# TEST REPORT NO: FCC_IC_RF_TEST_REPORT_AHFIHA-TYPEAPPR-1508717799-1054

## FCC ID: VBNAHFIHA-01

## IC ID: 661W-AHFIHA

| | |
|---|---|
| **Date:** | Oulu 13. Feb 2024 |
| **Pages:** | 239 |
| **Appendices:** | 3 |

| | |
|---|---|
| Equipment Under Test: | Airscale Base Transceiver Station Remote Radio Head<br><br>E-UTRA and E-UTRA NB-IoT (FDD) |
| Radio Access technology: | |
| Type: | AHFIHA |
| Manufacturer: | Nokia Solutions and Networks Oy |
| Address: | Kaapelitie 4, FI-90620, Oulu, Finland |
| Task: | Conformance test according to the specifications mentioned below |
| Test Specification(s): | FCC 47 CFR part 2<br>RSS-Gen Issue 5<br>FCC 47 CFR part 24<br>FCC 47 CFR part 27<br>RSS-133 Issue 6<br>RSS-139 Issue 4<br>RSS-199 Issue 4<br>SRSP-510 Issue 5<br>SRSP-513 Issue 4<br>SRSP-517 Issue 2<br>SRSP-519 Issue 2 |
| Result: | The EUT complies with the requirements of the specification |

The results relate only to the items tested as described in this test report.

| **Approved by:** | **Date** | **Signature** |
|---|---|---|
| Jarkko Kenttälä<br>Squad Group Lead, Type Approval<br>Nokia Networks | 13 Feb 2024 |  |

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# 1. SUMMARY

The following tests were performed according to the FCC rules and ISED specifications in order to verify the compliance of the EUT with the FCC and ISED requirements:

| Test No. | Measurement | FCC Rule and RSS Paragraph | Page Number of this Report | Result |
|---|---|---|---|---|
| 1 | RF Power Output<br><br>Transmitter Output Power | § 2.1046, § 24.232,<br>§ 27.50,<br>RSS-Gen, 6.12<br>RSS-133, 4.1, 6.4<br>RSS-139, 5.5<br>RSS-199, 5.5<br>SRSP-510, 5.1.1<br>SRSP-513, 6.1.2, 6.1.3<br>SRSP-517, 6.1.2, 6.1.3<br>SRSP-519, 6.1.2, 6.1.3 | 10 | compliant |
| 2 | Modulation Characteristics | § 2.1047,<br>RSS-133, 6.2<br>RSS-139, 5.3<br>RSS-199, 5.3<br>RSS-Gen. | 64 | compliant |
| 3 | Occupied Bandwidth | § 2.1049, § 24.238,<br>§ 27.53,<br>RSS-Gen, 6.7 | 65 | compliant |
| 4 | Spurious Emissions at Antenna Terminals<br>Transmitter Unwanted Emission (Conducted) | § 2.1051, § 2.1057<br>§ 24.238 § 27.53<br>RSS-133, 4.2, 6.5<br>RSS-139, 5.6<br>RSS-199, 5.6<br>RSS-Gen, 6.13 | 90 | compliant |

**Table 1 Results – Summary**

In accordance with the FCC Rule §15.3 (z) the equipment was tested with the limits that are valid for an *unintentional radiator*.

Measurements guidance: FCC OET laboratory KDB: 662911 D01 Multiple Transmitter Output v01r02 and FCC KDB 971168 D01 Power Meas License Digital Systems v03r01: ANSI C6326-2015.

Test Laboratory:

Nokia Solutions and Networks Oy

Kaapelitie 4,

FI-90620, Oulu, Finland

Jarkko Kenttälä

FCC Reg. No: 261413

OATS number: 661AI-1

Testing laboratory accreditation number: T297

### 1.1 Time Schedule

| Test No. | 1, 2, 3, 4 |
|---|---|
| Start of Test: | 01 Nov 2023 |
| End of Test: | 01 Feb 2024 |

### 1.2 Participants

| Name | Function | Signature |
|---|---|---|
| RF Test person (Nokia) Timo Lindvall | Tests nos: 1,2,3,4 Setup of EUT |  |

## 2. EQUIPMENT UNDER TEST

The EUT is a Airscale Multiradio BTS RRH 4T4R, B25/B66/B7 160W per antenna 640W per radio.

The BTS performs the full RAN function of E-UTRA system.

The tested equipment is representative for serial production.

### 2.1 Configuration of EUT

The used different EUT configurations are shown by the following table.

| **Module Type** | Airscale Multiradio BTS RRH 4T4R, B25/B66/B7 160W per antenna 640W per radio |
|---|---|
| **Radio Access Technology** | E-UTRA, E-UTRA NB-IoT (In-band, Guard Band, Standalone) |
| **Duplex mode** | Frequency Division Duplex (FDD) |
| **Channel Bandwidth** | E-UTRA Single carrier 20MHz (B25, B66, B7) (**Config. A**),<br>E-UTRA Single carrier 15MHz (B25, B66, B7) (**Config. B**),<br>E-UTRA Single carrier 10MHz (B25, B66, B7) (**Config. C**),<br>E-UTRA Single carrier 5MHz (B25, B66, B7) (**Config. D**),<br>E-UTRA Single carrier 3MHz (B25, B66) (**Config. E**),<br>E-UTRA Single carrier 1.4MHz (B25, B66) (**Config. F**),<br>NB-IoT Guard band (NB-IoT GB) Single carrier 20MHz (B25, B66, B7) (**Config. G**),<br>NB-IoT Guard band (NB-IoT GB) Single carrier 15MHz (B25, B66, B7) (**Config. H**),<br>NB-IoT Guard band (NB-IoT GB) Single carrier 10MHz (B25, B66, B7) (**Config. I**),<br>NB-IoT Standalone (NB-IoT SA) Single carrier 200kHz (B25, B66, B7) (**Config. J**),<br>NB-IoT In-band (NB-IoT IB) Single carrier 20MHz (B25, B66, B7) (**Config. K**), |

| | | |
|---|---|---|
| | NB-IoT In-band (NB-IoT IB) Single carrier 15MHz (B25, B66, B7) (**Config. L**),<br>NB-IoT In-band (NB-IoT IB) Single carrier 10MHz (B25, B66, B7) (**Config. M**),<br>NB-IoT In-band (NB-IoT IB) Single carrier 5MHz (B25, B66, B7) (**Config. N**),<br>PCS Multicarrier Multiband Test Case 1 (**Config O**),<br>PCS Multicarrier Multiband Test Case 2 (**Config P**),<br>PCS Multicarrier Multiband Test Case 3 (**Config Q**),<br>AWS Multicarrier Multiband Test Case 1 (**Config R**),<br>AWS Multicarrier Multiband Test Case 2 (**Config S**),<br>AWS Multicarrier Multiband Test Case 3 (**Config T**),<br>BRS Multicarrier Multiband Test Case 1 (**Config U**),<br>BRS Multicarrier Multiband Test Case 2 (**Config V**),<br>BRS Multicarrier Multiband Test Case 3 (**Config W**)<br>Detailed description of Multicarrier Multiband configurations (Config O, P, Q, R, S, T, U, V and W) in Appendix A. | |
| **Supply Voltage** | 48.0 V DC | |
| **Single carrier** | | |
| **Rated Output Power (Prat)** | 20W (43.0dBm) conducted / carrier (for 200kHz, 1.4MHz and 3MHz Channel Bandwidths)<br>40W (46.0dBm) conducted / carrier (for 5MHz Channel Bandwidth)<br>60W (47.8dBm) conducted / carrier (for 10MHz, 15MHz and 20MHz Channel Bandwidths) | |
| **MultiCarrier Multiband** | | |
| **Rated Output Power (Prat)** | 20W (43.0dBm) to 60W (47.8dBm) conducted / carrier. Total 160W (52.0dBm) conducted / port. Details in Appendix A. | |
| | **RX** | **TX** |
| **Number of Antenna Ports** | 4 (ANT1 to ANT4) | 4 (ANT1 to ANT4) |
| **MiMo** | Yes | Yes |

**Table 2 Overview of EUT configuration**

The tests were performed with two EUT at the antenna ports from ANT1 to ANT4.

The used different EUT configurations are shown by the following table.

| Module Name | Serial-No. | Module Type | Config. |
|---|---|---|---|
| AHFIHA | RW233403203 | RRH | A, B, C, D, E, F |
| AHFIHA | RW233800371 | RRH | A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W |
| **BTS Software version** | | | |
| SBTS23R4_ENB_0000_000716_000000 | | | |
| SBTS23R4_ENB_0000_000936_000000 | | | |

**Table 3 Configuration of EUT**

For a functional description of the modules, please refer to the appropriate related parts and exhibit sections of this certification application.

## 2.2 Operating Conditions

The EUT supports QPSK, 16QAM, 64QAM and 256QAM modulation. If not stated otherwise, the following standard setup procedure for the EUT was used:

The transmitter was set up according to 3GPP TS 36.141 E-UTRA Test Models (TM) and NB-IoT Test Model (N-TM) as follows:

- TM 1.1: E-UTRA QPSK modulation testing
- TM 3.1: E-UTRA 64QAM modulation testing
- TM 3.1A: E-UTRA 256QAM modulation testing
- TM 3.2: E-UTRA 16QAM modulation testing
- TM 1.1 with N-TM: E-UTRA NB-IoT (In-band, Guard band) QPSK modulation testing
- N-TM: E-UTRA NB-IoT (Standalone) QPSK modulation testing

During the measurements, one carrier channel was tested at a time. The carrier was set to the maximum power level to ensure the maximum emission amplitudes during all measurements.

During the tests, the Airscale BTS is transmitting a pseudo random bit pattern on the data channels. This ensures that the measurements of the emission characteristics of the transmitter are pursuant to § 2.1049.

# 3. TEST CONFIGURATION

If not stated otherwise, the following measurement configuration was used to perform all measurements (see figure below).

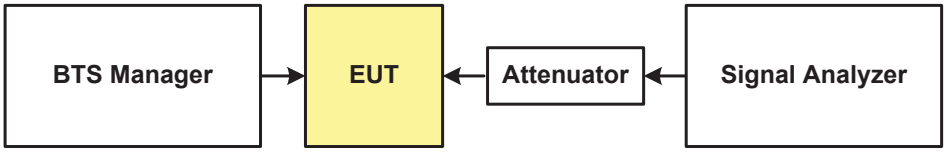



**Figure 1 Test Configuration (single output)**

The RF output of the transceiver (cell) under test is connected to a signal analyzer via a high power attenuator to protect the input of the signal analyzer from high RF power levels. A description of the analyzer settings is given in each of the sections describing the measurements. The other transceivers are terminated.

A complete list of the measurement equipment is included on page 145 of this measurement report.

## 3.1 Calibration of the Test Equipment

All relevant test equipment has a valid calibration from an external calibration laboratory. Additionally the signal analyzer has a built-in self-calibration procedure. This calibration procedure was activated prior to the measurements so that the analyzer is deemed accurate. High quality cables were used to connect the measurement equipment to the EUT. The actual loss of the attenuator and the cables was measured with a high precision network analyzer and taken into account for all measurements.

# 4. TEST RESULTS

## 4.1 Test No. 1: RF Power Output (§ 2.1046, § 24.232, § 27.50, RSS-Gen, RSS-133 RSS-139, RSS-199, SRSP-510, SRSP-513, SRSP-517, SRSP-519)

### 4.1.1. Limits

EIRP limits are calculated and found in Appendix B.

PCS FCC and ISED EIRP limits: 1640W/MHz i.e. 62.15dBm/MHz or 3280W/MHz i.e. 65.16dBm/MHz (§ 24.232(a)(2), (b)(2), RSS-133 6.4/ SRSP-510 5.1.1)

AWS FCC EIRP limits: 1640W/MHz i.e. 62.15dBm/MHz or 3280W/MHz i.e. 65.16dBm/MHz (§ 27.50(d)(1), (d)(2))

AWS ISED EIRP limits: 62.0dBm/MHz or 65.0dBm/MHz (RSS-139 5.5/ SRSP-513 6.1.2, 6.1.3/ SRSP-519 6.1.2, 6.1.3)

BRS FCC EIRP limits: 33dBW + 10 log(X/Y) dBW + 10 log(360/beamwidth) dBW, where X is the channel width in MHz and Y is 5.5 or 6MHz. (§ 27.50(h)(ii))

BRS ISED EIRP limits: 1640W/MHz i.e. 62.15dBm/MHz (RSS-199 5.5/ SRSP-517 6.1.2, 6.1.3)

Peak to average power (PAPR) limit is 13dBm (0.1% of time).

(§ 24.232 (d), §27.50 (d)(5), RSS-133 6.4, RSS-139 5.5, RSS-199 5.5, ANSI C63.26)

### 4.1.2. Test Procedure and Results

Detachable Antenna: The maximum output power at the antenna terminals was measured using a signal analyzer.

The RF power was measured with a frequency sweep across the carrier. The carrier power was calculated from the signal analyzer by integration over the result. The base station maximum output power was measured with signal analyzer with offset adjust in testcase. (Offset is measured connection loss of the test set up.)

For the MiMo output, RF power output was measured from each antenna port individually and the results summed mathematically in accordance to FCC KDB 662911 D01 and ANSI C63.26 -guidance.

All Tx ports were tested in Config A and one Tx port was selected for the remaining testing. The AHFIHA antenna ports are essentially electrically identical (the RF power variation between antenna ports is small as shown in the results) and antenna port 1 was selected for the remaining testing based on ANSI C63.26-2015 clauses 5.2.5.3, 5.7.2i and 6.4.

The NB-IoT SA carrier power level was reduced from maximum (20W / carrier) to meet B7 FCC EIRP limits. See details in Appendix B.

Peak to average power (PAPR) was examined using CCDF method and 0.1% value recorded in dB to the tables below.

Average Power Spectral density was measured using FSW signal Analyzer.

The following tables shows the measured output powers at the antenna connector.

| Measured laboratory room temperature and humidity during the tests | | | | |
|---|---|---|---|---|
| Date | Temperature Min-Max: | | Humidity Min-Max: | |
| 02.11.2023 – 27.01.2024 | 19.5 °C | 28.2 °C | 3.6 RH% | 24.9 RH% |

The Average Max RF Power Values are bolded in A configuration.

**Config A:**

| Test Model 3.1a Modulation 256QAM Channel Frequency 1962.5MHz | |
|---|---|
| Tx Port | (dBm) |
| 1 | 47.70 |
| 2 | 47.63 |
| 3 | **47.86** |
| 4 | 47.62 |
| Total power | 235.73 W |
| | 53.72 dBm |

**Table 4 RF Power Output (Band 25 E-UTRA 20 MHz BW Middle Channel)**

| Test Model 3.1a Modulation 256QAM Channel Frequency 2155MHz | |
|---|---|
| Tx Port | (dBm) |
| 1 | 47.43 |
| 2 | **47.45** |
| 3 | 47.31 |
| 4 | 47.34 |
| Total power | 218.95 W |
| | 53.40 dBm |

**Table 5 RF Power Output (Band 66 E-UTRA 20 MHz BW Middle Channel)**

| Test Model 3.1a Modulation 256QAM Channel Frequency 2655MHz | |
|---|---|
| Tx Port | (dBm) |
| 1 | **47.33** |
| 2 | 47.08 |
| 3 | 47.30 |
| 4 | 47.32 |
| Total power | 212.78 W |
| | 53.30 dBm |

**Table 6 RF Power Output (Band 7 E-UTRA 20 MHz BW Middle Channel)**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.53 | 1 | 47.53 | 1 | 47.42 | 1 | 47.52 |

**Table 7 RF Power Output (Band 25 E-UTRA 20 MHz BW All modulation types)**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 2155MHz | | Channel Frequency 2155MHz | | Channel Frequency 2155MHz | | Channel Frequency 2155MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.44 | 1 | 47.38 | 1 | 47.35 | 1 | 47.34 |

**Table 8 RF Power Output (Band 66 E-UTRA 20 MHz BW All modulation types)**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 2655MHz | | Channel Frequency 2655MHz | | Channel Frequency 2655MHz | | Channel Frequency 2655MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.37 | 1 | 47.35 | 1 | 47.49 | 1 | 47.32 |

**Table 9 RF Power Output (Band 7 E-UTRA 20 MHz BW All modulation types)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 1940MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1985MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.85 | 1 | 47.56 | 1 | 47.66 |

**Table 10 RF Power Output (Band 25 E-UTRA 20 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2120MHz | | Channel Frequency 2155MHz | | Channel Frequency 2190MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.53 | 1 | 47.36 | 1 | 47.31 |

**Table 11 RF Power Output (Band 66 E-UTRA 20 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2630MHz | | Channel Frequency 2655MHz | | Channel Frequency 2680MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.30 | 1 | 47.38 | 1 | 47.25 |

**Table 12 RF Power Output (Band 7 E-UTRA 20 MHz BW Bottom, Middle and Top Channels)**

**Config B:**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 1937.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1987.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.70 | 1 | 47.54 | 1 | 47.62 |

**Table 13 RF Power Output (Band 25 E-UTRA 15 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2117.5MHz | | Channel Frequency 2155MHz | | Channel Frequency 2192.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.54 | 1 | 47.40 | 1 | 47.32 |

**Table 14 RF Power Output (Band 66 E-UTRA 15 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2627.5MHz | | Channel Frequency 2655MHz | | Channel Frequency 2682.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.30 | 1 | 47.33 | 1 | 47.28 |

**Table 15 RF Power Output (Band 7 E-UTRA 15 MHz BW Bottom, Middle and Top Channels)**

**Config C:**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 1935MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1990MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.73 | 1 | 47.57 | 1 | 47.60 |

**Table 16 RF Power Output (Band 25 E-UTRA 10 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2115MHz | | Channel Frequency 2155MHz | | Channel Frequency 2195MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.51 | 1 | 47.42 | 1 | 47.33 |

**Table 17 RF Power Output (Band 66 E-UTRA 10 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2625MHz | | Channel Frequency 2655MHz | | Channel Frequency 2685MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.29 | 1 | 47.32 | 1 | 47.29 |

**Table 18 RF Power Output (Band 7 E-UTRA 10 MHz BW Bottom, Middle and Top Channels)**

**Config D:**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 1932.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1992.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 45.93 | 1 | 45.80 | 1 | 45.86 |

**Table 19 RF Power Output (Band 25 E-UTRA 5 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2112.5MHz | | Channel Frequency 2155MHz | | Channel Frequency 2197.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 45.68 | 1 | 45.64 | 1 | 45.59 |

**Table 20 RF Power Output (Band 66 E-UTRA 5 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2622.5MHz | | Channel Frequency 2655MHz | | Channel Frequency 2687.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 45.64 | 1 | 45.64 | 1 | 45.59 |

**Table 21 RF Power Output (Band 7 E-UTRA 5 MHz BW Bottom, Middle and Top Channels)**

**Config E:**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 1931.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1988.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 42.85 | 1 | 42.79 | 1 | 42.98 |

**Table 22 RF Power Output (Band 25 E-UTRA 3 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2111.5MHz | | Channel Frequency 2155MHz | | Channel Frequency 2198.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 42.61 | 1 | 42.65 | 1 | 42.60 |

**Table 23 RF Power Output (Band 66 E-UTRA 3 MHz BW Bottom, Middle and Top Channels)**

**Config F:**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 1930.7MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1989.3MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 42.80 | 1 | 42.85 | 1 | 42.96 |

**Table 24 RF Power Output (Band 25 E-UTRA 1.4 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2110.7MHz | | Channel Frequency 2155MHz | | Channel Frequency 2199.3MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 42.65 | 1 | 42.70 | 1 | 42.67 |

**Table 25 RF Power Output (Band 66 E-UTRA 1.4 MHz BW Bottom, Middle and Top Channels)**

**Config G:**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 1940MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1985MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.73 | 1 | 47.61 | 1 | 47.70 |

**Table 26 RF Power Output (Band 25 NB-IoT GB 20 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2120MHz | | Channel Frequency 2155MHz | | Channel Frequency 2190MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.61 | 1 | 47.51 | 1 | 47.41 |

**Table 27 RF Power Output (Band 66 NB-IoT GB 20 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2630MHz | | Channel Frequency 2655MHz | | Channel Frequency 2680MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.30 | 1 | 47.34 | 1 | 47.28 |

**Table 28 RF Power Output (Band 7 NB-IoT GB 20 MHz BW Bottom, Middle and Top Channels)**

**Config H:**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 1937.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1987.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.99 | 1 | 47.79 | 1 | 47.91 |

**Table 29 RF Power Output (Band 25 NB-IoT GB 15 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2117.5MHz | | Channel Frequency 2155MHz | | Channel Frequency 2192.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.83 | 1 | 47.70 | 1 | 47.60 |

**Table 30 RF Power Output (Band 66 NB-IoT GB 15 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2627.5MHz | | Channel Frequency 2655MHz | | Channel Frequency 2682.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.62 | 1 | 47.63 | 1 | 47.53 |

**Table 31 RF Power Output (Band 7 NB-IoT GB 15 MHz BW Bottom, Middle and Top Channels)**

**Config I:**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 1935MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1990MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.75 | 1 | 47.59 | 1 | 47.62 |

**Table 32 RF Power Output (Band 25 NB-IoT GB 10 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2115MHz | | Channel Frequency 2155MHz | | Channel Frequency 2195MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.50 | 1 | 47.44 | 1 | 47.33 |

**Table 33 RF Power Output (Band 66 NB-IoT GB 10 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2625MHz | | Channel Frequency 2655MHz | | Channel Frequency 2685MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.34 | 1 | 47.32 | 1 | 47.35 |

**Table 34 RF Power Output (Band 7 NB-IoT GB 10 MHz BW Bottom, Middle and Top Channels)**

**Config J:**

| Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 1930.2MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1994.8MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 42.73 | 1 | 42.82 | 1 | 42.45 |

**Table 35 RF Power Output (Band 25 NB-IoT SA Bottom, Middle and Top Channels)**

| Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2110.2MHz | | Channel Frequency 2155MHz | | Channel Frequency 2199.8MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 42.24 | 1 | 42.71 | 1 | 42.58 |

**Table 36 RF Power Output (Band 66 NB-IoT SA Bottom, Middle and Top Channels)**

| Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2620.2MHz | | Channel Frequency 2655MHz | | Channel Frequency 2689.8MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 42.61 | 1 | 42.73 | 1 | 42.84 |

**Table 37 RF Power Output (Band 7 NB-IoT SA (for ISED) Bottom, Middle and Top Channels)**

| Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2620.2MHz | | Channel Frequency 2655MHz | | Channel Frequency 2689.8MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 36.50 | 1 | 36.61 | 1 | 36.74 |

**Table 38 RF Power Output (Band 7 NB-IoT SA Reduced Power (for FCC) Bottom, Middle and Top Channels)**

**Config K:**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 1940MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1985MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.66 | 1 | 47.51 | 1 | 47.65 |

**Table 39 RF Power Output (Band 25 NB-IoT IB 20 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2120MHz | | Channel Frequency 2155MHz | | Channel Frequency 2190MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.54 | 1 | 47.38 | 1 | 47.30 |

**Table 40 RF Power Output (Band 66 NB-IoT IB 20 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2630MHz | | Channel Frequency 2655MHz | | Channel Frequency 2680MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.27 | 1 | 47.32 | 1 | 47.22 |

**Table 41 RF Power Output (Band 7 NB-IoT IB 20 MHz BW Bottom, Middle and Top Channels)**

**Config L:**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 1937.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1987.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.69 | 1 | 47.53 | 1 | 47.64 |

**Table 42 RF Power Output (Band 25 NB-IoT IB 15 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2117.5MHz | | Channel Frequency 2155MHz | | Channel Frequency 2192.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.47 | 1 | 47.40 | 1 | 47.33 |

**Table 43 RF Power Output (Band 66 NB-IoT IB 15 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2627.5MHz | | Channel Frequency 2655MHz | | Channel Frequency 2682.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.30 | 1 | 47.33 | 1 | 47.24 |

**Table 44 RF Power Output (Band 7 NB-IoT IB 15 MHz BW Bottom, Middle and Top Channels)**

**Config M:**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 1935MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1990MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.68 | 1 | 47.54 | 1 | 47.61 |

**Table 45 RF Power Output (Band 25 NB-IoT IB 10 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2115MHz | | Channel Frequency 2155MHz | | Channel Frequency 2195MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.48 | 1 | 47.41 | 1 | 47.32 |

**Table 46 RF Power Output (Band 66 NB-IoT IB 10 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2625MHz | | Channel Frequency 2655MHz | | Channel Frequency 2685MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 47.31 | 1 | 47.34 | 1 | 47.29 |

**Table 47 RF Power Output (Band 7 NB-IoT IB 10 MHz BW Bottom, Middle and Top Channels)**

**Config N:**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 1932.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1992.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 45.90 | 1 | 45.88 | 1 | 45.89 |

**Table 48 RF Power Output (Band 25 NB-IoT IB 5 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2112.5MHz | | Channel Frequency 2155MHz | | Channel Frequency 2197.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 45.72 | 1 | 45.71 | 1 | 45.61 |

**Table 49 RF Power Output (Band 66 NB-IoT IB 5 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2622.5MHz | | Channel Frequency 2655MHz | | Channel Frequency 2687.5MHz | |
| Tx Port | (dBm) | Tx Port | (dBm) | Tx Port | (dBm) |
| 1 | 45.65 | 1 | 45.63 | 1 | 45.68 |

**Table 50 RF Power Output (Band 7 NB-IoT IB 5 MHz BW Bottom, Middle and Top Channels)**

**Config O:**

| Test Model 1.1 Modulation QPSK | | | | | |
|---|---|---|---|---|---|
| | Channel Frequency | | | | |
| | 1932.5 MHz | 1937.5 MHz | 1992.5 MHz | 2155.0 MHz | 2655.0 MHz |
| Tx Port | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) |
| 1 | 42.56 | 42.69 | 42.58 | 47.28 | 45.48 |

**Table 51 RF Power Output (Band 25: 3x E-UTRA 5 MHz BW + Band 66 E-UTRA 10 MHz BW + Band 7 E-UTRA 5 MHz BW)**

**Config P:**

| Test Model 1.1 Modulation QPSK | | | | |
|---|---|---|---|---|
| | Channel Frequency | | | |
| | 1940.0 MHz | 1960.0 MHz | 2155.0 MHz | 2655.0 MHz |
| Tx Port | (dBm) | (dBm) | (dBm) | (dBm) |
| 1 | 44.44 | 44.43 | 47.26 | 45.47 |

**Table 52 RF Power Output (Band 25: 2x E-UTRA 20 MHz BW + Band 66 E-UTRA 20 MHz BW + Band 7 E-UTRA 20 MHz BW)**

**Config Q:**

| Test Model 1.1 Modulation QPSK | | | | |
|---|---|---|---|---|
| | Channel Frequency | | | |
| | 1965.0 MHz | 1985.0 MHz | 2155.0 MHz | 2655.0 MHz |
| Tx Port | (dBm) | (dBm) | (dBm) | (dBm) |
| 1 | 44.47 | 44.51 | 47.28 | 45.51 |

**Table 53 RF Power Output (Band 25: 2x E-UTRA 20 MHz BW + Band 66 E-UTRA 20 MHz BW + Band 7 E-UTRA 20 MHz BW)**

**Config R:**

| Test Model 1.1 Modulation QPSK | | | | | |
|---|---|---|---|---|---|
| | Channel Frequency | | | | |
| | 2112.5 MHz | 2117.5 MHz | 2197.5 MHz | 1962.5 MHz | 2655.0 MHz |
| Tx Port | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) |
| 1 | 42.11 | 42.26 | 42.91 | 47.31 | 45.50 |

**Table 54 RF Power Output (Band 66: 3x E-UTRA 5 MHz BW + Band 25 E-UTRA 10 MHz BW + Band 7 E-UTRA 5 MHz BW)**

**Config S:**

| Test Model 1.1 Modulation QPSK | | | | |
|---|---|---|---|---|
| | Channel Frequency | | | |
| | 2120.0 MHz | 2140.0 MHz | 1962.5 MHz | 2655.0 MHz |
| Tx Port | (dBm) | (dBm) | (dBm) | (dBm) |
| 1 | 44.26 | 44.42 | 47.36 | 45.50 |

**Table 55 RF Power Output (Band 66: 2x E-UTRA 20 MHz BW + Band 25 E-UTRA 20 MHz BW + Band 7 E-UTRA 20 MHz BW)**

**Config T:**

| Test Model 1.1 Modulation QPSK | | | | |
|---|---|---|---|---|
| | Channel Frequency | | | |
| | 2170.0 MHz | 2190.0 MHz | 1962.5 MHz | 2655.0 MHz |
| Tx Port | (dBm) | (dBm) | (dBm) | (dBm) |
| 1 | 44.50 | 44.31 | 47.43 | 45.54 |

**Table 56 RF Power Output (Band 66: 2x E-UTRA 20 MHz BW + Band 25 E-UTRA 20 MHz BW + Band 7 E-UTRA 20 MHz BW)**

**Config U:**

| Test Model 1.1 Modulation QPSK | | | | | |
|---|---|---|---|---|---|
| | Channel Frequency | | | | |
| | 2622.5 MHz | 2627.5 MHz | 2687.5 MHz | 1962.5 MHz | 2155.0 MHz |
| Tx Port | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) |
| 1 | 42.30 | 42.23 | 42.54 | 47.44 | 45.46 |

**Table 57 RF Power Output (Band 7: 3x E-UTRA 5 MHz BW + Band 25 E-UTRA 10 MHz BW + Band 66 E-UTRA 5 MHz BW)**

**Config V:**

| Test Model 1.1 Modulation QPSK | | | | |
|---|---|---|---|---|
| | Channel Frequency | | | |
| | 2630.0 MHz | 2650.0 MHz | 1962.5 MHz | 2155.0 MHz |
| Tx Port | (dBm) | (dBm) | (dBm) | (dBm) |
| 1 | 44.09 | 44.32 | 47.45 | 45.50 |

**Table 58 RF Power Output (Band 7: 2x E-UTRA 20 MHz BW + Band 25 E-UTRA 20 MHz BW + Band 66 E-UTRA 20 MHz BW)**

**Config W:**

| Test Model 1.1 Modulation QPSK | | | | |
|---|---|---|---|---|
| | Channel Frequency | | | |
| | 2660.0 MHz | 2680.0 MHz | 1962.5 MHz | 2155.0 MHz |
| Tx Port | (dBm) | (dBm) | (dBm) | (dBm) |
| 1 | 44.22 | 44.23 | 47.47 | 45.49 |

**Table 59 RF Power Output (Band 7: 2x E-UTRA 20 MHz BW + Band 25 E-UTRA 20 MHz BW + Band 66 E-UTRA 20 MHz BW)**

The base station maximum output power was found to be compliant with the manufacturer's specifications and with all requirements of the FCC rules and ISED RSS specifications.

