

# **FCC**

# **CERTIFICATION TEST REPORT**

For

**Rugged Tablet** 

MODEL No.: xTablet T8650

FCC ID: 086T8650

Trademark: MobileDemand

REPORT NO.: ES160623027E7

ISSUE DATE: July 27, 2016

Prepared for

MobileDemand, L.C.

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## 1 TEST RESULT CERTIFICATION

| Applicant:           | MobileDemand, L.C.<br>1501 Boyson Sq Dr, Ste 101 Hiawatha, Iowa, United States 52233 |  |  |  |  |
|----------------------|--|--|--|--|--|
| Manufacturer:        | MSI ELECTRONICS (KUNSHAN) CO LTD.<br>No. 88 E QUANJIN RD KUNSHAN JIANGSU, CHINA      |  |  |  |  |
| Product Description: | Rugged Tablet  |  |  |  |  |
| Trademark:           | MobileDemand   |  |  |  |  |
| Model Number:        | xTablet T8650  |  |  |  |  |
| File Number:         | ES160623027E7  |  |  |  |  |
| Date of Test:        | June 24, 2016 to July 27, 2016   |  |  |  |  |

Measurement Procedure Used:

| APPLICABLE STANDARDS  |      |  |  |  |  |  |
|---|------|--|--|--|--|--|
| STANDARD TEST RESULT  |      |  |  |  |  |  |
| FCC 47 CFR Part 2, Subpart J<br>FCC 47 CFR Part 22, Subpart H | 200  |  |  |  |  |  |
| FCC 47 CFR Part 24, Subpart E<br>FCC 47 CFR Part 27           | PASS |  |  |  |  |  |

The above equipment was tested by EMTEK (SHENZHEN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.25 (2015) and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 2, 22(H), 24(E), 27.

The test results of this report relate only to the tested sample identified in this report

| Date of Test :                | June 24, 2016 to July 27, 2016 |
|-------------------------------|--------------------------------|
| Prepared by :                 | Joanna. Jiao                   |
|                               | Joanna Jiao /Editor            |
| Reviewer:                     | Foe Xia                        |
|                               | Joe Xia /Supervisor            |
| Approve & Authorized Signer : |                                |
|                               | Lisa Wang/Manager              |

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# 2 EUT TECHNICAL DESCRIPTION

| Characteristics                  | Description   |   |  |  |
|----------------------------------|---|---|--|--|
| Device Type                      | LTE   |   |  |  |
| Operation Band:                  | LTE BAND2, LTE BAND4, LTE BAND5, LTE BAND13, LTE BAND17<br>BAND25,  |   |  |  |
| Modulation:                      | QPSK, 16QAM   |   |  |  |
| Operating Frequency<br>Range(s): | TX 1710 to 1755MI<br>TX 824 to 849MHz<br>TX 777 to 787MHz<br>TX 704 to 716MHz   | Hz /RX 1930 to 1990MHz for LTE BAND2<br>Hz /RX 2110 to 2155MHz for LTE BAND4<br>/RX 869 to 894MHz for LTE BAND5<br>/RX 746 to 756MHz for LTE BAND13<br>/RX 734 to 746MHz for LTE BAND17<br>Hz /RX 1930 – 1995MHz for LTE BAND25 |  |  |
|                                  | LTE BAND2   | □1.4MHz, □3MHz, ⊠5MHz, ⊠10MHz, ⊠15MHz, ⊠20MHz,  |  |  |
|                                  | LTE BAND4   | □ 1.4MHz, □ 3MHz, ⊠ 5MHz, ⊠ 10MHz, ⊠ 15MHz, ⊠ 20MHz,  |  |  |
| Supported Channel Bandwidth:     | LTE BAND5   | □1.4MHz, □3MHz, ⊠5MHz, ⊠10MHz   |  |  |
| Bandwidth:                       | LTE BAND13  | ⊠5MHz, ⊠10MHz   |  |  |
|                                  | LTE BAND17  | ⊠5MHz, ⊠10MHz   |  |  |
|                                  | LTE BAND25  | □ 1.4MHz, □ 3MHz, ⊠ 5MHz, ⊠ 10MHz, ⊠ 15MHz, ⊠ 20MHz,  |  |  |
| Transmit Power Max:              | 26.06dBm for LTE I<br>25.41dBm for LTE I<br>17.36dBm for LTE I<br>17.71dBm for LTE I<br>20.76dBm for LTE I<br>25.71dBm for LTE I      | BAND4<br>BAND5<br>BAND13<br>BAND17  |  |  |
|                                  | TX & RX   | 1   |  |  |
| TX and RX Antenna:               | TX-only   | 0   |  |  |
|                                  | RX-only   | 1   |  |  |
| Antenna Type                     | FPC antenna   |   |  |  |
| Antenna Gain                     | 2.34dBi for LTE BAND2 1.93dBi for LTE BAND4 -3.43dBi for LTE BAND5 -3.14dBi for LTE BAND13 0dBi for LTE BAND17 2.23dBi for LTE BAND25 |   |  |  |
|                                  | ⊠3.7V internal rechargeable lithium battery ⊠DC 19V from adapter  |   |  |  |
| Power supply                     | Adapter:  Model: A12-065N2A  Rev: 02  AC Input: 100-240V~1.7A 50-60Hz  DC Output: 19v/3.42A 65W                                       |   |  |  |

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**Note:** for more details, please refer to the User's manual of the EUT.



# 3 SUMMARY OF TEST RESULT

| FCC Rule                         | IC Rule                      | Test Parameter                             | Verdict | Remark |
|----------------------------------|------------------------------|--|---------|--------|
| 2.1046                           | RSS-132, 5.4<br>RSS-133, 6.4 | RF Power Output                            | PASS    |        |
| 22.913, 24.232,<br>27.50         | RSS-132, 5.4<br>RSS-133, 6.4 | Equivalent (Isotropic) Radiated Power      | PASS    |        |
| 2.1047                           | RSS-132, 5.2<br>RSS-133, 6.2 | Modulation Characteristics                 | PASS    |        |
| 2.1049                           | RSS-Gen, 6.6                 | Occupied Bandwidth                         | PASS    |        |
| 2.1051, 22.917,                  | RSS-132, 5.5                 | Out of Band Emissions at Antenna Terminals | PASS    |        |
| 24.238, 27.53                    | RSS-133, 6.5                 | Band Edge Emission                         | PASS    |        |
| 2.1053, 22.917,<br>24.238, 27.53 | RSS-132, 5.5<br>RSS-133, 6.5 | Field Strength of Spurious Radiation       | PASS    |        |
| 2.1055, 22.355,                  | RSS-132, 5.3                 | Frequency Stability versus Temperature     | PASS    |        |
| 24.235, 27.54                    | RSS-133, 6.3                 | Frequency Stability versus Voltage         | PASS    |        |
| 24.232, 27.50                    |                              | Peak to Average Ratio                      | PASS    |        |

NOTE1: N/A (Not Applicable)

# RELATED SUBMITTAL(S) / GRANT(S):

This submittal(s) (test report) is intended for FCC ID: O86T8650 filing to comply with FCC 47 CFR Part 2, 22(H), 24(E), 27 and RSS-Gen, RSS-132, RSS-133.

The system is compliance with Subpart B is authorized under a DOC procedure

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# 4 TEST METHODOLOGY

## 4.1 GENERAL DESCRIPTION OF APPLIED STANDARDS

According to its specifications, the EUT must comply with the requirements of the following standards: FCC 47 CFR Part 2, Subpart J

FCC 47 CFR Part 27 KDB971168 D01: v02r02

ANSI/TIA-603-D-2010 ANSI C63.26:2015

## 4.2 MEASUREMENT EQUIPMENT USED

# 4.2.1 Radiated Emission Test Equipment

| EQUIPMENT<br>TYPE | MFR         | MODEL<br>NUMBER | SERIAL<br>NUMBER | LAST CAL.  |
|-------------------|-------------|-----------------|------------------|------------|
| EMI Test Receiver | R&S         | ESU             | 1302.6005.26     | 05/16/2016 |
| Pre-Amplifier     | HP          | 8447D           | 2944A07999       | 05/16/2016 |
| Bilog Antenna     | Schwarzbeck | VULB9163        | 142              | 05/16/2016 |
| Loop Antenna      | ARA         | PLA-1030/B      | 1029             | 05/16/2016 |
| Horn Antenna      | Schwarzbeck | BBHA 9170       | BBHA9170399      | 05/16/2016 |
| Horn Antenna      | Schwarzbeck | BBHA 9120       | D143             | 05/16/2016 |
| Cable             | Schwarzbeck | AK9513          | ACRX1            | 05/16/2016 |
| Cable             | Rosenberger | N/A             | FP2RX2           | 05/16/2016 |
| Cable             | Schwarzbeck | AK9513          | CRPX1            | 05/16/2016 |
| Cable             | Schwarzbeck | AK9513          | CRRX2            | 05/16/2016 |
| Cable             | H+B         | 0.5M SF104-26.5 | 289147/4         | 05/16/2016 |
| Cable             | H+B         | 3M SF104-26.5   | 295838/4         | 05/16/2016 |
| Cable             | H+B         | 6M SF104-26.5   | 295840/4         | 05/16/2016 |

# 4.2.2 Radio Frequency Test Equipment

| EQUIPMENT<br>TYPE                | MFR                  | MODEL<br>NUMBER  | SERIAL<br>NUMBER            | LAST<br>CAL. |
|----------------------------------|----------------------|------------------|-----------------------------|--------------|
| Spectrum Analyzer                | Agilent              | E4407B           | 88156318                    | 05/16/2016   |
| Power meter                      | Anritsu              | ML2495A          | 0824006                     | 05/16/2016   |
| Power sensor                     | Anritsu              | MA2411B          | 0738172                     | 05/16/2016   |
| Spectrum Analyzer                | Agilent              | N9010A           | My53470879                  | 05/16/2016   |
| Spectrum Analyzer                | R&S                  | FSV30            | 103040                      | 05/16/2016   |
| Spectrum Analyzer                | R&S                  | FSV40            | 132.1-3008K39-<br>100967-AP | 05/16/2016   |
| Universal Radio<br>Communication | R&S                  | CMW500           | 1201.0002K50-1<br>40822zk   | 05/16/2016   |
| Universal Radio<br>Communication | R&S                  | CMU200           | 111226                      | 05/16/2016   |
| Power Splitter                   | MInI-Circuits        | ZFRSC-183-S<br>+ | S F808201417                | 05/16/2016   |
| Attenuator                       | Weinschel Associates | WA14             | 18-10-12                    | 05/16/2016   |
| Temp. / Humidity<br>Chamber      | Kingson              | THS-M1           | 242                         | 05/16/2016   |

Remark: Each piece of equipment is scheduled for calibration once a year.

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## 4.3 DESCRIPTION OF TEST MODES

The EUT has been tested under its typical operating condition. The CMU200 and CMW500 used to control the EUT staying in continuous transmitting and receiving mode for testing.

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

During all testing, EUT is in link mode with base station emulator at maximum power level.

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

Test of channel included the lowest and middle and highest frequency to perform the test, then record on this report.

Pre-defined engineering program for regulatory testing used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

## ■ Test Mode and system config

Configure the CMW500 call box to support all LTE tests in respect to the 3GPP 36.521.

UE term. Conn: User defined Channels

Exp. Nominal Power Mode: According to UL Power Control Settings

RS EPRE: -75.0 dBm/15kHz Full Cell BW Power: -50.2 dBm

PSS Power Offset = PSS Power Offset = PBCH Power Offset = PCFICH Power Offset = PDCCH Power

Offset =  $0.0 \, dB$ 

PHICH Power Offset = -12 dB

OCNG ON

PDSCH Power Offset PA: 0 dB, Power Ratio Index PB: 0 (rhoB/rhoA: 1)

Active TPC Setup: Max Power

Security Settings: Authentication OFF, NAS Security OFF, AS Security OFF

Integrity Algortithm: NULL

Milenage OFF

Configure the desired channel, BW, resource block allocation and modulation.

Connect to test set.

Set CMW500 TPC Setup to Max Power (Up power control command).

According to 3GPP 36.521, V9.1.0., the output power level for Power Class 3 LTE is to be 23.0dBm + 2.7dB. The lower limit is shifted down by the MPR amount allowed for certain configurations. Maximum Power Reduction (MPR) is allowed due to higher order modulation and transmit bandwidth configurations. These MPR levels reduce the lower limit of each output power by the either 1 or 2dB per 3GPP 36.521.

| Modulation | Channel bandwidth / Transmission bandwidth configuration[RB] |      |      |       |       |       | MPR (dB)  |
|------------|--|------|------|-------|-------|-------|-----------|
| Wodulation | 1.4MHz   | 3MHz | 5MHz | 10MHz | 15MHz | 20MHz | WIFK (UB) |
| QPSK       | > 5  | > 4  | > 8  | > 12  | > 16  | > 18  | ≤ 1       |
| 16 QAM     | ≤ 5  | ≤ 4  | ≤ 8  | ≤ 12  | ≤ 16  | ≤ 18  | ≤ 1       |
| 16 QAM     | > 5  | > 4  | > 8  | > 12  | > 16  | > 18  | ≤ 2       |

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## Test Environment

| Environment Parameter | Selected Values During Tests |       |  |  |
|-----------------------|------------------------------|-------|--|--|
| Relative Humidity     | Ambient                      |       |  |  |
| Temperature           | TN Ambient                   |       |  |  |
|                       | VL                           | 2.97V |  |  |
| Ambient               | VN                           | 3.30V |  |  |
|                       | VH                           | 3.63V |  |  |

NOTE: VL= Lower Extreme Test Voltage

VN= Nominal Voltage
VH= Upper Extreme Test Voltage
TN= Normal Temperature

# Test Channel and Frequency

| Test Mode | Bandwidth | TX / RX |               | RF Channel    |               |
|-----------|-----------|---------|---------------|---------------|---------------|
| rest wode | Danuwidin | IA/KA   | Low (L) Midd  | Middle (M)    | High (H)      |
|           |           | TX      | Channel 18625 | Channel 18900 | Channel 19175 |
|           | 5MHz      | 1/      | 1852.5 MHz    | 1880 MHz      | 1907.5 MHz    |
|           | SIVITIZ   | RX      | Channel 625   | Channel 900   | Channel 1175  |
|           |           | r.x     | 1932.5 MHz    | 1960 MHz      | 1987.5 MHz    |
|           |           | TX      | Channel 18650 | Channel 18900 | Channel 19150 |
|           | 10MHz     |         | 1855 MHz      | 1880 MHz      | 1905 MHz      |
|           | TUIVITZ   | RX      | Channel 650   | Channel 900   | Channel 1150  |
| LTE BAND2 |           | IVA     | 1935 MHz      | 1960 MHz      | 1985 MHz      |
| LIE DANDZ |           | 5MHz RX | Channel 18675 | Channel 18900 | Channel 19125 |
|           | 15MU-     |         | 1857.5 MHz    | 1880 MHz      | 1902.5 MHz    |
|           | TOMINZ    |         | Channel 675   | Channel 900   | Channel 1125  |
|           |           |         | 1937.5 MHz    | 1960 MHz      | 1982.5 MHz    |
|           |           | TX      | Channel 18700 | Channel 18900 | Channel 19100 |
|           | 20MHz     | 17      | 1860 MHz      | 1880 MHz      | 1900 MHz      |
|           | ZUIVITZ   | DV      | Channel 700   | Channel 900   | Channel 1100  |
|           |           | RX      | 1940 MHz      | 1960 MHz      | 1980 MHz      |

| Test Mode   | Bandwidth | TX / RX                                  |               | RF Channel    |               |
|-------------|-----------|--|---------------|---------------|---------------|
| rest ivioue | Danuwidin | 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1 | Low (L)       | Middle (M)    | High (H)      |
|             |           | TX                                       | Channel 19975 | Channel 20175 | Channel 20375 |
|             | 5MHz      | 1/                                       | 1712.5 MHz    | 1732.5 MHz    | 1752.5 MHz    |
|             | SIVIFIZ   | RX                                       | Channel 1975  | Channel 2175  | Channel 2375  |
|             |           | NX.                                      | 2112.5 MHz    | 2132.5MHz     | 2152.5 MHz    |
|             |           | TX                                       | Channel 20000 | Channel 20175 | Channel 20350 |
|             | 10MHz     | 17                                       | 1715 MHz      | 1732.5 MHz    | 1750 MHz      |
|             | TOWNIZ    | RX                                       | Channel 2000  | Channel 2175  | Channel 2350  |
| LTE BAND4   |           | IVX                                      | 2115 MHz      | 2132.5MHz     | 2150 MHz      |
| LIE DAIND4  | 15MHz     | 15MHz RX                                 | Channel 20025 | Channel 20175 | Channel 20325 |
|             |           |  | 1717.5 MHz    | 1732.5 MHz    | 1747.5 MHz    |
|             |           |  | Channel 2025  | Channel 2175  | Channel 2325  |
|             |           |  | 2117.5 MHz    | 2132.5MHz     | 2147.5 MHz    |
|             |           | TX                                       | Channel 20050 | Channel 20175 | Channel 20300 |
|             | 20MHz     | 1/                                       | 1720 MHz      | 1732.5 MHz    | 1745 MHz      |
|             | ZUIVITIZ  | DY                                       | Channel 2050  | Channel 2175  | Channel 2300  |
|             |           | RX                                       | 2120 MHz      | 2132.5MHz     | 2145 MHz      |



| Test Mode | Bandwidth | TX / RX |               | RF Channel    |               |
|-----------|-----------|---------|---------------|---------------|---------------|
| rest wode | Danuwiuin |         | Low (L)       | Middle (M)    | High (H)      |
|           |           | TX -    | Channel 20425 | Channel 20525 | Channel 20625 |
|           | 5MHz      |         | 826.5 MHz     | 836.5 MHz     | 846.5 MHz     |
|           | SIVITZ    | RX      | Channel 2425  | Channel 2525  | Channel 2625  |
| LTE BAND5 |           | RA.     | 871.5 MHz     | 881.5 MHz     | 891.5 MHz     |
| LIE DANDS |           | TV      | Channel 20450 | Channel 20525 | Channel 20600 |
|           | 10MHz     | TX      | 829 MHz       | 836.5 MHz     | 844 MHz       |
|           | TOME      | DV      | Channel 2450  | Channel 2525  | Channel 2600  |
|           |           | RX      | 874 MHz       | 881.5 MHz     | 889 MHz       |

| Test Mode   | Bandwidth  | TX / RX |               | RF Channel    |               |
|-------------|------------|---------|---------------|---------------|---------------|
| rest wode   | Danuwiuiii |         | Low (L)       | Middle (M)    | High (H)      |
|             |            | TX      | Channel 23205 | Channel 23230 | Channel 23255 |
|             | 5MHz       | 17      | 779.5 MHz     | 782 MHz       | 784.5 MHz     |
|             | SIVITIZ    | RX      | Channel 5205  | Channel 5230  | Channel 5255  |
| LTE BAND13  |            |         | 748.35 MHz    | 751 MHz       | 753.5 MHz     |
| LIE BAND 13 |            | TX      | Channel 23230 | Channel 23230 | Channel 23230 |
|             | 10MHz      |         | 782 MHz       | 782 MHz       | 782 MHz       |
|             | TUIVITZ    | RX      | Channel 5230  | Channel 5230  | Channel 5230  |
|             |            | KΛ      | 751 MHz       | 751 MHz       | 751 MHz       |

| Test Mode  | Bandwidth | TX / RX |  | RF Channel    |               |
|------------|-----------|---------|--|---------------|---------------|
| lest wode  | Danuwiuin | 17/17   | Low (L)  | Middle (M)    | High (H)      |
|            |           | TX      | Channel 23755  | Channel 23790 | Channel 23825 |
|            | 5MHz      | 1/      | 706.5 MHz  | 710 MHz       | 713.5 MHz     |
|            | SIVITZ    | RX      | Channel 5755   | Channel 5790  | Channel 5825  |
| LTE BAND17 |           |         | 736.5 MHz  | 740 MHz       | 743.5 MHz     |
| LIE DANDII |           | TX      | Channel 23780  | Channel 23790 | Channel 23800 |
|            | 10MHz     |         | 709 MHz  | 710 MHz       | 711 MHz       |
|            | TOME      | RX      | Channel 23780         Channel 23790         Char           709 MHz         710 MHz         7           Channel 5780         Channel 5790         Cha |               |               |
|            |           | KA      | 739 MHz  | 740 MHz       | 741 MHz       |

| Test Mode  | Bandwidth | TX / RX |               | RF Channel    |               |
|------------|-----------|---------|---------------|---------------|---------------|
| rest Mode  | bandwidth | IA/KA   | Low (L)       | Middle (M)    | High (H)      |
|            |           | TX      | Channel 26065 | Channel 26365 | Channel 26665 |
|            | 5MHz      | 17      | 1852.5 MHz    | 1882.5 MHz    | 1912.5 MHz    |
|            | SIVITZ    | RX      | Channel 8065  | Channel 8365  | Channel 8665  |
|            |           | NA .    | 1932.5 MHz    | 1962.5 MHz    | 1992.5 MHz    |
|            | 10MHz     | TX      | Channel 26090 | Channel 26365 | Channel 26640 |
|            |           | 17      | 1855 MHz      | 1882.5 MHz    | 1910 MHz      |
|            |           | RX      | Channel 8090  | Channel 8365  | Channel 8640  |
| LTE BAND25 |           |         | 1935.0 MHz    | 1962.5 MHz    | 1990.0 MHz    |
| LIE BAND25 |           | TX      | Channel 26115 | Channel 26365 | Channel 26615 |
|            | 15MHz     |         | 1857.5 MHz    | 1882.5 MHz    | 1907.5 MHz    |
|            | TOMITZ    | RX      | Channel 8115  | Channel 8365  | Channel 8615  |
|            |           | IVX     | 1937.5 MHz    | 1962.5 MHz    | 1987.5 MHz    |
|            |           | TX      | Channel 26140 | Channel 26365 | Channel 26590 |
|            | 20MHz     | 17      | 1860 MHz      | 1882.5 MHz    | 1905 MHz      |
|            | ZUIVII IZ | RX      | Channel 8140  | Channel 8365  | Channel 8590  |
|            |           |         | 1940.0 MHz    | 1962.5 MHz    | 1985.0 MHz    |



## 5 FACILITIES AND ACCREDITATIONS

#### 5.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

Bldg 69, Majialong Industry Zone District, Nanshan District, Shenzhen, China The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.26 and CISPR Publication 22.

## 5.2 LABORATORY ACCREDITATIONS AND LISTINGS

Site Description

EMC Lab. : Accredited by CNAS, 2013.10.29

The certificate is valid until 2016.10.28

The Laboratory has been assessed and proved to be in compliance with

CNAS-CL01:2006 (identical to ISO/IEC 17025:2005)

The Certificate Registration Number is L2291.

Accredited by TUV Rheinland Shenzhen 2015.4

The Laboratory has been assessed according to the requirements

ISO/IEC 17025.

Accredited by FCC, April 17, 2013

The Certificate Registration Number is 709623.

Accredited by FCC, July 24, 2013

The Certificate Registration Number is 406365.

Accredited by Industry Canada, November 29, 2012

The Certificate Registration Number is 4480A.

Name of Firm : EMTEK (SHENZHEN) CO., LTD.

Site Location : Bldg 69, Majialong Industry Zone,

Nanshan District, Shenzhen, Guangdong, China

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# **6 TEST SYSTEM UNCERTAINTY**

The following measurement uncertainty levels have been estimated for tests performed on the apparatus:

| Parameter               | Uncertainty |
|-------------------------|-------------|
| Radio Frequency         | ±1x10^-5    |
| RF Power Output         | ±1.0dB      |
| Radiated Emission Test  | ±2.0dB      |
| Occupied Bandwidth Test | ±1.0dB      |
| Band Edge Test          | ±3dB        |
| All emission, radiated  | ±3dB        |
| Antenna Port Emission   | ±3dB        |
| Temperature             | ±0.5        |
| Humidity                | ±3%         |

Measurement Uncertainty for a level of Confidence of 95%

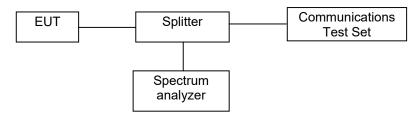
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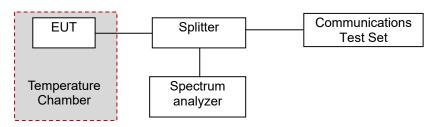
## 7 SETUP OF EQUIPMENT UNDER TEST

## 7.1 RADIO FREQUENCY TEST SETUP 1

The component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



### 7.2 RADIO FREQUENCY TEST SETUP 2



## 7.3 RADIO FREQUENCY TEST SETUP 3

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10. The test distance is 3m.The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.26-2015 and CAN/CSA-CEI/IEC CISPR 22.

## Below 30MHz:

The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna (loop antenna). The Antenna should be positioned with its plane vertical at the specified distance from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. The center of the loop shall be 1 m above the ground. For certain applications, the loop antenna plane may also need to be positioned horizontally at the specified distance from the EUT.

#### Above 30MHz:

The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).

## Above 1GHz:

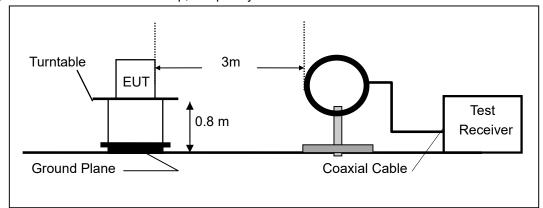
(Note: the FCC's permission to use 1.5m as an alternative per TCBC Conf call of Dec. 2, 2014.)

The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).

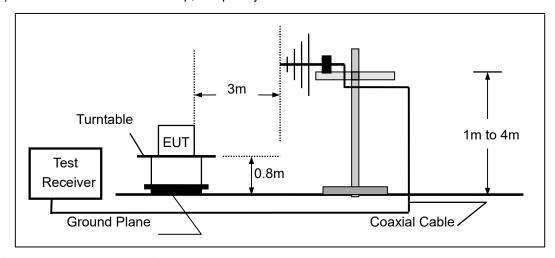
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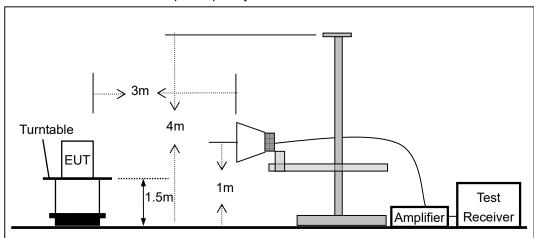
# (a) Radiated Emission Test Set-Up, Frequency Below 30MHz



# (b) Radiated Emission Test Set-Up, Frequency Below 1000MHz



# (c) Radiated Emission Test Set-Up, Frequency above 1000MHz





# 7.4 SUPPORT EQUIPMENT

| Item | Equipment | Mfr/Brand | Model/Type No. | FCC ID | Note |
|------|-----------|-----------|----------------|--------|------|
| N/A  | N/A       | N/A       | N/A            | N/A    | N/A  |

## Notes:

- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

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## 8 TEST REQUIREMENTS

## **8.1 RF POWER OUTPUT**

#### 8.1.1 Conformance Limit

No limit requirement.

## 8.1.2 Test Configuration

Test according to clause 7.1 radio frequency test setup 1

#### 8.1.3 Test Procedure

Connect the EUT to Universal Radio Communication Tester CMU200 or CMU500 via the antenna connector. A call is set up by the SS according to the generic call set up procedure on a channel with ARFCN in the ARFCN range, power control level set to Max power. The frequency band is set as selected frequency,

The RF output of the transmitter was connected to base station simulator.

Set EUT at maximum average power by base station simulator.

Set RBW = 1-5% of the OBW, not to exceed 1 MHz.

Set VBW ≥ 3 × RBW.

Number of points in sweep  $\geq 2 \times \text{span} / \text{RBW}$ . (This gives bin-to-bin spacing  $\leq \text{RBW}/2$ , so that narrowband signals are not lost between frequency bins.)

Sweep time = auto.

Detector = RMS (power averaging).

Set sweep trigger to "free run".

Trace average at least 100 traces in power averaging (i.e., RMS) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the on and off periods of the transmitter.

Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission). For example, add 10 log (1/0.25) = 6 dB if the duty cycle is a constant 25%

Measure lowest, middle, and highest channels for each bandwidth and different modulation. Measure and record the results in the test report.

## 8.1.4 Test Results

Pass

Note: The details please see Appendix A.

