HCT CO.,LTD.
74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA
TEL: +82-31-645-6300 FAX: +82-31-645-6401

# FCC LTE REPORT

## Certification

**Applicant Name:**
SAMSUNG Electronics Co., Ltd.

**Address:**
129, Samsung-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Rep. of Korea

**Date of Issue:**
April 23, 2018

**Location:**
HCT CO., LTD.,
74, Seoicheon-ro 578beon-gil, Majang-myeon,
Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA

**Report No.:** HCT-RF-1804-FC032

**FCC ID:** **A3LSMG8750**

**APPLICANT:** **SAMSUNG Electronics Co., Ltd.**

**Model(s):** SM-G8750
**EUT Type:** Mobile Phone
**FCC Classification:** Licensed Portable Transmitter Held to Ear (PCE)
**FCC Rule Part(s):** §27, §2

| Mode (MHz) | Tx Frequency (MHz) | Emission Designator | Modulation | EIRP | |
|---|---|---|---|---|---|
| | | | | Max. Power (W) | Max. Power (dBm) |
| LTE – Band4 (1.4) | 1710.7 – 1754.3 | 1M09G7D | QPSK | 0.157 | 21.97 |
| | | 1M09W7D | 16QAM | 0.131 | 21.18 |
| | | 1M09W7D | 64QAM | 0.105 | 20.21 |
| LTE – Band4 (3) | 1711.5 – 1753.5 | 2M71G7D | QPSK | 0.154 | 21.87 |
| | | 2M70W7D | 16QAM | 0.128 | 21.06 |
| | | 2M71W7D | 64QAM | 0.102 | 20.07 |
| LTE – Band4 (5) | 1712.5 – 1752.5 | 4M51G7D | QPSK | 0.153 | 21.85 |
| | | 4M49W7D | 16QAM | 0.128 | 21.07 |
| | | 4M50W7D | 64QAM | 0.102 | 20.08 |
| LTE – Band4 (10) | 1715.0 – 1750.0 | 8M99G7D | QPSK | 0.144 | 21.58 |
| | | 8M98W7D | 16QAM | 0.122 | 20.85 |
| | | 8M99W7D | 64QAM | 0.096 | 19.82 |
| LTE – Band4 (15) | 1717.5 – 1747.5 | 13M4G7D | QPSK | 0.145 | 21.60 |
| | | 13M4W7D | 16QAM | 0.124 | 20.92 |
| | | 13M5W7D | 64QAM | 0.098 | 19.91 |
| LTE – Band4 (20) | 1720.0 – 1745.0 | 18M0G7D | QPSK | 0.140 | 21.45 |
| | | 17M9W7D | 16QAM | 0.122 | 20.86 |
| | | 17M9W7D | 64QAM | 0.095 | 19.79 |

The measurements shown in this report were made in accordance with the procedures specified in CFR47 section §2.947. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

**HCT CO., LTD.** Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998,21 U.S. C.853(a)

**Report prepared by : Kwon Jeong**
**Engineer of Telecommunication Testing Center**

**Report approved by : Jong Seok Lee**
**Manager of Telecommunication Testing Center**

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

# Version

| TEST REPORT NO. | DATE | DESCRIPTION |
|---|---|---|
| HCT-RF-1804-FC032 | April 23, 2018 | - First Approval Report |
| | | |
| | | |
| | | |

# Table of Contents

1. GENERAL INFORMATION ..... 4
2. INTRODUCTION ..... 5
2.1. DESCRIPTION OF EUT ..... 5
2.2. MEASURING INSTRUMENT CALIBRATION ..... 5
2.3. TEST FACILITY ..... 5
3. DESCRIPTION OF TESTS ..... 6
3.1 TEST PROCEDURE ..... 6
3.2 RADIATED POWER ..... 7
3.3 RADIATED SPURIOUS EMISSIONS ..... 8
3.4 PEAK- TO- AVERAGE RATIO ..... 9
3.5 OCCUPIED BANDWIDTH. ..... 11
3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL ..... 12
3.7 BAND EDGE ..... 13
3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE ..... 14
4. LIST OF TEST EQUIPMENT ..... 15
5. MEASUREMENT UNCERTAINTY ..... 16
6. SUMMARY OF TEST RESULTS ..... 17
7. SAMPLE CALCULATION ..... 18
8. TEST DATA ..... 20
8.1 EQUIVALENT ISOTROPIC RADIATED POWER ..... 20
8.2 RADIATED SPURIOUS EMISSIONS ..... 23
8.3 PEAK-TO-AVERAGE RATIO ..... 29
8.4 OCCUPIED BANDWIDTH ..... 30
8.5 CONDUCTED SPURIOUS EMISSIONS ..... 31
8.6 BAND EDGE ..... 31
8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE ..... 32
9. TEST PLOTS ..... 38

# MEASUREMENT REPORT

## 1. GENERAL INFORMATION

| | |
|---|---|
| **Applicant Name:** | SAMSUNG Electronics Co., Ltd. |
| **Address:** | 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea |
| **FCC ID:** | A3LSMG8750 |
| **Application Type:** | Certification |
| **FCC Classification:** | Licensed Portable Transmitter Held to Ear (PCE) |
| **FCC Rule Part(s):** | §27, §2 |
| **EUT Type:** | Mobile Phone |
| **Model(s):** | SM-G8750 |
| **Tx Frequency:** | 1710.7 MHz – 1754.3 MHz (LTE – Band 4 (1.4 MHz))<br>1711.5 MHz – 1753.5 MHz (LTE – Band 4 (3 MHz))<br>1712.5 MHz – 1752.5 MHz (LTE – Band 4 (5 MHz))<br>1715.0 MHz – 1750.0 MHz (LTE – Band 4 (10 MHz))<br>1717.5 MHz – 1747.5 MHz (LTE – Band 4 (15 MHz))<br>1720.0 MHz – 1745.0 MHz (LTE – Band 4 (20 MHz)) |
| **Date(s) of Tests:** | March 27, 2018 ~ April 23, 2018 |

# 2. INTRODUCTION

### 2.1. DESCRIPTION OF EUT

The EUT was a Mobile Phone with GSM/GPRS/EGPRS/UMTS and LTE.

It also supports IEEE 802.11a/b/g/n/ac (HT20/40/80), Bluetooth, NFC and ANT+.

### 2.2. MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

### 2.3. TEST FACILITY

The Fully-anechoic chamber and conducted measurement facility used to collect the radiated data are located at the 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA.

# 3. DESCRIPTION OF TESTS

### 3.1 TEST PROCEDURE

| Test Description | Test Procedure Used |
|---|---|
| Occupied Bandwidth | - KDB 971168 D01 v03r01 – Section 4.3<br>- ANSI C63.26-2015 – Section 5.4.4 |
| Band Edge | - KDB 971168 D01 v03r01 – Section 6.0<br>- ANSI C63.26-2015 – Section 5.7 |
| Spurious and Harmonic Emissions at Antenna Terminal | - KDB 971168 D01 v03r01 – Section 6.0<br>- ANSI C63.26-2015 – Section 5.7 |
| Conducted Output Power | - N/A (See SAR Report) |
| Peak- to- Average Ratio | - KDB 971168 D01 v03r01 – Section 5.7<br>- ANSI C63.26-2015 – Section 5.2.3.4<br>- ANSI C63.26-2015 – Section 5.2.6(only GSM) |
| Frequency stability | - ANSI C63.26-2015 – Section 5.6 |
| Effective Radiated Power/<br>Effective Isotropic Radiated Power | - KDB 971168 D01 v03r01 – Section 5.2 & 5.8<br>- ANSI C63.26-2015 – Section 5.2<br>- ANSI/TIA-603-E-2016 – Section 2.2.17 |
| Radiated Spurious and Harmonic Emissions | - KDB 971168 D01 v03r01 – Section 6.2<br>- ANSI/TIA-603-E-2016 – Section 2.2.12 |

## 3.2 RADIATED POWER

**Test Overview**

Radiated tests are performed in the Fully-anechoic chamber.

The equipment under test is placed on a non-conductive table 3-meters away from the receive antenna in accordance with ANSI/TIA-603-E-2016 Clause 2.2.17.

**Test Settings**

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW ≥ 3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points > 2 x span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

**Test Note**

1. The turntable is rotated through 360 degrees, and the receiving antenna scans in order to determine the level of the maximized emission.
2. A half wave dipole is then substituted in place of the EUT. For emissions above 1GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator and the previously recorded signal was duplicated.

   The power is calculated by the following formula;

   $$P_{d(dBm)} = Pg_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dB)}$$

   Where: $P_d$ is the dipole equivalent power and $P_g$ is the generator output power into the substitution antenna.
3. The maximum value is calculated by adding the forward power to the calibrated source plus its appropriate gain value.

   These steps are repeated with the receiving antenna in both vertical and horizontal polarization. the difference between the gain of the horn and an isotropic antenna are taken into consideration
4. The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
5. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

### 3.3 RADIATED SPURIOUS EMISSIONS

**Test Overview**

Radiated tests are performed in the Fully-anechoic chamber.

Radiated Spurious Emission Measurements at 3 meters by Substitution Method according to ANSI/TIA-603-E-2016.

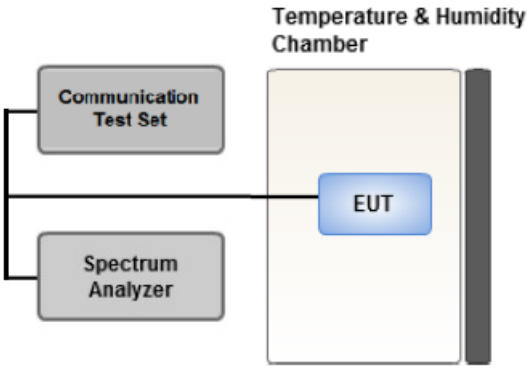
**Test Settings**

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW ≥ 3 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points > 2 x span / RBW
5. Detector = Peak
6. Trace mode = Max Hold
7. The trace was allowed to stabilize
8. Test channel : Low/ Middle/ High
9. Frequency range : We are performed all frequency to $10^{th}$ harmonics from 9 kHz.

**Test Note**

1. Measurements value show only up to 3 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
2. The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
   The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the test data

### 3.4 PEAK- TO- AVERAGE RATIO




**Test setup**

① **CCDF Procedure for PAPR**

**Test Settings**

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. Set the measurement interval as follows:
   .- for continuous transmissions, set to 1 ms,
   .- or burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.
4. Record the maximum PAPR level associated with a probability of 0.1%.

**② Alternate Procedure for PAPR**

Use one of the procedures presented in 5.2(ANSI C63.26-2015) to measure the total peak power and record as $P_{Pk}$.

Use one of the applicable procedures presented 5.2(ANSI C63.26-2015) to measure the total average power and record as $P_{Avg}$. Determine the P.A.R. from:

$$P.A.R_{(dB)} = P_{Pk\ (dBm)} - P_{Avg\ (dBm)}\ (P_{Avg} = \text{Average Power + Duty cycle Factor})$$

**Test Settings(Peak Power)**

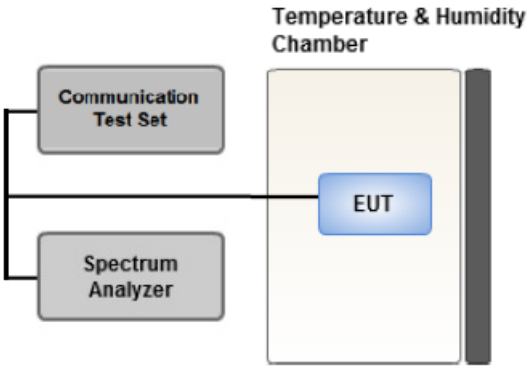
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW ≥ 3 × RBW.