**Config A:**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 35.41 | 1 | 35.44 | 1 | 36.00 | 1 | 35.50 |

**Table 60 Power Spectral Density (Band 25 E-UTRA 20 MHz BW Middle Channel)**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 2155MHz | | Channel Frequency 2155MHz | | Channel Frequency 2155MHz | | Channel Frequency 2155MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 35.36 | 1 | 35.34 | 1 | 35.74 | 1 | 35.30 |

**Table 61 Power Spectral Density (Band 66 E-UTRA 20 MHz BW Middle Channel)**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 2655MHz | | Channel Frequency 2655MHz | | Channel Frequency 2655MHz | | Channel Frequency 2655MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 35.07 | 1 | 35.09 | 1 | 35.55 | 1 | 35.07 |

**Table 62 Power Spectral Density (Band 7 E-UTRA 20 MHz BW Middle Channel)**

**Config B:**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 36.64 | 1 | 36.69 | 1 | 37.62 | 1 | 36.72 |

**Table 63 Power Spectral Density (Band 25 E-UTRA 15 MHz BW Middle Channel)**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 2155MHz | | Channel Frequency 2155MHz | | Channel Frequency 2155MHz | | Channel Frequency 2155MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 36.58 | 1 | 36.58 | 1 | 37.36 | 1 | 36.56 |

**Table 64 Power Spectral Density (Band 66 E-UTRA 15 MHz BW Middle Channel)**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 2655MHz | | Channel Frequency 2655MHz | | Channel Frequency 2655MHz | | Channel Frequency 2655MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 36.36 | 1 | 36.33 | 1 | 37.15 | 1 | 36.31 |

**Table 65 Power Spectral Density (Band 7 E-UTRA 15 MHz BW Middle Channel)**

**Config C:**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 38.29 | 1 | 38.39 | 1 | 38.77 | 1 | 38.47 |

**Table 66 Power Spectral Density (Band 25 E-UTRA 10 MHz BW Middle Channel)**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 2155MHz | | Channel Frequency 2155MHz | | Channel Frequency 2155MHz | | Channel Frequency 2155MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 38.33 | 1 | 38.34 | 1 | 38.64 | 1 | 38.31 |

**Table 67 Power Spectral Density (Band 66 E-UTRA 10 MHz BW Middle Channel)**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 2655MHz | | Channel Frequency 2655MHz | | Channel Frequency 2655MHz | | Channel Frequency 2655MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 38.12 | 1 | 38.13 | 1 | 38.43 | 1 | 38.10 |

**Table 68 Power Spectral Density (Band 7 E-UTRA 10 MHz BW Middle Channel)**

**Config D:**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 39.66 | 1 | 39.70 | 1 | 40.09 | 1 | 39.78 |

**Table 69 Power Spectral Density (Band 25 E-UTRA 5 MHz BW Middle Channel)**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 2155MHz | | Channel Frequency 2155MHz | | Channel Frequency 2155MHz | | Channel Frequency 2155MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 39.53 | 1 | 39.53 | 1 | 39.88 | 1 | 39.52 |

**Table 70 Power Spectral Density (Band 66 E-UTRA 5 MHz BW Middle Channel)**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 2622.5MHz | | Channel Frequency 2622.5MHz | | Channel Frequency 2622.5MHz | | Channel Frequency 2622.5MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 39.32 | 1 | 39.27 | 1 | 39.63 | 1 | 39.27 |
| Channel Frequency 2655MHz | | Channel Frequency 2655MHz | | Channel Frequency 2655MHz | | Channel Frequency 2655MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 39.35 | 1 | 39.35 | 1 | 39.73 | 1 | 39.37 |
| Channel Frequency 2687.5MHz | | Channel Frequency 2687.5MHz | | Channel Frequency 2687.5MHz | | Channel Frequency 2687.5MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 39.27 | 1 | 39.22 | 1 | 39.61 | 1 | 39.28 |

**Table 71 Power Spectral Density (Band 7 E-UTRA 5 MHz BW Bottom, Middle and Top Channels)**

**Config E:**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 38.80 | 1 | 38.81 | 1 | 39.26 | 1 | 38.88 |

**Table 72 Power Spectral Density (Band 25 E-UTRA 3 MHz BW Middle Channel)**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 2155MHz | | Channel Frequency 2155MHz | | Channel Frequency 2155MHz | | Channel Frequency 2155MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 38.65 | 1 | 38.64 | 1 | 39.06 | 1 | 38.62 |

**Table 73 Power Spectral Density (Band 66 E-UTRA 3 MHz BW Middle Channel)**

**Config F:**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 1930.7MHz | | Channel Frequency 1930.7MHz | | Channel Frequency 1930.7MHz | | Channel Frequency 1930.7MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 41.66 | 1 | 41.74 | 1 | 41.84 | 1 | 41.73 |
| Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 41.83 | 1 | 41.89 | 1 | 41.93 | 1 | 41.90 |
| Channel Frequency 1989.3MHz | | Channel Frequency 1989.3MHz | | Channel Frequency 1989.3MHz | | Channel Frequency 1989.3MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 41.99 | 1 | 42.02 | 1 | 42.07 | 1 | 42.04 |

**Table 74 Power Spectral Density (Band 25 E-UTRA 1.4 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 2110.7MHz | | Channel Frequency 2110.7MHz | | Channel Frequency 2110.7MHz | | Channel Frequency 2110.7MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 41.55 | 1 | 41.46 | 1 | 41.51 | 1 | 41.44 |
| Channel Frequency 2155MHz | | Channel Frequency 2155MHz | | Channel Frequency 2155MHz | | Channel Frequency 2155MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 41.66 | 1 | 41.61 | 1 | 41.64 | 1 | 41.58 |
| Channel Frequency 2199.3MHz | | Channel Frequency 2199.3MHz | | Channel Frequency 2199.3MHz | | Channel Frequency 2199.3MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 41.43 | 1 | 41.35 | 1 | 41.38 | 1 | 41.33 |

**Table 75 Power Spectral Density (Band 66 E-UTRA 1.4 MHz BW Bottom, Middle and Top Channels)**

**Config G:**

| Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|
| Channel Frequency 1962.5MHz | |
| Tx Port | dBm/MHz |
| 1 | 35.54 |

**Table 76 Power Spectral Density (Band 25 NB-IoT GB 20 MHz BW Middle Channel)**

| Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|
| Channel Frequency 2155MHz | |
| Tx Port | dBm/MHz |
| 1 | 35.61 |

**Table 77 Power Spectral Density (Band 66 NB-IoT GB 20 MHz BW Middle Channel)**

| Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|
| Channel Frequency 2655MHz | |
| Tx Port | dBm/MHz |
| 1 | 35.52 |

**Table 78 Power Spectral Density (Band 7 NB-IoT GB 20 MHz BW Middle Channel)**

**Config H:**

| Test Model 1.1 with N-TM<br>Modulation QPSK | |
|---|---|
| Channel Frequency 1962.5MHz | |
| Tx Port | dBm/MHz |
| 1 | 36.92 |

**Table 79 Power Spectral Density (Band 25 NB-IoT GB 15 MHz BW Middle Channel)**

| Test Model 1.1 with N-TM<br>Modulation QPSK | |
|---|---|
| Channel Frequency 2155MHz | |
| Tx Port | dBm/MHz |
| 1 | 37.13 |

**Table 80 Power Spectral Density (Band 66 NB-IoT GB 15 MHz BW Middle Channel)**

| Test Model 1.1 with N-TM<br>Modulation QPSK | |
|---|---|
| Channel Frequency 2655MHz | |
| Tx Port | dBm/MHz |
| 1 | 36.83 |

**Table 81 Power Spectral Density (Band 7 NB-IoT GB 15 MHz BW Middle Channel)**

**Config I:**

| Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|
| Channel Frequency 1962.5MHz | |
| Tx Port | dBm/MHz |
| 1 | 38.48 |

**Table 82 Power Spectral Density (Band 25 NB-IoT GB 10 MHz BW Middle Channel)**

| Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|
| Channel Frequency 2155MHz | |
| Tx Port | dBm/MHz |
| 1 | 38.60 |

**Table 83 Power Spectral Density (Band 66 NB-IoT GB 10 MHz BW Middle Channel)**

| Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|
| Channel Frequency 2655MHz | |
| Tx Port | dBm/MHz |
| 1 | 38.37 |

**Table 84 Power Spectral Density (Band 7 NB-IoT GB 10 MHz BW Middle Channel)**

**Config J:**

| Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 1930.2MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1994.8MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 42.40 | 1 | 42.73 | 1 | 42.35 |

**Table 85 Power Spectral Density (Band 25 NB-IoT SA Bottom, Middle and Top Channels)**

| Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2110.2MHz | | Channel Frequency 2155MHz | | Channel Frequency 2199.8MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 42.08 | 1 | 42.55 | 1 | 42.41 |

**Table 86 Power Spectral Density (Band 66 NB-IoT SA Bottom, Middle and Top Channels)**

| Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2620.2MHz | | Channel Frequency 2655MHz | | Channel Frequency 2689.8MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 42.51 | 1 | 42.62 | 1 | 42.65 |

**Table 87 Power Spectral Density (Band 7 NB-IoT SA (for ISED) Bottom, Middle and Top Channels)**

| Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2620.2MHz | | Channel Frequency 2655MHz | | Channel Frequency 2689.8MHz | |
| Tx Port | dBm/MHz | Tx Port | dBm/MHz | Tx Port | dBm/MHz |
| 1 | 36.33 | 1 | 36.55 | 1 | 36.56 |

**Table 88 Power Spectral Density (Band 7 NB-IoT SA Reduced Power (for FCC) Bottom, Middle and Top Channels)**

**Config K:**

| Test Model 1.1 with N-TM<br>Modulation QPSK | |
|---|---|
| Channel Frequency 1962.5MHz | |
| Tx Port | dBm/MHz |
| 1 | 35.32 |

**Table 89 Power Spectral Density (Band 25 NB-IoT IB 20 MHz BW Middle Channel)**

| Test Model 1.1 with N-TM<br>Modulation QPSK | |
|---|---|
| Channel Frequency 2155MHz | |
| Tx Port | dBm/MHz |
| 1 | 35.39 |

**Table 90 Power Spectral Density (Band 66 NB-IoT IB 20 MHz BW Middle Channel)**

| Test Model 1.1 with N-TM<br>Modulation QPSK | |
|---|---|
| Channel Frequency 2655MHz | |
| Tx Port | dBm/MHz |
| 1 | 35.29 |

**Table 91 Power Spectral Density (Band 7 NB-IoT IB 20 MHz BW Middle Channel)**

**Config L:**

| Test Model 1.1 with N-TM<br>Modulation QPSK | |
|---|---|
| Channel Frequency 1962.5MHz | |
| Tx Port | dBm/MHz |
| 1 | 36.51 |

**Table 92 Power Spectral Density (Band 25 NB-IoT IB 15 MHz BW Middle Channel)**

| Test Model 1.1 with N-TM<br>Modulation QPSK | |
|---|---|
| Channel Frequency 2155MHz | |
| Tx Port | dBm/MHz |
| 1 | 36.52 |

**Table 93 Power Spectral Density (Band 66 NB-IoT IB 15 MHz BW Middle Channel)**

| Test Model 1.1 with N-TM<br>Modulation QPSK | |
|---|---|
| Channel Frequency 2655MHz | |
| Tx Port | dBm/MHz |
| 1 | 36.55 |

**Table 94 Power Spectral Density (Band 7 NB-IoT IB 15 MHz BW Middle Channel)**

**Config M:**

| Test Model 1.1 with N-TM<br>Modulation QPSK | |
|---|---|
| Channel Frequency 1962.5MHz | |
| Tx Port | dBm/MHz |
| 1 | 38.30 |

**Table 95 Power Spectral Density (Band 25 NB-IoT IB 10 MHz BW Middle Channel)**

| Test Model 1.1 with N-TM<br>Modulation QPSK | |
|---|---|
| Channel Frequency 2155MHz | |
| Tx Port | dBm/MHz |
| 1 | 38.49 |

**Table 96 Power Spectral Density (Band 66 NB-IoT IB 10 MHz BW Middle Channel)**

| Test Model 1.1 with N-TM<br>Modulation QPSK | |
|---|---|
| Channel Frequency 2655MHz | |
| Tx Port | dBm/MHz |
| 1 | 38.33 |

**Table 97 Power Spectral Density (Band 7 NB-IoT IB 10 MHz BW Middle Channel)**

**Config N:**

| Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|
| Channel Frequency 1962.5MHz | |
| Tx Port | dBm/MHz |
| 1 | 39.47 |

**Table 98 Power Spectral Density (Band 25 NB-IoT IB 5 MHz BW Middle Channel)**

| Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|
| Channel Frequency 2155MHz | |
| Tx Port | dBm/MHz |
| 1 | 39.73 |

**Table 99 Power Spectral Density (Band 66 NB-IoT IB 5 MHz BW Middle Channel)**

| Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|
| Channel Frequency 2655MHz | |
| Tx Port | dBm/MHz |
| 1 | 39.57 |

**Table 100 Power Spectral Density (Band 7 NB-IoT IB 5 MHz BW Middle Channel)**

The base station power spectral density was found to be compliant with the manufacturer's specifications and with all requirements of the FCC rules and ISED RSS specifications.

**Config A:**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1962.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.90 | 1 | 7.86 | 1 | 7.86 | 1 | 7.90 |

**Table 101 Peak to Average Power (Band 25 E-UTRA 20 MHz BW Middle Channel All modulation types)**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 2155MHz | | Channel Frequency 2155MHz | | Channel Frequency 2155MHz | | Channel Frequency 2155MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.86 | 1 | 7.88 | 1 | 7.86 | 1 | 7.88 |

**Table 102 Peak to Average Power (Band 66 E-UTRA 20 MHz BW Middle Channel All modulation types)**

| Test Model 1.1 Modulation QPSK | | Test Model 3.1 Modulation 64QAM | | Test Model 3.2 Modulation 16QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|---|---|
| Channel Frequency 2655MHz | | Channel Frequency 2655MHz | | Channel Frequency 2655MHz | | Channel Frequency 2655MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.88 | 1 | 7.86 | 1 | 7.84 | 1 | 7.88 |

**Table 103 Peak to Average Power (Band 7 E-UTRA 20 MHz BW Middle Channel All modulation types)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 1940MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1985MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.88 | 1 | 7.86 | 1 | 7.88 |

**Table 104 Peak to Average Power (Band 25 E-UTRA 20 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2120MHz | | Channel Frequency 2155MHz | | Channel Frequency 2190MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.90 | 1 | 7.88 | 1 | 7.88 |

**Table 105 Peak to Average Power (Band 66 E-UTRA 20 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2630MHz | | Channel Frequency 2655MHz | | Channel Frequency 2680MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.86 | 1 | 7.86 | 1 | 7.88 |

**Table 106 Peak to Average Power (Band 7 E-UTRA 20 MHz BW Bottom, Middle and Top Channels)**

**Config B:**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 1937.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1987.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.88 | 1 | 7.90 | 1 | 7.88 |

**Table 107 Peak to Average Power (Band 25 E-UTRA 15 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2117.5MHz | | Channel Frequency 2155MHz | | Channel Frequency 2192.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.90 | 1 | 7.90 | 1 | 7.88 |

**Table 108 Peak to Average Power (Band 66 E-UTRA 15 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2627.5MHz | | Channel Frequency 2655MHz | | Channel Frequency 2682.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.88 | 1 | 7.88 | 1 | 7.88 |

**Table 109 Peak to Average Power (Band 7 E-UTRA 15 MHz BW Bottom, Middle and Top Channels)**

**Config C:**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 1935MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1990MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.90 | 1 | 7.92 | 1 | 7.88 |

**Table 110 Peak to Average Power (Band 25 E-UTRA 10 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2115MHz | | Channel Frequency 2155MHz | | Channel Frequency 2195MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.92 | 1 | 7.90 | 1 | 7.90 |

**Table 111 Peak to Average Power (Band 66 E-UTRA 10 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2625MHz | | Channel Frequency 2655MHz | | Channel Frequency 2685MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.92 | 1 | 7.90 | 1 | 7.92 |

**Table 112 Peak to Average Power (Band 7 E-UTRA 10 MHz BW Bottom, Middle and Top Channels)**

**Config D:**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 1932.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1992.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.92 | 1 | 7.90 | 1 | 7.94 |

**Table 113 Peak to Average Power (Band 25 E-UTRA 5 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2112.5MHz | | Channel Frequency 2155MHz | | Channel Frequency 2197.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.92 | 1 | 7.88 | 1 | 7.94 |

**Table 114 Peak to Average Power (Band 66 E-UTRA 5 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2622.5MHz | | Channel Frequency 2655MHz | | Channel Frequency 2687.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.86 | 1 | 7.90 | 1 | 7.92 |

**Table 115 Peak to Average Power (Band 7 E-UTRA 5 MHz BW Bottom, Middle and Top Channels)**

**Config E:**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 1931.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1988.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.94 | 1 | 7.92 | 1 | 7.88 |

**Table 116 Peak to Average Power (Band 25 E-UTRA 3 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2111.5MHz | | Channel Frequency 2155MHz | | Channel Frequency 2198.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.92 | 1 | 7.86 | 1 | 7.82 |

**Table 117 Peak to Average Power (Band 66 E-UTRA 3 MHz BW Bottom, Middle and Top Channels)**

**Config F:**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 1930.7MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1989.3MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.88 | 1 | 7.92 | 1 | 7.96 |

**Table 118 Peak to Average Power (Band 25 E-UTRA 1.4 MHz BW Bottom, Middle and Top Channels)**

| Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | | Test Model 3.1a Modulation 256QAM | |
|---|---|---|---|---|---|
| Channel Frequency 2110.7MHz | | Channel Frequency 2155MHz | | Channel Frequency 2199.3MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.96 | 1 | 7.98 | 1 | 7.84 |

**Table 119 Peak to Average Power (Band 66 E-UTRA 1.4 MHz BW Bottom, Middle and Top Channels)**

**Config G:**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 1940MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1985MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.56 | 1 | 7.38 | 1 | 7.44 |

**Table 120 Peak to Average Power (Band 25 NB-IoT GB 20 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2120MHz | | Channel Frequency 2155MHz | | Channel Frequency 2190MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.42 | 1 | 7.40 | 1 | 7.40 |

**Table 121 Peak to Average Power (Band 66 NB-IoT GB 20 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2630MHz | | Channel Frequency 2655MHz | | Channel Frequency 2680MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.40 | 1 | 7.40 | 1 | 7.38 |

**Table 122 Peak to Average Power (Band 7 NB-IoT GB 20 MHz BW Bottom, Middle and Top Channels)**

**Config H:**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 1937.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1987.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.26 | 1 | 7.12 | 1 | 7.18 |

**Table 123 Peak to Average Power (Band 25 NB-IoT GB 15 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2117.5MHz | | Channel Frequency 2155MHz | | Channel Frequency 2192.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.14 | 1 | 7.12 | 1 | 7.14 |

**Table 124 Peak to Average Power (Band 66 NB-IoT GB 15 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2627.5MHz | | Channel Frequency 2655MHz | | Channel Frequency 2682.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.14 | 1 | 7.12 | 1 | 7.12 |

**Table 125 Peak to Average Power (Band 7 NB-IoT GB 15 MHz BW Bottom, Middle and Top Channels)**

**Config I:**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 1935MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1990MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.44 | 1 | 7.40 | 1 | 7.42 |

**Table 126 Peak to Average Power (Band 25 NB-IoT GB 10 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2115MHz | | Channel Frequency 2155MHz | | Channel Frequency 2195MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.42 | 1 | 7.42 | 1 | 7.40 |

**Table 127 Peak to Average Power (Band 66 NB-IoT GB 10 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2625MHz | | Channel Frequency 2655MHz | | Channel Frequency 2685MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.40 | 1 | 7.40 | 1 | 7.38 |

**Table 128 Peak to Average Power (Band 7 NB-IoT GB 10 MHz BW Bottom, Middle and Top Channels)**

**Config J:**

| Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 1930.2MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1994.8MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 6.30 | 1 | 6.34 | 1 | 6.38 |

**Table 129 Peak to Average Power (Band 25 NB-IoT SA Bottom, Middle and Top Channels)**

| Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2110.2MHz | | Channel Frequency 2155MHz | | Channel Frequency 2199.8MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 6.38 | 1 | 6.34 | 1 | 6.34 |

**Table 130 Peak to Average Power (Band 66 NB-IoT SA Bottom, Middle and Top Channels)**

| Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | | Test Model N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2620.2MHz | | Channel Frequency 2655MHz | | Channel Frequency 2689.8MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 6.36 | 1 | 6.36 | 1 | 6.36 |

**Table 131 Peak to Average Power (Band 7 NB-IoT SA Bottom, Middle and Top Channels)**

**Config K:**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 1940MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1985MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.54 | 1 | 7.42 | 1 | 7.44 |

**Table 132 Peak to Average Power (Band 25 NB-IoT IB 20 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2120MHz | | Channel Frequency 2155MHz | | Channel Frequency 2190MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.42 | 1 | 7.40 | 1 | 7.42 |

**Table 133 Peak to Average Power (Band 66 NB-IoT IB 20 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2630MHz | | Channel Frequency 2655MHz | | Channel Frequency 2680MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.42 | 1 | 7.40 | 1 | 7.40 |

**Table 134 Peak to Average Power (Band 7 NB-IoT IB 20 MHz BW Bottom, Middle and Top Channels)**

**Config L:**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 1937.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1987.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.50 | 1 | 7.42 | 1 | 7.44 |

**Table 135 Peak to Average Power (Band 25 NB-IoT IB 15 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2117.5MHz | | Channel Frequency 2155MHz | | Channel Frequency 2192.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.44 | 1 | 7.44 | 1 | 7.44 |

**Table 136 Peak to Average Power (Band 66 NB-IoT IB 15 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2627.5MHz | | Channel Frequency 2655MHz | | Channel Frequency 2682.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.42 | 1 | 7.42 | 1 | 7.42 |

**Table 137 Peak to Average Power (Band 7 NB-IoT IB 15 MHz BW Bottom, Middle and Top Channels)**

**Config M:**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 1935MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1990MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.46 | 1 | 7.44 | 1 | 7.44 |

**Table 138 Peak to Average Power (Band 25 NB-IoT IB 10 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2115MHz | | Channel Frequency 2155MHz | | Channel Frequency 2195MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.46 | 1 | 7.44 | 1 | 7.44 |

**Table 139 Peak to Average Power (Band 66 NB-IoT IB 10 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2625MHz | | Channel Frequency 2655MHz | | Channel Frequency 2685MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.46 | 1 | 7.44 | 1 | 7.42 |

**Table 140 Peak to Average Power (Band 7 NB-IoT IB 10 MHz BW Bottom, Middle and Top Channels)**

**Config N:**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 1932.5MHz | | Channel Frequency 1962.5MHz | | Channel Frequency 1992.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.42 | 1 | 7.42 | 1 | 7.44 |

**Table 141 Peak to Average Power (Band 25 NB-IoT IB 5 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2112.5MHz | | Channel Frequency 2155MHz | | Channel Frequency 2197.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.44 | 1 | 7.44 | 1 | 7.42 |

**Table 142 Peak to Average Power (Band 66 NB-IoT IB 5 MHz BW Bottom, Middle and Top Channels)**

| Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | | Test Model 1.1 with N-TM Modulation QPSK | |
|---|---|---|---|---|---|
| Channel Frequency 2622.5MHz | | Channel Frequency 2655MHz | | Channel Frequency 2687.5MHz | |
| Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% | Tx Port | CCDF 0.1% |
| 1 | 7.42 | 1 | 7.42 | 1 | 7.42 |

**Table 143 Peak to Average Power (Band 7 NB-IoT IB 5 MHz BW Bottom, Middle and Top Channels)**

The base station peak to average power was found to be compliant with the manufacturer's specifications and with all requirements of the FCC rules and ISED RSS specifications.

## 4.2 Test No. 2: Modulation Characteristics (§ 2.1047, RSS-Gen, RSS-133, RSS-139, RSS-199)

The occupied bandwidth was measured to be compliant with the manufacturer's specifications and with all requirements of the FCC rules and ISED RSS specifications, which represents the 99% power bandwidth (see the following section and screenshots on page 176).

No further testing is required under this section of the FCC rules and ISED RSS specifications. No measurements other than the occupied bandwidth are required.

Sample of modulation screenshots are on page 172, in I/Q constellation diagrams and tables, showing QPSK, 16QAM, 64QAM and 256QAM –modulation generation.

## 4.3 Test No. 3: Occupied Bandwidth (§ 2.1049, § 24.238, § 27.53, RSS-Gen)

### 4.3.1. Limits

FCC § 2.1049: The 99% occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to 0.5% of the emitted power.

FCC § 24.238(b) for PCS, § 27.53(h)(3) for AWS and § 27.53(m)(6) for BRS : The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

RSS-Gen. 6.7: The occupied bandwidth or the “99% emission bandwidth” is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

### 4.3.2. Test Procedure and Results

The 99% occupied bandwidth of the carrier emission is measured using a signal analyzer with Resolution Bandwidth set to 3.9-500kHz (1-5% of bandwidth; see screenshots on page 176 for details).

The Relative measurement procedure of OBW is measured as the width of the spectral envelope of the modulated signal, at an amplitude level reduced from a reference value by a specified ratio (or in decibels, a specified number of dB down from the reference value). The typical ratio for transmitters is −26 dB, corresponding to the 26 dB BW. The Relative measurement procedure emission is measured using a signal analyzer with Resolution Bandwidth set to 3.9-500kHz (1-5% of bandwidth; see screenshots on page 184 for details).

Emission designator summary tables are found in Appendix C.

The following tables summarize the results:

| Measured laboratory room temperature and humidity during the tests | | | | |
|---|---|---|---|---|
| Date | Temperature Min-Max: | | Humidity Min-Max: | |
| 10.11.2023 – 13.12.2023 | 19.5 °C | 26.4 °C | 5.1 RH% | 18.3 RH% |

**Config A:**

| Test Model 1.1 Modulation QPSK | | | Test Model 3.1 Modulation 64QAM | | | Test Model 3.2 Modulation 16QAM | | | Test Model 3.1a Modulation 256QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Channel Frequency 1940MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 18.00 | 19.50 |
| Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 17.97 | 19.46 | 1 | 17.99 | 19.50 | 1 | 18.04 | 19.54 | 1 | 17.97 | 19.50 |
| | | | | | | | | | Channel Frequency 1985MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 17.96 | 19.62 |

**Table 144 Occupied Bandwidth (Band 25 E-UTRA 20 MHz Channel bandwidth)**

| Test Model 1.1 Modulation QPSK | | | Test Model 3.1 Modulation 64QAM | | | Test Model 3.2 Modulation 16QAM | | | Test Model 3.1a Modulation 256QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Channel Frequency 2120MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 17.97 | 19.54 |
| Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 17.97 | 19.50 | 1 | 17.98 | 19.54 | 1 | 18.00 | 19.62 | 1 | 17.98 | 19.34 |
| | | | | | | | | | Channel Frequency 2190MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 17.97 | 19.46 |

**Table 145 Occupied Bandwidth (Band 66 E-UTRA 20 MHz Channel bandwidth)**

| Test Model 1.1 Modulation QPSK | | | Test Model 3.1 Modulation 64QAM | | | Test Model 3.2 Modulation 16QAM | | | Test Model 3.1a Modulation 256QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Channel Frequency 2630MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 17.98 | 19.38 |
| Channel Frequency 2655MHz | | | Channel Frequency 2655MHz | | | Channel Frequency 2655MHz | | | Channel Frequency 2655MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 17.98 | 19.38 | 1 | 17.99 | 19.50 | 1 | 17.97 | 19.70 | 1 | 17.99 | 19.42 |
| | | | | | | | | | Channel Frequency 2680MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 18.00 | 19.50 |

**Table 146 Occupied Bandwidth (Band 7 E-UTRA 20 MHz Channel bandwidth)**

**Config B:**

| Test Model 1.1 Modulation QPSK | | | Test Model 3.1 Modulation 64QAM | | | Test Model 3.2 Modulation 16QAM | | | Test Model 3.1a Modulation 256QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Channel Frequency 1937.5MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 13.46 | 14.56 |
| Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 13.47 | 14.54 | 1 | 13.47 | 14.56 | 1 | 13.47 | 14.48 | 1 | 13.48 | 14.51 |
| | | | | | | | | | Channel Frequency 1987.5MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 13.47 | 14.51 |

**Table 147 Occupied Bandwidth (Band 25 E-UTRA 15 MHz Channel bandwidth)**

| Test Model 1.1 Modulation QPSK | | | Test Model 3.1 Modulation 64QAM | | | Test Model 3.2 Modulation 16QAM | | | Test Model 3.1a Modulation 256QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Channel Frequency 2117.5MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 13.46 | 14.48 |
| Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 13.46 | 14.56 | 1 | 13.48 | 14.60 | 1 | 13.43 | 14.42 | 1 | 13.47 | 14.45 |
| | | | | | | | | | Channel Frequency 2192.5MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 13.47 | 14.56 |

**Table 148 Occupied Bandwidth (Band 66 E-UTRA 15 MHz Channel bandwidth)**

| Test Model 1.1 Modulation QPSK | | | Test Model 3.1 Modulation 64QAM | | | Test Model 3.2 Modulation 16QAM | | | Test Model 3.1a Modulation 256QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Channel Frequency 2627.5MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 13.47 | 14.48 |
| Channel Frequency 2655MHz | | | Channel Frequency 2655MHz | | | Channel Frequency 2655MHz | | | Channel Frequency 2655MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 13.47 | 14.42 | 1 | 13.47 | 14.56 | 1 | 13.49 | 14.36 | 1 | 13.47 | 14.60 |
| | | | | | | | | | Channel Frequency 2682.5MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 13.46 | 14.51 |

**Table 149 Occupied Bandwidth (Band 7 E-UTRA 15 MHz Channel bandwidth)**

**Config C:**

| Test Model 1.1 Modulation QPSK | | | Test Model 3.1 Modulation 64QAM | | | Test Model 3.2 Modulation 16QAM | | | Test Model 3.1a Modulation 256QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Channel Frequency 1935MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 8.97 | 9.67 |
| Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 8.98 | 9.73 | 1 | 8.97 | 9.71 | 1 | 8.99 | 9.71 | 1 | 8.98 | 9.71 |
| | | | | | | | | | Channel Frequency 1990MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 8.97 | 9.71 |

**Table 150 Occupied Bandwidth (Band 25 E-UTRA 10 MHz Channel bandwidth)**

| Test Model 1.1 Modulation QPSK | | | Test Model 3.1 Modulation 64QAM | | | Test Model 3.2 Modulation 16QAM | | | Test Model 3.1a Modulation 256QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Channel Frequency 2115MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 8.96 | 9.73 |
| Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 8.97 | 9.73 | 1 | 8.98 | 9.73 | 1 | 8.99 | 9.67 | 1 | 8.97 | 9.65 |
| | | | | | | | | | Channel Frequency 2195MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 8.97 | 9.69 |

**Table 151 Occupied Bandwidth (Band 66 E-UTRA 10 MHz Channel bandwidth)**

| Test Model 1.1 Modulation QPSK | | | Test Model 3.1 Modulation 64QAM | | | Test Model 3.2 Modulation 16QAM | | | Test Model 3.1a Modulation 256QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Channel Frequency 2625MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 8.97 | 9.69 |
| Channel Frequency 2655MHz | | | Channel Frequency 2655MHz | | | Channel Frequency 2655MHz | | | Channel Frequency 2655MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 8.97 | 9.73 | 1 | 8.98 | 9.73 | 1 | 8.98 | 9.57 | 1 | 8.97 | 9.73 |
| | | | | | | | | | Channel Frequency 2685MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 8.96 | 9.63 |

