



# TESTREPORT

Applicant Name : TECNO MOBILE LIMITED  
Address : FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25  
SHAN MEI STREET FOTAN NT HONGKONG  
Report Number : RA221117-54715E-RF-00C  
FCC ID: 2ADYY-BF6

## Test Standard (s)

FCC PART 27; FCC PART 22H; FCC PART 24E

## Sample Description

Product Type: Mobile Phone  
Model No.: BF6  
Multiple Model(s) No.: N/A  
Trade Mark: TECNO  
Date Received: 2022/11/17  
Report Date: 2022/12/22

|              |       |
|--------------|-------|
| Test Result: | Pass* |
|--------------|-------|

\* In the configuration tested, the EUT complied with the standards above.

## Prepared and Checked By:

*Roger Ling*

Roger Ling  
EMC Engineer

## Approved By:

*Candy Li*

Candy Li  
EMC Engineer

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "★".

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FCC -2G,3G,4G

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## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Frequency Range        | GSM 850: 824-849MHz(TX); 869-894MHz(RX)<br>PCS 1900: 1850-1910MHz(TX); 1930-1990MHz(RX)<br>WCDMA Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX)<br>WCDMA Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX)<br>WCDMA Band 5: 824-849MHz(TX); 869-894MHz(RX)<br>LTE Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX)<br>LTE Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX)<br>LTE Band 5: 824-849MHz(TX); 869-894MHz(RX)<br>LTE Band 7: 2500-2570MHz(TX); 2620-2690MHz(RX)<br>LTE Band 12: 699-716MHz(TX); 729-746MHz(RX)<br>LTE Band 17: 704-716MHz(TX); 734-746MHz(RX)<br>LTE Band 38: 2570-2620MHz(TX/RX)<br>LTE Band 41: 2535-2655MHz(TX/RX)<br>LTE Band 66: 1710-1780MHz(TX); 2110-2180MHz(RX) |
| Modulation Technique   | 2G: GMSK, 8PSK<br>3G: BPSK, QPSK, 16QAM<br>4G: QPSK, 16QAM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Antenna Specification* | GSM850/WCDMA Band 5/LTE Band 5: -0.3dBi<br>PCS 1900/WCDMA Band 2/ LTE Band 2: -0.75dBi<br>WCDMA Band 4/ LTE Band 4/ LTE Band 66:-1.0dBi<br>LTE Band 7/ LTE Band 38/LTE Band 41: 2.5dBi<br>LTE Band 12/ LTE Band 17: -2.5dBi(provided by the applicant)                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Voltage Range          | DC 3.85V from battery or DC 5V from adapter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Sample serial number   | 1QH6-1 for Radiated Emissions Test<br>1QHH-8 for RF Conducted Test<br>(Assigned by ATC)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Sample/EUT Status      | Good condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Adapter 1 information  | Model: U100TSA<br>Input: AC 100-240V, 50/60Hz, 0.3A<br>Output: DC 5.0V, 2.0A ,10.0W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Adapter 2 information  | Model: U050TSA<br>Input: AC 100-240V, 50/60Hz, Max 0.2A<br>Output: DC 5.0V, 1.0A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Extreme condition*     | L.V.: Low Voltage 3.45V<br>N.V.: Normal Voltage 3.85V<br>H.V.: High Voltage 4.4V<br>(provided by the applicant)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### Objective

This test report is in accordance with Part 2-Subpart J, Part 22-Subpart H, Part24-Subpart E, and Part 27 of the Federal Communication Commission's rules.

The objective is to determine the compliance of the EUT with FCC rules for output power, modulation characteristic, occupied bandwidth, and spurious emission at antenna terminal, spurious radiated emission, frequency stability and band edge.

## Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2-Subpart J as well as the following parts:

Part 22 Subpart H - Public Mobile Services  
 Part 24 Subpart E - Personal Communication Services  
 Part 27 - Miscellaneous Wireless Communications Services

ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

## Measurement Uncertainty

| Parameter                    |                 | Uncertainty             |
|------------------------------|-----------------|-------------------------|
| Occupied Channel Bandwidth   |                 | ±5%                     |
| RF output power, conducted   |                 | ±0.73dB                 |
| Unwanted Emission, conducted |                 | ±1.6dB                  |
| RF Frequency                 |                 | ±0.082*10 <sup>-7</sup> |
| Emissions,<br>Radiated       | 30MHz - 1GHz    | ±4.28dB                 |
|                              | 1GHz - 18GHz    | ±4.98dB                 |
|                              | 18GHz - 26.5GHz | ±5.06dB                 |
| Temperature                  |                 | ±1 °C                   |
| Humidity                     |                 | ±6%                     |
| Supply voltages              |                 | ±0.4%                   |

*Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.*

## Test Facility

The Test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358, the FCC Designation No.: CN1189. Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 4297.01.

Listed by Innovation, Science and Economic Development Canada (ISED), the Registration Number is 5077A.

## SYSTEM TEST CONFIGURATION

### Description of Test Configuration

The final qualification test was performed with the EUT operating at normal mode.

Test was performed as below table:

| Frequency band | Bandwidth (MHz) | Test Frequency(MHz) |        |        |
|----------------|-----------------|---------------------|--------|--------|
|                |                 | Low                 | Middle | High   |
| GSM850         | 0.25            | 824.2               | 836.6  | 848.8  |
| PCS1900        | 0.25            | 1850.2              | 1880   | 1909.8 |
| WCDMA B2       | 4.2             | 1852.4              | 1880   | 1907.6 |
| WCDMA B4       | 4.2             | 1712.4              | 1732.6 | 1752.6 |
| WCDMA B5       | 4.2             | 826.4               | 836.6  | 846.6  |
| LTE B2         | 1.4             | 1850.7              | 1880   | 1909.3 |
|                | 3               | 1851.5              | 1880   | 1908.5 |
|                | 5               | 1852.5              | 1880   | 1907.5 |
|                | 10              | 1855                | 1880   | 1905   |
|                | 15              | 1857.5              | 1880   | 1902.5 |
|                | 20              | 1860                | 1880   | 1900   |
| LTE B4         | 1.4             | 1710.7              | 1732.5 | 1754.3 |
|                | 3               | 1711.5              | 1732.5 | 1753.5 |
|                | 5               | 1712.5              | 1732.5 | 1752.5 |
|                | 10              | 1715                | 1732.5 | 1750   |
|                | 15              | 1717.5              | 1732.5 | 1747.5 |
|                | 20              | 1720                | 1732.5 | 1745   |
| LTE B5         | 1.4             | 824.7               | 836.5  | 848.3  |
|                | 3               | 825.5               | 836.5  | 847.5  |
|                | 5               | 826.5               | 836.5  | 846.5  |
|                | 10              | 829                 | 836.5  | 844    |
| LTE B7         | 5               | 2502.5              | 2535   | 2567.5 |
|                | 10              | 2505                | 2535   | 2565   |
|                | 15              | 2507.5              | 2535   | 2562.5 |
|                | 20              | 2510                | 2535   | 2560   |
| LTE B12        | 1.4             | 699.7               | 707.5  | 715.3  |
|                | 3               | 700.5               | 707.5  | 714.5  |
|                | 5               | 701.5               | 707.5  | 713.5  |
|                | 10              | 704                 | 707.5  | 711    |
| LTE B17        | 5               | 706.5               | 710    | 713.5  |
|                | 10              | 709                 | 710    | 711    |

| Frequency band | Bandwidth (MHz) | Test Frequency(MHz) |        |        |
|----------------|-----------------|---------------------|--------|--------|
|                |                 | Low                 | Middle | High   |
| LTE B38        | 5               | 2572.5              | 2595   | 2617.5 |
|                | 10              | 2575                | 2595   | 2615   |
|                | 15              | 2577.5              | 2595   | 2612.5 |
|                | 20              | 2580                | 2595   | 2610   |
| LTE B41        | 5               | 2537.5              | 2595   | 2652.5 |
|                | 10              | 2540                | 2595   | 2650   |
|                | 15              | 2542.5              | 2595   | 2647.5 |
|                | 20              | 2545                | 2595   | 2645   |
| LTE B66        | 1.4             | 1710.7              | 1745   | 1779.3 |
|                | 3               | 1711.5              | 1745   | 1778.5 |
|                | 5               | 1712.5              | 1745   | 1777.5 |
|                | 10              | 1715                | 1745   | 1775   |
|                | 15              | 1717.5              | 1745   | 1772.5 |
|                | 20              | 1720                | 1745   | 1770   |

### Equipment Modifications

No modification was made to the EUT.

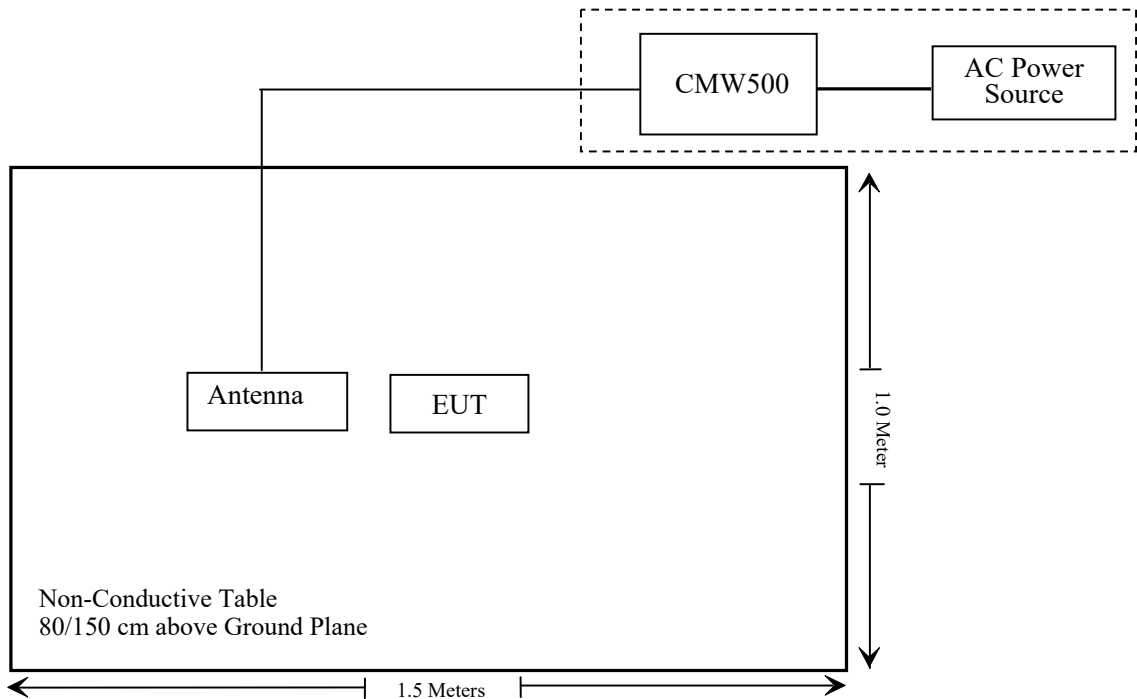
### Support Equipment List and Details

| Manufacturer    | Description                         | Model  | Serial Number |
|-----------------|-------------------------------------|--------|---------------|
| Rohde & Schwarz | Wideband Radio Communication Tester | CMW500 | 154606        |

### Support Cable Description

| Cable Description                  | Length (m) | From / Port | To     |
|------------------------------------|------------|-------------|--------|
| Un-shielded Un-detachable AC Cable | 1.2        | AC Power    | CMW500 |

Block Diagram of Test Setup



**SUMMARY OF TEST RESULTS**

| FCC Rules                                                          | Description of Test                    | Result         |
|--------------------------------------------------------------------|----------------------------------------|----------------|
| § 1.1307 ,§2.1093                                                  | RF Exposure (SAR)                      | Compliant      |
| §2.1046; § 22.913 (a) (d);<br>§ 24.232 (c) (d); §27.50(b) (d) (h); | RF Output Power                        | Compliant      |
| § 2.1047                                                           | Modulation Characteristics             | Not Applicable |
| § 2.1049; § 22.905;<br>§ 22.917; § 24.238; §27.53                  | Occupied Bandwidth                     | Compliant      |
| § 2.1051; §22.917 (a);<br>§ 24.238 (a); §27.53;                    | Spurious Emissions at Antenna Terminal | Compliant      |
| § 2.1053; § 22.917 (a);<br>§ 24.238 (a); §27.53                    | Field Strength of Spurious Radiation   | Compliant      |
| § 22.917 (a);<br>§ 24.238 (a); §27.53(c)(g)(h)(m)                  | Band Edge                              | Compliant      |
| § 2.1055; § 22.355;<br>§ 24.235; §27.54;                           | Frequency stability                    | Compliant      |

**TEST EQUIPMENT LIST**

| Manufacturer                                    | Description       | Model                | Serial Number          | Calibration Date | Calibration Due Date |
|-------------------------------------------------|-------------------|----------------------|------------------------|------------------|----------------------|
| Radiated Emission Test                          |                   |                      |                        |                  |                      |
| Rohde& Schwarz                                  | Test Receiver     | ESR                  | 102725                 | 2021/12/13       | 2022/12/12           |
| Rohde&Schwarz                                   | Spectrum Analyzer | FSV40                | 101949                 | 2021/12/13       | 2022/12/12           |
| SONOMA INSTRUMENT                               | Amplifier         | 310 N                | 186131                 | 2022/11/08       | 2023/11/07           |
| A.H. Systems, inc.                              | Preamplifier      | PAM-0118P            | 135                    | 2022/11/08       | 2023/11/07           |
| Quinstar                                        | Amplifier         | QLW-184055<br>36-J0  | 15964001002            | 2022/11/08       | 2023/11/07           |
| Radiated Emission Test Software: e3 19821b (V9) |                   |                      |                        |                  |                      |
| Unknown                                         | RF Coaxial Cable  | No.10                | N050                   | 2022/11/25       | 2023/11/24           |
| Unknown                                         | RF Coaxial Cable  | No.11                | N1000                  | 2022/11/25       | 2023/11/24           |
| Unknown                                         | RF Coaxial Cable  | No.12                | N040                   | 2022/11/25       | 2023/11/24           |
| Unknown                                         | RF Coaxial Cable  | No.13                | N300                   | 2022/11/25       | 2023/11/24           |
| Unknown                                         | RF Coaxial Cable  | No.14                | N800                   | 2022/11/25       | 2023/11/24           |
| Unknown                                         | RF Coaxial Cable  | No.15                | N600                   | 2021/12/14       | 2022/12/13           |
| Unknown                                         | RF Coaxial Cable  | No.16                | N650                   | 2021/12/14       | 2022/12/13           |
| Schwarzbeck                                     | Bilog Antenna     | VULB9163             | 9163-194               | 2020/01/05       | 2023/01/04           |
| Schwarzbeck                                     | Bilog Antenna     | VULB9163             | 9163-323               | 2021/07/06       | 2024/07/05           |
| Schwarzbeck                                     | Horn Antenna      | BBHA9120D            | 9120D-655              | 2020/01/05       | 2023/01/04           |
| Schwarzbeck                                     | Horn Antenna      | BBHA9120D            | 9120D-1067             | 2020/01/05       | 2023/01/04           |
| PASTERNAK                                       | Horn Antenn       | PE9852/2F-20         | 1120<br>(ATC-BA-024-1) | 2020/01/05       | 2023/01/04           |
| PASTERNAK                                       | Horn Antenn       | PE9852/2F-20         | 1120<br>(ATC-BA-025-1) | 2020/01/05       | 2023/01/04           |
| Wainwright                                      | High Pass Filter  | WHKX3.6/18<br>G-10SS | 5                      | 2021/12/14       | 2022/12/13           |
| CD                                              | High Pass Filter  | HPM-1.2/18G<br>-60   | 110                    | 2021/12/14       | 2022/12/13           |
| Unknown                                         | RFCoaxialCable    | No.16                | N200                   | 2021/12/14       | 2022/12/13           |
| Agilent                                         | Signal Generator  | N5183A               | MY51040755             | 2021/12/13       | 2022/12/12           |

| Manufacturer      | Description                         | Model       | Serial Number | Calibration Date | Calibration Due Date |
|-------------------|-------------------------------------|-------------|---------------|------------------|----------------------|
| RF Conducted Test |                                     |             |               |                  |                      |
| SPECTRUM ANALYZER | Rohde & Schwarz                     | FSU26       | 200982        | 2022/07/04       | 2023/07/03           |
| Rohde&Schwarz     | Spectrum Analyzer                   | FSV-40      | 101590        | 2022/01/19       | 2023/01/18           |
| Rohde & Schwarz   | Wideband Radio Communication Tester | CMW500      | 154606        | 2021/11/25       | 2022/11/24           |
| Rohde & Schwarz   | Wideband Radio Communication Tester | CMW500      | 154606        | 2022/11/25       | 2023/11/24           |
| Mini-Circuits     | Power Splitter                      | DC-18000MHz | SF10944151S   | 2021/11/25       | 2022/11/24           |
| Mini-Circuits     | Power Splitter                      | DC-18000MHz | SF10944151S   | 2022/11/25       | 2023/11/24           |
| REALE             | Temp. & Humid. Chamber              | RHP-800BT   | R20170318310  | 2022/11/23       | 2023/11/22           |
| Fluke             | Multi Meter                         | 45          | 7664009       | 2021/12/14       | 2022/12/13           |
| Fluke             | Multi Meter                         | 45          | 7664009       | 2022/12/14       | 2023/12/13           |
| Manson            | DC Power Source                     | KPS-6604    | ATCS-205      | NCR              | NCR                  |
| Unknown           | RF Coaxial Cable                    | No.33       | RF-03         | Each time        |                      |

\* Statement of Traceability: Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

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## **FCC §1.1307(b)&§2.1093 - RF EXPOSURE INFORMATION**

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### **Applicable Standard**

FCC§1.1307 and §2.1093.

### **Test Result**

Compliant, please refer to the SAR report: RA221117-54715E-SA.

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## **FCC§2.1047 - MODULATION CHARACTERISTIC**

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According to FCC § 2.1047(d), Part 22H & 24E& 27, there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

## FCC § 2.1046,§ 22.913 (a) (d)&§ 24.232(c) (d); §27.50 (c)(d)(h)- RF OUTPUT POWER

### Applicable Standard

According to FCC §2.1046 and §22.913 (a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC §2.1046 and §24.232 (c),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.

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB.

According to §27.50(c), Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

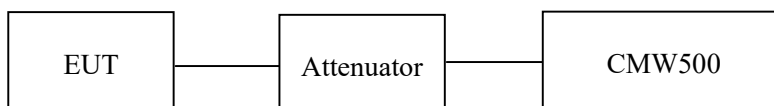
According to §27.50(d), Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

According to §27.50(h), the maximum EIRP must not exceed 2Watts (33dBm) for 2496-2690 MHz.

### Test Procedure

#### Conducted method:

The RF output of the transmitter was connected to the CMW500 through sufficient attenuation.



Note: the path loss (cable loss and attenuator) has included in the result.

### Test Data

#### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 27.2℃     |
| Relative Humidity: | 56.2 %    |
| ATM Pressure:      | 101.0 kPa |

The testing was performed by Glenn Jiang from 2022-11-24 to 2022-12-10.

**Conducted Power****Cellular Band (Part 22H)**

| Mode | Channel | Frequency (MHz) | Average Output Power (dBm) | ERP(dBm)     | Limit (dBm) |
|------|---------|-----------------|----------------------------|--------------|-------------|
| GSM  | 128     | 824.2           | 32.70                      | <b>30.25</b> | 38.45       |
|      | 190     | 836.6           | 32.60                      | 30.15        | 38.45       |
|      | 251     | 848.8           | 32.70                      | 30.25        | 38.45       |

| Mode | Channel | Frequency (MHz) | Average Output Power (dBm) |         |         |         | ERP(dBm) |         |         |         | Limit (dBm) |
|------|---------|-----------------|----------------------------|---------|---------|---------|----------|---------|---------|---------|-------------|
|      |         |                 | 1 slot                     | 2 slots | 3 slots | 4 slots | 1 slot   | 2 slots | 3 slots | 4 slots |             |
| GPRS | 128     | 824.2           | 32.59                      | 30.48   | 28.45   | 26.98   | 30.14    | 28.03   | 26.00   | 24.53   | 38.45       |
|      | 190     | 836.6           | 32.63                      | 30.45   | 28.48   | 26.82   | 30.18    | 28.00   | 26.03   | 24.37   | 38.45       |
|      | 251     | 848.8           | 32.65                      | 30.45   | 28.46   | 26.93   | 30.20    | 28.00   | 26.01   | 24.48   | 38.45       |

| Mode  | Channel | Frequency (MHz) | Average Output Power (dBm) |         |         |         | ERP(dBm)     |         |         |         | Limit (dBm) |
|-------|---------|-----------------|----------------------------|---------|---------|---------|--------------|---------|---------|---------|-------------|
|       |         |                 | 1 slot                     | 2 slots | 3 slots | 4 slots | 1 slot       | 2 slots | 3 slots | 4 slots |             |
| EGPRS | 128     | 824.2           | 25.04                      | 23.31   | 20.66   | 19.93   | 22.59        | 20.86   | 18.21   | 17.48   | 38.45       |
|       | 190     | 836.6           | 25.11                      | 23.32   | 20.81   | 19.89   | <b>22.66</b> | 20.87   | 18.36   | 17.44   | 38.45       |
|       | 251     | 848.8           | 24.92                      | 23.18   | 20.66   | 19.97   | 22.47        | 20.73   | 18.21   | 17.52   | 38.45       |

| Mode              | Test Mode | 3GPP Sub Test | Average Output Power (dBm) |       |       | ERP(dBm)     |       |       |
|-------------------|-----------|---------------|----------------------------|-------|-------|--------------|-------|-------|
|                   |           |               | Low                        | Mid   | High  | Low          | Mid   | High  |
| WCDMA<br>(Band 5) | RMC12.2k  |               | 23.43                      | 23.34 | 23.28 | <b>20.98</b> | 20.89 | 20.83 |
|                   | HSDPA     | 1             | 21.95                      | 21.76 | 21.92 | 19.50        | 19.31 | 19.47 |
|                   |           | 2             | 21.88                      | 21.58 | 21.88 | 19.43        | 19.13 | 19.43 |
|                   |           | 3             | 21.77                      | 21.64 | 21.64 | 19.32        | 19.19 | 19.19 |
|                   |           | 4             | 21.68                      | 21.58 | 21.58 | 19.23        | 19.13 | 19.13 |
|                   | HSUPA     | 1             | 21.92                      | 21.74 | 21.91 | 19.47        | 19.29 | 19.46 |
|                   |           | 2             | 21.88                      | 21.68 | 21.88 | 19.43        | 19.23 | 19.43 |
|                   |           | 3             | 21.74                      | 21.58 | 21.55 | 19.29        | 19.13 | 19.10 |
|                   |           | 4             | 21.76                      | 21.45 | 21.47 | 19.31        | 19.00 | 19.02 |
|                   |           | 5             | 21.58                      | 21.58 | 21.58 | 19.13        | 19.13 | 19.13 |
|                   | HSPA+     | 1             | 21.48                      | 21.47 | 21.64 | 19.03        | 19.02 | 19.19 |

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)

For GSM850 / WCDMA Band5: Antenna Gain = -0.3dBi = -2.45dBd (0dBd=2.15(dBi))

Limit: ERP ≤ 38.45dBm

**PCS Band (Part 24E)**

| Mode | Channel | Frequency (MHz) | Average Output Power (dBm) | EIRP(dBm)    | Limit (dBm) |
|------|---------|-----------------|----------------------------|--------------|-------------|
| GSM  | 512     | 1850.2          | 30.00                      | <b>29.25</b> | 33          |
|      | 661     | 1880.0          | 29.80                      | 29.05        | 33          |
|      | 810     | 1909.8          | 29.70                      | 28.95        | 33          |

| Mode | Channel | Frequency (MHz) | Average Output Power (dBm) |         |         |         | EIRP(dBm) |         |         |         | Limit (dBm) |
|------|---------|-----------------|----------------------------|---------|---------|---------|-----------|---------|---------|---------|-------------|
|      |         |                 | 1 slot                     | 2 slots | 3 slots | 4 slots | 1 slot    | 2 slots | 3 slots | 4 slots |             |
| GPRS | 512     | 1850.2          | 29.98                      | 28.06   | 26.40   | 24.89   | 29.23     | 27.31   | 25.65   | 24.14   | 33          |
|      | 661     | 1880.0          | 29.76                      | 27.74   | 26.16   | 24.64   | 29.01     | 26.99   | 25.41   | 23.89   | 33          |
|      | 810     | 1909.8          | 29.58                      | 27.17   | 25.64   | 24.15   | 28.83     | 26.42   | 24.89   | 23.40   | 33          |

| Mode  | Channel | Frequency (MHz) | Average Output Power (dBm) |         |         |         | EIRP(dBm)    |         |         |         | Limit (dBm) |
|-------|---------|-----------------|----------------------------|---------|---------|---------|--------------|---------|---------|---------|-------------|
|       |         |                 | 1 slot                     | 2 slots | 3 slots | 4 slots | 1 slot       | 2 slots | 3 slots | 4 slots |             |
| EGPRS | 512     | 1850.2          | 26.01                      | 24.62   | 21.96   | 20.73   | 25.26        | 23.87   | 21.21   | 19.98   | 33          |
|       | 661     | 1880.0          | 26.36                      | 24.67   | 22.17   | 21.17   | <b>25.61</b> | 23.92   | 21.42   | 20.42   | 33          |
|       | 810     | 1909.8          | 26.01                      | 24.22   | 21.81   | 20.61   | 25.26        | 23.47   | 21.06   | 19.86   | 33          |

| Mode              | Test Mode | 3GPP Sub Test | Average Output Power (dBm) |       |       | EIRP(dBm) |              |       |
|-------------------|-----------|---------------|----------------------------|-------|-------|-----------|--------------|-------|
|                   |           |               | Low                        | Mid   | High  | Low       | Mid          | High  |
| WCDMA<br>(Band 2) | RMC12.2k  |               | 22.88                      | 22.94 | 22.94 | 22.13     | <b>22.19</b> | 22.19 |
|                   | HSDPA     | 1             | 21.29                      | 21.68 | 21.29 | 20.54     | 20.93        | 20.54 |
|                   |           | 2             | 21.24                      | 21.42 | 21.24 | 20.49     | 20.67        | 20.49 |
|                   |           | 3             | 21.41                      | 21.33 | 21.41 | 20.66     | 20.58        | 20.66 |
|                   |           | 4             | 21.33                      | 21.21 | 21.33 | 20.58     | 20.46        | 20.58 |
|                   | HSUPA     | 1             | 21.15                      | 21.71 | 21.15 | 20.40     | 20.96        | 20.40 |
|                   |           | 2             | 21.13                      | 21.55 | 21.13 | 20.38     | 20.80        | 20.38 |
|                   |           | 3             | 21.18                      | 21.62 | 21.18 | 20.43     | 20.87        | 20.43 |
|                   |           | 4             | 21.16                      | 21.47 | 21.16 | 20.41     | 20.72        | 20.41 |
|                   |           | 5             | 21.14                      | 21.59 | 21.14 | 20.39     | 20.84        | 20.39 |
|                   | HSPA+     | 1             | 21.16                      | 21.46 | 21.16 | 20.41     | 20.71        | 20.41 |

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)  
 For PCS1900 / WCDMA Band2: Antenna Gain = -0.75dBi  
 Limit: EIRP ≤ 33dBm

**AWS Band**

| Mode           | Test Mode | 3GPP Sub Test | Average Output Power (dBm) |       |       | EIRP(dBm) |       |       |
|----------------|-----------|---------------|----------------------------|-------|-------|-----------|-------|-------|
|                |           |               | Low                        | Mid   | High  | Low       | Mid   | High  |
| WCDMA (Band 4) | RMC12.2k  |               | 22.78                      | 22.82 | 22.93 | 21.78     | 21.82 | 21.93 |
|                | HSDPA     | 1             | 21.27                      | 21.89 | 20.27 | 20.27     | 20.89 | 19.27 |
|                |           | 2             | 21.33                      | 21.55 | 20.33 | 20.33     | 20.55 | 19.33 |
|                |           | 3             | 21.24                      | 21.31 | 20.24 | 20.24     | 20.31 | 19.24 |
|                |           | 4             | 21.32                      | 21.26 | 20.32 | 20.32     | 20.26 | 19.32 |
|                | HSUPA     | 1             | 21.20                      | 21.95 | 20.2  | 20.20     | 20.95 | 19.20 |
|                |           | 2             | 21.11                      | 21.88 | 20.11 | 20.11     | 20.88 | 19.11 |
|                |           | 3             | 21.13                      | 21.57 | 20.13 | 20.13     | 20.57 | 19.13 |
|                |           | 4             | 21.14                      | 21.69 | 20.14 | 20.14     | 20.69 | 19.14 |
|                |           | 5             | 21.21                      | 21.47 | 20.21 | 20.21     | 20.47 | 19.21 |
|                | HSPA+     | 1             | 21.17                      | 21.36 | 20.17 | 20.17     | 20.36 | 19.17 |

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band4: Antenna Gain = -1.0dBi

Limit: EIRP ≤ 30dBm

**LTE Band 2**

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 1.4                | QPSK       | RB1#0                 | 20.71                                   | 20.70 | 20.53 | 19.96     | 19.95 | 19.78 |
|                    |            | RB1#3                 | 20.74                                   | 20.76 | 20.47 | 19.99     | 20.01 | 19.72 |
|                    |            | RB1#5                 | 20.73                                   | 20.73 | 20.54 | 19.98     | 19.98 | 19.79 |
|                    |            | RB3#0                 | 20.76                                   | 20.66 | 20.57 | 20.01     | 19.91 | 19.82 |
|                    |            | RB3#3                 | 20.84                                   | 20.59 | 20.61 | 20.09     | 19.84 | 19.86 |
|                    |            | RB6#0                 | 19.65                                   | 19.70 | 19.57 | 18.90     | 18.95 | 18.82 |
|                    | 16QAM      | RB1#0                 | 20.38                                   | 20.05 | 20.29 | 19.63     | 19.30 | 19.54 |
|                    |            | RB1#3                 | 20.40                                   | 19.93 | 20.34 | 19.65     | 19.18 | 19.59 |
|                    |            | RB1#5                 | 20.41                                   | 19.80 | 20.33 | 19.66     | 19.05 | 19.58 |
|                    |            | RB3#0                 | 19.77                                   | 19.57 | 19.73 | 19.02     | 18.82 | 18.98 |
|                    |            | RB3#3                 | 19.82                                   | 19.56 | 19.78 | 19.07     | 18.81 | 19.03 |
|                    |            | RB6#0                 | 19.04                                   | 18.93 | 18.91 | 18.29     | 18.18 | 18.16 |
| 3.0                | QPSK       | RB1#0                 | 20.85                                   | 20.54 | 20.64 | 20.10     | 19.79 | 19.89 |
|                    |            | RB1#8                 | 20.85                                   | 20.55 | 20.56 | 20.10     | 19.80 | 19.81 |
|                    |            | RB1#14                | 20.88                                   | 20.51 | 20.49 | 20.13     | 19.76 | 19.74 |
|                    |            | RB6#0                 | 19.66                                   | 19.66 | 19.67 | 18.91     | 18.91 | 18.92 |
|                    |            | RB6#9                 | 19.81                                   | 19.54 | 19.64 | 19.06     | 18.79 | 18.89 |
|                    |            | RB15#0                | 19.71                                   | 19.63 | 19.65 | 18.96     | 18.88 | 18.90 |
|                    | 16QAM      | RB1#0                 | 19.88                                   | 19.41 | 20.03 | 19.13     | 18.66 | 19.28 |
|                    |            | RB1#8                 | 19.81                                   | 19.27 | 20.01 | 19.06     | 18.52 | 19.26 |
|                    |            | RB1#14                | 20.01                                   | 19.35 | 19.96 | 19.26     | 18.60 | 19.21 |
|                    |            | RB6#0                 | 18.97                                   | 18.76 | 18.62 | 18.22     | 18.01 | 17.87 |
|                    |            | RB6#9                 | 19.08                                   | 18.93 | 18.67 | 18.33     | 18.18 | 17.92 |
|                    |            | RB15#0                | 18.79                                   | 18.75 | 18.79 | 18.04     | 18.00 | 18.04 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm)    |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|--------------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low          | Mid   | High  |
| 5.0                | QPSK       | RB1#0                 | 20.80                                   | 20.59 | 20.66 | 20.05        | 19.84 | 19.91 |
|                    |            | RB1#13                | 20.85                                   | 20.53 | 20.60 | 20.10        | 19.78 | 19.85 |
|                    |            | RB1#24                | 20.93                                   | 20.55 | 20.52 | 20.18        | 19.80 | 19.77 |
|                    |            | RB15#0                | 19.64                                   | 19.69 | 19.76 | 18.89        | 18.94 | 19.01 |
|                    |            | RB15#10               | 19.79                                   | 19.64 | 19.69 | 19.04        | 18.89 | 18.94 |
|                    |            | RB25#0                | 19.80                                   | 19.66 | 19.63 | 19.05        | 18.91 | 18.88 |
|                    | 16QAM      | RB1#0                 | 19.67                                   | 19.38 | 18.80 | 18.92        | 18.63 | 18.05 |
|                    |            | RB1#13                | 19.82                                   | 19.25 | 18.75 | 19.07        | 18.50 | 18.00 |
|                    |            | RB1#24                | 19.89                                   | 19.35 | 18.72 | 19.14        | 18.60 | 17.97 |
|                    |            | RB15#0                | 18.69                                   | 18.78 | 18.78 | 17.94        | 18.03 | 18.03 |
|                    |            | RB15#10               | 18.73                                   | 19.14 | 18.78 | 17.98        | 18.39 | 18.03 |
|                    |            | RB25#0                | 18.80                                   | 18.64 | 18.77 | 18.05        | 17.89 | 18.02 |
| 10.0               | QPSK       | RB1#0                 | 20.75                                   | 20.56 | 20.53 | 20.00        | 19.81 | 19.78 |
|                    |            | RB1#25                | 20.86                                   | 20.51 | 20.56 | 20.11        | 19.76 | 19.81 |
|                    |            | RB1#49                | 20.89                                   | 20.48 | 20.50 | <b>20.14</b> | 19.73 | 19.75 |
|                    |            | RB25#0                | 19.81                                   | 19.76 | 19.72 | 19.06        | 19.01 | 18.97 |
|                    |            | RB25#25               | 19.78                                   | 19.67 | 19.64 | 19.03        | 18.92 | 18.89 |
|                    |            | RB50#0                | 19.89                                   | 19.67 | 19.80 | 19.14        | 18.92 | 19.05 |
|                    | 16QAM      | RB1#0                 | 20.45                                   | 19.50 | 19.87 | 19.70        | 18.75 | 19.12 |
|                    |            | RB1#25                | 20.59                                   | 19.48 | 19.93 | 19.84        | 18.73 | 19.18 |
|                    |            | RB1#49                | 20.66                                   | 19.35 | 19.79 | <b>19.91</b> | 18.60 | 19.04 |
|                    |            | RB25#0                | 18.97                                   | 18.93 | 18.77 | 18.22        | 18.18 | 18.02 |
|                    |            | RB25#25               | 18.92                                   | 18.91 | 18.72 | 18.17        | 18.16 | 17.97 |
|                    |            | RB50#0                | 19.01                                   | 18.76 | 18.78 | 18.26        | 18.01 | 18.03 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm)    |              |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|--------------|--------------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low          | Mid          | High  |
| 15.0               | QPSK       | RB1#0                 | 20.77                                   | 20.75 | 20.63 | 20.02        | 20.00        | 19.88 |
|                    |            | RB1#38                | 20.83                                   | 20.58 | 20.58 | 20.08        | 19.83        | 19.83 |
|                    |            | RB1#74                | 20.88                                   | 20.64 | 20.50 | 20.13        | 19.89        | 19.75 |
|                    |            | RB36#0                | 19.88                                   | 19.68 | 19.81 | 19.13        | 18.93        | 19.06 |
|                    |            | RB36#39               | 19.76                                   | 19.65 | 19.77 | 19.01        | 18.90        | 19.02 |
|                    |            | RB75#0                | 19.91                                   | 19.79 | 19.72 | 19.16        | 19.04        | 18.97 |
|                    | 16QAM      | RB1#0                 | 20.46                                   | 20.15 | 19.92 | 19.71        | 19.40        | 19.17 |
|                    |            | RB1#38                | 20.58                                   | 19.91 | 19.86 | 19.83        | 19.16        | 19.11 |
|                    |            | RB1#74                | 20.66                                   | 20.05 | 19.78 | 19.91        | 19.30        | 19.03 |
|                    |            | RB36#0                | 18.91                                   | 18.78 | 18.87 | 18.16        | 18.03        | 18.12 |
|                    |            | RB36#39               | 19.40                                   | 18.64 | 18.84 | 18.65        | 17.89        | 18.09 |
|                    |            | RB75#0                | 18.94                                   | 18.74 | 18.79 | 18.19        | 17.99        | 18.04 |
| 20.0               | QPSK       | RB1#0                 | 20.95                                   | 20.84 | 20.73 | 20.20        | 20.09        | 19.98 |
|                    |            | RB1#50                | 21.01                                   | 20.78 | 20.84 | <b>20.26</b> | 20.03        | 20.09 |
|                    |            | RB1#99                | 20.99                                   | 20.81 | 20.66 | 20.24        | 20.06        | 19.91 |
|                    |            | RB50#0                | 19.87                                   | 19.71 | 19.72 | 19.12        | 18.96        | 18.97 |
|                    |            | RB50#50               | 19.89                                   | 19.71 | 19.79 | 19.14        | 18.96        | 19.04 |
|                    |            | RB100#0               | 19.87                                   | 19.70 | 19.86 | 19.12        | 18.95        | 19.11 |
|                    | 16QAM      | RB1#0                 | 19.73                                   | 20.65 | 19.66 | 18.98        | <b>19.90</b> | 18.91 |
|                    |            | RB1#50                | 19.97                                   | 20.42 | 19.79 | 19.22        | 19.67        | 19.04 |
|                    |            | RB1#99                | 19.94                                   | 20.46 | 19.65 | 19.19        | 19.71        | 18.90 |
|                    |            | RB50#0                | 18.96                                   | 18.81 | 18.91 | 18.21        | 18.06        | 18.16 |
|                    |            | RB50#50               | 18.99                                   | 19.04 | 18.84 | 18.24        | 18.29        | 18.09 |
|                    |            | RB100#0               | 18.93                                   | 18.80 | 18.87 | 18.18        | 18.05        | 18.12 |

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)

For Band2: Antenna Gain = -0.75dBi

Limit: EIRP ≤ 33dBm

**LTE Band 4**

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |              |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|--------------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High         |
| 1.4                | QPSK       | RB1#0                 | 20.98                                   | 20.99 | 21.27 | 19.98     | 19.99 | <b>20.27</b> |
|                    |            | RB1#3                 | 21.08                                   | 20.84 | 21.15 | 20.08     | 19.84 | 20.15        |
|                    |            | RB1#5                 | 21.07                                   | 20.88 | 21.12 | 20.07     | 19.88 | 20.12        |
|                    |            | RB3#0                 | 21.15                                   | 20.92 | 21.02 | 20.15     | 19.92 | 20.02        |
|                    |            | RB3#3                 | 21.11                                   | 21.03 | 20.96 | 20.11     | 20.03 | 19.96        |
|                    |            | RB6#0                 | 20.06                                   | 19.93 | 20.02 | 19.06     | 18.93 | 19.02        |
|                    | 16QAM      | RB1#0                 | 20.86                                   | 20.74 | 21.02 | 19.86     | 19.74 | <b>20.02</b> |
|                    |            | RB1#3                 | 20.85                                   | 20.68 | 21.00 | 19.85     | 19.68 | 20.00        |
|                    |            | RB1#5                 | 20.88                                   | 20.70 | 20.96 | 19.88     | 19.70 | 19.96        |
|                    |            | RB3#0                 | 20.20                                   | 20.06 | 20.16 | 19.20     | 19.06 | 19.16        |
|                    |            | RB3#3                 | 20.24                                   | 20.12 | 20.27 | 19.24     | 19.12 | 19.27        |
|                    |            | RB6#0                 | 19.44                                   | 19.71 | 19.56 | 18.44     | 18.71 | 18.56        |
| 3.0                | QPSK       | RB1#0                 | 21.15                                   | 20.92 | 20.97 | 20.15     | 19.92 | 19.97        |
|                    |            | RB1#8                 | 21.09                                   | 20.83 | 21.02 | 20.09     | 19.83 | 20.02        |
|                    |            | RB1#14                | 21.05                                   | 20.87 | 20.94 | 20.05     | 19.87 | 19.94        |
|                    |            | RB6#0                 | 20.19                                   | 20.02 | 20.06 | 19.19     | 19.02 | 19.06        |
|                    |            | RB6#9                 | 19.99                                   | 20.08 | 20.09 | 18.99     | 19.08 | 19.09        |
|                    |            | RB15#0                | 20.16                                   | 20.06 | 20.16 | 19.16     | 19.06 | 19.16        |
|                    | 16QAM      | RB1#0                 | 20.82                                   | 19.78 | 20.14 | 19.82     | 18.78 | 19.14        |
|                    |            | RB1#8                 | 20.90                                   | 19.68 | 20.14 | 19.90     | 18.68 | 19.14        |
|                    |            | RB1#14                | 20.71                                   | 19.74 | 20.12 | 19.71     | 18.74 | 19.12        |
|                    |            | RB6#0                 | 19.26                                   | 19.25 | 19.04 | 18.26     | 18.25 | 18.04        |
|                    |            | RB6#9                 | 19.20                                   | 19.70 | 19.43 | 18.20     | 18.70 | 18.43        |
|                    |            | RB15#0                | 19.19                                   | 19.58 | 19.11 | 18.19     | 18.58 | 18.11        |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 5.0                | QPSK       | RB1#0                 | 21.18                                   | 20.96 | 21.12 | 20.18     | 19.96 | 20.12 |
|                    |            | RB1#13                | 21.10                                   | 20.93 | 21.09 | 20.10     | 19.93 | 20.09 |
|                    |            | RB1#24                | 21.17                                   | 20.95 | 21.04 | 20.17     | 19.95 | 20.04 |
|                    |            | RB15#0                | 20.11                                   | 20.03 | 19.98 | 19.11     | 19.03 | 18.98 |
|                    |            | RB15#10               | 20.05                                   | 20.02 | 20.08 | 19.05     | 19.02 | 19.08 |
|                    |            | RB25#0                | 20.03                                   | 20.03 | 20.06 | 19.03     | 19.03 | 19.06 |
|                    | 16QAM      | RB1#0                 | 20.28                                   | 19.73 | 19.16 | 19.28     | 18.73 | 18.16 |
|                    |            | RB1#13                | 20.16                                   | 19.63 | 19.26 | 19.16     | 18.63 | 18.26 |
|                    |            | RB1#24                | 20.24                                   | 19.83 | 19.20 | 19.24     | 18.83 | 18.20 |
|                    |            | RB15#0                | 19.07                                   | 19.20 | 19.20 | 18.07     | 18.20 | 18.20 |
|                    |            | RB15#10               | 18.99                                   | 19.51 | 19.16 | 17.99     | 18.51 | 18.16 |
|                    |            | RB25#0                | 19.19                                   | 19.40 | 19.18 | 18.19     | 18.40 | 18.18 |
| 10.0               | QPSK       | RB1#0                 | 21.24                                   | 21.04 | 20.99 | 20.24     | 20.04 | 19.99 |
|                    |            | RB1#25                | 21.19                                   | 20.97 | 21.02 | 20.19     | 19.97 | 20.02 |
|                    |            | RB1#49                | 21.22                                   | 21.02 | 20.97 | 20.22     | 20.02 | 19.97 |
|                    |            | RB25#0                | 20.04                                   | 20.09 | 19.98 | 19.04     | 19.09 | 18.98 |
|                    |            | RB25#25               | 20.10                                   | 20.01 | 20.02 | 19.10     | 19.01 | 19.02 |
|                    |            | RB50#0                | 20.14                                   | 20.01 | 20.07 | 19.14     | 19.01 | 19.07 |
|                    | 16QAM      | RB1#0                 | 20.36                                   | 19.41 | 20.24 | 19.36     | 18.41 | 19.24 |
|                    |            | RB1#25                | 20.25                                   | 19.55 | 20.30 | 19.25     | 18.55 | 19.30 |
|                    |            | RB1#49                | 20.33                                   | 19.52 | 20.38 | 19.33     | 18.52 | 19.38 |
|                    |            | RB25#0                | 19.23                                   | 19.21 | 19.05 | 18.23     | 18.21 | 18.05 |
|                    |            | RB25#25               | 19.26                                   | 19.22 | 19.10 | 18.26     | 18.22 | 18.10 |
|                    |            | RB50#0                | 19.22                                   | 19.53 | 19.11 | 18.22     | 18.53 | 18.11 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm)    |              |              |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|--------------|--------------|--------------|
|                    |            |                       | Low                                     | Mid   | High  | Low          | Mid          | High         |
| 15.0               | QPSK       | RB1#0                 | 21.31                                   | 20.92 | 21.00 | <b>20.31</b> | 19.92        | 20.00        |
|                    |            | RB1#38                | 21.19                                   | 20.89 | 21.02 | 20.19        | 19.89        | 20.02        |
|                    |            | RB1#74                | 21.19                                   | 20.89 | 20.96 | 20.19        | 19.89        | 19.96        |
|                    |            | RB36#0                | 20.13                                   | 20.12 | 19.98 | 19.13        | 19.12        | 18.98        |
|                    |            | RB36#39               | 20.09                                   | 20.08 | 19.99 | 19.09        | 19.08        | 18.99        |
|                    |            | RB75#0                | 20.10                                   | 20.03 | 20.05 | 19.10        | 19.03        | 19.05        |
|                    | 16QAM      | RB1#0                 | 20.34                                   | 20.40 | 20.34 | 19.34        | 19.40        | 19.34        |
|                    |            | RB1#38                | 20.21                                   | 20.34 | 20.30 | 19.21        | 19.34        | 19.30        |
|                    |            | RB1#74                | 20.28                                   | 20.41 | 20.31 | 19.28        | <b>19.41</b> | 19.31        |
|                    |            | RB36#0                | 19.28                                   | 19.11 | 19.50 | 18.28        | 18.11        | 18.50        |
|                    |            | RB36#39               | 19.31                                   | 19.11 | 19.21 | 18.31        | 18.11        | 18.21        |
|                    |            | RB75#0                | 19.16                                   | 19.51 | 19.10 | 18.16        | 18.51        | 18.10        |
| 20.0               | QPSK       | RB1#0                 | 21.13                                   | 21.15 | 21.27 | 20.13        | 20.15        | <b>20.27</b> |
|                    |            | RB1#50                | 21.11                                   | 20.99 | 21.20 | 20.11        | 19.99        | 20.20        |
|                    |            | RB1#99                | 21.12                                   | 21.05 | 21.26 | 20.12        | 20.05        | 20.26        |
|                    |            | RB50#0                | 20.18                                   | 19.96 | 20.10 | 19.18        | 18.96        | 19.10        |
|                    |            | RB50#50               | 20.02                                   | 20.02 | 20.08 | 19.02        | 19.02        | 19.08        |
|                    |            | RB100#0               | 20.16                                   | 20.08 | 19.97 | 19.16        | 19.08        | 18.97        |
|                    | 16QAM      | RB1#0                 | 20.56                                   | 20.86 | 19.60 | 19.56        | <b>19.86</b> | 18.60        |
|                    |            | RB1#50                | 20.52                                   | 20.77 | 19.36 | 19.52        | 19.77        | 18.36        |
|                    |            | RB1#99                | 20.42                                   | 20.82 | 19.46 | 19.42        | 19.82        | 18.46        |
|                    |            | RB50#0                | 19.27                                   | 19.05 | 19.23 | 18.27        | 18.05        | 18.23        |
|                    |            | RB50#50               | 19.66                                   | 19.14 | 19.25 | 18.66        | 18.14        | 18.25        |
|                    |            | RB100#0               | 19.17                                   | 19.56 | 19.49 | 18.17        | 18.56        | 18.49        |

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)  
 For Band4: Antenna Gain = -1dBi  
 Limit: EIRP ≤ 30dBm

