# FCC Radio Test Report

## FCC ID: 2A25M-PRE31G

**This report concerns: Original Grant**

| | | |
|---|---|---|
| **Project No.** | : | 2108C220 |
| **Equipment** | : | Pre-install 3.1G |
| **Brand Name** | : | Clobotics |
| **Test Model** | : | Sloth pre3.1G |
| **Series Model** | : | N/A |
| **Applicant** | : | SHANGHAI CLOBOTICS TECHNOLOGY CO., LTD |
| **Address** | : | 555 DongChuan Rd., Building 5, Rm 102A,Minhang Distr., Shanghai, China |
| **Manufacturer** | : | SHANGHAI CLOBOTICS TECHNOLOGY CO., LTD |
| **Address** | : | 555 DongChuan Rd., Building 5, Rm 102A,Minhang Distr., Shanghai, China |
| **Factory** | : | Shenzhen Changkeshun Technology Co.,Ltd |
| **Address** | : | Fl.3-4,Bldg.k,Jinchangda Tech Park,Guanlan St.,Longhua Dist., Shenzhen, China |
| **Date of Receipt** | : | Sep. 09, 2021 |
| **Date of Test** | : | Sep. 10, 2021 ~ Oct. 26, 2021 |
| **Issued Date** | : | Oct. 26, 2021 |
| **Report Version** | : | R01 |
| **Test Sample** | : | Engineering Sample No.: DG2021090933 for conducted, DG2021090934 for radiated. |
| **Standard(s)** | : | 47 CFR FCC Part 27 Subpart L<br>47 CFR FCC Part 27 Subpart M<br>47 CFR FCC Part 27 Subpart C<br>47 CFR FCC Part 2<br>ANSI/TIA/EIA-603-E-2016<br>KDB 971168 D01 Power Meas License Digital Systems v03r01 |

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

Gabriel Zhu

**Prepared by :** Gabriel Zhu

Steven Lu

**Approved by :** Steven Lu

TESTING CERT #5123.02

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**Declaration**

**BTL** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

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**BTL** is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

**Limitation**

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.
Please note that the measurement uncertainty is provided for informational purpose only and is not use in determining the Pass/Fail results.

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**REPORT ISSUED HISTORY**

| Report Version | Description | Issued Date |
|---|---|---|
| R00 | Original Issue. | Oct. 18, 2021 |
| R01 | Modified the comments of TCB. | Oct. 26, 2021 |

## 1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

| FCC Part 27 Subpart L, M, C & Part 2 | | | |
|---|---|---|---|
| **Standard(s) Section** | **Test Item** | **Judgment** | **Remark** |
| 2.1046 | Output Power | PASS | ------ |
| 27.50(d)(4)<br>27.50(c)(10)<br>27.50(h)(2) | Equivalent Isotropic Radiated Power &<br>Equivalent Radiated Power | PASS | ------ |
| 2.1049 | Occupied Bandwidth | PASS | ------ |
| 2.1051<br>27.53(h)<br>27.53(m)(4) | Conducted Spurious Emissions | PASS | ------ |
| 2.1053<br>27.53(h)<br>27.53(m)(4) | Radiated Spurious Emissions | PASS | ------ |
| 2.1051<br>27.53(h)<br>27.53(m)(4) | Band Edge Measurements | PASS | ------ |
| 27.50(d)(5) | Peak To Average Ratio | PASS | ------ |
| 2.1055<br>27.54 | Frequency Stability | PASS | ------ |

Note:

(1) “N/A” denotes test is not applicable in this test report.

### 1.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.
BTL's Test Firm Registration Number for FCC: 357015
BTL's Designation Number for FCC: CN1240

### 1.2 MEASUREMENT UNCERTAINTY

The measurement uncertainty figures shall be calculated according the methods described in the ETSI TR 100 028 and shall correspond to an expansion factor (coverage factor) k=1.96 or k=2(which provide confidence levels of respectively 90% and 95.45% in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)).
Measurement Uncertainty for a Level of Confidence of 95 %, U=2xUc(y).

The BTL measurement uncertainty as below table:

A. Radiated Measurement :

| Test Site | Method | Measurement Frequency Range | Ant. H / V | U,(dB) |
|---|---|---|---|---|
| DG-CB03 (3m) | CISPR | 9KHz ~ 30MHz | - | 2.36 |
| | | 30MHz ~ 200MHz | V | 4.36 |
| | | 30MHz ~ 200MHz | H | 3.32 |
| | | 200MHz ~ 1,000MHz | V | 4.08 |
| | | 200MHz ~ 1,000MHz | H | 3.96 |
| | | 1GHz ~ 6GHz | - | 3.80 |
| | | 6GHz ~ 18GHz | - | 4.82 |

| Test Site | Method | Measurement Frequency Range | U,(dB) |
|---|---|---|---|
| DG-CB03 (1m) | CISPR | 18 GHz ~ 26.5 GHz | 3.62 |

B. Other Measurement:

| **Parameter** | **Uncertainty** |
|---|---|
| Spectrum Bandwidth | ±3.8 % |
| Maximum Output Power | ±0.95 dB |
| Power Spectral Density | ±0.86 dB |
| Frequency Stability | ±0.16 dB |
| Temperature | ±0.08 °C |
| Time | ±0.58 % |
| Supply voltages | ±0.3 % |

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

### 1.3 TEST ENVIRONMENT CONDITIONS

| Test Item | Temperature | Humidity | Test Voltage | Tested By |
|---|---|---|---|---|
| Output Power & EIRP & ERP | 22.2°C | 53% | DC 12V | Tate Liu |
| Occupied Bandwidth | 22.2°C | 53% | DC 12V | Tate Liu |
| Conducted Spurious Emissions | 22.2°C | 53% | DC 12V | Tate Liu |
| Radiated Spurious Emissions | 26°C | 52% | DC 12V | Kwok Guo |
| Band Edge | 22.2°C | 53% | DC 12V | Tate Liu |
| Peak To Average Ratio | 22.2°C | 53% | DC 12V | Tate Liu |
| Frequency Stability | Normal and Extreme | | | Tate Liu |

## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

| | | | | |
|---|---|---|---|---|
| Equipment | Pre-install 3.1G | | | |
| Brand Name | Clobotics | | | |
| Test Model | Sloth pre3.1G | | | |
| Series Model | N/A | | | |
| Model Difference(s) | N/A | | | |
| Hardware Version | DH603_MB_V1.0 | | | |
| Software Version | 2.0.7 | | | |
| Power Source | DC Voltage supplied from External Power Supply. | | | |
| Power Rating | DC 12V | | | |
| IEMI No. | Radiated | 675646644564647 | | |
| | Conducted | 664547655656558 | | |
| Modulation Type | LTE | | QPSK,16QAM | |
| Max. EIRP | LTE | Channel Bandwidth (MHz) | QPSK (dBm) | 16QAM (dBm) |
| | Band 4 | 1.4 | 23.77 | 23.08 |
| | | 3 | 23.75 | 23.03 |
| | | 5 | 23.73 | 23.06 |
| | | 10 | 23.79 | 23.05 |
| | | 15 | 23.58 | 22.94 |
| | | 20 | 23.74 | 23.28 |
| | Band 7 | 5 | 27.76 | 26.77 |
| | | 10 | 27.57 | 26.55 |
| | | 15 | 27.35 | 26.59 |
| | | 20 | 27.35 | 27.13 |
| | Band 38 | 5 | 27.94 | 27.12 |
| | | 10 | 28.19 | 27.45 |
| | | 15 | 27.89 | 27.15 |
| | | 20 | 28.04 | 27.36 |
| | Band 41 | 5 | 28.07 | 27.40 |
| | | 10 | 28.31 | 27.65 |
| | | 15 | 28.07 | 27.34 |
| | | 20 | 28.32 | 27.67 |
| Max. ERP | Band 12 | 1.4 | 19.92 | 19.07 |
| | | 3 | 19.91 | 18.95 |
| | | 5 | 19.95 | 19.29 |
| | | 10 | 20.01 | 18.87 |

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. Channel List:

| LTE Band 4 | | | | | |
|---|---|---|---|---|---|
| Test Frequency ID | Bandwidth (MHz) | $N_{UL}$ | Frequency of Uplink (MHz) | $N_{DL}$ | Frequency of Downlink (MHz) |
| Low Range | 1.4 | 19957 | 1710.7 | 1957 | 2110.7 |
| | 3 | 19965 | 1711.5 | 1965 | 2111.5 |
| | 5 | 19975 | 1712.5 | 1975 | 2112.5 |
| | 10 | 20000 | 1715 | 2000 | 2115 |
| | 15 | 20025 | 1717.5 | 2025 | 2117.5 |
| | 20 | 20050 | 1720 | 2050 | 2120 |
| Mid Range | 1.4/3/5/10/15/20 | 20175 | 1732.5 | 2175 | 2132.5 |
| High Range | 1.4 | 20393 | 1754.3 | 2393 | 2154.3 |
| | 3 | 20385 | 1753.5 | 2385 | 2153.5 |
| | 5 | 20375 | 1752.5 | 2375 | 2152.5 |
| | 10 | 20350 | 1750 | 2350 | 2150 |
| | 15 | 20325 | 1747.5 | 2325 | 2147.5 |
| | 20 | 20300 | 1745 | 2300 | 2145 |

| LTE Band 7 | | | | | |
|---|---|---|---|---|---|
| Test Frequency ID | Bandwidth (MHz) | $N_{UL}$ | Frequency of Uplink (MHz) | $N_{DL}$ | Frequency of Downlink (MHz) |
| Low Range | 5 | 20775 | 2502.5 | 2775 | 2622.5 |
| | 10 | 20800 | 2505 | 2800 | 2625 |
| | 15 | 20825 | 2507.5 | 2825 | 2627.5 |
| | 20 | 20850 | 2510 | 2850 | 2630 |
| Mid Range | 5/10/15/20 | 21100 | 2535 | 3100 | 2655 |
| High Range | 5 | 21425 | 2567.5 | 3425 | 2687.5 |
| | 10 | 21400 | 2565 | 3400 | 2685 |
| | 15 | 21375 | 2562.5 | 3375 | 2682.5 |
| | 20 | 21350 | 2560 | 3350 | 2680 |

| LTE Band 12 | | | |
|---|---|---|---|
| Test Frequency ID | Bandwidth (MHz) | EARFCN | Frequency (UL and DL) (MHz) |
| Low Range | 1.4 | 23017 | 699.7 |
| | 3 | 23025 | 700.5 |
| | 5 | 23035 | 701.5 |
| | 10 | 23060 | 704.0 |
| Mid Range | 1.4/3/5/10 | 23095 | 707.5 |
| High Range | 1.4 | 23173 | 715.3 |
| | 3 | 23165 | 714.5 |
| | 5 | 23155 | 713.5 |
| | 10 | 23130 | 711.0 |

| LTE Band 38 | | | |
|---|---|---|---|
| Test Frequency ID | Bandwidth (MHz) | EARFCN | Frequency (UL and DL) (MHz) |
| Low Range | 5 | 37775 | 2572.5 |
| | 10 | 37800 | 2575 |
| | 15 | 37825 | 2577.5 |
| | 20 | 37850 | 2580 |
| Mid Range | 5/10/15/20 | 38000 | 2600 |
| High Range | 5 | 38225 | 2617.5 |
| | 10 | 38200 | 2615 |
| | 15 | 38175 | 2612.5 |
| | 20 | 38150 | 2610 |

| LTE Band 41 | | | |
|---|---|---|---|
| Test Frequency ID | Bandwidth (MHz) | EARFCN | Frequency (UL and DL) (MHz) |
| Low Range | 5 | 40165 | 2547.5 |
| | 10 | 40190 | 2550 |
| | 15 | 40215 | 2552.5 |
| | 20 | 40240 | 2555 |
| Mid Range | 5/10/15/20 | 40690 | 2600 |
| High Range | 5 | 41215 | 2652.5 |
| | 10 | 41190 | 2650 |
| | 15 | 41165 | 2647.5 |
| | 20 | 41140 | 2645 |

3. Table for Filed Antenna:

| Brand | Model Name | Antenna Type | Connector | Gain (dBi) | Note |
|---|---|---|---|---|---|
| N/A | N/A | FPC | N/A | 1.86 | LTE Band 4 |
| N/A | N/A | FPC | N/A | 4.94 | LTE Band 7 |
| N/A | N/A | FPC | N/A | -0.85 | LTE Band 12 |
| N/A | N/A | FPC | N/A | 4.75 | LTE Band 38 |
| N/A | N/A | FPC | N/A | 4.94 | LTE Band 41 |

Note: The antenna gain is provided by the manufacturer.

## 2.2 DESCRIPTION OF TEST MODES

Following mode(s) is (were) found to be the worst case(s) and selected for the final test.

| LTE BAND 4 MODE | | | | | |
|---|---|---|---|---|---|
| Test Item | Available Channel | Tested Channel | Channel Bandwidth | Modulation | Mode |
| Output Power & EIRP | 19957 to 20393 | 19957, 20175, 20393 | 1.4MHz | QPSK, 16QAM | 1RB/3RB/6RB |
| | 19965 to 20385 | 19965, 20175, 20385 | 3MHz | QPSK, 16QAM | 1RB/8RB/15RB |
| | 19975 to 20375 | 19975, 20175, 20375 | 5MHz | QPSK, 16QAM | 1RB/12RB/25RB |
| | 20000 to 20350 | 20000, 20175, 20350 | 10MHz | QPSK, 16QAM | 1RB/25RB/50RB |
| | 20025 to 20325 | 20025, 20175, 20325 | 15MHz | QPSK, 16QAM | 1RB/36RB/75RB |
| | 20050 to 20300 | 20050, 20175, 20300 | 20MHz | QPSK, 16QAM | 1RB/50RB/100RB |
| Occupied Bandwidth | 19957 to 20393 | 19957, 20175, 20393 | 1.4MHz | QPSK, 16QAM | 6RB |
| | 19965 to 20385 | 19965, 20175, 20385 | 3MHz | QPSK, 16QAM | 15RB |
| | 19975 to 20375 | 19975, 20175, 20375 | 5MHz | QPSK, 16QAM | 25RB |
| | 20000 to 20350 | 20000, 20175, 20350 | 10MHz | QPSK, 16QAM | 50RB |
| | 20025 to 20325 | 20025, 20175, 20325 | 15MHz | QPSK, 16QAM | 75 RB |
| | 20050 to 20300 | 20050, 20175, 20300 | 20MHz | QPSK, 16QAM | 100RB |
| Conducted Spurious Emissions | 19957 to 20393 | 20175 | 1.4MHz | QPSK | 1RB |
| | 19975 to 20375 | 20175 | 5MHz | QPSK | 1RB |
| | 20050 to 20300 | 20175 | 20MHz | QPSK | 1RB |
| Radiated Spurious Emissions | 19957 to 20393 | 20175 | 1.4MHz | QPSK | 1RB |
| | 19975 to 20375 | 20175 | 5MHz | QPSK | 1RB |
| | 20050 to 20300 | 20175 | 20MHz | QPSK | 1RB |
| Band Edge | 19957 to 20393 | 19957, 20393 | 1.4MHz | QPSK | 1RB/6RB |
| | 19965 to 20385 | 19965, 20385 | 3MHz | QPSK | 1RB/15RB |
| | 19975 to 20375 | 19975, 20375 | 5MHz | QPSK | 1RB/25RB |
| | 20000 to 20350 | 20000, 20350 | 10MHz | QPSK | 1RB/50RB |
| | 20025 to 20325 | 20025, 20325 | 15MHz | QPSK | 1RB/75RB |
| | 20050 to 20300 | 20050, 20300 | 20MHz | QPSK | 1RB/100RB |
| Peak To Average Ratio | 19957 to 20393 | 19957, 20175, 20393 | 1.4MHz | QPSK, 16QAM | 1RB |
| | 19965 to 20385 | 19965, 20175, 20385 | 3MHz | QPSK, 16QAM | 1RB |
| | 19975 to 20375 | 19975, 20175, 20375 | 5MHz | QPSK, 16QAM | 1RB |
| | 20000 to 20350 | 20000, 20175, 20350 | 10MHz | QPSK, 16QAM | 1RB |
| | 20025 to 20325 | 20025, 20175, 20325 | 15MHz | QPSK, 16QAM | 1RB |
| | 20050 to 20300 | 20050, 20175, 20300 | 20MHz | QPSK, 16QAM | 1RB |
| Frequency Stability | 19957 to 20393 | 20175 | 1.4MHz | QPSK | 1RB |
| | 19965 to 20385 | 20175 | 3MHz | QPSK | 1RB |
| | 19975 to 20375 | 20175 | 5MHz | QPSK | 1RB |
| | 20000 to 20350 | 20175 | 10MHz | QPSK | 1RB |
| | 20025 to 20325 | 20175 | 15MHz | QPSK | 1RB |
| | 20050 to 20300 | 20175 | 20MHz | QPSK | 1RB |

| LTE BAND 7 MODE | | | | | |
|---|---|---|---|---|---|
| Test Item | Available Channel | Tested Channel | Channel Bandwidth | Modulation | Mode |
| Output Power & EIRP | 20775 to 21425 | 20775, 21100, 21425 | 5MHz | QPSK, 16QAM | 1RB/12RB/25RB |
| | 20800 to 21400 | 20800, 21100, 21400 | 10MHz | QPSK, 16QAM | 1RB/25RB/50RB |
| | 20825 to 21375 | 20825, 21100, 21375 | 15MHz | QPSK, 16QAM | 1RB/36RB/75RB |
| | 20850 to 21350 | 20850, 21100, 21350 | 20MHz | QPSK, 16QAM | 1RB/50RB/100RB |
| Occupied Bandwidth | 20775 to 21425 | 20775, 21100, 21425 | 5MHz | QPSK, 16QAM | 25RB |
| | 20800 to 21400 | 20800, 21100, 21400 | 10MHz | QPSK, 16QAM | 50RB |
| | 20825 to 21375 | 20825, 21100, 21375 | 15MHz | QPSK, 16QAM | 75RB |
| | 20850 to 21350 | 20850, 21100, 21350 | 20MHz | QPSK, 16QAM | 100RB |
| Conducted Spurious Emissions | 20775 to 21425 | 21100 | 5MHz | QPSK | 1RB |
| | 20850 to 21350 | 21100 | 20MHz | QPSK | 1RB |
| Radiated Spurious Emissions | 20775 to 21425 | 21100 | 5MHz | QPSK | 1RB |
| | 20850 to 21350 | 21100 | 20MHz | QPSK | 1RB |
| Band Edge | 20775 to 21425 | 20775, 21425 | 5MHz | QPSK | 1RB/25RB |
| | 20800 to 21400 | 20800, 21400 | 10MHz | QPSK | 1RB/50RB |
| | 20825 to 21375 | 20825, 21375 | 15MHz | QPSK | 1RB/75RB |
| | 20850 to 21350 | 20850, 21350 | 20MHz | QPSK | 1RB/100RB |
| Peak To Average Ratio | 20775 to 21425 | 20775, 21100, 21425 | 5MHz | QPSK, 16QAM | 1RB |
| | 20800 to 21400 | 20800, 21100, 21400 | 10MHz | QPSK, 16QAM | 1RB |
| | 20825 to 21375 | 20825, 21100, 21375 | 15MHz | QPSK, 16QAM | 1RB |
| | 20850 to 21350 | 20850, 21100, 21350 | 20MHz | QPSK, 16QAM | 1RB |
| Frequency Stability | 20775 to 21425 | 21100 | 5MHz | QPSK | 1RB |
| | 20800 to 21400 | 21100 | 10MHz | QPSK | 1RB |
| | 20825 to 21375 | 21100 | 15MHz | QPSK | 1RB |
| | 20850 to 21350 | 21100 | 20MHz | QPSK | 1RB |

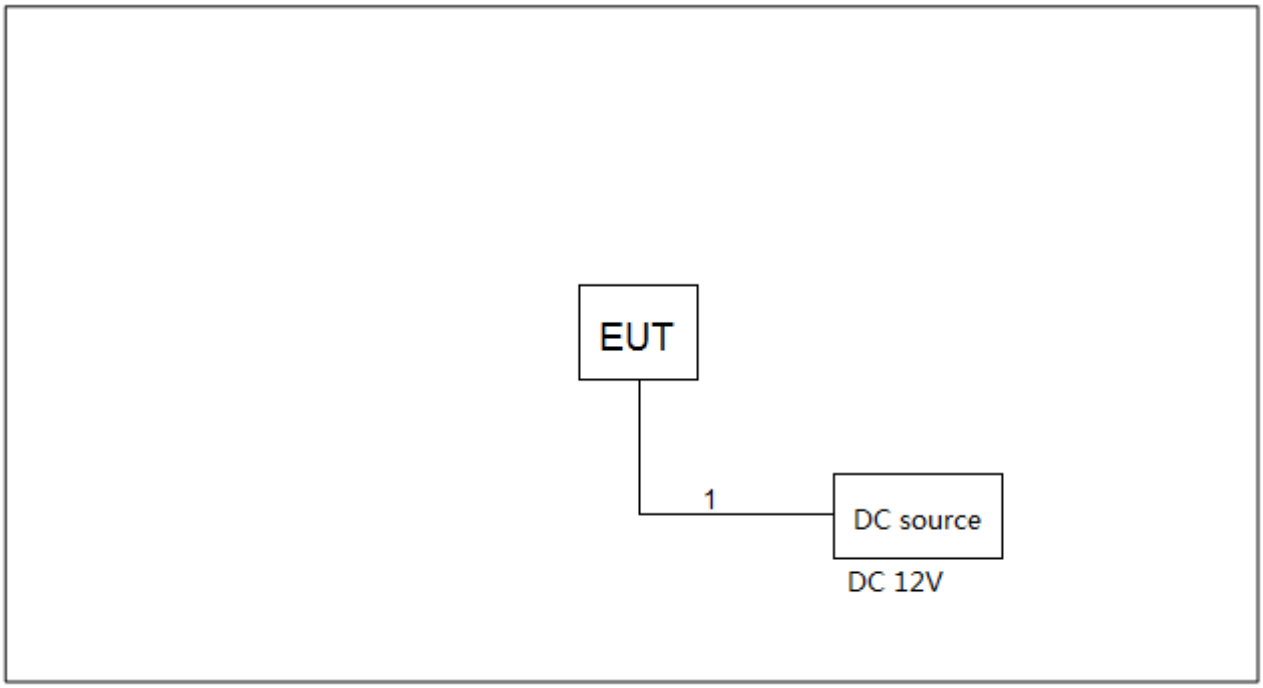
| LTE BAND 12 | | | | | |
|---|---|---|---|---|---|
| Test Item | Available Channel | Tested Channel | Channel Bandwidth | Modulation | Mode |
| ERP | 23017 to 23173 | 23017, 23095, 23173 | 1.4MHz | QPSK, 16QAM | 1RB/3RB/6RB |
| | 23025 to 23165 | 23025, 23095, 23165 | 3MHz | QPSK, 16QAM | 1RB/8RB/15RB |
| | 23035 to 23155 | 23035, 23095, 23155 | 5MHz | QPSK, 16QAM | 1RB/12RB/25RB |
| | 23060 to 23130 | 23060, 23095, 23130 | 10MHz | QPSK, 16QAM | 1RB/25RB/50RB |
| Frequency Stability | 23017 to 23173 | 23095 | 1.4MHz | QPSK | 1 RB |
| | 23025 to 23165 | 23095 | 3MHz | QPSK | 1 RB |
| | 23035 to 23155 | 23095 | 5MHz | QPSK | 1 RB |
| | 23060 to 23130 | 23095 | 10MHz | QPSK | 1 RB |
| Occupied Bandwidth | 23017 to 23173 | 23017, 23095, 23173 | 1.4MHz | QPSK, 16QAM | 6RB |
| | 23025 to 23165 | 23025, 23095, 23165 | 3MHz | QPSK, 16QAM | 15RB |
| | 23035 to 23155 | 23035, 23095, 23155 | 5MHz | QPSK, 16QAM | 25RB |
| | 23060 to 23130 | 23060, 23095, 23130 | 10MHz | QPSK, 16QAM | 50RB |
| Peak to Average Ratio | 23017 to 23173 | 23017, 23095, 23173 | 1.4MHz | QPSK, 16QAM | 1 RB |
| | 23025 to 23165 | 23025, 23095, 23165 | 3MHz | QPSK, 16QAM | 1 RB |
| | 23035 to 23155 | 23035, 23095, 23155 | 5MHz | QPSK, 16QAM | 1 RB |
| | 23060 to 23130 | 23060, 23095, 23130 | 10MHz | QPSK, 16QAM | 1 RB |
| Band Edge | 23017 to 23173 | 23017,23173 | 1.4MHz | QPSK | 1RB/6RB |
| | 23025 to 23165 | 23025,23165 | 3MHz | QPSK | 1RB/15RB |
| | 23035 to 23155 | 23035,23155 | 5MHz | QPSK | 1RB/25RB |
| | 23060 to 23130 | 23060,23130 | 10MHz | QPSK | 1RB/50RB |
| Conducted Emission | 23017 to 23173 | 23095 | 1.4MHz | QPSK | 1 RB |
| | 23025 to 23165 | 23095 | 3MHz | QPSK | 1 RB |
| | 23035 to 23155 | 23095 | 5MHz | QPSK | 1 RB |
| | 23060 to 23130 | 23095 | 10MHz | QPSK | 1 RB |
| Radiated Emission | 23017 to 23173 | 23095 | 1.4MHz | QPSK | 1 RB |
| | 23017 to 23173 | 23095 | 5MHz | QPSK | 1 RB |
| | 23060 to 23130 | 23095 | 10MHz | QPSK | 1 RB |

| LTE BAND 38 MODE | | | | | |
|---|---|---|---|---|---|
| Test Item | Available Channel | Tested Channel | Channel Bandwidth | Modulation | Mode |
| Output Power & EIRP | 37775 to 38225 | 37775, 38000, 38225 | 5MHz | QPSK, 16QAM | 1RB/12RB/25RB |
| | 37800 to 38200 | 37800, 38000, 38200 | 10MHz | QPSK, 16QAM | 1RB/25RB/50RB |
| | 37825 to 38175 | 37825, 38000, 38175 | 15MHz | QPSK, 16QAM | 1RB/36RB/75RB |
| | 37850 to 38150 | 37850, 38000, 38150 | 20MHz | QPSK, 16QAM | 1RB/50RB/100RB |
| Occupied Bandwidth | 37775 to 38225 | 37775, 38000, 38225 | 5MHz | QPSK, 16QAM | 25RB |
| | 37800 to 38200 | 37800, 38000, 38200 | 10MHz | QPSK, 16QAM | 50RB |
| | 37825 to 38175 | 37825, 38000, 38175 | 15MHz | QPSK, 16QAM | 75RB |
| | 37850 to 38150 | 37850, 38000, 38150 | 20MHz | QPSK, 16QAM | 100RB |
| Conducted Spurious Emissions | 37850 to 38150 | 38000 | 5MHz | QPSK | 1RB |
| | 37850 to 38150 | 38000 | 20MHz | QPSK | 1RB |
| Radiated Spurious Emissions | 37850 to 38150 | 38000 | 5MHz | QPSK | 1RB |
| | 37850 to 38150 | 38000 | 20MHz | QPSK | 1RB |
| Band Edge | 37775 to 38225 | 37775, 38225 | 5MHz | QPSK | 1RB/25RB |
| | 37800 to 38200 | 37800, 38200 | 10MHz | QPSK | 1RB/50RB |
| | 37825 to 38175 | 37825, 38175 | 15MHz | QPSK | 1RB/75RB |
| | 37850 to 38150 | 37850, 38150 | 20MHz | QPSK | 1RB/100RB |
| Peak to Average Ratio | 37775 to 38225 | 37775, 38000, 38225 | 5MHz | QPSK, 16QAM | 1RB |
| | 37800 to 38200 | 37800, 38000, 38200 | 10MHz | QPSK, 16QAM | 1RB |
| | 37825 to 38175 | 37825, 38000, 38175 | 15MHz | QPSK, 16QAM | 1RB |
| | 37850 to 38150 | 37850, 38000, 38150 | 20MHz | QPSK, 16QAM | 1RB |
| Frequency Stability | 37775 to 38225 | 38000 | 5MHz | QPSK | 1RB |
| | 37800 to 38200 | 38000 | 10MHz | QPSK | 1RB |
| | 37825 to 38175 | 38000 | 15MHz | QPSK | 1RB |
| | 37850 to 38150 | 38000 | 20MHz | QPSK | 1RB |

| LTE BAND 41 MODE | | | | | |
|---|---|---|---|---|---|
| Test Item | Available Channel | Tested Channel | Channel Bandwidth | Modulation | Mode |
| Output Power & EIRP | 40165 to 41215 | 40165, 40690, 41215 | 5MHz | QPSK, 16QAM | 1RB/12RB/25RB |
| | 40190 to 41190 | 40190, 40690, 41190 | 10MHz | QPSK, 16QAM | 1RB/25RB/50RB |
| | 40215 to 41165 | 40215, 40690, 41165 | 15MHz | QPSK, 16QAM | 1RB/36RB/75RB |
| | 40240 to 41140 | 40240, 40690, 41140 | 20MHz | QPSK, 16QAM | 1RB/50RB/100RB |
| Occupied Bandwidth | 40165 to 41215 | 40165, 40690, 41215 | 5MHz | QPSK, 16QAM | 25RB |
| | 40190 to 41190 | 40190, 40690, 41190 | 10MHz | QPSK, 16QAM | 50RB |
| | 40215 to 41165 | 40215, 40690, 41165 | 15MHz | QPSK, 16QAM | 75RB |
| | 40240 to 41140 | 40240, 40690, 41140 | 20MHz | QPSK, 16QAM | 100RB |
| Conducted Spurious Emissions | 40165 to 41215 | 40690 | 5MHz | QPSK | 1RB |
| | 40240 to 41140 | 40690 | 20MHz | QPSK | 1RB |
| Radiated Spurious Emissions | 40165 to 41215 | 40690 | 5MHz | QPSK | 1RB |
| | 40240 to 41140 | 40690 | 20MHz | QPSK | 1RB |
| Band Edge | 40165 to 41215 | 40165, 41215 | 5MHz | QPSK | 1RB/25RB |
| | 40190 to 41190 | 40190, 41190 | 10MHz | QPSK | 1RB/50RB |
| | 40215 to 41165 | 40215, 41165 | 15MHz | QPSK | 1RB/75RB |
| | 40240 to 41140 | 40240, 41140 | 20MHz | QPSK | 1RB/100RB |
| Peak to Average Ratio | 40165 to 41215 | 40165, 40690, 41215 | 5MHz | QPSK, 16QAM | 1RB |
| | 40190 to 41190 | 40190, 40690, 41190 | 10MHz | QPSK, 16QAM | 1RB |
| | 40215 to 41165 | 40215, 40690, 41165 | 15MHz | QPSK, 16QAM | 1RB |
| | 40240 to 41140 | 40240, 40690, 41140 | 20MHz | QPSK, 16QAM | 1RB |
| Frequency Stability | 40165 to 41215 | 40690 | 5MHz | QPSK | 1RB |
| | 40190 to 41190 | 40690 | 10MHz | QPSK | 1RB |
| | 40215 to 41165 | 40690 | 15MHz | QPSK | 1RB |
| | 40240 to 41140 | 40690 | 20MHz | QPSK | 1RB |

Note:
There is only one transmitting port in the sample, and the output power has MPR backoff mechanism. The output power of 16QAM will be 1dBm smaller than that of QPSK. All bands of band edge had been evaluated. It is found the Bandwidth 5MHz of LTE Band 25 is worst and recorded.