**Table 152 Occupied Bandwidth (Band 7 E-UTRA 10 MHz Channel bandwidth)**

**Config D:**

| Test Model 1.1 Modulation QPSK | | | Test Model 3.1 Modulation 64QAM | | | Test Model 3.2 Modulation 16QAM | | | Test Model 3.1a Modulation 256QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Channel Frequency 1932.5MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 4.49 | 4.83 |
| Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 4.49 | 4.86 | 1 | 4.49 | 4.83 | 1 | 4.48 | 4.89 | 1 | 4.49 | 4.84 |
| | | | | | | | | | Channel Frequency 1992.5MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 4.49 | 4.86 |

**Table 153 Occupied Bandwidth (Band 25 E-UTRA 5 MHz Channel bandwidth)**

| Test Model 1.1 Modulation QPSK | | | Test Model 3.1 Modulation 64QAM | | | Test Model 3.2 Modulation 16QAM | | | Test Model 3.1a Modulation 256QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Channel Frequency 2112.5MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 4.49 | 4.87 |
| Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 4.49 | 4.84 | 1 | 4.49 | 4.88 | 1 | 4.49 | 4.83 | 1 | 4.49 | 4.88 |
| | | | | | | | | | Channel Frequency 2197.5MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 4.49 | 4.86 |

**Table 154 Occupied Bandwidth (Band 66 E-UTRA 5 MHz Channel bandwidth)**

| Test Model 1.1 Modulation QPSK | | | Test Model 3.1 Modulation 64QAM | | | Test Model 3.2 Modulation 16QAM | | | Test Model 3.1a Modulation 256QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Channel Frequency 2622.5MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 4.49 | 4.84 |
| Channel Frequency 2655MHz | | | Channel Frequency 2655MHz | | | Channel Frequency 2655MHz | | | Channel Frequency 2655MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 4.49 | 4.88 | 1 | 4.49 | 4.87 | 1 | 4.45 | 4.82 | 1 | 4.50 | 4.84 |
| | | | | | | | | | Channel Frequency 2687.5MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 4.50 | 4.88 |

**Table 155 Occupied Bandwidth (Band 7 E-UTRA 5 MHz Channel bandwidth)**

**Config E:**

| Test Model 1.1 Modulation QPSK | | | Test Model 3.1 Modulation 64QAM | | | Test Model 3.2 Modulation 16QAM | | | Test Model 3.1a Modulation 256QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Channel Frequency 1931.5MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 2.70 | 2.91 |
| Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 2.70 | 2.93 | 1 | 2.71 | 2.93 | 1 | 2.70 | 2.93 | 1 | 2.70 | 2.92 |
| | | | | | | | | | Channel Frequency 1988.5MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 2.70 | 2.91 |

**Table 156 Occupied Bandwidth (Band 25 E-UTRA 3 MHz Channel bandwidth)**

| Test Model 1.1 Modulation QPSK | | | Test Model 3.1 Modulation 64QAM | | | Test Model 3.2 Modulation 16QAM | | | Test Model 3.1a Modulation 256QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Channel Frequency 2111.5MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 2.70 | 2.93 |
| Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 2.70 | 2.93 | 1 | 2.70 | 2.91 | 1 | 2.70 | 2.94 | 1 | 2.70 | 2.90 |
| | | | | | | | | | Channel Frequency 2198.5MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 2.70 | 2.91 |

**Table 157 Occupied Bandwidth (Band 66 E-UTRA 3 MHz Channel bandwidth)**

**Config F:**

| Test Model 1.1 Modulation QPSK | | | Test Model 3.1 Modulation 64QAM | | | Test Model 3.2 Modulation 16QAM | | | Test Model 3.1a Modulation 256QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Channel Frequency 1930.7MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 1.11 | 1.26 |
| Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1962.5MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 1.11 | 1.28 | 1 | 1.11 | 1.25 | 1 | 1.11 | 1.28 | 1 | 1.11 | 1.28 |
| | | | | | | | | | Channel Frequency 1989.3MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 1.11 | 1.27 |

**Table 158 Occupied Bandwidth (Band 25 E-UTRA 1.4 MHz Channel bandwidth)**

| Test Model 1.1 Modulation QPSK | | | Test Model 3.1 Modulation 64QAM | | | Test Model 3.2 Modulation 16QAM | | | Test Model 3.1a Modulation 256QAM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Channel Frequency 2110.7MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 1.11 | 1.26 |
| Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2155MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 1.12 | 1.27 | 1 | 1.11 | 1.27 | 1 | 1.11 | 1.27 | 1 | 1.11 | 1.27 |
| | | | | | | | | | Channel Frequency 2199.3MHz | | |
| | | | | | | | | | Tx Port | 99% (MHz) | 26dB (MHz) |
| | | | | | | | | | 1 | 1.11 | 1.28 |

**Table 159 Occupied Bandwidth (Band 66 E-UTRA 1.4 MHz Channel bandwidth)**

**Config G:**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 1940MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1985MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 18.26 | 19.90 | 1 | 18.29 | 19.86 | 1 | 18.24 | 19.82 |

**Table 160 Occupied Bandwidth (Band 25 NB-IoT GB 20 MHz Channel bandwidth)**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 2120MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2190MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 18.30 | 19.82 | 1 | 18.31 | 19.78 | 1 | 18.28 | 19.94 |

**Table 161 Occupied Bandwidth (Band 66 NB-IoT GB 20 MHz Channel bandwidth)**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 2630MHz | | | Channel Frequency 2655MHz | | | Channel Frequency 2680MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 18.28 | 19.94 | 1 | 18.26 | 19.86 | 1 | 18.28 | 19.86 |

**Table 162 Occupied Bandwidth (Band 7 NB-IoT GB 20 MHz Channel bandwidth)**

**Config H:**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 1937.5MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1987.5MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 13.75 | 14.74 | 1 | 13.76 | 14.71 | 1 | 13.74 | 14.74 |

**Table 163 Occupied Bandwidth (Band 25 NB-IoT GB 15 MHz Channel bandwidth)**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 2117.5MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2192.5MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 13.75 | 14.80 | 1 | 13.75 | 14.78 | 1 | 13.76 | 14.78 |

**Table 164 Occupied Bandwidth (Band 66 NB-IoT GB 15 MHz Channel bandwidth)**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 2627.5MHz | | | Channel Frequency 2655MHz | | | Channel Frequency 2682.5MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 13.75 | 14.78 | 1 | 13.73 | 14.71 | 1 | 13.75 | 14.71 |

**Table 165 Occupied Bandwidth (Band 7 NB-IoT GB 15 MHz Channel bandwidth)**

**Config I:**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 1935MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1990MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 9.21 | 9.85 | 1 | 9.21 | 9.83 | 1 | 9.21 | 9.85 |

**Table 166 Occupied Bandwidth (Band 25 NB-IoT GB 10 MHz Channel bandwidth)**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 2115MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2195MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 9.21 | 9.85 | 1 | 9.20 | 9.83 | 1 | 9.20 | 9.89 |

**Table 167 Occupied Bandwidth (Band 66 NB-IoT GB 10 MHz Channel bandwidth)**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 2625MHz | | | Channel Frequency 2655MHz | | | Channel Frequency 2685MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 9.19 | 9.83 | 1 | 9.20 | 9.87 | 1 | 9.21 | 9.81 |

**Table 168 Occupied Bandwidth (Band 7 NB-IoT GB 10 MHz Channel bandwidth)**

**Config J:**

| Test Model N-TM Modulation QPSK | | | Test Model N-TM Modulation QPSK | | | Test Model N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 1930.2MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1994.8MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 0.202 | 0.280 | 1 | 0.200 | 0.244 | 1 | 0.204 | 0.292 |

**Table 169 Occupied Bandwidth (Band 25 NB-IoT SA)**

| Test Model N-TM Modulation QPSK | | | Test Model N-TM Modulation QPSK | | | Test Model N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 2110.2MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2199.8MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 0.204 | 0.272 | 1 | 0.205 | 0.232 | 1 | 0.205 | 0.246 |

**Table 170 Occupied Bandwidth (Band 66 NB-IoT SA)**

| Test Model N-TM Modulation QPSK | | | Test Model N-TM Modulation QPSK | | | Test Model N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 2620.2MHz | | | Channel Frequency 2655MHz | | | Channel Frequency 2689.8MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 0.200 | 0.260 | 1 | 0.202 | 0.271 | 1 | 0.204 | 0.243 |

**Table 171 Occupied Bandwidth (Band 7 NB-IoT SA)**

**Config K:**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 1940MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1985MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 17.99 | 19.54 | 1 | 17.97 | 19.42 | 1 | 17.99 | 19.46 |

**Table 172 Occupied Bandwidth (Band 25 NB-IoT IB 20 MHz Channel bandwidth)**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 2120MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2190MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 17.98 | 19.46 | 1 | 17.99 | 19.38 | 1 | 17.99 | 19.54 |

**Table 173 Occupied Bandwidth (Band 66 NB-IoT IB 20 MHz Channel bandwidth)**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 2630MHz | | | Channel Frequency 2655MHz | | | Channel Frequency 2680MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 17.98 | 19.38 | 1 | 17.98 | 19.42 | 1 | 17.96 | 19.50 |

**Table 174 Occupied Bandwidth (Band 7 NB-IoT IB 20 MHz Channel bandwidth)**

**Config L:**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 1937.5MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1987.5MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 13.47 | 14.56 | 1 | 13.46 | 14.56 | 1 | 13.47 | 14.56 |

**Table 175 Occupied Bandwidth (Band 25 NB-IoT IB 15 MHz Channel bandwidth)**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 2117.5MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2192.5MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 13.46 | 14.60 | 1 | 13.49 | 14.54 | 1 | 13.47 | 14.60 |

**Table 176 Occupied Bandwidth (Band 66 NB-IoT IB 15 MHz Channel bandwidth)**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 2627.5MHz | | | Channel Frequency 2655MHz | | | Channel Frequency 2682.5MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 13.46 | 14.42 | 1 | 13.47 | 14.56 | 1 | 13.47 | 14.56 |

**Table 177 Occupied Bandwidth (Band 7 NB-IoT IB 15 MHz Channel bandwidth)**

**Config M:**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 1935MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1990MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 8.97 | 9.71 | 1 | 8.97 | 9.67 | 1 | 8.97 | 9.67 |

**Table 178 Occupied Bandwidth (Band 25 NB-IoT IB 10 MHz Channel bandwidth)**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 2115MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2195MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 8.97 | 9.67 | 1 | 8.97 | 9.67 | 1 | 8.97 | 9.69 |

**Table 179 Occupied Bandwidth (Band 66 NB-IoT IB 10 MHz Channel bandwidth)**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 2625MHz | | | Channel Frequency 2655MHz | | | Channel Frequency 2685MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 8.98 | 9.67 | 1 | 8.96 | 9.69 | 1 | 8.97 | 9.69 |

**Table 180 Occupied Bandwidth (Band 7 NB-IoT IB 10 MHz Channel bandwidth)**

**Config N:**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 1932.5MHz | | | Channel Frequency 1962.5MHz | | | Channel Frequency 1992.5MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 4.48 | 4.83 | 1 | 4.49 | 4.87 | 1 | 4.49 | 4.83 |

**Table 181 Occupied Bandwidth (Band 25 NB-IoT IB 5 MHz Channel bandwidth)**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 2112.5MHz | | | Channel Frequency 2155MHz | | | Channel Frequency 2197.5MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 4.49 | 4.83 | 1 | 4.49 | 4.83 | 1 | 4.48 | 4.86 |

**Table 182 Occupied Bandwidth (Band 66 NB-IoT IB 5 MHz Channel bandwidth)**

| Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | | Test Model 1.1 with N-TM Modulation QPSK | | |
|---|---|---|---|---|---|---|---|---|
| Channel Frequency 2622.5MHz | | | Channel Frequency 2655MHz | | | Channel Frequency 2687.5MHz | | |
| Tx Port | 99% (MHz) | 26dB (MHz) | Tx Port | Value 99% (MHz) | Value 26dB (MHz) | Tx Port | 99% (MHz) | 26dB (MHz) |
| 1 | 4.49 | 4.83 | 1 | 4.48 | 4.82 | 1 | 4.49 | 4.88 |

**Table 183 Occupied Bandwidth (Band 7 NB-IoT IB 5 MHz Channel bandwidth)**

The occupied bandwidth was found to be compliant with the manufacturer's specifications and with all requirements of the FCC rules and ISED RSS specifications.

## 4.4 Test No. 4: Spurious Emissions at Antenna Terminals (§ 2.1051, § 2.1057, § 24.238, § 27.53) and Transmitter Unwanted Emission (RSS-Gen, RSS-133, RSS-139, RSS-199)

### 4.4.1. Limits

FCC §27.53(m)(2) for BRS, 27.53(h)(1) for AWS and §24.238(a) for PCS. The power of any emissions outside the licensee's frequency bands of operation shall be attenuated below the transmitter power (P) measured in watts.

The attenuation shall be not less than 43 + 10 log (P) dB (P = transmitter power in Watts).

The compliance limit was calculated in the following way:

| | |
|---|---|
| Maximum transmitter output power [W]: | P |
| Maximum transmitter output power [dBm]: | 30 + 10 log10 P (conversion from W to dBm) |
| Attenuation required by FCC: | 43 + 10 log10 P |

Compliance limit = Maximum transmitter output power - Required attenuation

$$= 30 + 10 \log_{10} P - (43 + 10 \log_{10} P) = \underline{-13 \text{ dBm}}$$

RSS-133, 6.51 for PCS. Equipment shall comply with the limits in (i) and (ii) below.

i. In the 1.0 MHz bands immediately outside and adjacent to the equipment's operating frequency block, the emission power per any 1% of the emission bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least 43 + 10 log10p(watts).
ii. After the first 1.0 MHz, the emission power in any 1 MHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least 43 + 10 log10p(watts). If the measurement is performed using 1% of the emission bandwidth, power integration over 1.0 MHz is required.

RSS-139, 5.6 Table 6 for AWS. Offset from the edge of the frequency block or frequency block group over the 1MHz unwanted emission limit is -13dBm/MHz and below 1MHz limit is -13 dBm/(1% of occupied bandwidth).

RSS-199, 5.6 Table 4 for BRS. Offset from the edge of the frequency block or frequency block group over the 1MHz unwanted emission limit is -13dBm/MHz and below 1MHz limit is -13 dBm/(1% of occupied bandwidth).

For MiMo output from 4 TX antenna connectors, one antenna connector was measured individually and the individual limit lime was reduced by 10log(4). Limit line was calculated to show -19 dBm emission limit, according to FCC KDB 662911 D01 and ANSI C6326-2015 guidance.

The AHFIHA antenna ports are essentially electrically identical (the RF power variation between antenna ports is small as shown in the results of Test No.1) and antenna port 1 was selected for the remaining testing based on ANSI C63.26-2015 clauses 5.2.5.3, 5.7.2i and 6.4.

### 4.4.2. Test Procedure and Results

The tests were carried out in accordance with § 27.53, § 24.238, RSS-133, RSS-139, RSS-199. For all frequency ranges except two (immediately below and above the carrier frequency block) a 1 MHz resolution bandwidth was used for the measurements.

In the 1 MHz frequency bands immediately outside and adjacent to the carrier frequency block the resolution bandwidth is lowered to 1% of the 99%/ 26 dB occupied bandwidth of the transmitted carrier.

According to § 2.1057 and RSS-Gen 6.13.2, all emissions including the fundamental frequency from the lowest radio frequency generated in the equipment, without going below 9 kHz, up to the 10th harmonic were investigated.

In the spurious emission measurements (except measurements at band edges) for single carrier operations, carriers in all bands with same channel bandwidth and modulation type were enabled simultaneously to maximize the port power.

For all NB-IoT SA testing, an E-UTRA 5MHz carrier was enabled (at the middle channel with remaining available port power).

The following tables summarize the worst case detected emission levels (see screenshots on page 192 for details). The external attenuation (connection loss of the set up) is already added in the results.

| Measured laboratory room temperature and humidity during the tests | | | | |
|---|---|---|---|---|
| Date | Temperature Min-Max: | | Humidity Min-Max: | |
| 14.11.2023 -01.02.2024 | 19.5 °C | 28.2 °C | 3.6 RH% | 21.8 RH% |

**Config A Lower band edge (Band 25):**

| Carrier Frequency: 1940.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 1929 - 1930 | 1930 | -24.13 | compliant |
| 1928 – 1929 | 1928.5 | -23.97 | compliant |
| 1908 – 1928 | 1928 | -23.88 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 784 Spurious Emissions (Lower band edge) (Band 25 E-UTRA 20 MHz CH BW)**

**Config A Upper band edge (Band 25):**

| Carrier Frequency: 1985.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 1995 – 1996 | 1995 | -24.55 | compliant |
| 1996 – 1997 | 1996.5 | -22.98 | compliant |
| 1997 - 2017 | 1997 | -22.69 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 885 Spurious Emissions (Upper band edge) (Band 25 E-UTRA 20 MHz CH BW)**

**Config A Spurious emissions (Band 25):**

| Carrier Frequency: 1962.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2847 | -22.83 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 986 Spurious Emissions (Band 25 E-UTRA 20 MHz Channel BW)**

**Config A Lower band edge (Band 66):**

| Carrier Frequency: 2120.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2109 - 2110 | 2110 | -25.51 | compliant |
| 2108 - 2109 | 2108.5 | -22.47 | compliant |
| 2088 – 2108 | 2108 | -20.77 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 1087 Spurious Emissions (Lower band edge) (Band 66 E-UTRA 20 MHz CH BW)**

**Config A Upper band edge (Band 66):**

| Carrier Frequency: 2190.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2200 - 2201 | 2200 | -24.09 | compliant |
| 2201 – 2202 | 2201.5 | -21.57 | compliant |
| 2202 – 2222 | 2202 | -21.43 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 1188 Spurious Emissions (Upper band edge) (Band 66 E-UTRA 20 MHz CH BW)**

**Config A Spurious emissions (Band 66):**

| Carrier Frequency: 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2460 | -23.22 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 1289 Spurious Emissions (Band 66 E-UTRA 20 MHz Channel BW)**

**Config A Lower band edge (Band 7):**

| Carrier Frequency: 2630.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2619 - 2620 | 2620 | -25.49 | compliant |
| 2618 - 2619 | 2618.5 | -23.42 | compliant |
| 2598 - 2618 | 2618 | -24.18 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 1390 Spurious Emissions (Lower band edge) (Band 7 E-UTRA 20 MHz CH BW)**

**Config A Upper band edge (Band 7):**

| Carrier Frequency: 2680.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2690 - 2691 | 2690 | -25.17 | compliant |
| 2691 - 2692 | 2691.5 | -23.50 | compliant |
| 2692 - 2712 | 2692 | -23.41 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 1491 Spurious Emissions (Upper band edge) (Band 7 E-UTRA 20 MHz CH BW)**

**Config A Spurious emissions (Band 7):**

| Carrier Frequency: 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2467 | -23.22 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 1592 Spurious Emissions (Band 7 E-UTRA 20 MHz Channel BW)**

**Config B Lower band edge (Band 25):**

| Carrier Frequency: 1937.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 1929 - 1930 | 1930 | -21.07 | compliant |
| 1928 - 1929 | 1928.5 | -21.73 | compliant |
| 1908 - 1928 | 1928 | -23.75 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 1693 Spurious Emissions (Lower band edge) (Band 25 E-UTRA 15 MHz CH BW)**

**Config B Upper band edge (Band 25):**

| Carrier Frequency: 1987.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 1995 - 1996 | 1995 | -20.38 | compliant |
| 1996 - 1997 | 1996.5 | -22.24 | compliant |
| 1997 - 2017 | 1997 | -22.07 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 194 Spurious Emissions (Upper band edge) (Band 25 E-UTRA 15 MHz CH BW)**

**Config B Spurious emissions (Band 25):**

| Carrier Frequency: 1962.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2845 | -22.65 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 195 Spurious Emissions (Band 25 E-UTRA 15 MHz Channel BW)**

**Config B Lower band edge (Band 66):**

| Carrier Frequency: 2117.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2109 - 2110 | 2110 | -20.83 | compliant |
| 2108 - 2109 | 2108.5 | -21.65 | compliant |
| 2088 - 2108 | 2108 | -19.91 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 196 Spurious Emissions (Lower band edge) (Band 66 E-UTRA 15 MHz CH BW)**

**Config B Upper band edge (Band 66):**

| Carrier Frequency: 2192.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2200 - 2201 | 2200 | -21.14 | compliant |
| 2201 - 2202 | 2201.5 | -21.76 | compliant |
| 2202 - 2222 | 2202 | -21.81 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 197 Spurious Emissions (Upper band edge) (Band 66 E-UTRA 15 MHz CH BW)**

**Config B Spurious emissions (Band 66):**

| Carrier Frequency: 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4809 | -23.84 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 198 Spurious Emissions (Band 66 E-UTRA 15 MHz Channel BW)**

**Config B Lower band edge (Band 7):**

| Carrier Frequency: 2627.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2619 - 2620 | 2620 | -20.98 | compliant |
| 2618 - 2619 | 2618.5 | -23.99 | compliant |
| 2598 - 2618 | 2618 | -23.74 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 199 Spurious Emissions (Lower band edge) (Band 7 E-UTRA 15 MHz CH BW)**

**Config B Upper band edge (Band 7):**

| Carrier Frequency: 2682.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2690 - 2691 | 2690 | -21.49 | compliant |
| 2691 - 2692 | 2691.5 | -23.27 | compliant |
| 2692 - 2712 | 2693 | -23.09 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 200 Spurious Emissions (Upper band edge) (Band 7 E-UTRA 15 MHz CH BW)**

**Config B Spurious emissions (Band 7):**

| Carrier Frequency: 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4810 | -23.64 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 201 Spurious Emissions (Band 7 E-UTRA 15 MHz Channel BW)**

**Config C Lower band edge (Band 25):**

| Carrier Frequency: 1935.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 1929 - 1930 | 1930 | -25.41 | compliant |
| 1928 - 1929 | 1928.5 | -23.10 | compliant |
| 1908 - 1928 | 1928 | -23.33 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 202 Spurious Emissions (Lower band edge) (Band 25 E-UTRA 10 MHz CH BW)**

**Config C Upper band edge (Band 25):**

| Carrier Frequency: 1990.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 1995 - 1996 | 1995 | -25.28 | compliant |
| 1996 - 1997 | 1996.5 | -21.49 | compliant |
| 1997 - 2017 | 1997 | -22.30 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 203 Spurious Emissions (Upper band edge) (Band 25 E-UTRA 10 MHz CH BW)**

**Config C Spurious emissions (Band 25):**

| Carrier Frequency: 1962.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2847 | -22.23 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 204 Spurious Emissions (Band 25 E-UTRA 10 MHz Channel BW)**

**Config C Lower band edge (Band 66):**

| Carrier Frequency: 2115.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2109 - 2110 | 2110 | -25.33 | compliant |
| 2108 - 2109 | 2108.5 | -21.00 | compliant |
| 2088 - 2108 | 2108 | -20.46 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 205 Spurious Emissions (Lower band edge) (Band 66 E-UTRA 10 MHz CH BW)**

**Config C Upper band edge (Band 66):**

| Carrier Frequency: 2195.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2200 - 2201 | 2200 | -24.99 | compliant |
| 2201 - 2202 | 2201.5 | -21.39 | compliant |
| 2202 - 2222 | 2202 | -20.55 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 206 Spurious Emissions (Upper band edge) (Band 66 E-UTRA 10 MHz CH BW)**

**Config C Spurious emissions (Band 66):**

| Carrier Frequency: 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4810 | -23.25 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 207 Spurious Emissions (Band 66 E-UTRA 10 MHz Channel BW)**

**Config C Lower band edge (Band 7):**

| Carrier Frequency: 2625.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2619 - 2620 | 2620 | -25.52 | compliant |
| 2618 - 2619 | 2618.5 | -23.22 | compliant |
| 2598 - 2618 | 2618 | -23.61 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 208 Spurious Emissions (Lower band edge) (Band 7 E-UTRA 10 MHz CH BW)**

**Config C Upper band edge (Band 7):**

| Carrier Frequency: 2685.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2690 - 2691 | 2690 | -24.81 | compliant |
| 2691 - 2692 | 2691.5 | -22.60 | compliant |
| 2692 - 2712 | 2692 | -22.88 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 209 Spurious Emissions (Upper band edge) (Band 7 E-UTRA 10 MHz CH BW)**

**Config C Spurious emissions (Band 7):**

| Carrier Frequency: 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2461 | -22.48 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 210 Spurious Emissions (Band 7 E-UTRA 10 MHz Channel BW)**

**Config D Lower band edge (Band 25):**

| Carrier Frequency: 1932.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 1929 - 1930 | 1930 | -25.62 | compliant |
| 1928 - 1929 | 1928.5 | -23.87 | compliant |
| 1908 - 1928 | 1928 | -23.65 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 211 Spurious Emissions (Lower band edge) (Band 25 E-UTRA 5 MHz CH BW)**

**Config D Upper band edge (Band 25):**

| Carrier Frequency: 1992.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 1995 - 1996 | 1995 | -26.38 | compliant |
| 1996 - 1997 | 1996.5 | -21.84 | compliant |
| 1997 - 2017 | 1997 | -22.69 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 212 Spurious Emissions (Upper band edge) (Band 25 E-UTRA 5 MHz CH BW)**

**Config D Spurious emissions (Band 25):**

| Carrier Frequency: 1962.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4810 | -23.79 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 213 Spurious Emissions (Band 25 E-UTRA 5 MHz Channel BW)**

**Config D Lower band edge (Band 66):**

| Carrier Frequency: 2112.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2109 - 2110 | 2110 | -26.37 | compliant |
| 2108 - 2109 | 2108.5 | -22.97 | compliant |
| 2088 - 2108 | 2108 | -22.61 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 214 Spurious Emissions (Lower band edge) (Band 66 E-UTRA 5 MHz CH BW)**

**Config D Upper band edge (Band 66):**

| Carrier Frequency: 2197.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2200 - 2201 | 2200 | -25.43 | compliant |
| 2201 - 2202 | 2201.5 | -20.57 | compliant |
| 2202 - 2222 | 2202 | -20.97 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 215 Spurious Emissions (Upper band edge) (Band 66 E-UTRA 5 MHz CH BW)**

**Config D Spurious emissions (Band 66):**

| Carrier Frequency: 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4812 | -23.75 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 216 Spurious Emissions (Band 66 E-UTRA 5 MHz Channel BW)**

**Config D Lower band edge (Band 7):**

| Carrier Frequency: 2622.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2619 - 2620 | 2620 | -25.29 | compliant |
| 2618 - 2619 | 2618.5 | -23.78 | compliant |
| 2598 - 2618 | 2618 | -23.97 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 217 Spurious Emissions (Lower band edge) (Band 7 E-UTRA 5 MHz CH BW)**

**Config D Upper band edge (Band 7):**

| Carrier Frequency: 2687.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2690 - 2691 | 2690 | -25.41 | compliant |
| 2691 - 2692 | 2691.5 | -22.37 | compliant |
| 2692 - 2712 | 2692 | -24.54 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 218 Spurious Emissions (Upper band edge) (Band 7 E-UTRA 5 MHz CH BW)**

**Config D Spurious emissions (Band 7):**

| Carrier Frequency: 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4810 | -23.58 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 219 Spurious Emissions (Band 7 E-UTRA 5 MHz Channel BW)**

**Config E Lower band edge (Band 25):**

| Carrier Frequency: 1931.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 1929 - 1930 | 1930 | -23.74 | compliant |
| 1928 - 1929 | 1928.5 | -23.95 | compliant |
| 1908 - 1928 | 1928 | -24.69 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 220 Spurious Emissions (Lower band edge) (Band 25 E-UTRA 3 MHz CH BW)**

**Config E Upper band edge (Band 25):**

| Carrier Frequency: 1988.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 1990 - 1991 | 1990 | -23.92 | compliant |
| 1991 - 1992 | 1991.5 | -23.73 | compliant |
| 1992 - 2012 | 1992 | -22.25 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 221 Spurious Emissions (Upper band edge) (Band 25 E-UTRA 3 MHz CH BW)**

**Config E Spurious emissions (Band 25):**

| Carrier Frequency: 1962.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2462 | -26.12 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 222 Spurious Emissions (Band 25 E-UTRA 3 MHz Channel BW)**

**Config E Lower band edge (Band 66):**

| Carrier Frequency: 2111.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2109 - 2110 | 2110 | -24.26 | compliant |
| 2108 - 2109 | 2108.5 | -25.34 | compliant |
| 2088 - 2108 | 2108 | -25.56 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 223 Spurious Emissions (Lower band edge) (Band 66 E-UTRA 3 MHz CH BW)**

**Config E Upper band edge (Band 66):**

| Carrier Frequency: 2198.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2200 - 2201 | 2200 | -25.11 | compliant |
| 2201 - 2202 | 2201.5 | -21.92 | compliant |
| 2202 - 2222 | 2202 | -23.16 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 224 Spurious Emissions (Upper band edge) (Band 66 E-UTRA 3 MHz CH BW)**

**Config E Spurious emissions (Band 66):**

| Carrier Frequency: 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2848 | -26.15 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 225 Spurious Emissions (Band 66 E-UTRA 3 MHz Channel BW)**

**Config F Lower band edge (Band 25):**

| Carrier Frequency: 1930.7 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 1929 - 1930 | 1930 | -27.50 | compliant |
| 1928 - 1929 | 1928.5 | -26.04 | compliant |
| 1908 - 1928 | 1928 | -22.96 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 226 Spurious Emissions (Lower band edge) (Band 25 E-UTRA 1.4 MHz CH BW)**

**Config F Upper band edge (Band 25):**

| Carrier Frequency: 1989.3 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 1990 - 1991 | 1990 | -28.30 | compliant |
| 1991 - 1992 | 1991.5 | -24.92 | compliant |
| 1992 - 2012 | 1992 | -23.05 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 227 Spurious Emissions (Upper band edge) (Band 25 E-UTRA 1.4 MHz CH BW)**

**Config F Spurious emissions (Band 25):**

| Carrier Frequency: 1962.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2847 | -26.17 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 228 Spurious Emissions (Band 25 E-UTRA 1.4 MHz Channel BW)**

**Config F Lower band edge (Band 66):**

| Carrier Frequency: 2110.7 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2109 - 2110 | 2110 | -26.73 | compliant |
| 2108 - 2109 | 2108.5 | -25.51 | compliant |
| 2088 - 2108 | 2108 | -22.79 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 229 Spurious Emissions (Lower band edge) (Band 66 E-UTRA 1.4 MHz CH BW)**

**Config F Upper band edge (Band 66):**

| Carrier Frequency: 2199.3 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 2200 - 2201 | 2200 | -26.74 | compliant |
| 2201 - 2202 | 2201.5 | -24.24 | compliant |
| 2202 – 2222 | 2202 | -23.69 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 230 Spurious Emissions (Upper band edge) (Band 66 E-UTRA 1.4 MHz CH BW)**

**Config F Spurious emissions (Band 66):**

| Carrier Frequency: 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| 256QAM-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2463 | -26.08 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 231 Spurious Emissions (Band 66 E-UTRA 1.4 MHz Channel BW)**

**Config G Lower band edge (Band 25):**

| Carrier Frequency: 1940.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1929 - 1930 | 1930 | -24.91 | compliant |
| 1928 - 1929 | 1928.5 | -23.93 | compliant |
| 1908 - 1928 | 1928 | -20.28 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 232 Spurious Emissions (Lower band edge) (Band 25 NB-IoT GB 20 MHz CH BW)**