**LTE Band5**

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | ERP(dBm) |              |              |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|----------|--------------|--------------|
|                    |            |                       | Low                                     | Mid   | High  | Low      | Mid          | High         |
| 1.4                | QPSK       | RB1#0                 | 23.12                                   | 23.08 | 23.17 | 20.67    | 20.63        | 20.72        |
|                    |            | RB1#3                 | 23.03                                   | 23.10 | 23.18 | 20.58    | 20.65        | 20.73        |
|                    |            | RB1#5                 | 23.06                                   | 23.17 | 23.15 | 20.61    | 20.72        | 20.70        |
|                    |            | RB3#0                 | 23.26                                   | 23.28 | 23.14 | 20.81    | 20.83        | 20.69        |
|                    |            | RB3#3                 | 23.20                                   | 23.27 | 23.33 | 20.75    | 20.82        | <b>20.88</b> |
|                    |            | RB6#0                 | 22.11                                   | 22.18 | 22.17 | 19.66    | 19.73        | 19.72        |
|                    | 16QAM      | RB1#0                 | 21.77                                   | 23.02 | 22.78 | 19.32    | <b>20.57</b> | 20.33        |
|                    |            | RB1#3                 | 21.83                                   | 22.80 | 22.91 | 19.38    | 20.35        | 20.46        |
|                    |            | RB1#5                 | 21.86                                   | 22.78 | 22.87 | 19.41    | 20.33        | 20.42        |
|                    |            | RB3#0                 | 22.27                                   | 21.98 | 21.82 | 19.82    | 19.53        | 19.37        |
|                    |            | RB3#3                 | 22.12                                   | 22.06 | 21.91 | 19.67    | 19.61        | 19.46        |
|                    |            | RB6#0                 | 21.30                                   | 21.12 | 21.11 | 18.85    | 18.67        | 18.66        |
| 3.0                | QPSK       | RB1#0                 | 23.10                                   | 23.09 | 23.10 | 20.65    | 20.64        | 20.65        |
|                    |            | RB1#8                 | 23.04                                   | 23.18 | 23.09 | 20.59    | 20.73        | 20.64        |
|                    |            | RB1#14                | 23.10                                   | 23.14 | 23.20 | 20.65    | 20.69        | 20.75        |
|                    |            | RB6#0                 | 22.21                                   | 22.23 | 21.99 | 19.76    | 19.78        | 19.54        |
|                    |            | RB6#9                 | 22.30                                   | 22.13 | 21.94 | 19.85    | 19.68        | 19.49        |
|                    |            | RB15#0                | 22.16                                   | 22.07 | 21.97 | 19.71    | 19.62        | 19.52        |
|                    | 16QAM      | RB1#0                 | 22.87                                   | 21.91 | 22.18 | 20.42    | 19.46        | 19.73        |
|                    |            | RB1#8                 | 22.81                                   | 21.79 | 22.40 | 20.36    | 19.34        | 19.95        |
|                    |            | RB1#14                | 23.02                                   | 21.82 | 22.28 | 20.57    | 19.37        | 19.83        |
|                    |            | RB6#0                 | 21.18                                   | 21.40 | 21.21 | 18.73    | 18.95        | 18.76        |
|                    |            | RB6#9                 | 21.18                                   | 21.33 | 21.18 | 18.73    | 18.88        | 18.73        |
|                    |            | RB15#0                | 21.06                                   | 21.13 | 21.17 | 18.61    | 18.68        | 18.72        |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | ERP(dBm)     |       |              |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|--------------|-------|--------------|
|                    |            |                       | Low                                     | Mid   | High  | Low          | Mid   | High         |
| 5.0                | QPSK       | RB1#0                 | 23.10                                   | 23.20 | 23.01 | 20.65        | 20.75 | 20.56        |
|                    |            | RB1#13                | 23.04                                   | 23.13 | 22.91 | 20.59        | 20.68 | 20.46        |
|                    |            | RB1#24                | 23.12                                   | 23.25 | 23.07 | 20.67        | 20.80 | 20.62        |
|                    |            | RB15#0                | 22.04                                   | 22.22 | 22.15 | 19.59        | 19.77 | 19.70        |
|                    |            | RB15#10               | 22.23                                   | 22.12 | 21.93 | 19.78        | 19.67 | 19.48        |
|                    |            | RB25#0                | 22.16                                   | 22.11 | 21.96 | 19.71        | 19.66 | 19.51        |
|                    | 16QAM      | RB1#0                 | 22.18                                   | 22.32 | 22.13 | 19.73        | 19.87 | 19.68        |
|                    |            | RB1#13                | 22.30                                   | 22.11 | 21.88 | 19.85        | 19.66 | 19.43        |
|                    |            | RB1#24                | 22.06                                   | 22.25 | 21.93 | 19.61        | 19.80 | 19.48        |
|                    |            | RB15#0                | 20.82                                   | 21.00 | 21.01 | 18.37        | 18.55 | 18.56        |
|                    |            | RB15#10               | 20.93                                   | 20.91 | 20.89 | 18.48        | 18.46 | 18.44        |
|                    |            | RB25#0                | 21.13                                   | 21.10 | 21.05 | 18.68        | 18.65 | 18.60        |
| 10.0               | QPSK       | RB1#0                 | 23.13                                   | 22.98 | 23.23 | 20.68        | 20.53 | <b>20.78</b> |
|                    |            | RB1#25                | 23.07                                   | 23.00 | 23.19 | 20.62        | 20.55 | 20.74        |
|                    |            | RB1#49                | 23.06                                   | 23.08 | 23.10 | 20.61        | 20.63 | 20.65        |
|                    |            | RB25#0                | 22.18                                   | 22.22 | 22.21 | 19.73        | 19.77 | 19.76        |
|                    |            | RB25#25               | 22.24                                   | 22.24 | 21.94 | 19.79        | 19.79 | 19.49        |
|                    |            | RB50#0                | 22.07                                   | 22.13 | 22.08 | 19.62        | 19.68 | 19.63        |
|                    | 16QAM      | RB1#0                 | 22.82                                   | 21.90 | 22.57 | <b>20.37</b> | 19.45 | 20.12        |
|                    |            | RB1#25                | 22.68                                   | 21.78 | 22.48 | 20.23        | 19.33 | 20.03        |
|                    |            | RB1#49                | 22.81                                   | 21.98 | 22.43 | 20.36        | 19.53 | 19.98        |
|                    |            | RB25#0                | 21.13                                   | 21.30 | 21.22 | 18.68        | 18.85 | 18.77        |
|                    |            | RB25#25               | 21.13                                   | 21.33 | 21.09 | 18.68        | 18.88 | 18.64        |
|                    |            | RB50#0                | 21.10                                   | 21.06 | 21.24 | 18.65        | 18.61 | 18.79        |

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)  
 For Band5: Antenna Gain = -0.3dBi = -2.45dBd (0dBd=2.15dBi)  
 Limit: ERP ≤ 38.45dBm

**LTE Band 7**

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power(dBm) |       |       | EIRP(dBm) |       |              |
|--------------------|------------|-----------------------|----------------------------------------|-------|-------|-----------|-------|--------------|
|                    |            |                       | Low                                    | Mid   | High  | Low       | Mid   | High         |
| 5.0                | QPSK       | RB1#0                 | 19.61                                  | 19.19 | 19.83 | 22.11     | 21.69 | 22.33        |
|                    |            | RB1#13                | 19.51                                  | 19.26 | 19.84 | 22.01     | 21.76 | 22.34        |
|                    |            | RB1#24                | 19.69                                  | 19.49 | 19.84 | 22.19     | 21.99 | <b>22.34</b> |
|                    |            | RB15#0                | 18.27                                  | 18.44 | 18.95 | 20.77     | 20.94 | 21.45        |
|                    |            | RB15#10               | 18.38                                  | 18.38 | 19.02 | 20.88     | 20.88 | 21.52        |
|                    |            | RB25#0                | 18.38                                  | 18.34 | 19.08 | 20.88     | 20.84 | 21.58        |
|                    | 16QAM      | RB1#0                 | 18.34                                  | 17.82 | 19.27 | 20.84     | 20.32 | 21.77        |
|                    |            | RB1#13                | 18.40                                  | 17.84 | 19.28 | 20.90     | 20.34 | <b>21.78</b> |
|                    |            | RB1#24                | 18.41                                  | 17.98 | 19.25 | 20.91     | 20.48 | 21.75        |
|                    |            | RB15#0                | 17.59                                  | 17.64 | 18.08 | 20.09     | 20.14 | 20.58        |
|                    |            | RB15#10               | 17.53                                  | 17.60 | 18.00 | 20.03     | 20.10 | 20.50        |
|                    |            | RB25#0                | 17.62                                  | 17.50 | 18.08 | 20.12     | 20.00 | 20.58        |
| 10.0               | QPSK       | RB1#0                 | 19.43                                  | 19.20 | 19.78 | 21.93     | 21.70 | 22.28        |
|                    |            | RB1#25                | 19.38                                  | 19.23 | 19.78 | 21.88     | 21.73 | 22.28        |
|                    |            | RB1#49                | 19.59                                  | 19.50 | 19.85 | 22.09     | 22.00 | 22.35        |
|                    |            | RB25#0                | 18.42                                  | 18.33 | 18.85 | 20.92     | 20.83 | 21.35        |
|                    |            | RB25#25               | 18.51                                  | 18.41 | 18.94 | 21.01     | 20.91 | 21.44        |
|                    |            | RB50#0                | 18.42                                  | 18.39 | 18.95 | 20.92     | 20.89 | 21.45        |
|                    | 16QAM      | RB1#0                 | 19.14                                  | 18.76 | 18.95 | 21.64     | 21.26 | 21.45        |
|                    |            | RB1#25                | 19.07                                  | 18.86 | 19.15 | 21.57     | 21.36 | 21.65        |
|                    |            | RB1#49                | 19.26                                  | 19.06 | 19.07 | 21.76     | 21.56 | 21.57        |
|                    |            | RB25#0                | 17.62                                  | 17.49 | 18.13 | 20.12     | 19.99 | 20.63        |
|                    |            | RB25#25               | 17.59                                  | 17.63 | 18.13 | 20.09     | 20.13 | 20.63        |
|                    |            | RB50#0                | 17.46                                  | 17.55 | 18.10 | 19.96     | 20.05 | 20.60        |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power(dBm) |       |       | EIRP(dBm) |              |              |
|--------------------|------------|-----------------------|----------------------------------------|-------|-------|-----------|--------------|--------------|
|                    |            |                       | Low                                    | Mid   | High  | Low       | Mid          | High         |
| 15.0               | QPSK       | RB1#0                 | 19.43                                  | 19.20 | 19.78 | 21.93     | 21.70        | 22.28        |
|                    |            | RB1#38                | 19.38                                  | 19.23 | 19.78 | 21.88     | 21.73        | 22.28        |
|                    |            | RB1#74                | 19.59                                  | 19.50 | 19.85 | 22.09     | 22.00        | 22.35        |
|                    |            | RB36#0                | 18.42                                  | 18.33 | 18.85 | 20.92     | 20.83        | 21.35        |
|                    |            | RB36#39               | 18.51                                  | 18.41 | 18.94 | 21.01     | 20.91        | 21.44        |
|                    |            | RB75#0                | 18.42                                  | 18.39 | 18.95 | 20.92     | 20.89        | 21.45        |
|                    | 16QAM      | RB1#0                 | 19.14                                  | 18.76 | 18.95 | 21.64     | 21.26        | 21.45        |
|                    |            | RB1#38                | 19.07                                  | 18.86 | 19.15 | 21.57     | 21.36        | 21.65        |
|                    |            | RB1#74                | 19.26                                  | 19.06 | 19.07 | 21.76     | 21.56        | 21.57        |
|                    |            | RB36#0                | 17.62                                  | 17.49 | 18.13 | 20.12     | 19.99        | 20.63        |
|                    |            | RB36#39               | 17.59                                  | 17.63 | 18.13 | 20.09     | 20.13        | 20.63        |
|                    |            | RB75#0                | 17.46                                  | 17.55 | 18.10 | 19.96     | 20.05        | 20.60        |
| 20.0               | QPSK       | RB1#0                 | 19.43                                  | 19.38 | 19.70 | 21.93     | 21.88        | 22.20        |
|                    |            | RB1#50                | 19.38                                  | 19.53 | 19.88 | 21.88     | 22.03        | 22.38        |
|                    |            | RB1#99                | 19.53                                  | 19.71 | 19.91 | 22.03     | 22.21        | <b>22.41</b> |
|                    |            | RB50#0                | 18.38                                  | 18.36 | 18.84 | 20.88     | 20.86        | 21.34        |
|                    |            | RB50#50               | 18.51                                  | 18.48 | 18.93 | 21.01     | 20.98        | 21.43        |
|                    |            | RB100#0               | 18.42                                  | 18.42 | 18.88 | 20.92     | 20.92        | 21.38        |
|                    | 16QAM      | RB1#0                 | 18.91                                  | 18.84 | 18.33 | 21.41     | 21.34        | 20.83        |
|                    |            | RB1#50                | 18.96                                  | 18.96 | 18.53 | 21.46     | 21.46        | 21.03        |
|                    |            | RB1#99                | 18.98                                  | 19.19 | 18.61 | 21.48     | <b>21.69</b> | 21.11        |
|                    |            | RB50#0                | 17.68                                  | 17.45 | 17.99 | 20.18     | 19.95        | 20.49        |
|                    |            | RB50#50               | 17.63                                  | 17.53 | 18.17 | 20.13     | 20.03        | 20.67        |
|                    |            | RB100#0               | 18.18                                  | 17.61 | 18.04 | 20.68     | 20.11        | 20.54        |

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)  
 For Band7: Antenna Gain = 2.5dBi  
 Limit: EIRP ≤ 33dBm

**LTE Band 12**

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | ERP(dBm) |              |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|----------|--------------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low      | Mid          | High  |
| 1.4                | QPSK       | RB1#0                 | 22.77                                   | 22.83 | 22.78 | 18.12    | 18.18        | 18.13 |
|                    |            | RB1#3                 | 22.81                                   | 22.95 | 22.74 | 18.16    | 18.30        | 18.09 |
|                    |            | RB1#5                 | 22.79                                   | 22.98 | 22.80 | 18.14    | 18.33        | 18.15 |
|                    |            | RB3#0                 | 22.92                                   | 23.08 | 22.81 | 18.27    | 18.43        | 18.16 |
|                    |            | RB3#3                 | 22.86                                   | 23.09 | 22.78 | 18.21    | <b>18.44</b> | 18.13 |
|                    |            | RB6#0                 | 21.77                                   | 22.08 | 21.86 | 17.12    | 17.43        | 17.21 |
|                    | 16QAM      | RB1#0                 | 22.63                                   | 22.74 | 22.13 | 17.98    | 18.09        | 17.48 |
|                    |            | RB1#3                 | 22.64                                   | 22.76 | 22.11 | 17.99    | 18.11        | 17.46 |
|                    |            | RB1#5                 | 22.55                                   | 22.80 | 22.08 | 17.90    | <b>18.15</b> | 17.43 |
|                    |            | RB3#0                 | 21.59                                   | 21.92 | 21.76 | 16.94    | 17.27        | 17.11 |
|                    |            | RB3#3                 | 21.56                                   | 21.88 | 21.96 | 16.91    | 17.23        | 17.31 |
|                    |            | RB6#0                 | 20.87                                   | 21.17 | 21.10 | 16.22    | 16.52        | 16.45 |
| 3.0                | QPSK       | RB1#0                 | 22.95                                   | 23.00 | 22.87 | 18.30    | 18.35        | 18.22 |
|                    |            | RB1#8                 | 22.81                                   | 23.05 | 22.85 | 18.16    | 18.40        | 18.20 |
|                    |            | RB1#14                | 22.78                                   | 23.04 | 22.73 | 18.13    | 18.39        | 18.08 |
|                    |            | RB6#0                 | 21.82                                   | 22.04 | 21.72 | 17.17    | 17.39        | 17.07 |
|                    |            | RB6#9                 | 21.78                                   | 22.08 | 21.87 | 17.13    | 17.43        | 17.22 |
|                    |            | RB15#0                | 21.74                                   | 22.03 | 21.70 | 17.09    | 17.38        | 17.05 |
|                    | 16QAM      | RB1#0                 | 22.21                                   | 21.78 | 21.96 | 17.56    | 17.13        | 17.31 |
|                    |            | RB1#8                 | 21.99                                   | 21.51 | 21.98 | 17.34    | 16.86        | 17.33 |
|                    |            | RB1#14                | 21.93                                   | 21.58 | 22.00 | 17.28    | 16.93        | 17.35 |
|                    |            | RB6#0                 | 20.91                                   | 21.01 | 20.60 | 16.26    | 16.36        | 15.95 |
|                    |            | RB6#9                 | 20.78                                   | 21.27 | 20.82 | 16.13    | 16.62        | 16.17 |
|                    |            | RB15#0                | 20.79                                   | 21.14 | 20.67 | 16.14    | 16.49        | 16.02 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | ERP(dBm)     |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|--------------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low          | Mid   | High  |
| 5.0                | QPSK       | RB1#0                 | 22.83                                   | 22.70 | 22.62 | 18.18        | 18.05 | 17.97 |
|                    |            | RB1#13                | 22.74                                   | 22.77 | 22.68 | 18.09        | 18.12 | 18.03 |
|                    |            | RB1#24                | 22.71                                   | 22.69 | 22.62 | 18.06        | 18.04 | 17.97 |
|                    |            | RB15#0                | 21.67                                   | 21.97 | 21.71 | 17.02        | 17.32 | 17.06 |
|                    |            | RB15#10               | 21.63                                   | 22.07 | 21.65 | 16.98        | 17.42 | 17.00 |
|                    |            | RB25#0                | 21.63                                   | 22.00 | 21.67 | 16.98        | 17.35 | 17.02 |
|                    | 16QAM      | RB1#0                 | 21.57                                   | 21.93 | 20.90 | 16.92        | 17.28 | 16.25 |
|                    |            | RB1#13                | 21.53                                   | 21.87 | 20.77 | 16.88        | 17.22 | 16.12 |
|                    |            | RB1#24                | 21.53                                   | 21.81 | 20.89 | 16.88        | 17.16 | 16.24 |
|                    |            | RB15#0                | 20.60                                   | 20.81 | 20.82 | 15.95        | 16.16 | 16.17 |
|                    |            | RB15#10               | 20.32                                   | 21.04 | 20.56 | 15.67        | 16.39 | 15.91 |
|                    |            | RB25#0                | 20.44                                   | 21.21 | 20.62 | 15.79        | 16.56 | 15.97 |
| 10.0               | QPSK       | RB1#0                 | 22.89                                   | 22.58 | 22.87 | 18.24        | 17.93 | 18.22 |
|                    |            | RB1#25                | 22.71                                   | 22.97 | 22.76 | 18.06        | 18.32 | 18.11 |
|                    |            | RB1#49                | 23.01                                   | 22.81 | 22.76 | <b>18.36</b> | 18.16 | 18.11 |
|                    |            | RB25#0                | 21.61                                   | 22.01 | 22.00 | 16.96        | 17.36 | 17.35 |
|                    |            | RB25#25               | 22.01                                   | 21.81 | 21.64 | 17.36        | 17.16 | 16.99 |
|                    |            | RB50#0                | 21.63                                   | 22.07 | 21.88 | 16.98        | 17.42 | 17.23 |
|                    | 16QAM      | RB1#0                 | 22.50                                   | 21.27 | 22.24 | 17.85        | 16.62 | 17.59 |
|                    |            | RB1#25                | 22.30                                   | 21.62 | 22.19 | 17.65        | 16.97 | 17.54 |
|                    |            | RB1#49                | 22.80                                   | 21.37 | 22.10 | <b>18.15</b> | 16.72 | 17.45 |
|                    |            | RB25#0                | 20.63                                   | 21.17 | 21.08 | 15.98        | 16.52 | 16.43 |
|                    |            | RB25#25               | 21.10                                   | 20.99 | 20.62 | 16.45        | 16.34 | 15.97 |
|                    |            | RB50#0                | 20.62                                   | 21.22 | 20.72 | 15.97        | 16.57 | 16.07 |

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)  
 For Band12: Antenna Gain = -2.5dBi = -4.65dBd (0dBd=2.15dBi)  
 Limit: ERP≤34.77dBm

**LTE Band 17**

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | ERP(dBm)     |       |              |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|--------------|-------|--------------|
|                    |            |                       | Low                                     | Mid   | High  | Low          | Mid   | High         |
| 5.0                | QPSK       | RB1#0                 | 22.75                                   | 22.94 | 22.71 | 18.10        | 18.29 | 18.06        |
|                    |            | RB1#13                | 22.90                                   | 22.85 | 22.64 | 18.25        | 18.20 | 17.99        |
|                    |            | RB1#24                | 23.07                                   | 22.88 | 22.58 | <b>18.42</b> | 18.23 | 17.93        |
|                    |            | RB15#0                | 22.09                                   | 21.82 | 21.69 | 17.44        | 17.17 | 17.04        |
|                    |            | RB15#10               | 22.03                                   | 21.87 | 21.67 | 17.38        | 17.22 | 17.02        |
|                    |            | RB25#0                | 21.96                                   | 21.90 | 21.67 | 17.31        | 17.25 | 17.02        |
|                    | 16QAM      | RB1#0                 | 20.79                                   | 21.68 | 21.58 | 16.14        | 17.03 | 16.93        |
|                    |            | RB1#13                | 21.08                                   | 21.60 | 21.62 | 16.43        | 16.95 | 16.97        |
|                    |            | RB1#24                | 21.15                                   | 21.54 | 21.69 | 16.50        | 16.89 | <b>17.04</b> |
|                    |            | RB15#0                | 20.96                                   | 20.63 | 20.67 | 16.31        | 15.98 | 16.02        |
|                    |            | RB15#10               | 21.21                                   | 20.61 | 20.48 | 16.56        | 15.96 | 15.83        |
|                    |            | RB25#0                | 21.06                                   | 20.71 | 20.66 | 16.41        | 16.06 | 16.01        |
| 10.0               | QPSK       | RB1#0                 | 22.73                                   | 22.83 | 22.84 | 18.08        | 18.18 | 18.19        |
|                    |            | RB1#25                | 22.91                                   | 22.77 | 22.62 | <b>18.26</b> | 18.12 | 17.97        |
|                    |            | RB1#49                | 22.85                                   | 22.82 | 22.69 | 18.20        | 18.17 | 18.04        |
|                    |            | RB25#0                | 22.01                                   | 22.06 | 22.05 | 17.36        | 17.41 | 17.40        |
|                    |            | RB25#25               | 21.72                                   | 21.75 | 21.69 | 17.07        | 17.10 | 17.04        |
|                    |            | RB50#0                | 22.04                                   | 21.88 | 21.88 | 17.39        | 17.23 | 17.23        |
|                    | 16QAM      | RB1#0                 | 22.33                                   | 21.62 | 22.32 | 17.68        | 16.97 | 17.67        |
|                    |            | RB1#25                | 22.84                                   | 21.45 | 22.14 | <b>18.19</b> | 16.80 | 17.49        |
|                    |            | RB1#49                | 22.45                                   | 21.40 | 22.11 | 17.80        | 16.75 | 17.46        |
|                    |            | RB25#0                | 21.02                                   | 21.33 | 21.11 | 16.37        | 16.68 | 16.46        |
|                    |            | RB25#25               | 20.98                                   | 21.15 | 20.65 | 16.33        | 16.50 | 16.00        |
|                    |            | RB50#0                | 21.13                                   | 20.93 | 20.75 | 16.48        | 16.28 | 16.10        |

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd)  
 For Band17: Antenna Gain = -2.5dBi = -4.65dBd (0dBd=2.15dBi)  
 Limit: ERP≤34.77dBm

**LTE Band 38**

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm)    |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|--------------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low          | Mid   | High  |
| 5.0                | QPSK       | RB1#0                 | 21.67                                   | 21.48 | 21.45 | 24.17        | 23.98 | 23.95 |
|                    |            | RB1#13                | 21.58                                   | 21.40 | 21.38 | 24.08        | 23.90 | 23.88 |
|                    |            | RB1#24                | 21.59                                   | 21.44 | 21.41 | 24.09        | 23.94 | 23.91 |
|                    |            | RB15#0                | 20.49                                   | 20.63 | 20.46 | 22.99        | 23.13 | 22.96 |
|                    |            | RB15#10               | 20.47                                   | 20.63 | 20.46 | 22.97        | 23.13 | 22.96 |
|                    |            | RB25#0                | 20.44                                   | 20.60 | 20.43 | 22.94        | 23.10 | 22.93 |
|                    | 16QAM      | RB1#0                 | 20.61                                   | 20.33 | 20.19 | 23.11        | 22.83 | 22.69 |
|                    |            | RB1#13                | 20.64                                   | 20.19 | 20.34 | 23.14        | 22.69 | 22.84 |
|                    |            | RB1#24                | 20.30                                   | 20.30 | 20.49 | 22.80        | 22.80 | 22.99 |
|                    |            | RB15#0                | 19.59                                   | 19.63 | 19.58 | 22.09        | 22.13 | 22.08 |
|                    |            | RB15#10               | 19.74                                   | 19.62 | 19.57 | 22.24        | 22.12 | 22.07 |
|                    |            | RB25#0                | 19.62                                   | 19.77 | 19.61 | 22.12        | 22.27 | 22.11 |
| 10.0               | QPSK       | RB1#0                 | 21.78                                   | 21.46 | 21.68 | <b>24.28</b> | 23.96 | 24.18 |
|                    |            | RB1#25                | 21.72                                   | 21.55 | 21.59 | 24.22        | 24.05 | 24.09 |
|                    |            | RB1#49                | 21.73                                   | 21.57 | 21.62 | 24.23        | 24.07 | 24.12 |
|                    |            | RB25#0                | 20.51                                   | 20.50 | 20.41 | 23.01        | 23.00 | 22.91 |
|                    |            | RB25#25               | 20.61                                   | 20.74 | 20.40 | 23.11        | 23.24 | 22.90 |
|                    |            | RB50#0                | 20.48                                   | 20.61 | 20.48 | 22.98        | 23.11 | 22.98 |
|                    | 16QAM      | RB1#0                 | 20.90                                   | 20.49 | 20.64 | 23.40        | 22.99 | 23.14 |
|                    |            | RB1#25                | 20.83                                   | 20.53 | 20.64 | 23.33        | 23.03 | 23.14 |
|                    |            | RB1#49                | 21.28                                   | 20.63 | 20.60 | <b>23.78</b> | 23.13 | 23.10 |
|                    |            | RB25#0                | 19.71                                   | 20.10 | 19.45 | 22.21        | 22.60 | 21.95 |
|                    |            | RB25#25               | 19.78                                   | 20.22 | 19.45 | 22.28        | 22.72 | 21.95 |
|                    |            | RB50#0                | 19.79                                   | 19.64 | 19.66 | 22.29        | 22.14 | 22.16 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |              |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|--------------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid          | High  |
| 15.0               | QPSK       | RB1#0                 | 21.73                                   | 21.38 | 21.73 | 24.23     | 23.88        | 24.23 |
|                    |            | RB1#38                | 21.70                                   | 21.51 | 21.67 | 24.20     | 24.01        | 24.17 |
|                    |            | RB1#74                | 21.74                                   | 21.40 | 21.64 | 24.24     | 23.90        | 24.14 |
|                    |            | RB36#0                | 20.44                                   | 20.65 | 20.57 | 22.94     | 23.15        | 23.07 |
|                    |            | RB36#39               | 20.50                                   | 20.63 | 20.46 | 23.00     | 23.13        | 22.96 |
|                    |            | RB75#0                | 20.61                                   | 20.63 | 20.52 | 23.11     | 23.13        | 23.02 |
|                    | 16QAM      | RB1#0                 | 20.89                                   | 20.58 | 20.68 | 23.39     | 23.08        | 23.18 |
|                    |            | RB1#38                | 20.84                                   | 20.73 | 20.59 | 23.34     | 23.23        | 23.09 |
|                    |            | RB1#74                | 20.92                                   | 20.44 | 20.55 | 23.42     | 22.94        | 23.05 |
|                    |            | RB36#0                | 19.55                                   | 19.88 | 19.59 | 22.05     | 22.38        | 22.09 |
|                    |            | RB36#39               | 19.48                                   | 19.87 | 19.63 | 21.98     | 22.37        | 22.13 |
|                    |            | RB75#0                | 19.66                                   | 19.69 | 19.61 | 22.16     | 22.19        | 22.11 |
| 20.0               | QPSK       | RB1#0                 | 21.62                                   | 21.94 | 21.49 | 24.12     | 24.44        | 23.99 |
|                    |            | RB1#50                | 21.59                                   | 21.99 | 21.41 | 24.09     | 24.49        | 23.91 |
|                    |            | RB1#99                | 21.67                                   | 22.14 | 21.40 | 24.17     | <b>24.64</b> | 23.90 |
|                    |            | RB50#0                | 20.61                                   | 20.70 | 20.64 | 23.11     | 23.20        | 23.14 |
|                    |            | RB50#50               | 20.69                                   | 20.72 | 20.66 | 23.19     | 23.22        | 23.16 |
|                    |            | RB100#0               | 20.64                                   | 20.70 | 20.68 | 23.14     | 23.20        | 23.18 |
|                    | 16QAM      | RB1#0                 | 20.56                                   | 21.21 | 21.22 | 23.06     | 23.71        | 23.72 |
|                    |            | RB1#50                | 20.64                                   | 21.22 | 21.02 | 23.14     | 23.72        | 23.52 |
|                    |            | RB1#99                | 20.60                                   | 21.25 | 21.02 | 23.10     | <b>23.75</b> | 23.52 |
|                    |            | RB50#0                | 19.84                                   | 19.91 | 19.84 | 22.34     | 22.41        | 22.34 |
|                    |            | RB50#50               | 19.96                                   | 19.98 | 19.99 | 22.46     | 22.48        | 22.49 |
|                    |            | RB100#0               | 19.70                                   | 19.77 | 19.86 | 22.20     | 22.27        | 22.36 |

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)  
 For Band38: Antenna Gain = 2.5dBi  
 Limit: EIRP ≤ 33dBm

**LTE Band 41**

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 5.0                | QPSK       | RB1#0                 | 21.10                                   | 21.71 | 21.54 | 23.60     | 24.21 | 24.04 |
|                    |            | RB1#13                | 21.17                                   | 21.66 | 21.42 | 23.67     | 24.16 | 23.92 |
|                    |            | RB1#24                | 21.24                                   | 21.78 | 21.52 | 23.74     | 24.28 | 24.02 |
|                    |            | RB15#0                | 20.18                                   | 20.54 | 20.44 | 22.68     | 23.04 | 22.94 |
|                    |            | RB15#10               | 20.26                                   | 20.54 | 20.49 | 22.76     | 23.04 | 22.99 |
|                    |            | RB25#0                | 20.18                                   | 20.51 | 20.49 | 22.68     | 23.01 | 22.99 |
|                    | 16QAM      | RB1#0                 | 20.06                                   | 20.72 | 20.80 | 22.56     | 23.22 | 23.30 |
|                    |            | RB1#13                | 20.18                                   | 20.72 | 20.77 | 22.68     | 23.22 | 23.27 |
|                    |            | RB1#24                | 20.21                                   | 20.70 | 20.84 | 22.71     | 23.20 | 23.34 |
|                    |            | RB15#0                | 19.48                                   | 19.70 | 19.70 | 21.98     | 22.20 | 22.20 |
|                    |            | RB15#10               | 19.51                                   | 19.71 | 19.67 | 22.01     | 22.21 | 22.17 |
|                    |            | RB25#0                | 19.14                                   | 19.74 | 19.69 | 21.64     | 22.24 | 22.19 |
| 10.0               | QPSK       | RB1#0                 | 21.19                                   | 21.77 | 21.56 | 23.69     | 24.27 | 24.06 |
|                    |            | RB1#25                | 21.27                                   | 21.74 | 21.55 | 23.77     | 24.24 | 24.05 |
|                    |            | RB1#49                | 21.47                                   | 21.74 | 21.59 | 23.97     | 24.24 | 24.09 |
|                    |            | RB25#0                | 20.50                                   | 20.62 | 20.48 | 23.00     | 23.12 | 22.98 |
|                    |            | RB25#25               | 20.58                                   | 20.71 | 20.51 | 23.08     | 23.21 | 23.01 |
|                    |            | RB50#0                | 20.35                                   | 20.58 | 20.49 | 22.85     | 23.08 | 22.99 |
|                    | 16QAM      | RB1#0                 | 20.54                                   | 20.69 | 20.83 | 23.04     | 23.19 | 23.33 |
|                    |            | RB1#25                | 20.80                                   | 20.73 | 20.86 | 23.30     | 23.23 | 23.36 |
|                    |            | RB1#49                | 21.11                                   | 20.81 | 20.93 | 23.61     | 23.31 | 23.43 |
|                    |            | RB25#0                | 19.59                                   | 19.60 | 19.70 | 22.09     | 22.10 | 22.20 |
|                    |            | RB25#25               | 19.79                                   | 19.66 | 19.72 | 22.29     | 22.16 | 22.22 |
|                    |            | RB50#0                | 19.58                                   | 19.70 | 19.80 | 22.08     | 22.20 | 22.30 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm)    |              |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|--------------|--------------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low          | Mid          | High  |
| 15.0               | QPSK       | RB1#0                 | 21.36                                   | 21.96 | 21.92 | 23.86        | 24.46        | 24.42 |
|                    |            | RB1#38                | 21.56                                   | 22.09 | 21.98 | 24.06        | 24.59        | 24.48 |
|                    |            | RB1#74                | 21.82                                   | 22.09 | 22.03 | 24.32        | 24.59        | 24.53 |
|                    |            | RB36#0                | 20.75                                   | 20.95 | 20.78 | 23.25        | 23.45        | 23.28 |
|                    |            | RB36#39               | 20.93                                   | 20.89 | 20.74 | 23.43        | 23.39        | 23.24 |
|                    |            | RB75#0                | 20.80                                   | 20.91 | 20.79 | 23.30        | 23.41        | 23.29 |
|                    | 16QAM      | RB1#0                 | 20.80                                   | 20.86 | 21.01 | 23.30        | 23.36        | 23.51 |
|                    |            | RB1#38                | 20.93                                   | 21.10 | 21.63 | 23.43        | 23.60        | 24.13 |
|                    |            | RB1#74                | 21.15                                   | 20.97 | 21.63 | 23.65        | 23.47        | 24.13 |
|                    |            | RB36#0                | 19.86                                   | 19.98 | 19.70 | 22.36        | 22.48        | 22.20 |
|                    |            | RB36#39               | 19.99                                   | 20.03 | 19.75 | 22.49        | 22.53        | 22.25 |
|                    |            | RB75#0                | 19.88                                   | 20.00 | 19.95 | 22.38        | 22.50        | 22.45 |
| 20.0               | QPSK       | RB1#0                 | 21.88                                   | 21.99 | 22.00 | 24.38        | 24.49        | 24.50 |
|                    |            | RB1#50                | 22.09                                   | 22.12 | 22.13 | 24.59        | 24.62        | 24.63 |
|                    |            | RB1#99                | 22.30                                   | 22.12 | 22.22 | <b>24.80</b> | 24.62        | 24.72 |
|                    |            | RB50#0                | 20.85                                   | 21.21 | 21.02 | 23.35        | 23.71        | 23.52 |
|                    |            | RB50#50               | 21.00                                   | 21.26 | 21.12 | 23.50        | 23.76        | 23.62 |
|                    |            | RB100#0               | 20.82                                   | 21.20 | 21.15 | 23.32        | 23.70        | 23.65 |
|                    | 16QAM      | RB1#0                 | 21.46                                   | 21.75 | 20.89 | 23.96        | 24.25        | 23.39 |
|                    |            | RB1#50                | 21.64                                   | 21.78 | 20.95 | 24.14        | 24.28        | 23.45 |
|                    |            | RB1#99                | 21.71                                   | 21.89 | 21.15 | 24.21        | <b>24.39</b> | 23.65 |
|                    |            | RB50#0                | 19.92                                   | 20.38 | 20.21 | 22.42        | 22.88        | 22.71 |
|                    |            | RB50#50               | 20.23                                   | 20.54 | 20.36 | 22.73        | 23.04        | 22.86 |
|                    |            | RB100#0               | 19.93                                   | 20.36 | 20.11 | 22.43        | 22.86        | 22.61 |

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)  
 For Band41: Antenna Gain = 2.5dBi  
 Limit: EIRP ≤ 33dBm

**LTE Band 66:**

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 1.4                | QPSK       | RB1#0                 | 21.59                                   | 21.60 | 21.61 | 20.59     | 20.60 | 20.61 |
|                    |            | RB1#3                 | 21.58                                   | 21.43 | 21.68 | 20.58     | 20.43 | 20.68 |
|                    |            | RB1#5                 | 21.63                                   | 21.71 | 21.68 | 20.63     | 20.71 | 20.68 |
|                    |            | RB3#0                 | 20.62                                   | 20.38 | 20.74 | 19.62     | 19.38 | 19.74 |
|                    |            | RB3#3                 | 20.62                                   | 20.37 | 20.74 | 19.62     | 19.37 | 19.74 |
|                    |            | RB6#0                 | 20.66                                   | 20.40 | 20.76 | 19.66     | 19.40 | 19.76 |
|                    | 16QAM      | RB1#0                 | 21.32                                   | 20.45 | 20.93 | 20.32     | 19.45 | 19.93 |
|                    |            | RB1#3                 | 21.33                                   | 20.25 | 20.94 | 20.33     | 19.25 | 19.94 |
|                    |            | RB1#5                 | 21.30                                   | 20.53 | 20.90 | 20.30     | 19.53 | 19.90 |
|                    |            | RB3#0                 | 19.71                                   | 19.79 | 19.91 | 18.71     | 18.79 | 18.91 |
|                    |            | RB3#3                 | 19.61                                   | 19.79 | 19.91 | 18.61     | 18.79 | 18.91 |
|                    |            | RB6#0                 | 19.67                                   | 19.60 | 19.79 | 18.67     | 18.60 | 18.79 |
| 3.0                | QPSK       | RB1#0                 | 21.61                                   | 21.37 | 21.69 | 20.61     | 20.37 | 20.69 |
|                    |            | RB1#8                 | 21.61                                   | 21.34 | 21.64 | 20.61     | 20.34 | 20.64 |
|                    |            | RB1#14                | 21.56                                   | 21.51 | 21.70 | 20.56     | 20.51 | 20.70 |
|                    |            | RB6#0                 | 20.61                                   | 20.42 | 20.76 | 19.61     | 19.42 | 19.76 |
|                    |            | RB6#9                 | 20.58                                   | 20.39 | 20.73 | 19.58     | 19.39 | 19.73 |
|                    |            | RB15#0                | 20.57                                   | 20.37 | 20.73 | 19.57     | 19.37 | 19.73 |
|                    | 16QAM      | RB1#0                 | 20.73                                   | 20.10 | 19.86 | 19.73     | 19.10 | 18.86 |
|                    |            | RB1#8                 | 20.77                                   | 20.09 | 19.82 | 19.77     | 19.09 | 18.82 |
|                    |            | RB1#14                | 20.68                                   | 20.31 | 19.89 | 19.68     | 19.31 | 18.89 |
|                    |            | RB6#0                 | 19.50                                   | 19.60 | 19.82 | 18.50     | 18.60 | 18.82 |
|                    |            | RB6#9                 | 19.50                                   | 19.55 | 19.82 | 18.50     | 18.55 | 18.82 |
|                    |            | RB15#0                | 19.53                                   | 19.43 | 19.84 | 18.53     | 18.43 | 18.84 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 5.0                | QPSK       | RB1#0                 | 21.61                                   | 21.37 | 21.69 | 20.61     | 20.37 | 20.69 |
|                    |            | RB1#13                | 21.61                                   | 21.34 | 21.64 | 20.61     | 20.34 | 20.64 |
|                    |            | RB1#24                | 21.56                                   | 21.51 | 21.70 | 20.56     | 20.51 | 20.70 |
|                    |            | RB15#0                | 20.61                                   | 20.42 | 20.76 | 19.61     | 19.42 | 19.76 |
|                    |            | RB15#10               | 20.58                                   | 20.39 | 20.73 | 19.58     | 19.39 | 19.73 |
|                    |            | RB25#0                | 20.57                                   | 20.37 | 20.73 | 19.57     | 19.37 | 19.73 |
|                    | 16QAM      | RB1#0                 | 20.73                                   | 20.10 | 19.86 | 19.73     | 19.10 | 18.86 |
|                    |            | RB1#13                | 20.77                                   | 20.09 | 19.82 | 19.77     | 19.09 | 18.82 |
|                    |            | RB1#24                | 20.68                                   | 20.31 | 19.89 | 19.68     | 19.31 | 18.89 |
|                    |            | RB15#0                | 19.50                                   | 19.60 | 19.82 | 18.50     | 18.60 | 18.82 |
|                    |            | RB15#10               | 19.50                                   | 19.55 | 19.82 | 18.50     | 18.55 | 18.82 |
|                    |            | RB25#0                | 19.53                                   | 19.43 | 19.84 | 18.53     | 18.43 | 18.84 |
| 10.0               | QPSK       | RB1#0                 | 21.66                                   | 21.56 | 21.55 | 20.66     | 20.56 | 20.55 |
|                    |            | RB1#25                | 21.69                                   | 21.60 | 21.58 | 20.69     | 20.60 | 20.58 |
|                    |            | RB1#49                | 21.61                                   | 21.62 | 21.62 | 20.61     | 20.62 | 20.62 |
|                    |            | RB25#0                | 20.58                                   | 20.45 | 20.77 | 19.58     | 19.45 | 19.77 |
|                    |            | RB25#25               | 20.59                                   | 20.53 | 20.71 | 19.59     | 19.53 | 19.71 |
|                    |            | RB50#0                | 20.51                                   | 20.44 | 20.76 | 19.51     | 19.44 | 19.76 |
|                    | 16QAM      | RB1#0                 | 20.76                                   | 20.04 | 20.90 | 19.76     | 19.04 | 19.90 |
|                    |            | RB1#25                | 20.64                                   | 20.01 | 20.93 | 19.64     | 19.01 | 19.93 |
|                    |            | RB1#49                | 20.76                                   | 20.13 | 20.94 | 19.76     | 19.13 | 19.94 |
|                    |            | RB25#0                | 19.62                                   | 19.63 | 19.79 | 18.62     | 18.63 | 18.79 |
|                    |            | RB25#25               | 19.71                                   | 19.83 | 19.75 | 18.71     | 18.83 | 18.75 |
|                    |            | RB50#0                | 19.63                                   | 19.59 | 19.82 | 18.63     | 18.59 | 18.82 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm)    |              |              |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|--------------|--------------|--------------|
|                    |            |                       | Low                                     | Mid   | High  | Low          | Mid          | High         |
| 15.0               | QPSK       | RB1#0                 | 21.64                                   | 21.59 | 21.58 | 20.64        | 20.59        | 20.58        |
|                    |            | RB1#38                | 21.69                                   | 21.58 | 21.60 | 20.69        | 20.58        | 20.60        |
|                    |            | RB1#74                | 21.70                                   | 21.59 | 21.65 | <b>20.70</b> | 20.59        | 20.65        |
|                    |            | RB36#0                | 20.56                                   | 20.52 | 20.73 | 19.56        | 19.52        | 19.73        |
|                    |            | RB36#39               | 20.53                                   | 20.55 | 20.71 | 19.53        | 19.55        | 19.71        |
|                    |            | RB75#0                | 20.58                                   | 20.48 | 20.81 | 19.58        | 19.48        | 19.81        |
|                    | 16QAM      | RB1#0                 | 21.39                                   | 20.91 | 20.94 | <b>20.39</b> | 19.91        | 19.94        |
|                    |            | RB1#38                | 21.32                                   | 20.81 | 20.93 | 20.32        | 19.81        | 19.93        |
|                    |            | RB1#74                | 21.32                                   | 20.98 | 20.89 | 20.32        | 19.98        | 19.89        |
|                    |            | RB36#0                | 19.60                                   | 19.54 | 19.90 | 18.60        | 18.54        | 18.90        |
|                    |            | RB36#39               | 19.60                                   | 19.76 | 19.83 | 18.60        | 18.76        | 18.83        |
|                    |            | RB75#0                | 19.60                                   | 19.63 | 19.83 | 18.60        | 18.63        | 18.83        |
| 20.0               | QPSK       | RB1#0                 | 21.59                                   | 21.58 | 21.68 | 20.59        | 20.58        | 20.68        |
|                    |            | RB1#50                | 21.58                                   | 21.53 | 21.73 | 20.58        | 20.53        | 20.73        |
|                    |            | RB1#99                | 21.48                                   | 21.70 | 21.86 | 20.48        | 20.70        | <b>20.86</b> |
|                    |            | RB50#0                | 20.58                                   | 20.61 | 20.65 | 19.58        | 19.61        | 19.65        |
|                    |            | RB50#50               | 20.49                                   | 20.58 | 20.68 | 19.49        | 19.58        | 19.68        |
|                    |            | RB100#0               | 20.60                                   | 20.47 | 20.72 | 19.60        | 19.47        | 19.72        |
|                    | 16QAM      | RB1#0                 | 21.04                                   | 21.11 | 20.64 | 20.04        | 20.11        | 19.64        |
|                    |            | RB1#50                | 20.61                                   | 21.02 | 20.66 | 19.61        | 20.02        | 19.66        |
|                    |            | RB1#99                | 20.65                                   | 21.19 | 20.71 | 19.65        | <b>20.19</b> | 19.71        |
|                    |            | RB50#0                | 19.62                                   | 19.51 | 19.77 | 18.62        | 18.51        | 18.77        |
|                    |            | RB50#50               | 19.60                                   | 19.59 | 19.93 | 18.60        | 18.59        | 18.93        |
|                    |            | RB100#0               | 19.66                                   | 19.49 | 19.75 | 18.66        | 18.49        | 18.75        |

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)  
 For Band 66: Antenna Gain = -1.0dBi  
 Limit: EIRP ≤ 30dBm

**Peak-to-average ratio (PAR)****Cellular Band**

| Mode | Channel | PAR (dB) | Limit(dB) |
|------|---------|----------|-----------|
| GSM  | Low     | 3.65     | 13        |
|      | Middle  | 3.46     | 13        |
|      | High    | 3.71     | 13        |

| Mode  | Channel | PAR (dB) | Limit(dB) |
|-------|---------|----------|-----------|
| EGPRS | Low     | 3.83     | 13        |
|       | Middle  | 3.44     | 13        |
|       | High    | 3.69     | 13        |

| Mode             | Channel | PAR (dB) | Limit (dB) |
|------------------|---------|----------|------------|
| RMC<br>(BPSK)    | Low     | 3.04     | 13         |
|                  | Middle  | 2.92     | 13         |
|                  | High    | 2.92     | 13         |
| HSDPA<br>(16QAM) | Low     | 3.94     | 13         |
|                  | Middle  | 3.81     | 13         |
|                  | High    | 3.91     | 13         |
| HSUPA<br>(BPSK)  | Low     | 4.33     | 13         |
|                  | Middle  | 3.91     | 13         |
|                  | High    | 3.81     | 13         |
| HSPA+            | Low     | 3.55     | 13         |
|                  | Middle  | 3.62     | 13         |
|                  | High    | 3.47     | 13         |

**PCS Band**

| Mode | Channel | PAR (dB) | Limit(dB) |
|------|---------|----------|-----------|
| GSM  | Low     | 3.46     | 13        |
|      | Middle  | 3.00     | 13        |
|      | High    | 3.58     | 13        |

| Mode  | Channel | PAR (dB) | Limit(dB) |
|-------|---------|----------|-----------|
| EGPRS | Low     | 3.38     | 13        |
|       | Middle  | 3.86     | 13        |
|       | High    | 3.47     | 13        |

| Mode             | Channel | PAR (dB) | Limit (dB) |
|------------------|---------|----------|------------|
| RMC<br>(BPSK)    | Low     | 3.11     | 13         |
|                  | Middle  | 3.11     | 13         |
|                  | High    | 3.08     | 13         |
| HSDPA<br>(16QAM) | Low     | 3.91     | 13         |
|                  | Middle  | 3.97     | 13         |
|                  | High    | 4.04     | 13         |
| HSUPA<br>(BPSK)  | Low     | 3.88     | 13         |
|                  | Middle  | 3.88     | 13         |
|                  | High    | 3.85     | 13         |
| HSPA+            | Low     | 3.77     | 13         |
|                  | Middle  | 3.62     | 13         |
|                  | High    | 3.48     | 13         |

**AWS Band**

| Mode             | Channel | PAR (dB) | Limit (dB) |
|------------------|---------|----------|------------|
| RMC<br>(BPSK)    | Low     | 3.14     | 13         |
|                  | Middle  | 3.17     | 13         |
|                  | High    | 3.14     | 13         |
| HSDPA<br>(16QAM) | Low     | 4.01     | 13         |
|                  | Middle  | 4.07     | 13         |
|                  | High    | 4.10     | 13         |
| HSUPA<br>(BPSK)  | Low     | 3.88     | 13         |
|                  | Middle  | 3.88     | 13         |
|                  | High    | 3.85     | 13         |
| HSPA+            | Low     | 3.41     | 13         |
|                  | Middle  | 3.75     | 13         |
|                  | High    | 3.68     | 13         |

**LTE Band 2 20MHz Bandwidth**

| Modulation         | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|--------------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK (1RB Size)    | 5.86             | 5.62                | 5.25              | 13             | Pass   |
| QPSK (100RB Size)  | 5.68             | 5.62                | 5.42              | 13             | Pass   |
| 16QAM (1RB Size)   | 5.83             | 6.09                | 6.26              | 13             | Pass   |
| 16QAM (100RB Size) | 6.52             | 6.46                | 6.38              | 13             | Pass   |

**LTE Band 4 20MHz Bandwidth**

| Modulation         | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|--------------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK (1RB Size)    | 5.74             | 5.54                | 5.62              | 13             | Pass   |
| QPSK (100RB Size)  | 5.62             | 5.39                | 5.77              | 13             | Pass   |
| 16QAM (1RB Size)   | 6.46             | 6.29                | 5.48              | 13             | Pass   |
| 16QAM (100RB Size) | 5.97             | 6.32                | 6.12              | 13             | Pass   |

**LTE Band 5 10MHz Bandwidth**

| Modulation        | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|-------------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK (1RB Size)   | 5.03             | 4.81                | 4.04              | 13             | Pass   |
| QPSK (50RB Size)  | 5.58             | 5.42                | 5.48              | 13             | Pass   |
| 16QAM (1RB Size)  | 6.22             | 5.71                | 5.26              | 13             | Pass   |
| 16QAM (50RB Size) | 6.28             | 6.25                | 6.25              | 13             | Pass   |

**LTE Band 7 20MHz Bandwidth**

| Modulation         | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|--------------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK (1RB Size)    | 6.20             | 5.86                | 6.41              | 13             | Pass   |
| QPSK (100RB Size)  | 6.20             | 6.38                | 6.35              | 13             | Pass   |
| 16QAM (1RB Size)   | 7.51             | 5.65                | 6.43              | 13             | Pass   |
| 16QAM (100RB Size) | 6.52             | 6.46                | 6.41              | 13             | Pass   |

**LTE Band 12 10MHz Bandwidth**

| Modulation        | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|-------------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK (1RB Size)   | 4.39             | 4.87                | 4.90              | 13             | Pass   |
| QPSK (50RB Size)  | 5.71             | 5.54                | 5.71              | 13             | Pass   |
| 16QAM (1RB Size)  | 5.00             | 6.09                | 6.15              | 13             | Pass   |
| 16QAM (50RB Size) | 6.6              | 6.47                | 6.57              | 13             | Pass   |

**LTE Band 17 10MHz Bandwidth**

| Modulation        | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|-------------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK (1RB Size)   | 5.13             | 4.81                | 4.78              | 13             | Pass   |
| QPSK (50RB Size)  | 5.61             | 5.64                | 5.74              | 13             | Pass   |
| 16QAM (1RB Size)  | 5.83             | 5.90                | 6.19              | 13             | Pass   |
| 16QAM (50RB Size) | 6.54             | 6.60                | 6.60              | 13             | Pass   |

**LTE Band 38 20MHz Bandwidth**

| Modulation         | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|--------------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK (1RB Size)    | 6.23             | 5.74                | 5.77              | 13             | Pass   |
| QPSK (100RB Size)  | 6.00             | 5.36                | 5.07              | 13             | Pass   |
| 16QAM (1RB Size)   | 6.20             | 5.36                | 5.62              | 13             | Pass   |
| 16QAM (100RB Size) | 5.68             | 4.93                | 5.59              | 13             | Pass   |

**LTE Band 41 20MHz Bandwidth**

| Modulation         | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|--------------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK (1RB Size)    | 5.48             | 5.42                | 5.36              | 13             | Pass   |
| QPSK (100RB Size)  | 5.51             | 5.68                | 5.36              | 13             | Pass   |
| 16QAM (1RB Size)   | 5.48             | 6.38                | 6.81              | 13             | Pass   |
| 16QAM (100RB Size) | 5.97             | 5.51                | 6.99              | 13             | Pass   |

**LTE Band 66 20MHz Bandwidth**

| Modulation         | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|--------------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK (1RB Size)    | 5.91             | 5.59                | 6.52              | 13             | Pass   |
| QPSK (100RB Size)  | 5.71             | 5.88                | 6.70              | 13             | Pass   |
| 16QAM (1RB Size)   | 6.12             | 6.55                | 7.28              | 13             | Pass   |
| 16QAM (100RB Size) | 5.65             | 6.12                | 6.38              | 13             | Pass   |

## FCC §2.1049, §22.917, §22.905 & §24.238&§27.53 - OCCUPIED BANDWIDTH

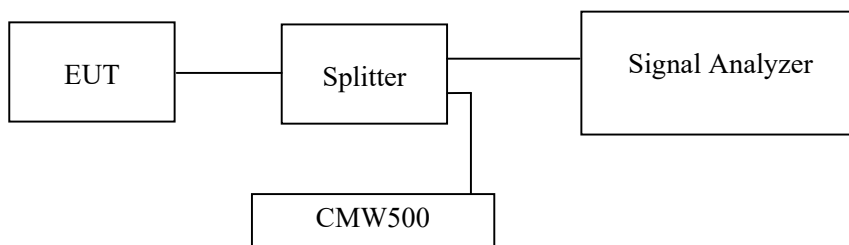
### Applicable Standard

FCC 47 §2.1049, §22.917, §22.905, §24.238, and §27.53.