1. Set the RBW ≥ OBW.
2. Set VBW ≥ 3 × RBW.
3. Set span ≥ 2 × OBW.
4. Sweep time ≥ 10 × (number of points in sweep) × (transmission symbol period).
5. Detector = peak.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the peak marker function to determine the peak amplitude level.

**Test Settings(Average Power)**

1. Set span to 2 × to 3 × the OBW.
2. Set RBW ≥ OBW.
3. Set VBW ≥ 3 × RBW.
4. Set number of measurement points in sweep ≥ 2 × span / RBW.
5. Sweep time:
   Set ≥ [10 × (number of points in sweep) × (transmission period)] for single sweep (automation-compatible) measurement. The transmission period is the (on + off) time.
6. Detector = power averaging (rms).
7. Set sweep trigger to “free run.”
8. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. (To accurately determine the average power over the on and off period of the transmitter, it can be necessary to increase the number of traces to be averaged above 100 or, if using a manually configured sweep time, increase the sweep time.)
9. Use the peak marker function to determine the maximum amplitude level.
10. Add [10 log (1/duty cycle)] to the measured maximum power level to compute the average power during continuous transmission. For example, add [10 log (1/0.25)] = 6 dB if the duty cycle is a constant 25%.

### 3.5 OCCUPIED BANDWIDTH.




**Test setup**

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

The EUT makes a call to the communication simulator.

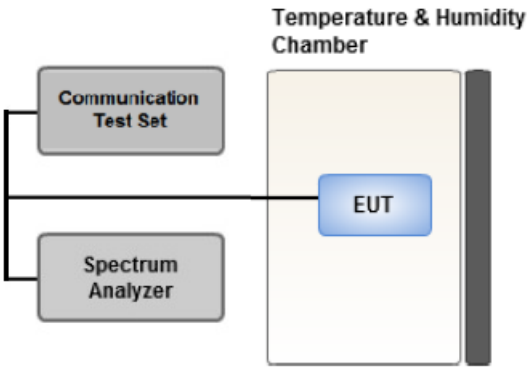
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

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

**Test Settings**

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth and the 26dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 – 5% of the expected OBW
3. VBW ≥ 3 x RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5% of the 99% occupied bandwidth observed in Step 7

### 3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL




**Test setup**

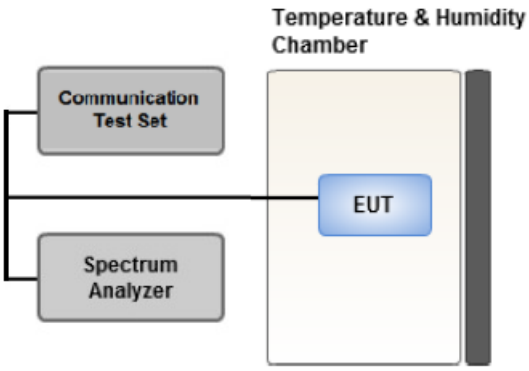
**Test Overview**

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

**Test Settings**

1. RBW = 1 MHz
2. VBW ≥ 3 MHz
3. Detector = Peak
4. Trace Mode = max hold
5. Sweep time = auto
6. Number of points in sweep ≥ 2 * Span / RBW

### 3.7 BAND EDGE




**Test setup**

**Test Overview**

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

**Test Settings**

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW > 1% of the emission bandwidth
4. VBW > 3 x RBW
5. Detector = RMS
6. Number of sweep points ≥ 2 x Span/RBW
7. Trace mode = trace average
8. Sweep time = auto couple
9. The trace was allowed to stabilize

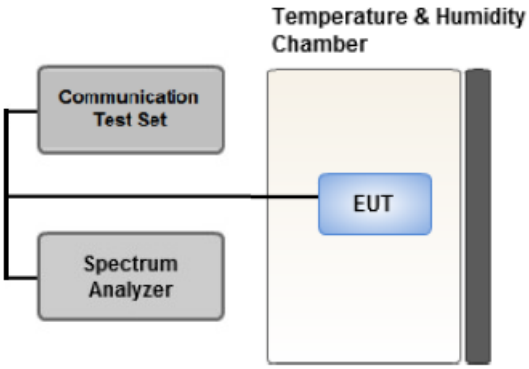
**Test Notes**

According to FCC 22.917, 24.238, 27.53 specified that 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. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

All measurements were done at 2 channels(low and high operational frequency range.)

The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

### 3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE




**Test setup**

**Test Overview**

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015.

The frequency stability of the transmitter is measured by:

1. Temperature:
   The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
2. Primary Supply Voltage:
   .- Unless otherwise specified, vary primary supply voltage from 85% to 115% of the nominal value for other than hand carried battery equipment.
   .- For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.

**Test Settings**

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

# 4. LIST OF TEST EQUIPMENT

| Manufacture | Model/ Equipment | Serial Number | Calibration Date | Calibration Interval | Calibration Due |
|---|---|---|---|---|---|
| REOHDE & SCHWARZ | SCU 18 / AMPLIFIER | 10094 | 04/17/2018 | Annual | 04/17/2019 |
| Wainwright | WHK1.2/15G-10EF/H.P.F | 4 | 04/04/2018 | Annual | 04/04/2019 |
| Wainwright | WHK3.3/18G-10EF/H.P.F | 2 | 04/04/2018 | Annual | 04/04/2019 |
| Hewlett Packard | 11667B / Power Splitter(DC~26.5 GHz) | 11275 | 05/04/2017 | Annual | 05/04/2018 |
| Agilent | E3632A/DC Power Supply | KR75303243 | 07/18/2017 | Annual | 07/18/2018 |
| Schwarzbeck | UHAP/ Dipole Antenna | 557 | 03/31/2017 | Biennial | 03/31/2019 |
| Schwarzbeck | UHAP/ Dipole Antenna | 558 | 03/31/2017 | Biennial | 03/31/2019 |
| ESPEC | SU-642 / Chamber | 93000718 | 07/21/2017 | Annual | 07/21/2018 |
| Schwarzbeck | BBHA 9120D/ Horn Antenna(1~18GHz) | 147 | 09/09/2016 | Biennial | 09/09/2018 |
| Schwarzbeck | BBHA 9120D/ Horn Antenna(1~18GHz) | 9120D-1298 | 10/14/2016 | Biennial | 10/14/2018 |
| Schwarzbeck | BBHA 9170/ Horn Antenna(15~40GHz) | BBHA9170342 | 04/25/2017 | Biennial | 04/25/2019 |
| Schwarzbeck | BBHA 9170/ Horn Antenna(15~40GHz) | BBHA9170124 | 04/25/2017 | Biennial | 04/25/2019 |
| Agilent | N9020A/Signal Analyzer(10Hz~26.5GHz) | MY52090906 | 06/01/2017 | Annual | 06/01/2018 |
| Hewlett Packard | 8493C/ATTENUATOR(20dB) | 17280 | 06/22/2017 | Annual | 06/22/2018 |
| REOHDE & SCHWARZ | FSV40/Spectrum Analyzer(10Hz~40GHz) | 100931 | 10/30/2017 | Annual | 10/30/2018 |
| Agilent | 8960 (E5515C)/ Base Station | MY48360800 | 09/26/2017 | Annual | 09/26/2018 |
| Schwarzbeck | FMZB1513/ Loop Antenna(9kHz~30MHz) | 1513-175 | 04/19/2017 | Biennial | 04/19/2019 |
| Schwarzbeck | VULB9160/ Bilog Antenna | 3150 | 09/30/2016 | Biennial | 09/30/2018 |
| Schwarzbeck | VULB9160/ Bilog Antenna | 9360-3368 | 10/14/2016 | Biennial | 10/14/2018 |
| Anritsu Corp. | MT8820C/Wideband Radio Communication Tester | 6200863156 | 02/13/2018 | Annual | 02/13/2019 |
| Anritsu Corp. | MT8820C/Wideband Radio Communication Tester | 6201026545 | 02/08/2018 | Annual | 02/08/2019 |
| REOHDE & SCHWARZ | SMB100A/ SIGNAL GENERATOR (100kHz~40GHz) | 177633 | 07/18/2017 | Annual | 07/18/2018 |
| REOHDE & SCHWARZ | FSV40/Spectrum Analyzer | 100931 | 10/30/2017 | Annual | 10/30/2018 |
| REOHDE & SCHWARZ | ESU40 / EMI TEST RECEIVER | 100524 | 08/16/2017 | Annual | 08/16/2018 |
| HCT CO., LTD., | FCC LTE Mobile Conducted RF Automation Test Software | - | - | - | - |

# 5. MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4:2014.

All measurement uncertainty values are shown with a coverage factor of $k$ = 2 to indicate a 95 % level of confidence. The measurement data shown herein meets or exceeds the $U_{CISPR}$ measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

| Parameter | Expanded Uncertainty (±dB) |
|---|---|
| Conducted Disturbance (150 kHz ~ 30 MHz) | 1.82 |
| Radiated Disturbance (9 kHz ~ 30 MHz) | 3.40 |
| Radiated Disturbance (30 MHz ~ 1 GHz) | 4.80 |
| Radiated Disturbance (1 GHz ~ 18 GHz) | 6.07 |

# 6. SUMMARY OF TEST RESULTS

### 6.1 Test Condition : Conducted Test

| Test Description | FCC Part Section(s) | Test Limit | Test Result |
|---|---|---|---|
| Occupied Bandwidth | §2.1049 | N/A | PASS |
| Band Edge / Spurious and Harmonic Emissions at Antenna Terminal. | §2.1051, §27.53(h) | < 43 + 10log10 (P[Watts]) at Band Edge and for all out-of-band emissions | PASS |
| Conducted Output Power | §2.1046 | N/A | **See Note1** |
| Peak- to- Average Ratio | 27.50(d)(5) | < 13 dB | PASS |
| Frequency stability / variation of ambient temperature | §2.1055, § 27.54 | Emission must remain in band | PASS |

**Note:**

1. See SAR Report

### 6.2 Test Condition : Radiated Test

| Test Description | FCC Part Section(s) | Test Limit | Test Result |
|---|---|---|---|
| Equivalent Isotropic Radiated Power | 27.50(d)(4) | < 1 Watts max. EIRP | PASS |
| Radiated Spurious and Harmonic Emissions | §2.1053, §27.53(h) | < 43 + 10log10 (P[Watts]) for all out-of band emissions | PASS |

**Note:**

Radiated test measurements were performed with the EUT placed on an authorized wireless charging pad (WCP) Model: EP-PG950 while operating under normal conditions in a simulated call or data transmission configuration. The worst case radiated emissions data is shown in this report.

# 7. SAMPLE CALCULATION

### 7.1 ERP Sample Calculation

| Ch./ Freq. | | Measured Level(dBm) | Substitute Level(dBm) | Ant. Gain (dBd) | C.L | Pol. | ERP | |
|---|---|---|---|---|---|---|---|---|
| channel | Freq.(MHz) | | | | | | W | dBm |
| 128 | 824.20 | -21.37 | 38.40 | -10.61 | 0.95 | H | 0.483 | 26.84 |

**ERP = Substitute LEVEL(dBm) + Ant. Gain – CL(Cable Loss)**

1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.
2) During the test , the turn table is rotated until the maximum signal is found.
3) Record the field strength meter's level.
4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.
5) Increase the signal generator output till the field strength meter's level is equal to the item (3).
6) The signal generator output level with Ant. Gain and cable loss are the rating of effective radiated power.