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## 8.2 EFFECTIVE (ISOTROPIC) RADIATED POWER

## 8.2.1 Conformance Limit

LTE BAND5 FCC Part 22.913

Extend coverage on a secondary basis into cellular unserved areas, as those areas are defined in §22.949, the ERP of base transmitters and cellular repeaters of such systems must not exceed 1000 Watts. The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

LTE BAND2 FCC Part 24.232

Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

LTE BAND25 FCC Part 24.232

Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

LTE BAND4 FCC Part 27.50(d)

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP. Fixed stations operating in the 1710-1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

LTE BAND13 FCC Part 27.50(b)

Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP

LTE BAND17 FCC Part 27.50(c)

Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP

## 8.2.2 Test Configuration

Test according to clause 7.3 radio frequency test setup 3

### 8.2.3 Test Procedure

Connect the EUT to Universal Radio Communication Tester CMU200 or CMU500 via the antenna connector. A call is set up by the SS according to the generic call set up procedure on a channel with ARFCN in the Mid ARFCN range, power control level set to Max power. MS TXPWR\_MAX\_CCH is set to the maximum value supported by the Power Class of the Mobile under test

The instrument must have an available measurement/resolution bandwidth that is equal to or exceeds the OBW. If this capability is available, then the following procedure can be used to determine the total peak output power.

- a) Set the RBW ≥ OBW.
- b) Set VBW ≥ 3 × RBW.
- c) Set span ≥ 2 × RBW
- d) Sweep time = auto couple.
- e) Detector = peak.
- f) Ensure that the number of measurement points ≥ span/RBW.
- g) Trace mode = max hold.
- h) Allow trace to fully stabilize.
- i) Use the peak marker function to determine the peak amplitude level.

The EUT was placed on a turn table which is 0.8m above ground plane. Maximum procedure was performed on the six highest emissions to ensure EUT compliance. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. Repeat above procedures until all frequency measured was complete.

A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.5m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUTthrough 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High,

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Middle, Low) were measured with peak detector.

The EUT is then put into continuously transmitting mode at its maximum power level during the test. And the maximum value of the receiver should be recorded as (Pr).

The EUT shall be replaced by a substitution antenna. The test setup refers to figure below. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antennapolarization.

A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna.

The cable loss (PcI) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.

The measurement results are obtained as described below:

Power(EIRP)=PMea- PAg - Pcl - Ga

This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.

ERP can be calculated from EIRP by subtracting the gain of the dipole,

ERP = EIRP -2.15dBi.

## 8.2.4 Test Results

Pass

Note: The details please see Appendix B.

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## 8.3 MODULATION CHARACTERISTICS

## 8.3.1 Conformance Limit

No specific modulation characteristics requirement limits.

## 8.3.2 Test Configuration

Test according to clause 7.1 radio frequency test setup 1

#### 8.3.3 Test Procedure

Connect the EUT to Universal Radio Communication Tester CMU200 or CMU500 via the antenna connector. A call is set up by the SS according to the generic call set up procedure on a channel with ARFCN in the Mid ARFCN range, power control level set to Max power. MS TXPWR\_MAX\_CCH is set to the maximum value supported by the Power Class of the Mobile under test,The frequency band is set as selected frequency, test method was according to 3GPP TS 51.010 and 3GPP TS 34.121. and 3GPP2 C.S0011/TIA-98-E for 1XRTT.and 3GPP2 C.S0033-0/tia-866 for Rel.0 and 3GPP2 C.S0033-A for Rev.A The waveform quality and constellation of the was tested.

## 8.3.4 Test Results

Pass

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## **8.4 OCCUPIED BANDWIDTH**

## 8.4.1 Conformance Limit

No specific modulation characteristics requirement limits.

## 8.4.2 Test Configuration

Test according to clause 7.1 radio frequency test setup 1

#### 8.4.3 Test Procedure

Connect the EUT to Universal Radio Communication Tester CMU200 or CMU500 via the antenna connector. A call is set up by the SS according to the generic call set up procedure on a channel with ARFCN in the Mid ARFCN range, power control level set to Max power. MS TXPWR\_MAX\_CCH is set to the maximum value supported by the Power Class of the Mobile under test,

## ■ 99% Occupied bandwidth

The following procedure shall be used for measuring (99 %) power bandwidth

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (i.e., two to five times the OBW).
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
- c) Set the reference level of the instrument as required to keep the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope must be at least 10log (OBW / RBW) below the reference level.
- d) NOTE—Steps a) through c) may require iteration to adjust within the specified tolerances.
- e) Set the detection mode to peak, and the trace mode to max hold...
- f) Use the 99 % power bandwidth function of the spectrum analyzer (if available) and report the measured bandwidth.
- g) If the instrument does not have a 99 % power bandwidth function, the trace data points are to be recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99 % power bandwidth is the difference between these two frequencies.
- h) The OBW shall be reported by providing plot(s) of the measuring instrument display. The frequency and amplitude axes and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

#### ■ 26 dB Occupied bandwidth

The reference value is the highest level of the spectral envelope of the modulated signal.

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
- b) The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
- c) Set the reference level of the instrument as required to prevent the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope must be at least 10log (OBW / RBW) below the reference level.
- d) NOTE—Steps a) through c) may require iteration to adjust within the specified tolerances.
- e) The dynamic range of the spectrum analyzer at the selected RBW shall be at least 10 dB below the target "-X dB down" requirement (i.e., if the requirement calls for measuring the –26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference value).
- f) Set the detection mode to peak, and the trace mode to max hold.
- g) Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).
- h) Determine the "-X dB down amplitude" as equal to (Reference Value X). Alternatively, this calculation

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can be performed by the analyzer by using the marker-delta function.

- i) Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the "–X dB down amplitude" determined in step g). If a marker is below this "-X dB down amplitude" value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
- j) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display. The frequency and amplitude axes and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s)

## 8.4.4 Test Results

**Pass** 

Note: The details please see Appendix C.

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#### 8.5 BAND EDGE EMISSION

#### 8.5.1 Conformance Limit

FCC Part 22.917 LTE BAND5 ≤ -13 dBm/1%\*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block. LTE BAND2 FCC Part 24.238 ≤ -13 dBm/1%\*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block. LTE BAND25 FCC Part 24.238 ≤ -13 dBm/1%\*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block. LTE BAND4 FCC Part 27.53(h) ≤ -13 dBm/1%\*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block. LTE BAND13 FCC Part 27.53(c) ≤ -13 dBm/1%\*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block. LTE BAND17 FCC Part 27.53(g) ≤ -13 dBm/1%\*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.

## 8.5.2 Test Configuration

Test according to clause 7.1 radio frequency test setup 1

#### 8.5.3 Test Procedure

Connect the EUT to Universal Radio Communication Tester CMU200 or CMU500 via the antenna connector. A call is set up by the SS according to the generic call set up procedure on a channel with ARFCN in the Mid ARFCN range, power control level set to Max power. MS TXPWR\_MAX\_CCH is set to the maximum value supported by the Power Class of the Mobile under test,

Spectrum Analyzer is set as below: SET RBW ≥ 1% of Emission BW. SET VBW about three times of RBW Detector: RMS Trace mode= max hold. Span= 2MHz

## 8.5.4 Test Results

Pass

Note: The details please see Appendix D.

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#### 8.6 OUT OF BAND EMISSIONS AT ANTENNA TERMINALS

## 8.6.1 Conformance Limit

LTE BAND5 FCC Part 22.917

Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

LTE BAND2 FCC Part 24.238

Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

LTE BAND25 FCC Part 24.238

Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

LTE BAND4 FCC Part 27.53(h)

Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

LTE BAND13 FCC Part 27.53(c)

Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

LTE BAND17 FCC Part 27.53(g)

Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

# 8.6.2 Test Configuration

Test according to clause 7.1 radio frequency test setup 1

## 8.6.3 Test Procedure

The transmitter output (antenna port) was connected to the spectrum analyzer

Connect the EUT to Universal Radio Communication Tester CMU200 or CMU500 via the antenna connector. A call is set up by the SS according to the generic call set up procedure on a channel with ARFCN in the Mid ARFCN range, power control level set to Max power. MS TXPWR\_MAX\_CCH is set to the maximum value supported by the Power Class of the Mobile under test,

Spectrum Analyzer is set as below:

9kHz~150kHz, RBW = 1KHz, VBW ≥ 3×RBW,

150kHz $\sim$ 30MHz, RBW = 10KHz, VBW ≥ 3×RBW,

30MHz~1GHz, RBW = 100 kHz, VBW = 300 kHz. Above 1GHz, RBW = 1 MHz, VBW = 3 MHz.

Detector: Peak

Trace mode= max hold.

## 8.6.4 Test Results

Pass

Note: The details please see Appendix E.

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#### 8.7 FIELD STRENGTH OF SPURIOUS RADIATION

## 8.7.1 Conformance Limit

LTE BAND5 FCC Part 22.917

Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

LTE BAND2 FCC Part 24.238

Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

LTE BAND25 FCC Part 24.238

Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

LTE BAND4 FCC Part 27.53(h)

Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

LTE BAND13 FCC Part 27.53(c)

Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

LTE BAND17 FCC Part 27.53(g)

Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

# 8.7.2 Test Configuration

Test according to clause 7.3 radio frequency test setup 3

## 8.7.3 Test Procedure

Connect the EUT to Universal Radio Communication Tester CMU200 or CMU500 via the antenna connector. A call is set up by the SS according to the generic call set up procedure on a channel with ARFCN in the Mid ARFCN range, power control level set to Max power. MS TXPWR\_MAX\_CCH is set to the maximum value supported by the Power Class of the Mobile under test.

Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). 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.

then the following procedure can be used to determine spurious emission

- a) RBW = 1 MHz for  $f \ge 1$  GHz(1GHz to 25GHz), 100 kHz for f < 1 GHz(30MHz to 1GHz), 200Hz for f < 150KHz(9KHz to 150KHz), 9KHz for f < 30MHz(150KHz to 30KHz)
- b) Set VBW ≥ 3 × RBW.
- c) Set span wide enough to fully capture the emission being measured
- d) Sweep time = auto couple.
- e) Detector = peak.
- f) Ensure that the number of measurement points ≥ span/RBW.

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- g) Trace mode = max hold.
- h) Allow trace to fully stabilize.
- i) Use the peak marker function to determine the peak amplitude level.
- Step1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
- Step2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
- Step3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
- Step4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
- Step5. Make the measurement with the spectrum analyzer's RBW , VBW , taking the record of maximum spurious emission.
- Step6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
- Step7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
- Step8. Taking the record of output power at antenna port.
- Step9. Repeat step 7 to step 8 for another polarization.
- Step10. Emission level (dBm) = output power + substitution Gain. Test Results

### 8.7.4 Test Results

**Pass** 

Note: The details please see Appendix F.

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## 8.8 FREQUENCY STABILITY

## 8.8.1 Conformance Limit

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within  $\pm 0.00025\%$  ( $\pm 2.5$ ppm) of the center frequency.

## 8.8.2 Test Configuration

Test according to clause 7.2 conducted emission test setup2.

## 8.8.3 Test Procedure

Connect the EUT to Universal Radio Communication Tester CMU200 or CMU500 via the antenna connector. A call is set up by the SS according to the generic call set up procedure on a channel with ARFCN in the ARFCN range, power control level set to Max power. MS TXPWR\_MAX\_CCH is set to the maximum value supported by the Power Class of the Mobile under test.

EUT was placed at temperature chamber and connected to an external power supply. Temperature and voltage condition shall be tested to confirm frequency stability.

- (a) Frequency measurements shall be made at the extremes of the specified temperature range and at intervals of not more than 10° centigrade through the range. A period of time sufficient to stabilize all of the components of the oscillator circuit at each temperature level shall be allowed prior to frequency measurement. The short-term transient effects on the frequency of the transmitter due to keying (except for broadcast transmitters) and any heating element cycling normally occurring at each ambient temperature level also shall be shown. Only the portion or portions of the transmitter containing the frequency determining and stabilizing circuitry need be subjected to the temperature variation test.
- (b) The frequency stability shall be measured with variation of primary supply voltage as follows:
- (1) Vary primary supply voltage from 95 to 105 percent of the nominal value for other than hand carried battery equipment.
- (2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery operating end point, which shall be specified by the manufacturer.

#### 8.8.4 Test Results

**Pass** 

Note: The details please see Appendix G.

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#### 8.9 PEAK TO AVERAGE RATIO

#### 8.9.1 Conformance Limit

LTE BAND2 FCC Part 24.232

Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of §24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

LTE BAND25 FCC Part 24.232

Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of §24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

LTE BAND4 FCC Part 27.50(d)

Equipment employed must be authorized in accordance with the provisions of §24.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

## 8.9.2 Test Configuration

Test according to clause 7.1 conducted emission test setup1.

### 8.9.3 Test Procedure

The EUT was connected to Spectrum Analyzer and Base Station via power divider.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

Set the number of counts to a value that stabilizes the measured CCDF curve.

Set the measurement interval to 1 ms.

Record the maximum PAPR level associated with a probability of 0.1%.

- a) Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;
- b) Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
- c) Set the number of counts to a value that stabilizes the measured CCDF curve;
- d) Set the measurement interval as follows:
- 1) for continuous transmissions, set to 1 ms,
- 2) for burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.
- e) Record the maximum PAPR level associated with a probability of 0.1%.

#### 8.9.4 Test Results

**Pass** 

Note: The details please see Appendix H.

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# **APPENDIX A: TEST DATA FOR RF POWER OUTPUT**

| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 23.19             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 23.20             | N/A            | Pass    |
|                   | ODCK       | CNALL-        | 40005             | 4050.5                        | RB1#24  | 23.25             | N/A            | Pass    |
|                   | QPSK       | 5MHz          | 18625             | 1852.5                        | RB12#0  | 23.00             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.95             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.01             | N/A            | Pass    |
|                   |            | EMI.          |                   | 1852.5                        | RB1#0   | 22.01             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.01             | N/A            | Pass    |
|                   | 10 0 0 0 0 |               | 40005             |                               | RB1#24  | 22.13             | N/A            | Pass    |
|                   | 16-QAM     | 5MHz          | 18625             |                               | RB12#0  | 22.20             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.16             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.18             | N/A            | Pass    |
|                   |            | 5MHz          | 18900             | 1880.0                        | RB1#0   | 23.17             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.82             | N/A            | Pass    |
|                   | QPSK       |               |                   |                               | RB1#24  | 22.99             | N/A            | Pass    |
|                   | QPSK       |               |                   |                               | RB12#0  | 22.45             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.30             | N/A            | Pass    |
| LTE               |            |               |                   |                               | RB25#0  | 22.05             | N/A            | Pass    |
| Babd2             |            | 5N41 -        | 18900             | 1880.0                        | RB1#0   | 22.36             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.05             | N/A            | Pass    |
|                   | 16-QAM     |               |                   |                               | RB1#24  | 22.08             | N/A            | Pass    |
|                   | 10-QAIVI   | 5MHz          | 10900             | 1000.0                        | RB12#0  | 22.35             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.30             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.31             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 23.06             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.14             | N/A            | Pass    |
|                   | QPSK       | 5MHz          | 19175             | 1907.5                        | RB1#24  | 23.21             | N/A            | Pass    |
|                   | QPSK       | SIVIE         | 19175             | 1907.5                        | RB12#0  | 22.01             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.25             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.97             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.14             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.10             | N/A            | Pass    |
|                   | 16 0 4 14  | ENALL-        | 10175             | 1007 F                        | RB1#24  | 22.15             | N/A            | Pass    |
|                   | 16-QAM     | 5MHz          | 19175             | 1907.5                        | RB12#0  | 22.20             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.30             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.02             | N/A            | Pass    |

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| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 23.23             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 23.15             | N/A            | Pass    |
|                   | ODCK       | 400411-       | 40050             | 1855.0                        | RB1#49  | 23.36             | N/A            | Pass    |
|                   | QPSK       | 10MHz         | 18650             | 1000.0                        | RB25#0  | 22.85             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.46             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.97             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.93             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.41             | N/A            | Pass    |
|                   | 16 OAM     | 10MHz         | 18650             | 1855.0                        | RB1#49  | 23.08             | N/A            | Pass    |
|                   | 16-QAM     | TUIVITZ       | 10000             | 1000.0                        | RB25#0  | 23.58             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 23.41             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 23.00             | N/A            | Pass    |
|                   |            | 10MHz         | 18900             | 1880.0                        | RB1#0   | 23.19             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 23.01             | N/A            | Pass    |
|                   | QPSK       |               |                   |                               | RB1#49  | 23.12             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.80             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 23.19             | N/A            | Pass    |
| LTE               |            |               |                   |                               | RB50#0  | 22.95             | N/A            | Pass    |
| Babd2             |            |               | 18900             | 1880.0                        | RB1#0   | 22.58             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.13             | N/A            | Pass    |
|                   | 16-QAM     | 10MHz         |                   |                               | RB1#49  | 22.49             | N/A            | Pass    |
|                   | 10-QAIVI   | TOIVITIZ      | 10900             |                               | RB25#0  | 22.50             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.20             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.13             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 23.12             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 23.18             | N/A            | Pass    |
|                   | QPSK       | 10MHz         | 19150             | 1905.0                        | RB1#49  | 23.38             | N/A            | Pass    |
|                   | QPSK       | TUIVITZ       | 19150             | 1905.0                        | RB25#0  | 23.42             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.41             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.96             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.04             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.09             | N/A            | Pass    |
|                   | 16-QAM     | 10MHz         | 10150             | 1005.0                        | RB1#49  | 22.31             | N/A            | Pass    |
|                   | 10-QAIVI   | 10MHz         | 19150             | 1905.0                        | RB25#0  | 22.26             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.14             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.25             | N/A            | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 23.22             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#37  | 22.95             | N/A            | Pass    |
|                   | ODOK       | 45MH=         | 40075             | 4057.5                        | RB1#74  | 23.40             | N/A            | Pass    |
|                   | QPSK       | 15MHz         | 18675             | 1857.5                        | RB36#0  | 22.41             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#37 | 22.90             | N/A            | Pass    |
|                   |            |               |                   |                               | RB75#0  | 22.96             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.04             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#37  | 22.14             | N/A            | Pass    |
|                   | 10 0 0 0 0 | 15MHz         | 40075             | 4057.5                        | RB1#74  | 22.33             | N/A            | Pass    |
|                   | 16-QAM     | IOIVIDZ       | 18675             | 1857.5                        | RB36#0  | 22.38             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#37 | 22.42             | N/A            | Pass    |
|                   |            |               |                   |                               | RB75#0  | 22.19             | N/A            | Pass    |
|                   |            | 15MHz         | 18900             |                               | RB1#0   | 23.18             | N/A            | Pass    |
|                   |            |               |                   | 1880.0                        | RB1#37  | 22.86             | N/A            | Pass    |
|                   | QPSK       |               |                   |                               | RB1#74  | 23.20             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#0  | 22.42             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#37 | 22.16             | N/A            | Pass    |
| LTE               |            |               |                   |                               | RB75#0  | 22.09             | N/A            | Pass    |
| Babd2             |            |               | 40000             |                               | RB1#0   | 22.52             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#37  | 22.50             | N/A            | Pass    |
|                   | 16-QAM     | 15MHz         |                   | 1000.0                        | RB1#74  | 22.42             | N/A            | Pass    |
|                   | 10-QAIVI   | TOMIC         | 18900             | 1880.0                        | RB36#0  | 22.41             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#37 | 22.36             | N/A            | Pass    |
|                   |            |               |                   |                               | RB75#0  | 22.15             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 23.19             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#37  | 23.00             | N/A            | Pass    |
|                   | QPSK       | 15MHz         | 19125             | 1902.5                        | RB1#74  | 23.35             | N/A            | Pass    |
|                   | QPSK       | TOMITZ        | 19125             | 1902.5                        | RB36#0  | 22.42             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#37 | 22.36             | N/A            | Pass    |
|                   |            |               |                   |                               | RB75#0  | 22.89             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.18             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#37  | 22.15             | N/A            | Pass    |
|                   | 16-QAM     | 151/14        | 10125             | 1002.5                        | RB1#74  | 22.18             | N/A            | Pass    |
|                   | 10-QAW     | 15MHz         | 19125             | 1902.5                        | RB36#0  | 22.10             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#37 | 22.26             | N/A            | Pass    |
|                   |            |               |                   |                               | RB75#0  | 22.31             | N/A            | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 23.20             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#49  | 23.18             | N/A            | Pass    |
|                   | 00014      | 001411        | 40700             | 4000.0                        | RB1#99  | 23.15             | N/A            | Pass    |
|                   | QPSK       | 20MHz         | 18700             | 1860.0                        | RB50#0  | 22.65             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#49 | 23.12             | N/A            | Pass    |
|                   |            |               |                   |                               | RB100#0 | 23.04             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.47             | N/A            | Pass    |
|                   |            |               |                   | 1860.0                        | RB1#49  | 22.35             | N/A            | Pass    |
|                   | 16-QAM     | 001411-       | 40700             |                               | RB1#99  | 22.15             | N/A            | Pass    |
|                   |            | 20MHz         | 18700             |                               | RB50#0  | 22.53             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#49 | 22.80             | N/A            | Pass    |
|                   |            |               |                   |                               | RB100#0 | 22.97             | N/A            | Pass    |
|                   |            | 20MHz         | 18900             | 1880.0                        | RB1#0   | 23.27             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#49  | 22.96             | N/A            | Pass    |
|                   | ODCK       |               |                   |                               | RB1#99  | 23.20             | N/A            | Pass    |
|                   | QPSK       |               |                   |                               | RB50#0  | 22.58             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#49 | 23.15             | N/A            | Pass    |
| LTE               |            |               |                   |                               | RB100#0 | 23.18             | N/A            | Pass    |
| Babd2             |            |               |                   | 1880.0                        | RB1#0   | 23.27             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#49  | 23.26             | N/A            | Pass    |
|                   | 16-QAM     | 20MHz         | 18900             |                               | RB1#99  | 23.02             | N/A            | Pass    |
|                   | 10-QAIVI   | ZUIVITZ       | 10900             |                               | RB50#0  | 23.15             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#49 | 23.16             | N/A            | Pass    |
|                   |            |               |                   |                               | RB100#0 | 23.18             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 23.47             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#49  | 23.02             | N/A            | Pass    |
|                   | QPSK       | 20MHz         | 19100             | 1900.0                        | RB1#99  | 23.72             | N/A            | Pass    |
|                   | QPSK       | ZUIVI⊓Z       | 19100             | 1900.0                        | RB50#0  | 23.03             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#49 | 23.52             | N/A            | Pass    |
|                   |            |               |                   |                               | RB100#0 | 23.14             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 23.22             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#49  | 23.05             | N/A            | Pass    |
|                   | 16 0 4 14  | 201411-       | 10100             | 1000.0                        | RB1#99  | 23.46             | N/A            | Pass    |
|                   | 16-QAM     | 20MHz         | 19100             | 1900.0                        | RB50#0  | 22.95             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#49 | 22.90             | N/A            | Pass    |
|                   |            |               |                   |                               | RB100#0 | 22.96             | N/A            | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 23.36             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 23.30             | N/A            | Pass    |
|                   | ODOK       | CN411-        | 40075             | 1712.5                        | RB1#24  | 23.24             | N/A            | Pass    |
|                   | QPSK       | 5MHz          | 19975             | 1712.5                        | RB12#0  | 23.01             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.58             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.27             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.33             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.16             | N/A            | Pass    |
|                   | 16 0 14    | ENAL I-       | 10075             | 1710 E                        | RB1#24  | 22.30             | N/A            | Pass    |
|                   | 16-QAM     | 5MHz          | 19975             | 1712.5                        | RB12#0  | 22.15             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.05             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.15             | N/A            | Pass    |
|                   |            | 5MHz          | 20175             |                               | RB1#0   | 23.28             | N/A            | Pass    |
|                   |            |               |                   | 1732.5                        | RB1#12  | 23.12             | N/A            | Pass    |
|                   | ODOK       |               |                   |                               | RB1#24  | 23.35             | N/A            | Pass    |
|                   | QPSK       |               |                   |                               | RB12#0  | 22.93             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.82             | N/A            | Pass    |
| LTE               |            |               |                   |                               | RB25#0  | 22.68             | N/A            | Pass    |
| Babd4             |            |               | 00475             | 1732.5                        | RB1#0   | 22.04             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.01             | N/A            | Pass    |
|                   | 16-QAM     | 5MHz          |                   |                               | RB1#24  | 22.10             | N/A            | Pass    |
|                   | 10-QAIVI   | SIVITZ        | 20175             |                               | RB12#0  | 22.15             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.18             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.30             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 23.39             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 23.15             | N/A            | Pass    |
|                   | ODCK       | 5MHz          | 20275             | 1750 F                        | RB1#24  | 23.40             | N/A            | Pass    |
|                   | QPSK       | SIVITZ        | 20375             | 1752.5                        | RB12#0  | 22.96             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.58             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.45             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.74             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.60             | N/A            | Pass    |
|                   | 16 0 4 14  | ENAL I-       | 20275             | 17E0 E                        | RB1#24  | 22.56             | N/A            | Pass    |
|                   | 16-QAM     | 5MHz          | 20375             | 1752.5                        | RB12#0  | 22.48             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.69             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.17             | N/A            | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 23.20             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.86             | N/A            | Pass    |
|                   | ODCK       | 400411-       | 20000             | 4745.0                        | RB1#49  | 23.36             | N/A            | Pass    |
|                   | QPSK       | 10MHz         | 20000             | 1715.0                        | RB25#0  | 22.75             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.69             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.94             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.36             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.30             | N/A            | Pass    |
|                   | 16 0 1 1   | 101411-       | 20000             | 1715.0                        | RB1#49  | 22.03             | N/A            | Pass    |
|                   | 16-QAM     | 10MHz         | 20000             | 1715.0                        | RB25#0  | 22.20             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.14             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.25             | N/A            | Pass    |
|                   |            | 10MHz         | 20175             |                               | RB1#0   | 23.26             | N/A            | Pass    |
|                   |            |               |                   | 1732.5                        | RB1#24  | 23.19             | N/A            | Pass    |
|                   | ODCK       |               |                   |                               | RB1#49  | 23.12             | N/A            | Pass    |
|                   | QPSK       |               |                   |                               | RB25#0  | 23.48             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.86             | N/A            | Pass    |
| LTE               |            |               |                   |                               | RB50#0  | 22.98             | N/A            | Pass    |
| Babd4             |            |               | 00475             | 1732.5                        | RB1#0   | 22.41             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.13             | N/A            | Pass    |
|                   | 16-QAM     | 10MHz         |                   |                               | RB1#49  | 22.46             | N/A            | Pass    |
|                   | 10-QAIVI   | TUIVITZ       | 20175             |                               | RB25#0  | 22.18             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.16             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.40             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 23.26             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.96             | N/A            | Pass    |
|                   | ODCK       | 10MHz         | 20250             | 1750.0                        | RB1#49  | 22.56             | N/A            | Pass    |
|                   | QPSK       | TUIVITZ       | 20350             | 1750.0                        | RB25#0  | 23.21             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.41             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.21             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.35             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.05             | N/A            | Pass    |
|                   | 16 0 4 14  | 101411-       | 20250             | 1750.0                        | RB1#49  | 22.28             | N/A            | Pass    |
|                   | 16-QAM     | 10MHz         | 20350             | 1750.0                        | RB25#0  | 22.13             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.31             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.36             | N/A            | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   |            |               |                   | 1717.5                        | RB1#0   | 23.21             | N/A            | Pass    |
|                   | QPSK       | 15MHz         | 20025             |                               | RB1#37  | 23.05             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#74  | 23.17             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#0  | 22.14             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#37 | 22.42             | N/A            | Pass    |
|                   |            |               |                   |                               | RB75#0  | 22.30             | N/A            | Pass    |
|                   |            |               | 20025             | 1717.5                        | RB1#0   | 22.19             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#37  | 22.62             | N/A            | Pass    |
|                   | 16-QAM     | 15MHz         |                   |                               | RB1#74  | 22.20             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#0  | 22.16             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#37 | 22.14             | N/A            | Pass    |
|                   |            |               |                   |                               | RB75#0  | 22.15             | N/A            | Pass    |
|                   |            | 15MHz         | 20175             |                               | RB1#0   | 23.18             | N/A            | Pass    |
|                   |            |               |                   | 1732.5                        | RB1#37  | 23.12             | N/A            | Pass    |
|                   | QPSK       |               |                   |                               | RB1#74  | 23.34             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#0  | 22.63             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#37 | 22.16             | N/A            | Pass    |
| LTE               |            |               |                   |                               | RB75#0  | 22.94             | N/A            | Pass    |
| Babd4             | 16-QAM     | 15MHz         | 20175             | 1732.5                        | RB1#0   | 22.36             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#37  | 22.41             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#74  | 22.57             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#0  | 22.10             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#37 | 22.16             | N/A            | Pass    |
|                   |            |               |                   |                               | RB75#0  | 22.14             | N/A            | Pass    |
|                   | QPSK       | 15MHz         | 20325             | 1747.5                        | RB1#0   | 23.39             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#37  | 23.36             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#74  | 23.29             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#0  | 22.69             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#37 | 22.56             | N/A            | Pass    |
|                   |            |               |                   |                               | RB75#0  | 23.14             | N/A            | Pass    |
|                   | 16-QAM     | 15MHz         | 20325             | 1747.5                        | RB1#0   | 22.29             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#37  | 22.40             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#74  | 22.20             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#0  | 22.02             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#37 | 22.46             | N/A            | Pass    |
|                   |            |               |                   |                               | RB75#0  | 22.16             | N/A            | Pass    |