### Test Procedure

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

The resolution bandwidth of the spectrum analyzer was set at 1% to 5% of the anticipated emission bandwidth and the 26 dB & 99% bandwidth was recorded.



Note: the path loss (cable loss and attenuator) has included in the result.

### Test Data

#### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 27.2℃     |
| Relative Humidity: | 56.2 %    |
| ATM Pressure:      | 101.0 kPa |

The testing was performed by Glenn Jiang from 2022-11-24 to 2022-12-10.

EUT operation mode: Transmitting

#### Test Result: Pass

Please refer to the following tables and plots.

**Cellular Band (Part 22H)**

| Mode        | Channel | Frequency (MHz) | 99% Occupied Bandwidth (kHz) | 26 dB Emission Bandwidth (kHz) |
|-------------|---------|-----------------|------------------------------|--------------------------------|
| GSM(GMSK)   | 128     | 824.2           | 243.00                       | 317.00                         |
|             | 190     | 836.6           | 239.00                       | 309.00                         |
|             | 251     | 848.8           | 241.00                       | 325.00                         |
| EGPRS(8PSK) | 128     | 824.2           | 241.00                       | 307.00                         |
|             | 190     | 836.6           | 240.00                       | 309.00                         |
|             | 251     | 848.8           | 241.00                       | 306.00                         |

|       | Frequency (MHz) | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) |
|-------|-----------------|--------------------------|----------------------|
| RMC   | 826.4           | 4.16                     | 4.70                 |
|       | 836.6           | 4.14                     | 4.70                 |
|       | 846.6           | 4.16                     | 4.71                 |
| HSDPA | 826.4           | 4.16                     | 4.71                 |
|       | 836.6           | 4.16                     | 4.68                 |
|       | 846.6           | 4.16                     | 4.70                 |
| HSUPA | 826.4           | 4.16                     | 4.71                 |
|       | 836.6           | 4.14                     | 4.70                 |
|       | 846.6           | 4.16                     | 4.70                 |

**PCS Band (Part 24E)**

| Mode        | Channel | Frequency (MHz) | 99% Occupied Bandwidth (kHz) | 26 dB Emission Bandwidth (kHz) |
|-------------|---------|-----------------|------------------------------|--------------------------------|
| GSM(GMSK)   | 512     | 1850.2          | 242.00                       | 312.00                         |
|             | 661     | 1880.0          | 244.00                       | 316.00                         |
|             | 810     | 1909.8          | 242.00                       | 312.00                         |
| EGPRS(8PSK) | 512     | 1850.2          | 246.00                       | 312.00                         |
|             | 661     | 1880.0          | 249.00                       | 318.00                         |
|             | 810     | 1909.8          | 248.00                       | 311.00                         |

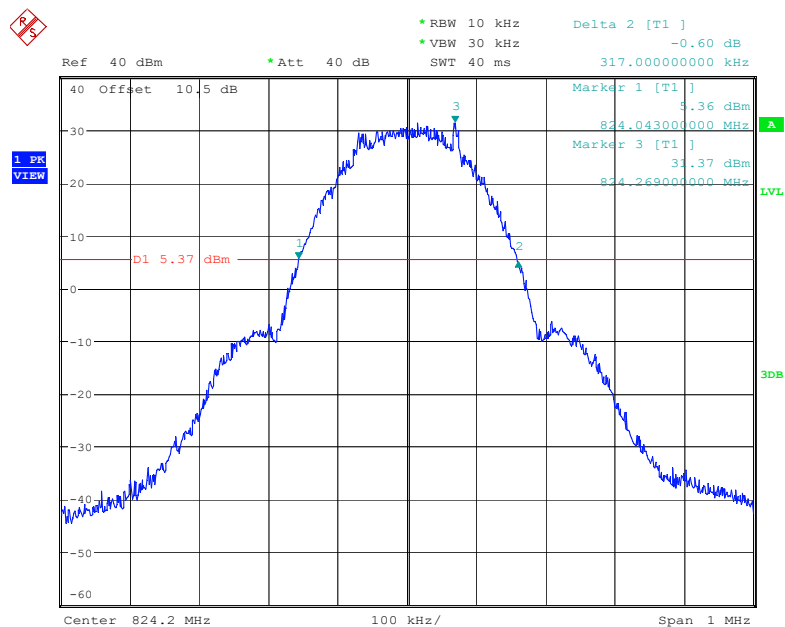
| Frequency (MHz) |        | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) |
|-----------------|--------|--------------------------|----------------------|
| RMC             | 1852.4 | 4.14                     | 4.70                 |
|                 | 1880.0 | 4.14                     | 4.70                 |
|                 | 1907.6 | 4.16                     | 4.70                 |
| HSDPA           | 1852.4 | 4.16                     | 4.68                 |
|                 | 1880.0 | 4.14                     | 4.70                 |
|                 | 1907.6 | 4.16                     | 4.71                 |
| HSUPA           | 1852.4 | 4.14                     | 4.68                 |
|                 | 1880.0 | 4.14                     | 4.68                 |
|                 | 1907.6 | 4.16                     | 4.71                 |

**AWS Band (Part 27)**

| Frequency (MHz) |        | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) |
|-----------------|--------|--------------------------|----------------------|
| RMC             | 1712.4 | 4.14                     | 4.70                 |
|                 | 1732.6 | 4.14                     | 4.70                 |
|                 | 1752.6 | 4.16                     | 4.68                 |
| HSDPA           | 1712.4 | 4.16                     | 4.70                 |
|                 | 1732.6 | 4.16                     | 4.68                 |
|                 | 1752.6 | 4.14                     | 4.71                 |
| HSUPA           | 1712.4 | 4.14                     | 4.68                 |
|                 | 1732.6 | 4.14                     | 4.70                 |
|                 | 1752.6 | 4.14                     | 4.70                 |

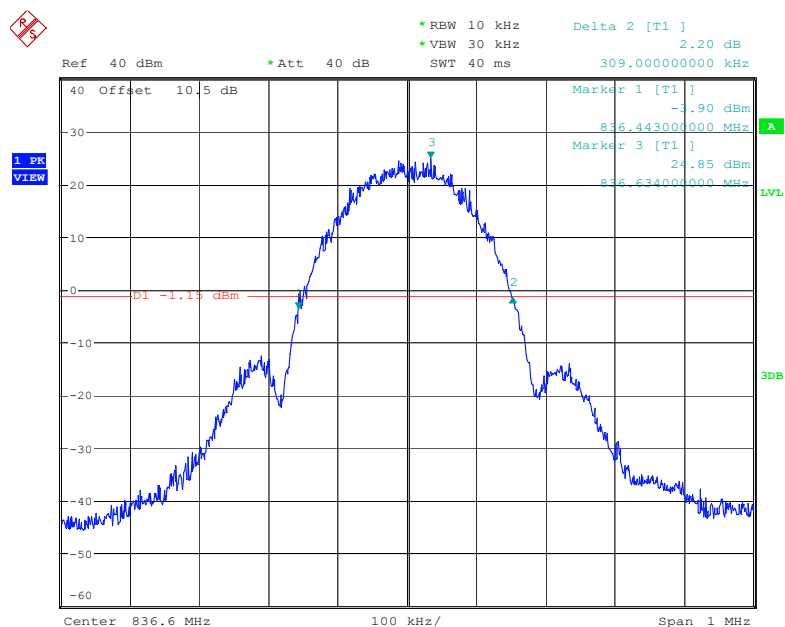
## Cellular Band (Part 22H)

## 26 dB Emissions for GSM (GMSK) Mode, Low channel



Date: 7.DEC.2022 16:53:31

## 26 dB Emissions for GSM (GMSK) Mode, Middle channel



Date: 7.DEC.2022 17:18:27

The image shows a VectorStar spectrum analyzer interface. At the top, there are several status indicators: a red 'R' in a square, a green 'R' in a square, and a green 'R' in a square. Below these, the following parameters are displayed: \*RBW 10 kHz, \*Att 40 dB, Delta 2 [T1] -0.13 dB, \*VBW 30 kHz, and SWT 40 ms. The main display area shows a spectrum plot with a blue trace. The x-axis is labeled 'Center 848.8 MHz' and 'Span 1 MHz'. The y-axis is labeled '40 Offset 10.5 dB' and '325.00000000 kHz'. A red horizontal line is drawn across the plot at approximately 5.04 dBm, labeled 'D1 5.04 dBm'. There are three markers: Marker 1 [T1] at 4.54 dBm, Marker 2 [T1] at 31.04 dBm, and Marker 3 [T1] at 31.04 dBm. The plot also shows a grid and a cursor labeled '1 PK VIEW'.

Ref 40 dBm \* Att 40 dB Delta 2 [T1] -0.76 dB  
 \* RBW 10 kHz VBW 30 kHz SWT 40 ms 307.00000000 kHz

40 Offset 10.5 dB

Marker 1 [T1] -1.55 dBm  
 824.049000000 MHz  
 Marker 3 [T1] 24.63 dBm  
 824.235000000 MHz

1 PK VIEW

3

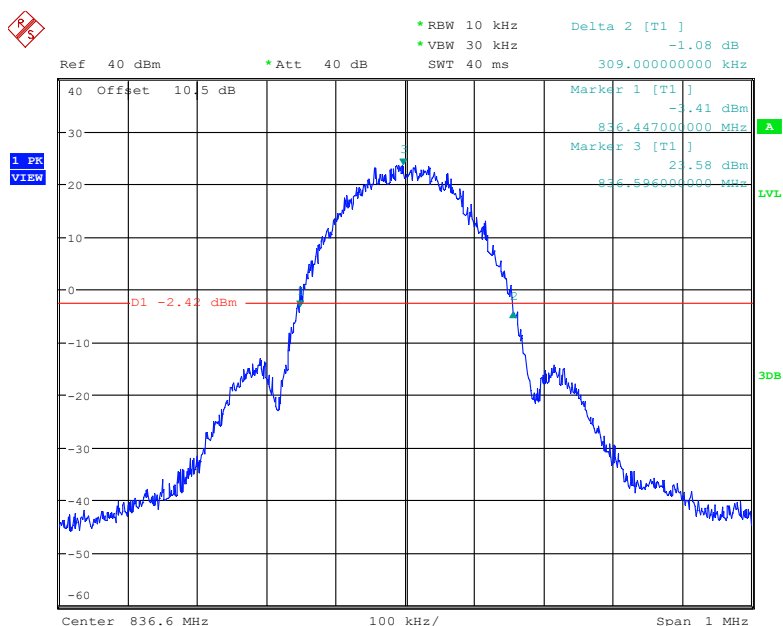
D1 -1.37 dBm

3dB

Center 824.2 MHz 100 kHz/ Span 1 MHz

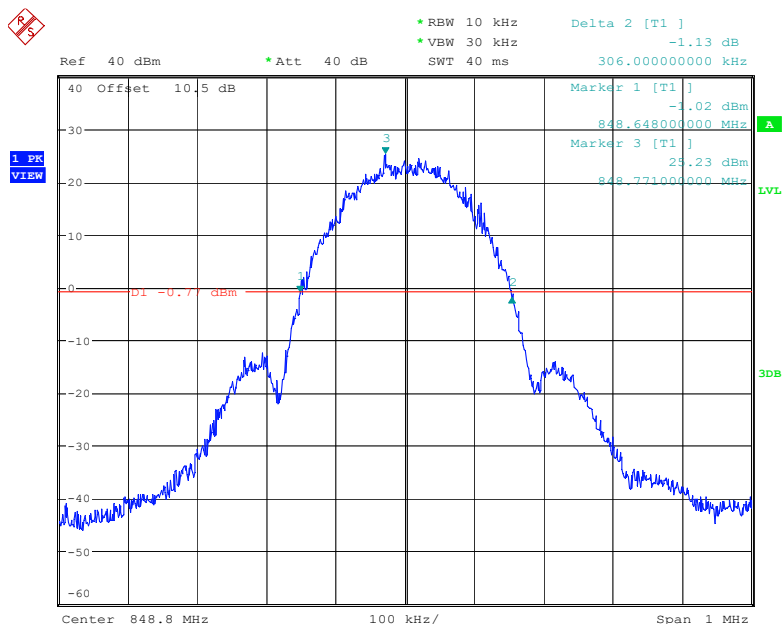
FCC -2G,3G,4G

## 26 dB Emissions for EGPRS (8PSK) Mode, Middle channel

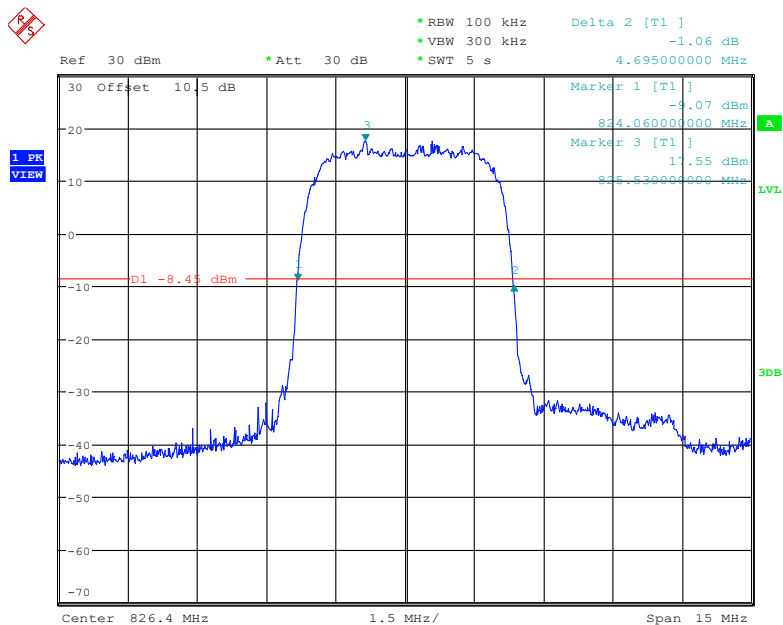


Date: 10.DEC.2022 18:11:17

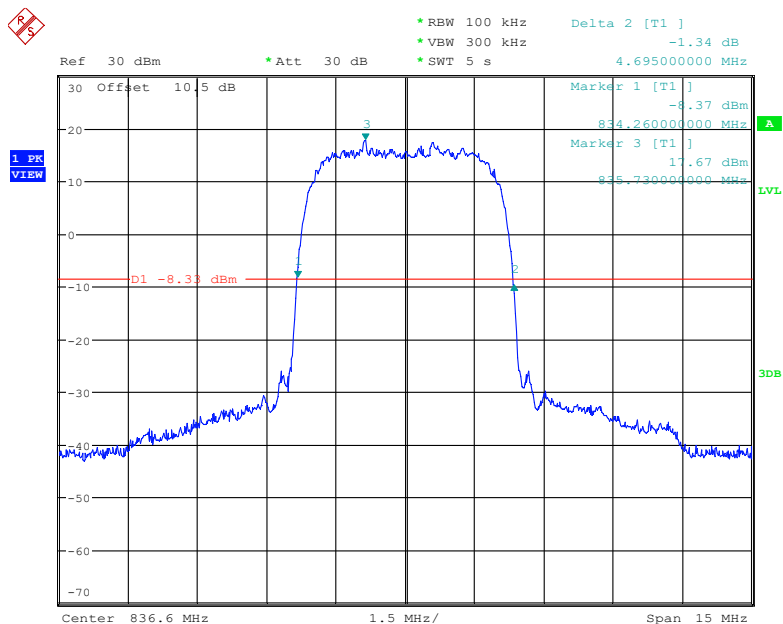
## 26 dB Emissions for EGPRS (8PSK) Mode, High channel



Date: 7.DEC.2022 17:23:18

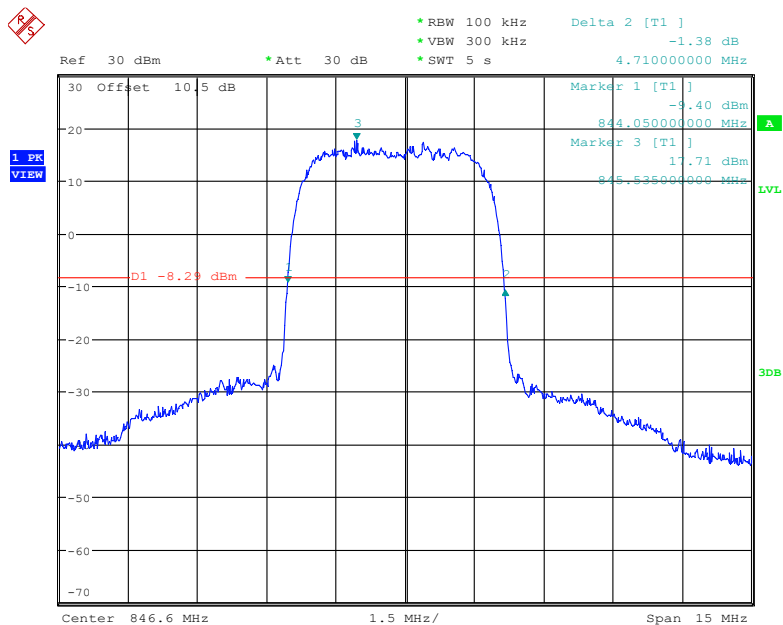
**26 dB Emissions for RMC (BPSK) Mode, Low channel**

Date: 8.DEC.2022 10:10:43

**26 dB Emissions for RMC (BPSK) Mode, Middle channel**

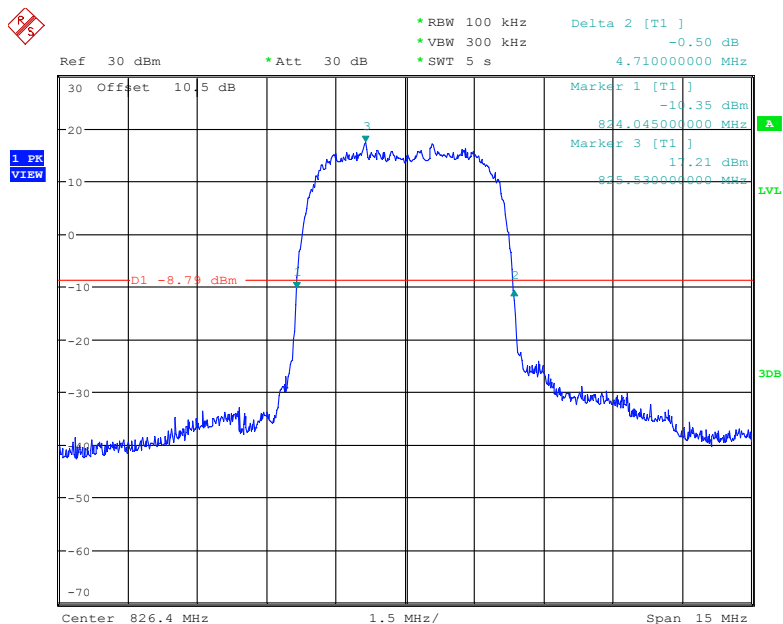
Date: 8.DEC.2022 10:13:42

## 26 dB Emissions for RMC (BPSK) Mode, High channel

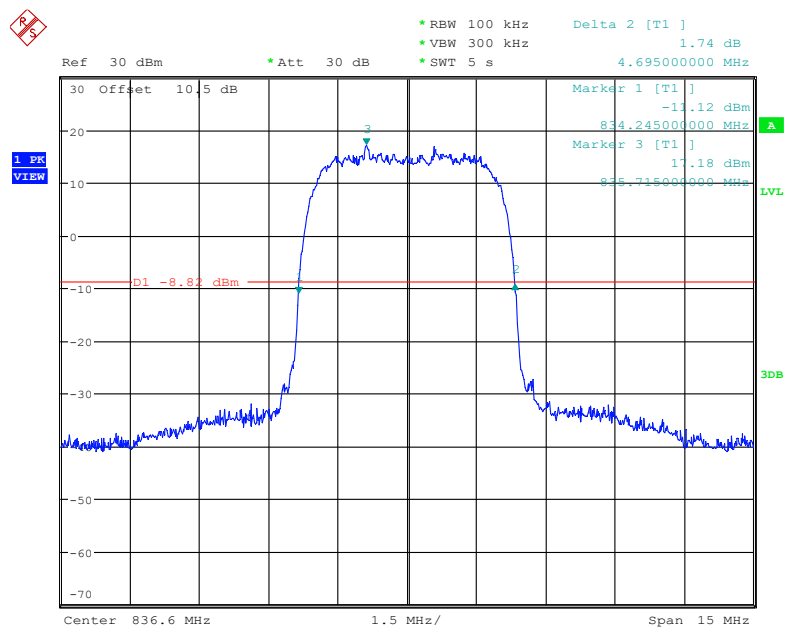


Date: 8.DEC.2022 10:16:39

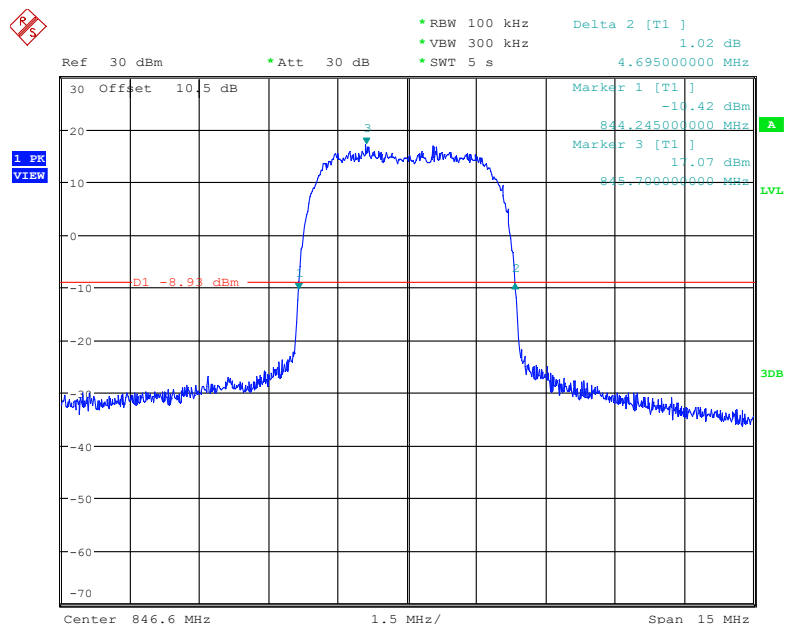
## 26 dB Emissions for HSUPA (QPSK) Mode, Low channel



Date: 8.DEC.2022 11:54:22

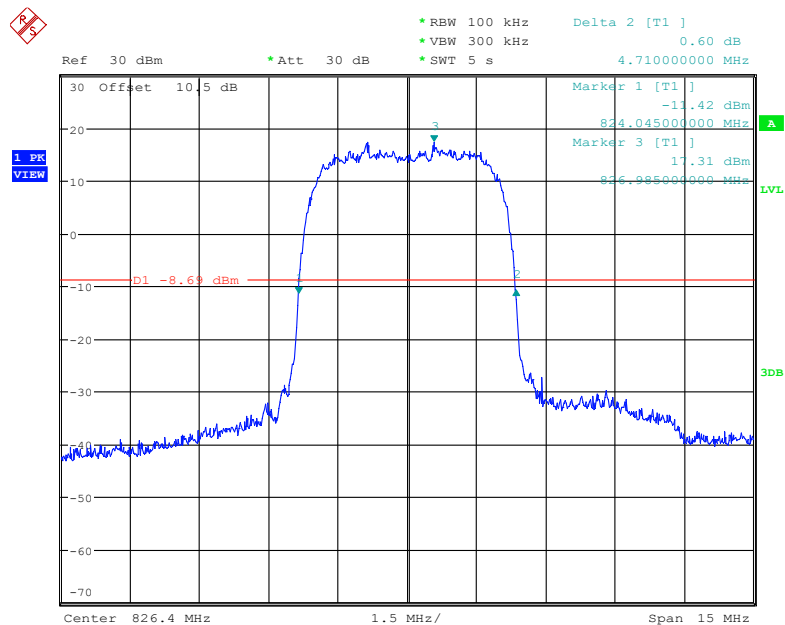
**26 dB Emissions for HSUPA (QPSK) Mode, Middle channel**

Date: 8.DEC.2022 13:06:33

**26 dB Emissions for HSUPA (QPSK) Mode, High channel**

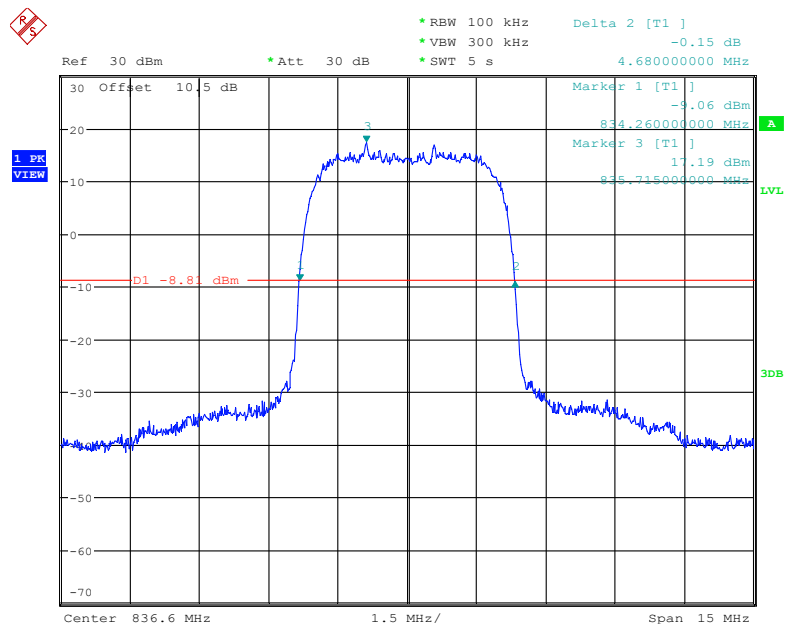
Date: 8.DEC.2022 13:09:31

## 26 dB Emissions for HSDPA (16QAM) Mode, Low channel



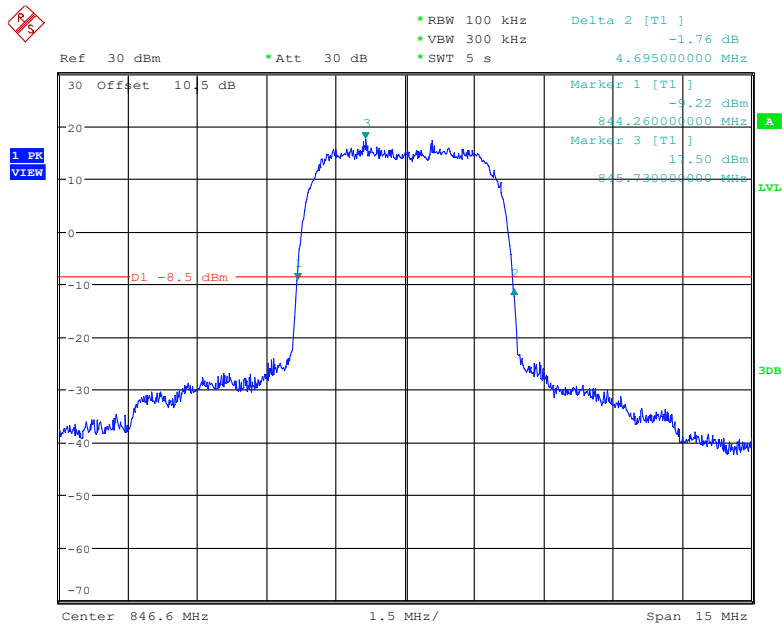
Date: 8.DEC.2022 10:33:01

## 26 dB Emissions for HSDPA (16QAM) Mode, Middle channel



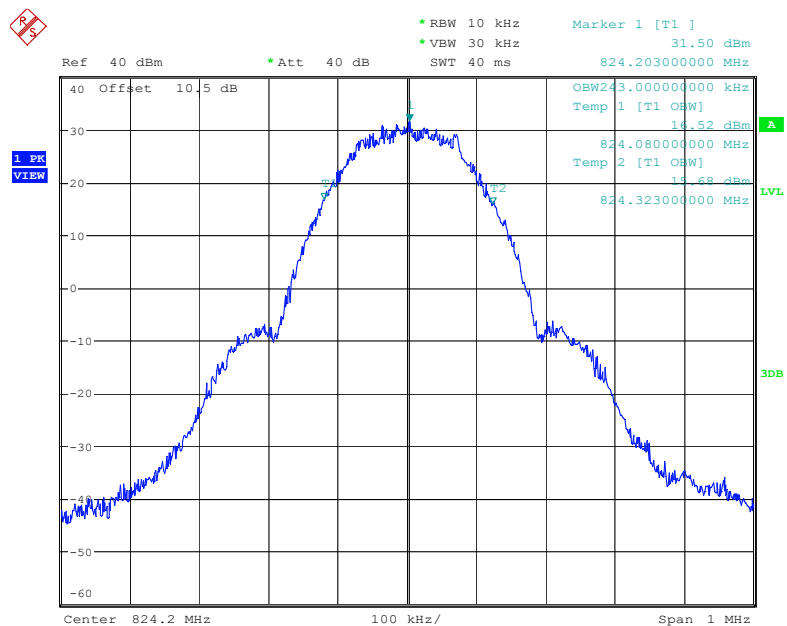
Date: 8.DEC.2022 10:36:43

26 dB Emissions for HSDPA (16QAM) Mode, High channel



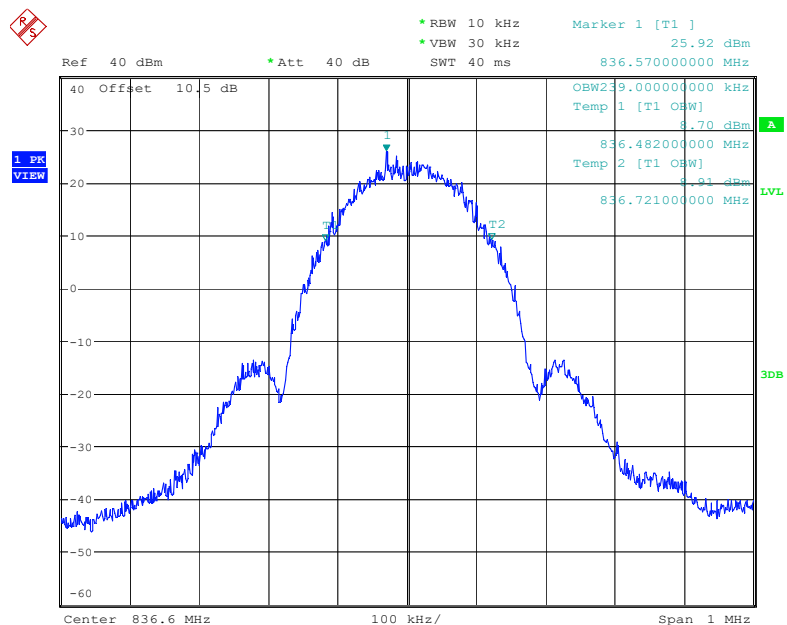
Date: 8.DEC.2022 10:39:31

## 99% Occupied Bandwidth for GSM (GMSK) Mode, Low channel

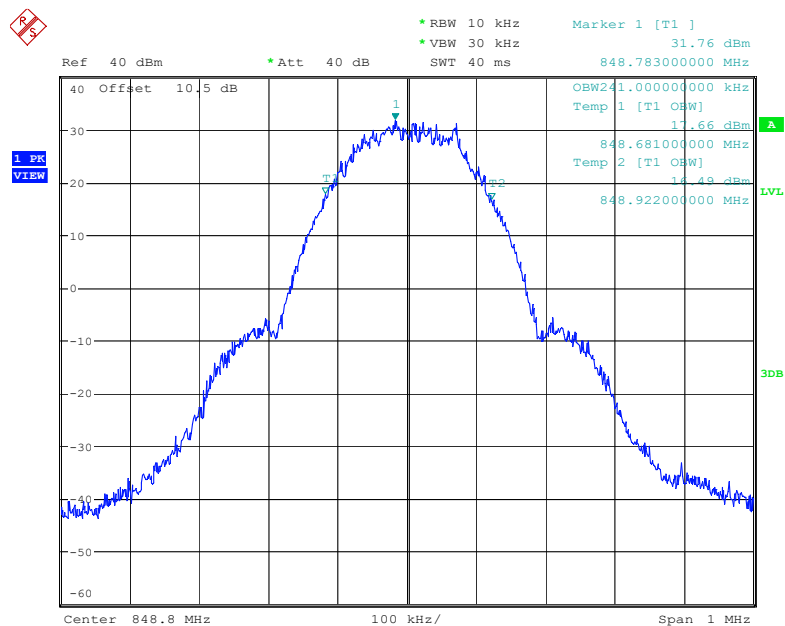


Date: 7.DEC.2022 16:52:51

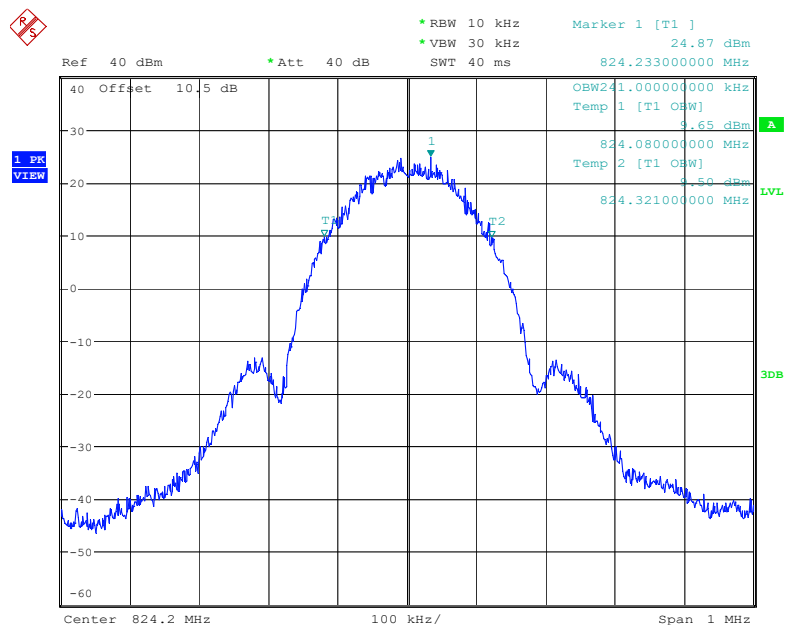
## 99% Occupied Bandwidth for GSM (GMSK) Mode, Middle channel



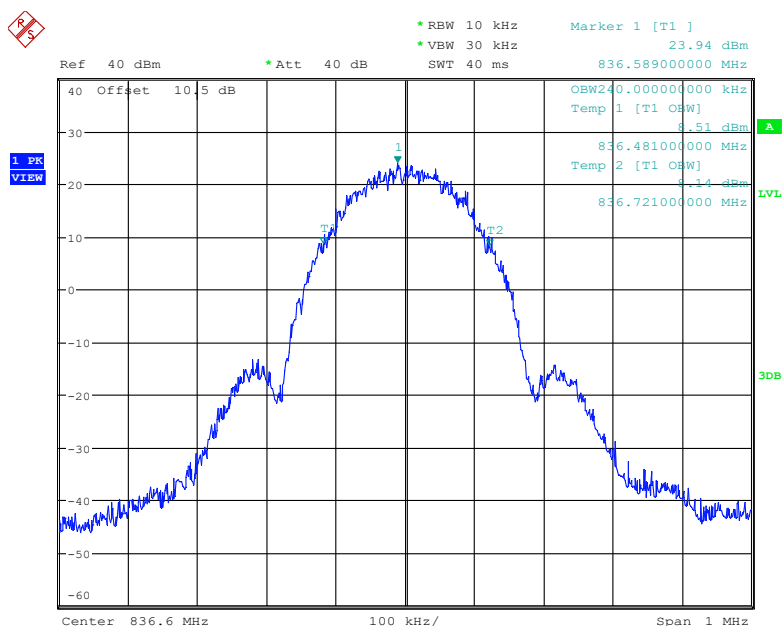
Date: 7.DEC.2022 17:17:48

**99% Occupied Bandwidth for GSM (GMSK) Mode, High channel**

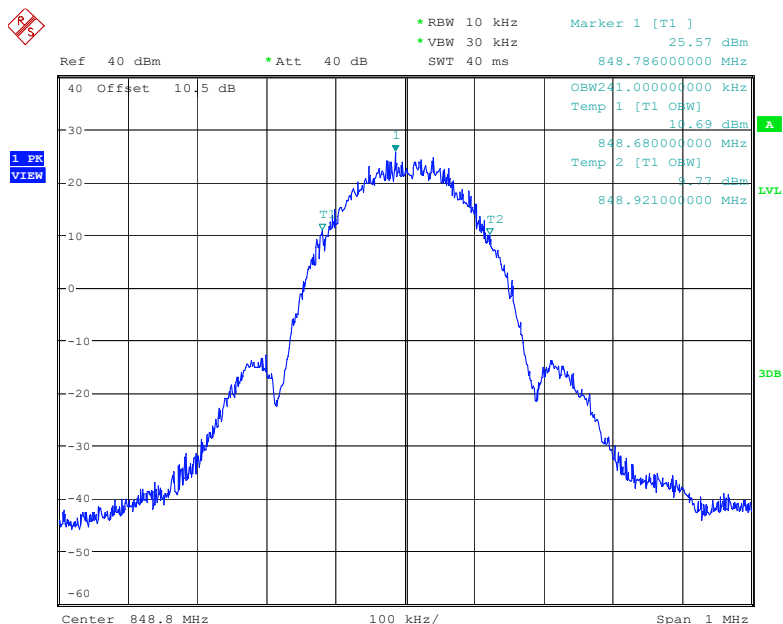
Date: 7.DEC.2022 17:02:13

**99% Occupied Bandwidth for EGPRS (8PSK) Mode, Low channel**

Date: 7.DEC.2022 17:13:46

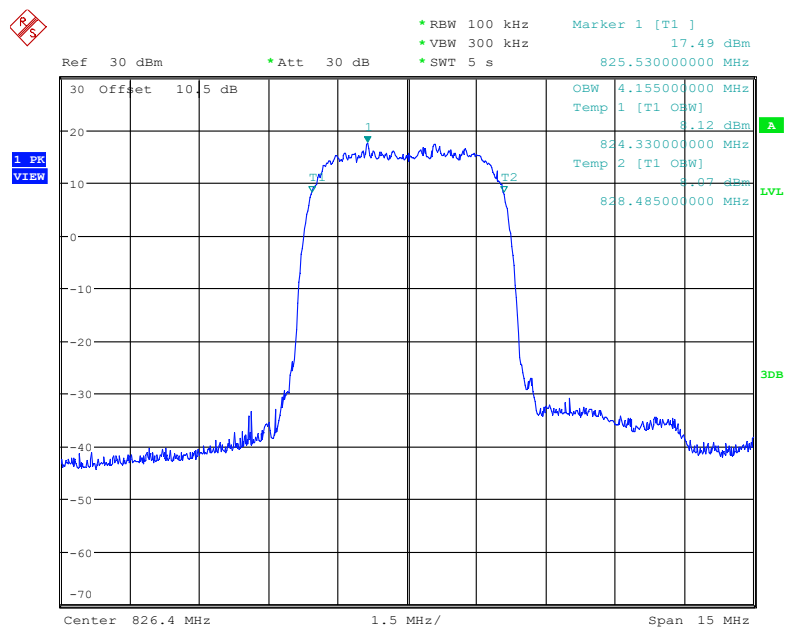
**99% Occupied Bandwidth for EGPRS (8PSK) Mode, Middle channel**

Date: 10.DEC.2022 18:10:38

**99% Occupied Bandwidth for EGPRS (8PSK) Mode, High channel**

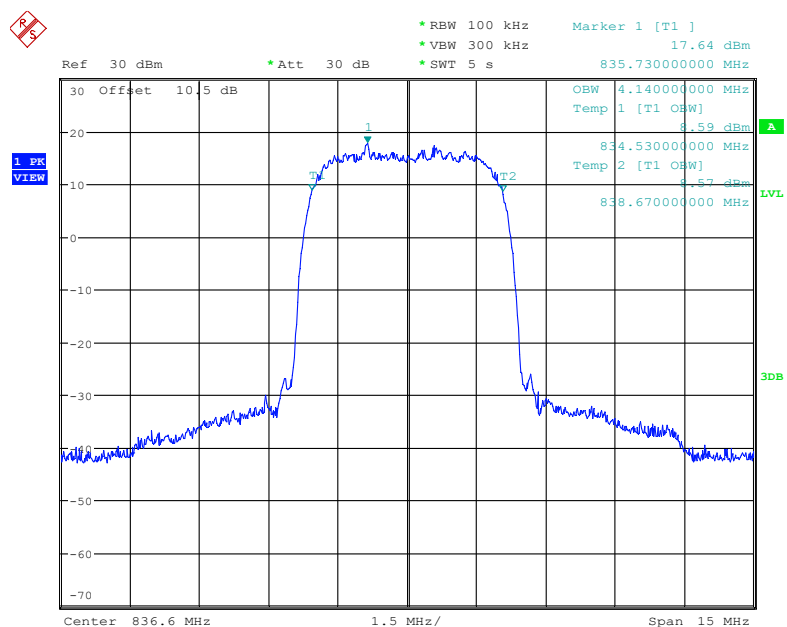
Date: 7.DEC.2022 17:22:39

## 99% Occupied Bandwidth for RMC (BPSK) Mode, Low channel

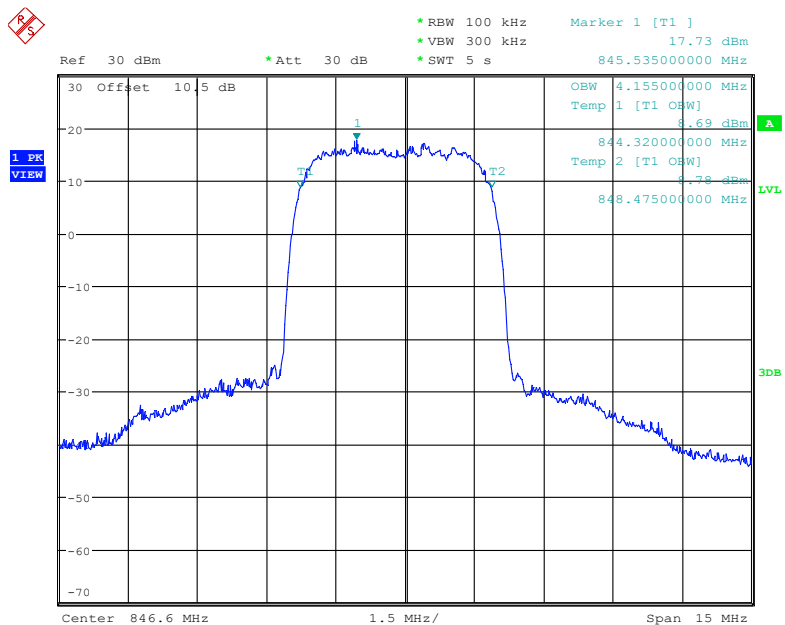


Date: 8.DEC.2022 10:10:02

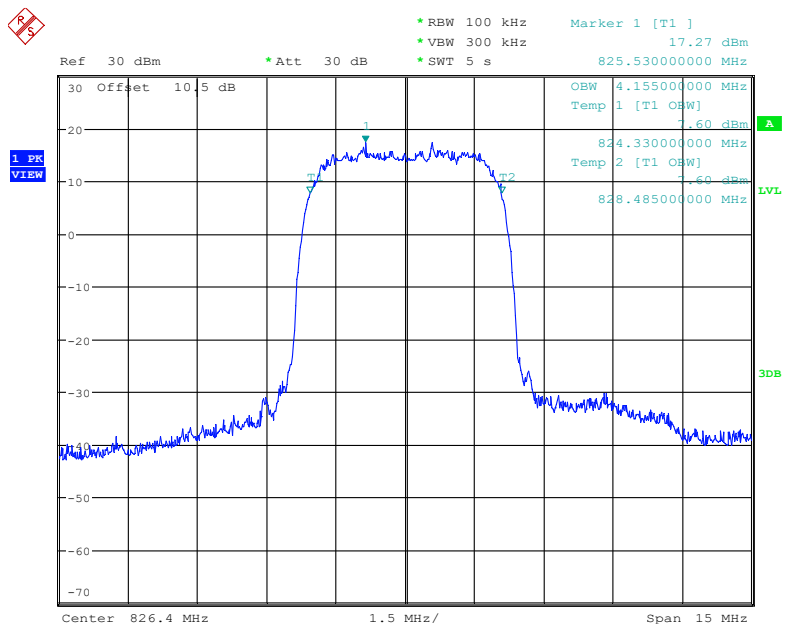
## 99% Occupied Bandwidth for RMC (BPSK) Mode, Middle channel



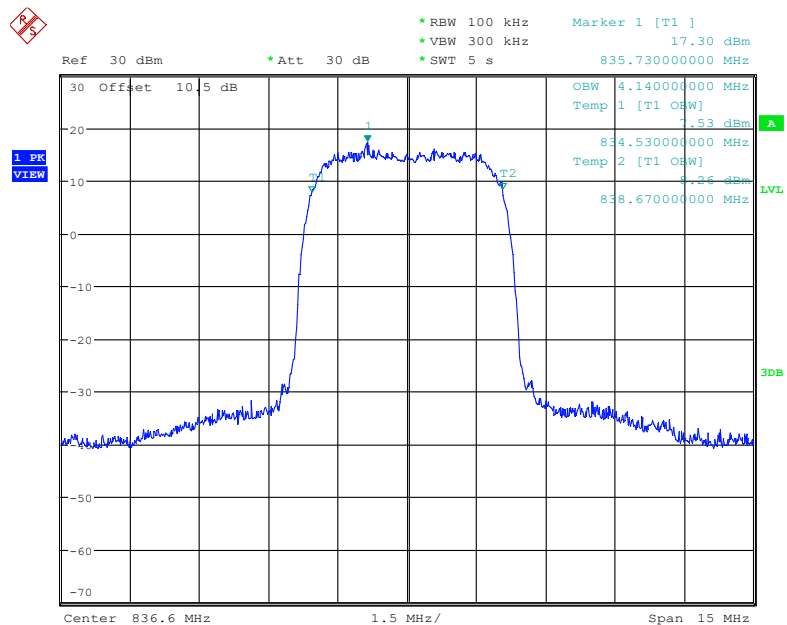
Date: 8.DEC.2022 10:13:02

**99% Occupied Bandwidth for RMC (BPSK) Mode, High channel**

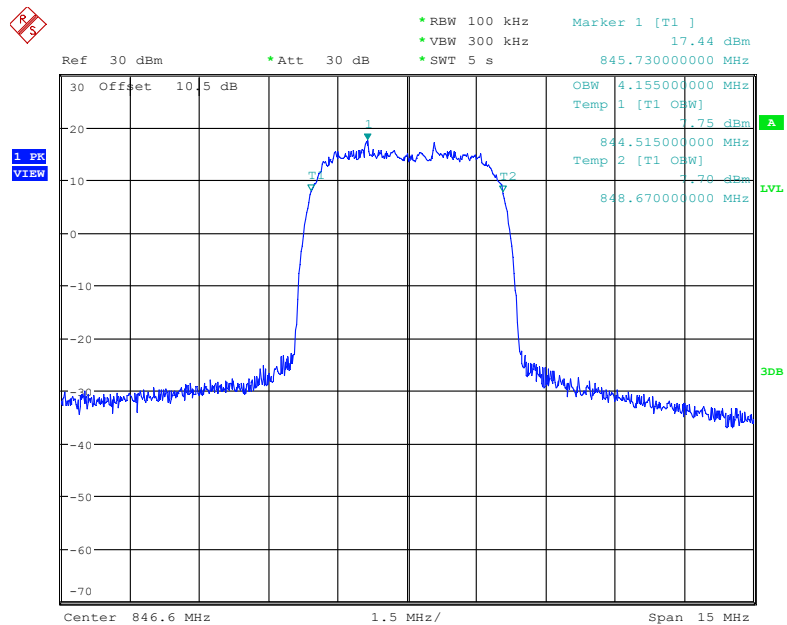
Date: 8.DEC.2022 10:15:58

**99% Occupied Bandwidth for HSUPA (QPSK) Mode, Low channel**

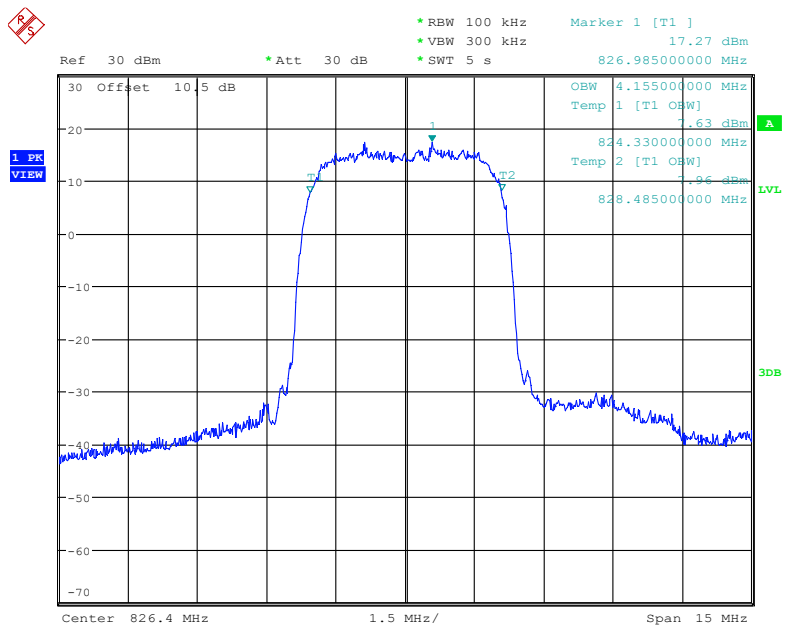
Date: 8.DEC.2022 11:53:43

**99% Occupied Bandwidth for HSUPA (QPSK) Mode, Middle channel**

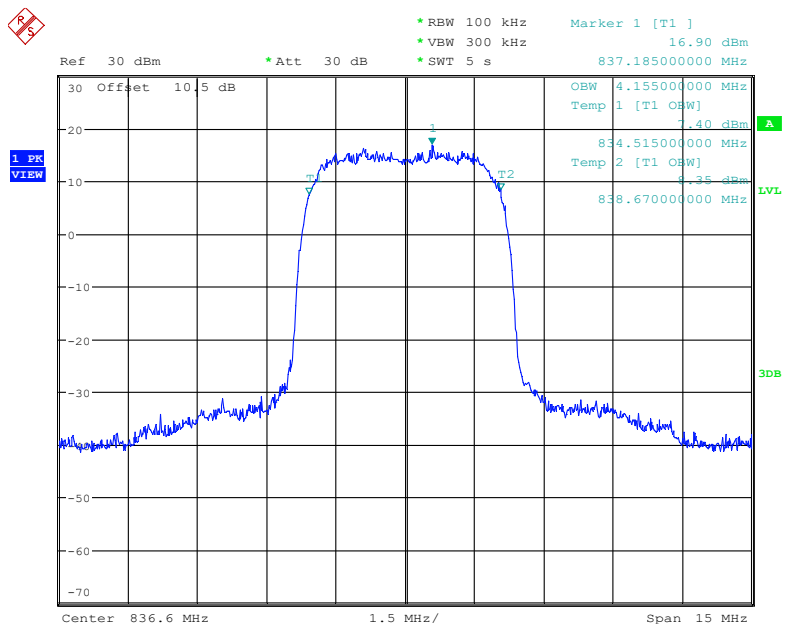
Date: 8.DEC.2022 13:05:54

**99% Occupied Bandwidth for HSUPA (QPSK) Mode, High channel**

Date: 8.DEC.2022 13:08:52

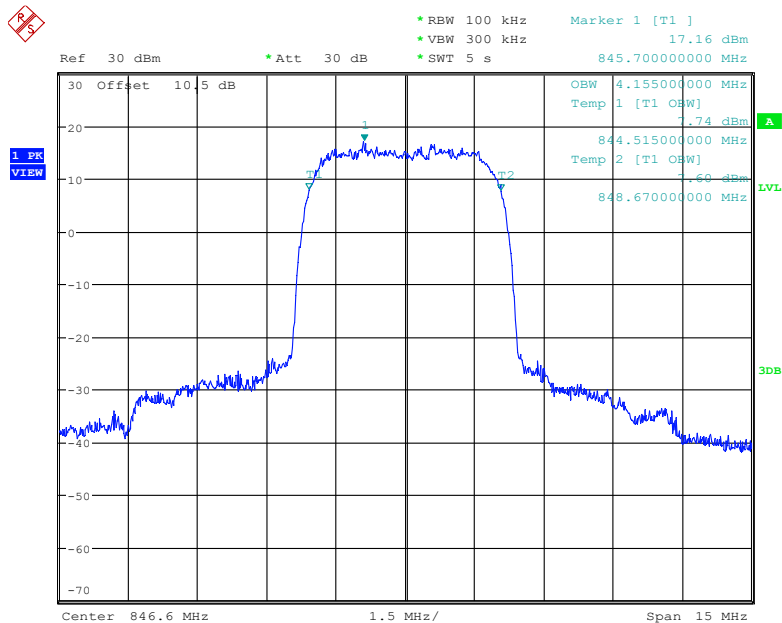
**99% Occupied Bandwidth for HSDPA (16QAM) Mode, Low channel**