## 2.3 BLOCK DIGRAM SHOWING THECONFIGURATIONOFSYSTEMTESTED




## 2.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| Item | Equipment | Mfr/Brand | Model/Type No. | Series No. |
|---|---|---|---|---|
| - | DC Source | TRUE-POWER | GPC30300N | N/A |

| Item | Cable Type | Shielded Type | Ferrite Core | Length |
|---|---|---|---|---|
| 1 | DC Cable | NO | NO | 1m |

# 3. TEST RESULT

## 3.1 OUTPUT POWER MEASUREMENT

### 3.1.1 LIMIT

Mobile / Portable station are limited to 1 watts e.i.r.p. (Part 27 Subpart L)
Mobile / Portable station are limited to 2 watts e.i.r.p. (Part 27 Subpart M)
Mobile / Portable station are limited to 3 watts e.r.p. (Part 27 Subpart C)

### 3.1.2 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 5.

**EIRP:**

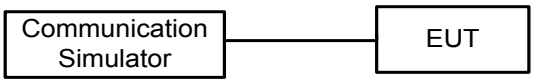
EIRP = Output Power + Antenan gain

**Output Power:**

The EUT was set up for the maximum power with WCDMA and LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

### 3.1.3 TEST SETUP LAYOUT

Output Power Measurement




### 3.1.4 TEST DEVIATION

No deviation

### 3.1.5 TEST RESULTS

Please refer to the APPENDIX A.

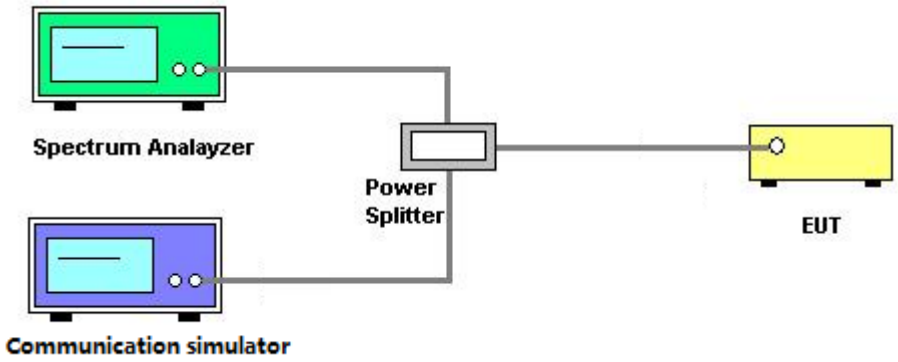
## 3.2 OCCUPIED BANDWIDTH MEASUREMENT

### 3.2.1 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 4.

1. The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth and 26dB bandwidth.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. RBW=(1% ~ 5%)*EBW
   VBW≥3* RBW
4. Set spectrum analyzer with Peak detector.

### 3.2.2 TEST SETUP LAYOUT




### 3.2.3 TEST DEVIATION

No deviation

### 3.2.4 TEST RESULTS

Please refer to the APPENDIX B.

## 3.3 CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

### 3.3.1 LIMIT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to -13dBm. (Part 27 Subpart L)

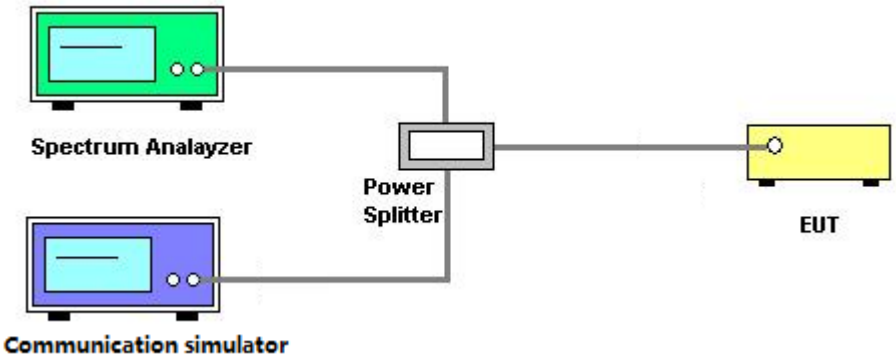
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 55 + 10 log(P) dB. The emission limit equal to -25dBm. (Part 27 Subpart M)

### 3.3.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 6.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured. Set RBW>=1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
3. Set spectrum analyzer with Peak detector.
4. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

### 3.3.3 TEST SETUP LAYOUT




### 3.3.4 TEST DEVIATION

No deviation

### 3.3.5 TEST RESULTS

Please refer to the APPENDIX C.

## 3.4 RADIATED SPURIOUS EMISSIONS MEASUREMENT

### 3.4.1 LIMIT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to -13dBm. (Part 27 Subpart L)

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 55 + 10 log(P) dB. The emission limit equal to -25dBm. (Part 27 Subpart M)

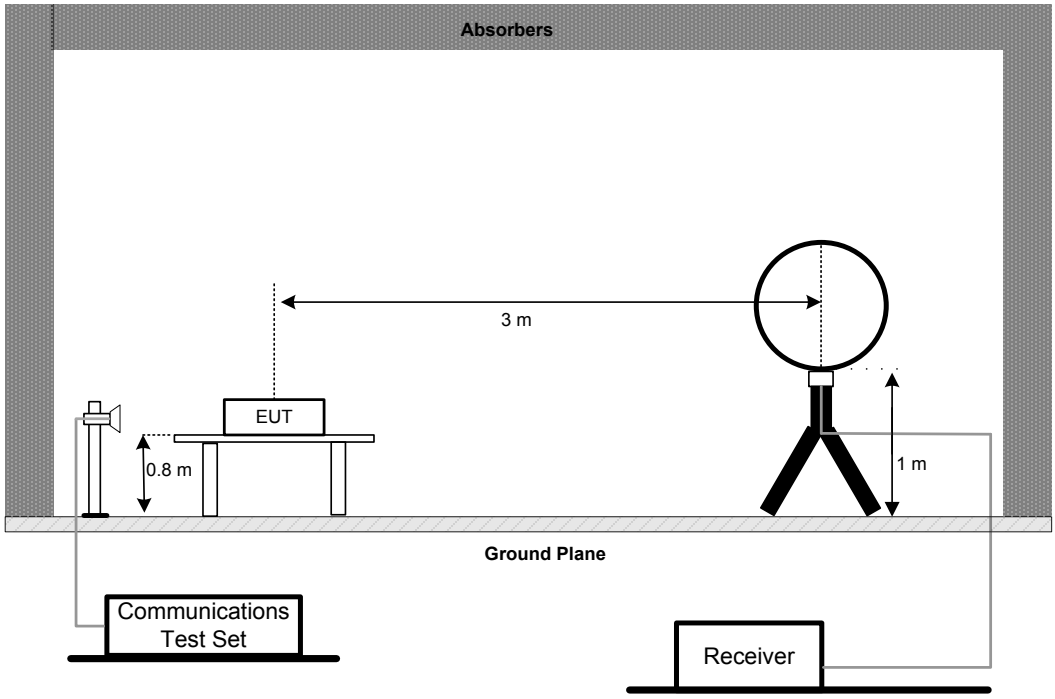
### 3.4.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 6.2.

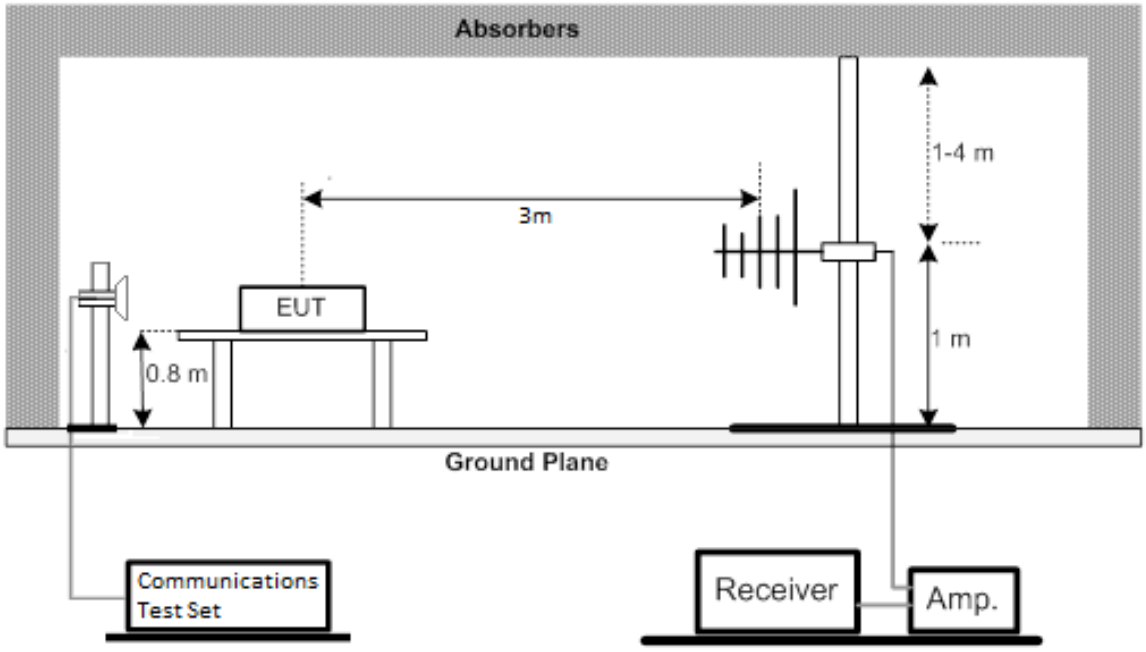
1. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
2. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value “ of step a. Record the power level of S.G
3. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.
4. ERP can be calculated form EIRP by subtracting the gain of dipole, ERP = EIPR - 2.15dBi.
5. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

### 3.4.3 TEST SETUP LAYOUT

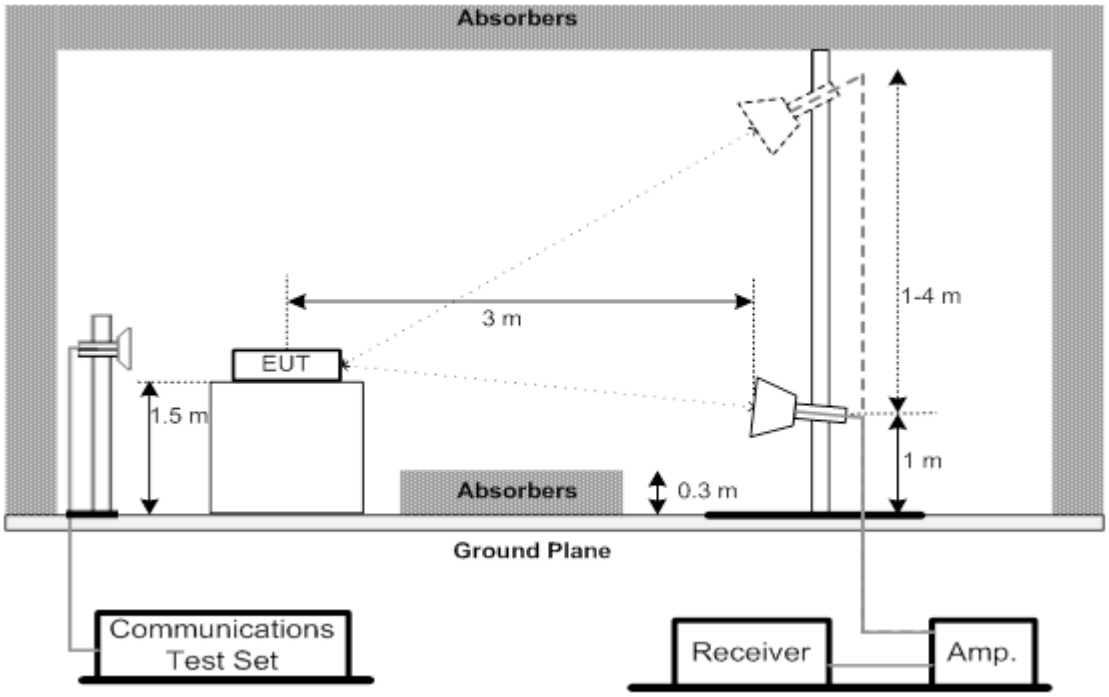
**Below 30MHz**




**30MHz to 1GHz**



**Above 1GHz**




### 3.4.4 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the APPENDIX D.

### 3.4.5 TEST RESULTS (30MHZ TO 1000MHZ)

Please refer to the APPENDIX E.

### 3.4.6 TEST RESULTS (ABOVE 1000MHZ)

Please refer to the APPENDIX F.

## 3.5 BAND EDGE MEASUREMENT

### 3.5.1 LIMIT

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 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed. (Part 27 Subpart L)

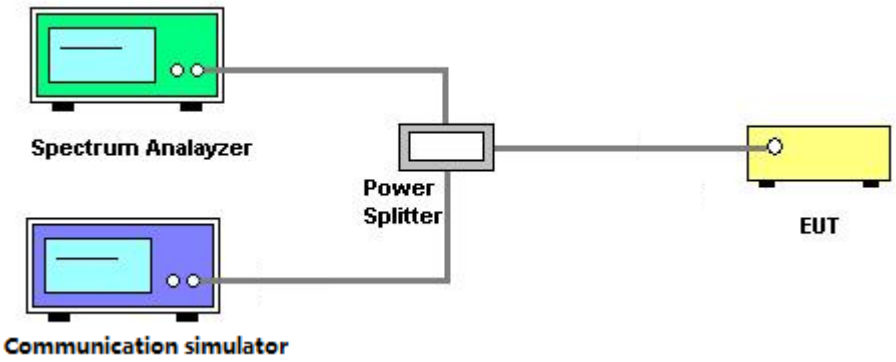
For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. (Part 27 Subpart M)

### 3.5.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 6.

1. All measurements were done at low and high operational frequency range.
2. Record the max trace plot into the test report.

### 3.5.3 TEST SETUP LAYOUT




### 3.5.4 TEST DEVIATION

No deviation

### 3.5.5 TEST RESULTS

Please refer to the APPENDIX G.

## 3.6 PEAK TO AVERAGE RATIO MEASUREMENT

### 3.6.1 LIMIT

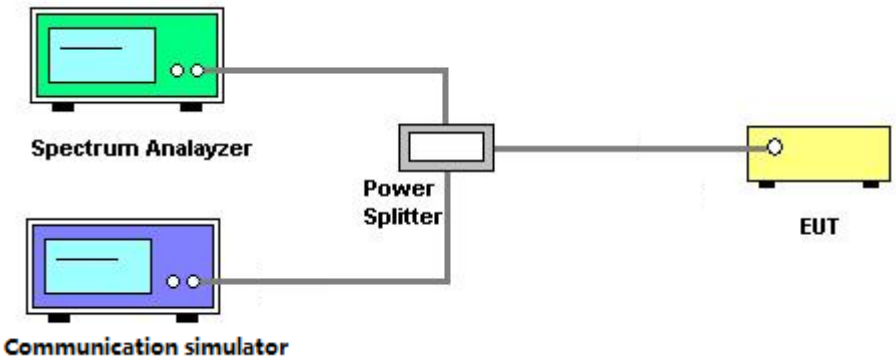
In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB.

### 3.6.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 5.7.

1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.

### 3.6.3 TEST SETUP LAYOUT




### 3.6.4 TEST DEVIATION

No deviation

### 3.6.5 TEST RESULTS

Please refer to the APPENDIX H.

## 3.7 FREQUENCY STABILITY MEASUREMENT

### 3.7.1 LIMIT

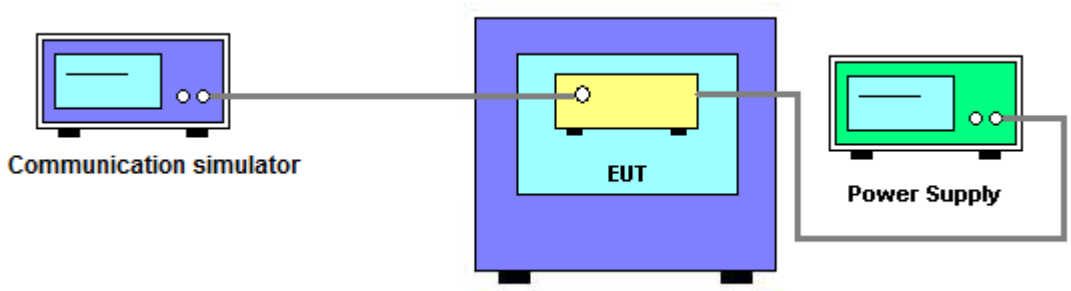
±1.5 ppm is for base and fixed station. ±2.5 ppm is for mobile station.

### 3.7.2 TEST PROCEDURES

The testing follows FCC KDB 971168 v03r01 Section 9.

1. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
2. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
3. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5°C during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.
4. The frequency error was recorded frequency error from the communication simulator.

### 3.7.3 TEST SETUP LAYOUT




### 3.7.4 TEST DEVIATION

No deviation

### 3.7.5 TEST RESULTS

Please refer to the APPENDIX I.

## 4. LIST OF MEASUREMENT EQUIPMENTS

| Radiated Spurious Emission Measurement | | | | | |
|---|---|---|---|---|---|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1 | Antenna | Schwarzbeck | VULB9160 | 9160-3232 | Mar. 15, 2022 |
| 2 | Amplifier | Agilent | 8449B | 3008A02334 | Feb. 27, 2022 |
| 3 | High Pass Filter | Wairrwright Instruments Gmbh | WHK 1.5/15G-10ST | 11 | Feb. 27, 2022 |
| 4 | Band Reject Filter | Wairrwright Instruments Gmbh | WRCG 1710/1785-1690/1805-60/ 12SS | 38 | Feb. 27, 2022 |
| 5 | Band Reject Filter | Wairrwright Instruments Gmbh | WRCG 824/849-810/863-60/9SS | 7 | Feb. 27, 2022 |
| 6 | Band Reject Filter | Wairrwright Instruments Gmbh | WRCG 880/915-860/935-60/9SS | 14 | Feb. 27, 2022 |
| 7 | Band Reject Filter | Wairrwright Instruments Gmbh | WRCG 1850/1910-1830/1930-60/ 10SS | 17 | Feb. 27, 2022 |
| 8 | High Pass Filter | Wairrwright Instruments Gmbh | WHK3.1/18G-10SS | 24 | Feb. 27, 2022 |
| 9 | Wireless Communication Test SET | Agilent | E5515C | MY48364183 | Feb. 28, 2022 |
| 10 | Microwave Preamplifier With Adaptor | EMC INSTRUMENT | EMC2654045 | 980039 & HA01 | Feb. 28, 2022 |
| 11 | Receiver | Agilent | N9038A | MY52130039 | Mar. 19, 2022 |
| 12 | wideband radio communication tester | R&S | CMW500 | 152372 | Feb. 27, 2022 |
| 13 | High pass filter | KANGMAIWEI | ZHPF-M3-12.75G-3869 | B2015073763 | Feb. 07, 2022 |
| 14 | High pass filter | KANGMAIWEI | ZHPF-M1000-4000-1 | B2015073762 | Feb. 07, 2022 |
| 15 | High pass filter | KANGMAIWEI | ZHPF-M6-186-1727 | B2015073764 | Feb. 07, 2022 |
| 16 | Cable | emci | LMR-400(30MHz-1GHz) (8m+5m) | N/A | May 20, 2022 |
| 17 | Cable | mitron | RWLP50-4.0A-KJ-SMSM-12M | N/A | Nov. 23, 2021 |
| 18 | Controller | ETS-Lindgren | 2090 | N/A | N/A |
| 19 | Measurement Software | Farad | EZ-EMC Ver.NB-03A1-01 | N/A | N/A |
| 20 | Loop Antenna | EM | EM-6876-1 | 230 | Apr. 28, 2022 |
| 21 | Double Ridged Guide Antenna | ETS | 3115 | 75846 | Mar. 17, 2022 |
| 22 | Broad-Band Horn Antenna | Schwarzbeck | BBHA 9170 | 9170319 | Jun. 30, 2022 |

| Conducted Measurement | | | | | |
|---|---|---|---|---|---|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1 | Wireless Communication Test SET | Agilent | E5515C | MY48364183 | Feb. 28, 2022 |
| 2 | EXA Spectrum Analyzer | Agilent | N9010A | MY50520044 | Feb. 28, 2022 |
| 3 | POWER SPLITTER | Mini-Circuits | ZFRSC-123-S+ | 331000910-1 | Feb. 27, 2022 |
| 4 | wideband radio communication tester | R&S | CMW500 | 152372 | Feb. 27, 2022 |

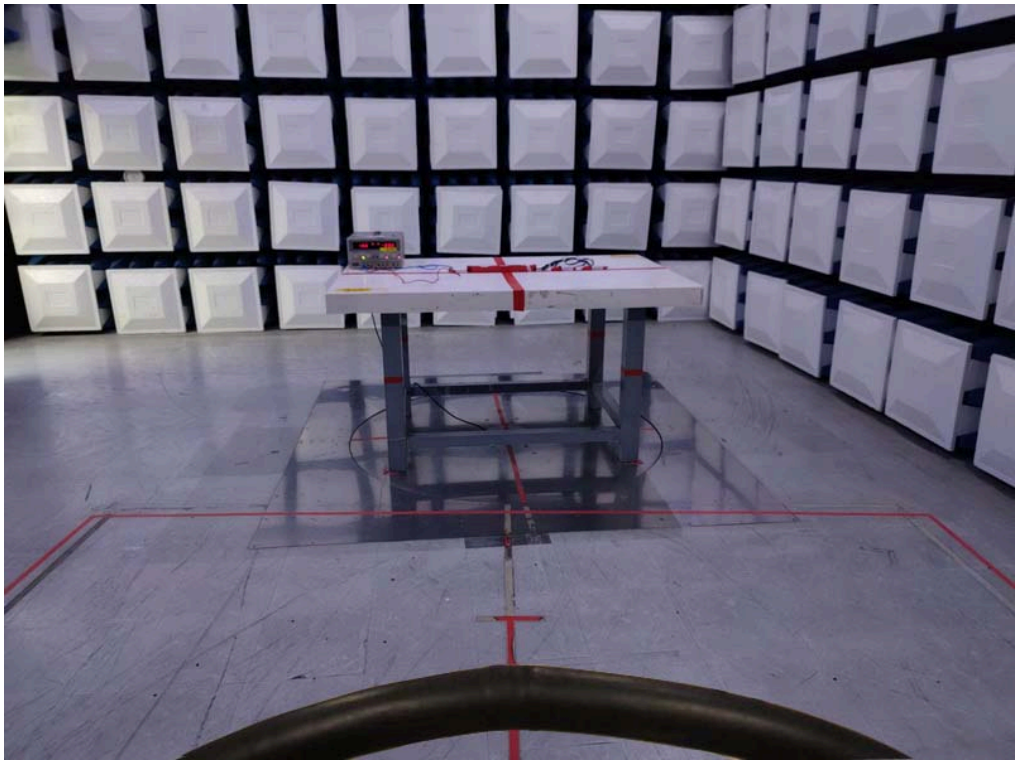
| Frequency Stability Measurement | | | | | |
|---|---|---|---|---|---|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1 | Wireless Communication Test SET | Agilent | E5515C | MY48364183 | Feb. 28, 2022 |
| 2* | Multi-output DC Power Supply | GW Instek | GPC-3030DN | EK880675 | Jul. 25, 2023 |
| 3 | POWER SPLITTER | Mini-Circuits | ZFRSC-123-S+ | 331000910-1 | Feb. 27, 2022 |
| 4 | wideband radio communication tester | R&S | CMW500 | 152372 | Feb. 27, 2022 |
| 5 | Const Temp,& Humidity Chamber | Bell | BTH-50C | 20170306001 | Feb. 27, 2022 |

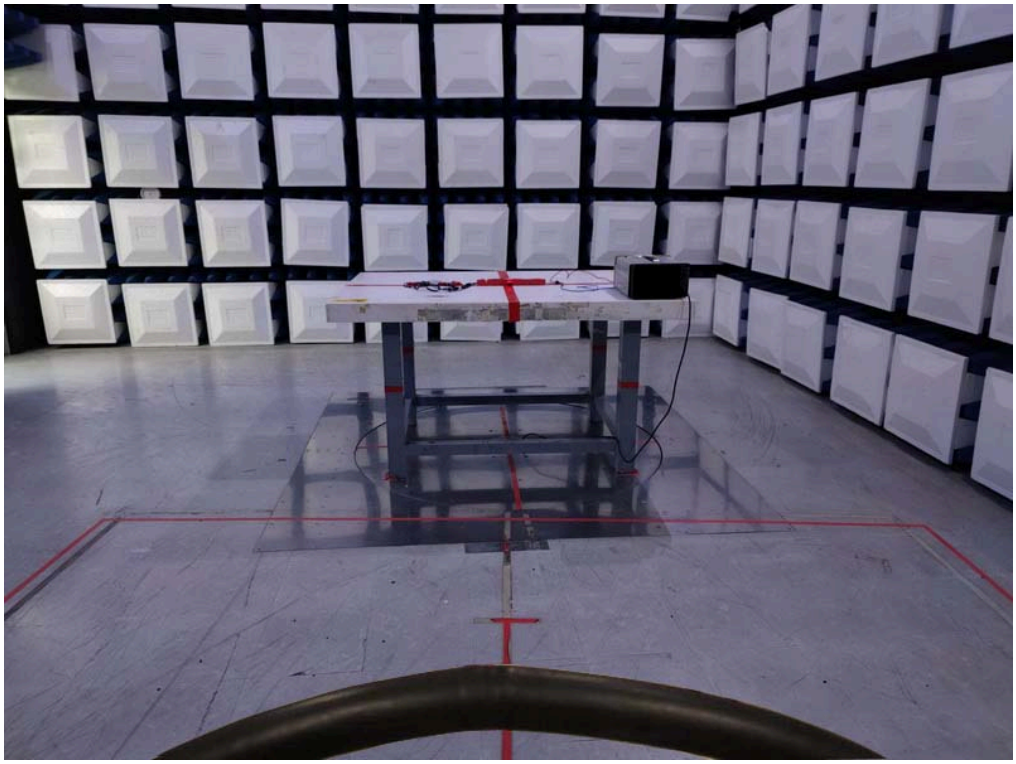
Remark: “N/A” denotes no model name, serial no. or calibration specified.
“*” calibration period of equipment list is three year.
Except * item, all calibration period of equipment list is one year.

