



# TESTREPORT

Applicant Name: Beijing Wiseasy Technology Co.,Ltd.  
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Chaoyang District, 100027, Beijing, China  
Report Number: KS1220428-17332E-RF-00C  
FCC ID: 2AXOJ-P5

## Test Standard (s)

FCC PART 27; FCC PART 22H; FCC PART 24E; FCC PART 90

## Sample Description

Product Name: Smart Payment Terminal  
Model Name.: P5  
Trade Mark: Wiseasy  
Date Received: 2022/04/08  
Report Date: 2022/09/05

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

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

## Prepared and Checked By:

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EMC Engineer

## Approved By:

Robert 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 II: 1850-1910MHz(TX); 1930-1990MHz(RX)<br>WCDMA Band IV: 1710-1755 MHz(TX), 2110-2155MHz(RX)<br>WCDMA Band V: 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); 2620-2690 MHz(RX)<br>LTE Band 12: 699-716MHz(TX); 729-746MHz(RX)<br>LTE Band 17: 704-716MHz(TX); 734-746MHz(RX)<br>LTE Band 25: 1850-1915MHz(TX); 1930-1995MHz(RX)<br>LTE Band 26: 814-849MHz(TX); 859-894MHz(RX)<br>LTE Band 41: 2496-2690MHz(TX/RX)<br>LTE Band 66: 1710-1780MHz(TX);2110-2200MHz(RX) |
| Modulation Technique     | 2G: GMSK, 8PSK<br>3G: BPSK, QPSK, 16QAM<br>4G: QPSK, 16QAM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Antenna Specification*   | GSM 850/WCDMA Band V/LTE B5/LTE B26: -2.77dBi<br>WCDMA Band IV/LTE B4: -0.52dBi<br>WCDMA Band II/PCS 1900/LTE B2/LTE B25: -0.06dBi<br>LTE B7/LTE B41: 1.65dBi<br>LTE B12/LTE B17: -3.82dBi<br>LTE B66: -0.06dBi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Voltage Range            | DC 7.4V by battery and DC 5V charging from adapter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Sample serial number     | KS1220428-17332E-RF-S1 for Radiated Emissions<br>KS1220428-17332E-RF-S2 for RF Conducted Test<br>(Assigned by ATC)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Sample/EUT Status        | Good condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Adapter information      | Adapter 1:<br>Model: ASSA107w-050200<br>Input: AC 100-240V, 50/60Hz, 0.45A<br>Output: DC 5 V, 2A<br>Adapter 2:<br>Model: RD0502000-USBA-87MG<br>Input: AC 100-240V, 50/60Hz, 300mA<br>Output: DC 5 V, 2000mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Normal/Extreme Condition | L.V.: Low Voltage 6.66V <sub>DC</sub><br>N.V.: Normal Voltage 7.4V <sub>DC</sub><br>H.V.: High Voltage 8.14V <sub>DC</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

*Note: The product has two versions, one is with fingerprints, and the other is without fingerprints. The Lab selected the version with fingerprints for all tests, which completely covered the version without fingerprints.*

## Objective

This test report is in accordance with Part 2-Subpart J, Part 22-Subpart H, Part 24-Subpart E, Subpart 27 and Subpart 90 of the Federal Communications Commission 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  
 Part 90 Private Land Mobile Radio 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 Frequency                       |                | $0.082 \times 10^{-7}$ |
| RF output power, conducted         |                | 0.73dB                 |
| Unwanted Emission, conducted       |                | 1.6dB                  |
| AC Power Lines Conducted Emissions |                | 2.72dB                 |
| Emissions,<br>Radiated             | 9kHz - 30MHz   | 2.66dB                 |
|                                    | 30MHz - 1GHz   | 4.28dB                 |
|                                    | 1GHz - 18GHz   | 4.98dB                 |
|                                    | 18GHz -26.5GHz | 5.06dB                 |
|                                    | 26.5GHz -40GHz | 4.72dB                 |
| 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 429 7.01.

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.

| Frequency band | Bandwidth (MHz) | Test Frequency (MHz) |        |        |
|----------------|-----------------|----------------------|--------|--------|
|                |                 | Low                  | Middle | High   |
| GSM 850        | 0.25            | 824.2                | 836.6  | 848.8  |
| PCS 1900       | 0.25            | 1850.2               | 1880   | 1909.8 |
| WCDMA Band II  | 4.2             | 1852.4               | 1880   | 1907.6 |
| WCDMA Band IV  | 4.2             | 1712.4               | 1732.6 | 1752.6 |
| WCDMA Band V   | 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              | 1715.0               | 1732.5 | 1750.0 |
|                | 15              | 1717.5               | 1732.5 | 1747.5 |
|                | 20              | 1720.0               | 1732.5 | 1745.0 |
| 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               | 2535.0 | 2567.5 |
|                | 10              | 2505.0               | 2535.0 | 2565.0 |
|                | 15              | 2507.5               | 2535.0 | 2562.5 |
|                | 20              | 2510.0               | 2535.0 | 2560.0 |
| 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              | 704.0                | 707.5  | 711.0  |

|         |     |        |        |        |
|---------|-----|--------|--------|--------|
| LTE B17 | 5   | 706.5  | 710.0  | 713.5  |
|         | 10  | 709.0  | 710.0  | 711.0  |
| LTE B25 | 1.4 | 1850.7 | 1882.5 | 1914.3 |
|         | 3   | 1851.5 | 1882.5 | 1913.5 |
|         | 5   | 1852.5 | 1882.5 | 1912.5 |
|         | 10  | 1855.0 | 1882.5 | 1910.0 |
|         | 15  | 1857.5 | 1882.5 | 1907.5 |
|         | 20  | 1860.0 | 1882.5 | 1905.0 |
| LTE B26 | 1.4 | 814.7  | 831.5  | 848.3  |
|         | 3   | 815.5  | 831.5  | 847.5  |
|         | 5   | 816.5  | 831.5  | 846.5  |
|         | 10  | 819.0  | 831.5  | 844.0  |
|         | 15  | 821.5  | 831.5  | 841.5  |
| LTE B41 | 5   | 2498.5 | 2593   | 2687.5 |
|         | 10  | 2501   | 2593   | 2685   |
|         | 15  | 2503.5 | 2593   | 2682.5 |
|         | 20  | 2506   | 2593   | 2680   |
| LTE B66 | 1.4 | 1710.7 | 1745.0 | 1779.3 |
|         | 3   | 1711.5 | 1745.0 | 1778.5 |
|         | 5   | 1712.5 | 1745.0 | 1777.5 |
|         | 10  | 1715.0 | 1745.0 | 1775.0 |
|         | 15  | 1717.5 | 1745.0 | 1772.5 |
|         | 20  | 1720.0 | 1745.0 | 1770.0 |

### Equipment Modifications

No modification was made to the EUT.

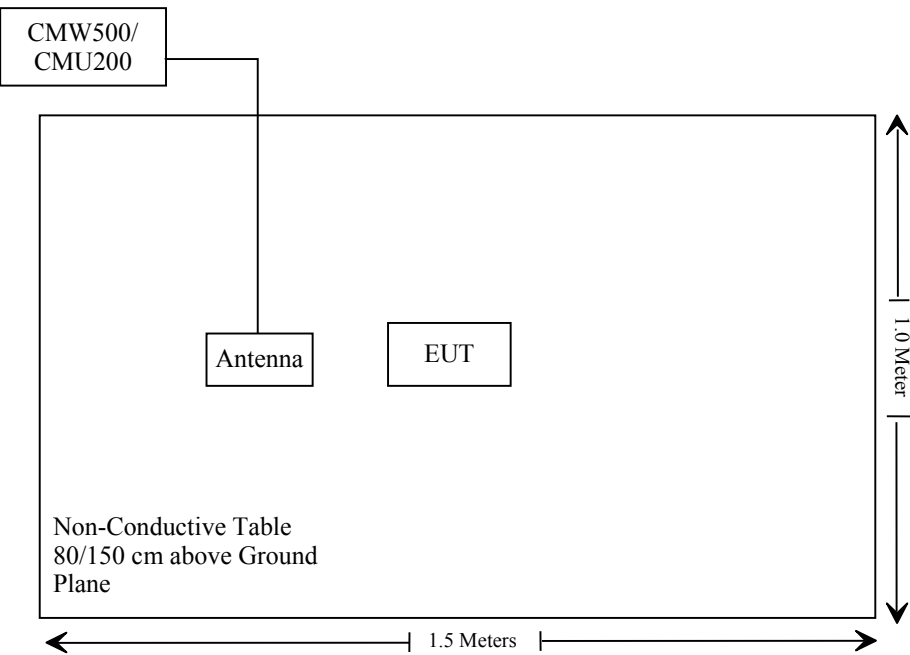
### Support Equipment List and Details

| Manufacturer    | Description                          | Model  | Serial Number             |
|-----------------|--------------------------------------|--------|---------------------------|
| Rohde & Schwarz | Wideband Radio Communication Tester  | CMW500 | 1201.002K50-11621<br>8-UY |
| Rohde & Schwarz | Universal Radio Communication Tester | CMU200 | 110605                    |

### Support Cable Description

| Cable Description                 | Length (m) | From / Port | To                |
|-----------------------------------|------------|-------------|-------------------|
| Unshielded Un-detachable AC Cable | 1.2        | AC Power    | CMW500/<br>CMU200 |

**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);<br>§ 24.232 (c); §27.50 (b) (c) (d) (h);<br>§90.635 (b) | RF Output Power                        | Compliant      |
| § 2.1047                                                                       | Modulation Characteristics             | Not Applicable |
| § 2.1049                                                                       | Occupied Bandwidth                     | Compliant      |
| § 2.1051; §22.917 (a);<br>§ 24.238 (a); §27.53; § 90.691                       | Spurious Emissions at Antenna Terminal | Compliant      |
| § 2.1053; § 22.917 (a);<br>§ 24.238 (a); §27.53; §90.691                       | Field Strength of Spurious Radiation   | Compliant      |
| § 22.917 (a);<br>§ 24.238 (a); §27.53 (c) (h) (m);<br>§90.691                  | Band Edge                              | Compliant      |
| § 2.1055; § 22.355;<br>§ 24.235; §27.54; §90.213                               | 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        | 2021/11/09       | 2022/11/08           |
| A.H. Systems, inc.                              | Preamplifier                        | PAM-0118P            | 135           | 2021/11/09       | 2022/11/08           |
| Quinstar                                        | Amplifier                           | QLW-18405536-J0      | 15964001002   | 2021/11/11       | 2022/11/10           |
| Unknown                                         | RF Coaxial Cable                    | No.10                | N050          | 2021/12/14       | 2022/12/13           |
| Unknown                                         | RF Coaxial Cable                    | No.11                | N1000         | 2021/12/14       | 2022/12/13           |
| Unknown                                         | RF Coaxial Cable                    | No.12                | N040          | 2021/12/14       | 2022/12/13           |
| Unknown                                         | RF Coaxial Cable                    | No.13                | N300          | 2021/12/14       | 2022/12/13           |
| 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           |
| Unknown                                         | Band Reject Filter                  | MSF824-862MS-1147    | 201706003     | 2021/12/14       | 2022/12/13           |
| Unknown                                         | Band Reject Filter                  | MSF1850-1910MS-1148  | 201706003     | 2021/12/14       | 2022/12/13           |
| Unknown                                         | Band Reject Filter                  | MSF700-800MS-1153    | 201706003     | 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 Antenna                        | PE9852/2F-20         | 1120          | 2020/01/05       | 2023/01/04           |
| PASTERNAK                                       | Horn Antenna                        | PE9852/2F-20         | 1120          | 2020/01/05       | 2023/01/04           |
| Agilent                                         | Signal Generator                    | N5183A               | MY51040755    | 2021/12/13       | 2022/12/12           |
| Radiated Emission Test Software: e3 19821b (V9) |                                     |                      |               |                  |                      |
| RF Conducted Test                               |                                     |                      |               |                  |                      |
| Rohde & Schwarz                                 | Spectrum Analyzer                   | FSV-40               | 101495        | 2021/12/13       | 2022/12/12           |
| Rohde & Schwarz                                 | Wideband Radio Communication Tester | CMW500               | 154606        | 2021/12/13       | 2022/12/12           |
| Mini-Circuits                                   | Power Splitter                      | DC-18000MHz          | SF10944151S   | 2021/12/14       | 2022/12/13           |
| Gongwen                                         | Temp. & Humid. Chamber              | HSD-500              | 109           | 2021/10/14       | 2022/10/13           |
| Fluke                                           | Multi Meter                         | 45                   | 7664009       | 2021/12/14       | 2022/12/13           |
| Manson                                          | DC Power Source                     | KPS-6604             | ATCS-205      | NCR              | NCR                  |
| Unknown                                         | RF Cable                            | Unknown              | Unknown       | Each time        | /                    |
| HP                                              | 6dB Attenuator                      | 8493B 6dB Attenuator | 06151         | 2021/12/14       | 2022/12/13           |

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: CR22080010-20A.

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

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According to FCC § 2.1047(d), Part 22H, 24E, 27 & 90, there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

## FCC § 2.1046, § 22.913 (a)&§ 24.232 (c); §27.50(c)(h); § 90.635(b)- 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.

According to §27.50(b), Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP.

According to §27.50(c), Control and mobile stations in the 698-746 MHz band are limited to 30 watts ERP. And 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), the maximum EIRP must not exceed 1Watts (30dBm) for 1710-1780MHz.

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

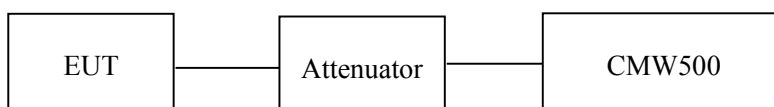
According to FCC §2.1046 and §90.635 (b), The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

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

### Test Procedure

#### Conducted method:

The RF output of the transmitter was connected to the CMW500 through sufficient attenuation. (The path loss is 6 dB between EUT and CMW500)



ANSI C63.26-2015 Section 5.5.

### Test Data

#### Environmental Conditions

|                    |                 |
|--------------------|-----------------|
| Temperature:       | 23.5~26.5 °C    |
| Relative Humidity: | 56~61 %         |
| ATM Pressure:      | 101.0~101.2 kPa |

*The testing was performed by Black Ding from 2022-06-02 to 2022-06-04.*

**Conducted Power****GSM 850**

| 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     | 824.20          | 32.90                      | 32.53   | 32.25   | 31.91   | 27.98    | 27.61   | 27.33   | 26.99   | 38.45       |
|      | 190     | 836.60          | 33.15                      | 32.82   | 32.53   | 32.26   | 28.23    | 27.90   | 27.61   | 27.34   | 38.45       |
|      | 251     | 848.80          | 33.12                      | 32.79   | 32.55   | 32.32   | 28.20    | 27.87   | 27.63   | 27.40   | 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     | 824.20          | 26.48                      | 26.21   | 25.96   | 25.62   | 21.56    | 21.29   | 21.04   | 20.70   | 38.45       |
|       | 190     | 836.60          | 26.83                      | 26.51   | 26.26   | 25.88   | 21.91    | 21.59   | 21.34   | 20.96   | 38.45       |
|       | 251     | 848.80          | 27.25                      | 26.97   | 26.68   | 26.30   | 22.33    | 22.05   | 21.76   | 21.38   | 38.45       |

**WCDMA Band V**

| Mode           | Test Mode | 3GPP Sub Test | Average Output Power (dBm) |       |       | ERP(dBm) |       |       |
|----------------|-----------|---------------|----------------------------|-------|-------|----------|-------|-------|
|                |           |               | Low                        | Mid   | High  | Low      | Mid   | High  |
| WCDMA (Band V) | RMC12.2k  |               | 22.13                      | 22.07 | 22.16 | 17.21    | 17.15 | 17.24 |
|                | HSDPA     | 1             | 21.95                      | 22.23 | 22.31 | 17.03    | 17.31 | 17.39 |
|                |           | 2             | 21.99                      | 22.20 | 22.18 | 17.07    | 17.28 | 17.26 |
|                |           | 3             | 21.93                      | 22.05 | 22.09 | 17.01    | 17.13 | 17.17 |
|                |           | 4             | 21.98                      | 22.07 | 22.13 | 17.06    | 17.15 | 17.21 |
|                | HSUPA     | 1             | 22.07                      | 22.21 | 22.35 | 17.15    | 17.29 | 17.43 |
|                |           | 2             | 22.02                      | 22.22 | 22.31 | 17.10    | 17.30 | 17.39 |
|                |           | 3             | 22.07                      | 22.16 | 22.26 | 17.15    | 17.24 | 17.34 |
|                |           | 4             | 22.02                      | 22.09 | 22.18 | 17.10    | 17.17 | 17.26 |
|                |           | 5             | 21.99                      | 22.13 | 22.19 | 17.07    | 17.21 | 17.27 |
|                | HSPA+     | /             | 22.01                      | 22.15 | 22.23 | 17.09    | 17.23 | 17.31 |

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

For GSM 850/WCDMA Band V:

Antenna Gain = -2.77dBi = -4.92dBd (0dBd = 2.15dBi), Path Loss = 0dB

Limit: ERP ≤ 38.45dBm

**PCS 1900**

| 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     | 1850.20         | 29.90                      | 29.78   | 29.59   | 29.40   | 29.84     | 29.72   | 29.53   | 29.34   | 33.00       |
|      | 661     | 1880.00         | 30.04                      | 29.88   | 29.69   | 29.48   | 29.98     | 29.82   | 29.63   | 29.42   | 33.00       |
|      | 810     | 1909.80         | 29.78                      | 29.63   | 29.41   | 29.25   | 29.72     | 29.57   | 29.35   | 29.19   | 33.00       |

| 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     | 1850.20         | 25.82                      | 25.66   | 25.42   | 25.20   | 25.76     | 25.60   | 25.36   | 25.14   | 33.00       |
|       | 661     | 1880.00         | 25.42                      | 25.19   | 25.01   | 24.74   | 25.36     | 25.13   | 24.95   | 24.68   | 33.00       |
|       | 810     | 1909.80         | 26.29                      | 26.07   | 25.83   | 25.64   | 26.23     | 26.01   | 25.77   | 25.58   | 33.00       |

**WCDMA Band II**

| Mode               | Test Mode | 3GPP Sub Test | Average Output Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|-----------|---------------|----------------------------|-------|-------|-----------|-------|-------|
|                    |           |               | Low                        | Mid   | High  | Low       | Mid   | High  |
| WCDMA<br>(Band II) | RMC12.2k  |               | 22.29                      | 22.19 | 22.1  | 22.23     | 22.13 | 22.04 |
|                    | HSDPA     | 1             | 22.03                      | 22.07 | 21.34 | 21.97     | 22.01 | 21.28 |
|                    |           | 2             | 22.04                      | 22.16 | 21.46 | 21.98     | 22.10 | 21.40 |
|                    |           | 3             | 22.03                      | 22.13 | 21.28 | 21.97     | 22.07 | 21.22 |
|                    |           | 4             | 22.08                      | 22.11 | 21.30 | 22.02     | 22.05 | 21.24 |
|                    | HSUPA     | 1             | 21.95                      | 22.16 | 21.35 | 21.89     | 22.10 | 21.29 |
|                    |           | 2             | 22.09                      | 22.08 | 21.44 | 22.03     | 22.02 | 21.38 |
|                    |           | 3             | 22.03                      | 22.14 | 21.47 | 21.97     | 22.08 | 21.41 |
|                    |           | 4             | 21.97                      | 22.21 | 21.28 | 21.91     | 22.15 | 21.22 |
|                    |           | 5             | 22.08                      | 22.13 | 21.23 | 22.02     | 22.07 | 21.17 |
|                    | HSPA+     | /             | 22.00                      | 22.09 | 21.45 | 21.94     | 22.03 | 21.39 |

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi)+ Path Loss(dB)  
 For PCS 1900 / WCDMA Band II: Antenna Gain = -0.06dBi, Path Loss= 0dB  
 Limit: EIRP≤33dBm

**WCDMA Band IV**

| Mode            | Test Mode | 3GPP Sub Test | Average Output Power (dBm) |       |       | EIRP(dBm) |       |       |
|-----------------|-----------|---------------|----------------------------|-------|-------|-----------|-------|-------|
|                 |           |               | Low                        | Mid   | High  | Low       | Mid   | High  |
| WCDMA (Band IV) | RMC12.2k  |               | 22.19                      | 22.10 | 22.21 | 21.67     | 21.58 | 21.69 |
|                 | HSDPA     | 1             | 21.97                      | 22.15 | 21.86 | 21.45     | 21.63 | 21.34 |
|                 |           | 2             | 21.97                      | 22.15 | 21.84 | 21.45     | 21.63 | 21.32 |
|                 |           | 3             | 22.00                      | 22.27 | 21.68 | 21.48     | 21.75 | 21.16 |
|                 |           | 4             | 22.10                      | 22.15 | 21.84 | 21.58     | 21.63 | 21.32 |
|                 | HSUPA     | 1             | 22.13                      | 22.26 | 21.84 | 21.61     | 21.74 | 21.32 |
|                 |           | 2             | 22.00                      | 22.17 | 21.75 | 21.48     | 21.65 | 21.23 |
|                 |           | 3             | 22.04                      | 22.07 | 21.79 | 21.52     | 21.55 | 21.27 |
|                 |           | 4             | 22.18                      | 22.06 | 21.87 | 21.66     | 21.54 | 21.35 |
|                 |           | 5             | 22.09                      | 22.18 | 21.81 | 21.57     | 21.66 | 21.29 |
|                 | HSPA+     | /             | 22.16                      | 22.14 | 21.82 | 21.64     | 21.62 | 21.30 |

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

For WCDMA Band IV: Antenna Gain = -0.52dBi, Path Loss= 0dB

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       | 1#0                   | 22.19                                   | 22.06 | 21.65 | 22.13     | 22.00 | 21.59 |
|                    |            | 1#2                   | 21.80                                   | 21.64 | 21.76 | 21.74     | 21.58 | 21.70 |
|                    |            | 1#5                   | 22.09                                   | 21.87 | 21.66 | 22.03     | 21.81 | 21.60 |
|                    |            | 3#0                   | 22.25                                   | 21.72 | 21.67 | 22.19     | 21.66 | 21.61 |
|                    |            | 3#1                   | 21.81                                   | 21.83 | 21.99 | 21.75     | 21.77 | 21.93 |
|                    |            | 3#2                   | 21.95                                   | 21.89 | 21.96 | 21.89     | 21.83 | 21.90 |
|                    |            | 6#0                   | 22.07                                   | 21.72 | 21.88 | 22.01     | 21.66 | 21.82 |
|                    | 16QAM      | 1#0                   | 21.80                                   | 21.99 | 21.28 | 21.74     | 21.93 | 21.22 |
|                    |            | 1#2                   | 21.94                                   | 21.32 | 21.25 | 21.88     | 21.26 | 21.19 |
|                    |            | 1#5                   | 21.49                                   | 21.98 | 21.42 | 21.43     | 21.92 | 21.36 |
|                    |            | 3#0                   | 21.34                                   | 21.76 | 21.38 | 21.28     | 21.70 | 21.32 |
|                    |            | 3#1                   | 21.29                                   | 21.49 | 21.62 | 21.23     | 21.43 | 21.56 |
|                    |            | 3#2                   | 21.76                                   | 21.50 | 21.59 | 21.70     | 21.44 | 21.53 |
|                    |            | 6#0                   | 21.52                                   | 21.22 | 21.94 | 21.46     | 21.16 | 21.88 |
| 3.0                | QPSK       | 1#0                   | 21.59                                   | 21.87 | 21.28 | 21.53     | 21.81 | 21.22 |
|                    |            | 1#7                   | 21.44                                   | 21.93 | 21.35 | 21.38     | 21.87 | 21.29 |
|                    |            | 1#14                  | 21.44                                   | 21.19 | 21.42 | 21.38     | 21.13 | 21.36 |
|                    |            | 8#0                   | 22.08                                   | 21.89 | 21.19 | 22.02     | 21.83 | 21.13 |
|                    |            | 8#4                   | 22.15                                   | 21.93 | 21.75 | 22.09     | 21.87 | 21.69 |
|                    |            | 8#7                   | 21.86                                   | 21.30 | 21.22 | 21.80     | 21.24 | 21.16 |
|                    |            | 15#0                  | 21.52                                   | 21.95 | 21.31 | 21.46     | 21.89 | 21.25 |
|                    | 16QAM      | 1#0                   | 21.58                                   | 22.04 | 21.41 | 21.52     | 21.98 | 21.35 |
|                    |            | 1#7                   | 21.31                                   | 21.95 | 21.08 | 21.25     | 21.89 | 21.02 |
|                    |            | 1#14                  | 21.95                                   | 21.31 | 21.51 | 21.89     | 21.25 | 21.45 |
|                    |            | 8#0                   | 22.23                                   | 21.53 | 21.45 | 22.17     | 21.47 | 21.39 |
|                    |            | 8#4                   | 21.66                                   | 21.78 | 21.33 | 21.60     | 21.72 | 21.27 |
|                    |            | 8#7                   | 21.93                                   | 21.38 | 21.70 | 21.87     | 21.32 | 21.64 |
|                    |            | 15#0                  | 21.75                                   | 21.70 | 21.87 | 21.69     | 21.64 | 21.81 |

| 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       | 1#0                   | 21.52                                   | 21.16 | 21.89 | 21.46     | 21.10 | 21.83 |
|                    |            | 1#12                  | 21.45                                   | 21.85 | 21.70 | 21.39     | 21.79 | 21.64 |
|                    |            | 1#24                  | 21.76                                   | 21.98 | 21.99 | 21.70     | 21.92 | 21.93 |
|                    |            | 12#0                  | 22.00                                   | 21.73 | 21.39 | 21.94     | 21.67 | 21.33 |
|                    |            | 12#6                  | 21.61                                   | 21.67 | 21.87 | 21.55     | 21.61 | 21.81 |
|                    |            | 12#11                 | 22.04                                   | 21.44 | 21.41 | 21.98     | 21.38 | 21.35 |
|                    |            | 25#0                  | 21.65                                   | 21.48 | 21.09 | 21.59     | 21.42 | 21.03 |
|                    | 16QAM      | 1#0                   | 21.31                                   | 21.25 | 21.31 | 21.25     | 21.19 | 21.25 |
|                    |            | 1#12                  | 21.72                                   | 21.63 | 21.51 | 21.66     | 21.57 | 21.45 |
|                    |            | 1#24                  | 21.66                                   | 21.76 | 21.11 | 21.60     | 21.70 | 21.05 |
|                    |            | 12#0                  | 21.44                                   | 21.38 | 21.60 | 21.38     | 21.32 | 21.54 |
|                    |            | 12#6                  | 21.26                                   | 21.94 | 21.42 | 21.20     | 21.88 | 21.36 |
|                    |            | 12#11                 | 21.47                                   | 21.75 | 21.05 | 21.41     | 21.69 | 20.99 |
|                    |            | 25#0                  | 21.91                                   | 21.22 | 21.42 | 21.85     | 21.16 | 21.36 |
| 10.0               | QPSK       | 1#0                   | 21.27                                   | 21.22 | 21.35 | 21.21     | 21.16 | 21.29 |
|                    |            | 1#24                  | 21.59                                   | 21.68 | 21.83 | 21.53     | 21.62 | 21.77 |
|                    |            | 1#49                  | 21.69                                   | 21.77 | 21.22 | 21.63     | 21.71 | 21.16 |
|                    |            | 25#0                  | 22.06                                   | 21.75 | 21.06 | 22.00     | 21.69 | 21.00 |
|                    |            | 25#12                 | 21.61                                   | 21.98 | 21.86 | 21.55     | 21.92 | 21.80 |
|                    |            | 25#24                 | 21.99                                   | 21.45 | 21.06 | 21.93     | 21.39 | 21.00 |
|                    |            | 50#0                  | 21.56                                   | 21.52 | 21.32 | 21.50     | 21.46 | 21.26 |
|                    | 16QAM      | 1#0                   | 21.81                                   | 21.3  | 21.09 | 21.75     | 21.24 | 21.03 |
|                    |            | 1#24                  | 22.16                                   | 21.47 | 21.97 | 22.10     | 21.41 | 21.91 |
|                    |            | 1#49                  | 21.59                                   | 21.13 | 21.06 | 21.53     | 21.07 | 21.00 |
|                    |            | 25#0                  | 21.60                                   | 21.29 | 21.96 | 21.54     | 21.23 | 21.90 |
|                    |            | 25#12                 | 21.71                                   | 21.89 | 21.33 | 21.65     | 21.83 | 21.27 |
|                    |            | 25#24                 | 21.62                                   | 22.10 | 21.88 | 21.56     | 22.04 | 21.82 |
|                    |            | 50#0                  | 21.64                                   | 21.43 | 21.67 | 21.58     | 21.37 | 21.61 |

| 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       | 1#0                   | 21.69                                   | 21.23 | 21.42 | 21.63     | 21.17 | 21.36 |
|                    |            | 1#37                  | 21.75                                   | 21.3  | 21.24 | 21.69     | 21.24 | 21.18 |
|                    |            | 1#74                  | 21.75                                   | 21.26 | 21.24 | 21.69     | 21.20 | 21.18 |
|                    |            | 36#0                  | 22.15                                   | 21.73 | 21.58 | 22.09     | 21.67 | 21.52 |
|                    |            | 36#18                 | 21.54                                   | 21.12 | 21.97 | 21.48     | 21.06 | 21.91 |
|                    |            | 36#37                 | 21.96                                   | 21.19 | 21.04 | 21.90     | 21.13 | 20.98 |
|                    |            | 75#0                  | 22.10                                   | 21.58 | 21.37 | 22.04     | 21.52 | 21.31 |
|                    | 16QAM      | 1#0                   | 22.19                                   | 21.49 | 21.74 | 22.13     | 21.43 | 21.68 |
|                    |            | 1#37                  | 21.76                                   | 21.46 | 21.90 | 21.70     | 21.40 | 21.84 |
|                    |            | 1#74                  | 21.30                                   | 21.76 | 21.80 | 21.24     | 21.70 | 21.74 |
|                    |            | 36#0                  | 21.64                                   | 21.72 | 21.20 | 21.58     | 21.66 | 21.14 |
|                    |            | 36#18                 | 22.06                                   | 21.38 | 21.63 | 22.00     | 21.32 | 21.57 |
|                    |            | 36#37                 | 21.99                                   | 21.55 | 21.45 | 21.93     | 21.49 | 21.39 |
|                    |            | 75#0                  | 21.59                                   | 21.54 | 21.62 | 21.53     | 21.48 | 21.56 |
| 20.0               | QPSK       | 1#0                   | 21.99                                   | 22.06 | 21.31 | 21.93     | 22.00 | 21.25 |
|                    |            | 1#49                  | 21.47                                   | 21.99 | 21.68 | 21.41     | 21.93 | 21.62 |
|                    |            | 1#99                  | 21.88                                   | 21.78 | 21.62 | 21.82     | 21.72 | 21.56 |
|                    |            | 50#0                  | 21.46                                   | 21.81 | 21.92 | 21.40     | 21.75 | 21.86 |
|                    |            | 50#24                 | 22.19                                   | 21.19 | 21.34 | 22.13     | 21.13 | 21.28 |
|                    |            | 50#49                 | 22.06                                   | 21.11 | 21.72 | 22.00     | 21.05 | 21.66 |
|                    |            | 100#0                 | 21.27                                   | 21.60 | 21.67 | 21.21     | 21.54 | 21.61 |
|                    | 16QAM      | 1#0                   | 22.10                                   | 21.16 | 21.19 | 22.04     | 21.10 | 21.13 |
|                    |            | 1#49                  | 21.96                                   | 21.49 | 21.88 | 21.90     | 21.43 | 21.82 |
|                    |            | 1#99                  | 21.56                                   | 21.98 | 22.00 | 21.50     | 21.92 | 21.94 |
|                    |            | 50#0                  | 21.66                                   | 21.46 | 21.17 | 21.60     | 21.40 | 21.11 |
|                    |            | 50#24                 | 21.81                                   | 21.34 | 21.88 | 21.75     | 21.28 | 21.82 |
|                    |            | 50#49                 | 21.26                                   | 21.38 | 21.51 | 21.20     | 21.32 | 21.45 |
|                    |            | 100#0                 | 21.93                                   | 21.70 | 21.68 | 21.87     | 21.64 | 21.62 |

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

For Band 2: Antenna Gain = -0.06dBi, Path Loss = 0dB

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       | 1#0                   | 21.90                                   | 21.66 | 21.55 | 21.38     | 21.14 | 21.03 |
|                    |            | 1#2                   | 21.65                                   | 21.25 | 21.48 | 21.13     | 20.73 | 20.96 |
|                    |            | 1#5                   | 21.49                                   | 21.13 | 21.59 | 20.97     | 20.61 | 21.07 |
|                    |            | 3#0                   | 22.15                                   | 21.56 | 21.73 | 21.63     | 21.04 | 21.21 |
|                    |            | 3#1                   | 21.60                                   | 21.86 | 21.34 | 21.08     | 21.34 | 20.82 |
|                    |            | 3#2                   | 21.37                                   | 22.04 | 21.3  | 20.85     | 21.52 | 20.78 |
|                    |            | 6#0                   | 21.31                                   | 21.41 | 21.82 | 20.79     | 20.89 | 21.30 |
|                    | 16QAM      | 1#0                   | 22.04                                   | 21.60 | 21.28 | 21.52     | 21.08 | 20.76 |
|                    |            | 1#2                   | 22.09                                   | 21.35 | 21.62 | 21.57     | 20.83 | 21.10 |
|                    |            | 1#5                   | 22.06                                   | 21.49 | 21.71 | 21.54     | 20.97 | 21.19 |
|                    |            | 3#0                   | 21.43                                   | 22.07 | 21.6  | 20.91     | 21.55 | 21.08 |
|                    |            | 3#1                   | 21.73                                   | 21.81 | 21.88 | 21.21     | 21.29 | 21.36 |
|                    |            | 3#2                   | 21.59                                   | 21.9  | 21.2  | 21.07     | 21.38 | 20.68 |
|                    |            | 6#0                   | 21.66                                   | 21.12 | 21.04 | 21.14     | 20.60 | 20.52 |
| 3.0                | QPSK       | 1#0                   | 22.15                                   | 21.57 | 21.18 | 21.63     | 21.05 | 20.66 |
|                    |            | 1#7                   | 21.61                                   | 21.68 | 21.72 | 21.09     | 21.16 | 21.20 |
|                    |            | 1#14                  | 21.71                                   | 21.13 | 21.20 | 21.19     | 20.61 | 20.68 |
|                    |            | 8#0                   | 21.80                                   | 21.6  | 21.90 | 21.28     | 21.08 | 21.38 |
|                    |            | 8#4                   | 21.69                                   | 21.51 | 21.50 | 21.17     | 20.99 | 20.98 |
|                    |            | 8#7                   | 21.46                                   | 22.1  | 21.68 | 20.94     | 21.58 | 21.16 |
|                    |            | 15#0                  | 21.37                                   | 21.3  | 21.24 | 20.85     | 20.78 | 20.72 |
|                    | 16QAM      | 1#0                   | 21.96                                   | 22.08 | 21.29 | 21.44     | 21.56 | 20.77 |
|                    |            | 1#7                   | 21.29                                   | 21.92 | 21.46 | 20.77     | 21.40 | 20.94 |
|                    |            | 1#14                  | 21.59                                   | 22.01 | 21.40 | 21.07     | 21.49 | 20.88 |
|                    |            | 8#0                   | 21.57                                   | 21.14 | 21.93 | 21.05     | 20.62 | 21.41 |
|                    |            | 8#4                   | 21.34                                   | 21.29 | 21.38 | 20.82     | 20.77 | 20.86 |
|                    |            | 8#7                   | 21.62                                   | 22.05 | 21.59 | 21.10     | 21.53 | 21.07 |
|                    |            | 15#0                  | 22.12                                   | 21.83 | 21.11 | 21.60     | 21.31 | 20.59 |

| 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       | 1#0                   | 21.93                                   | 21.45 | 21.92 | 21.41     | 20.93 | 21.40 |
|                    |            | 1#12                  | 21.33                                   | 21.26 | 21.38 | 20.81     | 20.74 | 20.86 |
|                    |            | 1#24                  | 22.26                                   | 21.16 | 21.34 | 21.74     | 20.64 | 20.82 |
|                    |            | 12#0                  | 22.21                                   | 22.10 | 21.07 | 21.69     | 21.58 | 20.55 |
|                    |            | 12#6                  | 21.39                                   | 21.59 | 21.02 | 20.87     | 21.07 | 20.50 |
|                    |            | 12#11                 | 21.34                                   | 21.50 | 21.21 | 20.82     | 20.98 | 20.69 |
|                    |            | 25#0                  | 21.93                                   | 21.51 | 21.9  | 21.41     | 20.99 | 21.38 |
|                    | 16QAM      | 1#0                   | 21.55                                   | 21.90 | 21.85 | 21.03     | 21.38 | 21.33 |
|                    |            | 1#12                  | 22.09                                   | 21.20 | 21.13 | 21.57     | 20.68 | 20.61 |
|                    |            | 1#24                  | 21.69                                   | 21.6  | 21.58 | 21.17     | 21.08 | 21.06 |
|                    |            | 12#0                  | 21.93                                   | 21.22 | 21.83 | 21.41     | 20.70 | 21.31 |
|                    |            | 12#6                  | 21.47                                   | 21.82 | 21.28 | 20.95     | 21.30 | 20.76 |
|                    |            | 12#11                 | 21.39                                   | 22.04 | 21.71 | 20.87     | 21.52 | 21.19 |
|                    |            | 25#0                  | 21.72                                   | 21.78 | 21.59 | 21.20     | 21.26 | 21.07 |
| 10.0               | QPSK       | 1#0                   | 21.45                                   | 21.34 | 21.48 | 20.93     | 20.82 | 20.96 |
|                    |            | 1#24                  | 22.14                                   | 21.82 | 21.23 | 21.62     | 21.30 | 20.71 |
|                    |            | 1#49                  | 22.16                                   | 21.55 | 21.9  | 21.64     | 21.03 | 21.38 |
|                    |            | 25#0                  | 22.11                                   | 21.8  | 21.09 | 21.59     | 21.28 | 20.57 |
|                    |            | 25#12                 | 21.95                                   | 21.27 | 21.58 | 21.43     | 20.75 | 21.06 |
|                    |            | 25#24                 | 21.65                                   | 21.47 | 21.15 | 21.13     | 20.95 | 20.63 |
|                    |            | 50#0                  | 22.01                                   | 21.71 | 21.38 | 21.49     | 21.19 | 20.86 |
|                    | 16QAM      | 1#0                   | 21.75                                   | 22.08 | 21.29 | 21.23     | 21.56 | 20.77 |
|                    |            | 1#24                  | 22.00                                   | 22.08 | 21.41 | 21.48     | 21.56 | 20.89 |
|                    |            | 1#49                  | 21.92                                   | 21.53 | 21.49 | 21.40     | 21.01 | 20.97 |
|                    |            | 25#0                  | 21.99                                   | 22.08 | 21.32 | 21.47     | 21.56 | 20.80 |
|                    |            | 25#12                 | 21.36                                   | 22.03 | 21.62 | 20.84     | 21.51 | 21.10 |
|                    |            | 25#24                 | 21.80                                   | 21.16 | 21.59 | 21.28     | 20.64 | 21.07 |
|                    |            | 50#0                  | 21.31                                   | 21.14 | 21.09 | 20.79     | 20.62 | 20.57 |

| 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       | 1#0                   | 21.72                                   | 21.90 | 21.38 | 21.20     | 21.38 | 20.86 |
|                    |            | 1#37                  | 21.85                                   | 21.18 | 21.11 | 21.33     | 20.66 | 20.59 |
|                    |            | 1#74                  | 21.42                                   | 21.68 | 21.44 | 20.90     | 21.16 | 20.92 |
|                    |            | 36#0                  | 21.74                                   | 22.01 | 21.99 | 21.22     | 21.49 | 21.47 |
|                    |            | 36#18                 | 21.66                                   | 21.57 | 22.00 | 21.14     | 21.05 | 21.48 |
|                    |            | 36#37                 | 21.56                                   | 21.65 | 21.93 | 21.04     | 21.13 | 21.41 |
|                    |            | 75#0                  | 21.86                                   | 21.93 | 21.08 | 21.34     | 21.41 | 20.56 |
|                    | 16QAM      | 1#0                   | 21.73                                   | 21.56 | 21.13 | 21.21     | 21.04 | 20.61 |
|                    |            | 1#37                  | 22.22                                   | 21.30 | 21.37 | 21.70     | 20.78 | 20.85 |
|                    |            | 1#74                  | 22.05                                   | 21.35 | 21.05 | 21.53     | 20.83 | 20.53 |
|                    |            | 36#0                  | 21.67                                   | 21.77 | 21.25 | 21.15     | 21.25 | 20.73 |
|                    |            | 36#18                 | 21.95                                   | 21.86 | 21.43 | 21.43     | 21.34 | 20.91 |
|                    |            | 36#37                 | 21.39                                   | 21.63 | 21.86 | 20.87     | 21.11 | 21.34 |
|                    |            | 75#0                  | 21.84                                   | 21.57 | 21.29 | 21.32     | 21.05 | 20.77 |
| 20.0               | QPSK       | 1#0                   | 21.87                                   | 21.37 | 21.29 | 21.35     | 20.85 | 20.77 |
|                    |            | 1#49                  | 21.86                                   | 21.54 | 21.54 | 21.34     | 21.02 | 21.02 |
|                    |            | 1#99                  | 21.67                                   | 22.02 | 21.67 | 21.15     | 21.50 | 21.15 |
|                    |            | 50#0                  | 21.82                                   | 21.42 | 21.20 | 21.30     | 20.90 | 20.68 |
|                    |            | 50#24                 | 21.83                                   | 21.52 | 22.00 | 21.31     | 21.00 | 21.48 |
|                    |            | 50#49                 | 21.81                                   | 21.12 | 21.26 | 21.29     | 20.60 | 20.74 |
|                    |            | 100#0                 | 22.06                                   | 21.58 | 21.56 | 21.54     | 21.06 | 21.04 |
|                    | 16QAM      | 1#0                   | 21.83                                   | 21.69 | 21.14 | 21.31     | 21.17 | 20.62 |
|                    |            | 1#49                  | 21.92                                   | 21.57 | 21.79 | 21.40     | 21.05 | 21.27 |
|                    |            | 1#99                  | 22.23                                   | 21.81 | 21.84 | 21.71     | 21.29 | 21.32 |
|                    |            | 50#0                  | 21.68                                   | 21.41 | 21.77 | 21.16     | 20.89 | 21.25 |
|                    |            | 50#24                 | 21.60                                   | 21.66 | 21.99 | 21.08     | 21.14 | 21.47 |
|                    |            | 50#49                 | 21.34                                   | 21.16 | 21.67 | 20.82     | 20.64 | 21.15 |
|                    |            | 100#0                 | 21.48                                   | 21.29 | 22.02 | 20.96     | 20.77 | 21.50 |

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

For Band 4: Antenna Gain = -0.52dBi, Path Loss = 0dB

Limit: EIRP ≤ 30dBm

**LTE Band 5**

| 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       | 1#0                   | 21.34                                   | 21.49 | 21.72 | 16.42    | 16.57 | 16.80 |
|                    |            | 1#2                   | 21.52                                   | 21.67 | 21.99 | 16.60    | 16.75 | 17.07 |
|                    |            | 1#5                   | 22.02                                   | 21.15 | 21.35 | 17.10    | 16.23 | 16.43 |
|                    |            | 3#0                   | 22.00                                   | 21.58 | 21.19 | 17.08    | 16.66 | 16.27 |
|                    |            | 3#1                   | 21.70                                   | 21.30 | 21.50 | 16.78    | 16.38 | 16.58 |
|                    |            | 3#2                   | 22.15                                   | 21.95 | 21.53 | 17.23    | 17.03 | 16.61 |
|                    |            | 6#0                   | 21.84                                   | 21.67 | 21.62 | 16.92    | 16.75 | 16.70 |
|                    | 16QAM      | 1#0                   | 21.77                                   | 22.01 | 21.58 | 16.85    | 17.09 | 16.66 |
|                    |            | 1#2                   | 21.76                                   | 21.99 | 21.11 | 16.84    | 17.07 | 16.19 |
|                    |            | 1#5                   | 21.61                                   | 21.83 | 22.01 | 16.69    | 16.91 | 17.09 |
|                    |            | 3#0                   | 21.5                                    | 21.54 | 21.53 | 16.58    | 16.62 | 16.61 |
|                    |            | 3#1                   | 21.62                                   | 22.11 | 21.89 | 16.70    | 17.19 | 16.97 |
|                    |            | 3#2                   | 22.08                                   | 21.54 | 21.22 | 17.16    | 16.62 | 16.30 |
|                    |            | 6#0                   | 21.55                                   | 21.50 | 21.69 | 16.63    | 16.58 | 16.77 |
| 3.0                | QPSK       | 1#0                   | 22.14                                   | 21.82 | 21.88 | 17.22    | 16.90 | 16.96 |
|                    |            | 1#7                   | 21.91                                   | 21.41 | 21.35 | 16.99    | 16.49 | 16.43 |
|                    |            | 1#14                  | 21.39                                   | 21.38 | 21.72 | 16.47    | 16.46 | 16.80 |
|                    |            | 8#0                   | 21.53                                   | 21.58 | 21.37 | 16.61    | 16.66 | 16.45 |
|                    |            | 8#4                   | 22.03                                   | 21.82 | 21.46 | 17.11    | 16.90 | 16.54 |
|                    |            | 8#7                   | 21.69                                   | 21.53 | 21.34 | 16.77    | 16.61 | 16.42 |
|                    |            | 15#0                  | 22.25                                   | 22.00 | 21.45 | 17.33    | 17.08 | 16.53 |
|                    | 16QAM      | 1#0                   | 21.64                                   | 21.62 | 21.49 | 16.72    | 16.70 | 16.57 |
|                    |            | 1#7                   | 22.25                                   | 21.11 | 21.76 | 17.33    | 16.19 | 16.84 |
|                    |            | 1#14                  | 22.22                                   | 21.99 | 21.03 | 17.30    | 17.07 | 16.11 |
|                    |            | 8#0                   | 22.02                                   | 21.99 | 21.08 | 17.10    | 17.07 | 16.16 |
|                    |            | 8#4                   | 21.46                                   | 21.79 | 21.65 | 16.54    | 16.87 | 16.73 |
|                    |            | 8#7                   | 21.63                                   | 21.62 | 21.47 | 16.71    | 16.70 | 16.55 |
|                    |            | 15#0                  | 21.55                                   | 21.91 | 21.81 | 16.63    | 16.99 | 16.89 |

| 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       | 1#0                   | 21.85                                   | 21.30 | 21.74 | 16.93    | 16.38 | 16.82 |
|                    |            | 1#12                  | 22.24                                   | 21.29 | 21.64 | 17.32    | 16.37 | 16.72 |
|                    |            | 1#24                  | 21.60                                   | 21.43 | 21.35 | 16.68    | 16.51 | 16.43 |
|                    |            | 12#0                  | 21.76                                   | 21.78 | 21.05 | 16.84    | 16.86 | 16.13 |
|                    |            | 12#6                  | 22.15                                   | 21.74 | 21.27 | 17.23    | 16.82 | 16.35 |
|                    |            | 12#11                 | 21.47                                   | 21.47 | 21.09 | 16.55    | 16.55 | 16.17 |
|                    |            | 25#0                  | 21.73                                   | 21.11 | 21.22 | 16.81    | 16.19 | 16.30 |
|                    | 16QAM      | 1#0                   | 21.92                                   | 21.84 | 21.32 | 17.00    | 16.92 | 16.40 |
|                    |            | 1#12                  | 22.01                                   | 21.16 | 21.63 | 17.09    | 16.24 | 16.71 |
|                    |            | 1#24                  | 21.50                                   | 21.14 | 21.10 | 16.58    | 16.22 | 16.18 |
|                    |            | 12#0                  | 21.43                                   | 21.16 | 21.81 | 16.51    | 16.24 | 16.89 |
|                    |            | 12#6                  | 21.95                                   | 21.92 | 21.31 | 17.03    | 17.00 | 16.39 |
|                    |            | 12#11                 | 21.66                                   | 21.27 | 21.26 | 16.74    | 16.35 | 16.34 |
|                    |            | 25#0                  | 22.23                                   | 21.71 | 21.40 | 17.31    | 16.79 | 16.48 |
| 10.0               | QPSK       | 1#0                   | 21.8                                    | 21.99 | 21.92 | 16.88    | 17.07 | 17.00 |
|                    |            | 1#24                  | 21.38                                   | 21.60 | 21.37 | 16.46    | 16.68 | 16.45 |
|                    |            | 1#49                  | 22.03                                   | 21.33 | 21.57 | 17.11    | 16.41 | 16.65 |
|                    |            | 25#0                  | 21.60                                   | 21.89 | 21.30 | 16.68    | 16.97 | 16.38 |
|                    |            | 25#12                 | 22.22                                   | 21.40 | 21.69 | 17.30    | 16.48 | 16.77 |
|                    |            | 25#24                 | 21.35                                   | 21.28 | 21.45 | 16.43    | 16.36 | 16.53 |
|                    |            | 50#0                  | 21.67                                   | 21.58 | 21.85 | 16.75    | 16.66 | 16.93 |
|                    | 16QAM      | 1#0                   | 21.75                                   | 22.11 | 21.27 | 16.83    | 17.19 | 16.35 |
|                    |            | 1#24                  | 21.59                                   | 21.68 | 21.84 | 16.67    | 16.76 | 16.92 |
|                    |            | 1#49                  | 22.00                                   | 21.90 | 21.56 | 17.08    | 16.98 | 16.64 |
|                    |            | 25#0                  | 21.88                                   | 21.80 | 21.54 | 16.96    | 16.88 | 16.62 |
|                    |            | 25#12                 | 22.24                                   | 21.17 | 21.25 | 17.32    | 16.25 | 16.33 |
|                    |            | 25#24                 | 21.42                                   | 21.46 | 21.69 | 16.50    | 16.54 | 16.77 |
|                    |            | 50#0                  | 21.29                                   | 21.73 | 22.00 | 16.37    | 16.81 | 17.08 |

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

For Band5: Antenna Gain = -2.77dBi = -4.92dBd (0dBd = 2.15dBi), Path Loss = 0dB

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                  | QPSK       | 1#0                   | 21.95                                   | 21.32 | 22.00 | 23.60     | 22.97 | 23.65 |
|                    |            | 1#12                  | 22.12                                   | 21.49 | 21.43 | 23.77     | 23.14 | 23.08 |
|                    |            | 1#24                  | 21.92                                   | 21.16 | 21.53 | 23.57     | 22.81 | 23.18 |
|                    |            | 12#0                  | 21.37                                   | 21.36 | 21.63 | 23.02     | 23.01 | 23.28 |
|                    |            | 12#6                  | 21.42                                   | 21.46 | 21.71 | 23.07     | 23.11 | 23.36 |
|                    |            | 12#11                 | 21.87                                   | 21.37 | 21.76 | 23.52     | 23.02 | 23.41 |
|                    |            | 25#0                  | 22.11                                   | 21.30 | 21.12 | 23.76     | 22.95 | 22.77 |
|                    | 16QAM      | 1#0                   | 22.03                                   | 21.94 | 21.07 | 23.68     | 23.59 | 22.72 |
|                    |            | 1#12                  | 21.3                                    | 22.09 | 21.56 | 22.95     | 23.74 | 23.21 |
|                    |            | 1#24                  | 22.26                                   | 22.04 | 21.38 | 23.91     | 23.69 | 23.03 |
|                    |            | 12#0                  | 21.95                                   | 21.51 | 21.42 | 23.60     | 23.16 | 23.07 |
|                    |            | 12#6                  | 22.03                                   | 21.40 | 21.38 | 23.68     | 23.05 | 23.03 |
|                    |            | 12#11                 | 22.01                                   | 21.84 | 21.05 | 23.66     | 23.49 | 22.70 |
|                    |            | 25#0                  | 21.43                                   | 21.83 | 21.34 | 23.08     | 23.48 | 22.99 |
| 10                 | QPSK       | 1#0                   | 21.52                                   | 21.19 | 21.8  | 23.17     | 22.84 | 23.45 |
|                    |            | 1#24                  | 21.53                                   | 22.02 | 21.50 | 23.18     | 23.67 | 23.15 |
|                    |            | 1#49                  | 21.45                                   | 21.50 | 21.02 | 23.10     | 23.15 | 22.67 |
|                    |            | 25#0                  | 21.48                                   | 22.09 | 21.72 | 23.13     | 23.74 | 23.37 |
|                    |            | 25#12                 | 21.74                                   | 22.05 | 21.53 | 23.39     | 23.70 | 23.18 |
|                    |            | 25#24                 | 22.11                                   | 22.06 | 21.14 | 23.76     | 23.71 | 22.79 |
|                    |            | 50#0                  | 21.60                                   | 21.25 | 21.78 | 23.25     | 22.90 | 23.43 |
|                    | 16QAM      | 1#0                   | 21.65                                   | 21.91 | 21.68 | 23.30     | 23.56 | 23.33 |
|                    |            | 1#24                  | 21.65                                   | 21.22 | 21.62 | 23.30     | 22.87 | 23.27 |
|                    |            | 1#49                  | 21.99                                   | 21.91 | 21.77 | 23.64     | 23.56 | 23.42 |
|                    |            | 25#0                  | 21.33                                   | 22.04 | 21.84 | 22.98     | 23.69 | 23.49 |
|                    |            | 25#12                 | 22.16                                   | 21.17 | 21.16 | 23.81     | 22.82 | 22.81 |
|                    |            | 25#24                 | 21.86                                   | 21.23 | 21.75 | 23.51     | 22.88 | 23.40 |
|                    |            | 50#0                  | 21.65                                   | 21.81 | 21.1  | 23.30     | 23.46 | 22.75 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 15                 | QPSK       | 1#0                   | 22.08                                   | 21.65 | 21.58 | 23.73     | 23.30 | 23.23 |
|                    |            | 1#37                  | 21.84                                   | 21.82 | 21.51 | 23.49     | 23.47 | 23.16 |
|                    |            | 1#74                  | 21.42                                   | 21.59 | 21.25 | 23.07     | 23.24 | 22.90 |
|                    |            | 36#0                  | 22.11                                   | 21.22 | 21.13 | 23.76     | 22.87 | 22.78 |
|                    |            | 36#18                 | 21.52                                   | 22    | 21.71 | 23.17     | 23.65 | 23.36 |
|                    |            | 36#37                 | 21.61                                   | 21.29 | 21.73 | 23.26     | 22.94 | 23.38 |
|                    |            | 75#0                  | 21.83                                   | 22    | 21.2  | 23.48     | 23.65 | 22.85 |
|                    | 16QAM      | 1#0                   | 21.93                                   | 21.93 | 21.54 | 23.58     | 23.58 | 23.19 |
|                    |            | 1#37                  | 22.02                                   | 21.87 | 21.73 | 23.67     | 23.52 | 23.38 |
|                    |            | 1#74                  | 21.48                                   | 21.39 | 21.72 | 23.13     | 23.04 | 23.37 |
|                    |            | 36#0                  | 21.4                                    | 21.29 | 21.89 | 23.05     | 22.94 | 23.54 |
|                    |            | 36#18                 | 21.49                                   | 21.28 | 21.04 | 23.14     | 22.93 | 22.69 |
|                    |            | 36#37                 | 21.47                                   | 21.83 | 21.07 | 23.12     | 23.48 | 22.72 |
|                    |            | 75#0                  | 21.78                                   | 21.27 | 21.96 | 23.43     | 22.92 | 23.61 |
| 20                 | QPSK       | 1#0                   | 21.27                                   | 21.59 | 21.57 | 22.92     | 23.24 | 23.22 |
|                    |            | 1#49                  | 21.41                                   | 21.79 | 21.14 | 23.06     | 23.44 | 22.79 |
|                    |            | 1#99                  | 21.57                                   | 21.65 | 21.17 | 23.22     | 23.30 | 22.82 |
|                    |            | 50#0                  | 21.32                                   | 21.87 | 21.07 | 22.97     | 23.52 | 22.72 |
|                    |            | 50#24                 | 22.16                                   | 21.18 | 21.22 | 23.81     | 22.83 | 22.87 |
|                    |            | 50#49                 | 22.14                                   | 21.11 | 21.35 | 23.79     | 22.76 | 23.00 |
|                    |            | 100#0                 | 22.22                                   | 21.68 | 21.96 | 23.87     | 23.33 | 23.61 |
|                    | 16QAM      | 1#0                   | 21.79                                   | 21.65 | 21.82 | 23.44     | 23.30 | 23.47 |
|                    |            | 1#49                  | 21.49                                   | 21.36 | 21.49 | 23.14     | 23.01 | 23.14 |
|                    |            | 1#99                  | 22.02                                   | 21.72 | 21.04 | 23.67     | 23.37 | 22.69 |
|                    |            | 50#0                  | 21.72                                   | 21.69 | 21.32 | 23.37     | 23.34 | 22.97 |
|                    |            | 50#24                 | 22.06                                   | 22.01 | 21.27 | 23.71     | 23.66 | 22.92 |
|                    |            | 50#49                 | 21.59                                   | 21.73 | 21.03 | 23.24     | 23.38 | 22.68 |
|                    |            | 100#0                 | 22.1                                    | 21.34 | 21.82 | 23.75     | 22.99 | 23.47 |

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

For Band 7: Antenna Gain = 1.65dBi, Path Loss = 0dB

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       | 1#0                   | 22.08                                   | 21.42 | 21.21 | 16.11    | 15.45 | 15.24 |
|                    |            | 1#2                   | 21.99                                   | 21.47 | 21.18 | 16.02    | 15.50 | 15.21 |
|                    |            | 1#5                   | 21.73                                   | 21.54 | 21.46 | 15.76    | 15.57 | 15.49 |
|                    |            | 3#0                   | 22.1                                    | 22.1  | 21.93 | 16.13    | 16.13 | 15.96 |
|                    |            | 3#1                   | 22.18                                   | 21.21 | 21.16 | 16.21    | 15.24 | 15.19 |
|                    |            | 3#2                   | 22.08                                   | 21.78 | 21.57 | 16.11    | 15.81 | 15.60 |
|                    |            | 6#0                   | 21.41                                   | 21.57 | 21.65 | 15.44    | 15.60 | 15.68 |
|                    | 16QAM      | 1#0                   | 21.51                                   | 21.31 | 21.05 | 15.54    | 15.34 | 15.08 |
|                    |            | 1#2                   | 22.08                                   | 21.58 | 21.48 | 16.11    | 15.61 | 15.51 |
|                    |            | 1#5                   | 21.58                                   | 21.45 | 21.62 | 15.61    | 15.48 | 15.65 |
|                    |            | 3#0                   | 21.94                                   | 21.55 | 21.39 | 15.97    | 15.58 | 15.42 |
|                    |            | 3#1                   | 21.34                                   | 22.06 | 21.37 | 15.37    | 16.09 | 15.40 |
|                    |            | 3#2                   | 21.84                                   | 21.33 | 21.86 | 15.87    | 15.36 | 15.89 |
|                    |            | 6#0                   | 21.66                                   | 21.51 | 21.06 | 15.69    | 15.54 | 15.09 |
| 3.0                | QPSK       | 1#0                   | 21.82                                   | 21.54 | 22.00 | 15.85    | 15.57 | 16.03 |
|                    |            | 1#7                   | 22.23                                   | 22.03 | 21.17 | 16.26    | 16.06 | 15.20 |
|                    |            | 1#14                  | 21.36                                   | 21.43 | 21.61 | 15.39    | 15.46 | 15.64 |
|                    |            | 8#0                   | 21.96                                   | 21.91 | 21.59 | 15.99    | 15.94 | 15.62 |
|                    |            | 8#4                   | 21.97                                   | 21.76 | 21.44 | 16.00    | 15.79 | 15.47 |
|                    |            | 8#7                   | 21.93                                   | 22.02 | 21.95 | 15.96    | 16.05 | 15.98 |
|                    |            | 15#0                  | 22.11                                   | 21.16 | 21.7  | 16.14    | 15.19 | 15.73 |
|                    | 16QAM      | 1#0                   | 21.39                                   | 21.17 | 21.79 | 15.42    | 15.20 | 15.82 |
|                    |            | 1#7                   | 22.22                                   | 21.82 | 21.05 | 16.25    | 15.85 | 15.08 |
|                    |            | 1#14                  | 21.55                                   | 21.28 | 21.39 | 15.58    | 15.31 | 15.42 |
|                    |            | 8#0                   | 22.13                                   | 21.69 | 21.47 | 16.16    | 15.72 | 15.50 |
|                    |            | 8#4                   | 22.16                                   | 21.43 | 21.33 | 16.19    | 15.46 | 15.36 |
|                    |            | 8#7                   | 21.39                                   | 21.7  | 21.21 | 15.42    | 15.73 | 15.24 |
|                    |            | 15#0                  | 22.04                                   | 21.57 | 21.34 | 16.07    | 15.60 | 15.37 |

| 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       | 1#0                   | 21.81                                   | 21.75 | 21.67 | 15.84    | 15.78 | 15.70 |
|                    |            | 1#12                  | 21.39                                   | 22.07 | 21.74 | 15.42    | 16.10 | 15.77 |
|                    |            | 1#24                  | 21.76                                   | 21.12 | 21.16 | 15.79    | 15.15 | 15.19 |
|                    |            | 12#0                  | 21.38                                   | 21.32 | 21.84 | 15.41    | 15.35 | 15.87 |
|                    |            | 12#6                  | 22.05                                   | 21.73 | 21.13 | 16.08    | 15.76 | 15.16 |
|                    |            | 12#11                 | 22.09                                   | 21.54 | 21.47 | 16.12    | 15.57 | 15.50 |
|                    |            | 25#0                  | 21.91                                   | 21.53 | 21.35 | 15.94    | 15.56 | 15.38 |
|                    | 16QAM      | 1#0                   | 21.33                                   | 21.14 | 21.24 | 15.36    | 15.17 | 15.27 |
|                    |            | 1#12                  | 21.32                                   | 21.5  | 21.11 | 15.35    | 15.53 | 15.14 |
|                    |            | 1#24                  | 21.76                                   | 21.85 | 21.78 | 15.79    | 15.88 | 15.81 |
|                    |            | 12#0                  | 21.68                                   | 21.35 | 21.65 | 15.71    | 15.38 | 15.68 |
|                    |            | 12#6                  | 21.69                                   | 21.35 | 21.86 | 15.72    | 15.38 | 15.89 |
|                    |            | 12#11                 | 21.4                                    | 21.5  | 21.39 | 15.43    | 15.53 | 15.42 |
|                    |            | 25#0                  | 21.33                                   | 21.87 | 21.39 | 15.36    | 15.90 | 15.42 |
| 10.0               | QPSK       | 1#0                   | 21.51                                   | 21.99 | 21.33 | 15.54    | 16.02 | 15.36 |
|                    |            | 1#24                  | 22.24                                   | 21.47 | 21.84 | 16.27    | 15.50 | 15.87 |
|                    |            | 1#49                  | 21.66                                   | 21.83 | 21.66 | 15.69    | 15.86 | 15.69 |
|                    |            | 25#0                  | 21.31                                   | 21.39 | 21.52 | 15.34    | 15.42 | 15.55 |
|                    |            | 25#12                 | 21.61                                   | 22.06 | 21.14 | 15.64    | 16.09 | 15.17 |
|                    |            | 25#24                 | 21.64                                   | 21.7  | 21.9  | 15.67    | 15.73 | 15.93 |
|                    |            | 50#0                  | 22.01                                   | 21.19 | 22.01 | 16.04    | 15.22 | 16.04 |
|                    | 16QAM      | 1#0                   | 22.26                                   | 21.99 | 21.49 | 16.29    | 16.02 | 15.52 |
|                    |            | 1#24                  | 21.52                                   | 21.48 | 21.19 | 15.55    | 15.51 | 15.22 |
|                    |            | 1#49                  | 21.75                                   | 21.38 | 22.01 | 15.78    | 15.41 | 16.04 |
|                    |            | 25#0                  | 21.38                                   | 21.31 | 21.79 | 15.41    | 15.34 | 15.82 |
|                    |            | 25#12                 | 21.43                                   | 21.69 | 21.8  | 15.46    | 15.72 | 15.83 |
|                    |            | 25#24                 | 21.54                                   | 21.77 | 21.65 | 15.57    | 15.80 | 15.68 |
|                    |            | 50#0                  | 21.93                                   | 21.97 | 21.18 | 15.96    | 16.00 | 15.21 |

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

For Band 12: Antenna Gain = -3.82dBi = -5.97dBd (0dBd=2.15dBi), Path Loss = 0dB

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       | 1#0                   | 21.57                                   | 21.86 | 21.05 | 15.60    | 15.89 | 15.08 |
|                    |            | 1#12                  | 21.6                                    | 21.9  | 21.65 | 15.63    | 15.93 | 15.68 |
|                    |            | 1#24                  | 21.59                                   | 21.86 | 21.89 | 15.62    | 15.89 | 15.92 |
|                    |            | 12#0                  | 21.84                                   | 21.53 | 21.5  | 15.87    | 15.56 | 15.53 |
|                    |            | 12#6                  | 21.27                                   | 21.25 | 21.31 | 15.30    | 15.28 | 15.34 |
|                    |            | 12#11                 | 21.78                                   | 21.73 | 21.4  | 15.81    | 15.76 | 15.43 |
|                    |            | 25#0                  | 22.11                                   | 21.48 | 21.72 | 16.14    | 15.51 | 15.75 |
|                    | 16QAM      | 1#0                   | 22.03                                   | 21.28 | 21.51 | 16.06    | 15.31 | 15.54 |
|                    |            | 1#12                  | 21.48                                   | 21.33 | 21.12 | 15.51    | 15.36 | 15.15 |
|                    |            | 1#24                  | 21.85                                   | 21.39 | 21.69 | 15.88    | 15.42 | 15.72 |
|                    |            | 12#0                  | 21.82                                   | 21.24 | 21.48 | 15.85    | 15.27 | 15.51 |
|                    |            | 12#6                  | 21.88                                   | 21.27 | 21.92 | 15.91    | 15.30 | 15.95 |
|                    |            | 12#11                 | 22.04                                   | 21.24 | 21.03 | 16.07    | 15.27 | 15.06 |
|                    |            | 25#0                  | 21.63                                   | 21.91 | 21.92 | 15.66    | 15.94 | 15.95 |
| 10.0               | QPSK       | 1#0                   | 21.78                                   | 21.26 | 21.88 | 15.81    | 15.29 | 15.91 |
|                    |            | 1#24                  | 21.56                                   | 21.5  | 21.84 | 15.59    | 15.53 | 15.87 |
|                    |            | 1#49                  | 22.07                                   | 21.31 | 21.12 | 16.10    | 15.34 | 15.15 |
|                    |            | 25#0                  | 21.28                                   | 21.33 | 21.79 | 15.31    | 15.36 | 15.82 |
|                    |            | 25#12                 | 21.42                                   | 21.52 | 21.14 | 15.45    | 15.55 | 15.17 |
|                    |            | 25#24                 | 21.82                                   | 21.22 | 21.58 | 15.85    | 15.25 | 15.61 |
|                    |            | 50#0                  | 21.33                                   | 21.69 | 21.43 | 15.36    | 15.72 | 15.46 |
|                    | 16QAM      | 1#0                   | 21.41                                   | 21.41 | 21.13 | 15.44    | 15.44 | 15.16 |
|                    |            | 1#24                  | 21.43                                   | 21.68 | 21.29 | 15.46    | 15.71 | 15.32 |
|                    |            | 1#49                  | 22.11                                   | 21.37 | 21.23 | 16.14    | 15.40 | 15.26 |
|                    |            | 25#0                  | 21.73                                   | 21.95 | 21.64 | 15.76    | 15.98 | 15.67 |
|                    |            | 25#12                 | 21.54                                   | 22.02 | 21.15 | 15.57    | 16.05 | 15.18 |
|                    |            | 25#24                 | 21.88                                   | 21.84 | 21.71 | 15.91    | 15.87 | 15.74 |
|                    |            | 50#0                  | 21.88                                   | 21.89 | 21.1  | 15.91    | 15.92 | 15.13 |