Date: 8.DEC.2022 10:32:22

**99% Occupied Bandwidth for HSDPA (16QAM) Mode, Middle channel**

Date: 8.DEC.2022 10:36:03

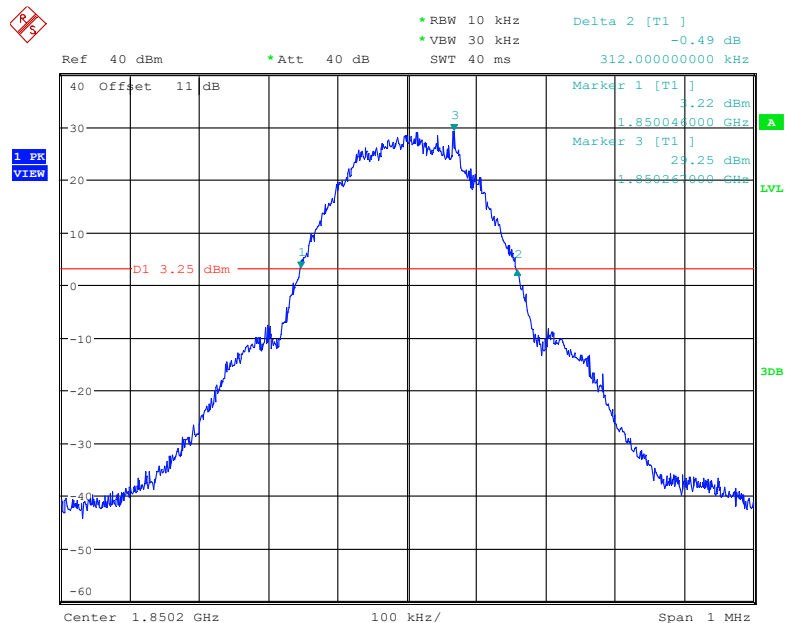
99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



Date: 8.DEC.2022 10:38:51

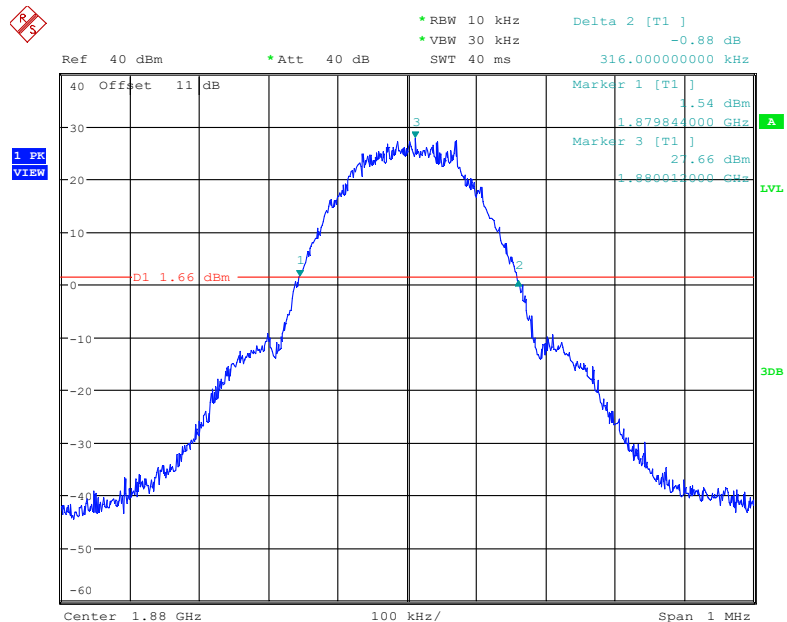
## PCS Band (Part 24E)

## 26 dB Emissions for GSM (GMSK) Mode, Low channel



Date: 8.DEC.2022 08:50:42

## 26 dB Emissions for GSM (GMSK) Mode, Middle channel



Date: 10.DEC.2022 18:06:16

\* RBW 10 kHz  
 \* VBW 30 kHz  
 \* Att 40 dB  
 Delta 2 [T1]  
 -0.00 dB  
 312.00000000 kHz

Ref 40 dBm  
 Offset 11 dB  
 1 PK  
 VIEW

Marker 1 [T1]  
 2.03 dBm  
 1.909647000 GHz  
 Marker 3 [T1]  
 28.42 dBm  
 1.909820000 GHz

D1 2.42 dBm  
 LVL  
 3DB

Center 1.9098 GHz  
 100 kHz/  
 Span 1 MHz

Date: 8.DEC.2022 08:57:06

Ref 40 dBm \* Att 40 dB \* RBW 10 kHz Delta 2 [T1] -0.30 dB \* VBW 30 kHz 312.00000000 kHz

40 Offset 11 dB

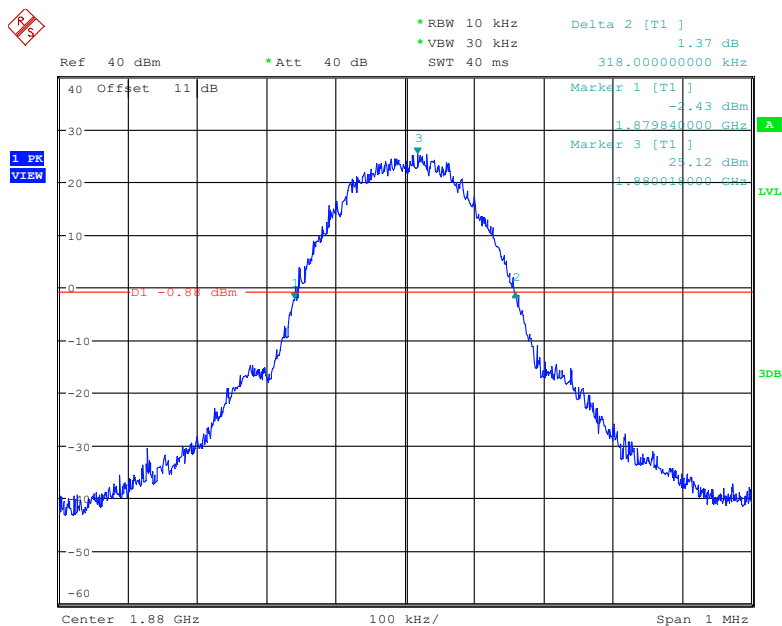
Marker 1 [T1] -0.67 dBm 1.850041000 GHz

Marker 3 [T1] 29.41 dBm 1.850230000 GHz

Center 1.850 GHz 100 kHz/ Span 1 MHz

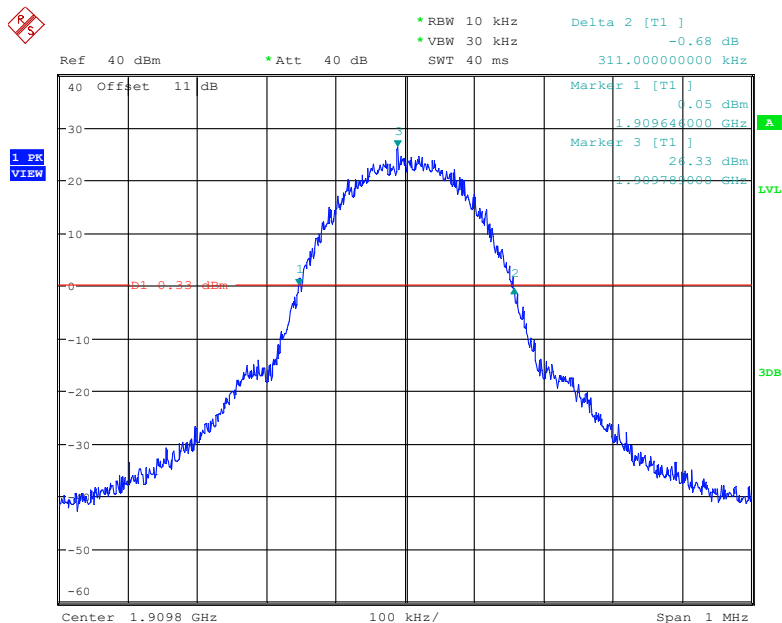
Date: 8.DEC.2022 09:05:01

## 26 dB Emissions for EGPRS (8PSK) Mode, Middle channel

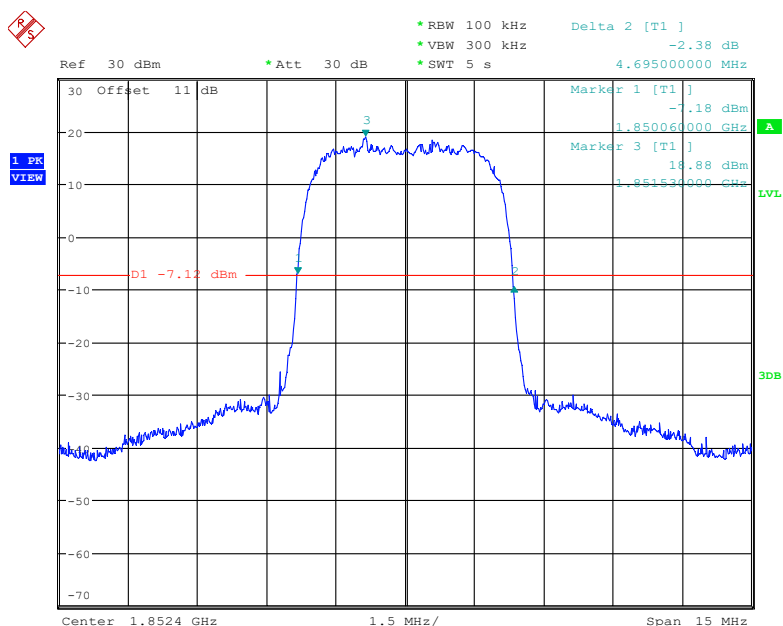


Date: 8.DEC.2022 09:12:23

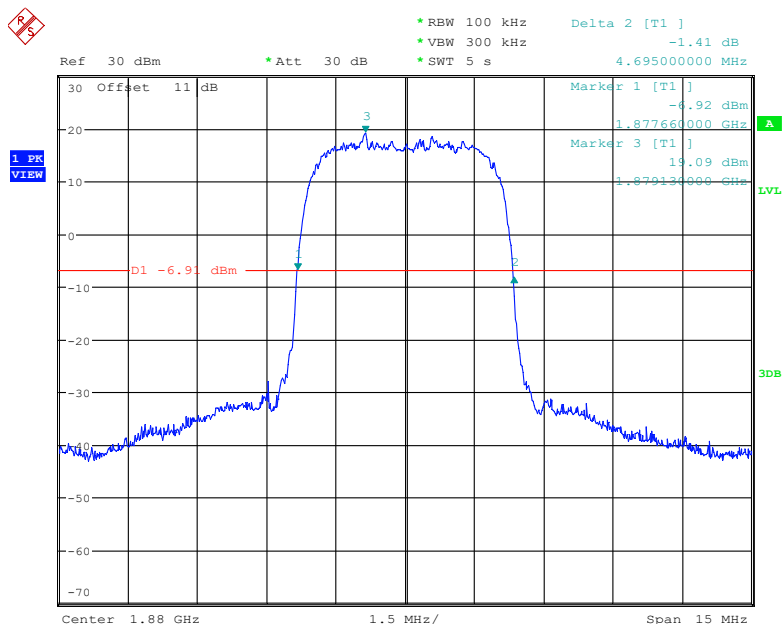
## 26 dB Emissions for EGPRS (8PSK) Mode, High channel



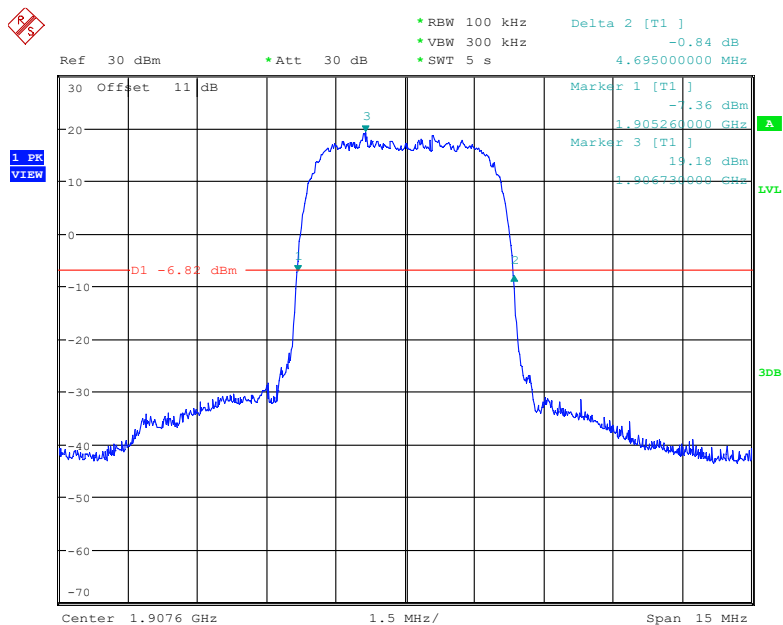
Date: 8.DEC.2022 09:17:10

**26 dB Emissions for RMC (BPSK) Mode, Low channel**

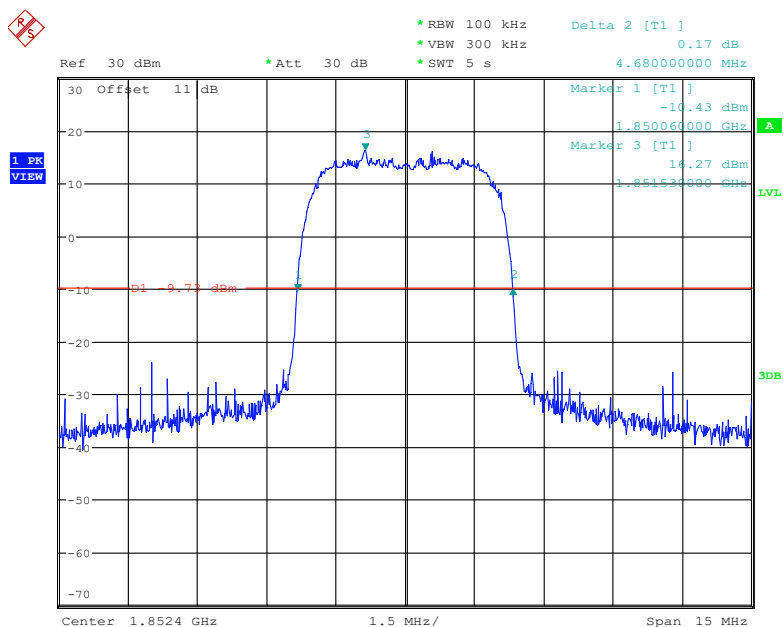
Date: 8.DEC.2022 09:26:09

**26 dB Emissions for RMC (BPSK) Mode, Middle channel**

Date: 8.DEC.2022 09:30:28

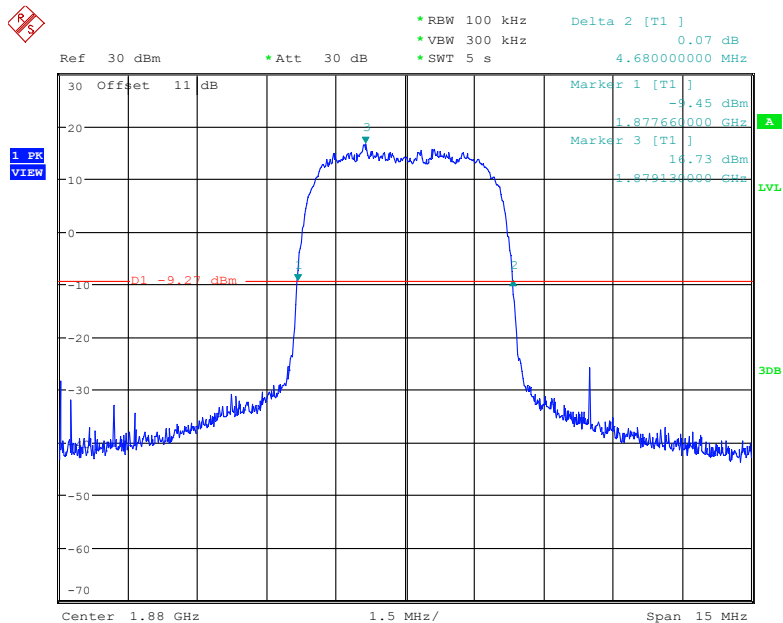
**26 dB Emissions for RMC (BPSK) Mode, High channel**

Date: 8.DEC.2022 09:36:07

**26 dB Emissions for HSUPA (QPSK) Mode, Low channel**

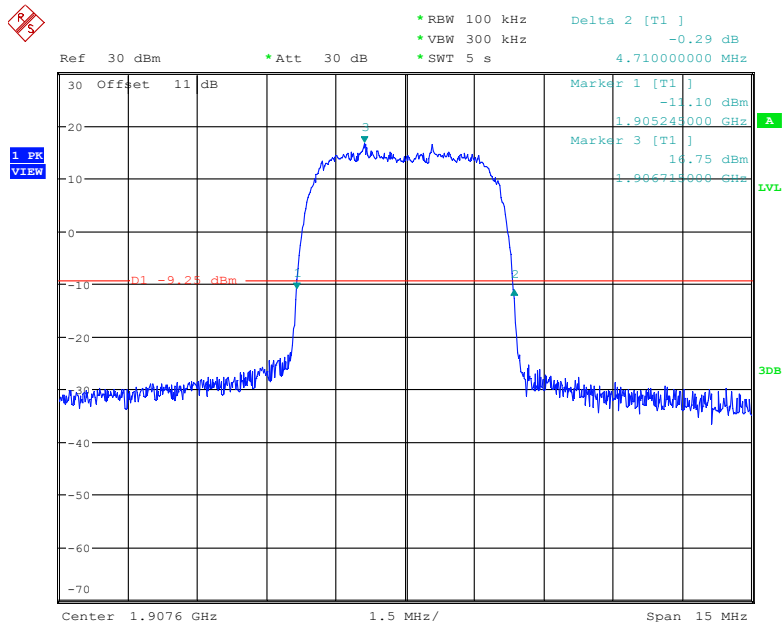
Date: 8.DEC.2022 11:15:41

26 dB Emissions for HSUPA (QPSK) Mode, Middle channel



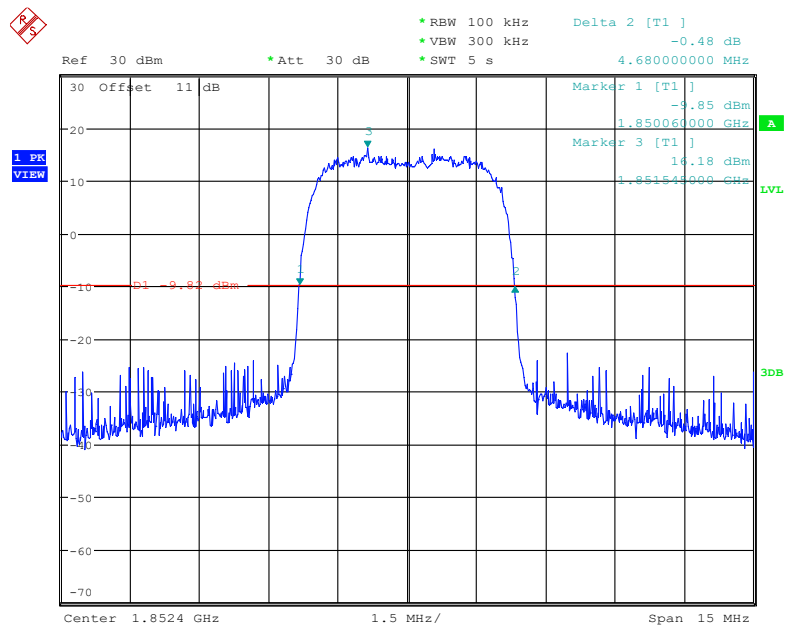
Date: 8.DEC.2022 11:19:51

26 dB Emissions for HSUPA (QPSK) Mode, High channel



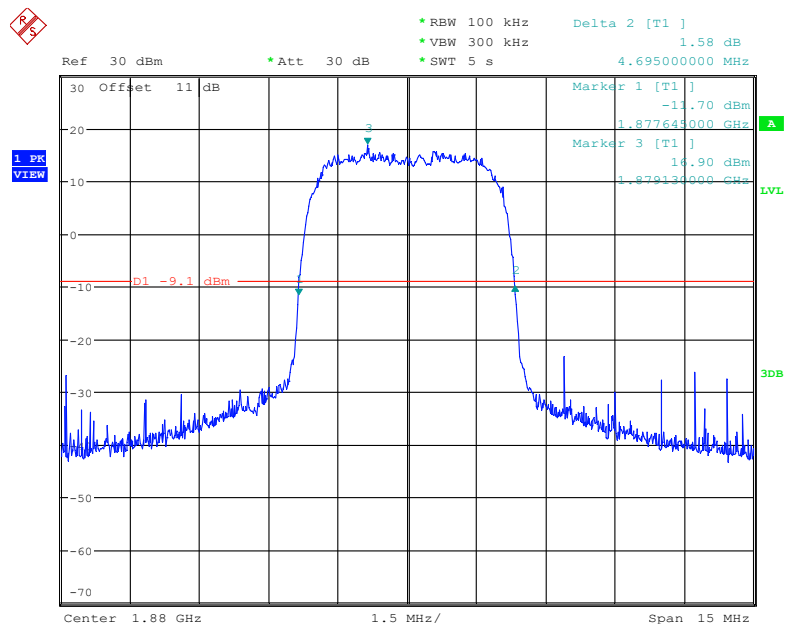
Date: 8.DEC.2022 11:22:54

## 26 dB Emissions for HSDPA (16QAM) Mode, Low channel



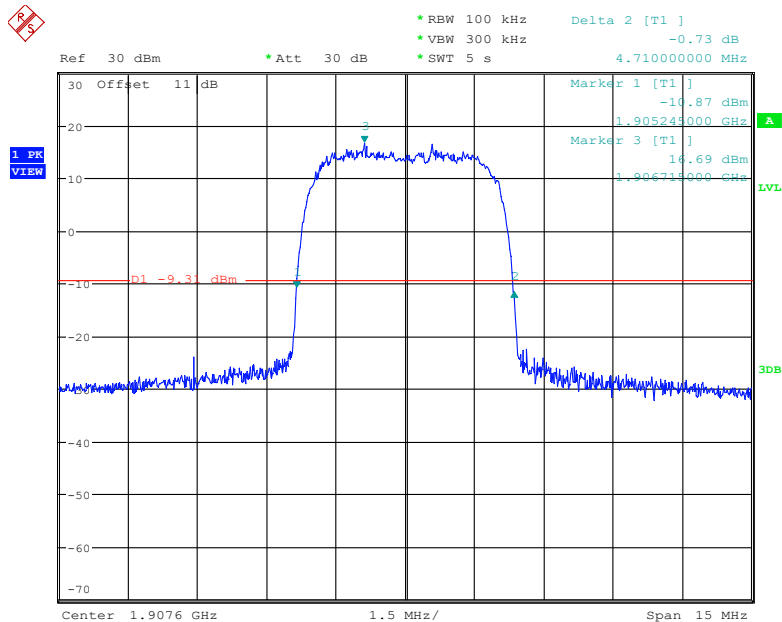
Date: 8.DEC.2022 10:57:21

## 26 dB Emissions for HSDPA (16QAM) Mode, Middle channel



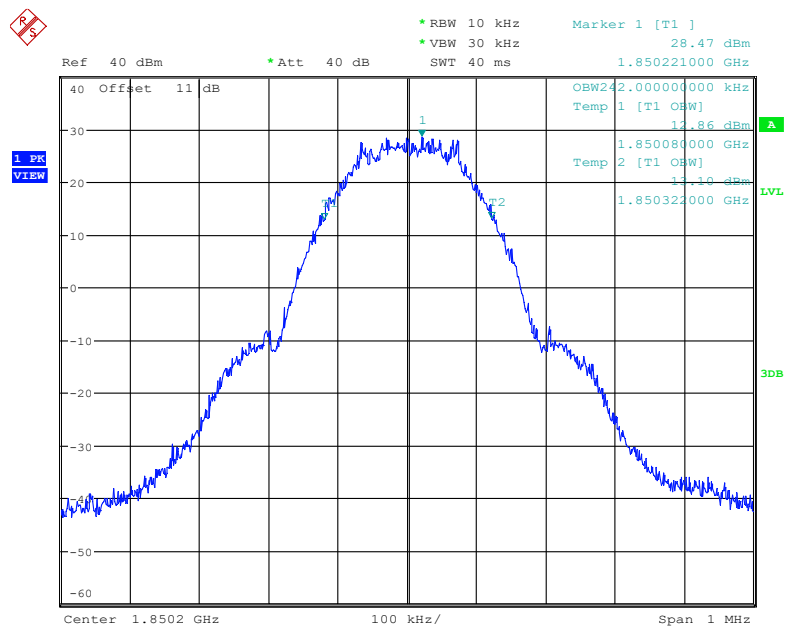
Date: 8.DEC.2022 11:02:14

26 dB Emissions for HSDPA (16QAM) Mode, High channel



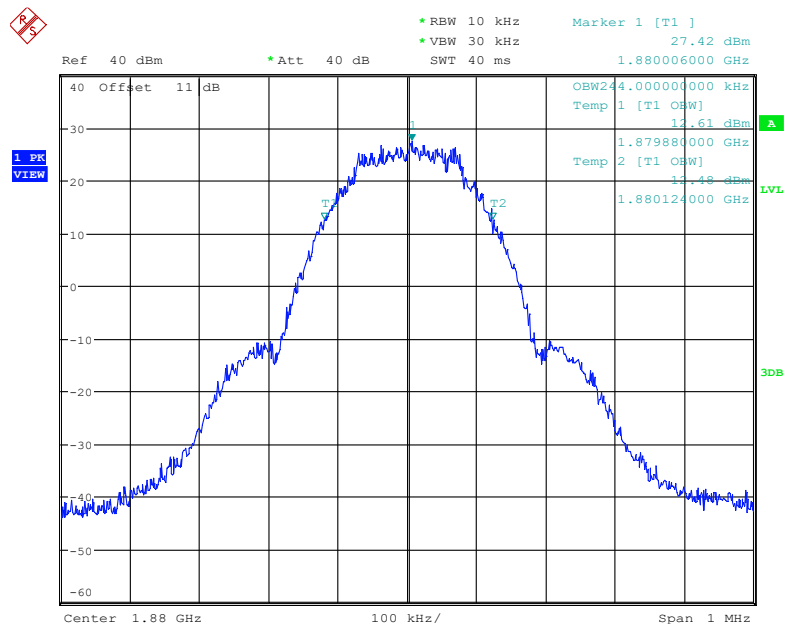
Date: 8.DEC.2022 11:05:45

## 99% Occupied Bandwidth for GSM (GMSK) Mode, Low channel



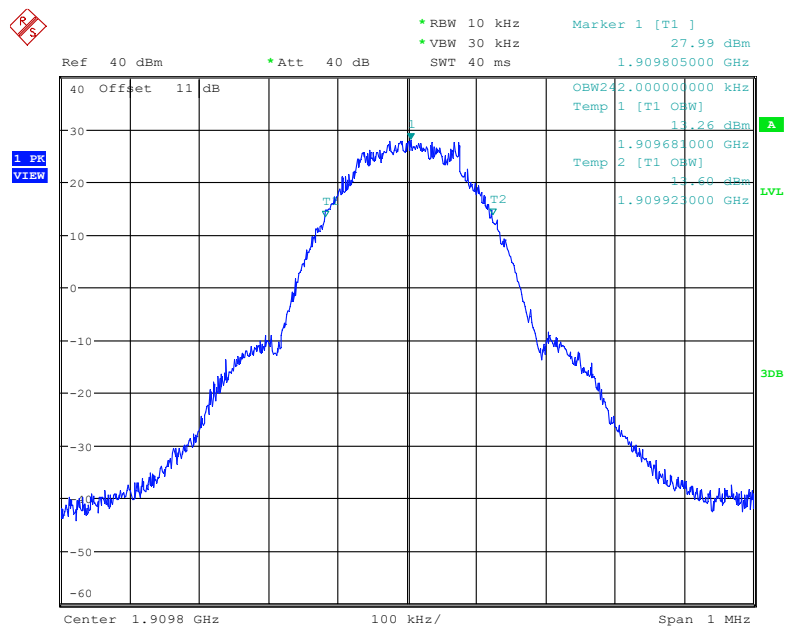
Date: 8.DEC.2022 08:50:04

## 99% Occupied Bandwidth for GSM (GMSK) Mode, Middle channel



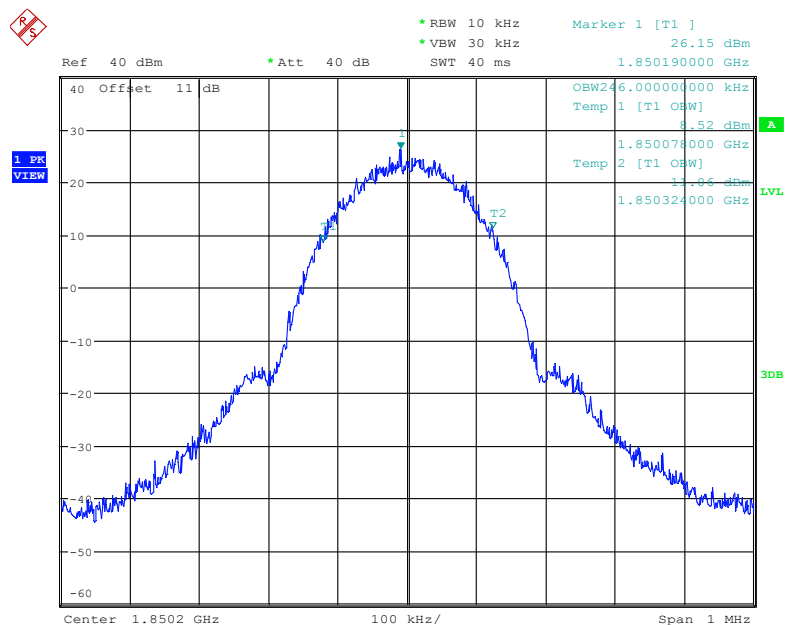
Date: 10.DEC.2022 18:05:35

## 99% Occupied Bandwidth for GSM (GMSK) Mode, High channel

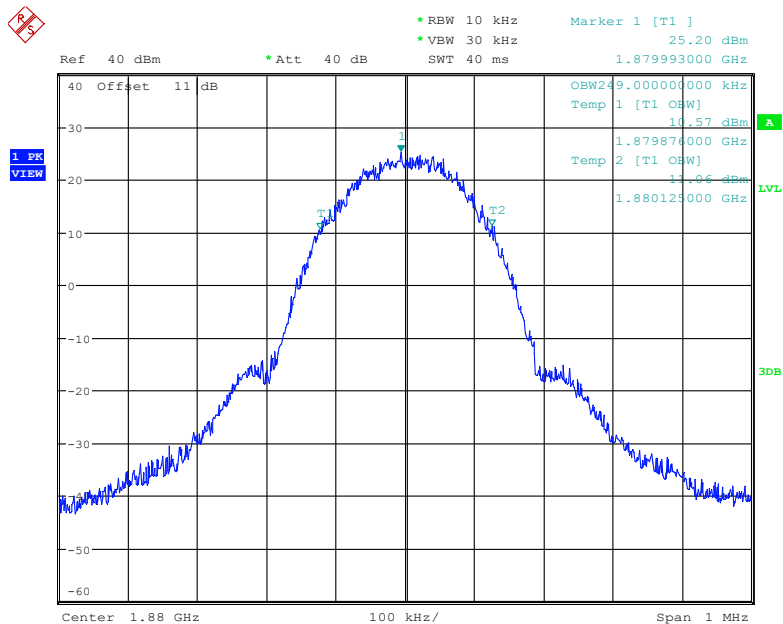


Date: 8.DEC.2022 08:56:27

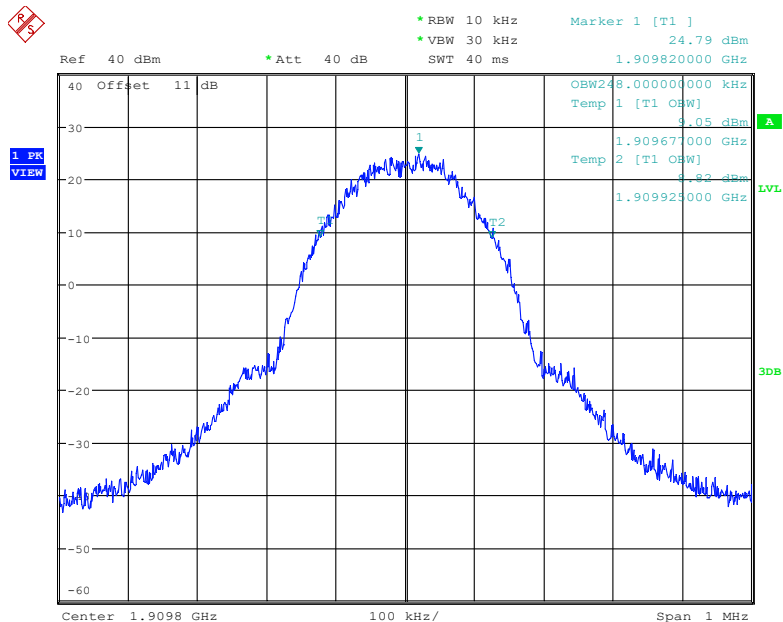
## 99% Occupied Bandwidth for EGPRS (8PSK) Mode, Low channel



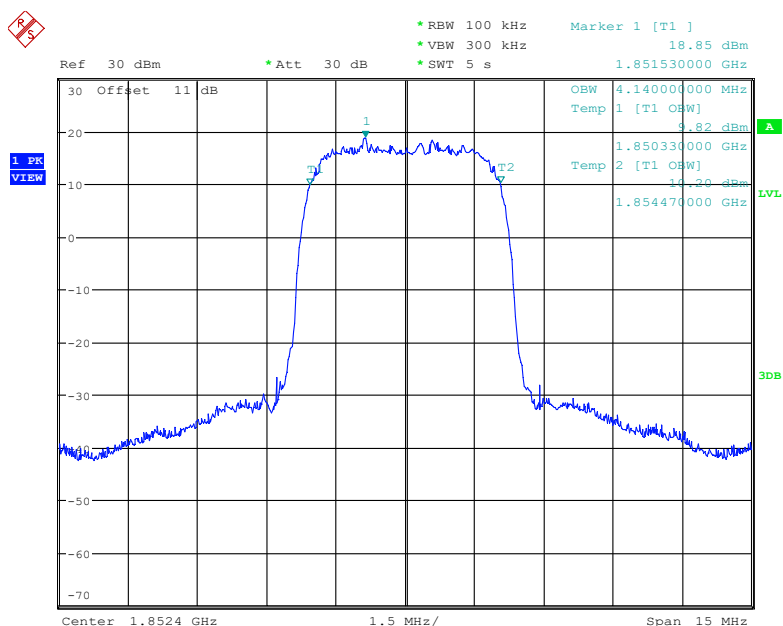
Date: 8.DEC.2022 09:04:21

**99% Occupied Bandwidth for EGPRS (8PSK) Mode, Middle channel**

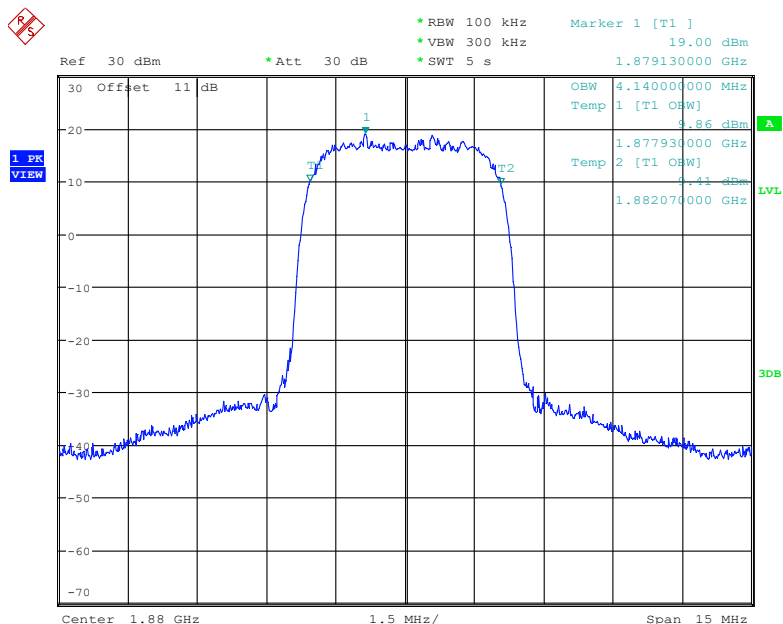
Date: 8.DEC.2022 09:11:42

**99% Occupied Bandwidth for EGPRS (8PSK) Mode, High channel**

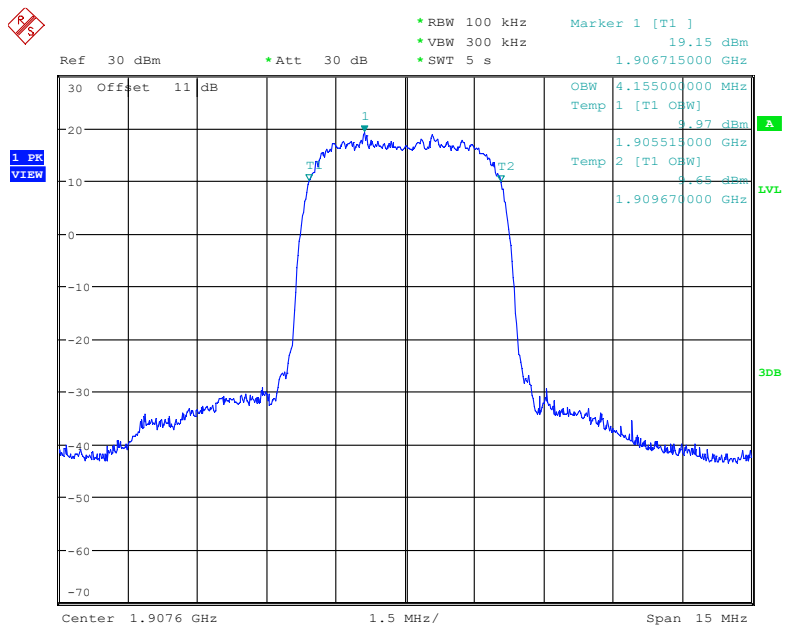
Date: 8.DEC.2022 09:16:30

**99% Occupied Bandwidth for RMC (BPSK) Mode, Low channel**

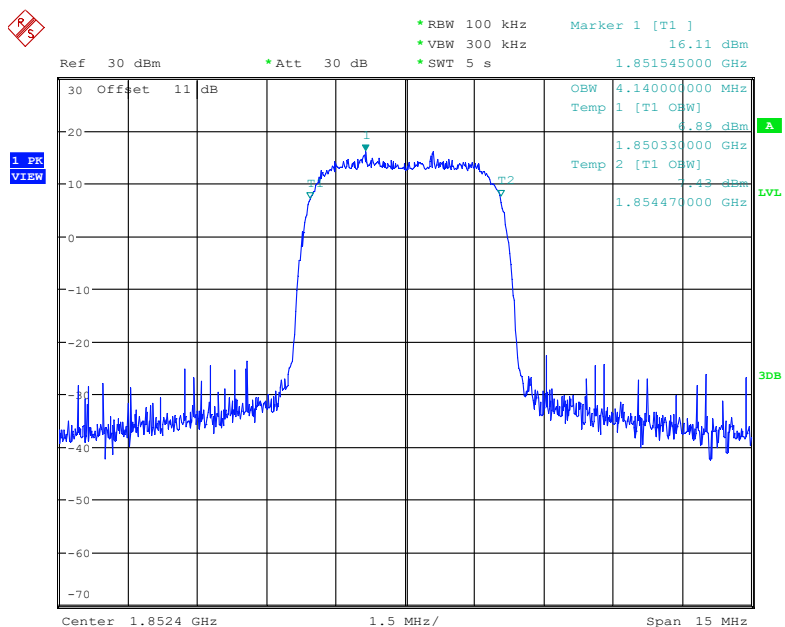
Date: 8.DEC.2022 09:25:30

**99% Occupied Bandwidth for RMC (BPSK) Mode, Middle channel**

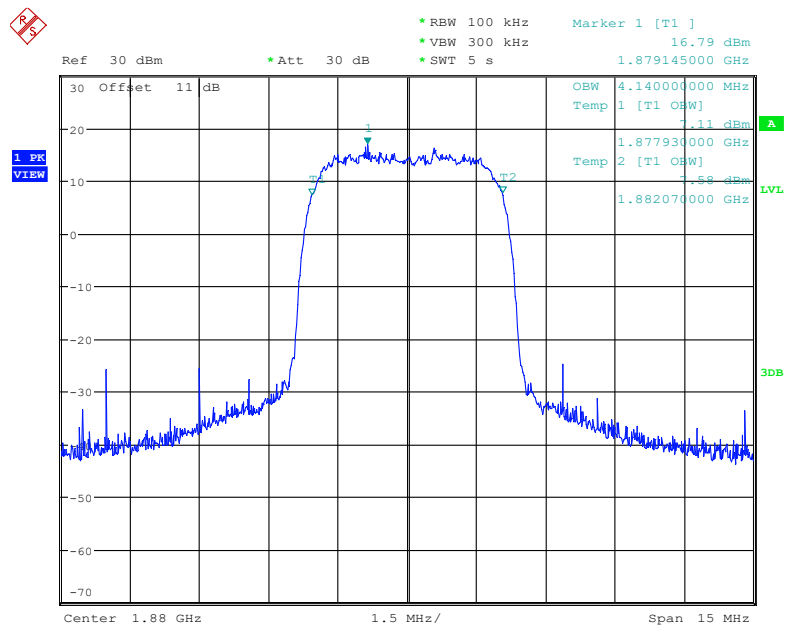
Date: 8.DEC.2022 09:29:49

**99% Occupied Bandwidth for RMC (BPSK) Mode, High channel**

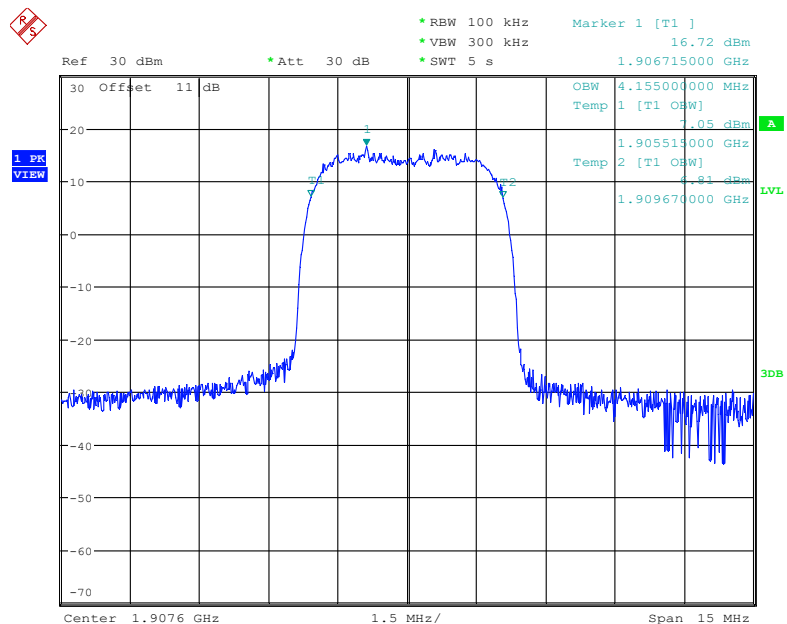
Date: 8.DEC.2022 09:35:27

**99% Occupied Bandwidth for HSUPA (QPSK) Mode, Low channel**

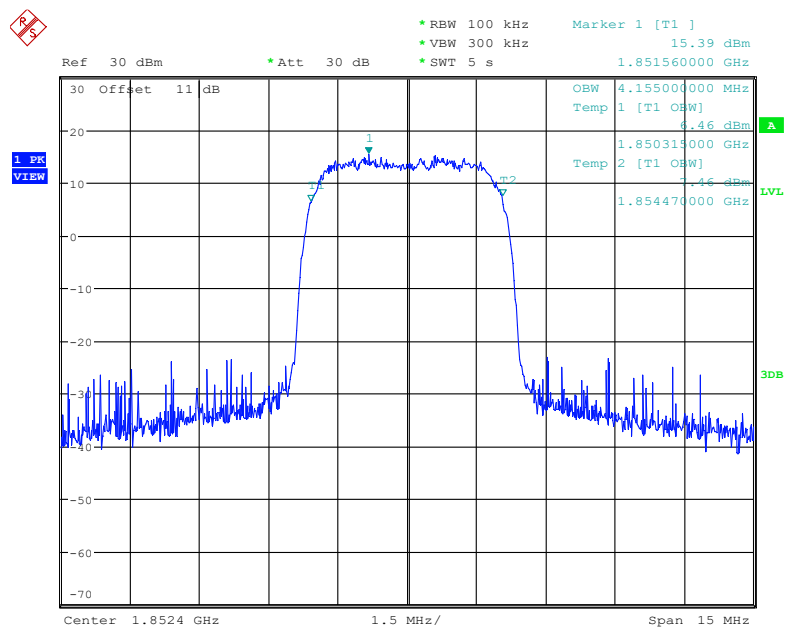
Date: 8.DEC.2022 11:15:02

**99% Occupied Bandwidth for HSUPA (QPSK) Mode, Middle channel**

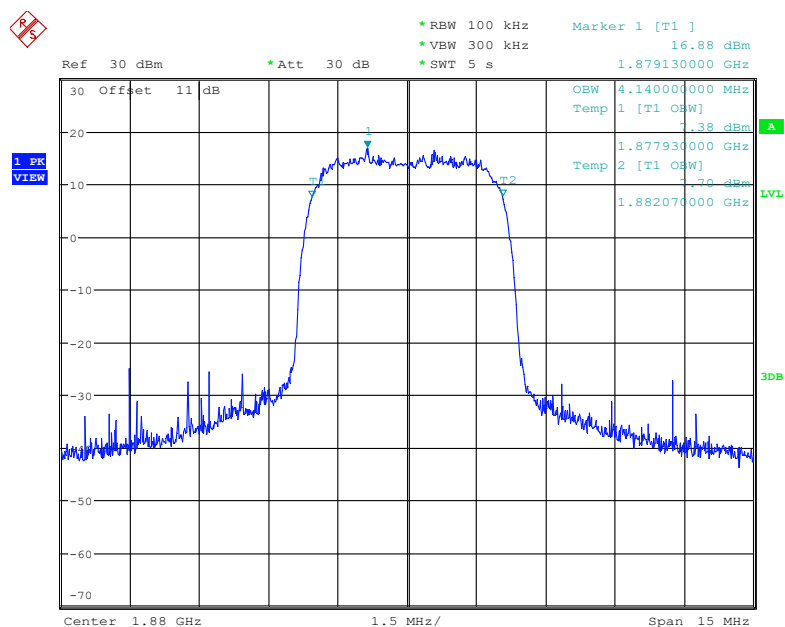
Date: 8.DEC.2022 11:19:11

**99% Occupied Bandwidth for HSUPA (QPSK) Mode, High channel**

Date: 8.DEC.2022 11:22:14

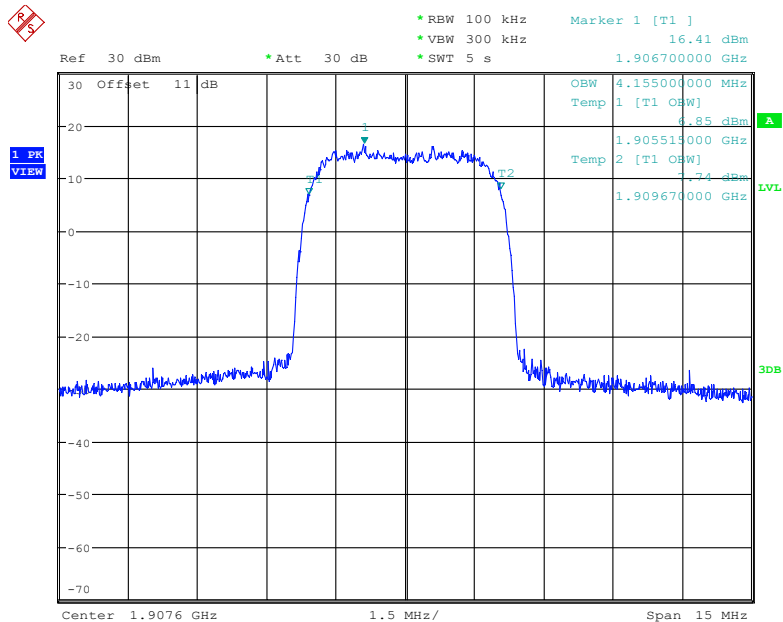
**99% Occupied Bandwidth for HSDPA (16QAM) Mode, Low channel**