## 5. EUT TEST PHOTO

**Radiated Emissions Test Photos**

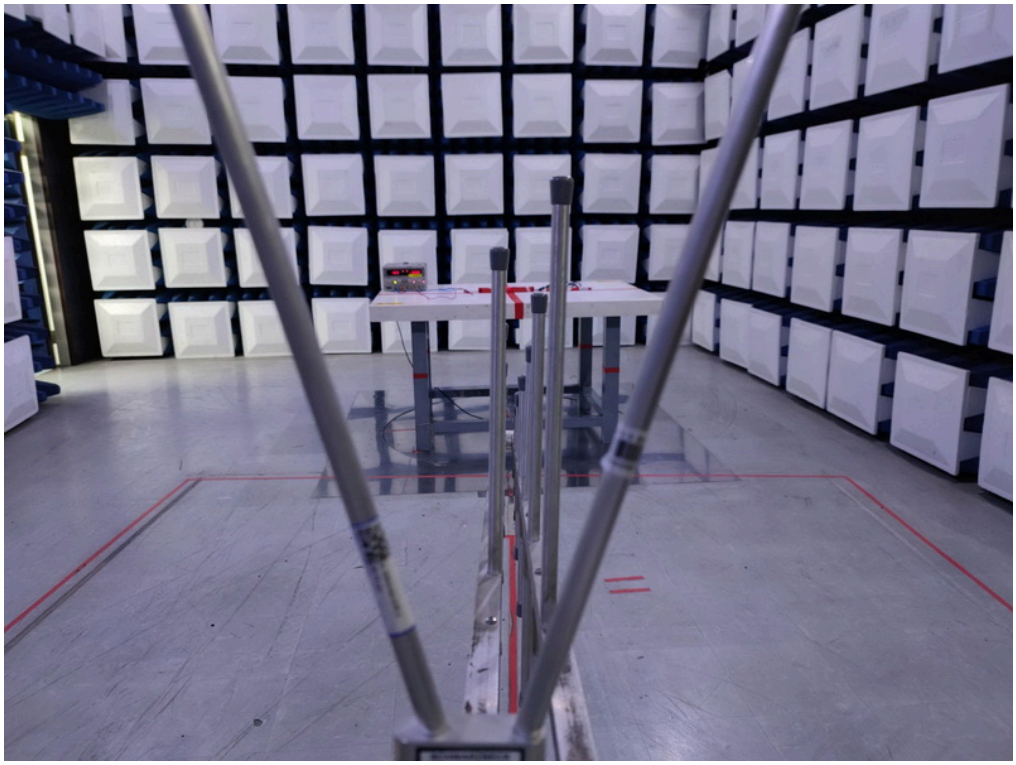
**9 kHz to 30 MHz**

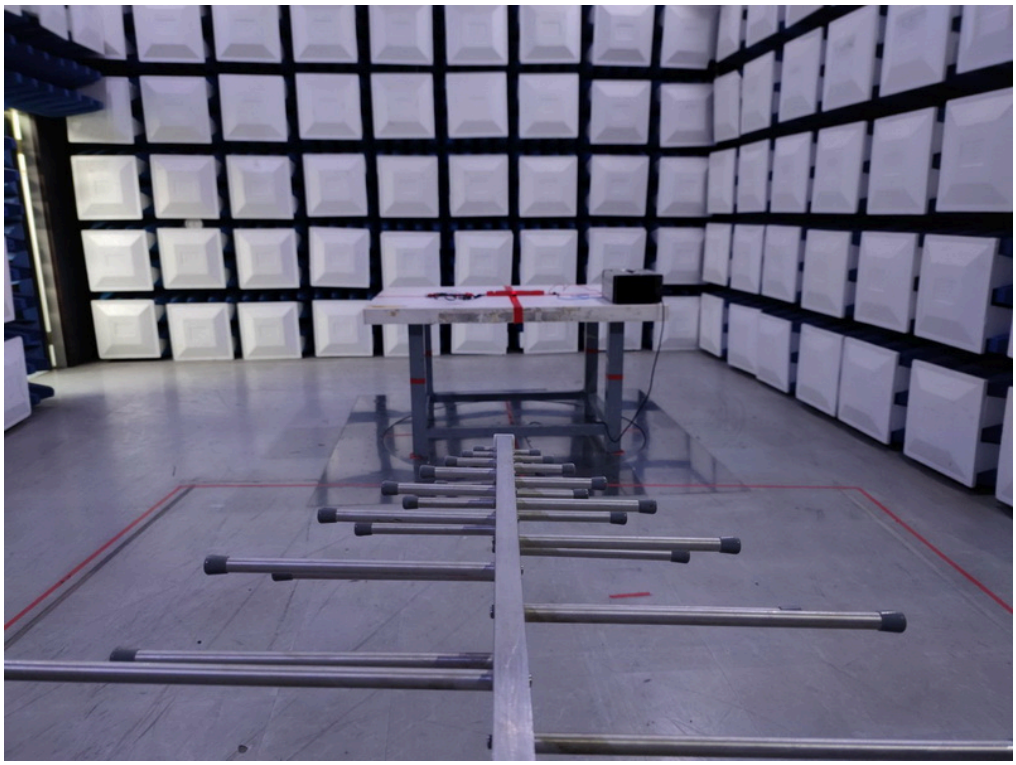




**Radiated Emissions Test Photos**

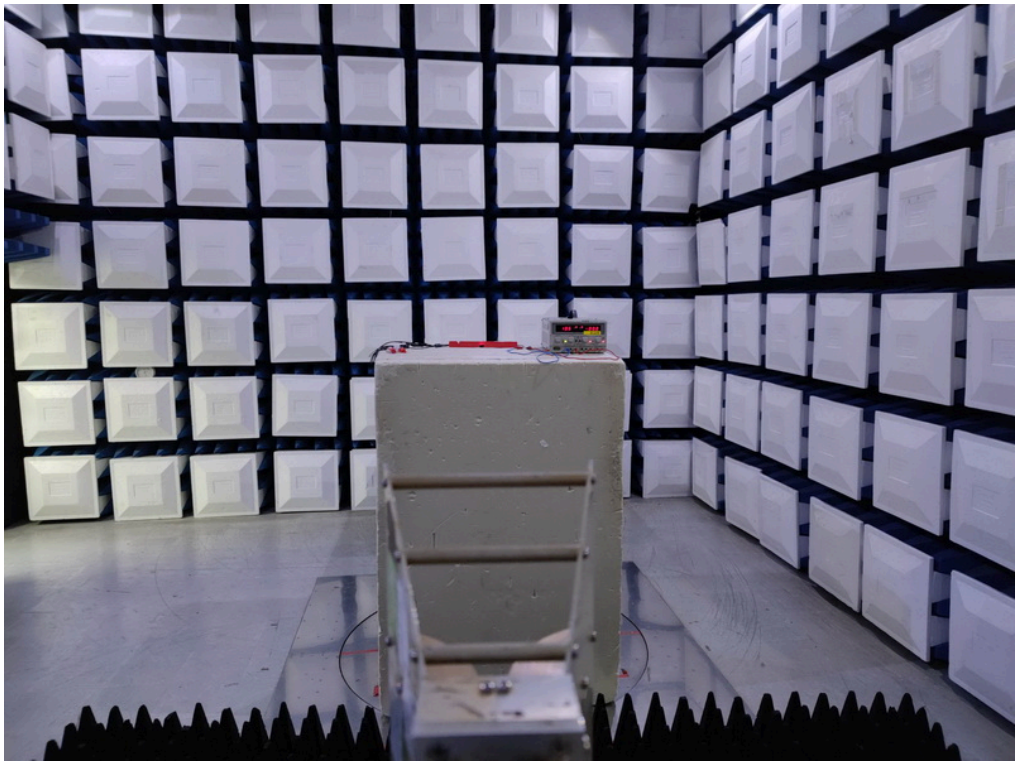
**30 MHz to 1 GHz**

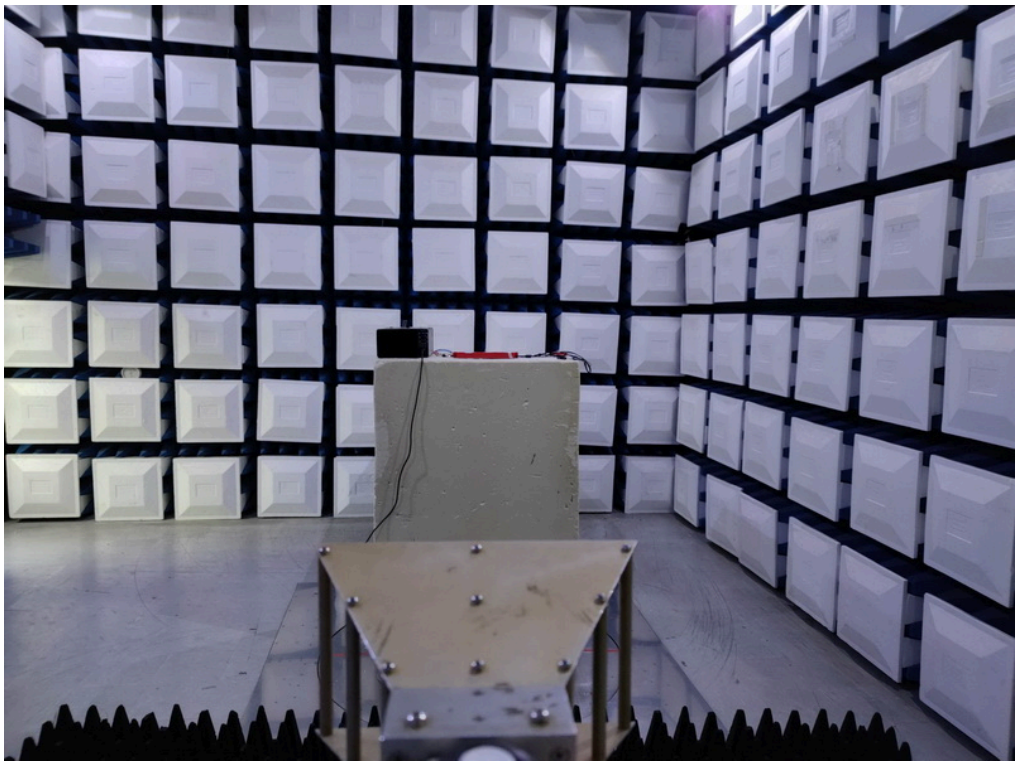




**Radiated Emissions Test Photos**

**Above 1 GHz**





# APPENDIX A - OUTPUT POWER

**Output Power (dBm):**

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 19957CH | 20175CH | 20393CH |
| | | | | 1710.7MHz | 1732.5MHz | 1754.3MHz |
| 4 / 1.4M | QPSK | 1 | 0 | 21.79 | 21.54 | 21.49 |
| | | 1 | 2 | 21.89 | 21.66 | 21.59 |
| | | 1 | 5 | 21.78 | 21.50 | 21.49 |
| | | 3 | 0 | 21.86 | 21.66 | 21.53 |
| | | 3 | 1 | 21.91 | 21.72 | 21.60 |
| | | 3 | 2 | 21.83 | 21.69 | 21.54 |
| | | 6 | 0 | 20.83 | 20.66 | 20.54 |
| | 16QAM | 1 | 0 | 21.14 | 20.65 | 20.65 |
| | | 1 | 2 | 21.22 | 20.69 | 20.71 |
| | | 1 | 5 | 21.11 | 20.65 | 20.62 |
| | | 3 | 0 | 21.03 | 20.81 | 20.61 |
| | | 3 | 1 | 21.05 | 20.87 | 20.63 |
| | | 3 | 2 | 21.03 | 20.85 | 20.60 |
| | | 6 | 0 | 19.74 | 19.84 | 19.67 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 19965CH | 20175CH | 20385CH |
| | | | | 1711.5MHz | 1732.5MHz | 1753.5MHz |
| 4 / 3M | QPSK | 1 | 0 | 21.78 | 21.69 | 21.54 |
| | | 1 | 7 | 21.89 | 21.83 | 21.65 |
| | | 1 | 14 | 21.74 | 21.68 | 21.49 |
| | | 8 | 0 | 20.81 | 20.68 | 20.55 |
| | | 8 | 4 | 20.83 | 20.70 | 20.60 |
| | | 8 | 7 | 20.79 | 20.63 | 20.54 |
| | | 15 | 0 | 20.81 | 20.64 | 20.54 |
| | 16QAM | 1 | 0 | 20.75 | 21.03 | 20.64 |
| | | 1 | 7 | 20.85 | 21.17 | 20.75 |
| | | 1 | 14 | 20.72 | 21.01 | 20.60 |
| | | 8 | 0 | 19.93 | 19.78 | 19.60 |
| | | 8 | 4 | 19.94 | 19.78 | 19.65 |
| | | 8 | 7 | 19.89 | 19.72 | 19.60 |
| | | 15 | 0 | 19.81 | 19.70 | 19.52 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 19975CH | 20175CH | 20375CH |
| | | | | 1712.5MHz | 1732.5MHz | 1752.5MHz |
| 4 / 5M | QPSK | 1 | 0 | 21.81 | 21.59 | 21.53 |
| | | 1 | 13 | 21.87 | 21.69 | 21.62 |
| | | 1 | 24 | 21.73 | 21.54 | 21.49 |
| | | 12 | 0 | 20.73 | 20.64 | 20.54 |
| | | 12 | 6 | 20.81 | 20.70 | 20.60 |
| | | 12 | 11 | 20.80 | 20.67 | 20.58 |
| | | 25 | 0 | 20.75 | 20.62 | 20.53 |
| | 16QAM | 1 | 0 | 20.93 | 21.09 | 20.65 |
| | | 1 | 13 | 21.00 | 21.20 | 20.73 |
| | | 1 | 24 | 20.85 | 21.04 | 20.59 |
| | | 12 | 0 | 19.81 | 19.79 | 19.59 |
| | | 12 | 6 | 19.89 | 19.83 | 19.67 |
| | | 12 | 11 | 19.89 | 19.79 | 19.61 |
| | | 25 | 0 | 19.81 | 19.72 | 19.51 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 20000CH | 20175CH | 20350CH |
| | | | | 1715MHz | 1732.5MHz | 1750MHz |
| 4 / 10M | QPSK | 1 | 0 | 21.79 | 21.71 | 21.54 |
| | | 1 | 25 | 21.93 | 21.87 | 21.74 |
| | | 1 | 49 | 21.68 | 21.62 | 21.47 |
| | | 25 | 0 | 20.77 | 20.77 | 20.61 |
| | | 25 | 13 | 20.81 | 20.71 | 20.62 |
| | | 25 | 25 | 20.82 | 20.65 | 20.61 |
| | | 50 | 0 | 20.79 | 20.71 | 20.61 |
| | 16QAM | 1 | 0 | 20.76 | 21.04 | 20.64 |
| | | 1 | 25 | 20.87 | 21.19 | 20.77 |
| | | 1 | 49 | 20.67 | 21.02 | 20.55 |
| | | 25 | 0 | 19.79 | 19.81 | 19.74 |
| | | 25 | 13 | 19.87 | 19.76 | 19.74 |
| | | 25 | 25 | 19.84 | 19.72 | 19.72 |
| | | 50 | 0 | 19.81 | 19.74 | 19.67 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 20025CH | 20175CH | 20325CH |
| | | | | 1717.5MHz | 1732.5MHz | 1747.5MHz |
| 4 / 15M | QPSK | 1 | 0 | 21.70 | 21.65 | 21.54 |
| | | 1 | 38 | 21.72 | 21.70 | 21.62 |
| | | 1 | 74 | 21.57 | 21.54 | 21.44 |
| | | 36 | 0 | 20.75 | 20.77 | 20.65 |
| | | 36 | 18 | 20.80 | 20.73 | 20.66 |
| | | 36 | 39 | 20.80 | 20.62 | 20.63 |
| | | 75 | 0 | 20.77 | 20.74 | 20.65 |
| | 16QAM | 1 | 0 | 20.68 | 20.97 | 20.99 |
| | | 1 | 38 | 20.70 | 21.06 | 21.08 |
| | | 1 | 74 | 20.56 | 20.89 | 20.90 |
| | | 36 | 0 | 19.74 | 19.79 | 19.66 |
| | | 36 | 18 | 19.77 | 19.75 | 19.63 |
| | | 36 | 39 | 19.76 | 19.67 | 19.61 |
| | | 75 | 0 | 19.75 | 19.73 | 19.66 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 20050CH | 20175CH | 20300CH |
| | | | | 1720MHz | 1732.5MHz | 1745MHz |
| 4 / 20M | QPSK | 1 | 0 | 21.58 | 21.41 | 21.32 |
| | | 1 | 50 | 21.86 | 21.79 | 21.73 |
| | | 1 | 99 | 21.42 | 21.37 | 21.25 |
| | | 50 | 0 | 20.70 | 20.80 | 20.66 |
| | | 50 | 25 | 20.75 | 20.70 | 20.66 |
| | | 50 | 50 | 20.67 | 20.57 | 20.63 |
| | | 100 | 0 | 20.68 | 20.67 | 20.65 |
| | 16QAM | 1 | 0 | 21.12 | 20.94 | 20.78 |
| | | 1 | 50 | 21.42 | 21.29 | 21.17 |
| | | 1 | 99 | 20.97 | 20.87 | 20.69 |
| | | 50 | 0 | 19.71 | 19.82 | 19.70 |
| | | 50 | 25 | 19.82 | 19.74 | 19.65 |
| | | 50 | 50 | 19.72 | 19.63 | 19.66 |
| | | 100 | 0 | 19.79 | 19.70 | 19.69 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 20775CH | 21100CH | 21425CH |
| | | | | 2502.5MHz | 2535MHz | 2567.5MHz |
| 7 / 5M | QPSK | 1 | 0 | 22.32 | 22.54 | 22.76 |
| | | 1 | 13 | 22.41 | 22.64 | 22.82 |
| | | 1 | 24 | 22.36 | 22.58 | 22.70 |
| | | 12 | 0 | 21.38 | 21.62 | 21.69 |
| | | 12 | 6 | 21.47 | 21.68 | 21.54 |
| | | 12 | 11 | 21.48 | 21.67 | 21.32 |
| | | 25 | 0 | 21.39 | 21.61 | 21.28 |
| | 16QAM | 1 | 0 | 20.99 | 21.24 | 21.76 |
| | | 1 | 13 | 21.13 | 21.29 | 21.83 |
| | | 1 | 24 | 20.98 | 21.23 | 21.75 |
| | | 12 | 0 | 20.04 | 20.25 | 20.74 |
| | | 12 | 6 | 20.10 | 20.31 | 20.46 |
| | | 12 | 11 | 20.12 | 20.34 | 20.39 |
| | | 25 | 0 | 20.01 | 20.26 | 20.30 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 20800CH | 21100CH | 21400CH |
| | | | | 2505MHz | 2535MHz | 2565MHz |
| 7 / 10M | QPSK | 1 | 0 | 22.49 | 22.63 | 22.25 |
| | | 1 | 25 | 22.61 | 22.44 | 22.42 |
| | | 1 | 49 | 22.51 | 22.24 | 22.36 |
| | | 25 | 0 | 21.47 | 21.20 | 21.38 |
| | | 25 | 13 | 21.49 | 21.23 | 21.35 |
| | | 25 | 25 | 21.57 | 21.30 | 21.37 |
| | | 50 | 0 | 21.58 | 21.29 | 21.36 |
| | 16QAM | 1 | 0 | 20.84 | 21.50 | 21.28 |
| | | 1 | 25 | 21.00 | 21.61 | 21.40 |
| | | 1 | 49 | 20.93 | 21.48 | 21.19 |
| | | 25 | 0 | 20.04 | 20.28 | 20.47 |
| | | 25 | 13 | 20.09 | 20.30 | 20.46 |
| | | 25 | 25 | 20.18 | 20.42 | 20.49 |
| | | 50 | 0 | 20.07 | 20.37 | 20.40 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 20825CH | 21100CH | 21375CH |
| | | | | 2507.5MHz | 2535MHz | 2562.5MHz |
| 7 / 15M | QPSK | 1 | 0 | 21.93 | 22.09 | 22.24 |
| | | 1 | 38 | 22.01 | 22.24 | 22.41 |
| | | 1 | 74 | 21.91 | 22.17 | 22.38 |
| | | 36 | 0 | 21.19 | 21.33 | 21.42 |
| | | 36 | 18 | 21.43 | 21.38 | 21.46 |
| | | 36 | 39 | 21.72 | 21.46 | 21.56 |
| | | 75 | 0 | 21.70 | 21.40 | 21.54 |
| | 16QAM | 1 | 0 | 20.76 | 21.51 | 21.48 |
| | | 1 | 38 | 20.93 | 21.54 | 21.65 |
| | | 1 | 74 | 20.86 | 21.41 | 21.40 |
| | | 36 | 0 | 20.02 | 20.28 | 20.37 |
| | | 36 | 18 | 20.15 | 20.38 | 20.39 |
| | | 36 | 39 | 20.16 | 20.48 | 20.43 |
| | | 75 | 0 | 20.13 | 20.42 | 20.43 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 20850CH | 21100CH | 21350CH |
| | | | | 2510MHz | 2535MHz | 2560MHz |
| 7 / 20M | QPSK | 1 | 0 | 21.94 | 21.90 | 22.03 |
| | | 1 | 50 | 22.41 | 22.35 | 22.37 |
| | | 1 | 99 | 21.88 | 21.95 | 22.12 |
| | | 50 | 0 | 21.02 | 21.16 | 21.35 |
| | | 50 | 25 | 21.42 | 21.29 | 21.43 |
| | | 50 | 50 | 21.36 | 21.27 | 21.33 |
| | | 100 | 0 | 21.47 | 21.24 | 21.36 |
| | 16QAM | 1 | 0 | 21.27 | 21.39 | 21.74 |
| | | 1 | 50 | 21.72 | 21.67 | 22.19 |
| | | 1 | 99 | 21.41 | 21.31 | 21.78 |
| | | 50 | 0 | 20.04 | 20.26 | 20.72 |
| | | 50 | 25 | 20.18 | 20.42 | 20.39 |
| | | 50 | 50 | 20.12 | 20.42 | 20.32 |
| | | 100 | 0 | 20.11 | 20.31 | 20.36 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 23017CH | 23095CH | 23173CH |
| | | | | 699.7MHz | 707.5MHz | 715.3MHz |
| 12 / 1.4M | QPSK | 1 | 0 | 22.72 | 22.69 | 22.78 |
| | | 1 | 2 | 22.85 | 22.81 | 22.92 |
| | | 1 | 5 | 22.76 | 22.74 | 22.73 |
| | | 3 | 0 | 22.77 | 22.80 | 22.58 |
| | | 3 | 1 | 22.79 | 22.85 | 22.64 |
| | | 3 | 2 | 22.81 | 22.81 | 22.66 |
| | | 6 | 0 | 21.78 | 21.85 | 21.95 |
| | 16QAM | 1 | 0 | 22.01 | 21.72 | 21.51 |
| | | 1 | 2 | 22.07 | 21.81 | 21.62 |
| | | 1 | 5 | 21.97 | 21.79 | 21.55 |
| | | 3 | 0 | 21.86 | 21.91 | 21.41 |
| | | 3 | 1 | 21.90 | 21.99 | 21.48 |
| | | 3 | 2 | 21.88 | 21.98 | 21.52 |
| | | 6 | 0 | 20.66 | 20.96 | 20.75 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 23025CH | 23095CH | 23165CH |
| | | | | 700.5MHz | 707.5MHz | 714.5MHz |
| 12 / 3M | QPSK | 1 | 0 | 22.66 | 22.79 | 22.83 |
| | | 1 | 7 | 22.91 | 22.91 | 22.89 |
| | | 1 | 14 | 22.90 | 22.80 | 22.75 |
| | | 8 | 0 | 21.67 | 21.77 | 21.84 |
| | | 8 | 4 | 21.79 | 21.82 | 21.90 |
| | | 8 | 7 | 21.83 | 21.77 | 21.76 |
| | | 15 | 0 | 21.74 | 21.78 | 21.67 |
| | 16QAM | 1 | 0 | 21.74 | 21.57 | 21.85 |
| | | 1 | 7 | 21.78 | 21.80 | 21.95 |
| | | 1 | 14 | 21.51 | 21.72 | 21.90 |
| | | 8 | 0 | 20.68 | 20.90 | 20.74 |
| | | 8 | 4 | 20.78 | 20.96 | 20.72 |
| | | 8 | 7 | 20.76 | 20.92 | 20.63 |
| | | 15 | 0 | 20.67 | 20.84 | 20.59 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 23035CH | 23095CH | 23155CH |
| | | | | 701.5MHz | 707.5MHz | 713.5MHz |
| 12 / 5M | QPSK | 1 | 0 | 22.68 | 22.83 | 22.62 |
| | | 1 | 13 | 22.95 | 22.89 | 22.91 |
| | | 1 | 24 | 22.86 | 22.80 | 22.71 |
| | | 12 | 0 | 21.43 | 21.90 | 21.50 |
| | | 12 | 6 | 21.71 | 21.87 | 21.76 |
| | | 12 | 11 | 21.65 | 21.85 | 21.65 |
| | | 25 | 0 | 21.53 | 21.87 | 21.53 |
| | 16QAM | 1 | 0 | 21.78 | 22.00 | 21.68 |
| | | 1 | 13 | 21.78 | 22.29 | 21.67 |
| | | 1 | 24 | 21.65 | 22.17 | 21.52 |
| | | 12 | 0 | 20.50 | 20.95 | 20.48 |
| | | 12 | 6 | 20.69 | 20.99 | 20.65 |
| | | 12 | 11 | 20.58 | 21.00 | 20.53 |
| | | 25 | 0 | 20.45 | 20.91 | 20.40 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 23060CH | 23095CH | 23130CH |
| | | | | 704MHz | 707.5MHz | 711MHz |
| 12 / 10M | QPSK | 1 | 0 | 22.65 | 22.86 | 22.65 |
| | | 1 | 25 | 23.01 | 22.91 | 22.84 |
| | | 1 | 49 | 22.73 | 22.74 | 22.79 |
| | | 25 | 0 | 21.68 | 22.11 | 21.67 |
| | | 25 | 13 | 21.69 | 21.82 | 21.81 |
| | | 25 | 25 | 21.52 | 22.14 | 21.76 |
| | | 50 | 0 | 21.68 | 22.14 | 21.79 |
| | 16QAM | 1 | 0 | 21.54 | 21.65 | 21.23 |
| | | 1 | 25 | 21.56 | 21.87 | 21.37 |
| | | 1 | 49 | 21.49 | 21.69 | 21.01 |
| | | 25 | 0 | 20.64 | 20.74 | 20.31 |
| | | 25 | 13 | 20.64 | 20.39 | 20.49 |
| | | 25 | 25 | 20.39 | 20.74 | 20.53 |
| | | 50 | 0 | 20.56 | 20.71 | 20.30 |

| LTE Band / BW | Modulation | RB Sizet | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 37775CH | 38000CH | 38225CH |
| | | | | 2572.5MHz | 2600MHz | 2617.5MHz |
| 38 / 5M | QPSK | 1 | 0 | 22.45 | 22.55 | 23.05 |
| | | 1 | 13 | 22.52 | 22.85 | 23.19 |
| | | 1 | 24 | 22.37 | 22.86 | 23.05 |
| | | 12 | 0 | 21.53 | 22.08 | 22.20 |
| | | 12 | 6 | 21.55 | 22.11 | 22.20 |
| | | 12 | 11 | 21.58 | 22.11 | 22.21 |
| | | 25 | 0 | 21.50 | 22.10 | 22.15 |
| | 16QAM | 1 | 0 | 22.23 | 22.08 | 22.22 |
| | | 1 | 13 | 22.32 | 22.20 | 22.37 |
| | | 1 | 24 | 22.19 | 22.07 | 22.23 |
| | | 12 | 0 | 21.10 | 21.05 | 21.06 |
| | | 12 | 6 | 21.08 | 21.04 | 21.06 |
| | | 12 | 11 | 21.07 | 21.15 | 21.08 |
| | | 25 | 0 | 20.93 | 21.02 | 21.11 |

| LTE Band / BW | Modulation | RB Sizet | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 37800CH | 38000CH | 38200CH |
| | | | | 2575MHz | 2600MHz | 2615MHz |
| 38 / 10M | QPSK | 1 | 0 | 22.95 | 23.12 | 23.03 |
| | | 1 | 25 | 23.25 | 23.44 | 23.41 |
| | | 1 | 49 | 22.94 | 23.11 | 23.07 |
| | | 25 | 0 | 22.07 | 22.14 | 22.20 |
| | | 25 | 13 | 22.09 | 22.15 | 22.16 |
| | | 25 | 25 | 22.12 | 22.13 | 22.17 |
| | | 50 | 0 | 22.07 | 22.14 | 22.17 |
| | 16QAM | 1 | 0 | 22.31 | 22.20 | 22.37 |
| | | 1 | 25 | 22.58 | 22.48 | 22.70 |
| | | 1 | 49 | 22.29 | 22.16 | 22.41 |
| | | 25 | 0 | 21.06 | 21.10 | 21.14 |
| | | 25 | 13 | 21.03 | 21.06 | 21.12 |
| | | 25 | 25 | 21.01 | 21.10 | 21.11 |
| | | 50 | 0 | 20.97 | 21.05 | 21.13 |