| Operation<br>Mode | Modulation   | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|--------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   |              |               | 20050             | 1720.0                        | RB1#0   | 23.22             | N/A            | Pass    |
|                   | QPSK         | 20MHz         |                   |                               | RB1#49  | 23.15             | N/A            | Pass    |
|                   |              |               |                   |                               | RB1#99  | 23.30             | N/A            | Pass    |
|                   |              |               |                   |                               | RB50#0  | 23.26             | N/A            | Pass    |
|                   |              |               |                   |                               | RB50#49 | 23.18             | N/A            | Pass    |
|                   |              |               |                   |                               | RB100#0 | 23.14             | N/A            | Pass    |
|                   |              | 20MHz         | 20050             | 1720.0                        | RB1#0   | 22.36             | N/A            | Pass    |
|                   |              |               |                   |                               | RB1#49  | 22.20             | N/A            | Pass    |
|                   | 10 0 0 0 0 0 |               |                   |                               | RB1#99  | 22.15             | N/A            | Pass    |
|                   | 16-QAM       |               |                   |                               | RB50#0  | 22.19             | N/A            | Pass    |
|                   |              |               |                   |                               | RB50#49 | 22.14             | N/A            | Pass    |
|                   |              |               |                   |                               | RB100#0 | 22.36             | N/A            | Pass    |
|                   |              | 20MHz         | 20175             |                               | RB1#0   | 23.03             | N/A            | Pass    |
|                   | QPSK         |               |                   | 1732.5                        | RB1#49  | 22.96             | N/A            | Pass    |
|                   |              |               |                   |                               | RB1#99  | 23.24             | N/A            | Pass    |
|                   |              |               |                   |                               | RB50#0  | 23.02             | N/A            | Pass    |
|                   |              |               |                   |                               | RB50#49 | 22.65             | N/A            | Pass    |
| LTE               |              |               |                   |                               | RB100#0 | 22.45             | N/A            | Pass    |
| Babd4             | 16-QAM       | 20MHz         | 20175             | 1732.5                        | RB1#0   | 22.12             | N/A            | Pass    |
|                   |              |               |                   |                               | RB1#49  | 22.18             | N/A            | Pass    |
|                   |              |               |                   |                               | RB1#99  | 22.41             | N/A            | Pass    |
|                   |              |               |                   |                               | RB50#0  | 22.25             | N/A            | Pass    |
|                   |              |               |                   |                               | RB50#49 | 22.30             | N/A            | Pass    |
|                   |              |               |                   |                               | RB100#0 | 22.25             | N/A            | Pass    |
|                   | QPSK         | 20MHz         | 20300             | 1745.0                        | RB1#0   | 23.30             | N/A            | Pass    |
|                   |              |               |                   |                               | RB1#49  | 23.20             | N/A            | Pass    |
|                   |              |               |                   |                               | RB1#99  | 23.18             | N/A            | Pass    |
|                   |              |               |                   |                               | RB50#0  | 23.05             | N/A            | Pass    |
|                   |              |               |                   |                               | RB50#49 | 23.14             | N/A            | Pass    |
|                   |              |               |                   |                               | RB100#0 | 23.10             | N/A            | Pass    |
|                   | 16-QAM       | 20MHz         | 20300             | 1745.0                        | RB1#0   | 22.31             | N/A            | Pass    |
|                   |              |               |                   |                               | RB1#49  | 22.36             | N/A            | Pass    |
|                   |              |               |                   |                               | RB1#99  | 22.32             | N/A            | Pass    |
|                   |              |               |                   |                               | RB50#0  | 22.05             | N/A            | Pass    |
|                   |              |               |                   |                               | RB50#49 | 22.45             | N/A            | Pass    |
|                   |              |               |                   |                               | RB100#0 | 22.14             | N/A            | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   |            |               |                   | 826.5                         | RB1#0   | 22.70             | N/A            | Pass    |
|                   | QPSK       | 5MHz          | 20425             |                               | RB1#12  | 22.56             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.73             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#0  | 22.15             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.36             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.61             | N/A            | Pass    |
|                   | 40.044     | 5MHz          | 20425             | 826.5                         | RB1#0   | 22.70             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.36             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.69             | N/A            | Pass    |
|                   | 16-QAM     |               |                   |                               | RB12#0  | 22.30             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.56             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.53             | N/A            | Pass    |
|                   |            | 5MHz          | 20525             | 836.5                         | RB1#0   | 22.81             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.12             | N/A            | Pass    |
|                   | QPSK       |               |                   |                               | RB1#24  | 22.74             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#0  | 22.23             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.52             | N/A            | Pass    |
| LTE               |            |               |                   |                               | RB25#0  | 22.53             | N/A            | Pass    |
| Babd5             | 16-QAM     | 5MHz          | 20525             | 836.5                         | RB1#0   | 22.63             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.58             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.52             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#0  | 22.25             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.36             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.27             | N/A            | Pass    |
|                   | QPSK       | 5MHz          | 20625             | 846.5                         | RB1#0   | 22.94             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.58             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.71             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#0  | 22.14             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.54             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.68             | N/A            | Pass    |
|                   | 16-QAM     | 5MHz          | 20625             | 846.5                         | RB1#0   | 22.40             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.45             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.19             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#0  | 22.56             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.56             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.58             | N/A            | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 22.66             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.53             | N/A            | Pass    |
|                   | ODOK       | 40141         | 00.450            | 000.0                         | RB1#49  | 22.73             | N/A            | Pass    |
|                   | QPSK       | 10MHz         | 20450             | 829.0                         | RB25#0  | 22.15             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.16             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.61             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.51             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.15             | N/A            | Pass    |
|                   | 16-QAM     | 10MHz         | 20450             | 829.0                         | RB1#49  | 22.50             | N/A            | Pass    |
|                   | 16-QAM     | TUIVITZ       | 20450             | 029.0                         | RB25#0  | 22.15             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.06             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.53             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.65             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.35             | N/A            | Pass    |
|                   | ODCK       | 400411-       | 20525             | 000 5                         | RB1#49  | 22.91             | N/A            | Pass    |
|                   | QPSK       | 10MHz         | 20525             | 836.5                         | RB25#0  | 22.15             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.62             | N/A            | Pass    |
| LTE               |            |               |                   |                               | RB50#0  | 22.64             | N/A            | Pass    |
| Babd5             |            |               |                   |                               | RB1#0   | 22.04             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.15             | N/A            | Pass    |
|                   | 16-QAM     | 10MHz         | 20525             | 836.5                         | RB1#49  | 22.08             | N/A            | Pass    |
|                   | 10-QAIVI   | TUIVITZ       | 20525             | 030.5                         | RB25#0  | 22.64             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.63             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.72             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.78             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.89             | N/A            | Pass    |
|                   | QPSK       | 10MHz         | 20600             | 844.0                         | RB1#49  | 22.64             | N/A            | Pass    |
|                   | QPSK       | TUIVITZ       | 20600             | 044.0                         | RB25#0  | 22.69             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.47             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.61             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.80             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.06             | N/A            | Pass    |
|                   | 16 0 4 14  | 101411-       | 20600             | 844.0                         | RB1#49  | 22.64             | N/A            | Pass    |
|                   | 16-QAM     | 10MHz         | 20600             | 844.0                         | RB25#0  | 22.63             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.02             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.56             | N/A            | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 23.00             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.15             | N/A            | Pass    |
|                   | QPSK       | 5MHz          | 23205             | 779.5                         | RB1#24  | 22.79             | N/A            | Pass    |
|                   | QPSK       | SIVIE         | 23205             | 119.5                         | RB12#0  | 22.63             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.45             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.61             | (dBm)          | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.91             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.15             | N/A            | Pass    |
|                   | 16 0 1 1   | ENAL I-       | 22205             | 779.5                         | RB1#24  | 22.76             | N/A            | Pass    |
|                   | 16-QAM     | 5MHz          | 23205             | 779.5                         | RB12#0  | 22.56             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.45             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.58             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.70             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.63             | N/A            | Pass    |
|                   | ODOK       | CNALL-        | 00000             | 700.0                         | RB1#24  | 22.70             | N/A            | Pass    |
|                   | QPSK       | 5MHz          | 23230             | 782.0                         | RB12#0  | 22.66             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.54             | N/A            | Pass    |
| LTE               |            |               |                   |                               | RB25#0  | 22.76             | N/A            | Pass    |
| Babd13            |            |               |                   |                               | RB1#0   | 22.50             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.52             | N/A            | Pass    |
|                   | 16-QAM     | 5MHz          | 23230             | 782.0                         | RB1#24  | 22.70             | N/A            | Pass    |
|                   | 10-QAM     | SIVITZ        | 23230             | 702.0                         | RB12#0  | 22.64             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.60             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.66             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.86             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.52             | N/A            | Pass    |
|                   | ODOK       | CNALL-        | 00055             | 7045                          | RB1#24  | 22.83             | N/A            | Pass    |
|                   | QPSK       | 5MHz          | 23255             | 784.5                         | RB12#0  | 22.26             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.15             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.65             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.08             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.03             | N/A            | Pass    |
|                   | 16 0 4 14  | ENAL I-       | 22255             | 701 E                         | RB1#24  | 22.04             | N/A            | Pass    |
|                   | 16-QAM     | 5MHz          | 23255             | 784.5                         | RB12#0  | 22.53             | N/A            | Pass    |
|                   |            |               |                   | RB12#11                       | 22.45   | N/A               | Pass           |         |
|                   |            |               |                   |                               | RB25#0  | 22.59             | N/A            | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict             |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------------------|
|                   |            |               |                   |                               | RB1#0   | 22.66             | N/A            | Pass                |
|                   |            |               |                   |                               | RB1#24  | 22.35             | N/A            | Pass                |
|                   | ODCK       | 10MHz         | 23230             | 782.0                         | RB1#49  | 22.73             | N/A            | Pass                |
|                   | QPSK       | TUIVITZ       | 23230             | 702.0                         | RB25#0  | 22.15             | N/A            | Pass                |
|                   |            |               |                   |                               | RB25#24 | 22.95             | N/A            | Pass                |
| LTE               |            |               |                   |                               | RB50#0  | 22.61             | N/A            | Pass Pass Pass Pass |
| Babd13            |            |               |                   |                               | RB1#0   | 22.51             | N/A            | Pass                |
|                   |            |               |                   |                               | RB1#24  | 22.26             | N/A            | Pass                |
|                   | 16-QAM     | 10MHz         | 23230             | 782.0                         | RB1#49  | 22.50             | N/A            | Pass                |
|                   | 10-QAIVI   | TUIVITZ       | 23230             | 702.0                         | RB25#0  | 22.21             | N/A            | Pass                |
|                   |            |               |                   |                               | RB25#24 | 22.06             | N/A            | Pass                |
|                   |            |               |                   |                               | RB50#0  | 22.53             | N/A            | Pass                |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 22.72             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.68             | N/A            | Pass    |
|                   | ODOK       | CN411-        | 00755             | 700 5                         | RB1#24  | 22.52             | N/A            | Pass    |
|                   | QPSK       | 5MHz          | 23755             | 706.5                         | RB12#0  | 22                | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.06             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.66             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.83             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.63             | N/A            | Pass    |
|                   | 16 0 14    | ENAL I-       | 22755             | 706.5                         | RB1#24  | 22.06             | N/A            | Pass    |
|                   | 16-QAM     | 5MHz          | 23755             | 700.5                         | RB12#0  | 22.48             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.69             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.6              | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.91             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.62             | N/A            | Pass    |
|                   | ODOK       | CN411-        | 00700             | 740.0                         | RB1#24  | 22.97             | N/A            | Pass    |
|                   | QPSK       | 5MHz          | 23790             | 710.0                         | RB12#0  | 22.85             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.63             | N/A            | Pass    |
| LTE               |            |               |                   |                               | RB25#0  | 22.95             | N/A            | Pass    |
| Babd17            |            |               |                   |                               | RB1#0   | 22.84             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.6              | N/A            | Pass    |
|                   | 16-QAM     | 5MHz          | 23790             | 710.0                         | RB1#24  | 22.68             | N/A            | Pass    |
|                   | 10-QAIVI   | SIVITZ        | 23790             | 7 10.0                        | RB12#0  | 22.58             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.13             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.87             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.73             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.62             | N/A            | Pass    |
|                   | ODCK       | 5MHz          | 22025             | 713.5                         | RB1#24  | 22.66             | N/A            | Pass    |
|                   | QPSK       | SIVITZ        | 23825             | / 13.5                        | RB12#0  | 22.68             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.42             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.67             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.37             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.15             | N/A            | Pass    |
|                   | 16 0 4 14  | ENAL I-       | 22025             | 712.5                         | RB1#24  | 22.33             | N/A            | Pass    |
|                   | 16-QAM     | 5MHz          | 23825             | 713.5                         | RB12#0  | 22.06             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.06             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.66             | N/A            | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm)  | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|---|---------|
|                   |            |               |                   |                               | RB1#0   | 22.88             | N/A   | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.16             | N/A   | Pass    |
|                   | ODOK       | 40141         | 00700             | 700.0                         | RB1#49  | 22.85             | N/A   | Pass    |
|                   | QPSK       | 10MHz         | 23780             | 709.0                         | RB25#0  | 22.5              | N/A   | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.43             | N/A   | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.42             | N/A   | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.26             | N/A   | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.16             | N/A   | Pass    |
|                   | 16-QAM     | 10MHz         | 23780             | 709.0                         | RB1#49  | 22.06             | N/A   | Pass    |
|                   | 16-QAM     | TUIVITZ       | 23760             | 709.0                         | RB25#0  | 22.26             | N/A   | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.05             | N/A   | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.67             | N/A   | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.15             | 67 N/A Pa<br>15 N/A Pa<br>32 N/A Pa<br>35 N/A Pa<br>61 N/A Pa | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.82             | N/A   | Pass    |
|                   | QPSK       | 10MHz         | 23790             | 710.0                         | RB1#49  | 22.85             | N/A   | Pass    |
|                   | QPSK       | TUIVITZ       | 23790             | 7 10.0                        | RB25#0  | 22.61             | N/A   | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.63             | N/A   | Pass    |
| LTE               |            |               |                   |                               | RB50#0  | 22.62             | N/A   | Pass    |
| Babd17            |            |               |                   |                               | RB1#0   | 22.46             | N/A   | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.16             | N/A   | Pass    |
|                   | 16-QAM     | 10MHz         | 23790             | 710.0                         | RB1#49  | 22.56             | N/A   | Pass    |
|                   | 10-QAIVI   | TUIVITZ       | 23790             | 7 10.0                        | RB25#0  | 22.48             | N/A   | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.16             | N/A   | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.16             | N/A   | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.42             | N/A   | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.58             | N/A   | Pass    |
|                   | QPSK       | 10MHz         | 23800             | 711.0                         | RB1#49  | 22.59             | N/A   | Pass    |
|                   | QPSK       | TUIVITZ       | 23600             | 711.0                         | RB25#0  | 22.58             | N/A   | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.69             | N/A   | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.36             | N/A   | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.54             | N/A   | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.16             | N/A   | Pass    |
|                   | 16 0 4 14  | 101411-       | 22000             | 711.0                         | RB1#49  | 22.36             | N/A   | Pass    |
|                   | 16-QAM     | 10MHz         | 23800             | 711.0                         | RB25#0  | 22.42             | N/A   | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.06             | N/A   | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.13             | N/A   | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 23.35             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 23.23             | N/A            | Pass    |
|                   | ODOK       | CN411-        | 00005             | 4050.5                        | RB1#24  | 23.48             | N/A            | Pass    |
|                   | QPSK       | 5MHz          | 26065             | 1852.5                        | RB12#0  | 23.13             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 23.42             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.19             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.36             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.62             | N/A            | Pass    |
|                   | 10 0004    | CN411-        | 00005             | 4050.5                        | RB1#24  | 22.41             | N/A            | Pass    |
|                   | 16-QAM     | 5MHz          | 26065             | 1852.5                        | RB12#0  | 22.42             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.30             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.19             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 23.23             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.36             | N/A            | Pass    |
|                   | ODOK       | CN411-        | 00005             | 1882.5                        | RB1#24  | 23.26             | N/A            | Pass    |
|                   | QPSK       | 5MHz          | 26365             | 1882.5                        | RB12#0  | 23.30             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.20             | N/A            | Pass    |
| LTE               |            |               |                   |                               | RB25#0  | 22.25             | N/A            | Pass    |
| Babd25            |            |               |                   |                               | RB1#0   | 22.09             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.03             | N/A            | Pass    |
|                   | 16-QAM     | 5MHz          | 26365             | 1882.5                        | RB1#24  | 22.09             | N/A            | Pass    |
|                   | 10-QAIVI   | SIVITZ        | 20303             | 1002.5                        | RB12#0  | 22.00             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 22.96             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.24             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 23.40             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 23.05             | N/A            | Pass    |
|                   | ODCK       | 5MHz          | 26665             | 1010 5                        | RB1#24  | 23.45             | N/A            | Pass    |
|                   | QPSK       | SIVITZ        | 26665             | 1912.5                        | RB12#0  | 23.14             | N/A            | Pass    |
|                   |            |               |                   |                               | RB12#11 | 23.10             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.36             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.47             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#12  | 22.06             | N/A            | Pass    |
|                   | 16 0 4 14  | ENAL I-       | 26665             | 1010 F                        | RB1#24  | 22.68             | N/A            | Pass    |
|                   | 16-QAM     | 5MHz          | 26665             | 1912.5                        | RB12#0  | 22.52             | N/A            | Pass    |
|                   |            |               |                   | _                             | RB12#11 | 22.16             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#0  | 22.11             | N/A            | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 23.41             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.85             | N/A            | Pass    |
|                   | ODOK       | 40141         | 00000             | 4055.0                        | RB1#49  | 23.38             | N/A            | Pass    |
|                   | QPSK       | 10MHz         | 26090             | 1855.0                        | RB25#0  | 22.86             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.35             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.13             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.14             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.14             | N/A            | Pass    |
|                   | 10 0 0 0 0 | 400411-       | 20000             | 4055.0                        | RB1#49  | 22.18             | N/A            | Pass    |
|                   | 16-QAM     | 10MHz         | 26090             | 1855.0                        | RB25#0  | 22.05             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.03             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.14             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 23.28             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.96             | N/A            | Pass    |
|                   | ODCK       | 400411-       | 00005             | 4000 5                        | RB1#49  | 23.20             | N/A            | Pass    |
|                   | QPSK       | 10MHz         | 26365             | 1882.5                        | RB25#0  | 23.10             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.85             | N/A            | Pass    |
| LTE               |            |               |                   |                               | RB50#0  | 22.28             | N/A            | Pass    |
| Babd25            |            |               |                   |                               | RB1#0   | 22.64             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.56             | N/A            | Pass    |
|                   | 16-QAM     | 10MHz         | 26365             | 1882.5                        | RB1#49  | 22.53             | N/A            | Pass    |
|                   | 10-QAIVI   | TUIVITZ       | 20303             | 1002.5                        | RB25#0  | 22.16             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.13             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.09             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 23.41             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.63             | N/A            | Pass    |
|                   | QPSK       | 10MHz         | 26640             | 1910.0                        | RB1#49  | 23.39             | N/A            | Pass    |
|                   | QPSK       | TUIVITZ       | 20040             | 1910.0                        | RB25#0  | 22.52             | N/A            | Pass    |
|                   |            |               |                   |                               | RB25#24 | 22.35             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#0  | 22.19             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.25             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#24  | 22.00             | N/A            | Pass    |
|                   | 16 0 4 14  | 101411-       | 26640             | 1010.0                        | RB1#49  | 22.32             | N/A            | Pass    |
|                   | 16-QAM     | 10MHz         | 26640             | 1910.0                        | RB25#0  | 22.30             | N/A            | Pass    |
|                   |            |               |                   | RB25#24                       | 22.02   | N/A               | Pass           |         |
|                   |            |               |                   |                               | RB50#0  | 22.09             | N/A            | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 23.20             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#37  | 23.32             | N/A            | Pass    |
|                   | ODOK       | 451411        | 00445             | 4057.5                        | RB1#74  | 23.02             | N/A            | Pass    |
|                   | QPSK       | 15MHz         | 26115             | 1857.5                        | RB36#0  | 23.15             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#37 | 23.28             | N/A            | Pass    |
|                   |            |               |                   |                               | RB75#0  | 22.65             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.56             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#37  | 22.63             | N/A            | Pass    |
|                   | 16-QAM     | 15MHz         | 26115             | 1857.5                        | RB1#74  | 22.35             | N/A            | Pass    |
|                   | 16-QAM     | TOIVIE        | 20115             | 1007.0                        | RB36#0  | 22.17             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#37 | 22.10             | N/A            | Pass    |
|                   |            |               |                   |                               | RB75#0  | 22.95             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.30             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#37  | 22.93             | N/A            | Pass    |
|                   | ODCK       | 15MHz         | 00005             | 4000 5                        | RB1#74  | 23.32             | N/A            | Pass    |
|                   | QPSK       | IOIVIDZ       | 26365             | 1882.5                        | RB36#0  | 22.85             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#37 | 23.28             | N/A            | Pass    |
| LTE               |            |               |                   |                               | RB75#0  | 22.16             | N/A            | Pass    |
| Babd25            |            |               |                   |                               | RB1#0   | 22.17             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#37  | 22.10             | N/A            | Pass    |
|                   | 16-QAM     | 15MHz         | 26365             | 1882.5                        | RB1#74  | 22.30             | N/A            | Pass    |
|                   | 10-QAIVI   | TOIVIE        | 20303             | 1002.5                        | RB36#0  | 22.16             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#37 | 22.15             | N/A            | Pass    |
|                   |            |               |                   |                               | RB75#0  | 22.42             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.19             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#37  | 22.52             | N/A            | Pass    |
|                   | QPSK       | 15MHz         | 26615             | 1907.5                        | RB1#74  | 22.63             | N/A            | Pass    |
|                   | QFSK       | TOMINZ        | 20015             | 1907.5                        | RB36#0  | 22.45             | N/A            | Pass    |
|                   |            |               |                   |                               | RB36#37 | 22.58             | N/A            | Pass    |
|                   |            |               |                   |                               | RB75#0  | 22.15             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.32             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#37  | 22.52             | N/A            | Pass    |
|                   | 16 0 4 14  | 15MHz         | 26615             | 1907.5                        | RB1#74  | 22.42             | N/A            | Pass    |
|                   | 16-QAM     | TOIVIDZ       | 20015             | 1907.5                        | RB36#0  | 22.36             | N/A            | Pass    |
|                   |            |               |                   | RB36#37                       | 22.42   | N/A               | Pass           |         |
|                   |            |               |                   |                               | RB75#0  | 22.06             | N/A            | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 23.39             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#49  | 23.25             | N/A            | Pass    |
|                   | ODOK       | 001411-       | 00440             | 4000.0                        | RB1#99  | 23.25             | N/A            | Pass    |
|                   | QPSK       | 20MHz         | 26140             | 1860.0                        | RB50#0  | 23.02             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#49 | 22.69             | N/A            | Pass    |
|                   |            |               |                   |                               | RB100#0 | 22.11             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.09             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#49  | 22.02             | N/A            | Pass    |
|                   | 10 0 0 0 0 | 001411-       | 00440             | 4000.0                        | RB1#99  | 22.09             | N/A            | Pass    |
|                   | 16-QAM     | 20MHz         | 26140             | 1860.0                        | RB50#0  | 22.00             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#49 | 22.96             | N/A            | Pass    |
|                   |            |               |                   |                               | RB100#0 | 22.19             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 23.39             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#49  | 23.02             | N/A            | Pass    |
|                   | ODCK       | 001411-       | 00005             | 1882.5                        | RB1#99  | 23.23             | N/A            | Pass    |
|                   | QPSK       | 20MHz         | 26365             | 1002.5                        | RB50#0  | 22.52             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#49 | 22.42             | N/A            | Pass    |
| LTE               |            |               |                   |                               | RB100#0 | 22.06             | N/A            | Pass    |
| Babd25            |            |               |                   |                               | RB1#0   | 22.51             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#49  | 22.03             | N/A            | Pass    |
|                   | 16-QAM     | 20MHz         | 26365             | 1882.5                        | RB1#99  | 22.29             | N/A            | Pass    |
|                   | 10-QAIVI   | ZUIVITZ       | 20303             | 1002.5                        | RB50#0  | 22.10             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#49 | 22.06             | N/A            | Pass    |
|                   |            |               |                   |                               | RB100#0 | 22.09             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 23.25             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#49  | 22.15             | N/A            | Pass    |
|                   | ODCK       | 20MHz         | 26500             | 1005.0                        | RB1#99  | 23.35             | N/A            | Pass    |
|                   | QPSK       | ZUIVI⊓Z       | 26590             | 1905.0                        | RB50#0  | 22.43             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#49 | 22.63             | N/A            | Pass    |
|                   |            |               |                   |                               | RB100#0 | 22.14             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#0   | 22.20             | N/A            | Pass    |
|                   |            |               |                   |                               | RB1#49  | 22.68             | N/A            | Pass    |
|                   | 16 0 4 14  | 201411-       | 26500             | 1005.0                        | RB1#99  | 22.27             | N/A            | Pass    |
|                   | 16-QAM     | 20MHz         | 26590             | 1905.0                        | RB50#0  | 22.06             | N/A            | Pass    |
|                   |            |               |                   |                               | RB50#49 | 22.10             | N/A            | Pass    |
|                   |            |               |                   |                               | RB100#0 | 22.18             | N/A            | Pass    |



## APPENDIX B: TEST DATA FOR EFFECTIVE (ISOTROPIC) RADIATED POWER

| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | EIRP<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|---------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 25.53         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#12  | 25.54         | 33             | Pass    |
|                   | ODCK       | 5MHz          | 10605             | 10E0 E                        | RB1#24  | 25.59         | 33             | Pass    |
|                   | QPSK       | SIVIFIZ       | 18625             | 1852.5                        | RB12#0  | 25.34         | 33             | Pass    |
|                   |            |               |                   |                               | RB12#11 | 25.29         | 33             | Pass    |
|                   |            |               |                   |                               | RB25#0  | 24.35         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 24.35         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#12  | 24.35         | 33             | Pass    |
|                   | 16 0 1 1   | 5MHz          | 10605             | 10E0 E                        | RB1#24  | 24.47         | 33             | Pass    |
|                   | 16-QAM     | SIVIE         | 18625             | 1852.5                        | RB12#0  | 24.54         | 33             | Pass    |
|                   |            |               |                   |                               | RB12#11 | 24.50         | 33             | Pass    |
|                   |            |               |                   |                               | RB25#0  | 24.52         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 25.51         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#12  | 25.16         | 33             | Pass    |
|                   | QPSK       | 5MHz          | 10000             | 1880.0                        | RB1#24  | 25.33         | 33             | Pass    |
|                   | QPSK       | SIVIE         | 18900             | 1000.0                        | RB12#0  | 24.79         | 33             | Pass    |
|                   |            |               |                   |                               | RB12#11 | 24.64         | 33             | Pass    |
| LTE               |            |               |                   |                               | RB25#0  | 24.39         | 33             | Pass    |
| Babd2             |            |               |                   |                               | RB1#0   | 24.70         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#12  | 24.39         | 33             | Pass    |
|                   | 16-QAM     | 5MHz          | 18900             | 1880.0                        | RB1#24  | 24.42         | 33             | Pass    |
|                   | 10-QAIVI   | SIVIFIZ       | 10900             | 1000.0                        | RB12#0  | 24.69         | 33             | Pass    |
|                   |            |               |                   |                               | RB12#11 | 24.64         | 33             | Pass    |
|                   |            |               |                   |                               | RB25#0  | 24.65         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 25.40         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#12  | 24.48         | 33             | Pass    |
|                   | QPSK       | 5MHz          | 19175             | 1907.5                        | RB1#24  | 25.55         | 33             | Pass    |
|                   | QFSK       | SIVITZ        | 19175             | 1907.5                        | RB12#0  | 24.35         | 33             | Pass    |
|                   |            |               |                   |                               | RB12#11 | 24.59         | 33             | Pass    |
|                   |            |               |                   |                               | RB25#0  | 25.31         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 24.48         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#12  | 24.44         | 33             | Pass    |
|                   | 16-QAM     | 5MHz          | 19175             | 1907.5                        | RB1#24  | 24.49         | 33             | Pass    |
|                   | 10-QAIVI   | JIVII IZ      | 19175             | 1907.5                        | RB12#0  | 24.54         | 33             | Pass    |
|                   |            |               |                   |                               | RB12#11 | 24.64         | 33             | Pass    |
|                   |            |               |                   |                               | RB25#0  | 24.36         | 33             | Pass    |