Date: 8.DEC.2022 10:56:42

**99% Occupied Bandwidth for HSDPA (16QAM) Mode, Middle channel**

Date: 8.DEC.2022 11:01:33

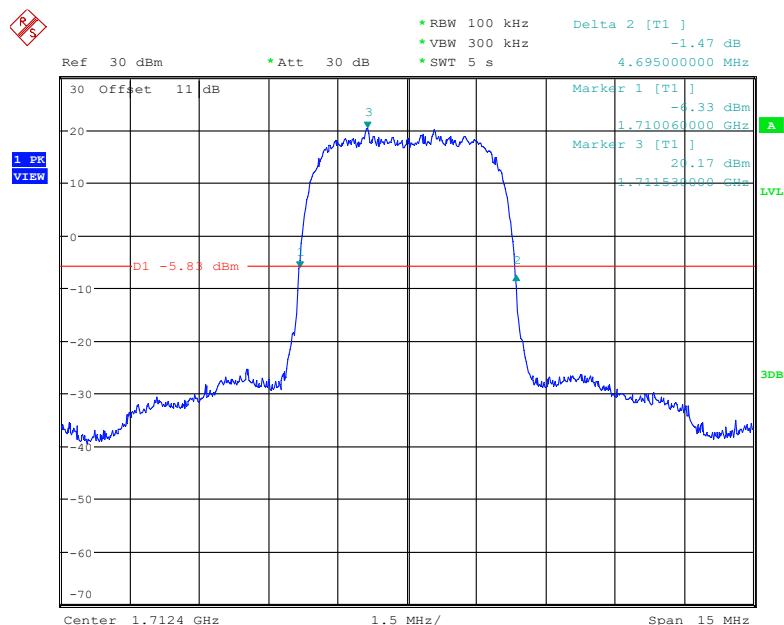
99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



Date: 8.DEC.2022 11:05:04

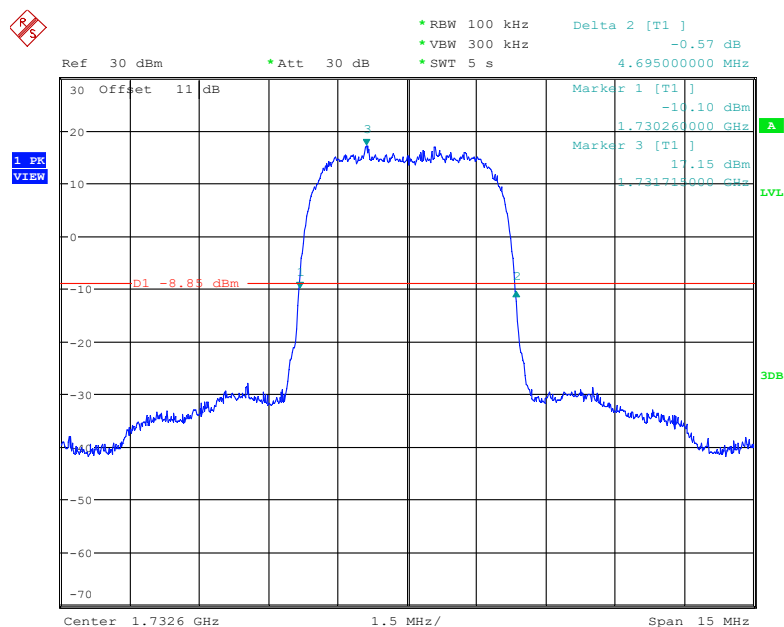
## AWS Band (Part 27)

## 26 dB Emissions for RMC (BPSK) Mode, Low channel



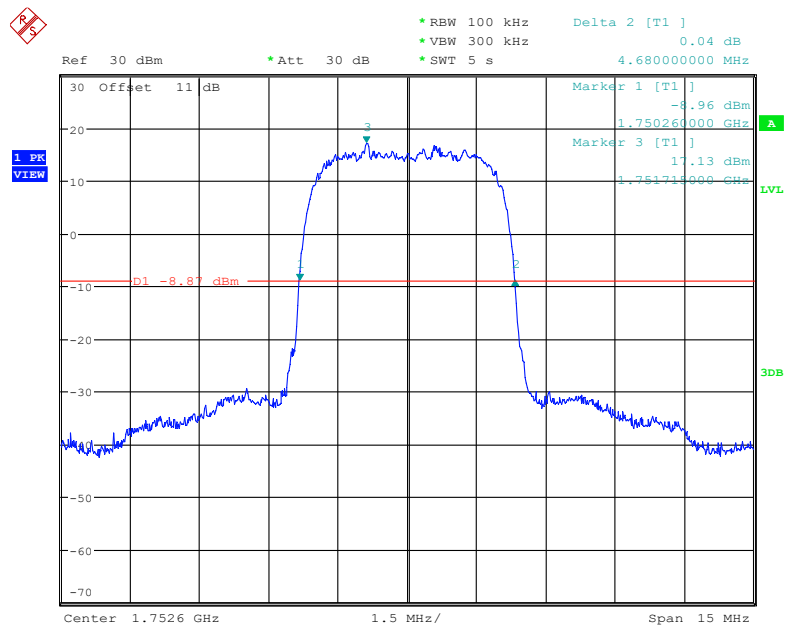
Date: 8.DEC.2022 09:45:46

## 26 dB Emissions for RMC (BPSK) Mode, Middle channel



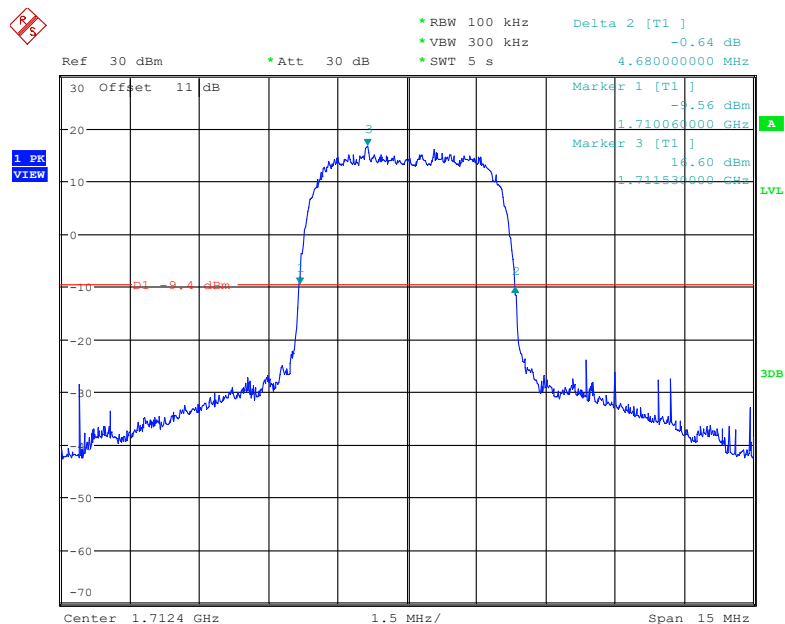
Date: 8.DEC.2022 09:58:06

## 26 dB Emissions for RMC (BPSK) Mode, High channel

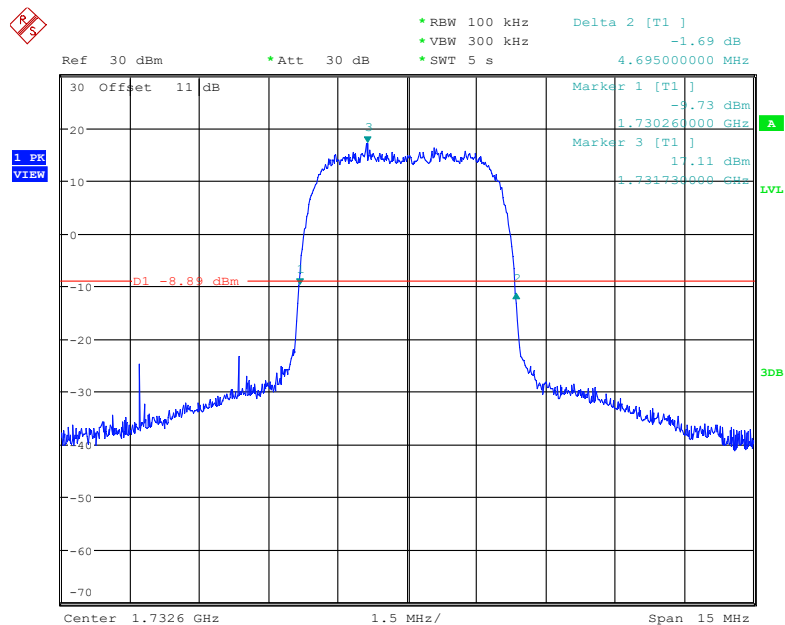


Date: 8.DEC.2022 10:01:41

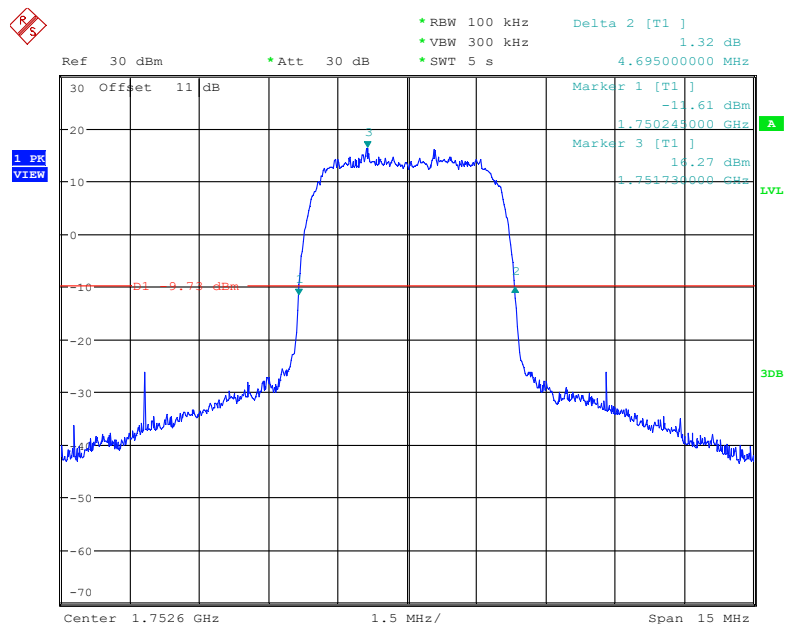
## 26 dB Emissions for HSUPA (QPSK) Mode, Low channel



Date: 8.DEC.2022 11:32:31

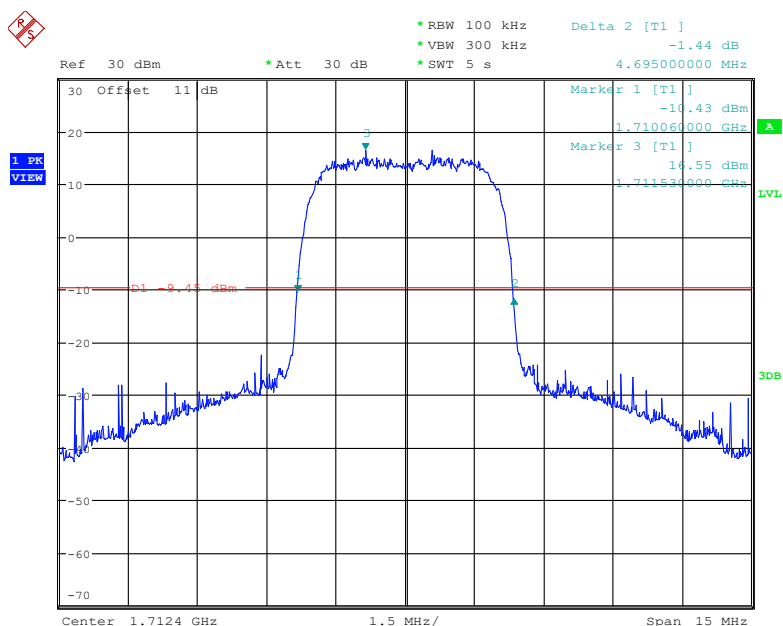
**26 dB Emissions & for HSUPA (QPSK) Mode, Middle channel**

Date: 8.DEC.2022 11:43:56

**26 dB Emissions for HSUPA (QPSK) Mode, High channel**

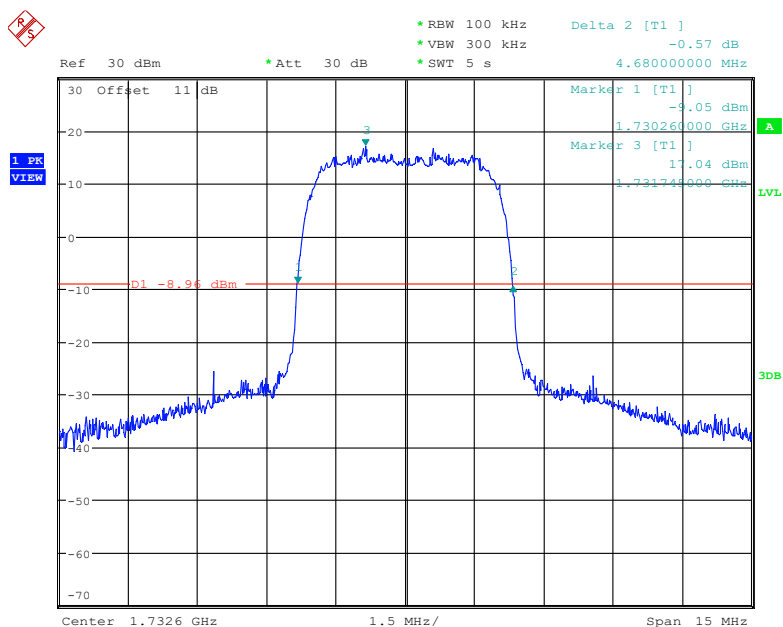
Date: 8.DEC.2022 11:47:15

## 26 dB Emissions for HSDPA (16QAM) Mode, Low channel



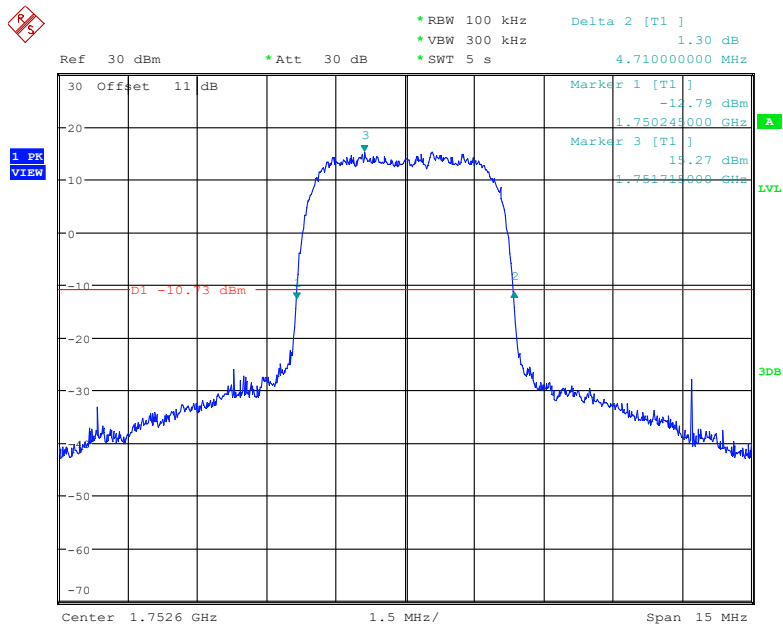
Date: 8.DEC.2022 10:44:18

## 26 dB Emissions for HSDPA (16QAM) Mode, Middle channel

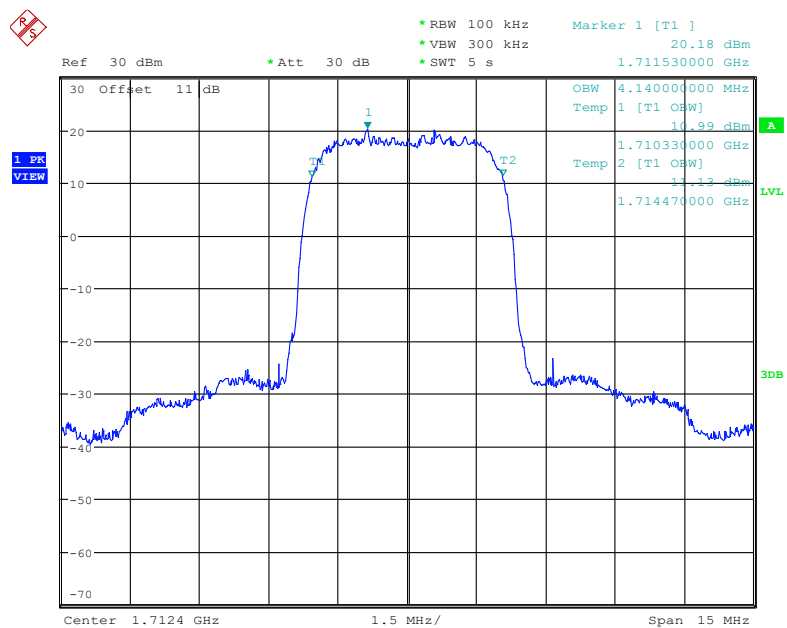


Date: 8.DEC.2022 10:48:20

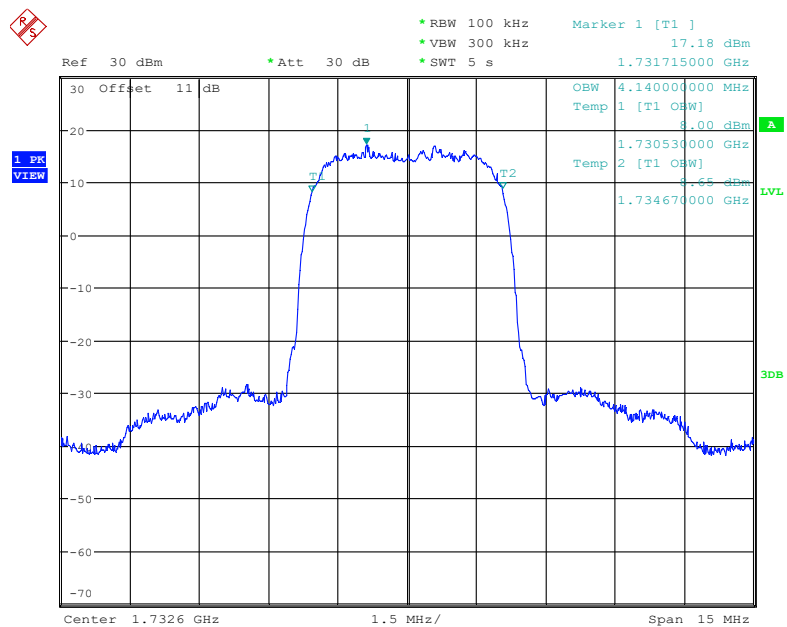
26 dB Emissions for HSDPA (16QAM) Mode, High channel



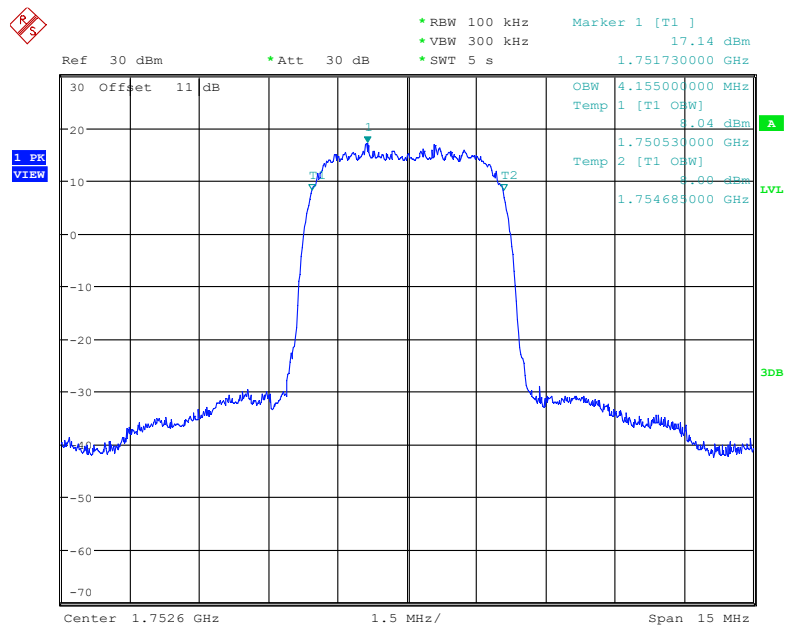
Date: 8.DEC.2022 10:51:46

**99% Occupied Bandwidth for RMC (BPSK) Mode, Low channel**

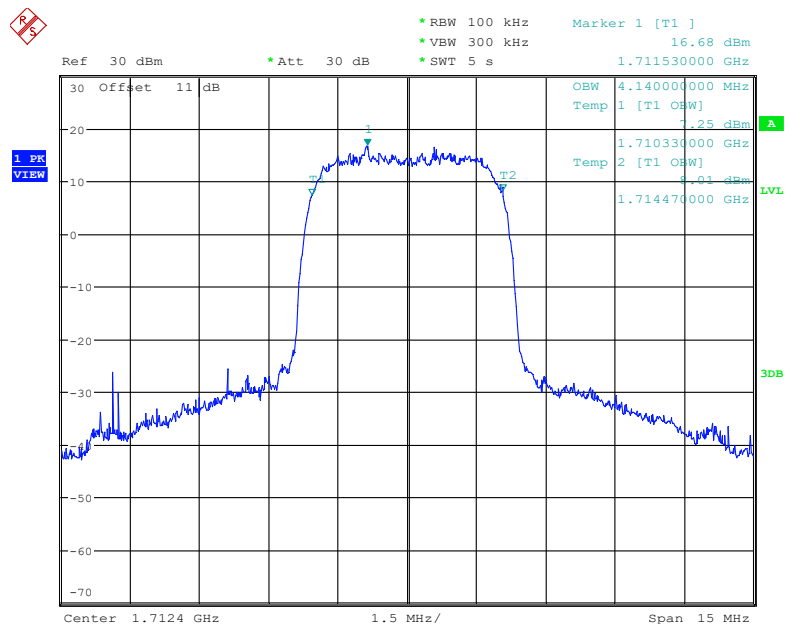
Date: 8.DEC.2022 09:45:06

**99% Occupied Bandwidth for RMC (BPSK) Mode, Middle channel**

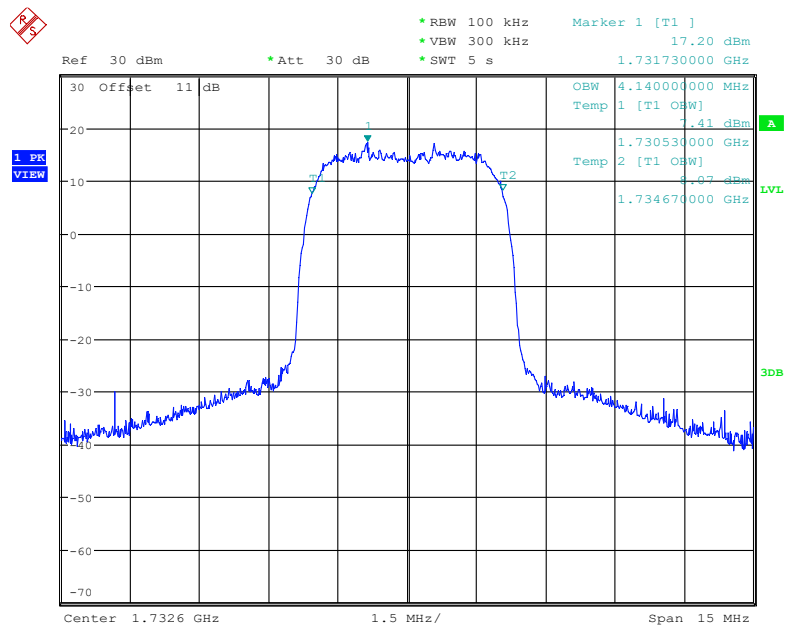
Date: 8.DEC.2022 09:57:27

**99% Occupied Bandwidth for RMC (BPSK) Mode, High channel**

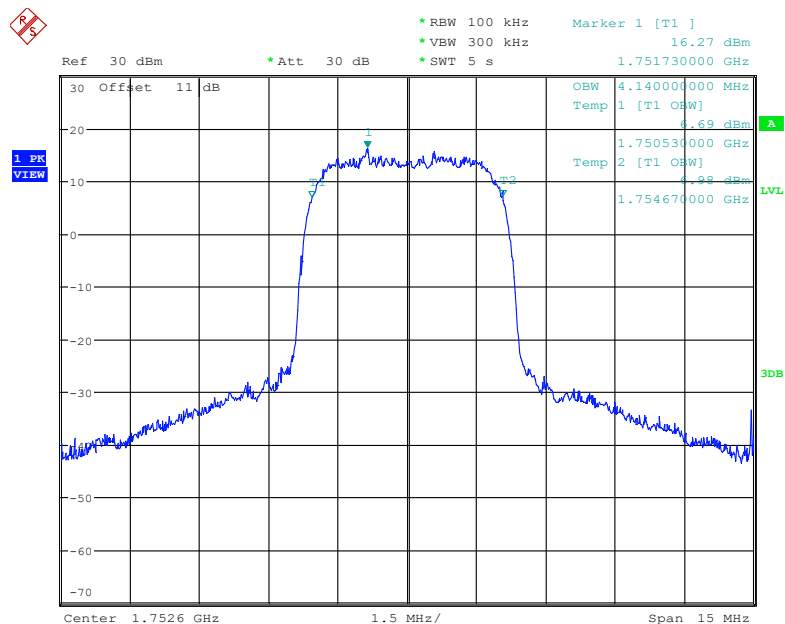
Date: 8.DEC.2022 10:01:02

**99% Occupied Bandwidth for HSUPA (QPSK) Mode, Low channel**

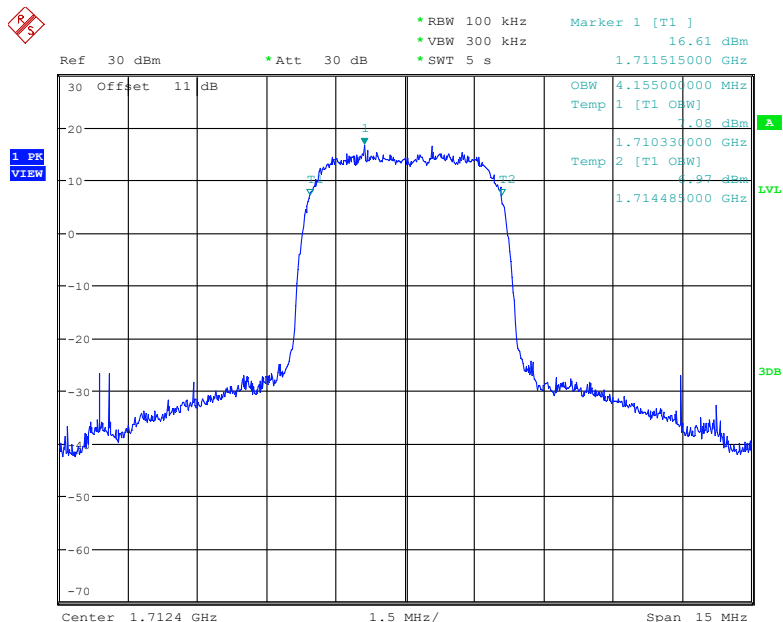
Date: 8.DEC.2022 11:31:50

**99% Occupied Bandwidth for HSUPA (QPSK) Mode, Middle channel**

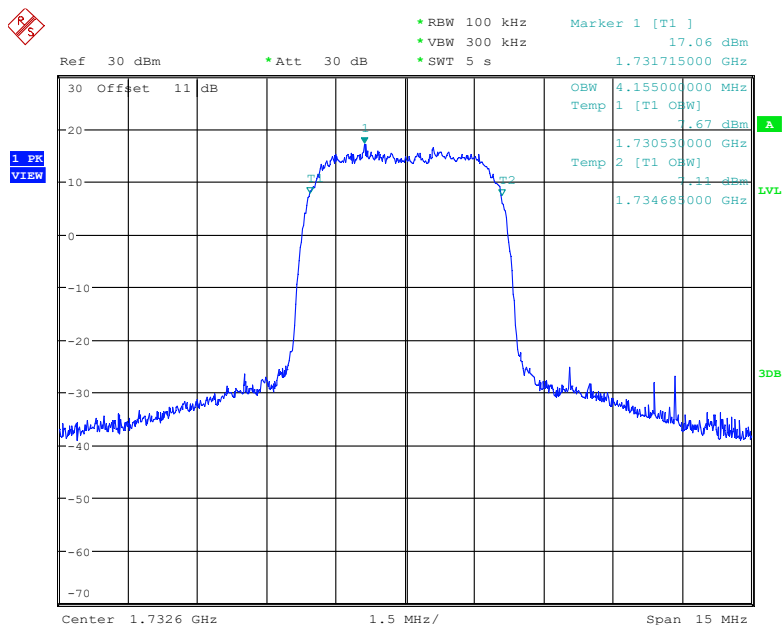
Date: 8.DEC.2022 11:43:16

**99% Occupied Bandwidth for HSUPA (QPSK) Mode, High channel**

Date: 8.DEC.2022 11:46:36

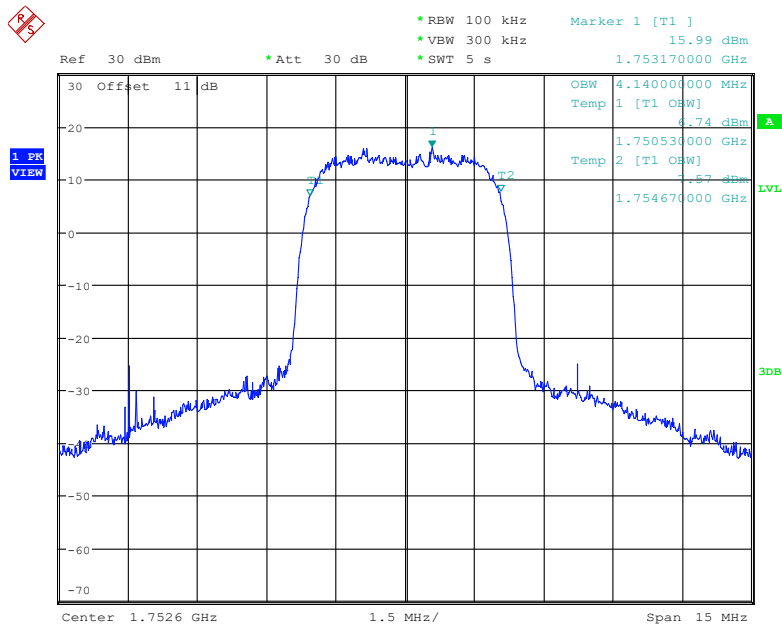
**99% Occupied Bandwidth for HSDPA (16QAM) Mode, Low channel**

Date: 8.DEC.2022 10:43:37

**99% Occupied Bandwidth for HSDPA (16QAM) Mode, Middle channel**

Date: 8.DEC.2022 10:47:41

99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



Date: 8.DEC.2022 10:51:08

**LTE Band 2:**

| Bandwidth | Modulation | Low channel |                | Middle channel |                | High channel |                |
|-----------|------------|-------------|----------------|----------------|----------------|--------------|----------------|
|           |            | OBW (MHz)   | 26dB EBW (MHz) | OBW (MHz)      | 26dB EBW (MHz) | OBW (MHz)    | 26dB EBW (MHz) |
| 1.4 MHz   | QPSK       | 1.092       | 1.254          | 1.104          | 1.260          | 1.098        | 1.266          |
|           | 16QAM      | 1.104       | 1.254          | 1.110          | 1.260          | 1.110        | 1.260          |
| 3 MHz     | QPSK       | 2.700       | 3.012          | 2.700          | 3.012          | 2.700        | 2.976          |
|           | 16QAM      | 2.688       | 3.000          | 2.688          | 2.844          | 2.700        | 3.000          |
| 5 MHz     | QPSK       | 4.520       | 5.020          | 4.520          | 5.000          | 4.520        | 4.980          |
|           | 16QAM      | 4.520       | 5.020          | 4.520          | 5.000          | 4.520        | 4.940          |
| 10 MHz    | QPSK       | 9.000       | 9.800          | 8.960          | 9.800          | 8.960        | 9.720          |
|           | 16QAM      | 9.000       | 9.840          | 8.960          | 9.760          | 8.960        | 9.760          |
| 15 MHz    | QPSK       | 13.500      | 14.940         | 13.560         | 15.120         | 13.560       | 15.060         |
|           | 16QAM      | 13.620      | 14.940         | 13.560         | 15.000         | 13.560       | 14.880         |
| 20 MHz    | QPSK       | 18.000      | 19.600         | 18.080         | 19.840         | 18.000       | 19.600         |
|           | 16QAM      | 18.000      | 19.760         | 18.000         | 19.600         | 17.920       | 19.760         |

**LTE Band 4:**

| Bandwidth | Modulation | Low channel |                | Middle channel |                | High channel |                |
|-----------|------------|-------------|----------------|----------------|----------------|--------------|----------------|
|           |            | OBW (MHz)   | 26dB EBW (MHz) | OBW (MHz)      | 26dB EBW (MHz) | OBW (MHz)    | 26dB EBW (MHz) |
| 1.4 MHz   | QPSK       | 1.098       | 1.254          | 1.098          | 1.260          | 1.098        | 1.254          |
|           | 16QAM      | 1.098       | 1.248          | 1.110          | 1.260          | 1.110        | 1.266          |
| 3 MHz     | QPSK       | 2.700       | 2.988          | 2.700          | 3.012          | 2.700        | 3.000          |
|           | 16QAM      | 2.688       | 2.988          | 2.712          | 3.024          | 2.700        | 3.000          |
| 5 MHz     | QPSK       | 4.520       | 5.040          | 4.520          | 5.020          | 4.520        | 4.960          |
|           | 16QAM      | 4.520       | 4.980          | 4.520          | 5.000          | 4.520        | 4.960          |
| 10 MHz    | QPSK       | 8.960       | 9.760          | 8.960          | 9.840          | 8.960        | 9.760          |
|           | 16QAM      | 8.920       | 9.240          | 8.960          | 9.840          | 8.960        | 9.760          |
| 15 MHz    | QPSK       | 13.500      | 15.000         | 13.500         | 15.060         | 13.500       | 15.000         |
|           | 16QAM      | 13.560      | 15.060         | 13.500         | 14.820         | 13.500       | 15.000         |
| 20 MHz    | QPSK       | 18.000      | 19.680         | 18.000         | 19.760         | 18.000       | 19.600         |
|           | 16QAM      | 18.000      | 19.760         | 18.080         | 19.680         | 18.080       | 19.760         |

**LTE Band 5:**

| Bandwidth | Modulation | Low channel |                | Middle channel |                | High channel |                |
|-----------|------------|-------------|----------------|----------------|----------------|--------------|----------------|
|           |            | OBW (MHz)   | 26dB EBW (MHz) | OBW (MHz)      | 26dB EBW (MHz) | OBW (MHz)    | 26dB EBW (MHz) |
| 1.4 MHz   | QPSK       | 1.104       | 1.260          | 1.104          | 1.254          | 1.104        | 1.260          |
|           | 16QAM      | 1.098       | 1.254          | 1.098          | 1.254          | 1.110        | 1.260          |
| 3 MHz     | QPSK       | 2.700       | 3.012          | 2.700          | 3.012          | 2.688        | 3.000          |
|           | 16QAM      | 2.688       | 3.012          | 2.688          | 3.000          | 2.700        | 3.024          |
| 5 MHz     | QPSK       | 4.520       | 4.980          | 4.520          | 5.000          | 4.520        | 4.980          |
|           | 16QAM      | 4.520       | 5.020          | 4.520          | 5.000          | 4.520        | 4.960          |
| 10 MHz    | QPSK       | 8.960       | 9.680          | 8.960          | 9.760          | 8.960        | 9.800          |
|           | 16QAM      | 8.960       | 9.760          | 8.960          | 9.840          | 8.960        | 9.720          |

**LTE Band 7:**

| Bandwidth | Modulation | Low channel |                | Middle channel |                | High channel |                |
|-----------|------------|-------------|----------------|----------------|----------------|--------------|----------------|
|           |            | OBW (MHz)   | 26dB EBW (MHz) | OBW (MHz)      | 26dB EBW (MHz) | OBW (MHz)    | 26dB EBW (MHz) |
| 5 MHz     | QPSK       | 4.520       | 5.000          | 4.520          | 4.960          | 4.520        | 4.960          |
|           | 16QAM      | 4.540       | 5.020          | 4.520          | 5.020          | 4.520        | 4.940          |
| 10 MHz    | QPSK       | 8.960       | 9.760          | 8.960          | 9.800          | 8.960        | 9.800          |
|           | 16QAM      | 8.960       | 9.760          | 8.960          | 9.880          | 8.960        | 9.800          |
| 15 MHz    | QPSK       | 13.500      | 14.880         | 13.500         | 15.120         | 13.560       | 15.120         |
|           | 16QAM      | 13.560      | 15.060         | 13.560         | 15.060         | 13.560       | 14.940         |
| 20 MHz    | QPSK       | 17.920      | 19.600         | 18.000         | 19.680         | 18.000       | 19.600         |
|           | 16QAM      | 18.000      | 19.600         | 18.000         | 19.760         | 18.000       | 19.760         |

**LTE Band 12:**

| Bandwidth | Modulation | Low channel |                | Middle channel |                | High channel |                |
|-----------|------------|-------------|----------------|----------------|----------------|--------------|----------------|
|           |            | OBW (MHz)   | 26dB EBW (MHz) | OBW (MHz)      | 26dB EBW (MHz) | OBW (MHz)    | 26dB EBW (MHz) |
| 1.4 MHz   | QPSK       | 1.104       | 1.260          | 1.098          | 1.260          | 1.104        | 1.254          |
|           | 16QAM      | 1.104       | 1.254          | 1.098          | 1.248          | 1.098        | 1.248          |
| 3 MHz     | QPSK       | 2.700       | 2.988          | 2.700          | 3.012          | 2.700        | 3.024          |
|           | 16QAM      | 2.688       | 3.012          | 2.688          | 3.000          | 2.700        | 3.024          |
| 5 MHz     | QPSK       | 4.520       | 4.980          | 4.500          | 4.960          | 4.520        | 4.980          |
|           | 16QAM      | 4.540       | 5.020          | 4.520          | 4.980          | 4.520        | 4.960          |
| 10 MHz    | QPSK       | 8.960       | 9.640          | 8.960          | 9.800          | 8.960        | 9.760          |
|           | 16QAM      | 8.960       | 9.800          | 8.960          | 9.800          | 8.960        | 9.760          |

**LTE Band 17:**

| Bandwidth | Modulation | Low channel |                | Middle channel |                | High channel |                |
|-----------|------------|-------------|----------------|----------------|----------------|--------------|----------------|
|           |            | OBW (MHz)   | 26dB EBW (MHz) | OBW (MHz)      | 26dB EBW (MHz) | OBW (MHz)    | 26dB EBW (MHz) |
| 5 MHz     | QPSK       | 4.520       | 5.000          | 4.520          | 4.960          | 4.500        | 5.020          |
|           | 16QAM      | 4.520       | 5.000          | 4.540          | 5.000          | 4.540        | 5.000          |
| 10 MHz    | QPSK       | 8.960       | 9.720          | 8.960          | 9.760          | 8.960        | 9.760          |
|           | 16QAM      | 8.960       | 9.800          | 8.960          | 9.800          | 8.960        | 9.760          |

**LTE Band 38**

| Bandwidth | Modulation | Low channel |                | Middle channel |                | High channel |                |
|-----------|------------|-------------|----------------|----------------|----------------|--------------|----------------|
|           |            | OBW (MHz)   | 26dB EBW (MHz) | OBW (MHz)      | 26dB EBW (MHz) | OBW (MHz)    | 26dB EBW (MHz) |
| 5 MHz     | QPSK       | 4.520       | 5.000          | 4.520          | 4.960          | 4.500        | 4.940          |
|           | 16QAM      | 4.500       | 5.000          | 4.500          | 5.000          | 4.500        | 4.980          |
| 10 MHz    | QPSK       | 8.960       | 9.800          | 8.960          | 9.720          | 9.000        | 9.760          |
|           | 16QAM      | 8.960       | 9.720          | 8.960          | 9.760          | 8.960        | 9.640          |
| 15 MHz    | QPSK       | 13.500      | 15.000         | 13.500         | 15.300         | 13.560       | 15.060         |
|           | 16QAM      | 13.560      | 15.180         | 13.500         | 14.940         | 13.500       | 15.060         |
| 20 MHz    | QPSK       | 18.000      | 19.440         | 18.000         | 19.520         | 18.000       | 19.680         |
|           | 16QAM      | 18.000      | 19.600         | 18.000         | 19.680         | 18.000       | 19.600         |

**LTE Band 41**

| Bandwidth | Modulation | Low channel |                | Middle channel |                | High channel |                |
|-----------|------------|-------------|----------------|----------------|----------------|--------------|----------------|
|           |            | OBW (MHz)   | 26dB EBW (MHz) | OBW (MHz)      | 26dB EBW (MHz) | OBW (MHz)    | 26dB EBW (MHz) |
| 5 MHz     | QPSK       | 4.500       | 4.940          | 4.500          | 4.980          | 4.520        | 4.980          |
|           | 16QAM      | 4.520       | 5.020          | 4.520          | 4.960          | 4.520        | 5.040          |
| 10 MHz    | QPSK       | 8.960       | 9.760          | 8.960          | 9.720          | 8.960        | 9.920          |
|           | 16QAM      | 8.960       | 9.800          | 8.960          | 9.800          | 8.960        | 9.760          |
| 15 MHz    | QPSK       | 13.560      | 15.120         | 13.500         | 15.000         | 13.560       | 15.300         |
|           | 16QAM      | 13.500      | 14.940         | 13.500         | 15.000         | 13.620       | 15.000         |
| 20 MHz    | QPSK       | 18.000      | 19.520         | 18.000         | 19.600         | 18.000       | 19.440         |
|           | 16QAM      | 18.000      | 19.600         | 18.000         | 19.600         | 18.000       | 19.600         |

**LTE Band 66**

| Bandwidth | Modulation | Low channel |                | Middle channel |                | High channel |                |
|-----------|------------|-------------|----------------|----------------|----------------|--------------|----------------|
|           |            | OBW (MHz)   | 26dB EBW (MHz) | OBW (MHz)      | 26dB EBW (MHz) | OBW (MHz)    | 26dB EBW (MHz) |
| 1.4 MHz   | QPSK       | 1.104       | 1.254          | 1.104          | 1.260          | 1.104        | 1.260          |
|           | 16QAM      | 1.104       | 1.254          | 1.098          | 1.254          | 1.092        | 1.248          |
| 3 MHz     | QPSK       | 2.712       | 2.988          | 2.688          | 3.000          | 2.700        | 3.000          |
|           | 16QAM      | 2.700       | 3.000          | 2.700          | 3.024          | 2.688        | 3.012          |
| 5 MHz     | QPSK       | 4.520       | 4.980          | 4.500          | 4.980          | 4.520        | 5.000          |
|           | 16QAM      | 4.520       | 5.000          | 4.540          | 5.000          | 4.520        | 5.000          |
| 10 MHz    | QPSK       | 8.960       | 9.760          | 9.000          | 9.720          | 9.000        | 9.720          |
|           | 16QAM      | 9.000       | 9.760          | 8.960          | 9.800          | 8.960        | 9.720          |
| 15 MHz    | QPSK       | 13.500      | 14.940         | 13.500         | 15.000         | 13.500       | 15.000         |
|           | 16QAM      | 13.620      | 15.060         | 13.560         | 15.000         | 13.560       | 15.060         |
| 20 MHz    | QPSK       | 18.080      | 19.680         | 18.000         | 19.840         | 18.000       | 19.600         |
|           | 16QAM      | 18.000      | 19.840         | 18.000         | 19.760         | 18.000       | 19.520         |

The test plots of LTE band please refer to the Appendix A.

## FCC §2.1051, §22.917(a) & §24.238(a)& §27.53 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

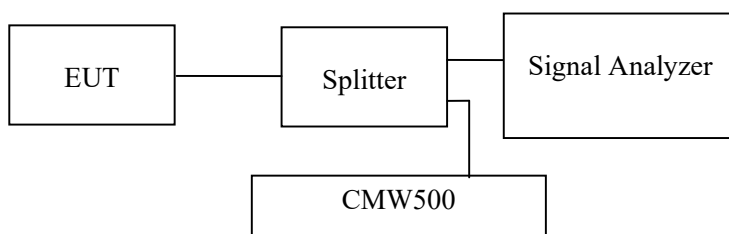
### Applicable Standard

FCC §2.1051, §22.917(a) & §24.238(a)&§27.53.

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1051.

### Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 1MHz. Sufficient scans were taken to show any out of band emissions up to 10<sup>th</sup> harmonic.



Note: the path loss (cable loss and attenuator) has included in the result.