### 7.2 EIRP Sample Calculation

| Ch./ Freq. | | Measured Level(dBm) | Substitute Level(dBm) | Ant. Gain (dBi) | C.L | Pol. | EIRP | |
|---|---|---|---|---|---|---|---|---|
| channel | Freq.(MHz) | | | | | | W | dBm |
| 20175 | 1,732.50 | -15.75 | 18.45 | 9.90 | 1.76 | H | 0.456 | 26.59 |

**EIRP = Substitute LEVEL(dBm) + Ant. Gain – CL(Cable Loss)**

1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.
2) During the test , the turn table is rotated until the maximum signal is found.
3) Record the field strength meter's level.
4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.
5) Increase the signal generator output till the field strength meter's level is equal to the item (3).
6) The signal generator output level with Ant. Gain and cable loss are the rating of equivalent isotropic radiated power.

### 7.3. Emission Designator

**GSM Emission Designator**

**Emission Designator = 249KGXW**
GSM BW = 249 kHz
G = Phase Modulation
X = Cases not otherwise covered
W = Combination (Audio/Data)

**EDGE Emission Designator**

**Emission Designator = 249KG7W**
GSM BW = 249 kHz
G = Phase Modulation
7 = Quantized/Digital Info
W = Combination (Audio/Data)

**WCDMA Emission Designator**

**Emission Designator = 4M17F9W**
WCDMA BW = 4.17 MHz
F = Frequency Modulation
9 = Composite Digital Info
W = Combination (Audio/Data)

**QPSK Modulation**

**Emission Designator = 4M48G7D**
LTE BW = 4.48 MHz
G = Phase Modulation
7 = Quantized/Digital Info
D = Data transmission; telemetry; telecommand

**16QAM Modulation**

**Emission Designator = 4M48W7D**
LTE BW = 4.48 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data transmission; telemetry; telecommand

**64QAM Modulation**

**Emission Designator = 4M48W7D**
LTE BW = 4.48 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data transmission; telemetry; telecommand

# 8. TEST DATA

### 8.1 EQUIVALENT ISOTROPIC RADIATED POWER

| Freq (MHz) | Mod/ Bandwidth | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | Limit | EIRP | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm |
| 1710.7 | LTE B4/ 1.4 MHz | QPSK | -19.03 | 13.55 | 9.37 | 1.92 | V | < 1.00 | 0.126 | 21.00 |
| | | 16-QAM | -19.67 | 12.91 | 9.37 | 1.92 | V | | 0.109 | 20.36 |
| | | 64-QAM | -20.69 | 11.89 | 9.37 | 1.92 | H | | 0.086 | 19.34 |
| 1732.5 | | QPSK | -19.06 | 13.56 | 9.45 | 1.93 | V | | 0.128 | 21.08 |
| | | 16-QAM | -19.65 | 12.97 | 9.45 | 1.93 | V | | 0.112 | 20.49 |
| | | 64-QAM | -20.68 | 11.94 | 9.45 | 1.93 | H | | 0.088 | 19.46 |
| 1754.3 | | QPSK | -18.22 | 14.39 | 9.52 | 1.94 | V | | 0.157 | 21.97 |
| | | 16-QAM | -19.01 | 13.60 | 9.52 | 1.94 | V | | 0.131 | 21.18 |
| | | 64-QAM | -19.98 | 12.63 | 9.52 | 1.94 | H | | 0.105 | 20.21 |

| Freq (MHz) | Mod/ Bandwidth | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | Limit | EIRP | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm |
| 1711.5 | LTE B4/ 3 MHz | QPSK | -18.94 | 13.64 | 9.37 | 1.92 | V | < 1.00 | 0.129 | 21.09 |
| | | 16-QAM | -19.59 | 12.99 | 9.37 | 1.92 | V | | 0.111 | 20.44 |
| | | 64-QAM | -20.62 | 11.96 | 9.37 | 1.92 | H | | 0.087 | 19.41 |
| 1732.5 | | QPSK | -18.95 | 13.67 | 9.45 | 1.93 | V | | 0.132 | 21.19 |
| | | 16-QAM | -19.57 | 13.05 | 9.45 | 1.93 | V | | 0.114 | 20.57 |
| | | 64-QAM | -20.60 | 12.02 | 9.45 | 1.93 | H | | 0.090 | 19.54 |
| 1753.5 | | QPSK | -18.31 | 14.29 | 9.52 | 1.94 | V | | 0.154 | 21.87 |
| | | 16-QAM | -19.12 | 13.48 | 9.52 | 1.94 | V | | 0.128 | 21.06 |
| | | 64-QAM | -20.11 | 12.49 | 9.52 | 1.94 | H | | 0.102 | 20.07 |

| Freq (MHz) | Mod/ Bandwidth | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | Limit | EIRP | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm |
| 1712.5 | LTE B4/ 5 MHz | QPSK | -18.92 | 13.66 | 9.37 | 1.92 | V | < 1.00 | 0.129 | 21.11 |
| | | 16-QAM | -19.57 | 13.01 | 9.37 | 1.92 | V | | 0.111 | 20.46 |
| | | 64-QAM | -20.59 | 11.99 | 9.37 | 1.92 | H | | 0.088 | 19.44 |
| 1732.5 | | QPSK | -18.88 | 13.74 | 9.45 | 1.93 | V | | 0.134 | 21.26 |
| | | 16-QAM | -19.50 | 13.12 | 9.45 | 1.93 | V | | 0.116 | 20.64 |
| | | 64-QAM | -20.51 | 12.11 | 9.45 | 1.93 | H | | 0.092 | 19.63 |
| 1752.5 | | QPSK | -18.33 | 14.27 | 9.52 | 1.94 | V | | 0.153 | 21.85 |
| | | 16-QAM | -19.11 | 13.49 | 9.52 | 1.94 | V | | 0.128 | 21.07 |
| | | 64-QAM | -20.10 | 12.50 | 9.52 | 1.94 | H | | 0.102 | 20.08 |

| Freq (MHz) | Mod/ Bandwidth | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | Limit | EIRP | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm |
| 1715.0 | LTE B4/ 10 MHz | QPSK | -18.92 | 13.66 | 9.39 | 1.92 | V | < 1.00 | 0.130 | 21.13 |
| | | 16-QAM | -19.55 | 13.03 | 9.39 | 1.92 | V | | 0.112 | 20.50 |
| | | 64-QAM | -20.62 | 11.96 | 9.39 | 1.92 | H | | 0.088 | 19.43 |
| 1732.5 | | QPSK | -18.89 | 13.73 | 9.45 | 1.93 | V | | 0.133 | 21.25 |
| | | 16-QAM | -19.54 | 13.08 | 9.45 | 1.93 | V | | 0.115 | 20.60 |
| | | 64-QAM | -20.58 | 12.04 | 9.45 | 1.93 | H | | 0.090 | 19.56 |
| 1750.0 | | QPSK | -18.59 | 14.01 | 9.51 | 1.94 | V | | 0.144 | 21.58 |
| | | 16-QAM | -19.32 | 13.28 | 9.51 | 1.94 | V | | 0.122 | 20.85 |
| | | 64-QAM | -20.35 | 12.25 | 9.51 | 1.94 | H | | 0.096 | 19.82 |

| Freq (MHz) | Mod/ Bandwidth | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | Limit | EIRP | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm |
| 1717.5 | LTE B4/ 15 MHz | QPSK | -18.74 | 13.85 | 9.39 | 1.92 | V | < 1.00 | 0.136 | 21.32 |
| | | 16-QAM | -19.40 | 13.19 | 9.39 | 1.92 | V | | 0.116 | 20.66 |
| | | 64-QAM | -20.43 | 12.16 | 9.39 | 1.92 | H | | 0.092 | 19.63 |
| 1732.5 | | QPSK | -18.83 | 13.79 | 9.45 | 1.93 | V | | 0.135 | 21.31 |
| | | 16-QAM | -19.51 | 13.11 | 9.45 | 1.93 | V | | 0.116 | 20.63 |
| | | 64-QAM | -20.52 | 12.10 | 9.45 | 1.93 | H | | 0.092 | 19.62 |
| 1747.5 | | QPSK | -18.57 | 14.04 | 9.50 | 1.94 | V | | 0.145 | 21.60 |
| | | 16-QAM | -19.25 | 13.36 | 9.50 | 1.94 | V | | 0.124 | 20.92 |
| | | 64-QAM | -20.26 | 12.35 | 9.50 | 1.94 | H | | 0.098 | 19.91 |

| Freq (MHz) | Mod/ Bandwidth | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | Limit | EIRP | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm |
| 1720.0 | LTE B4/ 20 MHz | QPSK | -18.76 | 13.82 | 9.40 | 1.92 | V | < 1.00 | 0.135 | 21.30 |
| | | 16-QAM | -19.42 | 13.16 | 9.40 | 1.92 | V | | 0.116 | 20.64 |
| | | 64-QAM | -20.47 | 12.11 | 9.40 | 1.92 | H | | 0.091 | 19.59 |
| 1732.5 | | QPSK | -18.82 | 13.80 | 9.45 | 1.93 | V | | 0.136 | 21.32 |
| | | 16-QAM | -19.56 | 13.06 | 9.45 | 1.93 | V | | 0.114 | 20.58 |
| | | 64-QAM | -20.58 | 12.04 | 9.45 | 1.93 | H | | 0.090 | 19.56 |
| 1745.0 | | QPSK | -18.72 | 13.90 | 9.49 | 1.94 | V | | 0.140 | 21.45 |
| | | 16-QAM | -19.31 | 13.31 | 9.49 | 1.94 | V | | 0.122 | 20.86 |
| | | 64-QAM | -20.38 | 12.24 | 9.49 | 1.94 | H | | 0.095 | 19.79 |

| Freq (MHz) | Mod/ Bandwidth | Modulation | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain(dBi) | C.L | Pol | Limit | ERP | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm |
| 1754.3 | LTE B4/ 1.4 MHz (With WPC) | QPSK | -20.04 | 12.57 | 9.52 | 1.94 | H | < 1.00 | 0.104 | 20.15 |

## 8.2 RADIATED SPURIOUS EMISSIONS

▣ OPERATING FREQUENTY: 1754.30 MHz

▣ MEASURED OUTPUT POWER: 21.97 dBm = 0.157 W

▣ MODE: LTE B4

▣ MODULATION SIGNAL: 1.4 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 $\log_{10}$ (W) = 34.97 dBc

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | dBc |
|---|---|---|---|---|---|---|---|---|
| 19957 (1710.7) | 3,421.40 | -55.95 | 12.19 | -62.93 | 2.78 | V | -53.52 | 75.49 |
| | 5,132.10 | -58.14 | 12.76 | -58.81 | 3.44 | V | -49.49 | 71.46 |
| | 6,842.80 | -55.50 | 12.06 | -51.55 | 3.99 | V | -43.48 | 65.45 |
| 20175 (1732.5) | 3,465.00 | -56.33 | 12.28 | -62.97 | 2.76 | V | -53.45 | 75.42 |
| | 5,197.50 | -56.35 | 12.86 | -57.25 | 3.47 | V | -47.86 | 69.83 |
| | 6,930.00 | -56.49 | 11.87 | -51.79 | 4.06 | H | -43.98 | 65.95 |
| 20393 (1754.3) | 3,508.60 | -55.76 | 12.36 | -61.97 | 2.82 | V | -52.43 | 74.40 |
| | 5,262.90 | -56.60 | 12.95 | -58.28 | 3.49 | H | -48.82 | 70.79 |
| | 7,017.20 | -57.48 | 11.73 | -54.23 | 3.98 | V | -46.48 | 68.45 |

▣ OPERATING FREQUENTY: 1753.50 MHz

▣ MEASURED OUTPUT POWER: 21.87 dBm = 0.154 W

▣ MODE: LTE B4

▣ MODULATION SIGNAL: 3 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 $log_{10}$ (W) = 34.87 dBc