**Config G Upper band edge (Band 25):**

| Carrier Frequency: 1985.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1995 - 1996 | 1995 | -25.02 | compliant |
| 1996 - 1997 | 1996.5 | -22.92 | compliant |
| 1997 - 2017 | 1997 | -23.09 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 233 Spurious Emissions (Upper band edge) (Band 25 NB-IoT GB 20 MHz CH BW)**

**Config G Spurious emissions (Band 25):**

| Carrier Frequency: 1962.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2852 | -22.79 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 234 Spurious Emissions (Band 25 NB-IoT GB 20 MHz Channel BW)**

**Config G Lower band edge (Band 66):**

| Carrier Frequency: 2120.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2109 - 2110 | 2110 | -24.63 | compliant |
| 2108 – 2109 | 2108.5 | -21.76 | compliant |
| 2088 - 2108 | 2108 | -21.64 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 235 Spurious Emissions (Lower band edge) (Band 66 NB-IoT GB 20 MHz CH BW)**

**Config G Upper band edge (Band 66):**

| Carrier Frequency: 2190.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2200 - 2201 | 2200 | -24.51 | compliant |
| 2201 - 2202 | 2201.5 | -22.04 | compliant |
| 2202 – 2222 | 2203 | -21.07 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 236 Spurious Emissions (Upper band edge) (Band 66 NB-IoT GB 20 MHz CH BW)**

**Config G Spurious emissions (Band 66):**

| Carrier Frequency: 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4818 | -24.11 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 237 Spurious Emissions (Band 66 NB-IoT GB 20 MHz Channel BW)**

**Config G Lower band edge (Band 7):**

| Carrier Frequency: 2630.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2619 – 2620 | 2620 | -25.68 | compliant |
| 2618 – 2619 | 2618.5 | -22.94 | compliant |
| 2598 - 2618 | 2618 | -23.23 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 238 Spurious Emissions (Lower band edge) (Band 7 NB-IoT GB 20 MHz CH BW)**

**Config G Upper band edge (Band 7):**

| Carrier Frequency: 2680.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2690 - 2691 | 2690 | -25.06 | compliant |
| 2691 - 2692 | 2691.5 | -23.00 | compliant |
| 2692 - 2712 | 2694 | -23.30 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 239 Spurious Emissions (Upper band edge) (Band 7 NB-IoT GB 20 MHz CH BW)**

**Config G Spurious emissions (Band 7):**

| Carrier Frequency: 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4815 | -23.98 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 240 Spurious Emissions (Band 7 NB-IoT GB 20 MHz Channel BW)**

**Config H Lower band edge (Band 25):**

| Carrier Frequency: 1937.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1929 - 1930 | 1930 | -21.31 | compliant |
| 1928 - 1929 | 1928.5 | -22.86 | compliant |
| 1908 - 1928 | 1928 | -23.45 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 241 Spurious Emissions (Lower band edge) (Band 25 NB-IoT GB 15 MHz CH BW)**

**Config H Upper band edge (Band 25):**

| Carrier Frequency: 1987.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1995 - 1996 | 1995 | -21.47 | compliant |
| 1996 - 1997 | 1996.5 | -22.15 | compliant |
| 1997 - 2017 | 1997 | -22.64 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 242 Spurious Emissions (Upper band edge) (Band 25 NB-IoT GB 15 MHz CH BW)**

**Config H Spurious emissions (Band 25):**

| Carrier Frequency: 1962.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2848 | -22.55 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 243 Spurious Emissions (Band 25 NB-IoT GB 15 MHz Channel BW)**

**Config H Lower band edge (Band 66):**

| Carrier Frequency: 2117.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2109 - 2110 | 2110 | -21.96 | compliant |
| 2108 - 2109 | 2108.5 | -21.00 | compliant |
| 2088 - 2108 | 2108 | -20.51 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 244 Spurious Emissions (Lower band edge) (Band 66 NB-IoT GB 15 MHz CH BW)**

**Config H Upper band edge (Band 66):**

| Carrier Frequency: 2192.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2200 - 2201 | 2200 | -21.84 | compliant |
| 2201 - 2202 | 2201.5 | -20.92 | compliant |
| 2202 – 2222 | 2203 | -21.62 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 245 Spurious Emissions (Upper band edge) (Band 66 NB-IoT GB 15 MHz CH BW)**

**Config H Spurious emissions (Band 66):**

| Carrier Frequency: 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4813 | -24.02 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 246 Spurious Emissions (Band 66 NB-IoT GB 15 MHz Channel BW)**

**Config H Lower band edge (Band 7):**

| Carrier Frequency: 2627.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2619 - 2620 | 2620 | -21.79 | compliant |
| 2618 - 2619 | 2618.5 | -22.81 | compliant |
| 2598 - 2618 | 2618 | -24.15 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 247 Spurious Emissions (Lower band edge) (Band 7 NB-IoT GB 15 MHz CH BW)**

**Config H Upper band edge (Band 7):**

| Carrier Frequency: 2682.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2690 - 2691 | 2690 | -22.07 | compliant |
| 2691 - 2692 | 2691.5 | -22.74 | compliant |
| 2692 - 2712 | 2692 | -23.05 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 248 Spurious Emissions (Upper band edge) (Band 7 NB-IoT GB 15 MHz CH BW)**

**Config H Spurious emissions (Band 7):**

| Carrier Frequency: 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4813 | -24.07 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 249 Spurious Emissions (Band 7 NB-IoT GB 15 MHz Channel BW)**

**Config I Lower band edge (Band 25):**

| Carrier Frequency: 1935.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1929 - 1930 | 1930 | -25.81 | compliant |
| 1928 - 1929 | 1928.5 | -22.51 | compliant |
| 1908 - 1928 | 1928 | -22.89 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 250 Spurious Emissions (Lower band edge) (Band 25 NB-IoT GB 10 MHz CH BW)**

**Config I Upper band edge (Band 25):**

| Carrier Frequency: 1990.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1995 - 1996 | 1995 | -25.24 | compliant |
| 1996 - 1997 | 1996.5 | -21.89 | compliant |
| 1997 - 2017 | 1997 | -22.37 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 251 Spurious Emissions (Upper band edge) (Band 25 NB-IoT GB 10 MHz CH BW)**

**Config I Spurious emissions (Band 25):**

| Carrier Frequency: 1962.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2850 | -22.20 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 252 Spurious Emissions (Band 25 NB-IoT GB 10 MHz Channel BW)**

**Config I Lower band edge (Band 66):**

| Carrier Frequency: 2115.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2109 - 2110 | 2110 | -24.97 | compliant |
| 2108 -2109 | 2108.5 | -21.31 | compliant |
| 2088 - 2108 | 2108 | -21.12 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 253 Spurious Emissions (Lower band edge) (Band 66 NB-IoT GB 10 MHz CH BW)**

**Config I Upper band edge (Band 66):**

| Carrier Frequency: 2195.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2200 - 2201 | 2200 | -25.84 | compliant |
| 2201 - 2202 | 2201.5 | -21.01 | compliant |
| 2202 – 2222 | 2202 | -21.97 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 254 Spurious Emissions (Upper band edge) (Band 66 NB-IoT GB 10 MHz CH BW)**

**Config I Spurious emissions (Band 66):**

| Carrier Frequency: 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4812 | -24.02 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 255 Spurious Emissions (Band 66 NB-IoT GB 10 MHz Channel BW)**

**Config I Lower band edge (Band 7):**

| Carrier Frequency: 2625.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2619 - 2620 | 2620 | -24.09 | compliant |
| 2618 - 2619 | 2618.5 | -23.64 | compliant |
| 2598 - 2618 | 2618 | -23.47 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 256 Spurious Emissions (Lower band edge) (Band 7 NB-IoT GB 10 MHz CH BW)**

**Config I Upper band edge (Band 7):**

| Carrier Frequency: 2685.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2690 - 2691 | 2690 | -25.22 | compliant |
| 2691 - 2692 | 2691.5 | -22.36 | compliant |
| 2692 - 2712 | 2692 | -22.74 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 257 Spurious Emissions (Upper band edge) (Band 7 NB-IoT GB 10 MHz CH BW)**

**Config I Spurious emissions (Band 7):**

| Carrier Frequency: 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4811 | -23.85 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 258 Spurious Emissions (Band 7 NB-IoT GB 10 MHz Channel BW)**

**Config J Lower band edge (Band 25):**

| Carrier Frequency: 1930.2 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1929 - 1930 | 1930 | -23.11 | compliant |
| 1928 - 1929 | 1928.5 | -20.84 | compliant |
| 1927 – 1928 | 1927.5 | -23.63 | compliant |
| 1907 - 1927 | 1927 | -24.08 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 259 Spurious Emissions (Lower band edge) (Band 25 NB-IoT SA)**

**Config J Upper band edge (Band 25):**

| Carrier Frequency: 1994.8 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1995 - 1996 | 1995 | -23.60 | compliant |
| 1996 - 1997 | 1996.5 | -20.43 | compliant |
| 1997 - 1998 | 1997.5 | -20.84 | compliant |
| 1998 - 2018 | 1998 | -20.27 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 260 Spurious Emissions (Upper band edge) (Band 25 NB-IoT SA)**

**Config J Spurious emissions (Band 25):**

| Carrier Frequency: 1930.2 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 1994 | -20.29 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 261 Spurious Emissions (Band 25 NB-IoT SA Bottom Channel)**

**Config J Spurious emissions (Band 25):**

| Carrier Frequency: 1994.8 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 1929 | -20.93 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 262 Spurious Emissions (Band 25 NB-IoT SA Top Channel)**

**Config J Lower band edge (Band 66):**

| Carrier Frequency: 2110.2 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2109 - 2110 | 2110 | -23.15 | compliant |
| 2108 - 2109 | 2108.5 | -19.38 | compliant |
| 2107 - 2108 | 2107.5 | -19.84 | compliant |
| 2087 - 2107 | 2107 | -20.22 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 263 Spurious Emissions (Lower band edge) (Band 66 NB-IoT SA)**

**Config J Upper band edge (Band 66):**

| Carrier Frequency: 2199.8 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2200 - 2201 | 2200 | -24.42 | compliant |
| 2201 - 2202 | 2201.5 | -19.54 | compliant |
| 2202 - 2203 | 2202.5 | -19.74 | compliant |
| 2203 - 2223 | 2203 | -20.02 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 264 Spurious Emissions (Upper band edge) (Band 66 NB-IoT SA)**

**Config J Spurious emissions (Band 66):**

| Carrier Frequency: 2110.2 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2200 | -19.94 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 265 Spurious Emissions (Band 66 NB-IoT SA Bottom Channel)**

**Config J Spurious emissions (Band 66):**

| Carrier Frequency: 2199.8 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 1928 | -19.59 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 266 Spurious Emissions (Band 66 NB-IoT SA Top Channel)**

**Config J Lower band edge (Band 7):**

| Carrier Frequency: 2620.2 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2619 - 2620 | 2620 | -22.33 | compliant |
| 2618 -2619 | 2618.5 | -20.75 | compliant |
| 2617 - 2618 | 2617.5 | -22.15 | compliant |
| 2597 - 2617 | 2617 | -21.36 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 267 Spurious Emissions (Lower band edge) (Band 7 NB-IoT SA)**

**Config J Upper band edge (Band 7):**

| Carrier Frequency: 2689.8 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2690 - 2691 | 2690 | -23.37 | compliant |
| 2691 - 2692 | 2691.5 | -21.06 | compliant |
| 2692 - 2693 | 2692.5 | -22.17 | compliant |
| 2693 - 2713 | 2693 | -21.95 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 268 Spurious Emissions (Upper band edge) (Band 7 NB-IoT SA)**

**Config J Spurious emissions (Band 7):**

| Carrier Frequency: 2620.2 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2688 | -20.32 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 269 Spurious Emissions (Band 7 NB-IoT SA Bottom Channel)**

**Config J Spurious emissions (Band 7):**

| Carrier Frequency: 2689.8 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2620 | -21.88 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 270 Spurious Emissions (Band 7 NB-IoT SA Top Channel)**

**Config K Lower band edge (Band 25):**

| Carrier Frequency: 1940.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1929 - 1930 | 1930 | -25.01 | compliant |
| 1928 - 1929 | 1928.5 | -23.09 | compliant |
| 1908 - 1928 | 1928 | -24.37 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 271 Spurious Emissions (Lower band edge) (Band 25 NB-IoT IB 20 MHz CH BW)**

**Config K Upper band edge (Band 25):**

| Carrier Frequency: 1985.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1995 - 1996 | 1995 | -24.18 | compliant |
| 1996 - 1997 | 1996.5 | -22.61 | compliant |
| 1997 - 2017 | 1997 | -22.21 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 272 Spurious Emissions (Upper band edge) (Band 25 NB-IoT IB 20 MHz CH BW)**

**Config K Spurious emissions (Band 25):**

| Carrier Frequency: 1962.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2990 | -22.74 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 273 Spurious Emissions (Band 25 NB-IoT IB 20 MHz Channel BW)**

**Config K Lower band edge (Band 66):**

| Carrier Frequency: 2120.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2109 - 2110 | 2110 | -24.47 | compliant |
| 2108 - 2109 | 2108.5 | -21.41 | compliant |
| 2088 - 2108 | 2108 | -22.05 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 274 Spurious Emissions (Lower band edge) (Band 66 NB-IoT IB 20 MHz CH BW)**

**Config K Upper band edge (Band 66):**

| Carrier Frequency: 2190.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2200 - 2201 | 2200 | -24.20 | compliant |
| 2201 - 2202 | 2201.5 | -21.55 | compliant |
| 2202 - 2222 | 2202 | -21.17 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 275 Spurious Emissions (Upper band edge) (Band 66 NB-IoT IB 20 MHz CH BW)**

**Config K Spurious emissions (Band 66):**

| Carrier Frequency: 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4820 | -24.12 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 276 Spurious Emissions (Band 66 NB-IoT IB 20 MHz Channel BW)**

**Config K Lower band edge (Band 7):**

| Carrier Frequency: 2630.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2619 - 2620 | 2620 | -25.75 | compliant |
| 2618 - 2619 | 2618.5 | -23.54 | compliant |
| 2598 - 2618 | 2618 | -24.32 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 277 Spurious Emissions (Lower band edge) (Band 7 NB-IoT IB 20 MHz CH BW)**

**Config K Upper band edge (Band 7):**

| Carrier Frequency: 2680.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2690 - 2691 | 2690 | -25.18 | compliant |
| 2691 - 2692 | 2691.5 | -23.30 | compliant |
| 2692 - 2712 | 2692 | -22.93 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 278 Spurious Emissions (Upper band edge) (Band 7 NB-IoT IB 20 MHz CH BW)**

**Config K Spurious emissions (Band 7):**

| Carrier Frequency: 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4816 | -23.91 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 279 Spurious Emissions (Band 7 NB-IoT IB 20 MHz Channel BW)**

**Config L Lower band edge (Band 25):**

| Carrier Frequency: 1937.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1929 - 1930 | 1930 | -20.97 | compliant |
| 1928 - 1929 | 1928.5 | -23.13 | compliant |
| 1908 - 1928 | 1928 | -24.13 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 280 Spurious Emissions (Lower band edge) (Band 25 NB-IoT IB 15 MHz CH BW)**

**Config L Upper band edge (Band 25):**

| Carrier Frequency: 1987.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1995 - 1996 | 1995 | -20.82 | compliant |
| 1996 - 1997 | 1996.5 | -22.53 | compliant |
| 1997 - 2017 | 1997 | -22.37 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 281 Spurious Emissions (Upper band edge) (Band 25 NB-IoT IB 15 MHz CH BW)**

**Config L Spurious emissions (Band 25):**

| Carrier Frequency: 1962.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2849 | -22.56 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 282 Spurious Emissions (Band 25 NB-IoT IB 15 MHz Channel BW)**

**Config L Lower band edge (Band 66):**

| Carrier Frequency: 2117.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2109 - 2110 | 2110 | -20.56 | compliant |
| 2108 - 2109 | 2108.5 | -21.32 | compliant |
| 2088 - 2108 | 2108 | -21.52 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 283 Spurious Emissions (Lower band edge) (Band 66 NB-IoT IB 15 MHz CH BW)**

**Config L Upper band edge (Band 66):**

| Carrier Frequency: 2192.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2200 -2201 | 2200 | -21.27 | compliant |
| 2201 - 2202 | 2201.5 | -21.50 | compliant |
| 2202 - 2222 | 2202 | -21.32 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 284 Spurious Emissions (Upper band edge) (Band 66 NB-IoT IB 15 MHz CH BW)**

**Config L Spurious emissions (Band 66):**

| Carrier Frequency: 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4814 | -23.98 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 285 Spurious Emissions (Band 66 NB-IoT IB 15 MHz Channel BW)**

**Config L Lower band edge (Band 7):**

| Carrier Frequency: 2627.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2619 - 2620 | 2620 | -21.80 | compliant |
| 2618 - 2619 | 2618.5 | -23.78 | compliant |
| 2598 - 2618 | 2618 | -24.38 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 286 Spurious Emissions (Lower band edge) (Band 7 NB-IoT IB 15 MHz CH BW)**

**Config L Upper band edge (Band 7):**

| Carrier Frequency: 2682.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2690 - 2691 | 2690 | -21.44 | compliant |
| 2691 - 2692 | 2691.5 | -23.16 | compliant |
| 2692 - 2712 | 2693 | -23.27 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 287 Spurious Emissions (Upper band edge) (Band 7 NB-IoT IB 15 MHz CH BW)**

**Config L Spurious emissions (Band 7):**

| Carrier Frequency: 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4809 | -24.08 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 288 Spurious Emissions (Band 7 NB-IoT IB 15 MHz Channel BW)**

**Config M Lower band edge (Band 25):**

| Carrier Frequency: 1935.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1929 - 1930 | 1930 | -26.06 | compliant |
| 1928 - 1929 | 1928.5 | -22.06 | compliant |
| 1908 - 1928 | 1928 | -23.91 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 289 Spurious Emissions (Lower band edge) (Band 25 NB-IoT IB 10 MHz CH BW)**

**Config M Upper band edge (Band 25):**

| Carrier Frequency: 1990.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1995 - 1996 | 1995 | -25.45 | compliant |
| 1996 - 1997 | 1996.5 | -21.22 | compliant |
| 1997 - 2017 | 1997 | -22.45 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 290 Spurious Emissions (Upper band edge) (Band 25 NB-IoT IB 10 MHz CH BW)**

**Config M Spurious emissions (Band 25):**

| Carrier Frequency: 1962.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2845 | -22.28 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 291 Spurious Emissions (Band 25 NB-IoT IB 10 MHz Channel BW)**

**Config M Lower band edge (Band 66):**

| Carrier Frequency: 2115.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2109 - 2110 | 2110 | -24.86 | compliant |
| 2108 - 2109 | 2108.5 | -20.80 | compliant |
| 2088 - 2108 | 2108 | -22.29 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 292 Spurious Emissions (Lower band edge) (Band 66 NB-IoT IB 10 MHz CH BW)**

**Config M Upper band edge (Band 66):**

| Carrier Frequency: 2195.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2200 - 2201 | 2200 | -25.18 | compliant |
| 2201 - 2202 | 2201.5 | -21.30 | compliant |
| 2202 – 2222 | 2202 | -21.01 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 293 Spurious Emissions (Upper band edge) (Band 66 NB-IoT IB 10 MHz CH BW)**

**Config M Spurious emissions (Band 66):**

| Carrier Frequency: 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4810 | -23.75 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 294 Spurious Emissions (Band 66 NB-IoT IB 10 MHz Channel BW)**

**Config M Lower band edge (Band 7):**

| Carrier Frequency: 2625.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2619 - 2620 | 2620 | -25.39 | compliant |
| 2618 - 2619 | 2618.5 | -22.11 | compliant |
| 2598 - 2618 | 2618 | -23.42 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 295 Spurious Emissions (Lower band edge) (Band 7 NB-IoT IB 10 MHz CH BW)**

**Config M Upper band edge (Band 7):**

| Carrier Frequency: 2685.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2690 - 2691 | 2690 | -25.07 | compliant |
| 2691 - 2692 | 2691.5 | -22.62 | compliant |
| 2692 - 2712 | 2692 | -23.09 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 296 Spurious Emissions (Upper band edge) (Band 7 NB-IoT IB 10 MHz CH BW)**

**Config M Spurious emissions (Band 7):**

| Carrier Frequency: 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4809 | -23.83 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 297 Spurious Emissions (Band 7 NB-IoT IB 10 MHz Channel BW)**

**Config N Lower band edge (Band 25):**

| Carrier Frequency: 1932.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1929 - 1930 | 1930 | -26.64 | compliant |
| 1928 - 1929 | 1928.5 | -23.69 | compliant |
| 1908 - 1928 | 1928 | -24.33 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 298 Spurious Emissions (Lower band edge) (Band 25 NB-IoT IB 5 MHz CH BW)**

**Config N Upper band edge (Band 25):**

| Carrier Frequency: 1992.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1995 - 1996 | 1995 | -25.89 | compliant |
| 1996 - 1997 | 1996.5 | -22.13 | compliant |
| 1997 - 2017 | 1997 | -21.60 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 299 Spurious Emissions (Upper band edge) (Band 25 NB-IoT IB 5 MHz CH BW)**

**Config N Spurious emissions (Band 25):**

| Carrier Frequency: 1962.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4811 | -23.83 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 300 Spurious Emissions (Band 25 NB-IoT IB 5 MHz Channel BW)**

**Config N Lower band edge (Band 66):**

| Carrier Frequency: 2112.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2109 - 2110 | 2110 | -26.55 | compliant |
| 2108 - 2109 | 2108.5 | -22.11 | compliant |
| 2088 - 2108 | 2108 | -23.76 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 301 Spurious Emissions (Lower band edge) (Band 66 NB-IoT IB 5 MHz CH BW)**

**Config N Upper band edge (Band 66):**

| Carrier Frequency: 2197.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2200 - 2201 | 2200 | -24.78 | compliant |
| 2201 - 2202 | 2201.5 | -21.01 | compliant |
| 2202 - 2222 | 2202 | -21.39 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 302 Spurious Emissions (Upper band edge) (Band 66 NB-IoT IB 5 MHz CH BW)**

**Config N Spurious emissions (Band 66):**

| Carrier Frequency: 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4809 | -23.65 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 303 Spurious Emissions (Band 66 NB-IoT IB 5 MHz Channel BW)**

**Config N Lower band edge (Band 7):**

| Carrier Frequency: 2622.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2619 - 2620 | 2620 | -25.23 | compliant |
| 2618 - 2619 | 2618.5 | -23.65 | compliant |
| 2598 - 2618 | 2618 | -23.79 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 304 Spurious Emissions (Lower band edge) (Band 7 NB-IoT IB 5 MHz CH BW)**

**Config N Upper band edge (Band 7):**

| Carrier Frequency: 2687.5 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2690 - 2691 | 2690 | -25.33 | compliant |
| 2691 - 2692 | 2691.5 | -23.23 | compliant |
| 2692 - 2712 | 2692 | -24.36 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 305 Spurious Emissions (Upper band edge) (Band 7 NB-IoT IB 5 MHz CH BW)**

**Config N Spurious emissions (Band 7):**

| Carrier Frequency: 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 4810 | -23.56 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 306 Spurious Emissions (Band 7 NB-IoT IB 5 MHz Channel BW)**

**Config O Lower band edge (Band 25):**

| Carrier Frequency: 1932.5 / 1937.5 / 1992.5 / 2155.0 / 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1929 - 1930 | 1930 | -24.49 | compliant |
| 1928 - 1929 | 1928.5 | -20.30 | compliant |
| 1908 - 1928 | 1928 | -20.10 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 307 Spurious Emissions (Lower band edge) (Band 25 3x E-UTRA 5MHz + Band 66 E-UTRA 10MHz + Band 7 E-UTRA 5MHz)**

**Config O Upper band edge (Band 25):**

| Carrier Frequency: 1932.5 / 1937.5 / 1992.5 / 2155.0 / 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1995 - 1996 | 1995 | -28.19 | compliant |
| 1996 - 1997 | 1996.5 | -20.35 | compliant |
| 1997 - 2017 | 1997 | -21.08 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 308 Spurious Emissions (Upper band edge) (Band 25 3x E-UTRA 5MHz + Band 66 E-UTRA 10MHz + Band 7 E-UTRA 5MHz)**

**Config O Spurious emissions:**

| Carrier Frequency: 1932.5 / 1937.5 / 1992.5 / 2155.0 / 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2873 | -22.44 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 309 Spurious Emissions (Band 25 3x E-UTRA 5MHz + Band 66 E-UTRA 10MHz + Band 7 E-UTRA 5MHz)**

**Config P Lower band edge (Band 25):**

| Carrier Frequency: 1940.0 / 1960.0 / 2155.0 / 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1929 - 1930 | 1930 | -20.98 | compliant |
| 1928 - 1929 | 1928.5 | -21.50 | compliant |
| 1908 - 1928 | 1928 | -21.17 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 310 Spurious Emissions (Lower band edge) (Band 25 2x E-UTRA 20MHz + Band 66 E-UTRA 20MHz + Band 7 E-UTRA 20MHz)**

**Config P Spurious emissions:**

| Carrier Frequency: 1940.0 / 1960.0 / 2155.0 / 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2990 | -22.84 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 311 Spurious Emissions (Band 25 2x E-UTRA 20MHz + Band 66 E-UTRA 20MHz + Band 7 E-UTRA 20MHz)**

**Config Q Upper band edge (Band 25):**

| Carrier Frequency: 1965.0 / 1985.0 / 2155.0 / 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 1995 - 1996 | 1995 | -20.60 | compliant |
| 1996 - 1997 | 1996.5 | -20.58 | compliant |
| 1997 - 2017 | 1997 | -21.19 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB, 1.0GHz ≤ f <3.6GHz: ±1.2dB, Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB, 8.0GHz ≤ f: ±1.9dB | |

**Table 312 Spurious Emissions (Upper band edge) (Band 25 2x E-UTRA 20MHz + Band 66 E-UTRA 20MHz + Band 7 E-UTRA 20MHz)**

**Config Q Spurious emissions:**

| Carrier Frequency: 1965.0 / 1985.0 / 2155.0 / 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2821 | -22.85 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB, 1.0GHz ≤ f <3.6GHz: ±1.2dB, 3.6GHz ≤ f <8.0GHz: ±1.6dB, 8.0GHz ≤ f: ±1.9dB | |

**Table 313 Spurious Emissions (Band 25 2x E-UTRA 20MHz + Band 66 E-UTRA 20MHz + Band 7 E-UTRA 20MHz)**

**Config R Lower band edge (Band 66):**

| Carrier Frequency: 2112.5 / 2117.5 / 2197.5 / 1962.5 / 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2109 - 2110 | 2110 | -23.06 | compliant |
| 2108 - 2109 | 2108.5 | -19.26 | compliant |
| 2088 - 2108 | 2108 | -19.68 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 314 Spurious Emissions (Lower band edge) (Band 66 3x E-UTRA 5MHz + Band 25 E-UTRA 10MHz + Band 7 E-UTRA 5MHz)**

**Config R Upper band edge (Band 66):**

| Carrier Frequency: 2112.5 / 2117.5 / 2197.5 / 1962.5 / 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2200 - 2201 | 2200 | -26.89 | compliant |
| 2201 - 2202 | 2201.5 | -19.30 | compliant |
| 2202 – 2222 | 2202 | -19.70 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 315 Spurious Emissions (Upper band edge) (Band 66 3x E-UTRA 5MHz + Band 25 E-UTRA 10MHz + Band 7 E-UTRA 5MHz)**

**Config R Spurious emissions:**

| Carrier Frequency: 2112.5 / 2117.5 / 2197.5 / 1962.5 / 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2992 | -22.61 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 316 Spurious Emissions (Band 66 3x E-UTRA 5MHz + Band 25 E-UTRA 10MHz + Band 7 E-UTRA 5MHz)**

**Config S Lower band edge (Band 66):**

| Carrier Frequency: 2120.0 / 2140.0 / 1962.5 / 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2109 - 2110 | 2110 | -20.37 | compliant |
| 2108 - 2109 | 2108.5 | -19.56 | compliant |
| 2088 - 2108 | 2108 | -19.31 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 317 Spurious Emissions (Lower band edge) (Band 66 2x E-UTRA 20MHz + Band 25 E-UTRA 20MHz + Band 7 E-UTRA 20MHz)**

**Config S Spurious emissions:**

| Carrier Frequency: 2120.0 / 2140.0 / 1962.5 / 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2201 | -21.75 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 318 Spurious Emissions (Band 66 2x E-UTRA 20MHz + Band 25 E-UTRA 20MHz + Band 7 E-UTRA 20MHz)**

**Config T Upper band edge (Band 66):**

| Carrier Frequency: 2170.0 / 2190.0 / 1962.5 / 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2200 - 2201 | 2200 | -20.82 | compliant |
| 2201 - 2202 | 2201.5 | -20.68 | compliant |
| 2202 – 2222 | 2202 | -20.83 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 319 Spurious Emissions (Upper band edge) (Band 66 2x E-UTRA 20MHz + Band 25 E-UTRA 20MHz + Band 7 E-UTRA 20MHz)**

**Config T Spurious emissions:**

| Carrier Frequency: 2170.0 / 2190.0 / 1962.5 / 2655.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2134 | -20.45 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 320 Spurious Emissions (Band 66 2x E-UTRA 20MHz + Band 25 E-UTRA 20MHz + Band 7 E-UTRA 20MHz)**

**Config U Lower band edge (Band 7):**

| Carrier Frequency: 2622.5 / 2627.5 / 2687.5 / 1962.5 / 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2619 - 2620 | 2620 | -23.14 | compliant |
| 2618 - 2619 | 2618.5 | -20.41 | compliant |
| 2598 - 2618 | 2618 | -20.12 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 321 Spurious Emissions (Lower band edge) (Band 7 3x E-UTRA 5MHz + Band 25 E-UTRA 10MHz + Band 66 E-UTRA 5MHz)**

**Config U Upper band edge (Band 7):**

| Carrier Frequency: 2622.5 / 2627.5 / 2687.5 / 1962.5 / 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2690 - 2691 | 2690 | -27.91 | compliant |
| 2691 - 2692 | 2691.5 | -19.42 | compliant |
| 2692 - 2712 | 2692 | -19.37 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>Measurement Uncertainty:3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 322 Spurious Emissions (Upper band edge) (Band 7 3x E-UTRA 5MHz + Band 25 E-UTRA 10MHz + Band 66 E-UTRA 5MHz)**

**Config U Spurious emissions:**

| Carrier Frequency: 2622.5 / 2627.5 / 2687.5 / 1962.5 / 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2819 | -22.50 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 323 Spurious Emissions (Band 7 3x E-UTRA 5MHz + Band 25 E-UTRA 10MHz + Band 66 E-UTRA 5MHz)**

**Config V Lower band edge (Band 7):**

| Carrier Frequency: 2630.0 / 2650.0 / 1962.5 / 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2619 - 2620 | 2620 | -20.36 | compliant |
| 2618 - 2619 | 2618.5 | -20.87 | compliant |
| 2598 - 2618 | 2618 | -20.31 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 324 Spurious Emissions (Lower band edge) (Band 7 2x E-UTRA 20MHz + Band 25 E-UTRA 20MHz + Band 66 E-UTRA 20MHz)**

**Config V Spurious emissions:**

| Carrier Frequency: 2630.0 / 2650.0 / 1962.5 / 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2998 | -22.93 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 325 Spurious Emissions (Band 7 2x E-UTRA 20MHz + Band 25 E-UTRA 20MHz + Band 66 E-UTRA 20MHz)**

**Config W Upper band edge (Band 7):**

| Carrier Frequency: 2660.0 / 2680.0 / 1962.5 / 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 2690 - 2691 | 2690 | -20.88 | compliant |
| 2691 - 2692 | 2691.5 | -22.34 | compliant |
| 2692 - 2712 | 2693 | -22.10 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 326 Spurious Emissions (Upper band edge) (Band 7 2x E-UTRA 20MHz + Band 25 E-UTRA 20MHz + Band 66 E-UTRA 20MHz)**

**Config W Spurious emissions:**

| Carrier Frequency: 2660.0 / 2680.0 / 1962.5 / 2155.0 MHz | | | |
|---|---|---|---|
| **Frequency Range [MHz]** | **Emission Frequency [MHz]** | **Maximum Emission Level [dBm]** | **Result** |
| QPSK-Modulation TX port 1 | | | |
| 0.009 – 27000 | 2990 | -22.90 | compliant |
| Measurement Uncertainty: | | f < 1.0GHz: ±1.1dB,<br>1.0GHz ≤ f <3.6GHz: ±1.2dB,<br>3.6GHz ≤ f <8.0GHz: ±1.6dB,<br>8.0GHz ≤ f: ±1.9dB | |

**Table 327 Spurious Emissions (Band 7 2x E-UTRA 20MHz + Band 25 E-UTRA 20MHz + Band 66 E-UTRA 20MHz)**

The measured conducted emission levels were found to be compliant with the manufacturer's specifications and with all requirements of the FCC rules and ISED RSS specifications.