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

For Band 17: Antenna Gain = -3.82dBi = -5.97dBd (0dBd= 2.15dBi), Path Loss = 0dB

Limit: ERP ≤ 34.77dBm

**LTE Band 25:**

| 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       | 1#0                   | 21.61                                   | 21.47 | 21.1  | 21.55     | 21.41 | 21.04 |
|                    |            | 1#2                   | 21.58                                   | 21.94 | 21.45 | 21.52     | 21.88 | 21.39 |
|                    |            | 1#5                   | 21.73                                   | 21.61 | 21.54 | 21.67     | 21.55 | 21.48 |
|                    |            | 3#0                   | 21.46                                   | 21.72 | 21.12 | 21.40     | 21.66 | 21.06 |
|                    |            | 3#1                   | 22.15                                   | 21.46 | 21.16 | 22.09     | 21.40 | 21.10 |
|                    |            | 3#2                   | 21.55                                   | 21.6  | 21.19 | 21.49     | 21.54 | 21.13 |
|                    |            | 6#0                   | 21.26                                   | 21.46 | 21.47 | 21.20     | 21.40 | 21.41 |
|                    | 16QAM      | 1#0                   | 21.89                                   | 21.94 | 21.73 | 21.83     | 21.88 | 21.67 |
|                    |            | 1#2                   | 21.93                                   | 21.92 | 21.98 | 21.87     | 21.86 | 21.92 |
|                    |            | 1#5                   | 22.1                                    | 21.59 | 21.24 | 22.04     | 21.53 | 21.18 |
|                    |            | 3#0                   | 22.13                                   | 21.74 | 21.29 | 22.07     | 21.68 | 21.23 |
|                    |            | 3#1                   | 21.26                                   | 21.46 | 21.16 | 21.20     | 21.40 | 21.10 |
|                    |            | 3#2                   | 21.46                                   | 21.5  | 21.76 | 21.40     | 21.44 | 21.70 |
|                    |            | 6#0                   | 21.35                                   | 22.02 | 21.32 | 21.29     | 21.96 | 21.26 |
| 3                  | QPSK       | 1#0                   | 21.82                                   | 21.54 | 21.12 | 21.76     | 21.48 | 21.06 |
|                    |            | 1#7                   | 21.96                                   | 22.1  | 21.34 | 21.90     | 22.04 | 21.28 |
|                    |            | 1#14                  | 21.63                                   | 21.81 | 21.69 | 21.57     | 21.75 | 21.63 |
|                    |            | 8#0                   | 22.02                                   | 21.26 | 21.68 | 21.96     | 21.20 | 21.62 |
|                    |            | 8#4                   | 21.74                                   | 21.54 | 22    | 21.68     | 21.48 | 21.94 |
|                    |            | 8#7                   | 22.24                                   | 21.63 | 21.92 | 22.18     | 21.57 | 21.86 |
|                    |            | 15#0                  | 21.41                                   | 21.39 | 21.28 | 21.35     | 21.33 | 21.22 |
|                    | 16QAM      | 1#0                   | 21.3                                    | 22.02 | 21.48 | 21.24     | 21.96 | 21.42 |
|                    |            | 1#7                   | 21.72                                   | 21.36 | 21.65 | 21.66     | 21.30 | 21.59 |
|                    |            | 1#14                  | 21.3                                    | 21.45 | 21.76 | 21.24     | 21.39 | 21.70 |
|                    |            | 8#0                   | 21.52                                   | 21.24 | 21.86 | 21.46     | 21.18 | 21.80 |
|                    |            | 8#4                   | 21.79                                   | 22.1  | 21.57 | 21.73     | 22.04 | 21.51 |
|                    |            | 8#7                   | 21.28                                   | 21.39 | 21.76 | 21.22     | 21.33 | 21.70 |
|                    |            | 15#0                  | 21.38                                   | 21.77 | 21.05 | 21.32     | 21.71 | 20.99 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 5                  | QPSK       | 1#0                   | 21.94                                   | 21.62 | 21.73 | 21.88     | 21.56 | 21.67 |
|                    |            | 1#12                  | 21.54                                   | 21.35 | 21.36 | 21.48     | 21.29 | 21.30 |
|                    |            | 1#24                  | 21.39                                   | 21.72 | 21.6  | 21.33     | 21.66 | 21.54 |
|                    |            | 12#0                  | 21.33                                   | 21.97 | 21.59 | 21.27     | 21.91 | 21.53 |
|                    |            | 12#6                  | 21.88                                   | 21.83 | 21.14 | 21.82     | 21.77 | 21.08 |
|                    |            | 12#11                 | 21.62                                   | 21.86 | 21.84 | 21.56     | 21.80 | 21.78 |
|                    |            | 25#0                  | 21.78                                   | 21.52 | 21.47 | 21.72     | 21.46 | 21.41 |
|                    | 16QAM      | 1#0                   | 21.59                                   | 21.72 | 21.09 | 21.53     | 21.66 | 21.03 |
|                    |            | 1#12                  | 21.81                                   | 22.07 | 21.38 | 21.75     | 22.01 | 21.32 |
|                    |            | 1#24                  | 21.88                                   | 21.11 | 21.28 | 21.82     | 21.05 | 21.22 |
|                    |            | 12#0                  | 21.81                                   | 21.85 | 21.16 | 21.75     | 21.79 | 21.10 |
|                    |            | 12#6                  | 21.38                                   | 21.28 | 21.47 | 21.32     | 21.22 | 21.41 |
|                    |            | 12#11                 | 21.8                                    | 21.8  | 21.46 | 21.74     | 21.74 | 21.40 |
|                    |            | 25#0                  | 21.62                                   | 21.31 | 21.65 | 21.56     | 21.25 | 21.59 |
| 10                 | QPSK       | 1#0                   | 22.18                                   | 21.3  | 21.47 | 22.12     | 21.24 | 21.41 |
|                    |            | 1#24                  | 21.8                                    | 21.29 | 21.49 | 21.74     | 21.23 | 21.43 |
|                    |            | 1#49                  | 21.31                                   | 21.23 | 21.53 | 21.25     | 21.17 | 21.47 |
|                    |            | 25#0                  | 21.6                                    | 21.75 | 21.12 | 21.54     | 21.69 | 21.06 |
|                    |            | 25#12                 | 21.52                                   | 21.14 | 21.42 | 21.46     | 21.08 | 21.36 |
|                    |            | 25#24                 | 21.72                                   | 21.44 | 21.46 | 21.66     | 21.38 | 21.40 |
|                    |            | 50#0                  | 21.51                                   | 21.81 | 21.8  | 21.45     | 21.75 | 21.74 |
|                    | 16QAM      | 1#0                   | 21.5                                    | 21.55 | 21.93 | 21.44     | 21.49 | 21.87 |
|                    |            | 1#24                  | 22.19                                   | 21.78 | 21.34 | 22.13     | 21.72 | 21.28 |
|                    |            | 1#49                  | 21.53                                   | 21.41 | 21.07 | 21.47     | 21.35 | 21.01 |
|                    |            | 25#0                  | 21.44                                   | 21.98 | 22.01 | 21.38     | 21.92 | 21.95 |
|                    |            | 25#12                 | 22.17                                   | 21.33 | 21.41 | 22.11     | 21.27 | 21.35 |
|                    |            | 25#24                 | 21.67                                   | 21.37 | 21.46 | 21.61     | 21.31 | 21.40 |
|                    |            | 50#0                  | 21.27                                   | 22.08 | 21.44 | 21.21     | 22.02 | 21.38 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 15                 | QPSK       | 1#0                   | 22.23                                   | 21.84 | 21.26 | 22.17     | 21.78 | 21.20 |
|                    |            | 1#37                  | 21.7                                    | 21.18 | 21.69 | 21.64     | 21.12 | 21.63 |
|                    |            | 1#74                  | 21.34                                   | 21.45 | 21.19 | 21.28     | 21.39 | 21.13 |
|                    |            | 36#0                  | 22.22                                   | 22    | 21.5  | 22.16     | 21.94 | 21.44 |
|                    |            | 36#18                 | 21.98                                   | 22.05 | 21.15 | 21.92     | 21.99 | 21.09 |
|                    |            | 36#37                 | 21.78                                   | 21.78 | 21.26 | 21.72     | 21.72 | 21.20 |
|                    |            | 75#0                  | 21.63                                   | 21.28 | 21.91 | 21.57     | 21.22 | 21.85 |
|                    | 16QAM      | 1#0                   | 21.38                                   | 22.03 | 21.27 | 21.32     | 21.97 | 21.21 |
|                    |            | 1#37                  | 21.34                                   | 21.4  | 21.49 | 21.28     | 21.34 | 21.43 |
|                    |            | 1#74                  | 21.72                                   | 21.83 | 21.29 | 21.66     | 21.77 | 21.23 |
|                    |            | 36#0                  | 21.62                                   | 21.73 | 21.38 | 21.56     | 21.67 | 21.32 |
|                    |            | 36#18                 | 22.19                                   | 21.69 | 21.8  | 22.13     | 21.63 | 21.74 |
|                    |            | 36#37                 | 21.32                                   | 21.66 | 21.27 | 21.26     | 21.60 | 21.21 |
|                    |            | 75#0                  | 22.22                                   | 21.92 | 21.69 | 22.16     | 21.86 | 21.63 |
| 20                 | QPSK       | 1#0                   | 22.01                                   | 21.35 | 21.41 | 21.95     | 21.29 | 21.35 |
|                    |            | 1#49                  | 21.36                                   | 22.04 | 21.28 | 21.30     | 21.98 | 21.22 |
|                    |            | 1#99                  | 22.15                                   | 22.03 | 21.72 | 22.09     | 21.97 | 21.66 |
|                    |            | 50#0                  | 21.59                                   | 21.82 | 21.05 | 21.53     | 21.76 | 20.99 |
|                    |            | 50#24                 | 21.75                                   | 21.21 | 21.45 | 21.69     | 21.15 | 21.39 |
|                    |            | 50#49                 | 22.25                                   | 22.09 | 21.73 | 22.19     | 22.03 | 21.67 |
|                    |            | 100#0                 | 21.37                                   | 21.93 | 21.93 | 21.31     | 21.87 | 21.87 |
|                    | 16QAM      | 1#0                   | 21.69                                   | 21.43 | 21.5  | 21.63     | 21.37 | 21.44 |
|                    |            | 1#49                  | 21.69                                   | 21.12 | 21.76 | 21.63     | 21.06 | 21.70 |
|                    |            | 1#99                  | 22.14                                   | 21.12 | 21.86 | 22.08     | 21.06 | 21.80 |
|                    |            | 50#0                  | 21.29                                   | 21.68 | 21.42 | 21.23     | 21.62 | 21.36 |
|                    |            | 50#24                 | 22.09                                   | 21.79 | 21.72 | 22.03     | 21.73 | 21.66 |
|                    |            | 50#49                 | 21.81                                   | 21.92 | 21.23 | 21.75     | 21.86 | 21.17 |
|                    |            | 100#0                 | 21.46                                   | 21.63 | 21.48 | 21.40     | 21.57 | 21.42 |

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

For Band 25: Antenna Gain = -0.06dBi, Path Loss= 0dB

Limit: EIRP≤33dBm



**LTE Band 26:**

| 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       | 1#0                   | 22.14                                   | 21.59 | 21.57 | 17.22    | 16.67 | 16.65 |
|                    |            | 1#2                   | 21.84                                   | 21.64 | 21.84 | 16.92    | 16.72 | 16.92 |
|                    |            | 1#5                   | 21.53                                   | 21.99 | 21.82 | 16.61    | 17.07 | 16.90 |
|                    |            | 3#0                   | 21.6                                    | 21.84 | 21.52 | 16.68    | 16.92 | 16.60 |
|                    |            | 3#1                   | 21.53                                   | 21.63 | 21.76 | 16.61    | 16.71 | 16.84 |
|                    |            | 3#2                   | 21.37                                   | 21.47 | 21.33 | 16.45    | 16.55 | 16.41 |
|                    |            | 6#0                   | 21.61                                   | 21.38 | 22    | 16.69    | 16.46 | 17.08 |
|                    | 16QAM      | 1#0                   | 21.67                                   | 21.4  | 21.44 | 16.75    | 16.48 | 16.52 |
|                    |            | 1#2                   | 22.16                                   | 21.52 | 21.86 | 17.24    | 16.60 | 16.94 |
|                    |            | 1#5                   | 21.79                                   | 21.67 | 22    | 16.87    | 16.75 | 17.08 |
|                    |            | 3#0                   | 21.91                                   | 21.31 | 21.27 | 16.99    | 16.39 | 16.35 |
|                    |            | 3#1                   | 21.38                                   | 21.95 | 21.89 | 16.46    | 17.03 | 16.97 |
|                    |            | 3#2                   | 22.01                                   | 21.15 | 21.34 | 17.09    | 16.23 | 16.42 |
|                    |            | 6#0                   | 21.88                                   | 22    | 21.41 | 16.96    | 17.08 | 16.49 |
| 3                  | QPSK       | 1#0                   | 21.43                                   | 21.35 | 21.36 | 16.51    | 16.43 | 16.44 |
|                    |            | 1#7                   | 21.55                                   | 21.97 | 21.65 | 16.63    | 17.05 | 16.73 |
|                    |            | 1#14                  | 22.03                                   | 21.33 | 21.09 | 17.11    | 16.41 | 16.17 |
|                    |            | 8#0                   | 22.21                                   | 21.15 | 21.45 | 17.29    | 16.23 | 16.53 |
|                    |            | 8#4                   | 22.09                                   | 21.35 | 21.25 | 17.17    | 16.43 | 16.33 |
|                    |            | 8#7                   | 21.6                                    | 21.65 | 21.48 | 16.68    | 16.73 | 16.56 |
|                    |            | 15#0                  | 22.07                                   | 21.8  | 21.68 | 17.15    | 16.88 | 16.76 |
|                    | 16QAM      | 1#0                   | 21.4                                    | 21.4  | 21.43 | 16.48    | 16.48 | 16.51 |
|                    |            | 1#7                   | 21.95                                   | 21.38 | 21.56 | 17.03    | 16.46 | 16.64 |
|                    |            | 1#14                  | 21.41                                   | 21.94 | 21.41 | 16.49    | 17.02 | 16.49 |
|                    |            | 8#0                   | 21.85                                   | 21.94 | 21.3  | 16.93    | 17.02 | 16.38 |
|                    |            | 8#4                   | 21.39                                   | 21.51 | 22.01 | 16.47    | 16.59 | 17.09 |
|                    |            | 8#7                   | 21.61                                   | 21.41 | 22    | 16.69    | 16.49 | 17.08 |
|                    |            | 15#0                  | 21.54                                   | 21.51 | 21.29 | 16.62    | 16.59 | 16.37 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | ERP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low      | Mid   | High  |
| 5                  | QPSK       | 1#0                   | 21.42                                   | 21.71 | 21.96 | 16.50    | 16.79 | 17.04 |
|                    |            | 1#12                  | 22.22                                   | 21.83 | 21.35 | 17.30    | 16.91 | 16.43 |
|                    |            | 1#24                  | 22.09                                   | 21.56 | 21.08 | 17.17    | 16.64 | 16.16 |
|                    |            | 12#0                  | 21.58                                   | 22.07 | 21.83 | 16.66    | 17.15 | 16.91 |
|                    |            | 12#6                  | 21.94                                   | 22.10 | 21.26 | 17.02    | 17.18 | 16.34 |
|                    |            | 12#11                 | 21.98                                   | 21.23 | 21.89 | 17.06    | 16.31 | 16.97 |
|                    |            | 25#0                  | 21.28                                   | 21.54 | 21.96 | 16.36    | 16.62 | 17.04 |
|                    | 16QAM      | 1#0                   | 21.48                                   | 21.54 | 21.30 | 16.56    | 16.62 | 16.38 |
|                    |            | 1#12                  | 21.30                                   | 21.99 | 21.86 | 16.38    | 17.07 | 16.94 |
|                    |            | 1#24                  | 21.75                                   | 21.13 | 21.36 | 16.83    | 16.21 | 16.44 |
|                    |            | 12#0                  | 21.32                                   | 21.46 | 21.05 | 16.40    | 16.54 | 16.13 |
|                    |            | 12#6                  | 21.95                                   | 21.75 | 21.77 | 17.03    | 16.83 | 16.85 |
|                    |            | 12#11                 | 22.07                                   | 21.43 | 21.16 | 17.15    | 16.51 | 16.24 |
|                    |            | 25#0                  | 22.16                                   | 21.41 | 21.03 | 17.24    | 16.49 | 16.11 |
| 10                 | QPSK       | 1#0                   | 21.61                                   | 21.89 | 21.25 | 16.69    | 16.97 | 16.33 |
|                    |            | 1#24                  | 21.90                                   | 21.55 | 21.41 | 16.98    | 16.63 | 16.49 |
|                    |            | 1#49                  | 21.51                                   | 21.61 | 21.49 | 16.59    | 16.69 | 16.57 |
|                    |            | 25#0                  | 21.54                                   | 21.78 | 21.29 | 16.62    | 16.86 | 16.37 |
|                    |            | 25#12                 | 22.07                                   | 21.83 | 21.85 | 17.15    | 16.91 | 16.93 |
|                    |            | 25#24                 | 22.00                                   | 21.14 | 21.67 | 17.08    | 16.22 | 16.75 |
|                    |            | 50#0                  | 21.36                                   | 21.77 | 21.93 | 16.44    | 16.85 | 17.01 |
|                    | 16QAM      | 1#0                   | 21.49                                   | 21.32 | 21.62 | 16.57    | 16.40 | 16.70 |
|                    |            | 1#24                  | 22.01                                   | 21.25 | 21.31 | 17.09    | 16.33 | 16.39 |
|                    |            | 1#49                  | 21.27                                   | 21.76 | 21.41 | 16.35    | 16.84 | 16.49 |
|                    |            | 25#0                  | 21.69                                   | 22.00 | 21.10 | 16.77    | 17.08 | 16.18 |
|                    |            | 25#12                 | 21.31                                   | 21.14 | 21.75 | 16.39    | 16.22 | 16.83 |
|                    |            | 25#24                 | 22.03                                   | 21.26 | 21.07 | 17.11    | 16.34 | 16.15 |
|                    |            | 50#0                  | 21.93                                   | 21.26 | 21.31 | 17.01    | 16.34 | 16.39 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | ERP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low      | Mid   | High  |
| 15                 | QPSK       | 1#0                   | 21.32                                   | 21.48 | 21.61 | 16.40    | 16.56 | 16.69 |
|                    |            | 1#37                  | 21.80                                   | 21.87 | 21.27 | 16.88    | 16.95 | 16.35 |
|                    |            | 1#74                  | 21.82                                   | 22.04 | 21.36 | 16.90    | 17.12 | 16.44 |
|                    |            | 36#0                  | 21.60                                   | 21.25 | 21.31 | 16.68    | 16.33 | 16.39 |
|                    |            | 36#18                 | 21.98                                   | 21.38 | 21.41 | 17.06    | 16.46 | 16.49 |
|                    |            | 36#37                 | 22.21                                   | 21.88 | 21.62 | 17.29    | 16.96 | 16.70 |
|                    |            | 75#0                  | 21.98                                   | 21.59 | 21.56 | 17.06    | 16.67 | 16.64 |
|                    | 16QAM      | 1#0                   | 21.41                                   | 21.39 | 21.13 | 16.49    | 16.47 | 16.21 |
|                    |            | 1#37                  | 21.53                                   | 21.69 | 21.62 | 16.61    | 16.77 | 16.70 |
|                    |            | 1#74                  | 22.19                                   | 21.18 | 21.11 | 17.27    | 16.26 | 16.19 |
|                    |            | 36#0                  | 21.78                                   | 21.27 | 21.73 | 16.86    | 16.35 | 16.81 |
|                    |            | 36#18                 | 21.75                                   | 21.62 | 22.00 | 16.83    | 16.70 | 17.08 |
|                    |            | 36#37                 | 21.66                                   | 21.42 | 21.86 | 16.74    | 16.50 | 16.94 |
|                    |            | 75#0                  | 22.01                                   | 21.20 | 21.07 | 17.09    | 16.28 | 16.15 |

Note:  $ERP(dBm) = \text{Conducted Power}(dBm) + \text{Antenna Gain}(dBd) + \text{Path Loss}(dB)$

For Band 26: Antenna Gain = -2.77dBi = -4.92dBd (0dBd=2.15dBi), Path Loss = 0dB

Limit:  $ERP \leq 34.77dBm$

**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                  | QPSK       | 1#0                   | 21.42                                   | 22.03 | 21.41 | 23.07     | 23.68 | 23.06 |
|                    |            | 1#12                  | 22.16                                   | 21.87 | 21.62 | 23.81     | 23.52 | 23.27 |
|                    |            | 1#24                  | 21.79                                   | 21.39 | 21.6  | 23.44     | 23.04 | 23.25 |
|                    |            | 12#0                  | 21.78                                   | 21.88 | 21.68 | 23.43     | 23.53 | 23.33 |
|                    |            | 12#6                  | 22.11                                   | 22.04 | 21.5  | 23.76     | 23.69 | 23.15 |
|                    |            | 12#11                 | 21.31                                   | 21.89 | 21.9  | 22.96     | 23.54 | 23.55 |
|                    |            | 25#0                  | 21.94                                   | 21.96 | 21.13 | 23.59     | 23.61 | 22.78 |
|                    | 16QAM      | 1#0                   | 21.34                                   | 21.42 | 21.41 | 22.99     | 23.07 | 23.06 |
|                    |            | 1#12                  | 21.47                                   | 21.34 | 21.68 | 23.12     | 22.99 | 23.33 |
|                    |            | 1#24                  | 21.56                                   | 21.49 | 21.29 | 23.21     | 23.14 | 22.94 |
|                    |            | 12#0                  | 21.28                                   | 21.84 | 21.96 | 22.93     | 23.49 | 23.61 |
|                    |            | 12#6                  | 21.98                                   | 21.92 | 21.45 | 23.63     | 23.57 | 23.10 |
|                    |            | 12#11                 | 21.93                                   | 21.27 | 21.42 | 23.58     | 22.92 | 23.07 |
|                    |            | 25#0                  | 21.52                                   | 21.4  | 21.79 | 23.17     | 23.05 | 23.44 |
| 10                 | QPSK       | 1#0                   | 21.96                                   | 21.35 | 21.46 | 23.61     | 23.00 | 23.11 |
|                    |            | 1#24                  | 22.05                                   | 21.92 | 21.66 | 23.70     | 23.57 | 23.31 |
|                    |            | 1#49                  | 22.05                                   | 21.68 | 21.86 | 23.70     | 23.33 | 23.51 |
|                    |            | 25#0                  | 21.26                                   | 21.9  | 21.14 | 22.91     | 23.55 | 22.79 |
|                    |            | 25#12                 | 22.13                                   | 21.41 | 21.18 | 23.78     | 23.06 | 22.83 |
|                    |            | 25#24                 | 21.67                                   | 21.65 | 21.27 | 23.32     | 23.30 | 22.92 |
|                    |            | 50#0                  | 22.26                                   | 21.89 | 21.44 | 23.91     | 23.54 | 23.09 |
|                    | 16QAM      | 1#0                   | 21.29                                   | 21.32 | 21.29 | 22.94     | 22.97 | 22.94 |
|                    |            | 1#24                  | 21.53                                   | 21.68 | 21.65 | 23.18     | 23.33 | 23.30 |
|                    |            | 1#49                  | 21.32                                   | 22.03 | 21.72 | 22.97     | 23.68 | 23.37 |
|                    |            | 25#0                  | 21.28                                   | 21.38 | 21.43 | 22.93     | 23.03 | 23.08 |
|                    |            | 25#12                 | 21.62                                   | 21.29 | 21.86 | 23.27     | 22.94 | 23.51 |
|                    |            | 25#24                 | 22.07                                   | 21.75 | 21.42 | 23.72     | 23.40 | 23.07 |
|                    |            | 50#0                  | 21.96                                   | 21.25 | 21.31 | 23.61     | 22.90 | 22.96 |

| 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       | 1#0                   | 21.88                                   | 22.08 | 21.12 | 23.53     | 23.73 | 22.77 |
|                    |            | 1#37                  | 21.30                                   | 21.65 | 21.97 | 22.95     | 23.30 | 23.62 |
|                    |            | 1#74                  | 21.60                                   | 21.93 | 22.01 | 23.25     | 23.58 | 23.66 |
|                    |            | 36#0                  | 22.20                                   | 21.19 | 21.88 | 23.85     | 22.84 | 23.53 |
|                    |            | 36#18                 | 22.22                                   | 21.89 | 21.67 | 23.87     | 23.54 | 23.32 |
|                    |            | 36#37                 | 22.20                                   | 21.57 | 21.62 | 23.85     | 23.22 | 23.27 |
|                    |            | 75#0                  | 21.61                                   | 22.06 | 21.39 | 23.26     | 23.71 | 23.04 |
|                    | 16QAM      | 1#0                   | 22.12                                   | 21.38 | 21.09 | 23.77     | 23.03 | 22.74 |
|                    |            | 1#37                  | 21.62                                   | 21.31 | 21.54 | 23.27     | 22.96 | 23.19 |
|                    |            | 1#74                  | 21.59                                   | 21.40 | 21.16 | 23.24     | 23.05 | 22.81 |
|                    |            | 36#0                  | 21.70                                   | 21.15 | 21.45 | 23.35     | 22.80 | 23.10 |
|                    |            | 36#18                 | 21.33                                   | 21.81 | 21.86 | 22.98     | 23.46 | 23.51 |
|                    |            | 36#37                 | 22.13                                   | 21.14 | 21.78 | 23.78     | 22.79 | 23.43 |
|                    |            | 75#0                  | 22.21                                   | 21.19 | 21.16 | 23.86     | 22.84 | 22.81 |
| 20.0               | QPSK       | 1#0                   | 22.10                                   | 21.47 | 21.32 | 23.75     | 23.12 | 22.97 |
|                    |            | 1#49                  | 21.35                                   | 21.86 | 21.61 | 23.00     | 23.51 | 23.26 |
|                    |            | 1#99                  | 21.69                                   | 22.09 | 21.88 | 23.34     | 23.74 | 23.53 |
|                    |            | 50#0                  | 22.19                                   | 21.20 | 21.11 | 23.84     | 22.85 | 22.76 |
|                    |            | 50#24                 | 22.22                                   | 21.58 | 21.48 | 23.87     | 23.23 | 23.13 |
|                    |            | 50#49                 | 21.93                                   | 21.16 | 21.34 | 23.58     | 22.81 | 22.99 |
|                    |            | 100#0                 | 21.66                                   | 21.27 | 21.32 | 23.31     | 22.92 | 22.97 |
|                    | 16QAM      | 1#0                   | 21.62                                   | 22.04 | 21.45 | 23.27     | 23.69 | 23.10 |
|                    |            | 1#49                  | 21.69                                   | 21.36 | 21.04 | 23.34     | 23.01 | 22.69 |
|                    |            | 1#99                  | 21.39                                   | 21.61 | 22.01 | 23.04     | 23.26 | 23.66 |
|                    |            | 50#0                  | 21.71                                   | 21.24 | 21.84 | 23.36     | 22.89 | 23.49 |
|                    |            | 50#24                 | 21.73                                   | 21.75 | 21.90 | 23.38     | 23.40 | 23.55 |
|                    |            | 50#49                 | 22.21                                   | 21.34 | 21.90 | 23.86     | 22.99 | 23.55 |
|                    |            | 100#0                 | 21.53                                   | 21.61 | 21.08 | 23.18     | 23.26 | 22.73 |

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

For Band 41: Antenna Gain = 1.65dBi, Path Loss = 0dB

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       | 1#0                   | 22.11                                   | 21.66 | 21.47 | 22.05     | 21.60 | 21.41 |
|                    |            | 1#12                  | 21.4                                    | 21.78 | 21.08 | 21.34     | 21.72 | 21.02 |
|                    |            | 1#24                  | 21.59                                   | 21.56 | 21.38 | 21.53     | 21.50 | 21.32 |
|                    |            | 12#0                  | 21.65                                   | 22.05 | 21.13 | 21.59     | 21.99 | 21.07 |
|                    |            | 12#6                  | 21.84                                   | 21.21 | 21.15 | 21.78     | 21.15 | 21.09 |
|                    |            | 12#11                 | 21.92                                   | 22.05 | 21.5  | 21.86     | 21.99 | 21.44 |
|                    |            | 25#0                  | 21.36                                   | 21.73 | 21.78 | 21.30     | 21.67 | 21.72 |
|                    | 16QAM      | 1#0                   | 21.37                                   | 21.24 | 21.25 | 21.31     | 21.18 | 21.19 |
|                    |            | 1#12                  | 21.92                                   | 21.34 | 21.33 | 21.86     | 21.28 | 21.27 |
|                    |            | 1#24                  | 21.31                                   | 21.27 | 21.18 | 21.25     | 21.21 | 21.12 |
|                    |            | 12#0                  | 22.16                                   | 21.85 | 21.76 | 22.10     | 21.79 | 21.70 |
|                    |            | 12#6                  | 21.29                                   | 21.51 | 21.41 | 21.23     | 21.45 | 21.35 |
|                    |            | 12#11                 | 21.66                                   | 21.85 | 21.72 | 21.60     | 21.79 | 21.66 |
|                    |            | 25#0                  | 21.38                                   | 21.36 | 22.01 | 21.32     | 21.30 | 21.95 |
| 3                  | QPSK       | 1#0                   | 22.22                                   | 21.52 | 21.87 | 22.16     | 21.46 | 21.81 |
|                    |            | 1#24                  | 22.11                                   | 21.17 | 21.73 | 22.05     | 21.11 | 21.67 |
|                    |            | 1#49                  | 22.04                                   | 22.05 | 21.84 | 21.98     | 21.99 | 21.78 |
|                    |            | 25#0                  | 21.67                                   | 21.28 | 21.2  | 21.61     | 21.22 | 21.14 |
|                    |            | 25#12                 | 21.85                                   | 21.93 | 21.3  | 21.79     | 21.87 | 21.24 |
|                    |            | 25#24                 | 21.28                                   | 21.81 | 21.5  | 21.22     | 21.75 | 21.44 |
|                    |            | 50#0                  | 21.92                                   | 21.5  | 21.32 | 21.86     | 21.44 | 21.26 |
|                    | 16QAM      | 1#0                   | 22.2                                    | 21.28 | 21.6  | 22.14     | 21.22 | 21.54 |
|                    |            | 1#24                  | 21.9                                    | 21.39 | 21.35 | 21.84     | 21.33 | 21.29 |
|                    |            | 1#49                  | 22.21                                   | 21.88 | 21.49 | 22.15     | 21.82 | 21.43 |
|                    |            | 25#0                  | 22.12                                   | 21.21 | 21.55 | 22.06     | 21.15 | 21.49 |
|                    |            | 25#12                 | 21.97                                   | 21.93 | 21.47 | 21.91     | 21.87 | 21.41 |
|                    |            | 25#24                 | 21.49                                   | 21.75 | 21.09 | 21.43     | 21.69 | 21.03 |
|                    |            | 50#0                  | 21.99                                   | 21.67 | 22.02 | 21.93     | 21.61 | 21.96 |

| Bandwidth<br>(MHz) | Modulation | RB size/<br>RB Offset | Conducted Average Output<br>Power (dBm) |       |       | EIRP(dBm) |       |       |
|--------------------|------------|-----------------------|-----------------------------------------|-------|-------|-----------|-------|-------|
|                    |            |                       | Low                                     | Mid   | High  | Low       | Mid   | High  |
| 5                  | QPSK       | 1#0                   | 21.34                                   | 21.14 | 21.54 | 21.28     | 21.08 | 21.48 |
|                    |            | 1#12                  | 21.32                                   | 21.87 | 21.43 | 21.26     | 21.81 | 21.37 |
|                    |            | 1#24                  | 21.63                                   | 21.67 | 21.07 | 21.57     | 21.61 | 21.01 |
|                    |            | 12#0                  | 21.91                                   | 21.49 | 21.20 | 21.85     | 21.43 | 21.14 |
|                    |            | 12#6                  | 21.26                                   | 21.30 | 21.48 | 21.20     | 21.24 | 21.42 |
|                    |            | 12#11                 | 21.38                                   | 21.56 | 21.29 | 21.32     | 21.50 | 21.23 |
|                    |            | 25#0                  | 21.92                                   | 21.62 | 21.05 | 21.86     | 21.56 | 20.99 |
|                    | 16QAM      | 1#0                   | 21.54                                   | 21.75 | 21.34 | 21.48     | 21.69 | 21.28 |
|                    |            | 1#12                  | 21.91                                   | 21.12 | 21.09 | 21.85     | 21.06 | 21.03 |
|                    |            | 1#24                  | 21.47                                   | 21.50 | 21.91 | 21.41     | 21.44 | 21.85 |
|                    |            | 12#0                  | 22.26                                   | 21.31 | 21.33 | 22.20     | 21.25 | 21.27 |
|                    |            | 12#6                  | 21.63                                   | 21.69 | 21.58 | 21.57     | 21.63 | 21.52 |
|                    |            | 12#11                 | 21.85                                   | 21.51 | 21.62 | 21.79     | 21.45 | 21.56 |
|                    |            | 25#0                  | 21.83                                   | 21.83 | 21.33 | 21.77     | 21.77 | 21.27 |
| 10                 | QPSK       | 1#0                   | 21.48                                   | 22.08 | 21.25 | 21.42     | 22.02 | 21.19 |
|                    |            | 1#24                  | 21.29                                   | 21.80 | 21.87 | 21.23     | 21.74 | 21.81 |
|                    |            | 1#49                  | 22.22                                   | 21.37 | 21.44 | 22.16     | 21.31 | 21.38 |
|                    |            | 25#0                  | 21.91                                   | 22.09 | 21.77 | 21.85     | 22.03 | 21.71 |
|                    |            | 25#12                 | 22.13                                   | 21.99 | 21.64 | 22.07     | 21.93 | 21.58 |
|                    |            | 25#24                 | 21.68                                   | 21.61 | 21.32 | 21.62     | 21.55 | 21.26 |
|                    |            | 50#0                  | 22.05                                   | 21.47 | 21.70 | 21.99     | 21.41 | 21.64 |
|                    | 16QAM      | 1#0                   | 22.08                                   | 22.04 | 22.00 | 22.02     | 21.98 | 21.94 |
|                    |            | 1#24                  | 22.01                                   | 21.68 | 21.40 | 21.95     | 21.62 | 21.34 |
|                    |            | 1#49                  | 22.26                                   | 21.36 | 21.24 | 22.20     | 21.30 | 21.18 |
|                    |            | 25#0                  | 21.85                                   | 21.16 | 21.33 | 21.79     | 21.10 | 21.27 |
|                    |            | 25#12                 | 21.27                                   | 21.77 | 21.79 | 21.21     | 21.71 | 21.73 |
|                    |            | 25#24                 | 22.15                                   | 21.51 | 21.37 | 22.09     | 21.45 | 21.31 |
|                    |            | 50#0                  | 21.69                                   | 21.53 | 21.85 | 21.63     | 21.47 | 21.79 |

| 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       | 1#0                   | 21.57                                   | 21.45 | 21.56 | 21.51     | 21.39 | 21.50 |
|                    |            | 1#37                  | 21.64                                   | 21.39 | 21.19 | 21.58     | 21.33 | 21.13 |
|                    |            | 1#74                  | 21.27                                   | 21.69 | 21.76 | 21.21     | 21.63 | 21.70 |
|                    |            | 36#0                  | 21.64                                   | 21.53 | 21.58 | 21.58     | 21.47 | 21.52 |
|                    |            | 36#18                 | 21.33                                   | 21.30 | 21.18 | 21.27     | 21.24 | 21.12 |
|                    |            | 36#37                 | 21.96                                   | 21.57 | 21.38 | 21.90     | 21.51 | 21.32 |
|                    |            | 75#0                  | 21.37                                   | 21.49 | 21.97 | 21.31     | 21.43 | 21.91 |
|                    | 16QAM      | 1#0                   | 22.07                                   | 21.42 | 21.75 | 22.01     | 21.36 | 21.69 |
|                    |            | 1#37                  | 21.26                                   | 21.52 | 21.78 | 21.20     | 21.46 | 21.72 |
|                    |            | 1#74                  | 21.72                                   | 21.90 | 21.61 | 21.66     | 21.84 | 21.55 |
|                    |            | 36#0                  | 21.87                                   | 21.26 | 21.44 | 21.81     | 21.20 | 21.38 |
|                    |            | 36#18                 | 21.87                                   | 22.06 | 21.48 | 21.81     | 22.00 | 21.42 |
|                    |            | 36#37                 | 21.95                                   | 22.04 | 21.31 | 21.89     | 21.98 | 21.25 |
|                    |            | 75#0                  | 22.24                                   | 21.77 | 21.45 | 22.18     | 21.71 | 21.39 |
| 20.0               | QPSK       | 1#0                   | 21.58                                   | 21.86 | 21.29 | 21.52     | 21.80 | 21.23 |
|                    |            | 1#49                  | 21.62                                   | 21.59 | 21.48 | 21.56     | 21.53 | 21.42 |
|                    |            | 1#99                  | 21.73                                   | 22.00 | 21.95 | 21.67     | 21.94 | 21.89 |
|                    |            | 50#0                  | 21.26                                   | 21.61 | 21.29 | 21.20     | 21.55 | 21.23 |
|                    |            | 50#24                 | 21.30                                   | 21.23 | 21.66 | 21.24     | 21.17 | 21.60 |
|                    |            | 50#49                 | 21.91                                   | 21.98 | 21.97 | 21.85     | 21.92 | 21.91 |
|                    |            | 100#0                 | 21.95                                   | 21.89 | 21.87 | 21.89     | 21.83 | 21.81 |
|                    | 16QAM      | 1#0                   | 21.57                                   | 21.30 | 21.14 | 21.51     | 21.24 | 21.08 |
|                    |            | 1#49                  | 21.32                                   | 21.79 | 21.06 | 21.26     | 21.73 | 21.00 |
|                    |            | 1#99                  | 22.05                                   | 21.73 | 21.48 | 21.99     | 21.67 | 21.42 |
|                    |            | 50#0                  | 21.54                                   | 21.83 | 22.00 | 21.48     | 21.77 | 21.94 |
|                    |            | 50#24                 | 21.42                                   | 21.12 | 21.96 | 21.36     | 21.06 | 21.90 |
|                    |            | 50#49                 | 21.95                                   | 22.04 | 21.83 | 21.89     | 21.98 | 21.77 |
|                    |            | 100#0                 | 21.41                                   | 21.62 | 21.72 | 21.35     | 21.56 | 21.66 |

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

For Band 66: Antenna Gain = -0.06dBi, Path Loss = 0dB

Limit: EIRP ≤ 30dBm



**Peak-to-average ratio (PAR)****GSM 850**

| Mode | Channel | PAR (dB) | Limit (dB) |
|------|---------|----------|------------|
| GPRS | Low     | 2.13     | 13         |
|      | Middle  | 1.93     | 13         |
|      | High    | 2.16     | 13         |

| Mode  | Channel | PAR (dB) | Limit (dB) |
|-------|---------|----------|------------|
| EGPRS | Low     | 2.15     | 13         |
|       | Middle  | 2.14     | 13         |
|       | High    | 2.22     | 13         |

**PCS 1900**

| Mode | Channel | PAR (dB) | Limit (dB) |
|------|---------|----------|------------|
| GPRS | Low     | 2.02     | 13         |
|      | Middle  | 2.21     | 13         |
|      | High    | 2.02     | 13         |

| Mode  | Channel | PAR (dB) | Limit (dB) |
|-------|---------|----------|------------|
| EGPRS | Low     | 2.08     | 13         |
|       | Middle  | 2.17     | 13         |
|       | High    | 2.15     | 13         |

**WCDMA Band V**

| Mode             | Channel | PAR (dB) | Limit (dB) |
|------------------|---------|----------|------------|
| RMC<br>(BPSK)    | Low     | 2.01     | 13         |
|                  | Middle  | 2.06     | 13         |
|                  | High    | 2.22     | 13         |
| HSDPA<br>(16QAM) | Low     | 2.08     | 13         |
|                  | Middle  | 2.13     | 13         |
|                  | High    | 2.24     | 13         |
| HSUPA<br>(BPSK)  | Low     | 2.16     | 13         |
|                  | Middle  | 2.22     | 13         |
|                  | High    | 1.99     | 13         |
| HSPA+            | Low     | 2.21     | 13         |
|                  | Middle  | 2.08     | 13         |
|                  | High    | 1.99     | 13         |

**WCDMA Band IV**

| Mode             | Channel | PAR (dB) | Limit (dB) |
|------------------|---------|----------|------------|
| RMC<br>(BPSK)    | Low     | 2.07     | 13         |
|                  | Middle  | 1.96     | 13         |
|                  | High    | 2.17     | 13         |
| HSDPA<br>(16QAM) | Low     | 2.2      | 13         |
|                  | Middle  | 2.17     | 13         |
|                  | High    | 1.97     | 13         |
| HSUPA<br>(BPSK)  | Low     | 2.17     | 13         |
|                  | Middle  | 2.07     | 13         |
|                  | High    | 2.02     | 13         |
| HSPA+            | Low     | 2.08     | 13         |
|                  | Middle  | 1.95     | 13         |
|                  | High    | 2.18     | 13         |

**WCDMA Band II**

| Mode             | Channel | PAR (dB) | Limit (dB) |
|------------------|---------|----------|------------|
| RMC<br>(BPSK)    | Low     | 2.06     | 13         |
|                  | Middle  | 2.19     | 13         |
|                  | High    | 2.22     | 13         |
| HSDPA<br>(16QAM) | Low     | 2.17     | 13         |
|                  | Middle  | 2.07     | 13         |
|                  | High    | 2.21     | 13         |
| HSUPA<br>(BPSK)  | Low     | 2.04     | 13         |
|                  | Middle  | 2.23     | 13         |
|                  | High    | 2.24     | 13         |
| HSPA+            | Low     | 2.18     | 13         |
|                  | Middle  | 2.14     | 13         |
|                  | High    | 2.06     | 13         |

**LTE Band 2 20MHz Bandwidth**

| Modulation | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK       | 3.14             | 3.16                | 3.17              | 13             | Pass   |
| QPSK       | 5.01             | 5.04                | 5.02              | 13             | Pass   |
| 16QAM      | 4.07             | 4.03                | 4.08              | 13             | Pass   |
| 16QAM      | 6.09             | 6.2                 | 6.16              | 13             | Pass   |

**LTE Band 4 20MHz Bandwidth**

| Modulation | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK       | 3.11             | 3.06                | 3.16              | 13             | 3.11   |
| QPSK       | 5.17             | 5.08                | 5.05              | 13             | 5.17   |
| 16QAM      | 4.1              | 4.07                | 4.16              | 13             | 4.1    |
| 16QAM      | 6.14             | 6.09                | 6.09              | 13             | 6.14   |

**LTE Band 5 10MHz Bandwidth**

| Modulation | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK       | 3.13             | 3.03                | 3.11              | 13             | Pass   |
| QPSK       | 5.11             | 5.07                | 5.07              | 13             | Pass   |
| 16QAM      | 4.02             | 4.06                | 4.02              | 13             | Pass   |
| 16QAM      | 6.19             | 6.10                | 6.12              | 13             | Pass   |

**LTE Band 7 20MHz Bandwidth**

| Modulation | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK       | 3.18             | 3.15                | 3.00              | 13             | Pass   |
| QPSK       | 5.18             | 5.11                | 5.06              | 13             | Pass   |
| 16QAM      | 4.00             | 4.09                | 4.17              | 13             | Pass   |
| 16QAM      | 6.04             | 6.11                | 6.16              | 13             | Pass   |

**LTE Band 12 10MHz Bandwidth**

| Modulation | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK       | 3.10             | 3.14                | 3.14              | 13             | Pass   |
| QPSK       | 5.05             | 5.12                | 5.04              | 13             | Pass   |
| 16QAM      | 4.05             | 4.13                | 4.19              | 13             | Pass   |
| 16QAM      | 6.16             | 6.17                | 6.04              | 13             | Pass   |

**LTE Band 17 10MHz Bandwidth**

| Modulation | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK       | 3.05             | 3.07                | 3.12              | 13             | Pass   |
| QPSK       | 5.02             | 5.19                | 5.14              | 13             | Pass   |
| 16QAM      | 4.02             | 4.13                | 4.11              | 13             | Pass   |
| 16QAM      | 6.16             | 6.03                | 6.05              | 13             | Pass   |

**LTE Band 25 20MHz Bandwidth**

| Modulation | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK       | 3.06             | 3.17                | 3.17              | 13             | Pass   |
| QPSK       | 5.00             | 5.09                | 5.19              | 13             | Pass   |
| 16QAM      | 4.19             | 4.03                | 4.05              | 13             | Pass   |
| 16QAM      | 6.15             | 6.05                | 6.14              | 13             | Pass   |

**LTE Band 26 15MHz Bandwidth**

| Modulation | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK       | 3.12             | 3.16                | 3.14              | 13             | Pass   |
| QPSK       | 5.1              | 5.09                | 5.08              | 13             | Pass   |
| 16QAM      | 4.03             | 4.07                | 4.19              | 13             | Pass   |
| 16QAM      | 6.02             | 6.01                | 6.01              | 13             | Pass   |

**LTE Band 41 20MHz Bandwidth**

| Modulation | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK       | 3.07             | 3.07                | 3.11              | 13             | Pass   |
| QPSK       | 5.06             | 5.01                | 5.04              | 13             | Pass   |
| 16QAM      | 4.03             | 4.01                | 4.06              | 13             | Pass   |
| 16QAM      | 6.04             | 6.14                | 6.11              | 13             | Pass   |

**LTE Band 66 20MHz Bandwidth**

| Modulation | Low channel (dB) | Middle channel (dB) | High channel (dB) | PAR Limit (dB) | Result |
|------------|------------------|---------------------|-------------------|----------------|--------|
| QPSK       | 3.15             | 3.14                | 3.14              | 13             | Pass   |
| QPSK       | 5.16             | 5.05                | 5.06              | 13             | Pass   |
| 16QAM      | 4.03             | 4.15                | 4.16              | 13             | Pass   |
| 16QAM      | 6.01             | 6.05                | 6.02              | 13             | Pass   |

## FCC §2.1049 - OCCUPIED BANDWIDTH

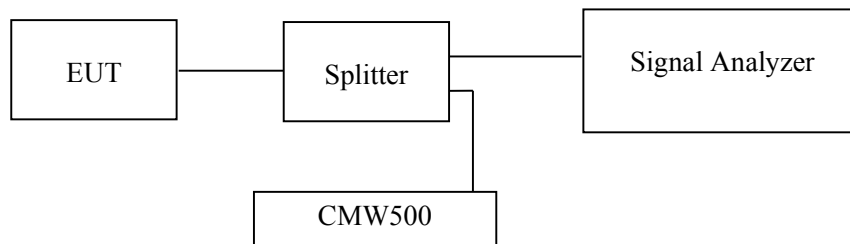
### Applicable Standard

FCC 47 §2.1049.

### 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 is 6 dB between EUT and Signal Analyzer

### Test Data

#### Environmental Conditions

|                    |                 |
|--------------------|-----------------|
| Temperature:       | 24~26.5 °C      |
| Relative Humidity: | 48~58 %         |
| ATM Pressure:      | 100.8~101.2 kPa |

*The testing was performed by Black Ding from 2022-04-22 to 2022-4-26.*

*EUT operation mode: Transmitting*

#### Test Result: Pass

*Please refer to the following tables and plots.*

**GSM 850**

| Mode | Channel | Frequency (MHz) | 99% Occupied Bandwidth (kHz) | 26 dB Emission Bandwidth (kHz) |
|------|---------|-----------------|------------------------------|--------------------------------|
| GPRS | 128     | 824.2           | 243.1                        | 322.7                          |
|      | 190     | 836.6           | 246.0                        | 316.9                          |
|      | 251     | 848.8           | 244.6                        | 321.3                          |

| Mode  | Channel | Frequency (MHz) | 99% Occupied Bandwidth (kHz) | 26 dB Emission Bandwidth (kHz) |
|-------|---------|-----------------|------------------------------|--------------------------------|
| EGPRS | 128     | 824.2           | 237.3                        | 315.5                          |
|       | 190     | 836.6           | 237.3                        | 315.5                          |
|       | 251     | 848.8           | 237.3                        | 315.5                          |

**PCS 1900**

| Mode | Channel | Frequency (MHz) | 99% Occupied Bandwidth (kHz) | 26 dB Emission Bandwidth (kHz) |
|------|---------|-----------------|------------------------------|--------------------------------|
| GPRS | 512     | 1850.2          | 244.6                        | 318.4                          |
|      | 661     | 1880.0          | 244.6                        | 316.9                          |
|      | 810     | 1909.8          | 244.6                        | 321.3                          |

| Mode  | Channel | Frequency (MHz) | 99% Occupied Bandwidth (kHz) | 26 dB Emission Bandwidth (kHz) |
|-------|---------|-----------------|------------------------------|--------------------------------|
| EGPRS | 512     | 1850.2          | 237.3                        | 315.5                          |
|       | 661     | 1880.0          | 237.3                        | 315.5                          |
|       | 810     | 1909.8          | 237.3                        | 315.5                          |

**WCDMA Band V**

|       | <b>Frequency<br/>(MHz)</b> | <b>Occupied Bandwidth<br/>(MHz)</b> | <b>26dB Bandwidth<br/>(MHz)</b> |
|-------|----------------------------|-------------------------------------|---------------------------------|
| RMC   | 826.4                      | 4.12                                | 4.69                            |
|       | 836.6                      | 4.11                                | 4.70                            |
|       | 846.6                      | 4.12                                | 4.70                            |
| HSDPA | 826.4                      | 4.12                                | 4.69                            |
|       | 836.6                      | 4.11                                | 4.70                            |
|       | 846.6                      | 4.12                                | 4.70                            |
| HSUPA | 826.4                      | 4.11                                | 4.69                            |
|       | 836.6                      | 4.12                                | 4.69                            |
|       | 846.6                      | 4.12                                | 4.70                            |
| HSPA+ | 826.4                      | 4.11                                | 4.69                            |
|       | 836.6                      | 4.12                                | 4.67                            |
|       | 846.6                      | 4.12                                | 4.70                            |

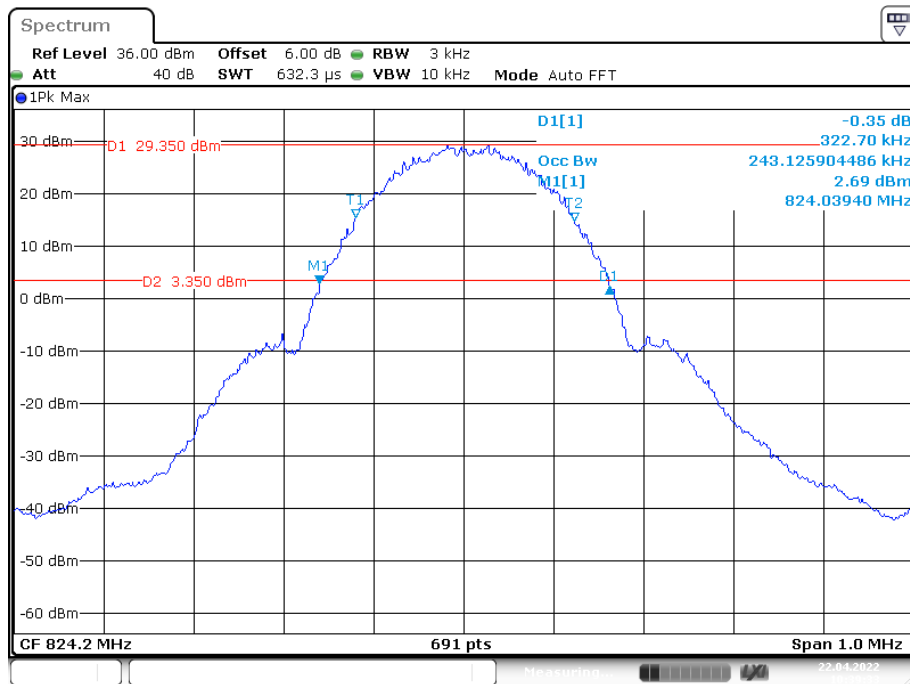
**WCDMA Band IV**

|       | <b>Frequency<br/>(MHz)</b> | <b>Occupied Bandwidth<br/>(MHz)</b> | <b>26dB Bandwidth<br/>(MHz)</b> |
|-------|----------------------------|-------------------------------------|---------------------------------|
| RMC   | 1712.4                     | 4.12                                | 4.72                            |
|       | 1732.6                     | 4.11                                | 4.70                            |
|       | 1752.6                     | 4.11                                | 4.72                            |
| HSDPA | 1712.4                     | 4.12                                | 4.72                            |
|       | 1732.6                     | 4.12                                | 4.70                            |
|       | 1752.6                     | 4.12                                | 4.72                            |
| HSUPA | 1712.4                     | 4.12                                | 4.72                            |
|       | 1732.6                     | 4.11                                | 4.70                            |
|       | 1752.6                     | 4.11                                | 4.72                            |
| HSPA+ | 1712.4                     | 4.12                                | 4.70                            |
|       | 1732.6                     | 4.12                                | 4.70                            |
|       | 1752.6                     | 4.12                                | 4.72                            |

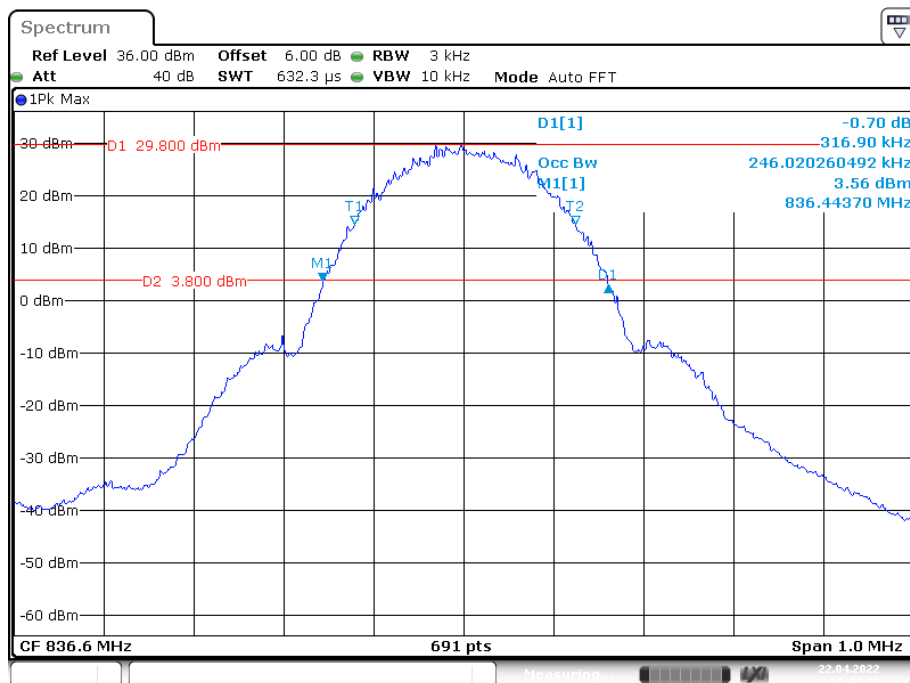


**WCDMA Band II**

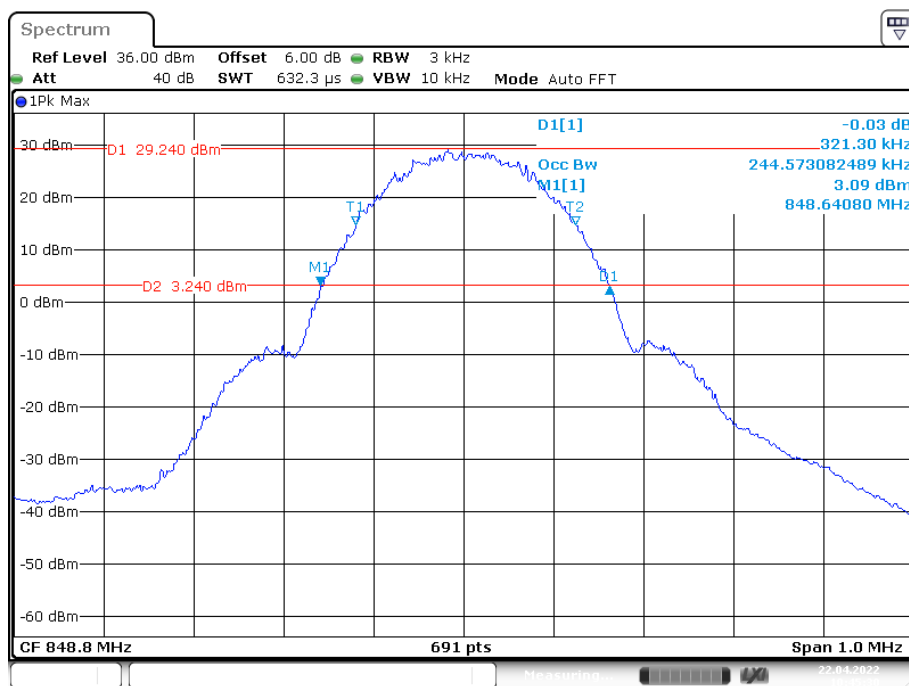
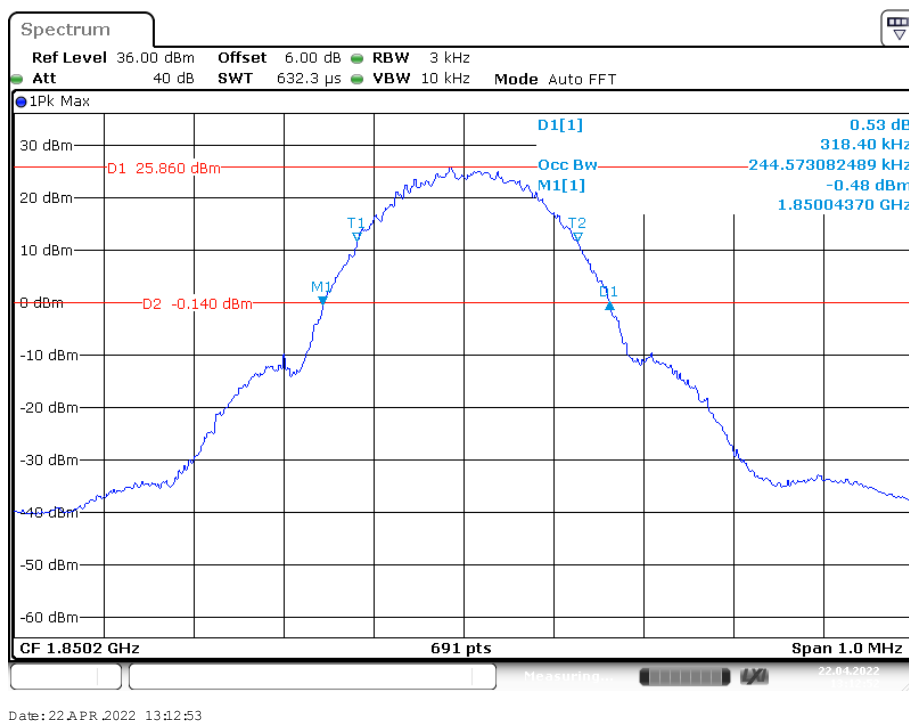
| Frequency<br>(MHz) |        | Occupied Bandwidth<br>(MHz) | 26dB Bandwidth<br>(MHz) |
|--------------------|--------|-----------------------------|-------------------------|
| RMC                | 1852.4 | 4.12                        | 4.72                    |
|                    | 1880   | 4.12                        | 4.72                    |
|                    | 1907.6 | 4.12                        | 4.73                    |
| HSDPA              | 1852.4 | 4.12                        | 4.72                    |
|                    | 1880   | 4.12                        | 4.72                    |
|                    | 1907.6 | 4.12                        | 4.72                    |
| HSUPA              | 1852.4 | 4.12                        | 4.72                    |
|                    | 1880   | 4.12                        | 4.72                    |
|                    | 1907.6 | 4.12                        | 4.73                    |
| HSPA+              | 1852.4 | 4.12                        | 4.72                    |
|                    | 1880   | 4.12                        | 4.72                    |
|                    | 1907.6 | 4.12                        | 4.73                    |

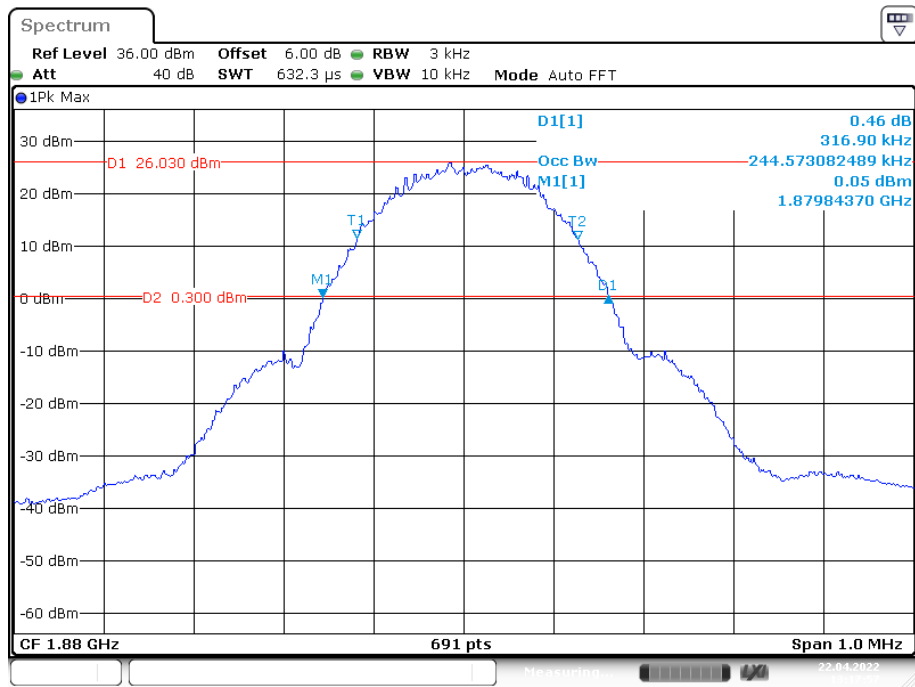
**26 dB Emissions & 99% Occupied Bandwidth for GSM 850 (GPRS) Mode, Low channel**

Date: 22 APR 2022 10:39:34

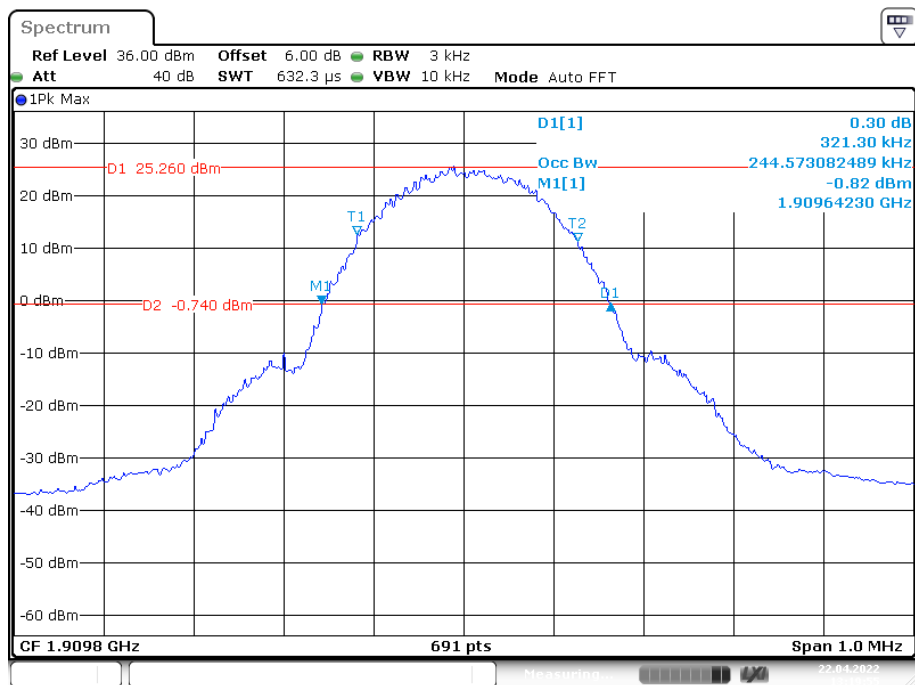
**26 dB Emissions & 99% Occupied Bandwidth for GSM 850 (GPRS) Mode, Middle channel**

Date: 22 APR 2022 10:43:33

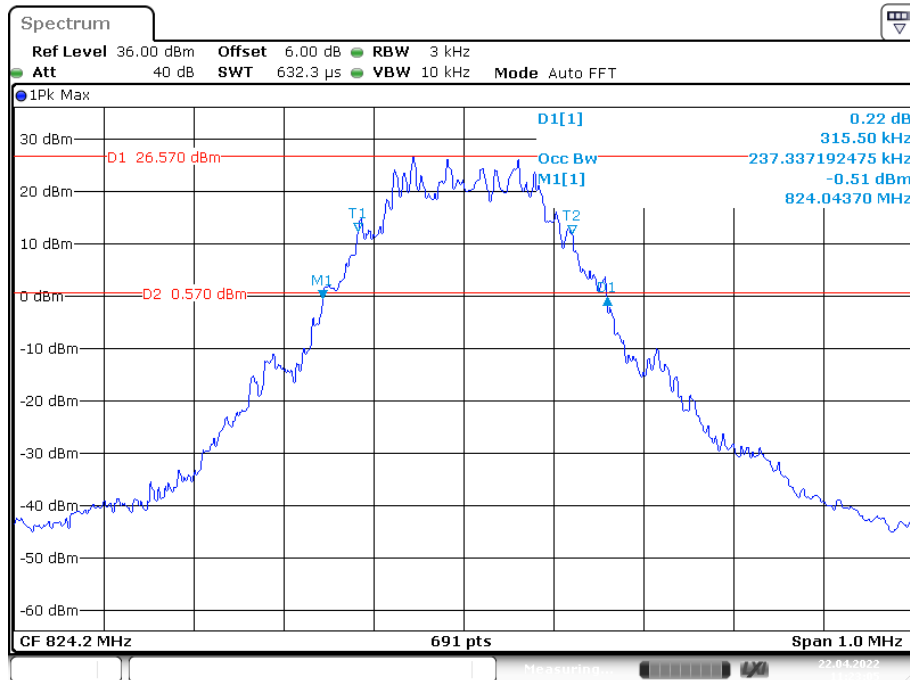
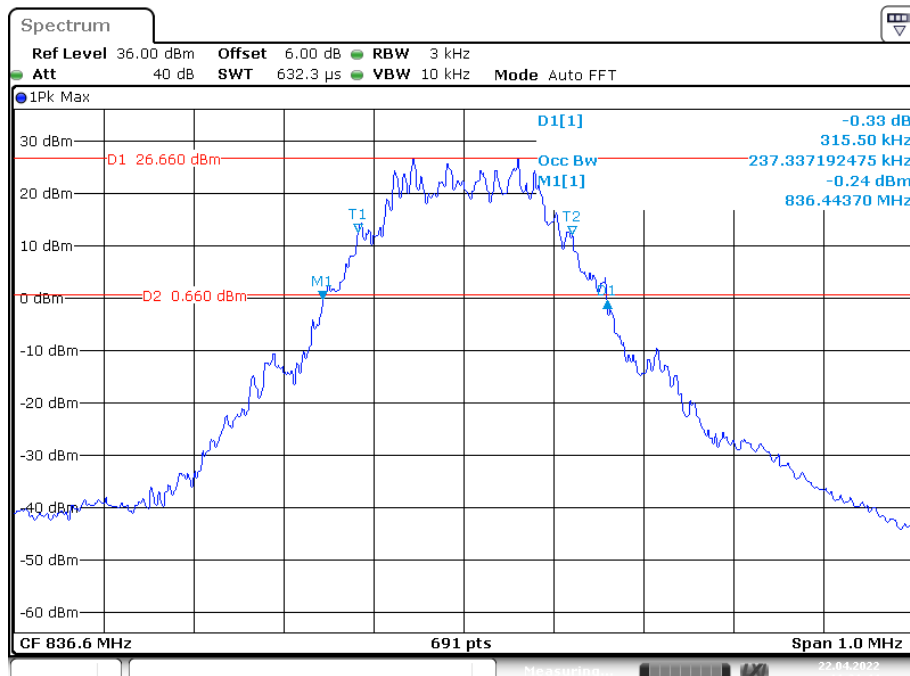
**26 dB Emissions & 99% Occupied Bandwidth for GSM 850 (GPRS) Mode, High channel****26 dB Emissions & 99% Occupied Bandwidth for PCS 1900 (GPRS) Mode, Low channel**

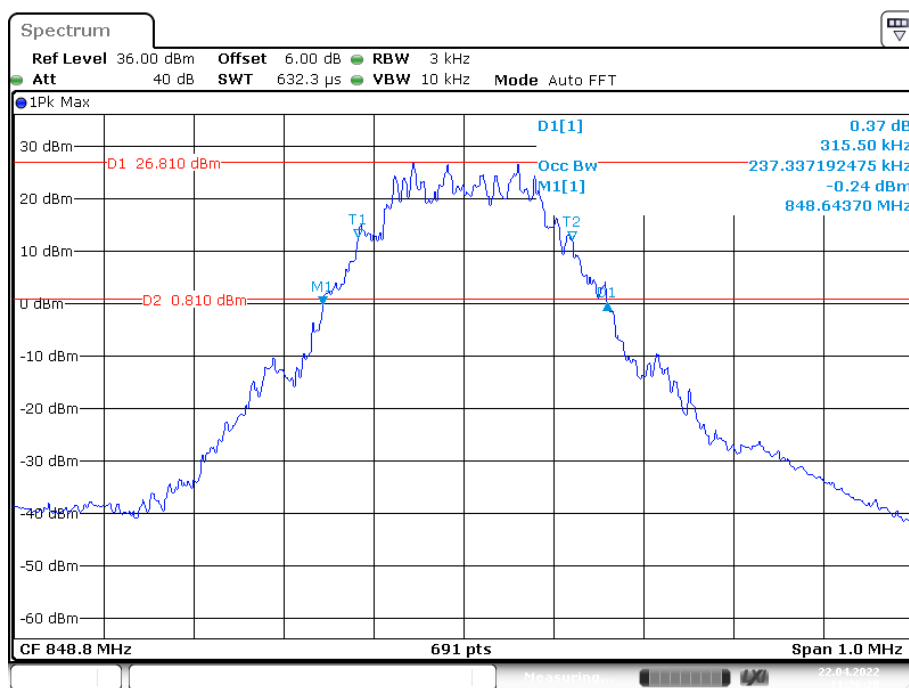
**26 dB Emissions & 99% Occupied Bandwidth for PCS 1900 (GPRS) Mode, Middle channel**

Date: 22 APR 2022 13:17:57

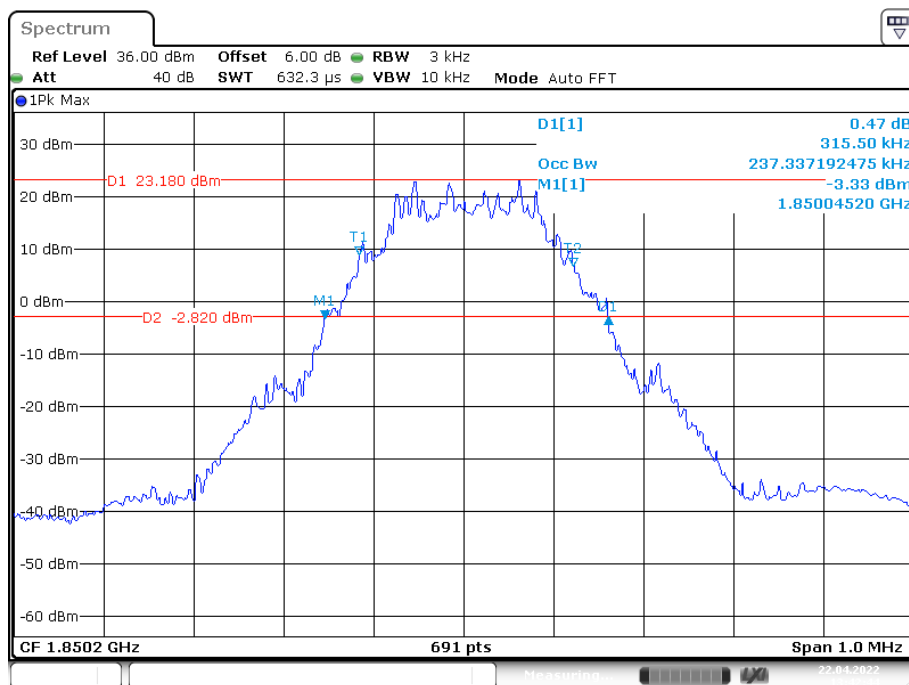
**26 dB Emissions & 99% Occupied Bandwidth for PCS 1900 (GPRS) Mode, High channel**

Date: 22 APR 2022 13:19:56

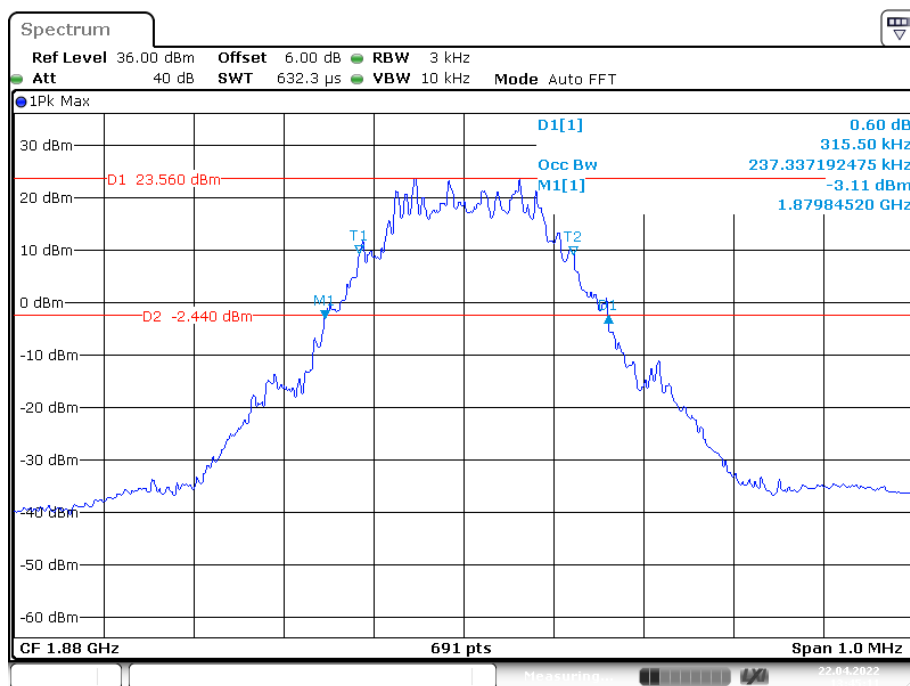
**26 dB Emissions & 99% Occupied Bandwidth for GSM 850 (EGPRS) Mode, Low channel****26 dB Emissions & 99% Occupied Bandwidth for GSM 850 (EGPRS) Mode, Middle channel**