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | dBc |
|---|---|---|---|---|---|---|---|---|
| 19965 (1711.5) | 3,423.00 | -56.17 | 12.20 | -63.18 | 2.78 | V | -53.76 | 75.63 |
| | 5,134.50 | -57.85 | 12.76 | -58.54 | 3.44 | V | -49.22 | 71.09 |
| | 6,846.00 | -57.58 | 12.05 | -53.57 | 3.99 | V | -45.51 | 67.38 |
| 20175 (1732.5) | 3,465.00 | -56.76 | 12.28 | -63.40 | 2.76 | V | -53.88 | 75.75 |
| | 5,197.50 | -58.16 | 12.86 | -59.06 | 3.47 | V | -49.67 | 71.54 |
| | 6,930.00 | -57.33 | 11.87 | -52.63 | 4.06 | V | -44.82 | 66.69 |
| 20385 (1753.5) | 3,507.00 | -56.01 | 12.36 | -62.25 | 2.82 | V | -52.71 | 74.58 |
| | 5,260.50 | -58.02 | 12.95 | -59.75 | 3.49 | V | -50.29 | 72.16 |
| | 7,014.00 | -57.63 | 11.73 | -54.61 | 3.98 | V | -46.86 | 68.73 |

▣ OPERATING FREQUENTY: 1752.50 MHz

▣ MEASURED OUTPUT POWER: 21.85 dBm = 0.153 W

▣ MODE: LTE B4

▣ MODULATION SIGNAL: 5 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 $log_{10}$ (W) = 34.85 dBc

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | dBc |
|---|---|---|---|---|---|---|---|---|
| 19975 (1712.5) | 3,425.00 | -56.11 | 12.20 | -63.16 | 2.78 | V | -53.74 | 75.59 |
| | 5,137.50 | -57.56 | 12.77 | -58.29 | 3.44 | V | -48.96 | 70.81 |
| | 6,850.00 | -56.65 | 12.04 | -52.54 | 4.00 | V | -44.50 | 66.35 |
| 20175 (1732.5) | 3,465.00 | -56.76 | 12.28 | -63.40 | 2.76 | V | -53.88 | 75.73 |
| | 5,197.50 | -58.34 | 12.86 | -59.24 | 3.47 | V | -49.85 | 71.70 |
| | 6,930.00 | -56.58 | 11.87 | -51.88 | 4.06 | V | -44.07 | 65.92 |
| 20375 (1752.5) | 3,505.00 | -55.12 | 12.36 | -61.40 | 2.82 | V | -51.86 | 73.71 |
| | 5,257.50 | -57.62 | 12.94 | -59.34 | 3.48 | V | -49.88 | 71.73 |
| | 7,010.00 | -57.89 | 11.73 | -55.16 | 3.98 | V | -47.41 | 69.26 |

▣ OPERATING FREQUENTY: 1750.00 MHz

▣ MEASURED OUTPUT POWER: 21.58 dBm = 0.144 W

▣ MODE: LTE B4

▣ MODULATION SIGNAL: 10 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 $log_{10}$ (W) = 34.58 dBc

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | dBc |
|---|---|---|---|---|---|---|---|---|
| 20000 (1715.0) | 3,430.00 | -56.38 | 12.21 | -63.53 | 2.78 | V | -54.10 | 75.68 |
| | 5,145.00 | -57.72 | 12.77 | -58.28 | 3.44 | V | -48.95 | 70.53 |
| | 6,860.00 | -55.34 | 12.01 | -51.10 | 4.02 | V | -43.11 | 64.69 |
| 20175 (1732.5) | 3,465.00 | -56.97 | 12.28 | -63.61 | 2.76 | V | -54.09 | 75.67 |
| | 5,197.50 | -57.78 | 12.86 | -58.68 | 3.47 | V | -49.29 | 70.87 |
| | 6,930.00 | -57.04 | 11.87 | -52.34 | 4.06 | V | -44.53 | 66.11 |
| 20350 (1750.0) | 3,500.00 | -54.95 | 12.35 | -61.32 | 2.82 | V | -51.79 | 73.37 |
| | 5,250.00 | -57.11 | 12.93 | -58.78 | 3.48 | V | -49.33 | 70.91 |
| | 7,000.00 | -56.58 | 11.73 | -54.05 | 4.07 | V | -46.39 | 67.97 |

▣ OPERATING FREQUENTY: 1747.50 MHz

▣ MEASURED OUTPUT POWER: 21.60 dBm = 0.145 W

▣ MODE: LTE B4

▣ MODULATION SIGNAL: 15 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 $log_{10}$ (W) = 34.60 dBc

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | dBc |
|---|---|---|---|---|---|---|---|---|
| 20025 (1717.5) | 3,435.00 | -55.10 | 12.21 | -62.12 | 2.78 | V | -52.69 | 74.29 |
| | 5,152.50 | -57.92 | 12.79 | -58.43 | 3.45 | V | -49.09 | 70.69 |
| | 6,870.00 | -56.68 | 11.99 | -52.71 | 4.03 | V | -44.75 | 66.35 |
| 20175 (1732.5) | 3,465.00 | -56.45 | 12.28 | -63.09 | 2.76 | V | -53.57 | 75.17 |
| | 5,197.50 | -58.10 | 12.86 | -59.00 | 3.47 | V | -49.61 | 71.21 |
| | 6,930.00 | -57.57 | 11.87 | -52.87 | 4.06 | V | -45.06 | 66.66 |
| 20325 (1747.5) | 3,495.00 | -54.94 | 12.34 | -61.30 | 2.81 | V | -51.77 | 73.37 |
| | 5,242.50 | -57.50 | 12.92 | -58.98 | 3.48 | V | -49.54 | 71.14 |
| | 6,990.00 | -56.46 | 11.75 | -51.22 | 4.05 | V | -43.52 | 65.12 |

▣ OPERATING FREQUENTY: 1745.00 MHz

▣ MEASURED OUTPUT POWER: 21.45 dBm = 0.140 W

▣ MODE: LTE B4

▣ MODULATION SIGNAL: 20 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 $log_{10}$ (W) = 34.45 dBc

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | dBc |
|---|---|---|---|---|---|---|---|---|
| 20050 (1720.0) | 3,440.00 | -56.13 | 12.23 | -63.05 | 2.77 | V | -53.59 | 75.04 |
| | 5,160.00 | -58.26 | 12.80 | -59.09 | 3.46 | V | -49.75 | 71.20 |
| | 6,880.00 | -56.84 | 11.97 | -52.83 | 4.04 | V | -44.90 | 66.35 |
| 20175 (1732.5) | 3,465.00 | -56.44 | 12.28 | -63.08 | 2.76 | V | -53.56 | 75.01 |
| | 5,197.50 | -57.15 | 12.86 | -58.05 | 3.47 | V | -48.66 | 70.11 |
| | 6,930.00 | -57.09 | 11.87 | -52.39 | 4.06 | V | -44.58 | 66.03 |
| 20300 (1745.0) | 3,490.00 | -54.96 | 12.33 | -61.30 | 2.81 | V | -51.78 | 73.23 |
| | 5,235.00 | -58.42 | 12.91 | -59.83 | 3.47 | V | -50.39 | 71.84 |
| | 6,980.00 | -54.41 | 11.77 | -49.14 | 4.04 | V | -41.41 | 62.86 |

**With WCP**

| Ch | Mod | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) |
|---|---|---|---|---|---|---|---|---|
| 20300 (1745.0) | 20 MHz QPSK | 3,490.00 | -57.47 | 12.33 | -63.81 | 2.81 | V | -54.29 |
| | | 5,235.00 | -57.59 | 12.91 | -59.00 | 3.47 | V | -49.56 |
| | | 6,980.00 | -56.46 | 11.77 | -51.19 | 4.04 | V | -43.46 |

### 8.3 PEAK-TO-AVERAGE RATIO

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data (dB ) |
|---|---|---|---|---|---|---|
| 4 | 1.4 MHz | 1732.5 | QPSK | 6 | 0 | 4.97 |
| | | | 16-QAM | | | 6.16 |
| | | | 64-QAM | | | 6.86 |
| | 3 MHz | | QPSK | 15 | | 4.88 |
| | | | 16-QAM | | | 6.16 |
| | | | 64-QAM | | | 6.79 |
| | 5 MHz | | QPSK | 25 | | 5.01 |
| | | | 16-QAM | | | 6.15 |
| | | | 64-QAM | | | 6.82 |
| | 10 MHz | | QPSK | 50 | | 4.90 |
| | | | 16-QAM | | | 6.02 |
| | | | 64-QAM | | | 6.65 |
| | 15 MHz | | QPSK | 75 | | 4.91 |
| | | | 16-QAM | | | 6.07 |
| | | | 64-QAM | | | 6.64 |
| | 20 MHz | | QPSK | 100 | | 4.87 |
| | | | 16-QAM | | | 6.11 |
| | | | 64-QAM | | | 6.66 |

**Note:**

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 48 ~ 56.

### 8.4 OCCUPIED BANDWIDTH

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data ( MHz ) |
|---|---|---|---|---|---|---|
| 4 | 1.4 MHz | 1732.5 | QPSK | 6 | 0 | 1.0932 |
| | | | 16-QAM | | | 1.0903 |
| | | | 64-QAM | | | 1.0934 |
| | 3 MHz | | QPSK | 15 | | 2.7104 |
| | | | 16-QAM | | | 2.7049 |
| | | | 64-QAM | | | 2.7126 |
| | 5 MHz | | QPSK | 25 | | 4.5116 |
| | | | 16-QAM | | | 4.4936 |
| | | | 64-QAM | | | 4.5008 |
| | 10 MHz | | QPSK | 50 | | 8.9869 |
| | | | 16-QAM | | | 8.9776 |
| | | | 64-QAM | | | 8.9882 |
| | 15 MHz | | QPSK | 75 | | 13.442 |
| | | | 16-QAM | | | 13.446 |
| | | | 64-QAM | | | 13.462 |
| | 20 MHz | | QPSK | 100 | | 17.988 |
| | | | 16-QAM | | | 17.910 |
| | | | 64-QAM | | | 17.925 |

**Note:**

1. Plots of the EUT's Occupied Bandwidth are shown Page 39 ~ 47.

### 8.5 CONDUCTED SPURIOUS EMISSIONS

| Band | Band Width (MHz) | Frequency (MHz) | Frequency of Maximum Harmonic (GHz) | Factor (dB) | Measurement Maximum Data (dBm) | Result (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|---|
| 4 | 1.4 | 1710.7 | 3.6895 | 27.976 | -77.037 | -49.061 | -13.00 |
| | | 1732.5 | 3.4647 | 27.976 | -74.830 | -46.854 | |
| | | 1754.3 | 3.5100 | 27.976 | -75.308 | -47.332 | |
| | 3 | 1711.5 | 3.4208 | 27.976 | -76.199 | -48.223 | |
| | | 1732.5 | 3.4632 | 27.976 | -74.302 | -46.326 | |
| | | 1753.5 | 3.5100 | 27.976 | -75.265 | -47.289 | |
| | 5 | 1712.5 | 3.4213 | 27.976 | -75.519 | -47.543 | |
| | | 1732.5 | 3.4612 | 27.976 | -74.086 | -46.110 | |
| | | 1752.5 | 3.5100 | 27.976 | -75.158 | -47.182 | |
| | 10 | 1715.0 | 3.4218 | 27.976 | -76.066 | -48.090 | |
| | | 1732.5 | 3.4567 | 27.976 | -73.023 | -45.047 | |
| | | 1750.0 | 3.5095 | 27.976 | -74.911 | -46.935 | |
| | 15 | 1717.5 | 3.4223 | 27.976 | -75.621 | -47.645 | |
| | | 1732.5 | 3.4522 | 27.976 | -73.427 | -45.451 | |
| | | 1747.5 | 3.5090 | 27.976 | -74.576 | -46.600 | |
| | 20 | 1720.0 | 3.4228 | 27.976 | -76.611 | -48.635 | |
| | | 1732.5 | 3.4477 | 27.976 | -73.062 | -45.086 | |
| | | 1745.0 | 3.5085 | 27.976 | -75.475 | -47.499 | |

**Note:**

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 75 ~ 92.
2. Conducted Spurious Emissions was Tested QPSK Modulation, Resource Block Size 1 and Resource Block Offset 0
3. Result (dBm) = Measurement Maximum Data (dBm) + Factor (dB)
4. Factor(dB) = Cable Loss + Attenuator + Power Splitter

| Frequency Range (GHz) | Factor [dB] |
|---|---|
| 0.03 – 1 | 25.270 |
| 1 – 5 | 27.976 |
| 5 – 10 | 28.591 |
| 10 – 15 | 29.116 |
| 15 – 20 | 29.489 |
| Above 20 | 30.131 |

### 8.6 BAND EDGE

- Plots of the EUT's Band Edge are shown Page 57 ~ 74.