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| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | EIRP<br>[dBm] | Limit<br>(dBm) | Verdict                                 |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|---------------|----------------|---|
|                   |            |               |                   |                               | RB1#0   | 25.57         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB1#24  | 25.49         | 33             | Pass                                    |
|                   | ODOK       | 40041.1-      | 40050             | 4055.0                        | RB1#49  | 25.70         | 33             | Pass                                    |
|                   | QPSK       | 10MHz         | 18650             | 1855.0                        | RB25#0  | 25.19         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB25#24 | 24.80         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB50#0  | 25.31         | 33             | Pass Pass Pass Pass Pass Pass Pass Pass |
|                   |            |               |                   |                               | RB1#0   | 25.27         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB1#24  | 24.75         | 33             | Pass                                    |
|                   | 16 OAM     | 10MHz         | 10650             | 1055.0                        | RB1#49  | 25.42         | 33             | Pass                                    |
|                   | 16-QAM     | TUIVITZ       | 10000             | 1855.0                        | RB25#0  | 25.92         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB25#24 | 25.75         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB50#0  | 25.34         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB1#0   | 25.53         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB1#24  | 25.35         | 33             | Pass                                    |
|                   | ODCK       | 400411-       | 40000             | 1880.0                        | RB1#49  | 25.46         | 33             | Pass                                    |
|                   | QPSK       | 10MHz         | 18900             | 1880.0                        | RB25#0  | 25.14         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB25#24 | 25.53         | 33             | Pass                                    |
| LTE               |            |               |                   |                               | RB50#0  | 25.29         | 33             | Pass                                    |
| Babd2             |            |               |                   |                               | RB1#0   | 24.92         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB1#24  | 24.47         | 33             | Pass                                    |
|                   | 16-QAM     | 10MHz         | 18900             | 1880.0                        | RB1#49  | 24.83         | 33             | Pass                                    |
|                   | 10-QAIVI   | TUIVITZ       | 10900             | 1000.0                        | RB25#0  | 24.84         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB25#24 | 24.54         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB50#0  | 24.47         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB1#0   | 25.46         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB1#24  | 25.52         | 33             | Pass                                    |
|                   | QPSK       | 10MHz         | 10150             | 1005.0                        | RB1#49  | 25.72         | 33             | Pass                                    |
|                   | QP5K       | TUIVITZ       | 19150             | 1905.0                        | RB25#0  | 25.76         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB25#24 | 24.75         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB50#0  | 25.30         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB1#0   | 24.38         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB1#24  | 24.43         | 33             | Pass                                    |
|                   | 16 0 4 14  | 101411-       | 10150             | 1005.0                        | RB1#49  | 24.65         | 33             | Pass                                    |
|                   | 16-QAM     | 10MHz         | 19150             | 1905.0                        | RB25#0  | 24.60         | 33             | Pass                                    |
|                   |            |               |                   |                               | RB25#24 | 24.48         | 33             | Pass Pass Pass Pass Pass Pass Pass Pass |
|                   |            |               |                   |                               | RB50#0  | 24.59         | 33             | Pass                                    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | EIRP<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|---------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 25.56         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#37  | 25.29         | 33             | Pass    |
|                   | ODOK       | 450411-       | 40075             | 4057.5                        | RB1#74  | 25.74         | 33             | Pass    |
|                   | QPSK       | 15MHz         | 18675             | 1857.5                        | RB36#0  | 24.75         | 33             | Pass    |
|                   |            |               |                   |                               | RB36#37 | 25.24         | 33             | Pass    |
|                   |            |               |                   |                               | RB75#0  | 25.30         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 24.38         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#37  | 24.48         | 33             | Pass    |
|                   | 16-QAM     | 15MHz         | 18675             | 1857.5                        | RB1#74  | 24.67         | 33             | Pass    |
|                   | 10-QAIVI   | TOMITZ        | 10075             | 1007.0                        | RB36#0  | 24.72         | 33             | Pass    |
|                   |            |               |                   |                               | RB36#37 | 24.76         | 33             | Pass    |
|                   |            |               |                   |                               | RB75#0  | 24.53         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 25.52         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#37  | 25.20         | 33             | Pass    |
|                   | QPSK       | 15MHz         | 18900             | 1880.0                        | RB1#74  | 25.54         | 33             | Pass    |
|                   | QPSK       | TOMITZ        | 10900             | 1000.0                        | RB36#0  | 24.76         | 33             | Pass    |
|                   |            |               |                   |                               | RB36#37 | 24.50         | 33             | Pass    |
| LTE               |            |               |                   |                               | RB75#0  | 24.43         | 33             | Pass    |
| Babd2             |            |               |                   |                               | RB1#0   | 24.86         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#37  | 24.84         | 33             | Pass    |
|                   | 16-QAM     | 15MHz         | 18900             | 1880.0                        | RB1#74  | 24.76         | 33             | Pass    |
|                   | 10-QAIVI   | TOMITIZ       | 10900             | 1000.0                        | RB36#0  | 24.75         | 33             | Pass    |
|                   |            |               |                   |                               | RB36#37 | 24.70         | 33             | Pass    |
|                   |            |               |                   |                               | RB75#0  | 24.49         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 25.53         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#37  | 25.34         | 33             | Pass    |
|                   | QPSK       | 15MHz         | 19125             | 1902.5                        | RB1#74  | 25.69         | 33             | Pass    |
|                   | QFSK       | 1 JIVII 12    | 19125             | 1902.5                        | RB36#0  | 24.76         | 33             | Pass    |
|                   |            |               |                   |                               | RB36#37 | 24.70         | 33             | Pass    |
|                   |            |               |                   |                               | RB75#0  | 25.23         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 24.52         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#37  | 24.49         | 33             | Pass    |
|                   | 16-QAM     | 15MH-         | 10125             | 1002.5                        | RB1#74  | 24.52         | 33             | Pass    |
|                   | 10-QAIVI   | TOWITZ        | 15MHz   19125     | 1 141175                      | RB36#0  | 24.44         | 33             | Pass    |
|                   |            |               |                   |                               | RB36#37 | 24.60         | 33             | Pass    |
|                   |            |               |                   |                               | RB75#0  | 24.65         | 33             | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | EIRP<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|---------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 25.54         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#49  | 25.52         | 33             | Pass    |
|                   | ODCK       | 001411-       | 40700             | 1000.0                        | RB1#99  | 25.49         | 33             | Pass    |
|                   | QPSK       | 20MHz         | 18700             | 1860.0                        | RB50#0  | 24.99         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#49 | 25.46         | 33             | Pass    |
|                   |            |               |                   |                               | RB100#0 | 25.38         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 24.81         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#49  | 24.69         | 33             | Pass    |
|                   | 16 OAM     | 20MHz         | 18700             | 1860.0                        | RB1#99  | 24.49         | 33             | Pass    |
|                   | 16-QAM     | ZUIVI⊓Z       | 16700             | 1000.0                        | RB50#0  | 24.87         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#49 | 25.14         | 33             | Pass    |
|                   |            |               |                   |                               | RB100#0 | 25.31         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0   |               | Pass           |         |
|                   |            |               |                   |                               | RB1#49  | 25.30         | 33             | Pass    |
|                   | ODCK       | 001411-       | 40000             | 1880.0                        | RB1#99  | 25.54         | 33             | Pass    |
|                   | QPSK       | 20MHz         | 18900             | 1880.0                        | RB50#0  | 24.92         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#49 | 25.49         | 33             | Pass    |
| LTE               |            |               |                   |                               | RB100#0 | 25.52         | 33             | Pass    |
| Babd2             |            |               |                   |                               | RB1#0   | 25.61         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#49  | 25.60         | 33             | Pass    |
|                   | 16-QAM     | 20MHz         | 18900             | 1880.0                        | RB1#99  | 25.36         | 33             | Pass    |
|                   | 10-QAIVI   | ZUIVITZ       | 10900             | 1000.0                        | RB50#0  | 25.49         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#49 | 25.50         | 33             | Pass    |
|                   |            |               |                   |                               | RB100#0 | 25.52         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 25.81         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#49  | 25.36         | 33             | Pass    |
|                   | ODCK       | 20MHz         | 10100             | 1000.0                        | RB1#99  | 26.06         | 33             | Pass    |
|                   | QPSK       | ZUIVI⊓Z       | 19100             | 1900.0                        | RB50#0  | 25.37         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#49 | 25.86         | 33             | Pass    |
|                   |            |               |                   |                               | RB100#0 | 25.48         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 25.56         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#49  | 25.39         | 33             | Pass    |
|                   | 16 0 4 14  | 201411-       | 10100             | 1000.0                        | RB1#99  | 25.80         | 33             | Pass    |
|                   | 16-QAM     | 20MHz         | 19100             | 1900.0                        | RB50#0  | 25.29         | 33             | Pass    |
|                   |            |               |                   | _                             | RB50#49 | 25.24         | 33             | Pass    |
|                   |            |               |                   |                               | RB100#0 | 25.30         | 33             | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number             | Channel<br>Frequency<br>(MHz) | Test RB | EIRP<br>[dBm] | Limit<br>(dBm)  | Verdict |
|-------------------|------------|---------------|-------------------------------|-------------------------------|---------|---------------|---|---------|
|                   |            |               |                               |                               | RB1#0   | 25.29         | 30  | Pass    |
|                   |            |               |                               |                               | RB1#12  | 25.23         | 30  | Pass    |
|                   | ODOK       | CN411-        | 40075                         | 4740.5                        | RB1#24  | 25.17         | 30  | Pass    |
|                   | QPSK       | 5MHz          | 19975                         | 1712.5                        | RB12#0  | 24.94         | 30  | Pass    |
|                   |            |               |                               |                               | RB12#11 | 24.51         | 30  | Pass    |
|                   |            |               |                               |                               | RB25#0  | 24.20         | 30  | Pass    |
|                   |            |               |                               |                               | RB1#0   | 24.26         | 30  | Pass    |
|                   |            |               |                               |                               | RB1#12  | 24.09         | 30  | Pass    |
|                   | 16 0 14    | ENAL I-       | 10075                         | 1712.5                        | RB1#24  | 24.23         | 30  | Pass    |
|                   | 16-QAM     | 5MHz          | 19975                         | 17 12.5                       | RB12#0  | 24.08         | 30  | Pass    |
|                   |            |               |                               |                               | RB12#11 | 23.98         | 30  | Pass    |
|                   |            |               |                               |                               | RB25#0  | 24.08         | 30  | Pass    |
|                   |            |               |                               |                               | RB1#0   | 25.21         | 30  | Pass    |
|                   |            |               |                               |                               | RB1#12  | 25.05         | 30  | Pass    |
|                   | ODOK       | CN411-        | 20475                         | 4700 5                        | RB1#24  | 25.28         | 30  | Pass    |
|                   | QPSK       | 5MHz          | 20175                         | 1732.5                        | RB12#0  | 24.86         | 30  | Pass    |
|                   |            |               |                               |                               | RB12#11 | 24.75         | 30  | Pass    |
| LTE               |            |               |                               |                               | RB25#0  | 24.61         | 30  | Pass    |
| Babd4             |            |               |                               |                               | RB1#0   | 23.97         | 30  | Pass    |
|                   |            |               | 19975 19975 20175 20175 20375 |                               | RB1#12  | 23.94         | 30  | Pass    |
|                   | 16-QAM     | 5MHz          | 20175                         | 1732.5                        | RB1#24  | 24.03         | 30  | Pass    |
|                   | 10-QAIVI   | SIVITZ        | 20175                         | 1732.5                        | RB12#0  | 24.08         | 30  | Pass    |
|                   |            |               |                               |                               | RB12#11 | 24.11         | 30  | Pass    |
|                   |            |               |                               |                               | RB25#0  | 24.23         | 30  | Pass    |
|                   |            |               |                               |                               | RB1#0   | 25.32         | 30  | Pass    |
|                   |            |               |                               |                               | RB1#12  | 25.08         | 30  | Pass    |
|                   | ODCK       | 5MHz          | 20275                         | 1750 F                        | RB1#24  | 25.33         | 30  | Pass    |
|                   | QPSK       | SIVITZ        | 20375                         | 1752.5                        | RB12#0  | 24.89         | 30  | Pass    |
|                   |            |               |                               |                               | RB12#11 | 24.51         | 30  | Pass    |
|                   |            |               |                               |                               | RB25#0  | 24.38         | 30  | Pass    |
|                   |            |               |                               |                               | RB1#0   | 24.67         | 30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>3 | Pass    |
|                   |            |               |                               |                               | RB1#12  | 24.53         | 30  | Pass    |
|                   | 16 0 4 14  | ENAL I—       | 20275                         | 1750.5                        | RB1#24  | 24.49         | 30  | Pass    |
|                   | 16-QAM     | 5MHz          | 20375                         | 1752.5                        | RB12#0  | 24.41         |   | Pass    |
|                   |            |               | _                             | RB12#11                       | 24.62   | 30            | Pass  |         |
|                   |            |               |                               |                               | RB25#0  | 24.10         | 30  | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | EIRP<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|---------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 25.13         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#24  | 24.79         | 30             | Pass    |
|                   | ODCK       | 400411-       | 20000             | 4745.0                        | RB1#49  | 25.29         | 30             | Pass    |
|                   | QPSK       | 10MHz         | 20000             | 1715.0                        | RB25#0  | 24.68         | 30             | Pass    |
|                   |            |               |                   |                               | RB25#24 | 24.62         | 30             | Pass    |
|                   |            |               |                   |                               | RB50#0  | 24.87         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 24.29         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#24  | 24.23         | 30             | Pass    |
|                   | 16 0 1 1   | 101411-       | 20000             | 1715.0                        | RB1#49  | 23.96         | 30             | Pass    |
|                   | 16-QAM     | 10MHz         | 20000             | 1715.0                        | RB25#0  | 24.13         | 30             | Pass    |
|                   |            |               |                   |                               | RB25#24 | 24.07         | 30             | Pass    |
|                   |            |               |                   |                               | RB50#0  | 24.18         | 30             | Pass    |
|                   |            |               |                   | RB1#0 25.1                    | 25.19   | 30            | Pass           |         |
|                   |            |               |                   |                               | RB1#24  | 25.12         | 30             | Pass    |
|                   | ODCK       | 400411-       | 20475             | 4700 5                        | RB1#49  | 25.05         | 30             | Pass    |
|                   | QPSK       | 10MHz         | 20175             | 1732.5                        | RB25#0  | 25.41         | 30             | Pass    |
|                   |            |               |                   |                               | RB25#24 | 24.79         | 30             | Pass    |
| LTE               |            |               |                   |                               | RB50#0  | 24.91         | 30             | Pass    |
| Babd4             |            |               |                   |                               | RB1#0   | 24.34         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#24  | 24.06         | 30             | Pass    |
|                   | 16-QAM     | 10MHz         | 20175             | 1732.5                        | RB1#49  | 24.39         | 30             | Pass    |
|                   | 10-QAIVI   | TUIVITZ       | 20175             | 1732.5                        | RB25#0  | 24.11         | 30             | Pass    |
|                   |            |               |                   |                               | RB25#24 | 24.09         | 30             | Pass    |
|                   |            |               |                   |                               | RB50#0  | 24.33         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 25.19         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#24  | 24.89         | 30             | Pass    |
|                   | QPSK       | 10MHz         | 20250             | 1750.0                        | RB1#49  | 24.49         | 30             | Pass    |
|                   | QPSK       | TUIVITZ       | 20350             | 1750.0                        | RB25#0  | 25.14         | 30             | Pass    |
|                   |            |               |                   |                               | RB25#24 | 24.34         | 30             | Pass    |
|                   |            |               |                   |                               | RB50#0  | 24.14         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 24.28         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#24  | 23.98         | 30             | Pass    |
|                   | 16 0 4 14  | 101411-       | 20250             | 1750.0                        | RB1#49  | 24.21         | 30             | Pass    |
|                   | 16-QAM     | 10MHz         | 20350             | 1750.0                        | RB25#0  | 24.06         | 30             | Pass    |
|                   |            |               |                   | _                             | RB25#24 | 24.24         | 30             | Pass    |
|                   |            |               |                   |                               | RB50#0  | 24.29         | 30             | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | EIRP<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|---------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 25.14         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#37  | 24.98         | 30             | Pass    |
|                   | ODCK       | 4 EN AL I-    | 20025             | 4747 5                        | RB1#74  | 25.10         | 30             | Pass    |
|                   | QPSK       | 15MHz         | 20025             | 1717.5                        | RB36#0  | 24.07         | 30             | Pass    |
|                   |            |               |                   |                               | RB36#37 | 24.35         | 30             | Pass    |
|                   |            |               |                   |                               | RB75#0  | 24.23         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 24.12         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#37  | 24.55         | 30             | Pass    |
|                   | 16 OAM     | 15MHz         | 20025             | 1717.5                        | RB1#74  | 24.13         | 30             | Pass    |
|                   | 16-QAM     | TOIVITZ       | 20025             | 1717.5                        | RB36#0  | 24.09         | 30             | Pass    |
|                   |            |               |                   |                               | RB36#37 | 24.07         | 30             | Pass    |
|                   |            |               |                   |                               | RB75#0  | 24.08         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 25.11         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#37  | 25.05         | 30             | Pass    |
|                   | ODCK       | 15MHz         | 20475             | 4700 F                        | RB1#74  | 25.27         | 30             | Pass    |
|                   | QPSK       | TOIVIEZ       | 20175             | 1732.5                        | RB36#0  | 24.56         | 30             | Pass    |
|                   |            |               |                   |                               | RB36#37 | 24.09         | 30             | Pass    |
| LTE               |            |               |                   |                               | RB75#0  | 24.87         | 30             | Pass    |
| Babd4             |            |               |                   |                               | RB1#0   | 24.29         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#37  | 24.34         | 30             | Pass    |
|                   | 16-QAM     | 15MHz         | 20175             | 1732.5                        | RB1#74  | 24.50         | 30             | Pass    |
|                   | 10-QAIVI   | TOIVITZ       | 20175             | 1732.5                        | RB36#0  | 24.03         | 30             | Pass    |
|                   |            |               |                   |                               | RB36#37 | 24.09         | 30             | Pass    |
|                   |            |               |                   |                               | RB75#0  | 24.07         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 25.32         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#37  | 25.29         | 30             | Pass    |
|                   | QPSK       | 15MHz         | 20225             | 1717 E                        | RB1#74  | 25.22         | 30             | Pass    |
|                   | QPSK       | TOIVITZ       | 20325             | 1747.5                        | RB36#0  | 24.62         | 30             | Pass    |
|                   |            |               |                   |                               | RB36#37 | 24.49         | 30             | Pass    |
|                   |            |               |                   |                               | RB75#0  | 25.07         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 24.22         | 30             | Pass    |
|                   |            |               |                   |                               | RB1#37  | 24.33         | 30             | Pass    |
|                   | 16 0 4 14  | 151411-       | 20225             | 1747 E                        | RB1#74  | 24.13         | 30             | Pass    |
|                   | 16-QAM     | 15MHz         | 20325             | 1747.5                        | RB36#0  | 23.95         | 30             | Pass    |
|                   |            |               |                   | _                             | RB36#37 | 24.39         | 30             | Pass    |
|                   |            |               |                   |                               | RB75#0  | 24.09         | 30             | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number             | Channel<br>Frequency<br>(MHz) | Test RB | EIRP<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------------------|-------------------------------|---------|---------------|----------------|---------|
|                   |            |               |                               |                               | RB1#0   | 25.15         | 30             | Pass    |
|                   |            |               |                               |                               | RB1#49  | 25.08         | 30             | Pass    |
|                   | ODCK       | 001411-       | 20050                         | 4700.0                        | RB1#99  | 25.23         | 30             | Pass    |
|                   | QPSK       | 20MHz         | 20050                         | 1720.0                        | RB50#0  | 25.19         | 30             | Pass    |
|                   |            |               |                               |                               | RB50#49 | 25.11         | 30             | Pass    |
|                   |            |               |                               |                               | RB100#0 | 25.07         | 30             | Pass    |
|                   |            |               |                               |                               | RB1#0   | 24.29         | 30             | Pass    |
|                   |            |               |                               |                               | RB1#49  | 24.13         | 30             | Pass    |
|                   | 10 0 0 0 0 | 001411-       | 20050                         | 4700.0                        | RB1#99  | 24.08         | 30             | Pass    |
|                   | 16-QAM     | 20MHz         | 20050                         | 1720.0                        | RB50#0  | 24.12         | 30             | Pass    |
|                   |            |               |                               |                               | RB50#49 | 24.07         | 30             | Pass    |
|                   |            |               | 20050 20050 20175 20175 20300 |                               | RB100#0 | 24.29         | 30             | Pass    |
|                   |            |               |                               | RB1;                          | RB1#0   | 24.96         | 30             | Pass    |
|                   |            |               |                               |                               | RB1#49  | 24.89         | 30             | Pass    |
|                   | ODCK       | 001411-       | 20475                         | 4700 F                        | RB1#99  | 25.17         | 30             | Pass    |
|                   | QPSK       | 20MHz         | 20175                         | 1732.5                        | RB50#0  | 24.95         | 30             | Pass    |
|                   |            |               |                               |                               | RB50#49 | 24.58         | 30             | Pass    |
| LTE               |            |               |                               |                               | RB100#0 | 24.38         | 30             | Pass    |
| Babd4             |            |               |                               |                               | RB1#0   | 24.05         | 30             | Pass    |
|                   |            |               |                               |                               | RB1#49  | 24.11         | 30             | Pass    |
|                   | 16-QAM     | 20MHz         | 20175                         | 1732.5                        | RB1#99  | 24.34         | 30             | Pass    |
|                   | 10-QAIVI   | ZUIVITZ       | 20175                         | 1732.5                        | RB50#0  | 24.18         | 30             | Pass    |
|                   |            |               |                               |                               | RB50#49 | 24.23         | 30             | Pass    |
|                   |            |               |                               |                               | RB100#0 | 24.18         | 30             | Pass    |
|                   |            |               |                               |                               | RB1#0   | 25.23         | 30             | Pass    |
|                   |            |               |                               |                               | RB1#49  | 25.13         | 30             | Pass    |
|                   | ODCK       | 201411-       | 20200                         | 1745.0                        | RB1#99  | 25.11         | 30             | Pass    |
|                   | QPSK       | 20MHz         | 20300                         | 1745.0                        | RB50#0  | 24.98         | 30             | Pass    |
|                   |            |               |                               |                               | RB50#49 | 25.07         | 30             | Pass    |
|                   |            |               |                               |                               | RB100#0 | 25.03         | 30             | Pass    |
|                   |            |               |                               |                               | RB1#0   | 24.24         | 30             | Pass    |
|                   |            |               |                               |                               | RB1#49  | 24.29         | 30             | Pass    |
|                   | 16 0 1 1   | 201411-       | 20200                         | 1745.0                        | RB1#99  | 24.25         | 30             | Pass    |
|                   | 16-QAM     | 20MHz         | 20300                         | 1745.0                        | RB50#0  | 23.98         | 30             | Pass    |
|                   |            |               |                               | _                             | RB50#49 | 24.38         | 30             | Pass    |
|                   |            |               |                               |                               | RB100#0 | 24.07         | 30             | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | ERP<br>[dBm] | Limit<br>(dBm) | Verdict                                 |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|--------------|----------------|---|
|                   |            |               |                   |                               | RB1#0   | 17.12        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB1#12  | 16.98        | 38.5           | Pass                                    |
|                   | ODOK       | - NALI-       | 20425             | 000 5                         | RB1#24  | 17.15        | 38.5           | Pass                                    |
|                   | QPSK       | 5MHz          | 20425             | 826.5                         | RB12#0  | 16.57        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB12#11 | 16.78        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB25#0  | 17.03        | 38.5           | Pass Pass Pass Pass Pass Pass Pass Pass |
|                   |            |               |                   |                               | RB1#0   | 17.12        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB1#12  | 16.78        | 38.5           | Pass                                    |
|                   | 16-QAM     | 5MHz          | 20425             | 826.5                         | RB1#24  | 17.11        | 38.5           | Pass                                    |
|                   | 10-QAIVI   | SIVITZ        | 20425             | 020.5                         | RB12#0  | 16.72        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB12#11 | 16.98        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB25#0  | 16.95        | 38.5           | Pass                                    |
|                   |            |               |                   | RB1#0                         | 17.23   | 38.5         | Pass           |   |
|                   |            |               |                   |                               | RB1#12  | 16.54        | 38.5           | Pass                                    |
|                   | ODCK       | ENAL I-       | 20525             | 836.5                         | RB1#24  | 17.16        | 38.5           | Pass                                    |
|                   | QPSK       | 5MHz          | 20525             | 030.3                         | RB12#0  | 16.65        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB12#11 | 16.94        | 38.5           | Pass                                    |
| LTE               |            |               |                   |                               | RB25#0  | 16.95        | 38.5           | Pass                                    |
| Babd5             |            |               |                   |                               | RB1#0   | 17.05        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB1#12  | 17.00        | 38.5           | Pass                                    |
|                   | 16-QAM     | 5MHz          | 20525             | 836.5                         | RB1#24  | 16.94        | 38.5           | Pass                                    |
|                   | 10-QAIVI   | SIVIFIZ       | 20323             | 030.3                         | RB12#0  | 16.67        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB12#11 | 16.78        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB25#0  | 16.69        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB1#0   | 17.36        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB1#12  | 17.00        | 38.5           | Pass                                    |
|                   | QPSK       | 5MHz          | 20625             | 846.5                         | RB1#24  | 17.13        | 38.5           | Pass                                    |
|                   | QPSK       | SIVITZ        | 20025             | 040.5                         | RB12#0  | 16.56        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB12#11 | 16.96        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB25#0  | 17.10        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB1#0   | 16.82        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB1#12  | 16.87        | 38.5           | Pass                                    |
|                   | 16-QAM     | 5MHz          | 20625             | 946 5                         | RB1#24  | 16.61        | 38.5           | Pass                                    |
|                   | 10-QAIVI   | SIVITZ        | 20625             | X4n h                         | RB12#0  | 16.98        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB12#11 | 16.98        | 38.5           | Pass                                    |
|                   |            |               |                   |                               | RB25#0  | 17.00        | 38.5           | Pass                                    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | ERP<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|--------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 17.08        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB1#24  | 16.95        | 38.5           | Pass    |
|                   | ODOK       | 401411        | 00.450            | 000.0                         | RB1#49  | 17.15        | 38.5           | Pass    |
|                   | QPSK       | 10MHz         | 20450             | 829.0                         | RB25#0  | 16.57        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB25#24 | 16.58        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB50#0  | 17.03        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB1#0   | 16.93        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB1#24  | 16.57        | 38.5           | Pass    |
|                   | 16-QAM     | 10MHz         | 20450             | 829.0                         | RB1#49  | 16.92        | 38.5           | Pass    |
|                   | 16-QAM     | TUIVITZ       | 20450             | 029.0                         | RB25#0  | 16.57        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB25#24 | 16.48        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB50#0  | 16.95        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB1#0   | 17.07        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB1#24  | 16.77        | 38.5           | Pass    |
|                   | ODCK       | 10MHz         | 20525             | 836.5                         | RB1#49  | 17.33        | 38.5           | Pass    |
|                   | QPSK       | TUIVITZ       | 20525             | 030.5                         | RB25#0  | 16.57        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB25#24 | 17.04        | 38.5           | Pass    |
| LTE               |            |               |                   |                               | RB50#0  | 17.06        | 38.5           | Pass    |
| Babd5             |            |               |                   |                               | RB1#0   | 16.46        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB1#24  | 16.57        | 38.5           | Pass    |
|                   | 16-QAM     | 10MHz         | 20525             | 836.5                         | RB1#49  | 16.50        | 38.5           | Pass    |
|                   | 10-QAIVI   | TUIVITZ       | 20525             | 030.5                         | RB25#0  | 17.06        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB25#24 | 17.05        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB50#0  | 17.14        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB1#0   | 17.20        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB1#24  | 17.31        | 38.5           | Pass    |
|                   | QPSK       | 10MHz         | 20600             | 844.0                         | RB1#49  | 17.06        | 38.5           | Pass    |
|                   | QPSK       | TUIVITZ       | 20000             | 044.0                         | RB25#0  | 17.11        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB25#24 | 16.89        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB50#0  | 17.03        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB1#0   | 17.22        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB1#24  | 16.48        | 38.5           | Pass    |
|                   | 16 0 4 14  | 101411-       | 20600             | 844.0                         | RB1#49  | 17.06        | 38.5           | Pass    |
|                   | 16-QAM     | 10MHz         | 20600             | 844.0                         | RB25#0  | 17.05        | 38.5           | Pass    |
|                   |            |               |                   | -                             | RB25#24 | 16.44        | 38.5           | Pass    |
|                   |            |               |                   |                               | RB50#0  | 16.98        | 38.5           | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | ERP<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|--------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 17.71        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#12  | 16.86        | 34.8           | Pass    |
|                   | QPSK       | 5MHz          | 23205             | 779.5                         | RB1#24  | 17.50        | 34.8           | Pass    |
|                   | QPSK       | SIVITZ        | 23205             | 119.5                         | RB12#0  | 17.34        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB12#11 | 17.16        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB25#0  | 17.32        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#0   | 17.62        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#12  | 16.86        | 34.8           | Pass    |
|                   | 16-QAM     | 5MHz          | 23205             | 779.5                         | RB1#24  | 17.47        | 34.8           | Pass    |
|                   | 10-QAIVI   | SIVITZ        | 23205             | 119.5                         | RB12#0  | 17.27        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB12#11 | 17.16        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB25#0  | 17.29        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#0 1 | 17.41        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#12  | 17.34        | 34.8           | Pass    |
|                   | ODCK       | ENAL I-       | 22220             | 782.0                         | RB1#24  | 17.41        | 34.8           | Pass    |
|                   | QPSK       | 5MHz          | 23230             | 702.0                         | RB12#0  | 17.37        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB12#11 | 17.25        | 34.8           | Pass    |
| LTE               |            |               |                   |                               | RB25#0  | 17.47        | 34.8           | Pass    |
| Babd13            |            |               |                   |                               | RB1#0   | 17.21        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#12  | 17.23        | 34.8           | Pass    |
|                   | 16-QAM     | 5MHz          | 23230             | 782.0                         | RB1#24  | 17.41        | 34.8           | Pass    |
|                   | 10-QAIVI   | SIVITZ        | 23230             | 702.0                         | RB12#0  | 17.35        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB12#11 | 17.31        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB25#0  | 17.37        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#0   | 17.57        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#12  | 17.23        | 34.8           | Pass    |
|                   | ODOK       | - NALI-       | 00055             | 7045                          | RB1#24  | 17.54        | 34.8           | Pass    |
|                   | QPSK       | 5MHz          | 23255             | 784.5                         | RB12#0  | 16.97        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB12#11 | 16.86        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB25#0  | 17.36        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#0   | 16.79        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#12  | 16.74        | 34.8           | Pass    |
|                   | 10.0014    | CNALL-        | 00055             | 704.5                         | RB1#24  | 16.75        | 34.8           | Pass    |
|                   | 16-QAM     | 5MHz          | 23255             | 784.5                         | RB12#0  | 17.24        | 34.8           | Pass    |
|                   |            |               |                   | _                             | RB12#11 | 17.16        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB25#0  | 17.30        | 34.8           | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | ERP<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|--------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 17.37        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#24  | 17.06        | 34.8           | Pass    |
|                   | QPSK       | 10MHz         | 23230             | 782.0                         | RB1#49  | 17.44        | 34.8           | Pass    |
|                   | QPSK       | TUIVITZ       | 23230             | 702.0                         | RB25#0  | 16.86        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB25#24 | 17.66        | 34.8           | Pass    |
| LTE               |            |               |                   |                               | RB50#0  | 17.32        | 34.8           | Pass    |
| Babd13            |            |               |                   |                               | RB1#0   | 17.22        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#24  | 16.97        | 34.8           | Pass    |
|                   | 16-QAM     | 10MHz         | 23230             | 782.0                         | RB1#49  | 17.21        | 34.8           | Pass    |
|                   | 10-QAIVI   | TOMITIZ       | 23230             | 702.0                         | RB25#0  | 16.92        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB25#24 | 16.77        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB50#0  | 17.24        | 34.8           | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | ERP<br>[dBm] | Limit<br>(dBm)   | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|--------------|--|---------|
|                   |            |               |                   |                               | RB1#0   | 20.57        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB1#12  | 20.53        | 34.8   | Pass    |
|                   | ODCK       | CN411-        | 00755             | 700 5                         | RB1#24  | 20.37        | 34.8   | Pass    |
|                   | QPSK       | 5MHz          | 23755             | 706.5                         | RB12#0  | 19.85        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB12#11 | 19.91        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB25#0  | 20.51        | 34.8 P | Pass    |
|                   |            |               |                   |                               | RB1#0   | 20.68        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB1#12  | 20.48        | 34.8   | Pass    |
|                   | 10 0 0 0 0 | CN411-        | 00755             | 700 5                         | RB1#24  | 19.91        | 34.8   | Pass    |
|                   | 16-QAM     | 5MHz          | 23755             | 706.5                         | RB12#0  | 20.33        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB12#11 | 20.54        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB25#0  | 20.45        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB1#0   | 20.76        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB1#12  | 20.47        | 34.8   | Pass    |
|                   | ODOK       |               | 00700             | 740.0                         | RB1#24  | 20.82        | 34.8   | Pass    |
|                   | QPSK       | 5MHz          | 23790             | 710.0                         | RB12#0  | 20.70        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB12#11 | 20.48        | 34.8   | Pass    |
| LTE               |            |               |                   |                               | RB25#0  | 20.80        | 34.8   | Pass    |
| Babd17            |            |               |                   |                               | RB1#0   | 20.69        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB1#12  | 20.45        | 34.8   | Pass    |
|                   | 10 0 0 0 0 | CN411-        | 00700             | 710.0                         | RB1#24  | 20.53        | 34.8   | Pass    |
|                   | 16-QAM     | 5MHz          | 23790             | 7 10.0                        | RB12#0  | 20.43        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB12#11 | 19.98        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB25#0  | 20.72        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB1#0   | 20.58        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB1#12  | 20.47        | 34.8   | Pass    |
|                   | ODOK       |               | 00005             | 740.5                         | RB1#24  | 20.51        | 34.8   | Pass    |
|                   | QPSK       | 5MHz          | 23825             | 713.5                         | RB12#0  | 20.53        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB12#11 | 20.27        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB25#0  | 20.52        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB1#0   | 20.22        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB1#12  | 20.00        | 34.8   | Pass    |
|                   | 40.0004    | CN411-        | 02005             | 740.5                         | RB1#24  | 20.18        | 34.8   | Pass    |
|                   | 16-QAM     | 5MHz          | 23825             | 713.5                         | RB12#0  | 19.91        | 34.8   | Pass    |
|                   |            |               |                   | _                             | RB12#11 | 19.91        | 34.8   | Pass    |
|                   |            |               |                   |                               | RB25#0  | 20.51        | 34.8   | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | ERP<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|--------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 20.73        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#24  | 20.01        | 34.8           | Pass    |
|                   | ODCK       | 400411-       | 00700             | 709.0                         | RB1#49  | 20.70        | 34.8           | Pass    |
|                   | QPSK       | 10MHz         | 23780             | 709.0                         | RB25#0  | 20.35        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB25#24 | 20.28        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB50#0  | 20.27        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#0   | 20.11        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#24  | 20.01        | 34.8           | Pass    |
|                   | 16 OAM     | 101411-       | 23780             | 709.0                         | RB1#49  | 19.91        | 34.8           | Pass    |
|                   | 16-QAM     | 10MHz         | 23700             | 709.0                         | RB25#0  | 20.11        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB25#24 | 19.90        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB50#0  | 20.52        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#0   | 20.00        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#24  | 20.67        | 34.8           | Pass    |
|                   | ODCK       | 400411-       | 00700             | 740.0                         | RB1#49  | 20.70        | 34.8           | Pass    |
|                   | QPSK       | 10MHz         | 23790             | 710.0                         | RB25#0  | 20.46        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB25#24 | 20.48        | 34.8           | Pass    |
| LTE               |            |               |                   |                               | RB50#0  | 20.47        | 34.8           | Pass    |
| Babd17            |            |               |                   |                               | RB1#0   | 20.31        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#24  | 20.01        | 34.8           | Pass    |
|                   | 16-QAM     | 10MHz         | 23790             | 710.0                         | RB1#49  | 20.41        | 34.8           | Pass    |
|                   | 10-QAIVI   | TUIVITZ       | 23790             | 7 10.0                        | RB25#0  | 20.33        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB25#24 | 20.01        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB50#0  | 20.01        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#0   | 20.27        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#24  | 20.43        | 34.8           | Pass    |
|                   | ODCK       | 101411-       | 22000             | 711.0                         | RB1#49  | 20.44        | 34.8           | Pass    |
|                   | QPSK       | 10MHz         | 23800             | 711.0                         | RB25#0  | 20.43        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB25#24 | 20.54        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB50#0  | 20.21        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#0   | 20.39        | 34.8           | Pass    |
|                   |            |               |                   |                               | RB1#24  | 20.01        | 34.8           | Pass    |
|                   | 16 0 4 14  | 101411-       | 22000             | 711.0                         | RB1#49  | 20.21        | 34.8           | Pass    |
|                   | 16-QAM     | 10MHz         | 23800             | 711.0                         | RB25#0  | 20.27        | 34.8           | Pass    |
|                   |            |               | _                 | RB25#24                       | 19.91   | 34.8         | Pass           |         |
|                   |            |               |                   |                               | RB50#0  | 19.98        | 34.8           | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB        | EIRP<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|----------------|---------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0          | 25.58         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#12         | 25.46         | 33             | Pass    |
|                   | ODOK       | CN411-        | 20005             | 4050 F                        | RB1#24         | 25.71         | 33             | Pass    |
|                   | QPSK       | 5MHz          | 26065             | 1852.5                        | RB12#0         | 25.36         | 33             | Pass    |
|                   |            |               |                   |                               | RB12#11        | 25.65         | 33             | Pass    |
|                   |            |               |                   |                               | RB25#0         | 24.42         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0          | 24.59         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#12         | 24.85         | 33             | Pass    |
|                   | 16 0 14    | ENAL I-       | 26065             | 1852.5                        | RB1#24         | 24.64         | 33             | Pass    |
|                   | 16-QAM     | 5MHz          | 26065             | 1002.0                        | RB12#0         | 24.65         | 33             | Pass    |
|                   |            |               |                   |                               | RB12#11        | 24.53         | 33             | Pass    |
|                   |            |               |                   |                               | RB25#0         | 24.42         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0 25.46 33 | 33            | Pass           |         |
|                   |            |               |                   |                               | RB1#12         | 24.59         | 33             | Pass    |
|                   | ODOK       | CN411-        | 00005             | 1882.5                        | RB1#24         | 25.49         | 33             | Pass    |
|                   | QPSK       | 5MHz          | 20305             | 1882.5                        | RB12#0         | 25.53         | 33             | Pass    |
|                   |            |               |                   |                               | RB12#11        | 24.43         | 33             | Pass    |
| LTE               |            |               |                   |                               | RB25#0         | 24.48         | 33             | Pass    |
| Babd25            |            |               |                   |                               | RB1#0          | 24.32         | 33             | Pass    |
|                   |            |               | 26365<br>26365    |                               | RB1#12         | 24.26         | 33             | Pass    |
|                   | 16-QAM     | 5MHz          | 26265             | 1882.5                        | RB1#24         | 24.32         | 33             | Pass    |
|                   | 10-QAIVI   | SIVITZ        | 20303             | 1002.5                        | RB12#0         | 24.23         | 33             | Pass    |
|                   |            |               |                   |                               | RB12#11        | 25.19         | 33             | Pass    |
|                   |            |               |                   |                               | RB25#0         | 24.47         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0          | 25.63         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#12         | 25.28         | 33             | Pass    |
|                   | ODCK       | 5MHz          | 26665             | 1010 5                        | RB1#24         | 25.68         | 33             | Pass    |
|                   | QPSK       | SIVITZ        | 26665             | 1912.5                        | RB12#0         | 25.37         | 33             | Pass    |
|                   |            |               |                   |                               | RB12#11        | 25.33         | 33             | Pass    |
|                   |            |               |                   |                               | RB25#0         | 24.59         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0          | 24.70         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#12         | 24.29         | 33             | Pass    |
|                   | 16 0 4 14  | ENAL I-       | 26665             | 1012 F                        | RB1#24         | 24.91         | 33             | Pass    |
|                   | 16-QAM     | 5MHz          | 26665             | 1912.5                        | RB12#0         | 24.75         | 33             | Pass    |
|                   |            |               | _                 | RB12#11                       | 24.39          | 33            | Pass           |         |
|                   |            |               |                   |                               | RB25#0         | 24.34         | 33             | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | EIRP<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|---------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 25.64         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#24  | 25.08         | 33             | Pass    |
|                   | ODCK       | 400411-       | 26090             | 1055.0                        | RB1#49  | 25.61         | 33             | Pass    |
|                   | QPSK       | 10MHz         |                   | 1855.0                        | RB25#0  | 25.09         | 33             | Pass    |
|                   |            |               |                   |                               | RB25#24 | 24.58         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#0  | 24.36         | 33             | Pass    |
|                   |            |               |                   | 1855.0                        | RB1#0   | 24.37         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#24  | 24.37         | 33             | Pass    |
|                   | 16 OAM     | 101411-       | 26000             |                               | RB1#49  | 24.41         | 33             | Pass    |
|                   | 16-QAM     | 10MHz         | 26090             |                               | RB25#0  | 24.28         | 33             | Pass    |
|                   |            |               |                   |                               | RB25#24 | 24.26         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#0  | 24.37         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 25.51         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#24  | 25.19         | 33             | Pass    |
|                   | QPSK       | 10MHz         | 26365             | 1882.5                        | RB1#49  | 25.43         | 33             | Pass    |
|                   |            |               |                   |                               | RB25#0  | 25.33         | 33             | Pass    |
|                   |            |               |                   |                               | RB25#24 | 25.08         | 33             | Pass    |
| LTE               |            |               |                   |                               | RB50#0  | 24.51         | 33             | Pass    |
| Babd25            | 16-QAM     | 10MHz         | 26365             |                               | RB1#0   | 24.87         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#24  | 24.79         | 33             | Pass    |
|                   |            |               |                   | 1882.5                        | RB1#49  | 24.76         | 33             | Pass    |
|                   |            |               |                   | 1882.5                        | RB25#0  | 24.39         | 33             | Pass    |
|                   |            |               |                   |                               | RB25#24 | 24.36         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#0  | 24.32         | 33             | Pass    |
|                   | ODOK       | 10MHz         | 00040             | 4040.0                        | RB1#0   | 25.64         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#24  | 24.86         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#49  | 25.62         | 33             | Pass    |
|                   | QPSK       |               | 26640             | 1910.0                        | RB25#0  | 24.75         | 33             | Pass    |
|                   |            |               |                   |                               | RB25#24 | 24.58         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#0  | 24.42         | 33             | Pass    |
|                   |            |               | 26640             |                               | RB1#0   | 24.48         | 33             | Pass    |
|                   | 16-QAM     | 10MHz         |                   | 1910.0                        | RB1#24  | 24.23         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#49  | 24.55         | 33             | Pass    |
|                   |            |               |                   |                               | RB25#0  | 24.53         | 33             | Pass    |
|                   |            |               |                   |                               | RB25#24 | 24.25         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#0  | 24.32         | 33             | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | EIRP<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|---------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 25.43         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#37  | 25.55         | 33             | Pass    |
|                   | ODCK       | 4 E N AL I —  | 26115             | 4057.5                        | RB1#74  | 25.25         | 33             | Pass    |
|                   | QPSK       | 15MHz         |                   | 1857.5                        | RB36#0  | 25.38         | 33             | Pass    |
|                   |            |               |                   |                               | RB36#37 | 25.51         | 33             | Pass    |
|                   |            |               |                   |                               | RB75#0  | 24.88         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 24.79         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#37  | 24.86         | 33             | Pass    |
|                   | 16 OAM     | 15MHz         | 06445             | 1857.5                        | RB1#74  | 24.58         | 33             | Pass    |
|                   | 16-QAM     | TOIVITZ       | 26115             | 6.1651                        | RB36#0  | 24.40         | 33             | Pass    |
|                   |            |               |                   |                               | RB36#37 | 24.33         | 33             | Pass    |
|                   |            |               |                   |                               | RB75#0  | 25.18         | 33             | Pass    |
|                   |            |               | 26365             |                               | RB1#0   | 24.53         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#37  | 25.16         | 33             | Pass    |
|                   | QPSK       | 15MHz         |                   | 1882.5                        | RB1#74  | 25.55         | 33             | Pass    |
|                   |            |               |                   |                               | RB36#0  | 25.08         | 33             | Pass    |
|                   |            |               |                   |                               | RB36#37 | 25.51         | 33             | Pass    |
| LTE               |            |               |                   |                               | RB75#0  | 24.39         | 33             | Pass    |
| Babd25            | 16-QAM     | 15MHz         | 26365             |                               | RB1#0   | 24.40         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#37  | 24.33         | 33             | Pass    |
|                   |            |               |                   | 1882.5                        | RB1#74  | 24.53         | 33             | Pass    |
|                   |            |               |                   | 1882.5                        | RB36#0  | 24.39         | 33             | Pass    |
|                   |            |               |                   |                               | RB36#37 | 24.38         | 33             | Pass    |
|                   |            |               |                   |                               | RB75#0  | 24.65         | 33             | Pass    |
|                   | QPSK       | 15MHz         | 26615             | 1907.5                        | RB1#0   | 24.42         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#37  | 24.75         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#74  | 24.86         | 33             | Pass    |
|                   |            |               |                   |                               | RB36#0  | 24.68         | 33             | Pass    |
|                   |            |               |                   |                               | RB36#37 | 24.81         | 33             | Pass    |
|                   |            |               |                   |                               | RB75#0  | 24.38         | 33             | Pass    |
|                   |            | 15MHz         | 26615             |                               | RB1#0   | 24.55         | 33             | Pass    |
|                   | 16-QAM     |               |                   | 1907.5                        | RB1#37  | 24.75         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#74  | 24.65         | 33             | Pass    |
|                   |            |               |                   |                               | RB36#0  | 24.59         | 33             | Pass    |
|                   |            |               |                   |                               | RB36#37 | 24.65         | 33             | Pass    |
|                   |            |               |                   |                               | RB75#0  | 24.29         | 33             | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | EIRP<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|---------------|----------------|---------|
|                   |            |               |                   |                               | RB1#0   | 25.62         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#49  | 25.48         | 33             | Pass    |
|                   | ODOK       | 20MHz         | 26140             | 1860.0                        | RB1#99  | 25.48         | 33             | Pass    |
|                   | QPSK       |               |                   |                               | RB50#0  | 25.25         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#49 | 24.92         | 33             | Pass    |
|                   |            |               |                   |                               | RB100#0 | 24.34         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#0   | 24.32         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#49  | 24.25         | 33             | Pass    |
|                   | 10 0 0 0 0 | 20MHz         | 00440             | 1860.0                        | RB1#99  | 24.32         | 33             | Pass    |
|                   | 16-QAM     | ZUIVI⊓Z       | 26140             |                               | RB50#0  | 24.23         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#49 | 25.19         | 33             | Pass    |
|                   |            |               |                   |                               | RB100#0 | 24.42         | 33             | Pass    |
|                   |            | 20MHz         | 26365             |                               | RB1#0   | 25.62         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#49  | 25.25         | 33             | Pass    |
|                   | QPSK       |               |                   | 1882.5                        | RB1#99  | 25.46         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#0  | 24.75         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#49 | 24.65         | 33             | Pass    |
| LTE               |            |               |                   |                               | RB100#0 | 24.29         | 33             | Pass    |
| Babd25            | 16-QAM     | 20MHz         | 26365             | 1882.5                        | RB1#0   | 24.74         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#49  | 24.26         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#99  | 24.52         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#0  | 24.33         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#49 | 24.29         | 33             | Pass    |
|                   |            |               |                   |                               | RB100#0 | 24.32         | 33             | Pass    |
|                   | ODOK       | 201411-       | 00500             | 4005.0                        | RB1#0   | 25.48         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#49  | 24.38         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#99  | 25.58         | 33             | Pass    |
|                   | QPSK       | 20MHz         | 26590             | 1905.0                        | RB50#0  | 24.66         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#49 | 24.86         | 33             | Pass    |
|                   |            |               |                   |                               | RB100#0 | 24.37         | 33             | Pass    |
|                   |            |               | 26590             |                               | RB1#0   | 24.43         | 33             | Pass    |
|                   | 16-QAM     | 20MHz         |                   | 1905.0                        | RB1#49  | 24.91         | 33             | Pass    |
|                   |            |               |                   |                               | RB1#99  | 24.50         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#0  | 24.29         | 33             | Pass    |
|                   |            |               |                   |                               | RB50#49 | 24.33         | 33             | Pass    |
|                   |            |               |                   |                               | RB100#0 | 24.41         | 33             | Pass    |