**26 dB Emissions & 99% Occupied Bandwidth for GSM 850 (EGPRS) Mode, High channel**

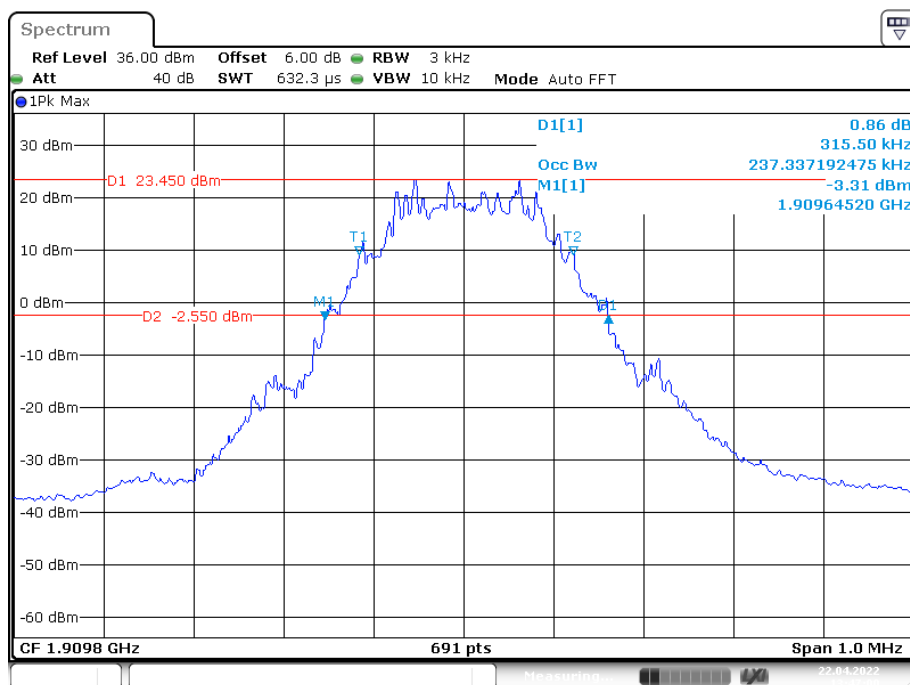
Date: 22 APR. 2022 11:26:20

**26 dB Emissions & 99% Occupied Bandwidth for PCS 1900 (EGPRS) Mode, Low channel**

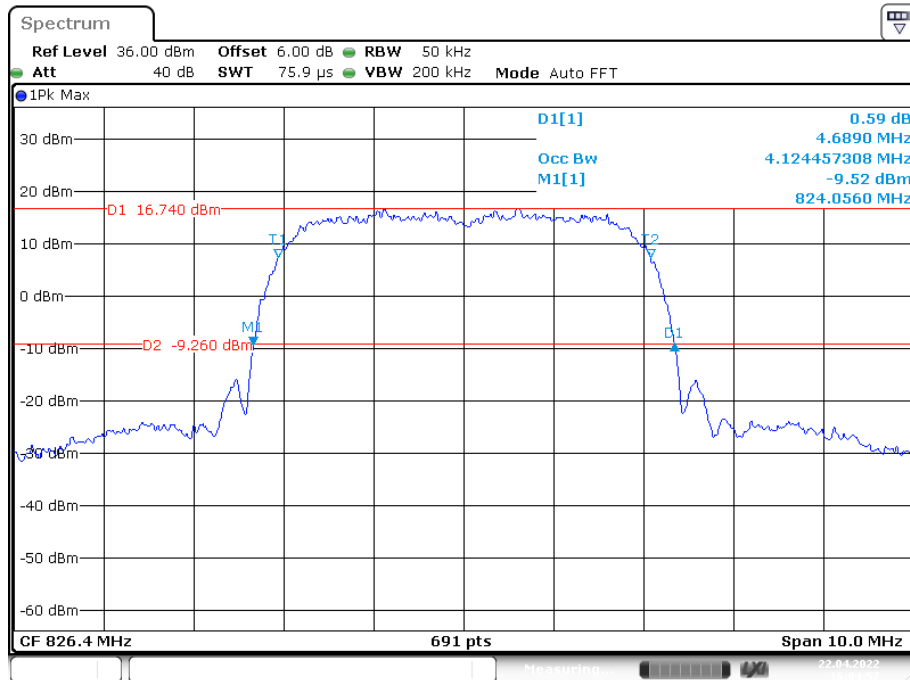
Date: 22 APR. 2022 13:42:44

**26 dB Emissions & 99% Occupied Bandwidth for PCS 1900 (EGPRS) Mode, Middle channel**

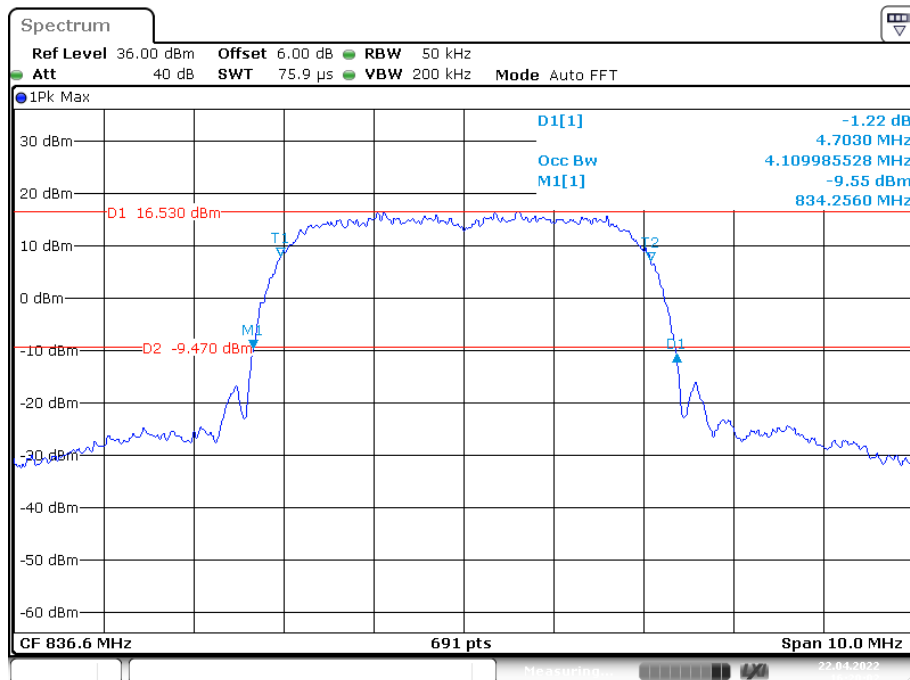
Date: 22 APR 2022 13:45:11

**26 dB Emissions & 99% Occupied Bandwidth for PCS 1900 (EGPRS) Mode, High channel**

Date: 22 APR 2022 13:47:00

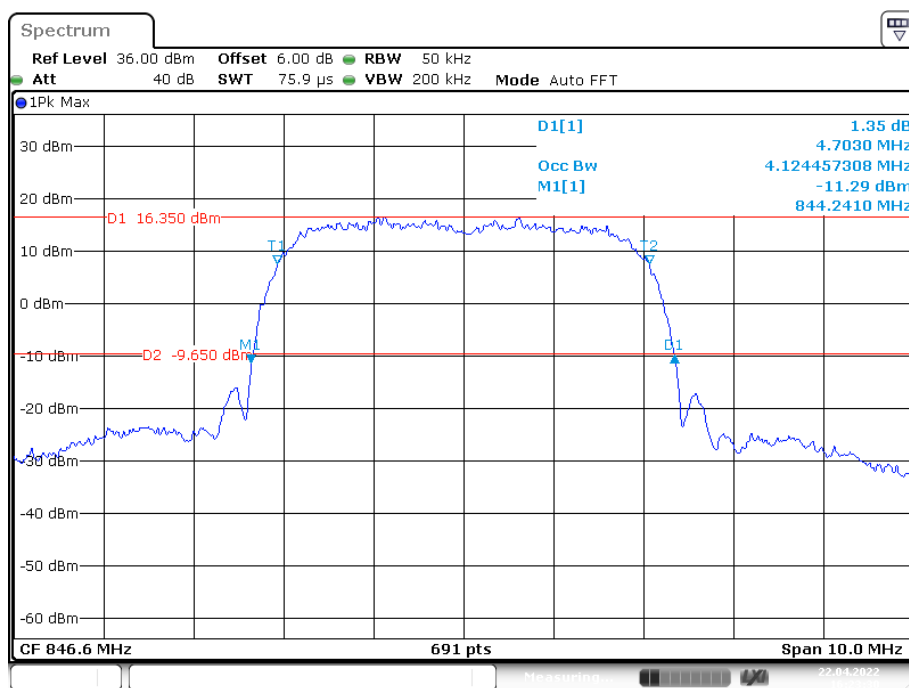
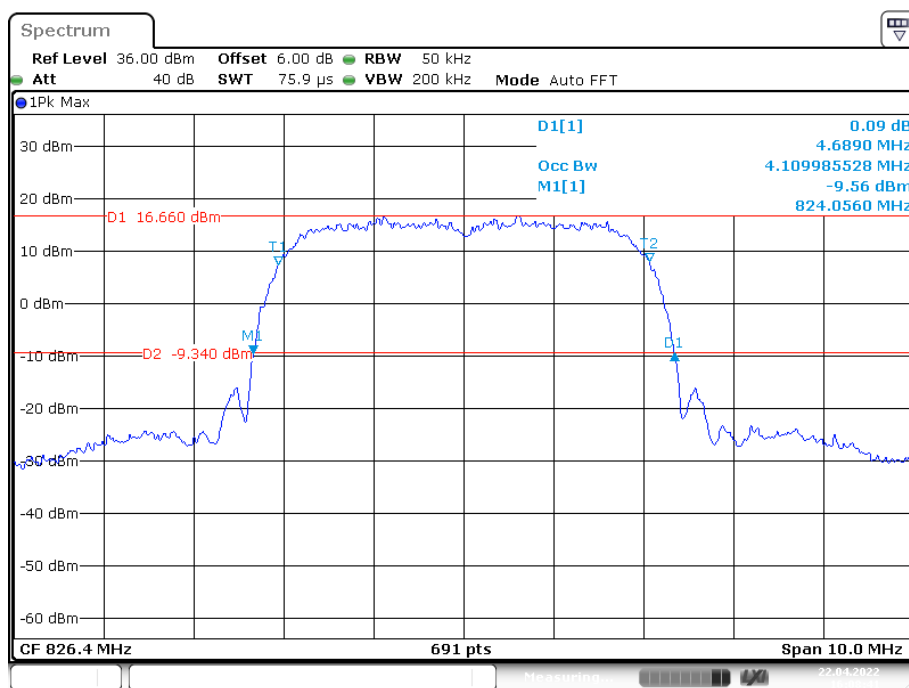
**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (RMC) Mode, Low channel**

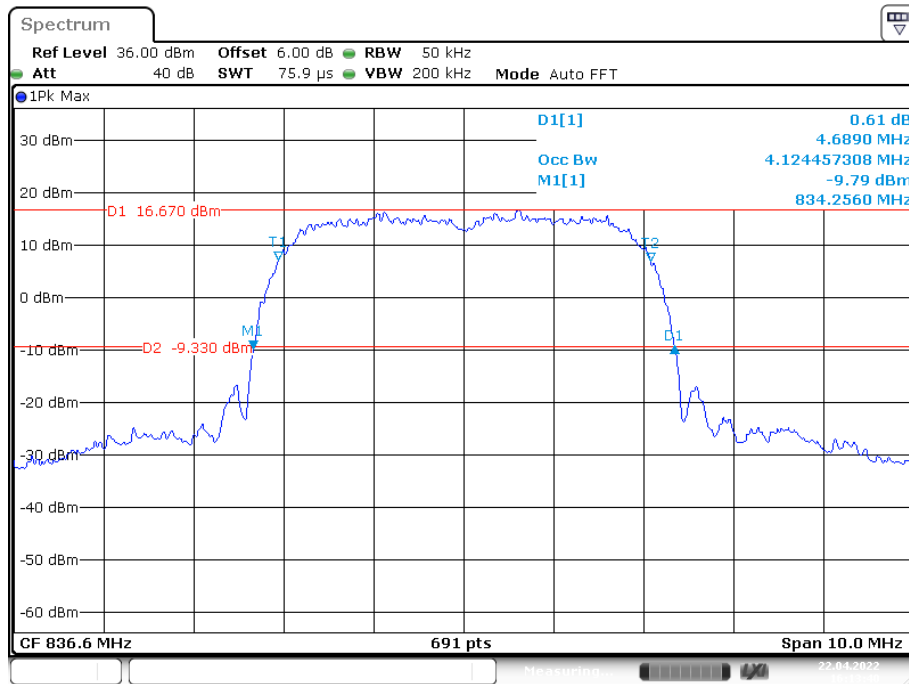
Date: 22.APR.2022 16:04:57

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (RMC) Mode, Middle channel**

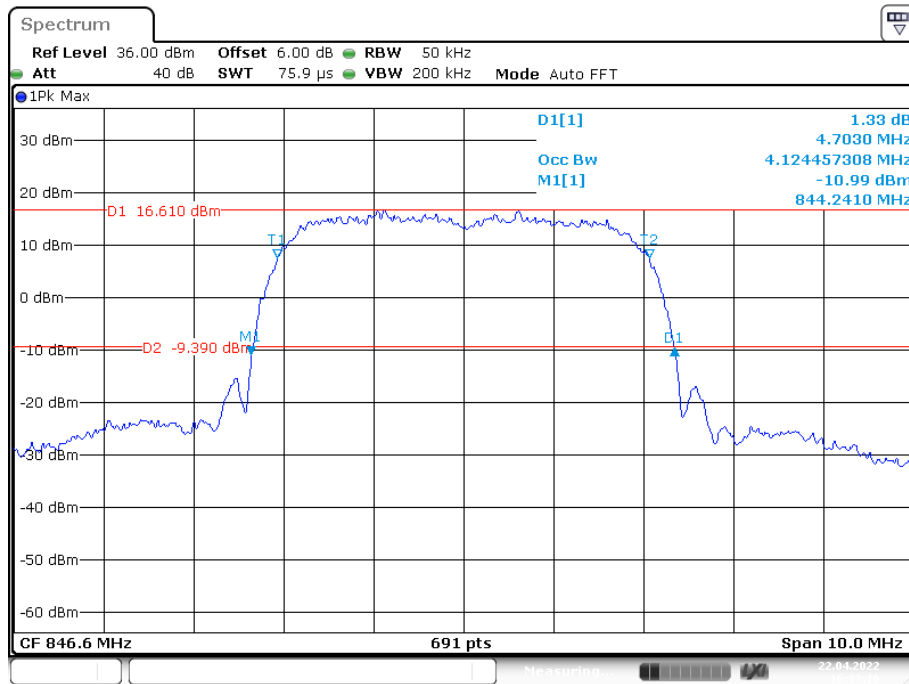
Date: 22.APR.2022 16:20:02



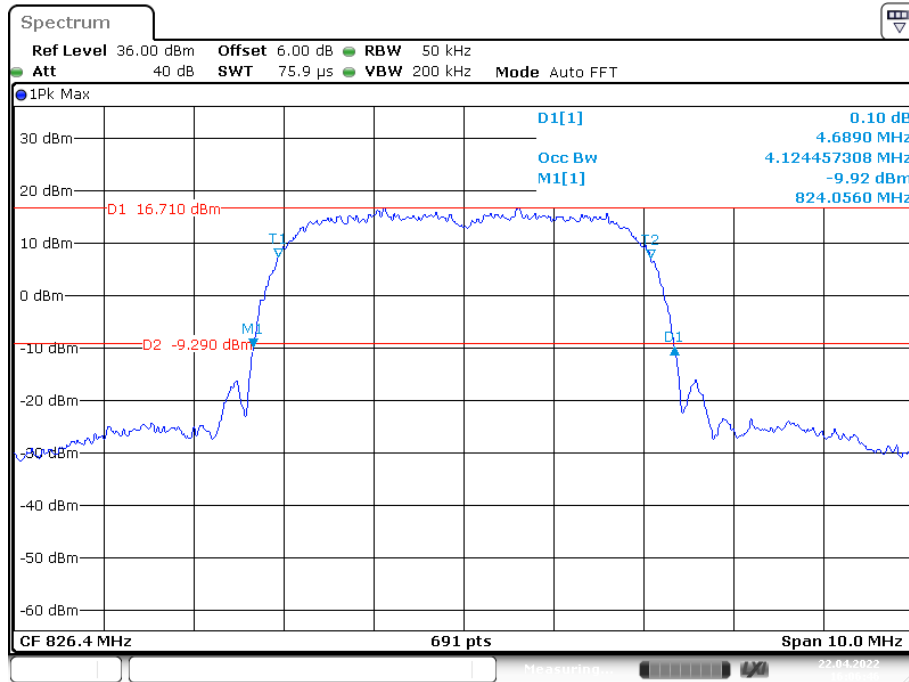
**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (RMC) Mode, High channel****26 dB Emissions & 99% Occupied Bandwidth for WCDMA(HSUPA) Mode, Low channel**

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA(HSUPA) Mode, Middle channel**

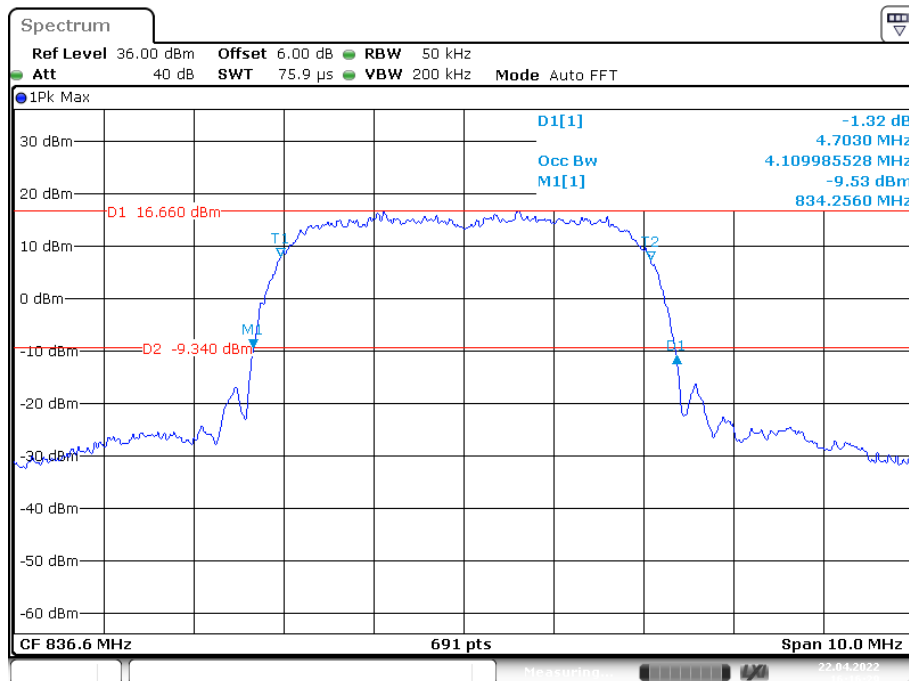
Date: 22 APR 2022 16:13:41

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA(HSUPA) Mode, High channel**

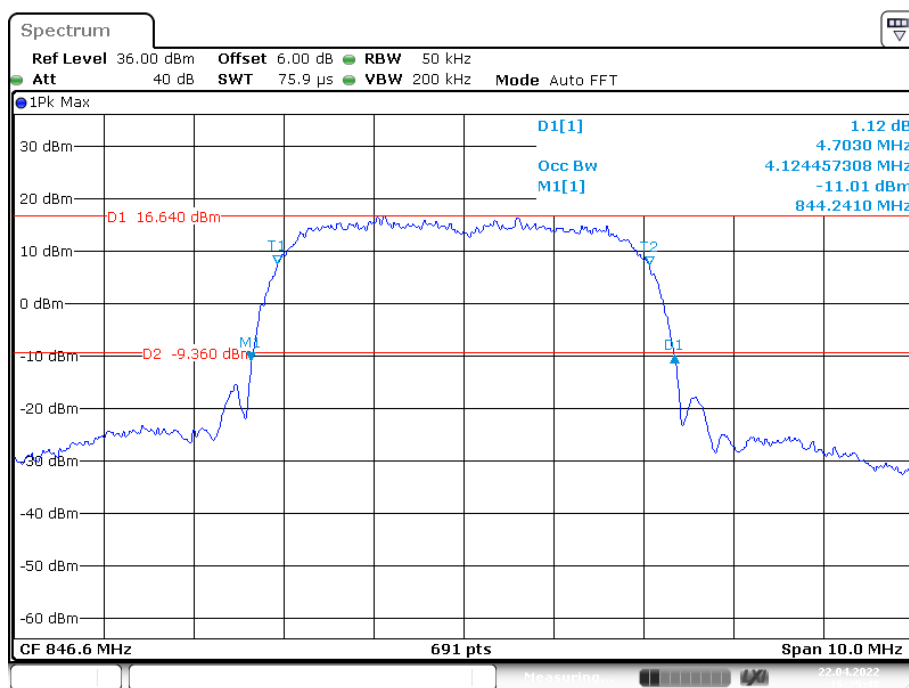
Date: 22 APR 2022 16:33:17

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA(HSDPA) Mode, Low channel**

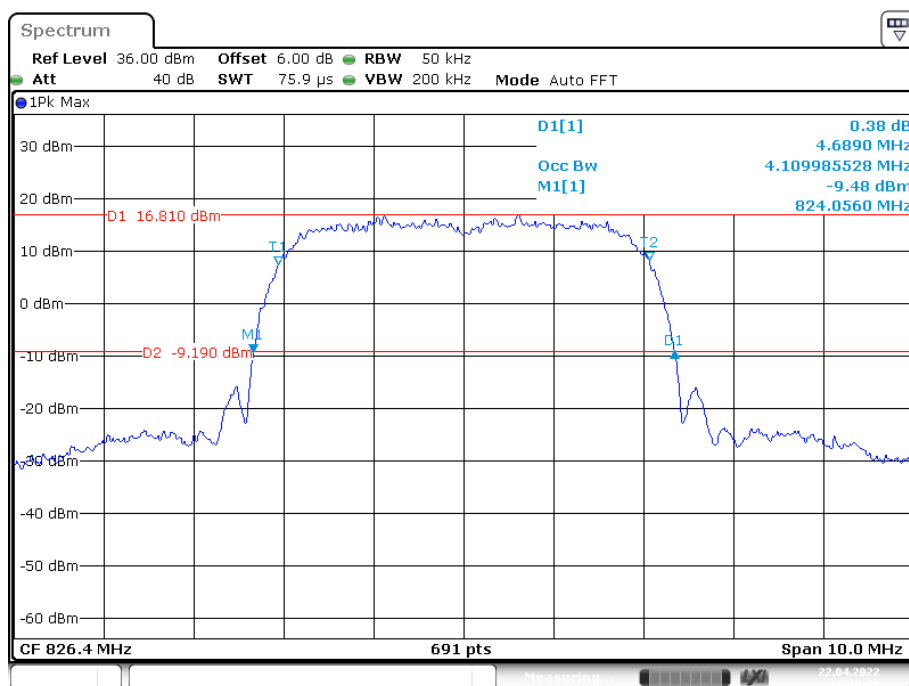
Date: 22 APR 2022 16:06:46

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA(HSDPA) Mode, Middle channel**

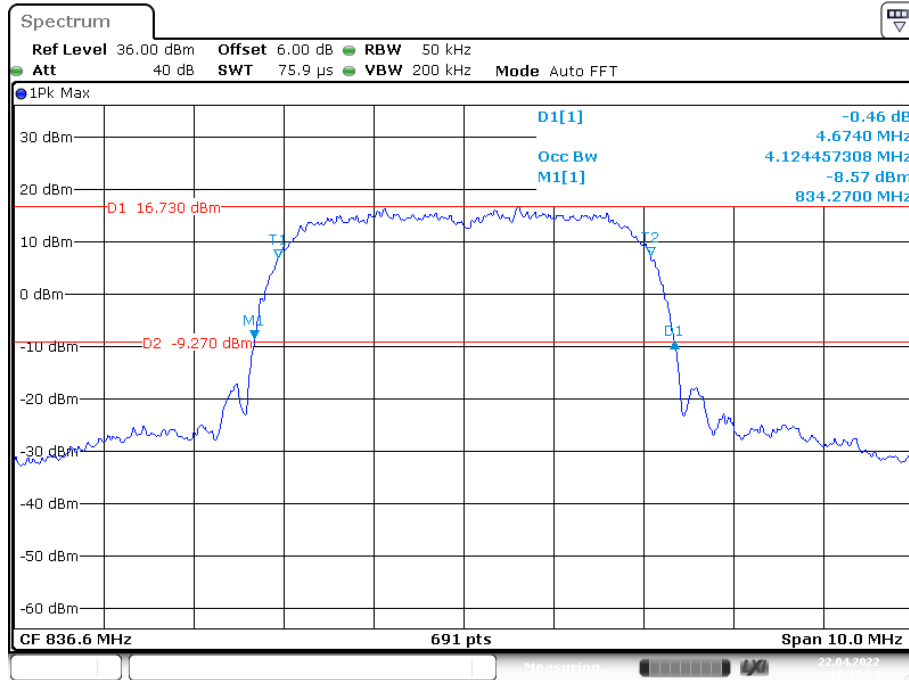
Date: 22 APR 2022 16:16:29

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA(HSDPA) Mode, High channel**

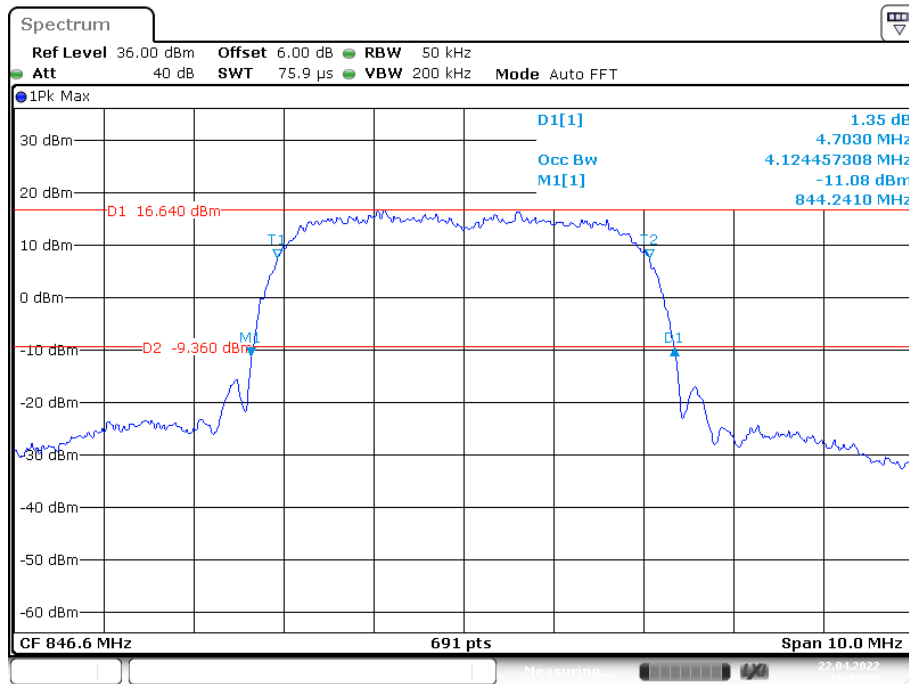
Date: 22 APR 2022 16:25:48

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA(HSPA+) Mode, Low channel**

Date: 22 APR 2022 16:10:40

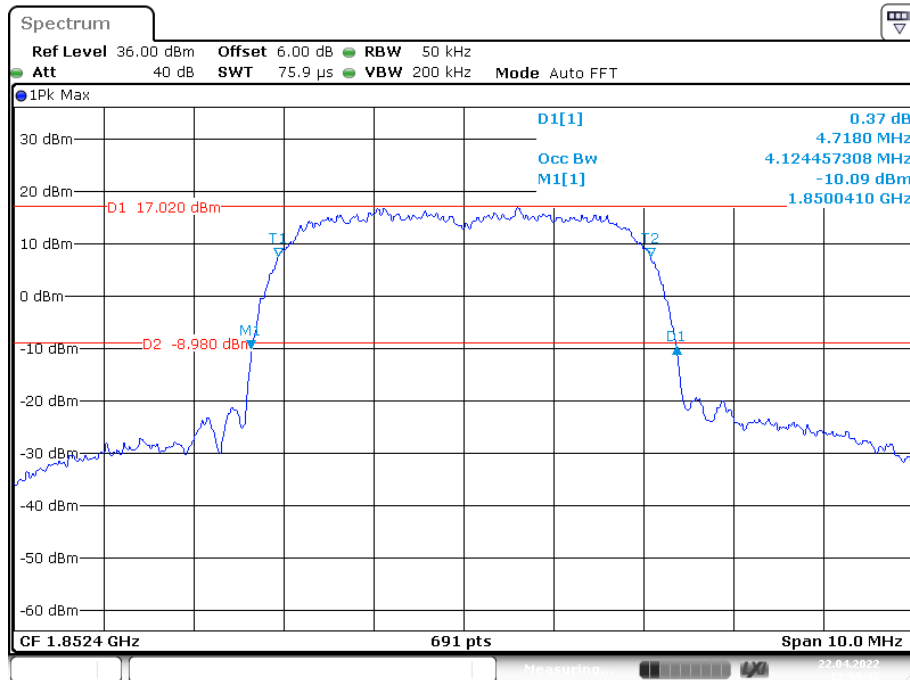
**26 dB Emissions & 99% Occupied Bandwidth for WCDMA(HSPA+) Mode, Middle channel**

Date: 22 APR 2022 16:12:24

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA(HSPA+) Mode, High channel**

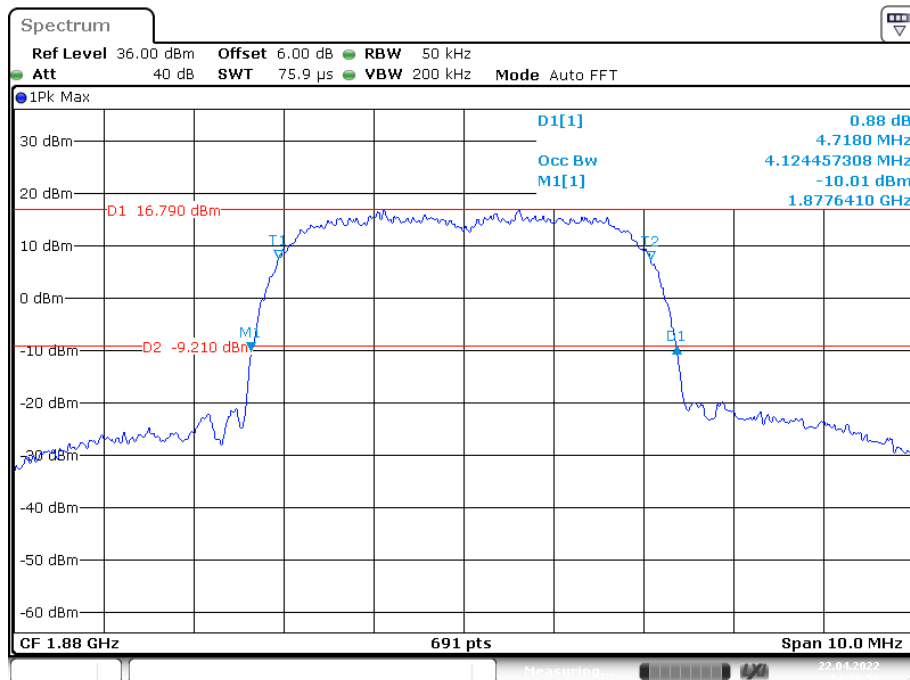
Date: 22 APR 2022 16:37:25

## 26 dB Emissions &amp; 99% Occupied Bandwidth for WCDMA (RMC) Mode, Low channel

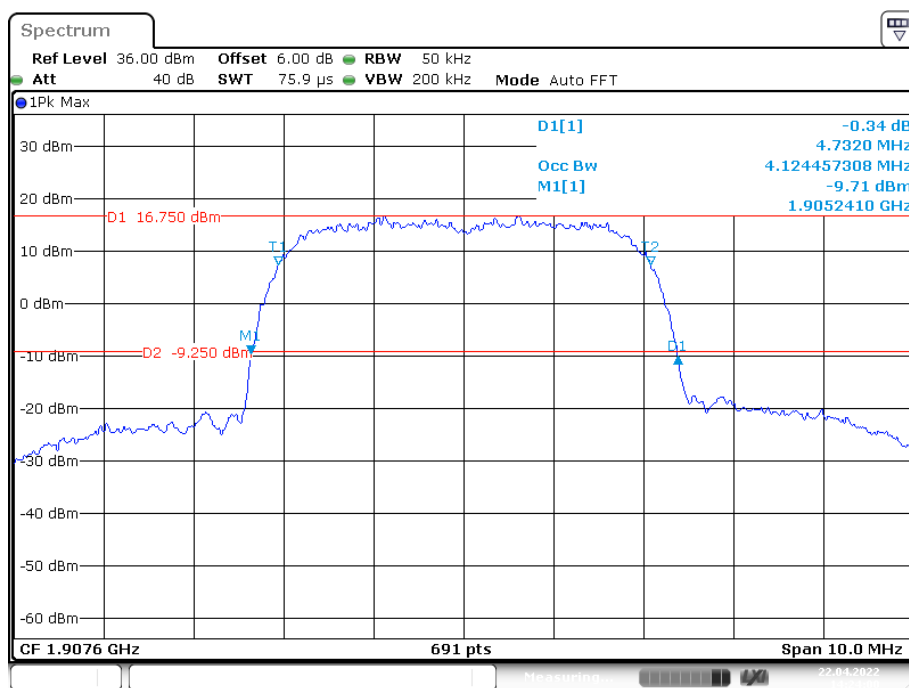


Date: 22 APR 2022 13:59:46

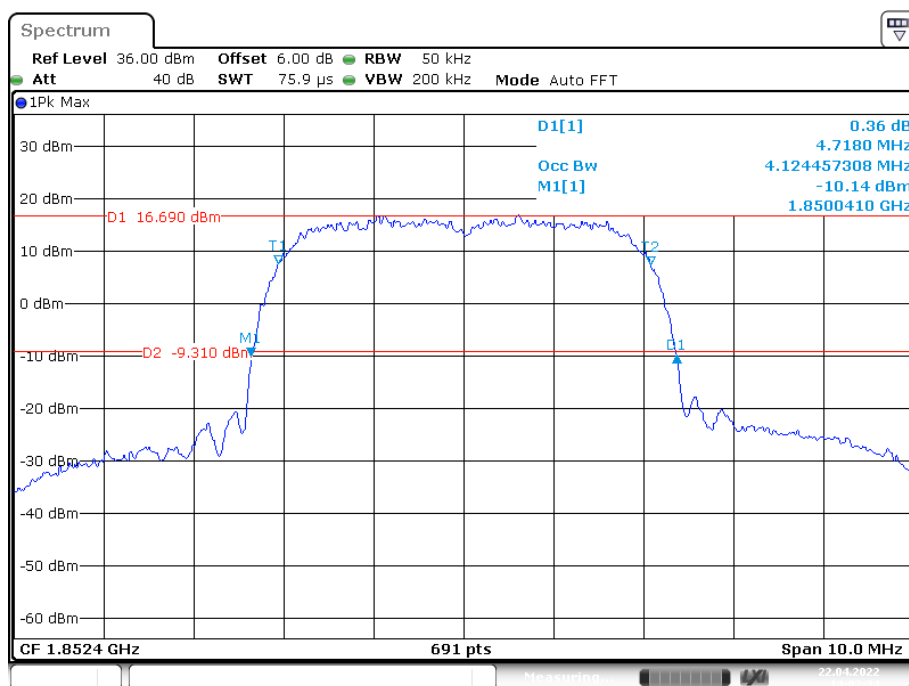
## 26 dB Emissions &amp; 99% Occupied Bandwidth for WCDMA (RMC) Mode, Middle channel



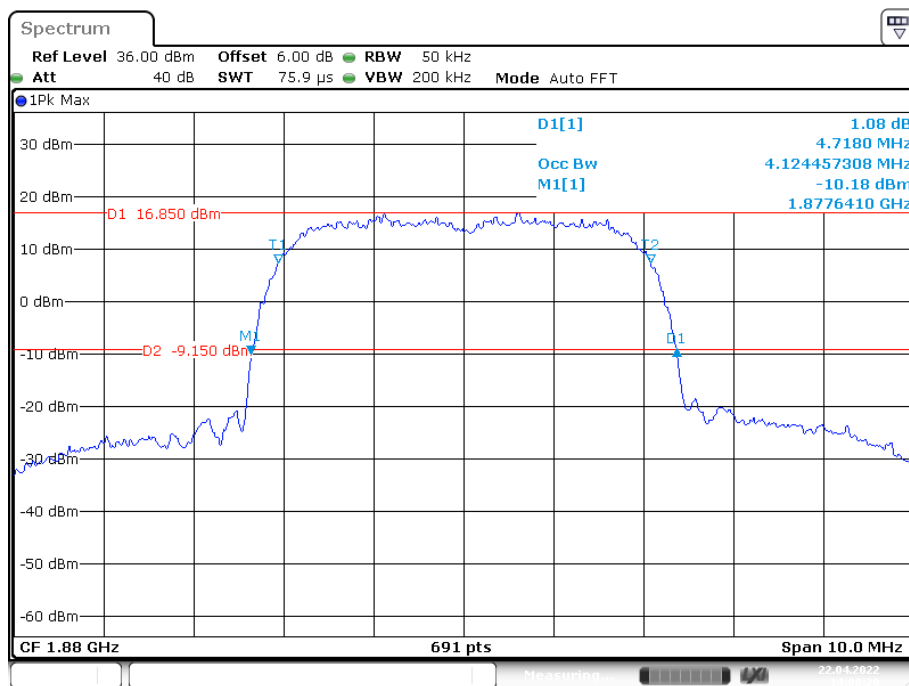
Date: 22 APR 2022 14:10:50

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (RMC) Mode, High channel**

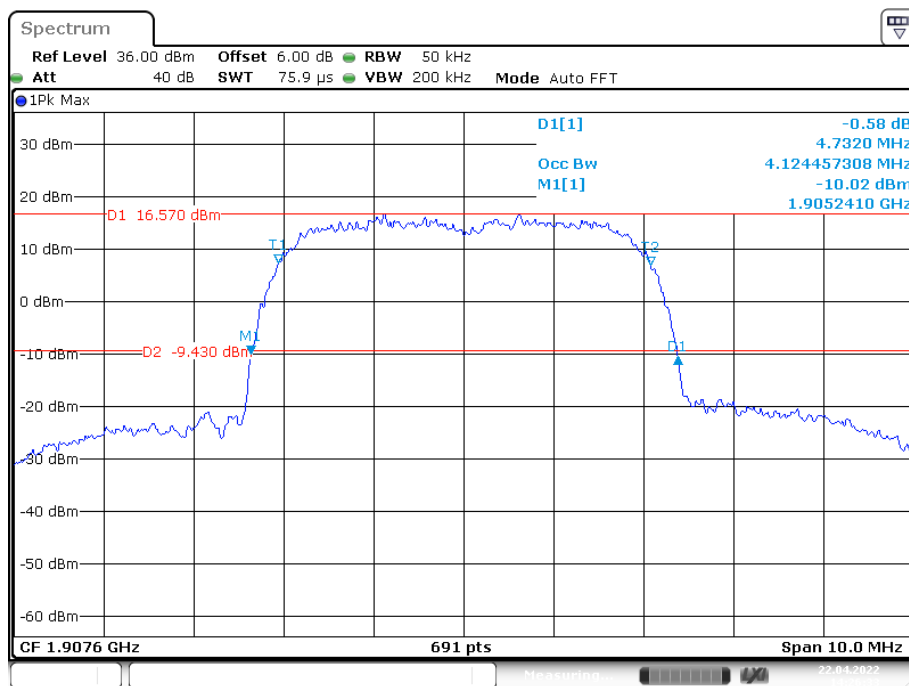
Date: 22 APR 2022 14:24:00

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSUPA) Mode, Low channel**

Date: 22 APR 2022 14:02:34

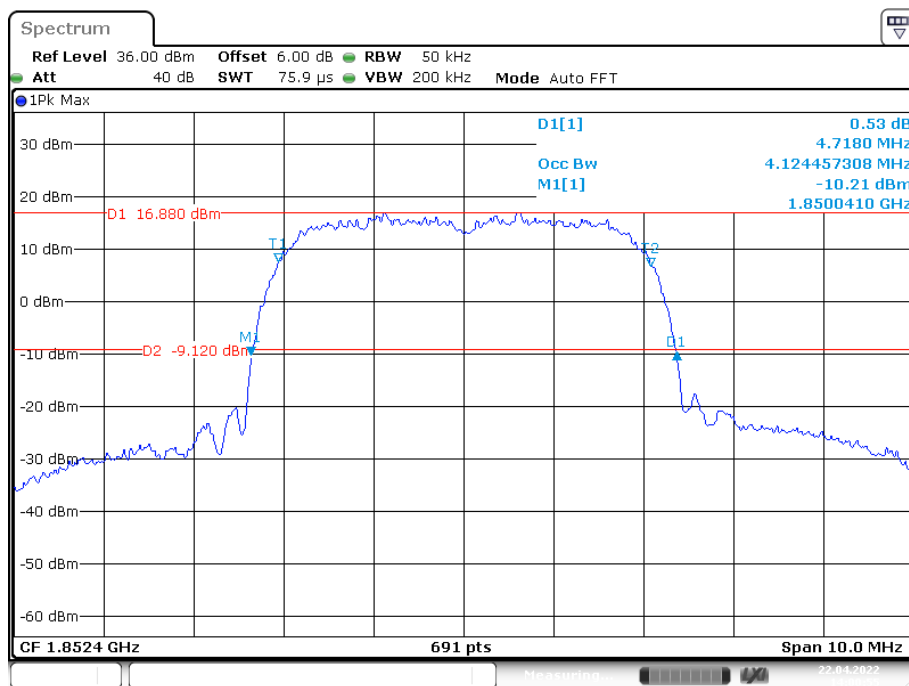
**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSUPA) Mode, Middle channel**

Date: 22 APR 2022 14:08:20

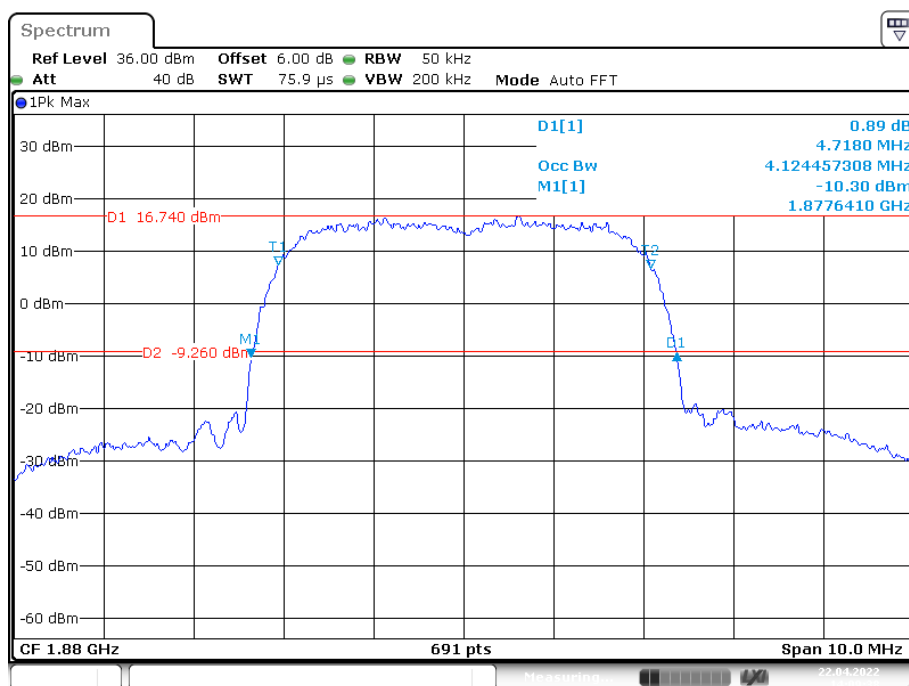
**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSUPA) Mode, High channel**

Date: 22 APR 2022 14:26:33

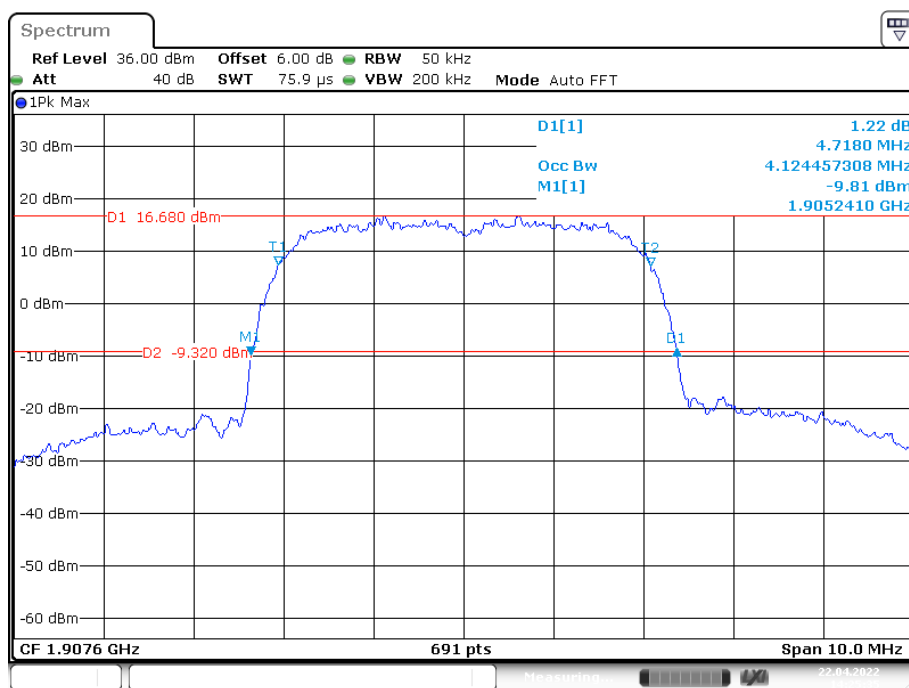


**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSDPA) Mode, Low channel**

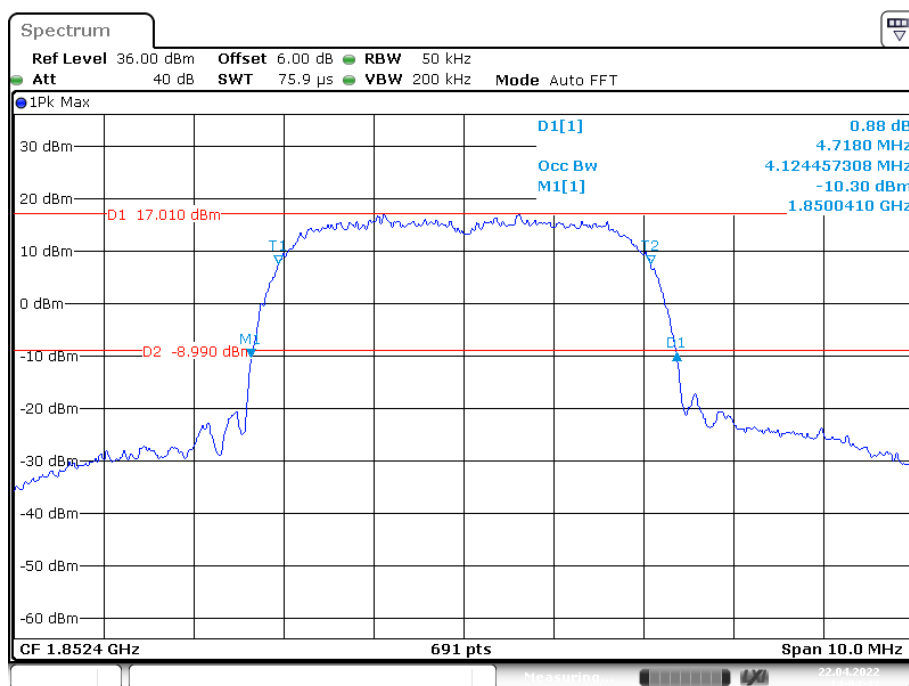
Date: 22 APR 2022 14:00:55

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSDPA) Mode, Middle channel**

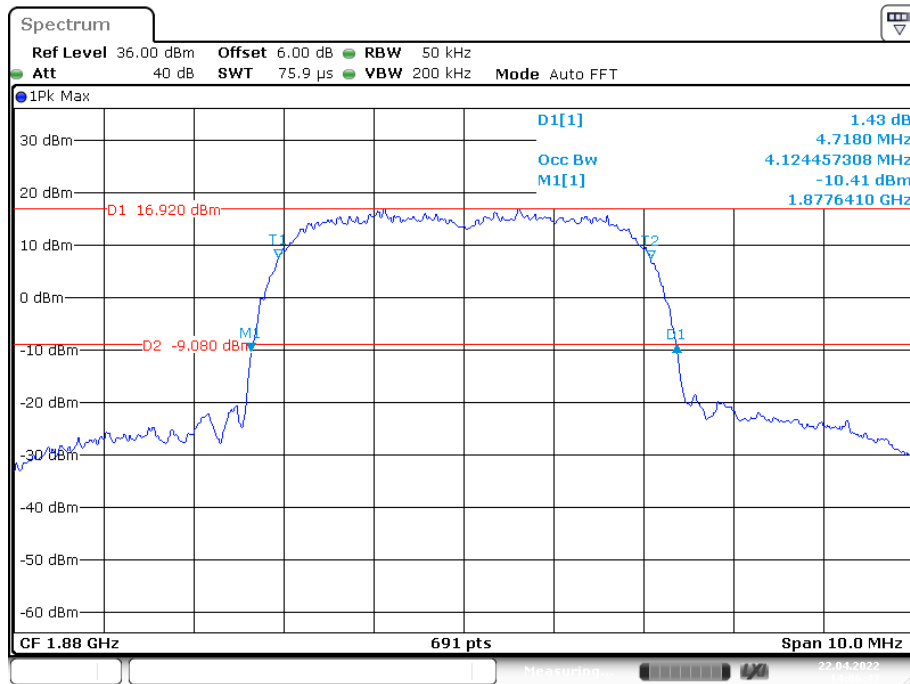
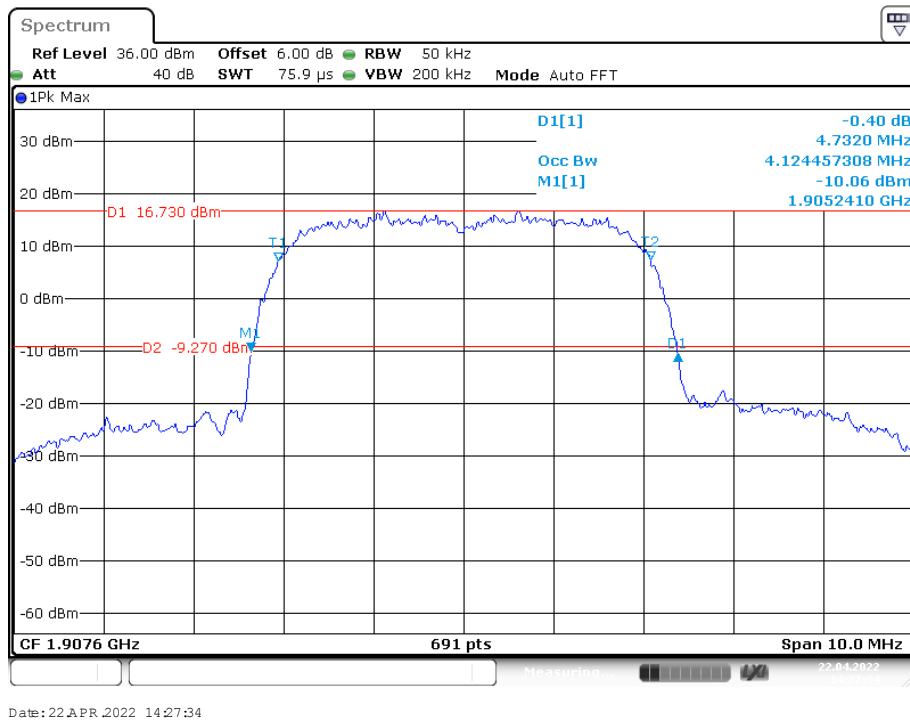
Date: 22 APR 2022 14:09:39

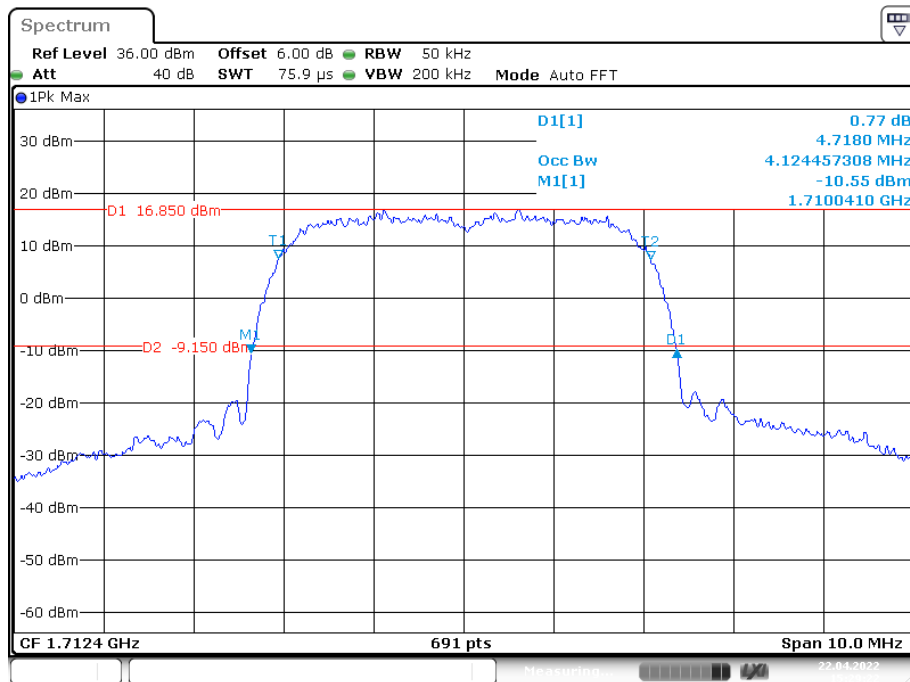
**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSDPA) Mode, High channel**

Date: 22 APR 2022 14:25:35

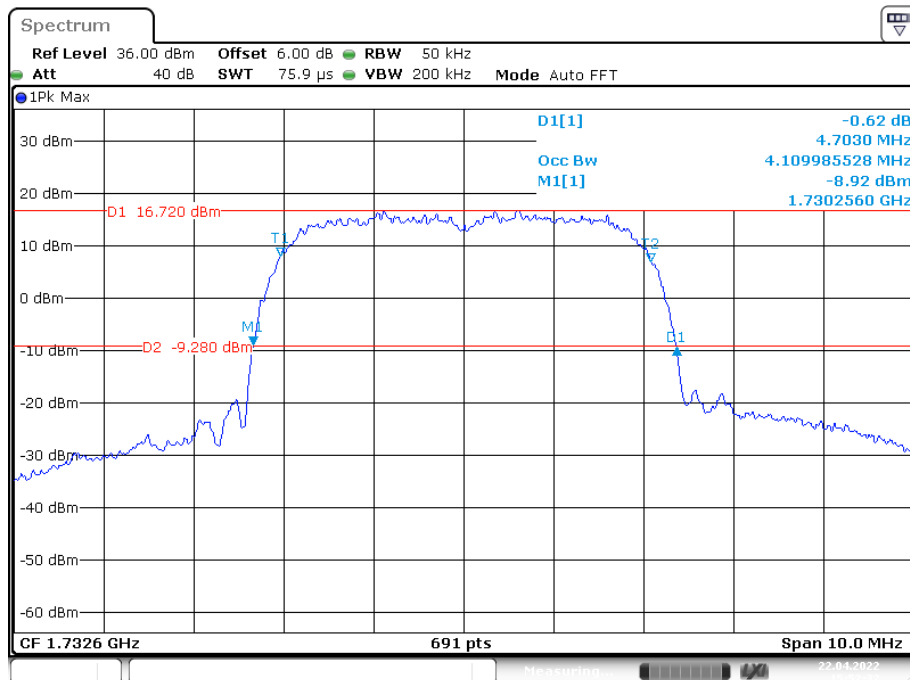
**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSPA+) Mode, Low channel**

Date: 22 APR 2022 14:04:43

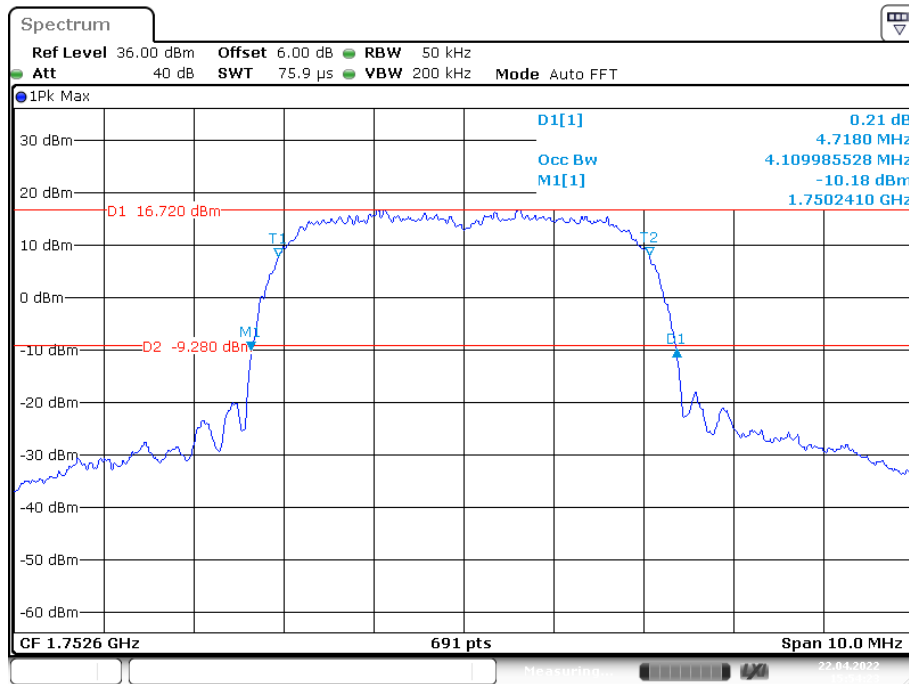
**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSPA+) Mode, Middle channel****26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSPA+) Mode, High channel**

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (RMC) Mode, Low channel**

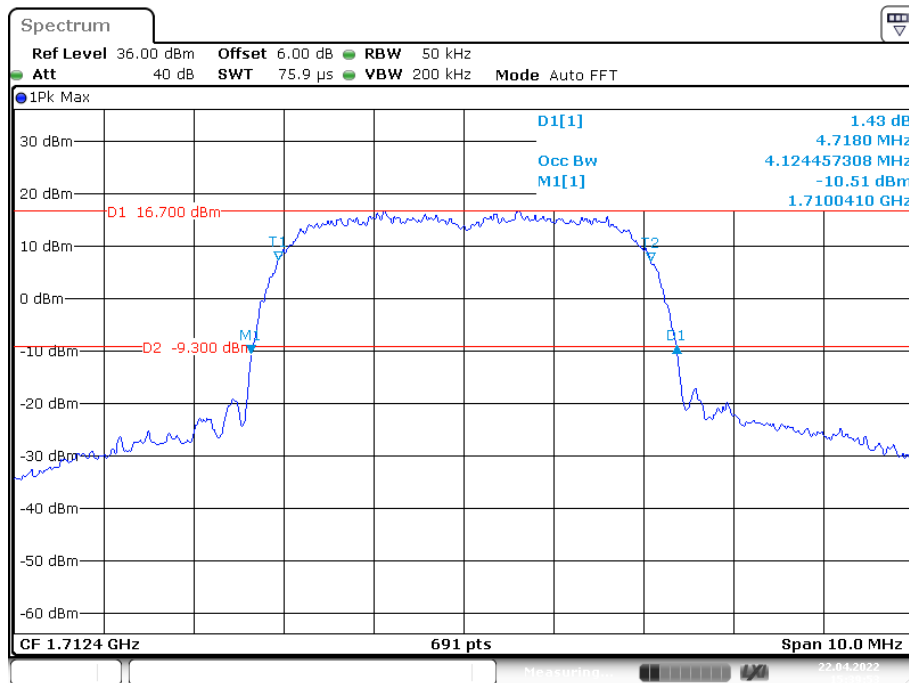
Date: 22.APR.2022 15:29:22

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (RMC) Mode, Middle channel**

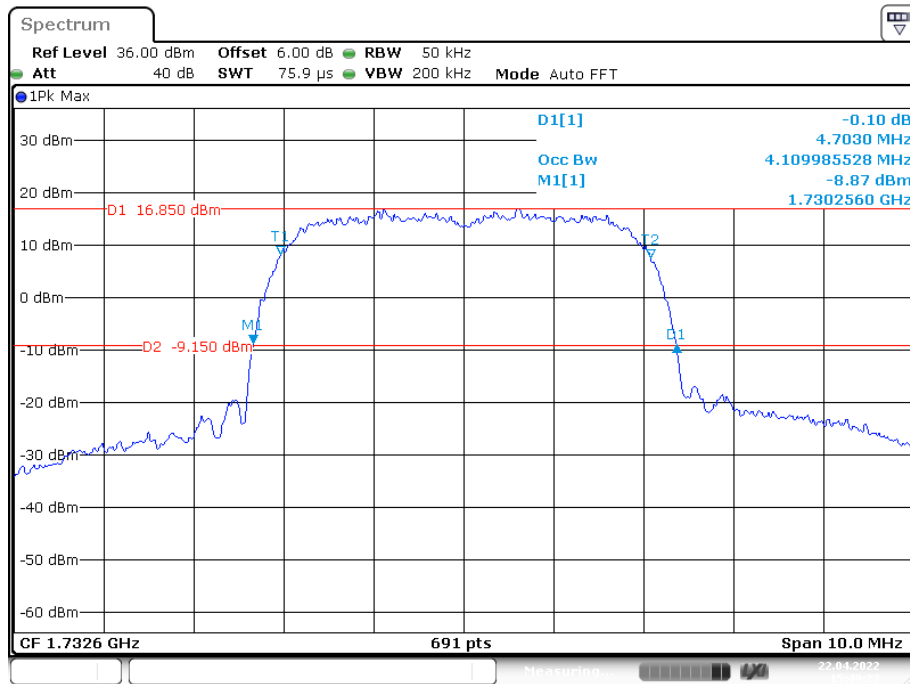
Date: 22.APR.2022 15:52:32

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (RMC) Mode, High channel**

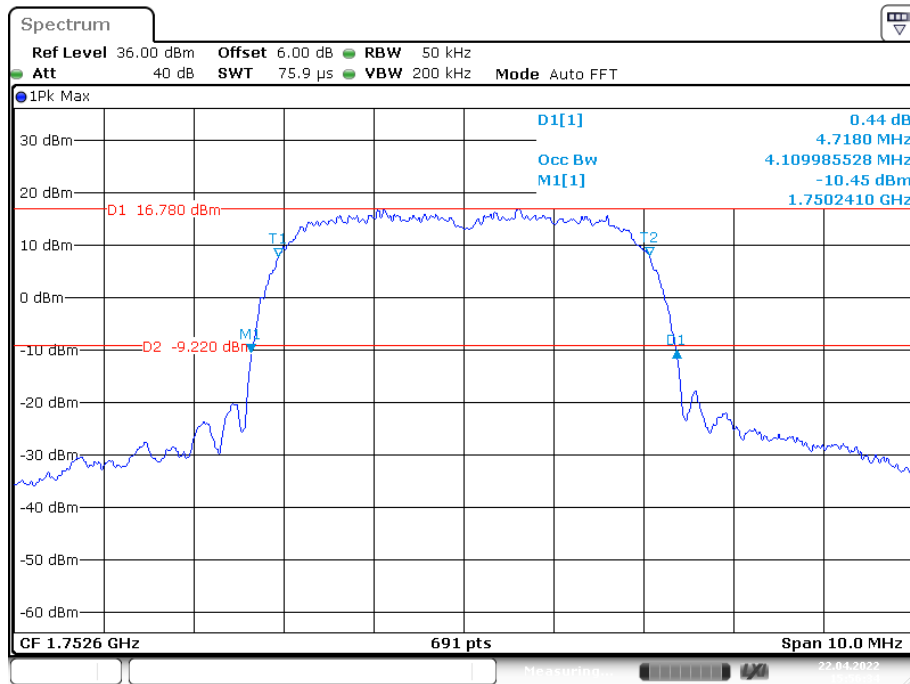
Date: 22 APR 2022 15:54:23

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSUPA) Mode, Low channel**

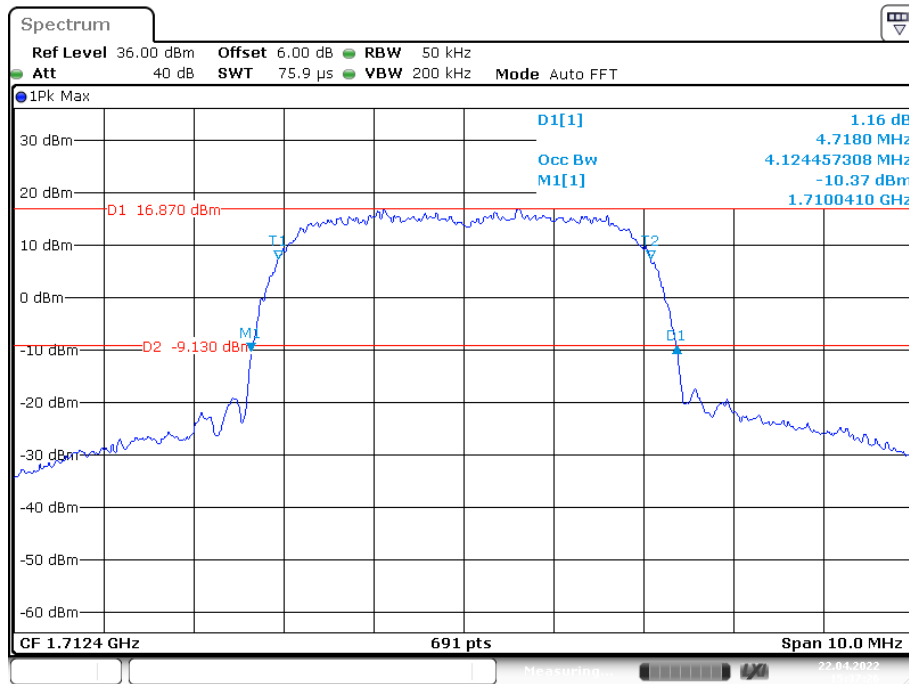
Date: 22 APR 2022 15:59:53

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSUPA) Mode, Middle channel**

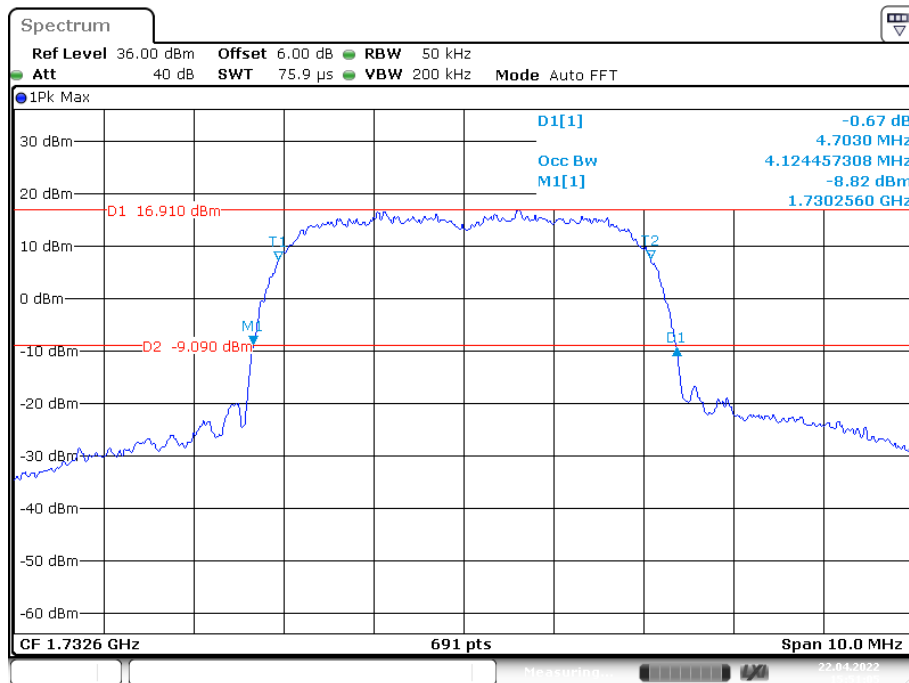
Date: 22 APR 2022 15:49:24

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSUPA) Mode, High channel**

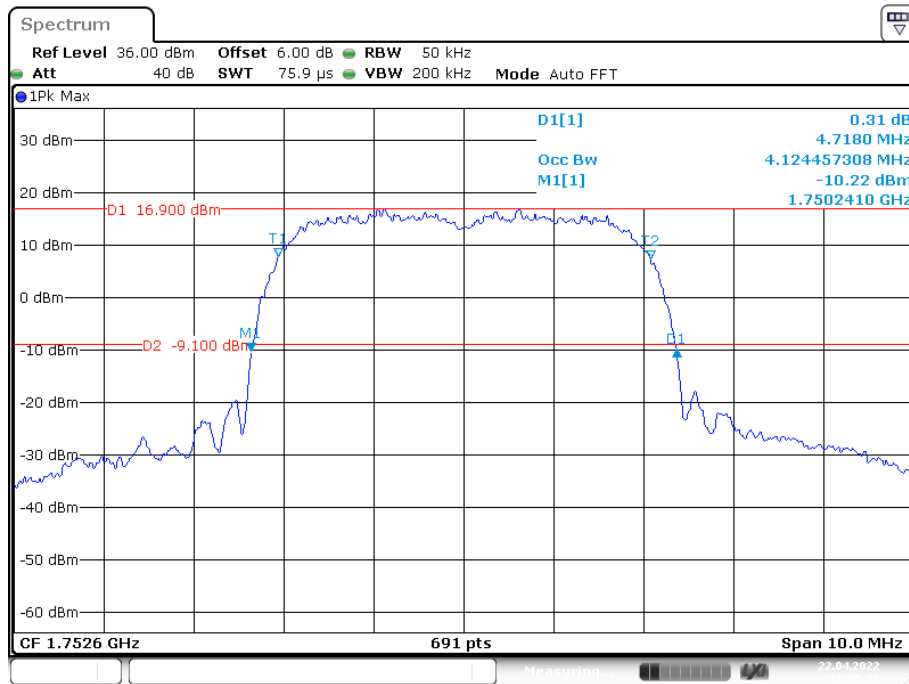
Date: 22 APR 2022 15:56:34

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSDPA) Mode, Low channel**

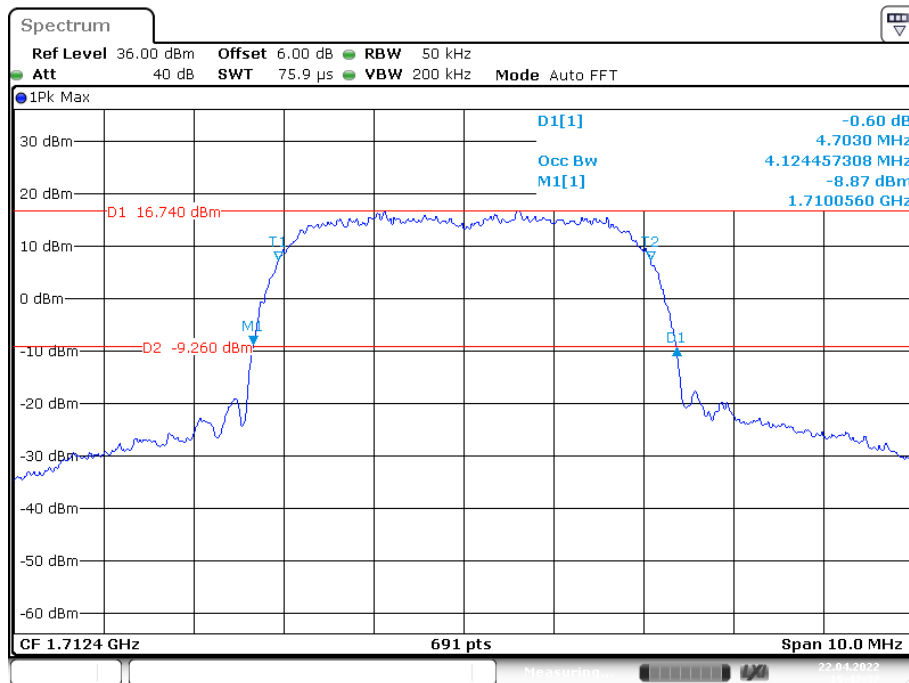
Date: 22 APR 2022 15:37:26

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSDPA) Mode, Middle channel**