| LTE Band / BW | Modulation | RB Sizet | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 37825CH | 38000CH | 38175CH |
| | | | | 2577.5MHz | 2600MHz | 2612.5MHz |
| 38 / 15M | QPSK | 1 | 0 | 22.86 | 22.98 | 22.96 |
| | | 1 | 38 | 22.96 | 23.14 | 23.10 |
| | | 1 | 74 | 22.83 | 23.01 | 22.99 |
| | | 36 | 0 | 22.07 | 22.16 | 22.17 |
| | | 36 | 18 | 22.10 | 22.18 | 22.17 |
| | | 36 | 39 | 22.15 | 22.17 | 22.13 |
| | | 75 | 0 | 22.13 | 22.19 | 22.17 |
| | 16QAM | 1 | 0 | 22.15 | 22.30 | 22.20 |
| | | 1 | 38 | 22.22 | 22.40 | 22.37 |
| | | 1 | 74 | 22.09 | 22.29 | 22.26 |
| | | 36 | 0 | 20.96 | 21.12 | 21.07 |
| | | 36 | 18 | 21.02 | 21.06 | 21.12 |
| | | 36 | 39 | 20.88 | 21.02 | 21.18 |
| | | 75 | 0 | 21.01 | 20.99 | 21.14 |

| LTE Band / BW | Modulation | RB Sizet | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 37850CH | 38000CH | 38150CH |
| | | | | 2580MHz | 2600MHz | 2610MHz |
| 38 / 20M | QPSK | 1 | 0 | 22.70 | 22.81 | 22.79 |
| | | 1 | 50 | 23.18 | 23.29 | 23.27 |
| | | 1 | 99 | 22.71 | 22.79 | 22.79 |
| | | 50 | 0 | 21.93 | 22.02 | 22.09 |
| | | 50 | 25 | 22.01 | 22.06 | 22.12 |
| | | 50 | 50 | 22.03 | 22.01 | 22.05 |
| | | 100 | 0 | 22.01 | 22.01 | 22.08 |
| | 16QAM | 1 | 0 | 22.05 | 22.18 | 22.03 |
| | | 1 | 50 | 22.47 | 22.61 | 22.48 |
| | | 1 | 99 | 22.01 | 22.17 | 22.10 |
| | | 50 | 0 | 20.94 | 21.04 | 21.04 |
| | | 50 | 25 | 21.00 | 21.08 | 21.06 |
| | | 50 | 50 | 21.01 | 21.06 | 21.03 |
| | | 100 | 0 | 21.00 | 21.03 | 21.05 |

| LTE Band / BW | Modulation | RB Sizet | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 40165CH | 40690CH | 41215CH |
| | | | | 2547.5MHz | 2600MHz | 2652.5MHz |
| 41 / 5M | QPSK | 1 | 0 | 22.74 | 22.87 | 23.08 |
| | | 1 | 13 | 22.81 | 22.96 | 23.13 |
| | | 1 | 24 | 22.76 | 22.88 | 23.03 |
| | | 12 | 0 | 21.80 | 21.94 | 22.13 |
| | | 12 | 6 | 21.88 | 22.04 | 22.14 |
| | | 12 | 11 | 21.87 | 22.05 | 22.18 |
| | | 25 | 0 | 21.82 | 22.01 | 22.10 |
| | 16QAM | 1 | 0 | 21.95 | 22.19 | 22.40 |
| | | 1 | 13 | 22.03 | 22.22 | 22.46 |
| | | 1 | 24 | 21.94 | 22.15 | 22.36 |
| | | 12 | 0 | 20.82 | 20.91 | 21.20 |
| | | 12 | 6 | 20.88 | 20.98 | 21.21 |
| | | 12 | 11 | 20.90 | 20.99 | 21.22 |
| | | 25 | 0 | 20.82 | 20.99 | 21.12 |

| LTE Band / BW | Modulation | RB Sizet | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 40190CH | 40690CH | 41190CH |
| | | | | 2550MHz | 2600MHz | 2650MHz |
| 41 / 10M | QPSK | 1 | 0 | 22.72 | 23.02 | 23.06 |
| | | 1 | 25 | 23.04 | 23.32 | 23.37 |
| | | 1 | 49 | 22.74 | 23.02 | 23.06 |
| | | 25 | 0 | 21.81 | 22.00 | 22.16 |
| | | 25 | 13 | 21.85 | 22.05 | 22.15 |
| | | 25 | 25 | 21.83 | 22.01 | 22.11 |
| | | 50 | 0 | 21.80 | 22.02 | 22.13 |
| | 16QAM | 1 | 0 | 22.00 | 22.31 | 22.42 |
| | | 1 | 25 | 22.28 | 22.59 | 22.71 |
| | | 1 | 49 | 22.02 | 22.33 | 22.40 |
| | | 25 | 0 | 20.83 | 21.00 | 21.17 |
| | | 25 | 13 | 20.92 | 21.07 | 21.17 |
| | | 25 | 25 | 20.87 | 20.99 | 21.17 |
| | | 50 | 0 | 20.86 | 21.02 | 21.15 |

| LTE Band / BW | Modulation | RB Sizet | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 40215CH | 40690CH | 41165CH |
| | | | | 2552.5MHz | 2600MHz | 2647.5MHz |
| 41 / 15M | QPSK | 1 | 0 | 22.69 | 22.96 | 23.03 |
| | | 1 | 38 | 22.79 | 23.06 | 23.13 |
| | | 1 | 74 | 22.77 | 22.96 | 22.97 |
| | | 36 | 0 | 21.92 | 22.06 | 22.12 |
| | | 36 | 18 | 21.95 | 22.10 | 22.15 |
| | | 36 | 39 | 21.91 | 22.04 | 22.14 |
| | | 75 | 0 | 21.92 | 22.11 | 22.15 |
| | 16QAM | 1 | 0 | 21.95 | 22.27 | 22.32 |
| | | 1 | 38 | 22.02 | 22.40 | 22.39 |
| | | 1 | 74 | 21.96 | 22.28 | 22.23 |
| | | 36 | 0 | 20.84 | 20.97 | 21.12 |
| | | 36 | 18 | 20.87 | 21.02 | 21.16 |
| | | 36 | 39 | 20.83 | 20.96 | 21.14 |
| | | 75 | 0 | 20.88 | 21.03 | 21.10 |

| LTE Band / BW | Modulation | RB Sizet | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 40240CH | 40690CH | 41140CH |
| | | | | 2555MHz | 2600MHz | 2645MHz |
| 41 / 20M | QPSK | 1 | 0 | 22.58 | 22.79 | 22.91 |
| | | 1 | 50 | 23.08 | 23.27 | 23.38 |
| | | 1 | 99 | 22.58 | 22.79 | 22.83 |
| | | 50 | 0 | 21.78 | 22.02 | 22.14 |
| | | 50 | 25 | 21.84 | 22.04 | 22.16 |
| | | 50 | 50 | 21.88 | 21.99 | 22.13 |
| | | 100 | 0 | 21.85 | 22.02 | 22.13 |
| | 16QAM | 1 | 0 | 21.84 | 21.88 | 22.26 |
| | | 1 | 50 | 22.31 | 22.32 | 22.73 |
| | | 1 | 99 | 21.91 | 21.89 | 22.21 |
| | | 50 | 0 | 20.80 | 20.98 | 21.15 |
| | | 50 | 25 | 20.85 | 21.03 | 21.22 |
| | | 50 | 50 | 20.85 | 20.95 | 21.16 |
| | | 100 | 0 | 20.82 | 21.00 | 21.12 |

**EIRP (dBm):**

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 19957CH | 20175CH | 20393CH |
| | | | | 1710.7MHz | 1732.5MHz | 1754.3MHz |
| 4 / 1.4M | QPSK | 1 | 0 | 23.65 | 23.40 | 23.35 |
| | | 1 | 2 | 23.75 | 23.52 | 23.45 |
| | | 1 | 5 | 23.64 | 23.36 | 23.35 |
| | | 3 | 0 | 23.72 | 23.52 | 23.39 |
| | | 3 | 1 | 23.77 | 23.58 | 23.46 |
| | | 3 | 2 | 23.69 | 23.55 | 23.40 |
| | | 6 | 0 | 22.69 | 22.52 | 22.40 |
| | 16QAM | 1 | 0 | 23.00 | 22.51 | 22.51 |
| | | 1 | 2 | 23.08 | 22.55 | 22.57 |
| | | 1 | 5 | 22.97 | 22.51 | 22.48 |
| | | 3 | 0 | 22.89 | 22.67 | 22.47 |
| | | 3 | 1 | 22.91 | 22.73 | 22.49 |
| | | 3 | 2 | 22.89 | 22.71 | 22.46 |
| | | 6 | 0 | 21.60 | 21.70 | 21.53 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 19965CH | 20175CH | 20385CH |
| | | | | 1711.5MHz | 1732.5MHz | 1753.5MHz |
| 4 / 3M | QPSK | 1 | 0 | 23.64 | 23.55 | 23.40 |
| | | 1 | 7 | 23.75 | 23.69 | 23.51 |
| | | 1 | 14 | 23.60 | 23.54 | 23.35 |
| | | 8 | 0 | 22.67 | 22.54 | 22.41 |
| | | 8 | 4 | 22.69 | 22.56 | 22.46 |
| | | 8 | 7 | 22.65 | 22.49 | 22.40 |
| | | 15 | 0 | 22.67 | 22.50 | 22.40 |
| | 16QAM | 1 | 0 | 22.61 | 22.89 | 22.50 |
| | | 1 | 7 | 22.71 | 23.03 | 22.61 |
| | | 1 | 14 | 22.58 | 22.87 | 22.46 |
| | | 8 | 0 | 21.79 | 21.64 | 21.46 |
| | | 8 | 4 | 21.80 | 21.64 | 21.51 |
| | | 8 | 7 | 21.75 | 21.58 | 21.46 |
| | | 15 | 0 | 21.67 | 21.56 | 21.38 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 19975CH | 20175CH | 20375CH |
| | | | | 1712.5MHz | 1732.5MHz | 1752.5MHz |
| 4 / 5M | QPSK | 1 | 0 | 23.67 | 23.45 | 23.39 |
| | | 1 | 13 | 23.73 | 23.55 | 23.48 |
| | | 1 | 24 | 23.59 | 23.40 | 23.35 |
| | | 12 | 0 | 22.59 | 22.50 | 22.40 |
| | | 12 | 6 | 22.67 | 22.56 | 22.46 |
| | | 12 | 11 | 22.66 | 22.53 | 22.44 |
| | | 25 | 0 | 22.61 | 22.48 | 22.39 |
| | 16QAM | 1 | 0 | 22.79 | 22.95 | 22.51 |
| | | 1 | 13 | 22.86 | 23.06 | 22.59 |
| | | 1 | 24 | 22.71 | 22.90 | 22.45 |
| | | 12 | 0 | 21.67 | 21.65 | 21.45 |
| | | 12 | 6 | 21.75 | 21.69 | 21.53 |
| | | 12 | 11 | 21.75 | 21.65 | 21.47 |
| | | 25 | 0 | 21.67 | 21.58 | 21.37 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 20000CH | 20175CH | 20350CH |
| | | | | 1715MHz | 1732.5MHz | 1750MHz |
| 4 / 10M | QPSK | 1 | 0 | 23.65 | 23.57 | 23.40 |
| | | 1 | 25 | 23.79 | 23.73 | 23.60 |
| | | 1 | 49 | 23.54 | 23.48 | 23.33 |
| | | 25 | 0 | 22.63 | 22.63 | 22.47 |
| | | 25 | 13 | 22.67 | 22.57 | 22.48 |
| | | 25 | 25 | 22.68 | 22.51 | 22.47 |
| | | 50 | 0 | 22.65 | 22.57 | 22.47 |
| | 16QAM | 1 | 0 | 22.62 | 22.90 | 22.50 |
| | | 1 | 25 | 22.73 | 23.05 | 22.63 |
| | | 1 | 49 | 22.53 | 22.88 | 22.41 |
| | | 25 | 0 | 21.65 | 21.67 | 21.60 |
| | | 25 | 13 | 21.73 | 21.62 | 21.60 |
| | | 25 | 25 | 21.70 | 21.58 | 21.58 |
| | | 50 | 0 | 21.67 | 21.60 | 21.53 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 20025CH | 20175CH | 20325CH |
| | | | | 1717.5MHz | 1732.5MHz | 1747.5MHz |
| 4 / 15M | QPSK | 1 | 0 | 23.56 | 23.51 | 23.40 |
| | | 1 | 38 | 23.58 | 23.56 | 23.48 |
| | | 1 | 74 | 23.43 | 23.40 | 23.30 |
| | | 36 | 0 | 22.61 | 22.63 | 22.51 |
| | | 36 | 18 | 22.66 | 22.59 | 22.52 |
| | | 36 | 39 | 22.66 | 22.48 | 22.49 |
| | | 75 | 0 | 22.63 | 22.60 | 22.51 |
| | 16QAM | 1 | 0 | 22.54 | 22.83 | 22.85 |
| | | 1 | 38 | 22.56 | 22.92 | 22.94 |
| | | 1 | 74 | 22.42 | 22.75 | 22.76 |
| | | 36 | 0 | 21.60 | 21.65 | 21.52 |
| | | 36 | 18 | 21.63 | 21.61 | 21.49 |
| | | 36 | 39 | 21.62 | 21.53 | 21.47 |
| | | 75 | 0 | 21.61 | 21.59 | 21.52 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 20050CH | 20175CH | 20300CH |
| | | | | 1720MHz | 1732.5MHz | 1745MHz |
| 4 / 20M | QPSK | 1 | 0 | 23.44 | 23.27 | 23.18 |
| | | 1 | 50 | 23.72 | 23.65 | 23.59 |
| | | 1 | 99 | 23.28 | 23.23 | 23.11 |
| | | 50 | 0 | 22.56 | 22.66 | 22.52 |
| | | 50 | 25 | 22.61 | 22.56 | 22.52 |
| | | 50 | 50 | 22.53 | 22.43 | 22.49 |
| | | 100 | 0 | 22.54 | 22.53 | 22.51 |
| | 16QAM | 1 | 0 | 22.98 | 22.80 | 22.64 |
| | | 1 | 50 | 23.28 | 23.15 | 23.03 |
| | | 1 | 99 | 22.83 | 22.73 | 22.55 |
| | | 50 | 0 | 21.57 | 21.68 | 21.56 |
| | | 50 | 25 | 21.68 | 21.60 | 21.51 |
| | | 50 | 50 | 21.58 | 21.49 | 21.52 |
| | | 100 | 0 | 21.65 | 21.56 | 21.55 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 20775CH | 21100CH | 21425CH |
| | | | | 2502.5MHz | 2535MHz | 2567.5MHz |
| 7 / 5M | QPSK | 1 | 0 | 27.26 | 27.48 | 27.70 |
| | | 1 | 13 | 27.35 | 27.58 | 27.76 |
| | | 1 | 24 | 27.30 | 27.52 | 27.64 |
| | | 12 | 0 | 26.32 | 26.56 | 26.63 |
| | | 12 | 6 | 26.41 | 26.62 | 26.48 |
| | | 12 | 11 | 26.42 | 26.61 | 26.26 |
| | | 25 | 0 | 26.33 | 26.55 | 26.22 |
| | 16QAM | 1 | 0 | 25.93 | 26.18 | 26.70 |
| | | 1 | 13 | 26.07 | 26.23 | 26.77 |
| | | 1 | 24 | 25.92 | 26.17 | 26.69 |
| | | 12 | 0 | 24.98 | 25.19 | 25.68 |
| | | 12 | 6 | 25.04 | 25.25 | 25.40 |
| | | 12 | 11 | 25.06 | 25.28 | 25.33 |
| | | 25 | 0 | 24.95 | 25.20 | 25.24 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 20800CH | 21100CH | 21400CH |
| | | | | 2505MHz | 2535MHz | 2565MHz |
| 7 / 10M | QPSK | 1 | 0 | 27.43 | 27.57 | 27.19 |
| | | 1 | 25 | 27.55 | 27.38 | 27.36 |
| | | 1 | 49 | 27.45 | 27.18 | 27.30 |
| | | 25 | 0 | 26.41 | 26.14 | 26.32 |
| | | 25 | 13 | 26.43 | 26.17 | 26.29 |
| | | 25 | 25 | 26.51 | 26.24 | 26.31 |
| | | 50 | 0 | 26.52 | 26.23 | 26.30 |
| | 16QAM | 1 | 0 | 25.78 | 26.44 | 26.22 |
| | | 1 | 25 | 25.94 | 26.55 | 26.34 |
| | | 1 | 49 | 25.87 | 26.42 | 26.13 |
| | | 25 | 0 | 24.98 | 25.22 | 25.41 |
| | | 25 | 13 | 25.03 | 25.24 | 25.40 |
| | | 25 | 25 | 25.12 | 25.36 | 25.43 |
| | | 50 | 0 | 25.01 | 25.31 | 25.34 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 20825CH | 21100CH | 21375CH |
| | | | | 2507.5MHz | 2535MHz | 2562.5MHz |
| 7 / 15M | QPSK | 1 | 0 | 26.87 | 27.03 | 27.18 |
| | | 1 | 38 | 26.95 | 27.18 | 27.35 |
| | | 1 | 74 | 26.85 | 27.11 | 27.32 |
| | | 36 | 0 | 26.13 | 26.27 | 26.36 |
| | | 36 | 18 | 26.37 | 26.32 | 26.40 |
| | | 36 | 39 | 26.66 | 26.40 | 26.50 |
| | | 75 | 0 | 26.64 | 26.34 | 26.48 |
| | 16QAM | 1 | 0 | 25.70 | 26.45 | 26.42 |
| | | 1 | 38 | 25.87 | 26.48 | 26.59 |
| | | 1 | 74 | 25.80 | 26.35 | 26.34 |
| | | 36 | 0 | 24.96 | 25.22 | 25.31 |
| | | 36 | 18 | 25.09 | 25.32 | 25.33 |
| | | 36 | 39 | 25.10 | 25.42 | 25.37 |
| | | 75 | 0 | 25.07 | 25.36 | 25.37 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 20850CH | 21100CH | 21350CH |
| | | | | 2510MHz | 2535MHz | 2560MHz |
| 7 / 20M | QPSK | 1 | 0 | 26.88 | 26.84 | 26.97 |
| | | 1 | 50 | 27.35 | 27.29 | 27.31 |
| | | 1 | 99 | 26.82 | 26.89 | 27.06 |
| | | 50 | 0 | 25.96 | 26.10 | 26.29 |
| | | 50 | 25 | 26.36 | 26.23 | 26.37 |
| | | 50 | 50 | 26.30 | 26.21 | 26.27 |
| | | 100 | 0 | 26.41 | 26.18 | 26.30 |
| | 16QAM | 1 | 0 | 26.21 | 26.33 | 26.68 |
| | | 1 | 50 | 26.66 | 26.61 | 27.13 |
| | | 1 | 99 | 26.35 | 26.25 | 26.72 |
| | | 50 | 0 | 24.98 | 25.20 | 25.66 |
| | | 50 | 25 | 25.12 | 25.36 | 25.33 |
| | | 50 | 50 | 25.06 | 25.36 | 25.26 |
| | | 100 | 0 | 25.05 | 25.25 | 25.30 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 37775CH | 38000CH | 38225CH |
| | | | | 2572.5MHz | 2600MHz | 2617.5MHz |
| 38 / 5M | QPSK | 1 | 0 | 27.20 | 27.30 | 27.80 |
| | | 1 | 13 | 27.27 | 27.60 | 27.94 |
| | | 1 | 24 | 27.12 | 27.61 | 27.80 |
| | | 12 | 0 | 26.28 | 26.83 | 26.95 |
| | | 12 | 6 | 26.30 | 26.86 | 26.95 |
| | | 12 | 11 | 26.33 | 26.86 | 26.96 |
| | | 25 | 0 | 26.25 | 26.85 | 26.90 |
| | 16QAM | 1 | 0 | 26.98 | 26.83 | 26.97 |
| | | 1 | 13 | 27.07 | 26.95 | 27.12 |
| | | 1 | 24 | 26.94 | 26.82 | 26.98 |
| | | 12 | 0 | 25.85 | 25.80 | 25.81 |
| | | 12 | 6 | 25.83 | 25.79 | 25.81 |
| | | 12 | 11 | 25.82 | 25.90 | 25.83 |
| | | 25 | 0 | 25.68 | 25.77 | 25.86 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 37800CH | 38000CH | 38200CH |
| | | | | 2575MHz | 2600MHz | 2615MHz |
| 38 / 10M | QPSK | 1 | 0 | 27.70 | 27.87 | 27.78 |
| | | 1 | 25 | 28.00 | 28.19 | 28.16 |
| | | 1 | 49 | 27.69 | 27.86 | 27.82 |
| | | 25 | 0 | 26.82 | 26.89 | 26.95 |
| | | 25 | 13 | 26.84 | 26.90 | 26.91 |
| | | 25 | 25 | 26.87 | 26.88 | 26.92 |
| | | 50 | 0 | 26.82 | 26.89 | 26.92 |
| | 16QAM | 1 | 0 | 27.06 | 26.95 | 27.12 |
| | | 1 | 25 | 27.33 | 27.23 | 27.45 |
| | | 1 | 49 | 27.04 | 26.91 | 27.16 |
| | | 25 | 0 | 25.81 | 25.85 | 25.89 |
| | | 25 | 13 | 25.78 | 25.81 | 25.87 |
| | | 25 | 25 | 25.76 | 25.85 | 25.86 |
| | | 50 | 0 | 25.72 | 25.80 | 25.88 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 37825CH | 38000CH | 38175CH |
| | | | | 2577.5MHz | 2600MHz | 2612.5MHz |
| 38 / 15M | QPSK | 1 | 0 | 27.61 | 27.73 | 27.71 |
| | | 1 | 38 | 27.71 | 27.89 | 27.85 |
| | | 1 | 74 | 27.58 | 27.76 | 27.74 |
| | | 36 | 0 | 26.82 | 26.91 | 26.92 |
| | | 36 | 18 | 26.85 | 26.93 | 26.92 |
| | | 36 | 39 | 26.90 | 26.92 | 26.88 |
| | | 75 | 0 | 26.88 | 26.94 | 26.92 |
| | 16QAM | 1 | 0 | 26.90 | 27.05 | 26.95 |
| | | 1 | 38 | 26.97 | 27.15 | 27.12 |
| | | 1 | 74 | 26.84 | 27.04 | 27.01 |
| | | 36 | 0 | 25.71 | 25.87 | 25.82 |
| | | 36 | 18 | 25.77 | 25.81 | 25.87 |
| | | 36 | 39 | 25.63 | 25.77 | 25.93 |
| | | 75 | 0 | 25.76 | 25.74 | 25.89 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 37850CH | 38000CH | 38150CH |
| | | | | 2580MHz | 2600MHz | 2610MHz |
| 38 / 20M | QPSK | 1 | 0 | 27.45 | 27.56 | 27.54 |
| | | 1 | 50 | 27.93 | 28.04 | 28.02 |
| | | 1 | 99 | 27.46 | 27.54 | 27.54 |
| | | 50 | 0 | 26.68 | 26.77 | 26.84 |
| | | 50 | 25 | 26.76 | 26.81 | 26.87 |
| | | 50 | 50 | 26.78 | 26.76 | 26.80 |
| | | 100 | 0 | 26.76 | 26.76 | 26.83 |
| | 16QAM | 1 | 0 | 26.80 | 26.93 | 26.78 |
| | | 1 | 50 | 27.22 | 27.36 | 27.23 |
| | | 1 | 99 | 26.76 | 26.92 | 26.85 |
| | | 50 | 0 | 25.69 | 25.79 | 25.79 |
| | | 50 | 25 | 25.75 | 25.83 | 25.81 |
| | | 50 | 50 | 25.76 | 25.81 | 25.78 |
| | | 100 | 0 | 25.75 | 25.78 | 25.80 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 40165CH | 40690CH | 41215CH |
| | | | | 2547.5MHz | 2600MHz | 2652.5MHz |
| 41 / 5M | QPSK | 1 | 0 | 27.68 | 27.81 | 28.02 |
| | | 1 | 13 | 27.75 | 27.90 | 28.07 |
| | | 1 | 24 | 27.70 | 27.82 | 27.97 |
| | | 12 | 0 | 26.74 | 26.88 | 27.07 |
| | | 12 | 6 | 26.82 | 26.98 | 27.08 |
| | | 12 | 11 | 26.81 | 26.99 | 27.12 |
| | | 25 | 0 | 26.76 | 26.95 | 27.04 |
| | 16QAM | 1 | 0 | 26.89 | 27.13 | 27.34 |
| | | 1 | 13 | 26.97 | 27.16 | 27.40 |
| | | 1 | 24 | 26.88 | 27.09 | 27.30 |
| | | 12 | 0 | 25.76 | 25.85 | 26.14 |
| | | 12 | 6 | 25.82 | 25.92 | 26.15 |
| | | 12 | 11 | 25.84 | 25.93 | 26.16 |
| | | 25 | 0 | 25.76 | 25.93 | 26.06 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 40190CH | 40690CH | 41190CH |
| | | | | 2550MHz | 2600MHz | 2650MHz |
| 41 / 10M | QPSK | 1 | 0 | 27.66 | 27.96 | 28.00 |
| | | 1 | 25 | 27.98 | 28.26 | 28.31 |
| | | 1 | 49 | 27.68 | 27.96 | 28.00 |
| | | 25 | 0 | 26.75 | 26.94 | 27.10 |
| | | 25 | 13 | 26.79 | 26.99 | 27.09 |
| | | 25 | 25 | 26.77 | 26.95 | 27.05 |
| | | 50 | 0 | 26.74 | 26.96 | 27.07 |
| | 16QAM | 1 | 0 | 26.94 | 27.25 | 27.36 |
| | | 1 | 25 | 27.22 | 27.53 | 27.65 |
| | | 1 | 49 | 26.96 | 27.27 | 27.34 |
| | | 25 | 0 | 25.77 | 25.94 | 26.11 |
| | | 25 | 13 | 25.86 | 26.01 | 26.11 |
| | | 25 | 25 | 25.81 | 25.93 | 26.11 |
| | | 50 | 0 | 25.80 | 25.96 | 26.09 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 40215CH | 40690CH | 41165CH |
| | | | | 2552.5MHz | 2600MHz | 2647.5MHz |
| 41 / 15M | QPSK | 1 | 0 | 27.63 | 27.90 | 27.97 |
| | | 1 | 38 | 27.73 | 28.00 | 28.07 |
| | | 1 | 74 | 27.71 | 27.90 | 27.91 |
| | | 36 | 0 | 26.86 | 27.00 | 27.06 |
| | | 36 | 18 | 26.89 | 27.04 | 27.09 |
| | | 36 | 39 | 26.85 | 26.98 | 27.08 |
| | | 75 | 0 | 26.86 | 27.05 | 27.09 |
| | 16QAM | 1 | 0 | 26.89 | 27.21 | 27.26 |
| | | 1 | 38 | 26.96 | 27.34 | 27.33 |
| | | 1 | 74 | 26.90 | 27.22 | 27.17 |
| | | 36 | 0 | 25.78 | 25.91 | 26.06 |
| | | 36 | 18 | 25.81 | 25.96 | 26.10 |
| | | 36 | 39 | 25.77 | 25.90 | 26.08 |
| | | 75 | 0 | 25.82 | 25.97 | 26.04 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 40240CH | 40690CH | 41140CH |
| | | | | 2555MHz | 2600MHz | 2645MHz |
| 41 / 20M | QPSK | 1 | 0 | 27.52 | 27.73 | 27.85 |
| | | 1 | 50 | 28.02 | 28.21 | 28.32 |
| | | 1 | 99 | 27.52 | 27.73 | 27.77 |
| | | 50 | 0 | 26.72 | 26.96 | 27.08 |
| | | 50 | 25 | 26.78 | 26.98 | 27.10 |
| | | 50 | 50 | 26.82 | 26.93 | 27.07 |
| | | 100 | 0 | 26.79 | 26.96 | 27.07 |
| | 16QAM | 1 | 0 | 26.78 | 26.82 | 27.20 |
| | | 1 | 50 | 27.25 | 27.26 | 27.67 |
| | | 1 | 99 | 26.85 | 26.83 | 27.15 |
| | | 50 | 0 | 25.74 | 25.92 | 26.09 |
| | | 50 | 25 | 25.79 | 25.97 | 26.16 |
| | | 50 | 50 | 25.79 | 25.89 | 26.10 |
| | | 100 | 0 | 25.76 | 25.94 | 26.06 |

**ERP (dBm):**

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 23017CH | 23095CH | 23173CH |
| | | | | 699.7MHz | 707.5MHz | 715.3MHz |
| 12 / 1.4M | QPSK | 1 | 0 | 19.72 | 19.69 | 19.78 |
| | | 1 | 2 | 19.85 | 19.81 | 19.92 |
| | | 1 | 5 | 19.76 | 19.74 | 19.73 |
| | | 3 | 0 | 19.77 | 19.80 | 19.58 |
| | | 3 | 1 | 19.79 | 19.85 | 19.64 |
| | | 3 | 2 | 19.81 | 19.81 | 19.66 |
| | | 6 | 0 | 18.78 | 18.85 | 18.95 |
| | 16QAM | 1 | 0 | 19.01 | 18.72 | 18.51 |
| | | 1 | 2 | 19.07 | 18.81 | 18.62 |
| | | 1 | 5 | 18.97 | 18.79 | 18.55 |
| | | 3 | 0 | 18.86 | 18.91 | 18.41 |
| | | 3 | 1 | 18.90 | 18.99 | 18.48 |
| | | 3 | 2 | 18.88 | 18.98 | 18.52 |
| | | 6 | 0 | 17.66 | 17.96 | 17.75 |