## 8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

▣ MODE: LTE 4

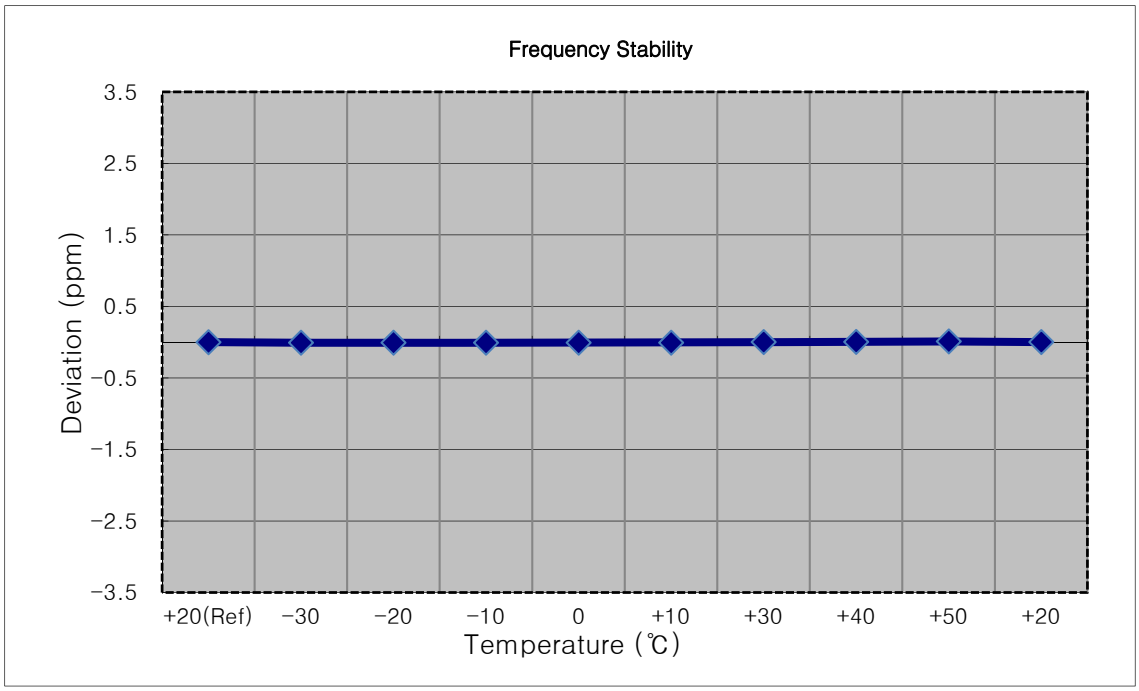
▣ OPERATING FREQUENCY: 1732,500,000 Hz

▣ CHANNEL: 20175 (1.4 MHz)

▣ REFERENCE VOLTAGE: 4.00 VDC

▣ DEVIATION LIMIT: Emission must remain in band

| Voltage (%) | Power (VDC) | Temp. (℃) | Frequency (Hz) | Frequency Error (Hz) | Deviation (%) | ppm |
|---|---|---|---|---|---|---|
| 100% | 4.00 | +20(Ref) | 1732 499 989 | 0.0 | 0.000 000 | 0.000 |
| 100% | | -30 | 1732 499 977 | -12.1 | -0.000 001 | -0.007 |
| 100% | | -20 | 1732 499 977 | -12.1 | -0.000 001 | -0.007 |
| 100% | | -10 | 1732 499 977 | -12.2 | -0.000 001 | -0.007 |
| 100% | | 0 | 1732 499 978 | -11.3 | -0.000 001 | -0.007 |
| 100% | | +10 | 1732 499 978 | -10.9 | -0.000 001 | -0.006 |
| 100% | | +30 | 1732 499 994 | 4.9 | 0.000 000 | 0.003 |
| 100% | | +40 | 1732 499 996 | 7.4 | 0.000 000 | 0.004 |
| 100% | | +50 | 1732 500 007 | 18.4 | 0.000 001 | 0.011 |
| Batt. Endpoint | 3.40 | +20 | 1732 499 992 | 3.3 | 0.000 000 | 0.002 |



▣ MODE: LTE 4

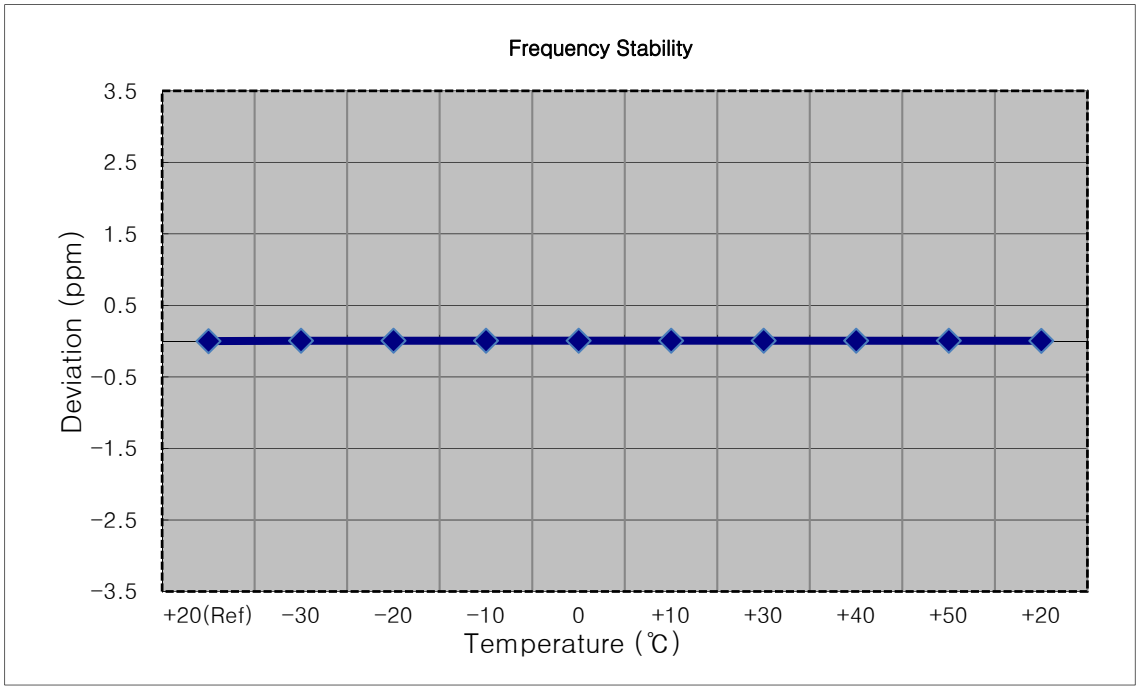
▣ OPERATING FREQUENCY: 1732,500,000 Hz

▣ CHANNEL: 20175 (3 MHz)

▣ REFERENCE VOLTAGE: 4.00 VDC

▣ DEVIATION LIMIT: Emission must remain in band

| Voltage (%) | Power (VDC) | Temp. (℃) | Frequency (Hz) | Frequency Error (Hz) | Deviation (%) | ppm |
|---|---|---|---|---|---|---|
| 100% | 4.00 | +20(Ref) | 1732 500 005 | 0.0 | 0.000 000 | 0.000 |
| 100% | | -30 | 1732 500 015 | 9.8 | 0.000 001 | 0.006 |
| 100% | | -20 | 1732 500 015 | 10.1 | 0.000 001 | 0.006 |
| 100% | | -10 | 1732 500 017 | 11.8 | 0.000 001 | 0.007 |
| 100% | | 0 | 1732 500 016 | 10.5 | 0.000 001 | 0.006 |
| 100% | | +10 | 1732 500 017 | 11.7 | 0.000 001 | 0.007 |
| 100% | | +30 | 1732 500 015 | 10.2 | 0.000 001 | 0.006 |
| 100% | | +40 | 1732 500 016 | 11.0 | 0.000 001 | 0.006 |
| 100% | | +50 | 1732 500 016 | 10.8 | 0.000 001 | 0.006 |
| Batt. Endpoint | 3.40 | +20 | 1732 500 015 | 9.6 | 0.000 001 | 0.006 |



▣ MODE: LTE 4

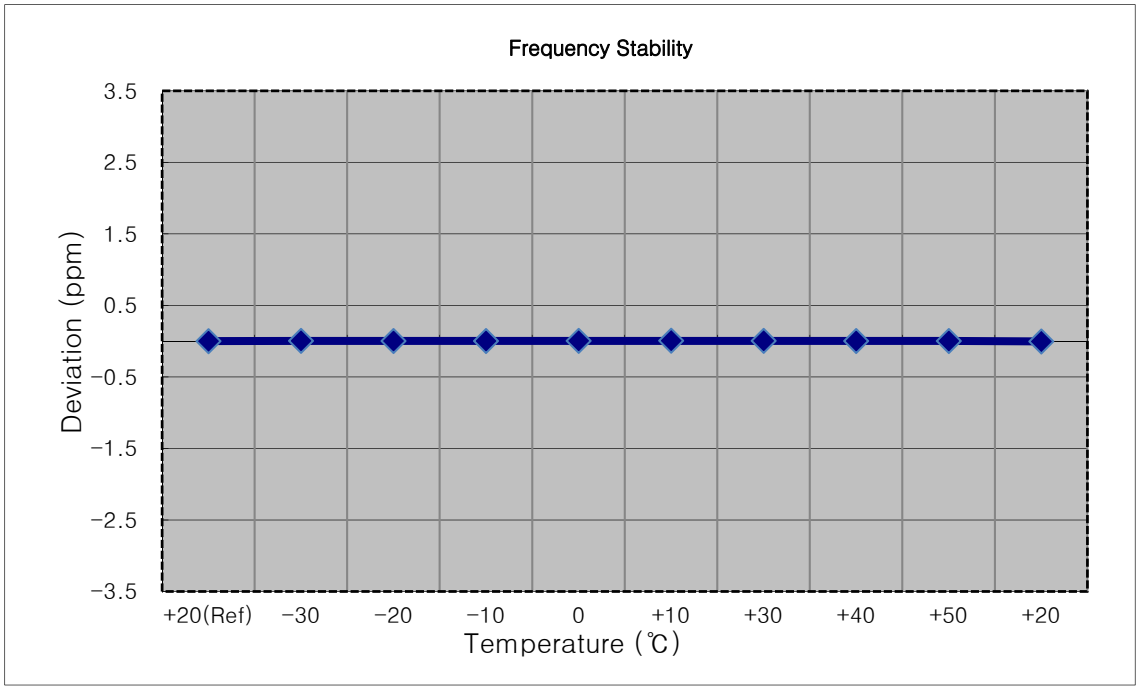
▣ OPERATING FREQUENCY: 1732,500,000 Hz

▣ CHANNEL: 20175 (5 MHz)