Date: 22 APR 2022 15:51:06

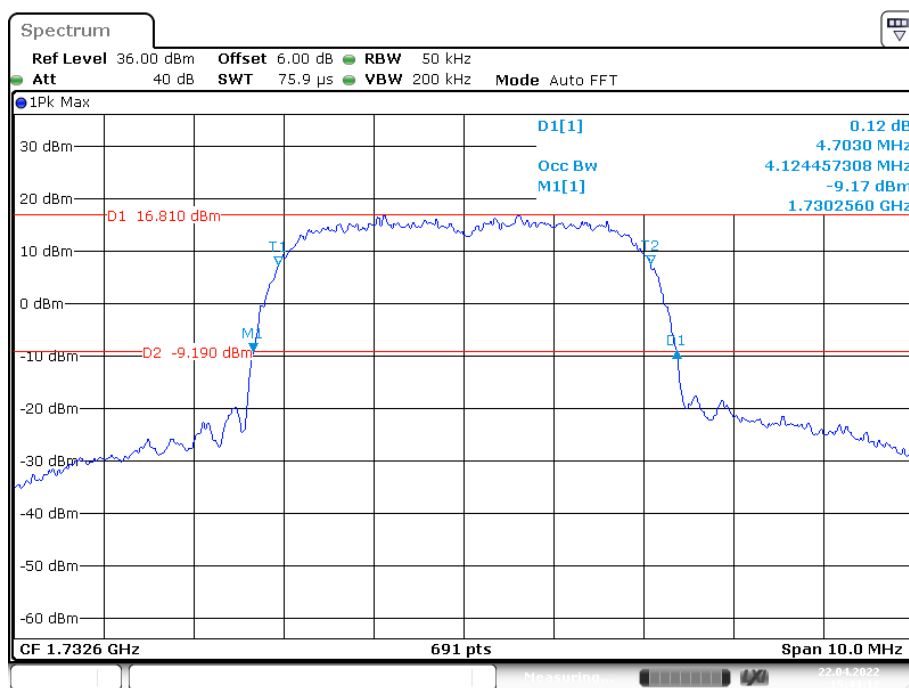
**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSDPA) Mode, High channel**

Date: 22 APR 2022 15:55:33

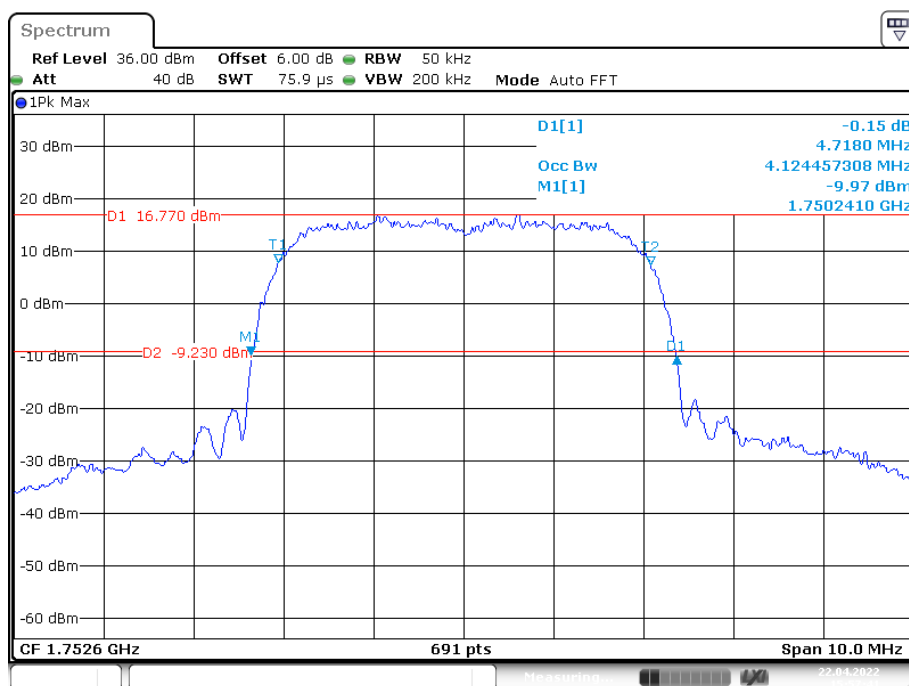
**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSPA+) Mode, Low channel**

Date: 22 APR 2022 15:42:37



**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSPA+) Mode, Middle channel**

Date: 22 APR 2022 15:44:12

**26 dB Emissions & 99% Occupied Bandwidth for WCDMA (HSPA+) Mode, High channel**

Date: 22 APR 2022 15:57:41

**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       | 1.081       | 1.281          | 1.094          | 1.263          | 1.094        | 1.411          |
|           | 16QAM      | 1.081       | 1.281          | 1.094          | 1.259          | 1.094        | 1.407          |
| 3 MHz     | QPSK       | 2.683       | 2.935          | 2.692          | 2.935          | 2.683        | 2.961          |
|           | 16QAM      | 2.683       | 2.935          | 2.692          | 2.935          | 2.683        | 2.961          |
| 5 MHz     | QPSK       | 4.472       | 4.906          | 4.486          | 4.920          | 4.486        | 4.978          |
|           | 16QAM      | 4.472       | 4.891          | 4.486          | 4.920          | 4.486        | 4.978          |
| 10 MHz    | QPSK       | 8.944       | 9.696          | 8.915          | 9.783          | 8.944        | 9.812          |
|           | 16QAM      | 8.944       | 9.696          | 8.915          | 9.812          | 8.944        | 9.812          |
| 15 MHz    | QPSK       | 13.372      | 14.544         | 13.415         | 14.588         | 13.372       | 14.544         |
|           | 16QAM      | 13.372      | 14.414         | 13.415         | 14.588         | 13.372       | 14.544         |
| 20 MHz    | QPSK       | 17.829      | 19.045         | 17.829         | 19.276         | 17.887       | 19.045         |
|           | 16QAM      | 17.887      | 19.161         | 17.829         | 19.276         | 17.829       | 19.103         |

**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       | 1.09        | 1.303          | 1.094          | 1.285          | 1.085        | 1.276          |
|           | 16QAM      | 1.09        | 1.298          | 1.094          | 1.285          | 1.085        | 1.276          |
| 3 MHz     | QPSK       | 2.683       | 2.944          | 2.692          | 2.922          | 2.683        | 2.926          |
|           | 16QAM      | 2.683       | 2.944          | 2.692          | 2.922          | 2.683        | 2.926          |
| 5 MHz     | QPSK       | 4.472       | 4.906          | 4.486          | 4.935          | 4.486        | 4.920          |
|           | 16QAM      | 4.472       | 4.906          | 4.486          | 4.949          | 4.486        | 4.920          |
| 10 MHz    | QPSK       | 8.944       | 9.725          | 8.915          | 9.725          | 8.944        | 9.783          |
|           | 16QAM      | 8.915       | 9.696          | 8.915          | 9.754          | 8.944        | 9.783          |
| 15 MHz    | QPSK       | 13.415      | 14.631         | 13.415         | 14.588         | 13.329       | 14.457         |
|           | 16QAM      | 13.415      | 14.631         | 13.415         | 14.544         | 13.329       | 14.501         |
| 20 MHz    | QPSK       | 17.887      | 19.161         | 17.887         | 19.038         | 17.887       | 19.334         |
|           | 16QAM      | 17.887      | 19.161         | 17.887         | 19.096         | 17.829       | 19.45          |

**LTE Band 5:**

| Bandwidth | Modulation | Low channel  |                   | Middle channel |                   | High channel |                   |
|-----------|------------|--------------|-------------------|----------------|-------------------|--------------|-------------------|
|           |            | OBW<br>(MHz) | 26dB EBW<br>(MHz) | OBW<br>(MHz)   | 26dB EBW<br>(MHz) | OBW<br>(MHz) | 26dB EBW<br>(MHz) |
| 1.4 MHz   | QPSK       | 1.09         | 1.268             | 1.085          | 1.276             | 1.090        | 1.281             |
|           | 16QAM      | 1.09         | 1.268             | 1.085          | 1.276             | 1.090        | 1.281             |
| 3 MHz     | QPSK       | 2.683        | 2.961             | 2.683          | 2.935             | 2.692        | 2.935             |
|           | 16QAM      | 2.683        | 2.952             | 2.683          | 2.935             | 2.692        | 2.935             |
| 5 MHz     | QPSK       | 4.472        | 4.906             | 4.486          | 4.920             | 4.472        | 4.906             |
|           | 16QAM      | 4.472        | 4.906             | 4.486          | 4.920             | 4.472        | 4.906             |
| 10 MHz    | QPSK       | 8.944        | 9.696             | 8.915          | 9.692             | 8.944        | 9.703             |
|           | 16QAM      | 8.944        | 9.725             | 8.944          | 9.664             | 8.944        | 9.674             |

**LTE Band 7:**

| Bandwidth | Modulation | Low channel  |                   | Middle channel |                   | High channel |                   |
|-----------|------------|--------------|-------------------|----------------|-------------------|--------------|-------------------|
|           |            | OBW<br>(MHz) | 26dB EBW<br>(MHz) | OBW<br>(MHz)   | 26dB EBW<br>(MHz) | OBW<br>(MHz) | 26dB EBW<br>(MHz) |
| 5 MHz     | QPSK       | 4.472        | 4.906             | 4.486          | 4.920             | 4.486        | 4.906             |
|           | 16QAM      | 4.472        | 4.906             | 4.486          | 4.920             | 4.486        | 4.906             |
| 10 MHz    | QPSK       | 8.915        | 9.783             | 8.944          | 9.754             | 8.944        | 9.667             |
|           | 16QAM      | 8.915        | 9.725             | 8.944          | 9.783             | 8.944        | 9.667             |
| 15 MHz    | QPSK       | 13.415       | 14.588            | 13.415         | 14.544            | 13.329       | 14.501            |
|           | 16QAM      | 13.415       | 14.631            | 13.415         | 14.544            | 13.372       | 14.457            |
| 20 MHz    | QPSK       | 17.887       | 19.276            | 17.887         | 19.161            | 17.829       | 19.038            |
|           | 16QAM      | 17.887       | 19.45             | 17.887         | 19.045            | 17.829       | 19.096            |

**LTE Band 12:**

| Bandwidth | Modulation | Low channel  |                   | Middle channel |                   | High channel |                   |
|-----------|------------|--------------|-------------------|----------------|-------------------|--------------|-------------------|
|           |            | OBW<br>(MHz) | 26dB EBW<br>(MHz) | OBW<br>(MHz)   | 26dB EBW<br>(MHz) | OBW<br>(MHz) | 26dB EBW<br>(MHz) |
| 1.4 MHz   | QPSK       | 1.094        | 1.272             | 1.085          | 1.263             | 1.085        | 1.276             |
|           | 16QAM      | 1.094        | 1.268             | 1.085          | 1.263             | 1.085        | 1.276             |
| 3 MHz     | QPSK       | 2.683        | 2.952             | 2.692          | 2.926             | 2.692        | 2.926             |
|           | 16QAM      | 2.683        | 2.952             | 2.692          | 2.926             | 2.692        | 2.935             |
| 5 MHz     | QPSK       | 4.472        | 4.891             | 4.501          | 4.955             | 4.472        | 4.873             |
|           | 16QAM      | 4.472        | 4.981             | 4.501          | 4.955             | 4.472        | 4.858             |
| 10 MHz    | QPSK       | 8.973        | 9.783             | 9.001          | 9.785             | 8.915        | 9.588             |
|           | 16QAM      | 8.973        | 9.783             | 9.001          | 9.814             | 8.915        | 9.617             |

**LTE Band 17:**

| Bandwidth | Modulation | Low channel  |                   | Middle channel |                   | High channel |                   |
|-----------|------------|--------------|-------------------|----------------|-------------------|--------------|-------------------|
|           |            | OBW<br>(MHz) | 26dB EBW<br>(MHz) | OBW<br>(MHz)   | 26dB EBW<br>(MHz) | OBW<br>(MHz) | 26dB EBW<br>(MHz) |
| 5 MHz     | QPSK       | 4.486        | 4.935             | 4.457          | 4.908             | 4.472        | 4.891             |
|           | 16QAM      | 4.486        | 4.935             | 4.457          | 4.894             | 4.472        | 4.906             |
| 10 MHz    | QPSK       | 8.944        | 9.729             | 8.915          | 9.713             | 8.915        | 9.639             |
|           | 16QAM      | 8.944        | 9.729             | 8.915          | 9.713             | 8.915        | 9.581             |

**LTE Band 25:**

| Bandwidth | Modulation | Low channel  |                   | Middle channel |                   | High channel |                   |
|-----------|------------|--------------|-------------------|----------------|-------------------|--------------|-------------------|
|           |            | OBW<br>(MHz) | 26dB EBW<br>(MHz) | OBW<br>(MHz)   | 26dB EBW<br>(MHz) | OBW<br>(MHz) | 26dB EBW<br>(MHz) |
| 1.4 MHz   | QPSK       | 1.094        | 1.268             | 1.085          | 1.281             | 1.090        | 1.298             |
|           | 16QAM      | 1.094        | 1.268             | 1.085          | 1.281             | 1.090        | 1.303             |
| 3 MHz     | QPSK       | 2.683        | 2.944             | 2.683          | 2.935             | 2.692        | 2.935             |
|           | 16QAM      | 2.683        | 2.944             | 2.683          | 2.935             | 2.692        | 2.944             |
| 5 MHz     | QPSK       | 4.472        | 4.891             | 4.486          | 4.920             | 4.472        | 4.906             |
|           | 16QAM      | 4.472        | 4.891             | 4.486          | 4.920             | 4.472        | 4.891             |
| 10 MHz    | QPSK       | 8.944        | 9.696             | 8.944          | 9.783             | 8.915        | 9.696             |
|           | 16QAM      | 8.944        | 9.667             | 8.973          | 9.841             | 8.915        | 9.725             |
| 15 MHz    | QPSK       | 13.372       | 14.588            | 13.372         | 14.501            | 13.329       | 14.457            |
|           | 16QAM      | 13.372       | 14.588            | 13.372         | 14.588            | 13.329       | 14.457            |
| 20 MHz    | QPSK       | 17.829       | 19.219            | 17.771         | 19.005            | 17.829       | 19.153            |
|           | 16QAM      | 17.829       | 19.392            | 17.829         | 19.005            | 17.829       | 19.096            |

**LTE Band 26:**

| Bandwidth | Modulation | Low channel  |                   | Middle channel |                   | High channel |                   |
|-----------|------------|--------------|-------------------|----------------|-------------------|--------------|-------------------|
|           |            | OBW<br>(MHz) | 26dB EBW<br>(MHz) | OBW<br>(MHz)   | 26dB EBW<br>(MHz) | OBW<br>(MHz) | 26dB EBW<br>(MHz) |
| 1.4 MHz   | QPSK       | 1.090        | 1.285             | 1.090          | 1.268             | 1.085        | 1.285             |
|           | 16QAM      | 1.090        | 1.285             | 1.090          | 1.272             | 1.081        | 1.276             |
| 3 MHz     | QPSK       | 2.683        | 2.961             | 2.683          | 2.935             | 2.683        | 2.926             |
|           | 16QAM      | 2.683        | 2.952             | 2.683          | 2.935             | 2.683        | 2.944             |
| 5 MHz     | QPSK       | 4.486        | 4.948             | 4.486          | 4.920             | 4.457        | 4.891             |
|           | 16QAM      | 4.457        | 4.933             | 4.486          | 4.906             | 4.457        | 4.891             |
| 10 MHz    | QPSK       | 8.944        | 9.667             | 8.944          | 9.754             | 8.944        | 9.783             |
|           | 16QAM      | 8.944        | 9.725             | 8.944          | 9.754             | 8.944        | 9.783             |
| 15 MHz    | QPSK       | 13.459       | 14.631            | 13.372         | 14.544            | 13.329       | 14.53             |
|           | 16QAM      | 13.459       | 14.588            | 13.372         | 14.544            | 13.329       | 14.573            |

**LTE Band 41**

| Bandwidth | Modulation | Low channel  |                   | Middle channel |                   | High channel |                   |
|-----------|------------|--------------|-------------------|----------------|-------------------|--------------|-------------------|
|           |            | OBW<br>(MHz) | 26dB EBW<br>(MHz) | OBW<br>(MHz)   | 26dB EBW<br>(MHz) | OBW<br>(MHz) | 26dB EBW<br>(MHz) |
| 5 MHz     | QPSK       | 4.511        | 5.04              | 4.511          | 5.080             | 4.511        | 5.020             |
|           | 16QAM      | 4.531        | 5.12              | 4.511          | 5.120             | 4.511        | 4.980             |
| 10 MHz    | QPSK       | 8.981        | 9.72              | 8.981          | 10.000            | 8.942        | 9.840             |
|           | 16QAM      | 8.942        | 9.72              | 8.942          | 9.720             | 8.942        | 9.800             |
| 15 MHz    | QPSK       | 13.533       | 14.76             | 13.473         | 14.760            | 13.473       | 14.820            |
|           | 16QAM      | 13.533       | 14.76             | 13.533         | 14.760            | 13.533       | 14.640            |
| 20 MHz    | QPSK       | 17.884       | 19.44             | 17.964         | 19.520            | 17.884       | 19.760            |
|           | 16QAM      | 17.884       | 19.52             | 17.884         | 19.600            | 17.884       | 19.680            |

**LTE Band 66:**

| Bandwidth | Modulation | Low channel  |                   | Middle channel |                   | High channel |                   |
|-----------|------------|--------------|-------------------|----------------|-------------------|--------------|-------------------|
|           |            | OBW<br>(MHz) | 26dB EBW<br>(MHz) | OBW<br>(MHz)   | 26dB EBW<br>(MHz) | OBW<br>(MHz) | 26dB EBW<br>(MHz) |
| 1.4 MHz   | QPSK       | 1.090        | 1.303             | 1.094          | 1.281             | 1.085        | 1.281             |
|           | 16QAM      | 1.090        | 1.303             | 1.094          | 1.281             | 1.085        | 1.281             |
| 3 MHz     | QPSK       | 2.683        | 2.944             | 2.683          | 2.926             | 2.683        | 2.926             |
|           | 16QAM      | 2.683        | 2.944             | 2.683          | 2.926             | 2.683        | 2.935             |
| 5 MHz     | QPSK       | 4.472        | 4.906             | 4.486          | 4.935             | 4.486        | 4.906             |
|           | 16QAM      | 4.472        | 4.891             | 4.486          | 4.949             | 4.486        | 4.906             |
| 10 MHz    | QPSK       | 8.915        | 9.725             | 8.944          | 9.783             | 8.915        | 9.696             |
|           | 16QAM      | 8.915        | 9.754             | 8.944          | 9.783             | 8.915        | 9.667             |
| 15 MHz    | QPSK       | 13.415       | 14.588            | 13.415         | 14.588            | 13.329       | 14.457            |
|           | 16QAM      | 13.415       | 14.588            | 13.372         | 14.501            | 13.329       | 14.501            |
| 20 MHz    | QPSK       | 17.887       | 19.392            | 17.829         | 18.936            | 17.829       | 18.980            |
|           | 16QAM      | 17.887       | 19.382            | 17.829         | 18.994            | 17.829       | 19.038            |

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

## FCC §2.1051, §22.917(a) & §24.238(a)& §27.53 & §90.691 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

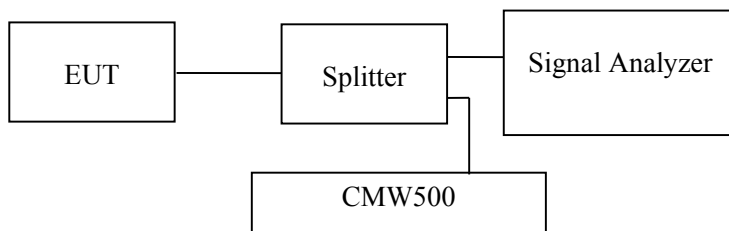
### Applicable Standard

FCC §2.1051, §22.917(a) & §24.238(a) & §27.53 & §90.691.

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 is 6 dB between EUT and Signal Analyzer

### Test Data

#### Environmental Conditions

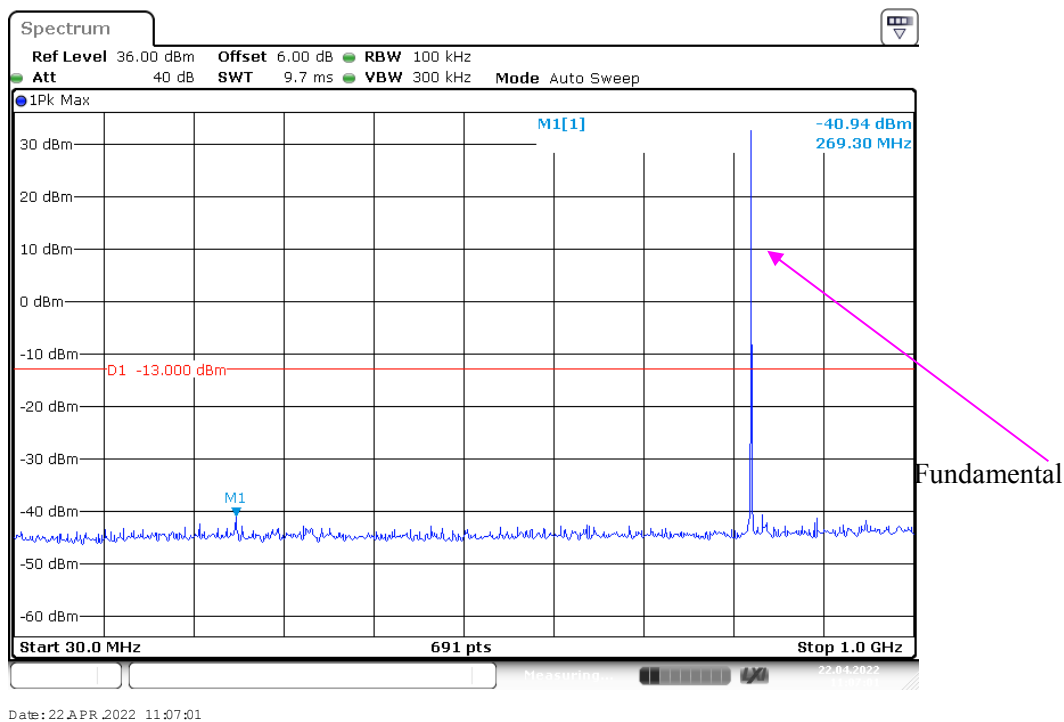
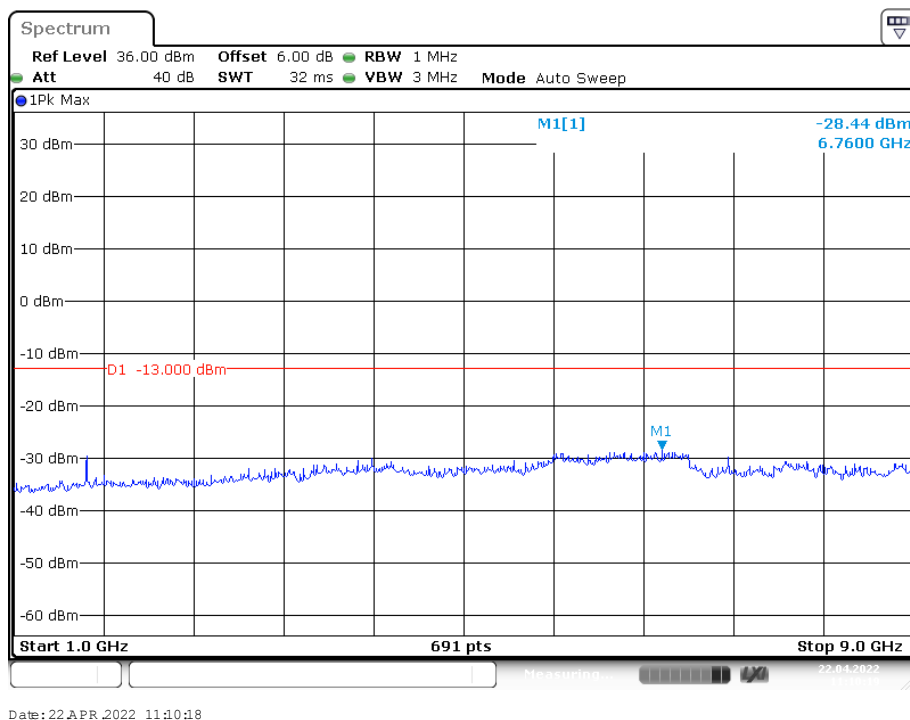
|                    |                 |
|--------------------|-----------------|
| Temperature:       | 24~26.5 °C      |
| Relative Humidity: | 48~58 %         |
| ATM Pressure:      | 100.8~101.2 kPa |

*The testing was performed by Black Ding from 2022-04-22 to 2022-4-26.*

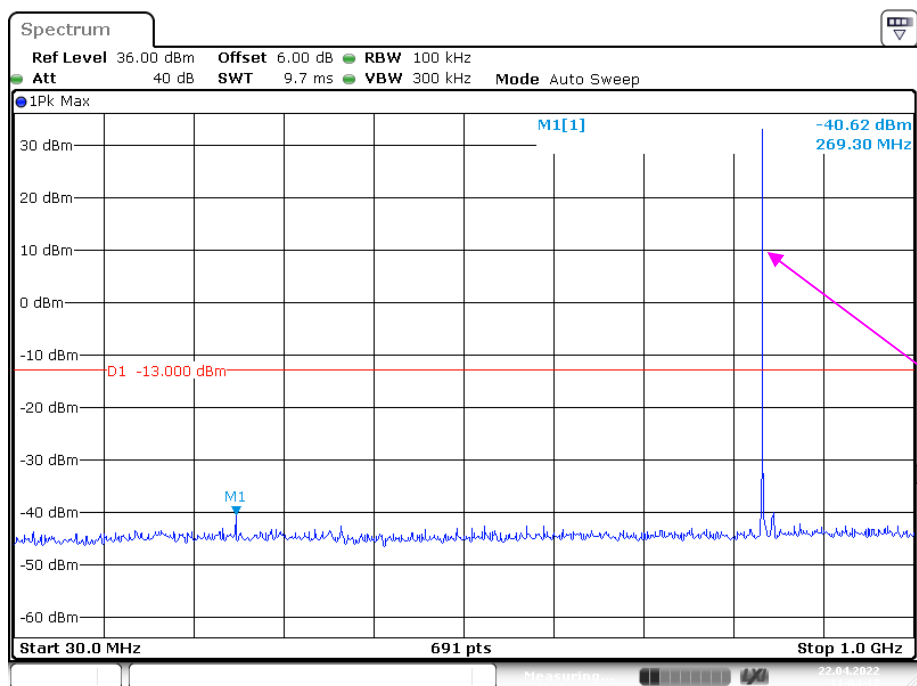
*EUT operation mode: Transmitting*

**Test result: Pass**

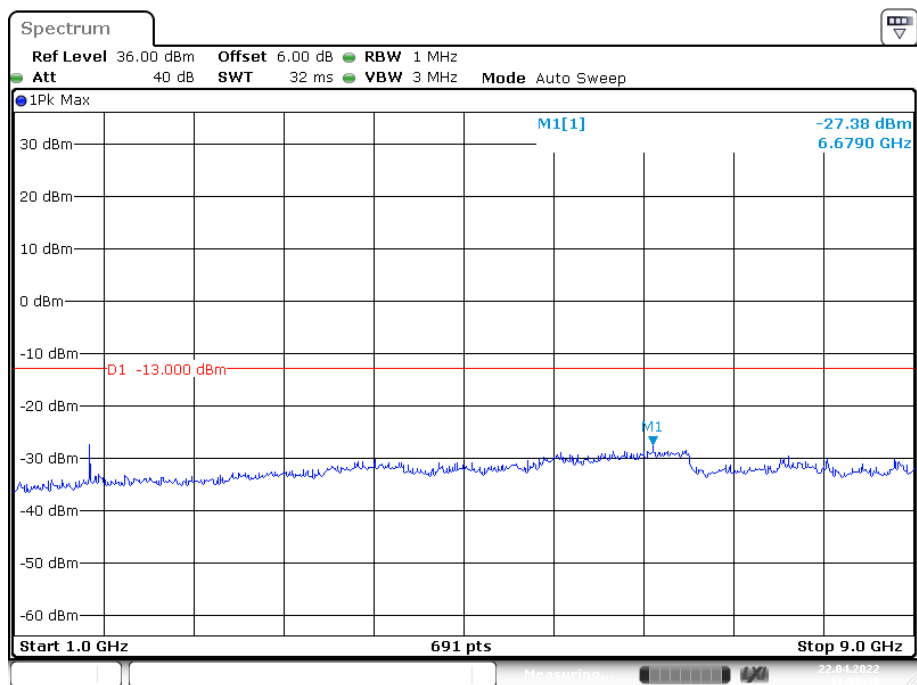
*Please refer to the following plots.*

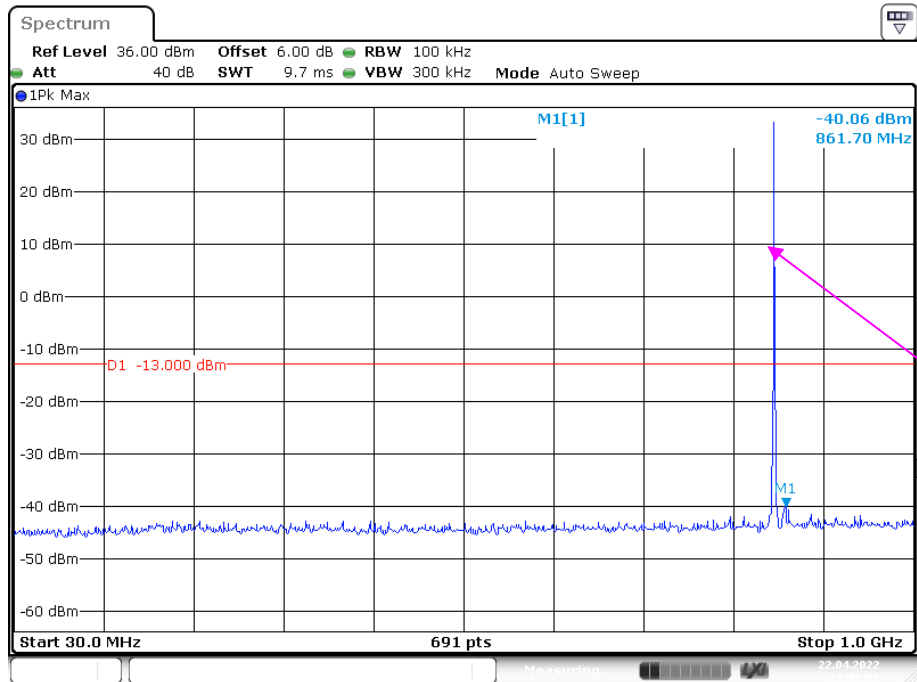
**GSM 850:****Low Channel:****30 MHz – 1 GHz (GPRS Mode)****1 GHz – 9 GHz (GPRS Mode)**



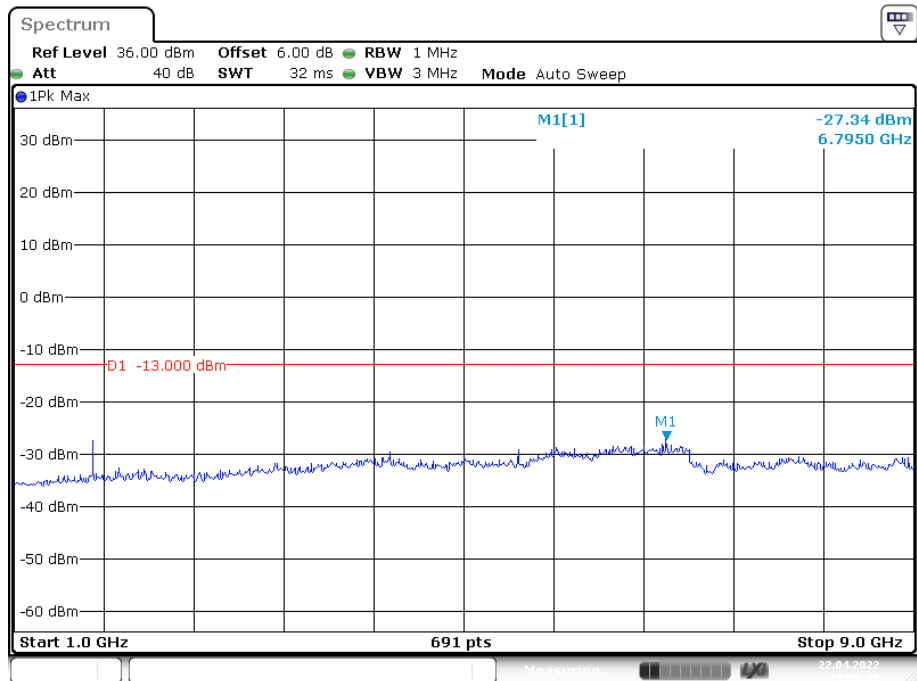
**Middle Channel:****30 MHz – 1 GHz (GPRS Mode)**

Fundamental

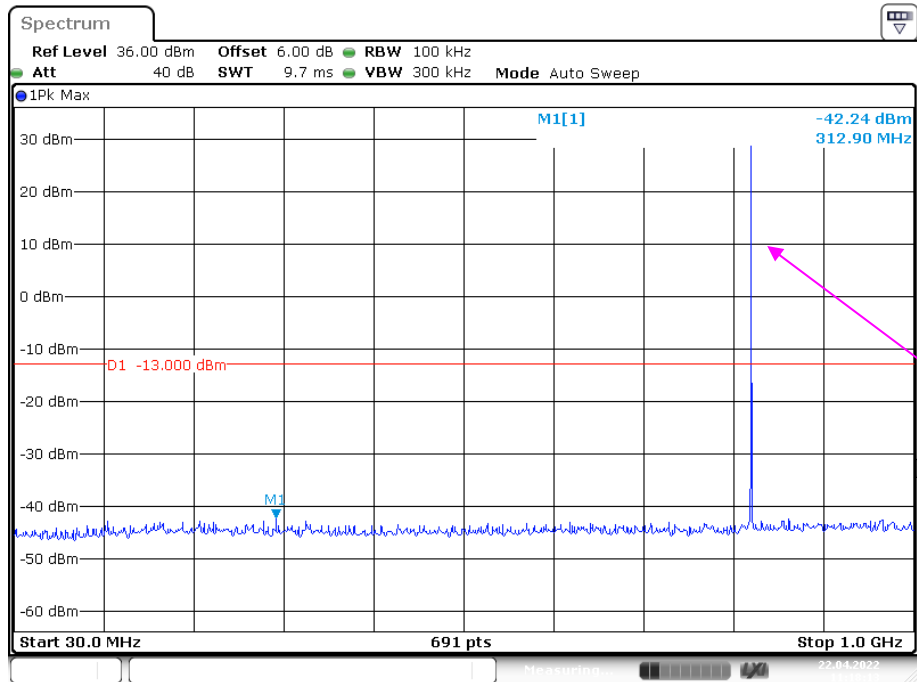
**1 GHz – 9 GHz (GPRS Mode)**

**High Channel:****30 MHz – 1 GHz (GPRS Mode)**

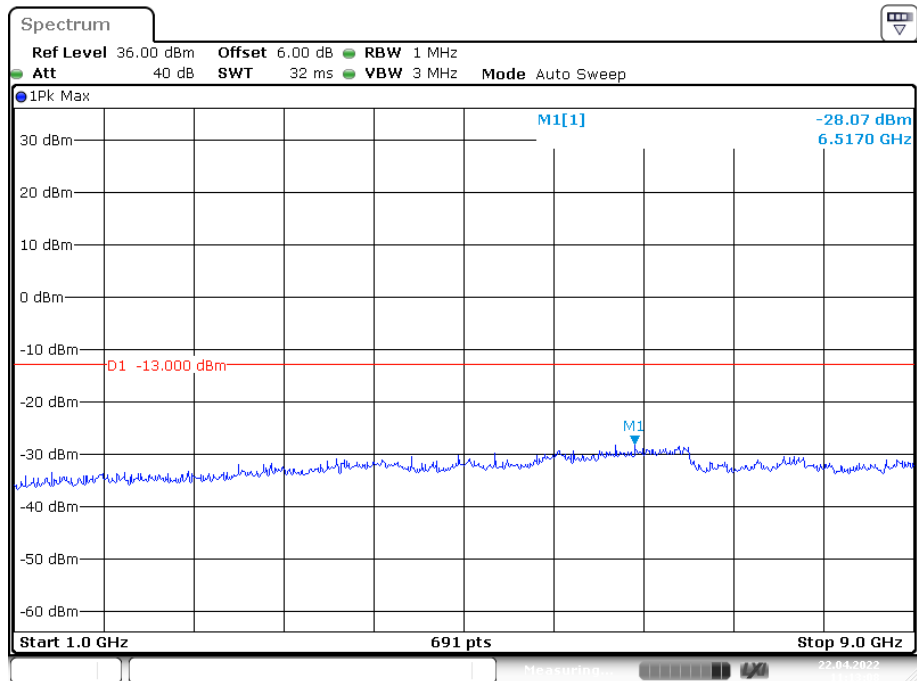
Date: 22 APR. 2022 11:07:57

**1 GHz – 9 GHz (GPRS Mode)**

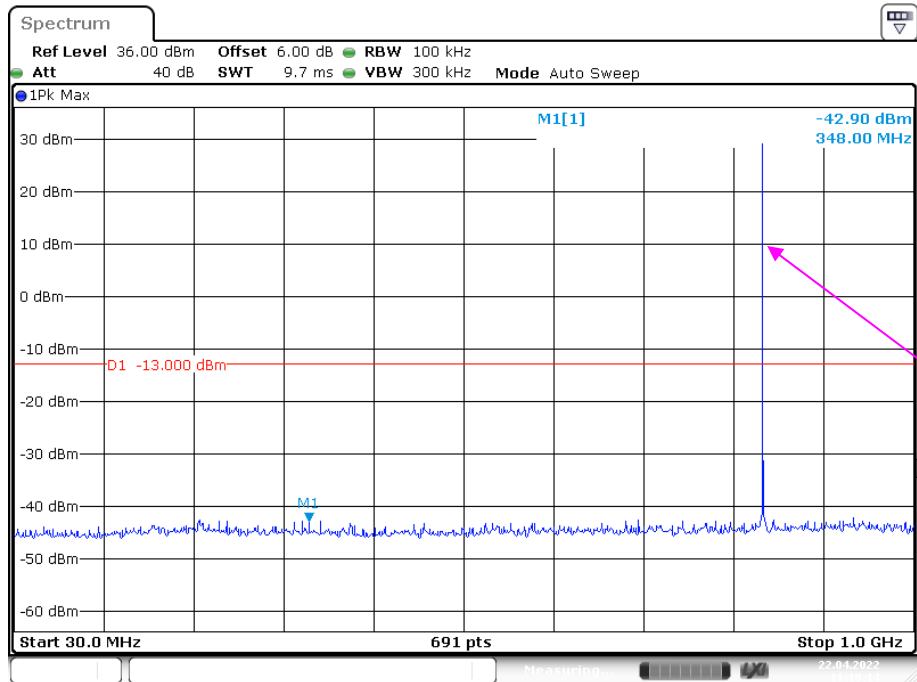
Date: 22 APR. 2022 11:09:00

**Low Channel:****30 MHz – 1 GHz (EGPRS Mode)**

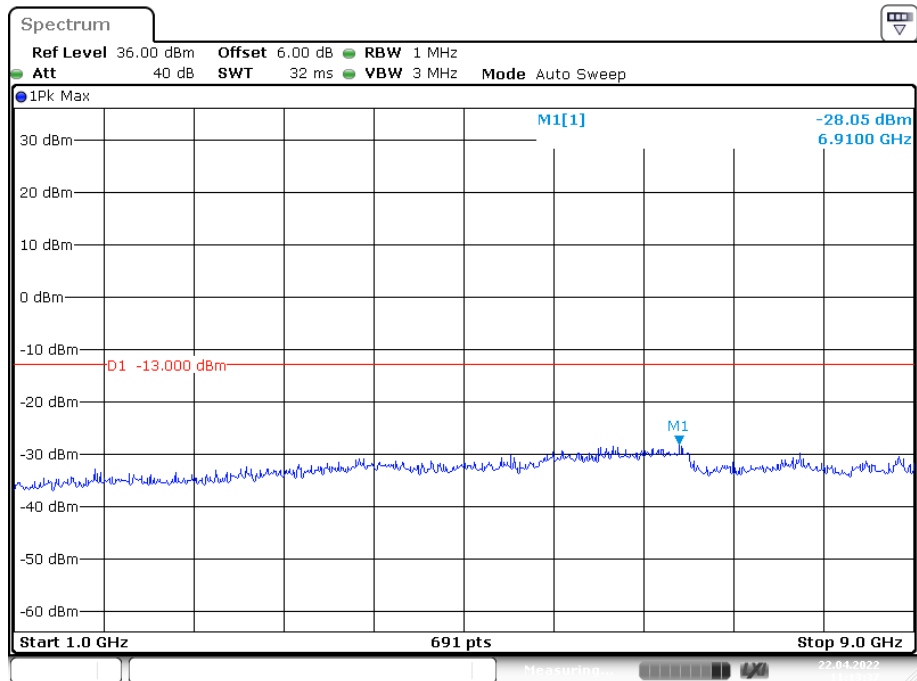
Date: 22 APR 2022 11:18:14

**1 GHz – 9 GHz (EGPRS Mode)**

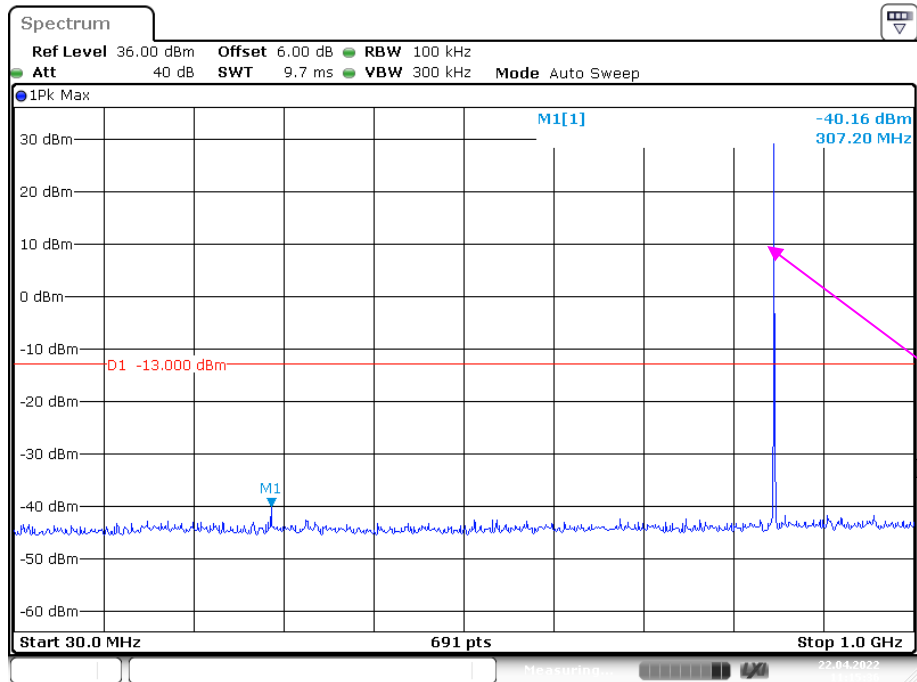
Date: 22 APR 2022 11:13:08

**Middle Channel:****30 MHz – 1 GHz (EGPRS Mode)**

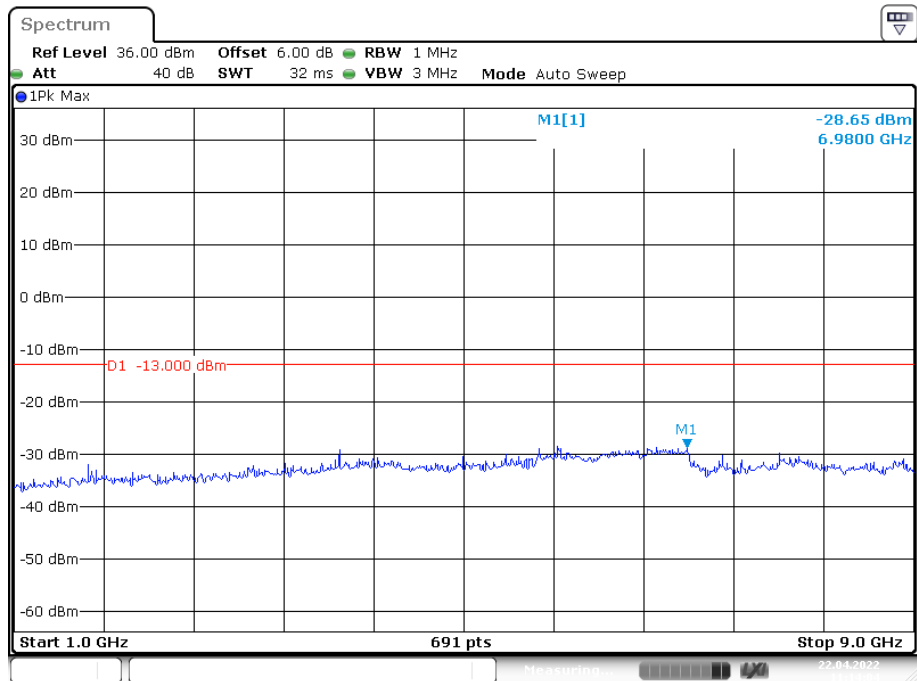
Date: 22 APR 2022 11:19:14

**1 GHz – 9 GHz (EGPRS Mode)**

Date: 22 APR 2022 11:13:38

**High Channel:****30 MHz – 1 GHz (EGPRS Mode)**

Date: 22 APR. 2022 11:15:36

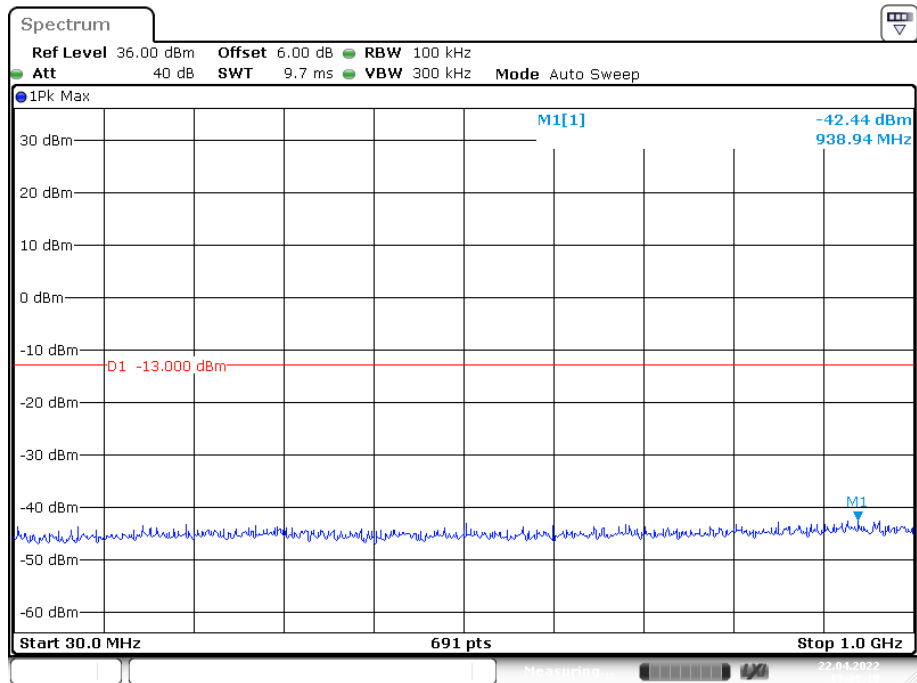
**1 GHz – 9 GHz (EGPRS Mode)**

Date: 22 APR. 2022 11:14:04

PCS 1900:

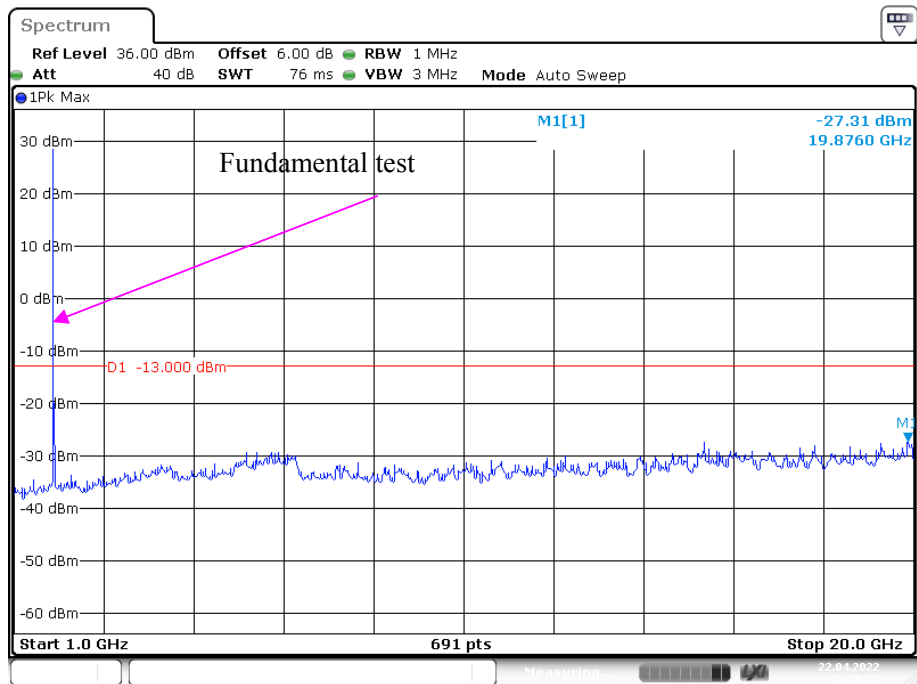
Low Channel:

## 30 MHz – 1 GHz (GPRS Mode)

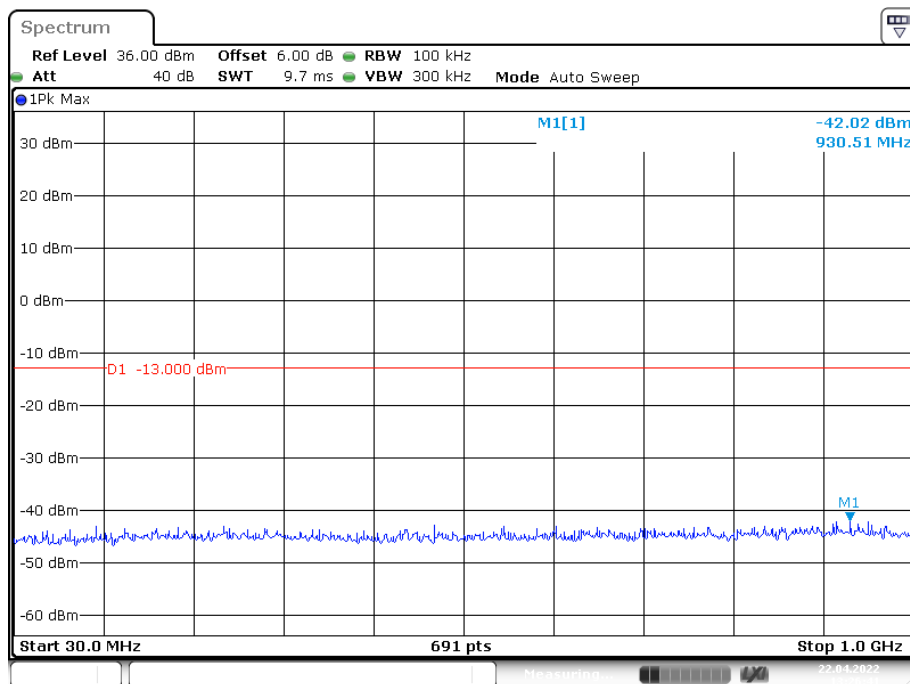


Date: 22 APR 2022 13:26:20

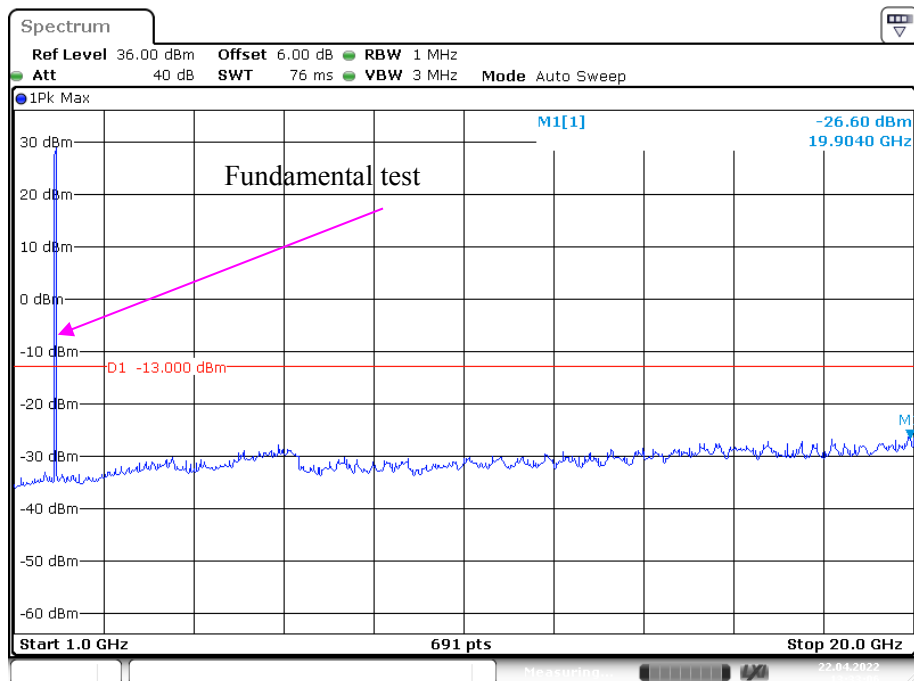
## 1 GHz – 20 GHz (GPRS Mode)



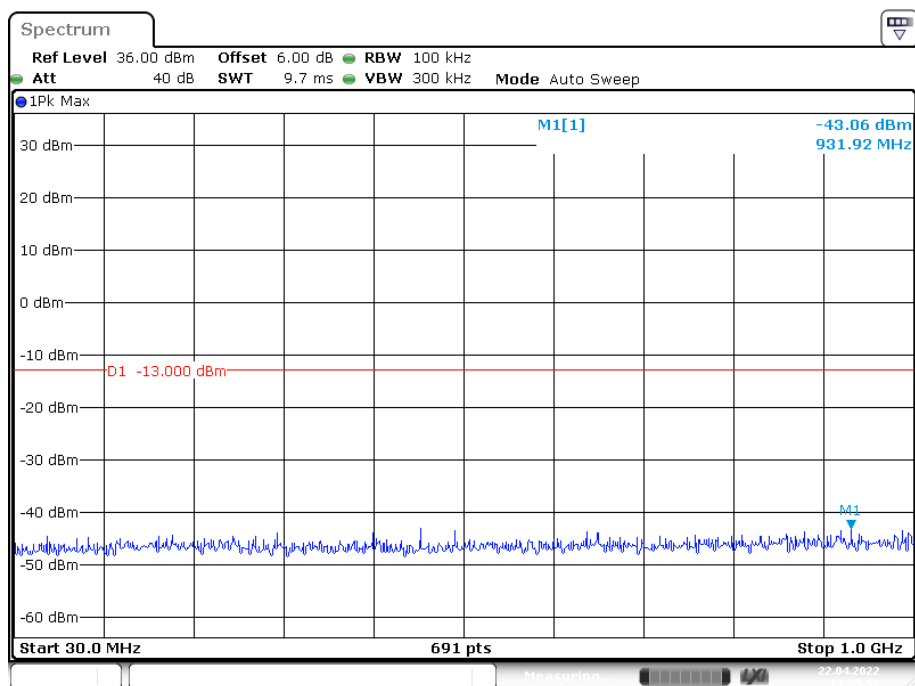
Date: 22 APR 2022 13:30:53

**Middle Channel:****30 MHz – 1 GHz (GPRS Mode)**

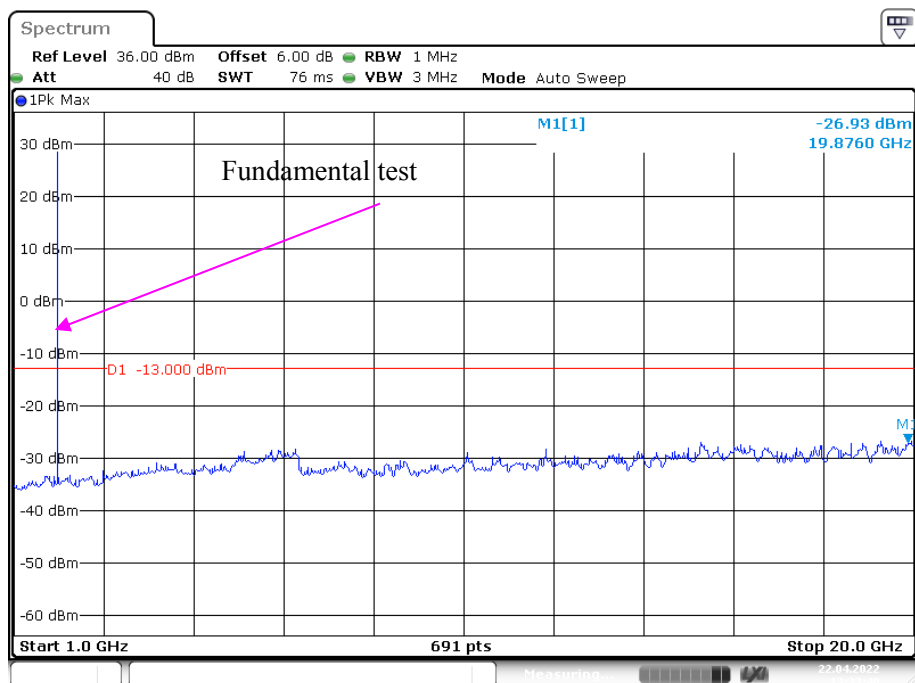
Date: 22 APR 2022 13:26:41

**1 GHz – 20 GHz (GPRS Mode)**

Date: 22 APR 2022 13:33:06

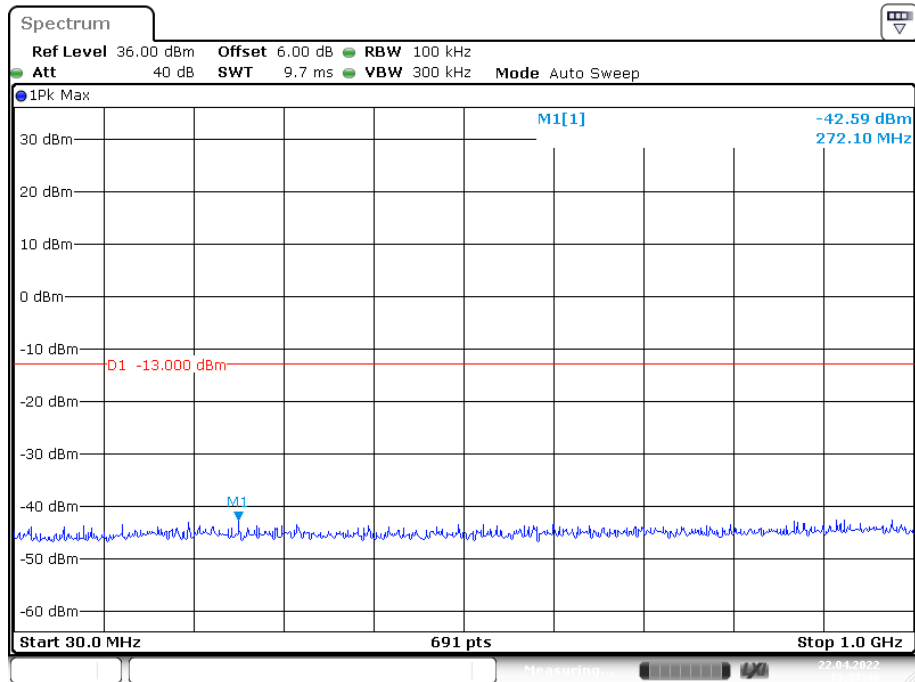
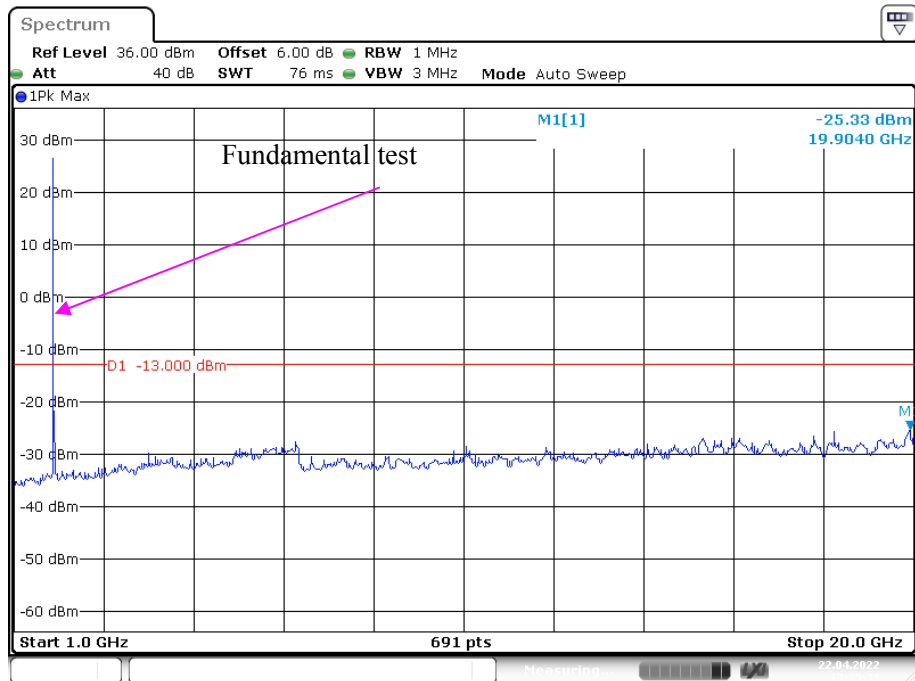
**High Channel:****30 MHz – 1 GHz (GPRS Mode)**

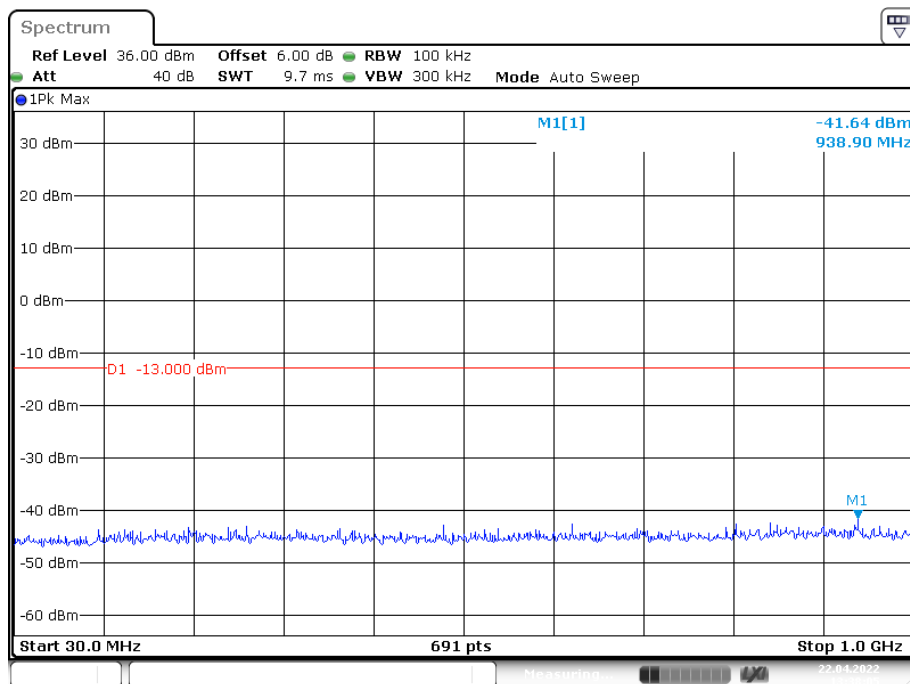
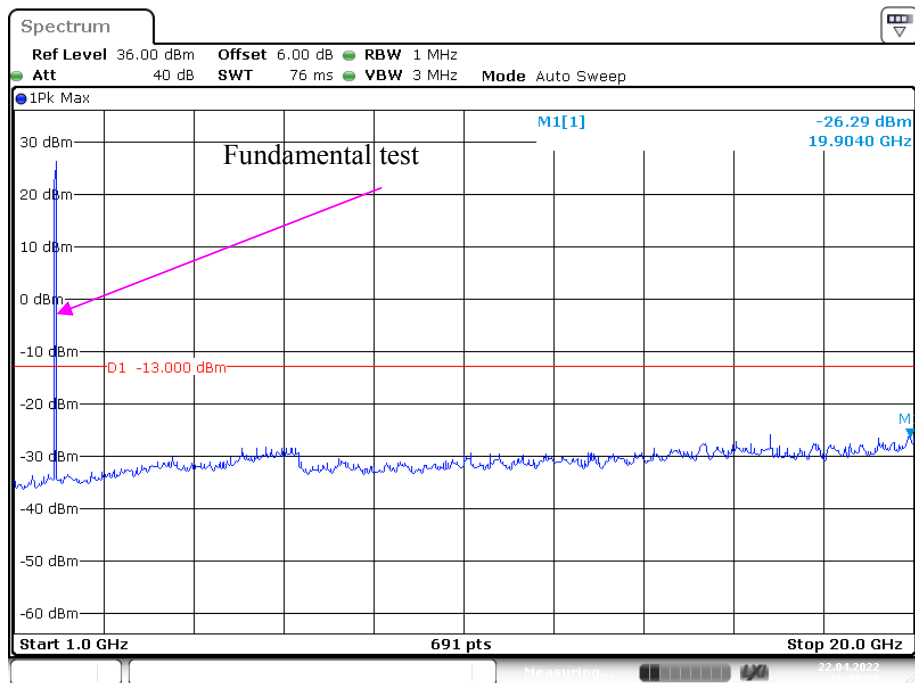
Date: 22 APR 2022 13:25:57

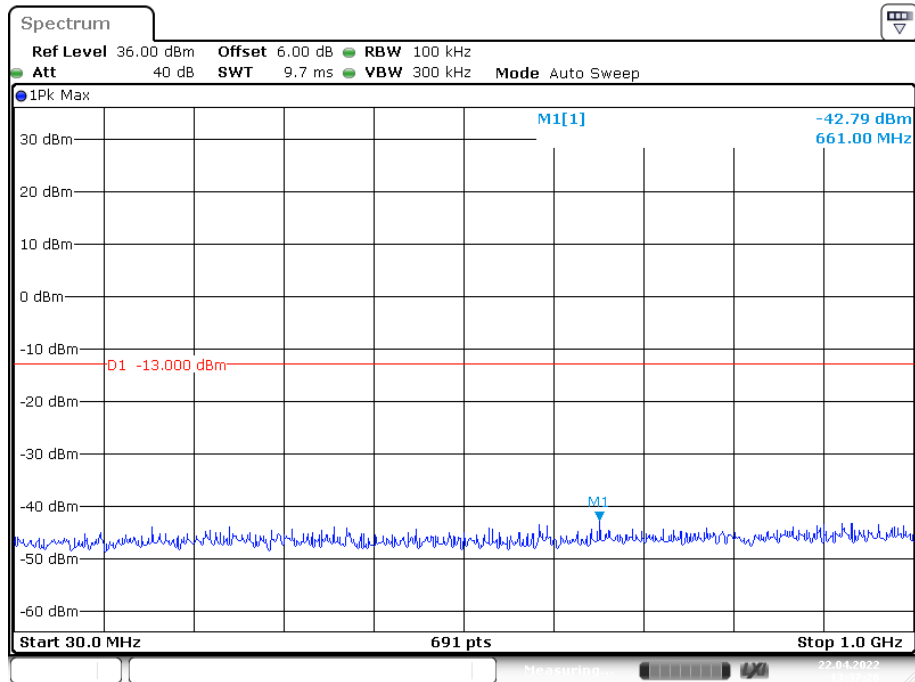
**1 GHz – 20 GHz (GPRS Mode)**

Date: 22 APR 2022 13:33:40

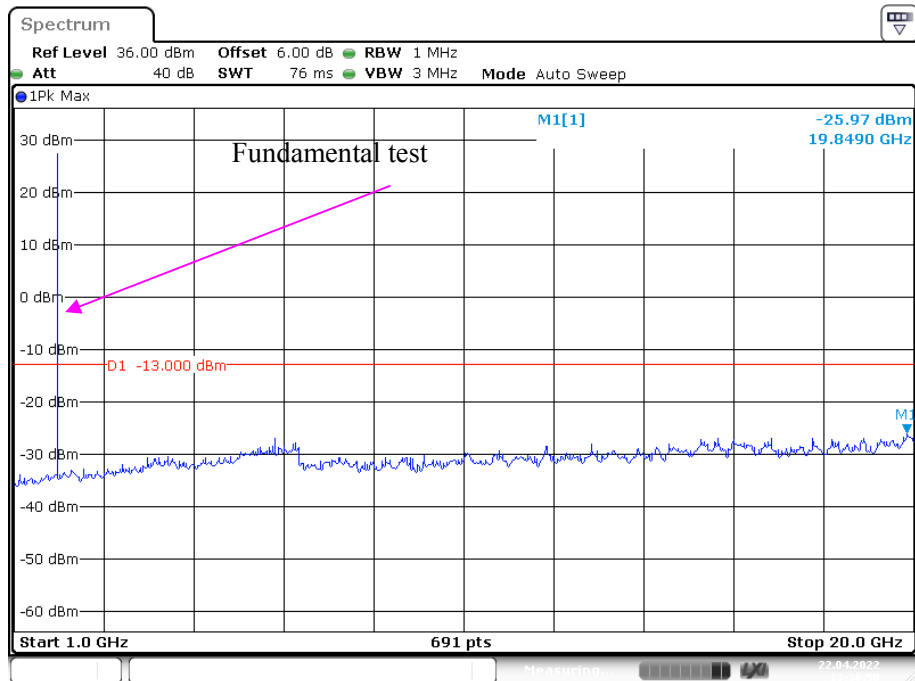


**Low Channel:****30 MHz – 1 GHz (EGPRS Mode)****1 GHz – 20 GHz (EGPRS Mode)**

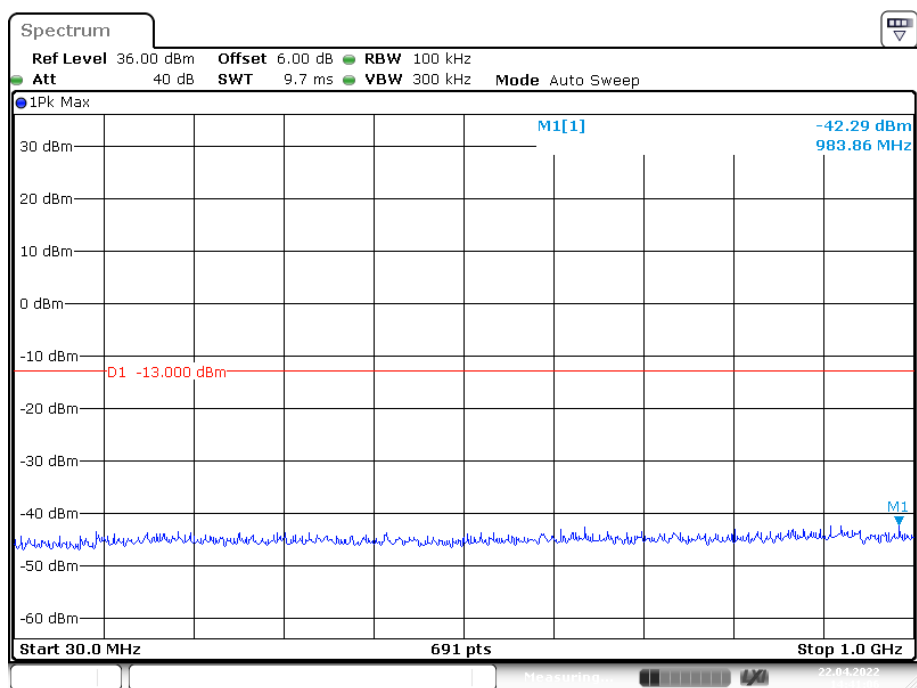
**Middle Channel:****30 MHz – 1 GHz (EGPRS Mode)****1 GHz – 20 GHz (EGPRS Mode)**