# 5. TEST DATA AND SCREENSHOTS

## 5.1 Part List of the RF Measurement Test Equipment

| No. | Test Equipment | Manufacturer & Type | Serial Number | Calibration date | Calibration due | Test No. |
|---|---|---|---|---|---|---|
| 1 | Signal & Spectrum Analyser | Rohde & Schwarz, FSW-43 | 104001 | 31.07.2023 | 31.07.2024 | 1, 2, 3, 4 |
| 2 | Vector Network Analyzer | Rohde&Schwarz, ZVL-13 | 101177 | 11.12.2023 | 10.12.2024 | 1, 2, 3, 4 |
| 3 | Vector Network Analyzer | Rohde&Schwarz, ZVA-40 | 100146 | 29.12.2023 | 29.12.2024 | 1, 2, 3, 4 |
| 4 | Calibration Unit | Rohde&Schwarz, ZV-Z54 | 100125 | 24.11.2023 | 24.11.2024 | 1, 2, 3, 4 |
| 5 | Rubidium Frequency Standard | Symmetricom, 8040C | 135230101015 | 24.08.2023 | 24.08.2024 | 1, 2, 3, 4 |
| 6 | DC-power supply | Elektro-Automatik, PSI 8080-510 | 1331460001 | cnn | - | 1, 2, 3, 4 |
| 7 | Attenuator | Aeroflex / Weinschel, 67-10-34 | BS0020 | cnn | - | 1, 2, 3, 4 |
| 8 | Attenuator | Weinshel, 66-30-33 | BN0228 | cnn | - | 1, 2, 3, 4 |
| 9 | Attenuator | Weinshel, 66-20-33 | CF0629 | cnn | - | 1, 2, 3, 4 |
| 10 | Attenuator | SHX, DTS100G-20dB-24G-3.5mm(F,F)-B | 14111102 | cnn | - | 4 |
| 11 | High Pass Filter | RF-Lambda, RHPF23G06G40 | 21052000011 | cnn | - | 4 |
| 12 | Multimeter | Fluke, 83 | 65870302 | 13.12.2023 | 12.12.2024 | 1, 2, 3, 4 |
| 13 | Humidity & temperature indicator | Vaisala, HMT141 | P2370166 | 30.06.2023 | 30.06.2024 | 1, 2, 3, 4 |

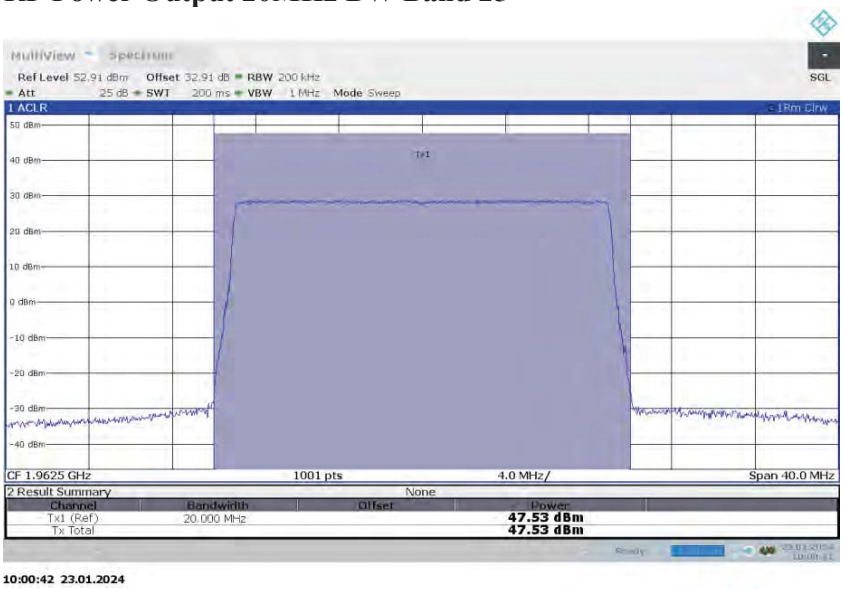
**Table 1728 Part List of the RF Measurement Test Equipment**

## 5.2 Spectral Plots

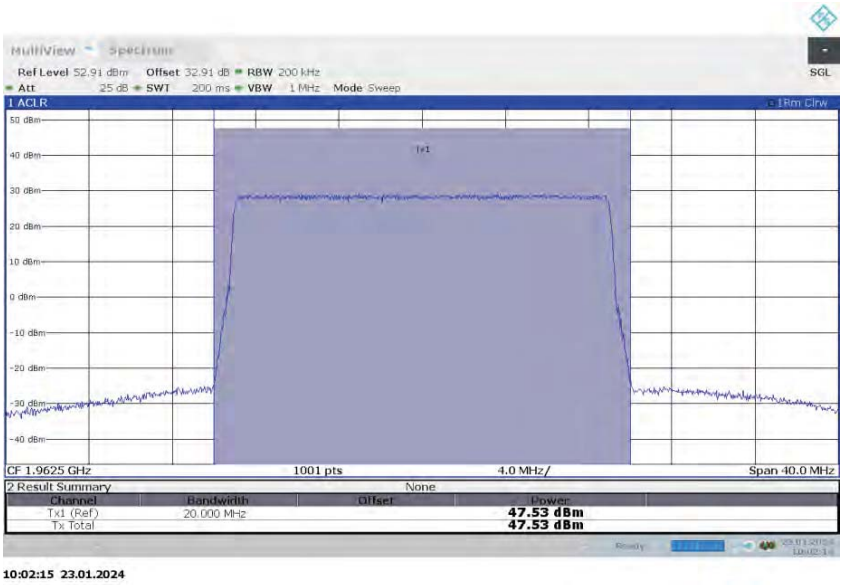
NOTE: Only a sample of the spectral plots are used and visible in this report. All measured test results and data are saved in Oulu located server.

### 5.2.1. Test No. 1: RF Output Power

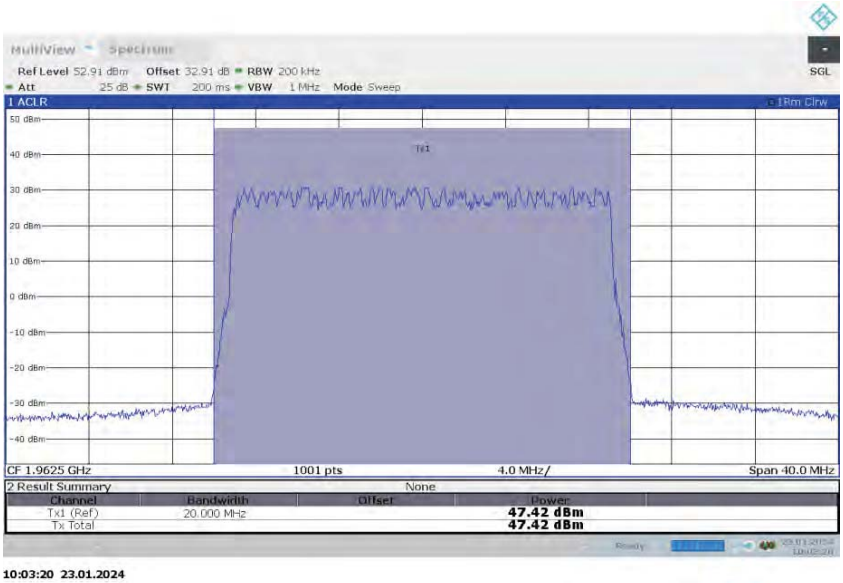
**RF Power Output 20MHz BW Band 25**



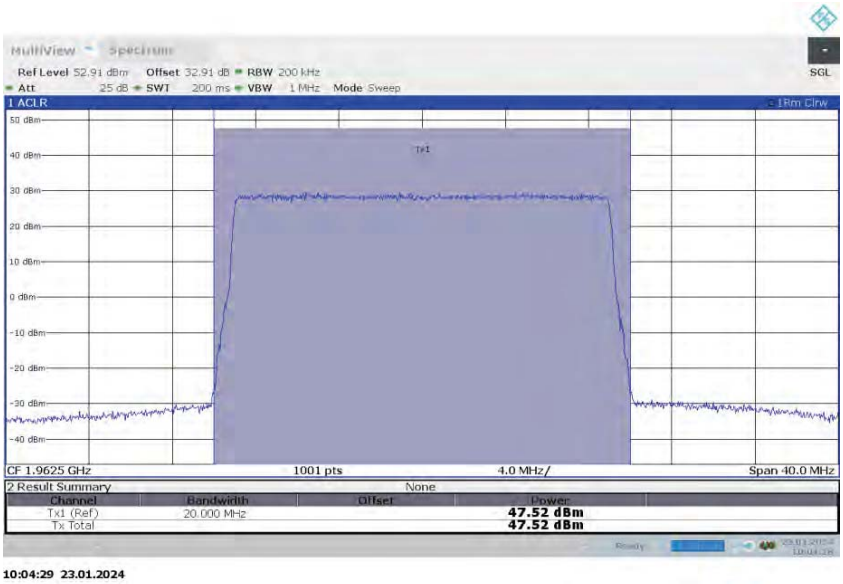

E-TM 1.1, Modulation QPSK, Channel Frequency 1962.5MHz, Tx port 1




E-TM 3.1, Modulation 64QAM, Channel Frequency 1962.5MHz, Tx port 1

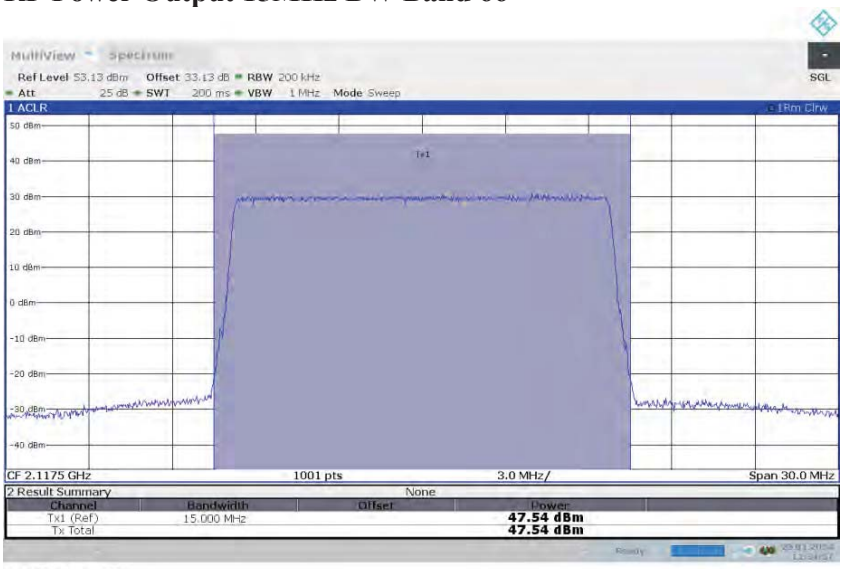



E-TM 3.2, Modulation 16QAM, Channel Frequency 1962.5MHz, Tx port 1



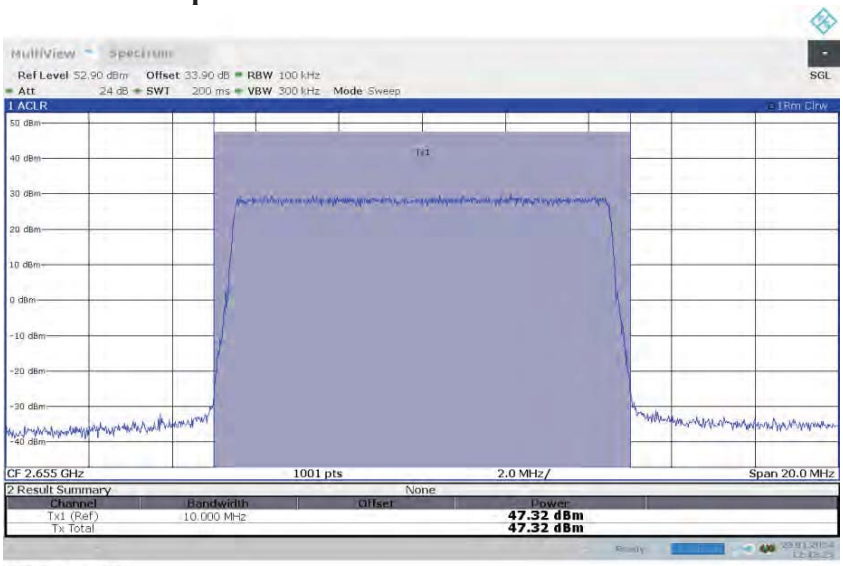

E-TM 3.1a, Modulation 256QAM, Channel Frequency 1962.5MHz, Tx port 1

**RF Power Output 15MHz BW Band 66**



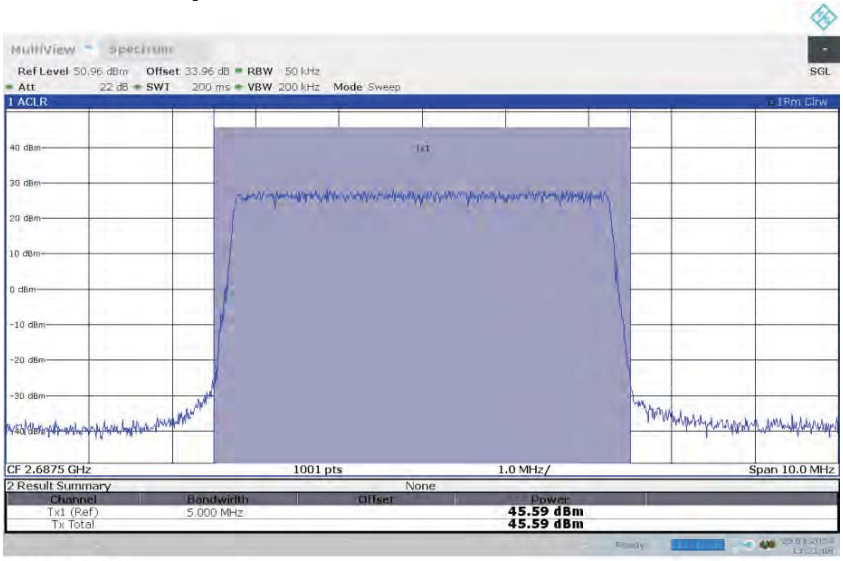

E-TM 3.1a, Modulation 256QAM, Channel Frequency 2117.5MHz, Tx port 1

**RF Power Output 10MHz BW Band 7**



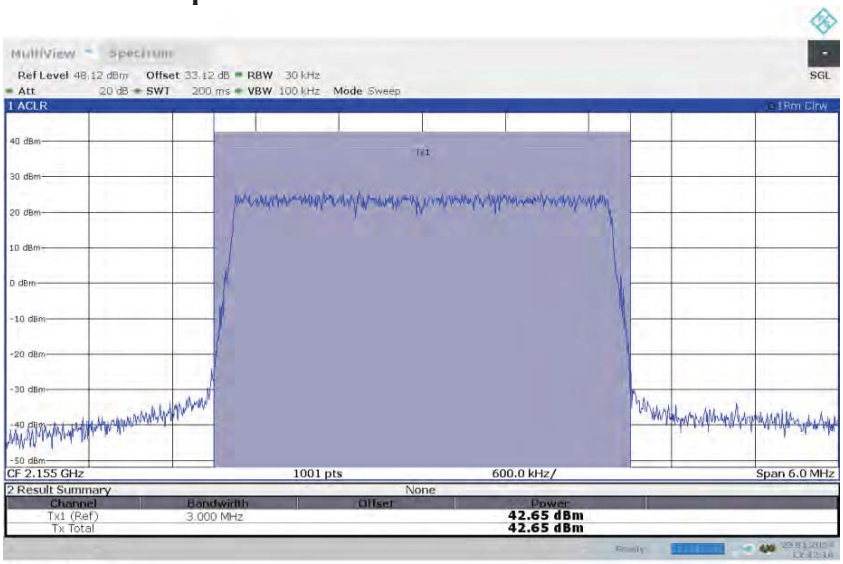

E-TM 3.1a, Modulation 256QAM, Channel Frequency 2655.0MHz, Tx port 1

**RF Power Output 5MHz BW Band 7**



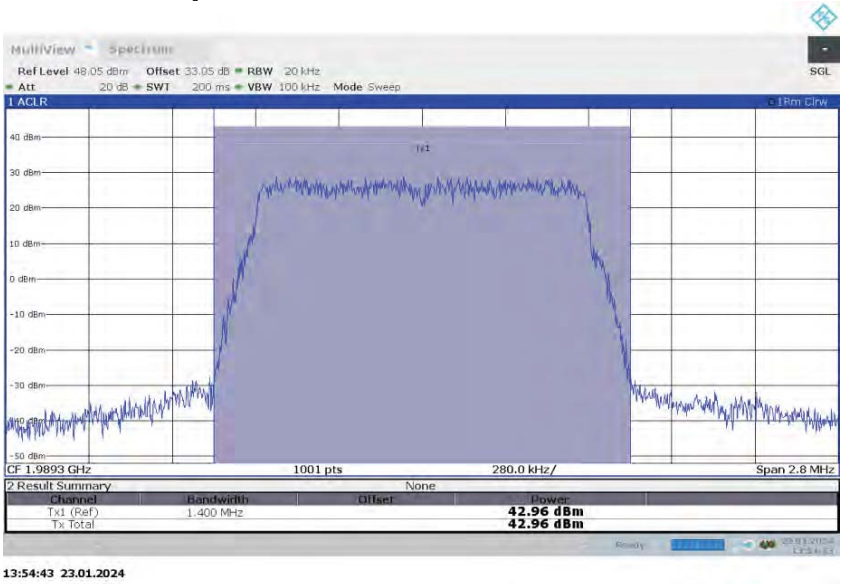

E-TM 3.1a, Modulation 256QAM, Channel Frequency 2687.5MHz, Tx port 1

**RF Power Output 3MHz BW Band 66**



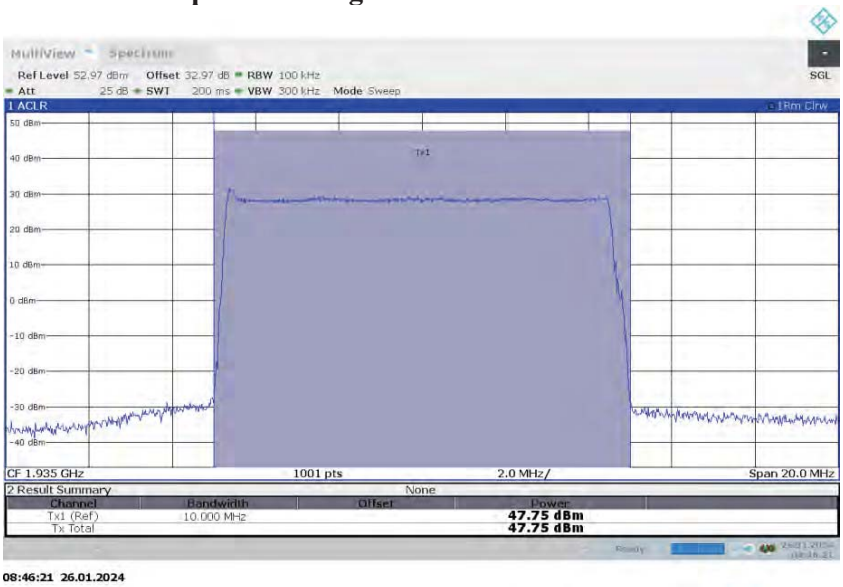

E-TM 3.1a, Modulation 256QAM, Channel Frequency 2155.0MHz, Tx port 1

**RF Power Output 1.4MHz BW Band 25**




E-TM 3.1a, Modulation 256QAM, Channel Frequency 1989.3MHz, Tx port 1

**RF Power Output NB-IoT guardband 10MHz BW Band 25**

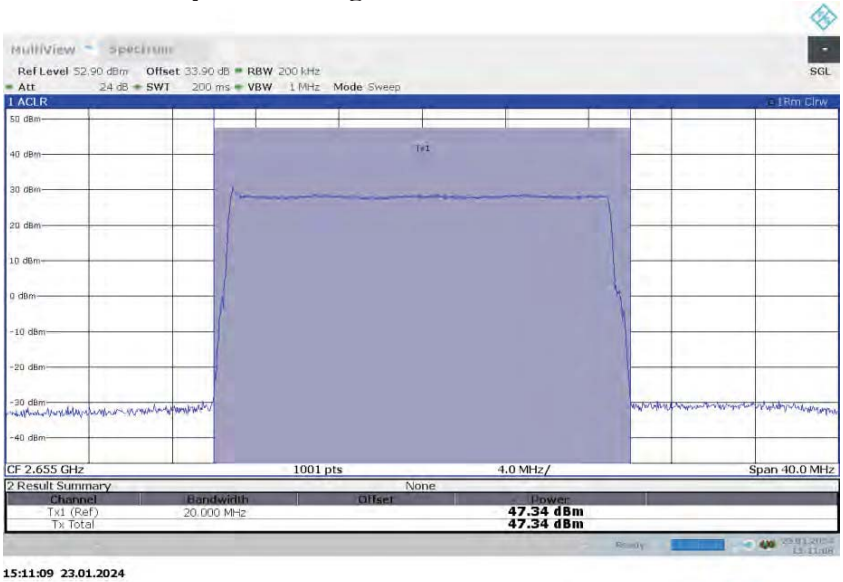



E-TM 1.1 with N-TM: E-UTRA NB-IoT GB, Modulation QPSK, Channel Frequency 1935.0MHz, Tx port 1

**RF Power Output NB-IoT guardband 15MHz BW Band 66**


E-TM 1.1 with N-TM: E-UTRA NB-IoT GB, Modulation QPSK, Channel Frequency 2117.5MHz, Tx port 1

**RF Power Output NB-IoT guardband 20MHz BW Band 7**




E-TM 1.1 with N-TM: E-UTRA NB-IoT GB, Modulation QPSK, Channel Frequency 2655.0MHz, Tx port 1

**RF Power Output NB-IoT Standalone 200kHz BW Band 25**


N-TM: E-UTRA NB-IoT SA, Modulation QPSK, Channel Frequency 1962.5MHz, Tx port 1

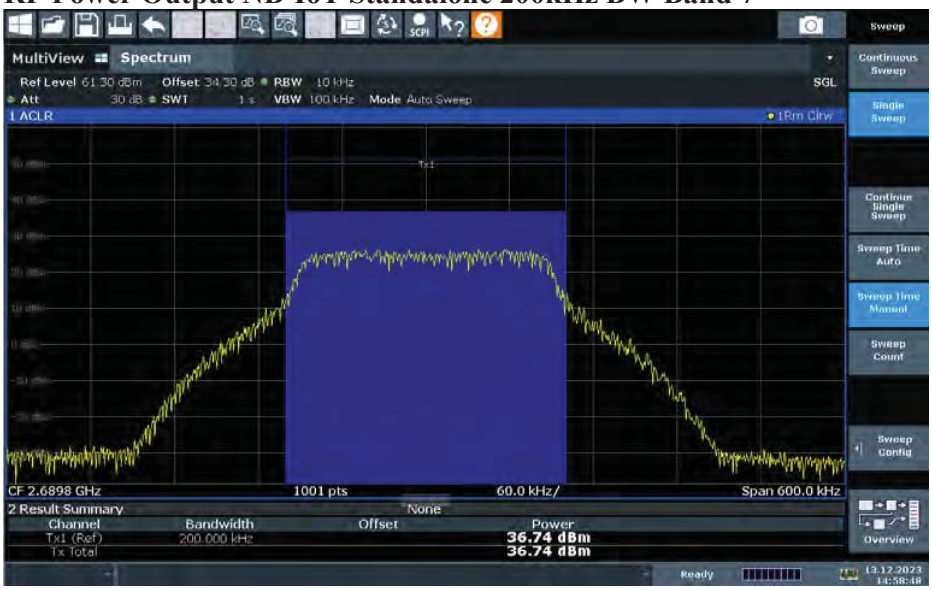
**RF Power Output NB-IoT Standalone 200kHz BW Band 66**


N-TM: E-UTRA NB-IoT SA, Modulation QPSK, Channel Frequency 2155.0MHz, Tx port 1

**RF Power Output NB-IoT Standalone 200kHz BW Band 7**

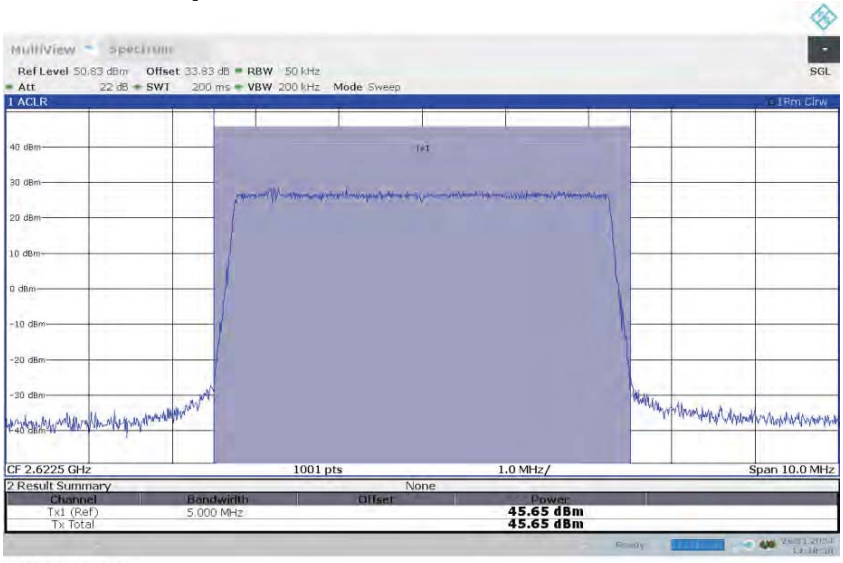

N-TM: E-UTRA NB-IoT SA, Modulation QPSK, Channel Frequency 2689.8MHz, Tx port 1 (ISED)

**RF Power Output NB-IoT Standalone 200kHz BW Band 7**



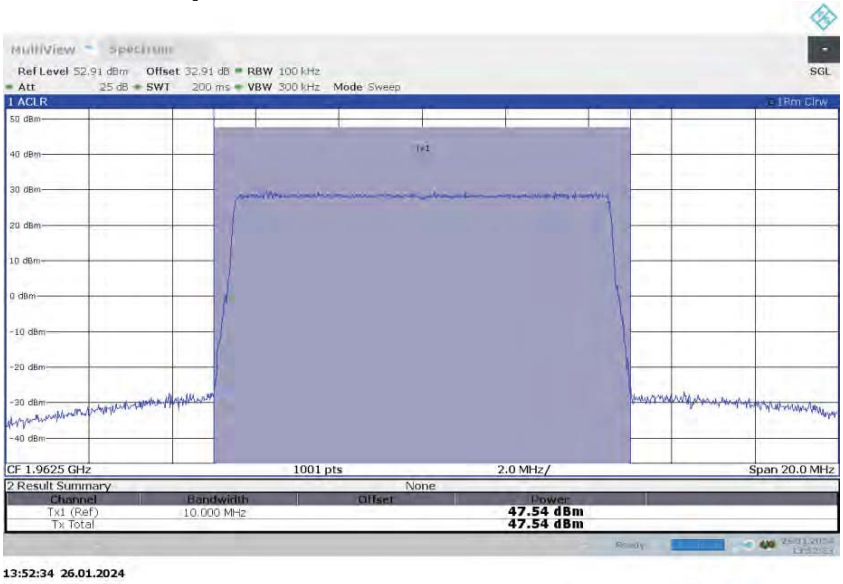

N-TM: E-UTRA NB-IoT SA, Modulation QPSK, Channel Frequency 2689.8MHz, Tx port 1 (Reduced Power for FCC)

**RF Power Output NB-IoT Inband 5MHz BW Band 7**




E-TM 1.1 with N-TM: E-UTRA NB-IoT IB, Modulation QPSK, Channel Frequency 2622.5MHz, Tx port 1

**RF Power Output NB-IoT Inband 10MHz BW Band 25**

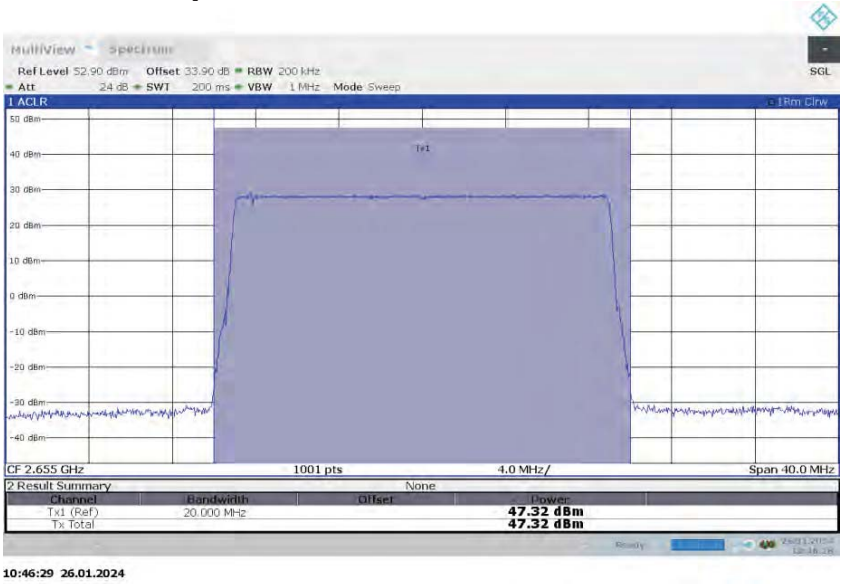



E-TM 1.1 with N-TM: E-UTRA NB-IoT IB, Modulation QPSK, Channel Frequency 1962.5MHz, Tx port 1