### Test Data

#### Environmental Conditions

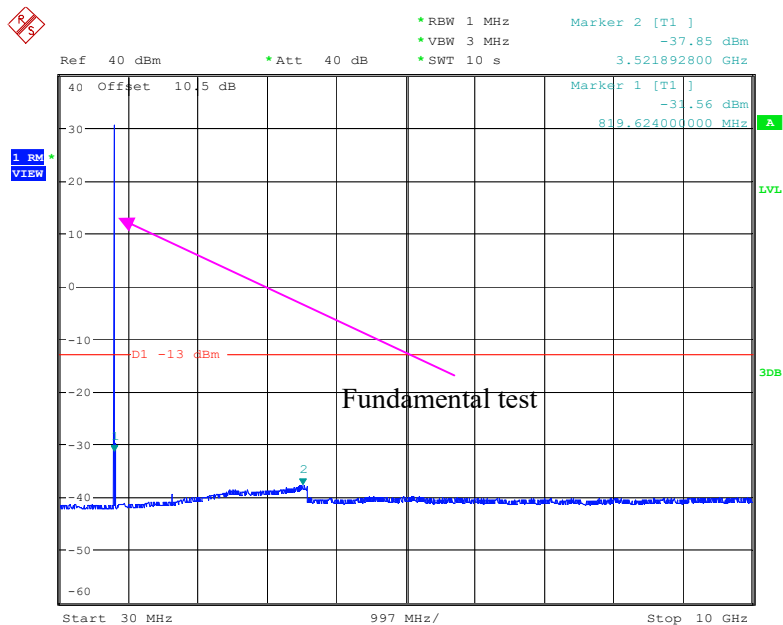
|                    |           |
|--------------------|-----------|
| Temperature:       | 27.2℃     |
| Relative Humidity: | 56.2 %    |
| ATM Pressure:      | 101.0 kPa |

*The testing was performed by Glenn Jiang from 2022-11-24 to 2022-12-22.*

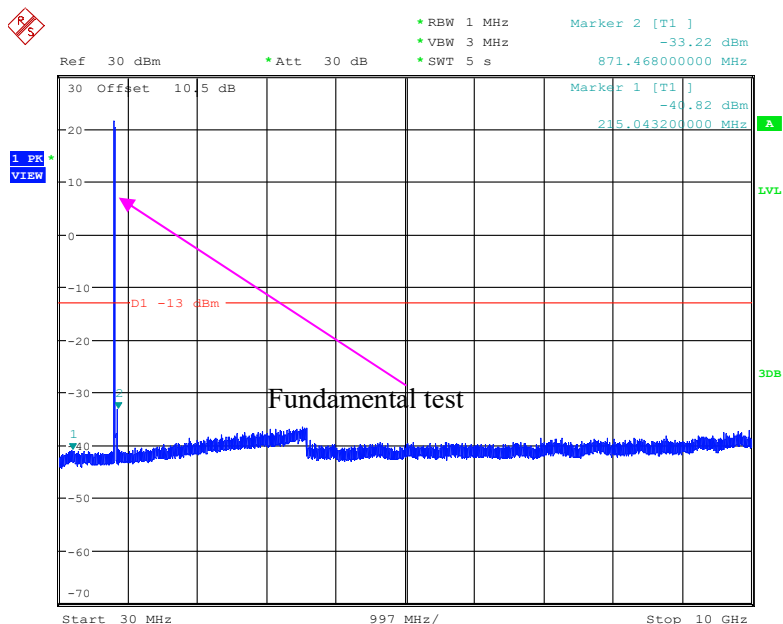
*EUT operation mode: Transmitting*

**Test result: Pass**

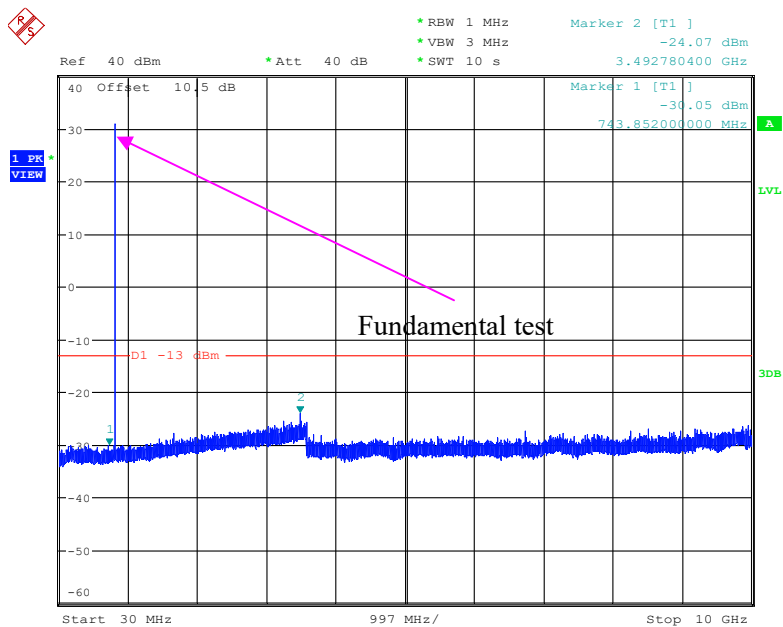
*Please refer to the following plots.*

**Cellular Band (Part 22H)****Low Channel:****30 MHz – 10GHz (GSM Mode)**

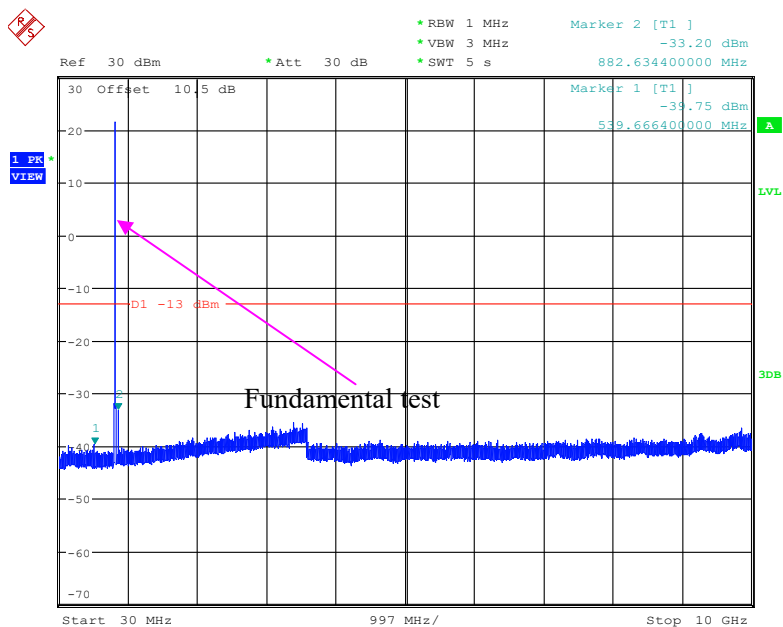
Date: 7.DEC.2022 17:09:58

**30 MHz – 10 GHz (WCDMA Mode)**

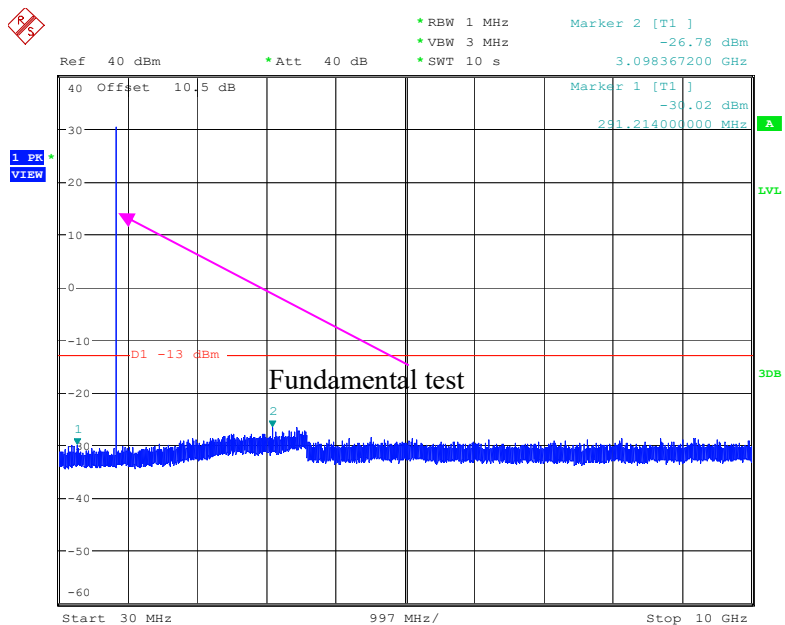
Date: 8.DEC.2022 10:11:23

**Middle Channel:****30 MHz – 10 GHz (GSM Mode)**

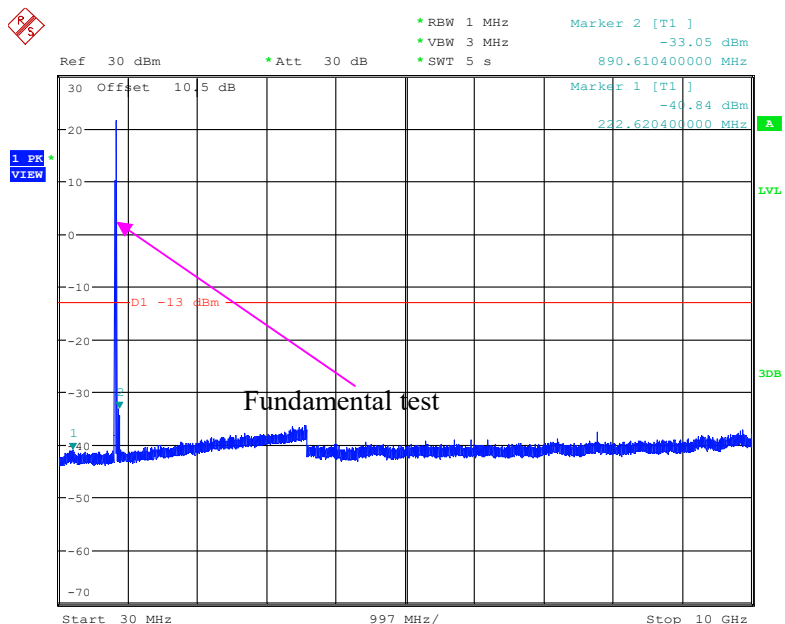
Date: 16.DEC.2022 10:51:09

**30 MHz – 10 GHz (WCDMA Mode)**

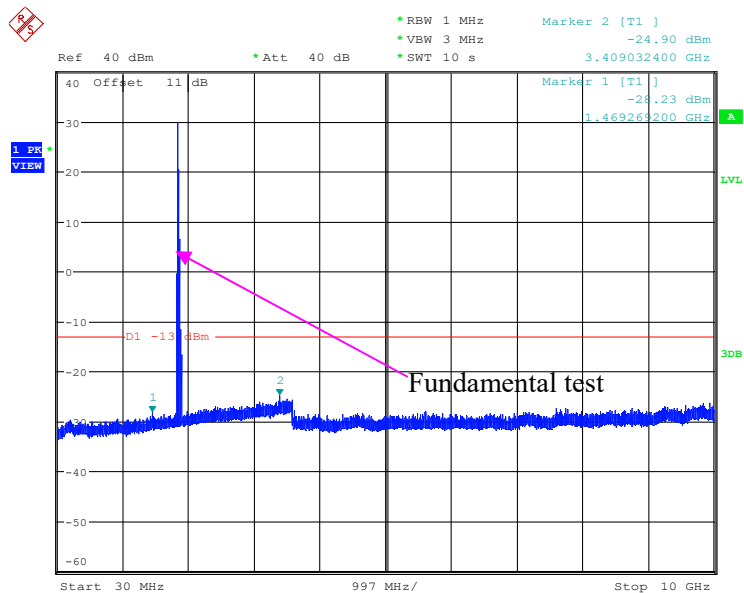
Date: 8.DEC.2022 10:14:12

**High Channel:****30 MHz – 10 GHz (GSM Mode)**

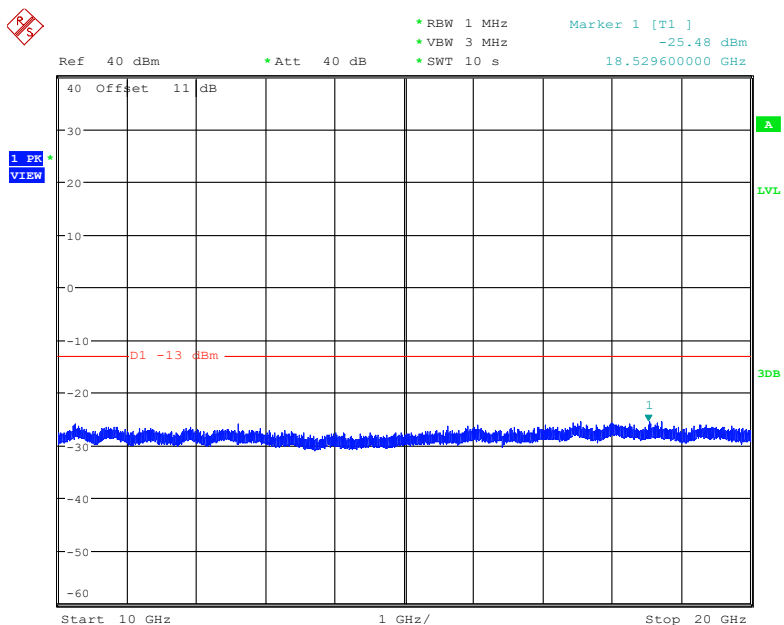
Date: 7.DEC.2022 17:06:23

**30 MHz – 10 GHz (WCDMA Mode)**

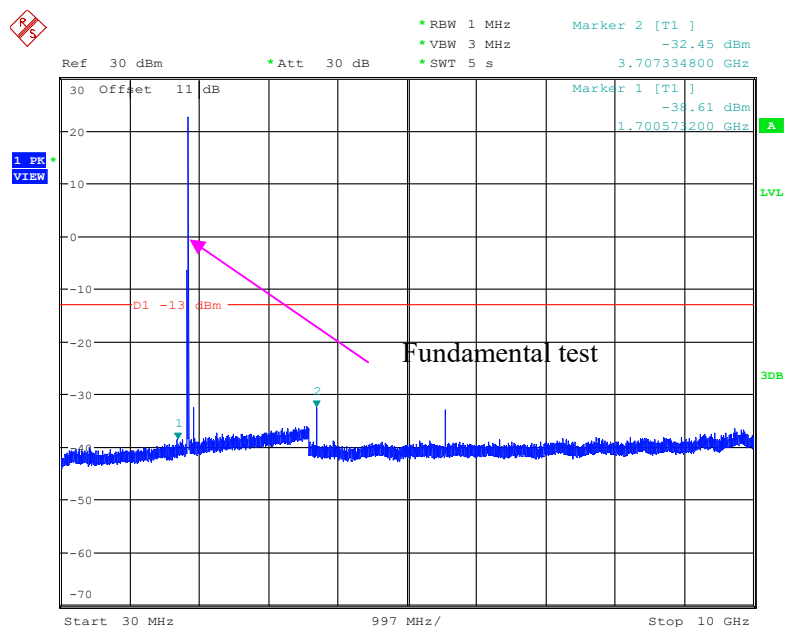
Date: 8.DEC.2022 10:18:05

**PCS Band (Part 24E)  
Low Channel:****30 MHz – 10 GHz (GSM Mode)**

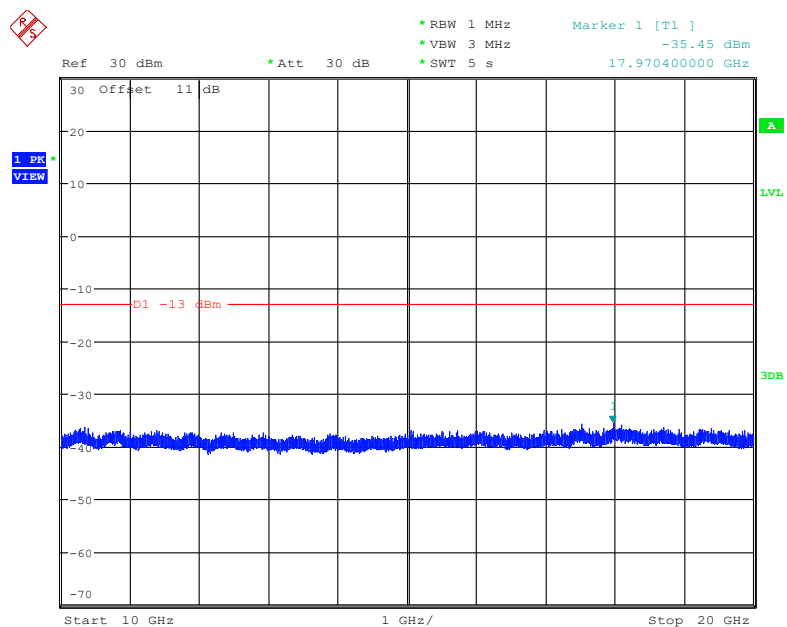
Date: 8.DEC.2022 08:53:07

**10 GHz – 20 GHz (GSM Mode)**

Date: 8.DEC.2022 08:54:18

**30 MHz – 10 GHz (WCDMA Mode)**

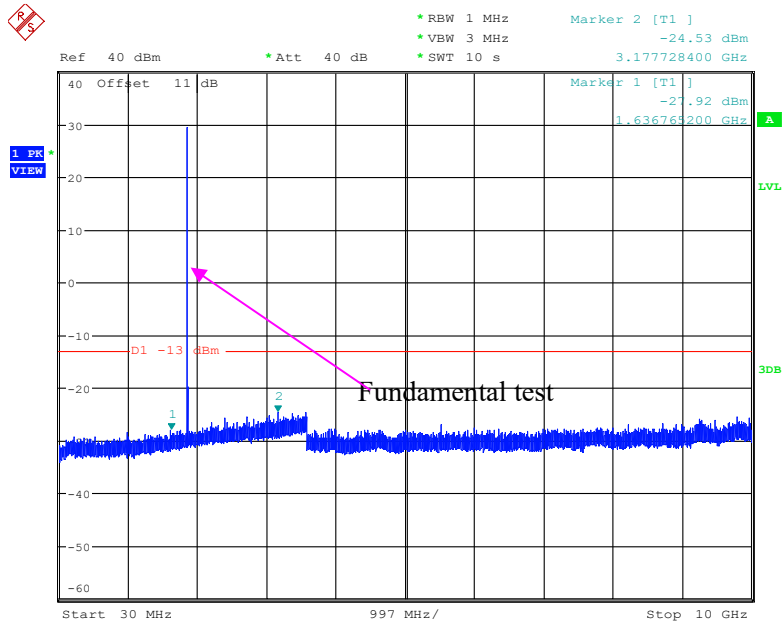
Date: 8.DEC.2022 09:27:29

**10 GHz – 20GHz (WCDMA Mode)**

Date: 8.DEC.2022 09:28:12

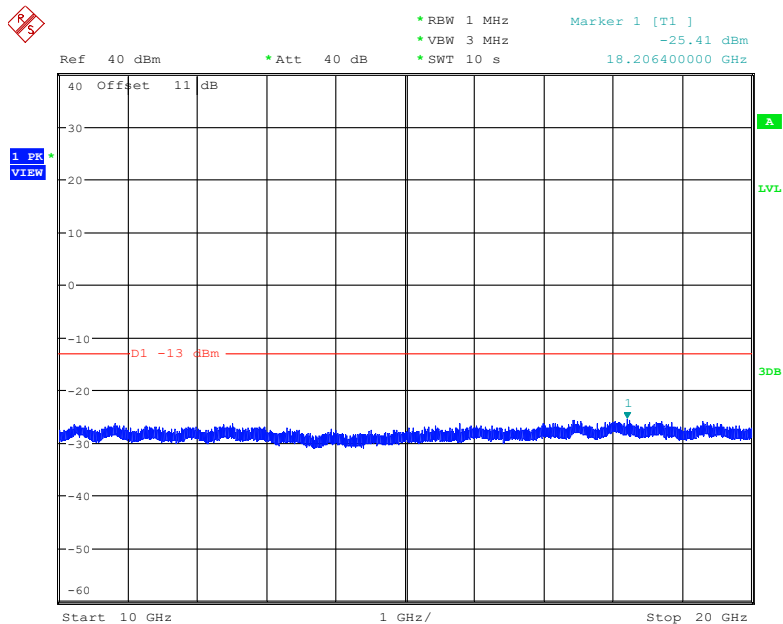
## Middle Channel:

## 30 MHz – 10 GHz (GSM Mode)



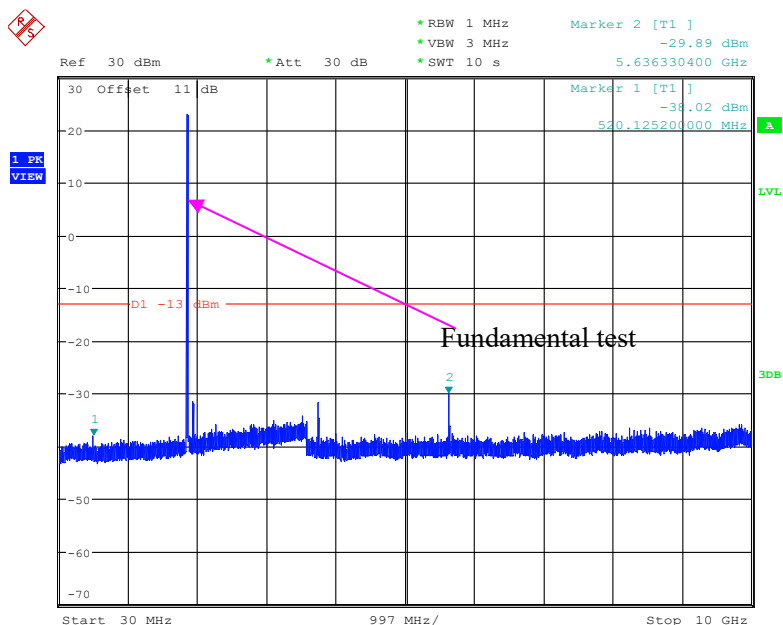
Date: 10.DEC.2022 18:06:38

## 10 GHz – 20 GHz (GSM Mode)



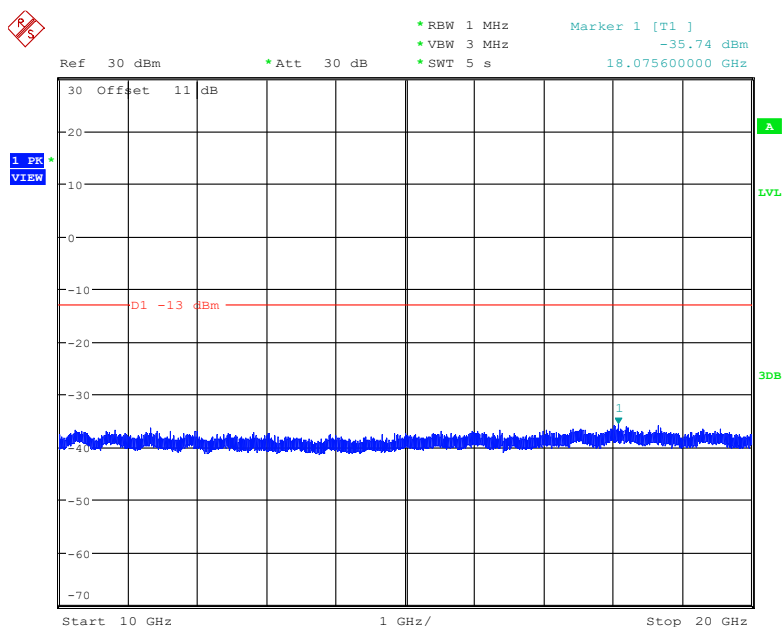
Date: 10.DEC.2022 18:07:50

## 30 MHz – 10 GHz (WCDMA Mode)

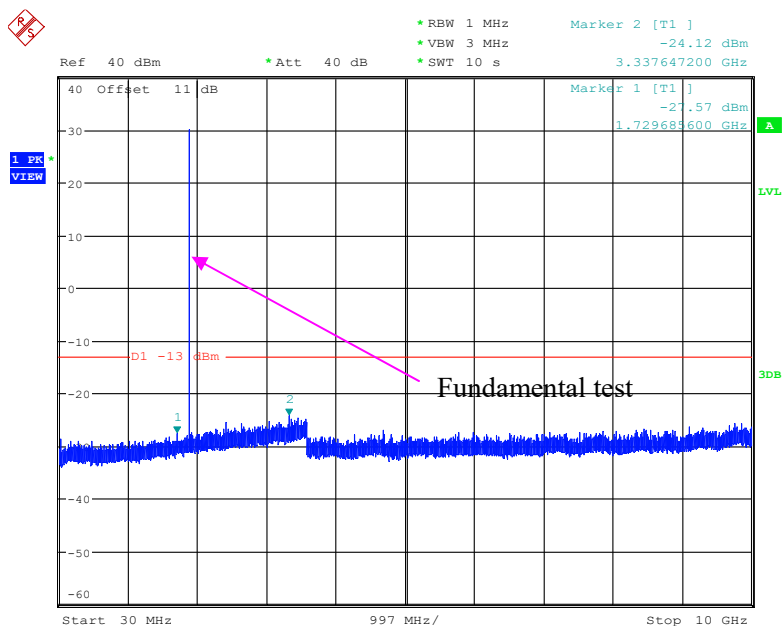


Date: 8.DEC.2022 09:33:24

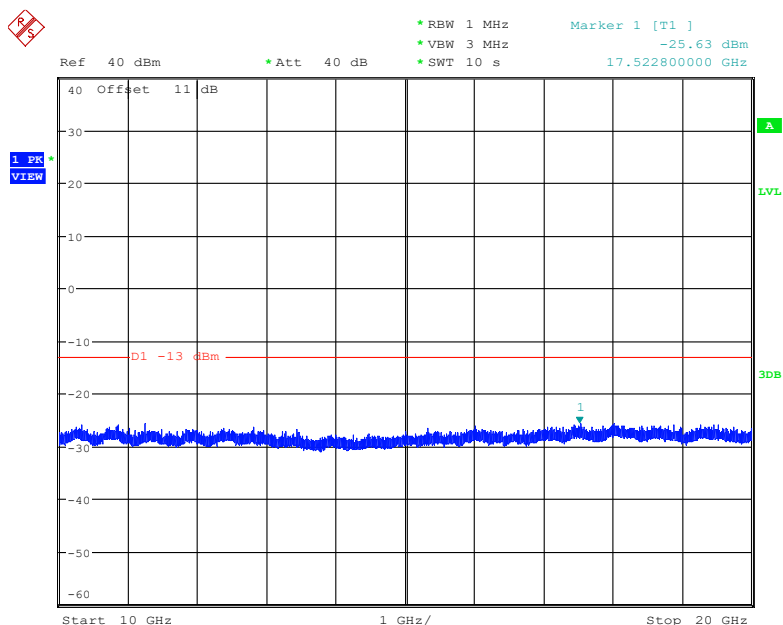
## 10 GHz – 20GHz (WCDMA Mode)



Date: 8.DEC.2022 09:34:06

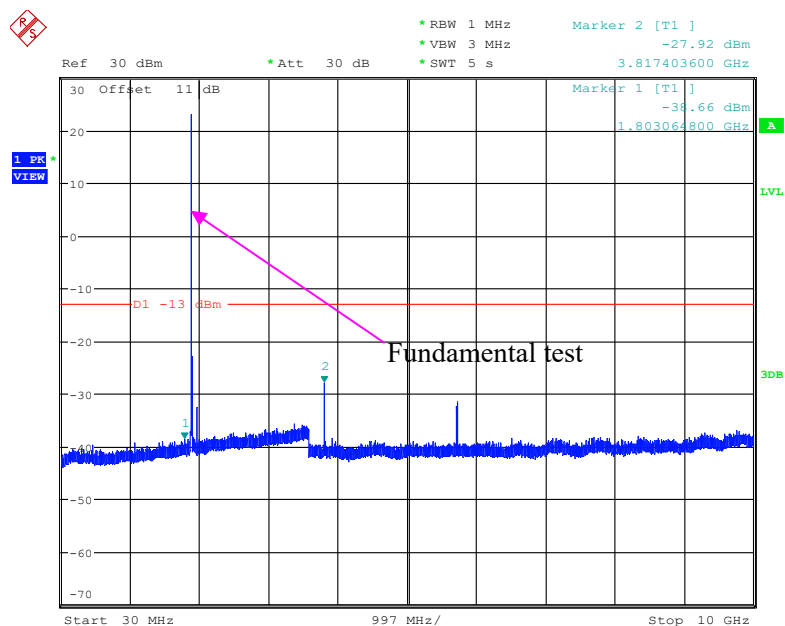
**High Channel:****30 MHz – 10 GHz (GSM Mode)**

Date: 8.DEC.2022 08:59:10

**10 GHz – 20 GHz (GSM Mode)**

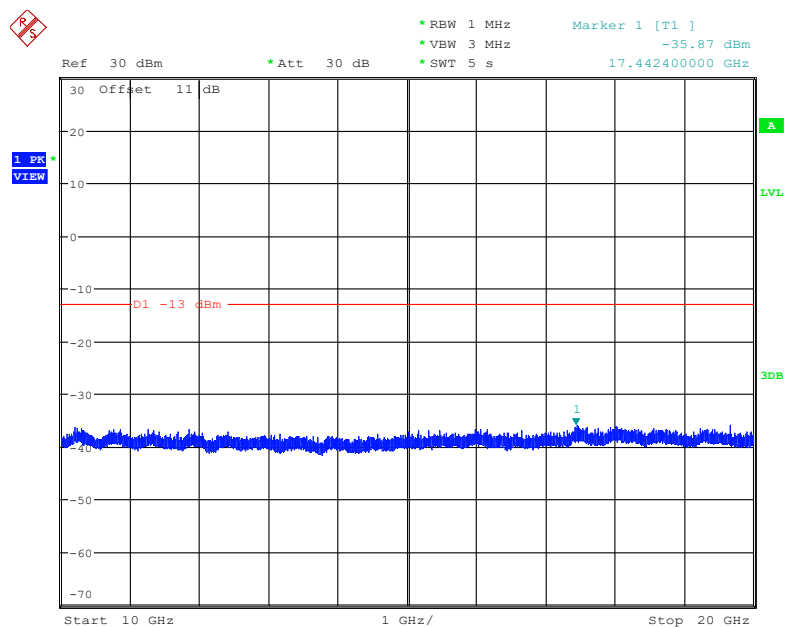
Date: 8.DEC.2022 09:00:22

## 30 MHz – 10 GHz (WCDMA Mode)

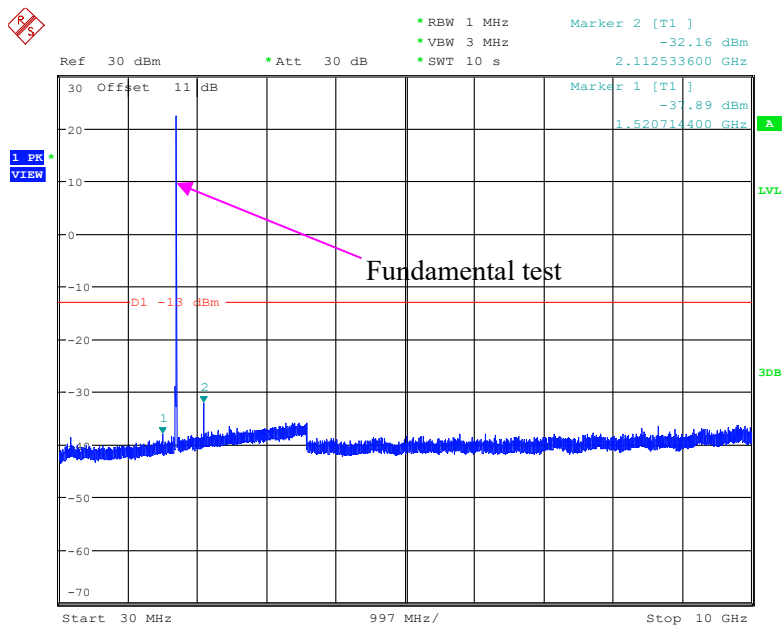


Date: 8.DEC.2022 09:37:27

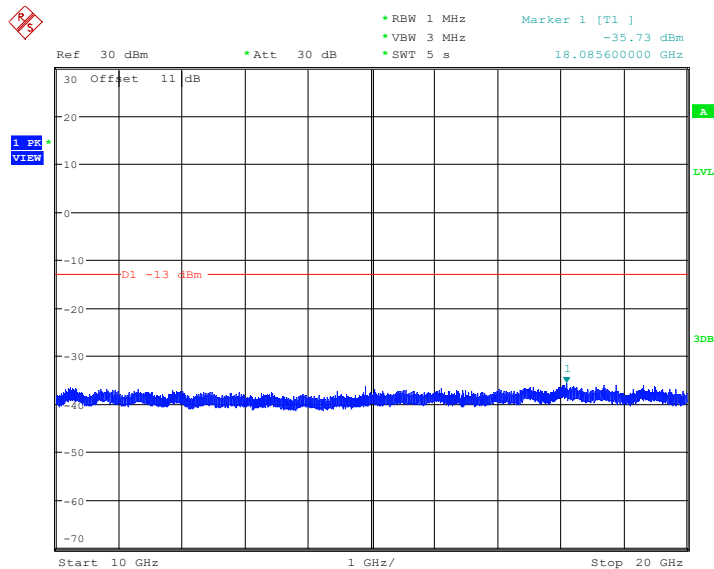
## 10 GHz – 20 GHz (WCDMA Mode)



Date: 8.DEC.2022 09:38:10

**AWS Band (Part 27)  
Low Channel:****30 MHz – 10 GHz (WCDMA Mode)**

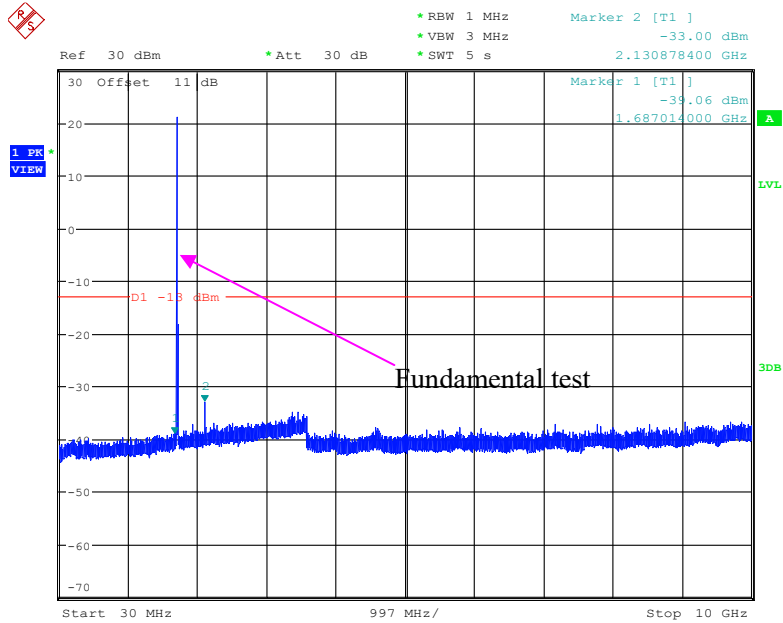
Date: 8.DEC.2022 09:54:57

**10 GHz – 20 GHz (WCDMA Mode)**

Date: 8.DEC.2022 09:55:39

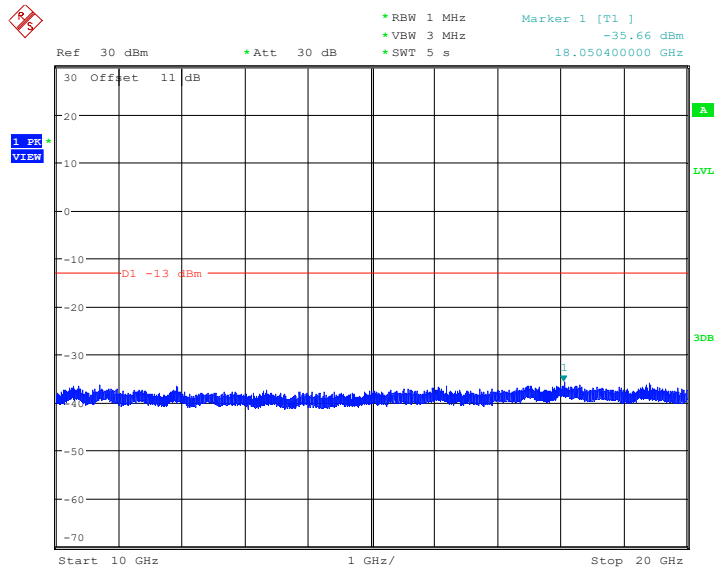
## Middle Channel

## 30 MHz – 10 GHz (WCDMA Mode)

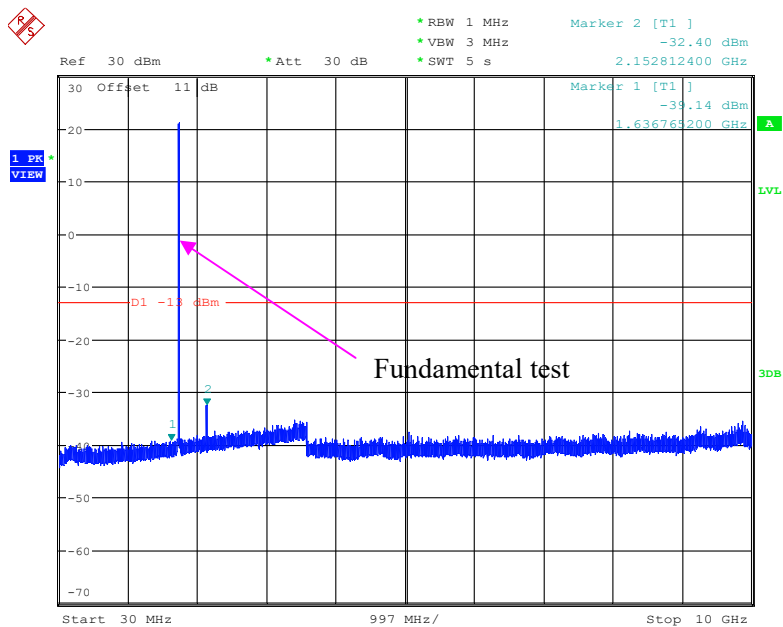


Date: 8.DEC.2022 09:58:32

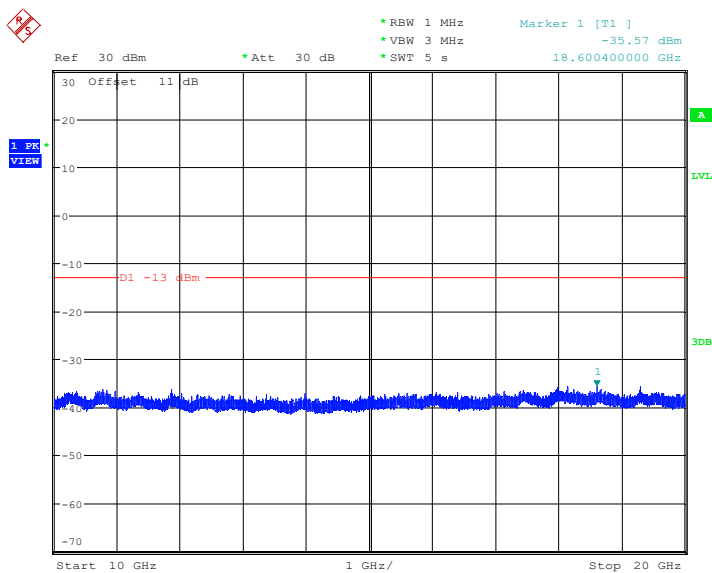
## 10GHz – 20 GHz (WCDMA Mode)



Date: 8.DEC.2022 09:59:13

**High Channel:****30 MHz – 10 GHz (WCDMA Mode)**

Date: 8.DEC.2022 10:02:48

**10 GHz – 20 GHz (WCDMA Mode)**

Date: 8.DEC.2022 10:03:31

The test plots of LTE band please refer to the Appendix B.

## **FCC § 2.1053; § 22.917 (a); § 24.238 (a); § 27.53- SPURIOUS RADIATED EMISSIONS**

### **Applicable Standard**

FCC § 2.1053, § 22.917(a) & § 24.238(a) & § 27.53.

### **Test Procedure**

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the receiving antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

### **Test Data**

#### **Environmental Conditions**

|                           |           |
|---------------------------|-----------|
| <b>Temperature:</b>       | 25.5℃     |
| <b>Relative Humidity:</b> | 52 %      |
| <b>ATM Pressure:</b>      | 101.0 kPa |

*The testing was performed by Jeff Jiang from 2022-12-07.*

*Test mode: Transmitting (Pre-scan in the X,Y and Z axes of orientation, the worst case Y-axis of orientation was recorded)*

*The worst case is as below:*

**30MHz-10GHz:****Cellular Band (Part 22H)**

| Frequency<br>(MHz) | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substitute<br>d Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------|------------------------------|---------------------|---------------|----------------|--------------------------------|----------------------------|----------------|----------------|
|                    |                              |                     | Height<br>(m) | Polar<br>(H/V) |                                |                            |                |                |
| GSM850             |                              |                     |               |                |                                |                            |                |                |
| Low Channel        |                              |                     |               |                |                                |                            |                |                |
| 950.46             | -72.34                       | 294                 | 1.6           | H              | 10.0                           | -62.34                     | -13            | -49.34         |
| 950.46             | -77.46                       | 186                 | 1.4           | V              | 11.7                           | -65.76                     | -13            | -52.76         |
| 1648.4             | -60.90                       | 73                  | 2.1           | H              | 3.5                            | -57.40                     | -13            | -44.40         |
| 1648.4             | -60.50                       | 312                 | 1.3           | V              | 3.1                            | -57.40                     | -13            | -44.40         |
| 2472.6             | -47.00                       | 158                 | 1.8           | H              | 6.6                            | -40.40                     | -13            | -27.40         |
| 2472.6             | -46.90                       | 359                 | 2.2           | V              | 5.8                            | -41.10                     | -13            | -28.10         |
| 3296.8             | -49.40                       | 251                 | 1.5           | H              | 6.4                            | -43.00                     | -13            | -30.00         |
| 3296.8             | -52.30                       | 196                 | 2.2           | V              | 5.7                            | -46.60                     | -13            | -33.60         |
| Middle Channel     |                              |                     |               |                |                                |                            |                |                |
| 954.42             | -72.67                       | 82                  | 1.9           | H              | 10.0                           | -62.67                     | -13            | -49.67         |
| 954.42             | -77.54                       | 85                  | 2.3           | V              | 11.7                           | -65.84                     | -13            | -52.84         |
| 1673.2             | -57.10                       | 27                  | 2.2           | H              | 3.8                            | -53.30                     | -13            | -40.30         |
| 1673.2             | -55.70                       | 215                 | 1.7           | V              | 3.1                            | -52.60                     | -13            | -39.60         |
| 2509.8             | -50.10                       | 136                 | 2.3           | H              | 6.2                            | -43.90                     | -13            | -30.90         |
| 2509.8             | -46.40                       | 104                 | 2.2           | V              | 5.6                            | -40.80                     | -13            | -27.80         |
| 3346.4             | -48.20                       | 105                 | 1.2           | H              | 6.6                            | -41.60                     | -13            | -28.60         |
| 3346.4             | -50.10                       | 331                 | 1.4           | V              | 5.4                            | -44.70                     | -13            | -31.70         |
| High Channel       |                              |                     |               |                |                                |                            |                |                |
| 951.75             | -70.93                       | 183                 | 1.9           | H              | 10.0                           | -60.93                     | -13            | -47.93         |
| 951.75             | -77.65                       | 306                 | 1.3           | V              | 11.7                           | -65.95                     | -13            | -52.95         |
| 1697.6             | -52.00                       | 331                 | 1.8           | H              | 4.1                            | -47.90                     | -13            | -34.90         |
| 1697.6             | -52.80                       | 175                 | 1.3           | V              | 3.1                            | -49.70                     | -13            | -36.70         |
| 2546.4             | -46.10                       | 241                 | 2.2           | H              | 6.1                            | -40.00                     | -13            | -27.00         |
| 2546.4             | -46.30                       | 31                  | 2.3           | V              | 5.8                            | -40.50                     | -13            | -27.50         |
| 3395.2             | -46.50                       | 26                  | 1.1           | H              | 6.2                            | -40.30                     | -13            | -27.30         |
| 3395.2             | -51.20                       | 247                 | 1.8           | V              | 5.4                            | -45.80                     | -13            | -32.80         |

| Frequency<br>(MHz) | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substitute<br>d Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------|------------------------------|---------------------|---------------|----------------|--------------------------------|----------------------------|----------------|----------------|
|                    |                              |                     | Height<br>(m) | Polar<br>(H/V) |                                |                            |                |                |
| WCDMA Band 5       |                              |                     |               |                |                                |                            |                |                |
| Low Channel        |                              |                     |               |                |                                |                            |                |                |
| 956.49             | -71.91                       | 35                  | 1.9           | H              | 10                             | -61.91                     | -13            | -48.91         |
| 956.49             | -76.64                       | 313                 | 1.6           | V              | 11.7                           | -64.94                     | -13            | -51.94         |
| 1652.8             | -57.60                       | 222                 | 1.2           | H              | 3.5                            | -54.10                     | -13            | -41.10         |
| 1652.8             | -52.50                       | 210                 | 1.6           | V              | 3.1                            | -49.40                     | -13            | -36.40         |
| 2479.2             | -58.00                       | 216                 | 1.9           | H              | 6.6                            | -51.40                     | -13            | -38.40         |
| 2479.2             | -56.50                       | 62                  | 2.1           | V              | 5.8                            | -50.70                     | -13            | -37.70         |
| 3305.6             | -52.70                       | 37                  | 1             | H              | 6.4                            | -46.30                     | -13            | -33.30         |
| 3305.6             | -52.40                       | 167                 | 1.2           | V              | 5.7                            | -46.70                     | -13            | -33.70         |
| Middle Channel     |                              |                     |               |                |                                |                            |                |                |
| 955.03             | -70.65                       | 222                 | 1.7           | H              | 10                             | -60.65                     | -13            | -47.65         |
| 955.03             | -75.97                       | 204                 | 1.4           | V              | 11.7                           | -64.27                     | -13            | -51.27         |
| 1673.2             | -58.10                       | 216                 | 1.8           | H              | 3.5                            | -54.60                     | -13            | -41.60         |
| 1673.2             | -56.50                       | 354                 | 2.3           | V              | 3.1                            | -53.40                     | -13            | -40.40         |
| 2509.8             | -57.50                       | 294                 | 1.7           | H              | 6.6                            | -50.90                     | -13            | -37.90         |
| 2509.8             | -56.90                       | 105                 | 2.5           | V              | 5.8                            | -51.10                     | -13            | -38.10         |
| 3346.4             | -52.70                       | 249                 | 2.3           | H              | 6.4                            | -46.30                     | -13            | -33.30         |
| 3346.4             | -51.70                       | 358                 | 2             | V              | 5.7                            | -46.00                     | -13            | -33.00         |
| High Channel       |                              |                     |               |                |                                |                            |                |                |
| 954.17             | -70.29                       | 218                 | 2.4           | H              | 10                             | -60.29                     | -13            | -47.29         |
| 954.17             | -76.65                       | 280                 | 1.9           | V              | 11.7                           | -64.95                     | -13            | -51.95         |
| 1693.2             | -58.20                       | 26                  | 1.7           | H              | 4.1                            | -54.10                     | -13            | -41.10         |
| 1693.2             | -56.70                       | 87                  | 2.2           | V              | 3.1                            | -53.60                     | -13            | -40.60         |
| 2539.8             | -57.20                       | 333                 | 1.2           | H              | 6.1                            | -51.10                     | -13            | -38.10         |
| 2539.8             | -56.50                       | 52                  | 1.4           | V              | 5.8                            | -50.70                     | -13            | -37.70         |
| 3386.4             | -52.60                       | 175                 | 1.7           | H              | 6.2                            | -46.40                     | -13            | -33.40         |
| 3386.4             | -51.40                       | 10                  | 1.7           | V              | 5.4                            | -46.00                     | -13            | -33.00         |

**30MHz-20GHz:****PCS Band (Part 24E)**

| Frequency<br>(MHz) | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substitute<br>d Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------|------------------------------|---------------------|---------------|----------------|--------------------------------|----------------------------|----------------|----------------|
|                    |                              |                     | Height<br>(m) | Polar<br>(H/V) |                                |                            |                |                |
| GSM 1900           |                              |                     |               |                |                                |                            |                |                |
| Low Channel        |                              |                     |               |                |                                |                            |                |                |
| 953.90             | -70.63                       | 173                 | 1.7           | H              | 10.0                           | -60.63                     | -13            | -47.63         |
| 953.90             | -75.52                       | 24                  | 1.7           | V              | 11.7                           | -63.82                     | -13            | -50.82         |
| 3700.4             | -41.30                       | 118                 | 1.4           | H              | 8.1                            | -33.20                     | -13            | -20.20         |
| 3700.4             | -46.40                       | 187                 | 2.4           | V              | 7.6                            | -38.80                     | -13            | -25.80         |
| 5550.6             | -49.10                       | 336                 | 1.6           | H              | 9.6                            | -39.50                     | -13            | -26.50         |
| 5550.6             | -45.80                       | 4                   | 2             | V              | 9.1                            | -36.70                     | -13            | -23.70         |
| Middle Channel     |                              |                     |               |                |                                |                            |                |                |
| 956.62             | -71.56                       | 286                 | 2.2           | H              | 10.0                           | -61.56                     | -13            | -48.56         |
| 956.62             | -75.80                       | 197                 | 2.4           | V              | 11.7                           | -64.10                     | -13            | -51.10         |
| 3760.0             | -40.60                       | 206                 | 1.2           | H              | 8.8                            | -31.80                     | -13            | -18.80         |
| 3760.0             | -45.90                       | 341                 | 2.3           | V              | 8                              | -37.90                     | -13            | -24.90         |
| 5640.0             | -49.90                       | 227                 | 2.2           | H              | 10.2                           | -39.70                     | -13            | -26.70         |
| 5640.0             | -50.80                       | 160                 | 2             | V              | 9.4                            | -41.40                     | -13            | -28.40         |
| High Channel       |                              |                     |               |                |                                |                            |                |                |
| 952.39             | -72.85                       | 226                 | 1.3           | H              | 10.0                           | -62.85                     | -13            | -49.85         |
| 952.39             | -75.51                       | 5                   | 1.2           | V              | 11.7                           | -63.81                     | -13            | -50.81         |
| 3819.6             | -42.40                       | 88                  | 1.7           | H              | 8.7                            | -33.70                     | -13            | -20.70         |
| 3819.6             | -46.80                       | 281                 | 2.1           | V              | 8                              | -38.80                     | -13            | -25.80         |
| 5729.4             | -50.00                       | 297                 | 1.1           | H              | 10.6                           | -39.40                     | -13            | -26.40         |
| 5729.4             | -49.30                       | 217                 | 1.3           | V              | 10.2                           | -39.10                     | -13            | -26.10         |

| Frequency<br>(MHz) | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substitute<br>d Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------|------------------------------|---------------------|---------------|----------------|--------------------------------|----------------------------|----------------|----------------|
|                    |                              |                     | Height<br>(m) | Polar<br>(H/V) |                                |                            |                |                |
| WCDMA Band 2       |                              |                     |               |                |                                |                            |                |                |
| Low Channel        |                              |                     |               |                |                                |                            |                |                |
| 950.77             | -72.07                       | 327                 | 2.5           | H              | 10.0                           | -62.07                     | -13            | -49.07         |
| 950.77             | -77.06                       | 268                 | 1.7           | V              | 11.7                           | -65.36                     | -13            | -52.36         |
| 3704.8             | -49.60                       | 355                 | 1.9           | H              | 8.2                            | -41.40                     | -13            | -28.40         |
| 3704.8             | -45.30                       | 144                 | 1.7           | V              | 7.6                            | -37.70                     | -13            | -24.70         |
| 5557.2             | -50.50                       | 114                 | 1.4           | H              | 9.7                            | -40.80                     | -13            | -27.80         |
| 5557.2             | -50.80                       | 281                 | 1.4           | V              | 9.1                            | -41.70                     | -13            | -28.70         |
| Middle Channel     |                              |                     |               |                |                                |                            |                |                |
| 953.50             | -70.08                       | 19                  | 1.4           | H              | 10.0                           | -60.08                     | -13            | -47.08         |
| 953.50             | -76.70                       | 289                 | 1.1           | V              | 11.7                           | -65.00                     | -13            | -52.00         |
| 3760.0             | -49.30                       | 90                  | 2.3           | H              | 8.8                            | -40.50                     | -13            | -27.50         |
| 3760.0             | -44.50                       | 151                 | 1.9           | V              | 8                              | -36.50                     | -13            | -23.50         |
| 5640.0             | -50.60                       | 41                  | 2.3           | H              | 10.2                           | -40.40                     | -13            | -27.40         |
| 5640.0             | -50.50                       | 327                 | 1.5           | V              | 9.4                            | -41.10                     | -13            | -28.10         |
| High Channel       |                              |                     |               |                |                                |                            |                |                |
| 953.50             | -70.87                       | 308                 | 1.8           | H              | 10.0                           | -60.87                     | -13            | -47.87         |
| 953.50             | -74.94                       | 145                 | 1.8           | V              | 11.7                           | -63.24                     | -13            | -50.24         |
| 3815.2             | -50.20                       | 225                 | 1.6           | H              | 8.7                            | -41.50                     | -13            | -28.50         |
| 3815.2             | -45.70                       | 111                 | 2.4           | V              | 7.9                            | -37.80                     | -13            | -24.80         |
| 5722.8             | -50.80                       | 69                  | 1.3           | H              | 10.6                           | -40.20                     | -13            | -27.20         |
| 5722.8             | -52.20                       | 98                  | 2.4           | V              | 10.1                           | -42.10                     | -13            | -29.10         |

**30MHz-20GHz:****AWS Band (Part 27E)**

| Frequency<br>(MHz) | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substitute<br>d Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------|------------------------------|---------------------|---------------|----------------|--------------------------------|----------------------------|----------------|----------------|
|                    |                              |                     | Height<br>(m) | Polar<br>(H/V) |                                |                            |                |                |
| WCDMA Band 4       |                              |                     |               |                |                                |                            |                |                |
| Low Channel        |                              |                     |               |                |                                |                            |                |                |
| 951.99             | -71.53                       | 94                  | 1.9           | H              | 10.0                           | -61.53                     | -13            | -48.53         |
| 951.99             | -76.22                       | 294                 | 2.3           | V              | 11.7                           | -64.52                     | -13            | -51.52         |
| 3424.8             | -49.00                       | 75                  | 1.7           | H              | 6.4                            | -42.60                     | -13            | -29.60         |
| 3424.8             | -48.90                       | 60                  | 1.7           | V              | 5.7                            | -43.20                     | -13            | -30.20         |
| 5137.2             | -55.90                       | 253                 | 2.2           | H              | 11.3                           | -44.60                     | -13            | -31.60         |
| 5137.2             | -55.90                       | 26                  | 1.6           | V              | 10.8                           | -45.10                     | -13            | -32.10         |
| Middle Channel     |                              |                     |               |                |                                |                            |                |                |
| 955.91             | -70.43                       | 248                 | 1.3           | H              | 10.0                           | -60.43                     | -13            | -47.43         |
| 955.91             | -75.09                       | 215                 | 1.2           | V              | 11.7                           | -63.39                     | -13            | -50.39         |
| 3465.2             | -51.50                       | 300                 | 1.5           | H              | 7                              | -44.50                     | -13            | -31.50         |
| 3465.2             | -52.10                       | 178                 | 2             | V              | 6.2                            | -45.90                     | -13            | -32.90         |
| 5197.8             | -55.10                       | 123                 | 1.2           | H              | 10.3                           | -44.80                     | -13            | -31.80         |
| 5197.8             | -54.00                       | 54                  | 2.2           | V              | 9.8                            | -44.20                     | -13            | -31.20         |
| High Channel       |                              |                     |               |                |                                |                            |                |                |
| 956.65             | -70.71                       | 185                 | 1.7           | H              | 10.0                           | -60.71                     | -13            | -47.71         |
| 956.65             | -75.46                       | 155                 | 1.2           | V              | 11.7                           | -63.76                     | -13            | -50.76         |
| 3505.2             | -52.30                       | 360                 | 1.4           | H              | 7.8                            | -44.50                     | -13            | -31.50         |
| 3505.2             | -52.90                       | 357                 | 1.5           | V              | 6.5                            | -46.40                     | -13            | -33.40         |
| 5257.8             | -53.90                       | 165                 | 1.3           | H              | 9.4                            | -44.50                     | -13            | -31.50         |
| 5257.8             | -53.60                       | 3                   | 1.6           | V              | 9                              | -44.60                     | -13            | -31.60         |