**High Channel:****30 MHz – 1 GHz (EGPRS Mode)**

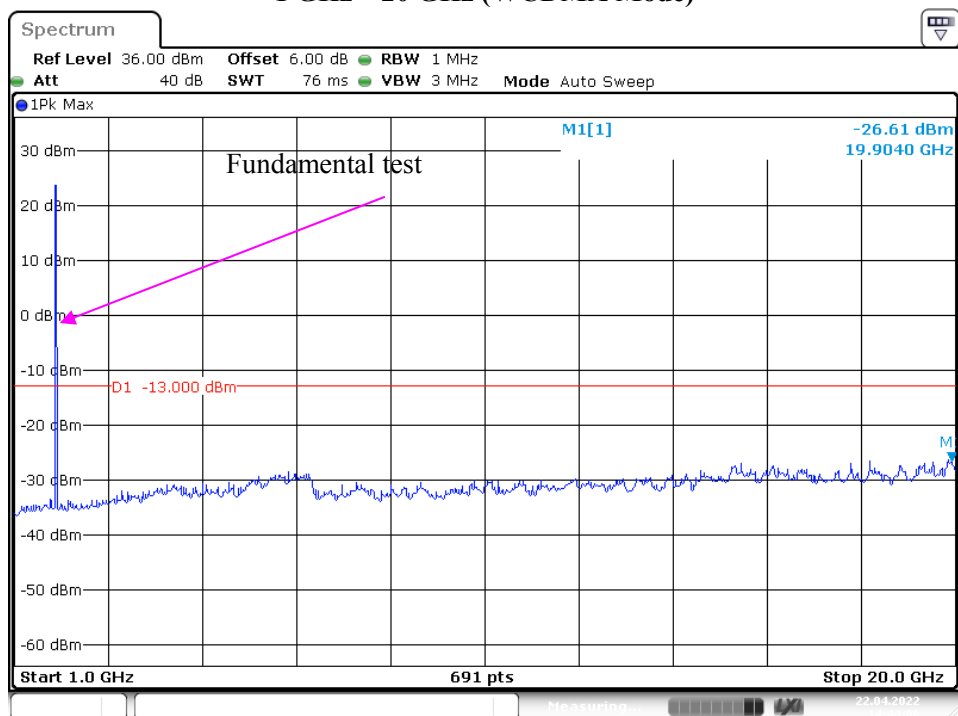
Date: 22 APR 2022 13:37:26

**1 GHz – 20 GHz (EGPRS Mode)**

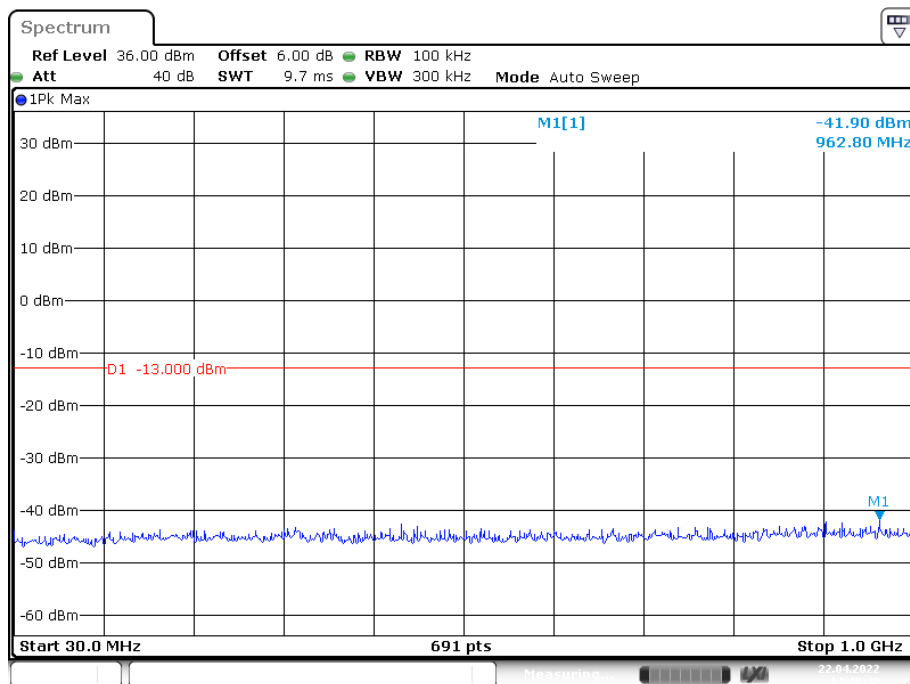
Date: 22 APR 2022 13:36:51

**WCDMA Band II:****HSDPA: Low channel****30 MHz – 1 GHz (WCDMA Mode)**

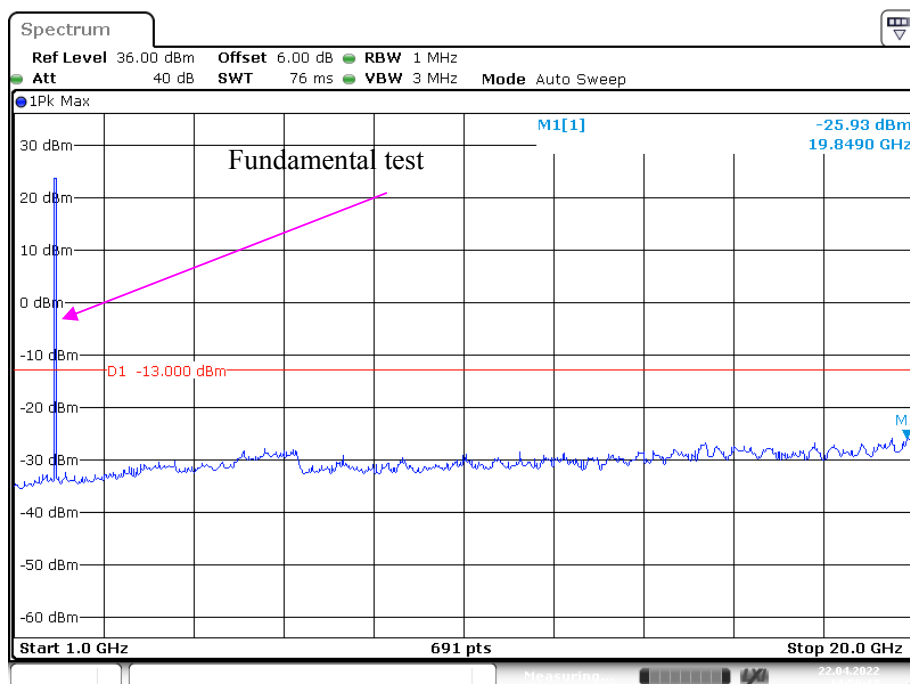
Date: 22 APR 2022 14:41:07

**1 GHz – 20 GHz (WCDMA Mode)**

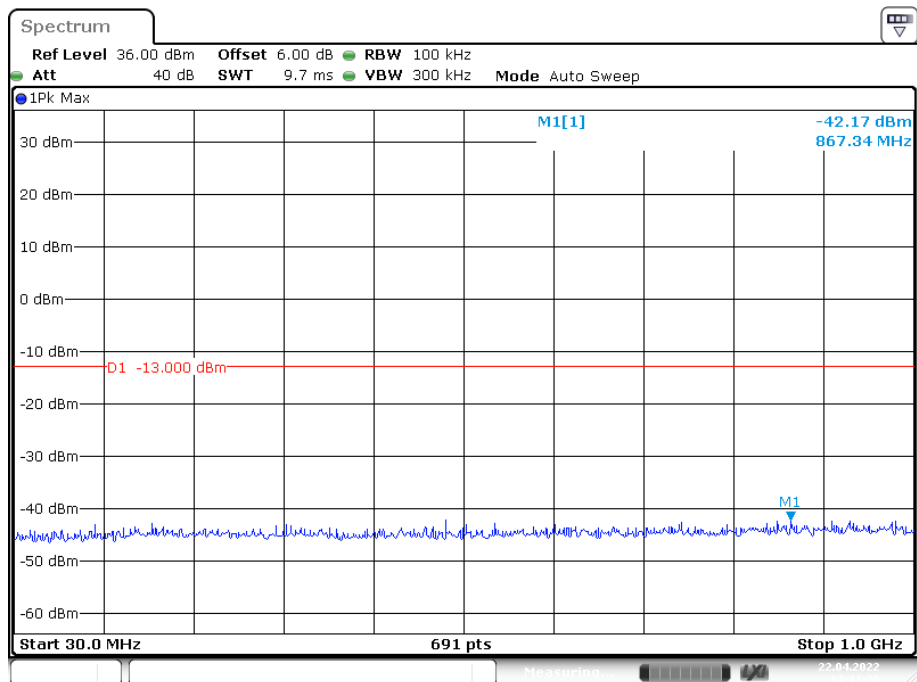
Date: 22 APR 2022 14:44:06

**Middle Channel:****30 MHz – 1 GHz (WCDMA Mode)**

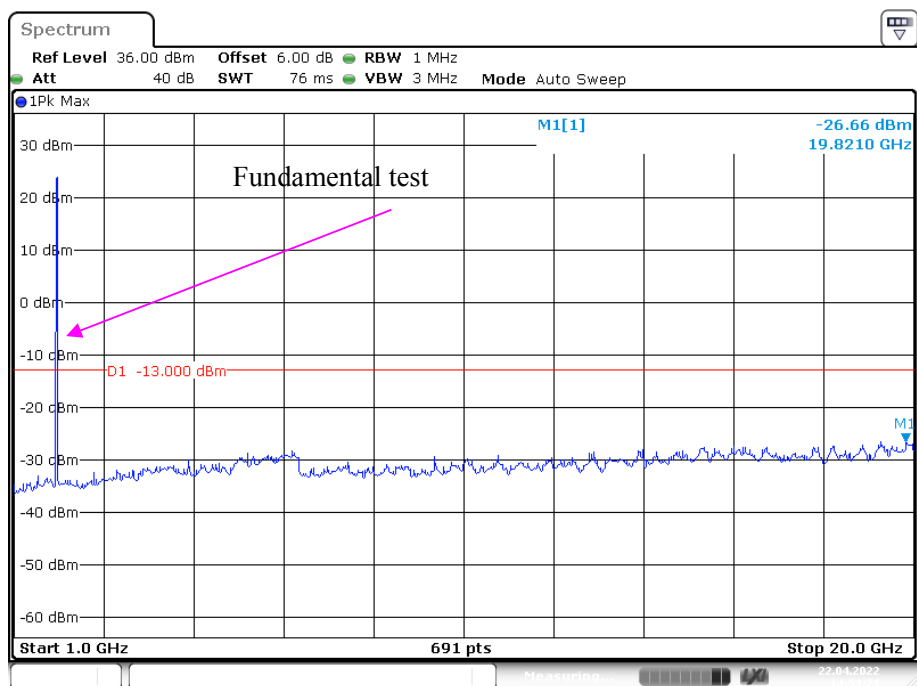
Date: 22 APR 2022 14:40:42

**1 GHz – 20 GHz (WCDMA Mode)**

Date: 22 APR 2022 14:50:13

**High Channel:****30 MHz – 1 GHz (WCDMA Mode)**

Date: 22 APR 2022 14:41:29

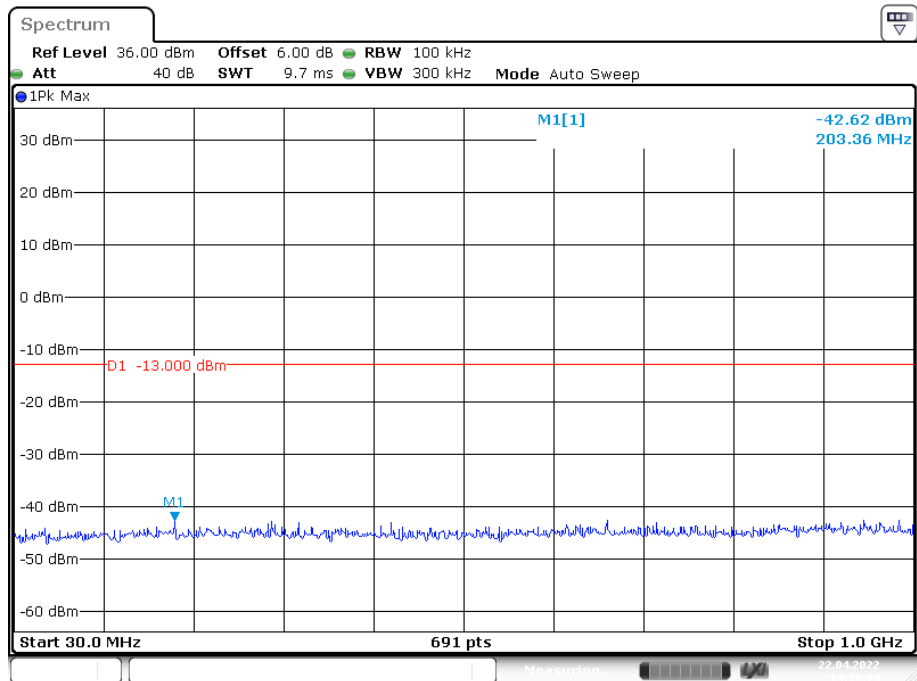
**1 GHz – 20 GHz (WCDMA Mode)**

Date: 22 APR 2022 14:53:21

HSPA+:

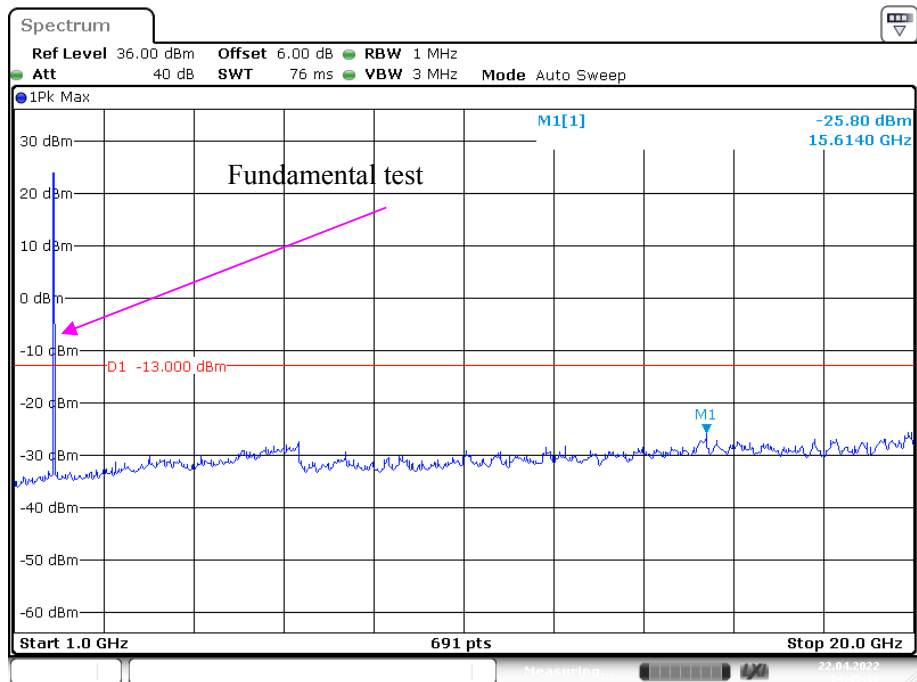
Low Channel:

## 30 MHz – 1 GHz (WCDMA Mode)

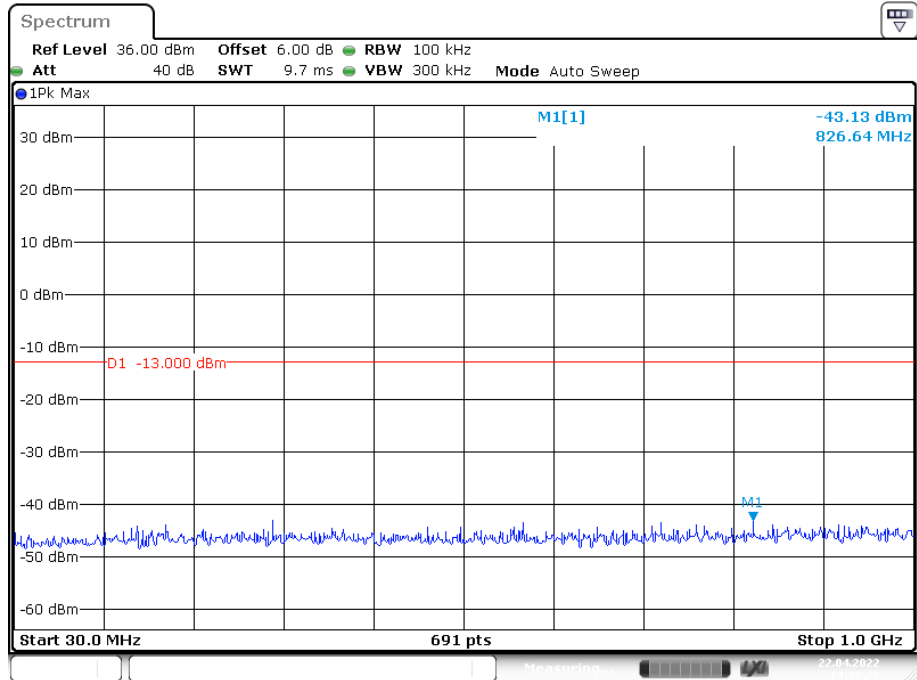


Date: 22 APR 2022 14:39:04

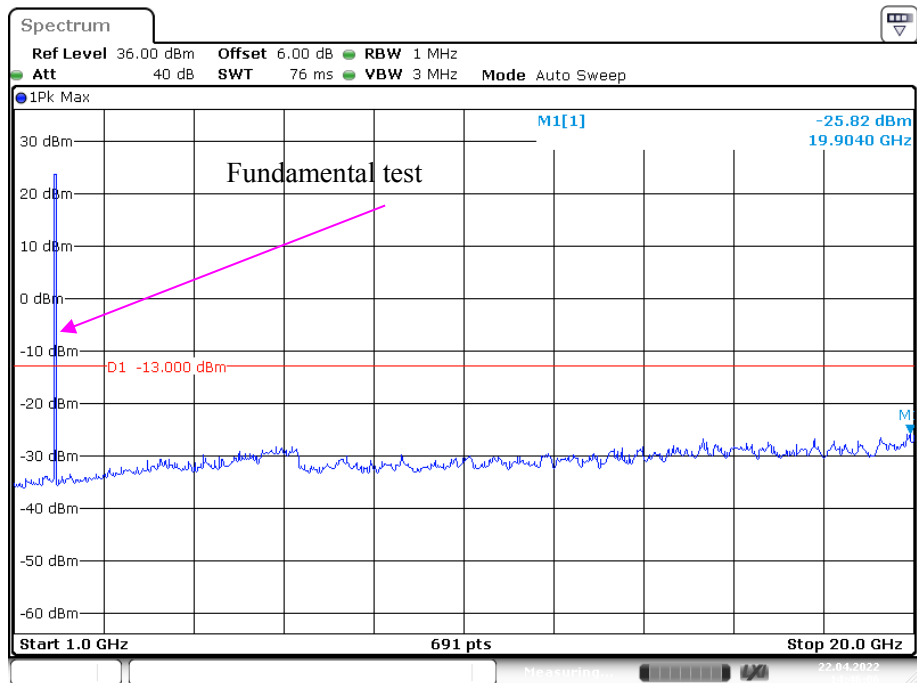
## 1 GHz – 20 GHz (WCDMA Mode)



Date: 22 APR 2022 14:45:16

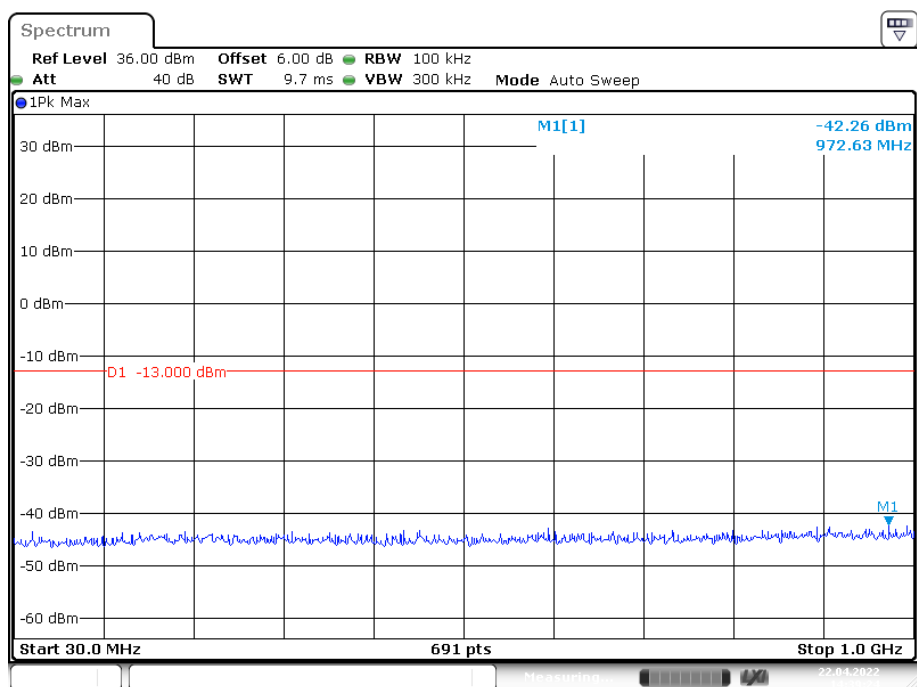
**Middle Channel:****30 MHz – 1 GHz (WCDMA Mode)**

Date: 22 APR 2022 14:38:29

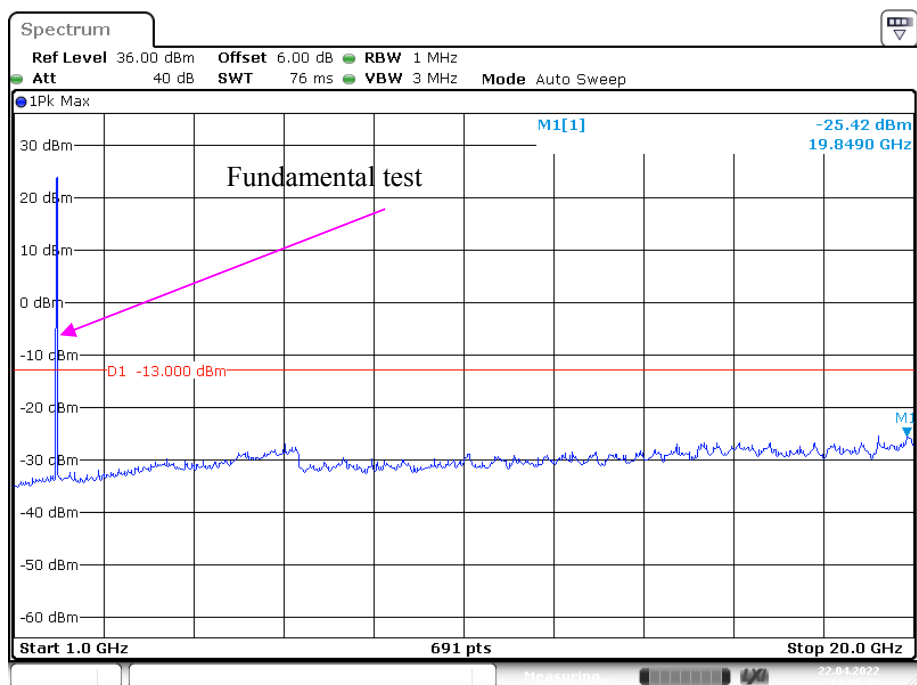
**1 GHz – 20 GHz (WCDMA Mode)**

Date: 22 APR 2022 14:46:07

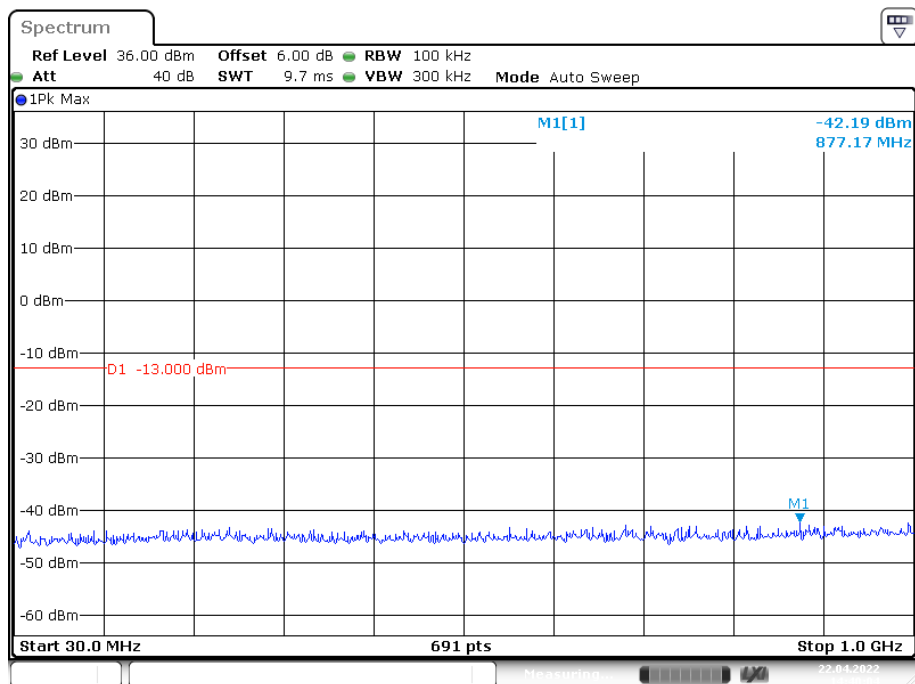


**High Channel:****30 MHz – 1 GHz (WCDMA Mode)**

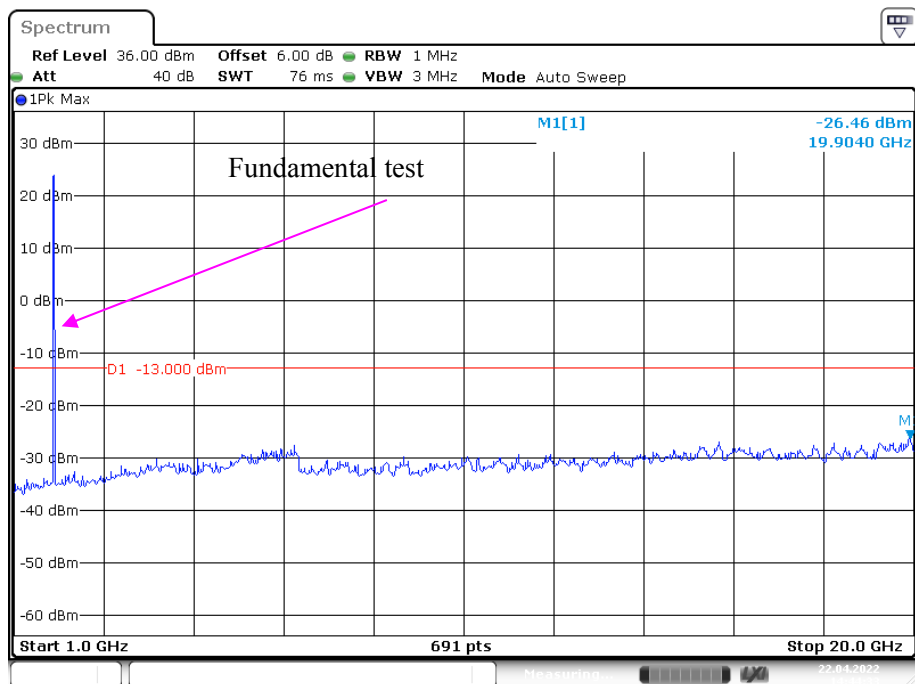
Date: 22 APR 2022 14:39:24

**1 GHz – 20 GHz (WCDMA Mode)**

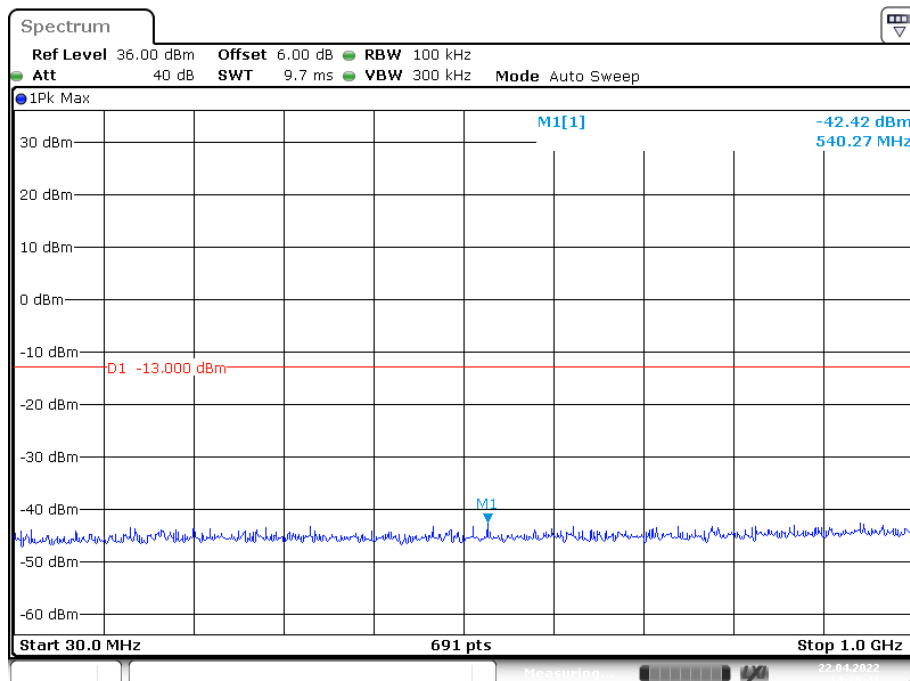
Date: 22 APR 2022 14:56:33

**HSUPA: Low channel****30 MHz– 1 GHz (WCDMA Mode)**

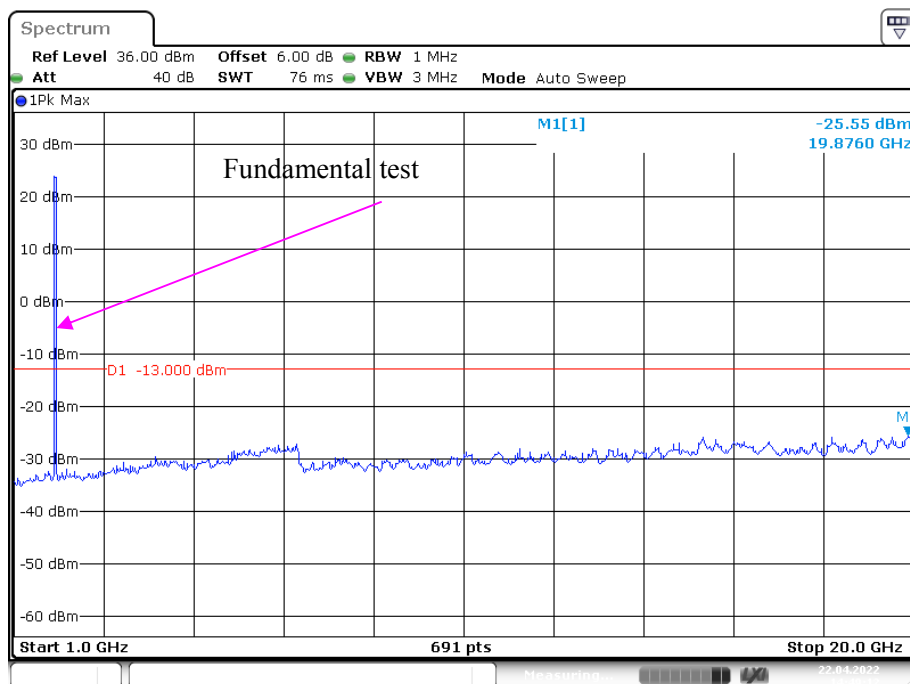
Date: 22 APR 2022 14:40:05

**1 GHz – 20 GHz (WCDMA Mode)**

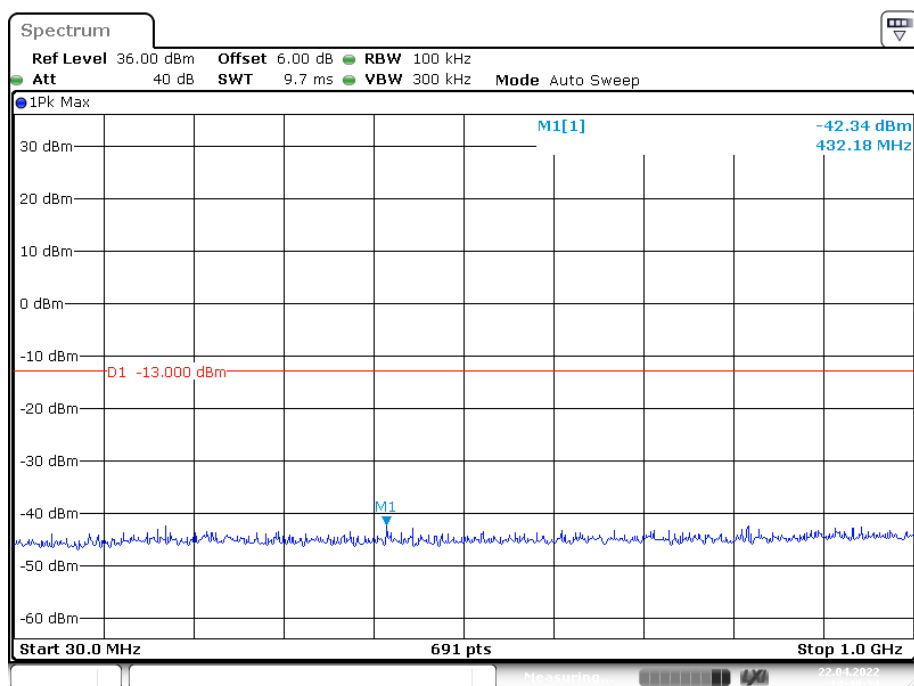
Date: 22 APR 2022 14:44:33

**Middle channel:****30 MHz – 1 GHz (WCDMA Mode)**

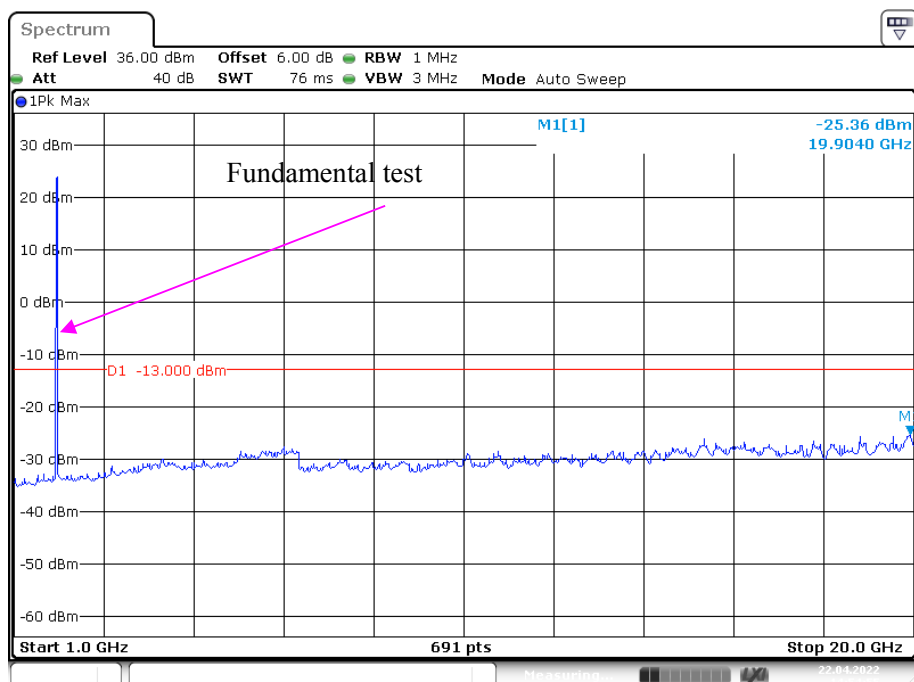
Date: 22 APR 2022 14:39:41

**1 GHz – 20 GHz (WCDMA Mode)**

Date: 22 APR 2022 14:49:12

**High Channel:****30 MHz – 1 GHz (WCDMA Mode)**

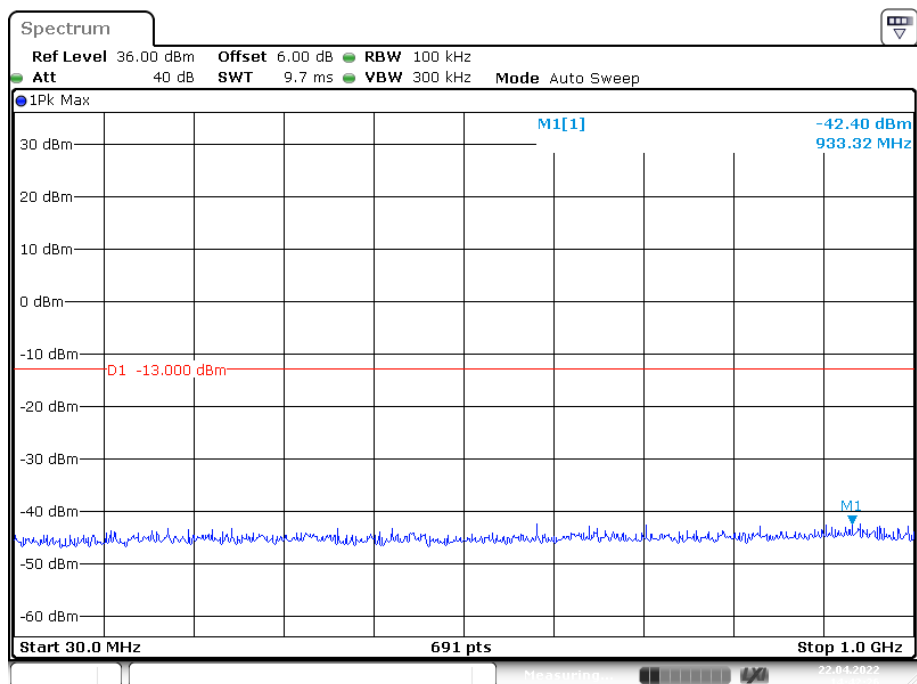
Date: 22 APR 2022 14:40:24

**1 GHz – 20 GHz (WCDMA Mode)**

Date: 22 APR 2022 14:54:54

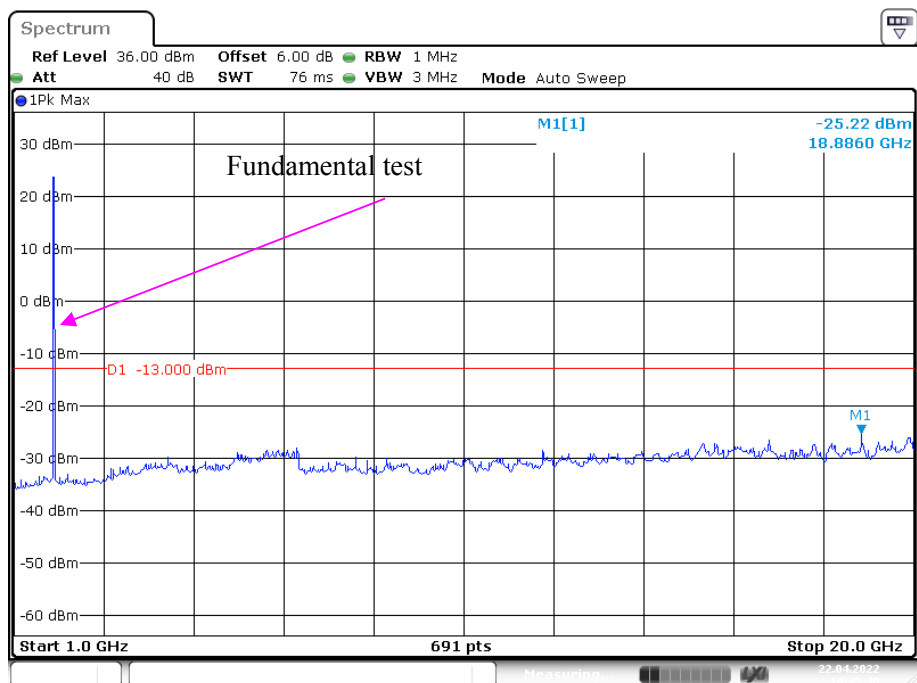
## Rel 99: Low channel

## 30 MHz– 1 GHz (WCDMA Mode)

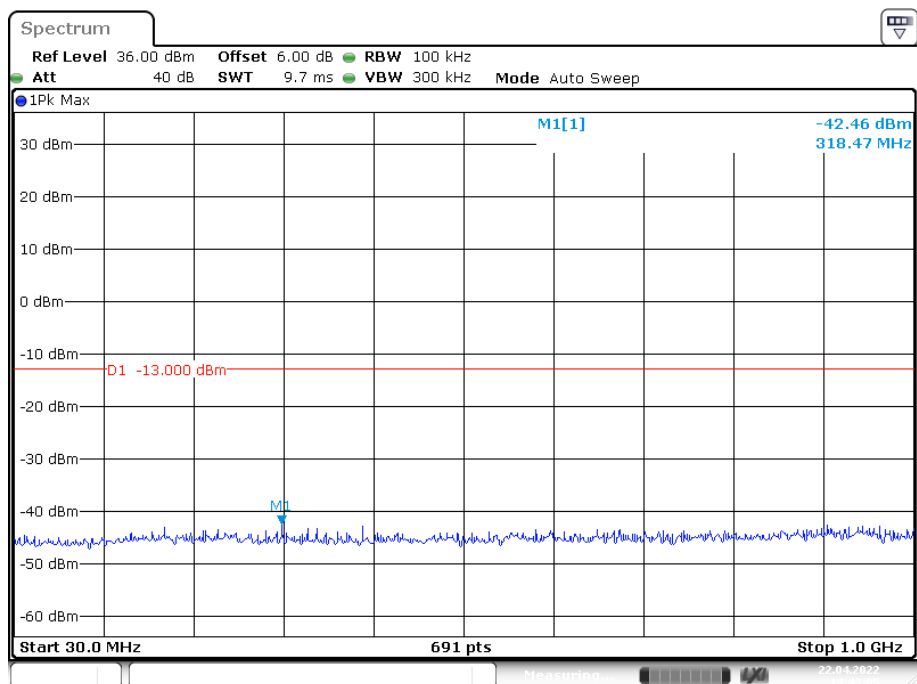


Date: 22 APR 2022 14:42:27

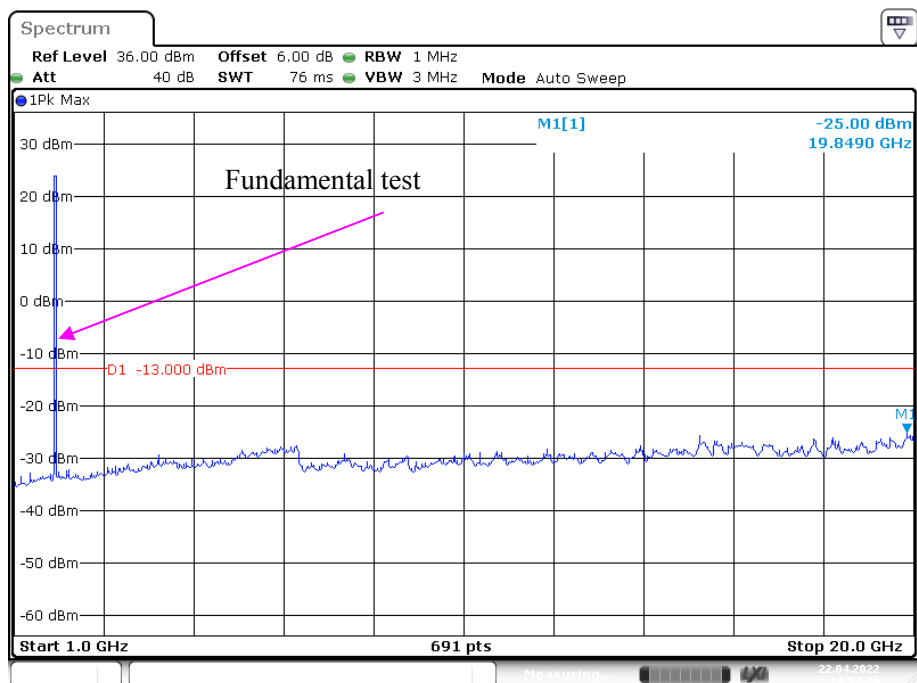
## 1 GHz – 20 GHz (WCDMA Mode)



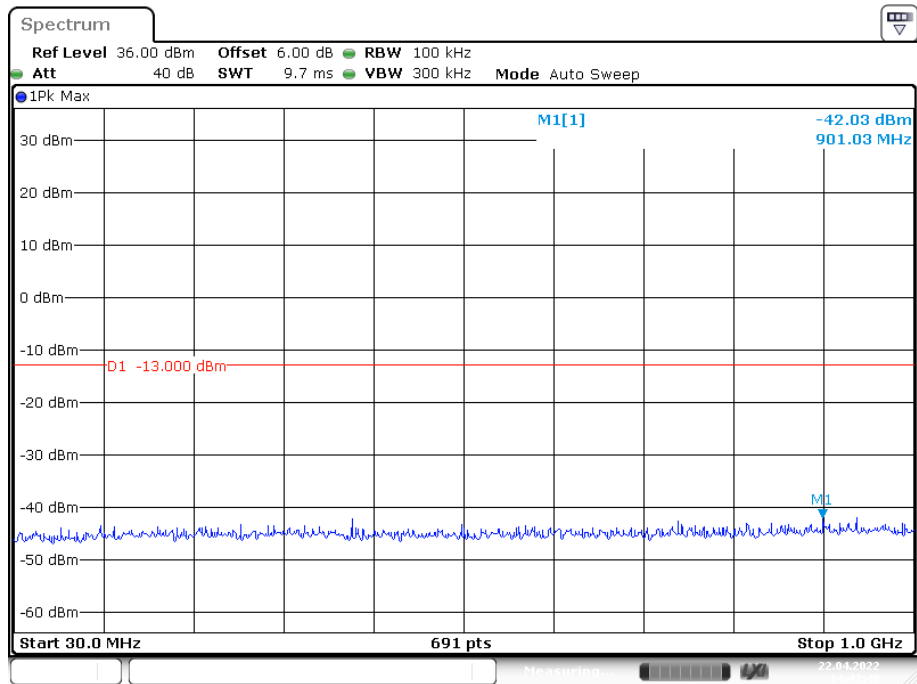
Date: 22 APR 2022 14:43:41

**Middle channel:****30 MHz – 1 GHz (WCDMA Mode)**

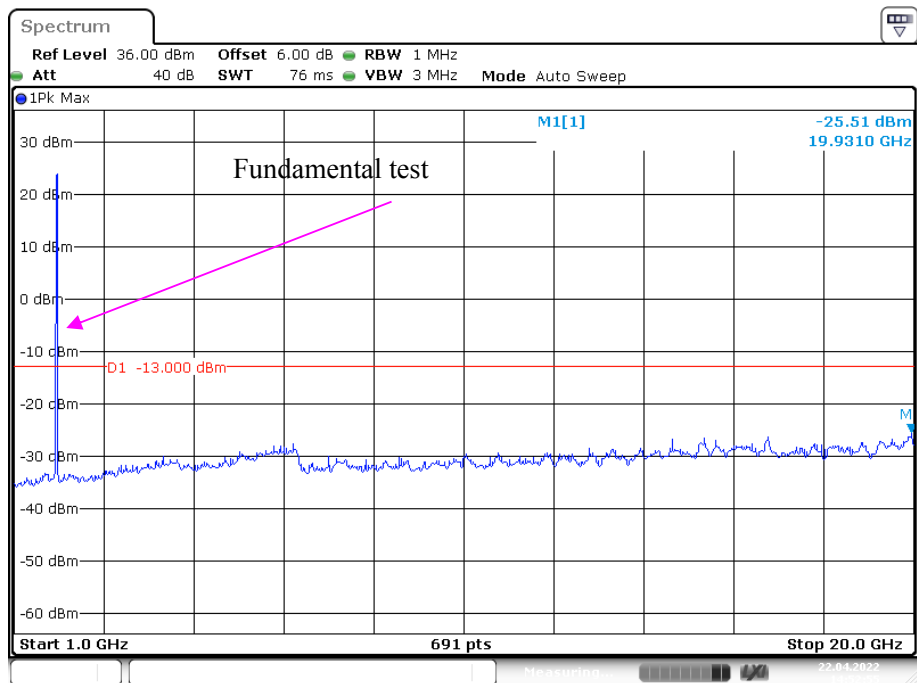
Date: 22 APR. 2022 14:42:06

**1GHz – 20 GHz (WCDMA Mode)**

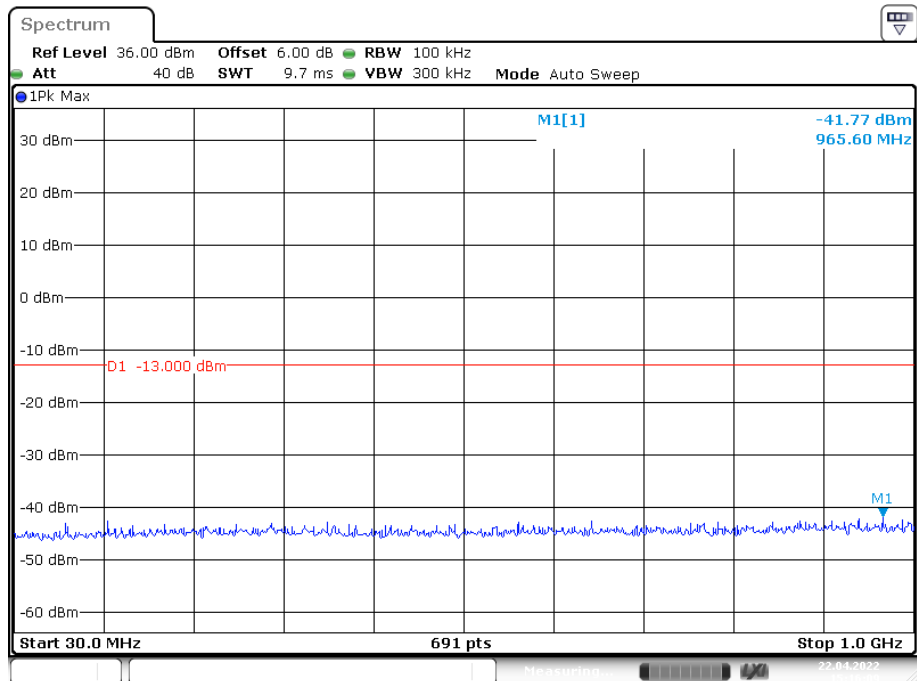
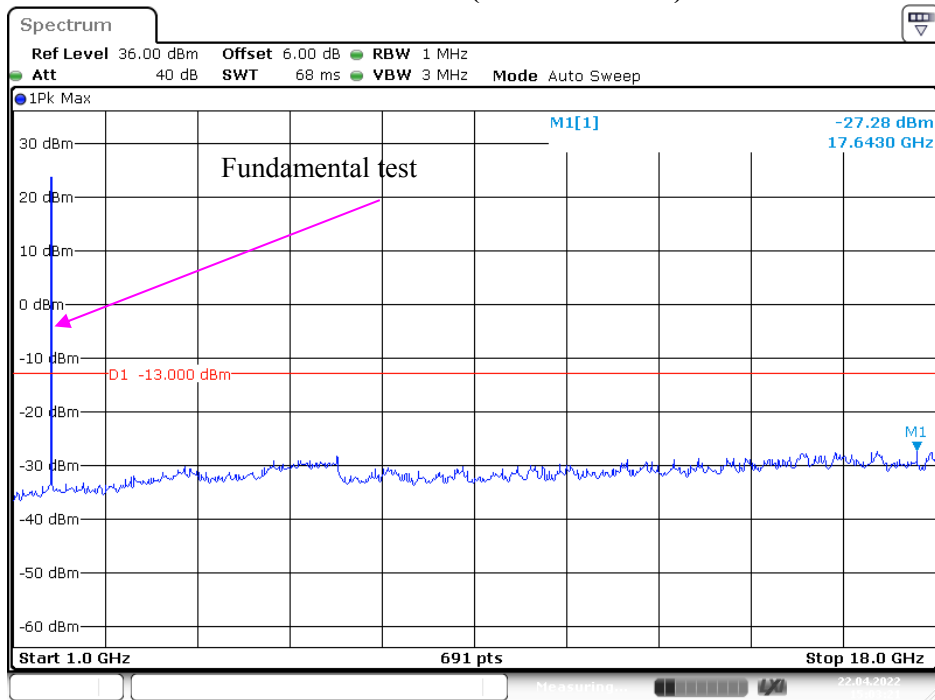
Date: 22 APR. 2022 14:52:05

**High channel:****30 MHz – 1 GHz (WCDMA Mode)**

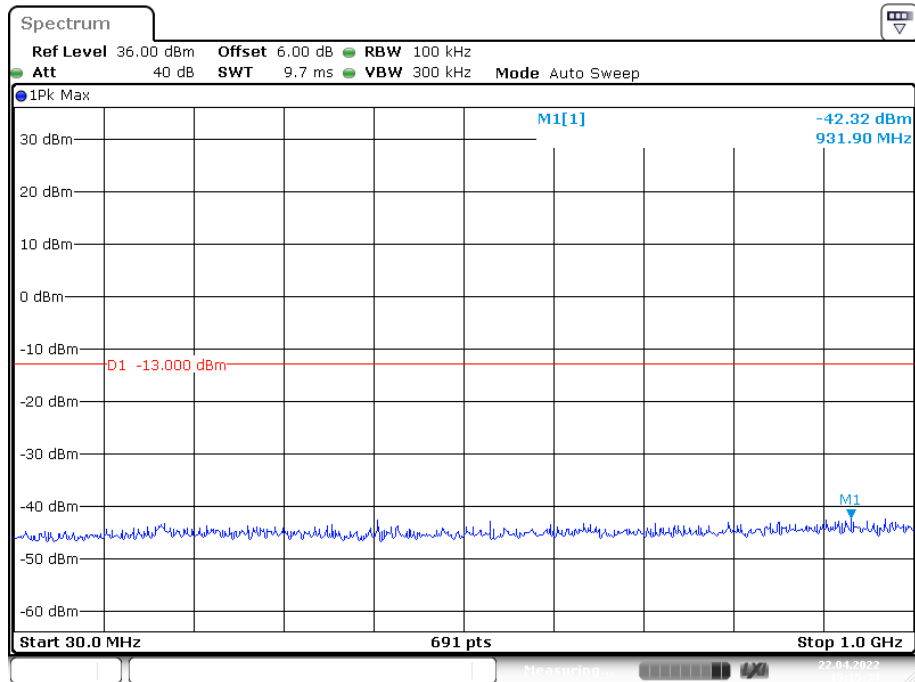
Date: 22 APR 2022 14:42:48

**1GHz – 20 GHz (WCDMA Mode)**

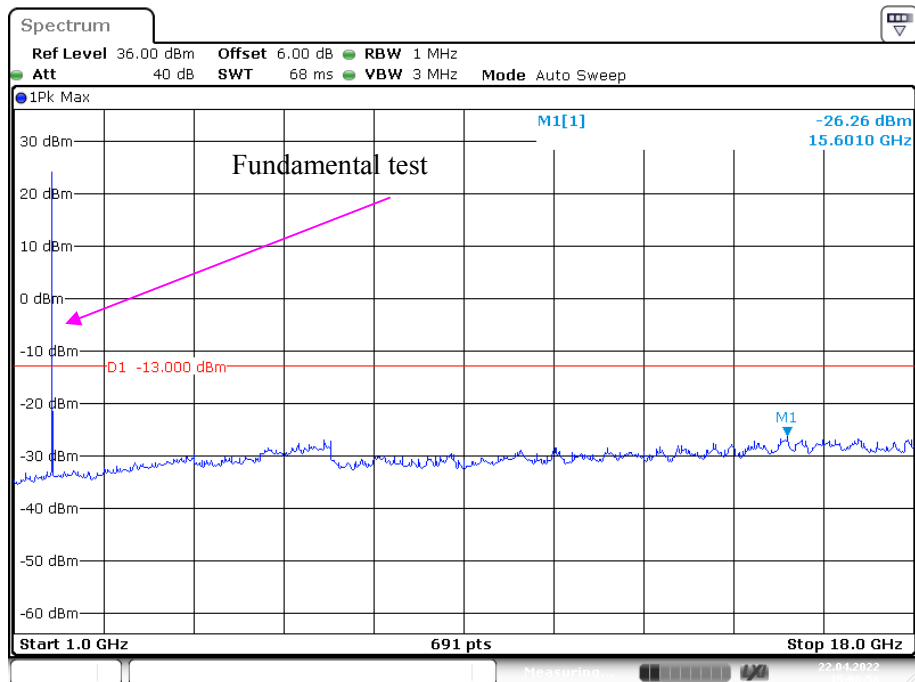
Date: 22 APR 2022 14:52:55

**WCDMA Band IV:****HSDPA: Low channel****30 MHz – 1 GHz (WCDMA Mode)****1 GHz – 18 GHz (WCDMA Mode)**

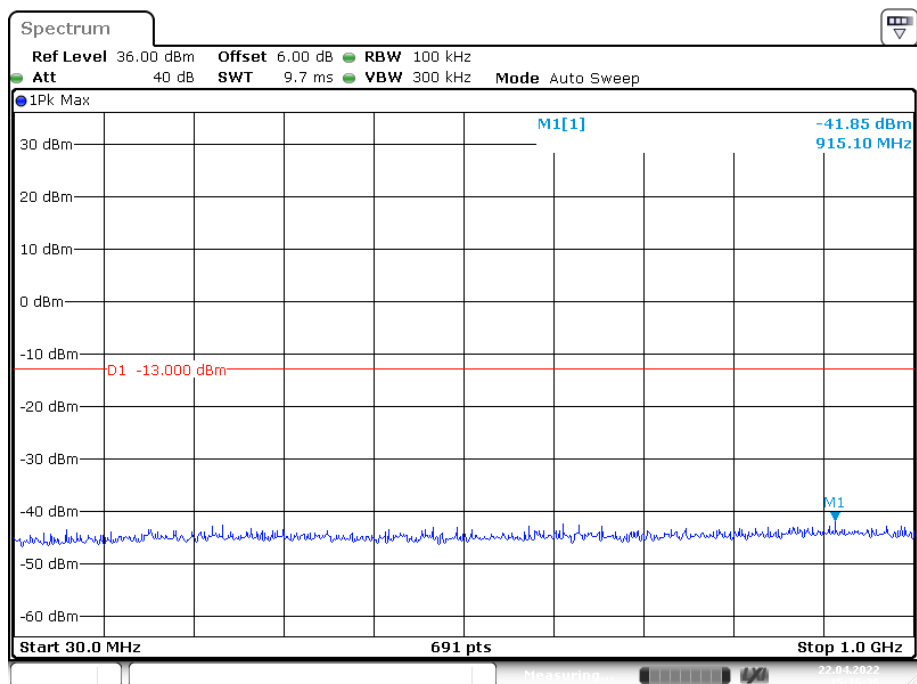


**Middle Channel:****30 MHz – 1 GHz (WCDMA Mode)**

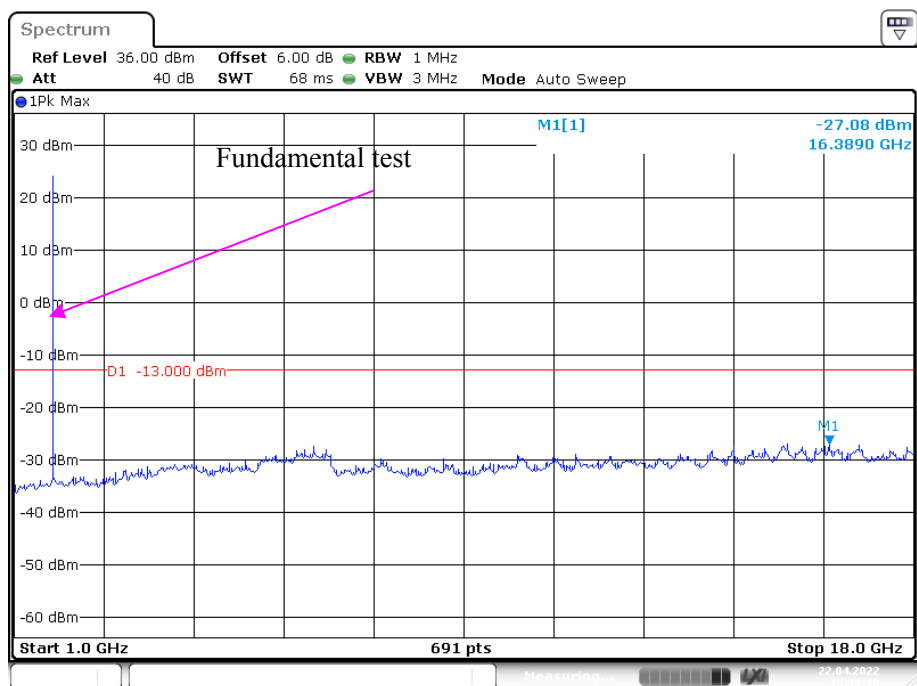
Date: 22 APR 2022 15:15:34

**1 GHz – 18 GHz (WCDMA Mode)**

Date: 22 APR 2022 15:08:56

**High Channel:****30 MHz – 1 GHz (WCDMA Mode)**

Date: 22 APR 2022 15:16:36

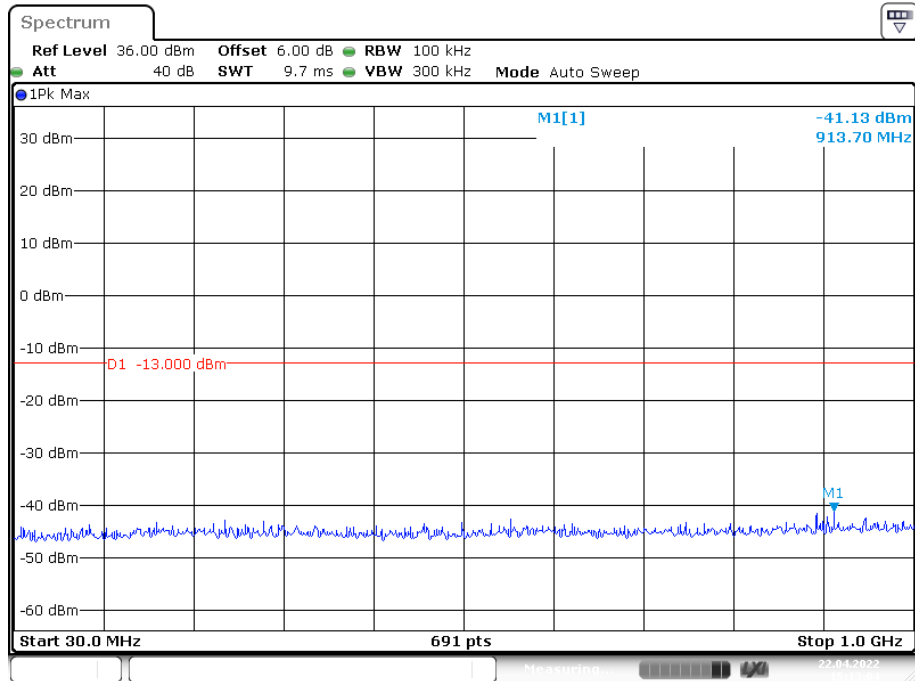
**1 GHz – 18 GHz (WCDMA Mode)**

Date: 22 APR 2022 15:11:13

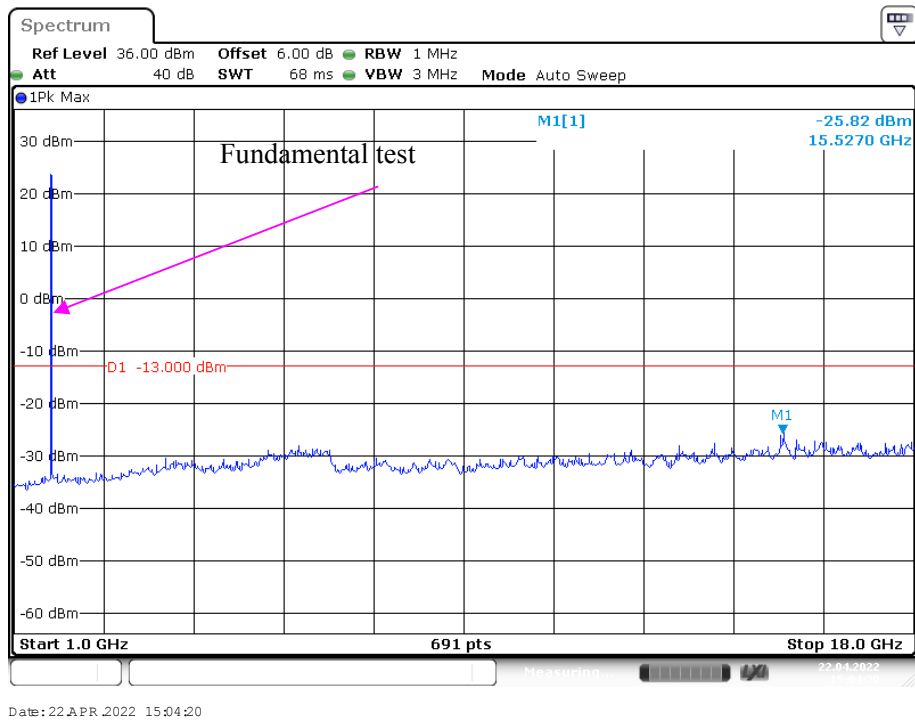
HSPA+:

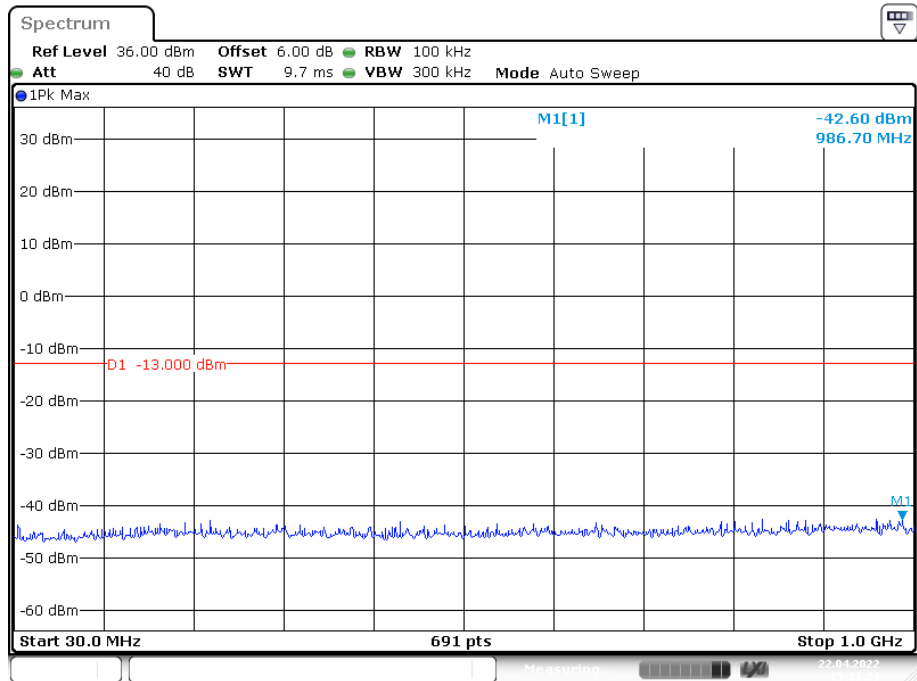
Low Channel:

## 30 MHz – 1 GHz (WCDMA Mode)

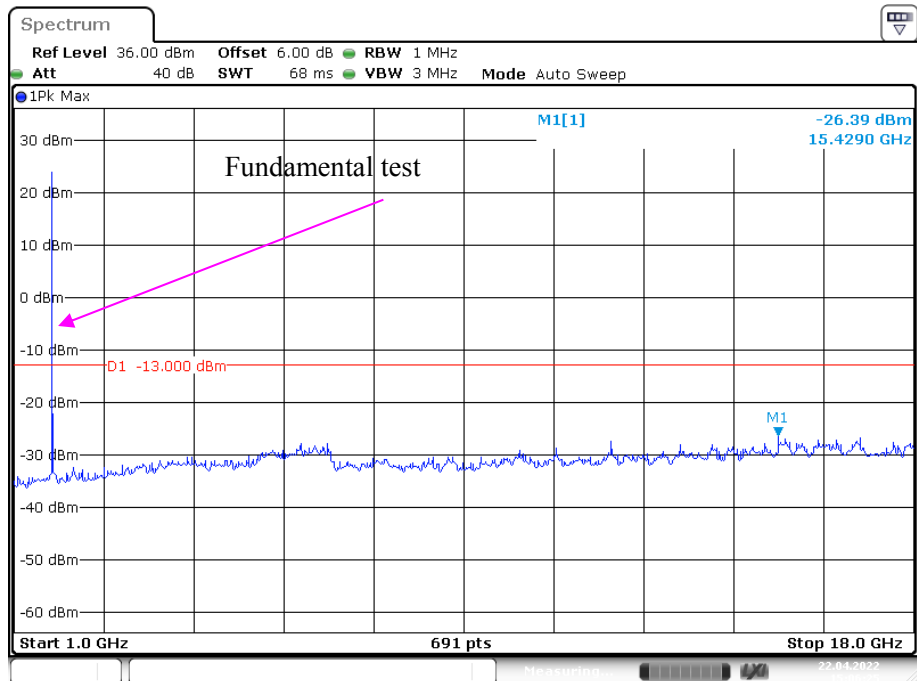


## 1 GHz – 18 GHz (WCDMA Mode)

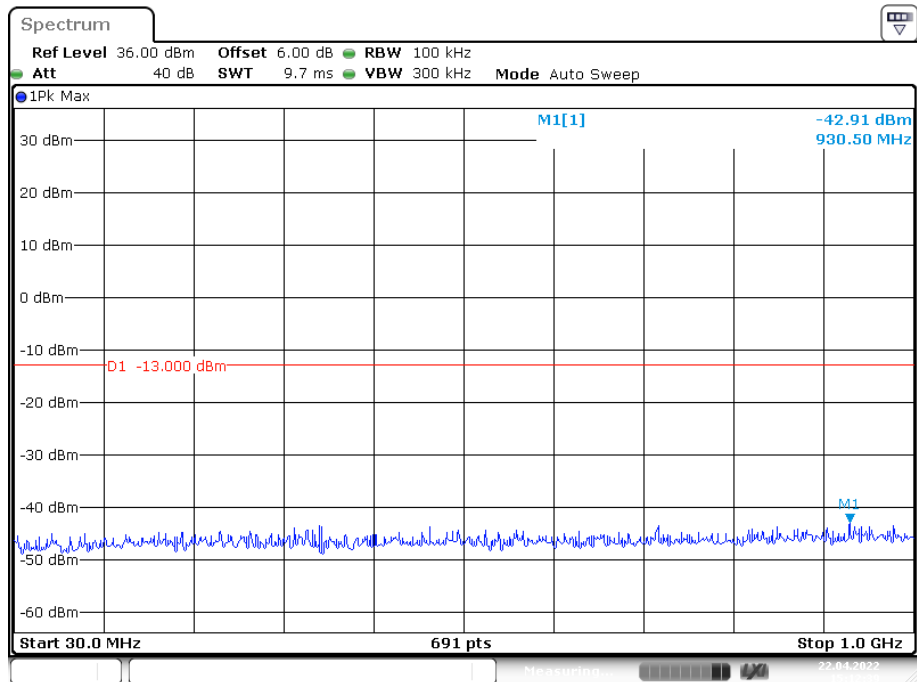


**Middle Channel:****30 MHz – 1 GHz (WCDMA Mode)**

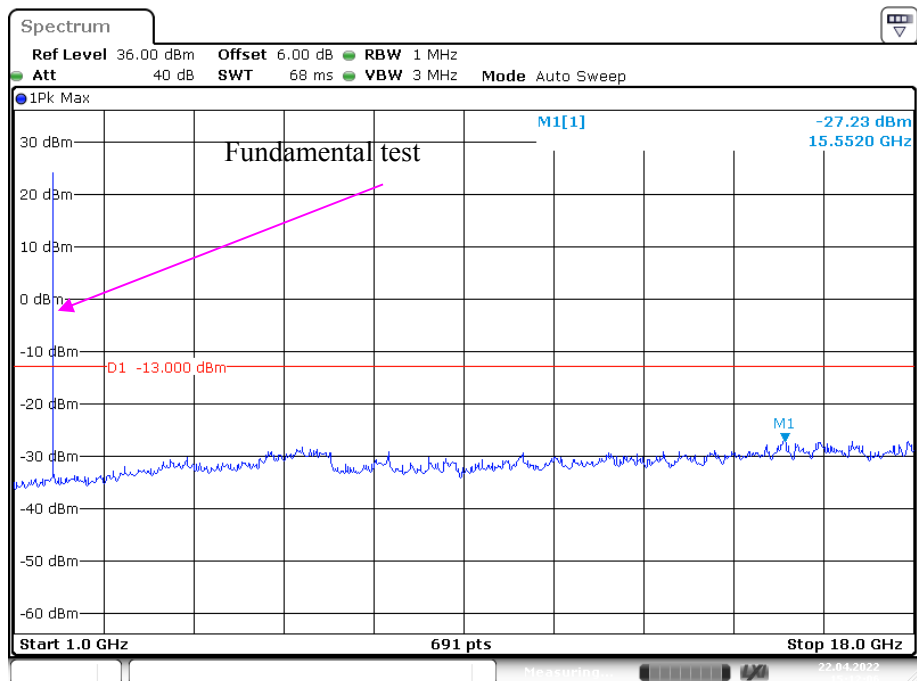
Date: 22 APR 2022 15:13:21

**1 GHz – 18 GHz (WCDMA Mode)**

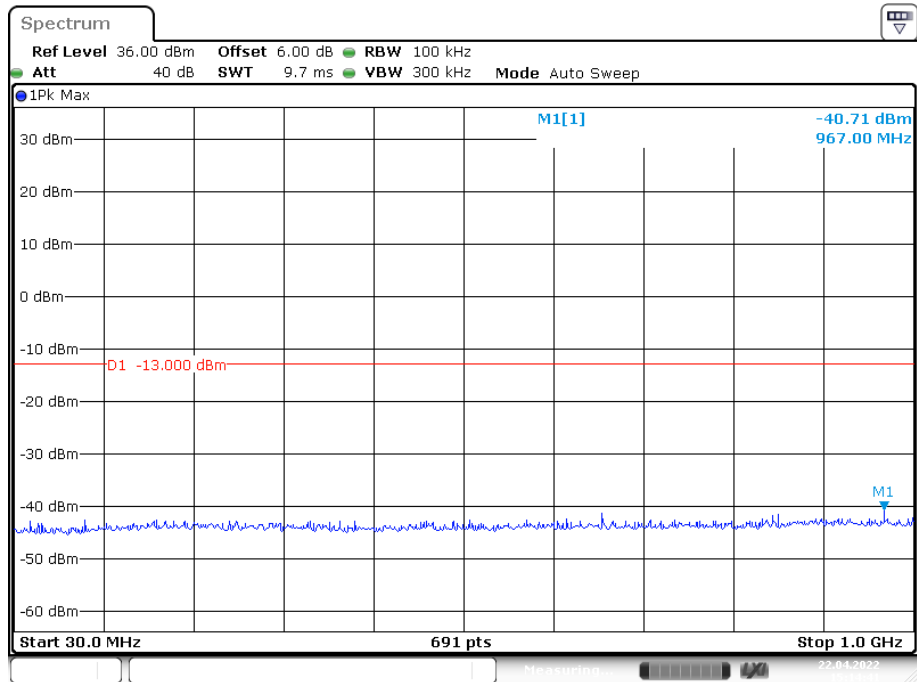
Date: 22 APR 2022 15:06:26

**High channel:****30 MHz – 1 GHz (WCDMA Mode)**

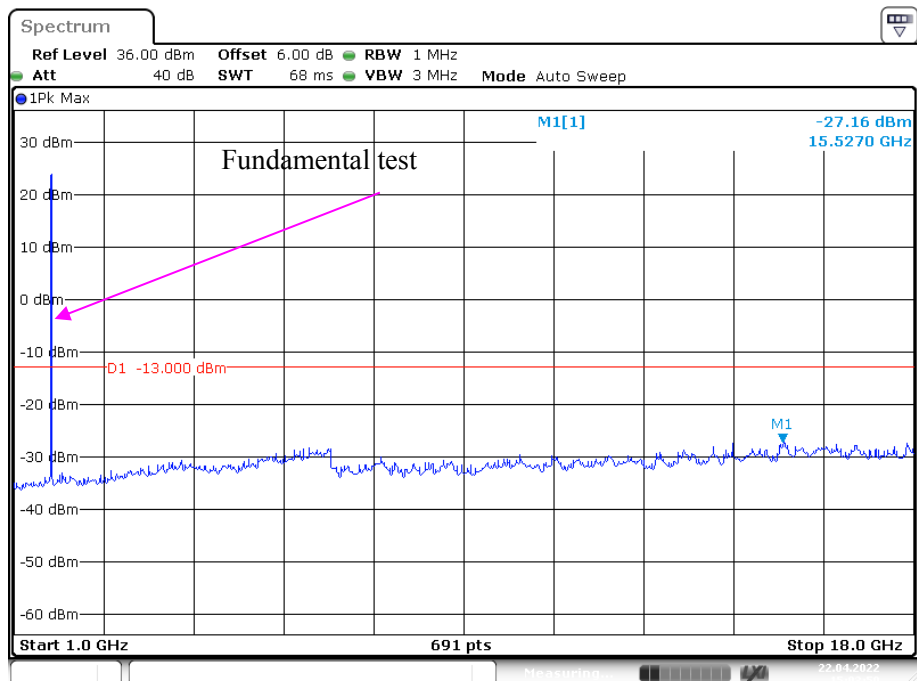
Date: 22 APR 2022 15:12:40

**1 GHz – 18 GHz (WCDMA Mode)**

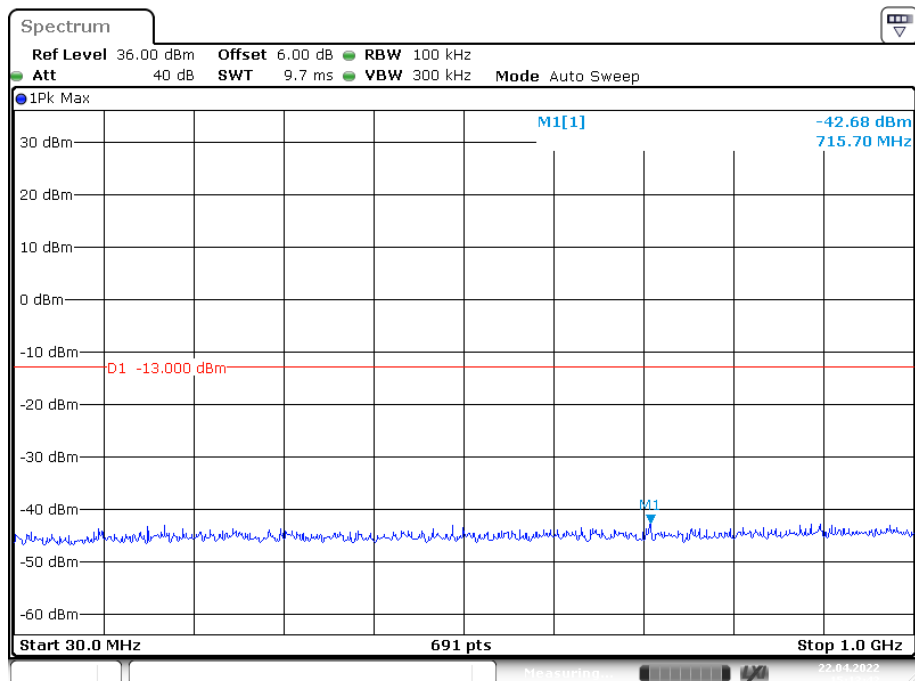
Date: 22 APR 2022 15:12:06

**HSUPA: Low channel****30 MHz– 1 GHz (WCDMA Mode)**

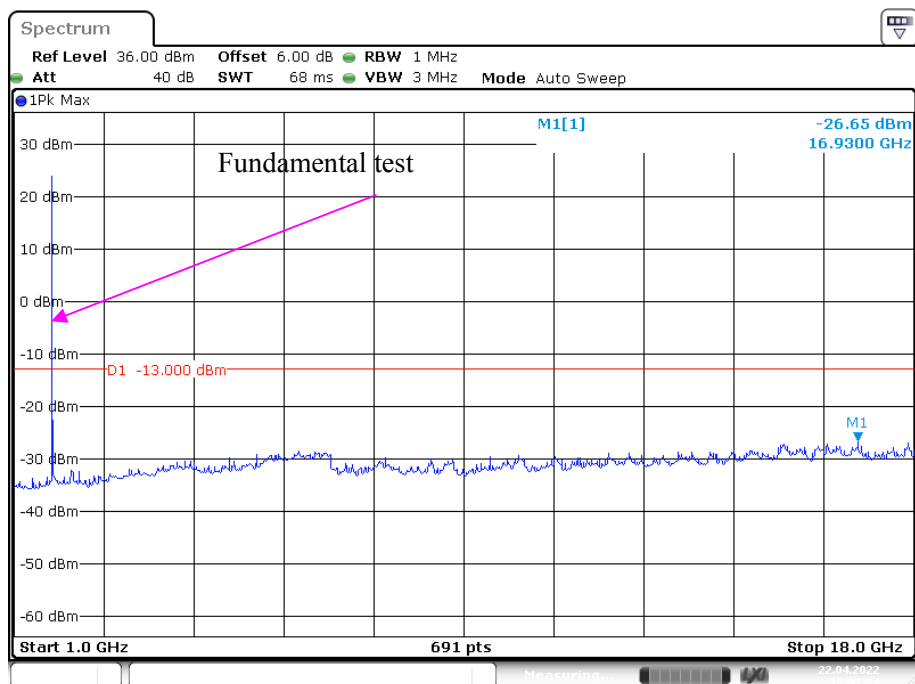
Date: 22 APR 2022 15:14:42

**1 GHz–18 GHz (WCDMA Mode)**

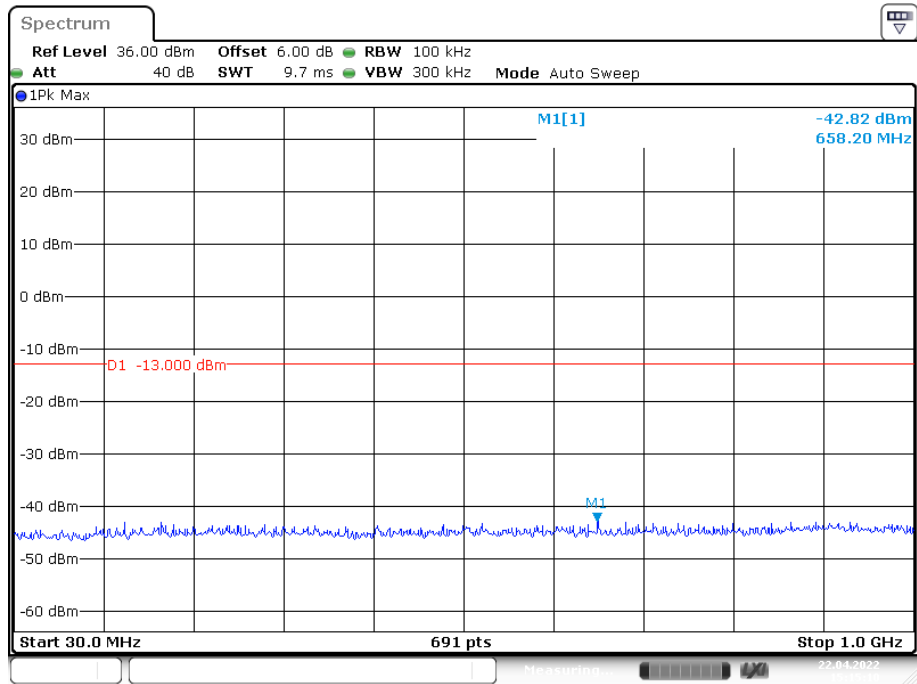
Date: 22 APR 2022 15:03:51

**Middle channel:****30 MHz – 1 GHz (WCDMA Mode)**

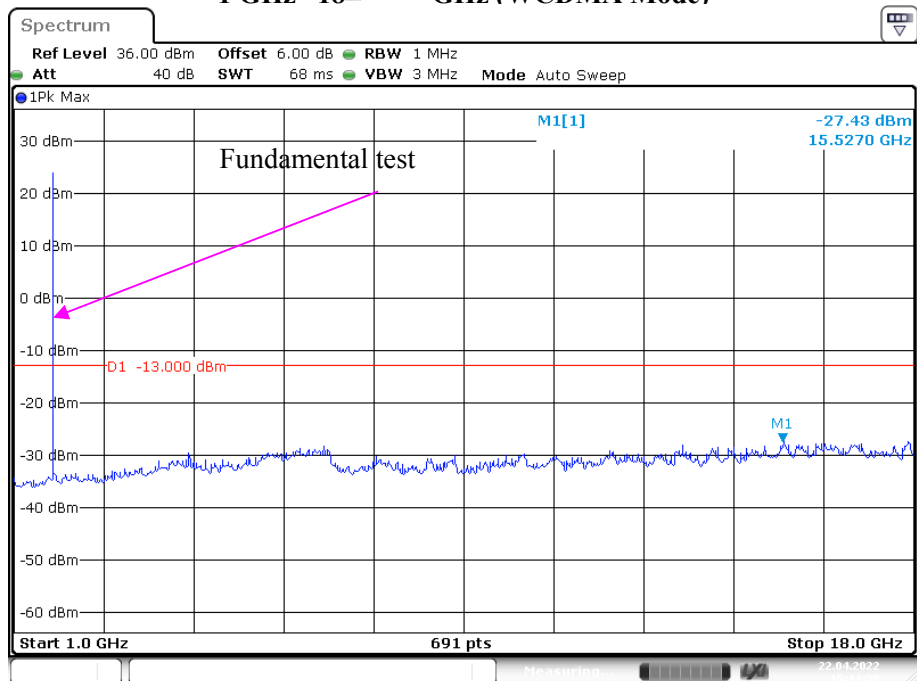
Date: 22 APR 2022 15:13:42

**1 GHz – 18 GHz (WCDMA Mode)**

Date: 22 APR 2022 15:07:04

**High Channel:****30 MHz – 1 GHz (WCDMA Mode)**

Date: 22 APR 2022 15:15:10

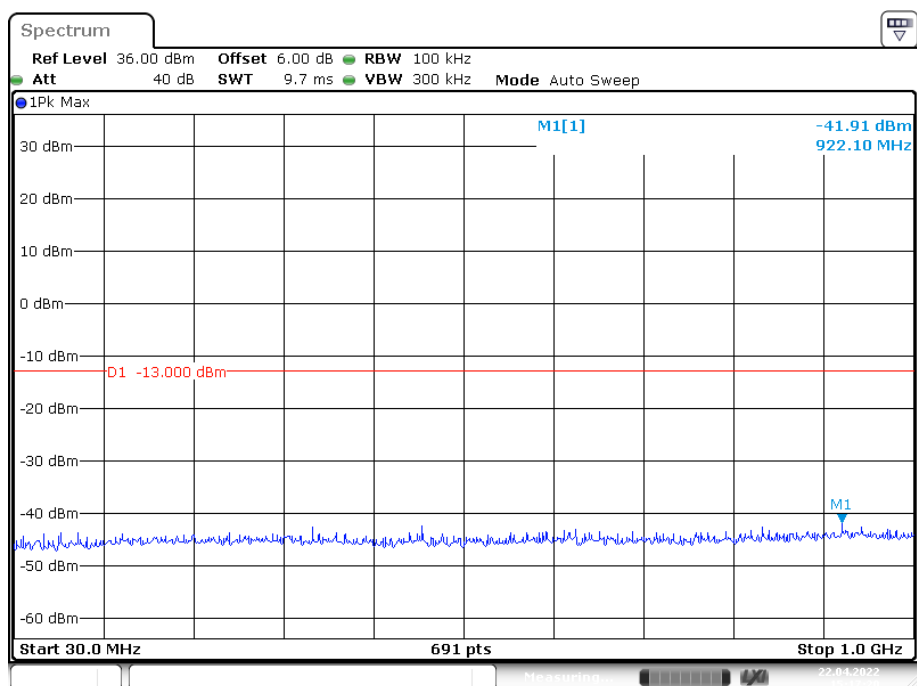
**1 GHz – 18 GHz (WCDMA Mode)**

Date: 22 APR 2022 15:11:39



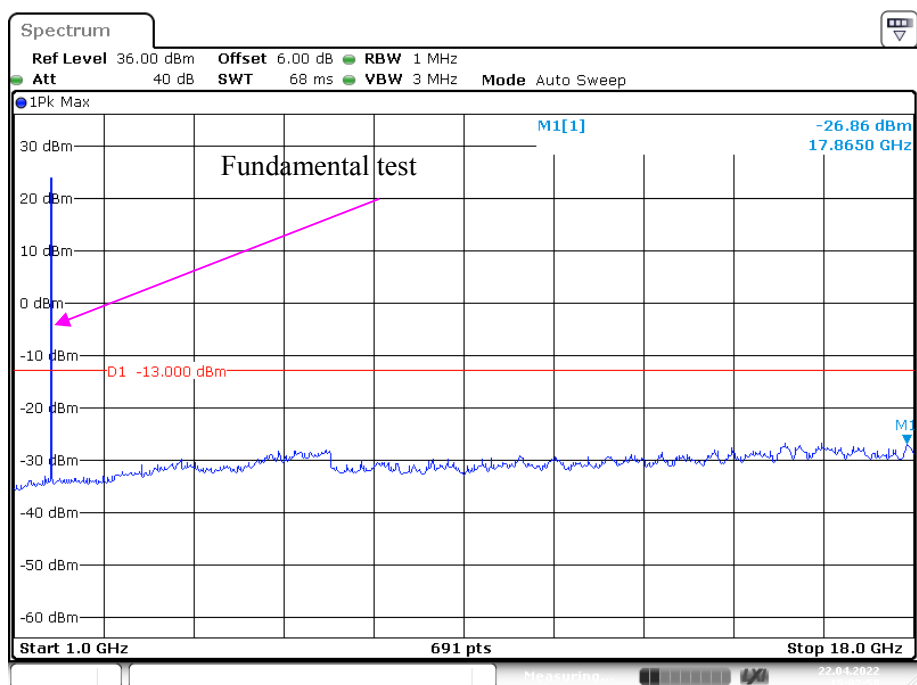
## Rel 99: Low channel

## 30 MHz– 1 GHz (WCDMA Mode)

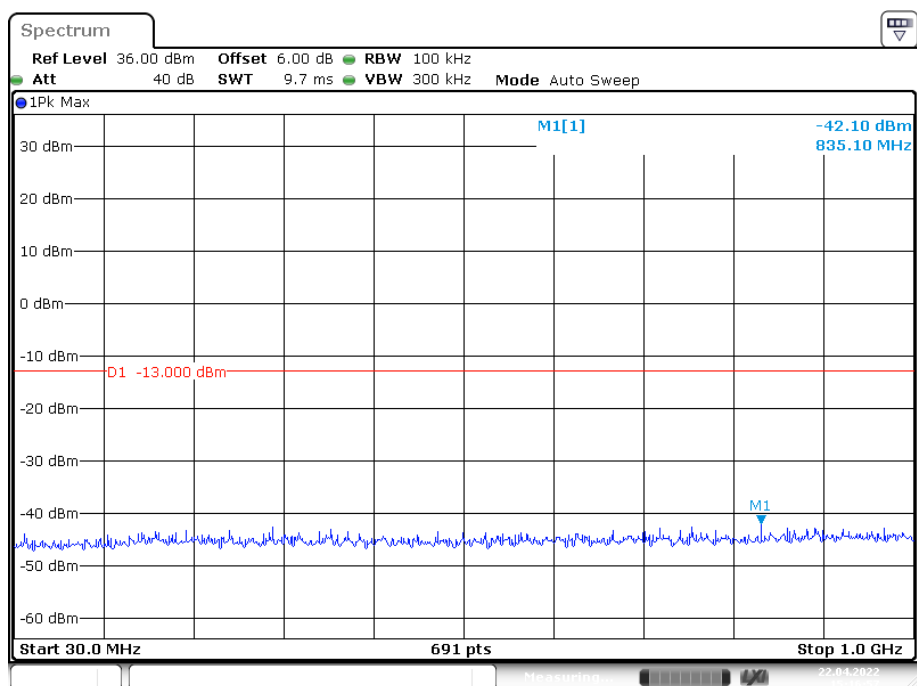
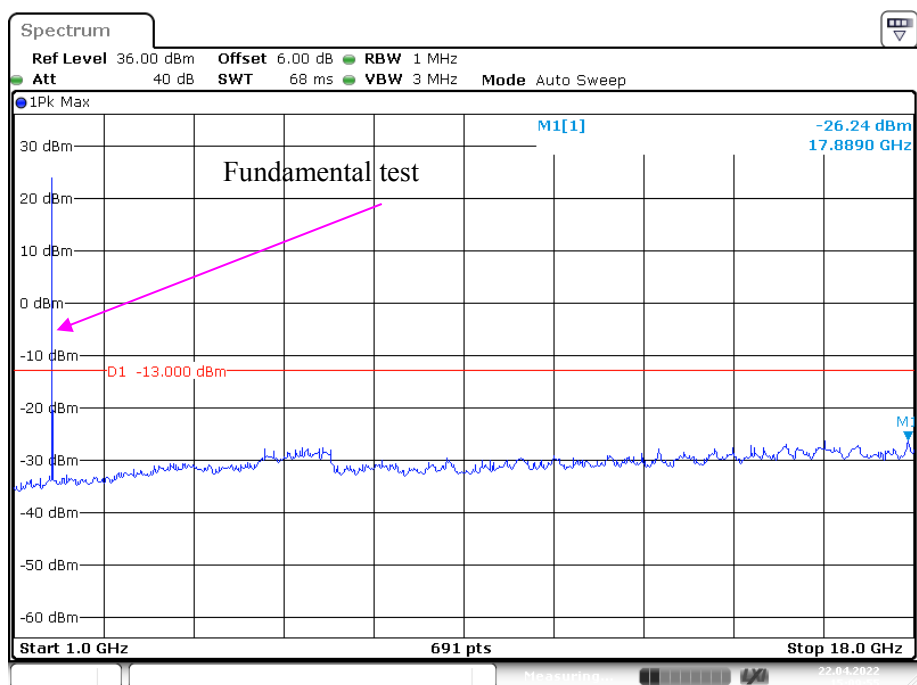


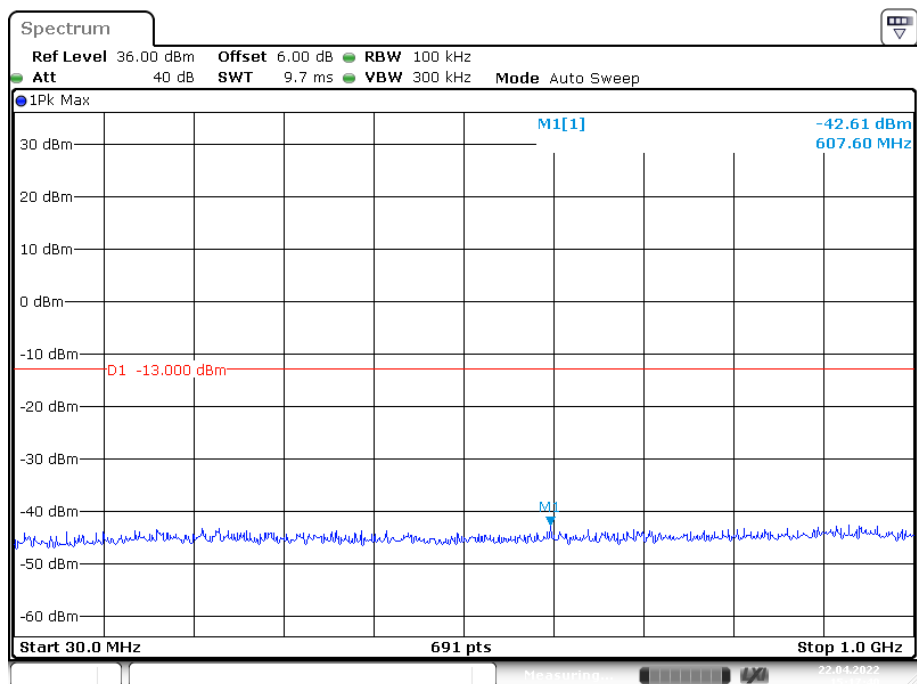
Date: 22 APR. 2022 15:17:21

## 1 GHz – 18 GHz (WCDMA Mode)

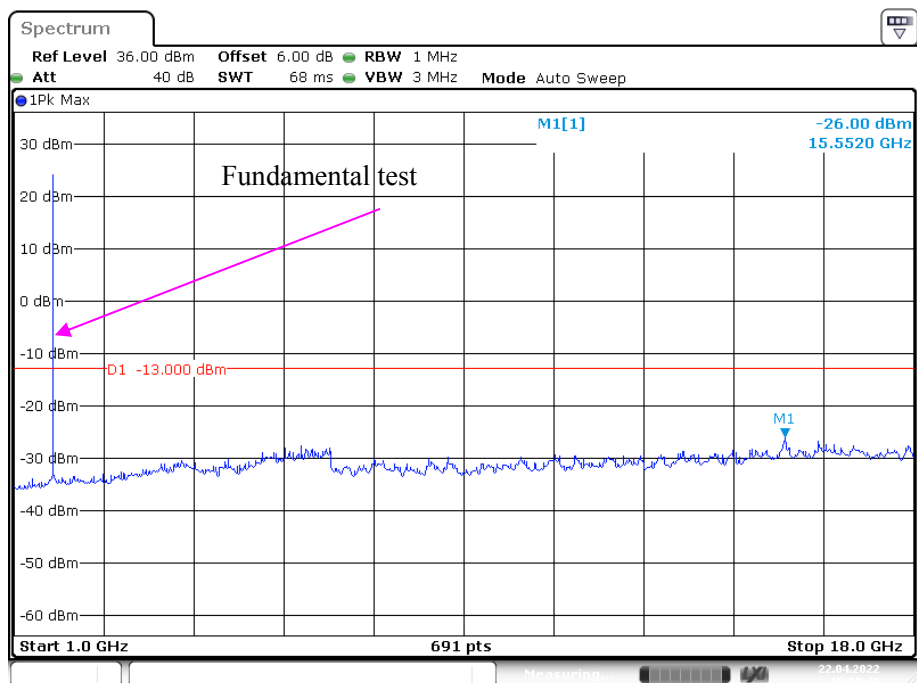


Date: 22 APR. 2022 15:02:51

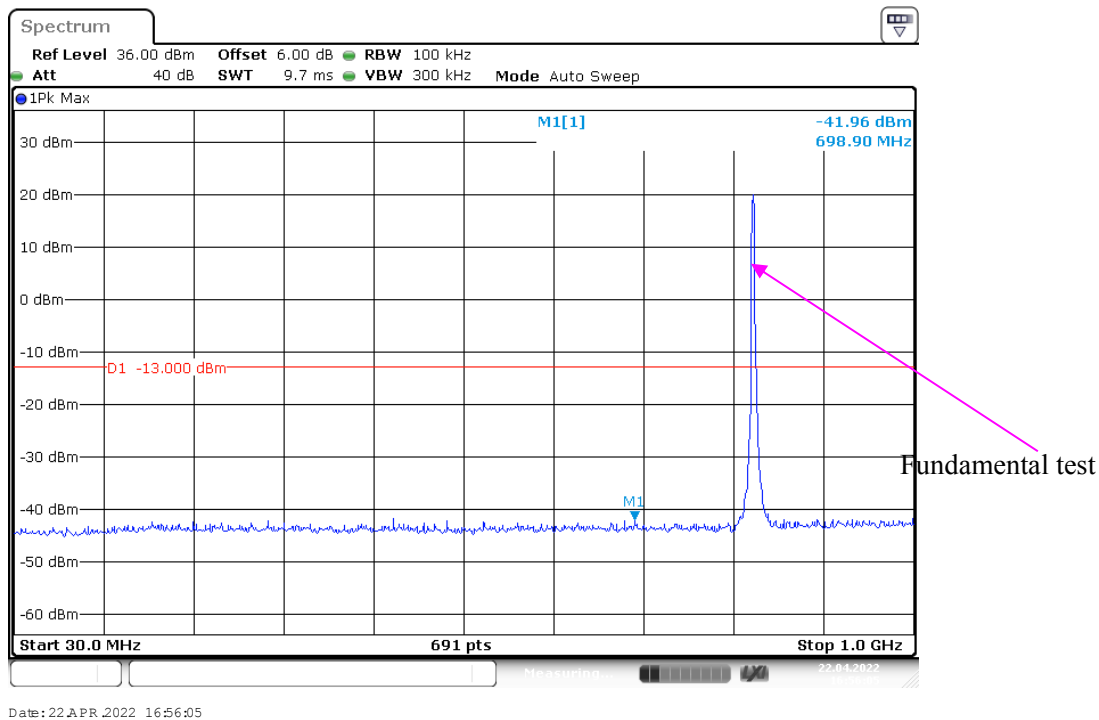
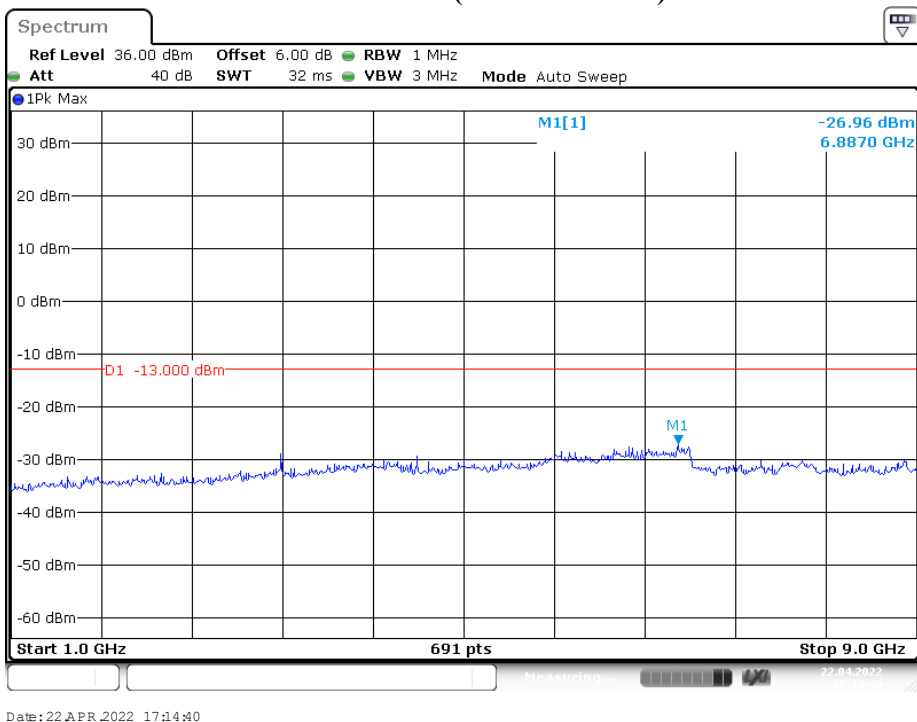
**Middle channel:****30 MHz – 1 GHz (WCDMA Mode)****1GHz – 20 GHz (WCDMA Mode)**

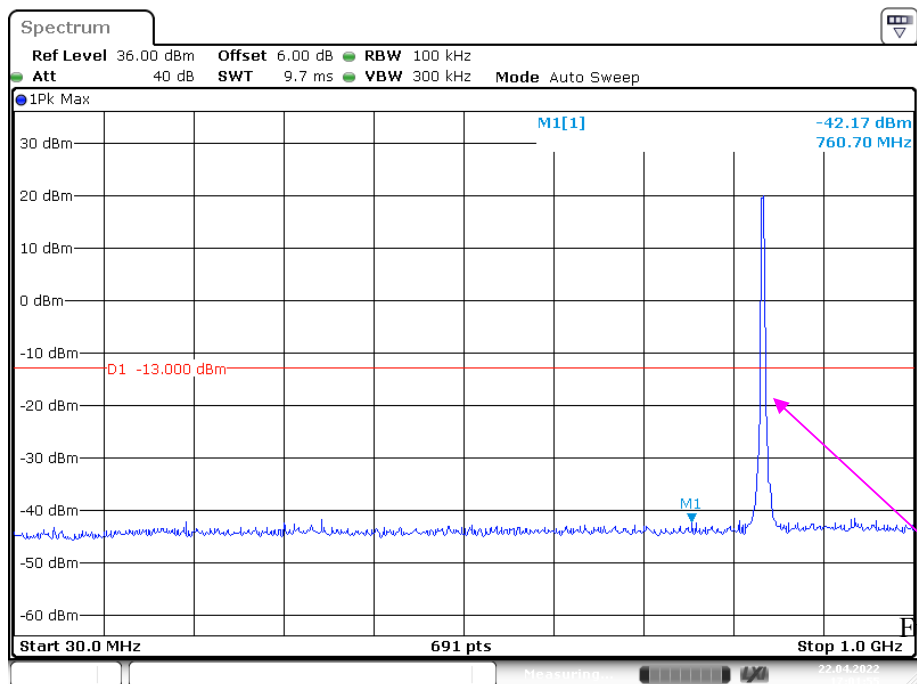
**High channel:****30 MHz – 1 GHz (WCDMA Mode)**

Date: 22 APR 2022 15:17:40

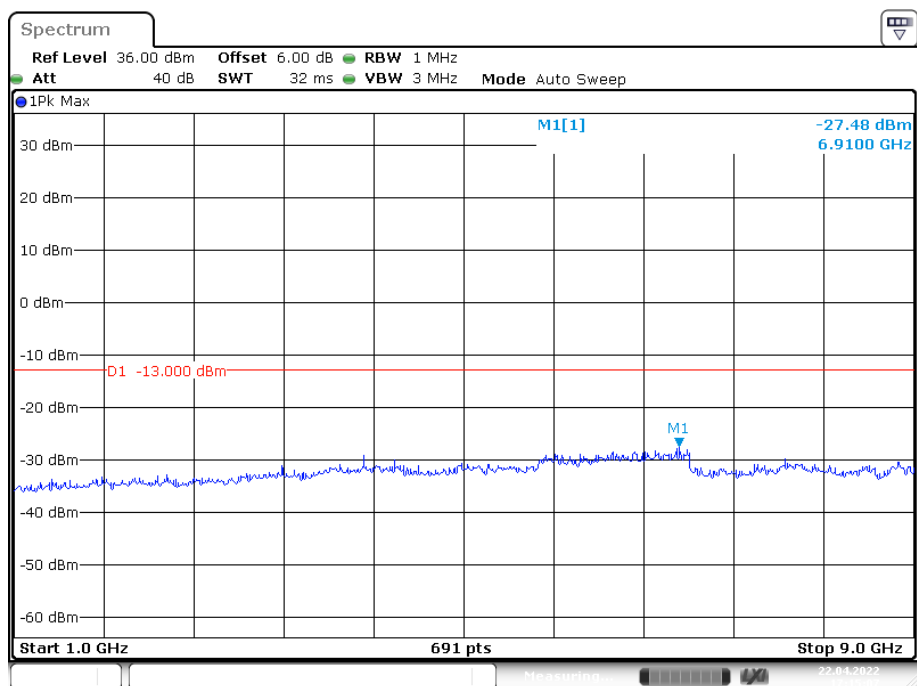
**1GHz – 20 GHz (WCDMA Mode)**

Date: 22 APR 2022 15:10:41

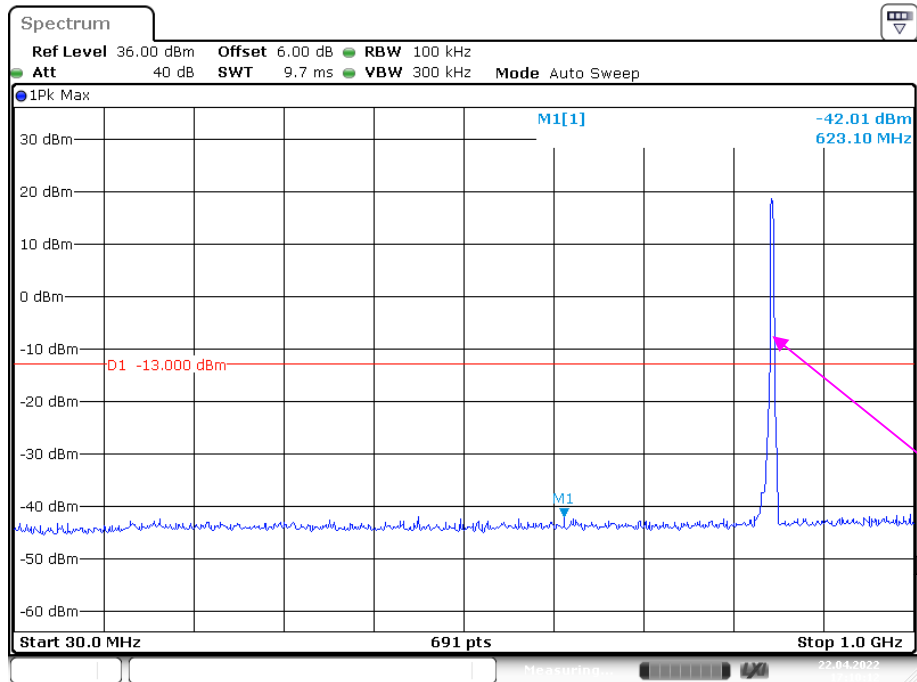
**WCDMA Band V:****HSDPA: Low channel****30 MHz – 1 GHz (WCDMA Mode)****1 GHz – 9 GHz (WCDMA Mode)**

**Middle Channel:****30 MHz – 1 GHz (WCDMA Mode)**

Date: 22 APR 2022 17:01:55

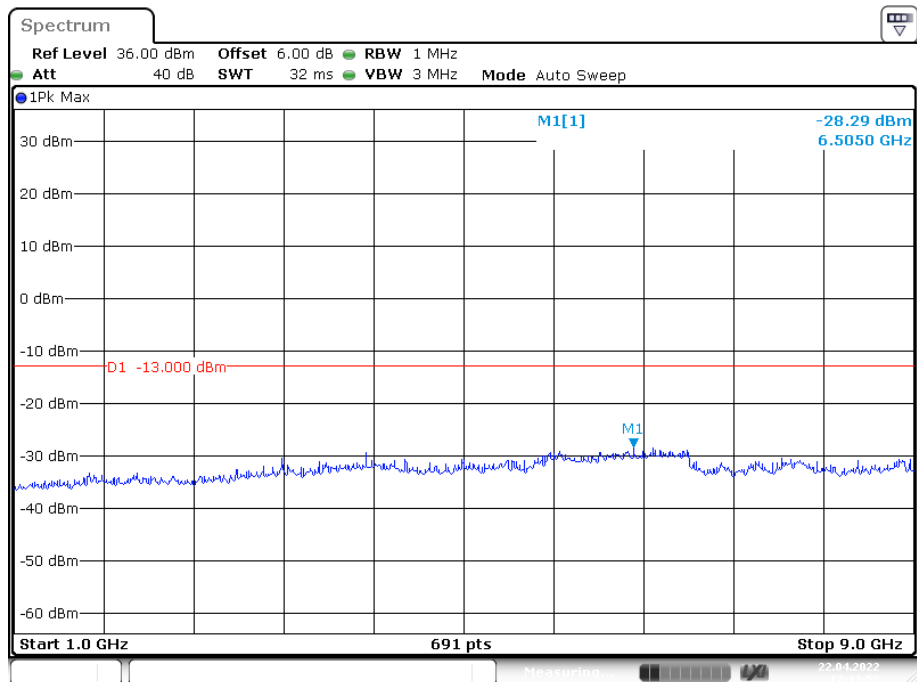
**1 GHz – 9 GHz (WCDMA Mode)**

Date: 22 APR 2022 17:15:07

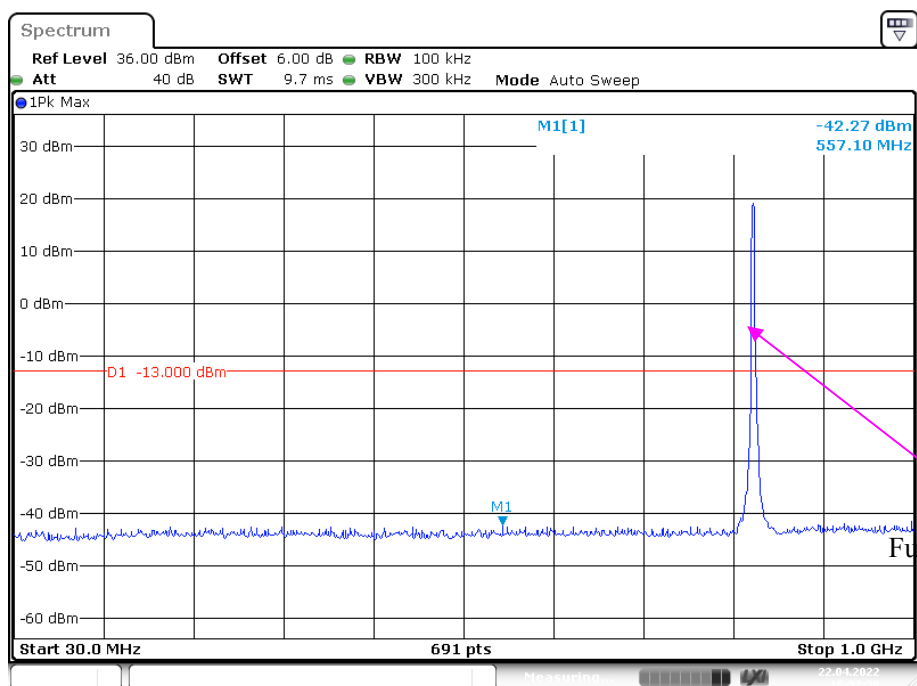
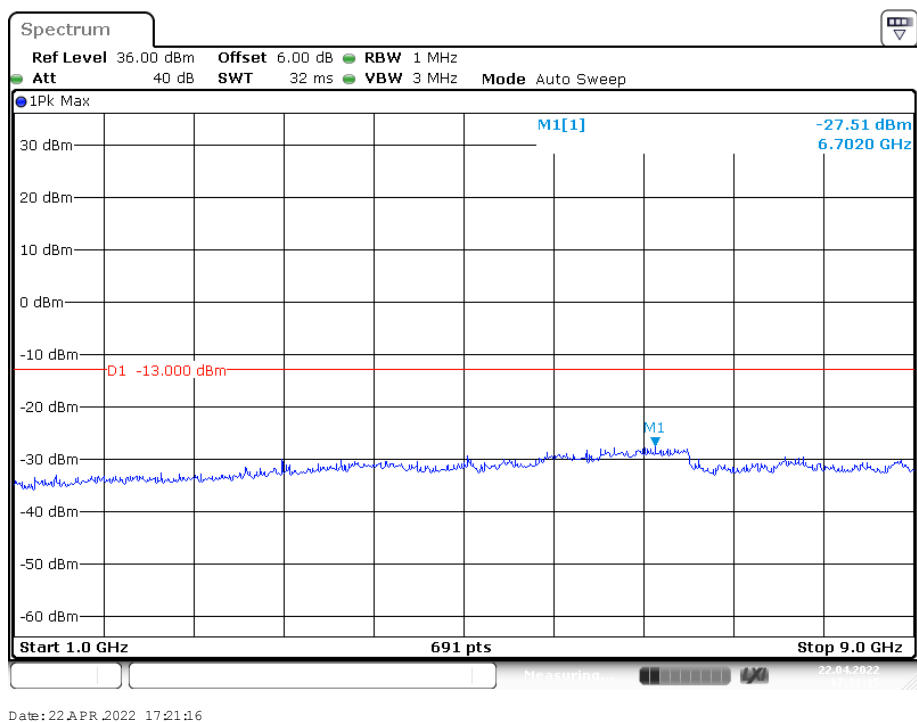
**High Channel:****30 MHz – 1 GHz (WCDMA Mode)**

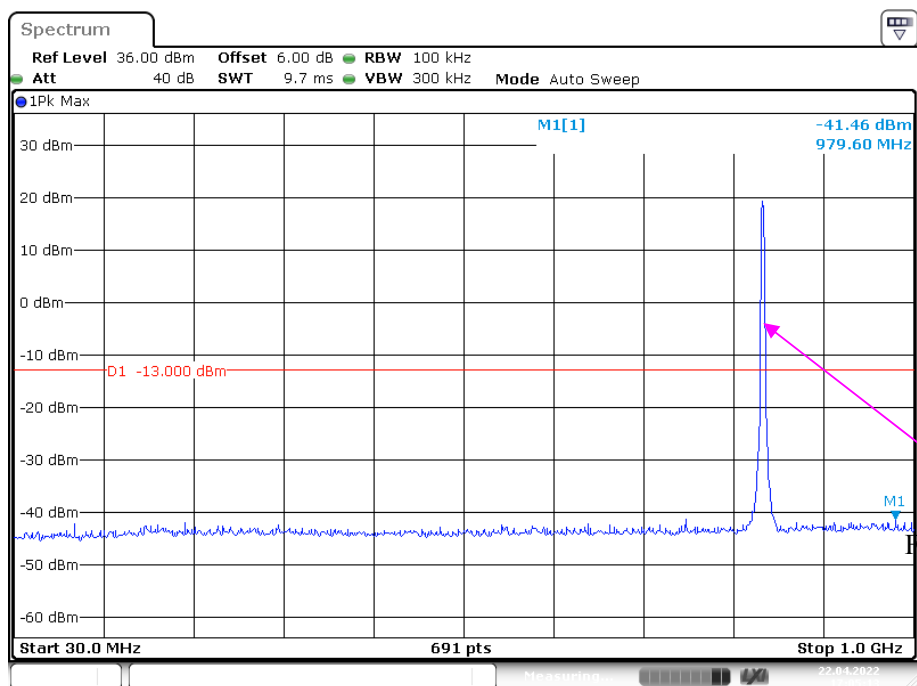
Date: 22 APR 2022 17:10:12

Fundamental test

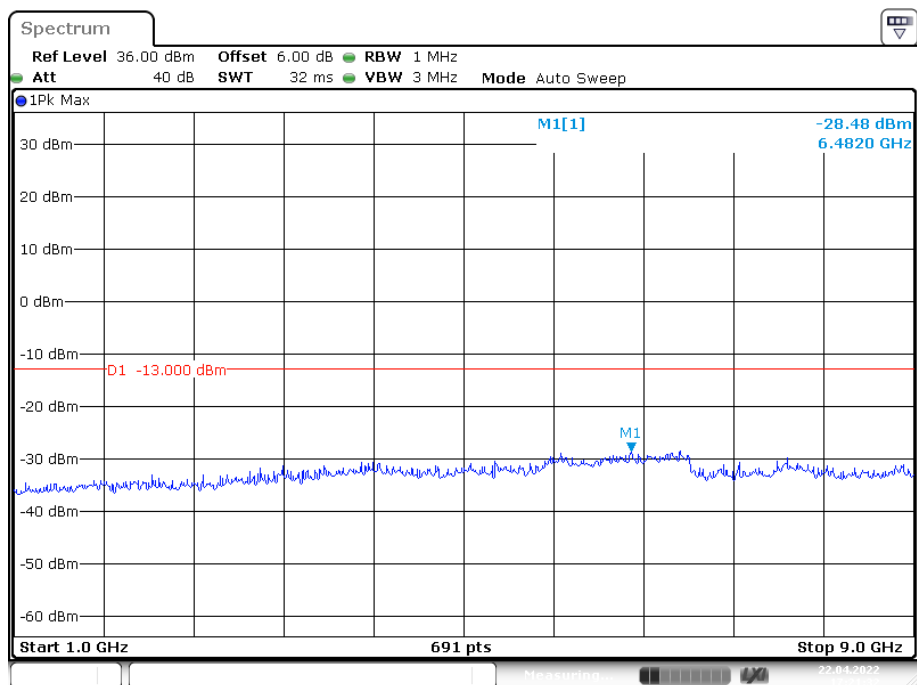
**1 GHz – 9 GHz (WCDMA Mode)**

Date: 22 APR 2022 17:13:53

**HSPA+: Low Channel:****30 MHz – 1 GHz (WCDMA Mode)****1 GHz – 9 GHz (WCDMA Mode)**

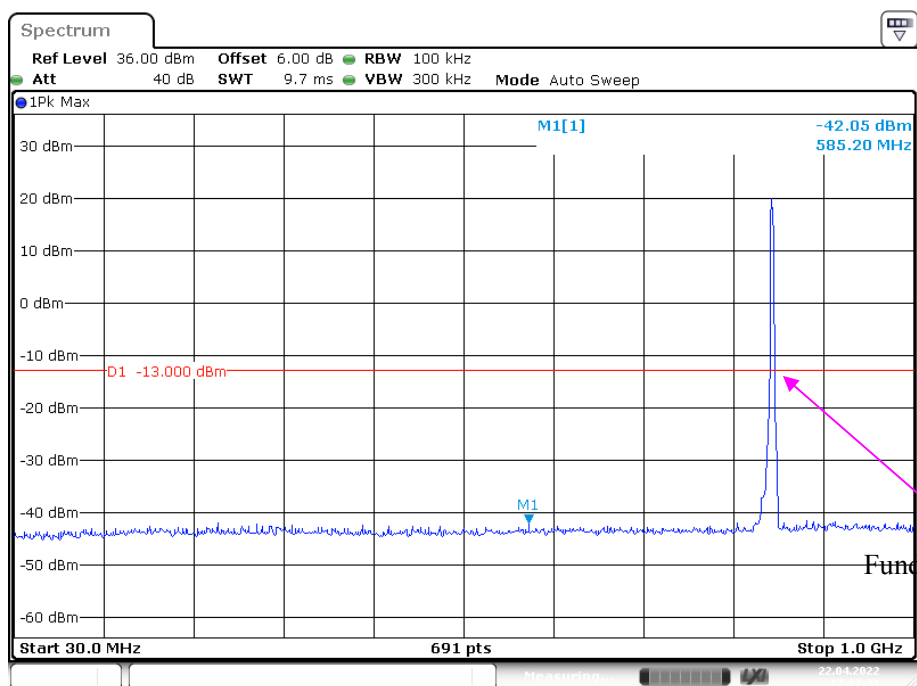
**Middle Channel:****30 MHz – 1 GHz (WCDMA Mode)**

Date: 22 APR 2022 17:05:12

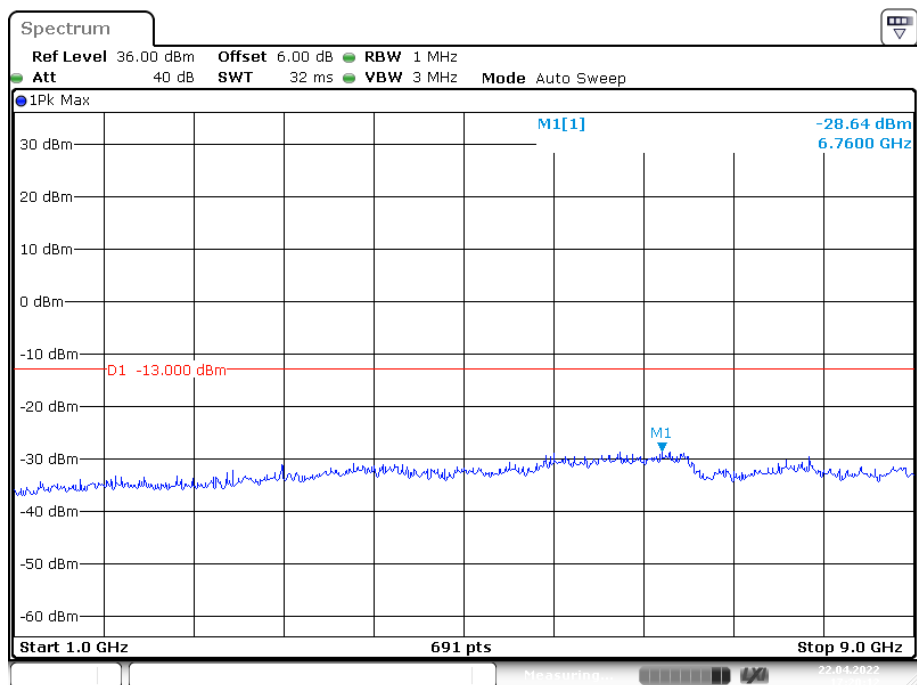
**1 GHz – 9 GHz (WCDMA Mode)**

Date: 22 APR 2022 17:21:33

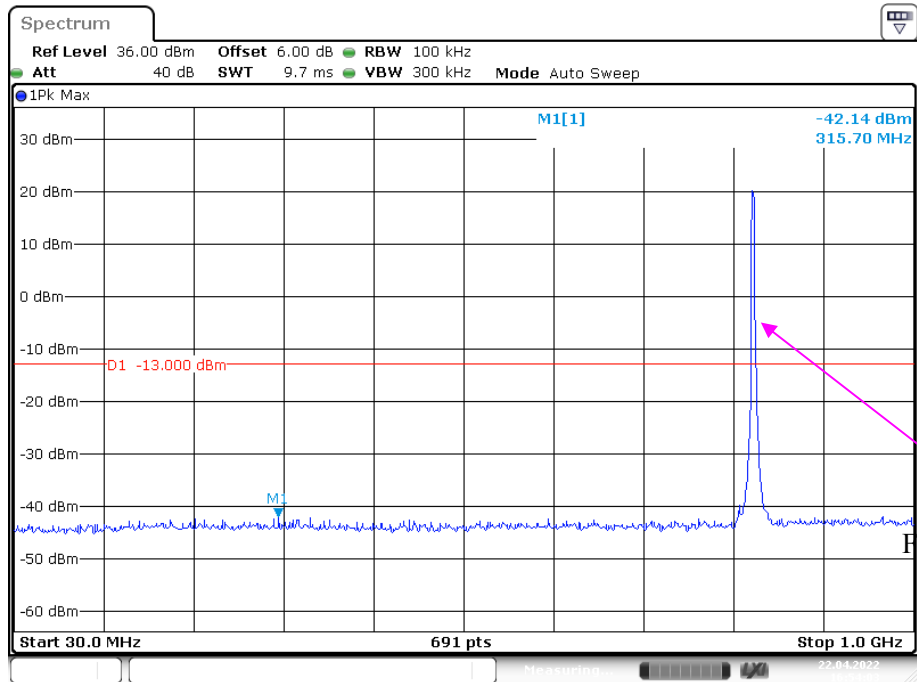


**High channel:****30 MHz – 1 GHz (WCDMA Mode)**

Date: 22 APR 2022 17:07:31

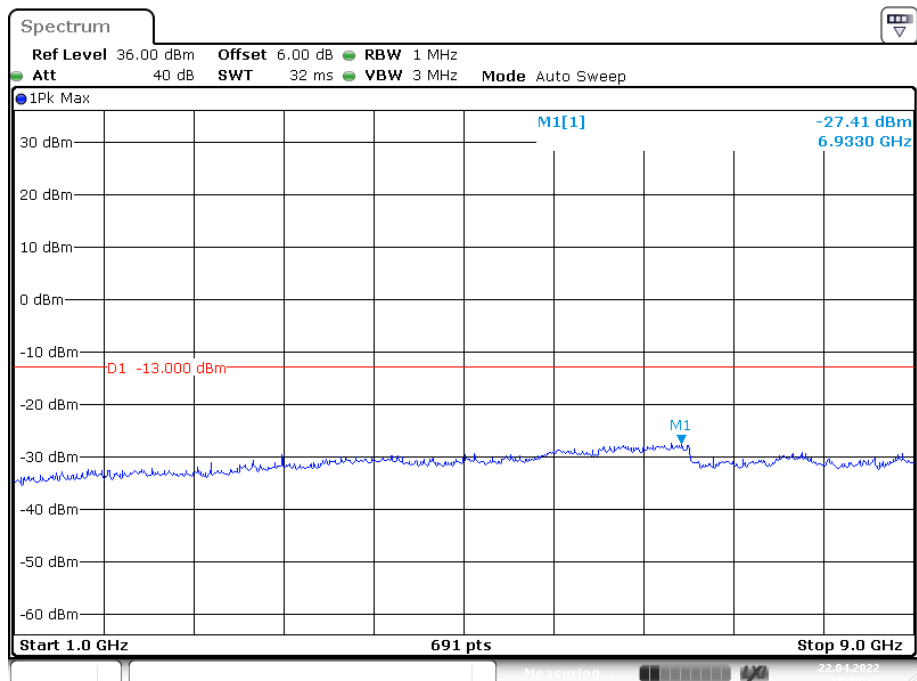
**1 GHz – 9 GHz (WCDMA Mode)**

Date: 22 APR 2022 17:20:12

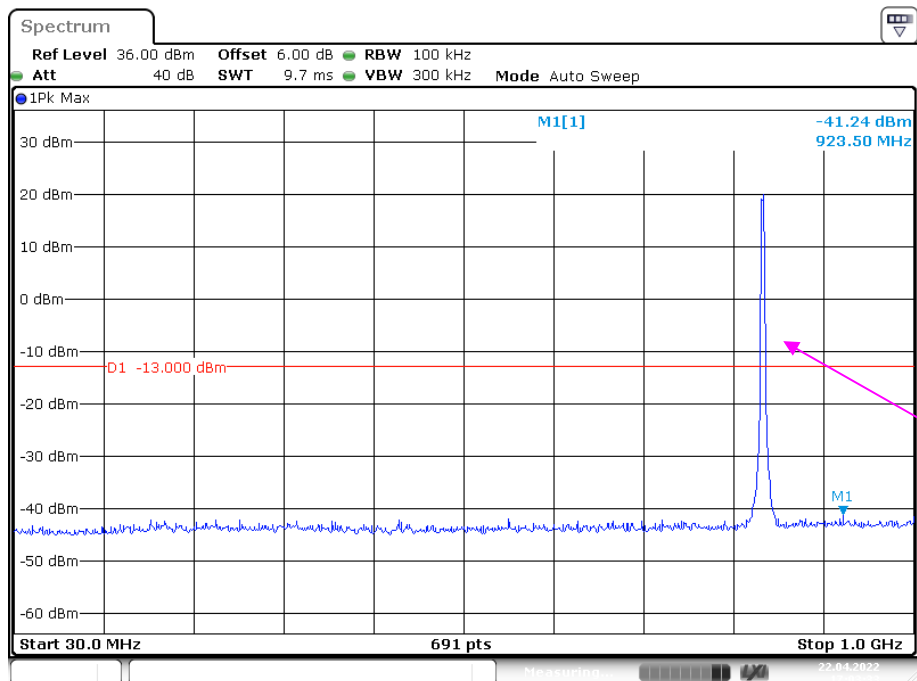
**HSUPA: Low channel****30 MHz– 1 GHz (WCDMA Mode)**

Date: 22 APR 2022 16:54:03

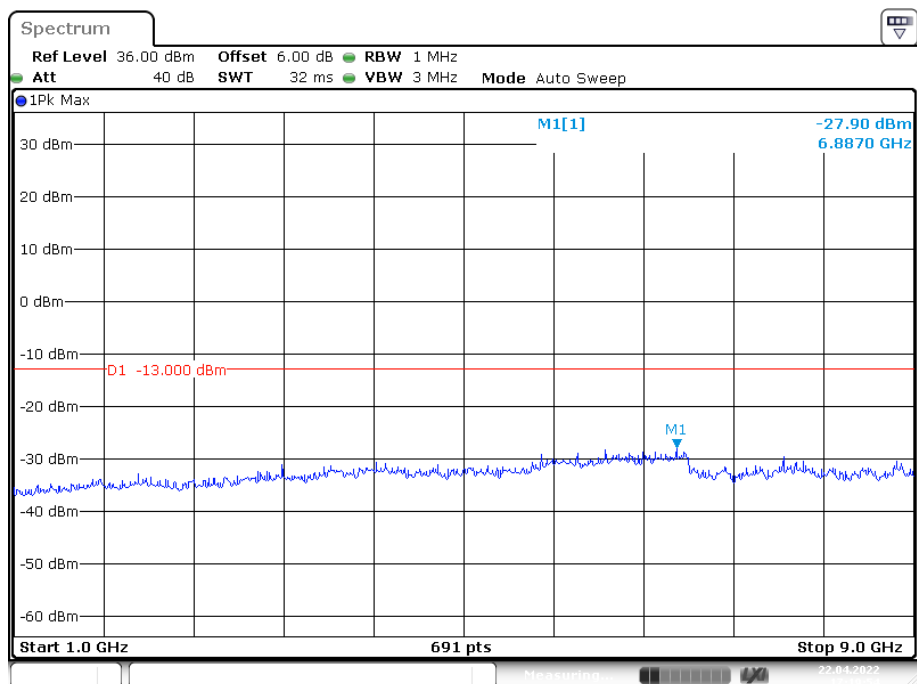
Fundamental test

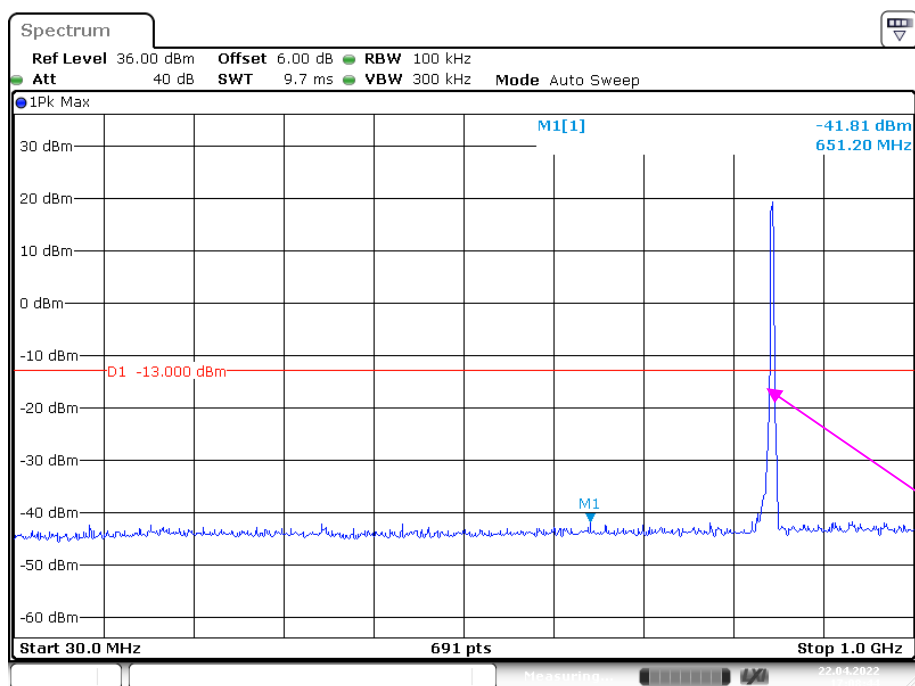
**1 GHz–9 GHz (WCDMA Mode)**

Date: 22 APR 2022 17:19:33

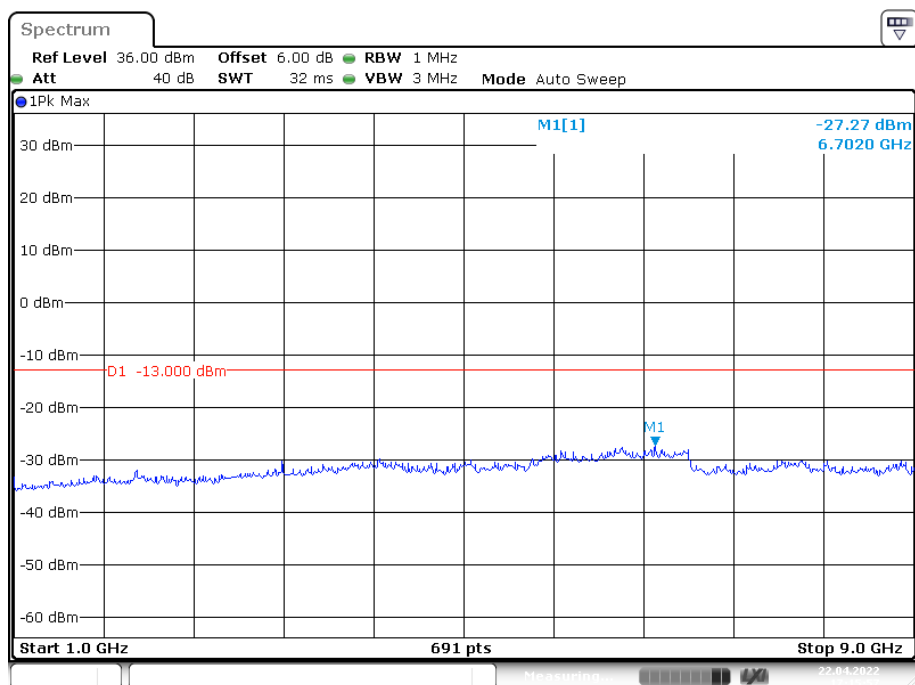
**Middle channel:****30 MHz – 1 GHz (WCDMA Mode)**

Fundamental test

**1 GHz – 9 GHz (WCDMA Mode)**

**High Channel:****30 MHz – 1 GHz (WCDMA Mode)**

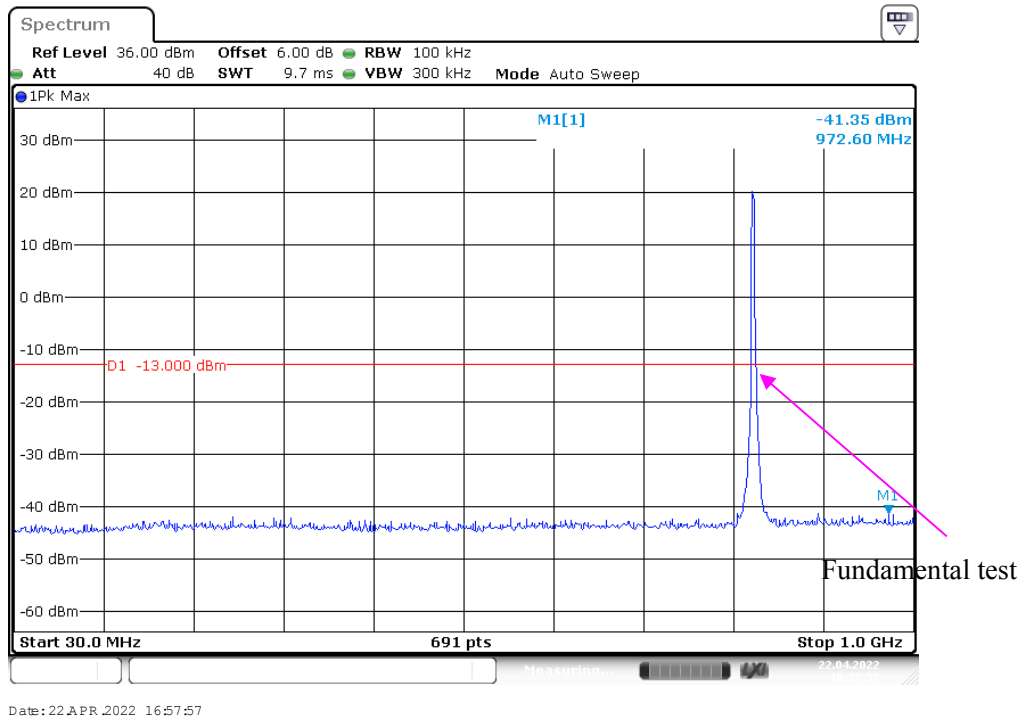
Date: 22 APR 2022 17:08:44

**1 GHz – 9 GHz (WCDMA Mode)**

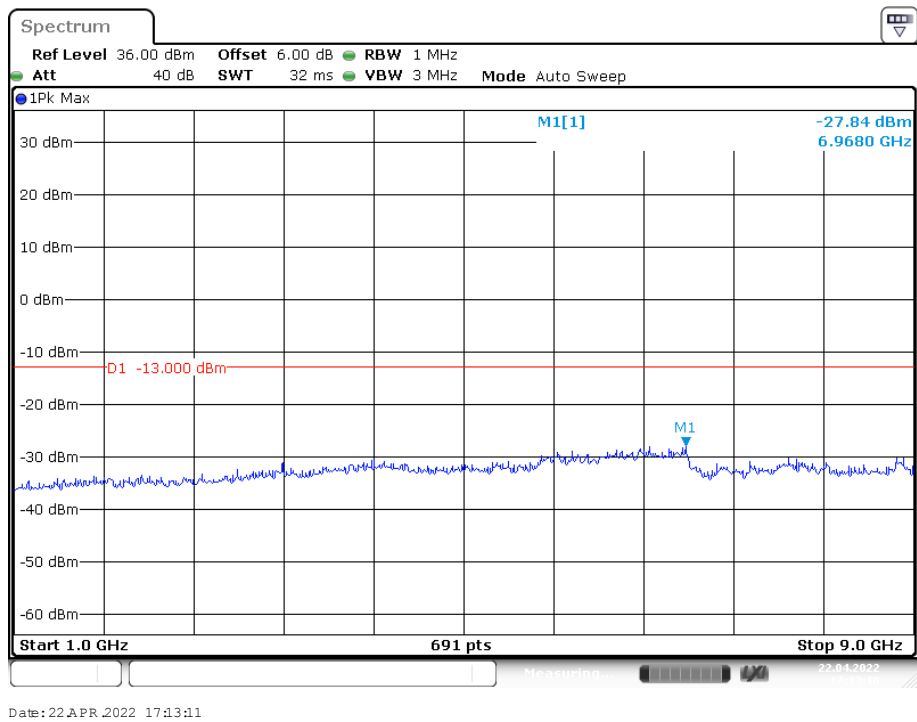
Date: 22 APR 2022 17:15:57

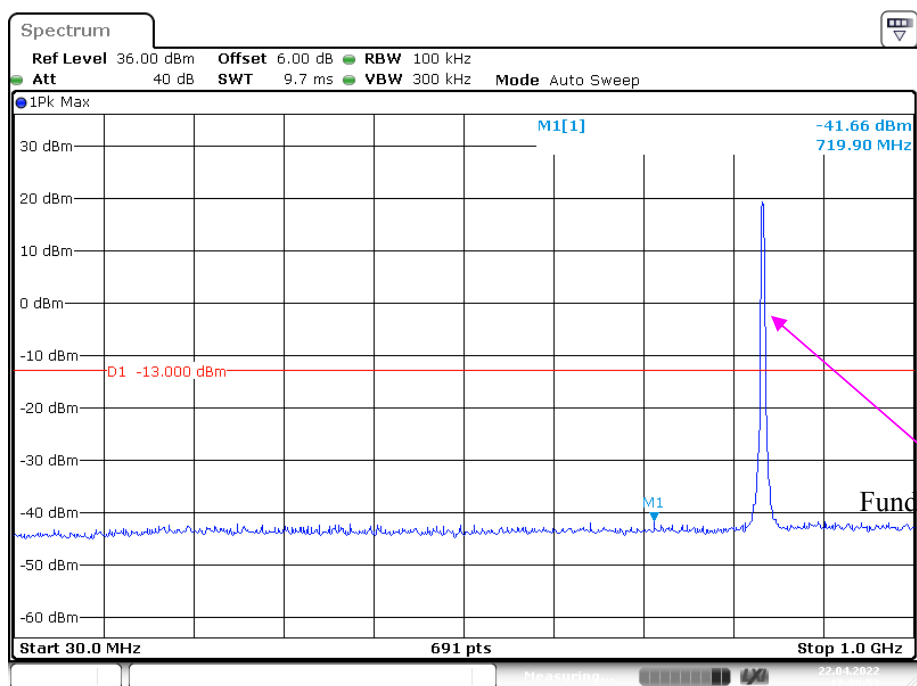
## Rel 99: Low channel

## 30 MHz– 1 GHz (WCDMA Mode)

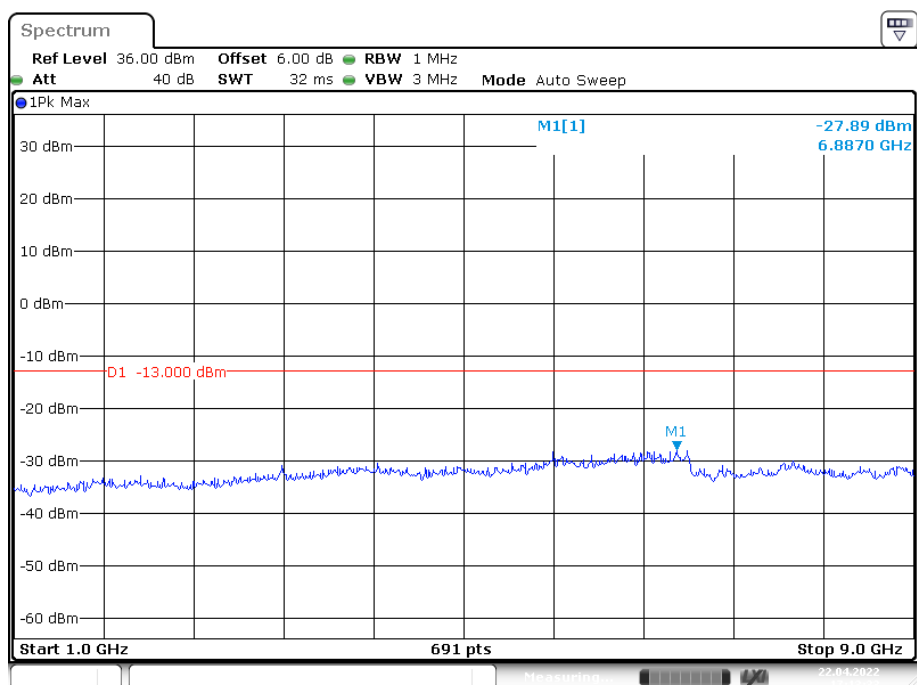


## 1 GHz – 9 GHz (WCDMA Mode)

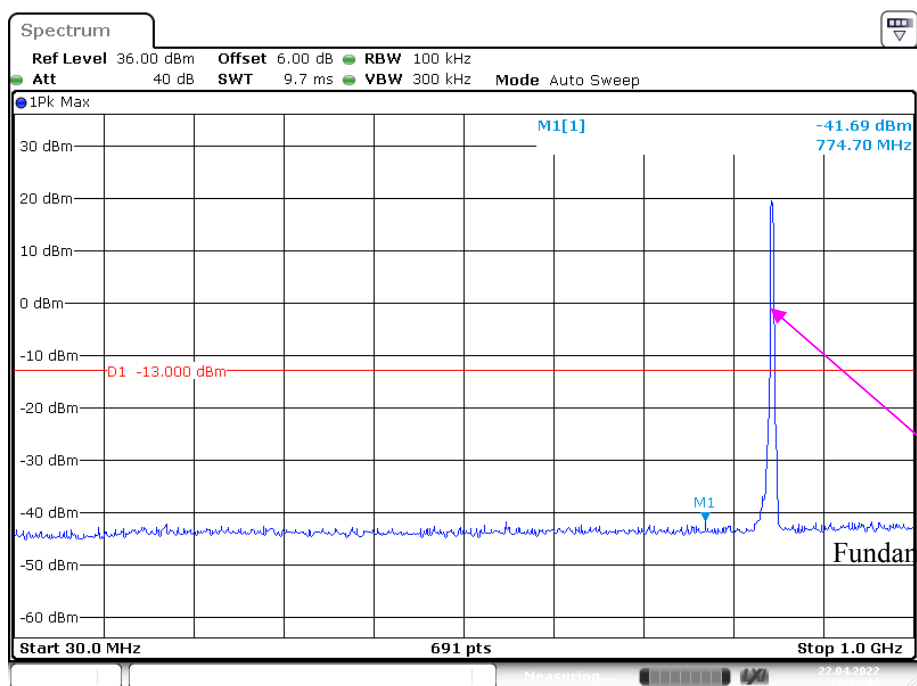


**Middle channel:****30 MHz – 1 GHz (WCDMA Mode)**

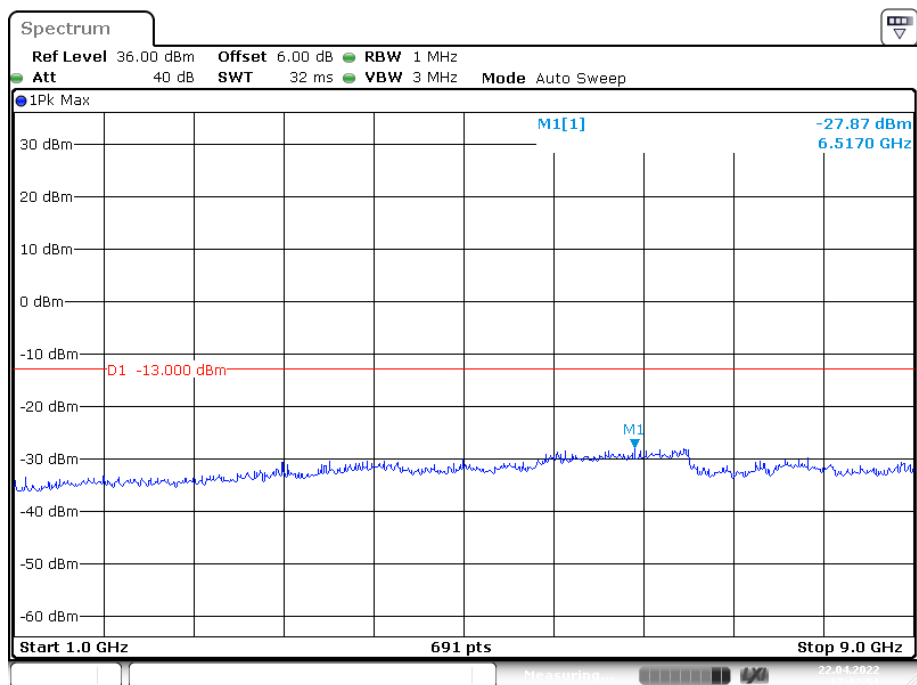
Date: 22 APR 2022 17:00:54

**1GHz – 9 GHz (WCDMA Mode)**

Date: 22 APR 2022 17:13:32

**High channel:****30 MHz – 1 GHz (WCDMA Mode)**

Date: 22 APR. 2022 17:12:03

**1GHz –9 GHz (WCDMA Mode)**

Date: 22 APR. 2022 17:12:51

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

**FCC § 2.1053; § 22.917 (a); § 24.238 (a); § 27.53; § 90.691 - SPURIOUS RADIATED EMISSIONS****Applicable Standard**

FCC § 2.1053, § 22.917(a) & § 24.238(a) & § 27.53 & § 90.691.