## APPENDIX C: TEST DATA FOR OCCUPIED BANDWIDTH

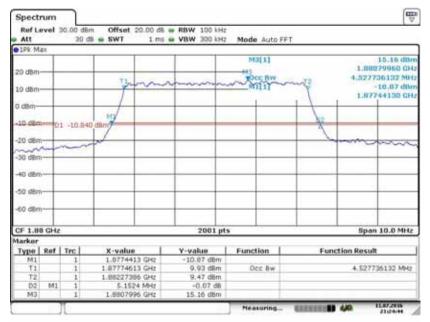
| Operation<br>Mode | Modulation | Band Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Occupied<br>Bandwidth<br>(KHz) | Emission<br>Bandwidth<br>(KHz) |
|-------------------|------------|------------|-------------------|-------------------------------|--------------------------------|--------------------------------|
|                   |            | 5MHz       | 18900             | 1880.0                        | 4527.736                       | 5152.40                        |
| LTE BANDO         | QPSK       | 10MHz      | 18900             | 1880.0                        | 8925.537                       | 9765.00                        |
| LTE BAND2         | QPSK       | 15MHz      | 18900             | 1880.0                        | 13493.253                      | 15022.00                       |
|                   |            | 20MHz      | 18900             | 1880.0                        | 17982.018                      | 19585.00                       |
|                   |            | 5MHz       | 20175             | 1732.5                        | 4495.504                       | 5074.00                        |
| LTE DANIDA        | QPSK       | 10MHz      | 20175             | 1732.5                        | 8951.049                       | 9791.00                        |
| LTE BAND4         | QFSN       | 15MHz      | 20175             | 1732.5                        | 13426.573                      | 14995.00                       |
|                   |            | 20MHz      | 20175             | 1732.5                        | 17902.098                      | 19580.00                       |
| LTE BAND5         | QPSK       | 5MHz       | 20525             | 836.5                         | 4515.485                       | 5129.00                        |
| LIE DANDS         | QPSK       | 10MHz      | 20525             | 836.5                         | 8931.069                       | 9781.00                        |
| LTE BAND13        | QPSK       | 5MHz       | 23230             | 782.0                         | 4525.475                       | 5065.00                        |
| LIE BAND 13       | QPSK       | 10MHz      | 23230             | 782.0                         | 8911.089                       | 9730.00                        |
| LTE BAND17        | OBSK       | 5MHz       | 23790             | 710.0                         | 4515.485                       | 5125.00                        |
| LIE DANUI/        | QPSK       | 10MHz      | 23790             | 710.0                         | 8951.049                       | 9730.00                        |
|                   | QPSK       | 5MHz       | 26365             | 1882.5                        | 4505.495                       | 5135.00                        |
| LTE BAND25        |            | 10MHz      | 26365             | 1882.5                        | 8931.069                       | 9820.00                        |
| LTE DAND25        |            | 15MHz      | 26365             | 1882.5                        | 13456.543                      | 14925.00                       |
|                   |            | 20MHz      | 26365             | 1882.5                        | 17942.058                      | 19470.00                       |
| LTE BAND2         | 16 OAM     | 5MHz       | 18900             | 1880.0                        | 4507.746                       | 5142.40                        |
|                   |            | 10MHz      | 18900             | 1880.0                        | 8935.532                       | 9685.00                        |
| LIE DANUZ         | 16-QAM     | 15MHz      | 18900             | 1880.0                        | 13508.246                      | 14978.00                       |
|                   |            | 20MHz      | 18900             | 1880.0                        | 17982.018                      | 19625.00                       |
|                   |            | 5MHz       | 20175             | 1732.5                        | 4505.495                       | 5094.00                        |
| LTE BAND4         | 16-QAM     | 10MHz      | 20175             | 1732.5                        | 8931.069                       | 9691.00                        |
| LIE DANU4         | 10-QAIVI   | 15MHz      | 20175             | 1732.5                        | 13456.543                      | 14866.00                       |
|                   |            | 20MHz      | 20175             | 1732.5                        | 17862.138                      | 19341.00                       |
| LTE BAND5         | 16-QAM     | 5MHz       | 20525             | 836.5                         | 4495.504                       | 5070.00                        |
| LIE DANDS         | 16-QAM     | 10MHz      | 20525             | 836.5                         | 8931.069                       | 9701.00                        |
| LTE BAND12        | 16-QAM     | 5MHz       | 23230             | 782.0                         | 4505.494                       | 5015.00                        |
| LTE BAND13        |            | 10MHz      | 23230             | 782.0                         | 8911.089                       | 9610.00                        |
| LTE BAND17        | 16-QAM     | 5MHz       | 23790             | 710.0                         | 4535.465                       | 5115.00                        |
| LTE BAND17        |            | 10MHz      | 23790             | 710.0                         | 8931.069                       | 9690.00                        |
|                   |            | 5MHz       | 26365             | 1882.5                        | 4515.485                       | 5085.00                        |
| LTE BAND25        | 16-QAM     | 10MHz      | 26365             | 1882.5                        | 8951.049                       | 9800.00                        |
| LIE DAIND25       | 16-QAW     | 15MHz      | 26365             | 1882.5                        | 13516.484                      | 14915.00                       |
|                   |            | 20MHz      | 26365             | 1882.5                        | 17942.058                      | 19630.00                       |

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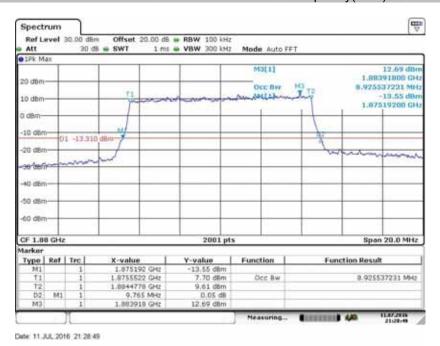
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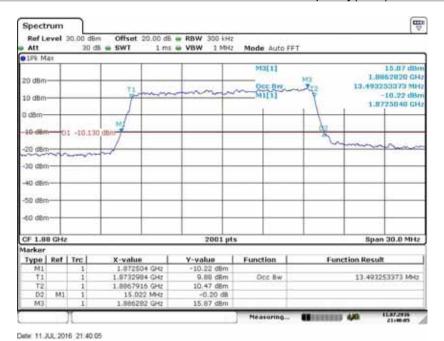
Date: 11 JUL 2016 21 24 44

|            | Bandwidth    |                 |                |        |  |
|------------|--------------|-----------------|----------------|--------|--|
| Test Model | LTE BAND2    | QPSK Modulation | Test BW        | 10MHz  |  |
|            | Test Channel | 18900           | Frequency(MHz) | 1880.0 |  |

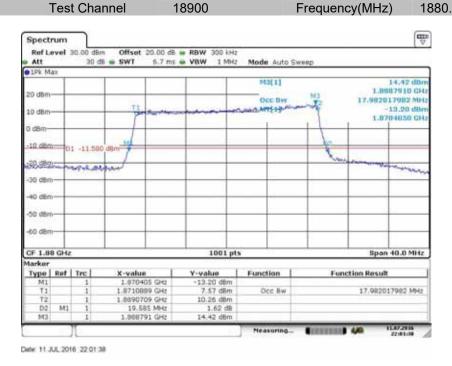




BandwidthTest ModelLTE BAND2QPSK ModulationTest BW15MHzTest Channel18900Frequency(MHz)1880.0

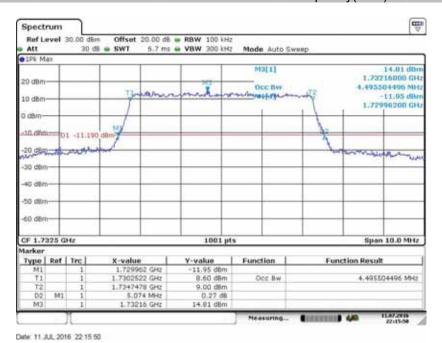


Test Model LTE BAND2 QPSK Modulation Test BW 20MHz
Test Channel 18900 Frequency(MHz) 1880.0

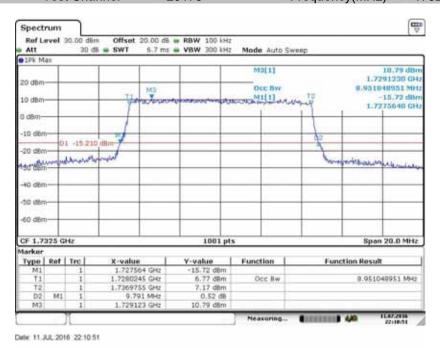




BandwidthTest ModelLTE BAND4QPSK ModulationTest BW5MHzTest Channel20175Frequency(MHz)1732.5