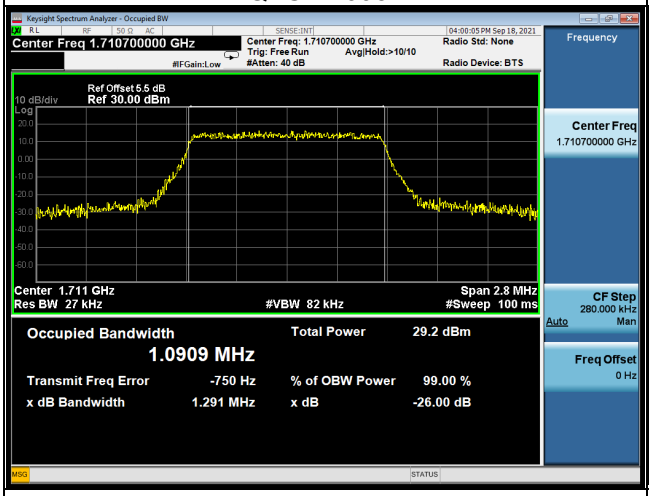
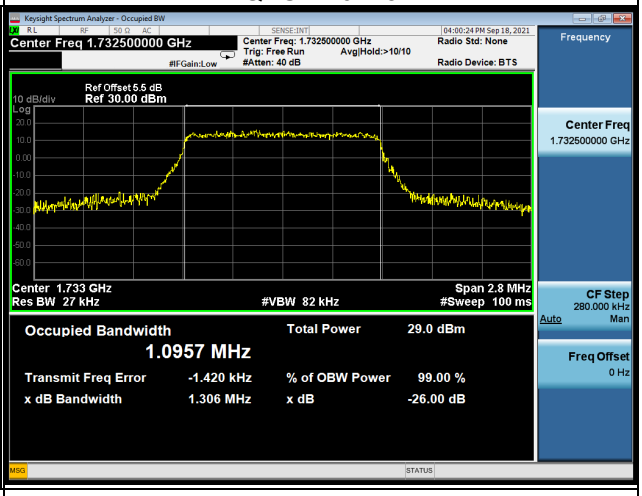
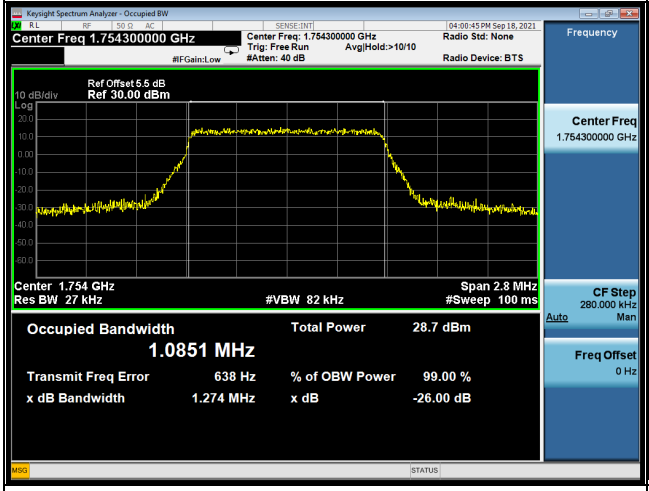
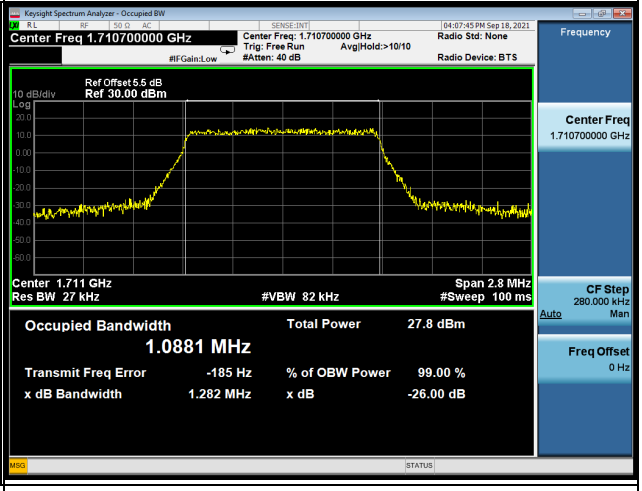
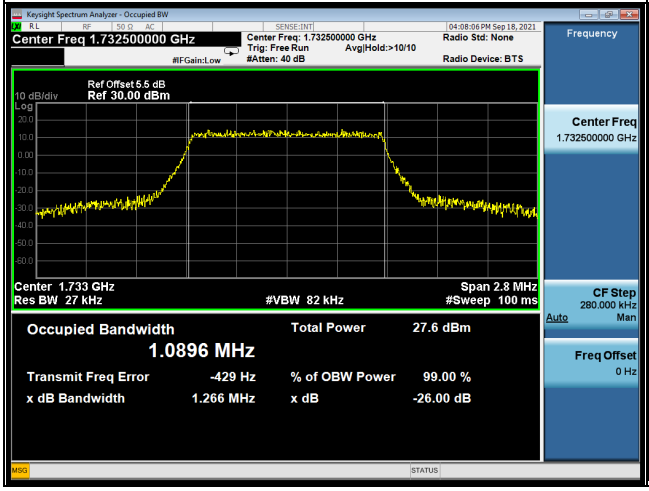
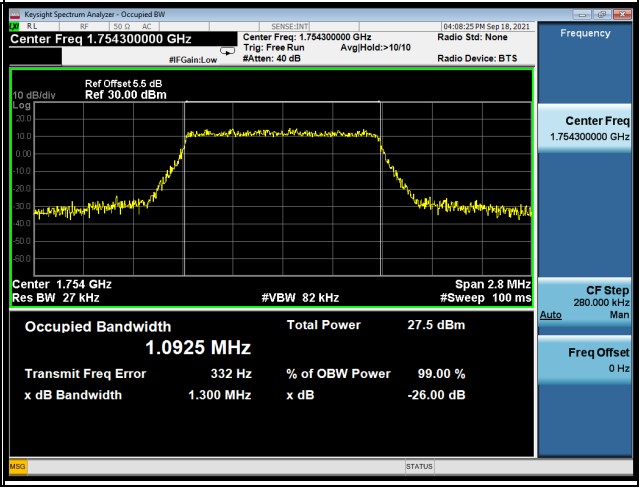
| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 23025CH | 23095CH | 23165CH |
| | | | | 700.5MHz | 707.5MHz | 714.5MHz |
| 12 / 3M | QPSK | 1 | 0 | 19.66 | 19.79 | 19.83 |
| | | 1 | 7 | 19.91 | 19.91 | 19.89 |
| | | 1 | 14 | 19.90 | 19.80 | 19.75 |
| | | 8 | 0 | 18.67 | 18.77 | 18.84 |
| | | 8 | 4 | 18.79 | 18.82 | 18.90 |
| | | 8 | 7 | 18.83 | 18.77 | 18.76 |
| | | 15 | 0 | 18.74 | 18.78 | 18.67 |
| | 16QAM | 1 | 0 | 18.74 | 18.57 | 18.85 |
| | | 1 | 7 | 18.78 | 18.80 | 18.95 |
| | | 1 | 14 | 18.51 | 18.72 | 18.90 |
| | | 8 | 0 | 17.68 | 17.90 | 17.74 |
| | | 8 | 4 | 17.78 | 17.96 | 17.72 |
| | | 8 | 7 | 17.76 | 17.92 | 17.63 |
| | | 15 | 0 | 17.67 | 17.84 | 17.59 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 23035CH | 23095CH | 23155CH |
| | | | | 701.5MHz | 707.5MHz | 713.5MHz |
| 12 / 5M | QPSK | 1 | 0 | 19.68 | 19.83 | 19.62 |
| | | 1 | 13 | 19.95 | 19.89 | 19.91 |
| | | 1 | 24 | 19.86 | 19.80 | 19.71 |
| | | 12 | 0 | 18.43 | 18.90 | 18.50 |
| | | 12 | 6 | 18.71 | 18.87 | 18.76 |
| | | 12 | 11 | 18.65 | 18.85 | 18.65 |
| | | 25 | 0 | 18.53 | 18.87 | 18.53 |
| | 16QAM | 1 | 0 | 18.78 | 19.00 | 18.68 |
| | | 1 | 13 | 18.78 | 19.29 | 18.67 |
| | | 1 | 24 | 18.65 | 19.17 | 18.52 |
| | | 12 | 0 | 17.50 | 17.95 | 17.48 |
| | | 12 | 6 | 17.69 | 17.99 | 17.65 |
| | | 12 | 11 | 17.58 | 18.00 | 17.53 |
| | | 25 | 0 | 17.45 | 17.91 | 17.40 |

| LTE Band / BW | Modulation | RB Size | RB Offset | Low CH | Mid CH | High CH |
|---|---|---|---|---|---|---|
| | | | | 23060CH | 23095CH | 23130CH |
| | | | | 704MHz | 707.5MHz | 711MHz |
| 12 / 10M | QPSK | 1 | 0 | 19.65 | 19.86 | 19.65 |
| | | 1 | 25 | 20.01 | 19.91 | 19.84 |
| | | 1 | 49 | 19.73 | 19.74 | 19.79 |
| | | 25 | 0 | 18.68 | 19.11 | 18.67 |
| | | 25 | 13 | 18.69 | 18.82 | 18.81 |
| | | 25 | 25 | 18.52 | 19.14 | 18.76 |
| | | 50 | 0 | 18.68 | 19.14 | 18.79 |
| | 16QAM | 1 | 0 | 18.54 | 18.65 | 18.23 |
| | | 1 | 25 | 18.56 | 18.87 | 18.37 |
| | | 1 | 49 | 18.49 | 18.69 | 18.01 |
| | | 25 | 0 | 17.64 | 17.74 | 17.31 |
| | | 25 | 13 | 17.64 | 17.39 | 17.49 |
| | | 25 | 25 | 17.39 | 17.74 | 17.53 |
| | | 50 | 0 | 17.56 | 17.71 | 17.30 |

# APPENDIX B - OCCUPIED BANDWIDTH

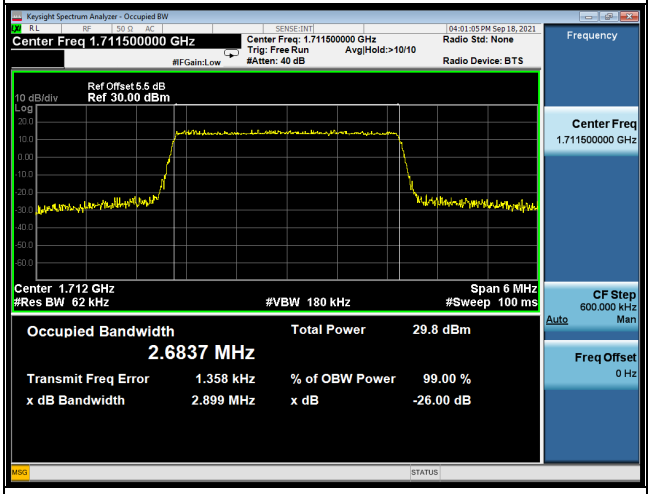
| LTE Band 4_1.4M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 19957 | 1710.7 | 1.0909 | 19957 | 1710.7 | 1.291 |
| 20175 | 1732.5 | 1.0957 | 20175 | 1732.5 | 1.306 |
| 20393 | 1754.3 | 1.0851 | 20393 | 1754.3 | 1.274 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 19957 | 1710.7 | 1.0881 | 19957 | 1710.7 | 1.282 |
| 20175 | 1732.5 | 1.0896 | 20175 | 1732.5 | 1.266 |
| 20393 | 1754.3 | 1.0925 | 20393 | 1754.3 | 1.300 |

| Spectrum Plot | |
|---|---|
| QPSK-19957 | QPSK-20175 |
|  |  |
| QPSK-20393 | 16QAM-19957 |
|  |  |
| 16QAM-20175 | 16QAM-20393 |
|  |  |

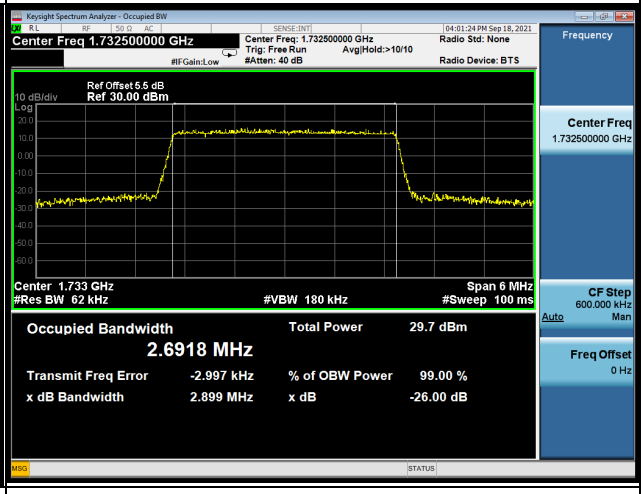
| LTE Band 4_3M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 19965 | 1711.5 | 2.6837 | 19965 | 1711.5 | 2.899 |
| 20175 | 1732.5 | 2.6918 | 20175 | 1732.5 | 2.899 |
| 20385 | 1753.5 | 2.6858 | 20385 | 1753.5 | 2.902 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 19965 | 1711.5 | 2.6881 | 19965 | 1711.5 | 2.916 |
| 20175 | 1732.5 | 2.6881 | 20175 | 1732.5 | 2.923 |
| 20385 | 1753.5 | 2.6820 | 20385 | 1753.5 | 2.923 |

## Spectrum Plot

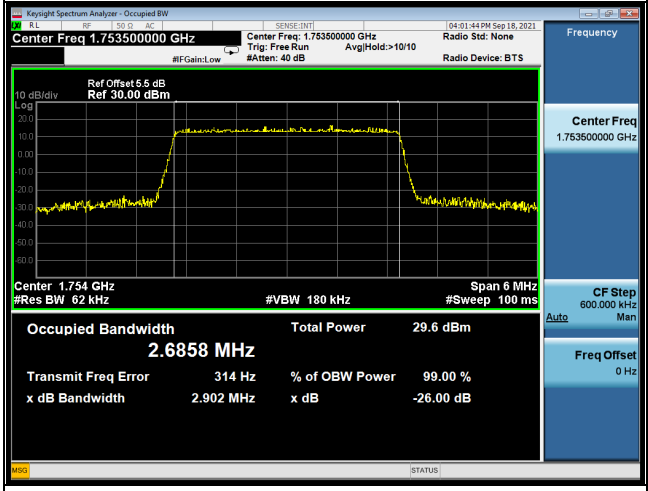
### QPSK-19965



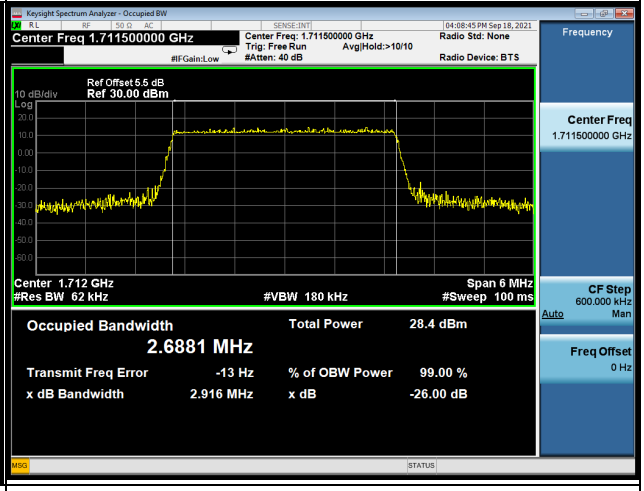

### QPSK-20175



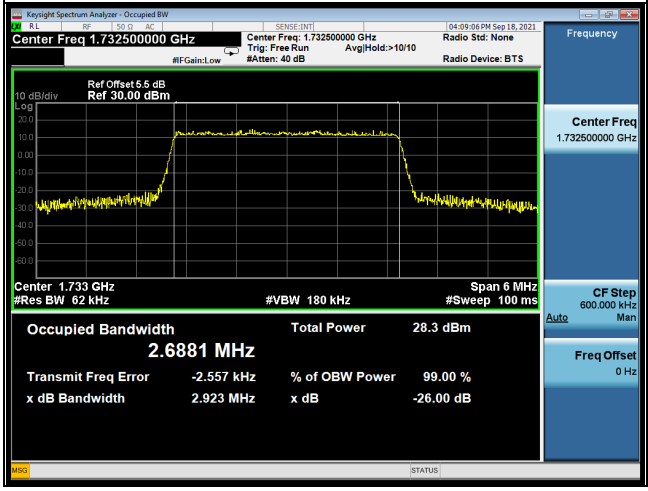

### QPSK-20385



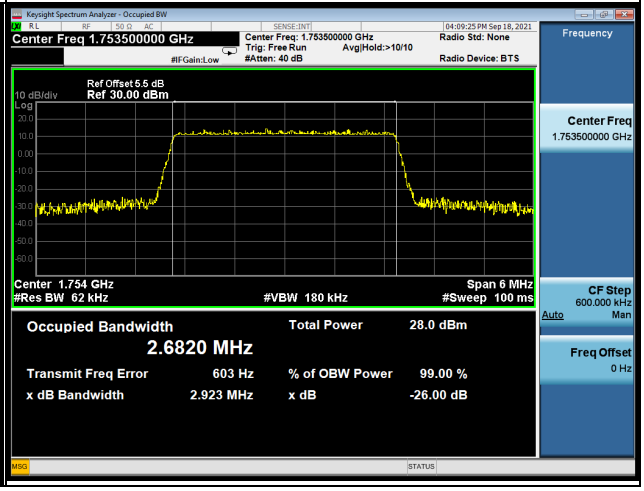

### 16QAM-19965




### 16QAM-20175



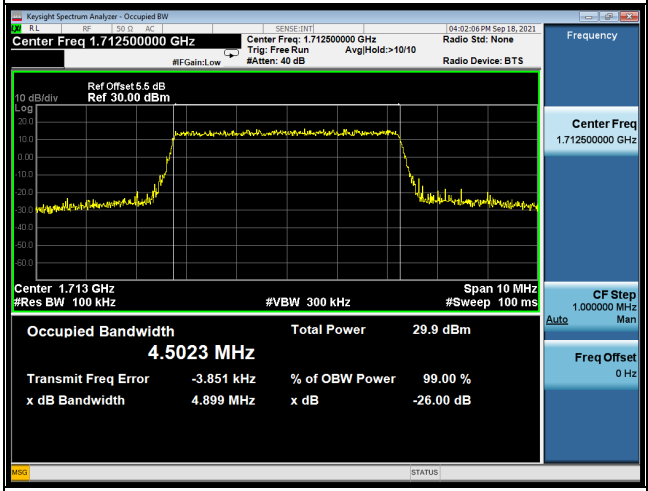

### 16QAM-20385



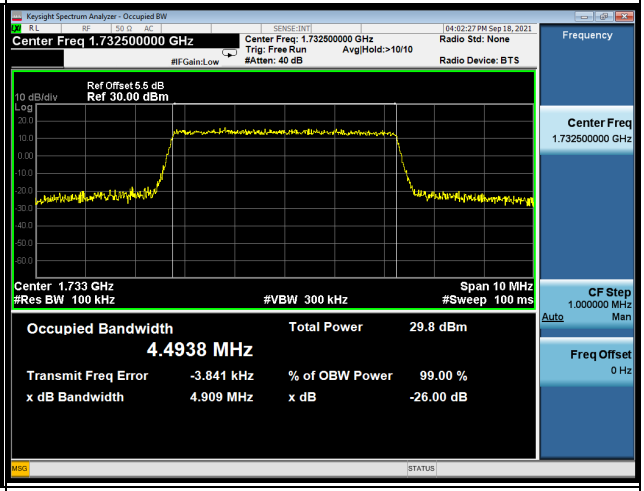
| LTE Band 4_5M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 19975 | 1712.5 | 4.5023 | 19975 | 1712.5 | 4.899 |
| 20175 | 1732.5 | 4.4938 | 20175 | 1732.5 | 4.909 |
| 20375 | 1752.5 | 4.4968 | 20375 | 1752.5 | 4.887 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 19975 | 1712.5 | 4.4917 | 19975 | 1712.5 | 4.926 |
| 20175 | 1732.5 | 4.4899 | 20175 | 1732.5 | 4.877 |
| 20375 | 1752.5 | 4.4842 | 20375 | 1752.5 | 4.870 |

## Spectrum Plot

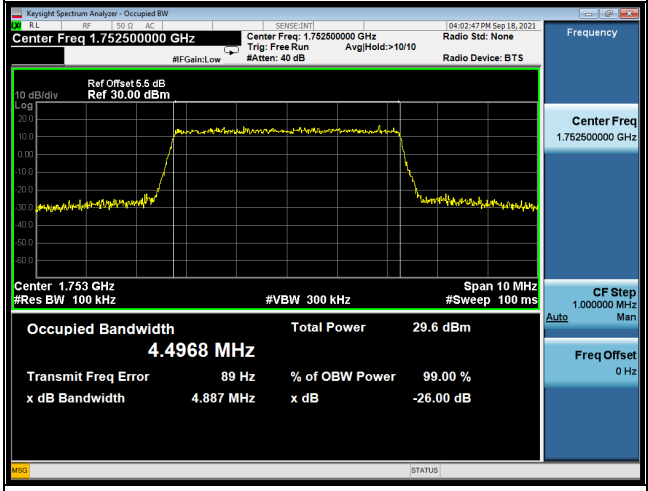
### QPSK-19975



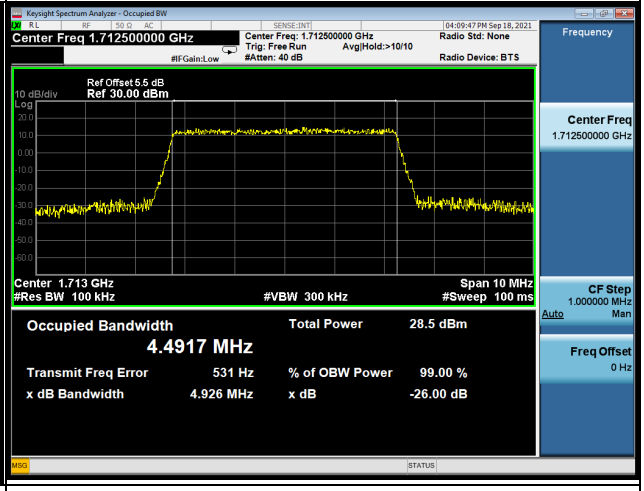

### QPSK-20175



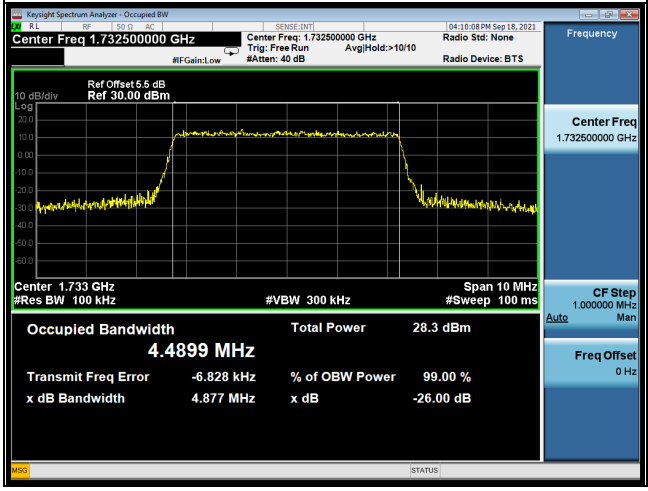

### QPSK-20375



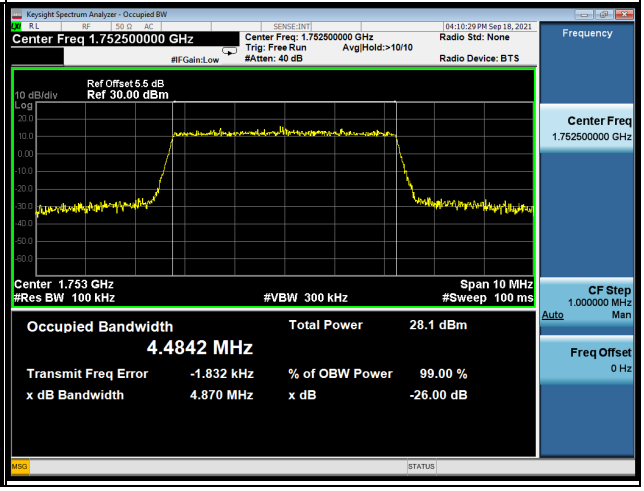

### 16QAM-19975




### 16QAM-20175



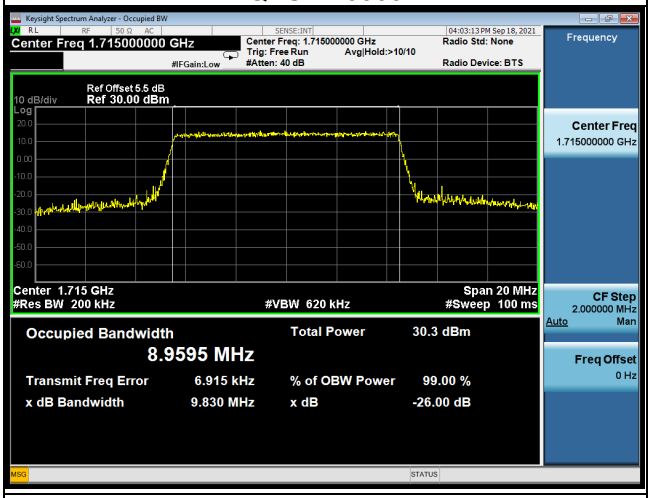

### 16QAM-20375



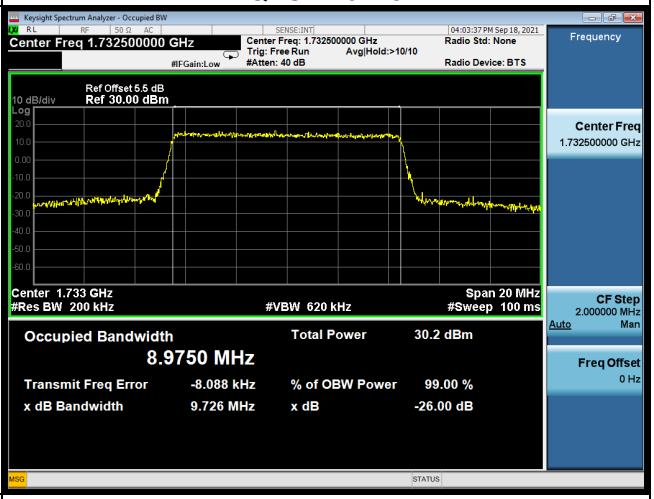
| LTE Band 4_10M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20000 | 1715 | 8.9595 | 20000 | 1715 | 9.830 |
| 20175 | 1732.5 | 8.9750 | 20175 | 1732.5 | 9.726 |
| 20350 | 1750 | 8.9754 | 20350 | 1750 | 9.785 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20000 | 1715 | 8.9702 | 20000 | 1715 | 9.699 |
| 20175 | 1732.5 | 8.9528 | 20175 | 1732.5 | 9.696 |
| 20350 | 1750 | 8.9625 | 20350 | 1750 | 9.678 |