**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>       | 23.5~25.5℃      |
| <b>Relative Humidity:</b> | 48~61%          |
| <b>ATM Pressure:</b>      | 100.8~101.2 kPa |

*The testing was performed by Level Li from 2022-04-16 to 2022-04-26.*

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



The worst case is 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) |                               |                            |                |                |
| GSM850                           |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-9GHz |                              |                     |               |                |                               |                            |                |                |
| GPRS Mode Low channel            |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.24                       | 271                 | 2.3           | H              | 6.78                          | -63.46                     | -13            | -50.46         |
| 236.49                           | -63.50                       | 26                  | 2.4           | V              | -1.39                         | -64.89                     | -13            | -51.89         |
| 1648.40                          | -48.75                       | 115                 | 1.3           | H              | 3.52                          | -45.23                     | -13            | -32.23         |
| 1648.40                          | -46.49                       | 340                 | 1.1           | V              | 3.10                          | -43.39                     | -13            | -30.39         |
| GPRS Mode Middle channel         |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.19                       | 309                 | 1.3           | H              | 6.78                          | -63.41                     | -13            | -50.41         |
| 236.49                           | -63.45                       | 262                 | 1.3           | V              | -1.39                         | -64.84                     | -13            | -51.84         |
| 1673.20                          | -48.69                       | 118                 | 1.9           | H              | 3.78                          | -44.91                     | -13            | -31.91         |
| 1673.20                          | -46.36                       | 44                  | 2             | V              | 3.1                           | -43.26                     | -13            | -30.26         |
| GPRS Mode High channel           |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.34                       | 78                  | 1.1           | H              | 6.78                          | -63.56                     | -13            | -50.56         |
| 236.49                           | -63.54                       | 74                  | 1.8           | V              | -1.39                         | -64.93                     | -13            | -51.93         |
| 1697.6                           | -48.74                       | 129                 | 1.6           | H              | 4.07                          | -44.67                     | -13            | -31.67         |
| 1697.6                           | -46.22                       | 265                 | 2.2           | V              | 3.10                          | -43.12                     | -13            | -30.12         |

| 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) |                               |                            |                |                |
| PCS1900                           |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-20GHz |                              |                     |               |                |                               |                            |                |                |
| GPRS Mode Low channel             |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.37                       | 360                 | 1.3           | H              | 6.78                          | -63.59                     | -13            | -50.59         |
| 236.49                            | -63.59                       | 75                  | 1.9           | V              | -1.39                         | -64.98                     | -13            | -51.98         |
| 3700.40                           | -45.97                       | 208                 | 1.6           | H              | 8.11                          | -37.86                     | -13            | -24.86         |
| 3700.40                           | -46.24                       | 278                 | 1.3           | V              | 7.60                          | -38.64                     | -13            | -25.64         |
| GPRS Mode Middle channel          |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.52                       | 87                  | 2.3           | H              | 6.78                          | -63.74                     | -13            | -50.74         |
| 236.49                            | -63.82                       | 264                 | 1.2           | V              | -1.39                         | -65.21                     | -13            | -52.21         |
| 3760.00                           | -46.31                       | 157                 | 1.1           | H              | 8.84                          | -37.47                     | -13            | -24.47         |
| 3760.00                           | -46.52                       | 178                 | 1.7           | V              | 7.96                          | -38.56                     | -13            | -25.56         |
| GPRS Mode High channel            |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.15                       | 344                 | 1.9           | H              | 6.78                          | -63.37                     | -13            | -50.37         |
| 236.49                            | -63.30                       | 203                 | 2.1           | V              | -1.39                         | -64.69                     | -13            | -51.69         |
| 3819.60                           | -46.17                       | 261                 | 2.1           | H              | 8.68                          | -37.49                     | -13            | -24.49         |
| 3819.60                           | -46.57                       | 209                 | 1.9           | V              | 7.96                          | -38.61                     | -13            | -25.61         |

| 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) |                               |                            |                |                |
| WCDMA Band V                     |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-9GHz |                              |                     |               |                |                               |                            |                |                |
| Low channel                      |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.37                       | 216                 | 2.1           | H              | 6.78                          | -63.59                     | -13            | -50.59         |
| 236.49                           | -63.69                       | 4                   | 1.5           | V              | -1.39                         | -65.08                     | -13            | -52.08         |
| 3305.60                          | -47.77                       | 33                  | 1.7           | H              | 6.42                          | -41.35                     | -13            | -28.35         |
| 3305.60                          | -46.78                       | 103                 | 2.2           | V              | 5.67                          | -41.11                     | -13            | -28.11         |
| Middle channel                   |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.29                       | 123                 | 2.0           | H              | 6.78                          | -63.51                     | -13            | -50.51         |
| 236.49                           | -63.62                       | 201                 | 1.8           | V              | -1.39                         | -65.01                     | -13            | -52.01         |
| 3346.40                          | -48.48                       | 49                  | 1.2           | H              | 6.59                          | -41.89                     | -13            | -28.89         |
| 3346.40                          | -46.92                       | 84                  | 2.4           | V              | 5.42                          | -41.50                     | -13            | -28.50         |
| High channel                     |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.45                       | 272                 | 1.3           | H              | 6.78                          | -63.67                     | -13            | -50.67         |
| 236.49                           | -63.72                       | 179                 | 1.4           | V              | -1.39                         | -65.11                     | -13            | -52.11         |
| 3386.40                          | -47.65                       | 143                 | 1.1           | H              | 6.31                          | -41.34                     | -13            | -28.34         |
| 3386.40                          | -46.58                       | 211                 | 2.2           | V              | 5.40                          | -41.18                     | -13            | -28.18         |

| 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) |                               |                            |                |                |
| WCDMA Band II                     |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-20GHz |                              |                     |               |                |                               |                            |                |                |
| Low channel                       |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.34                       | 343                 | 1.7           | H              | 6.78                          | -63.56                     | -13            | -50.56         |
| 236.49                            | -63.6                        | 357                 | 2.0           | V              | -1.39                         | -64.99                     | -13            | -51.99         |
| 3704.80                           | -59.07                       | 155                 | 2.2           | H              | 8.18                          | -50.89                     | -13            | -37.89         |
| 3704.80                           | -58.47                       | 208                 | 1.9           | V              | 7.64                          | -50.83                     | -13            | -37.83         |
| Middle channel                    |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.61                       | 221                 | 2.0           | H              | 6.78                          | -63.83                     | -13            | -50.83         |
| 236.49                            | -63.95                       | 272                 | 2.4           | V              | -1.39                         | -65.34                     | -13            | -52.34         |
| 3760.00                           | -59.35                       | 116                 | 1.2           | H              | 8.84                          | -50.51                     | -13            | -37.51         |
| 3760.00                           | -58.42                       | 147                 | 1.0           | V              | 7.96                          | -50.46                     | -13            | -37.46         |
| High channel                      |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.45                       | 160                 | 2.4           | H              | 6.78                          | -63.67                     | -13            | -50.67         |
| 236.49                            | -63.77                       | 347                 | 1.1           | V              | -1.39                         | -65.16                     | -13            | -52.16         |
| 3815.20                           | -58.79                       | 320                 | 2.1           | H              | 8.66                          | -50.13                     | -13            | -37.13         |
| 3815.20                           | -57.93                       | 252                 | 1.2           | V              | 7.92                          | -50.01                     | -13            | -37.01         |

| 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) |                               |                            |                |                |
| WCDMA Band IV                     |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-18GHz |                              |                     |               |                |                               |                            |                |                |
| Low channel                       |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.24                       | 102                 | 1.9           | H              | 6.78                          | -63.46                     | -13            | -50.46         |
| 236.49                            | -63.59                       | 11                  | 1.7           | V              | -1.39                         | -64.98                     | -13            | -51.98         |
| 3424.8                            | -56.08                       | 94                  | 2.4           | H              | 6.4                           | -49.68                     | -13            | -36.68         |
| 3424.8                            | -55.39                       | 156                 | 1.5           | V              | 5.75                          | -49.64                     | -13            | -36.64         |
| Middle channel                    |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.59                       | 150                 | 2.2           | H              | 6.78                          | -63.81                     | -13            | -50.81         |
| 236.49                            | -64                          | 265                 | 1.5           | V              | -1.39                         | -65.39                     | -13            | -52.39         |
| 3465.2                            | -56.34                       | 193                 | 2.2           | H              | 6.96                          | -49.38                     | -13            | -36.38         |
| 3465.2                            | -55.53                       | 309                 | 2.5           | V              | 6.22                          | -49.31                     | -13            | -36.31         |
| High channel                      |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.45                       | 92                  | 2.3           | H              | 6.78                          | -63.67                     | -13            | -50.67         |
| 236.49                            | -63.72                       | 10                  | 2.5           | V              | -1.39                         | -65.11                     | -13            | -52.11         |
| 3505.2                            | -56.8                        | 152                 | 1.8           | H              | 7.79                          | -49.01                     | -13            | -36.01         |
| 3505.2                            | -55.58                       | 58                  | 1.7           | V              | 6.54                          | -49.04                     | -13            | -36.04         |

**LTE Bands:** (pre-scan all bandwidths of QPSK and 16QAM, the 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) |                               |                            |                |                |
| LTE Band 2                        |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-20GHz |                              |                     |               |                |                               |                            |                |                |
| QPSK 1.4MHz, Low channel          |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.34                       | 217                 | 2.3           | H              | 6.78                          | -63.56                     | -13            | -50.56         |
| 236.49                            | -63.74                       | 187                 | 1.3           | V              | -1.39                         | -65.13                     | -13            | -52.13         |
| 3701.40                           | -57.81                       | 104                 | 2.1           | H              | 8.12                          | -49.69                     | -13            | -36.69         |
| 3701.40                           | -57.33                       | 170                 | 2.2           | V              | 7.61                          | -49.72                     | -13            | -36.72         |
| QPSK 1.4MHz, Middle channel       |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.66                       | 356                 | 1.6           | H              | 6.78                          | -63.88                     | -13            | -50.88         |
| 236.49                            | -64.07                       | 100                 | 2.1           | V              | -1.39                         | -65.46                     | -13            | -52.46         |
| 3760.00                           | -58.22                       | 204                 | 2.5           | H              | 8.84                          | -49.38                     | -13            | -36.38         |
| 3760.00                           | -57.3                        | 329                 | 1.8           | V              | 7.96                          | -49.34                     | -13            | -36.34         |
| QPSK 1.4MHz, High channel         |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.31                       | 187                 | 1.3           | H              | 6.78                          | -63.53                     | -13            | -50.53         |
| 236.49                            | -63.60                       | 223                 | 1.6           | V              | -1.39                         | -64.99                     | -13            | -51.99         |
| 3818.60                           | -57.78                       | 267                 | 2.0           | H              | 8.67                          | -49.11                     | -13            | -36.11         |
| 3818.60                           | -57.01                       | 150                 | 1.6           | V              | 7.95                          | -49.06                     | -13            | -36.06         |

| 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) |                               |                            |                |                |
| LTE Band 4                        |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-18GHz |                              |                     |               |                |                               |                            |                |                |
| QPSK 1.4MHz, Low channel          |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.45                       | 44                  | 2.1           | H              | 6.78                          | -63.67                     | -13            | -50.67         |
| 236.49                            | -63.95                       | 350                 | 2.1           | V              | -1.39                         | -65.34                     | -13            | -52.34         |
| 3421.40                           | -52.74                       | 180                 | 1.6           | H              | 6.37                          | -46.37                     | -13            | -33.37         |
| 3421.40                           | -52.26                       | 287                 | 2.5           | V              | 5.70                          | -46.56                     | -13            | -33.56         |
| QPSK 1.4MHz, Middle channel       |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.42                       | 93                  | 1.1           | H              | 6.78                          | -63.64                     | -13            | -50.64         |
| 236.49                            | -63.72                       | 106                 | 2.0           | V              | -1.39                         | -65.11                     | -13            | -52.11         |
| 3465.00                           | -53.08                       | 181                 | 2.1           | H              | 6.96                          | -46.12                     | -13            | -33.12         |
| 3465.00                           | -52.43                       | 66                  | 1.8           | V              | 6.22                          | -46.21                     | -13            | -33.21         |
| QPSK 1.4MHz, High channel         |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.31                       | 323                 | 1             | H              | 6.78                          | -63.53                     | -13            | -50.53         |
| 236.49                            | -63.65                       | 192                 | 1.5           | V              | -1.39                         | -65.04                     | -13            | -52.04         |
| 3508.60                           | -53.61                       | 82                  | 2.2           | H              | 7.78                          | -45.83                     | -13            | -32.83         |
| 3508.60                           | -52.45                       | 115                 | 2             | V              | 6.57                          | -45.88                     | -13            | -32.88         |

| 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) |                               |                            |                |                |
| LTE Band 5                       |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-9GHz |                              |                     |               |                |                               |                            |                |                |
| QPSK 1.4MHz, Low channel         |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.42                       | 29                  | 2.2           | H              | 6.78                          | -63.64                     | -13            | -50.64         |
| 236.49                           | -63.82                       | 83                  | 1.5           | V              | -1.39                         | -65.21                     | -13            | -52.21         |
| 3298.80                          | -46.09                       | 170                 | 2.2           | H              | 6.41                          | -39.68                     | -13            | -26.68         |
| 3298.80                          | -46.27                       | 80                  | 1.2           | V              | 5.71                          | -40.56                     | -13            | -27.56         |
| QPSK 1.4MHz, Middle channel      |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.42                       | 329                 | 2.5           | H              | 6.78                          | -63.64                     | -13            | -50.64         |
| 236.49                           | -63.84                       | 122                 | 1.0           | V              | -1.39                         | -65.23                     | -13            | -52.23         |
| 3346.00                          | -46.10                       | 94                  | 2.4           | H              | 6.58                          | -39.52                     | -13            | -26.52         |
| 3346.00                          | -45.78                       | 174                 | 1.0           | V              | 5.42                          | -40.36                     | -13            | -27.36         |
| QPSK 1.4MHz, High channel        |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.33                       | 27                  | 1.7           | H              | 6.78                          | -63.55                     | -13            | -50.55         |
| 236.49                           | -63.67                       | 44                  | 1.2           | V              | -1.39                         | -65.06                     | -13            | -52.06         |
| 3393.20                          | -45.69                       | 311                 | 2.0           | H              | 6.25                          | -39.44                     | -13            | -26.44         |
| 3393.20                          | -45.66                       | 81                  | 1.8           | V              | 5.40                          | -40.26                     | -13            | -27.26         |

| 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) |                               |                            |                |                |
| LTE Band 7                        |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-26GHz |                              |                     |               |                |                               |                            |                |                |
| QPSK 5MHz, Low channel            |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.45                       | 298                 | 1.3           | H              | 6.78                          | -63.67                     | -25            | -38.67         |
| 236.49                            | -63.95                       | 127                 | 1.3           | V              | -1.39                         | -65.34                     | -25            | -40.34         |
| 5005.00                           | -56.48                       | 34                  | 2.4           | H              | 10.83                         | -45.65                     | -25            | -20.65         |
| 5005.00                           | -55.71                       | 282                 | 2.1           | V              | 10.16                         | -45.55                     | -25            | -20.55         |
| QPSK 5MHz, Middle channel         |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.45                       | 38                  | 2.5           | H              | 6.78                          | -63.67                     | -25            | -38.67         |
| 236.49                            | -63.95                       | 162                 | 1.9           | V              | -1.39                         | -65.34                     | -25            | -40.34         |
| 5070.00                           | -56.70                       | 133                 | 1.3           | H              | 11.14                         | -45.56                     | -25            | -20.56         |
| 5070.00                           | -56.19                       | 241                 | 1.4           | V              | 10.78                         | -45.41                     | -25            | -20.41         |
| QPSK 5MHz, High channel           |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.47                       | 348                 | 1.2           | H              | 6.78                          | -63.69                     | -25            | -38.69         |
| 236.49                            | -63.94                       | 158                 | 1.8           | V              | -1.39                         | -65.33                     | -25            | -40.33         |
| 5135.00                           | -56.75                       | 201                 | 1.2           | H              | 11.34                         | -45.41                     | -25            | -20.41         |
| 5135.00                           | -56.11                       | 41                  | 1.9           | V              | 10.76                         | -45.35                     | -25            | -20.35         |

| 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) |                               |                            |                |                |
| LTE Band12                       |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-8GHz |                              |                     |               |                |                               |                            |                |                |
| QPSK 1.4MHz, Low channel         |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.62                       | 33                  | 2.3           | H              | 6.78                          | -63.84                     | -13            | -50.84         |
| 236.49                           | -64.07                       | 198                 | 1.2           | V              | -1.39                         | -65.46                     | -13            | -52.46         |
| 1399.40                          | -54.16                       | 342                 | 1.4           | H              | 5.91                          | -48.25                     | -13            | -35.25         |
| 1399.40                          | -55.14                       | 242                 | 2.4           | V              | 5.90                          | -49.24                     | -13            | -36.24         |
| QPSK 1.4MHz, Middle channel      |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.15                       | 40                  | 1.8           | H              | 6.78                          | -63.37                     | -13            | -50.37         |
| 236.49                           | -63.47                       | 196                 | 1.5           | V              | -1.39                         | -64.86                     | -13            | -51.86         |
| 1415.00                          | -53.77                       | 224                 | 1.9           | H              | 5.66                          | -48.11                     | -13            | -35.11         |
| 1415.00                          | -54.41                       | 257                 | 2.4           | V              | 5.36                          | -49.05                     | -13            | -36.05         |
| QPSK 1.4MHz, High channel        |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.42                       | 17                  | 1.7           | H              | 6.78                          | -63.64                     | -13            | -50.64         |
| 236.49                           | -63.74                       | 74                  | 1.2           | V              | -1.39                         | -65.13                     | -13            | -52.13         |
| 1430.60                          | -53.49                       | 315                 | 1.2           | H              | 5.41                          | -48.08                     | -13            | -35.08         |
| 1430.60                          | -53.81                       | 340                 | 1.1           | V              | 4.80                          | -49.01                     | -13            | -36.01         |

| 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) |                               |                            |                |                |
| LTE Band17                       |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-8GHz |                              |                     |               |                |                               |                            |                |                |
| QPSK 5MHz, Low channel           |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.45                       | 60                  | 1.1           | H              | 6.78                          | -63.67                     | -13            | -50.67         |
| 236.49                           | -63.90                       | 10                  | 1.2           | V              | -1.39                         | -65.29                     | -13            | -52.29         |
| 1413.00                          | -54.33                       | 114                 | 2.3           | H              | 5.69                          | -48.64                     | -13            | -35.64         |
| 1413.00                          | -54.04                       | 189                 | 2.3           | V              | 5.43                          | -48.61                     | -13            | -35.61         |
| QPSK 5MHz, Middle channel        |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.39                       | 175                 | 2             | H              | 6.78                          | -63.61                     | -13            | -50.61         |
| 236.49                           | -63.67                       | 219                 | 1.2           | V              | -1.39                         | -65.06                     | -13            | -52.06         |
| 1420.00                          | -54.16                       | 301                 | 1.1           | H              | 5.58                          | -48.58                     | -13            | -35.58         |
| 1420.00                          | -53.67                       | 128                 | 1.2           | V              | 5.18                          | -48.49                     | -13            | -35.49         |
| QPSK 5MHz, High channel          |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.33                       | 238                 | 2.2           | H              | 6.78                          | -63.55                     | -13            | -50.55         |
| 236.49                           | -63.77                       | 117                 | 1.9           | V              | -1.39                         | -65.16                     | -13            | -52.16         |
| 1427.00                          | -53.93                       | 258                 | 1.4           | H              | 5.47                          | -48.46                     | -13            | -35.46         |
| 1427.00                          | -53.27                       | 194                 | 1.3           | V              | 4.93                          | -48.34                     | -13            | -35.34         |

| 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) |                               |                            |                |                |
| LTE Band 25                       |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-20GHz |                              |                     |               |                |                               |                            |                |                |
| QPSK 1.4MHz, Low channel          |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.46                       | 283                 | 1.5           | H              | 6.78                          | -63.68                     | -13            | -50.68         |
| 236.49                            | -63.88                       | 226                 | 2.0           | V              | -1.39                         | -65.27                     | -13            | -52.27         |
| 3701.40                           | -56.48                       | 255                 | 2.5           | H              | 8.12                          | -48.36                     | -13            | -35.36         |
| 3701.40                           | -55.92                       | 27                  | 1.8           | V              | 7.61                          | -48.31                     | -13            | -35.31         |
| QPSK 1.4MHz, Middle channel       |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.47                       | 2                   | 1.8           | H              | 6.78                          | -63.69                     | -13            | -50.69         |
| 236.49                            | -63.83                       | 310                 | 2             | V              | -1.39                         | -65.22                     | -13            | -52.22         |
| 3765.00                           | -57.02                       | 115                 | 1.2           | H              | 8.81                          | -48.21                     | -13            | -35.21         |
| 3765.00                           | -56.1                        | 177                 | 1.1           | V              | 7.94                          | -48.16                     | -13            | -35.16         |
| QPSK 1.4MHz, High channel         |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.45                       | 140                 | 2.2           | H              | 6.78                          | -63.67                     | -13            | -50.67         |
| 236.49                            | -63.77                       | 211                 | 1.9           | V              | -1.39                         | -65.16                     | -13            | -52.16         |
| 3828.60                           | -56.72                       | 111                 | 2.4           | H              | 8.71                          | -48.01                     | -13            | -35.01         |
| 3828.60                           | -56.08                       | 171                 | 1.3           | V              | 8.03                          | -48.05                     | -13            | -35.05         |

| 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) |                               |                            |                |                |
| LTE Band 26                      |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-9GHz |                              |                     |               |                |                               |                            |                |                |
| QPSK 1.4MHz, Low channel         |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.32                       | 173                 | 1.7           | H              | 6.78                          | -63.54                     | -13            | -50.54         |
| 236.49                           | -63.66                       | 40                  | 2             | V              | -1.39                         | -65.05                     | -13            | -52.05         |
| 1629.40                          | -52.06                       | 211                 | 1.1           | H              | 3.75                          | -48.31                     | -13            | -35.31         |
| 1629.40                          | -51.43                       | 143                 | 1.4           | V              | 3.14                          | -48.29                     | -13            | -35.29         |
| QPSK 1.4MHz, Middle channel      |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.39                       | 142                 | 1.9           | H              | 6.78                          | -63.61                     | -13            | -50.61         |
| 236.49                           | -63.75                       | 172                 | 2.5           | V              | -1.39                         | -65.14                     | -13            | -52.14         |
| 1663.00                          | -48.78                       | 97                  | 1.8           | H              | 3.66                          | -45.12                     | -13            | -32.12         |
| 1663.00                          | -48.16                       | 330                 | 2             | V              | 3.10                          | -45.06                     | -13            | -32.06         |
| QPSK 1.4MHz, High channel        |                              |                     |               |                |                               |                            |                |                |
| 236.49                           | -70.16                       | 336                 | 1.6           | H              | 6.78                          | -63.38                     | -13            | -50.38         |
| 236.49                           | -63.55                       | 321                 | 1.8           | V              | -1.39                         | -64.94                     | -13            | -51.94         |
| 1696.60                          | -49.04                       | 270                 | 1.9           | H              | 4.06                          | -44.98                     | -13            | -31.98         |
| 1696.60                          | -48.07                       | 321                 | 1.4           | V              | 3.10                          | -44.97                     | -13            | -31.97         |

| 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) |                               |                            |                |                |
| LTE Band 41                       |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-27GHz |                              |                     |               |                |                               |                            |                |                |
| QPSK 5MHz, Low channel            |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.36                       | 150                 | 2.1           | H              | 6.78                          | -63.58                     | -25            | -38.58         |
| 236.49                            | -63.55                       | 235                 | 1.6           | V              | -1.39                         | -64.94                     | -25            | -39.94         |
| 4997.00                           | -55.81                       | 59                  | 1.1           | H              | 10.75                         | -45.06                     | -25            | -20.06         |
| 4997.00                           | -55.15                       | 187                 | 1.7           | V              | 10.04                         | -45.11                     | -25            | -20.11         |
| QPSK 5MHz, Middle channel         |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.45                       | 78                  | 2.4           | H              | 6.78                          | -63.67                     | -25            | -38.67         |
| 236.49                            | -63.88                       | 243                 | 2.4           | V              | -1.39                         | -65.27                     | -25            | -40.27         |
| 5186.00                           | -55.52                       | 71                  | 1.5           | H              | 10.61                         | -44.91                     | -25            | -19.91         |
| 5186.00                           | -54.98                       | 77                  | 2.5           | V              | 10.05                         | -44.93                     | -25            | -19.93         |
| QPSK 5MHz, High channel           |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.42                       | 179                 | 2.0           | H              | 6.78                          | -63.64                     | -25            | -38.64         |
| 236.49                            | -63.72                       | 264                 | 1.8           | V              | -1.39                         | -65.11                     | -25            | -40.11         |
| 5375.00                           | -54.17                       | 211                 | 1.8           | H              | 9.50                          | -44.67                     | -25            | -19.67         |
| 5375.00                           | -53.49                       | 25                  | 2.1           | V              | 8.85                          | -44.64                     | -25            | -19.64         |

| 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) |                               |                            |                |                |
| LTE Band 66                       |                              |                     |               |                |                               |                            |                |                |
| Test frequency range: 30MHz-18GHz |                              |                     |               |                |                               |                            |                |                |
| QPSK 1.4MHz, Low channel          |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.44                       | 329                 | 2.5           | H              | 6.78                          | -63.66                     | -13            | -50.66         |
| 236.49                            | -63.86                       | 59                  | 1.2           | V              | -1.39                         | -65.25                     | -13            | -52.25         |
| 3421.40                           | -47.69                       | 104                 | 1.8           | H              | 6.37                          | -41.32                     | -13            | -28.32         |
| 3421.40                           | -48.31                       | 112                 | 2.2           | V              | 5.7                           | -42.61                     | -13            | -29.61         |
| QPSK 1.4MHz, Middle channel       |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.36                       | 54                  | 1.9           | H              | 6.78                          | -63.58                     | -13            | -50.58         |
| 236.49                            | -63.67                       | 182                 | 1.3           | V              | -1.39                         | -65.06                     | -13            | -52.06         |
| 3490.00                           | -48.68                       | 286                 | 1.8           | H              | 7.56                          | -41.12                     | -13            | -28.12         |
| 3490.00                           | -48.91                       | 169                 | 2.2           | V              | 6.42                          | -42.49                     | -13            | -29.49         |
| QPSK 1.4MHz, High channel         |                              |                     |               |                |                               |                            |                |                |
| 236.49                            | -70.28                       | 57                  | 2.4           | H              | 6.78                          | -63.5                      | -13            | -50.5          |
| 236.49                            | -63.58                       | 68                  | 1.4           | V              | -1.39                         | -64.97                     | -13            | -51.97         |
| 3558.60                           | -48.85                       | 350                 | 1.1           | H              | 7.79                          | -41.06                     | -13            | -28.06         |
| 3558.60                           | -49.34                       | 264                 | 1.1           | V              | 6.97                          | -42.37                     | -13            | -29.37         |

**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)(h)(m); §90.691 - 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), For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

- (1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB;
- (2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB;
- (3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than  $76 + 10 \log(P)$  dB in a 6.25 kHz band segment, for base and fixed stations;
- (4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than  $65 + 10 \log(P)$  dB in a 6.25 kHz band segment, for mobile and portable stations;

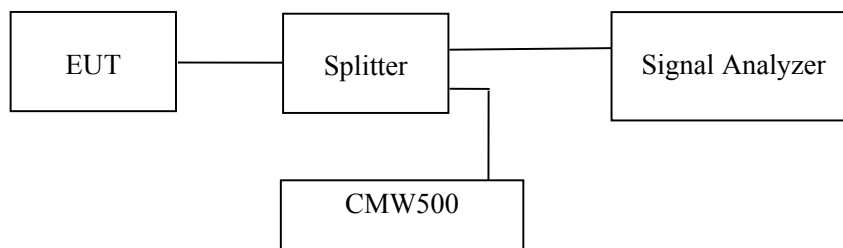
According to FCC §27.53 (h)(m), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

FCC §2.1051 and §90.691(a).The power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log(P)$  dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or less, but at least one percent of the emission bandwidth of the fundamental emission of the transmitter, provided the measured energy is integrated over a 1 MHz bandwidth.

**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 is 6 dB between EUT and Signal Analyzer

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

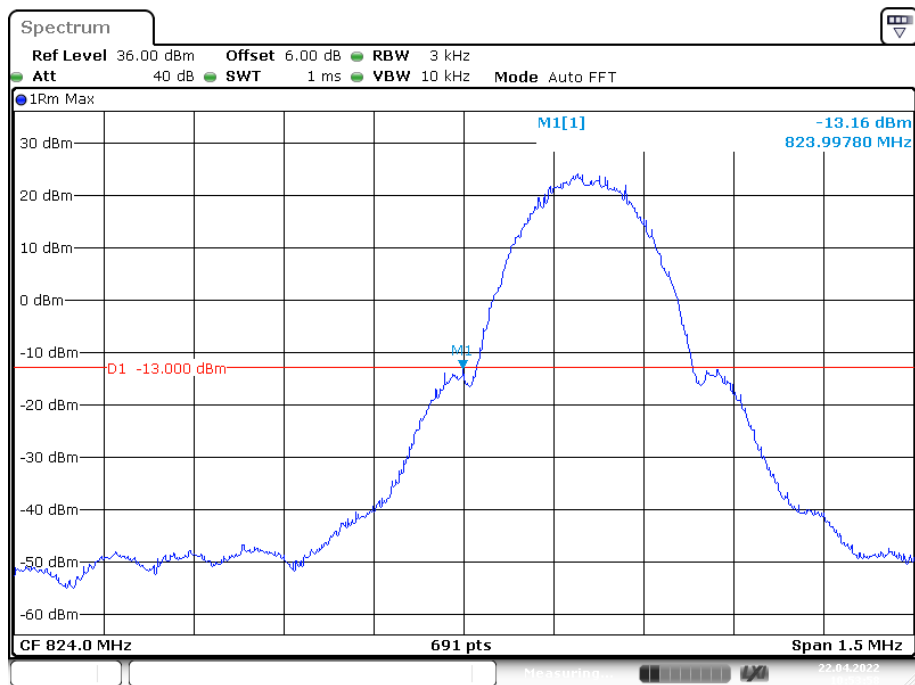
|                           |                 |
|---------------------------|-----------------|
| <b>Temperature:</b>       | 24~26.5 °C      |
| <b>Relative Humidity:</b> | 48~58 %         |
| <b>ATM Pressure:</b>      | 100.8~101.2 kPa |

*The testing was performed by Black Ding from 2022-04-22 to 2022-4-26.*

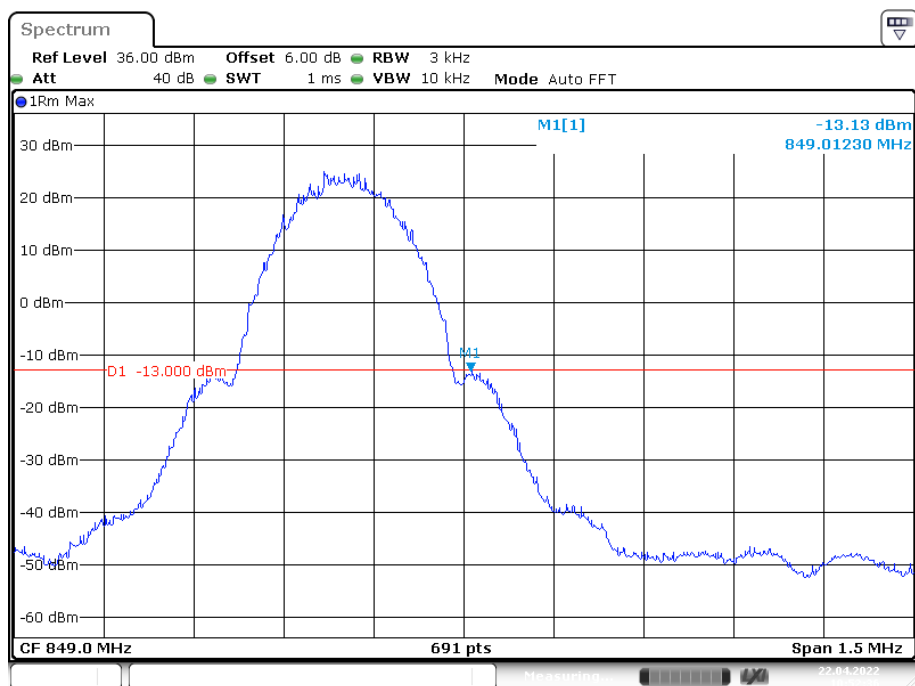
*EUT operation mode: Transmitting (Worst case)*

**Test Result: Pass**

*Please refer to the following plots.*

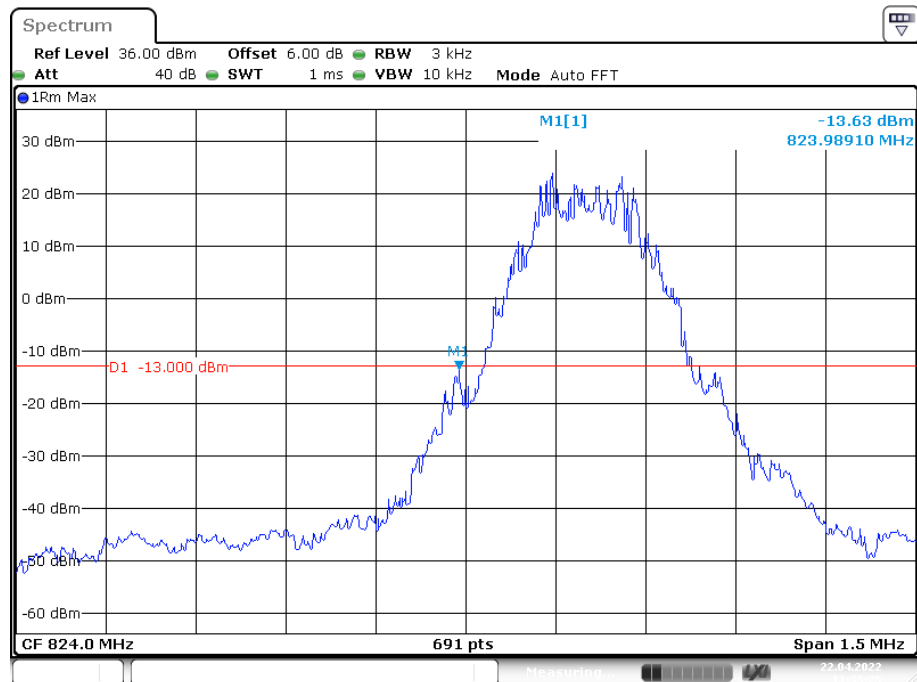
**GSM 850:****Left Band Edge for GPRS Mode**

Date: 22 APR 2022 10:53:58

**Right Band Edge for GPRS Mode**

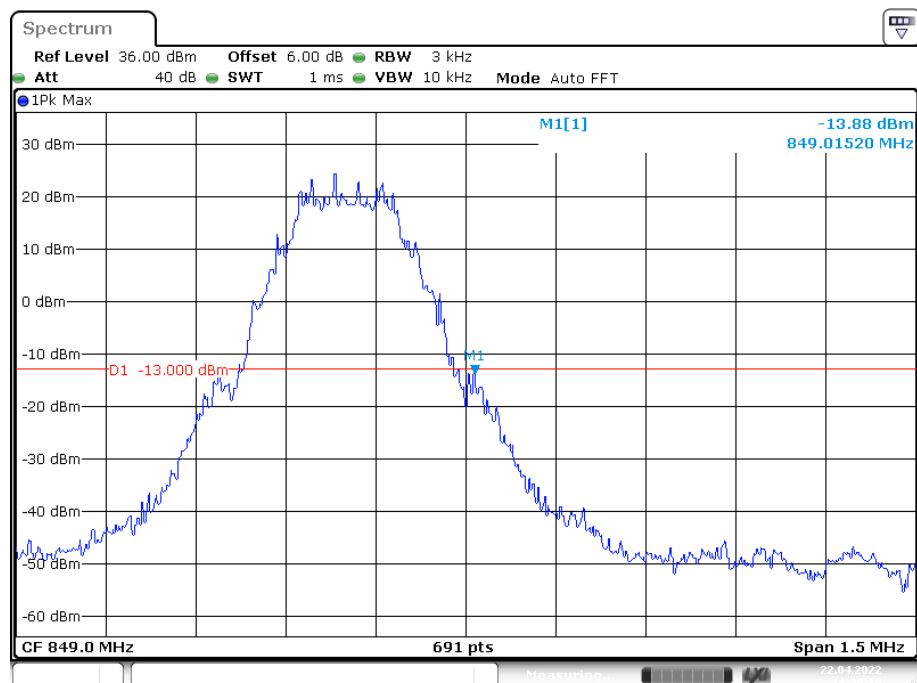
Date: 22 APR 2022 10:52:36

### Left Band Edge for EGPRS Mode



Date: 22 APR 2022 11:35:25

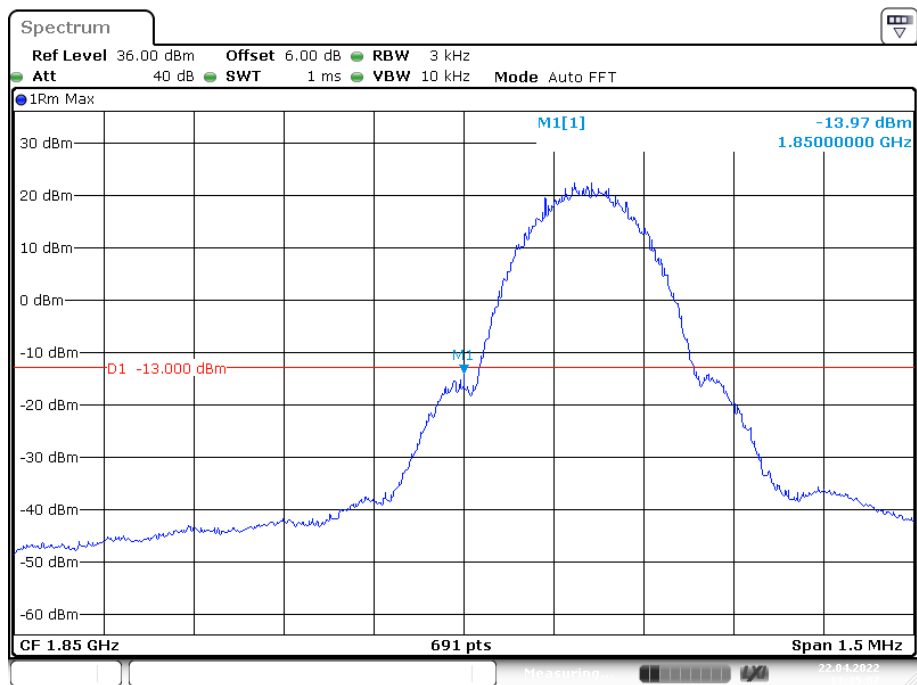
### Right Band Edge for GPRS Mode



Date: 22 APR 2022 11:29:20

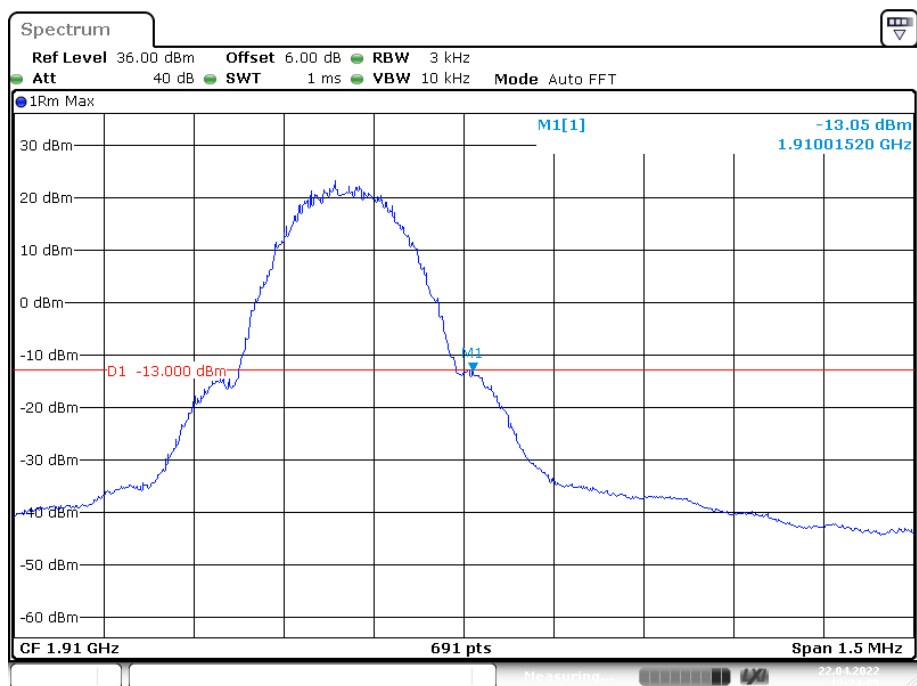
## PCS 1900:

## Left Band Edge for GPRS Mode



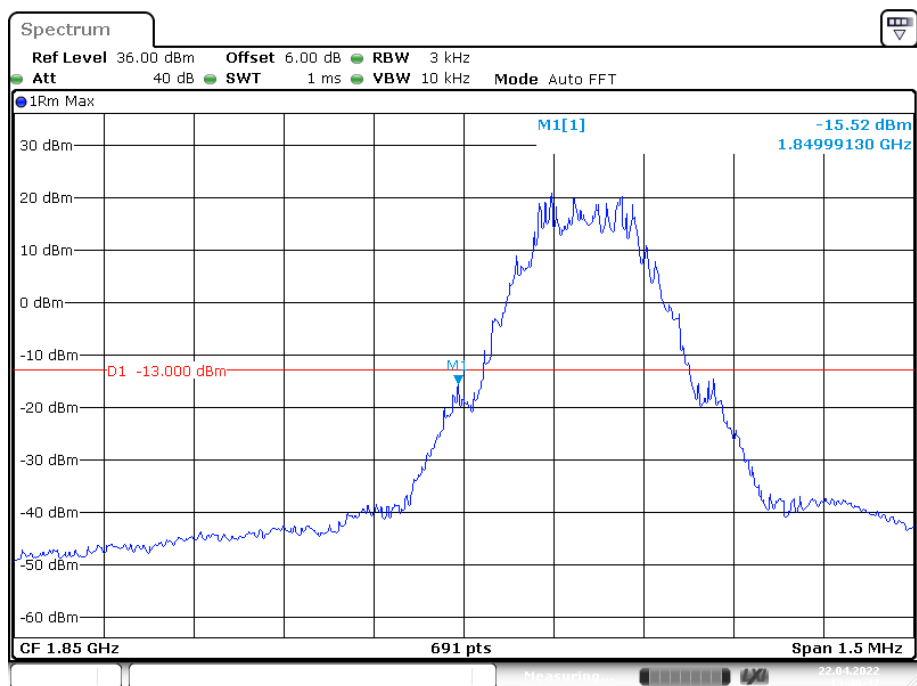
Date: 22 APR. 2022 13:25:08

## Right Band Edge for GPRS Mode



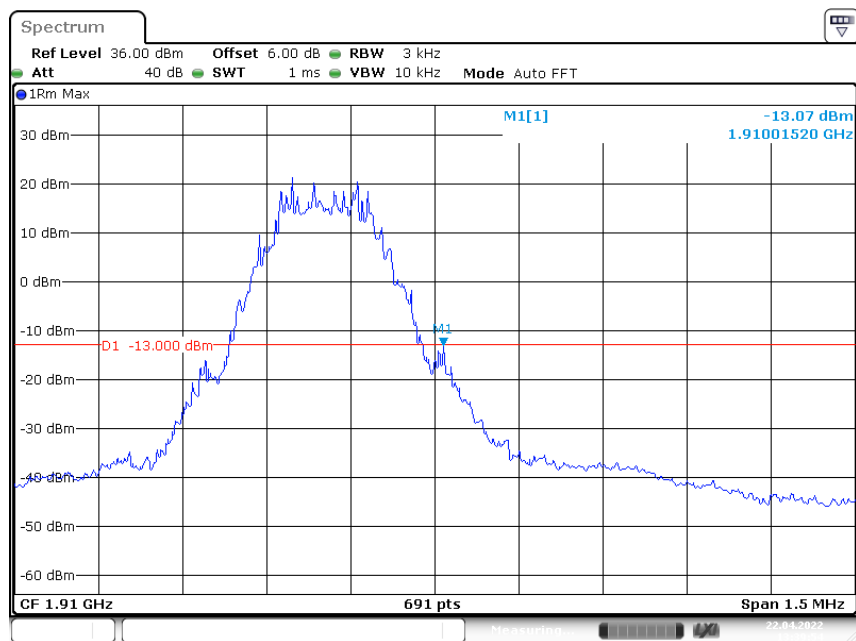
Date: 22 APR. 2022 13:24:06

## Left Band Edge for EGPRS Mode

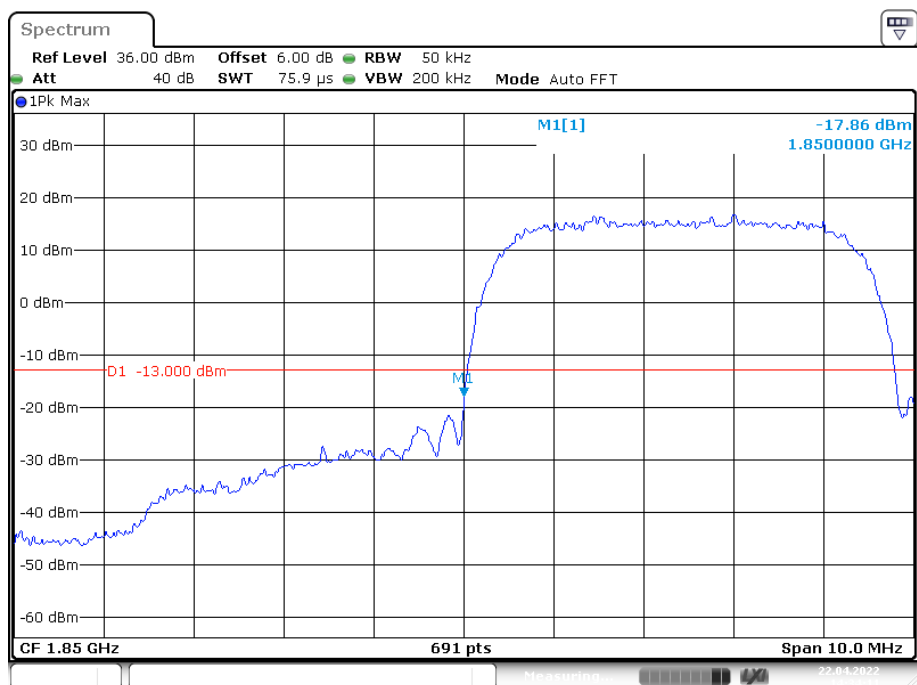


Date: 22 APR 2022 13:40:48

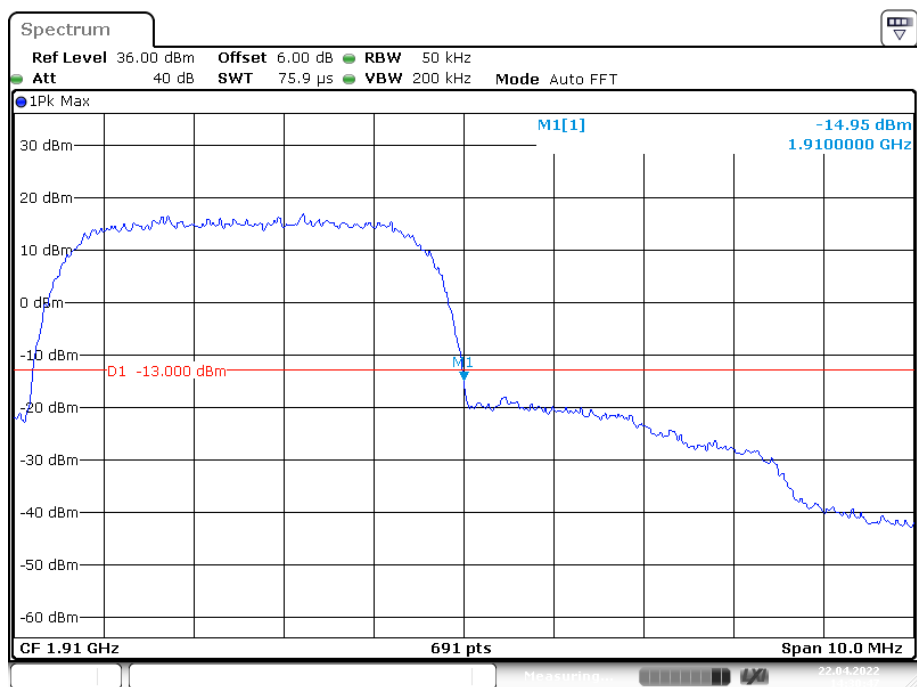
## Right Band Edge for EGPRS Mode



Date: 22 APR 2022 13:39:54

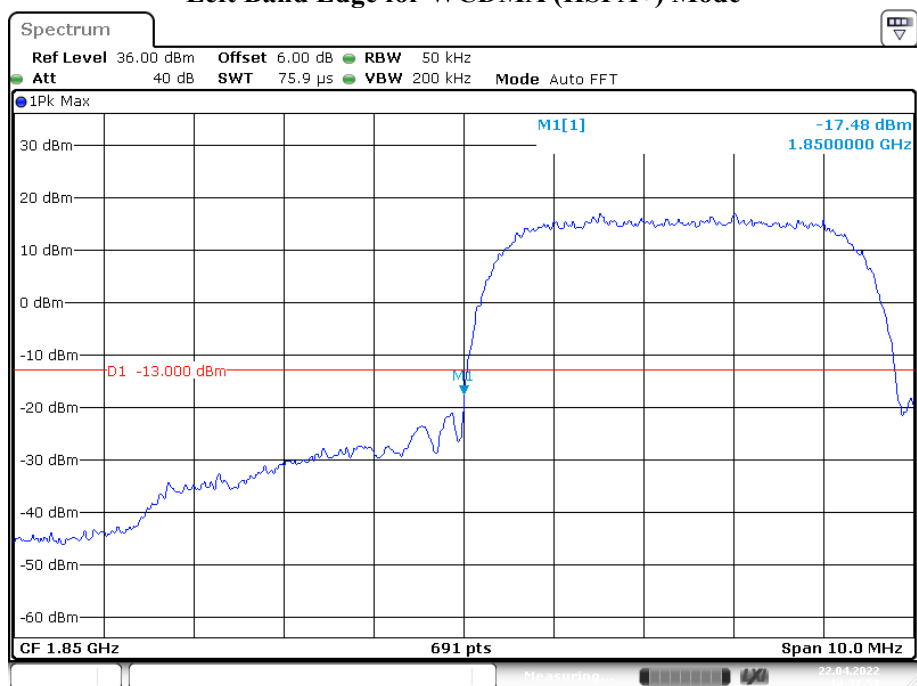
**WCDMA Band II:****Left Band Edge for WCDMA (HSDPA) Mode**

Date: 22 APR 2022 14:34:11

**Left Band Edge for WCDMA (HSDPA) Mode**

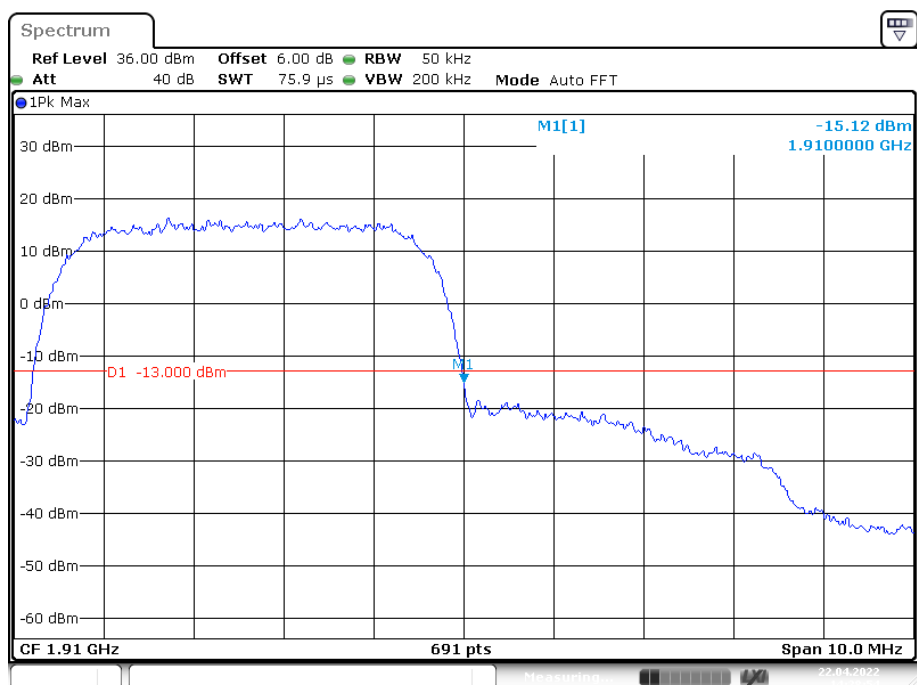
Date: 22 APR 2022 14:30:47

## Left Band Edge for WCDMA (HSPA+) Mode



Date: 22 APR 2022 14:37:50

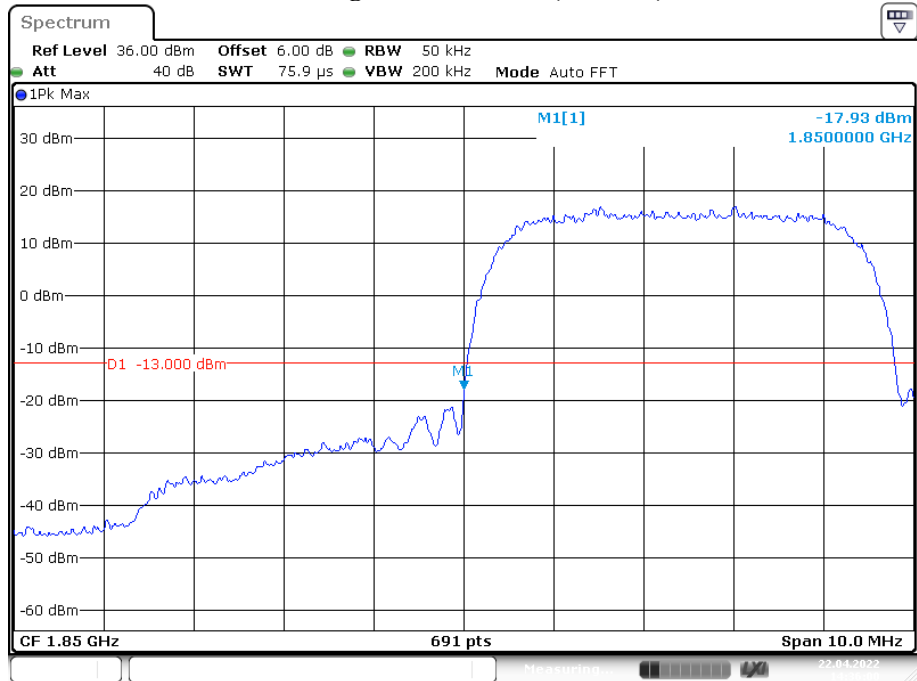
## Right Band Edge for WCDMA (HSPA+) Mode



Date: 22 APR 2022 14:28:54

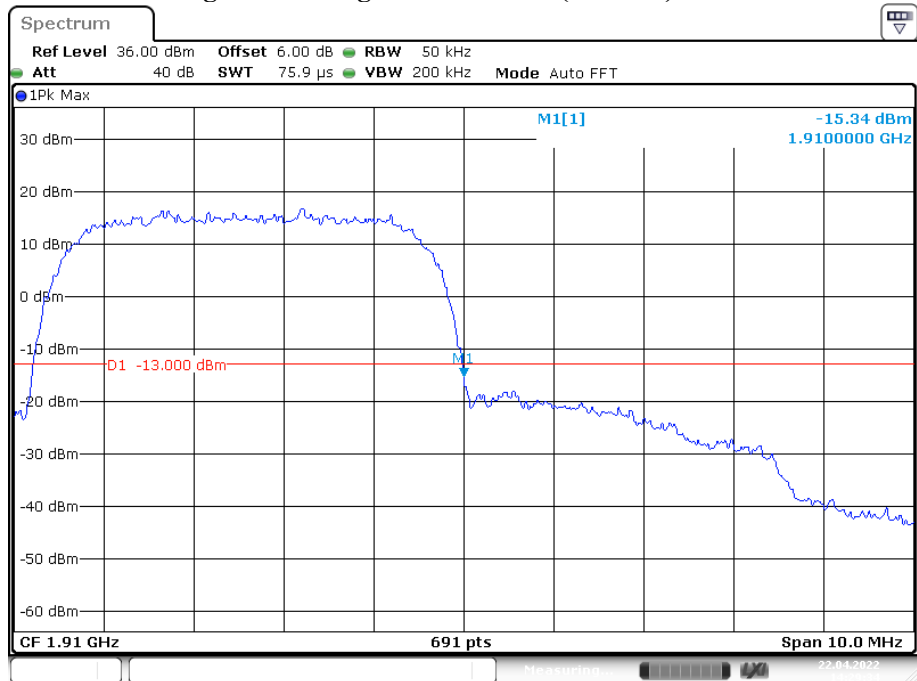


## Left Band Edge for WCDMA (HSUPA) Mode



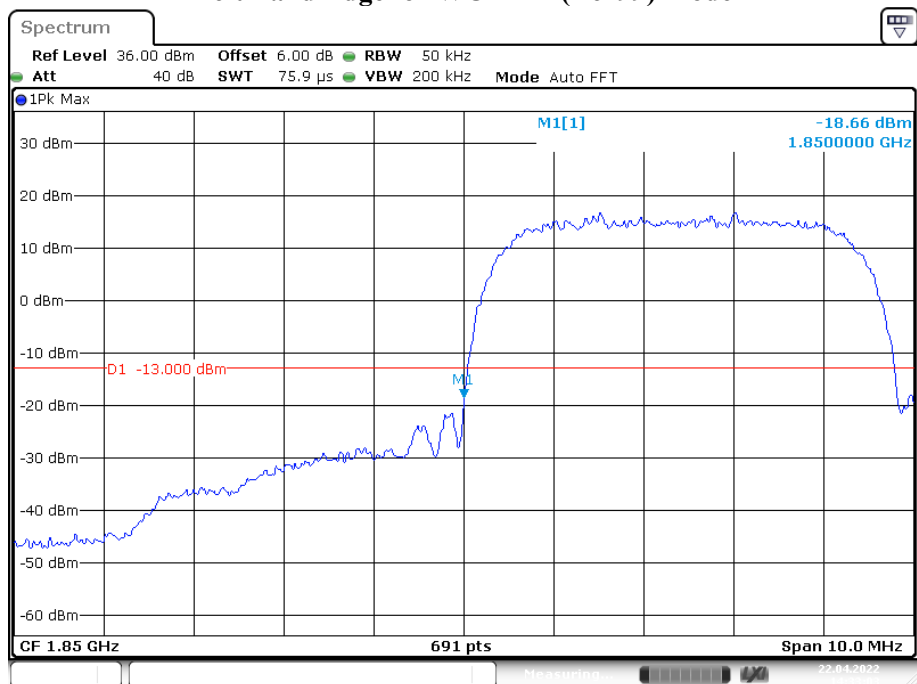
Date: 22 APR 2022 14:36:00

## Right Band Edge for WCDMA (HSUPA) Mode



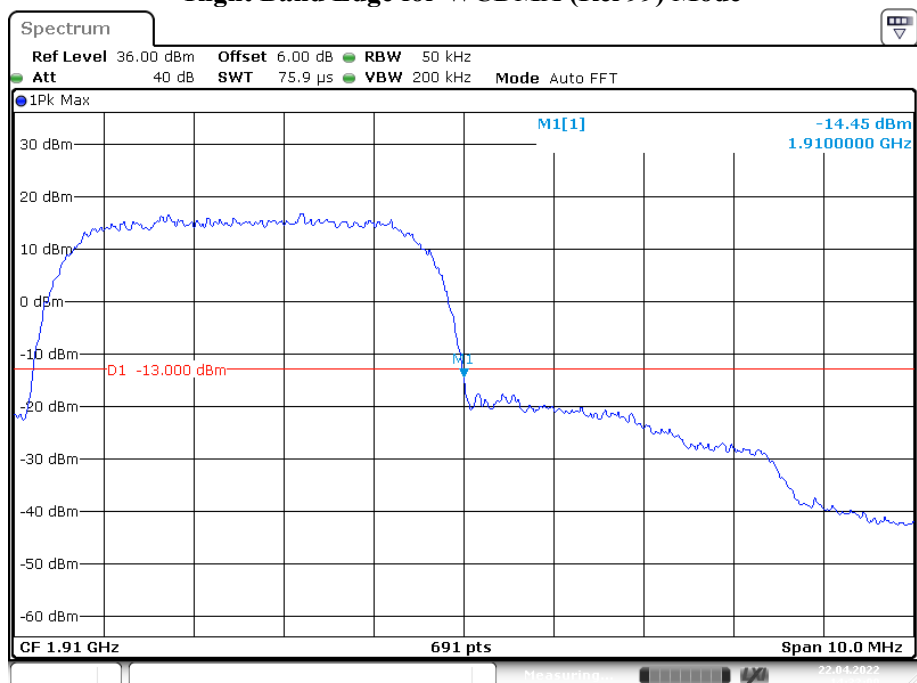
Date: 22 APR 2022 14:29:34

## Left Band Edge for WCDMA (Rel 99) Mode

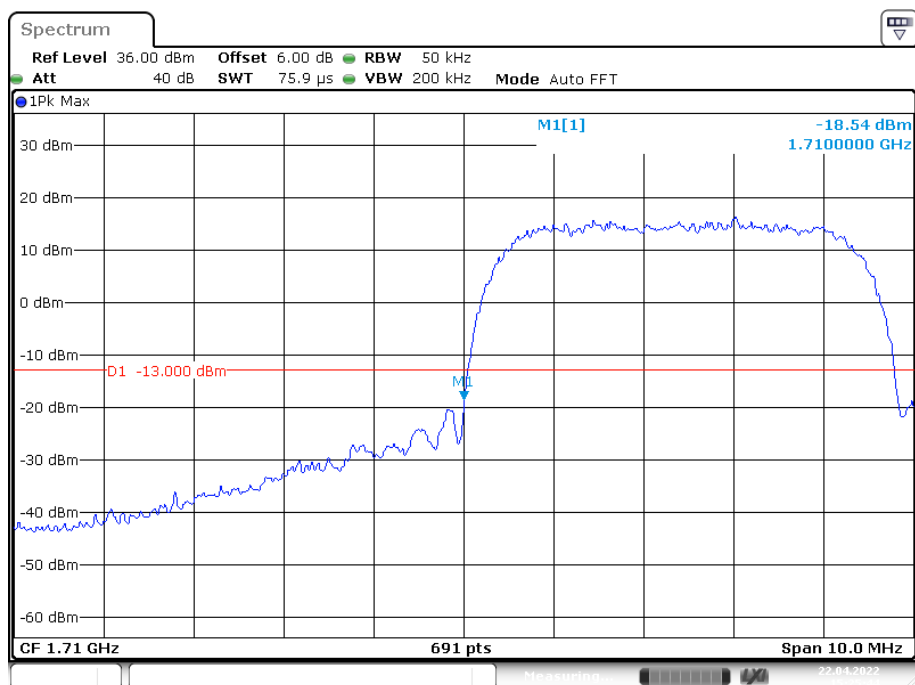


Date: 22 APR 2022 14:33:03

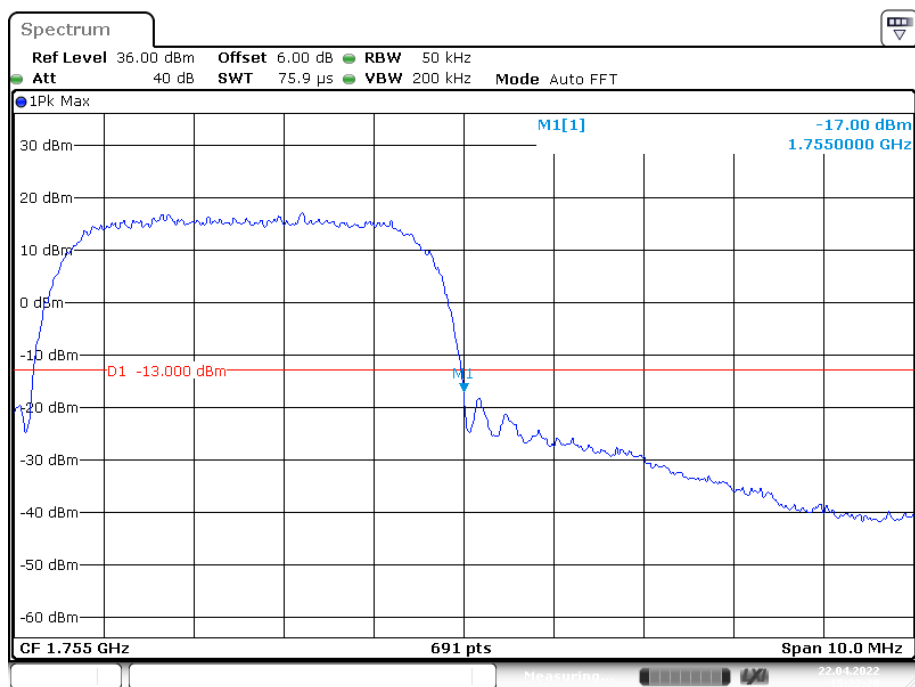
## Right Band Edge for WCDMA (Rel 99) Mode