**LTE Band:** (Pre-scan with all the bandwidth and modulation, and worst case as below)

| Frequency<br>(MHz)                     | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|----------------------------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                                        |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| Band 2                                 |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-20GHz      |                              |                     |               |                |                               |                            |                |                |
| QPSK, 1.4MHz bandwidth, Low Channel    |                              |                     |               |                |                               |                            |                |                |
| 956.63                                 | -70.71                       | 131                 | 2.4           | H              | 10.0                          | -60.71                     | -13            | -47.71         |
| 956.63                                 | -77.35                       | 110                 | 1.4           | V              | 11.7                          | -65.65                     | -13            | -52.65         |
| 3701.4                                 | -46.70                       | 24                  | 1.4           | H              | 8.1                           | -38.60                     | -13            | -25.60         |
| 3701.4                                 | -44.10                       | 134                 | 2             | V              | 7.6                           | -36.50                     | -13            | -23.50         |
| 5552.1                                 | -47.00                       | 272                 | 1.1           | H              | 9.6                           | -37.40                     | -13            | -24.40         |
| 5552.1                                 | -47.00                       | 142                 | 1.7           | V              | 9.1                           | -37.90                     | -13            | -24.90         |
| QPSK, 1.4MHz bandwidth, Middle Channel |                              |                     |               |                |                               |                            |                |                |
| 955.09                                 | -71.66                       | 64                  | 2.3           | H              | 10.0                          | -61.66                     | -13            | -48.66         |
| 955.09                                 | -74.73                       | 116                 | 1.4           | V              | 11.7                          | -63.03                     | -13            | -50.03         |
| 3760.0                                 | -50.90                       | 306                 | 2.4           | H              | 8.8                           | -42.10                     | -13            | -29.10         |
| 3760.0                                 | -49.30                       | 213                 | 1             | V              | 8                             | -41.30                     | -13            | -28.30         |
| 5640.0                                 | -47.60                       | 157                 | 2.1           | H              | 10.2                          | -37.40                     | -13            | -24.40         |
| 5640.0                                 | -48.40                       | 265                 | 1.6           | V              | 9.4                           | -39.00                     | -13            | -26.00         |
| QPSK, 1.4MHz bandwidth, High Channel   |                              |                     |               |                |                               |                            |                |                |
| 955.98                                 | -71.03                       | 142                 | 1.0           | H              | 10.0                          | -61.03                     | -13            | -48.03         |
| 955.98                                 | -77.27                       | 153                 | 2.3           | V              | 11.7                          | -65.57                     | -13            | -52.57         |
| 3818.6                                 | -46.10                       | 302                 | 1.6           | H              | 8.7                           | -37.40                     | -13            | -24.40         |
| 3818.6                                 | -41.80                       | 150                 | 1.8           | V              | 7.9                           | -33.90                     | -13            | -20.90         |
| 5727.9                                 | -47.40                       | 164                 | 2.3           | H              | 10.6                          | -36.80                     | -13            | -23.80         |
| 5727.9                                 | -48.20                       | 69                  | 2.2           | V              | 10.2                          | -38.00                     | -13            | -25.00         |

| Frequency<br>(MHz)                     | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|----------------------------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                                        |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| Band 4                                 |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-20GHz      |                              |                     |               |                |                               |                            |                |                |
| QPSK, 1.4MHz bandwidth, Low Channel    |                              |                     |               |                |                               |                            |                |                |
| 955.75                                 | -70.99                       | 202                 | 2.2           | H              | 10.0                          | -60.99                     | -13            | -47.99         |
| 955.75                                 | -75.39                       | 140                 | 1.2           | V              | 11.7                          | -63.69                     | -13            | -50.69         |
| 3421.4                                 | -45.70                       | 279                 | 2.2           | H              | 6.4                           | -39.30                     | -13            | -26.30         |
| 3421.4                                 | -50.30                       | 118                 | 1.5           | V              | 5.7                           | -44.60                     | -13            | -31.60         |
| 5132.1                                 | -56.60                       | 353                 | 1.6           | H              | 11.3                          | -45.30                     | -13            | -32.30         |
| 5132.1                                 | -56.30                       | 96                  | 1.3           | V              | 10.8                          | -45.50                     | -13            | -32.50         |
| QPSK, 1.4MHz bandwidth, Middle Channel |                              |                     |               |                |                               |                            |                |                |
| 954.77                                 | -70.44                       | 265                 | 1.7           | H              | 10.0                          | -60.44                     | -13            | -47.44         |
| 954.77                                 | -75.32                       | 263                 | 2.5           | V              | 11.7                          | -63.62                     | -13            | -50.62         |
| 3465.0                                 | -47.40                       | 349                 | 2.4           | H              | 7                             | -40.40                     | -13            | -27.40         |
| 3465.0                                 | -48.40                       | 198                 | 2.1           | V              | 6.2                           | -42.20                     | -13            | -29.20         |
| 5197.5                                 | -56.00                       | 330                 | 1.9           | H              | 10.4                          | -45.60                     | -13            | -32.60         |
| 5197.5                                 | -54.70                       | 58                  | 2             | V              | 9.8                           | -44.90                     | -13            | -31.90         |
| QPSK, 1.4MHz bandwidth, High Channel   |                              |                     |               |                |                               |                            |                |                |
| 954.40                                 | -71.93                       | 208                 | 2.1           | H              | 10.0                          | -61.93                     | -13            | -48.93         |
| 954.40                                 | -77.21                       | 247                 | 1.0           | V              | 11.7                          | -65.51                     | -13            | -52.51         |
| 3508.6                                 | -47.60                       | 230                 | 1.8           | H              | 7.8                           | -39.80                     | -13            | -26.80         |
| 3508.6                                 | -53.20                       | 186                 | 1             | V              | 6.6                           | -46.60                     | -13            | -33.60         |
| 5262.9                                 | -55.20                       | 45                  | 1.9           | H              | 9.5                           | -45.70                     | -13            | -32.70         |
| 5262.9                                 | -54.70                       | 256                 | 2             | V              | 8.9                           | -45.80                     | -13            | -32.80         |

| Frequency<br>(MHz)                     | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|----------------------------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                                        |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| Band 5                                 |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-10GHz      |                              |                     |               |                |                               |                            |                |                |
| QPSK, 1.4MHz bandwidth, Low Channel    |                              |                     |               |                |                               |                            |                |                |
| 955.87                                 | -70.29                       | 169                 | 1.8           | H              | 10.0                          | -60.29                     | -13            | -47.29         |
| 955.87                                 | -76.80                       | 1                   | 1.4           | V              | 11.7                          | -65.10                     | -13            | -52.10         |
| 1649.4                                 | -54.80                       | 270                 | 1.1           | H              | 3.5                           | -51.30                     | -13            | -38.30         |
| 1649.4                                 | -55.40                       | 2                   | 2.3           | V              | 3.1                           | -52.30                     | -13            | -39.30         |
| 2474.1                                 | -48.30                       | 84                  | 1.7           | H              | 6.6                           | -41.70                     | -13            | -28.70         |
| 2474.1                                 | -45.90                       | 168                 | 1             | V              | 5.8                           | -40.10                     | -13            | -27.10         |
| 3298.8                                 | -47.80                       | 213                 | 2.2           | H              | 6.4                           | -41.40                     | -13            | -28.40         |
| 3298.8                                 | -48.00                       | 199                 | 1.7           | V              | 5.7                           | -42.30                     | -13            | -29.30         |
| QPSK, 1.4MHz bandwidth, Middle Channel |                              |                     |               |                |                               |                            |                |                |
| 955.25                                 | -73.00                       | 86                  | 2.0           | H              | 10.0                          | -63.00                     | -13            | -50.00         |
| 955.25                                 | -76.55                       | 347                 | 1.3           | V              | 11.7                          | -64.85                     | -13            | -51.85         |
| 1673.0                                 | -50.20                       | 122                 | 1.7           | H              | 3.8                           | -46.40                     | -13            | -33.40         |
| 1673.0                                 | -50.40                       | 281                 | 2.4           | V              | 3.1                           | -47.30                     | -13            | -34.30         |
| 2509.5                                 | -51.70                       | 289                 | 1.4           | H              | 6.2                           | -45.50                     | -13            | -32.50         |
| 2509.5                                 | -49.60                       | 129                 | 1.1           | V              | 5.6                           | -44.00                     | -13            | -31.00         |
| 3346.0                                 | -47.40                       | 181                 | 1.1           | H              | 6.6                           | -40.80                     | -13            | -27.80         |
| 3346.0                                 | -47.90                       | 355                 | 2.4           | V              | 5.4                           | -42.50                     | -13            | -29.50         |
| QPSK, 1.4MHz bandwidth, High Channel   |                              |                     |               |                |                               |                            |                |                |
| 955.42                                 | -71.36                       | 246                 | 1.7           | H              | 10.0                          | -61.36                     | -13            | -48.36         |
| 955.42                                 | -77.49                       | 77                  | 1.5           | V              | 11.7                          | -65.79                     | -13            | -52.79         |
| 1696.6                                 | -53.20                       | 36                  | 1.8           | H              | 4.1                           | -49.10                     | -13            | -36.10         |
| 1696.6                                 | -52.10                       | 351                 | 1.9           | V              | 3.1                           | -49.00                     | -13            | -36.00         |
| 2544.9                                 | -54.40                       | 301                 | 2.1           | H              | 6.1                           | -48.30                     | -13            | -35.30         |
| 2544.9                                 | -53.10                       | 328                 | 1.7           | V              | 5.8                           | -47.30                     | -13            | -34.30         |
| 3393.2                                 | -47.60                       | 212                 | 1.9           | H              | 6.3                           | -41.30                     | -13            | -28.30         |
| 3393.2                                 | -47.60                       | 181                 | 2.5           | V              | 5.4                           | -42.20                     | -13            | -29.20         |

| Frequency<br>(MHz)                   | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                                      |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| Band 7                               |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-26.5GHz  |                              |                     |               |                |                               |                            |                |                |
| QPSK, 5MHz bandwidth, Low Channel    |                              |                     |               |                |                               |                            |                |                |
| 954.57                               | -71.23                       | 298                 | 1.2           | H              | 10.0                          | -61.23                     | -25            | -36.23         |
| 954.57                               | -76.13                       | 285                 | 1.5           | V              | 11.7                          | -64.43                     | -25            | -39.43         |
| 5005.0                               | -51.50                       | 107                 | 1.9           | H              | 10.8                          | -40.70                     | -25            | -15.70         |
| 5005.0                               | -50.70                       | 194                 | 2             | V              | 10.2                          | -40.50                     | -25            | -15.50         |
| 7507.5                               | -60.10                       | 108                 | 2.4           | H              | 20.3                          | -39.80                     | -25            | -14.80         |
| 7507.5                               | -60.00                       | 8                   | 1.2           | V              | 20.1                          | -39.90                     | -25            | -14.90         |
| QPSK, 5MHz bandwidth, Middle Channel |                              |                     |               |                |                               |                            |                |                |
| 956.38                               | -70.09                       | 131                 | 1.9           | H              | 9.8                           | -60.29                     | -25            | -35.29         |
| 956.38                               | -74.79                       | 15                  | 1.3           | V              | 11.7                          | -63.09                     | -25            | -38.09         |
| 5070.0                               | -51.60                       | 156                 | 1.8           | H              | 11.1                          | -40.50                     | -25            | -15.50         |
| 5070.0                               | -51.70                       | 249                 | 1.8           | V              | 10.8                          | -40.90                     | -25            | -15.90         |
| 7605.0                               | -63.10                       | 144                 | 2.2           | H              | 21.2                          | -41.90                     | -25            | -16.90         |
| 7605.0                               | -62.20                       | 196                 | 1.6           | V              | 20.1                          | -42.10                     | -25            | -17.10         |
| QPSK, 5MHz bandwidth, High Channel   |                              |                     |               |                |                               |                            |                |                |
| 951.56                               | -71.14                       | 191                 | 1.7           | H              | 10.0                          | -61.14                     | -25            | -36.14         |
| 951.56                               | -77.00                       | 103                 | 1.8           | V              | 11.7                          | -65.30                     | -25            | -40.30         |
| 5135.0                               | -51.70                       | 109                 | 1.8           | H              | 11.3                          | -40.40                     | -25            | -15.40         |
| 5135.0                               | -51.60                       | 219                 | 2             | V              | 10.8                          | -40.80                     | -25            | -15.80         |
| 7702.5                               | -63.20                       | 121                 | 2.3           | H              | 21.2                          | -42.00                     | -25            | -17.00         |
| 7702.5                               | -63.30                       | 328                 | 1.5           | V              | 21                            | -42.30                     | -25            | -17.30         |

| Frequency<br>(MHz)                     | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|----------------------------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                                        |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| Band 12                                |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-10GHz      |                              |                     |               |                |                               |                            |                |                |
| QPSK, 1.4MHz bandwidth, Low Channel    |                              |                     |               |                |                               |                            |                |                |
| 956.23                                 | -61.64                       | 241                 | 2.4           | H              | -0.2                          | -61.84                     | -13            | -48.84         |
| 956.23                                 | -66.72                       | 327                 | 1.4           | V              | 3.1                           | -63.62                     | -13            | -50.62         |
| 1399.4                                 | -55.00                       | 140                 | 1.9           | H              | 5.9                           | -49.10                     | -13            | -36.10         |
| 1399.4                                 | -57.40                       | 89                  | 2.4           | V              | 5.9                           | -51.50                     | -13            | -38.50         |
| 2099.1                                 | -40.70                       | 264                 | 2.2           | H              | 6.3                           | -34.40                     | -13            | -21.40         |
| 2099.1                                 | -43.80                       | 203                 | 1.5           | V              | 5.1                           | -38.70                     | -13            | -25.70         |
| 2798.8                                 | -53.90                       | 127                 | 1.3           | H              | 6.7                           | -47.20                     | -13            | -34.20         |
| 2798.8                                 | -52.80                       | 7                   | 2.2           | V              | 6.7                           | -46.10                     | -13            | -33.10         |
| QPSK, 1.4MHz bandwidth, Middle Channel |                              |                     |               |                |                               |                            |                |                |
| 952.86                                 | -61.36                       | 129                 | 1.8           | H              | -0.2                          | -61.56                     | -13            | -48.56         |
| 952.86                                 | -66.35                       | 86                  | 2.0           | V              | 3.1                           | -63.25                     | -13            | -50.25         |
| 1415.0                                 | -59.20                       | 235                 | 1.7           | H              | 5.7                           | -53.50                     | -13            | -40.50         |
| 1415.0                                 | -59.00                       | 338                 | 2.3           | V              | 5.4                           | -53.60                     | -13            | -40.60         |
| 2122.5                                 | -41.70                       | 268                 | 1.7           | H              | 6.7                           | -35.00                     | -13            | -22.00         |
| 2122.5                                 | -45.00                       | 104                 | 2.3           | V              | 5.8                           | -39.20                     | -13            | -26.20         |
| 2830.0                                 | -55.10                       | 298                 | 1.7           | H              | 7.1                           | -48.00                     | -13            | -35.00         |
| 2830.0                                 | -53.80                       | 113                 | 2.4           | V              | 6.5                           | -47.30                     | -13            | -34.30         |
| QPSK, 1.4MHz bandwidth, High Channel   |                              |                     |               |                |                               |                            |                |                |
| 956.14                                 | -60.77                       | 22                  | 2.2           | H              | -0.2                          | -60.97                     | -13            | -47.97         |
| 956.14                                 | -67.63                       | 226                 | 1.3           | V              | 3.1                           | -64.53                     | -13            | -51.53         |
| 1430.6                                 | -56.90                       | 158                 | 2.1           | H              | 5.4                           | -51.50                     | -13            | -38.50         |
| 1430.6                                 | -57.20                       | 181                 | 1.5           | V              | 4.8                           | -52.40                     | -13            | -39.40         |
| 2145.9                                 | -41.80                       | 8                   | 1.3           | H              | 7                             | -34.80                     | -13            | -21.80         |
| 2145.9                                 | -46.10                       | 66                  | 1.3           | V              | 6.6                           | -39.50                     | -13            | -26.50         |
| 2861.2                                 | -55.10                       | 76                  | 1.8           | H              | 7.3                           | -47.80                     | -13            | -34.80         |
| 2861.2                                 | -53.30                       | 182                 | 1.3           | V              | 6.3                           | -47.00                     | -13            | -34.00         |

| Frequency<br>(MHz)                   | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                                      |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| Band 17                              |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-10GHz    |                              |                     |               |                |                               |                            |                |                |
| QPSK, 5MHz bandwidth, Low Channel    |                              |                     |               |                |                               |                            |                |                |
| 955.09                               | -70.74                       | 52                  | 1.4           | H              | 10.0                          | -60.74                     | -13            | -47.74         |
| 955.09                               | -74.83                       | 285                 | 1.7           | V              | 11.7                          | -63.13                     | -13            | -50.13         |
| 1413.0                               | -59.30                       | 0                   | 1.4           | H              | 5.7                           | -53.60                     | -13            | -40.60         |
| 1413.0                               | -58.40                       | 156                 | 1.8           | V              | 5.4                           | -53.00                     | -13            | -40.00         |
| 2119.5                               | -39.10                       | 35                  | 2.5           | H              | 6.6                           | -32.50                     | -13            | -19.50         |
| 2119.5                               | -43.00                       | 225                 | 1.5           | V              | 5.7                           | -37.30                     | -13            | -24.30         |
| 2826.0                               | -54.60                       | 22                  | 1.4           | H              | 7.1                           | -47.50                     | -13            | -34.50         |
| 2826.0                               | -53.90                       | 1                   | 1.5           | V              | 6.5                           | -47.40                     | -13            | -34.40         |
| QPSK, 5MHz bandwidth, Middle Channel |                              |                     |               |                |                               |                            |                |                |
| 952.21                               | -71.02                       | 322                 | 2.1           | H              | 10.0                          | -61.02                     | -13            | -48.02         |
| 952.21                               | -76.22                       | 344                 | 1.6           | V              | 11.7                          | -64.52                     | -13            | -51.52         |
| 1420.0                               | -55.70                       | 221                 | 1.1           | H              | 5.6                           | -50.10                     | -13            | -37.10         |
| 1420.0                               | -55.40                       | 74                  | 2.2           | V              | 5.2                           | -50.20                     | -13            | -37.20         |
| 2130.0                               | -39.30                       | 189                 | 1             | H              | 6.8                           | -32.50                     | -13            | -19.50         |
| 2130.0                               | -43.60                       | 157                 | 1.5           | V              | 6.1                           | -37.50                     | -13            | -24.50         |
| 2840.0                               | -55.10                       | 92                  | 1.5           | H              | 7.3                           | -47.80                     | -13            | -34.80         |
| 2840.0                               | -54.20                       | 8                   | 1.5           | V              | 6.5                           | -47.70                     | -13            | -34.70         |
| QPSK, 5MHz bandwidth, High Channel   |                              |                     |               |                |                               |                            |                |                |
| 956.75                               | -71.29                       | 257                 | 1.8           | H              | 10.0                          | -61.29                     | -13            | -48.29         |
| 956.75                               | -77.59                       | 260                 | 2.5           | V              | 11.7                          | -65.89                     | -13            | -52.89         |
| 1427.0                               | -56.00                       | 228                 | 1.3           | H              | 5.5                           | -50.50                     | -13            | -37.50         |
| 1427.0                               | -54.80                       | 257                 | 1.9           | V              | 4.9                           | -49.90                     | -13            | -36.90         |
| 2140.5                               | -41.70                       | 143                 | 1.5           | H              | 6.9                           | -34.80                     | -13            | -21.80         |
| 2140.5                               | -45.90                       | 129                 | 1.2           | V              | 6.4                           | -39.50                     | -13            | -26.50         |
| 2854.0                               | -55.50                       | 308                 | 2.3           | H              | 7.4                           | -48.10                     | -13            | -35.10         |
| 2854.0                               | -54.80                       | 137                 | 1.3           | V              | 6.4                           | -48.40                     | -13            | -35.40         |

| Frequency<br>(MHz)                  | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|-------------------------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                                     |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| Band 38                             |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-26.5GHz |                              |                     |               |                |                               |                            |                |                |
| QPSK, 5MHz, Low Channel             |                              |                     |               |                |                               |                            |                |                |
| 952.26                              | -72.70                       | 63                  | 1.1           | H              | 10.0                          | -62.70                     | -25            | -37.70         |
| 952.26                              | -77.51                       | 31                  | 1.9           | V              | 11.7                          | -65.81                     | -25            | -40.81         |
| 5145.0                              | -52.90                       | 213                 | 1.7           | H              | 11.4                          | -41.50                     | -25            | -16.50         |
| 5145.0                              | -51.90                       | 44                  | 2.1           | V              | 10.7                          | -41.20                     | -25            | -16.20         |
| 7717.5                              | -64.70                       | 261                 | 1.8           | H              | 20.5                          | -44.20                     | -25            | -19.20         |
| 7717.5                              | -63.90                       | 93                  | 2.3           | V              | 20.3                          | -43.60                     | -25            | -18.60         |
| QPSK, 5MHz, Middle Channel          |                              |                     |               |                |                               |                            |                |                |
| 956.03                              | -84.38                       | 113                 | 2.0           | H              | 10.0                          | -74.38                     | -25            | -49.38         |
| 956.03                              | -89.22                       | 170                 | 2.0           | V              | 11.7                          | -77.52                     | -25            | -52.52         |
| 5190.0                              | -50.30                       | 341                 | 2             | H              | 10.5                          | -39.80                     | -25            | -14.80         |
| 5190.0                              | -48.60                       | 9                   | 1.3           | V              | 10.0                          | -38.60                     | -25            | -13.60         |
| 7785.0                              | -62.10                       | 263                 | 1.5           | H              | 18.3                          | -43.80                     | -25            | -18.80         |
| 7785.0                              | -60.60                       | 134                 | 2.2           | V              | 18.0                          | -42.60                     | -25            | -17.60         |
| QPSK, 5MHz, High Channel            |                              |                     |               |                |                               |                            |                |                |
| 951.92                              | -72.51                       | 3                   | 2.4           | H              | 10.0                          | -62.51                     | -25            | -37.51         |
| 951.92                              | -76.73                       | 177                 | 1.5           | V              | 11.7                          | -65.03                     | -25            | -40.03         |
| 5235.0                              | -48.70                       | 278                 | 1.1           | H              | 9.7                           | -39.00                     | -25            | -14.00         |
| 5235.0                              | -46.50                       | 144                 | 1.4           | V              | 9.2                           | -37.30                     | -25            | -12.30         |
| 7852.5                              | -61.40                       | 260                 | 1.8           | H              | 18.2                          | -43.20                     | -25            | -18.20         |
| 7852.5                              | -59.80                       | 283                 | 2.3           | V              | 17.6                          | -42.20                     | -25            | -17.20         |

| Frequency<br>(MHz)                   | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                                      |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| Band 41                              |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-26.55GHz |                              |                     |               |                |                               |                            |                |                |
| QPSK, 5MHz, Low Channel              |                              |                     |               |                |                               |                            |                |                |
| 951.73                               | -72.92                       | 66                  | 1.9           | H              | 10.0                          | -62.92                     | -25            | -37.92         |
| 951.73                               | -76.63                       | 241                 | 1.6           | V              | 11.7                          | -64.93                     | -25            | -39.93         |
| 5075.0                               | -48.70                       | 278                 | 1.1           | H              | 11.2                          | -37.50                     | -25            | -12.50         |
| 5075.0                               | -46.50                       | 144                 | 1.4           | V              | 10.9                          | -35.60                     | -25            | -10.60         |
| 7612.5                               | -61.40                       | 260                 | 1.8           | H              | 18.2                          | -43.20                     | -25            | -18.20         |
| 7612.5                               | -59.80                       | 283                 | 2.3           | V              | 17.6                          | -42.20                     | -25            | -17.20         |
| QPSK, 5MHz bandwidth, Middle Channel |                              |                     |               |                |                               |                            |                |                |
| 952.36                               | -72.21                       | 223                 | 1.8           | H              | 10.0                          | -62.21                     | -25            | -37.21         |
| 952.36                               | -77.66                       | 126                 | 2.1           | V              | 11.7                          | -65.96                     | -25            | -40.96         |
| 5190.0                               | -51.30                       | 191                 | 1.9           | H              | 10.5                          | -40.80                     | -25            | -15.80         |
| 5190.0                               | -49.80                       | 82                  | 1.4           | V              | 10.0                          | -39.80                     | -25            | -14.80         |
| 7785.0                               | -61.90                       | 114                 | 2.3           | H              | 18.3                          | -43.60                     | -25            | -18.60         |
| 7785.0                               | -60.90                       | 16                  | 1.8           | V              | 18.0                          | -42.90                     | -25            | -17.90         |
| QPSK, 5MHz bandwidth, High Channel   |                              |                     |               |                |                               |                            |                |                |
| 950.80                               | -72.72                       | 197                 | 2.4           | H              | 10.0                          | -62.72                     | -25            | -37.72         |
| 950.80                               | -76.02                       | 72                  | 1.9           | V              | 11.7                          | -64.32                     | -25            | -39.32         |
| 5305.0                               | -50.90                       | 44                  | 1.6           | H              | 9.6                           | -41.30                     | -25            | -16.30         |
| 5305.0                               | -49.10                       | 267                 | 1.2           | V              | 8.8                           | -40.30                     | -25            | -15.30         |
| 7957.5                               | -63.10                       | 175                 | 2.3           | H              | 18.9                          | -44.20                     | -25            | -19.20         |
| 7957.5                               | -62.10                       | 284                 | 2.3           | V              | 18.5                          | -43.60                     | -25            | -18.60         |

| Frequency<br>(MHz)                     | Receiver<br>Reading<br>(dBm) | Turntable<br>Degree | Rx Antenna    |                | Substituted<br>Factor<br>(dB) | Absolute<br>Level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|----------------------------------------|------------------------------|---------------------|---------------|----------------|-------------------------------|----------------------------|----------------|----------------|
|                                        |                              |                     | Height<br>(m) | Polar<br>(H/V) |                               |                            |                |                |
| Band 66                                |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-20GHz      |                              |                     |               |                |                               |                            |                |                |
| QPSK, 1.4MHz, Low Channel              |                              |                     |               |                |                               |                            |                |                |
| 953.51                                 | -70.28                       | 109                 | 1.7           | H              | 10.0                          | -60.28                     | -13            | -47.28         |
| 953.51                                 | -74.98                       | 182                 | 1.3           | V              | 11.7                          | -63.28                     | -13            | -50.28         |
| 3421.4                                 | -44.10                       | 74                  | 1.2           | H              | 6.4                           | -37.70                     | -13            | -24.70         |
| 3421.4                                 | -45.50                       | 325                 | 1.8           | V              | 5.7                           | -39.80                     | -13            | -26.80         |
| 5132.1                                 | -50.00                       | 316                 | 1.4           | H              | 11.3                          | -38.70                     | -13            | -25.70         |
| 5132.1                                 | -48.50                       | 241                 | 1.8           | V              | 10.8                          | -37.70                     | -13            | -24.70         |
| QPSK, 1.4MHz bandwidth, Middle Channel |                              |                     |               |                |                               |                            |                |                |
| 955.27                                 | -71.13                       | 80                  | 1.7           | H              | 10.0                          | -61.13                     | -13            | -48.13         |
| 955.27                                 | -75.60                       | 241                 | 1.6           | V              | 11.7                          | -63.90                     | -13            | -50.90         |
| 3490.0                                 | -44.70                       | 69                  | 1.2           | H              | 7.6                           | -37.10                     | -13            | -24.10         |
| 3490.0                                 | -46.60                       | 307                 | 1.5           | V              | 6.4                           | -40.20                     | -13            | -27.20         |
| 5235.0                                 | -45.80                       | 310                 | 1.6           | H              | 9.7                           | -36.10                     | -13            | -23.10         |
| 5235.0                                 | -44.00                       | 354                 | 1.6           | V              | 9.2                           | -34.80                     | -13            | -21.80         |
| QPSK, 1.4MHz bandwidth, High Channel   |                              |                     |               |                |                               |                            |                |                |
| 951.97                                 | -70.51                       | 27                  | 1.4           | H              | 10.0                          | -60.51                     | -13            | -47.51         |
| 951.97                                 | -75.84                       | 63                  | 1.3           | V              | 11.7                          | -64.14                     | -13            | -51.14         |
| 3558.6                                 | -46.40                       | 62                  | 1.7           | H              | 7.8                           | -38.60                     | -13            | -25.60         |
| 3558.6                                 | -47.30                       | 64                  | 1.1           | V              | 7                             | -40.30                     | -13            | -27.30         |
| 5337.9                                 | -44.70                       | 2                   | 1             | H              | 9.4                           | -35.30                     | -13            | -22.30         |
| 5337.9                                 | -42.70                       | 281                 | 1.3           | V              | 8.7                           | -34.00                     | -13            | -21.00         |

**Note:**

Absolute Level = Reading Level + Substituted Factor

Substituted Factor contains: SG Level - Cable loss+ Antenna Gain

Margin = Absolute Level -Limit

**FCC§ 22.917 (a);§ 24.238 (a); §27.53 (c)(g)(h)(m) - BAND EDGES****Applicable Standard**

According to § 22.917(a), the power of any emissions 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.

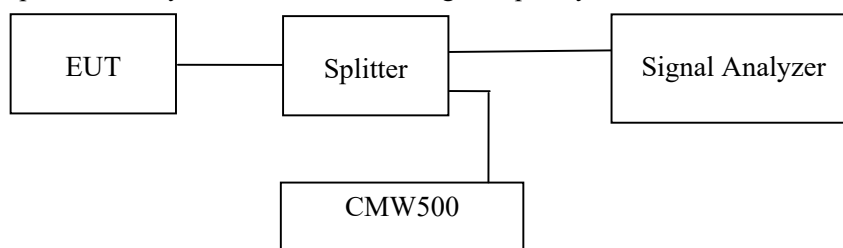
According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

According to FCC §27.53 (c)(g)(h)(m), 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.

**Test Procedure**

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency



Note: the path loss (cable loss and attenuator) has included in the result.

**Test Data****Environmental Conditions**

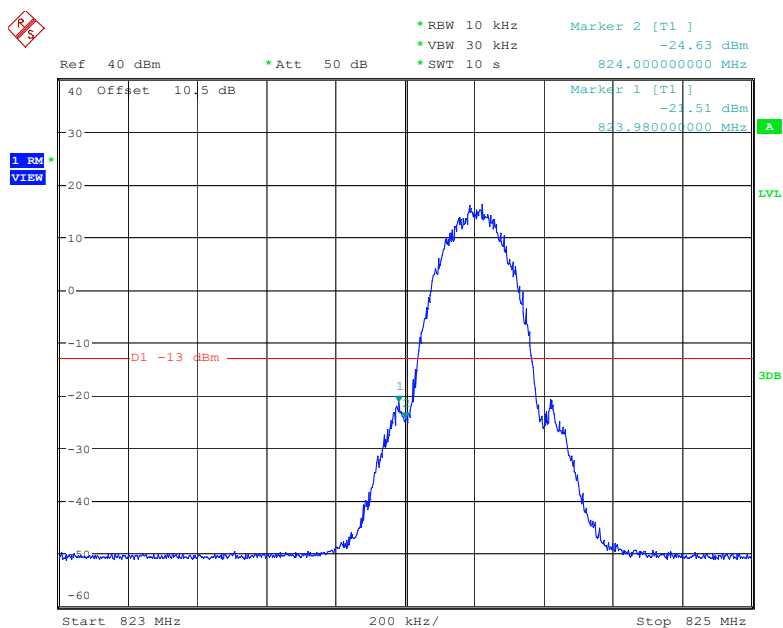
|                    |           |
|--------------------|-----------|
| Temperature:       | 27.2℃     |
| Relative Humidity: | 56.2 %    |
| ATM Pressure:      | 101.0 kPa |

The testing was performed by Glenn Jiang from 2022-11-24 to 2022-12-16.

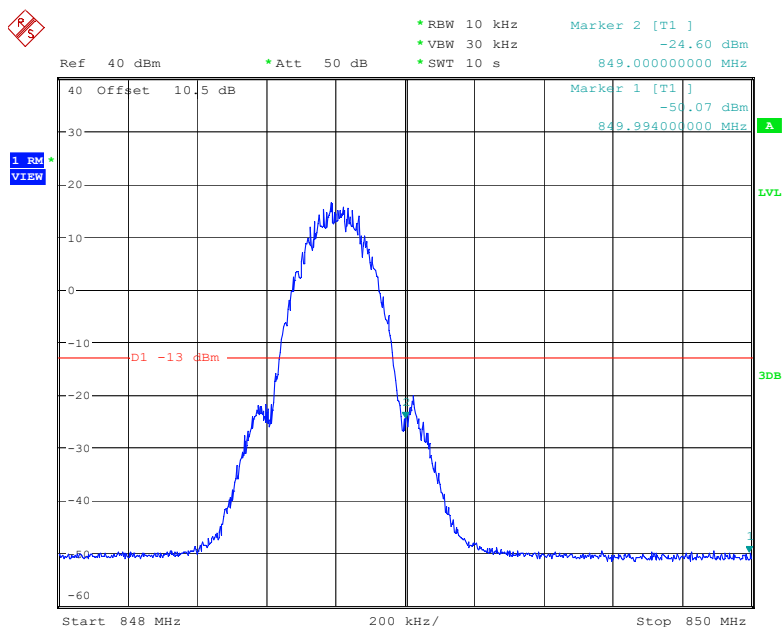
EUT operation mode: Transmitting (Worst case)

**Test Result: Pass**

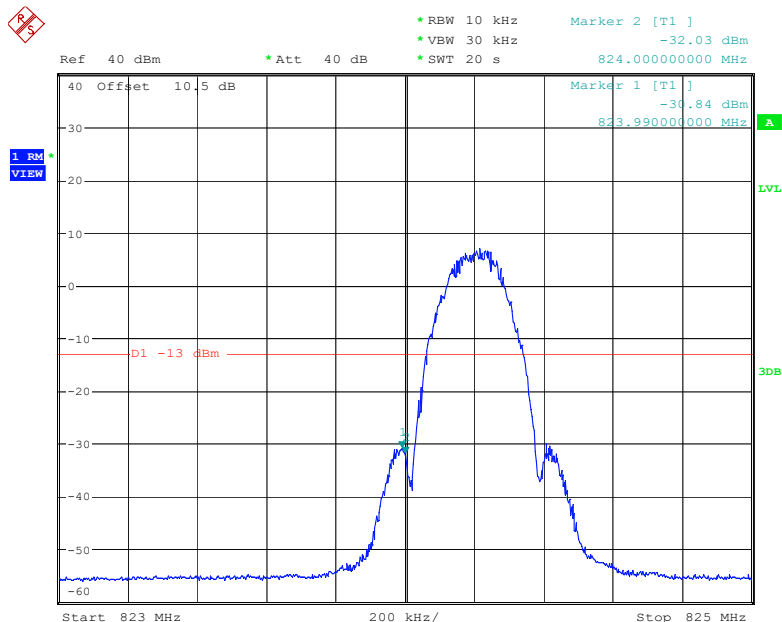
Please refer to the following plots.

**Cellular Band, Left Band Edge for GSM (GMSK) Mode**

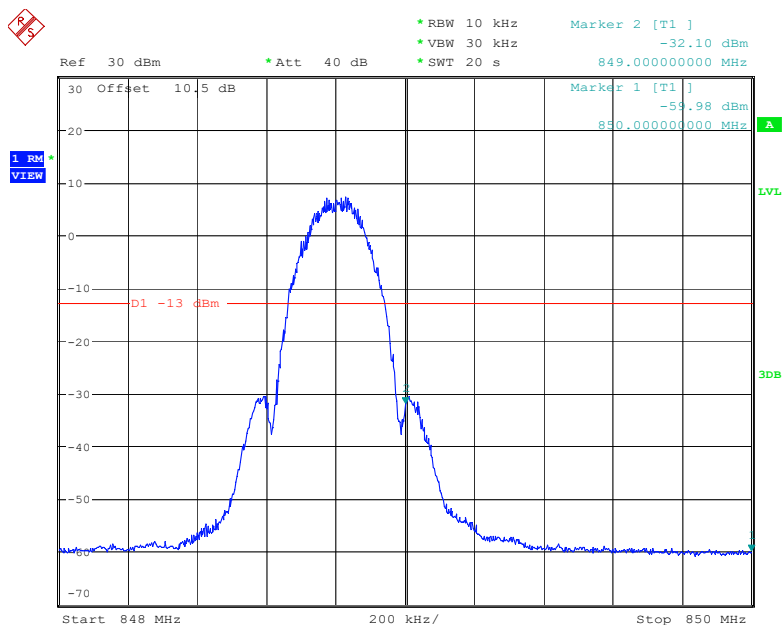
Date: 7.DEC.2022 16:54:56

**Cellular Band, Right Band Edge for GSM (GMSK) Mode**

Date: 7.DEC.2022 17:04:53

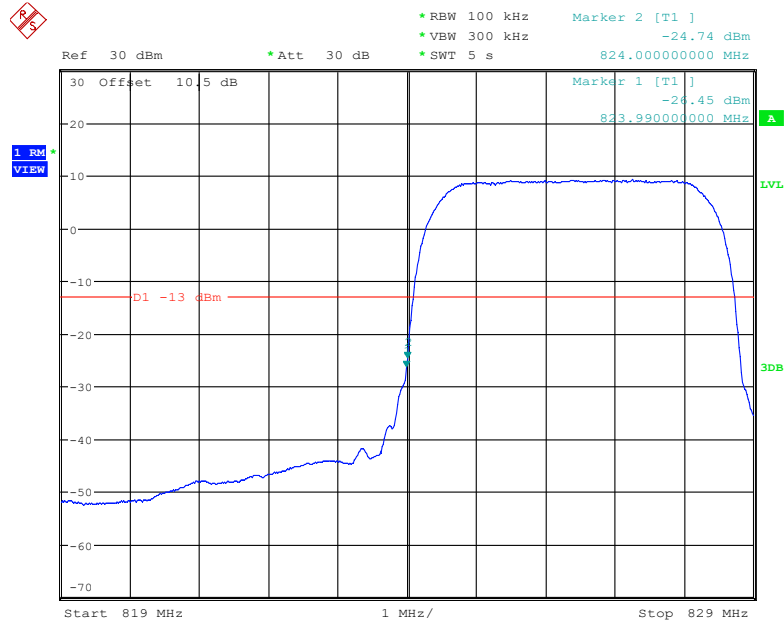
**Cellular Band, Left Band Edge for EGPRS (8PSK) Mode**

Date: 7.DEC.2022 17:15:55

**Cellular Band, Right Band Edge for EGPRS (8PSK) Mode**

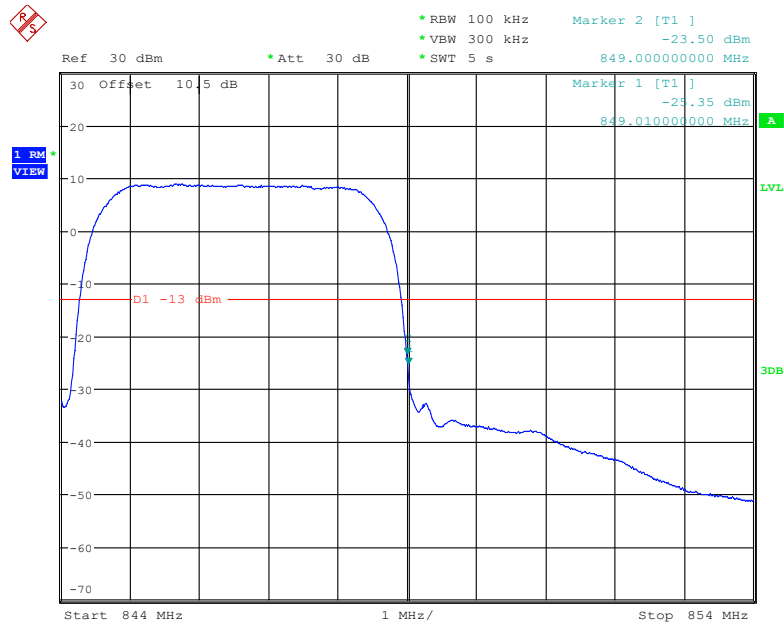
Date: 7.DEC.2022 17:24:48

## Cellular Band, Left Band Edge for RMC (BPSK) Mode

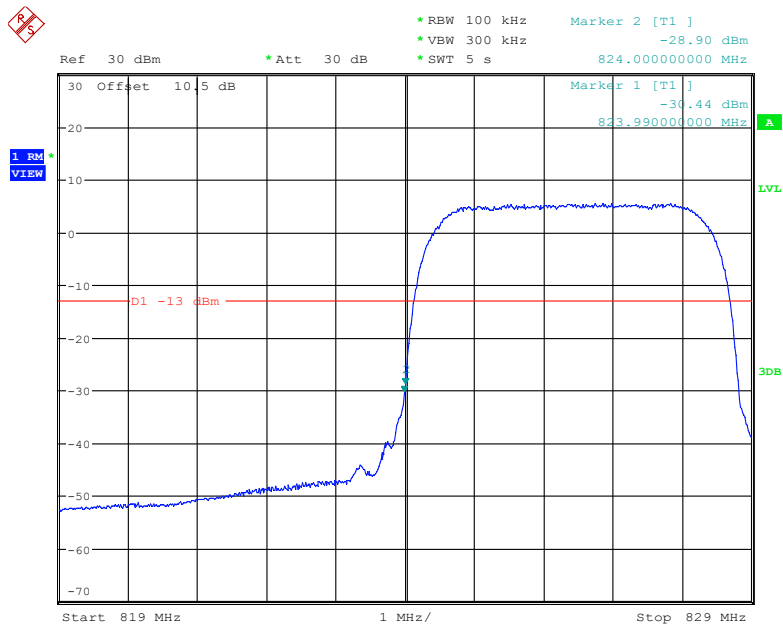


Date: 16.DEC.2022 10:39:23

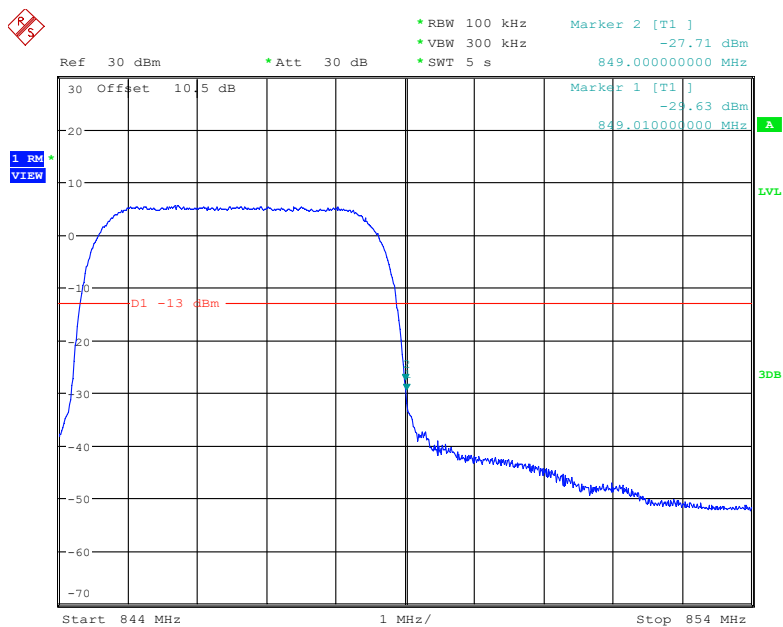
## Cellular Band, Right Band Edge for RMC (BPSK) Mode



Date: 16.DEC.2022 10:40:33

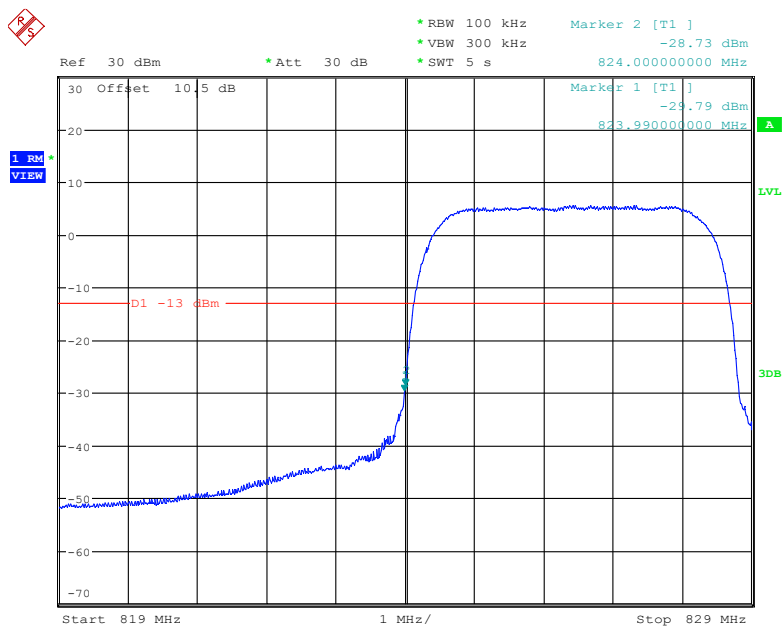
**Cellular Band, Left Band Edge for HSDPA(16QAM) Mode**

Date: 8.DEC.2022 10:33:42

**Cellular Band, Right Band Edge for HSDPA (16QAM) Mode**

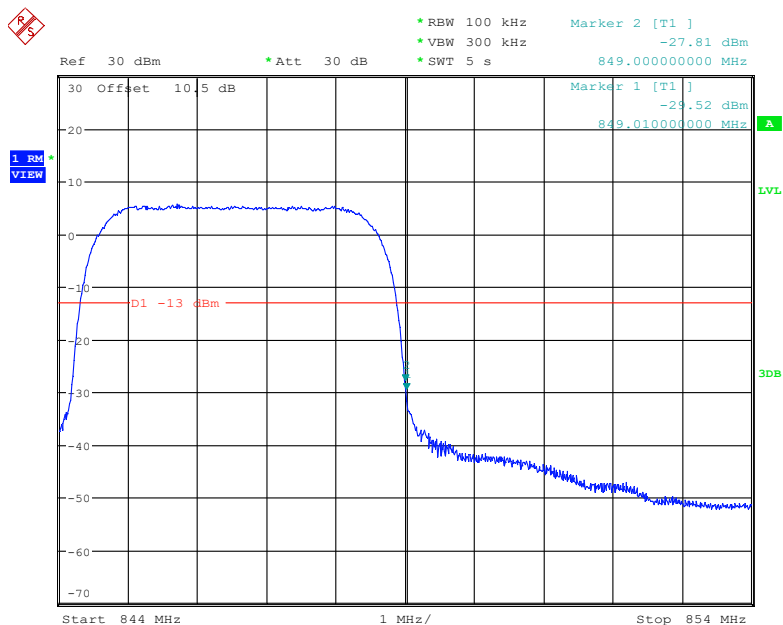
Date: 8.DEC.2022 10:40:12

## Cellular Band, Left Band Edge for HSUPA (QPSK) Mode

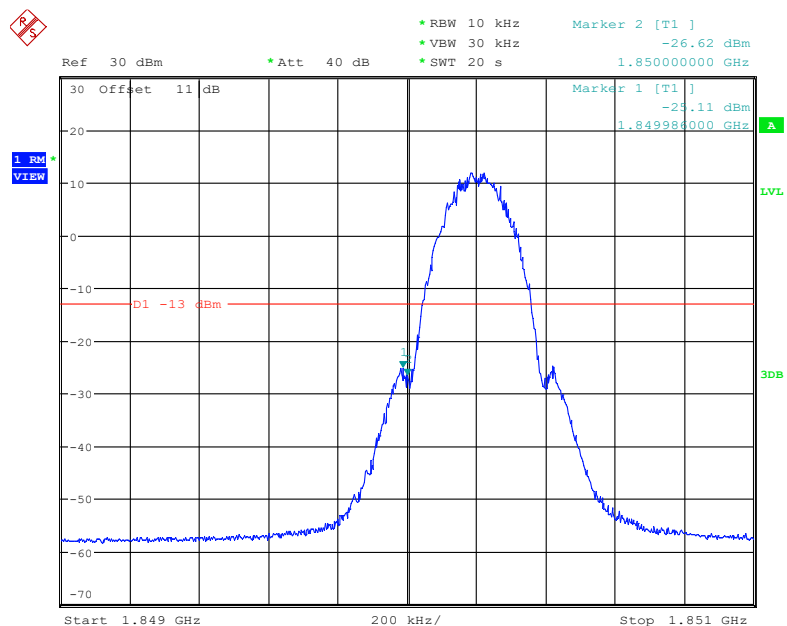


Date: 8.DEC.2022 11:55:03

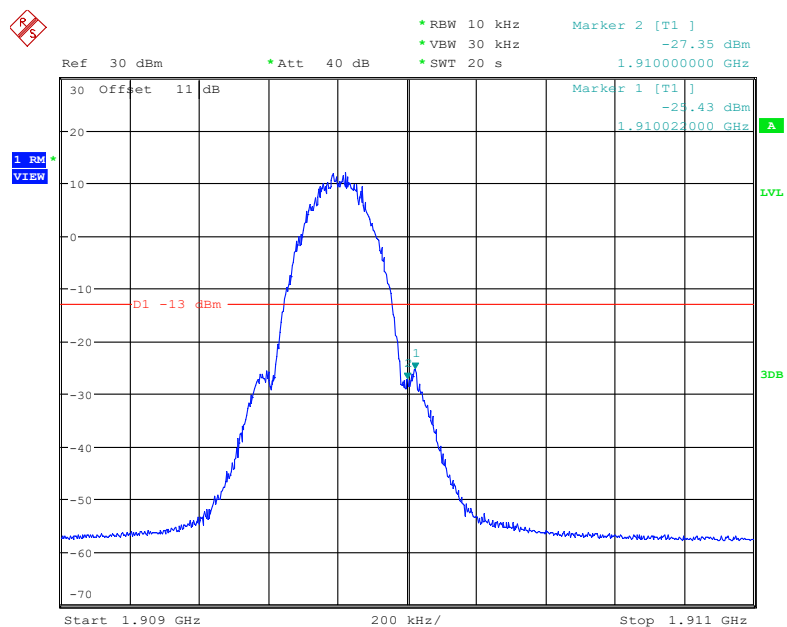
## Cellular Band, Right Band Edge for HSUPA (QPSK) Mode



Date: 8.DEC.2022 13:10:12

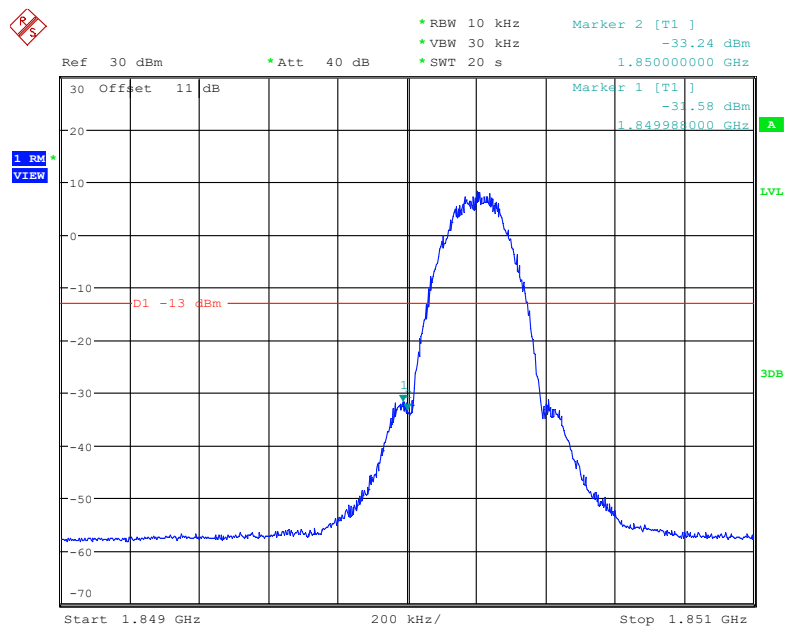
**PCS Band, Left Band Edge for GSM (GMSK) Mode**