## Spectrum Plot

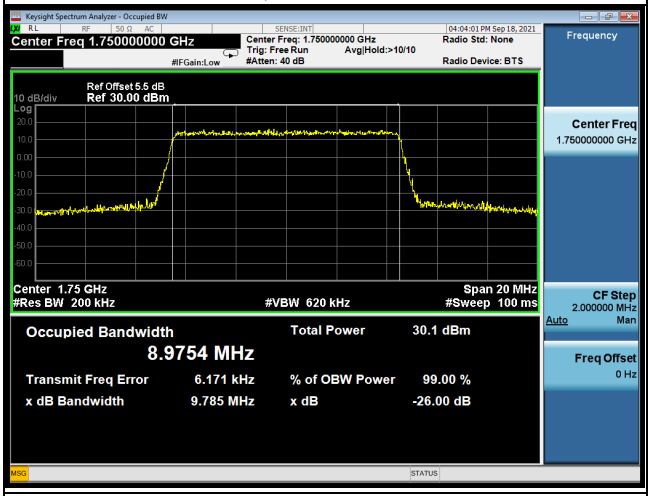
### QPSK-20000



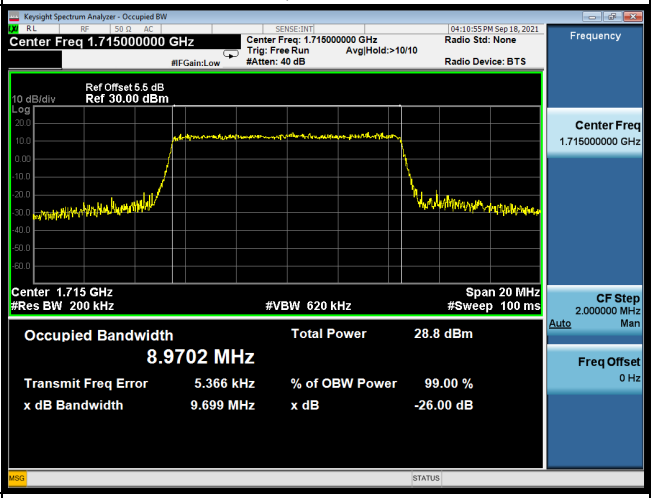

### QPSK-20175



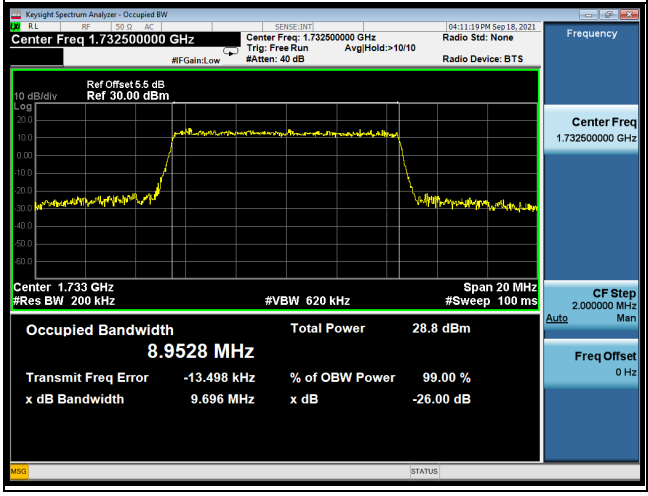

### QPSK-20350



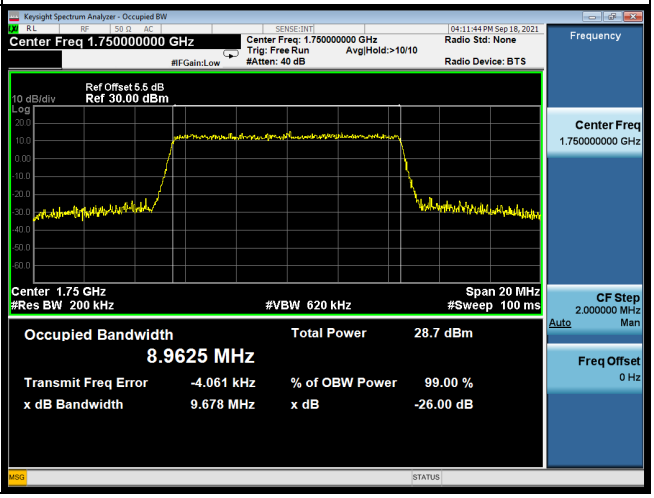

### 16QAM-20000




### 16QAM-20175



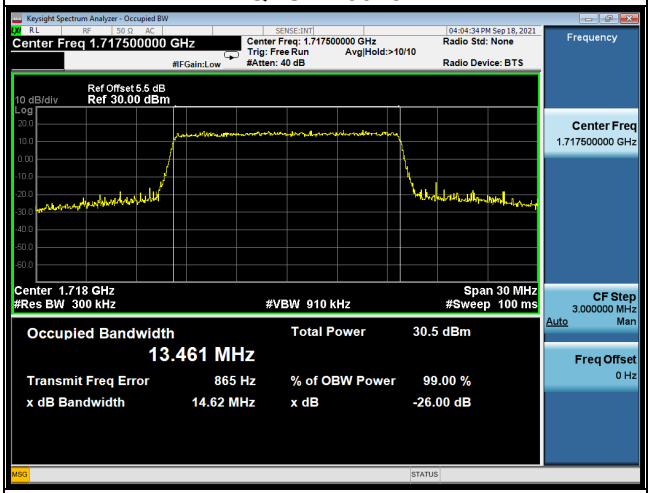

### 16QAM-20350



| LTE Band 4_15M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20025 | 1717.5 | 13.461 | 20025 | 1717.5 | 14.62 |
| 20175 | 1732.5 | 13.459 | 20175 | 1732.5 | 14.55 |
| 20325 | 1747.5 | 13.441 | 20325 | 1747.5 | 14.72 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20025 | 1717.5 | 13.450 | 20025 | 1717.5 | 14.56 |
| 20175 | 1732.5 | 13.458 | 20175 | 1732.5 | 14.58 |
| 20325 | 1747.5 | 13.451 | 20325 | 1747.5 | 14.57 |

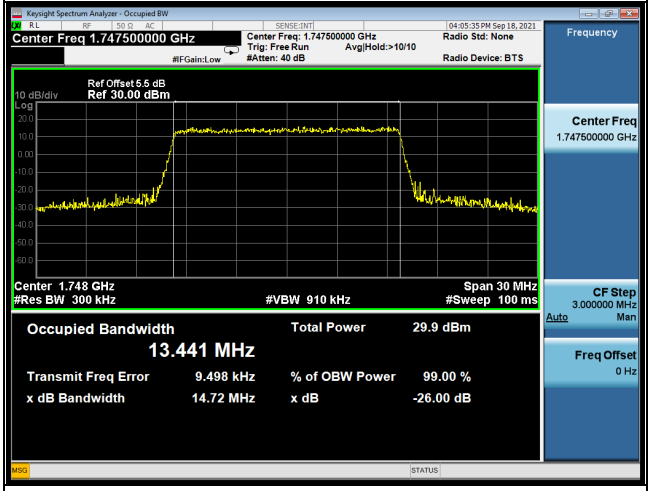
## Spectrum Plot

### QPSK-20025

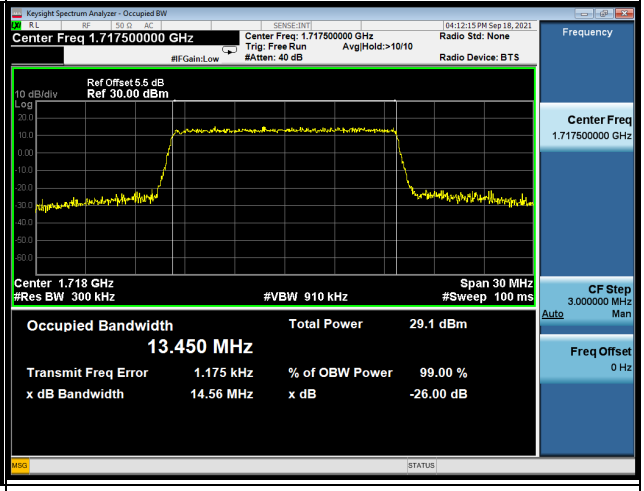



### QPSK-20175

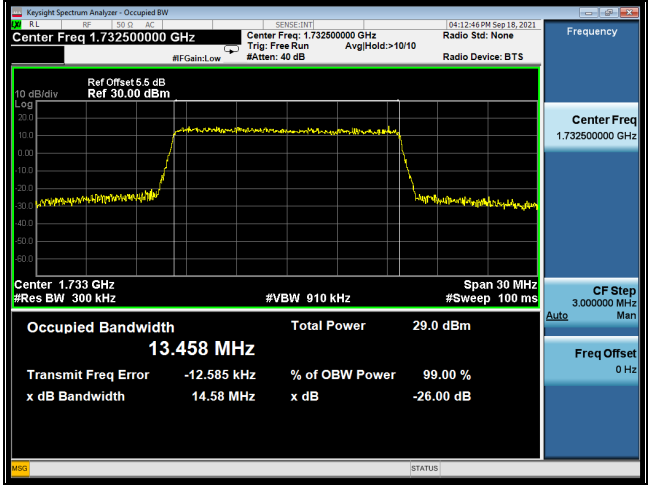

### QPSK-20325



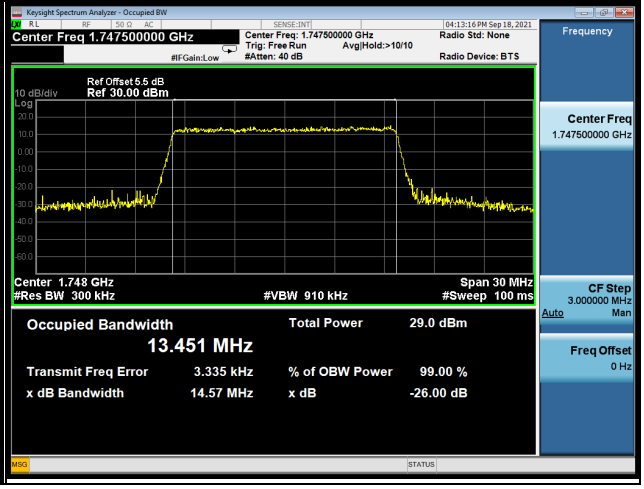

### 16QAM-20025



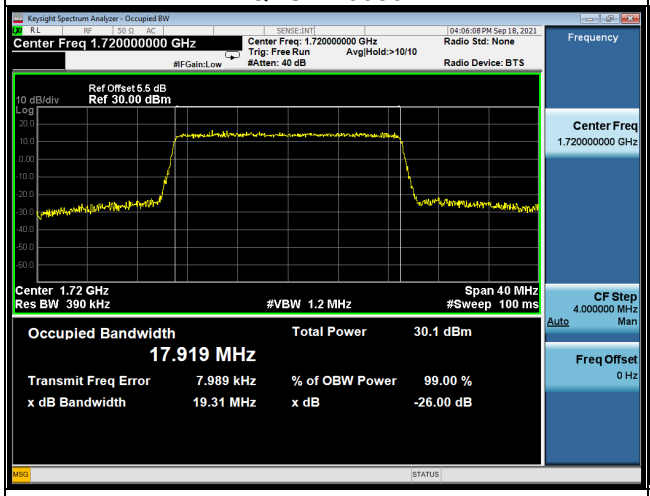
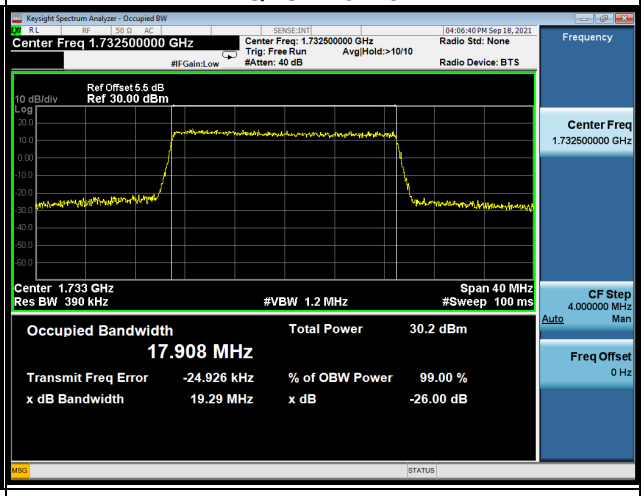
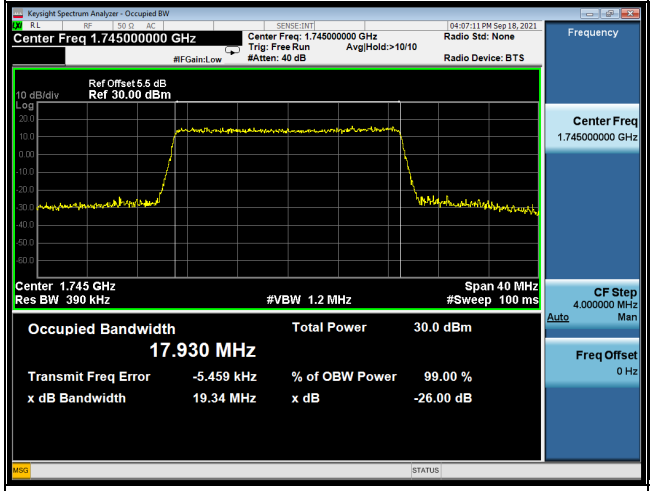
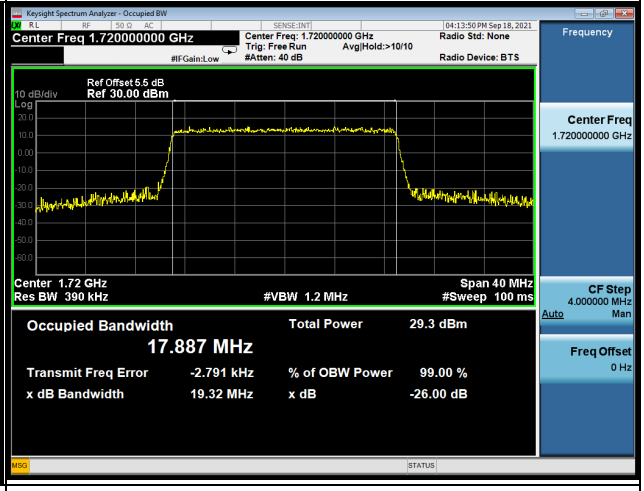
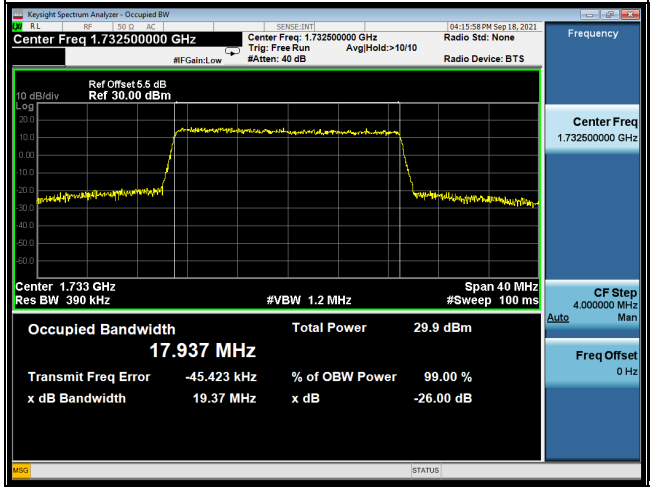
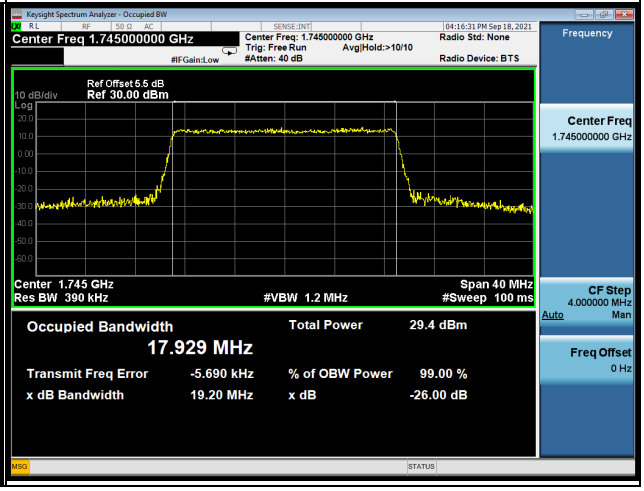

### 16QAM-20175




### 16QAM-20325



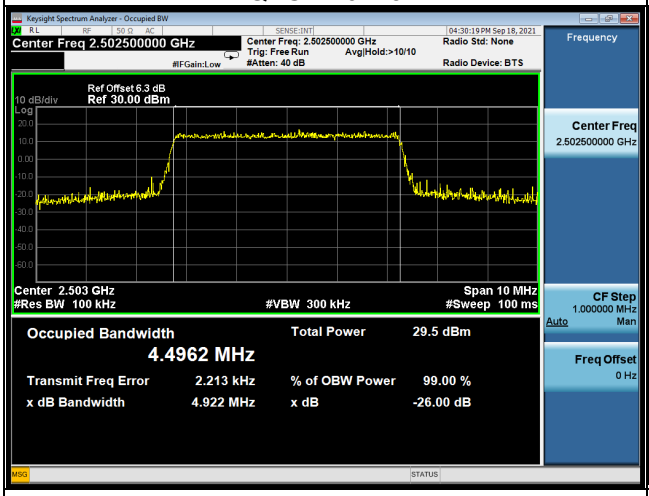
| LTE Band 4_20M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20050 | 1720 | 17.919 | 20050 | 1720 | 19.31 |
| 20175 | 1732.5 | 17.908 | 20175 | 1732.5 | 19.29 |
| 20300 | 1745 | 17.930 | 20300 | 1745 | 19.34 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20050 | 1720 | 17.887 | 20050 | 1720 | 19.32 |
| 20175 | 1732.5 | 17.937 | 20175 | 1732.5 | 19.37 |
| 20300 | 1745 | 17.929 | 20300 | 1745 | 19.20 |

| Spectrum Plot | |
|---|---|
| QPSK-20050 | QPSK-20175 |
|  |  |
| QPSK-20300 | 16QAM-20050 |
|  |  |
| 16QAM-20175 | 16QAM-20300 |
|  |  |

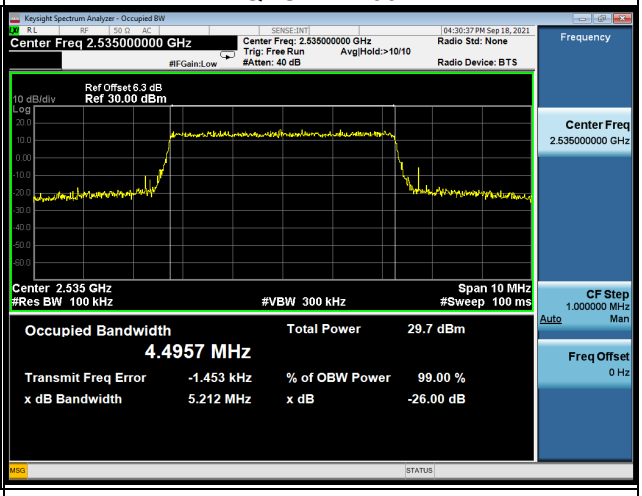
| LTE Band 7_5M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20775 | 2502.5 | 4.4962 | 20775 | 2502.5 | 4.922 |
| 21100 | 2535 | 4.4957 | 21100 | 2535 | 5.212 |
| 21425 | 2567.5 | 4.5012 | 21425 | 2567.5 | 4.967 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20775 | 2502.5 | 4.4978 | 20775 | 2502.5 | 4.874 |
| 21100 | 2535 | 4.4943 | 21100 | 2535 | 4.942 |
| 21425 | 2567.5 | 4.4959 | 21425 | 2567.5 | 4.952 |

## Spectrum Plot

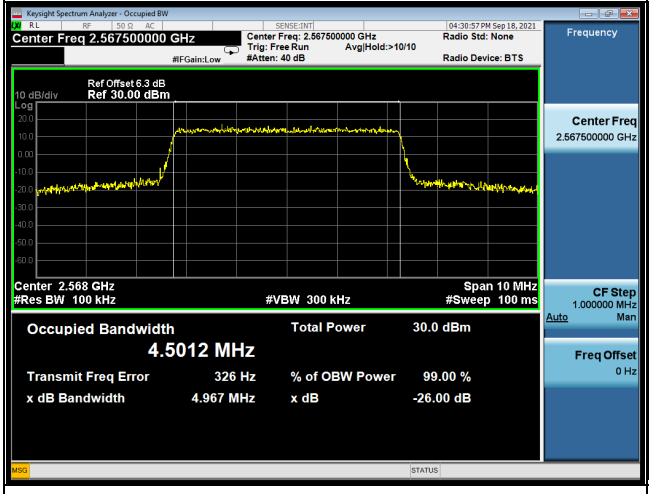
### QPSK-20775



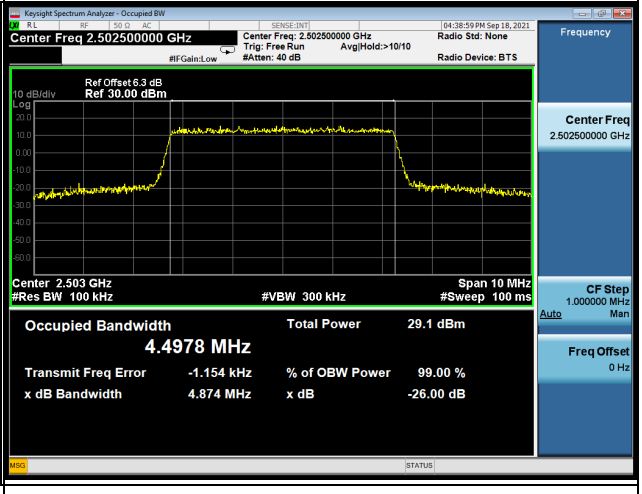

### QPSK-21100



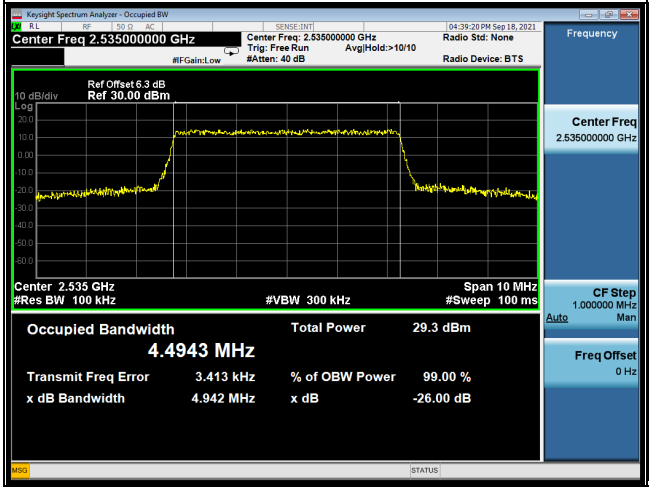

### QPSK-21425



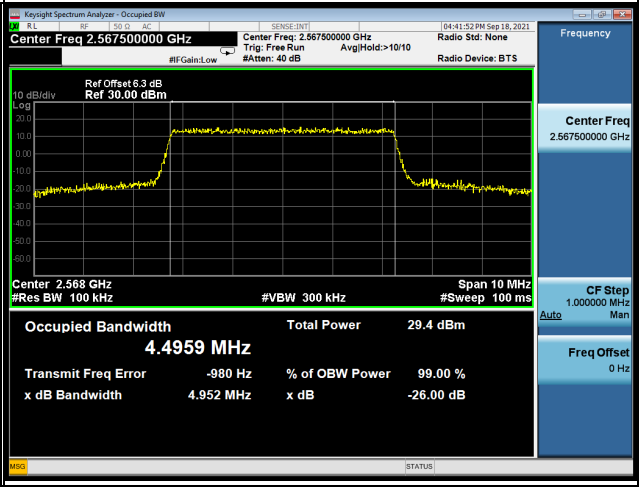

### 16QAM-20775



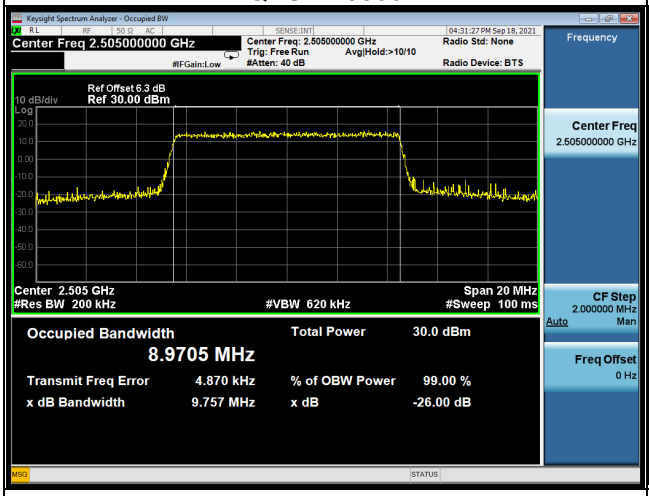
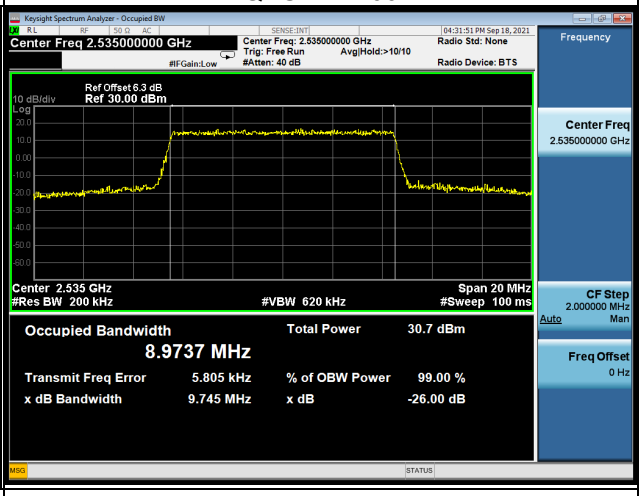
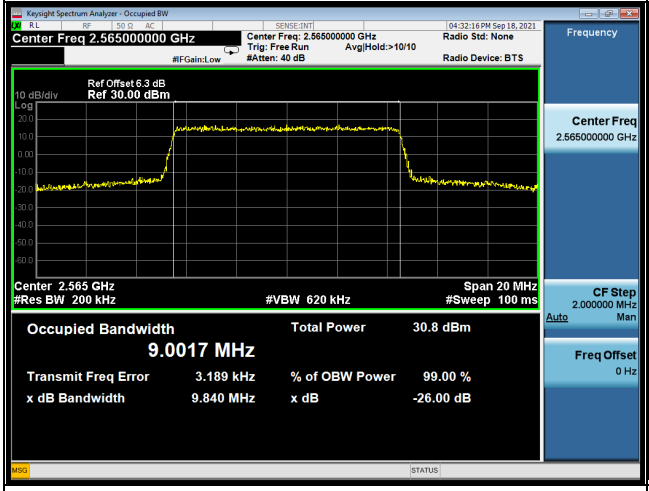
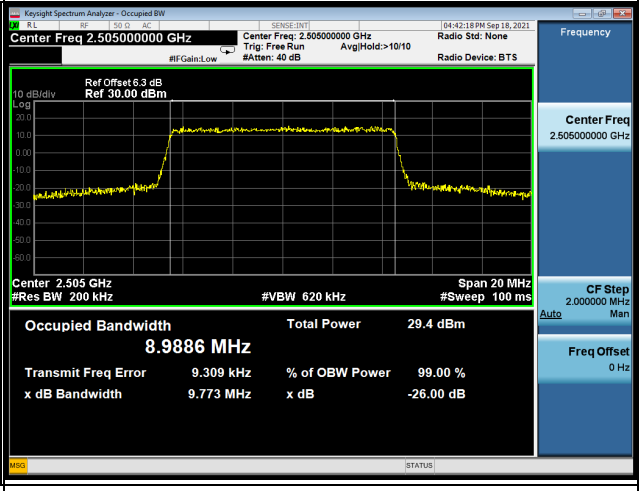
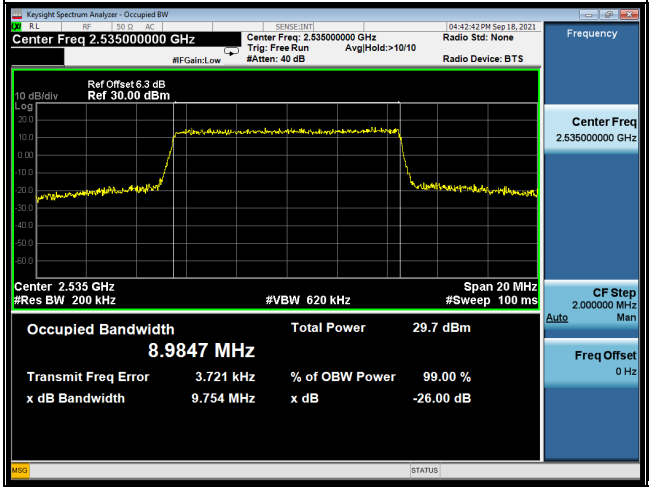
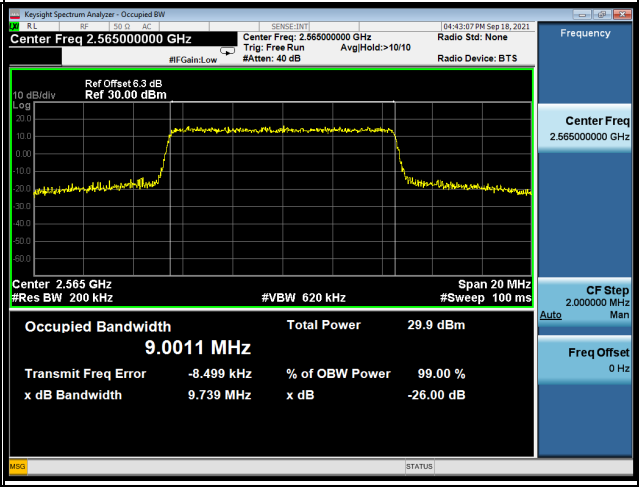

### 16QAM-21100




### 16QAM-21425



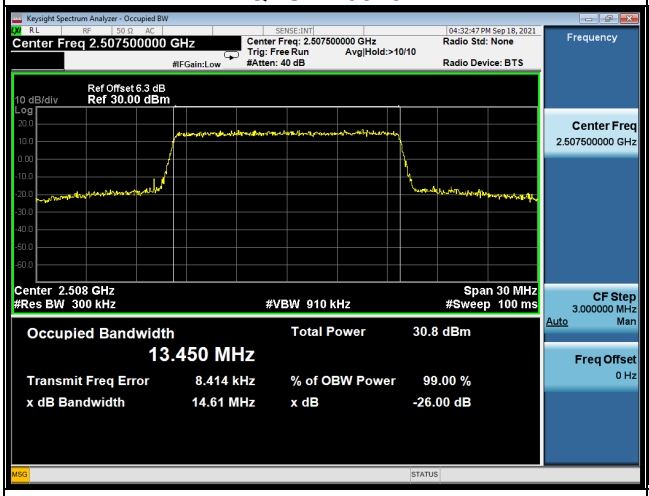
| LTE Band 7_10M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20800 | 2505 | 8.9705 | 20800 | 2505 | 9.757 |
| 21100 | 2535 | 8.9737 | 21100 | 2535 | 9.745 |
| 21400 | 2565 | 9.0017 | 21400 | 2565 | 9.840 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20800 | 2505 | 8.9886 | 20800 | 2505 | 9.773 |
| 21100 | 2535 | 8.9847 | 21100 | 2535 | 9.754 |
| 21400 | 2565 | 9.0011 | 21400 | 2565 | 9.739 |

| Spectrum Plot | |
|---|---|
| QPSK-20800 | QPSK-21100 |
|  |  |
| QPSK-21400 | 16QAM-20800 |
|  |  |
| 16QAM-21100 | 16QAM-21400 |
|  |  |