Date: 22 APR 2022 14:32:00

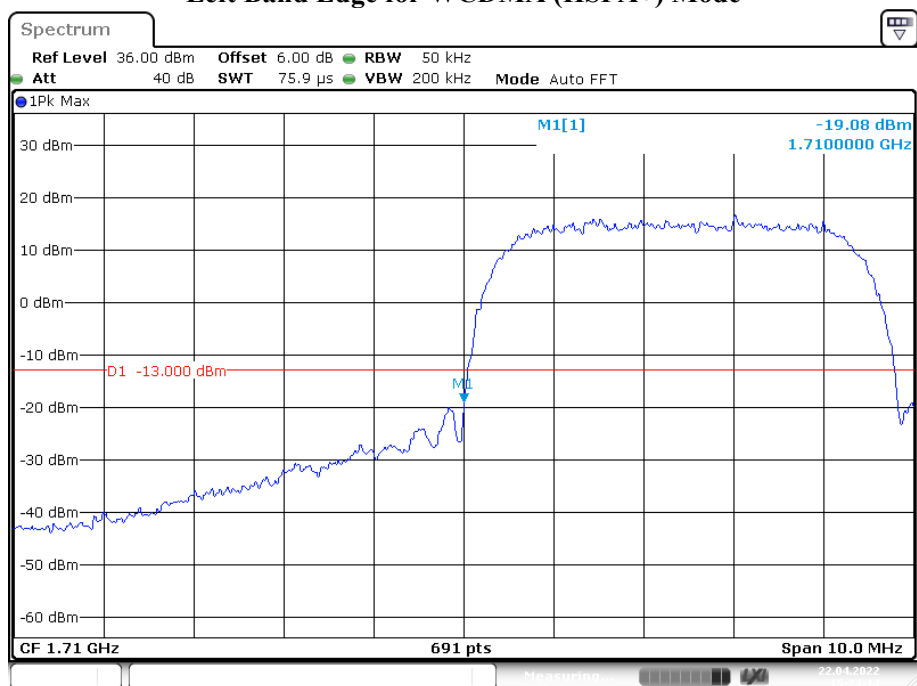
**WCDMA Band IV:****Left Band Edge for WCDMA (HSDPA) Mode**

Date: 22 APR 2022 15:25:44

**Left Band Edge for WCDMA (HSDPA) Mode**

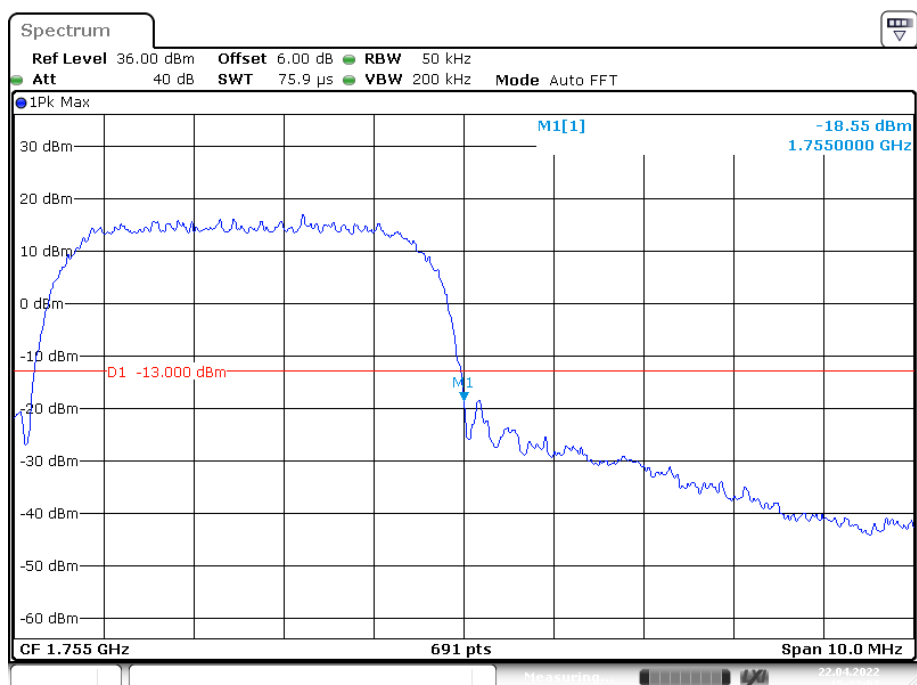
Date: 22 APR 2022 15:22:21

## Left Band Edge for WCDMA (HSPA+) Mode



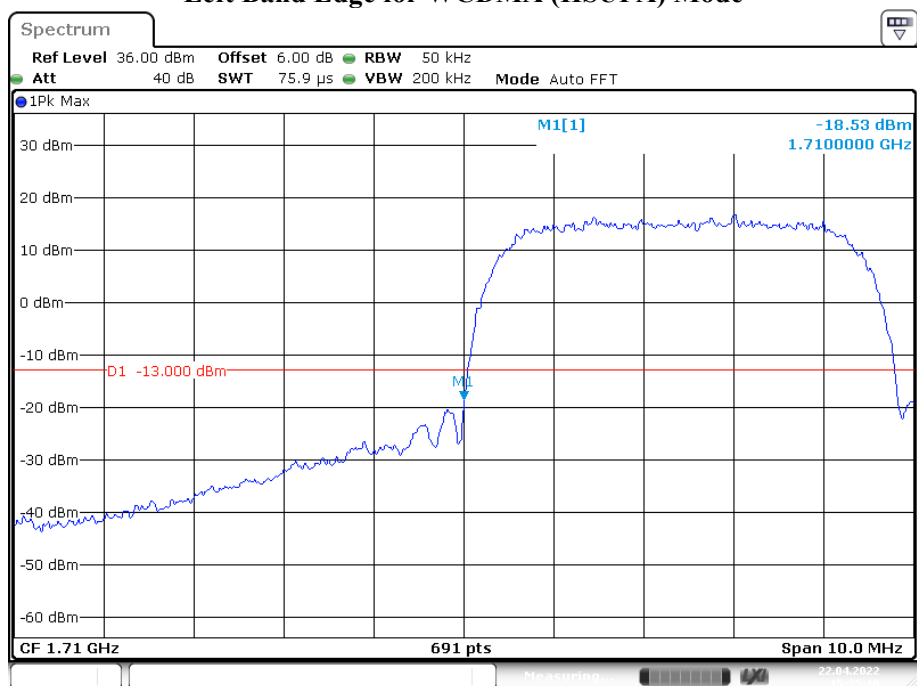
Date: 22 APR 2022 15:24:14

## Right Band Edge for WCDMA (HSPA+) Mode



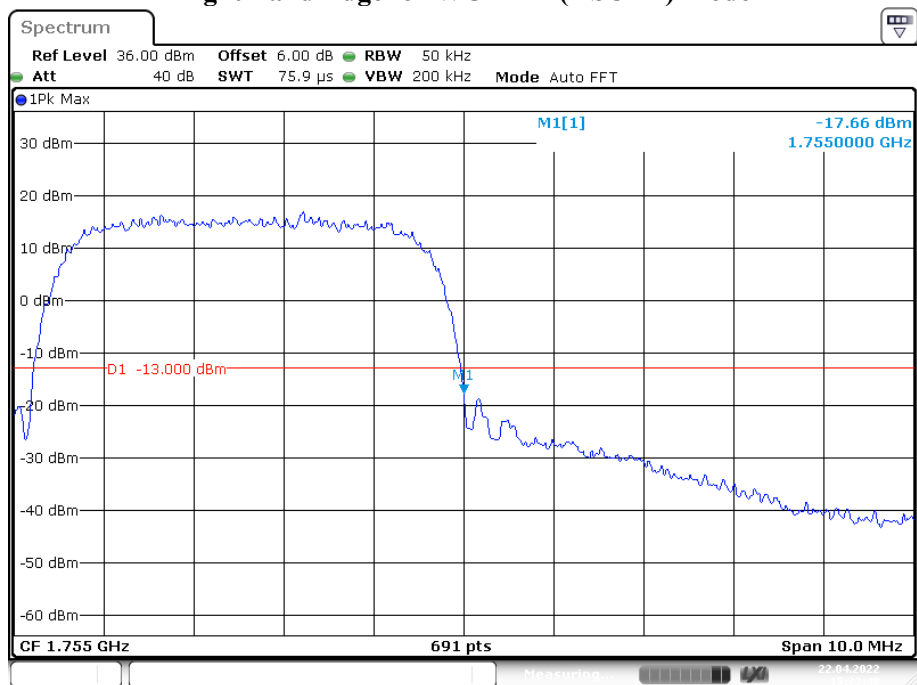
Date: 22 APR 2022 15:23:08

## Left Band Edge for WCDMA (HSUPA) Mode



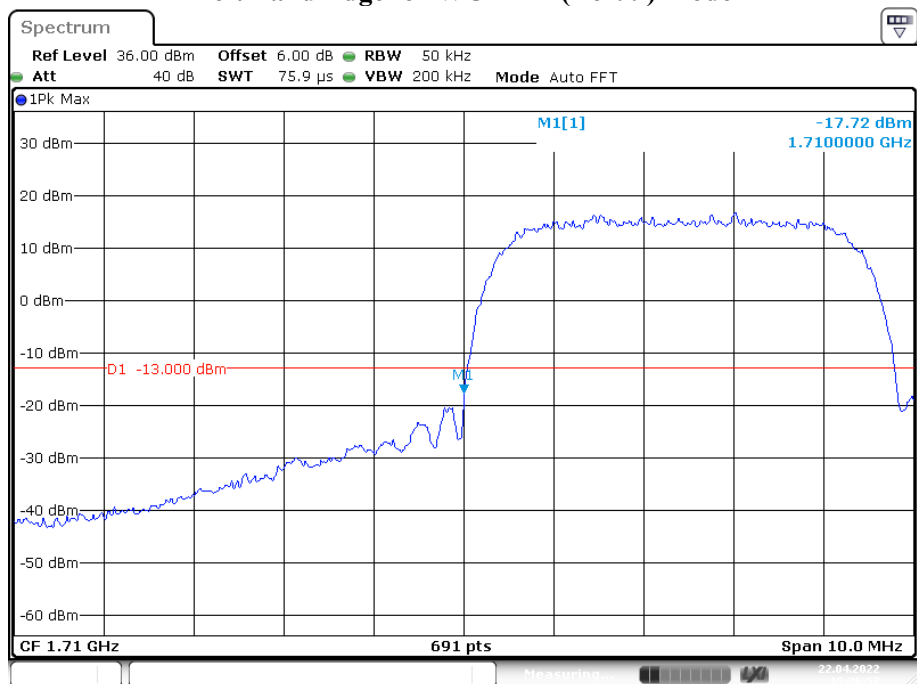
Date: 22 APR 2022 15:25:16

## Right Band Edge for WCDMA (HSUPA) Mode



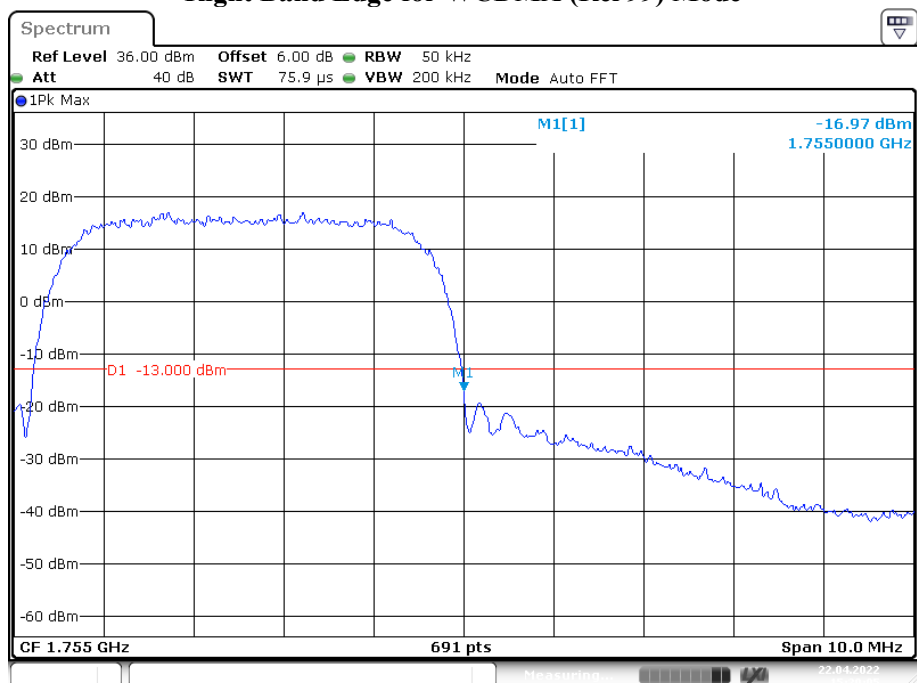
Date: 22 APR 2022 15:22:48

## Left Band Edge for WCDMA (Rel 99) Mode

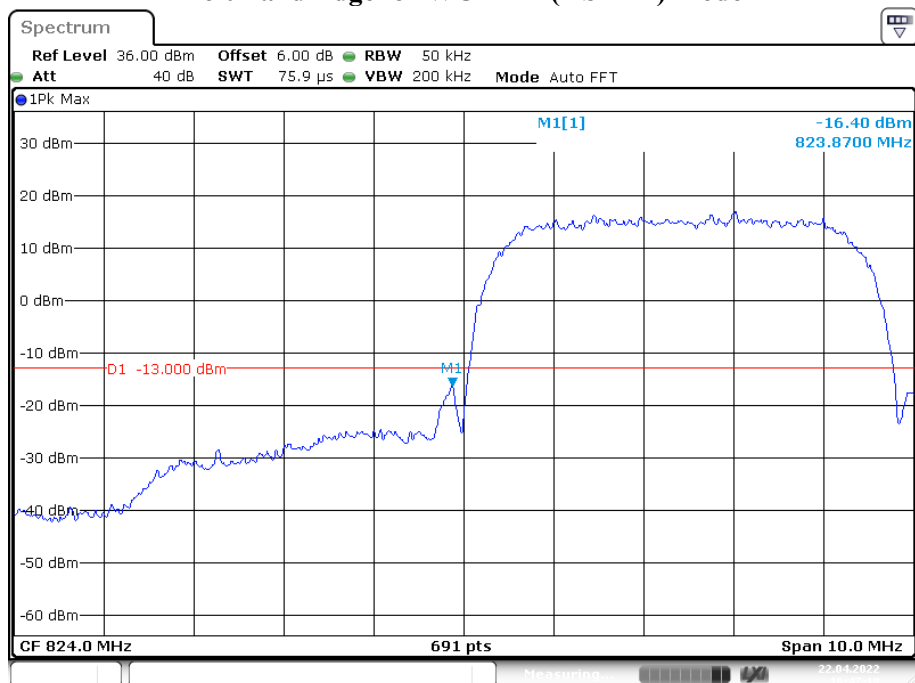


Date: 22 APR 2022 15:26:57

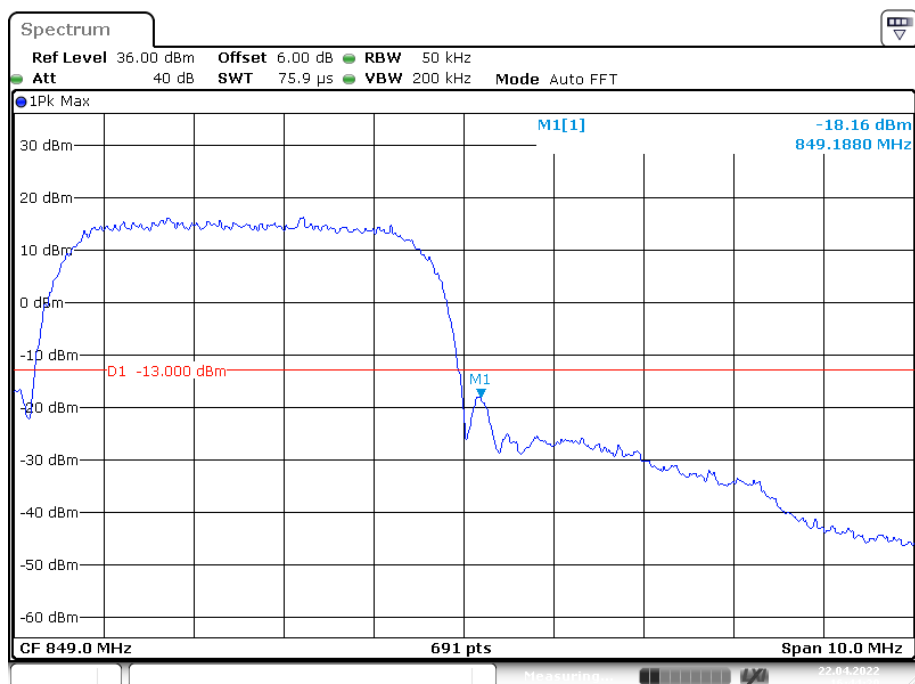
## Right Band Edge for WCDMA (Rel 99) Mode



Date: 22 APR 2022 15:20:05

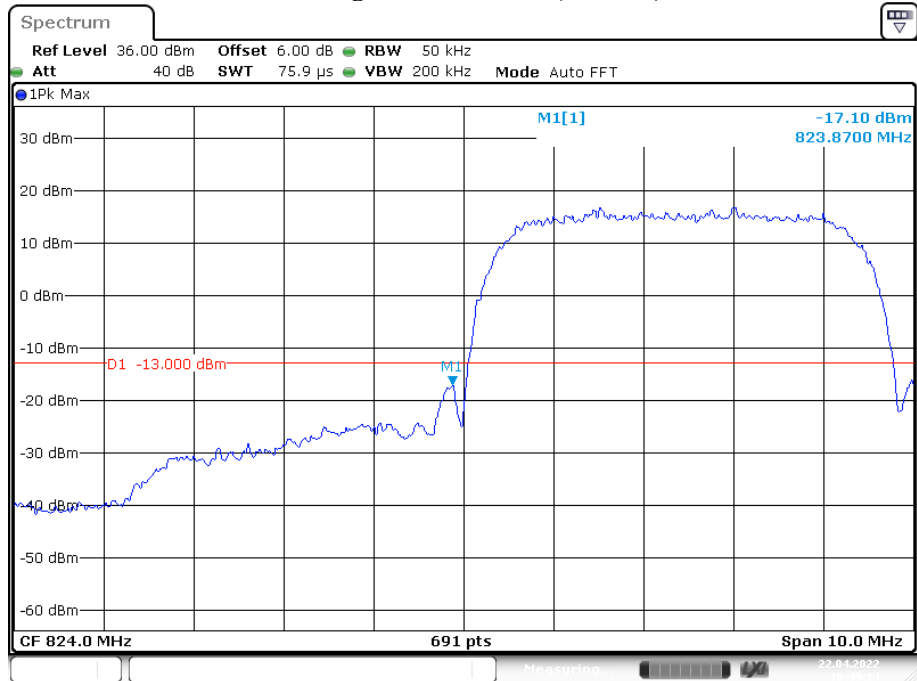
**WCDMA Band V:****Left Band Edge for WCDMA (HSDPA) Mode**

Date: 22 APR. 2022 16:47:18

**Left Band Edge for WCDMA (HSDPA) Mode**

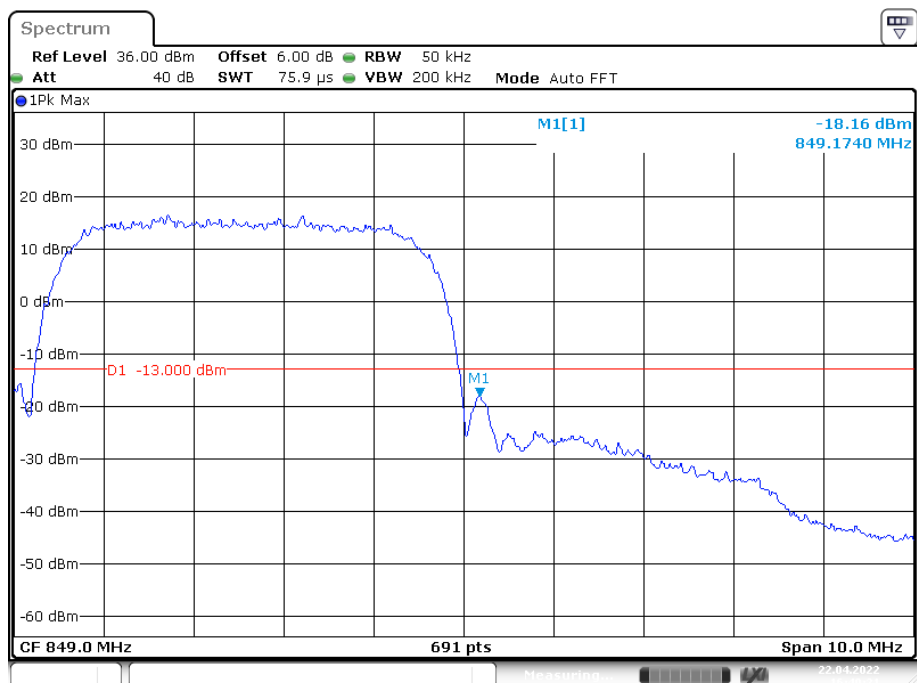
Date: 22 APR. 2022 16:44:21

## Left Band Edge for WCDMA (HSPA+) Mode



Date: 22 APR 2022 16:49:15

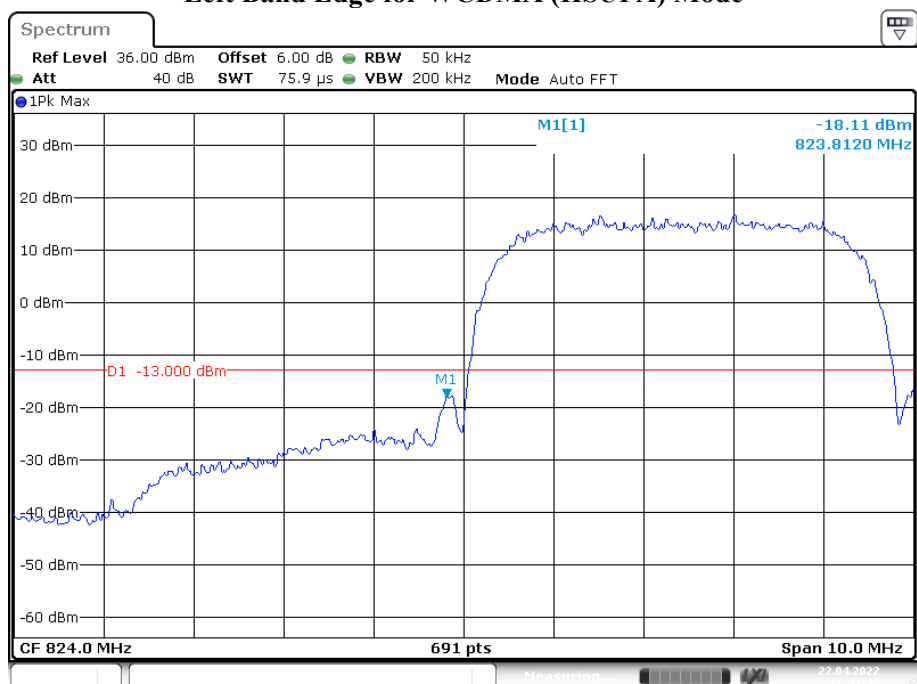
## Right Band Edge for WCDMA (HSPA+) Mode



Date: 22 APR 2022 16:40:21

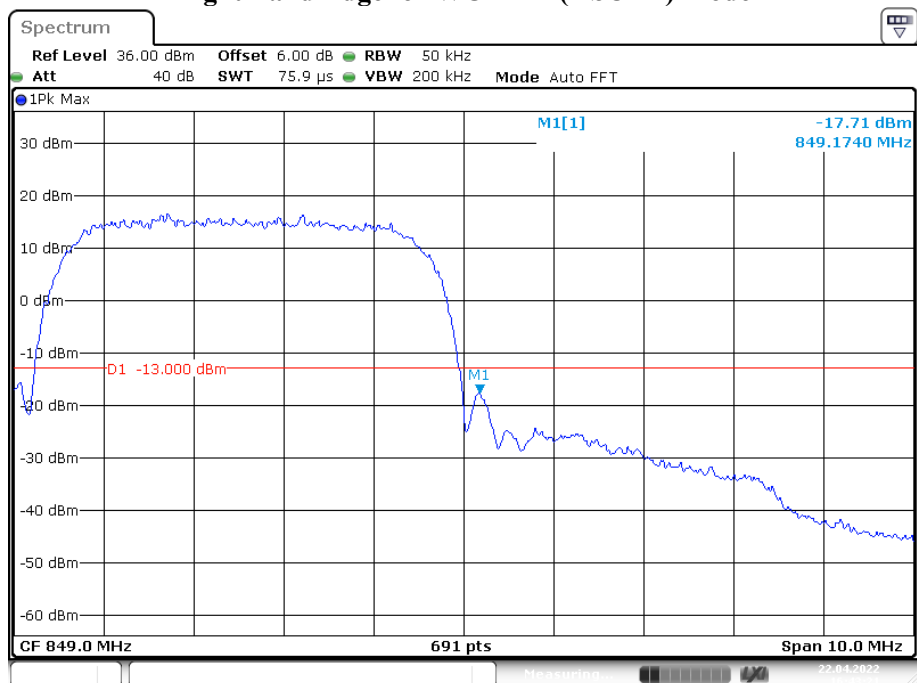


## Left Band Edge for WCDMA (HSUPA) Mode



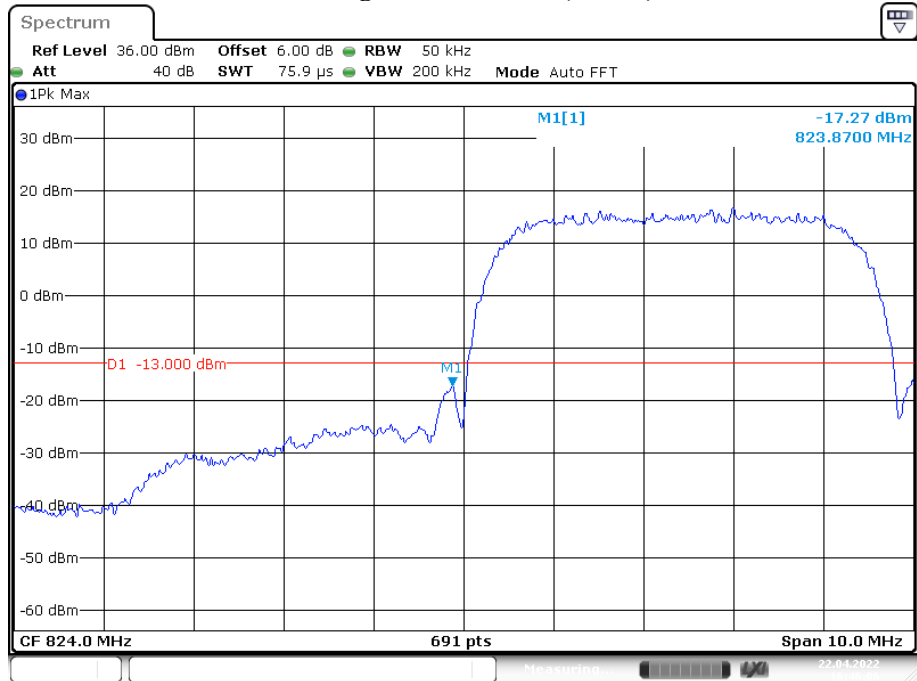
Date: 22 APR 2022 16:47:45

## Right Band Edge for WCDMA (HSUPA) Mode



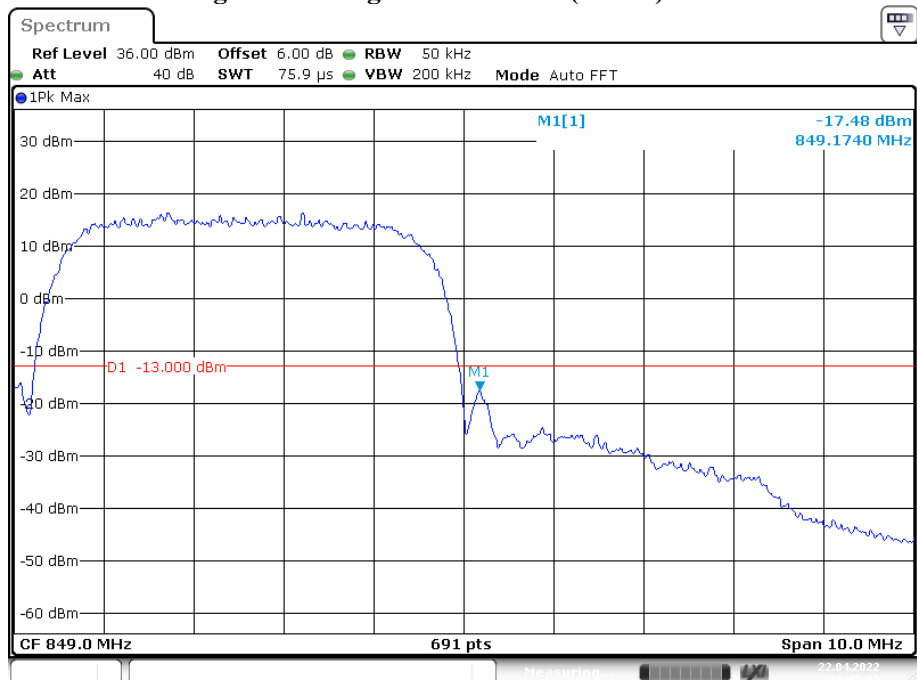
Date: 22 APR 2022 16:43:21

## Left Band Edge for WCDMA (Rel 99) Mode



Date: 22 APR 2022 16:46:06

## Right Band Edge for WCDMA (Rel 99) Mode



Date: 22 APR 2022 16:45:12

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

## FCC § 2.1055; § 22.355; § 24.235; §27.54; §90.213 - FREQUENCY STABILITY

### Applicable Standard

FCC § 2.1055, §22.355, §24.235 & §27.54 & §90.213.

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 ≤ 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                    |

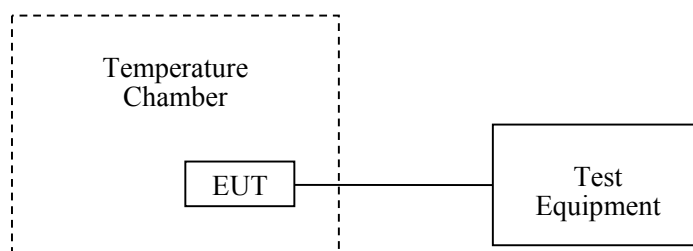
According to §24.235&§27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized frequency block.

### Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external AC 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 AC 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>       | 23~26 °C        |
| <b>Relative Humidity:</b> | 48~56 %         |
| <b>ATM Pressure:</b>      | 100.7~101.0 kPa |

*The testing was performed by Gala Liu from 2022-04-26 to 2022-04-30.*

*EUT operation mode: Transmitting*

**Test Result: Pass**

*Please refer to the following tables.*

**GSM 850**

| <b>GPRS Mode, Middle Channel, <math>f_0=836.6\text{MHz}</math></b> |                                          |                             |                              |                    |
|--------------------------------------------------------------------|------------------------------------------|-----------------------------|------------------------------|--------------------|
| <b>Temperature (°C)</b>                                            | <b>Voltage Supplied (V<sub>DC</sub>)</b> | <b>Frequency Error (Hz)</b> | <b>Frequency Error (ppm)</b> | <b>Limit (ppm)</b> |
| -30                                                                | N.V.                                     | 18                          | 0.02152                      | 2.5                |
| -20                                                                |                                          | 11                          | 0.01315                      | 2.5                |
| -10                                                                |                                          | 11                          | 0.01315                      | 2.5                |
| 0                                                                  |                                          | 16                          | 0.01913                      | 2.5                |
| 10                                                                 |                                          | 11                          | 0.01315                      | 2.5                |
| 20                                                                 |                                          | 17                          | 0.02032                      | 2.5                |
| 30                                                                 |                                          | 8                           | 0.00956                      | 2.5                |
| 40                                                                 |                                          | 22                          | 0.02630                      | 2.5                |
| 50                                                                 |                                          | 13                          | 0.01554                      | 2.5                |
| 20                                                                 | L.V.                                     | 15                          | 0.01793                      | 2.5                |
|                                                                    | H.V.                                     | 21                          | 0.02510                      | 2.5                |

| <b>EGPRS Mode, Middle Channel, <math>f_0=836.6\text{MHz}</math></b> |                                          |                             |                              |                    |
|---------------------------------------------------------------------|------------------------------------------|-----------------------------|------------------------------|--------------------|
| <b>Temperature (°C)</b>                                             | <b>Voltage Supplied (V<sub>DC</sub>)</b> | <b>Frequency Error (Hz)</b> | <b>Frequency Error (ppm)</b> | <b>Limit (ppm)</b> |
| -30                                                                 | N.V.                                     | 16                          | 0.01913                      | 2.5                |
| -20                                                                 |                                          | 16                          | 0.01913                      | 2.5                |
| -10                                                                 |                                          | 13                          | 0.01554                      | 2.5                |
| 0                                                                   |                                          | 7                           | 0.00837                      | 2.5                |
| 10                                                                  |                                          | 19                          | 0.02271                      | 2.5                |
| 20                                                                  |                                          | 18                          | 0.02152                      | 2.5                |
| 30                                                                  |                                          | 17                          | 0.02032                      | 2.5                |
| 40                                                                  |                                          | 20                          | 0.02391                      | 2.5                |
| 50                                                                  |                                          | 16                          | 0.01913                      | 2.5                |
| 20                                                                  | L.V.                                     | 22                          | 0.02630                      | 2.5                |
|                                                                     | H.V.                                     | 15                          | 0.01793                      | 2.5                |

**PCS 1900**

| <b>GPRS Mode, Middle Channel, <math>f_0=1880.0</math> MHz</b> |                                          |                             |                              |               |
|---------------------------------------------------------------|------------------------------------------|-----------------------------|------------------------------|---------------|
| <b>Temperature (°C)</b>                                       | <b>Voltage Supplied (V<sub>DC</sub>)</b> | <b>Frequency Error (Hz)</b> | <b>Frequency Error (ppm)</b> | <b>Result</b> |
| -30                                                           | N.V.                                     | -15                         | -0.00798                     | Pass          |
| -20                                                           |                                          | -13                         | -0.00691                     | Pass          |
| -10                                                           |                                          | -20                         | -0.01064                     | Pass          |
| 0                                                             |                                          | -17                         | -0.00904                     | Pass          |
| 10                                                            |                                          | -10                         | -0.00532                     | Pass          |
| 20                                                            |                                          | -19                         | -0.01011                     | Pass          |
| 30                                                            |                                          | -16                         | -0.00851                     | Pass          |
| 40                                                            |                                          | -14                         | -0.00745                     | Pass          |
| 50                                                            |                                          | -10                         | -0.00532                     | Pass          |
| 20                                                            | L.V.                                     | -10                         | -0.00532                     | Pass          |
|                                                               | H.V.                                     | -15                         | -0.00798                     | Pass          |

| <b>EGPRS Mode, Middle Channel, <math>f_0=1880.0</math> MHz</b> |                                          |                             |                              |               |
|----------------------------------------------------------------|------------------------------------------|-----------------------------|------------------------------|---------------|
| <b>Temperature (°C)</b>                                        | <b>Voltage Supplied (V<sub>DC</sub>)</b> | <b>Frequency Error (Hz)</b> | <b>Frequency Error (ppm)</b> | <b>Result</b> |
| -30                                                            | N.V.                                     | -21                         | -0.01117                     | Pass          |
| -20                                                            |                                          | -16                         | -0.00851                     | Pass          |
| -10                                                            |                                          | -20                         | -0.01064                     | Pass          |
| 0                                                              |                                          | -7                          | -0.00372                     | Pass          |
| 10                                                             |                                          | -12                         | -0.00638                     | Pass          |
| 20                                                             |                                          | -12                         | -0.00638                     | Pass          |
| 30                                                             |                                          | -8                          | -0.00426                     | Pass          |
| 40                                                             |                                          | -21                         | -0.01117                     | Pass          |
| 50                                                             |                                          | -16                         | -0.00851                     | Pass          |
| 20                                                             | L.V.                                     | -17                         | -0.00904                     | Pass          |
|                                                                | H.V.                                     | -9                          | -0.00479                     | Pass          |

**WCDMA Band V**

| Middle Channel, $f_0 = 836.6\text{MHz}$ |                                           |                            |                             |                |
|-----------------------------------------|-------------------------------------------|----------------------------|-----------------------------|----------------|
| Temperature<br>(°C)                     | Voltage<br>Supplied<br>(V <sub>DC</sub> ) | Frequency<br>Error<br>(Hz) | Frequency<br>Error<br>(ppm) | Limit<br>(ppm) |
| -30                                     | N.V.                                      | 16                         | 0.01913                     | 2.5            |
| -20                                     |                                           | 11                         | 0.01315                     | 2.5            |
| -10                                     |                                           | 13                         | 0.01554                     | 2.5            |
| 0                                       |                                           | 14                         | 0.01673                     | 2.5            |
| 10                                      |                                           | 20                         | 0.02391                     | 2.5            |
| 20                                      |                                           | 16                         | 0.01913                     | 2.5            |
| 30                                      |                                           | 20                         | 0.02391                     | 2.5            |
| 40                                      |                                           | 18                         | 0.02152                     | 2.5            |
| 50                                      |                                           | 8                          | 0.00956                     | 2.5            |
| 20                                      | L.V.                                      | 14                         | 0.01673                     | 2.5            |
|                                         | H.V.                                      | 15                         | 0.01793                     | 2.5            |

**WCDMA Band IV**

| Low Channel & High Channel |                     |           |           |             |          |
|----------------------------|---------------------|-----------|-----------|-------------|----------|
| Temperature                | Voltage<br>Supplied | FL        | FH        | FL<br>Limit | FH Limit |
| (°C)                       | (VAC)               | (MHz)     | (MHz)     | (MHz)       | (MHz)    |
| -30                        | N.V.                | 1710.0459 | 1754.7469 | 1710        | 1755     |
| -20                        |                     | 1710.0415 | 1754.7459 | 1710        | 1755     |
| -10                        |                     | 1710.0484 | 1754.7479 | 1710        | 1755     |
| 0                          |                     | 1710.0488 | 1754.7483 | 1710        | 1755     |
| 10                         |                     | 1710.0411 | 1754.7472 | 1710        | 1755     |
| 20                         |                     | 1710.0498 | 1754.7427 | 1710        | 1755     |
| 30                         |                     | 1710.0496 | 1754.7429 | 1710        | 1755     |
| 40                         |                     | 1710.0474 | 1754.7484 | 1710        | 1755     |
| 50                         |                     | 1710.0457 | 1754.7498 | 1710        | 1755     |
| 20                         | L.V.                | 1710.0468 | 1754.7446 | 1710        | 1755     |
|                            | H.V.                | 1710.0499 | 1754.7474 | 1710        | 1755     |



**WCDMA Band II**

| <b>Middle Channel, <math>f_0</math> =1880.0 MHz</b> |                                                  |                                     |                                      |               |
|-----------------------------------------------------|--------------------------------------------------|-------------------------------------|--------------------------------------|---------------|
| <b>Temperature<br/>(°C)</b>                         | <b>Voltage<br/>Supplied<br/>(V<sub>DC</sub>)</b> | <b>Frequency<br/>Error<br/>(Hz)</b> | <b>Frequency<br/>Error<br/>(ppm)</b> | <b>Result</b> |
| -30                                                 | N.V.                                             | 20                                  | 0.01064                              | Pass          |
| -20                                                 |                                                  | 16                                  | 0.00851                              | Pass          |
| -10                                                 |                                                  | 15                                  | 0.00798                              | Pass          |
| 0                                                   |                                                  | 14                                  | 0.00745                              | Pass          |
| 10                                                  |                                                  | 20                                  | 0.01064                              | Pass          |
| 20                                                  |                                                  | 11                                  | 0.00585                              | Pass          |
| 30                                                  |                                                  | 21                                  | 0.01117                              | Pass          |
| 40                                                  |                                                  | 11                                  | 0.00585                              | Pass          |
| 50                                                  |                                                  | 10                                  | 0.00532                              | Pass          |
| 20                                                  | L.V.                                             | 15                                  | 0.00798                              | Pass          |
|                                                     | H.V.                                             | 15                                  | 0.00798                              | Pass          |

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

| 10.0 MHz Middle Channel, $f_0=1880\text{MHz}$ |                                     |                      |                       |        |
|-----------------------------------------------|-------------------------------------|----------------------|-----------------------|--------|
| Temperature (°C)                              | Voltage Supplied (V <sub>DC</sub> ) | Frequency Error (Hz) | Frequency Error (ppm) | Result |
| -30                                           | N.V.                                | 17                   | 0.00904               | Pass   |
| -20                                           |                                     | 8                    | 0.00426               | Pass   |
| -10                                           |                                     | 12                   | 0.00638               | Pass   |
| 0                                             |                                     | 14                   | 0.00745               | Pass   |
| 10                                            |                                     | 11                   | 0.00585               | Pass   |
| 20                                            |                                     | 17                   | 0.00904               | Pass   |
| 30                                            |                                     | 14                   | 0.00745               | Pass   |
| 40                                            |                                     | 14                   | 0.00745               | Pass   |
| 50                                            |                                     | 21                   | 0.01117               | Pass   |
| 20                                            | L.V.                                | 22                   | 0.01170               | Pass   |
|                                               | H.V.                                | 11                   | 0.00585               | Pass   |

**16QAM:**

| 10.0 MHz Middle Channel, $f_0=1880\text{MHz}$ |                                     |                      |                       |        |
|-----------------------------------------------|-------------------------------------|----------------------|-----------------------|--------|
| Temperature (°C)                              | Voltage Supplied (V <sub>DC</sub> ) | Frequency Error (Hz) | Frequency Error (ppm) | Result |
| -30                                           | N.V.                                | 16                   | 0.00851               | Pass   |
| -20                                           |                                     | 18                   | 0.00957               | Pass   |
| -10                                           |                                     | 14                   | 0.00745               | Pass   |
| 0                                             |                                     | 9                    | 0.00479               | Pass   |
| 10                                            |                                     | 16                   | 0.00851               | Pass   |
| 20                                            |                                     | 9                    | 0.00479               | Pass   |
| 30                                            |                                     | 12                   | 0.00638               | Pass   |
| 40                                            |                                     | 16                   | 0.00851               | Pass   |
| 50                                            |                                     | 10                   | 0.00532               | Pass   |
| 20                                            | L.V.                                | 16                   | 0.00851               | Pass   |
|                                               | H.V.                                | 12                   | 0.00638               | Pass   |

**LTE Band 4:****QPSK:**

| Low Channel & High Channel 20 MHz Bandwidth |                    |                |                |                      |                      |
|---------------------------------------------|--------------------|----------------|----------------|----------------------|----------------------|
| Temperature                                 | Power Supplied     | F <sub>L</sub> | F <sub>H</sub> | F <sub>L</sub> Limit | F <sub>H</sub> Limit |
| (°C)                                        | (V <sub>DC</sub> ) | (MHz)          | (MHz)          | (MHz)                | (MHz)                |
| -30                                         | N.V.               | 1710.1396      | 1754.8624      | 1710                 | 1755                 |
| -20                                         |                    | 1710.1354      | 1754.8677      | 1710                 | 1755                 |
| -10                                         |                    | 1710.1326      | 1754.8629      | 1710                 | 1755                 |
| 0                                           |                    | 1710.1354      | 1754.8608      | 1710                 | 1755                 |
| 10                                          |                    | 1710.1311      | 1754.8627      | 1710                 | 1755                 |
| 20                                          |                    | 1710.1375      | 1754.8675      | 1710                 | 1755                 |
| 30                                          |                    | 1710.1369      | 1754.8623      | 1710                 | 1755                 |
| 40                                          |                    | 1710.1388      | 1754.8697      | 1710                 | 1755                 |
| 50                                          |                    | 1710.1327      | 1754.8668      | 1710                 | 1755                 |
| 20                                          | L.V.               | 1710.1372      | 1754.8617      | 1710                 | 1755                 |
|                                             | H.V.               | 1710.1396      | 1754.8641      | 1710                 | 1755                 |

**16QAM:**

| Low Channel & High Channel 20 MHz Bandwidth |                    |                |                |                      |                      |
|---------------------------------------------|--------------------|----------------|----------------|----------------------|----------------------|
| Temperature                                 | Voltage Supplied   | F <sub>L</sub> | F <sub>H</sub> | F <sub>L</sub> Limit | F <sub>H</sub> Limit |
| (°C)                                        | (V <sub>DC</sub> ) | (MHz)          | (MHz)          | (MHz)                | (MHz)                |
| -30                                         | N.V.               | 1710.1377      | 1754.8653      | 1710                 | 1755                 |
| -20                                         |                    | 1710.1372      | 1754.8638      | 1710                 | 1755                 |
| -10                                         |                    | 1710.1305      | 1754.8685      | 1710                 | 1755                 |
| 0                                           |                    | 1710.1381      | 1754.8667      | 1710                 | 1755                 |
| 10                                          |                    | 1710.1366      | 1754.8661      | 1710                 | 1755                 |
| 20                                          |                    | 1710.1342      | 1754.8604      | 1710                 | 1755                 |
| 30                                          |                    | 1710.1343      | 1754.8661      | 1710                 | 1755                 |
| 40                                          |                    | 1710.1307      | 1754.8677      | 1710                 | 1755                 |
| 50                                          |                    | 1710.1329      | 1754.8663      | 1710                 | 1755                 |
| 20                                          | L.V.               | 1710.1329      | 1754.8666      | 1710                 | 1755                 |
|                                             | H.V.               | 1710.1343      | 1754.8662      | 1710                 | 1755                 |

**LTE Band 5:****QPSK:**

| 10.0 MHz Middle Channel, $f_0=836.5\text{MHz}$ |                                           |                            |                             |                |
|------------------------------------------------|-------------------------------------------|----------------------------|-----------------------------|----------------|
| Temperature<br>(°C)                            | Voltage<br>Supplied<br>(V <sub>DC</sub> ) | Frequency<br>Error<br>(Hz) | Frequency<br>Error<br>(ppm) | Limit<br>(ppm) |
| -30                                            | N.V.                                      | 15                         | 0.01793                     | 2.5            |
| -20                                            |                                           | 12                         | 0.01435                     | 2.5            |
| -10                                            |                                           | 8                          | 0.00956                     | 2.5            |
| 0                                              |                                           | 22                         | 0.02630                     | 2.5            |
| 10                                             |                                           | 20                         | 0.02391                     | 2.5            |
| 20                                             |                                           | 14                         | 0.01674                     | 2.5            |
| 30                                             |                                           | 19                         | 0.02271                     | 2.5            |
| 40                                             |                                           | 13                         | 0.01554                     | 2.5            |
| 50                                             |                                           | 12                         | 0.01435                     | 2.5            |
| 20                                             | L.V.                                      | 11                         | 0.01315                     | 2.5            |
|                                                | H.V.                                      | 16                         | 0.01913                     | 2.5            |

**16QAM:**

| 10.0 MHz Middle Channel, $f_0=836.5\text{MHz}$ |                                           |                            |                             |                |
|------------------------------------------------|-------------------------------------------|----------------------------|-----------------------------|----------------|
| Temperature<br>(°C)                            | Voltage<br>Supplied<br>(V <sub>DC</sub> ) | Frequency<br>Error<br>(Hz) | Frequency<br>Error<br>(ppm) | Limit<br>(ppm) |
| -30                                            | N.V.                                      | 11                         | 0.01315                     | 2.5            |
| -20                                            |                                           | 13                         | 0.01554                     | 2.5            |
| -10                                            |                                           | 14                         | 0.01674                     | 2.5            |
| 0                                              |                                           | 22                         | 0.02630                     | 2.5            |
| 10                                             |                                           | 18                         | 0.02152                     | 2.5            |
| 20                                             |                                           | 10                         | 0.01195                     | 2.5            |
| 30                                             |                                           | 7                          | 0.00837                     | 2.5            |
| 40                                             |                                           | 19                         | 0.02271                     | 2.5            |
| 50                                             |                                           | 13                         | 0.01554                     | 2.5            |
| 20                                             | L.V.                                      | 17                         | 0.02032                     | 2.5            |
|                                                | H.V.                                      | 18                         | 0.02152                     | 2.5            |

**LTE Band 7:****QPSK:**

| Low Channel & High Channel 20 MHz Bandwidth |                    |                |                |                      |                      |
|---------------------------------------------|--------------------|----------------|----------------|----------------------|----------------------|
| Temperature                                 | Power Supplied     | F <sub>L</sub> | F <sub>H</sub> | F <sub>L</sub> Limit | F <sub>H</sub> Limit |
| (°C)                                        | (V <sub>DC</sub> ) | (MHz)          | (MHz)          | (MHz)                | (MHz)                |
| -30                                         | N.V.               | 2500.1023      | 2569.8041      | 2500                 | 2570                 |
| -20                                         |                    | 2500.1021      | 2569.8049      | 2500                 | 2570                 |
| -10                                         |                    | 2500.1014      | 2569.8025      | 2500                 | 2570                 |
| 0                                           |                    | 2500.1092      | 2569.8048      | 2500                 | 2570                 |
| 10                                          |                    | 2500.1080      | 2569.8021      | 2500                 | 2570                 |
| 20                                          |                    | 2500.1076      | 2569.8035      | 2500                 | 2570                 |
| 30                                          |                    | 2500.1069      | 2569.8015      | 2500                 | 2570                 |
| 40                                          |                    | 2500.1001      | 2569.8048      | 2500                 | 2570                 |
| 50                                          |                    | 2500.1022      | 2569.8049      | 2500                 | 2570                 |
| 20                                          | L.V.               | 2500.1069      | 2569.8015      | 2500                 | 2570                 |
|                                             | H.V.               | 2500.1012      | 2569.8007      | 2500                 | 2570                 |

**16QAM:**

| Low Channel & High Channel 20 MHz Bandwidth |                    |                |                |                      |                      |
|---------------------------------------------|--------------------|----------------|----------------|----------------------|----------------------|
| Temperature                                 | Voltage Supplied   | F <sub>L</sub> | F <sub>H</sub> | F <sub>L</sub> Limit | F <sub>H</sub> Limit |
| (°C)                                        | (V <sub>DC</sub> ) | (MHz)          | (MHz)          | (MHz)                | (MHz)                |
| -30                                         | N.V.               | 2500.1076      | 2569.8074      | 2500                 | 2570                 |
| -20                                         |                    | 2500.1079      | 2569.8047      | 2500                 | 2570                 |
| -10                                         |                    | 2500.1054      | 2569.8060      | 2500                 | 2570                 |
| 0                                           |                    | 2500.1074      | 2569.8068      | 2500                 | 2570                 |
| 10                                          |                    | 2500.1074      | 2569.8093      | 2500                 | 2570                 |
| 20                                          |                    | 2500.1093      | 2569.8095      | 2500                 | 2570                 |
| 30                                          |                    | 2500.1088      | 2569.8097      | 2500                 | 2570                 |
| 40                                          |                    | 2500.1091      | 2569.8089      | 2500                 | 2570                 |
| 50                                          |                    | 2500.1080      | 2569.8053      | 2500                 | 2570                 |
| 20                                          | L.V.               | 2500.1079      | 2569.8069      | 2500                 | 2570                 |
|                                             | H.V.               | 2500.1054      | 2569.8085      | 2500                 | 2570                 |

**LTE Band 12:****QPSK:**

| Low Channel & High Channel 10 MHz Bandwidth |                                         |                         |                         |                               |                               |
|---------------------------------------------|-----------------------------------------|-------------------------|-------------------------|-------------------------------|-------------------------------|
| Temperature<br>(°C)                         | Power<br>Supplied<br>(V <sub>DC</sub> ) | F <sub>L</sub><br>(MHz) | F <sub>H</sub><br>(MHz) | F <sub>L</sub> Limit<br>(MHz) | F <sub>H</sub> Limit<br>(MHz) |
| -30                                         | N.V.                                    | 699.0568                | 715.8169                | 699                           | 716                           |
| -20                                         |                                         | 699.0544                | 715.8114                | 699                           | 716                           |
| -10                                         |                                         | 699.0511                | 715.8112                | 699                           | 716                           |
| 0                                           |                                         | 699.0531                | 715.8109                | 699                           | 716                           |
| 10                                          |                                         | 699.0599                | 715.8182                | 699                           | 716                           |
| 20                                          |                                         | 699.0598                | 715.8122                | 699                           | 716                           |
| 30                                          |                                         | 699.0565                | 715.8109                | 699                           | 716                           |
| 40                                          |                                         | 699.0553                | 715.8139                | 699                           | 716                           |
| 50                                          |                                         | 699.0556                | 715.8176                | 699                           | 716                           |
| 20                                          | L.V.                                    | 699.0528                | 715.8135                | 699                           | 716                           |
|                                             | H.V.                                    | 699.0591                | 715.8145                | 699                           | 716                           |

**16QAM:**

| Low Channel & High Channel 10 MHz Bandwidth |                                         |                         |                         |                               |                               |
|---------------------------------------------|-----------------------------------------|-------------------------|-------------------------|-------------------------------|-------------------------------|
| Temperature<br>(°C)                         | Power<br>Supplied<br>(V <sub>DC</sub> ) | F <sub>L</sub><br>(MHz) | F <sub>H</sub><br>(MHz) | F <sub>L</sub> Limit<br>(MHz) | F <sub>H</sub> Limit<br>(MHz) |
| -30                                         | N.V.                                    | 699.0539                | 715.8134                | 699                           | 716                           |
| -20                                         |                                         | 699.0592                | 715.8173                | 699                           | 716                           |
| -10                                         |                                         | 699.0502                | 715.8155                | 699                           | 716                           |
| 0                                           |                                         | 699.0513                | 715.8135                | 699                           | 716                           |
| 10                                          |                                         | 699.0579                | 715.8102                | 699                           | 716                           |
| 20                                          |                                         | 699.0505                | 715.8115                | 699                           | 716                           |
| 30                                          |                                         | 699.0543                | 715.8148                | 699                           | 716                           |
| 40                                          |                                         | 699.0562                | 715.8147                | 699                           | 716                           |
| 50                                          |                                         | 699.0553                | 715.8192                | 699                           | 716                           |
| 20                                          | L.V.                                    | 699.0573                | 715.8109                | 699                           | 716                           |
|                                             | H.V.                                    | 699.0557                | 715.8154                | 699                           | 716                           |

**LTE Band 17:****QPSK:**

| Low Channel & High Channel 10 MHz Bandwidth |                                         |                         |                         |                               |                               |
|---------------------------------------------|-----------------------------------------|-------------------------|-------------------------|-------------------------------|-------------------------------|
| Temperature<br>(°C)                         | Power<br>Supplied<br>(V <sub>DC</sub> ) | F <sub>L</sub><br>(MHz) | F <sub>H</sub><br>(MHz) | F <sub>L</sub> Limit<br>(MHz) | F <sub>H</sub> Limit<br>(MHz) |
| -30                                         | N.V.                                    | 704.1688                | 715.9415                | 704                           | 716                           |
| -20                                         |                                         | 704.1695                | 715.9455                | 704                           | 716                           |
| -10                                         |                                         | 704.1623                | 715.946                 | 704                           | 716                           |
| 0                                           |                                         | 704.1619                | 715.9435                | 704                           | 716                           |
| 10                                          |                                         | 704.161                 | 715.9423                | 704                           | 716                           |
| 20                                          |                                         | 704.1677                | 715.9405                | 704                           | 716                           |
| 30                                          |                                         | 704.1671                | 715.9455                | 704                           | 716                           |
| 40                                          |                                         | 704.1603                | 715.9476                | 704                           | 716                           |
| 50                                          |                                         | 704.1681                | 715.9463                | 704                           | 716                           |
| 20                                          | L.V.                                    | 704.1679                | 715.9485                | 704                           | 716                           |
|                                             | H.V.                                    | 704.1649                | 715.9481                | 704                           | 716                           |

**16QAM:**

| Low Channel & High Channel 10 MHz Bandwidth |                                         |                         |                         |                               |                               |
|---------------------------------------------|-----------------------------------------|-------------------------|-------------------------|-------------------------------|-------------------------------|
| Temperature<br>(°C)                         | Power<br>Supplied<br>(V <sub>DC</sub> ) | F <sub>L</sub><br>(MHz) | F <sub>H</sub><br>(MHz) | F <sub>L</sub> Limit<br>(MHz) | F <sub>H</sub> Limit<br>(MHz) |
| -30                                         | N.V.                                    | 704.1605                | 715.8683                | 704                           | 716                           |
| -20                                         |                                         | 704.1681                | 715.8644                | 704                           | 716                           |
| -10                                         |                                         | 704.1645                | 715.8686                | 704                           | 716                           |
| 0                                           |                                         | 704.1622                | 715.8611                | 704                           | 716                           |
| 10                                          |                                         | 704.1677                | 715.8697                | 704                           | 716                           |
| 20                                          |                                         | 704.1609                | 715.8694                | 704                           | 716                           |
| 30                                          |                                         | 704.1655                | 715.8602                | 704                           | 716                           |
| 40                                          |                                         | 704.1663                | 715.8627                | 704                           | 716                           |
| 50                                          |                                         | 704.1651                | 715.8699                | 704                           | 716                           |
| 20                                          | L.V.                                    | 704.1652                | 715.8625                | 704                           | 716                           |
|                                             | H.V.                                    | 704.1626                | 715.8624                | 704                           | 716                           |

**LTE Band 25:****QPSK:**

| 10.0 MHz Middle Channel, $f_0=1882.5\text{MHz}$ |                                           |                            |                             |                |
|-------------------------------------------------|-------------------------------------------|----------------------------|-----------------------------|----------------|
| Temperature<br>(°C)                             | Voltage<br>Supplied<br>(V <sub>DC</sub> ) | Frequency<br>Error<br>(Hz) | Frequency<br>Error<br>(ppm) | Limit<br>(ppm) |
| -30                                             | N.V.                                      | 19                         | 0.010092961                 | 2.5            |
| -20                                             |                                           | 14                         | 0.007436919                 | 2.5            |
| -10                                             |                                           | 17                         | 0.009030544                 | 2.5            |
| 0                                               |                                           | 13                         | 0.00690571                  | 2.5            |
| 10                                              |                                           | 16                         | 0.008499336                 | 2.5            |
| 20                                              |                                           | 19                         | 0.010092961                 | 2.5            |
| 30                                              |                                           | 10                         | 0.005312085                 | 2.5            |
| 40                                              |                                           | 18                         | 0.009561753                 | 2.5            |
| 50                                              |                                           | 19                         | 0.010092961                 | 2.5            |
| 20                                              | L.V.                                      | 14                         | 0.007436919                 | 2.5            |
|                                                 | H.V.                                      | 17                         | 0.009030544                 | 2.5            |

**16QAM:**

| 10.0 MHz Middle Channel, $f_0=1882.5\text{MHz}$ |                                           |                            |                             |                |
|-------------------------------------------------|-------------------------------------------|----------------------------|-----------------------------|----------------|
| Temperature<br>(°C)                             | Voltage<br>Supplied<br>(V <sub>DC</sub> ) | Frequency<br>Error<br>(Hz) | Frequency<br>Error<br>(ppm) | Limit<br>(ppm) |
| -30                                             | N.V.                                      | 15                         | 0.007968127                 | 2.5            |
| -20                                             |                                           | 9                          | 0.004780876                 | 2.5            |
| -10                                             |                                           | 13                         | 0.00690571                  | 2.5            |
| 0                                               |                                           | 13                         | 0.00690571                  | 2.5            |
| 10                                              |                                           | 9                          | 0.004780876                 | 2.5            |
| 20                                              |                                           | 18                         | 0.009561753                 | 2.5            |
| 30                                              |                                           | 17                         | 0.009030544                 | 2.5            |
| 40                                              |                                           | 12                         | 0.006374502                 | 2.5            |
| 50                                              |                                           | 9                          | 0.004780876                 | 2.5            |
| 20                                              | L.V.                                      | 11                         | 0.005843293                 | 2.5            |
|                                                 | H.V.                                      | 15                         | 0.007968127                 | 2.5            |



**LTE Band 26:****QPSK:**

| 10.0 MHz Middle Channel, $f_o=831.5\text{MHz}$ |                                           |                            |                             |                |
|------------------------------------------------|-------------------------------------------|----------------------------|-----------------------------|----------------|
| Temperature<br>(°C)                            | Voltage<br>Supplied<br>(V <sub>DC</sub> ) | Frequency<br>Error<br>(Hz) | Frequency<br>Error<br>(ppm) | Limit<br>(ppm) |
| -30                                            | N.V.                                      | 15                         | 0.018039687                 | 2.5            |
| -20                                            |                                           | 15                         | 0.018039687                 | 2.5            |
| -10                                            |                                           | 18                         | 0.021647625                 | 2.5            |
| 0                                              |                                           | 15                         | 0.018039687                 | 2.5            |
| 10                                             |                                           | 16                         | 0.019242333                 | 2.5            |
| 20                                             |                                           | 18                         | 0.021647625                 | 2.5            |
| 30                                             |                                           | 12                         | 0.01443175                  | 2.5            |
| 40                                             |                                           | 5                          | 0.006013229                 | 2.5            |
| 50                                             |                                           | 10                         | 0.012026458                 | 2.5            |
| 20                                             | L.V.                                      | 13                         | 0.015634396                 | 2.5            |
|                                                | H.V.                                      | 11                         | 0.013229104                 | 2.5            |

**16QAM:**

| 10.0 MHz Middle Channel, $f_o=831.5\text{MHz}$ |                                           |                            |                             |                |
|------------------------------------------------|-------------------------------------------|----------------------------|-----------------------------|----------------|
| Temperature<br>(°C)                            | Voltage<br>Supplied<br>(V <sub>DC</sub> ) | Frequency<br>Error<br>(Hz) | Frequency<br>Error<br>(ppm) | Limit<br>(ppm) |
| -30                                            | N.V.                                      | 14                         | 0.016837041                 | 2.5            |
| -20                                            |                                           | 18                         | 0.021647625                 | 2.5            |
| -10                                            |                                           | 15                         | 0.018039687                 | 2.5            |
| 0                                              |                                           | 14                         | 0.016837041                 | 2.5            |
| 10                                             |                                           | 20                         | 0.024052916                 | 2.5            |
| 20                                             |                                           | 10                         | 0.012026458                 | 2.5            |
| 30                                             |                                           | 18                         | 0.021647625                 | 2.5            |
| 40                                             |                                           | 11                         | 0.013229104                 | 2.5            |
| 50                                             |                                           | 15                         | 0.018039687                 | 2.5            |
| 20                                             | L.V.                                      | 11                         | 0.013229104                 | 2.5            |
|                                                | H.V.                                      | 18                         | 0.021647625                 | 2.5            |

**LTE Band 41:****QPSK:**

| Low Channel & High Channel 20 MHz Bandwidth |                                         |                         |                         |                               |                               |
|---------------------------------------------|-----------------------------------------|-------------------------|-------------------------|-------------------------------|-------------------------------|
| Temperature<br>(°C)                         | Power<br>Supplied<br>(V <sub>DC</sub> ) | F <sub>L</sub><br>(MHz) | F <sub>H</sub><br>(MHz) | F <sub>L</sub> Limit<br>(MHz) | F <sub>H</sub> Limit<br>(MHz) |
| -30                                         | N.V.                                    | 2496.1905               | 2689.8985               | 2496                          | 2690                          |
| -20                                         |                                         | 2496.1949               | 2689.8957               | 2496                          | 2690                          |
| -10                                         |                                         | 2496.1988               | 2689.8948               | 2496                          | 2690                          |
| 0                                           |                                         | 2496.1968               | 2689.8964               | 2496                          | 2690                          |
| 10                                          |                                         | 2496.1992               | 2689.8976               | 2496                          | 2690                          |
| 20                                          |                                         | 2496.1947               | 2689.8923               | 2496                          | 2690                          |
| 30                                          |                                         | 2496.1954               | 2689.8963               | 2496                          | 2690                          |
| 40                                          |                                         | 2496.1934               | 2689.8922               | 2496                          | 2690                          |
| 50                                          |                                         | 2496.1982               | 2689.8955               | 2496                          | 2690                          |
| 20                                          | L.V.                                    | 2496.1944               | 2689.8984               | 2496                          | 2690                          |
|                                             | H.V.                                    | 2496.1991               | 2689.894                | 2496                          | 2690                          |

**16QAM:**

| Low Channel & High Channel 20 MHz Bandwidth |                                         |                         |                         |                               |                               |
|---------------------------------------------|-----------------------------------------|-------------------------|-------------------------|-------------------------------|-------------------------------|
| Temperature<br>(°C)                         | Power<br>Supplied<br>(V <sub>DC</sub> ) | F <sub>L</sub><br>(MHz) | F <sub>H</sub><br>(MHz) | F <sub>L</sub> Limit<br>(MHz) | F <sub>H</sub> Limit<br>(MHz) |
| -30                                         | N.V.                                    | 2496.1935               | 2689.8958               | 2496                          | 2690                          |
| -20                                         |                                         | 2496.1964               | 2689.8976               | 2496                          | 2690                          |
| -10                                         |                                         | 2496.1959               | 2689.8991               | 2496                          | 2690                          |
| 0                                           |                                         | 2496.1957               | 2689.8969               | 2496                          | 2690                          |
| 10                                          |                                         | 2496.1960               | 2689.8918               | 2496                          | 2690                          |
| 20                                          |                                         | 2496.1967               | 2689.8937               | 2496                          | 2690                          |
| 30                                          |                                         | 2496.1938               | 2689.8944               | 2496                          | 2690                          |
| 40                                          |                                         | 2496.1936               | 2689.8953               | 2496                          | 2690                          |
| 50                                          |                                         | 2496.1979               | 2689.8989               | 2496                          | 2690                          |
| 20                                          | L.V.                                    | 2496.1943               | 2689.8968               | 2496                          | 2690                          |
|                                             | H.V.                                    | 2496.1951               | 2689.8928               | 2496                          | 2690                          |

**LTE Band 66:****QPSK:**

| Low Channel & High Channel 20 MHz Bandwidth |                                         |                         |                         |                               |                               |
|---------------------------------------------|-----------------------------------------|-------------------------|-------------------------|-------------------------------|-------------------------------|
| Temperature<br>(°C)                         | Power<br>Supplied<br>(V <sub>DC</sub> ) | F <sub>L</sub><br>(MHz) | F <sub>H</sub><br>(MHz) | F <sub>L</sub> Limit<br>(MHz) | F <sub>H</sub> Limit<br>(MHz) |
| -30                                         | N.V.                                    | 1710.1368               | 1779.8348               | 1710                          | 1780                          |
| -20                                         |                                         | 1710.1354               | 1779.8314               | 1710                          | 1780                          |
| -10                                         |                                         | 1710.1301               | 1779.8389               | 1710                          | 1780                          |
| 0                                           |                                         | 1710.1329               | 1779.8373               | 1710                          | 1780                          |
| 10                                          |                                         | 1710.1369               | 1779.8343               | 1710                          | 1780                          |
| 20                                          |                                         | 1710.1352               | 1779.8349               | 1710                          | 1780                          |
| 30                                          |                                         | 1710.1345               | 1779.8345               | 1710                          | 1780                          |
| 40                                          |                                         | 1710.1375               | 1779.8305               | 1710                          | 1780                          |
| 50                                          |                                         | 1710.1359               | 1779.8342               | 1710                          | 1780                          |
| 20                                          | L.V.                                    | 1710.9502               | 1779.8311               | 1710                          | 1780                          |
|                                             | H.V.                                    | 1710.9564               | 1779.8323               | 1710                          | 1780                          |

**16QAM:**

| Low Channel & High Channel 20 MHz Bandwidth |                                         |                         |                         |                               |                               |
|---------------------------------------------|-----------------------------------------|-------------------------|-------------------------|-------------------------------|-------------------------------|
| Temperature<br>(°C)                         | Power<br>Supplied<br>(V <sub>DC</sub> ) | F <sub>L</sub><br>(MHz) | F <sub>H</sub><br>(MHz) | F <sub>L</sub> Limit<br>(MHz) | F <sub>H</sub> Limit<br>(MHz) |
| -30                                         | N.V.                                    | 1710.1305               | 1779.8312               | 1710                          | 1780                          |
| -20                                         |                                         | 1710.1324               | 1779.8355               | 1710                          | 1780                          |
| -10                                         |                                         | 1710.1341               | 1779.8322               | 1710                          | 1780                          |
| 0                                           |                                         | 1710.1359               | 1779.8381               | 1710                          | 1780                          |
| 10                                          |                                         | 1710.1381               | 1779.8313               | 1710                          | 1780                          |
| 20                                          |                                         | 1710.1307               | 1779.8337               | 1710                          | 1780                          |
| 30                                          |                                         | 1710.1389               | 1779.838                | 1710                          | 1780                          |
| 40                                          |                                         | 1710.1331               | 1779.8345               | 1710                          | 1780                          |
| 50                                          |                                         | 1710.1384               | 1779.8307               | 1710                          | 1780                          |
| 20                                          | L.V.                                    | 1710.1324               | 1779.8336               | 1710                          | 1780                          |
|                                             | H.V.                                    | 1710.137                | 1779.8354               | 1710                          | 1780                          |

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