▣ REFERENCE VOLTAGE: 4.00 VDC

▣ DEVIATION LIMIT: Emission must remain in band

| Voltage (%) | Power (VDC) | Temp. (℃) | Frequency (Hz) | Frequency Error (Hz) | Deviation (%) | ppm |
|---|---|---|---|---|---|---|
| 100% | 4.00 | +20(Ref) | 1732 500 012 | 0.0 | 0.000 000 | 0.000 |
| 100% | | -30 | 1732 500 019 | 7.0 | 0.000 000 | 0.004 |
| 100% | | -20 | 1732 500 017 | 4.6 | 0.000 000 | 0.003 |
| 100% | | -10 | 1732 500 016 | 3.4 | 0.000 000 | 0.002 |
| 100% | | 0 | 1732 500 018 | 5.9 | 0.000 000 | 0.003 |
| 100% | | +10 | 1732 500 022 | 9.7 | 0.000 001 | 0.006 |
| 100% | | +30 | 1732 500 019 | 6.6 | 0.000 000 | 0.004 |
| 100% | | +40 | 1732 500 018 | 5.7 | 0.000 000 | 0.003 |
| 100% | | +50 | 1732 500 017 | 4.6 | 0.000 000 | 0.003 |
| Batt. Endpoint | 3.40 | +20 | 1732 500 005 | -7.6 | 0.000 000 | -0.004 |



▣ MODE: LTE 4

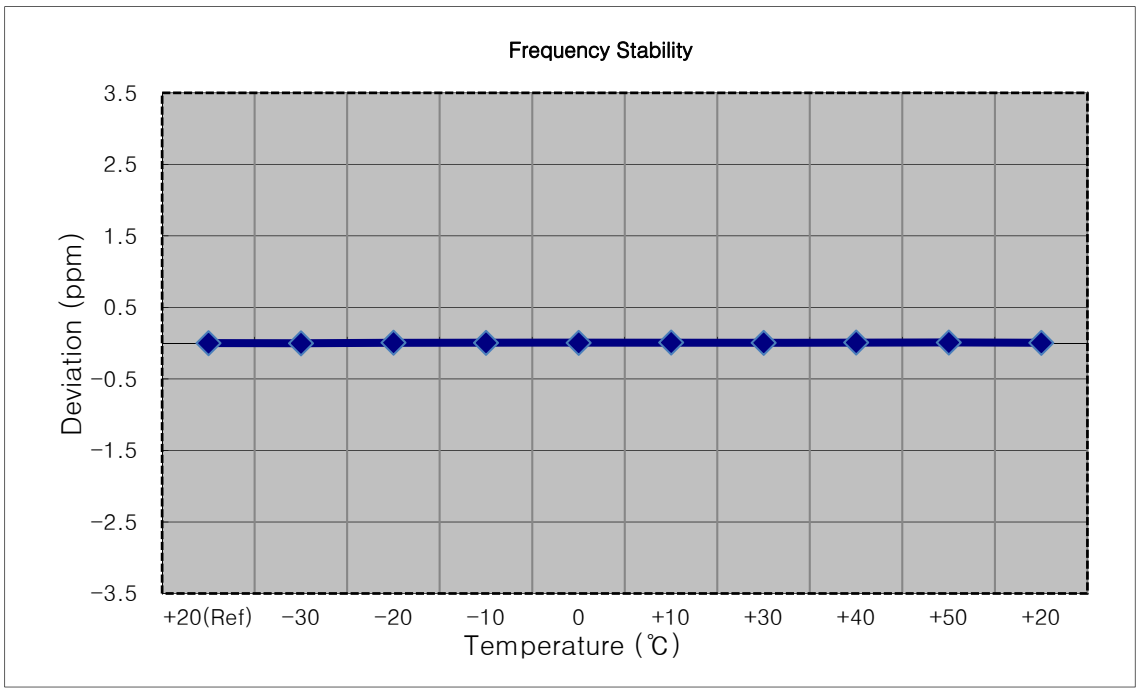
▣ OPERATING FREQUENCY: 1732,500,000 Hz

▣ CHANNEL: 20175 (10 MHz)

▣ REFERENCE VOLTAGE: 4.00 VDC

▣ DEVIATION LIMIT: Emission must remain in band

| Voltage (%) | Power (VDC) | Temp. (℃) | Frequency (Hz) | Frequency Error (Hz) | Deviation (%) | ppm |
|---|---|---|---|---|---|---|
| 100% | 4.00 | +20(Ref) | 1732 499 996 | 0.0 | 0.000 000 | 0.000 |
| 100% | | -30 | 1732 499 994 | -2.4 | 0.000 000 | -0.001 |
| 100% | | -20 | 1732 500 009 | 13.3 | 0.000 001 | 0.008 |
| 100% | | -10 | 1732 500 004 | 8.4 | 0.000 000 | 0.005 |
| 100% | | 0 | 1732 500 004 | 8.1 | 0.000 000 | 0.005 |
| 100% | | +10 | 1732 500 011 | 15.0 | 0.000 001 | 0.009 |
| 100% | | +30 | 1732 500 004 | 8.0 | 0.000 000 | 0.005 |
| 100% | | +40 | 1732 500 011 | 14.7 | 0.000 001 | 0.008 |
| 100% | | +50 | 1732 500 012 | 16.3 | 0.000 001 | 0.009 |
| Batt. Endpoint | 3.40 | +20 | 1732 500 004 | 8.2 | 0.000 000 | 0.005 |



▣ MODE: LTE 4

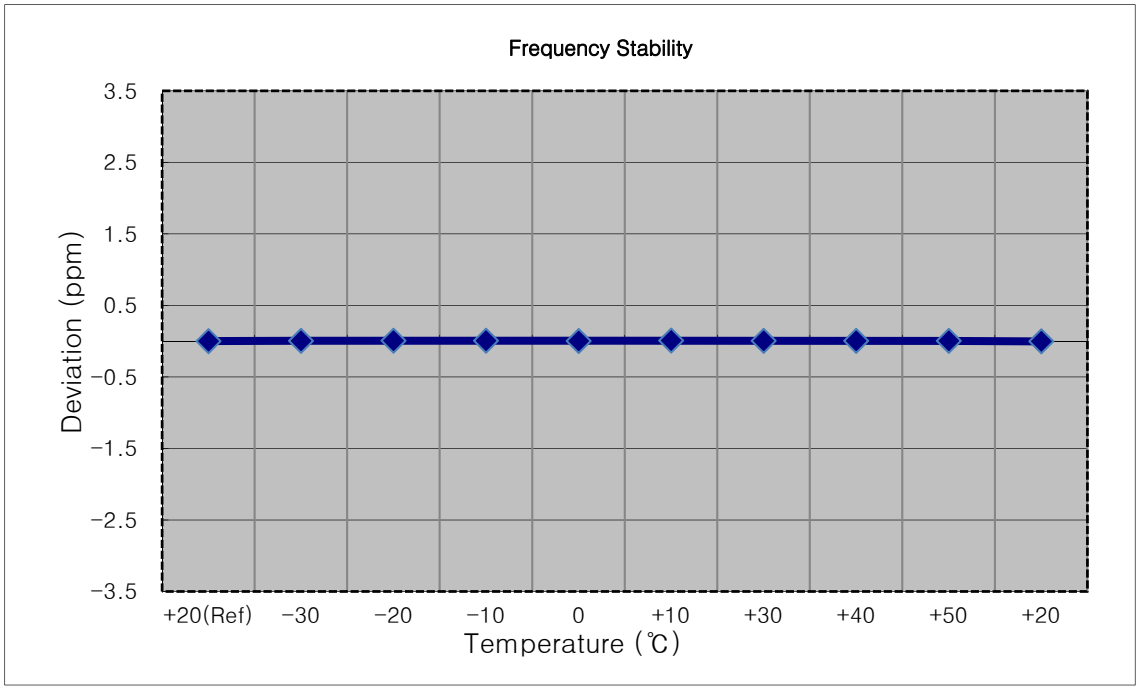
▣ OPERATING FREQUENCY: 1732,500,000 Hz

▣ CHANNEL: 20175 (15 MHz)

▣ REFERENCE VOLTAGE: 4.00 VDC

▣ DEVIATION LIMIT: Emission must remain in band

| Voltage (%) | Power (VDC) | Temp. (℃) | Frequency (Hz) | Frequency Error (Hz) | Deviation (%) | ppm |
|---|---|---|---|---|---|---|
| 100% | 4.00 | +20(Ref) | 1732 500 014 | 0.0 | 0.000 000 | 0.000 |
| 100% | | -30 | 1732 500 023 | 8.6 | 0.000 000 | 0.005 |
| 100% | | -20 | 1732 500 026 | 11.9 | 0.000 001 | 0.007 |
| 100% | | -10 | 1732 500 025 | 10.9 | 0.000 001 | 0.006 |
| 100% | | 0 | 1732 500 018 | 4.1 | 0.000 000 | 0.002 |
| 100% | | +10 | 1732 500 028 | 14.0 | 0.000 001 | 0.008 |
| 100% | | +30 | 1732 500 023 | 9.1 | 0.000 001 | 0.005 |
| 100% | | +40 | 1732 500 021 | 6.3 | 0.000 000 | 0.004 |
| 100% | | +50 | 1732 500 021 | 6.7 | 0.000 000 | 0.004 |
| Batt. Endpoint | 3.40 | +20 | 1732 500 010 | -4.6 | 0.000 000 | -0.003 |



▣ MODE: LTE 4

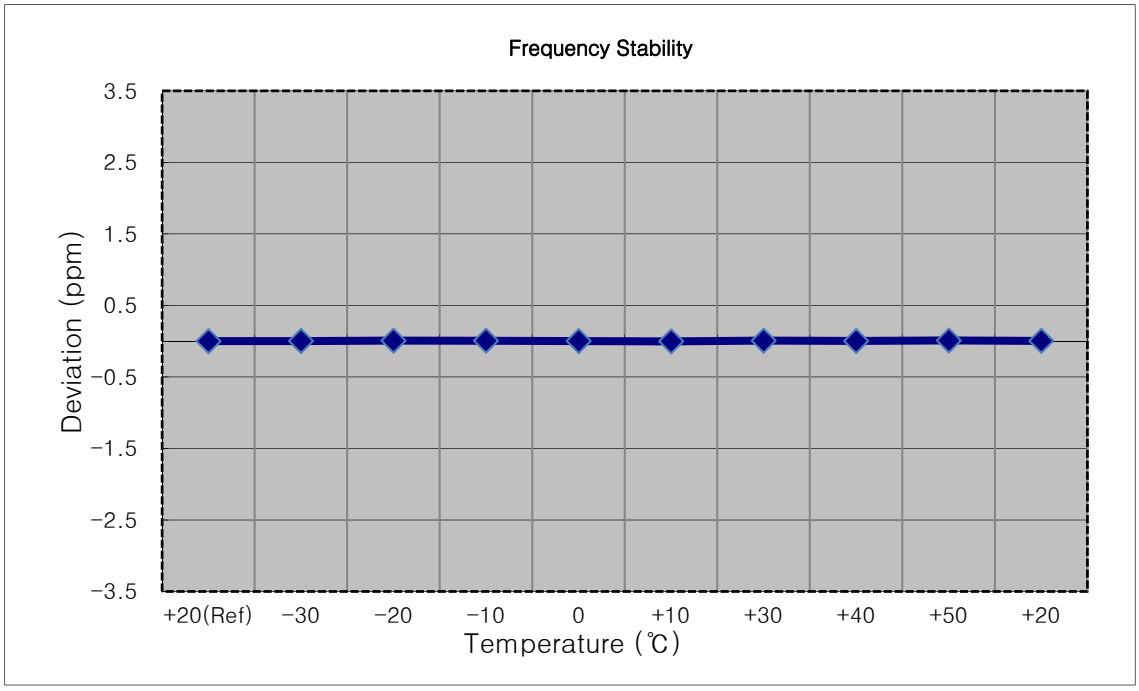
▣ OPERATING FREQUENCY: 1732,500,000 Hz

▣ CHANNEL: 20175 (20 MHz)