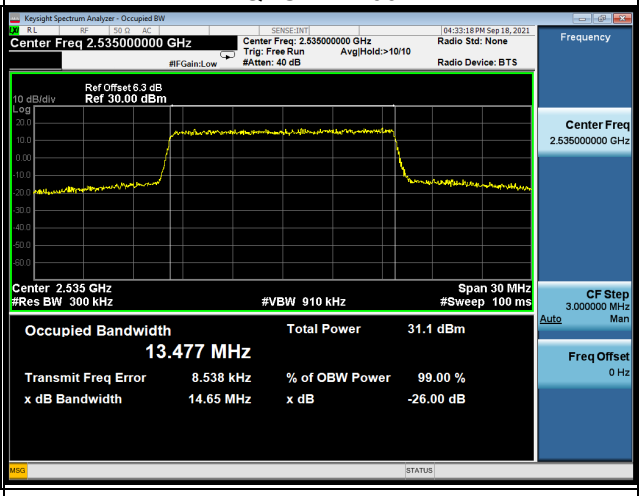
| LTE Band 7_15M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20825 | 2507.5 | 13.450 | 20825 | 2507.5 | 14.61 |
| 21100 | 2535 | 13.477 | 21100 | 2535 | 14.65 |
| 21375 | 2562.5 | 13.457 | 21375 | 2562.5 | 14.68 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20825 | 2507.5 | 13.453 | 20825 | 2507.5 | 14.54 |
| 21100 | 2535 | 13.465 | 21100 | 2535 | 14.63 |
| 21375 | 2562.5 | 13.467 | 21375 | 2562.5 | 14.56 |

## Spectrum Plot

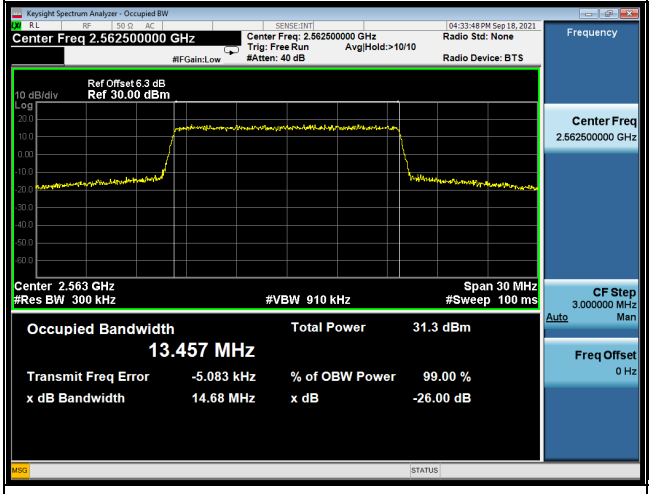
### QPSK-20825



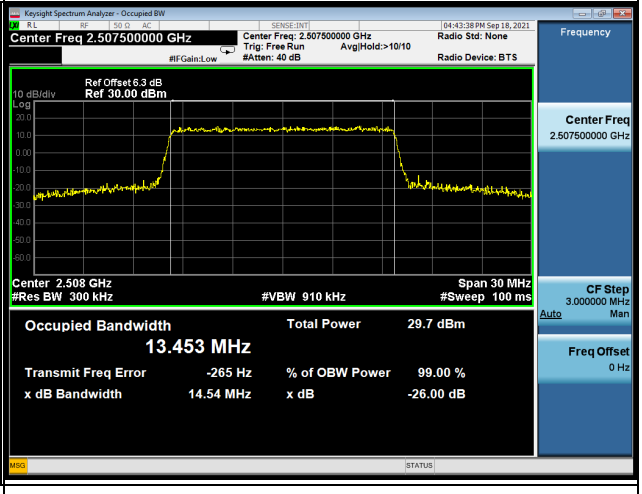

### QPSK-21100



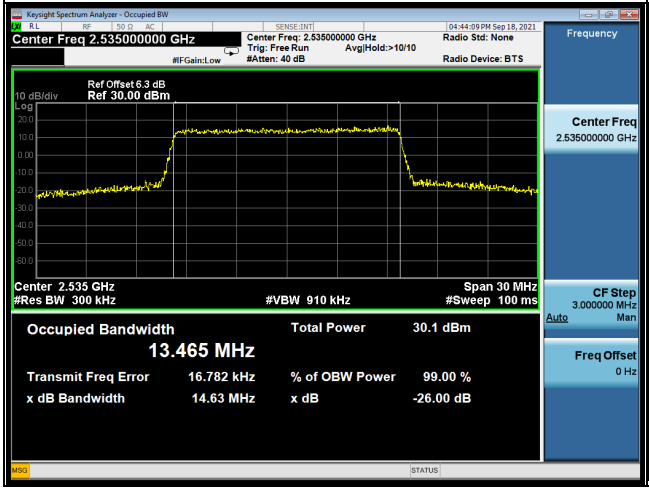

### QPSK-21375



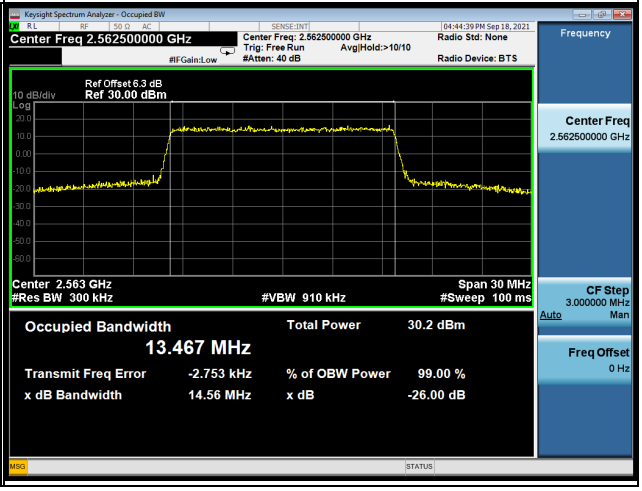

### 16QAM-20825




### 16QAM-21100



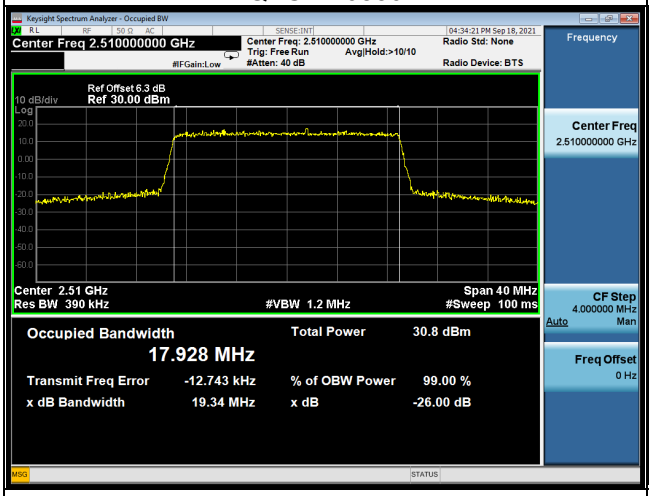

### 16QAM-21375



| LTE Band 7_20M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20850 | 2510 | 17.928 | 20850 | 2510 | 19.34 |
| 21100 | 2535 | 17.945 | 21100 | 2535 | 19.33 |
| 21350 | 2560 | 17.930 | 21350 | 2560 | 19.40 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 20850 | 2510 | 17.903 | 20850 | 2510 | 19.31 |
| 21100 | 2535 | 17.933 | 21100 | 2535 | 19.38 |
| 21350 | 2560 | 17.958 | 21350 | 2560 | 19.48 |

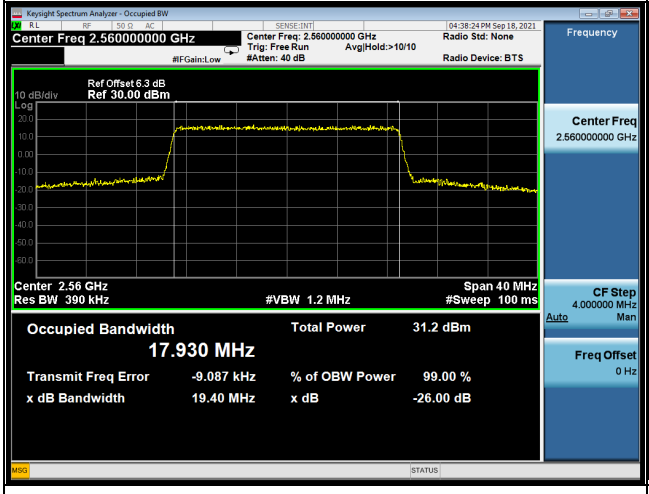
## Spectrum Plot

### QPSK-20850

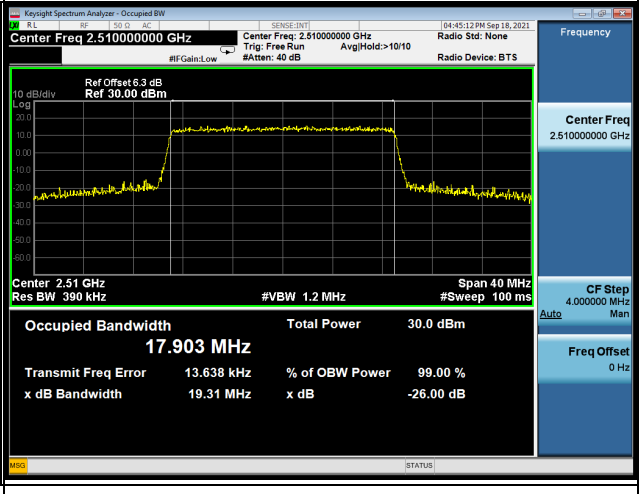



### QPSK-21100

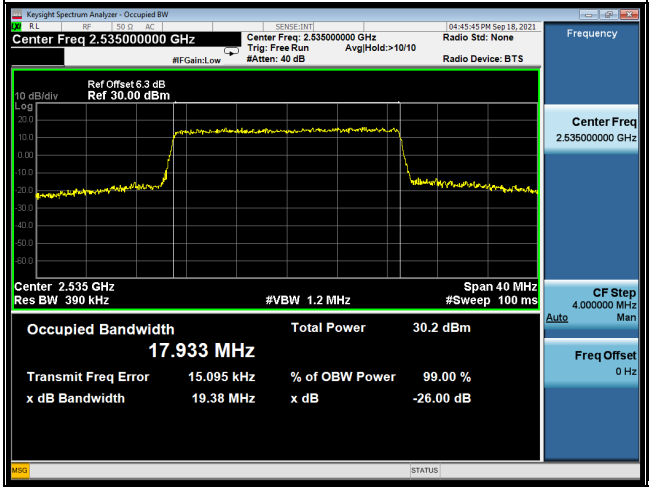

### QPSK-21350



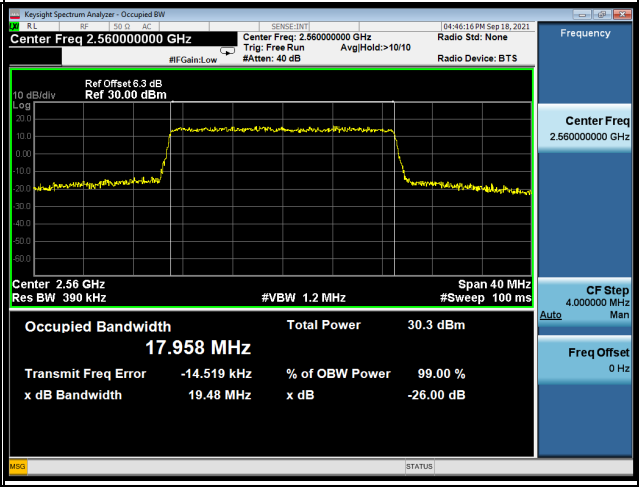

### 16QAM-20850




### 16QAM-21100



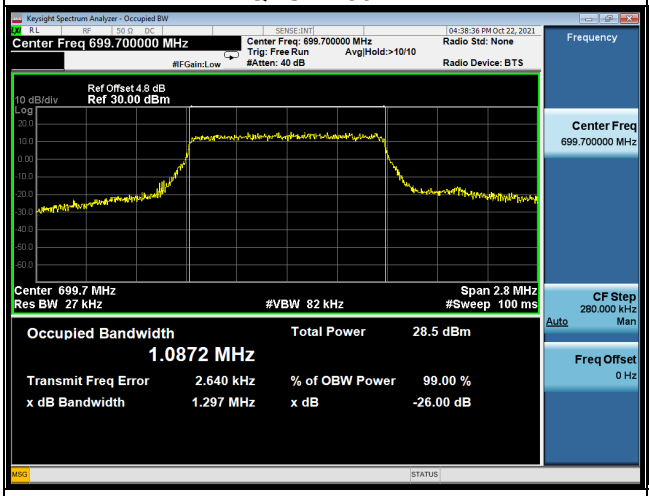

### 16QAM-21350



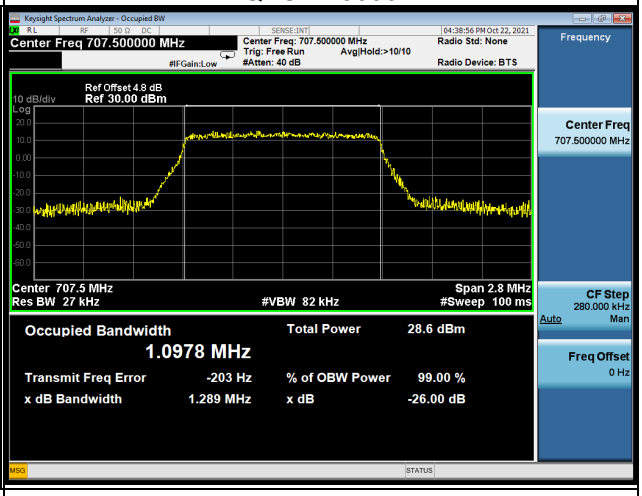
| LTE Band 12_1.4M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 23017 | 699.7 | 1.0872 | 23017 | 699.7 | 1.297 |
| 23095 | 707.5 | 1.0978 | 23095 | 707.5 | 1.289 |
| 23173 | 715.3 | 1.1161 | 23173 | 715.3 | 2.056 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 23017 | 699.7 | 1.0876 | 23017 | 699.7 | 1.291 |
| 23095 | 707.5 | 1.0914 | 23095 | 707.5 | 1.281 |
| 23173 | 715.3 | 1.0979 | 23173 | 715.3 | 1.434 |

## Spectrum Plot

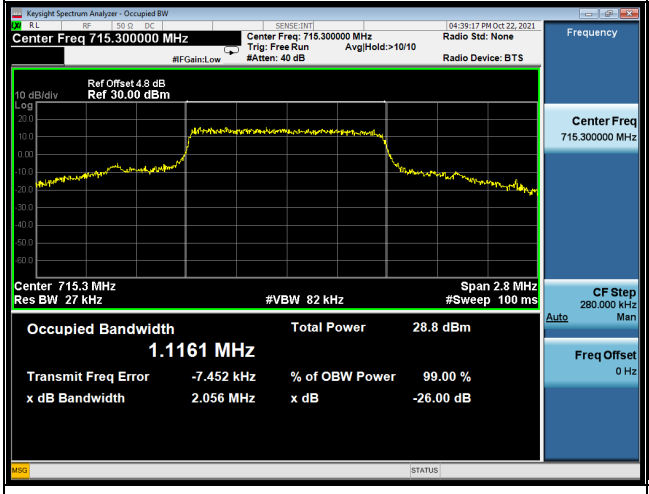
### QPSK-23017



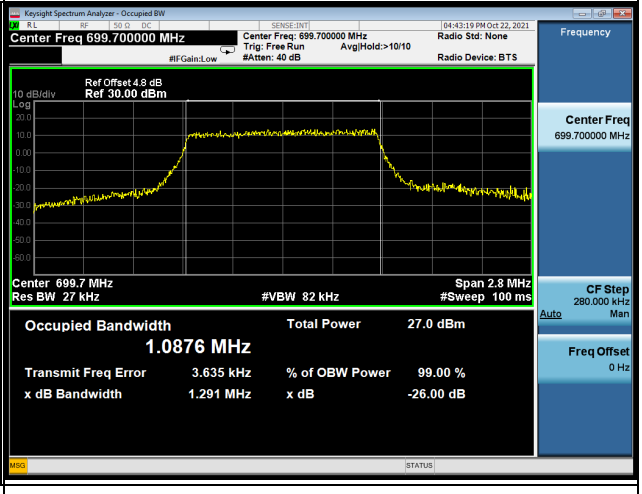

### QPSK-23095



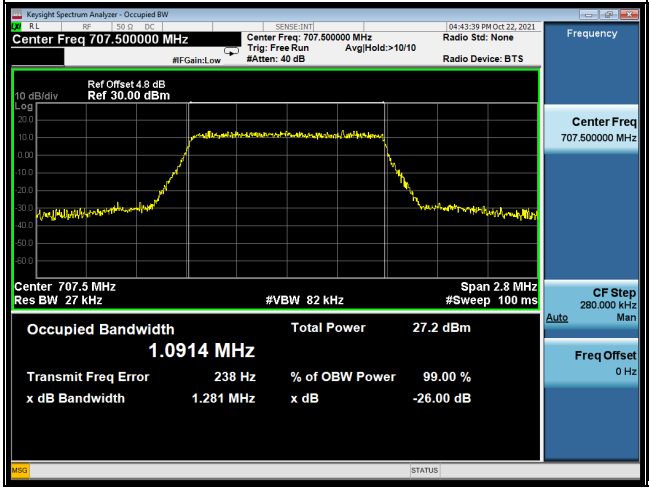

### QPSK-23173



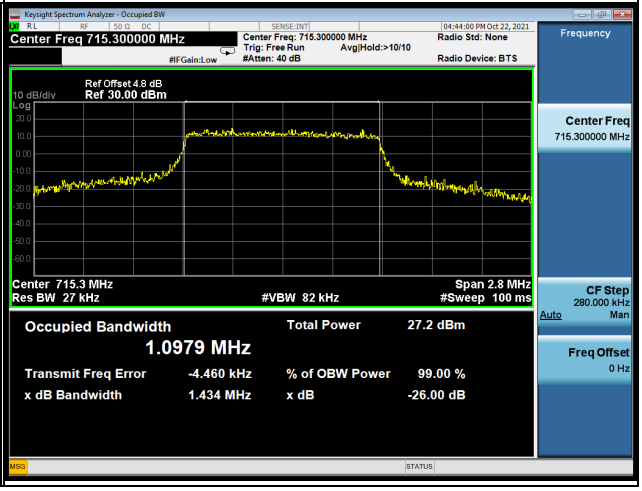

### 16QAM-23017




### 16QAM-23095



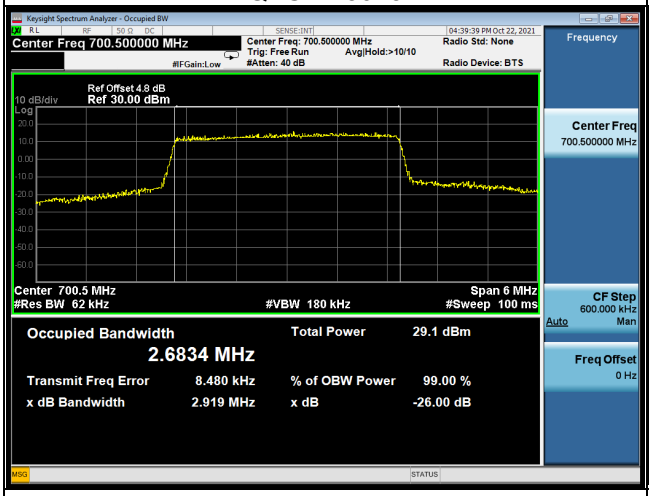

### 16QAM-23173



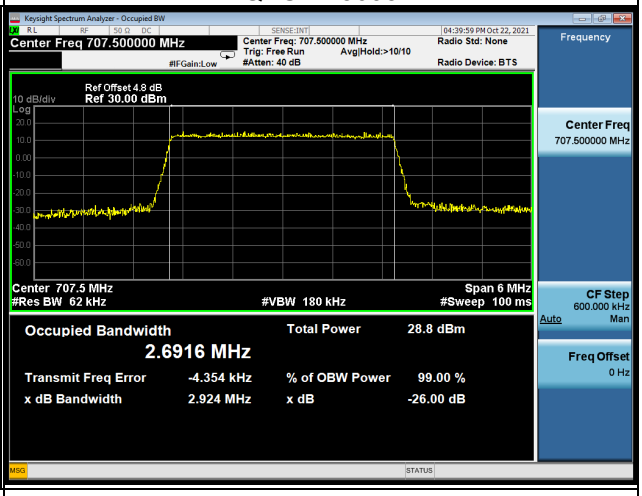
| LTE Band 12_3M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 23025 | 700.5 | 2.6834 | 23025 | 700.5 | 2.919 |
| 23095 | 707.5 | 2.6916 | 23095 | 707.5 | 2.924 |
| 23165 | 714.5 | 2.7026 | 23165 | 714.5 | 3.580 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 23025 | 700.5 | 2.6881 | 23025 | 700.5 | 2.901 |
| 23095 | 707.5 | 2.6850 | 23095 | 707.5 | 2.927 |
| 23165 | 714.5 | 2.6913 | 23165 | 714.5 | 3.657 |

## Spectrum Plot

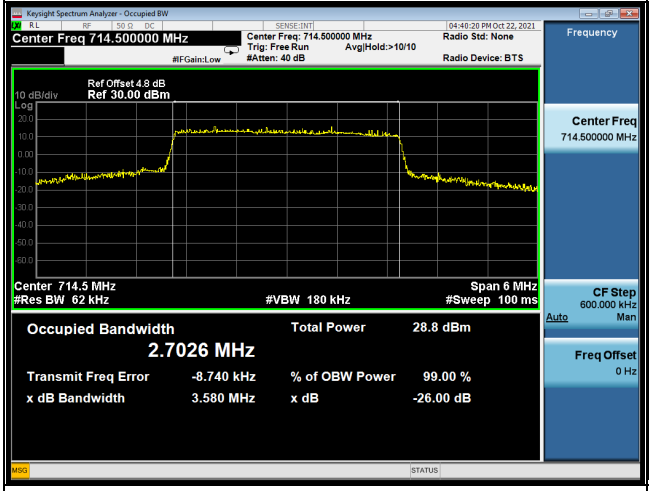
### QPSK-23025



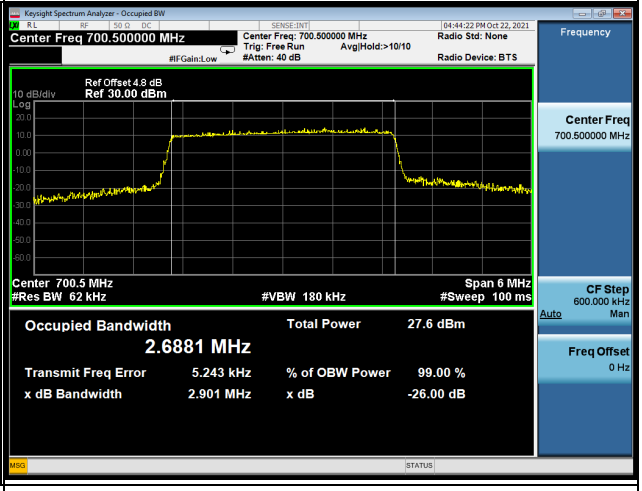

### QPSK-23095



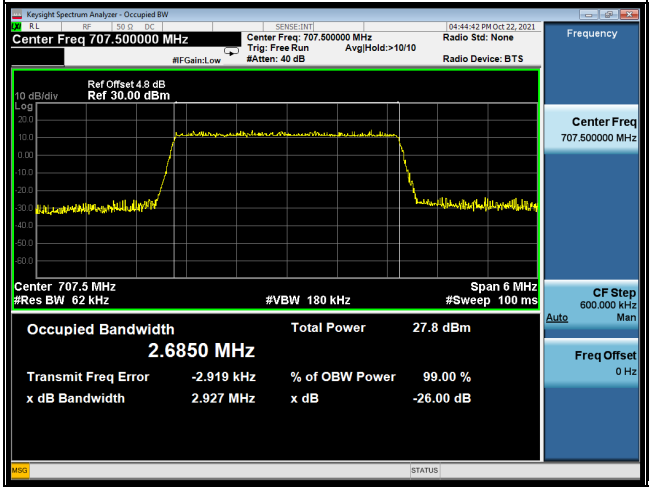

### QPSK-23165



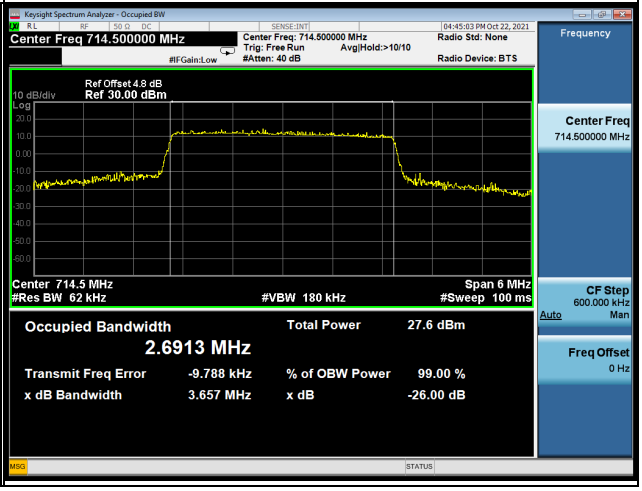

### 16QAM-23525




### 16QAM-23095



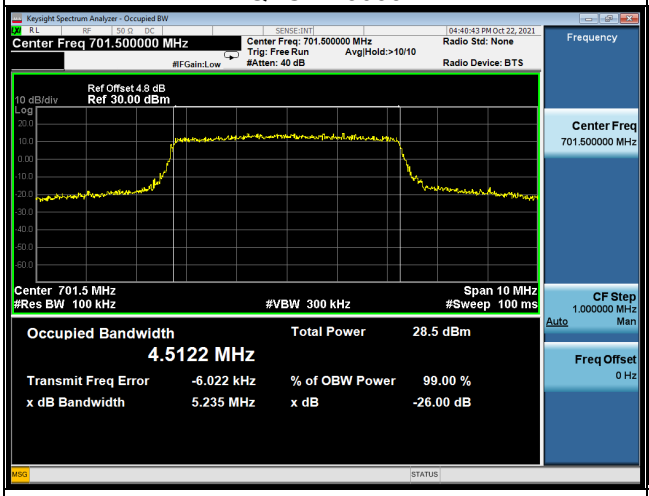

### 16QAM-23165



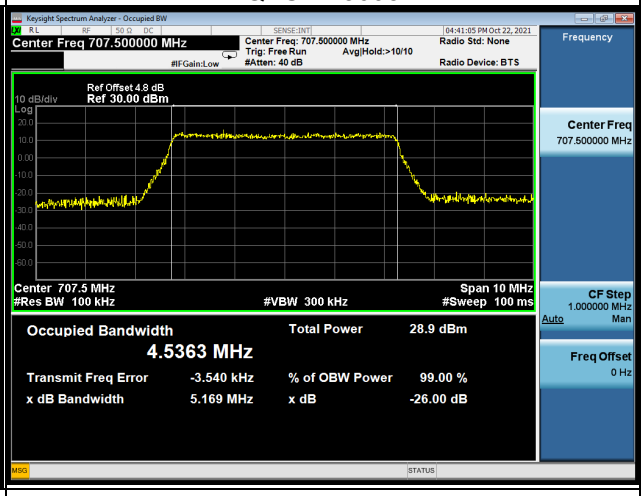
| LTE Band 12_5M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 23035 | 701.5 | 4.5122 | 23035 | 701.5 | 5.235 |
| 23095 | 707.5 | 4.5363 | 23095 | 707.5 | 5.169 |
| 23155 | 713.5 | 4.5012 | 23155 | 713.5 | 5.113 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 23035 | 701.5 | 4.4814 | 23035 | 701.5 | 5.095 |
| 23095 | 707.5 | 4.5243 | 23095 | 707.5 | 5.167 |
| 23155 | 713.5 | 4.4884 | 23155 | 713.5 | 5.046 |