**RF Power Output NB-IoT Inband 15MHz BW Band 66**

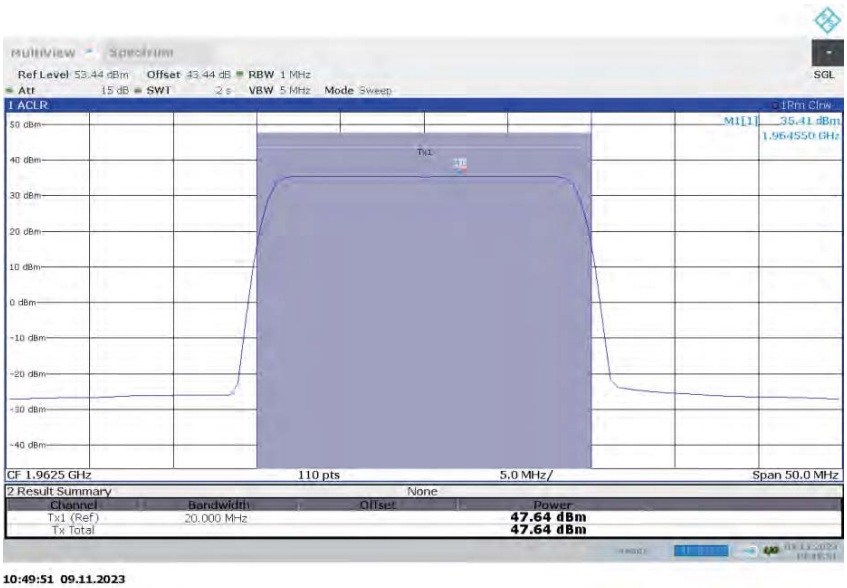

E-TM 1.1 with N-TM: E-UTRA NB-IoT IB, Modulation QPSK, Channel Frequency 2155.0MHz, Tx port 1

**RF Power Output NB-IoT Inband 20MHz BW Band 7**

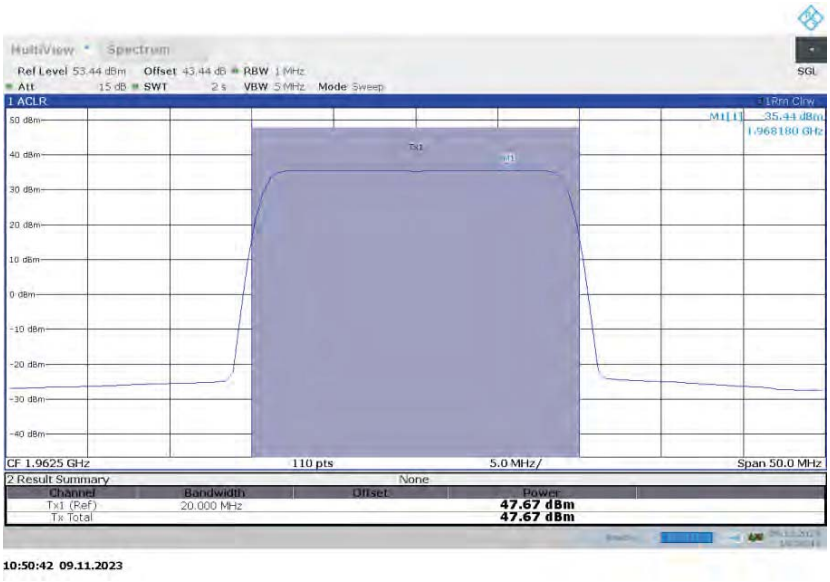



E-TM 1.1 with N-TM: E-UTRA NB-IoT IB, Modulation QPSK, Channel Frequency 2655.0MHz, Tx port 1

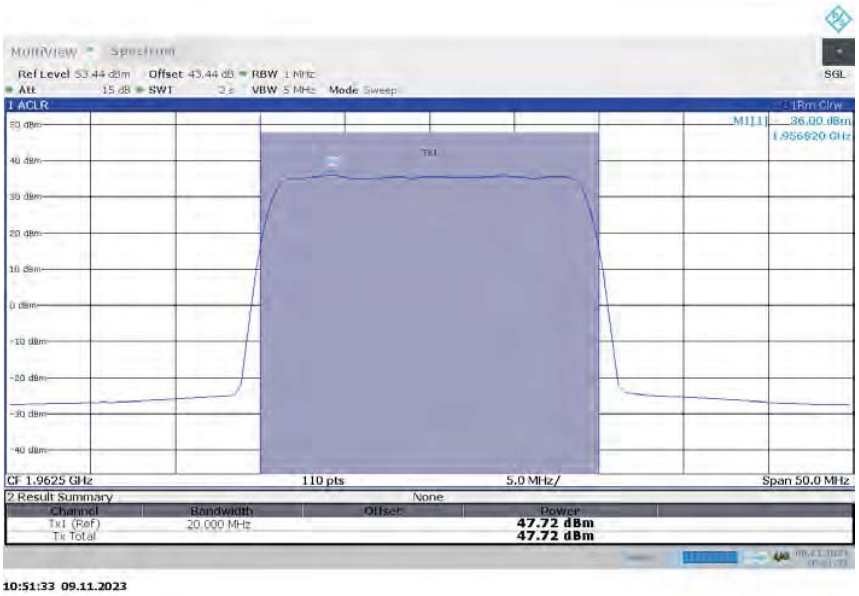
**Power spectral density 20MHz BW Band 25**



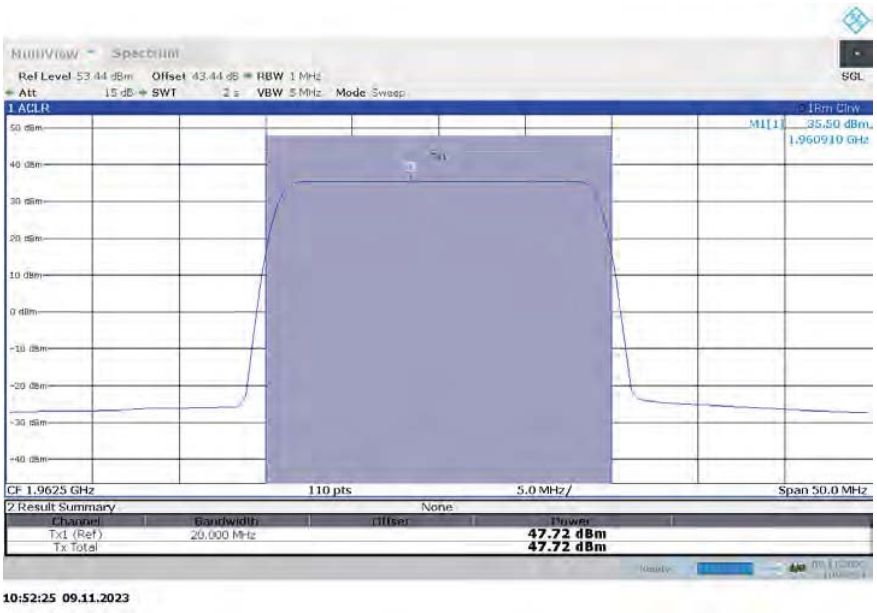

E-TM 1.1, Modulation QPSK, Channel Frequency 1962.5MHz, Tx port 1




E-TM 3.1, Modulation 64QAM, Channel Frequency 1962.5MHz, Tx port 1

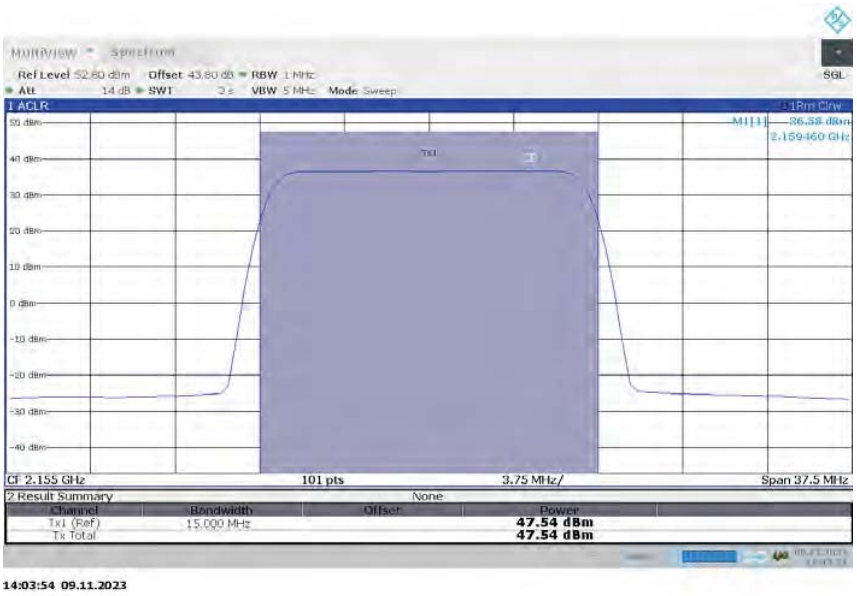



E-TM 3.2, Modulation 16QAM, Channel Frequency 1962.5MHz, Tx port 1



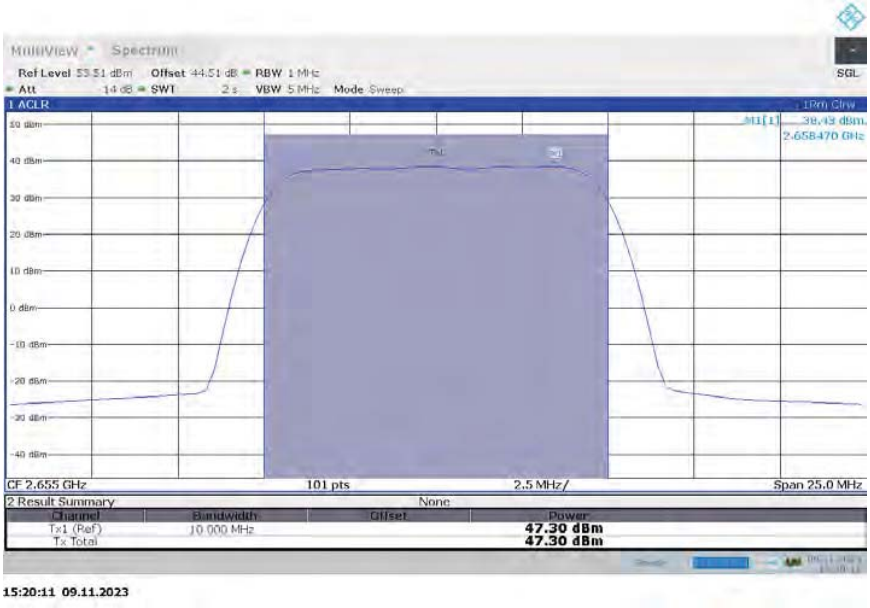

E-TM 3.1a, Modulation 256QAM, Channel Frequency 1962.5MHz, Tx port 1

**Power spectral density 15MHz BW Band 66**



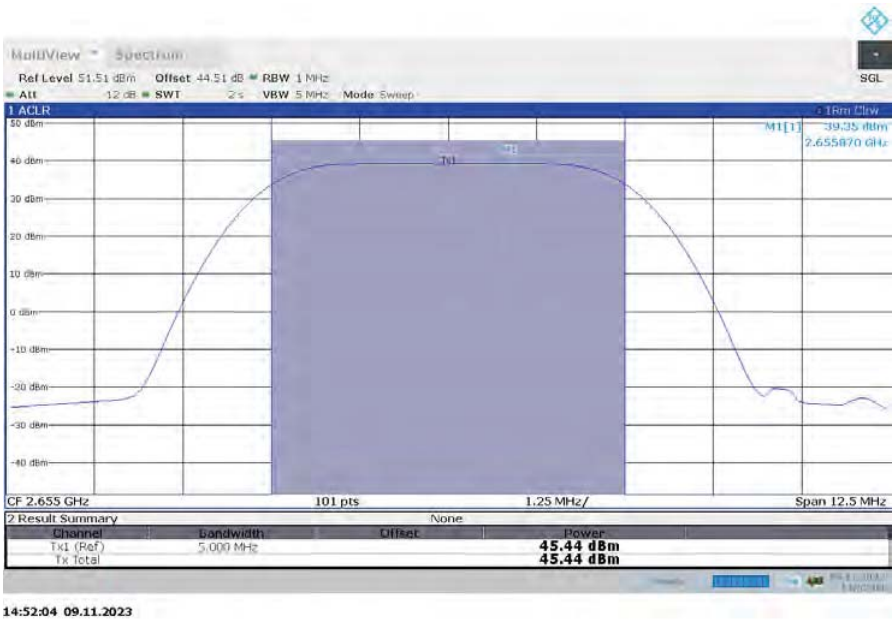

E-TM 1.1, Modulation QPSK, Channel Frequency 2155MHz, Tx port 1

**Power spectral density 10MHz BW Band 7**



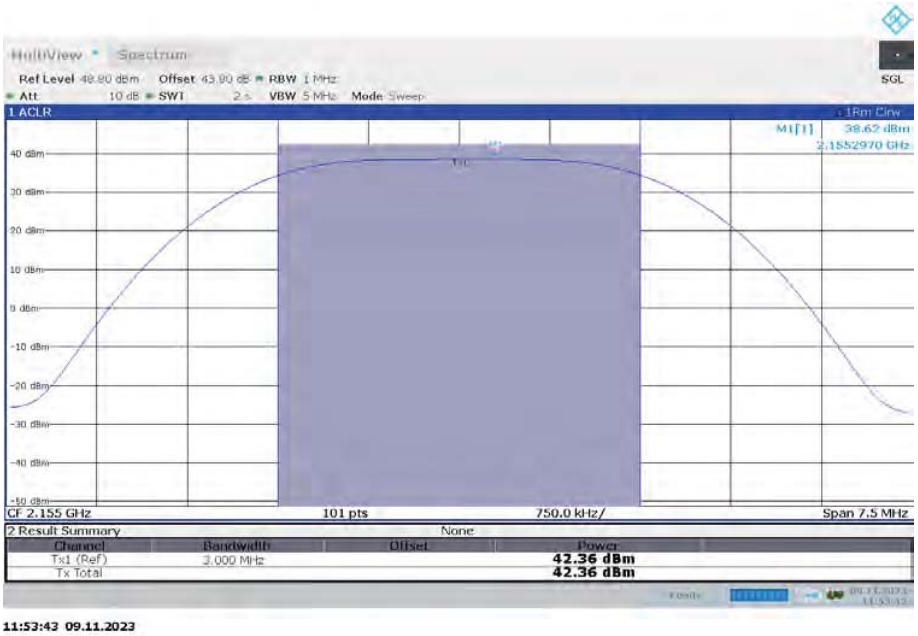

E-TM 3.2, Modulation 16QAM, Channel Frequency 2655MHz, Tx port 1

**Power spectral density 5MHz BW Band 7**



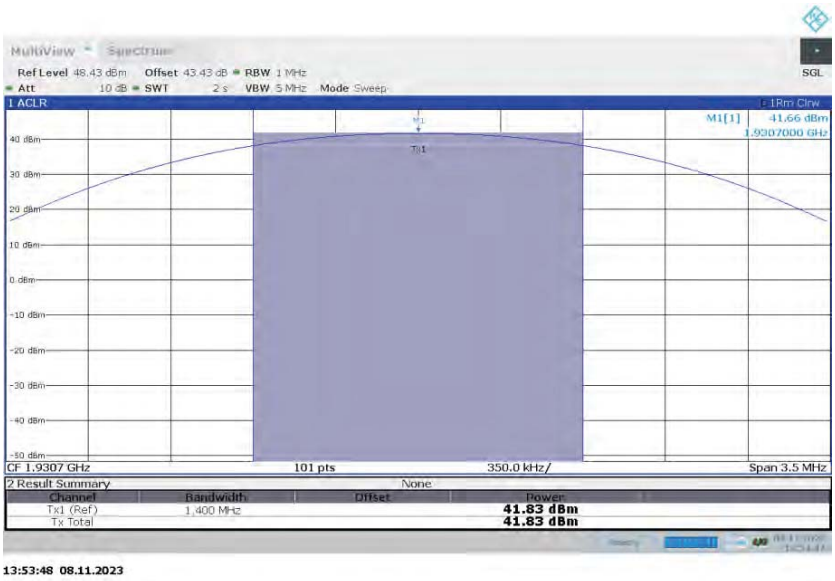

E-TM 3.1, Modulation 64QAM, Channel Frequency 2655MHz, Tx port 1

**Power spectral density 3MHz BW Band 66**



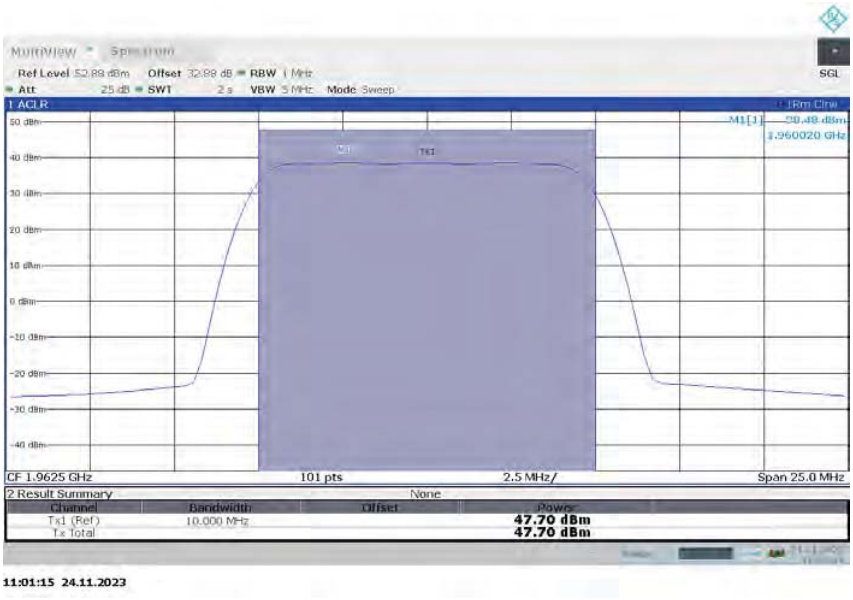

E-TM 3.1a, Modulation 256QAM, Channel Frequency 2155MHz,Tx Port1

**Power spectral density 1.4MHz BW Band 25**



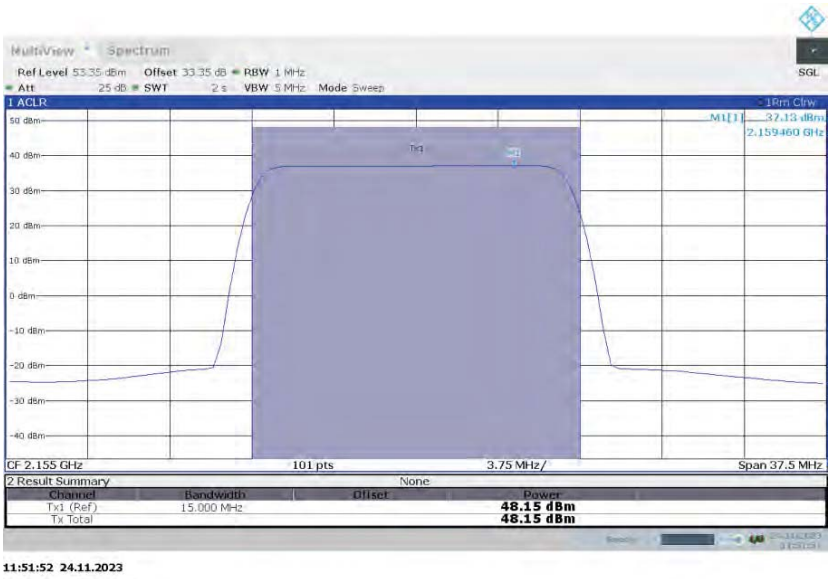

E-TM 1.1, Modulation QPSK, Channel Frequency 1930.7MHz, Tx port 1

**Power spectral density NB-IoT guardband 10MHz BW Band 25**



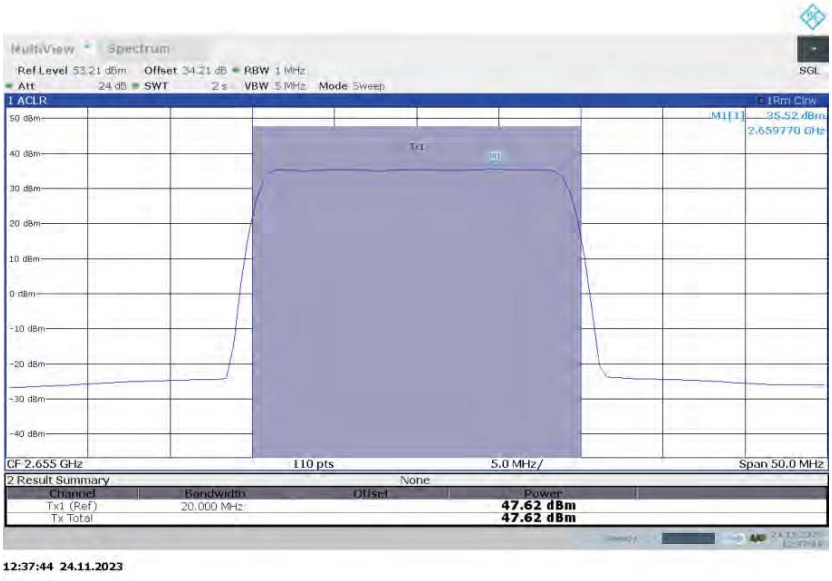

E-TM 1.1 with N-TM: E-UTRA NB-IoT GB, Modulation QPSK, Channel Frequency 1962.5MHz, Tx port 1

**Power spectral density NB-IoT guardband 15MHz BW Band 66**



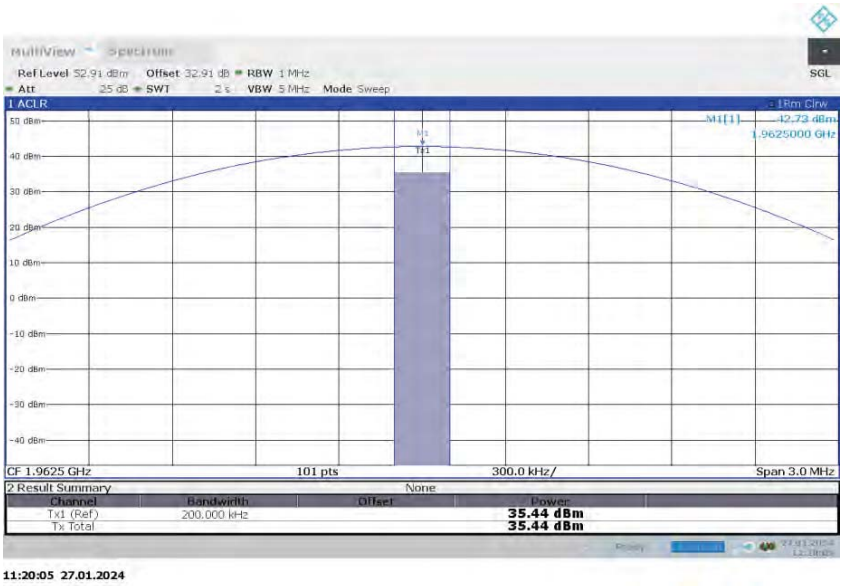

E-TM 1.1 with N-TM: E-UTRA NB-IoT GB, Modulation QPSK, Channel Frequency 2155MHz, Tx port 1

**Power spectral density NB-IoT guardband 20MHz BW Band 7**



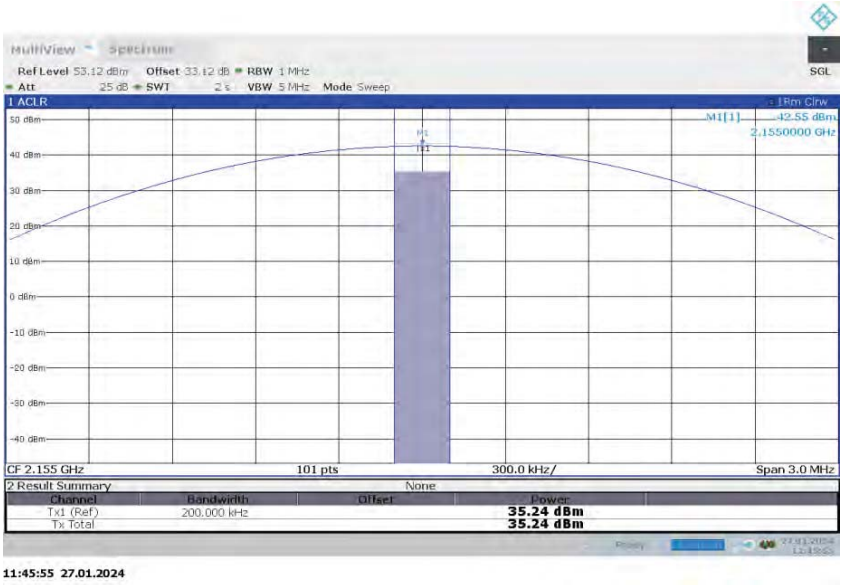

E-TM 1.1 with N-TM: E-UTRA NB-IoT GB, Modulation QPSK, Channel Frequency 2655MHz, Tx port 1

**Power spectral density NB-IoT Standalone 200kHz BW Band25**



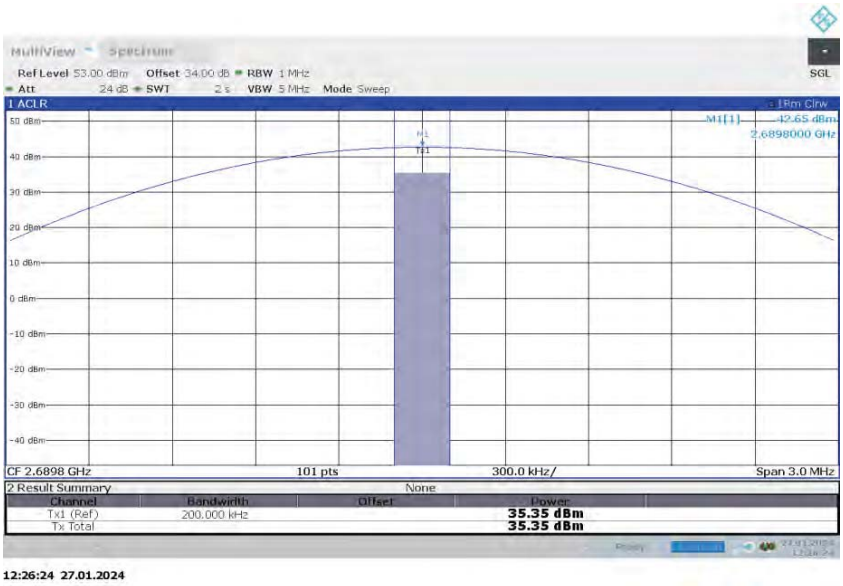

N-TM: E-UTRA NB-IoT SA, Modulation QPSK, Channel Frequency 1962.5MHz, Tx port 1

**Power spectral density NB-IoT Standalone 200kHz BW Band66**



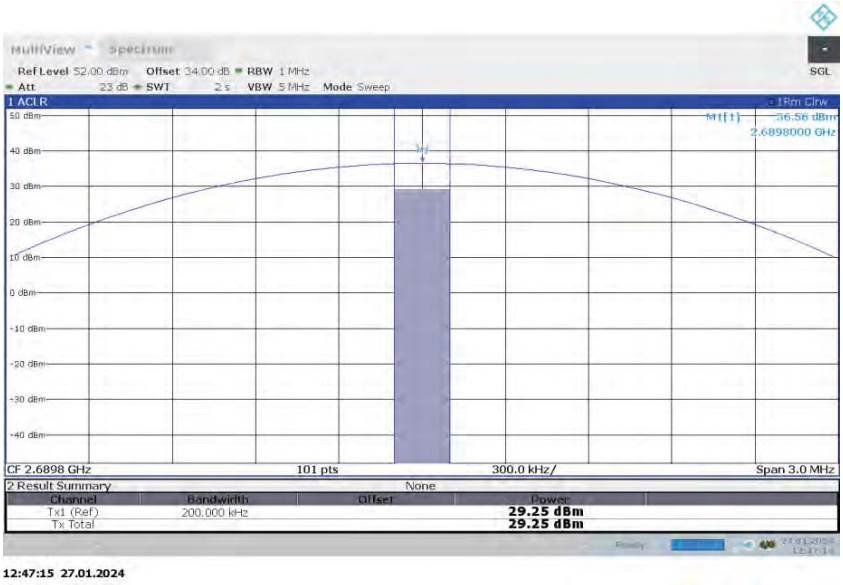

N-TM: E-UTRA NB-IoT SA, Modulation QPSK, Channel Frequency 2155MHz, Tx port 1

**Power spectral density NB-IoT Standalone 200kHz BW Band7**



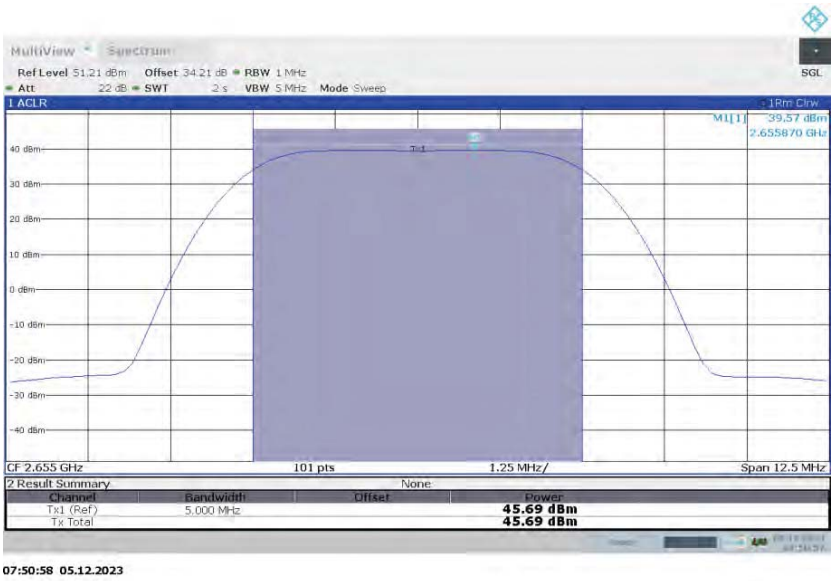

N-TM: E-UTRA NB-IoT SA, Modulation QPSK, Channel Frequency 2689.8MHz, Tx port 1 (ISED)