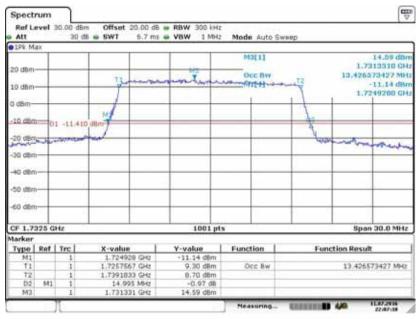


Test Model LTE BAND4 QPSK Modulation Test BW 10MHz
Test Channel 20175 Frequency(MHz) 1732.5



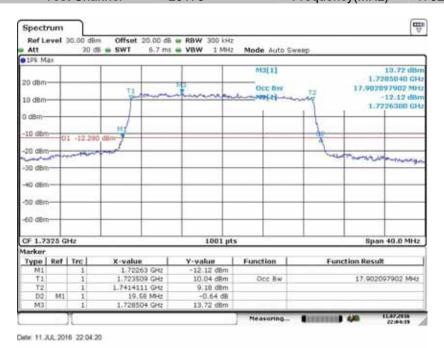


BandwidthTest ModelLTE BAND4QPSK ModulationTest BW15MHzTest Channel20175Frequency(MHz)1732.5



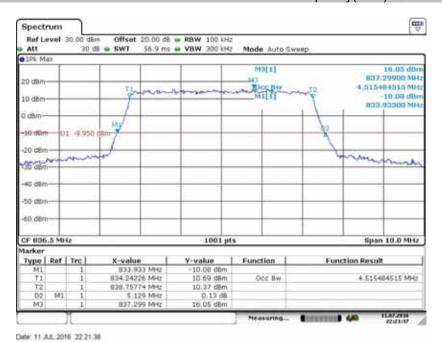
Date: 11 JUL 2016 22:07:17

BandwidthTest ModelLTE BAND4QPSK ModulationTest BW20MHzTest Channel20175Frequency(MHz)1732.5

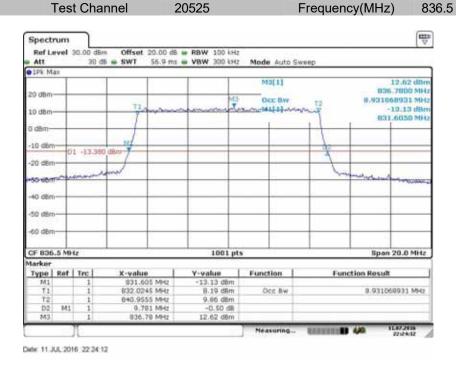




Test Model LTE BAND5 QPSK Modulation Test BW 5MHz
Test Channel 20525 Frequency(MHz) 836.5

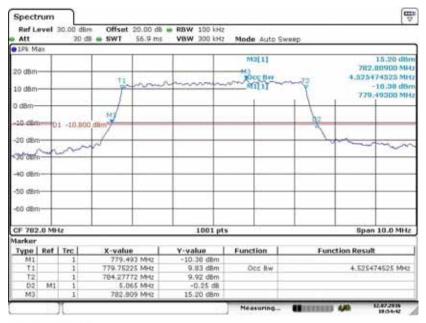


Bandwidth
Test Model LTE BAND5 QPSK Modulation Test BW 10MHz



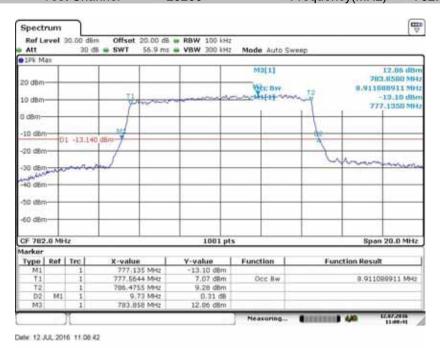


Test Model LTE BAND13 QPSK Modulation Test BW 5MHz
Test Channel 23230 Frequency(MHz) 782.0



Date: 12 JUL 2016: 10:54:41

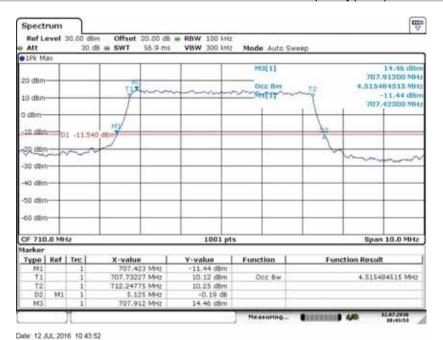
Test Model LTE BAND13 QPSK Modulation Test BW 10MHz
Test Channel 23230 Frequency(MHz) 782.0



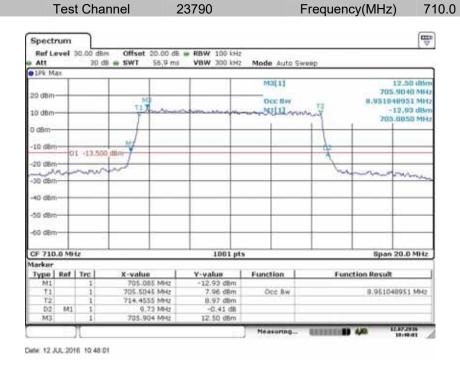
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BandwidthTest ModelLTE BAND17QPSK ModulationTest BW5MHzTest Channel23790Frequency(MHz)710.0

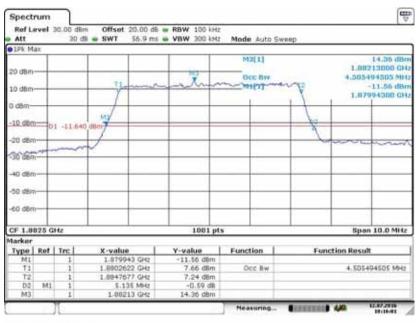


Bandwidth
Test Model LTE BAND17 QPSK Modulation Test BW 10MHz



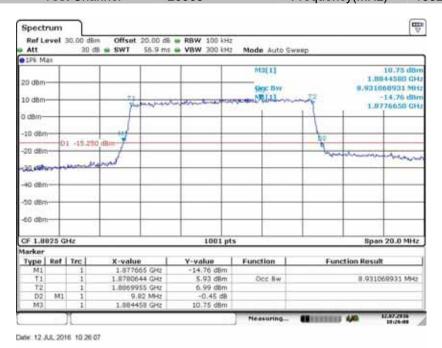


BandwidthTest ModelLTE BAND25QPSK ModulationTest BW5MHzTest Channel26365Frequency(MHz)1882.5



Date: 12 JUL 2016: 10:16:02

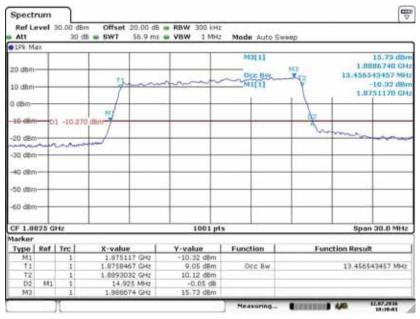
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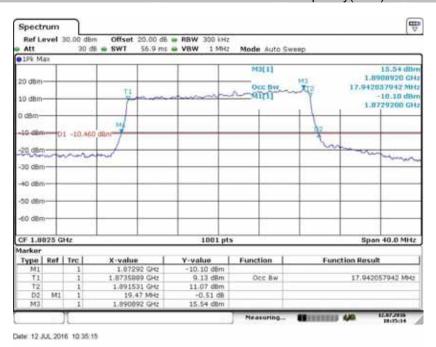


BandwidthTest ModelLTE BAND25QPSK ModulationTest BW15MHzTest Channel26365Frequency(MHz)1882.5



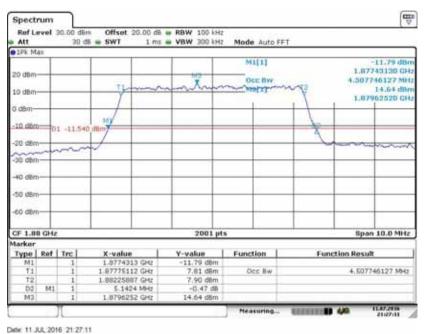
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BandwidthTest ModelLTE BAND25QPSK ModulationTest BW20MHzTest Channel26365Frequency(MHz)1882.5

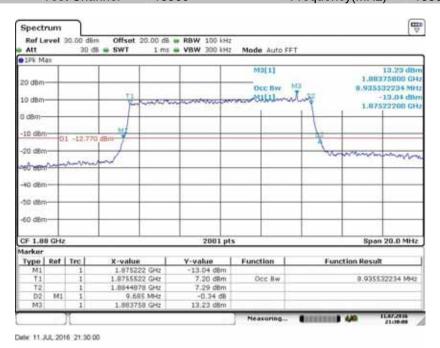




**Bandwidth** Test Model LTE BAND2 16-QAM Modulation Test BW 5MHz **Test Channel** 18900 Frequency(MHz) 1880.0



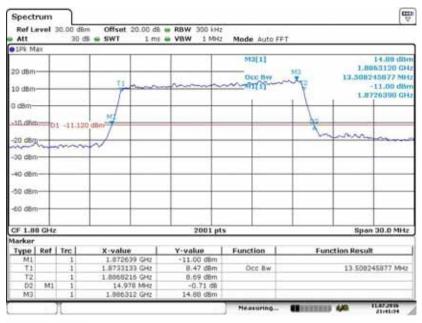
Bandwidth **Test Model** LTE BAND2 16-QAM Modulation Test BW 10MHz **Test Channel** 18900 Frequency(MHz) 1880.0



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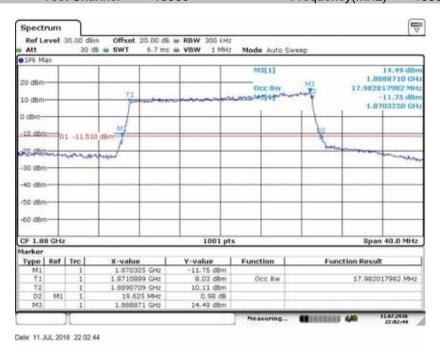


BandwidthTest ModelLTE BAND216-QAM ModulationTest BW15MHzTest Channel18900Frequency(MHz)1880.0



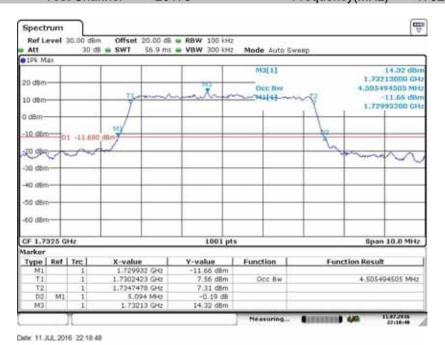
Date: 11 JUL 2016 21:41:34

Test Model LTE BAND2 16-QAM Modulation Test BW 20MHz
Test Channel 18900 Frequency(MHz) 1880.0

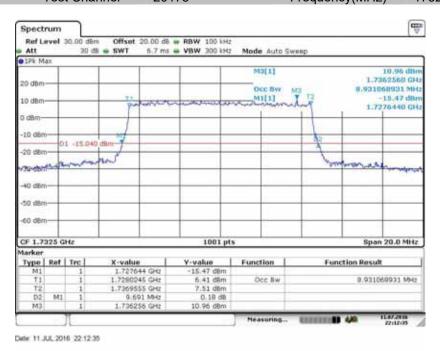




BandwidthTest ModelLTE BAND416-QAM ModulationTest BW5MHzTest Channel20175Frequency(MHz)1732.5

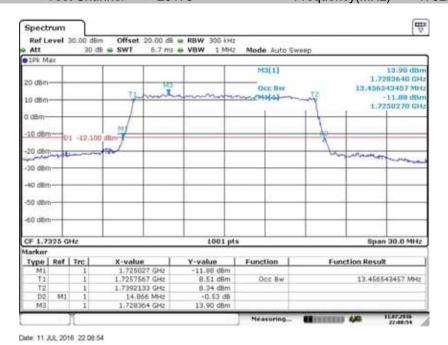


Test Model LTE BAND4 16-QAM Modulation Test BW 10MHz
Test Channel 20175 Frequency(MHz) 1732.5

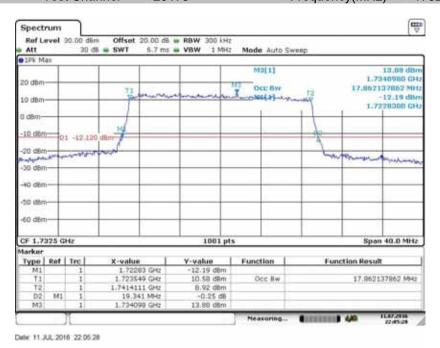




Test Model LTE BAND4 16-QAM Modulation Test BW 15MHz
Test Channel 20175 Frequency(MHz) 1732.5

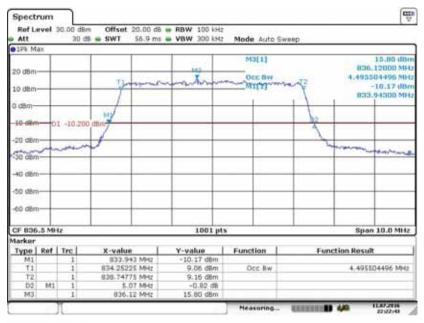


Test Model LTE BAND4 16-QAM Modulation Test BW 20MHz
Test Channel 20175 Frequency(MHz) 1732.5



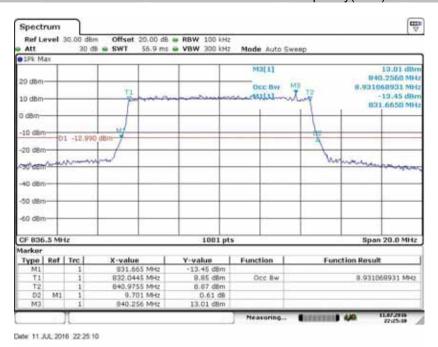


BandwidthTest ModelLTE BAND516-QAM ModulationTest BW5MHzTest Channel20525Frequency(MHz)836.5



Date: 11 JUL 2016 22:22:43

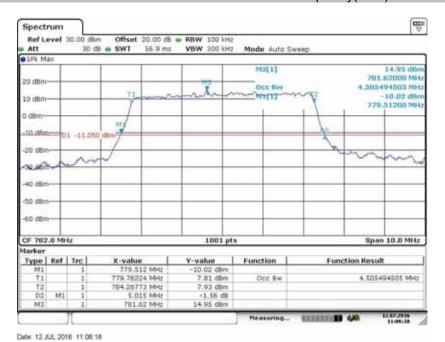
Test Model LTE BAND5 16-QAM Modulation Test BW 10MHz
Test Channel 20525 Frequency(MHz) 836.5



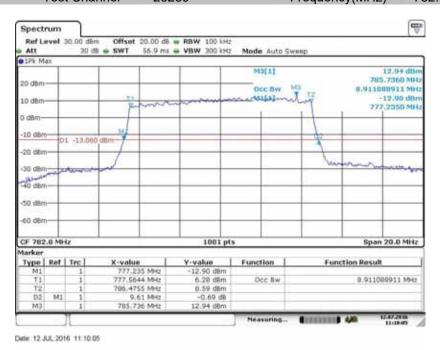
TRF No.: FCC Part 22, 24, 27/A Page 78 of 250 Report No.: ES160623027E7 Ver.1.0



BandwidthTest ModelLTE BAND1316-QAM ModulationTest BW5MHzTest Channel23230Frequency(MHz)782.0

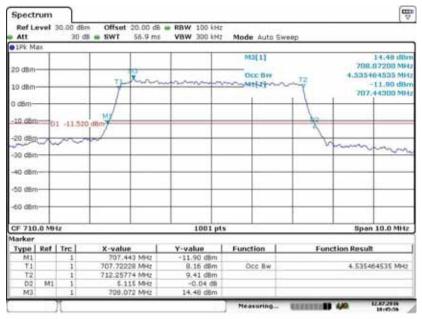


Test Model LTE BAND13 16-QAM Modulation Test BW 10MHz
Test Channel 23230 Frequency(MHz) 782.0



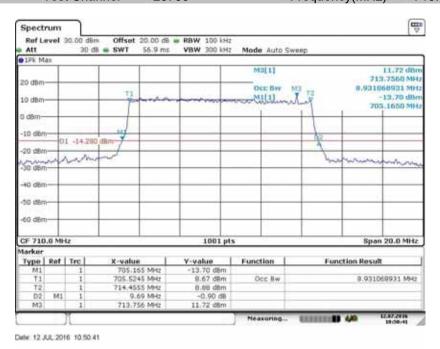


BandwidthTest ModelLTE BAND1716-QAM ModulationTest BW5MHzTest Channel23790Frequency(MHz)710.0



Date: 12 JUL 2016 10 45 56

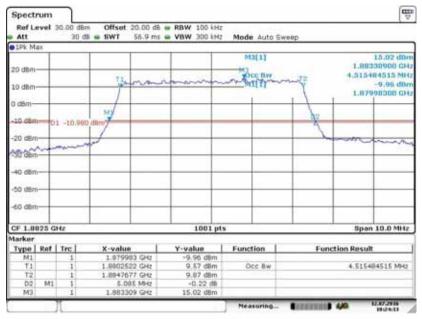
Test Model LTE BAND17 16-QAM Modulation Test BW 10MHz
Test Channel 23790 Frequency(MHz) 710.0



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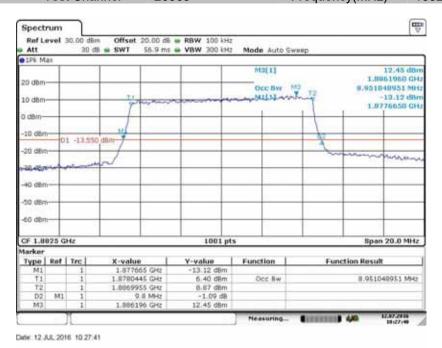


BandwidthTest ModelLTE BAND2516-QAM ModulationTest BW5MHzTest Channel26365Frequency(MHz)1882.5



Date: 12 JUL 2016 10:24 13

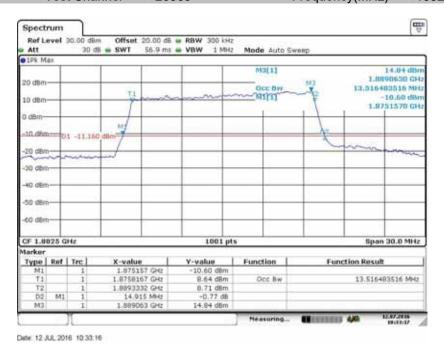
Test Model LTE BAND25 16-QAM Modulation Test BW 10MHz
Test Channel 26365 Frequency(MHz) 1882.5



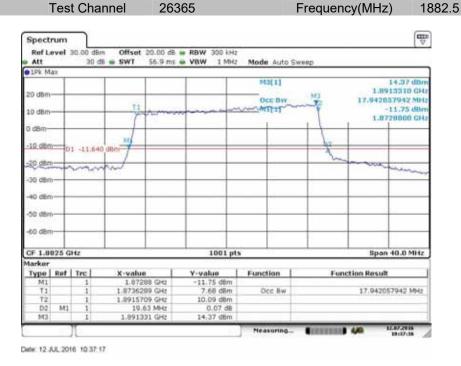
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Test Model LTE BAND25 16-QAM Modulation Test BW 15MHz
Test Channel 26365 Frequency(MHz) 1882.5



Bandwidth
Test Model LTE BAND25 16-QAM Modulation Test BW 20MHz





## APPENDIX D: TEST DATA FOR BAND EDGE EMISSION

| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB            | Values<br>(dBm)                                 | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|--------------------|---|----------------|---------|
|                   | ODCK       | 5MHz          | 18625             | 10E0 E                        | RB1#0              | -21.79  | -13.00         | Pass    |
|                   | QPSK       |               |                   | 1852.5                        | RB25#0             | -22.15  | -13.00         | Pass    |
|                   | 16-QAM     | 5MHz          | 18625             | 1852.5                        | RB1#0              | -22.28  | -13.00         | Pass    |
| LTE               | 10-QAIVI   | JIVII IZ      | 10023             | 1002.0                        | RB25#0             | -22.89  | -13.00         | Pass    |
| Babd2             | QPSK       | 5MHz          | 19175             | 1907.5                        | RB1#0              | -18.93  | -13.00         | Pass    |
|                   | QIOIN      | JIVII IZ      | 19173             | 1907.5                        | RB25#0             | -17.89  | -13.00         | Pass    |
|                   | 16-QAM     | 5MHz          | 19175             | 1907.5                        | RB1#0              | -21.03  | -13.00         | Pass    |
|                   | 10-QAW     | OIVII IZ      | 13173             | 1507.5                        | RB25#0             | -18.71  | -13.00         | Pass    |
|                   | QPSK       | 10MHz         | 18650             | 1855.0                        | RB1#0              | -30.26  | -13.00         | Pass    |
|                   | QI OIL     | TOWNIZ        | 10030             | 1000.0                        | RB50#0             | -31.57  | -13.00         | Pass    |
|                   | 16-QAM     | 10MHz         | 18650             | 1855.0                        | RB1#0              | -30.33  | -13.00         | Pass    |
| LTE               | 10-QAIVI   | TOWNIZ        |                   | 1000.0                        | RB50#0             | -33.08  | -13.00         | Pass    |
| Babd2             | QPSK       | 10MHz         | 19150             | 1905.0                        | RB1#0              | -25.49 -13.00<br>-26.51 -13.00<br>-26.13 -13.00 | Pass           |         |
|                   |            |               |                   | 1303.0                        | RB50#0             |   | Pass           |         |
|                   | 16-QAM     | 10MHz         | 19150             | 1905.0                        | RB1#0              | -26.13 -13.00                                   | Pass           |         |
|                   |            |               |                   | 1000.0                        | RB50#0             | -27.41  | -13.00         | Pass    |
|                   | QPSK       | 15MHz         | 18675             | 1857.5                        | RB1#0              | -19.39  | -13.00         | Pass    |
|                   |            |               |                   | 1007.0                        | RB75#0             | -29.09  | -13.00         | Pass    |
|                   | 16-QAM     | 15MHz         | 18675             | 1857.5 RI                     | RB1#0              | -20.55  | -13.00         | Pass    |
| LTE               |            |               |                   |                               | RB75#0             | -30.84  | -13.00         | Pass    |
| Babd2             | QPSK       | 15MHz         | 19125             | 1902.5                        | RB1#0              | -16.57  | -13.00         | Pass    |
|                   | QIOI       | 1 JIVII 12    |                   | 1002.0                        | RB75#0             | -23.44  | -13.00         | Pass    |
|                   | 16-QAM     | 15MHz         | 19125             | 1902.5                        | RB1#0 -16.91 -13.0 | -13.00  | Pass           |         |
|                   | 10-QAIVI   | 10IVII IZ     | 19123             | 1902.5                        | RB75#0             | -24.84  | -13.00         | Pass    |
|                   | QPSK       | 20MHz         | 18700             | 1860.0                        | RB1#0              | -23.08  | -13.00         | Pass    |
|                   | QIOI       | ZOIVII IZ     | 10700             | 1000.0                        | RB100#0            | -32.16  | -13.00         | Pass    |
|                   | 16-QAM     | 20MHz         | 18700             | 1860.0                        | RB1#0              | -23.45  | -13.00         | Pass    |
| LTE               | 10-QAIVI   | ZUIVITZ       |                   | 1000.0                        | RB100#0            | -31.37  | -13.00         | Pass    |
| Babd2             | OBSK       | QPSK 20MHz    | 19100             | 1900.0                        | RB1#0              | -20.58  | -13.00         | Pass    |
|                   | QI OIL     |               | 19100             | 1300.0                        | RB100#0            | -25.99  | -13.00         | Pass    |
|                   | 16-QAM     | 20MHz         | 19100             | 1900.0                        | RB1#0              | -21.38  | -13.00         | Pass    |
|                   | 10-QAIVI   | ZUIVII IZ     | 13100             | 1300.0                        | RB100#0            | -26.95  | -13.00         | Pass    |

