirements in band n79  **Summary of change**: Added requirements 6.8.5.2 for BS type 1-O OTA Tx intermodulation regional requirements for Band n79. |

## Open issues summary

N/A

# Topic #3: NB-IoT/eMTC core & perf. requirements for NTN: SAN RF requirement and conformance testing (6.2.2.1)

**Submitted CRs (Cat A CRs not listed)**

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Title / Summary of change** |
| [R4-2402581](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402581.zip) | Huawei, HiSilicon | (LTE\_NBIOT\_eMTC\_NTN\_req-Core) CR to TS 36.108: band-agnostic OBUE requirement, Rel-18  **Summary of change**: Removal of band number, being replaced by reference to clause 5.2. |
| [R4-2402582](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2402582.zip) | Huawei, HiSilicon | (LTE\_NBIOT\_eMTC\_NTN\_req-Perf) CR to TS 36.181: band-agnostic OBUE requirement, Rel-18  **Summary of change**: Removal of band number, being replaced by reference to TS 36.108 clause 5.2. |

## Open issues summary

N/A

# Topic #4: Other dedicated Rel-18 WIs: BS RF requirements (6.2.8.2)

## Companies’ contributions summary

**Submitted Draft CRs**

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Title / Summary of change** |
| [R4-2400637](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400637.zip) | Nokia, Nokia Shanghai Bell, Charter Communications, CableLabs, Ericsson, Spark NZ Ltd. | Draft CR for 38.858 editorial update to Technical Report  **Summary of change:** Separating numbers and units in Clause 11.3.1 and correcting references to tables 11.1-1 and 11.1-2 in Clase 13.1.2. Changing FR2 🡪 FR2-1 to be aligned throughout the TR in Table 13.1.2-1. |
| [R4-2400638](http://www.3gpp.org/ftp//tsg_ran/WG4_Radio/TSGR4_110/Docs//R4-2400638.zip) | Nokia, Nokia Shanghai Bell, Charter Communications, CableLabs, Ericsson, Spark NZ Ltd. | Draft CR for 38.858 technical update to Technical Report  **Summary of change:** See CR cover page. |

## Open issues summary

N/A

# Topic #5: IoT NTN enhancements: SAN RF requirements maintenance (Rel-18) (9.4.2)

*No Tdocs*.