Date: 8.DEC.2022 08:52:13

**PCS Band, Right Band Edge for GSM (GMSK) Mode**

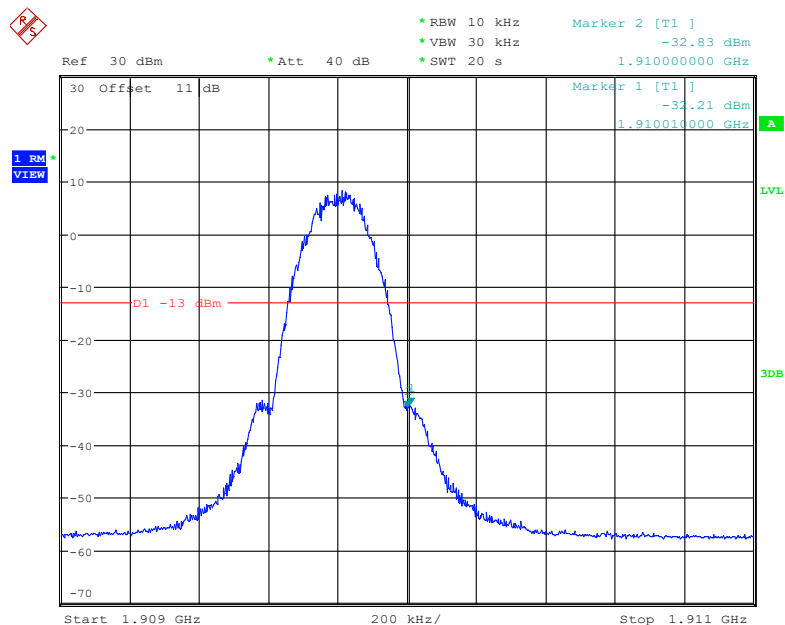
Date: 8.DEC.2022 08:58:38

## PCS Band, Left Band Edge for EGPRS (8PSK) Mode



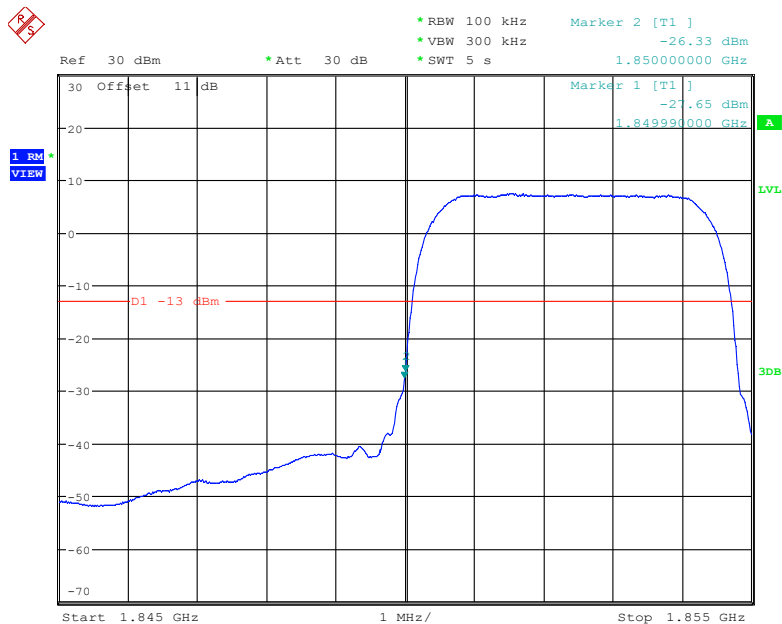
Date: 8.DEC.2022 09:06:31

## PCS Band, Right Band Edge for EGPRS (8PSK) Mode



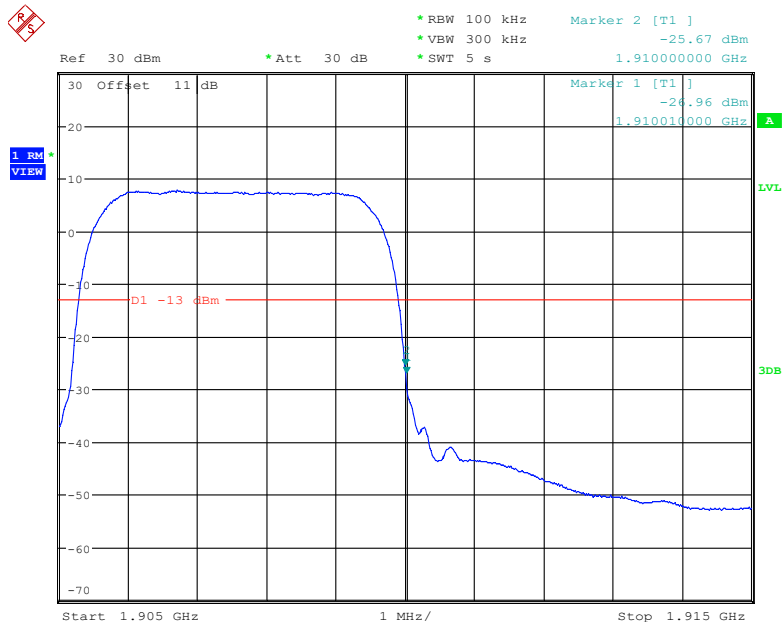
Date: 8.DEC.2022 09:18:40

PCS Band, Left Band Edge for RMC (BPSK) Mode



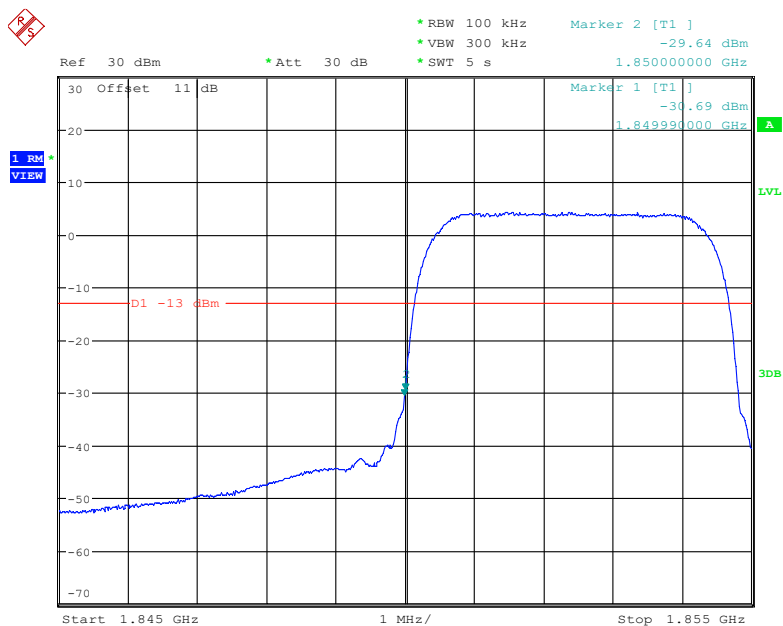
Date: 8.DEC.2022 09:26:49

PCS Band, Right Band Edge for RMC (BPSK) Mode



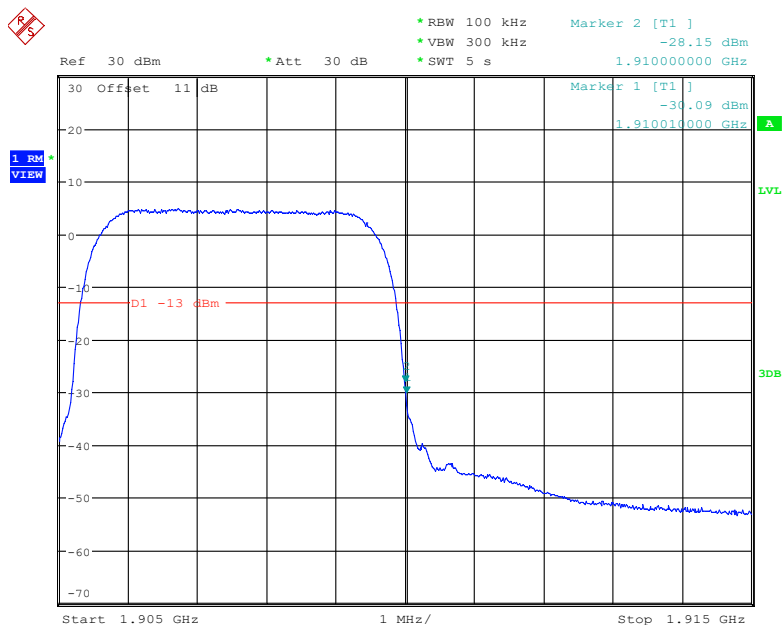
Date: 8.DEC.2022 09:36:46

## PCS Band, Left Band Edge for HSDPA(16QAM) Mode

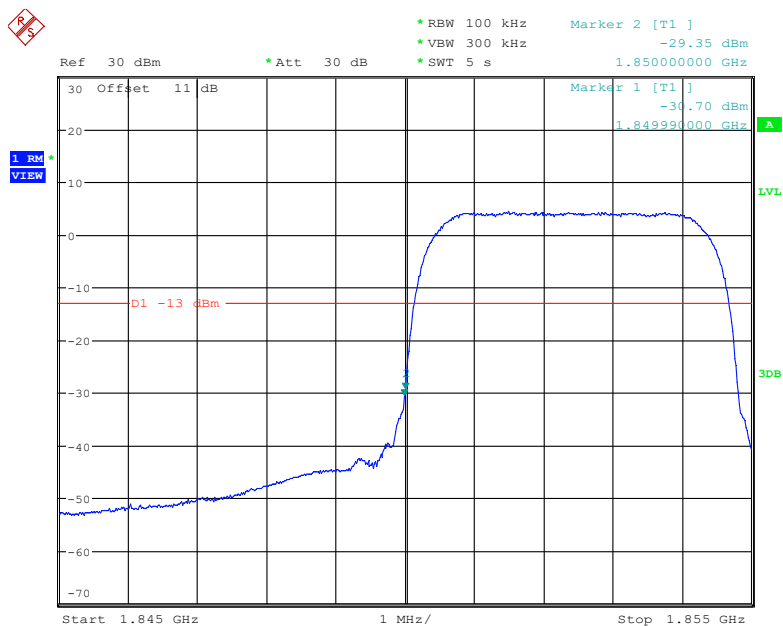


Date: 8.DEC.2022 10:58:02

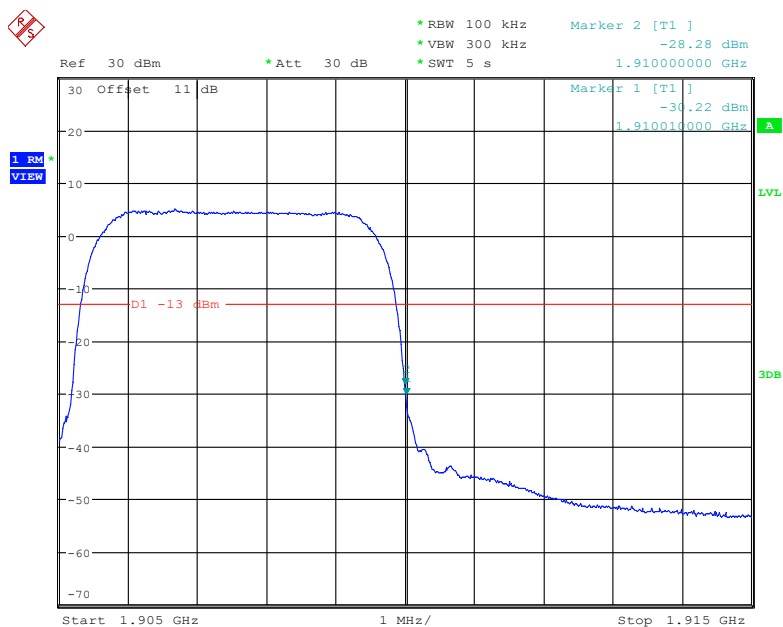
## PCS Band, Right Band Edge for HSDPA (16QAM) Mode



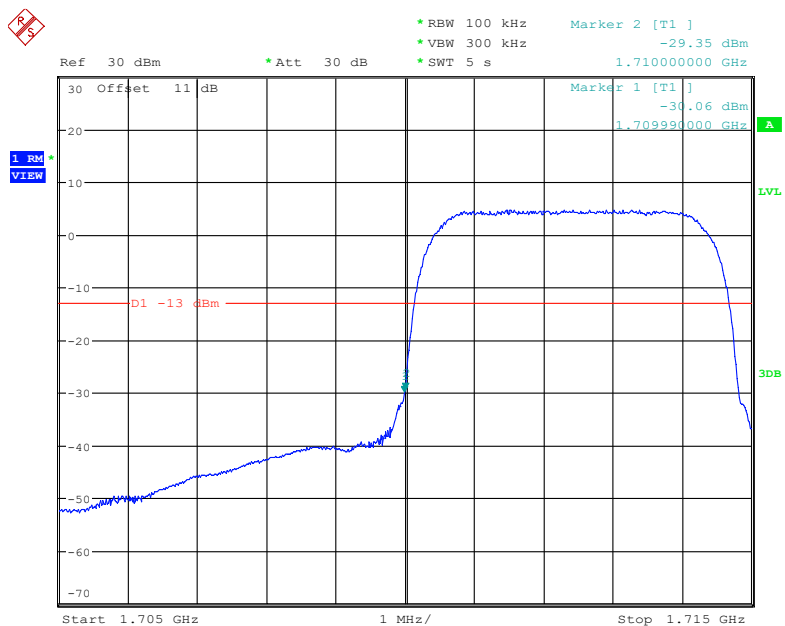
Date: 8.DEC.2022 11:06:25

**PCS Band, Left Band Edge for HSUPA (QPSK) Mode**

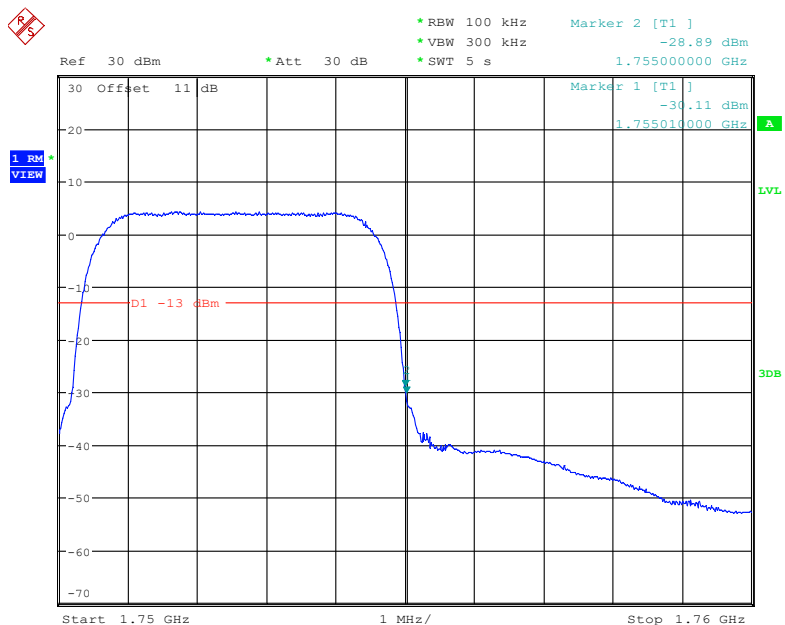
Date: 8.DEC.2022 11:16:20

**PCS Band, Right Band Edge for HSUPA (QPSK) Mode**

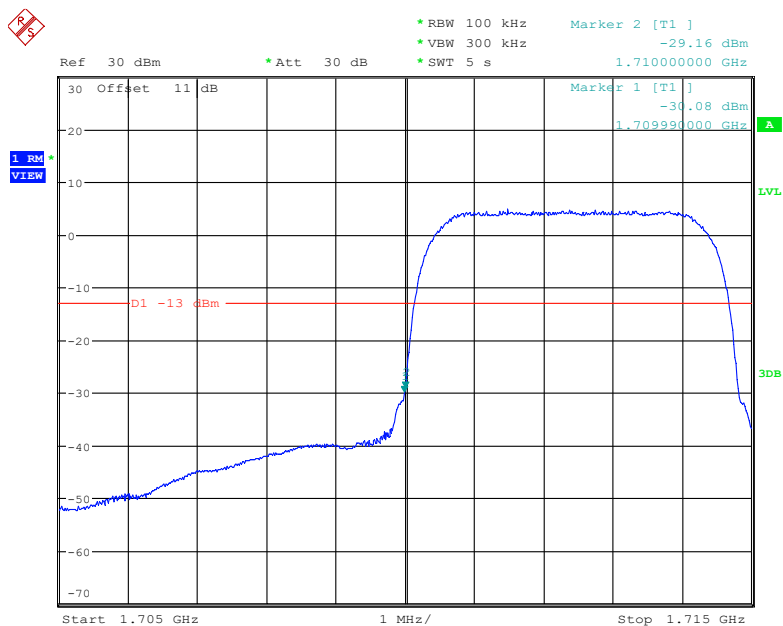
Date: 8.DEC.2022 11:23:34

**AWS Band, Left Band Edge for RMC (BPSK) Mode**

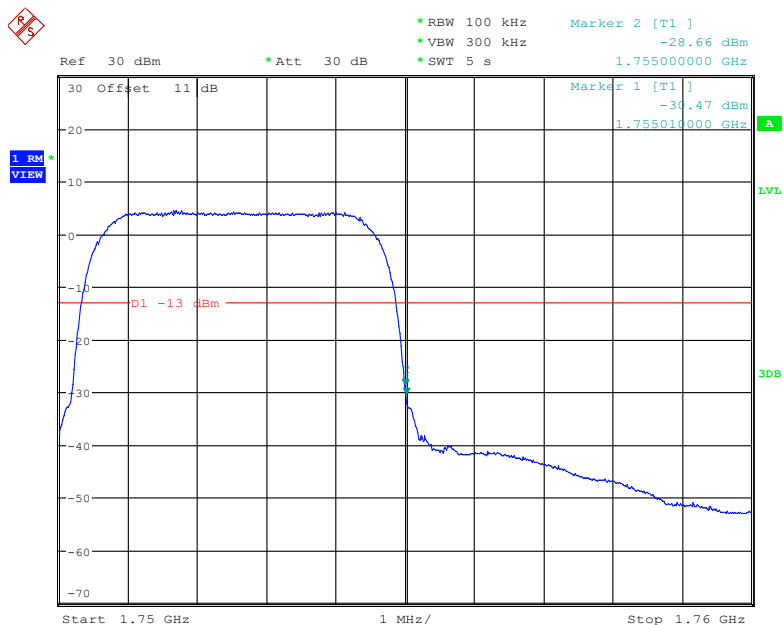
Date: 8.DEC.2022 11:33:11

**AWS Band, Right Band Edge for RMC (BPSK) Mode**

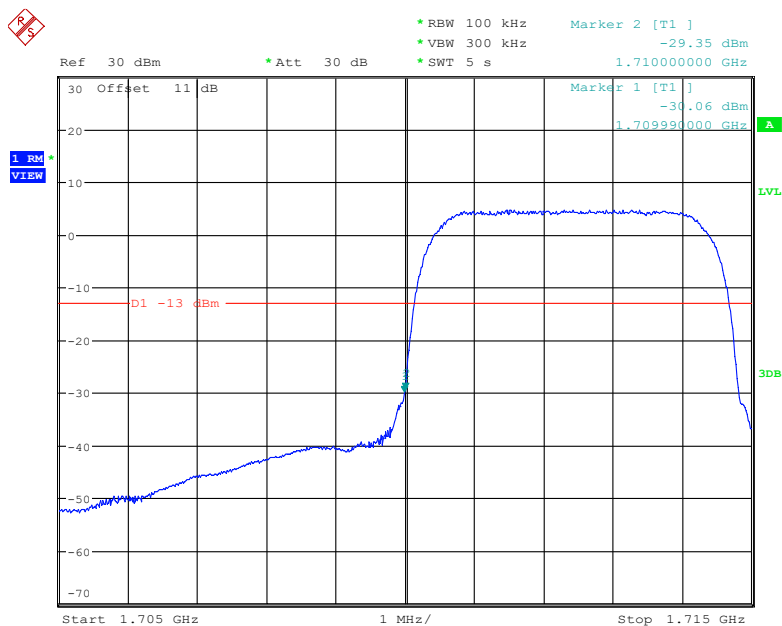
Date: 8.DEC.2022 11:47:56

**AWS Band, Left Band Edge for HSDPA(16QAM) Mode**

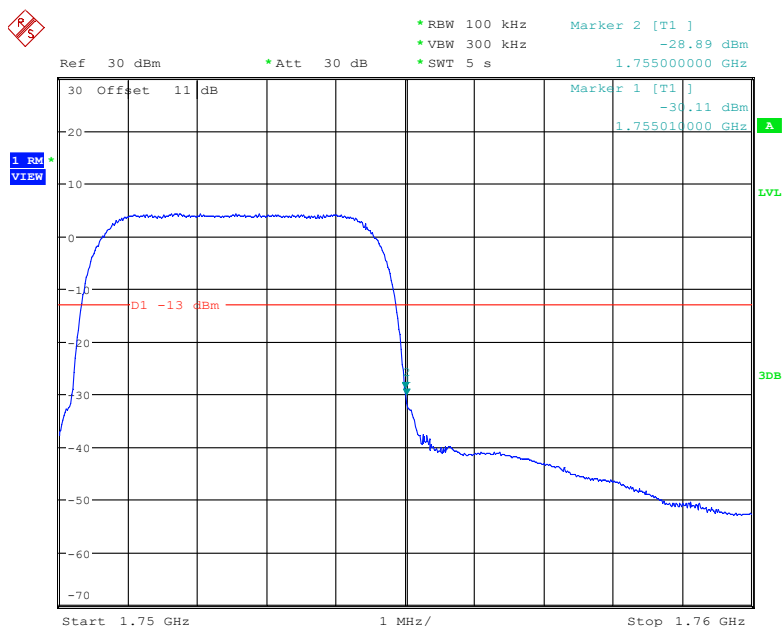
Date: 8.DEC.2022 10:44:58

**AWS Band, Right Band Edge for HSDPA (16QAM) Mode**

Date: 8.DEC.2022 10:52:26

**AWS Band, Left Band Edge for HSUPA (QPSK) Mode**

Date: 8.DEC.2022 11:33:11

**AWS Band, Right Band Edge for HSUPA (QPSK) Mode**

Date: 8.DEC.2022 11:47:56

The test plots of LTE bands please refer to the Appendix C.

## FCC § 2.1055; § 22.355; § 24.235; §27.54 - FREQUENCY STABILITY

### Applicable Standard

FCC § 2.1055, §22.355, §24.235&§27.54.

According to FCC §2.1055, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table below:

Frequency Tolerance for Transmitters in the Public Mobile Services

| Frequency Range (MHz) | Base, fixed (ppm) | Mobile $\leq 3$ watts (ppm) | Mobile $> 3$ watts (ppm) |
|-----------------------|-------------------|-----------------------------|--------------------------|
| 25 to 50              | 20.0              | 20.0                        | 50.0                     |
| 50 to 450             | 5.0               | 5.0                         | 50.0                     |
| 450 to 512            | 2.5               | 5.0                         | 5.0                      |
| 821 to 896            | 1.5               | 2.5                         | 2.5                      |
| 928 to 929.           | 5.0               | N/A                         | N/A                      |
| 929 to 960.           | 1.5               | N/A                         | N/A                      |
| 2110 to 2220          | 10.0              | N/A                         | N/A                      |

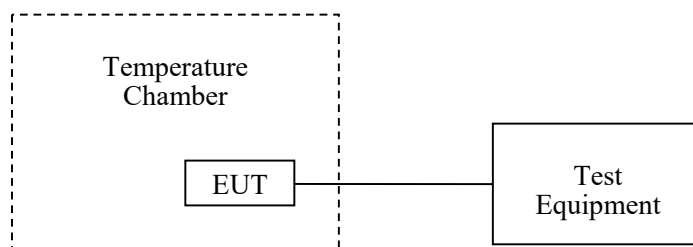
According to §24.235&§27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

### Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: For hand carried, battery powered equipment; reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.



**Test Data****Environmental Conditions**

|                           |           |
|---------------------------|-----------|
| <b>Temperature:</b>       | 27.2℃     |
| <b>Relative Humidity:</b> | 56.2 %    |
| <b>ATM Pressure:</b>      | 101.0 kPa |

*The testing was performed by Glenn Jiang from 2022-11-24 to 2022-12-10.*

*EUT operation mode: Transmitting*

**Test Result: Pass**

*Please refer to the following tables.*

**Cellular Band (Part 22H)****GSM Mode**

| Middle Channel, $f_0=836.6\text{MHz}$ |                                     |                      |                       |             |
|---------------------------------------|-------------------------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                      | Voltage Supplied (V <sub>DC</sub> ) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| -30                                   | N.V.                                | 6                    | 0.0072                | 2.5         |
| -20                                   |                                     | 5                    | 0.0060                | 2.5         |
| -10                                   |                                     | 4                    | 0.0048                | 2.5         |
| 0                                     |                                     | 3                    | 0.0036                | 2.5         |
| 10                                    |                                     | 2                    | 0.0024                | 2.5         |
| 20                                    |                                     | -2                   | -0.0024               | 2.5         |
| 30                                    |                                     | 4                    | 0.0048                | 2.5         |
| 40                                    |                                     | 5                    | 0.0060                | 2.5         |
| 50                                    |                                     | 6                    | 0.0072                | 2.5         |
| 20                                    | L.V.                                | 7                    | 0.0084                | 2.5         |
|                                       | H.V.                                | 3                    | 0.0036                | 2.5         |

**EDGE Mode**

| Middle Channel, $f_0=836.6\text{MHz}$ |                                     |                      |                       |             |
|---------------------------------------|-------------------------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                      | Voltage Supplied (V <sub>DC</sub> ) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| -30                                   | N.V.                                | 2.57                 | 0.0031                | 2.5         |
| -20                                   |                                     | 2.33                 | 0.0028                | 2.5         |
| -10                                   |                                     | 2.17                 | 0.0026                | 2.5         |
| 0                                     |                                     | 1.66                 | 0.0020                | 2.5         |
| 10                                    |                                     | 1.52                 | 0.0018                | 2.5         |
| 20                                    |                                     | 1.70                 | 0.0020                | 2.5         |
| 30                                    |                                     | 1.59                 | 0.0019                | 2.5         |
| 40                                    |                                     | 1.46                 | 0.0017                | 2.5         |
| 50                                    |                                     | 1.58                 | 0.0019                | 2.5         |
| 20                                    | L.V.                                | 1.72                 | 0.0021                | 2.5         |
|                                       | H.V.                                | 1.63                 | 0.0019                | 2.5         |

**WCDMA Mode**

| Middle Channel, $f_0=836.6\text{MHz}$ |                                     |                      |                       |             |
|---------------------------------------|-------------------------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                      | Voltage Supplied (V <sub>DC</sub> ) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| -30                                   | N.V.                                | 1.05                 | 0.0013                | 2.5         |
| -20                                   |                                     | 1.32                 | 0.0016                | 2.5         |
| -10                                   |                                     | 2.11                 | 0.0025                | 2.5         |
| 0                                     |                                     | 1.33                 | 0.0016                | 2.5         |
| 10                                    |                                     | 1.25                 | 0.0015                | 2.5         |
| 20                                    |                                     | 0.76                 | 0.0009                | 2.5         |
| 30                                    |                                     | 2.22                 | 0.0027                | 2.5         |
| 40                                    |                                     | 2.15                 | 0.0026                | 2.5         |
| 50                                    |                                     | 2.16                 | 0.0026                | 2.5         |
| 20                                    | L.V.                                | 2.34                 | 0.0028                | 2.5         |
|                                       | H.V.                                | 2.15                 | 0.0026                | 2.5         |

**PCS Band (Part 24E)****GSM Mode**

| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| -30              | N.V.                              | 1850.0831            | 1909.9238            | 1850                       | 1910                       |
| -20              |                                   | 1850.0768            | 1909.9215            | 1850                       | 1910                       |
| -10              |                                   | 1850.0819            | 1909.9193            | 1850                       | 1910                       |
| 0                |                                   | 1850.0786            | 1909.9204            | 1850                       | 1910                       |
| 10               |                                   | 1850.0794            | 1909.9217            | 1850                       | 1910                       |
| 20               |                                   | 1850.0792            | 1909.9256            | 1850                       | 1910                       |
| 30               |                                   | 1850.0781            | 1909.9260            | 1850                       | 1910                       |
| 40               |                                   | 1850.0778            | 1909.9226            | 1850                       | 1910                       |
| 50               |                                   | 1850.0832            | 1909.9230            | 1850                       | 1910                       |
| 20               | L.V.                              | 1850.0836            | 1909.9195            | 1850                       | 1910                       |
|                  | H.V.                              | 1850.0785            | 1909.9223            | 1850                       | 1910                       |

**EDGE Mode**

| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| -30              | N.V.                              | 1850.0743            | 1909.9211            | 1850                       | 1910                       |
| -20              |                                   | 1850.0771            | 1909.9240            | 1850                       | 1910                       |
| -10              |                                   | 1850.0776            | 1909.9270            | 1850                       | 1910                       |
| 0                |                                   | 1850.0805            | 1909.9217            | 1850                       | 1910                       |
| 10               |                                   | 1850.0772            | 1909.9226            | 1850                       | 1910                       |
| 20               |                                   | 1850.0802            | 1909.9209            | 1850                       | 1910                       |
| 30               |                                   | 1850.0818            | 1909.9207            | 1850                       | 1910                       |
| 40               |                                   | 1850.0789            | 1909.9237            | 1850                       | 1910                       |
| 50               |                                   | 1850.0783            | 1909.9244            | 1850                       | 1910                       |
| 20               | L.V.                              | 1850.0768            | 1909.9205            | 1850                       | 1910                       |
|                  | H.V.                              | 1850.0794            | 1909.9246            | 1850                       | 1910                       |

**WCDMA Mode**

| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| -30              | N.V.                              | 1850.3294            | 1909.6733            | 1850                       | 1910                       |
| -20              |                                   | 1850.3322            | 1909.6726            | 1850                       | 1910                       |
| -10              |                                   | 1850.3261            | 1909.6677            | 1850                       | 1910                       |
| 0                |                                   | 1850.3312            | 1909.6737            | 1850                       | 1910                       |
| 10               |                                   | 1850.3291            | 1909.6703            | 1850                       | 1910                       |
| 20               |                                   | 1850.3262            | 1909.6706            | 1850                       | 1910                       |
| 30               |                                   | 1850.3280            | 1909.6716            | 1850                       | 1910                       |
| 40               |                                   | 1850.3325            | 1909.6741            | 1850                       | 1910                       |
| 50               |                                   | 1850.3335            | 1909.6691            | 1850                       | 1910                       |
| 20               | L.V.                              | 1850.3339            | 1909.6732            | 1850                       | 1910                       |
|                  | H.V.                              | 1850.3269            | 1909.6735            | 1850                       | 1910                       |

**AWS Band (Part 27)**

| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| -30              | N.V.                              | 1710.0172            | 1754.9728            | 1710                       | 1755                       |
| -20              |                                   | 1710.0169            | 1754.9726            | 1710                       | 1755                       |
| -10              |                                   | 1710.0158            | 1754.9727            | 1710                       | 1755                       |
| 0                |                                   | 1710.0159            | 1754.9733            | 1710                       | 1755                       |
| 10               |                                   | 1710.0138            | 1754.9736            | 1710                       | 1755                       |
| 20               |                                   | 1710.0139            | 1754.9729            | 1710                       | 1755                       |
| 30               |                                   | 1710.0137            | 1754.9725            | 1710                       | 1755                       |
| 40               |                                   | 1710.0128            | 1754.9735            | 1710                       | 1755                       |
| 50               |                                   | 1710.0125            | 1754.9736            | 1710                       | 1755                       |
| 20               | L.V.                              | 1710.0136            | 1754.9728            | 1710                       | 1755                       |
|                  | H.V.                              | 1710.0144            | 1754.9729            | 1710                       | 1755                       |

**LTE:**  
**QPSK:**  
**Band 2:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 1850.5179            | 1909.4904            | 1850                       | 1910                       |
| -20              |                                   | 1850.5142            | 1909.4913            | 1850                       | 1910                       |
| -10              |                                   | 1850.5145            | 1909.4862            | 1850                       | 1910                       |
| 0                |                                   | 1850.5124            | 1909.4901            | 1850                       | 1910                       |
| 10               |                                   | 1850.5137            | 1909.4864            | 1850                       | 1910                       |
| 20               |                                   | 1850.5147            | 1909.4878            | 1850                       | 1910                       |
| 30               |                                   | 1850.5153            | 1909.4884            | 1850                       | 1910                       |
| 40               |                                   | 1850.5159            | 1909.4914            | 1850                       | 1910                       |
| 50               |                                   | 1850.5155            | 1909.4836            | 1850                       | 1910                       |
| 20               | L.V.                              | 1850.5146            | 1909.4865            | 1850                       | 1910                       |
|                  | H.V.                              | 1850.5170            | 1909.4843            | 1850                       | 1910                       |

**Band 4:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 1710.1166            | 1754.8738            | 1710                       | 1755                       |
| -20              |                                   | 1710.1158            | 1754.8736            | 1710                       | 1755                       |
| -10              |                                   | 1710.1152            | 1754.8737            | 1710                       | 1755                       |
| 0                |                                   | 1710.1154            | 1754.8738            | 1710                       | 1755                       |
| 10               |                                   | 1710.1147            | 1754.8757            | 1710                       | 1755                       |
| 20               |                                   | 1710.1142            | 1754.8755            | 1710                       | 1755                       |
| 30               |                                   | 1710.1139            | 1754.8754            | 1710                       | 1755                       |
| 40               |                                   | 1710.1130            | 1754.8756            | 1710                       | 1755                       |
| 50               |                                   | 1710.1129            | 1754.8749            | 1710                       | 1755                       |
| 20               | L.V.                              | 1710.1128            | 1754.8748            | 1710                       | 1755                       |
|                  | H.V.                              | 1710.1024            | 1754.8742            | 1710                       | 1755                       |

**Band 5:**

| 10.0 MHz Middle Channel, $f_0=836.5\text{MHz}$ |                                     |                      |                       |             |
|------------------------------------------------|-------------------------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                               | Voltage Supplied (V <sub>DC</sub> ) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| -30                                            | N.V.                                | 11.13                | 0.0133                | 2.5         |
| -20                                            |                                     | -5.97                | -0.0071               | 2.5         |
| -10                                            |                                     | 8.97                 | 0.0107                | 2.5         |
| 0                                              |                                     | -9.95                | -0.0119               | 2.5         |
| 10                                             |                                     | 7.96                 | 0.0095                | 2.5         |
| 20                                             |                                     | 7.78                 | 0.0093                | 2.5         |
| 30                                             |                                     | 9.86                 | 0.0118                | 2.5         |
| 40                                             |                                     | 7.93                 | 0.0095                | 2.5         |
| 50                                             |                                     | -6.92                | -0.0083               | 2.5         |
| 20                                             | L.V.                                | 8.97                 | 0.0107                | 2.5         |
|                                                | H.V.                                | 8.06                 | 0.0096                | 2.5         |

**Band 7:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 2500.1796            | 2569.8855            | 2500                       | 2570                       |
| -20              |                                   | 2500.1792            | 2569.8947            | 2500                       | 2570                       |
| -10              |                                   | 2500.1788            | 2569.8856            | 2500                       | 2570                       |
| 0                |                                   | 2500.1786            | 2569.8762            | 2500                       | 2570                       |
| 10               |                                   | 2500.1987            | 2569.8828            | 2500                       | 2570                       |
| 20               |                                   | 2500.1879            | 2569.8425            | 2500                       | 2570                       |
| 30               |                                   | 2500.1757            | 2569.8337            | 2500                       | 2570                       |
| 40               |                                   | 2500.1656            | 2569.8926            | 2500                       | 2570                       |
| 50               |                                   | 2500.1562            | 2569.8925            | 2500                       | 2570                       |
| 20               | L.V.                              | 2500.1528            | 2569.8835            | 2500                       | 2570                       |
|                  | H.V.                              | 2500.1431            | 2569.8741            | 2500                       | 2570                       |

**Band 12:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 699.1433             | 715.8872             | 699                        | 716                        |
| -20              |                                   | 699.1441             | 715.8728             | 699                        | 716                        |
| -10              |                                   | 699.1423             | 715.8458             | 699                        | 716                        |
| 0                |                                   | 699.1427             | 715.8632             | 699                        | 716                        |
| 10               |                                   | 699.1332             | 715.8417             | 699                        | 716                        |
| 20               |                                   | 699.1421             | 715.8284             | 699                        | 716                        |
| 30               |                                   | 699.1389             | 715.8323             | 699                        | 716                        |
| 40               |                                   | 699.1347             | 715.8314             | 699                        | 716                        |
| 50               |                                   | 699.1442             | 715.8454             | 699                        | 716                        |
| 20               | L.V.                              | 699.1372             | 715.8672             | 699                        | 716                        |
|                  | H.V.                              | 699.1374             | 715.8678             | 699                        | 716                        |

**Band 17:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 704.1895             | 715.9836             | 704                        | 716                        |
| -20              |                                   | 704.1729             | 715.9825             | 704                        | 716                        |
| -10              |                                   | 704.1368             | 715.9725             | 704                        | 716                        |
| 0                |                                   | 704.1218             | 715.8898             | 704                        | 716                        |
| 10               |                                   | 704.1326             | 715.8875             | 704                        | 716                        |
| 20               |                                   | 704.1265             | 715.8794             | 704                        | 716                        |
| 30               |                                   | 704.1435             | 715.8972             | 704                        | 716                        |
| 40               |                                   | 704.1532             | 715.8881             | 704                        | 716                        |
| 50               |                                   | 704.1232             | 715.8847             | 704                        | 716                        |
| 20               | L.V.                              | 704.1447             | 715.8826             | 704                        | 716                        |
|                  | H.V.                              | 704.1335             | 715.8799             | 704                        | 716                        |

**Band 38:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 2570.1378            | 2619.8826            | 2570                       | 2620                       |
| -20              |                                   | 2570.1077            | 2619.8725            | 2570                       | 2620                       |
| -10              |                                   | 2570.1246            | 2619.8631            | 2570                       | 2620                       |
| 0                |                                   | 2570.1155            | 2619.8557            | 2570                       | 2620                       |
| 10               |                                   | 2570.1056            | 2619.8425            | 2570                       | 2620                       |
| 20               |                                   | 2570.1933            | 2619.8321            | 2570                       | 2620                       |
| 30               |                                   | 2570.1838            | 2619.8225            | 2570                       | 2620                       |
| 40               |                                   | 2570.1729            | 2619.8125            | 2570                       | 2620                       |
| 50               |                                   | 2570.1618            | 2619.8326            | 2570                       | 2620                       |
| 20               | L.V.                              | 2570.1520            | 2619.8222            | 2570                       | 2620                       |
|                  | H.V.                              | 2570.1021            | 2619.8124            | 2570                       | 2620                       |

**Band 41:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 2535.1758            | 2654.8871            | 2535                       | 2655                       |
| -20              |                                   | 2535.1678            | 2654.8852            | 2535                       | 2655                       |
| -10              |                                   | 2535.1565            | 2654.8766            | 2535                       | 2655                       |
| 0                |                                   | 2535.1425            | 2654.8652            | 2535                       | 2655                       |
| 10               |                                   | 2535.1327            | 2654.8556            | 2535                       | 2655                       |
| 20               |                                   | 2535.1228            | 2654.8438            | 2535                       | 2655                       |
| 30               |                                   | 2535.1159            | 2654.8351            | 2535                       | 2655                       |
| 40               |                                   | 2535.1157            | 2654.8237            | 2535                       | 2655                       |
| 50               |                                   | 2535.1939            | 2654.8065            | 2535                       | 2655                       |
| 20               | L.V.                              | 2535.1622            | 2654.8032            | 2535                       | 2655                       |
|                  | H.V.                              | 2535.1524            | 2654.8012            | 2535                       | 2655                       |

**Band 66:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 1710.0241            | 1779.9728            | 1710                       | 1780                       |
| -20              |                                   | 1710.0238            | 1779.9727            | 1710                       | 1780                       |
| -10              |                                   | 1710.0236            | 1779.9839            | 1710                       | 1780                       |
| 0                |                                   | 1710.0235            | 1779.9756            | 1710                       | 1780                       |
| 10               |                                   | 1710.0237            | 1779.9755            | 1710                       | 1780                       |
| 20               |                                   | 1710.0228            | 1779.9747            | 1710                       | 1780                       |
| 30               |                                   | 1710.0257            | 1779.9749            | 1710                       | 1780                       |
| 40               |                                   | 1710.0256            | 1779.9756            | 1710                       | 1780                       |
| 50               |                                   | 1710.0229            | 1779.9828            | 1710                       | 1780                       |
| 20               | L.V.                              | 1710.0225            | 1779.9727            | 1710                       | 1780                       |
|                  | H.V.                              | 1710.0226            | 1779.9775            | 1710                       | 1780                       |

**16QAM:****Band 2:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 1850.5158            | 1909.4839            | 1850                       | 1910                       |
| -20              |                                   | 1850.5106            | 1909.4866            | 1850                       | 1910                       |
| -10              |                                   | 1850.5151            | 1909.4895            | 1850                       | 1910                       |
| 0                |                                   | 1850.5176            | 1909.4870            | 1850                       | 1910                       |
| 10               |                                   | 1850.5133            | 1909.4865            | 1850                       | 1910                       |
| 20               |                                   | 1850.5111            | 1909.4875            | 1850                       | 1910                       |
| 30               |                                   | 1850.5144            | 1909.4871            | 1850                       | 1910                       |
| 40               |                                   | 1850.5110            | 1909.4848            | 1850                       | 1910                       |
| 50               |                                   | 1850.5181            | 1909.4860            | 1850                       | 1910                       |
| 20               | L.V.                              | 1850.5104            | 1909.4905            | 1850                       | 1910                       |
|                  | H.V.                              | 1850.5169            | 1909.4856            | 1850                       | 1910                       |

**Band 4:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 1710.2966            | 1754.7672            | 1710                       | 1755                       |
| -20              |                                   | 1710.2958            | 1754.7562            | 1710                       | 1755                       |
| -10              |                                   | 1710.2751            | 1754.7672            | 1710                       | 1755                       |
| 0                |                                   | 1710.2652            | 1754.7452            | 1710                       | 1755                       |
| 10               |                                   | 1710.2633            | 1754.7435            | 1710                       | 1755                       |
| 20               |                                   | 1710.2643            | 1754.7626            | 1710                       | 1755                       |
| 30               |                                   | 1710.2572            | 1754.7625            | 1710                       | 1755                       |
| 40               |                                   | 1710.2658            | 1754.7652            | 1710                       | 1755                       |
| 50               |                                   | 1710.2636            | 1754.7752            | 1710                       | 1755                       |
| 20               | L.V.                              | 1710.2621            | 1754.7536            | 1710                       | 1755                       |
|                  | H.V.                              | 1710.2715            | 1754.7524            | 1710                       | 1755                       |

**Band 5:**

| 10.0 MHz Middle Channel, f <sub>0</sub> =836.5MHz |                                     |                      |                       |             |
|---------------------------------------------------|-------------------------------------|----------------------|-----------------------|-------------|
| Temperature (°C)                                  | Voltage Supplied (V <sub>DC</sub> ) | Frequency Error (Hz) | Frequency Error (ppm) | Limit (ppm) |
| -30                                               | N.V.                                | -30.08               | -0.0360               | 2.5         |
| -20                                               |                                     | 8.83                 | 0.0106                | 2.5         |
| -10                                               |                                     | -7.30                | -0.0087               | 2.5         |
| 0                                                 |                                     | -6.12                | -0.0073               | 2.5         |
| 10                                                |                                     | 9.75                 | 0.0117                | 2.5         |
| 20                                                |                                     | -7.49                | -0.0090               | 2.5         |
| 30                                                |                                     | -6.20                | -0.0074               | 2.5         |
| 40                                                |                                     | 9.32                 | 0.0111                | 2.5         |
| 50                                                |                                     | -5.36                | -0.0064               | 2.5         |
| 20                                                | L.V.                                | 7.61                 | 0.0091                | 2.5         |
|                                                   | H.V.                                | -9.30                | -0.0111               | 2.5         |

**Band 7:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 2500.1456            | 2569.8376            | 2500                       | 2570                       |
| -20              |                                   | 2500.1428            | 2569.8551            | 2500                       | 2570                       |
| -10              |                                   | 2500.1641            | 2569.8425            | 2500                       | 2570                       |
| 0                |                                   | 2500.1255            | 2569.8537            | 2500                       | 2570                       |
| 10               |                                   | 2500.1326            | 2569.8285            | 2500                       | 2570                       |
| 20               |                                   | 2500.1239            | 2569.8829            | 2500                       | 2570                       |
| 30               |                                   | 2500.1351            | 2569.8836            | 2500                       | 2570                       |
| 40               |                                   | 2500.1327            | 2569.8426            | 2500                       | 2570                       |
| 50               |                                   | 2500.1226            | 2569.8457            | 2500                       | 2570                       |
| 20               | L.V.                              | 2500.1235            | 2569.8352            | 2500                       | 2570                       |
|                  | H.V.                              | 2500.1144            | 2569.8238            | 2500                       | 2570                       |

**Band 12:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 699.1325             | 715.8364             | 699                        | 716                        |
| -20              |                                   | 699.1333             | 715.8325             | 699                        | 716                        |
| -10              |                                   | 699.1315             | 715.8354             | 699                        | 716                        |
| 0                |                                   | 699.1319             | 715.8324             | 699                        | 716                        |
| 10               |                                   | 699.1324             | 715.8309             | 699                        | 716                        |
| 20               |                                   | 699.1313             | 715.8376             | 699                        | 716                        |
| 30               |                                   | 699.1381             | 715.8315             | 699                        | 716                        |
| 40               |                                   | 699.1339             | 715.8306             | 699                        | 716                        |
| 50               |                                   | 699.1334             | 715.8346             | 699                        | 716                        |
| 20               | L.V.                              | 699.1364             | 715.8364             | 699                        | 716                        |
|                  | H.V.                              | 699.1366             | 715.8376             | 699                        | 716                        |

**Band 17:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 704.1687             | 715.8328             | 704                        | 716                        |
| -20              |                                   | 704.1521             | 715.8317             | 704                        | 716                        |
| -10              |                                   | 704.1862             | 715.8217             | 704                        | 716                        |
| 0                |                                   | 704.1713             | 715.8394             | 704                        | 716                        |
| 10               |                                   | 704.1818             | 715.8367             | 704                        | 716                        |
| 20               |                                   | 704.1757             | 715.8286             | 704                        | 716                        |
| 30               |                                   | 704.1827             | 715.8464             | 704                        | 716                        |
| 40               |                                   | 704.1524             | 715.8373             | 704                        | 716                        |
| 50               |                                   | 704.1724             | 715.8339             | 704                        | 716                        |
| 20               | L.V.                              | 704.1739             | 715.8318             | 704                        | 716                        |
|                  | H.V.                              | 704.1827             | 715.8291             | 704                        | 716                        |

**Band 38:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 2570.1877            | 2619.8856            | 2570                       | 2620                       |
| -20              |                                   | 2570.1928            | 2619.8769            | 2570                       | 2620                       |
| -10              |                                   | 2570.1825            | 2619.8695            | 2570                       | 2620                       |
| 0                |                                   | 2570.1731            | 2619.8556            | 2570                       | 2620                       |
| 10               |                                   | 2570.1636            | 2619.8492            | 2570                       | 2620                       |
| 20               |                                   | 2570.1526            | 2619.8345            | 2570                       | 2620                       |
| 30               |                                   | 2570.1412            | 2619.8294            | 2570                       | 2620                       |
| 40               |                                   | 2570.1375            | 2619.8113            | 2570                       | 2620                       |
| 50               |                                   | 2570.1287            | 2619.8125            | 2570                       | 2620                       |
| 20               | L.V.                              | 2570.1178            | 2619.8785            | 2570                       | 2620                       |
|                  | H.V.                              | 2570.1134            | 2619.8643            | 2570                       | 2620                       |

**Band 41:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 2535.1456            | 2654.8655            | 2535                       | 2655                       |
| -20              |                                   | 2535.1442            | 2654.8582            | 2535                       | 2655                       |
| -10              |                                   | 2535.1372            | 2654.8486            | 2535                       | 2655                       |
| 0                |                                   | 2535.1266            | 2654.8375            | 2535                       | 2655                       |
| 10               |                                   | 2535.1138            | 2654.8284            | 2535                       | 2655                       |
| 20               |                                   | 2535.1175            | 2654.8182            | 2535                       | 2655                       |
| 30               |                                   | 2535.1988            | 2654.8587            | 2535                       | 2655                       |
| 40               |                                   | 2535.1882            | 2654.8986            | 2535                       | 2655                       |
| 50               |                                   | 2535.1829            | 2654.8882            | 2535                       | 2655                       |
| 20               | L.V.                              | 2535.1618            | 2654.8765            | 2535                       | 2655                       |
|                  | H.V.                              | 2535.1572            | 2654.8344            | 2535                       | 2655                       |

**Band 66:**

| 10 MHz Bandwidth |                                   |                      |                      |                            |                            |
|------------------|-----------------------------------|----------------------|----------------------|----------------------------|----------------------------|
| Temperature (°C) | Power Supplied (V <sub>DC</sub> ) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | F <sub>L</sub> Limit (MHz) | F <sub>H</sub> Limit (MHz) |
| -30              | N.V.                              | 1710.1277            | 1779.8392            | 1710                       | 1780                       |
| -20              |                                   | 1710.1249            | 1779.8444            | 1710                       | 1780                       |
| -10              |                                   | 1710.1246            | 1779.8363            | 1710                       | 1780                       |
| 0                |                                   | 1710.1275            | 1779.8358            | 1710                       | 1780                       |
| 10               |                                   | 1710.1265            | 1779.8362            | 1710                       | 1780                       |
| 20               |                                   | 1710.1239            | 1779.8333            | 1710                       | 1780                       |
| 30               |                                   | 1710.1225            | 1779.8341            | 1710                       | 1780                       |
| 40               |                                   | 1710.1246            | 1779.8368            | 1710                       | 1780                       |
| 50               |                                   | 1710.1233            | 1779.8376            | 1710                       | 1780                       |
| 20               | L.V.                              | 1710.1258            | 1779.8356            | 1710                       | 1780                       |
|                  | H.V.                              | 1710.1252            | 1779.8354            | 1710                       | 1780                       |

\*\*\*\*\* END OF REPORT \*\*\*\*\*