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| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm]   | Limit<br>(dBm)                 | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|---------------------|--------------------------------|---------|
|                   | ODOK       | 5MHz          | 19975             | 1712.5                        | RB1#0   | -16.21              | -13.00                         | Pass    |
|                   | QPSK       | SIVITZ        |                   | 17 12.5                       | RB25#0  | -22.17              | -13.00                         | Pass    |
|                   | 16-QAM     | 5MHz          | 19975             | 1712.5                        | RB1#0   | -16.15              | -13.00                         | Pass    |
| LTE               | 10-QAIVI   | SIVITZ        | 19975             | 17 12.5                       | RB25#0  | -21.64              | -13.00                         | Pass    |
| Babd4             | QPSK       | 5MHz          | 20375             | 1752.5                        | RB1#0   | -19.41              | -13.00                         | Pass    |
|                   | QFSK       | JIVII IZ      | 20373             | 1732.3                        | RB25#0  | -21.62              | -13.00                         | Pass    |
|                   | 16-QAM     | 5MHz          | 20375             | 1752.5                        | RB1#0   | -16.84              | -13.00                         | Pass    |
|                   | 10-QAIVI   | SIVITIZ       | 20373             | 1752.5                        | RB25#0  | -21.08              | -13.00                         | Pass    |
|                   | QPSK       | 10MHz         | 20000             | 1715.0                        | RB1#0   | -30.17              | -13.00                         | Pass    |
|                   | QFSK       | TOWINZ        | 20000             | 17 15.0                       | RB50#0  | -29.88              | -13.00                         | Pass    |
|                   | 16-QAM     | 10MHz         | 20000             | 1715.0                        | RB1#0   | -30.19              | -30.19 -13.00<br>-30.99 -13.00 | Pass    |
| LTE               | 10-QAIVI   | TUMHZ         |                   | 17 15.0                       | RB50#0  | -30.99              |                                | Pass    |
| Babd4             | QPSK       | 10MHz         | 20350             | 1750.0                        | RB1#0   | -27.68              |                                | Pass    |
|                   |            |               |                   | 1750.0                        | RB50#0  | -28.17 -13.00       | Pass                           |         |
|                   | 16-QAM     | 10MHz         | 20350             | 1750.0                        | RB1#0   | -28.31 -13.00       | Pass                           |         |
|                   |            |               |                   | 1750.0                        | RB50#0  | -29.33              | -13.00                         | Pass    |
|                   | QPSK       | 15MHz         | 20025             | 1717.5                        | RB1#0   | -16.90              | -13.00                         | Pass    |
|                   |            |               |                   | 17 17.5                       | RB75#0  | -27.76              | -13.00                         | Pass    |
|                   | 16-QAM     | 15MHz         | 20025             | 1717.5                        | RB1#0   | -19.13              | -13.00                         | Pass    |
| LTE               |            |               |                   | 17 17.5                       | RB75#0  | -28.40              | -13.00                         | Pass    |
| Babd4             | QPSK       | 15MHz         | 20325             | 1747.5                        | RB1#0   | -18.77              | -13.00                         | Pass    |
|                   | QFSK       |               |                   | 1747.5                        | RB75#0  | -28.35              | -13.00                         | Pass    |
|                   | 16-QAM     | 15MHz         | 20325             | 1747.5                        | RB1#0   | RB1#0 -17.86 -13.00 | Pass                           |         |
|                   | 10-QAIVI   | TOIVINZ       | 20323             | 1747.5                        | RB75#0  | -28.33              | -13.00                         | Pass    |
|                   | QPSK       | 20MHz         | 20050             | 1720.0                        | RB1#0   |                     | -13.00                         | Pass    |
|                   | QFSK       | ZUIVITZ       | 20050             | 1720.0                        | RB100#0 |                     | Pass                           |         |
|                   | 16 0 1 1   | 201411-       | 20050             | 1720.0                        | RB1#0   |                     | -13.00                         | Pass    |
| LTE               | 16-QAM     | 20MHz         | 20050             | 1720.0                        | RB100#0 | -31.16              | -13.00                         | Pass    |
| Babd4             | ODCK       | QPSK 20MHz    | 20200             | 1745.0                        | RB1#0   | -21.58              | -13.00                         | Pass    |
|                   | QPSK       |               | 20300             | 1745.0                        | RB100#0 | -29.47              | -13.00                         | Pass    |
|                   | 40.0414    | 40.0444       | 00000             | 1745.0                        | RB1#0   | -21.48              | -13.00                         | Pass    |
|                   | 16-QAM     | 20MHz         | 20300             | 1745.0                        | RB100#0 | -30.41              | -13.00                         | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   | ODSK       | ENAL I-       | 20425             | 926 F                         | RB1#0   | -15.74            | -13.00         | Pass    |
|                   | QPSK       | 5MHz          | 20425             | 826.5                         | RB25#0  | -19.39            | -13.00         | Pass    |
|                   | 16-QAM     | 5MHz          | 20425             | 826.5                         | RB1#0   | -17.60            | -13.00         | Pass    |
| LTE               | 16-QAM     | SIVIE         | 20425             | 620.5                         | RB25#0  | -21.72            | -13.00         | Pass    |
| Babd5             | QPSK       | 5MHz          | 20625             | 846.5                         | RB1#0   | -15.04            | -13.00         | Pass    |
|                   |            |               |                   | 040.5                         | RB25#0  | -20.37            | -20.37 -13.00  | Pass    |
|                   | 16-QAM     | 5MHz          | 20625             | 846.5                         | RB1#0   | -16.92 -13.00     | Pass           |         |
|                   |            |               |                   | 040.5                         | RB25#0  | -20.88            | -13.00         | Pass    |
|                   | QPSK       | 10MHz         | 20450             | 829.0                         | RB1#0   | -30.36            | -13.00         | Pass    |
|                   |            |               |                   | 029.0                         | RB50#0  | -27.18            | -13.00         | Pass    |
|                   | 40.0444    | AAA 40MII-    | 00.450            | ogo o RE                      | RB1#0   | -29.69            | -13.00         | Pass    |
| LTE               | 16-QAM     | 10MHz         | 20450             | 829.0                         | RB50#0  | -28.93            | -28.93 -13.00  | Pass    |
| Babd5             | ODSK       | 101/14        | 20600             | 944.0                         | RB1#0   | -29.13            | -13.00         | Pass    |
|                   | QPSK       | 10MHz         |                   | 844.0                         | RB50#0  | -28.44            | -13.00         | Pass    |
|                   | 16 0 114   | 16-QAM 10MHz  | Hz 20600          | 944.0                         | RB1#0   | -29.31            | -13.00         | Pass    |
|                   | 16-QAM   1 |               |                   | 844.0                         | RB50#0  | -28.83            | -13.00         | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm] | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|---------|-------------------|----------------|---------|
|                   | ODSK       | ENAL I-       | 22205             | 770 F                         | RB1#0   | -15.86            | -13.00         | Pass    |
|                   | QPSK       | 5MHz          | 23205             | 779.5                         | RB25#0  | -19.20            | -13.00         | Pass    |
|                   | 16-QAM     | 5MHz          | 23205             | 779.5                         | RB1#0   | -17.11            | -13.00         | Pass    |
| LTE               | 16-QAM     | SIVIE         | 23205             | 119.5                         | RB25#0  | -21.95 -13.00     | -13.00         | Pass    |
| Babd13            | QPSK       | 5MHz          | 23255             | 784.5                         | RB1#0   | -15.97            | -13.00         | Pass    |
|                   |            |               |                   | 704.3                         | RB25#0  | -21.04            | -13.00         | Pass    |
|                   | 16-QAM     | 5MHz          | 23255             | 784.5                         | RB1#0   | -17.06 -          | -13.00         | Pass    |
|                   |            |               |                   | 764.5 R                       | RB25#0  | -20.79            | -13.00         | Pass    |
|                   | QPSK       | 10MHz         | 23230             | I 782 0 <del> </del>          | RB1#0   | -27.88            | -13.00         | Pass    |
|                   |            |               |                   |                               | RB50#0  | -30.67            | -13.00         | Pass    |
|                   | 16-QAM     | M 10MHz       | 22220             | 700.0                         | RB1#0   | -30.60            | -13.00         | Pass    |
| LTE               | 10-QAIVI   |               | 23230             | 782.0                         | RB50#0  | -30.29            |                | Pass    |
| Babd13            | ODCK       | 10MHz         | 22220             | 702.0                         | RB1#0   | -27.69            | -13.00         | Pass    |
|                   | QPSK       |               | 23230             | 782.0                         | RB50#0  | -28.87            | -13.00         | Pass    |
|                   | 16 0 4 14  | 16-QAM 10MHz  | z 23230           | 700.0                         | RB1#0   | -26.92            | -13.00         | Pass    |
|                   | 16-QAM     |               |                   | 782.0                         | RB50#0  | -31.82            | -13.00         | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB            | Measured<br>[dBm]              | Limit<br>(dBm) | Verdict |
|-------------------|------------|---------------|-------------------|-------------------------------|--------------------|--------------------------------|----------------|---------|
|                   | ODSK       | ENAL I-       | 22755             | 706 F                         | RB1#0              | -15.77                         | -13.00         | Pass    |
|                   | QPSK       | 5MHz          | 23755             | 706.5                         | RB25#0             | -19.57                         | -13.00         | Pass    |
|                   | 16 OAM     | ENAL I-       | 22755             | 706.5                         | RB1#0              | -16.61                         | -13.00         | Pass    |
| LTE               | 16-QAM     | 5MHz          | 23755             | 706.5                         | RB25#0             | -20.97                         | -13.00         | Pass    |
| Babd17            | QPSK       | 5MHz          | 23825             | 713.5                         | RB1#0              | -15.87                         | -13.00         | Pass    |
|                   |            |               |                   | 713.5                         | RB25#0             | -20.74                         | -20.74 -13.00  | Pass    |
|                   | 16-QAM     | 5MHz          | 23825             | 713.5                         | RB1#0              | -15.29 -13.00<br>-21.00 -13.00 | Pass           |         |
|                   |            |               |                   | 713.5                         | RB25#0             |                                | -13.00         | Pass    |
|                   | QPSK       | 10MHz         | 23780             | 709.0                         | RB1#0              | -24.87                         | -13.00         | Pass    |
|                   |            |               |                   | 709.0                         | RB50#0             | -29.28                         | -13.00         | Pass    |
|                   | 16-QAM     | AAA 40MU-     | 10MHz 23780       | 700.0                         | RB1#0 -27.22 -13.0 | -13.00                         | Pass           |         |
| LTE               | 10-QAIVI   | TUIVITZ       |                   | 709.0                         | RB50#0             | -27.68                         | -13.00         | Pass    |
| Babd17            | ODSK       | 101/14        | 23800             | 711.0                         | RB1#0              | -24.68                         | -13.00         | Pass    |
|                   | QPSK       | 10MHz         |                   | 711.0                         | RB50#0             | -26.61                         | -13.00         | Pass    |
|                   | 16 0 4 14  | 6-QAM 10MHz   | 10MHz 23800       | 711.0                         | RB1#0              | -26.15                         | -13.00         | Pass    |
|                   | 16-QAM   1 |               |                   | 711.0                         | RB50#0             | -28.20                         | -13.00         | Pass    |



| Operation<br>Mode | Modulation | Band<br>Width   | Channel<br>Number | Channel<br>Frequency<br>(MHz) | Test RB | Measured<br>[dBm]                               | Limit<br>(dBm) | Verdict |
|-------------------|------------|-----------------|-------------------|-------------------------------|---------|---|----------------|---------|
|                   | ODOK       | CNALL-          | 26065             |                               | RB1#0   | -17.32  | -13.00         | Pass    |
|                   | QPSK       | 5MHz            |                   | 1852.5                        | RB25#0  | -21.41  | -13.00         | Pass    |
|                   | 10.0014    | CNALL-          | 20005             | 4050.5                        | RB1#0   | -15.98  | -13.00         | Pass    |
| LTE               | 16-QAM     | 5MHz            | 26065             | 1852.5                        | RB25#0  | -23.45  | -13.00         | Pass    |
| Babd25            | QPSK       | 5MHz            | 26665             | 1912.5                        | RB1#0   | -14.33  | -13.00         | Pass    |
|                   | QFSK       | SIVITZ          | 20000             | 1912.5                        | RB25#0  | -20.69  | -13.00         | Pass    |
|                   | 16-QAM     | 5MHz            | 26665             | 1912.5                        | RB1#0   | -14.38  | -13.00         | Pass    |
|                   | 10-QAIVI   | SIVITZ          | 20000             | 1912.5                        | RB25#0  | -21.88  | -13.00         | Pass    |
|                   | QPSK       | 10MHz           | 26090             | 1855.0                        | RB1#0   | -29.68  | -13.00         | Pass    |
|                   | QFSK       | TUIVITZ         | 20090             | 1000.0                        | RB50#0  | -31.17  | -13.00         | Pass    |
|                   | 16 OAM     | 10MHz           | 26090             | 1855.0                        | RB1#0   | -30.80 -13.00<br>-33.22 -13.00                  | Pass           |         |
| LTE               | 16-QAM     | TUIVIHZ         |                   | 1000.0                        | RB50#0  | -33.22  | -13.00         | Pass    |
| Babd25            | QPSK       | 10MHz           | 26640             | 1910.0                        | RB1#0   | -23.19 -13.00<br>-27.35 -13.00<br>-24.52 -13.00 | Pass           |         |
|                   |            |                 |                   | 1910.0                        | RB50#0  |   | Pass           |         |
|                   | 16-QAM     | 10MHz           | 26640             | 1910.0                        | RB1#0   |   | Pass           |         |
|                   |            |                 |                   | 1910.0                        | RB50#0  | -28.48  | -13.00         | Pass    |
|                   | QPSK 15    | 15MHz           | 26115             | 1857.5                        | RB1#0   | -19.16  | -13.00         | Pass    |
|                   |            | TOIVINZ         | 20113             | 1057.5                        | RB75#0  | -28.58  |                | Pass    |
|                   | 16-QAM     | 15MHz           | 26115             | 1857.5                        | RB1#0   | -19.91  | -13.00         | Pass    |
| LTE               |            |                 |                   |                               | RB75#0  | -31.17  | -13.00         | Pass    |
| Babd25            | QPSK       | 15MHz           | MHz 26615         | 1907.5                        | RB1#0   | -17.33  | -13.00         | Pass    |
|                   | QFSK       | TOIVINZ         |                   |                               | RB75#0  | -25.57  | -13.00         | Pass    |
|                   | 16-QAM     | 15MHz           | 26615             | 1907.5                        | RB1#0   | -16.81 -13.00                                   | Pass           |         |
|                   | 10-QAM     | D-QAIVI ISIVITZ | 20013             | 1907.5                        | RB75#0  | -25.01  | -13.00         | Pass    |
|                   | QPSK       | 20MHz           | 26140             | 1860.0                        | RB1#0   | 1#0 -24.58 -13.00                               | Pass           |         |
|                   | QFSK       | ZUIVITZ         | 26140             | 1000.0                        | RB100#0 | -33.20  | -13.00         | Pass    |
| LTE<br>Babd25     | 16-QAM     | 20MHz           | 26140             | 1860.0                        | RB1#0   | -23.85  | -13.00         | Pass    |
|                   | 10-QAM     | ZUIVIMZ         | 26140             | 1000.0                        | RB100#0 | -33.18  | -13.00         | Pass    |
|                   | QPSK       | QPSK 20MHz      | 26590             | 1905.0                        | RB1#0   | -20.18  | -13.00         | Pass    |
|                   | QFSK       | ZUIVITIZ        |                   | 1905.0                        | RB100#0 | -24.17  | -13.00         | Pass    |
|                   | 16 OAM     | 16-QAM 20MHz    | 26590             | 1905.0                        | RB1#0   | -18.49  | -13.00         | Pass    |
|                   | 16-QAM     |                 | 20390             | 1905.0                        | RB100#0 | -25.50  | -13.00         | Pass    |

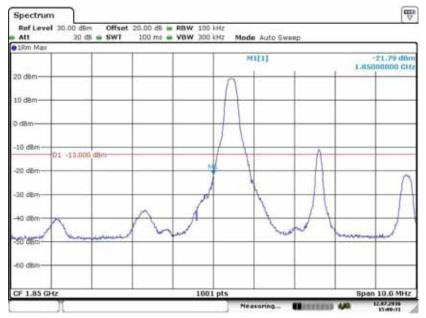


## Test plots as follow:

Test Model

Test Model

Band Width
Test Channel



Date: 12 JUL 2016 15:00:31

Test Model

Test Model

LTE Babd2
Band Width
Test Channel

Description

Application

SMHz
Frequency(MHz)

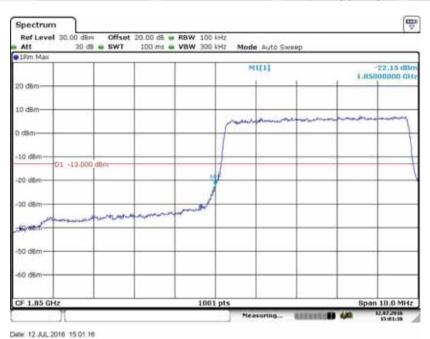
Description

Test RB
RB25#0

RB25#0

Test Channel

RB25#0



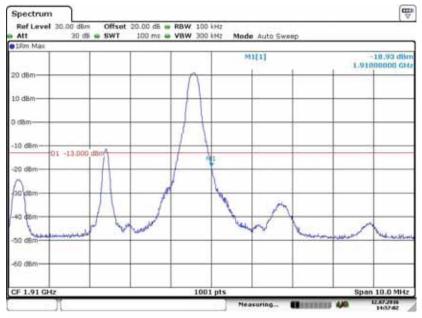
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**Test Model** 

LTE Babd2 **QPSK Modulation** 

**Band Width** 5MHz Test RB **RB1#0** Test Channel 19175 Frequency(MHz) 1907.5



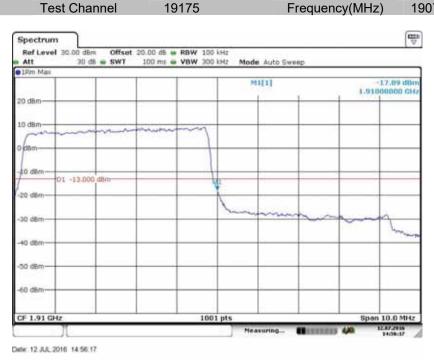
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**BAND EDGE EMISSION** 

Test Model

LTE Babd2 **QPSK Modulation Band Width** 5MHz

Test RB Frequency(MHz) RB25#0 1907.5

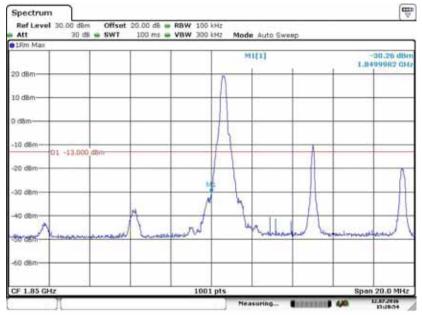




**Test Model** 

LTE Babd2 QPSK Modulation

Band Width 10MHz Test RB RB1#0
Test Channel 18650 Frequency(MHz) 1855.0



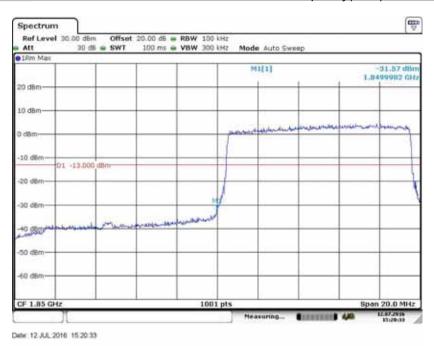
Date: 12 JUL 2016 15:20:54

**BAND EDGE EMISSION** 

**Test Model** 

LTE Babd2 QPSK Modulation
Band Width 10MHz
Test Channel 18650

Test RB Frequency(MHz) RB50#0 1855.0

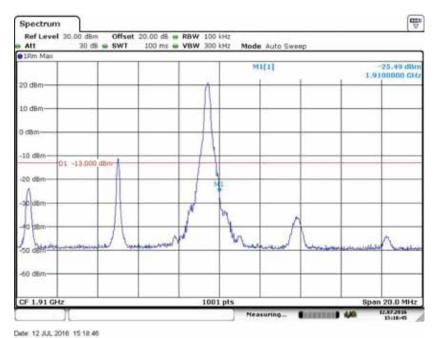




**Test Model** 

LTE Babd2 **QPSK Modulation** 

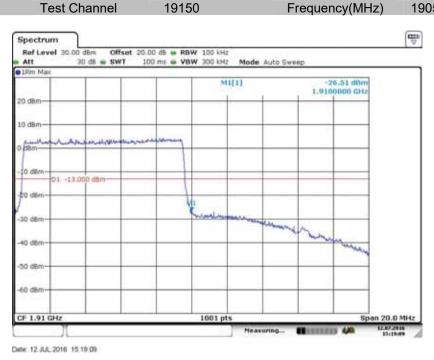
**Band Width** 10MHz Test RB **RB1#0** 19150 Test Channel Frequency(MHz) 1905.0



Test Model

**BAND EDGE EMISSION** LTE Babd2 **QPSK Modulation Band Width** 10MHz 19150

Test RB Frequency(MHz) RB50#0 1905.0





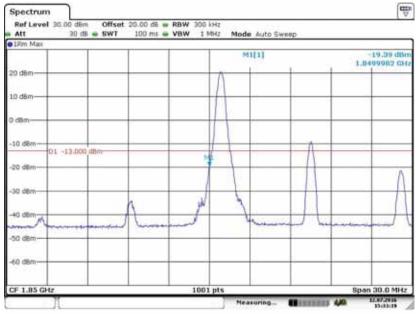
RB75#0

**BAND EDGE EMISSION** 

**Test Model** 

LTE Babd2 **QPSK Modulation** 

**Band Width** 15MHz Test RB **RB1#0** Test Channel 18675 Frequency(MHz) 1857.5



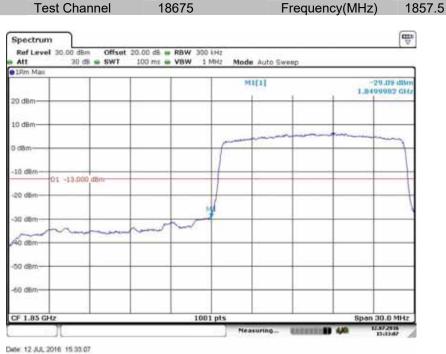
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**BAND EDGE EMISSION** 

Test Model

LTE Babd2 **QPSK Modulation Band Width** 15MHz

Test RB Frequency(MHz) **Test Channel** 18675



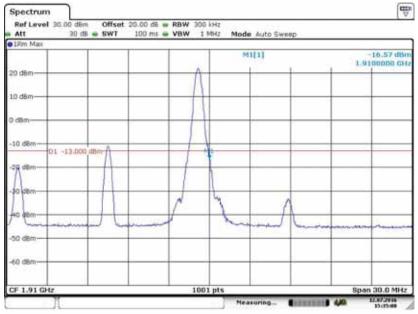
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**Test Model** 

LTE Babd2 **QPSK Modulation** 

**Band Width** 15MHz Test RB **RB1#0** Test Channel 19125 Frequency(MHz) 1902.5



Date: 12 JUL 2016 15:35:08

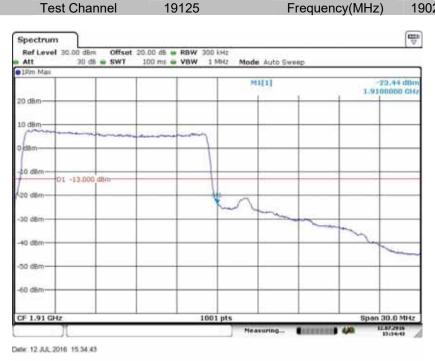
**BAND EDGE EMISSION** 

Test Model

LTE Babd2 **QPSK Modulation Band Width** 15MHz

19125

Test RB Frequency(MHz) RB75#0 1902.5

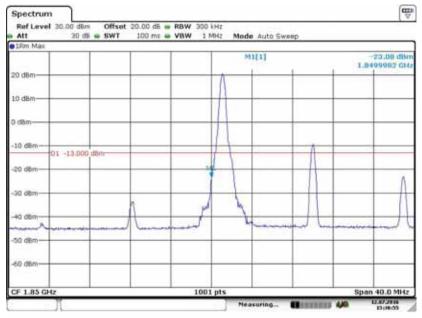




**Test Model** 

LTE Babd2 QPSK Modulation

Band Width 20MHz Test RB RB1#0
Test Channel 18700 Frequency(MHz) 1860.0



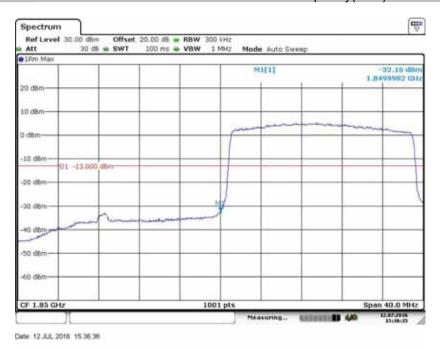
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**BAND EDGE EMISSION** 

**Test Model** 

LTE Babd2 QPSK Modulation
Band Width 20MHz
Test Channel 18700

Test RB Frequency(MHz) RB100#0 1860.0

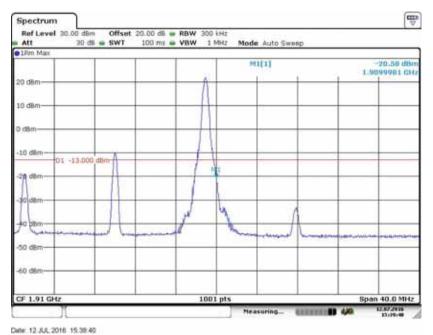




**Test Model** 

LTE Babd2 QPSK Modulation
Band Width 20MHz

Band Width 20MHz Test RB RB1#0
Test Channel 19100 Frequency(MHz) 1900.0



Date: 12 30L 2010 13.30-49

Test Model

## **BAND EDGE EMISSION**

LTE Babd2
Band Width
Test Channel

QPSK Modulation 20MHz

19100

Test RB Frequency(MHz) RB100#0 1900.0



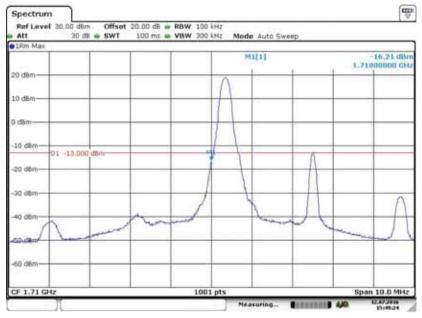
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**Test Model** 

LTE Babd4 QPSK Modulation

Band Width 5MHz Test RB RB1#0
Test Channel 19975 Frequency(MHz) 1712.5



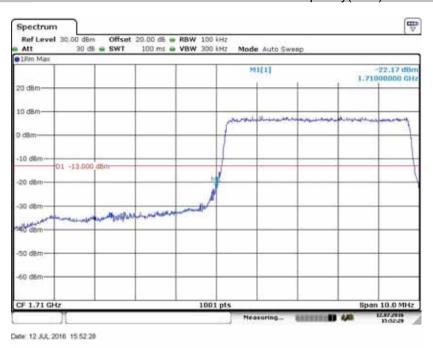
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Test Model

BAND EDGE EMISSION

LTE Babd4 QPSK Modulation

Band Width5MHzTest RBRB25#0Test Channel19975Frequency(MHz)1712.5



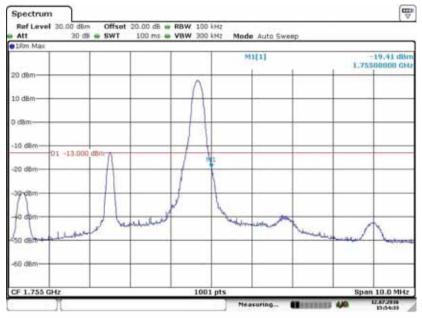
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**Test Model** 

LTE Babd4 QPSK Modulation

Band Width 5MHz Test RB RB1#0
Test Channel 20375 Frequency(MHz) 1752.5



Date: 12 JUL 2016: 15:54:33

**BAND EDGE EMISSION** 

**Test Model** 

LTE Babd4 QPSK Modulation
Band Width 5MHz
Test Channel 20375

Test RB Frequency(MHz) RB25#0 1752.5

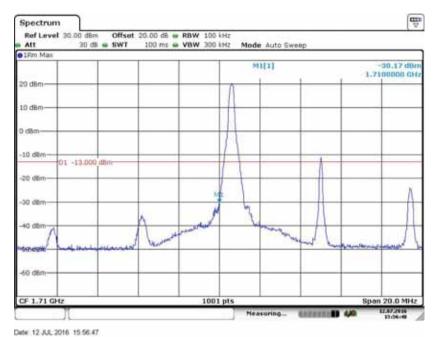




Test Model

LTE Babd4 **QPSK Modulation Band Width** 10MHz

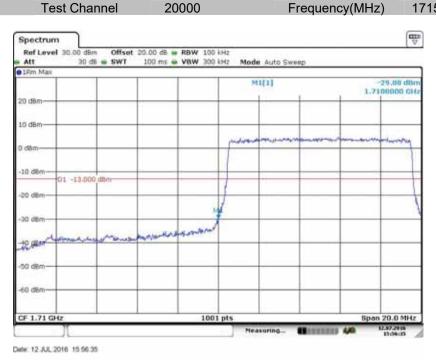
Test RB **RB1#0** 20000 Test Channel Frequency(MHz) 1715.0



Test Model

**BAND EDGE EMISSION** LTE Babd4 **QPSK Modulation Band Width** 10MHz

Test RB Frequency(MHz) RB50#0 1715.0

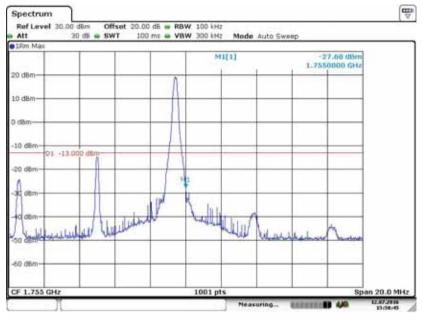




Test Model

LTE Babd4 QPSK Modulation

Band Width 10MHz Test RB RB1#0
Test Channel 20350 Frequency(MHz) 1750.0



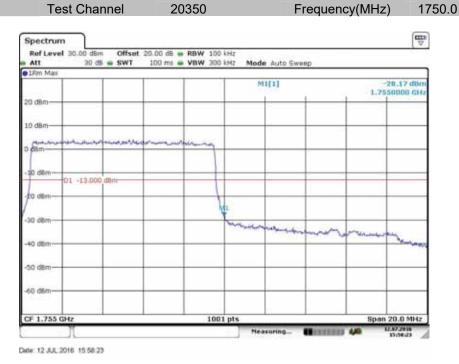
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Test Model

Test Model

Test Model

LTE Babd4 QPSK Modulation
Band Width 10MHz Test RB RB50#0

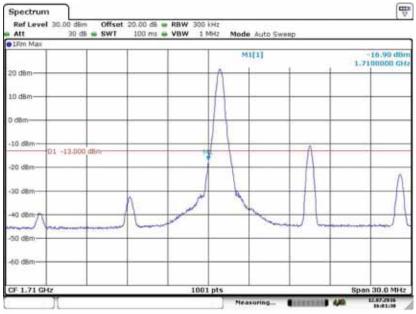




Test Model

LTE Babd4 **QPSK Modulation** 

**Band Width** 15MHz Test RB RB1#0 20025 Test Channel Frequency(MHz) 1717.5



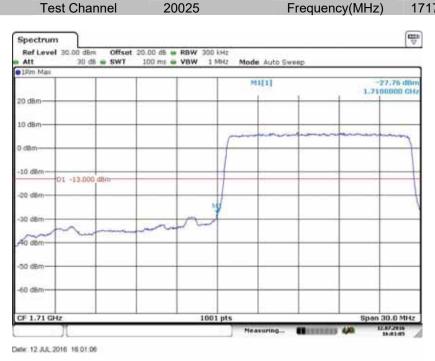
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**BAND EDGE EMISSION** 

Test Model

LTE Babd4 **QPSK Modulation Band Width** 15MHz 20025

Test RB Frequency(MHz) RB75#0 1717.5

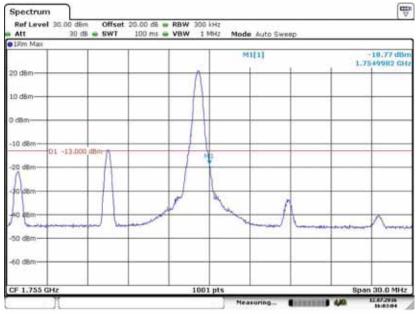




Test Model

LTE Babd4 **QPSK Modulation** 

**Band Width** 15MHz Test RB RB1#0 20325 Test Channel Frequency(MHz) 1747.5



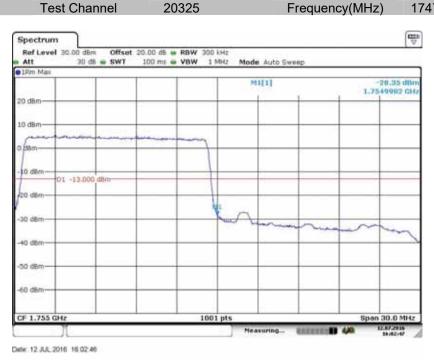
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**BAND EDGE EMISSION** 