**Power spectral density NB-IoT Standalone 200kHz BW Band7**



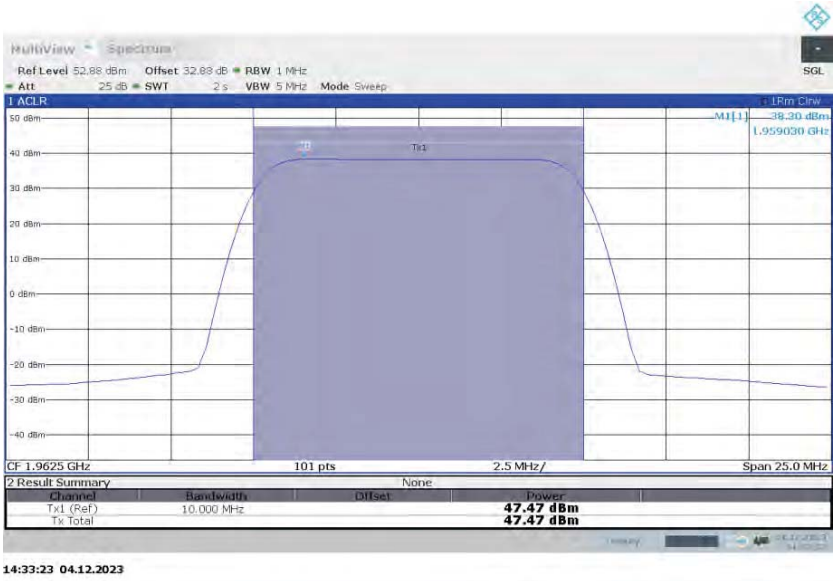

N-TM: E-UTRA NB-IoT SA, Modulation QPSK, Channel Frequency 2689.8MHz, Tx port 1 (Reduced Power for FCC)

**Power spectral density NB-IoT Inband 5MHz BW Band7**



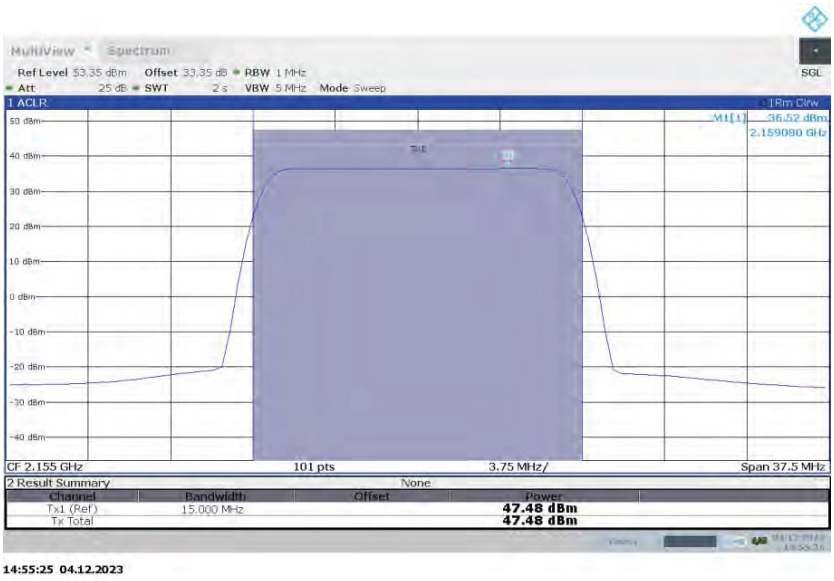

E-TM 1.1 with N-TM: E-UTRA NB-IoT IB, Modulation QPSK, Channel Frequency 2655MHz, Tx port 1

**Power spectral density NB-IoT Inband 10MHz BW Band25**



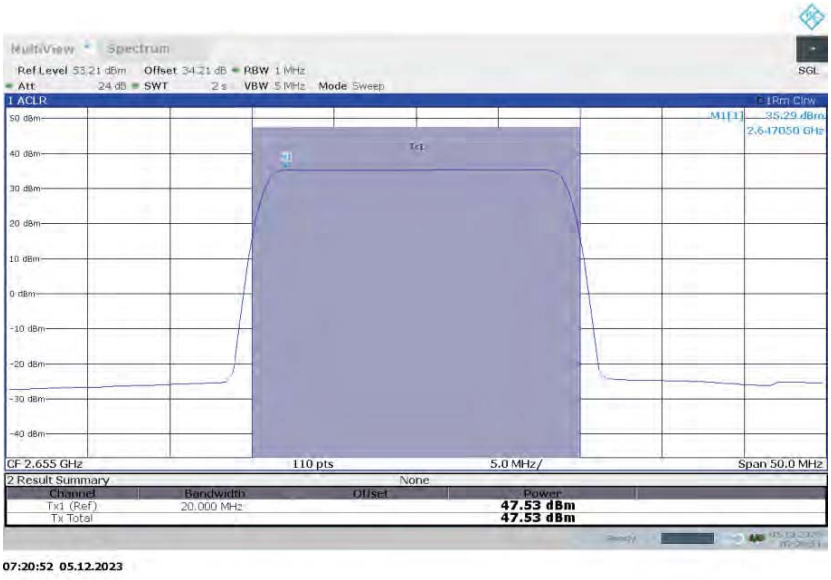

E-TM 1.1 with N-TM: E-UTRA NB-IoT IB, Modulation QPSK, Channel Frequency 1962.5MHz, Tx port 1

**Power spectral density NB-IoT Inband 15MHz BW Band66**



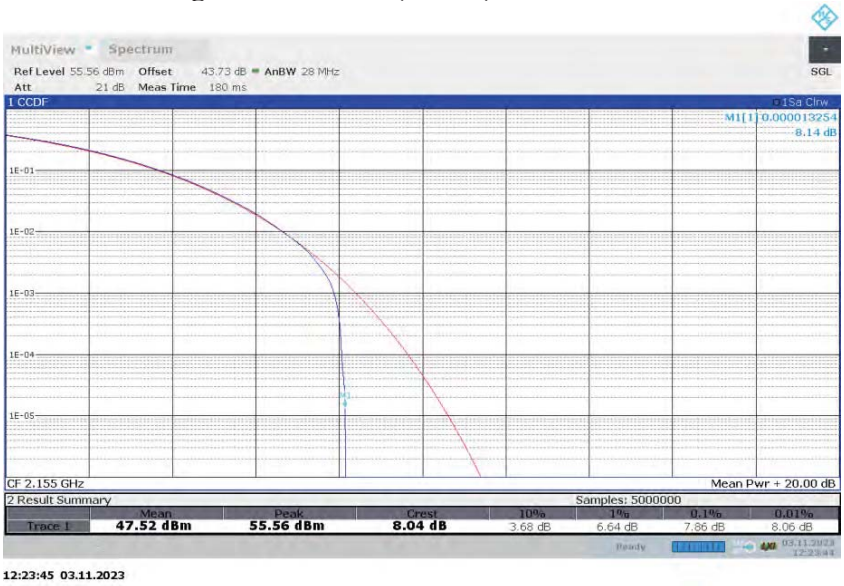

E-TM 1.1 with N-TM: E-UTRA NB-IoT IB, Modulation QPSK, Channel Frequency 2155MHz, Tx port 1

**Power spectral density NB-IoT Inband 20MHz BW Band7**



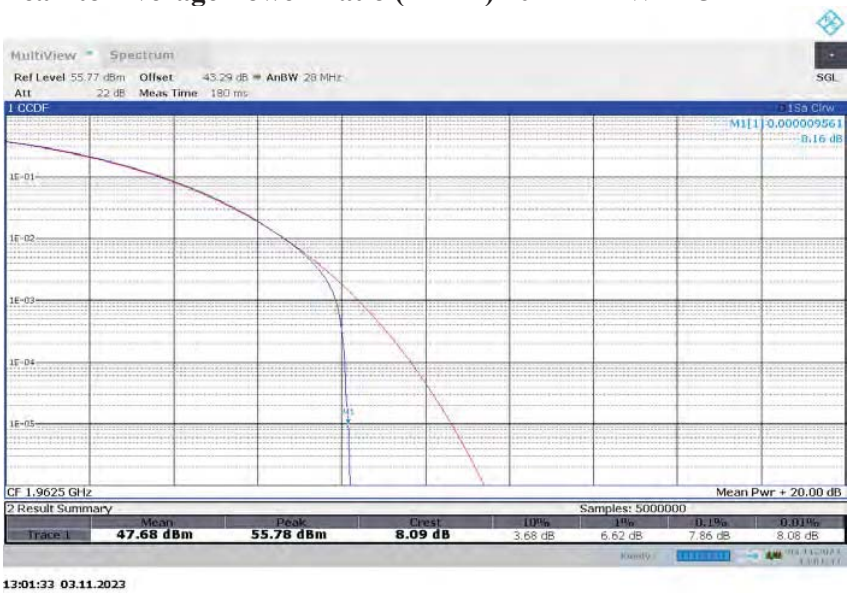

E-TM 1.1 with N-TM: E-UTRA NB-IoT IB, Modulation QPSK, Channel Frequency 2655MHz, Tx port 1

**Peak-to-Average Power Ratio (PAPR) 20MHz BW B66**




E-TM 1.1, Modulation QPSK, Channel Frequency 2155MHz, Tx port 1

**Peak-to-Average Power Ratio (PAPR) 20MHz BW B25**



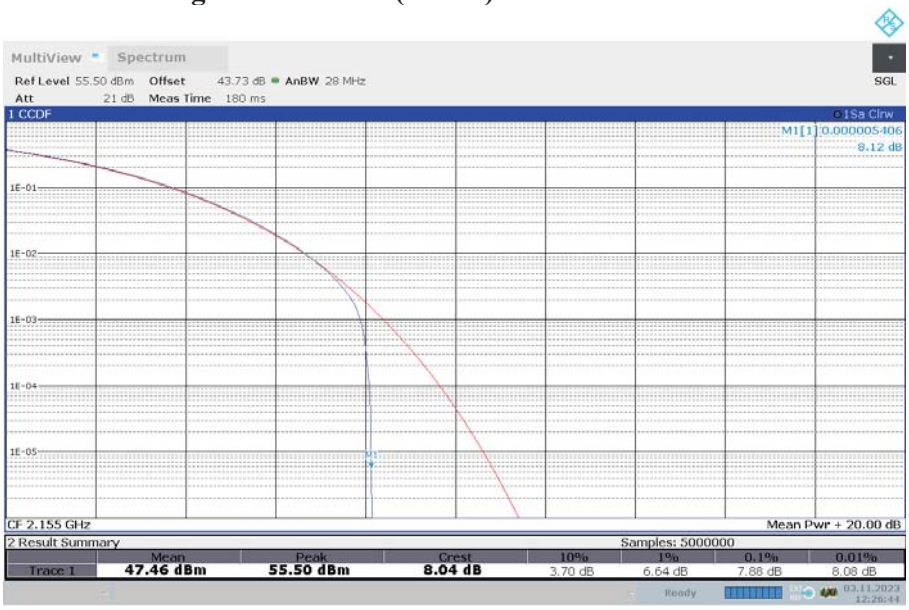

E-TM 3.2, Modulation 16QAM, Channel Frequency 1962.5MHz,Tx port 1

**Peak-to-Average Power Ratio (PAPR) 20MHz BW B7**


11:24:23 03.11.2023

E-TM 3.1, Modulation 64QAM, Channel Frequency 2655MHz,Tx Port11

**Peak-to-Average Power Ratio (PAPR) 20MHz BW B66**




12:26:45 03.11.2023

E-TM 3.1a, Modulation 256QAM, Channel Frequency 2155MHz,Tx Port1

**Peak-to-Average Power Ratio (PAPR) 15MHz BW B7**


E-TM 3.1a, Modulation 256QAM, Channel Frequency 2655MHz,Tx Port1

**Peak-to-Average Power Ratio (PAPR) 10MHz BW B25**

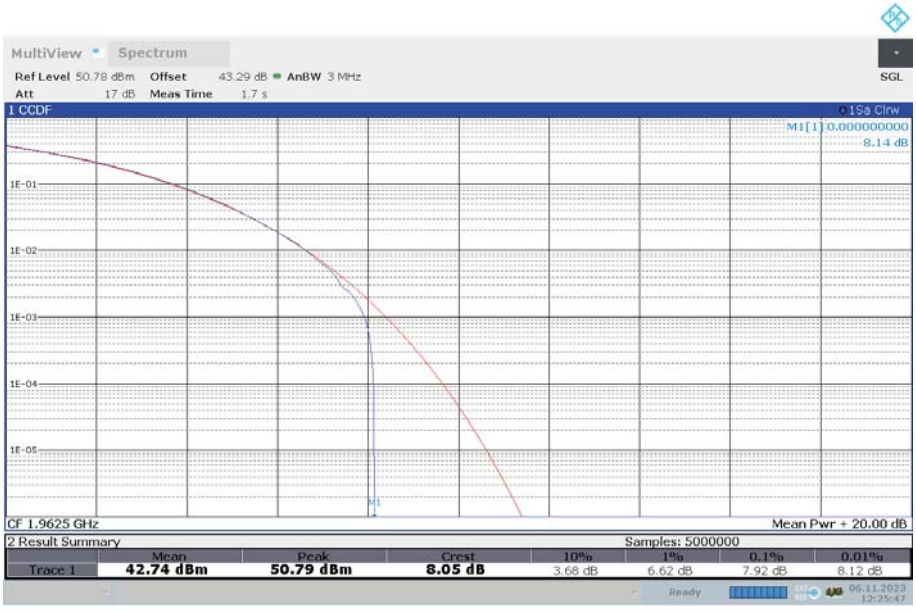

E-TM 3.1a, Modulation 256QAM, Channel Frequency 1962.5MHz,Tx Port1

**Peak-to-Average Power Ratio (PAPR) 5MHz BW B7**


10:52:13 07.11.2023

E-TM 3.1a, Modulation 256QAM, Channel Frequency 2655MHz,Tx Port1

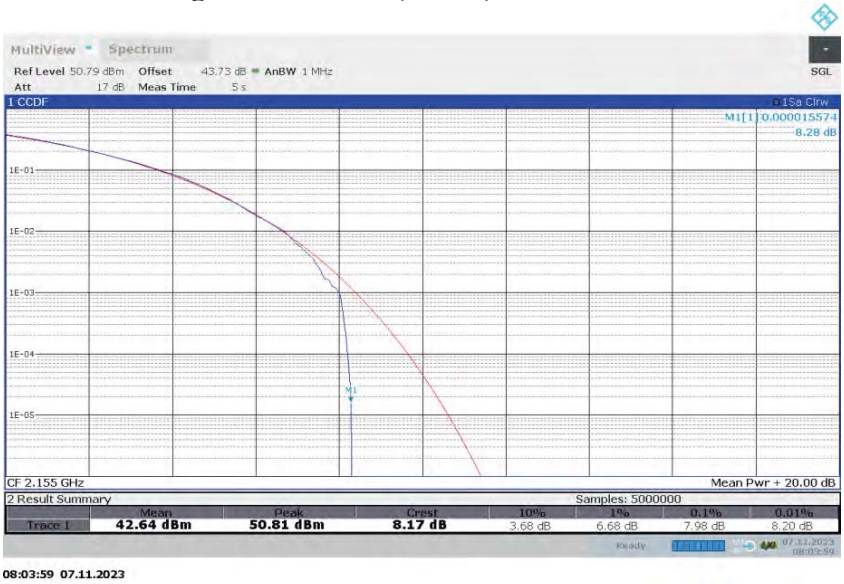
**Peak-to-Average Power Ratio (PAPR) 3MHz BW B25**




12:25:48 06.11.2023

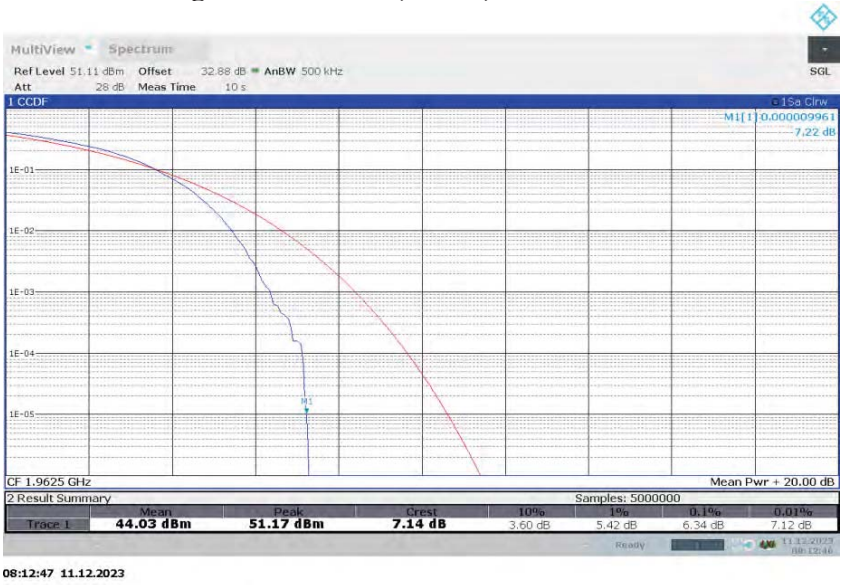
E-TM 3.1a, Modulation 256QAM, Channel Frequency 1962.5MHz,Tx Port1

**Peak-to-Average Power Ratio (PAPR) 1.4MHz BW B66**



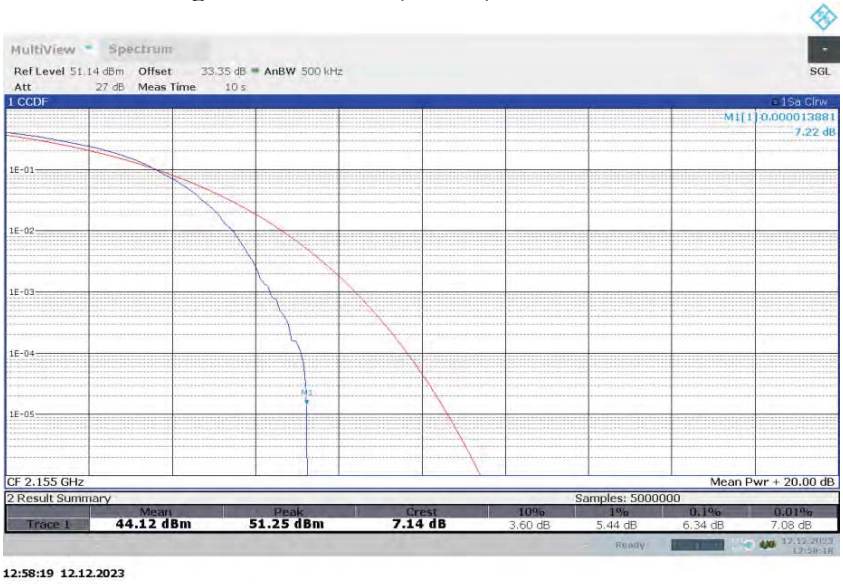

E-TM 3.1a, Modulation 256QAM, Channel Frequency 2155MHz,Tx Port1

**Peak-to-Average Power Ratio (PAPR) NB-IoT Standalone 200kHz BW B25**




N-TM: E-UTRA NB-IoT SA, Modulation QPSK, Channel Frequency 1962.5MHz, Tx port 1

**Peak-to-Average Power Ratio (PAPR) NB-IoT Standalone 200kHz BW B66**




12:58:19 12.12.2023

N-TM: E-UTRA NB-IoT SA, Modulation QPSK, Channel Frequency 2155.0MHz, Tx port 1

**Peak-to-Average Power Ratio (PAPR) NB-IoT Standalone 200kHz BW B7**

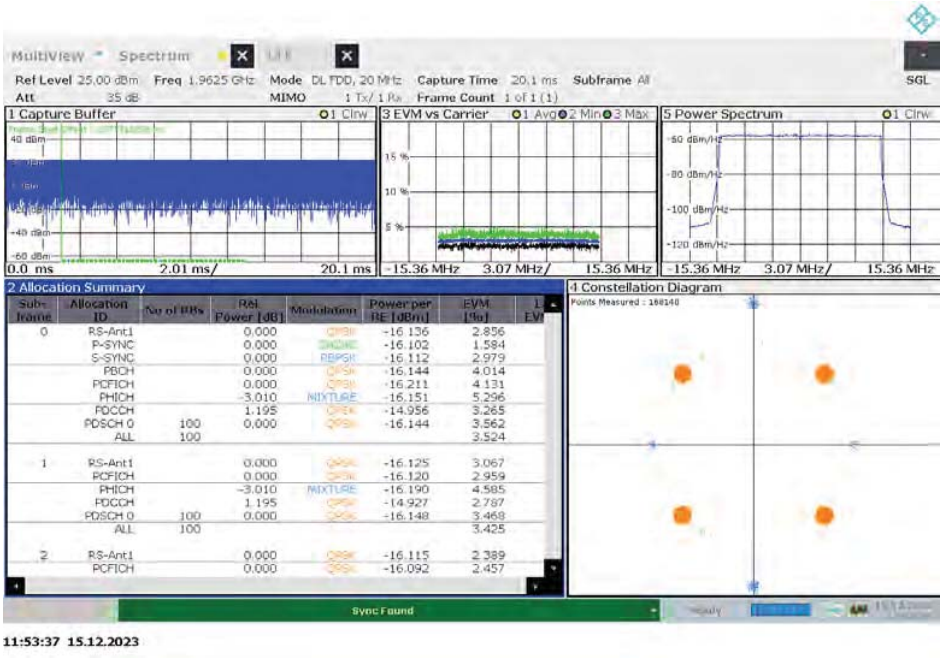

11:15:46 13.12.2023

N-TM: E-UTRA NB-IoT SA, Modulation QPSK, Channel Frequency 2655.0MHz, Tx port 1

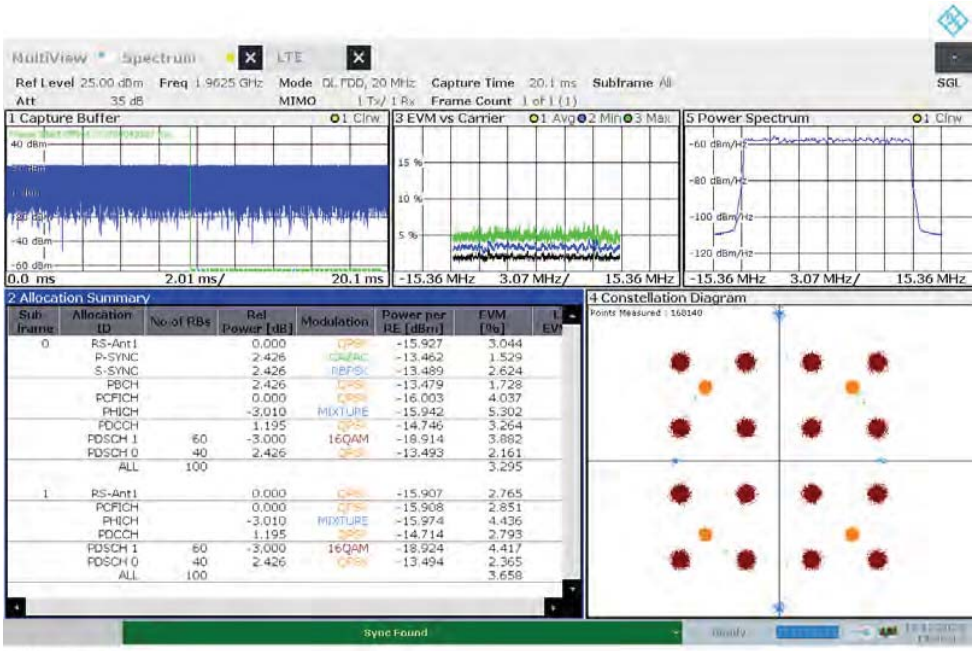
### 5.2.2. Test No. 2: Modulation Characteristics

No additional measurements are required for the modulation characteristics. Please refer to test no. 3, occupied bandwidth on page 65.

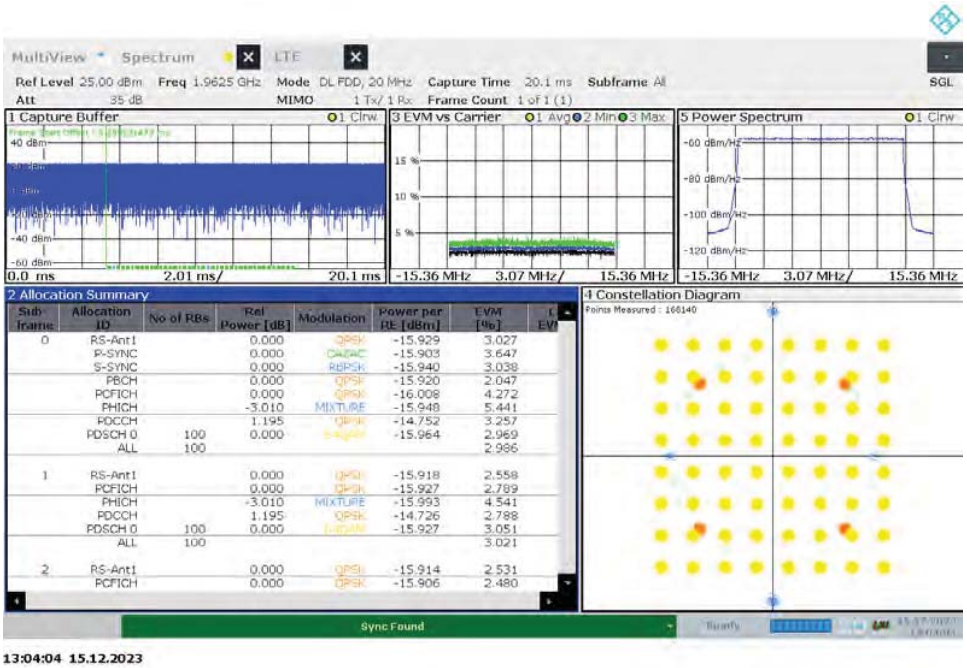
Screenshots below shows information about the modulations I/Q constellation form and modulation information table, displaying error to ideal modulation symbols.