▣ REFERENCE VOLTAGE: 4.00 VDC

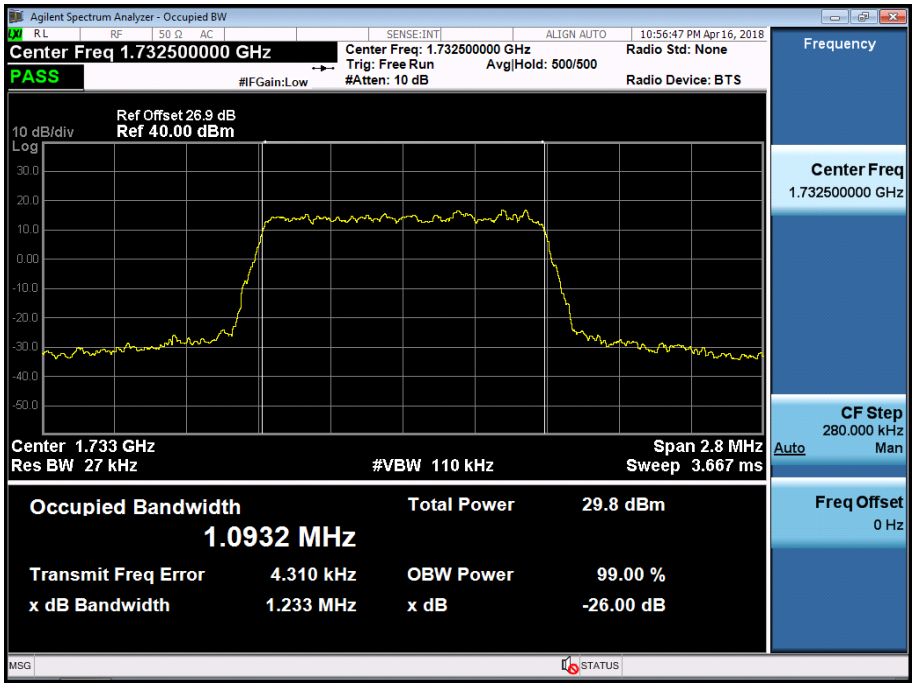
▣ DEVIATION LIMIT: Emission must remain in band

| Voltage (%) | Power (VDC) | Temp. (℃) | Frequency (Hz) | Frequency Error (Hz) | Deviation (%) | ppm |
|---|---|---|---|---|---|---|
| 100% | 4.00 | +20(Ref) | 1732 500 007 | 0.0 | 0.000 000 | 0.000 |
| 100% | | -30 | 1732 500 011 | 3.5 | 0.000 000 | 0.002 |
| 100% | | -20 | 1732 500 021 | 13.5 | 0.000 001 | 0.008 |
| 100% | | -10 | 1732 500 017 | 10.3 | 0.000 001 | 0.006 |
| 100% | | 0 | 1732 500 011 | 3.8 | 0.000 000 | 0.002 |
| 100% | | +10 | 1732 500 002 | -4.8 | 0.000 000 | -0.003 |
| 100% | | +30 | 1732 500 019 | 11.7 | 0.000 001 | 0.007 |
| 100% | | +40 | 1732 500 011 | 4.3 | 0.000 000 | 0.002 |
| 100% | | +50 | 1732 500 024 | 16.6 | 0.000 001 | 0.010 |
| Batt. Endpoint | 3.40 | +20 | 1732 500 013 | 5.9 | 0.000 000 | 0.003 |

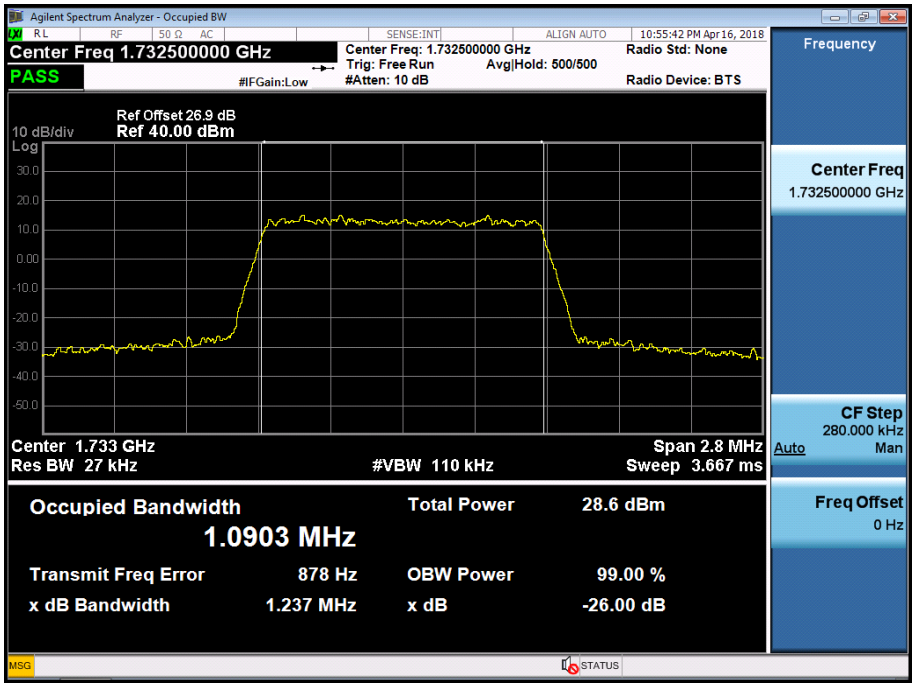


# 9. TEST PLOTS

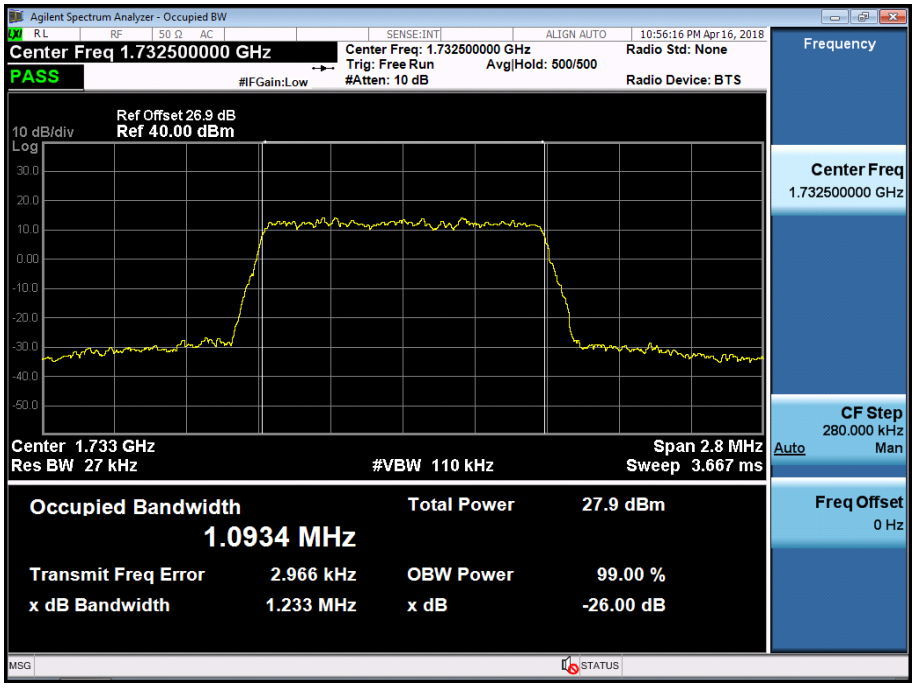
BAND 4. Occupied Bandwidth Plot (1.4M BW Ch.20175 QPSK RB 6)



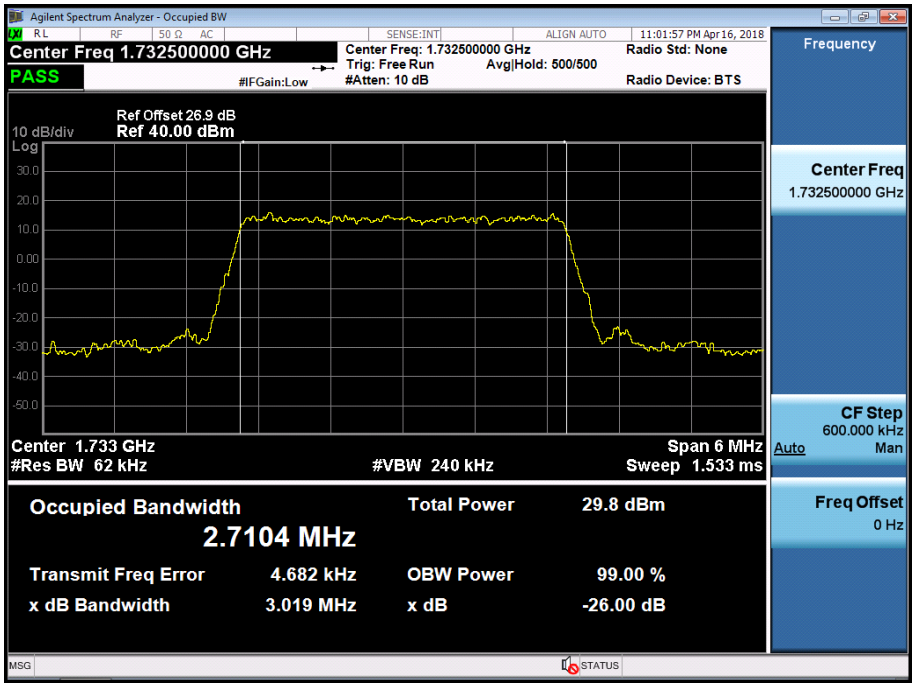

BAND 4. Occupied Bandwidth Plot (1.4M BW Ch.20175 16QAM RB 6)



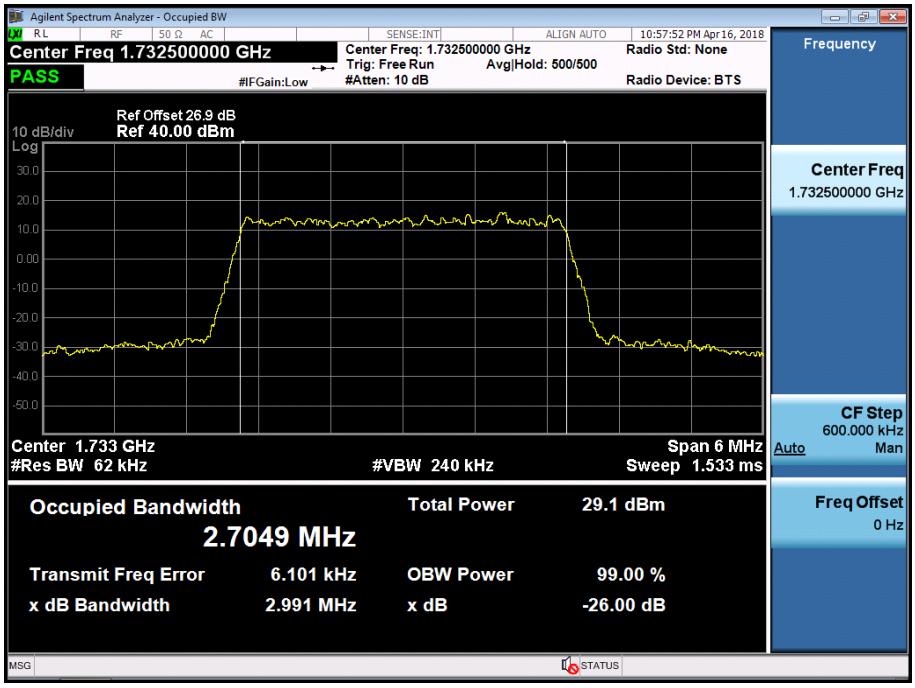
BAND 4. Occupied Bandwidth Plot (1.4M BW Ch.20175 64QAM RB 6)