Test Model

LTE Babd4 **QPSK Modulation Band Width** 15MHz 20325

Test RB Frequency(MHz) RB75#0 1747.5

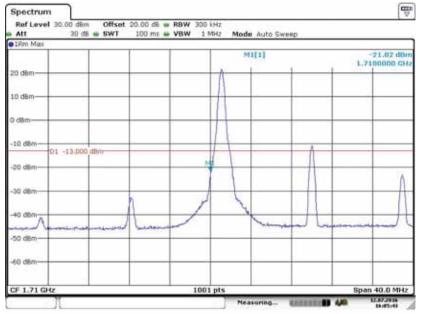




Test Model

LTE Babd4 QPSK Modulation

Band Width 20MHz Test RB RB1#0
Test Channel 20050 Frequency(MHz) 1720.0



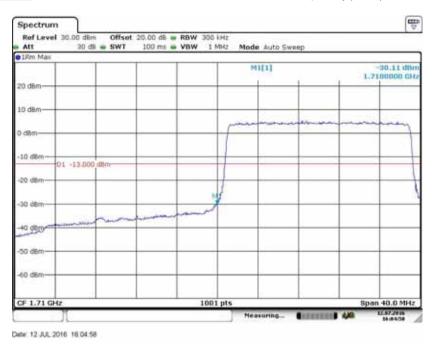
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**BAND EDGE EMISSION** 

Test Model

LTE Babd4 QPSK Modulation
Band Width 20MHz
Test Channel 20050

Test RB Frequency(MHz) RB100#0 1720.0

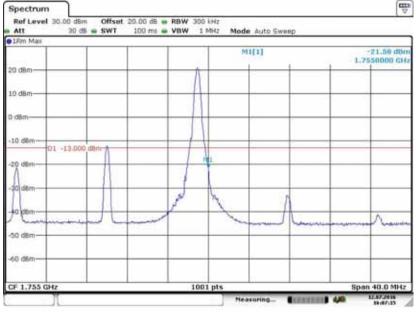




Test Model

LTE Babd4 QPSK Modulation

Band Width 20MHz Test RB RB1#0
Test Channel 20300 Frequency(MHz) 1745.0



Date 12 JUL 2016 16:07:15

Spectrum

Att

10 d8n

Ref Level 30.00 d8m

01 -13.000

**BAND EDGE EMISSION** 

30 dl - SWT

**Test Model** 

LTE Babd4 QPSK Modulation
Band Width 20MHz
Test Channel 20300

Offset 20.00 dB = RBW 300 kHz SWT 100 ms = VBW 1 MHz Test RB Frequency(MHz)

Mode Auto Sweep

-29,47 dBm 1.7550000 GHz

RB100#0

1745.0

TRF No.: FCC Part 22, 24, 27/A

Date: 12 JUL 2016 16:06:58

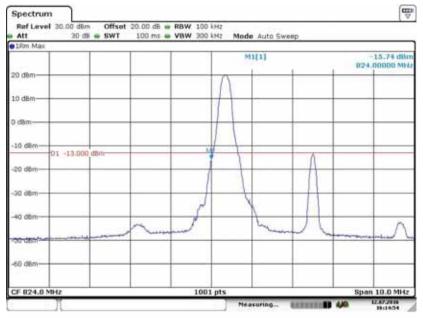
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Test Model

LTE Babd5 QPSK Modulation

Band Width 5MHz Test RB RB1#0
Test Channel 20425 Frequency(MHz) 826.5



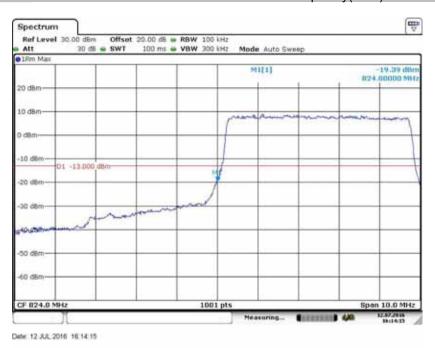
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**BAND EDGE EMISSION** 

Test Model

LTE Babd5 QPSK Modulation
Band Width 5MHz
Test Channel 20425

Test RB Frequency(MHz) RB25#0 826.5

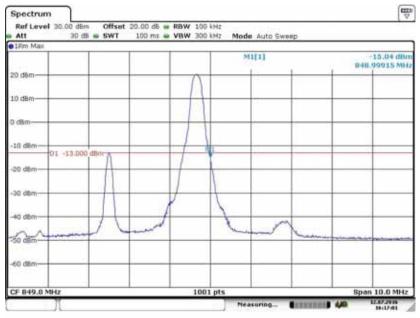




Test Model

LTE Babd5 QPSK Modulation

Band Width 5MHz Test RB RB1#0
Test Channel 20625 Frequency(MHz) 846.5



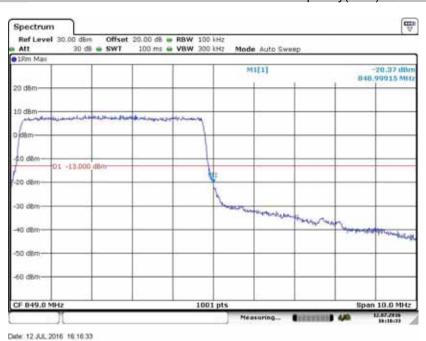
Date: 12 JUL 2016 16:17:00

**BAND EDGE EMISSION** 

Test Model

LTE Babd5 QPSK Modulation
Band Width 5MHz
Test Channel 20625

Test RB Frequency(MHz) RB25#0 846.5

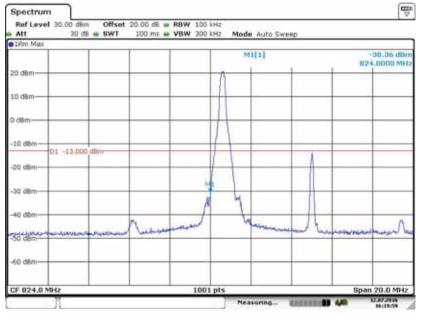




Test Model

LTE Babd5 QPSK Modulation

Band Width 10MHz Test RB RB1#0
Test Channel 20450 Frequency(MHz) 829.0



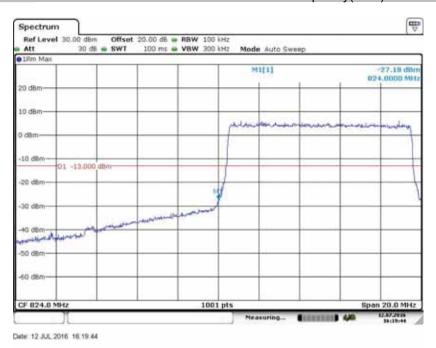
Date: 12 JUL 2016 16:19:59

**BAND EDGE EMISSION** 

**Test Model** 

LTE Babd5 QPSK Modulation
Band Width 10MHz
Test Channel 20450

Test RB Frequency(MHz) RB50#0 829.0

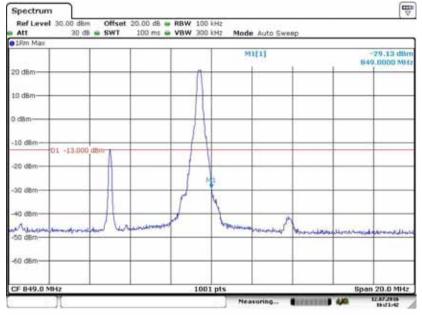




Test Model

LTE Babd5 **QPSK Modulation** 

10MHz **Band Width** Test RB **RB1#0** 20600 Test Channel Frequency(MHz) 844.0



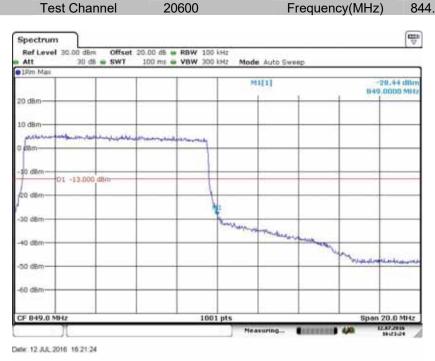
Date: 12 JUL 2016 16 21:42

**BAND EDGE EMISSION** 

Test Model

LTE Babd5 **QPSK Modulation Band Width** 10MHz 20600

Test RB Frequency(MHz) RB50#0 844.0

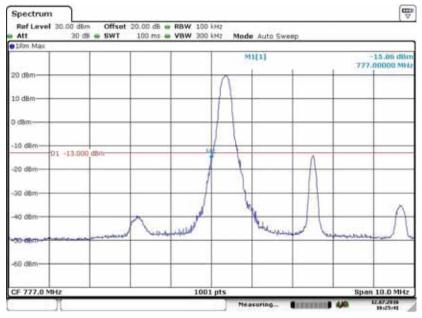




**Test Model** 

LTE Babd13 QPSK Modulation

Band Width 5MHz Test RB RB1#0
Test Channel 23205 Frequency(MHz) 779.5



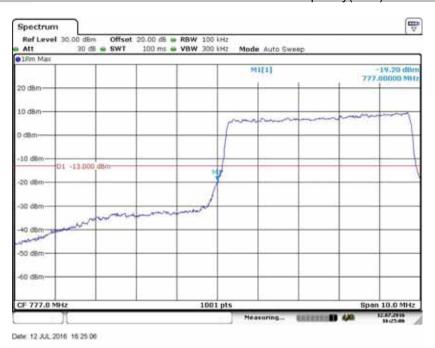
Date: 12 JUL 2016 16:25:41

BAND EDGE EMISSION

Test Model

LTE Babd13 QPSK Modulation
Band Width 5MHz
Test Channel 23205

Test RB Frequency(MHz) RB25#0 779.5

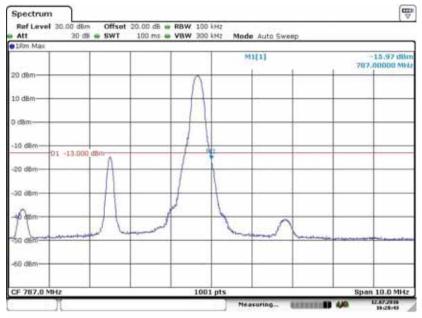




**Test Model** 

LTE Babd13 **QPSK Modulation** 

Band Width 5MHz Test RB **RB1#0** 23255 Test Channel Frequency(MHz) 784.5



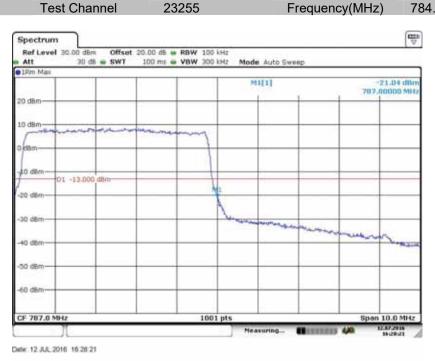
Date: 12 JUL 2016 16:28:44

**BAND EDGE EMISSION** 

Test Model

LTE Babd13 **QPSK Modulation Band Width** 5MHz

Test RB Frequency(MHz) RB25#0 784.5

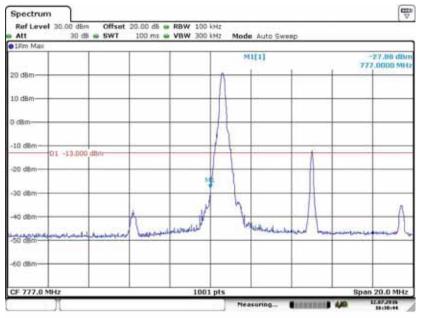




**Test Model** 

LTE Babd13 **QPSK Modulation** 

Band Width 10MHz Test RB **RB1#0** 23230 Test Channel Frequency(MHz) 782.0



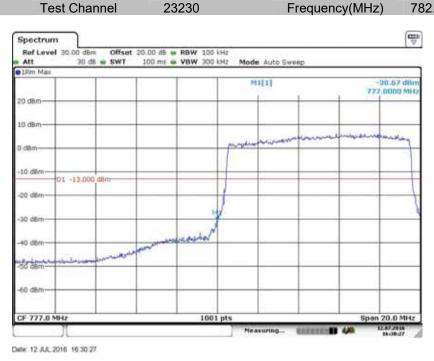
Date: 12 JUL 2016 16:30:44

**BAND EDGE EMISSION** 

Test Model

LTE Babd13 **QPSK Modulation Band Width** 10MHz 23230

Test RB Frequency(MHz) RB50#0 782.0

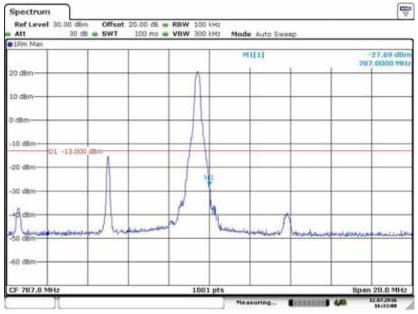




**Test Model** 

LTE Babd13 QPSK Modulation

Band Width 10MHz Test RB RB1#0
Test Channel 23230 Frequency(MHz) 782.0



Date 12 JUL 2016 16:33:08

**BAND EDGE EMISSION** 

Test Model

LTE Babd13 QPSK Modulation
Band Width 10MHz
Test Channel 23230

Test RB Frequency(MHz) RB50#0 782.0





RB25#0

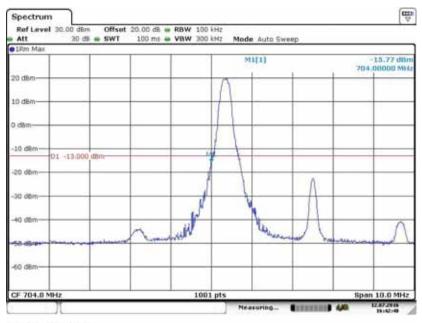
706.5

**BAND EDGE EMISSION** 

**Test Model** 

LTE Babd17 **QPSK Modulation** 

Band Width 5MHz Test RB **RB1#0** 23755 Test Channel Frequency(MHz) 706.5

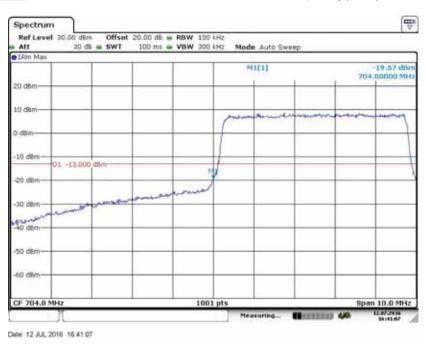


Date: 12 JUL 2016: 16:42:48

Test Model

**BAND EDGE EMISSION** LTE Babd17 **QPSK Modulation Band Width** 5MHz **Test Channel** 

Test RB Frequency(MHz) 23755

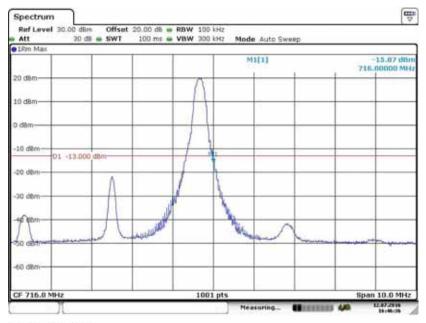




**Test Model** 

LTE Babd17 QPSK Modulation

Band Width 5MHz Test RB RB1#0
Test Channel 23825 Frequency(MHz) 713.5



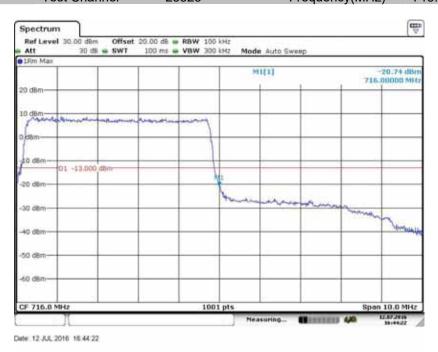
Date: 12 JUL 2016 16:46:36

BAND EDGE EMISSION

Test Model

LTE Babd17 QPSK Modulation
Band Width 5MHz
Test Channel 23825

Test RB Frequency(MHz) RB25#0 713.5



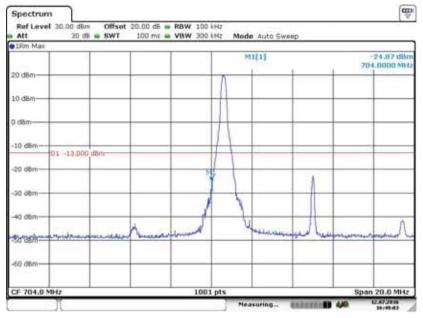


**Test Model** 

Test Model

LTE Babd17 QPSK Modulation
Band Width 10MHz

Band Width10MHzTest RBRB1#0Test Channel23780Frequency(MHz)709.0

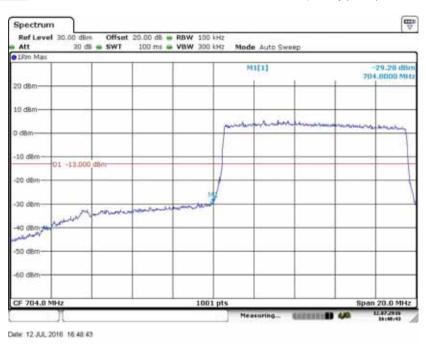


Date: 12 JUL 2016 16 49:03

BAND EDGE EMISSION

LTE Babd17 QPSK Modulation Band Width 10MHz

Band Width10MHzTest RBRB50#0Test Channel23780Frequency(MHz)709.0

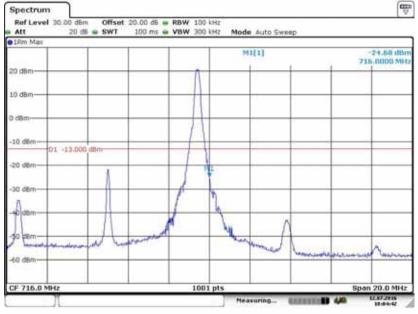




**Test Model** 

LTE Babd17 QPSK Modulation Band Width 10MHz

Band Width 10MHz Test RB RB1#0
Test Channel 23800 Frequency(MHz) 711.0



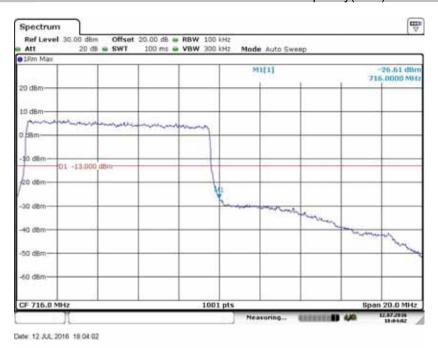
Date: 12 JUL 2016 18:04:42

BAND EDGE EMISSION

**Test Model** 

LTE Babd17 QPSK Modulation
Band Width 10MHz
Test Channel 23800

Test RB Frequency(MHz) RB50#0 711.0

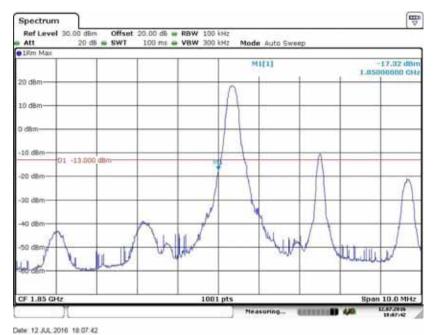




**Test Model** 

LTE Babd25 QPSK Modulation

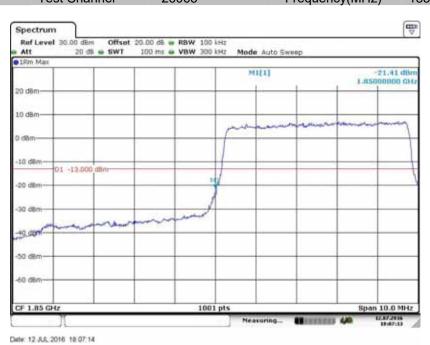
Band Width 5MHz Test RB RB1#0
Test Channel 26065 Frequency(MHz) 1852.5



Date: 12 30L 2010 10.01.42

Test Model

BAND EDGE EMISSIONLTE Babd25QPSK ModulationBand Width5MHzTest RBRB25#0Test Channel26065Frequency(MHz)1852.5

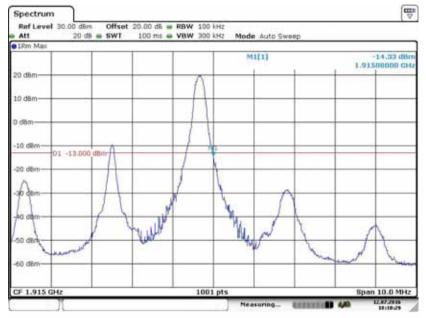




Test Model

LTE Babd25 QPSK Modulation

Band Width 5MHz Test RB RB1#0
Test Channel 26665 Frequency(MHz) 1912.5



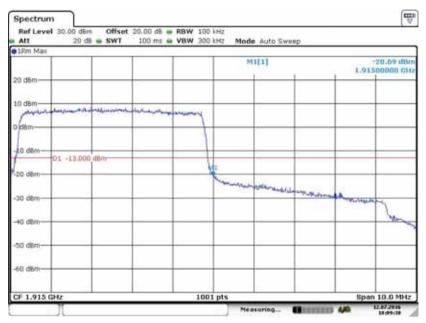
Date: 12 JUL 2016 18 10 29



Test Model

LTE Babd25 QPSK Modulation

Band Width 5MHz Test RB RB25#0
Test Channel 26665 Frequency(MHz) 1912.5



Date: 12 JUL 2016 18:09:31



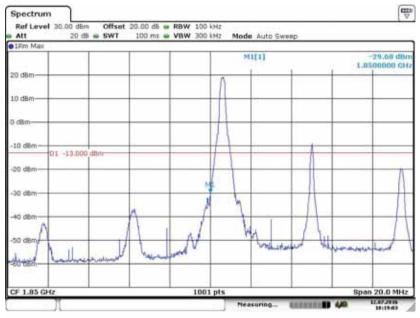
RB50#0

BAND EDGE EMISSION

**Test Model** 

LTE Babd25 QPSK Modulation

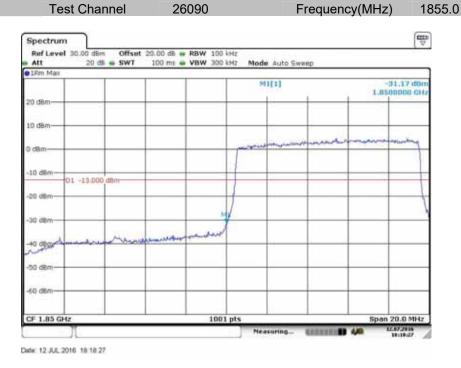
Band Width 10MHz Test RB RB1#0
Test Channel 26090 Frequency(MHz) 1855.0



Date: 12 JUL 2016 18 19:03

BAND EDGE EMISSION
LTE Babd25 QPS

LTE Babd25 QPSK Modulation
Band Width 10MHz Test RB
Test Channel 26090 Frequency(MHz)

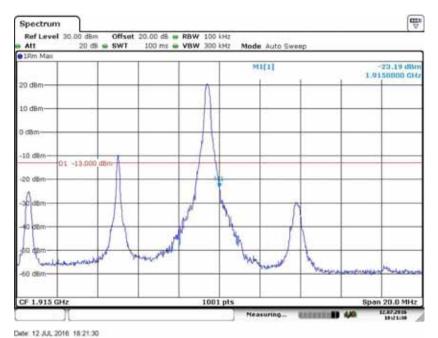




**Test Model** 

LTE Babd25 QPSK Modulation

Band Width 10MHz Test RB RB1#0
Test Channel 26640 Frequency(MHz) 1910.0



Test Model

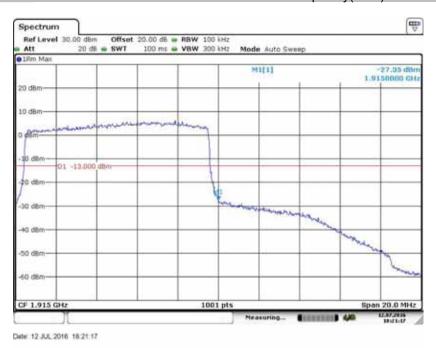
BAND EDGE EMISSION

LTE Babd25 QPSK Modulation

Band Width 10MHz

Test Channel 26640

Test RB Frequency(MHz) RB50#0 1910.0

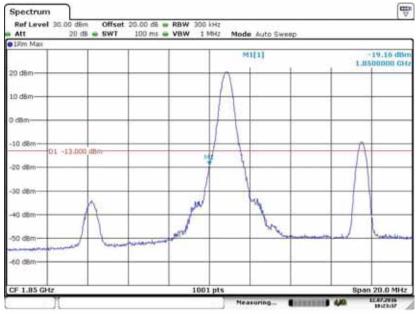




**Test Model** 

LTE Babd25 **QPSK Modulation** 

Band Width 15MHz Test RB RB1#0 Test Channel 26115 Frequency(MHz) 1857.5



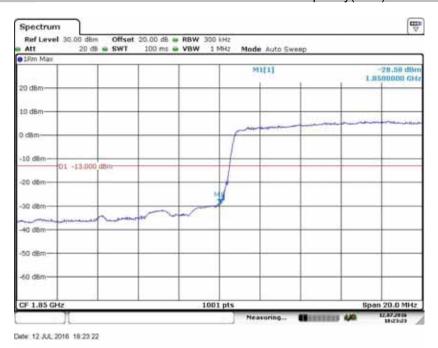
Date: 12 JUL 2016 18:23:37

**BAND EDGE EMISSION** 

Test Model

LTE Babd25 **QPSK Modulation Band Width** 15MHz **Test Channel** 26115

Test RB Frequency(MHz) RB75#0 1857.5

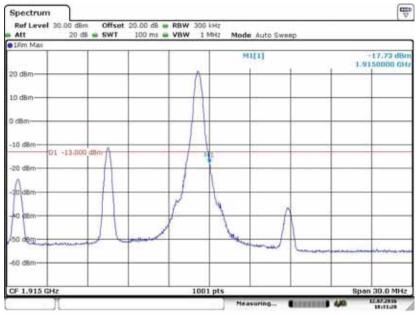




**Test Model** 

LTE Babd25 **QPSK Modulation** 

Band Width 15MHz Test RB **RB1#0** Test Channel 26615 Frequency(MHz) 1907.5



Date: 12 JUL 2016 18:31:28

**BAND EDGE EMISSION** 

Test Model

LTE Babd25 **QPSK Modulation Band Width** 15MHz **Test Channel** 26615

Test RB Frequency(MHz) RB75#0 1907.5

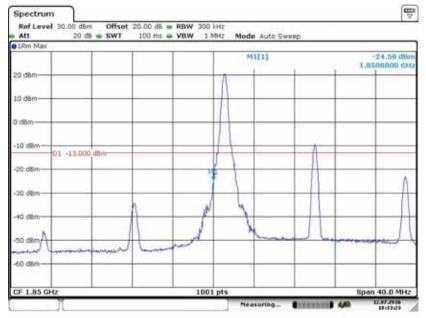




Test Model

LTE Babd25 QPSK Modulation

Band Width 20MHz Test RB RB1#0
Test Channel 26140 Frequency(MHz) 1860.0



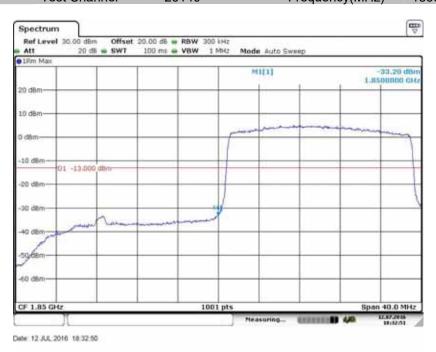
Date: 12 JUL 2016 18:33:23

BAND EDGE EMISSION

**Test Model** 

LTE Babd25 QPSK Modulation
Band Width 20MHz
Test Channel 26140

Test RB Frequency(MHz) RB100#0 1860.0

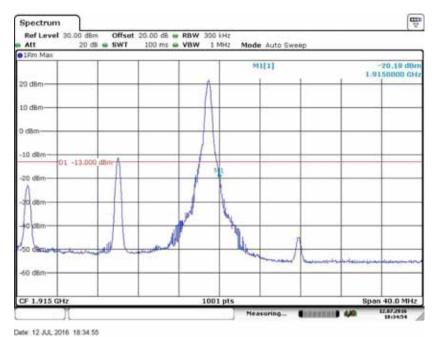




**Test Model** 

LTE Babd25 QPSK Modulation Band Width 20MHz

Band Width 20MHz Test RB RB1#0
Test Channel 26590 Frequency(MHz) 1905.0



Test Model

BAND EDGE EMISSION
LTE Babd25 QPSK Modulation
Band Width 20MHz
Test Channel 26590

Test RB Frequency(MHz)

RB100#0 1905.0