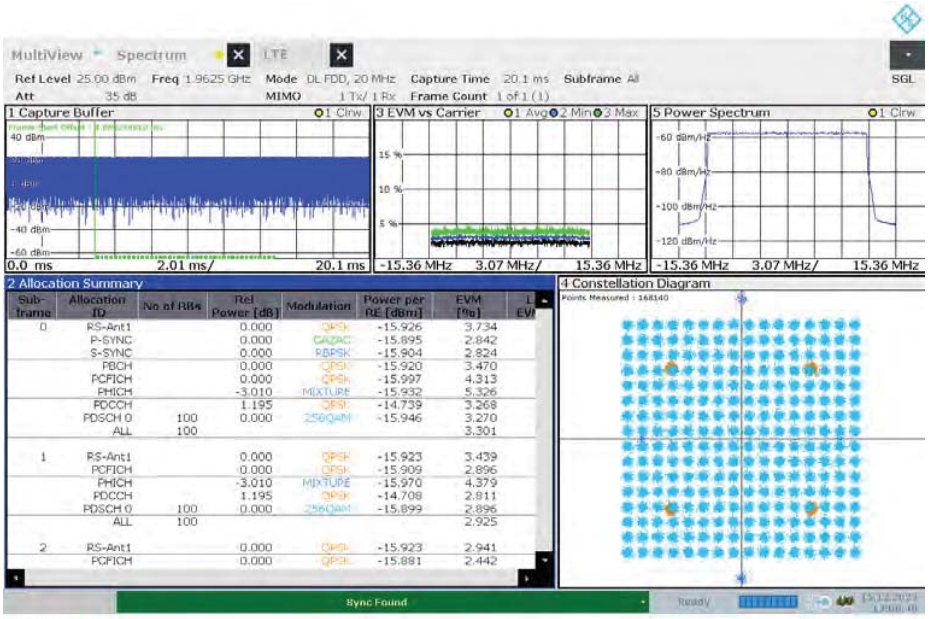

**I/Q constellation diagram with capture buffer – QPSK (1962.5MHz) (20MHz Channel BW)**



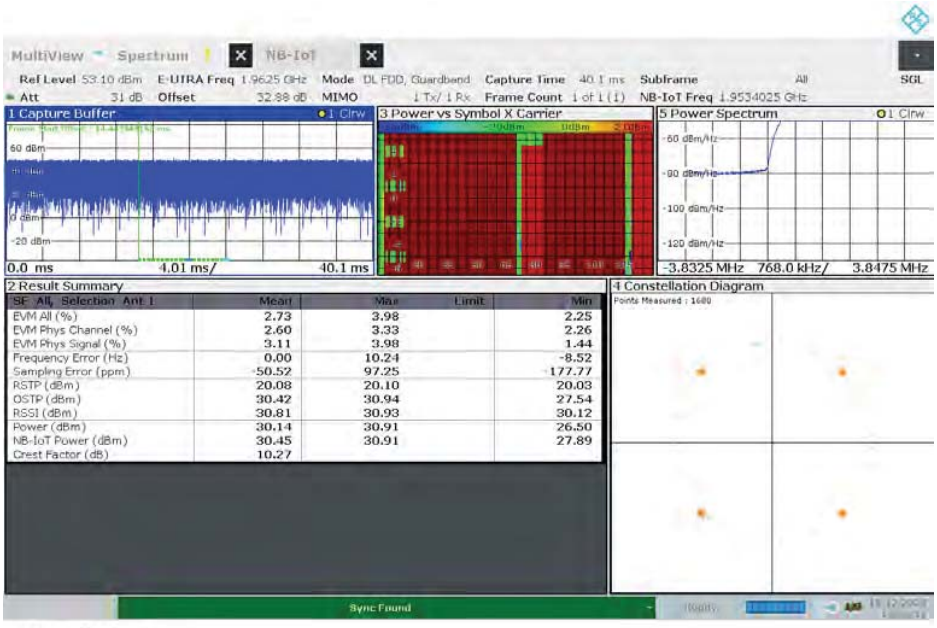

**I/Q constellation diagram with capture buffer – 16QAM (1962.5MHz) (20MHz Channel BW)**



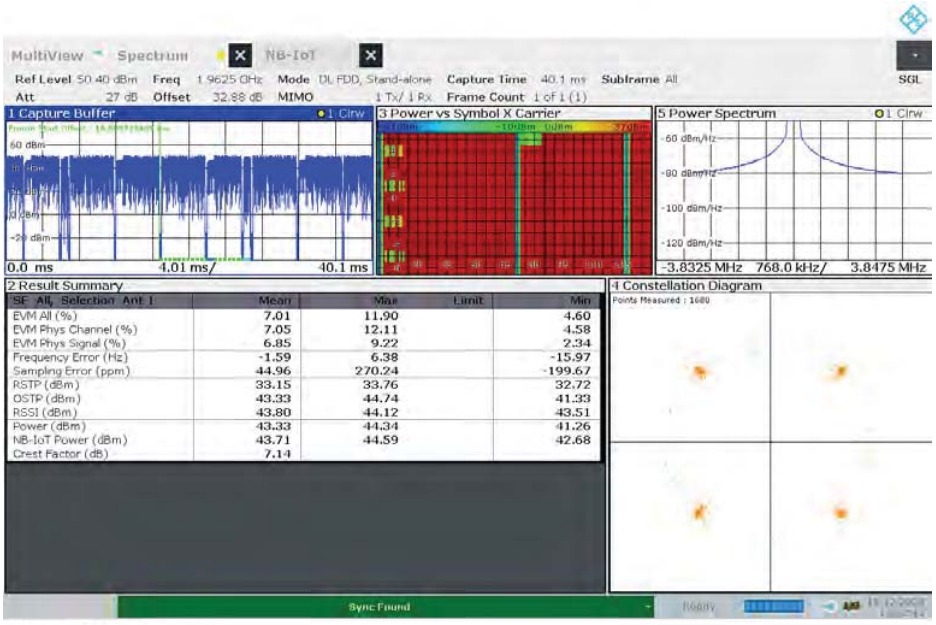

**I/Q constellation diagram with capture buffer – 64QAM (1962.5MHz) (20MHz Channel BW)**



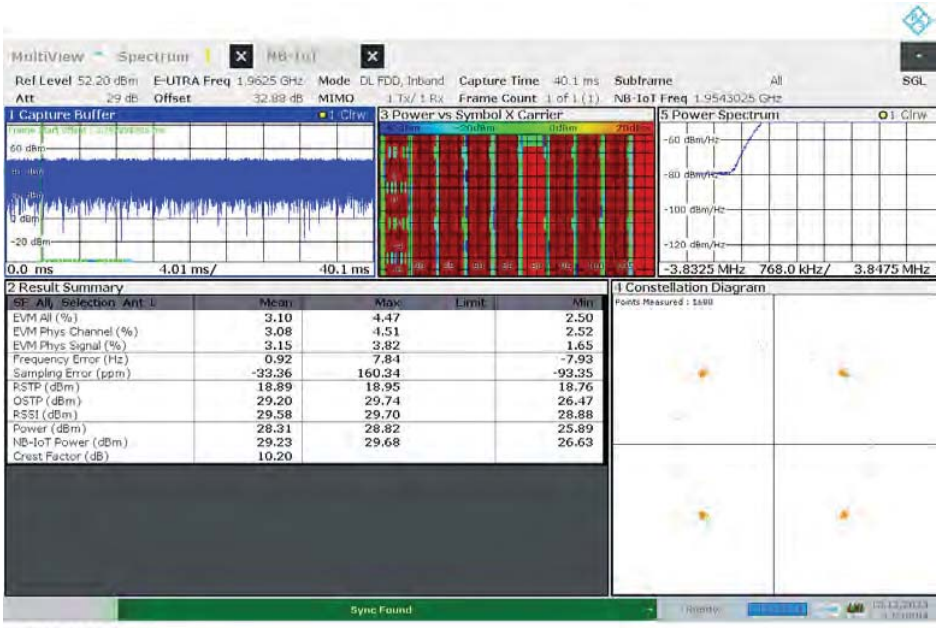

**I/Q constellation diagram with capture buffer – 256QAM (1962.5MHz) (20MHz Channel BW)**




**I/Q constellation diagram with capture buffer – QPSK (N-TM) - NB-IoT GB (1962.5MHz)**




**I/Q constellation diagram with capture buffer – QPSK (N-TM) - NB-IoT SA (1962.5MHz)**

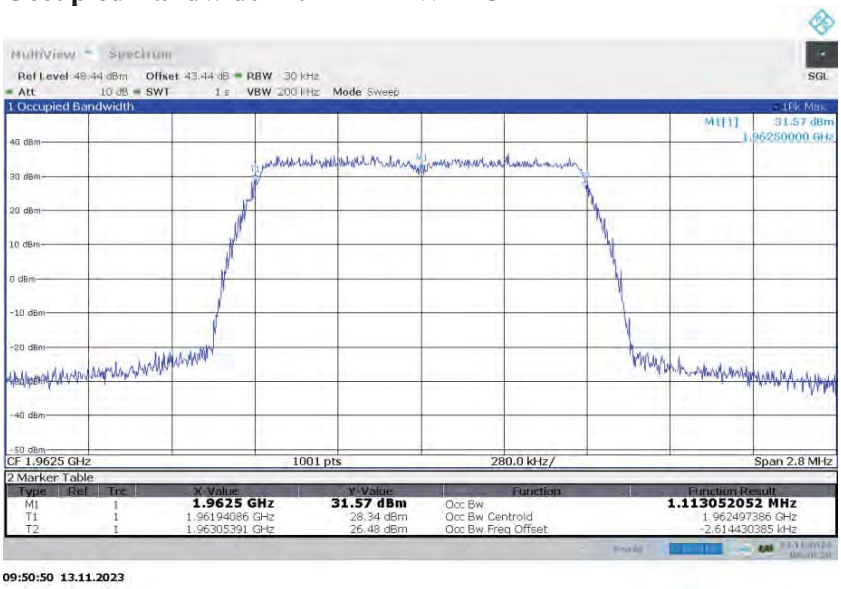



**I/Q constellation diagram with capture buffer – QPSK (N-TM) - NB-IoT IB (1962.5MHz)**

### 5.2.3. Test No. 3: Occupied Bandwidth

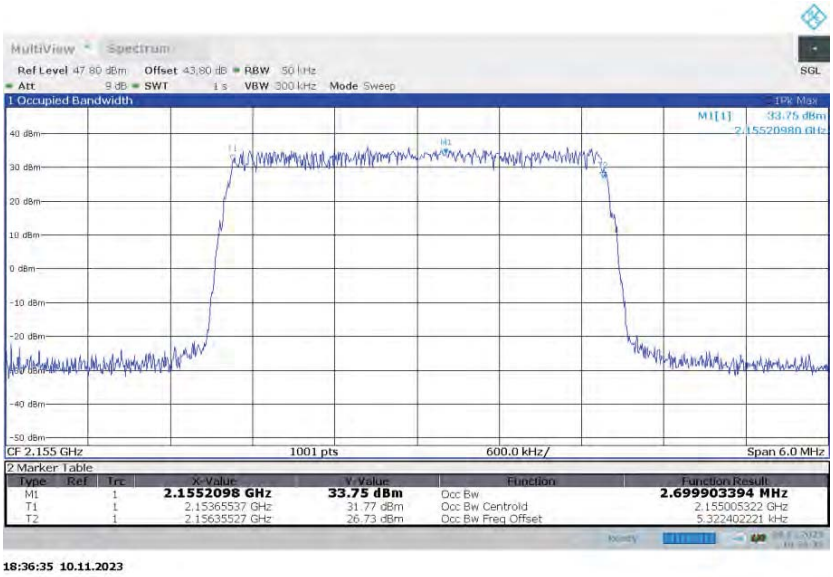
The 99% occupied bandwidth test method:

**Occupied Bandwidth 1.4MHz BW B25**



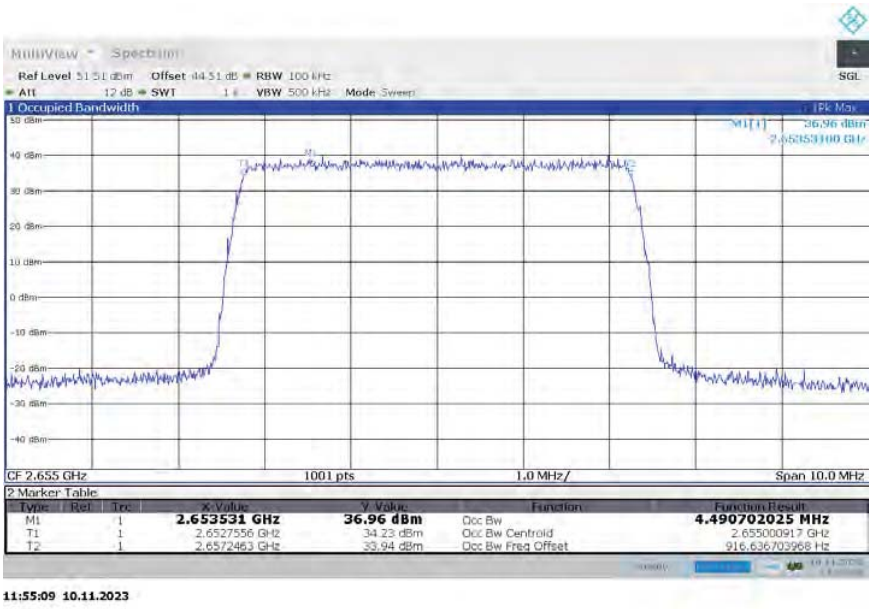

E-TM 1.1, Modulation QPSK, Channel Frequency 1962.5MHz,Tx Port1

**Occupied Bandwidth 3MHz BW B66**



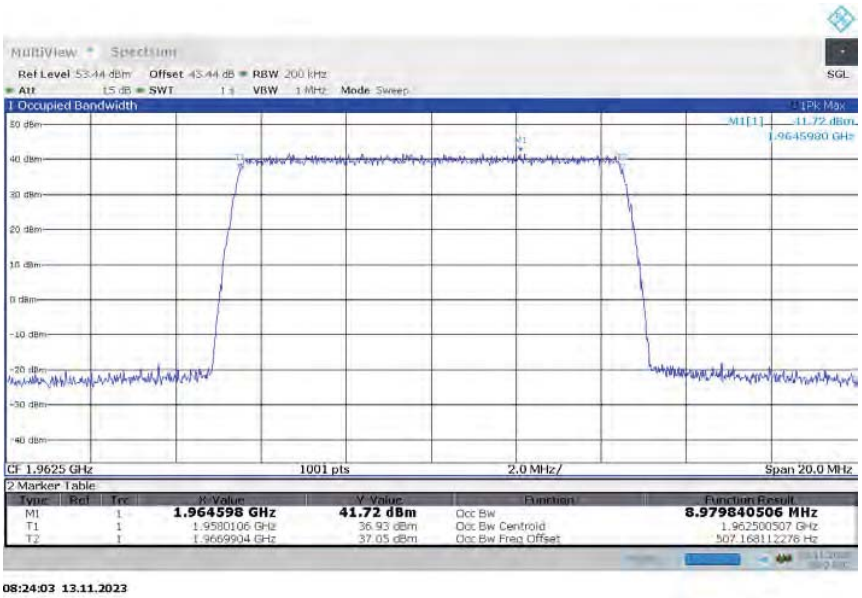

E-TM 3.2, Modulation 16QAM, Channel Frequency 2155MHz,Tx Port1

**Occupied Bandwidth 5MHz BW B7**



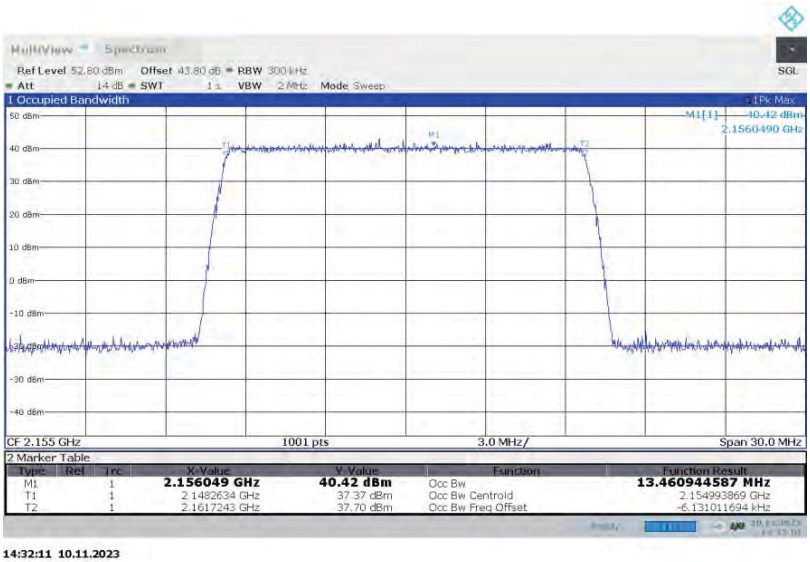

E-TM 3.1, Modulation 64QAM, Channel Frequency 2655MHz,Tx Port1

**Occupied Bandwidth 10MHz BW B25**



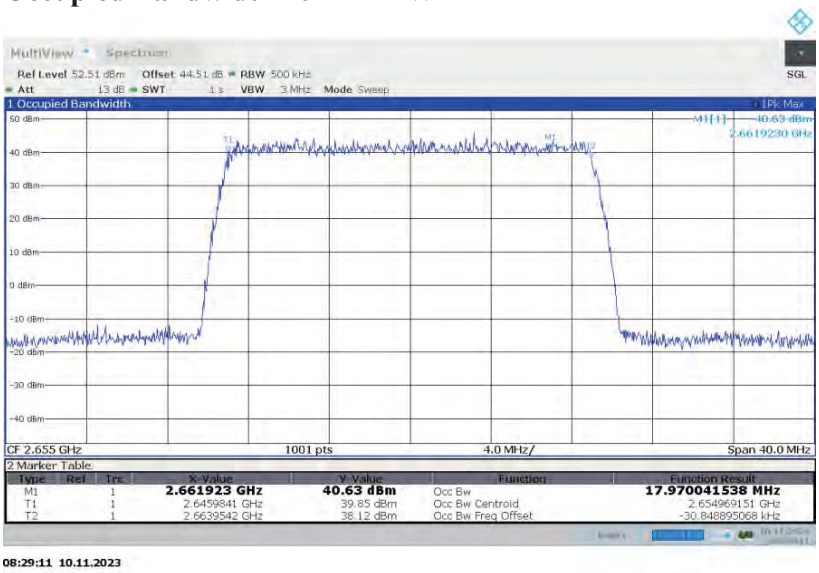

E-TM 3.1a, Modulation 256QAM, Channel Frequency 1962.5MHz,Tx Port1

**Occupied Bandwidth 15MHz BW B66**



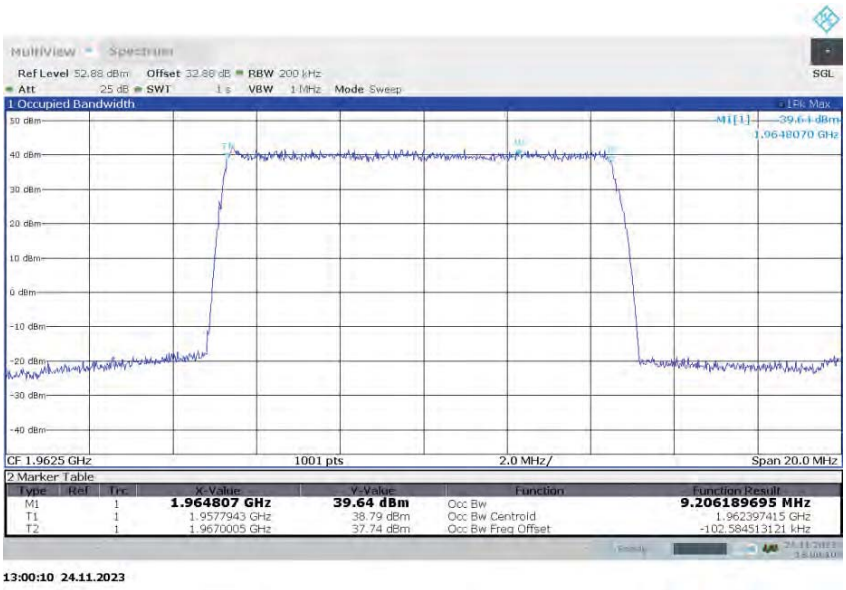

E-TM 1.1, Modulation QPSK, Channel Frequency 2155MHz,Tx Port1

**Occupied Bandwidth 20MHz BW B7**



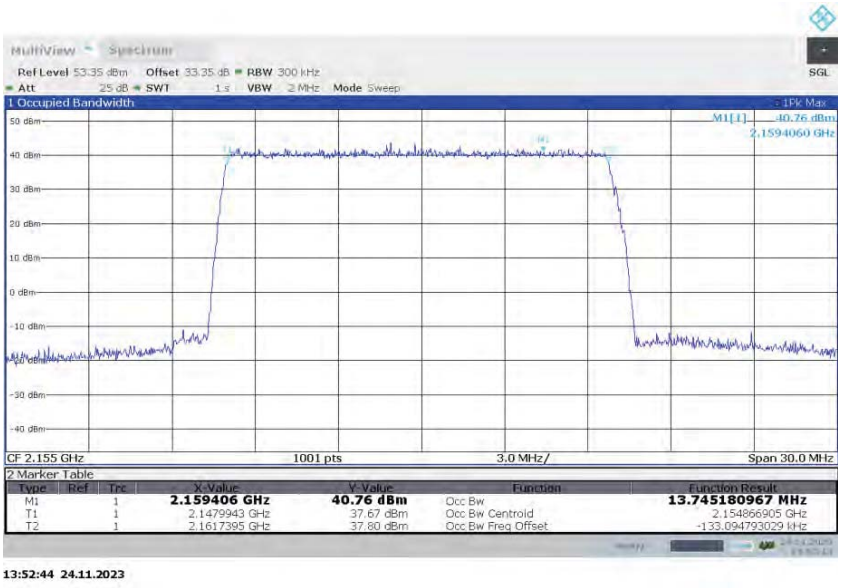

E-TM 3.2, Modulation 16QAM, Channel Frequency 2655MHz,Tx Port1

**Occupied Bandwidth NB-IoT Guardband 10MHz BW B25**



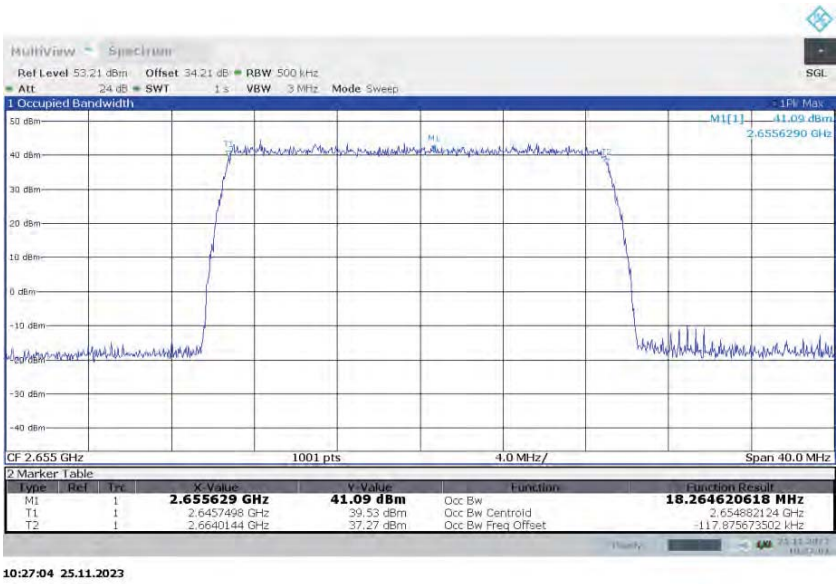

E-TM1.1 with N-TM: E-UTRA NB-IoT GB, Modulation QPSK, Channel Frequency 1962.5MHz, Tx port 1

**Occupied Bandwidth NB-IoT Guardband 15MHz BW B66**



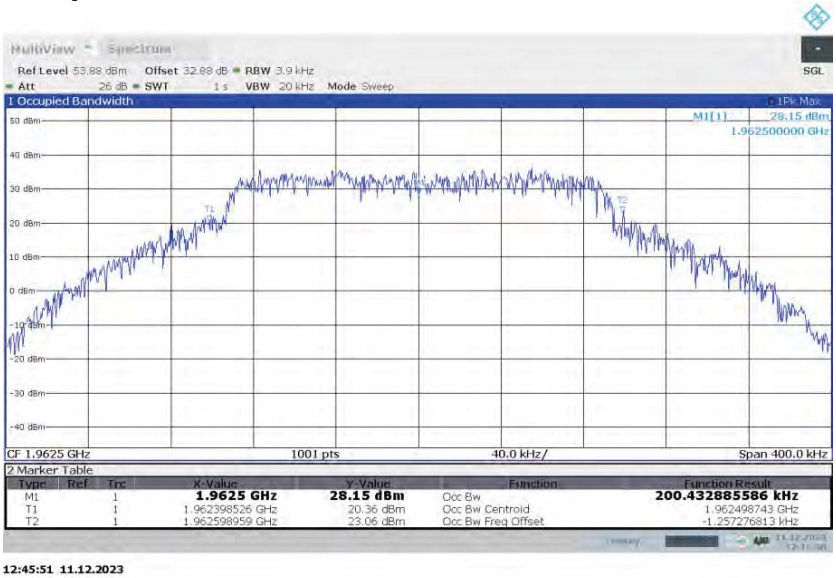

E-TM1.1 with N-TM: E-UTRA NB-IoT GB, Modulation QPSK, Channel Frequency 2155MHz, Tx port 1

**Occupied Bandwidth NB-IoT Guardband 20MHz BW B7**



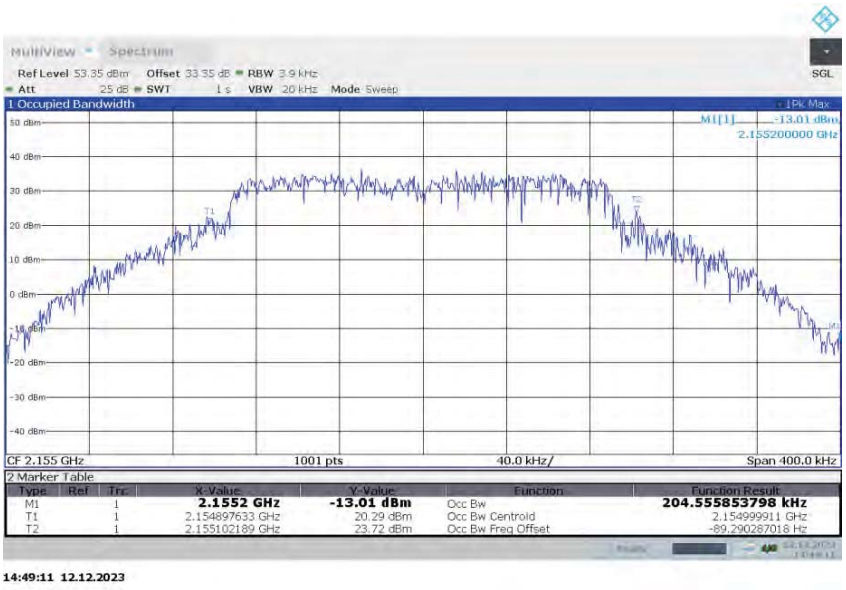

E-TM1.1 with N-TM: E-UTRA NB-IoT GB, Modulation QPSK, Channel Frequency 2655MHz, Tx port 1

**Occupied Bandwidth NB-IoT Standalone 200kHz BW B25**



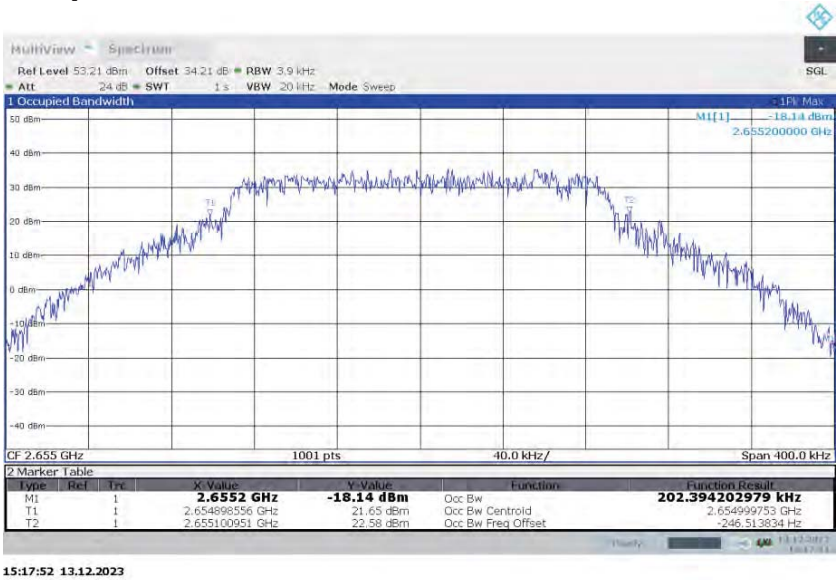

N-TM: E-UTRA NB-IoT SA, Modulation QPSK, Channel Frequency 1962.5MHz, Tx port 1

**Occupied Bandwidth NB-IoT Standalone 200kHz BW B66**



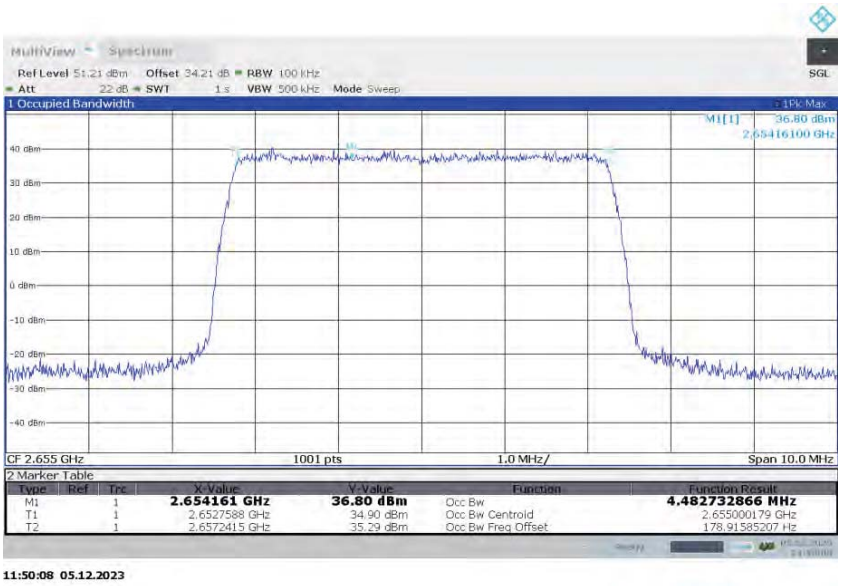

N-TM: E-UTRA NB-IoT SA, Modulation QPSK, Channel Frequency 2155MHz, Tx port 1

**Occupied Bandwidth NB-IoT Standalone 200kHz BW B7**



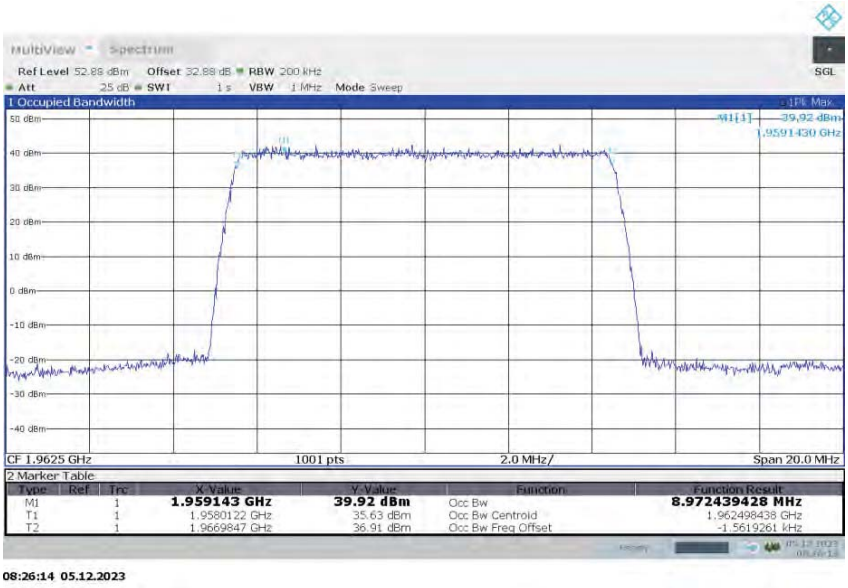

N-TM: E-UTRA NB-IoT SA, Modulation QPSK, Channel Frequency 2655MHz, Tx port 1

**Occupied Bandwidth NB-IoT Inband 5MHz BW B7**



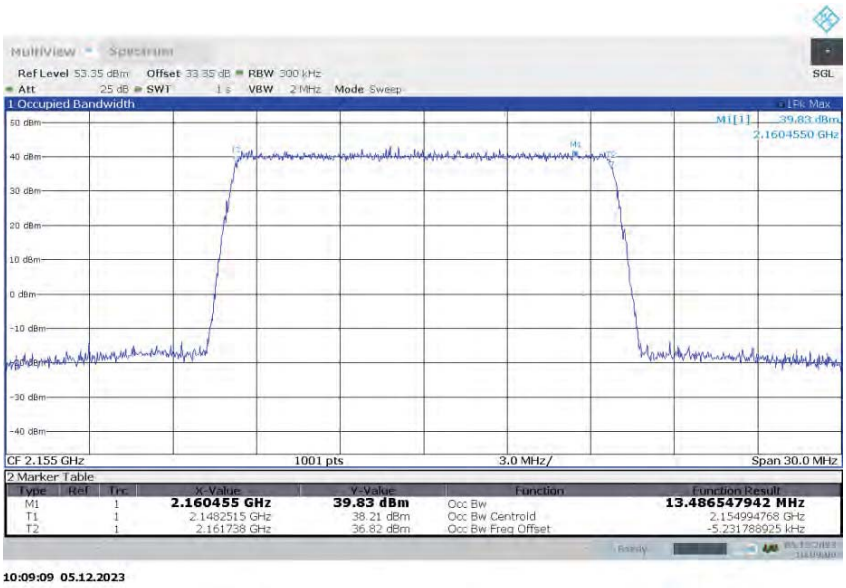

E-TM1.1 with N-TM: E-UTRA NB-IoT IB, Modulation QPSK, Channel Frequency 2655MHz, Tx port 1

**Occupied Bandwidth NB-IoT Inband 10MHz BW B25**



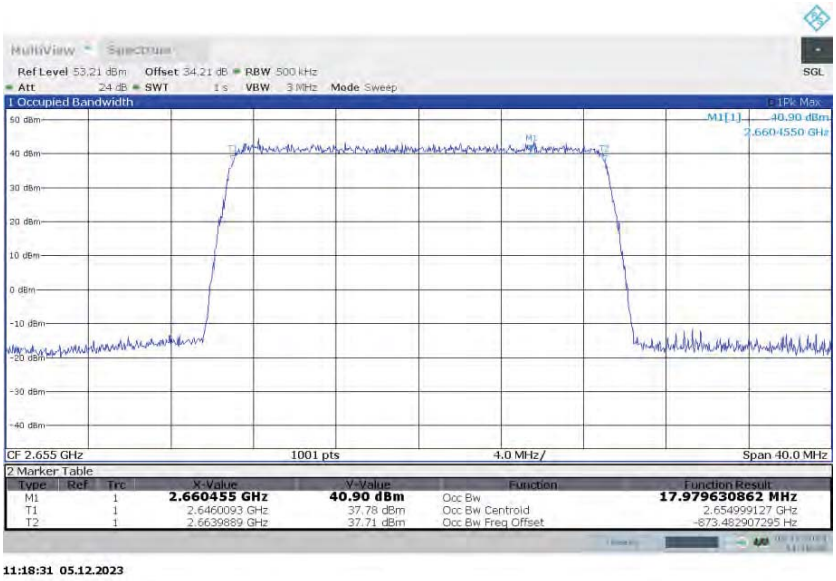

E-TM1.1 with N-TM: E-UTRA NB-IoT IB, Modulation QPSK, Channel Frequency 1962.5MHz, Tx port 1

**Occupied Bandwidth NB-IoT Inband 15MHz BW B66**




E-TM1.1 with N-TM: E-UTRA NB-IoT IB, Modulation QPSK, Channel Frequency 2155MHz, Tx port 1

**Occupied Bandwidth NB-IoT Inband 20MHz BW B7**




E-TM1.1 with N-TM: E-UTRA NB-IoT IB, Modulation QPSK, Channel Frequency 2655MHz, Tx port 1