## Spectrum Plot

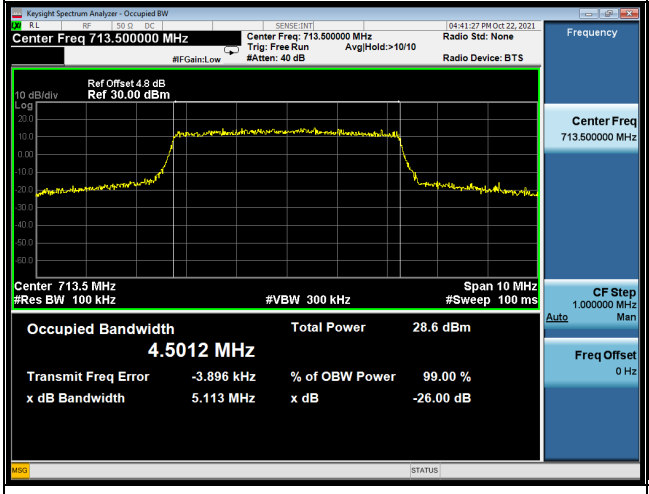
### QPSK-23035



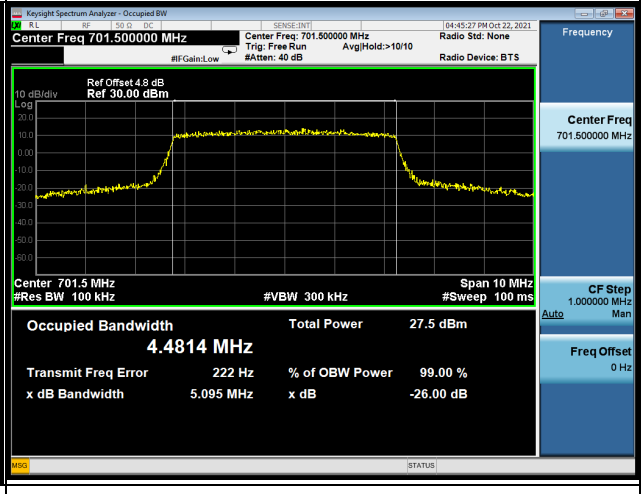

### QPSK-23095



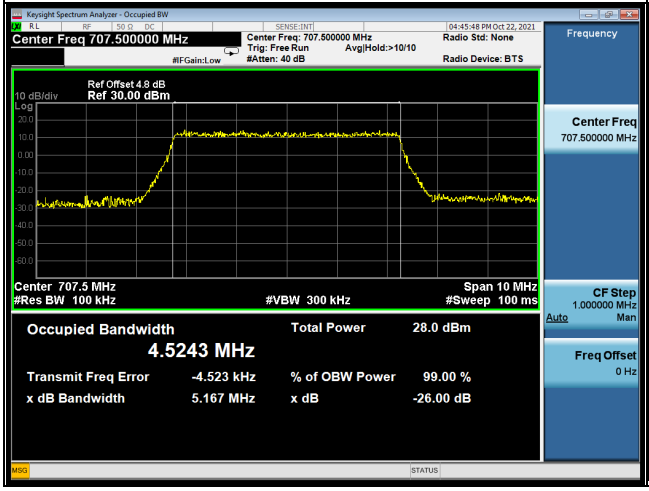

### QPSK-23155



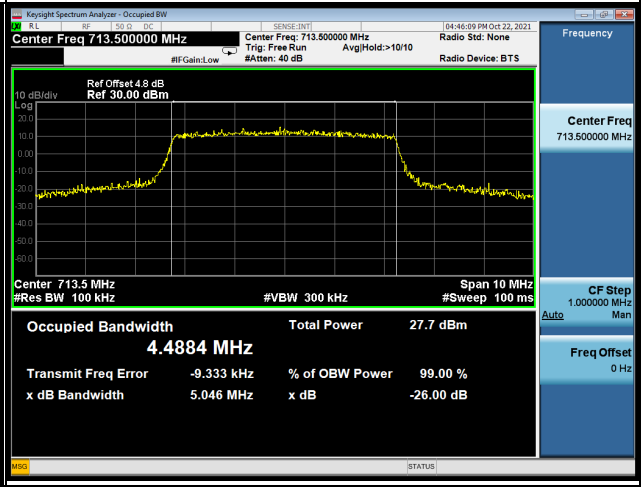

### 16QAM-23035




### 16QAM-23095



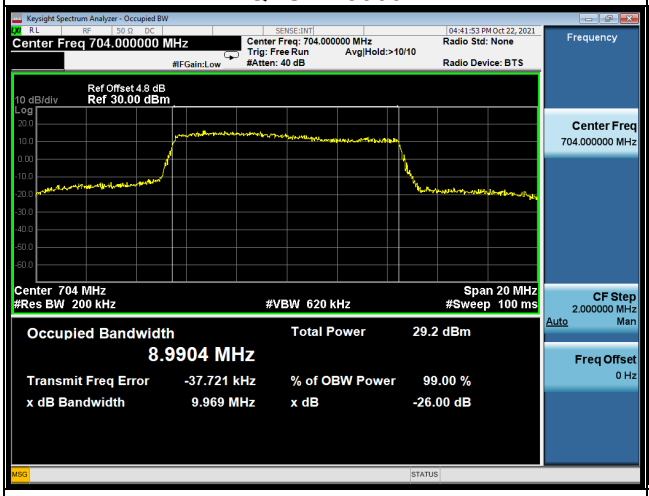

### 16QAM-23155



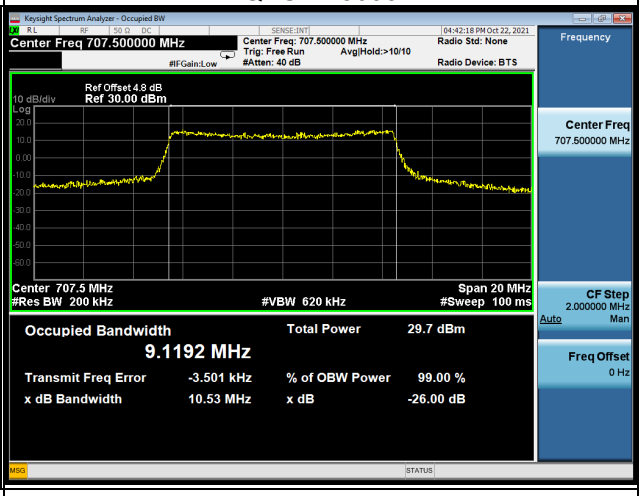
| LTE Band 12_10M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 23060 | 704.0 | 8.9904 | 23060 | 704.0 | 9.969 |
| 23095 | 707.5 | 9.1192 | 23095 | 707.5 | 10.53 |
| 23130 | 711.0 | 8.9772 | 23130 | 711.0 | 9.940 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 23060 | 704.0 | 8.9695 | 23060 | 704.0 | 9.945 |
| 23095 | 707.5 | 9.1085 | 23095 | 707.5 | 10.27 |
| 23130 | 711.0 | 8.9734 | 23130 | 711.0 | 10.09 |

## Spectrum Plot

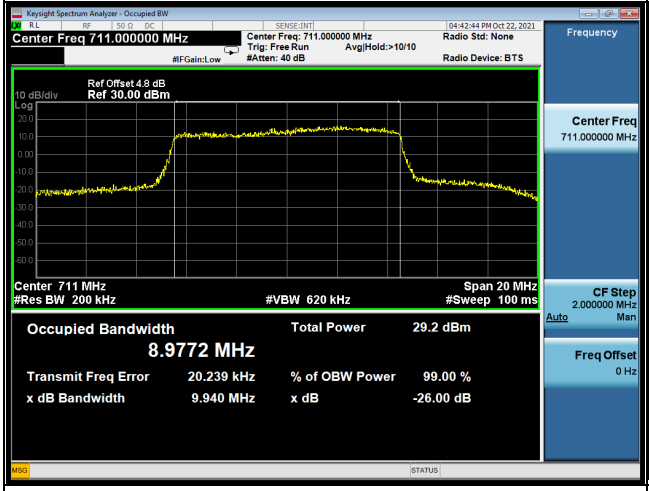
### QPSK-23060



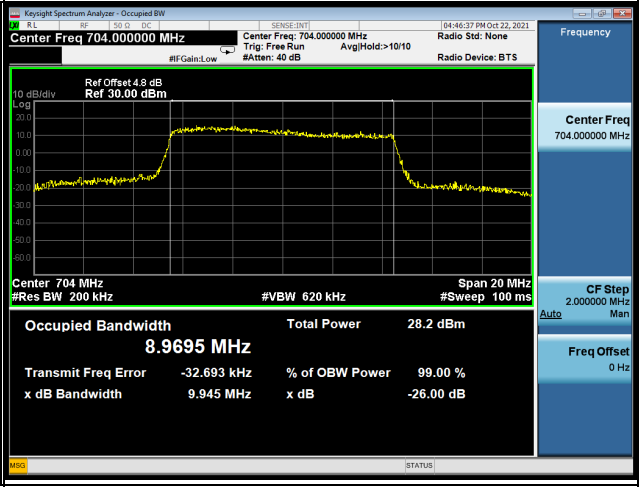

### QPSK-23095



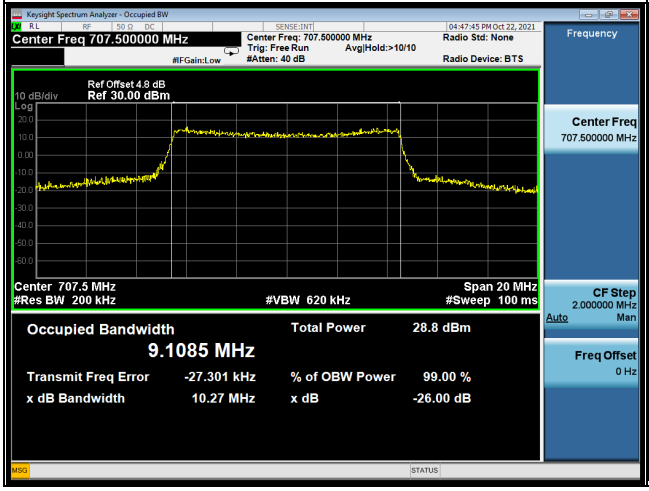

### QPSK-23130




### 16QAM-23060




### 16QAM-23095



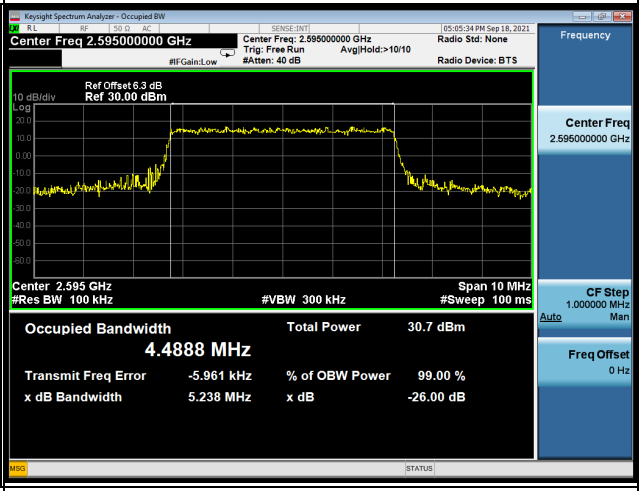

### 16QAM-23130

| LTE Band 38_5M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 37775 | 2572.5 | 4.4968 | 37775 | 2572.5 | 5.177 |
| 38000 | 2600 | 4.4888 | 38000 | 2600 | 5.238 |
| 38225 | 2617.5 | 4.4879 | 38225 | 2617.5 | 5.329 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 37775 | 2572.5 | 4.4831 | 37775 | 2572.5 | 4.904 |
| 38000 | 2600 | 4.4868 | 38000 | 2600 | 4.894 |
| 38225 | 2617.5 | 4.4902 | 38225 | 2617.5 | 5.192 |

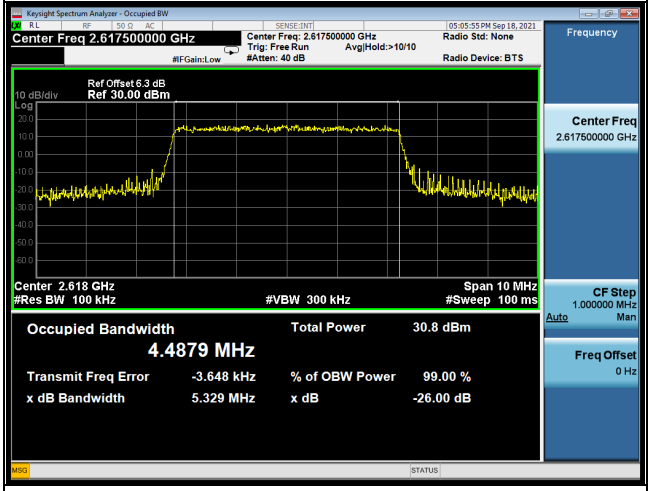
## Spectrum Plot

### QPSK-37775

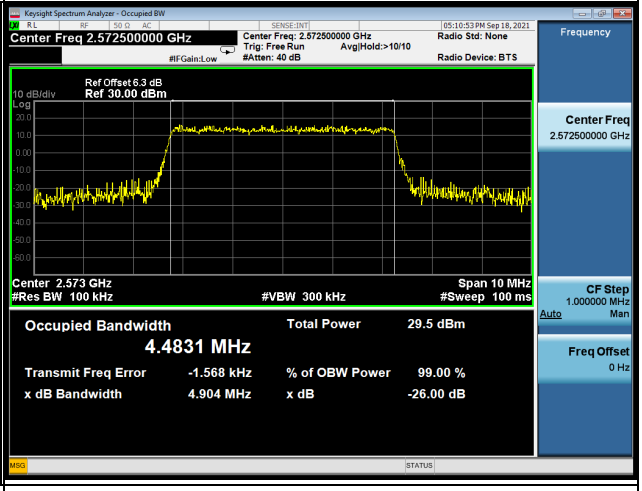

### QPSK-38000



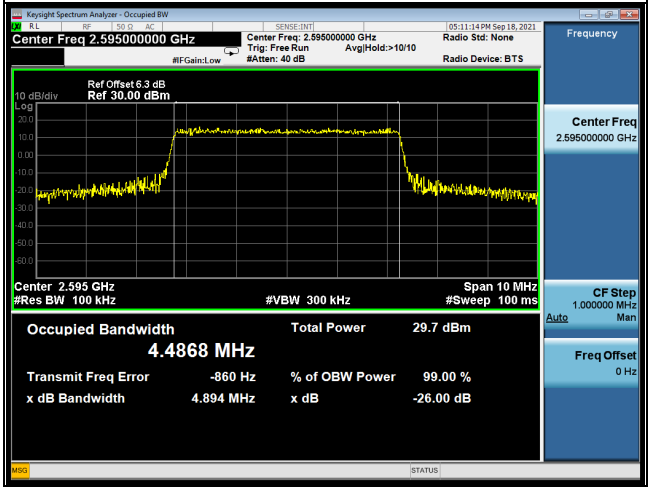

### QPSK-38225



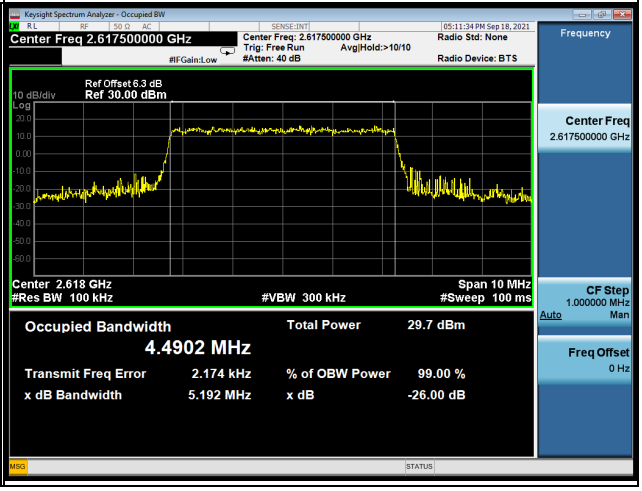

### 16QAM-37775




### 16QAM-38000



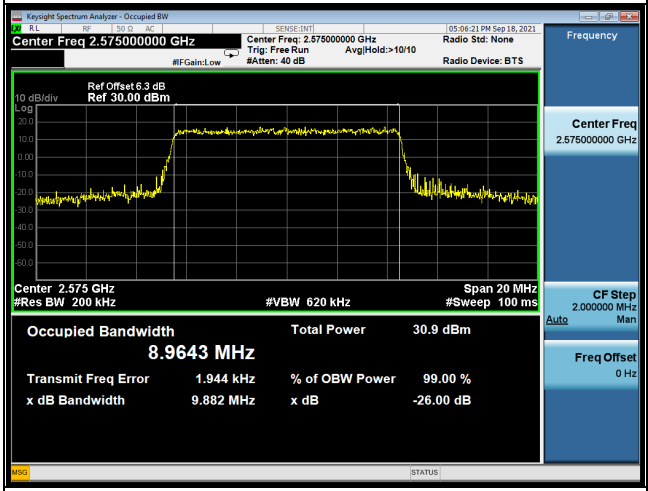

### 16QAM-38225



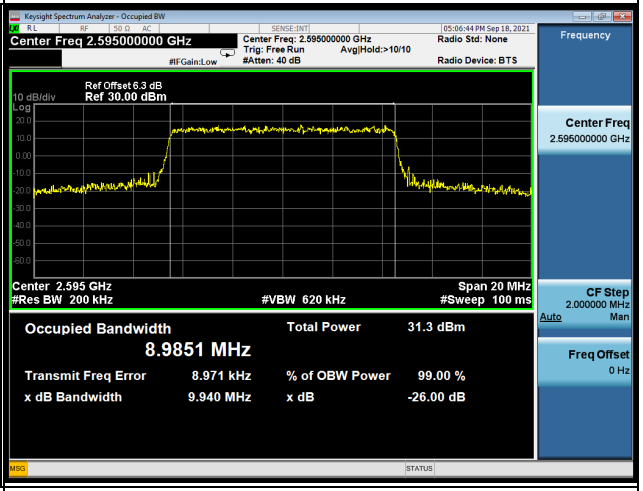
| LTE Band 38_10M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 37800 | 2575 | 8.9643 | 37800 | 2575 | 9.882 |
| 38000 | 2600 | 8.9851 | 38000 | 2600 | 9.940 |
| 38200 | 2615 | 9.0022 | 38200 | 2615 | 10.03 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 37800 | 2575 | 8.9672 | 37800 | 2575 | 9.826 |
| 38000 | 2600 | 8.9685 | 38000 | 2600 | 10.48 |
| 38200 | 2615 | 8.9885 | 38200 | 2615 | 10.16 |

## Spectrum Plot

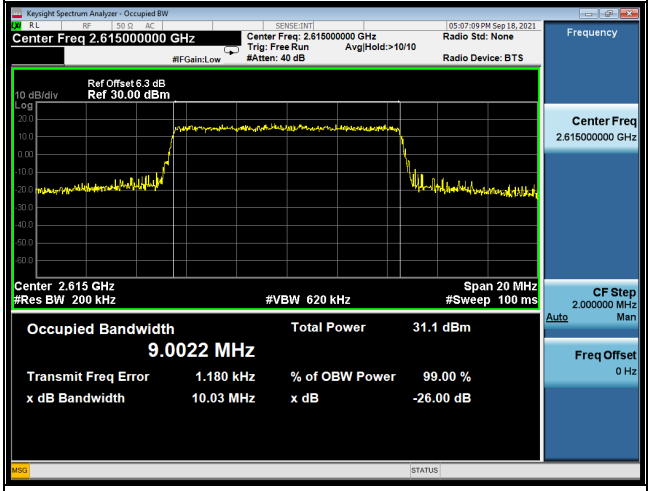
### QPSK-37800



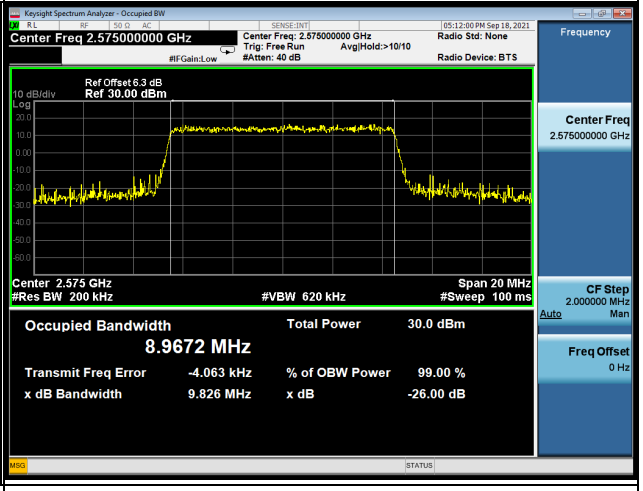

### QPSK-38000



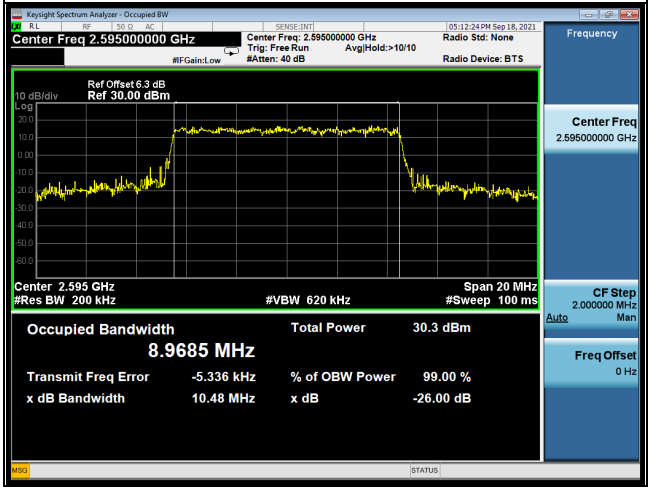

### QPSK-38200



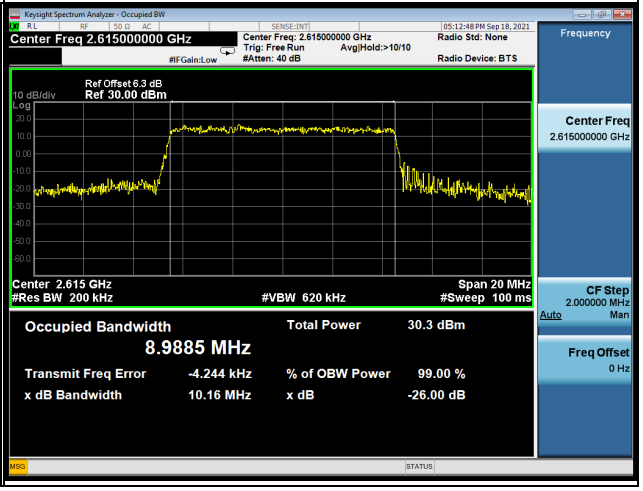

### 16QAM-37800



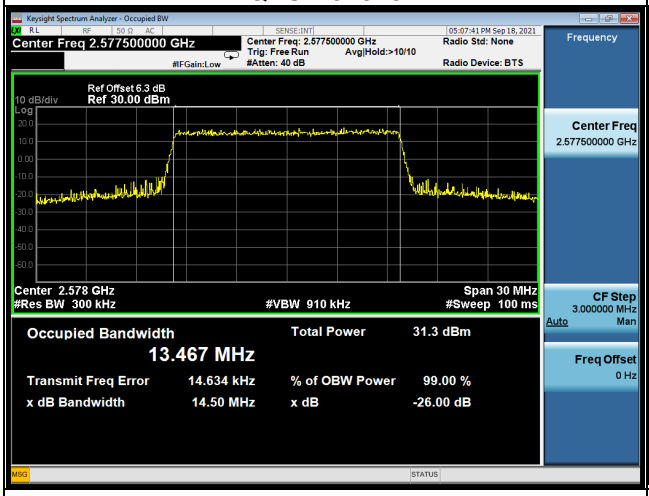
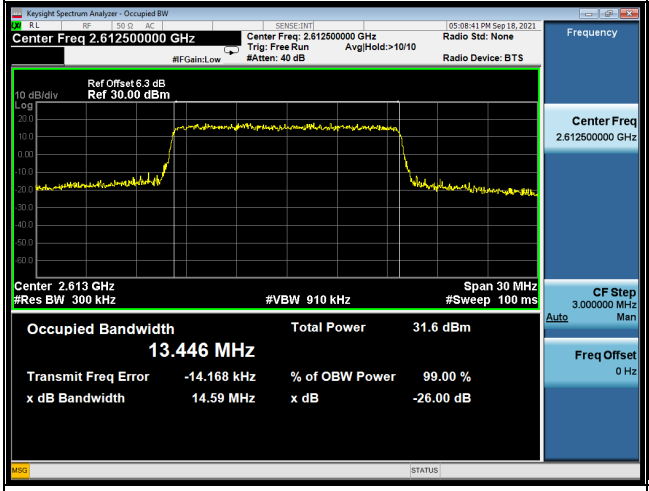
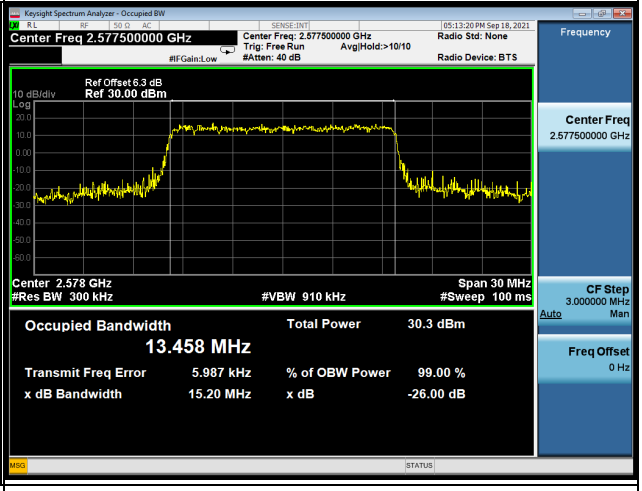
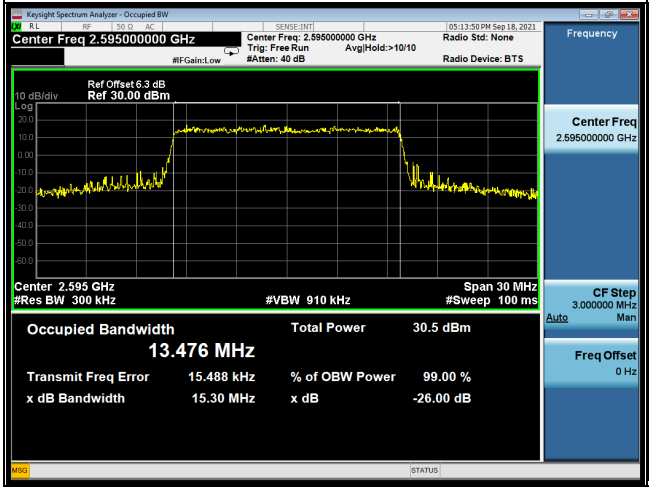
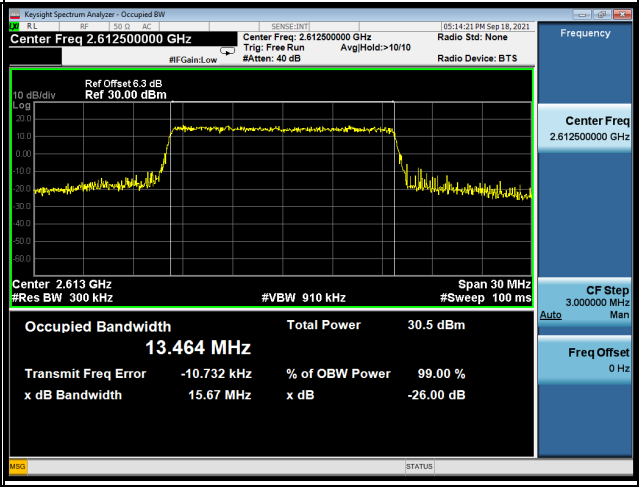

### 16QAM-38000




### 16QAM-38200



| LTE Band 38_15M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 37825 | 2577.5 | 13.467 | 37825 | 2577.5 | 14.50 |
| 38000 | 2600 | 13.456 | 38000 | 2600 | 14.56 |
| 38175 | 2612.5 | 13.446 | 38175 | 2612.5 | 14.59 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 37825 | 2577.5 | 13.458 | 37825 | 2577.5 | 15.20 |
| 38000 | 2600 | 13.476 | 38000 | 2600 | 15.30 |
| 38175 | 2612.5 | 13.464 | 38175 | 2612.5 | 15.67 |

| Spectrum Plot | |
|---|---|
| QPSK-37825 | QPSK-38000 |
|  |  |
| QPSK-38175 | 16QAM-37825 |
|  |  |
| 16QAM-38000 | 16QAM-38175 |
|  |  |

| LTE Band 38_20M | | | | | |
|---|---|---|---|---|---|
| QPSK | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 37850 | 2580 | 17.903 | 37850 | 2580 | 19.33 |
| 38000 | 2600 | 17.888 | 38000 | 2600 | 19.66 |
| 38150 | 2610 | 17.906 | 38150 | 2610 | 19.51 |
| 16QAM | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) |
| 37850 | 2580 | 17.915 | 37850 | 2580 | 19.59 |
| 38000 | 2600 | 17.928 | 38000 | 2600 | 20.26 |
| 38150 | 2610 | 17.914 | 38150 | 2610 | 20.74 |