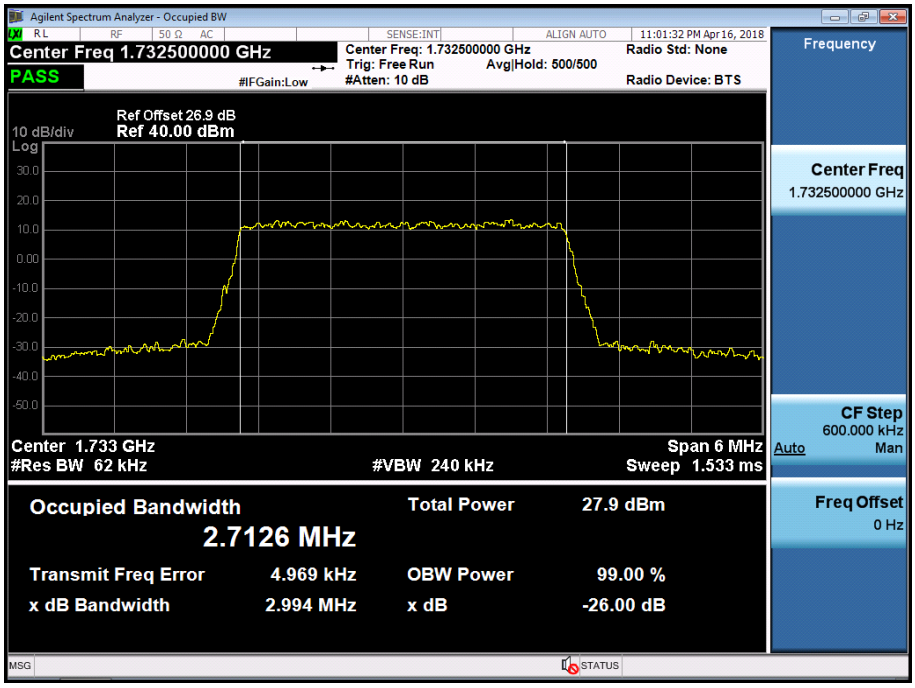

BAND 4. Occupied Bandwidth Plot (3M BW Ch.20175 QPSK RB 15)



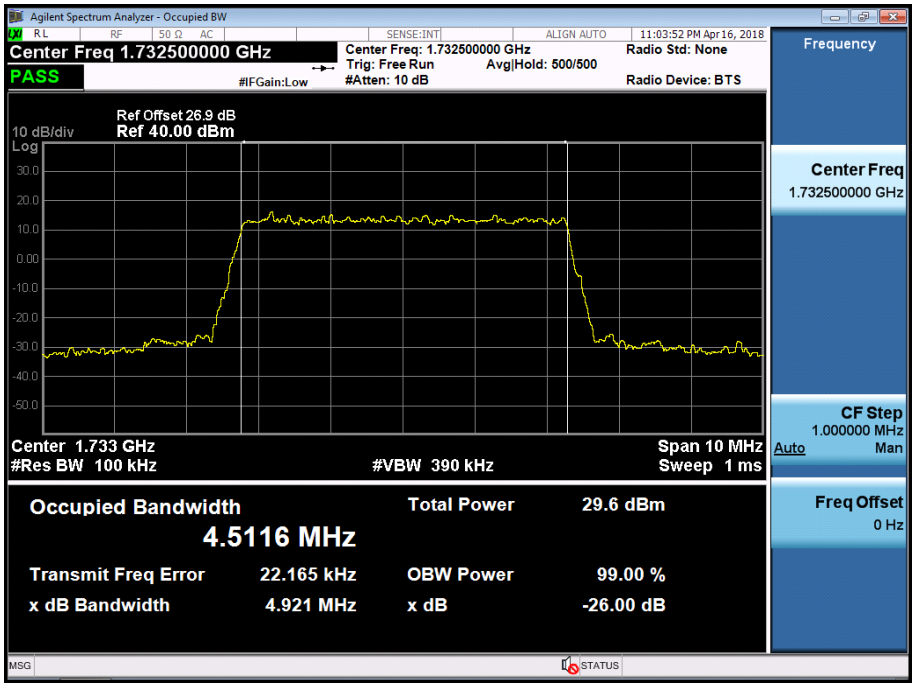
BAND 4. Occupied Bandwidth Plot (3M BW Ch.20175 16QAM RB 15)



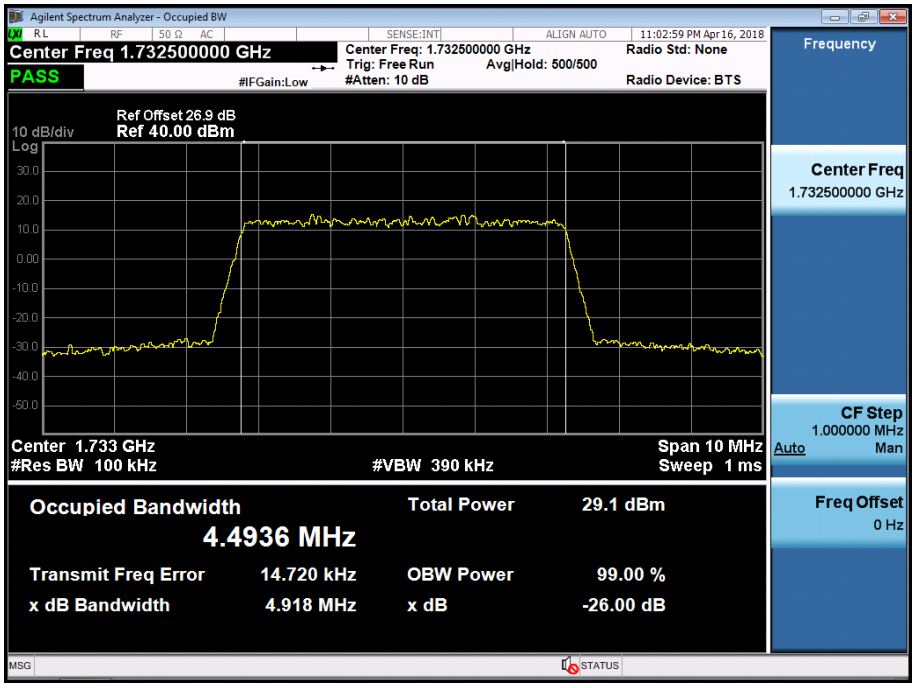

BAND 4. Occupied Bandwidth Plot (3M BW Ch.20175 64QAM RB 15)



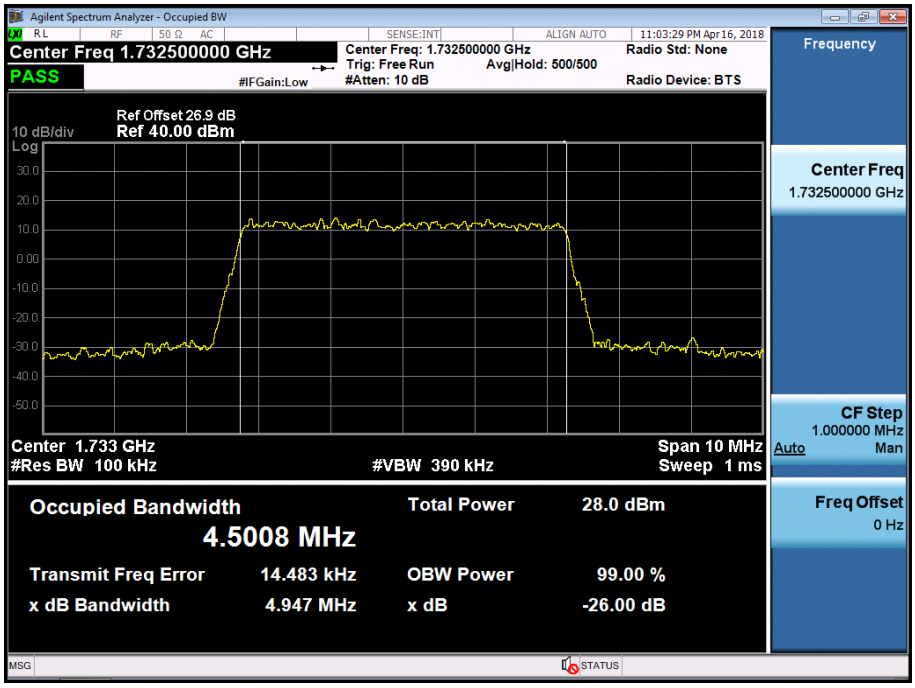
BAND 4. Occupied Bandwidth Plot (5M BW Ch.20175 QPSK RB 25)



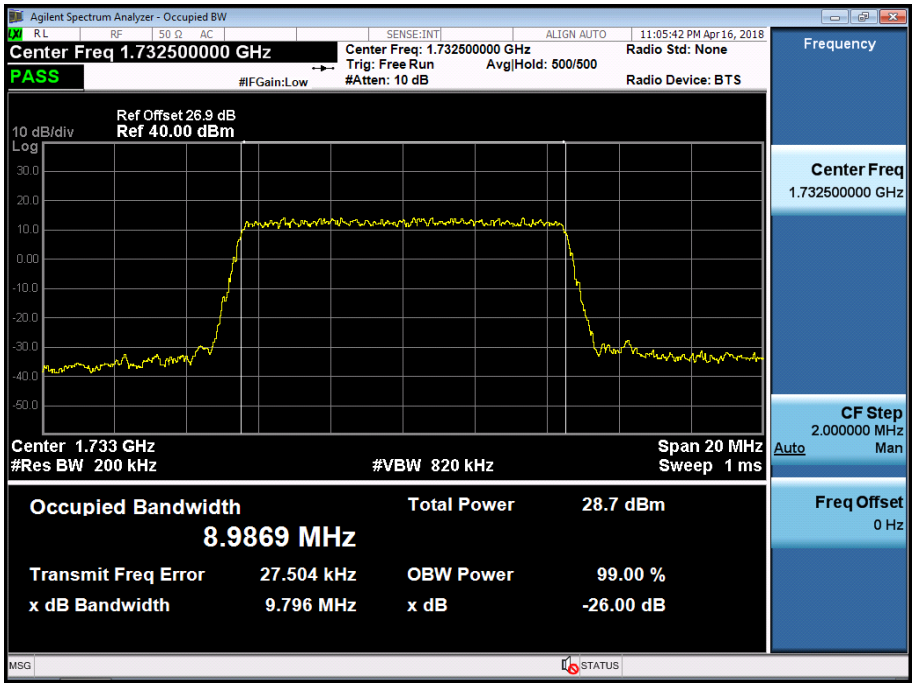

BAND 4. Occupied Bandwidth Plot (5M BW Ch.20175 16QAM RB 25)



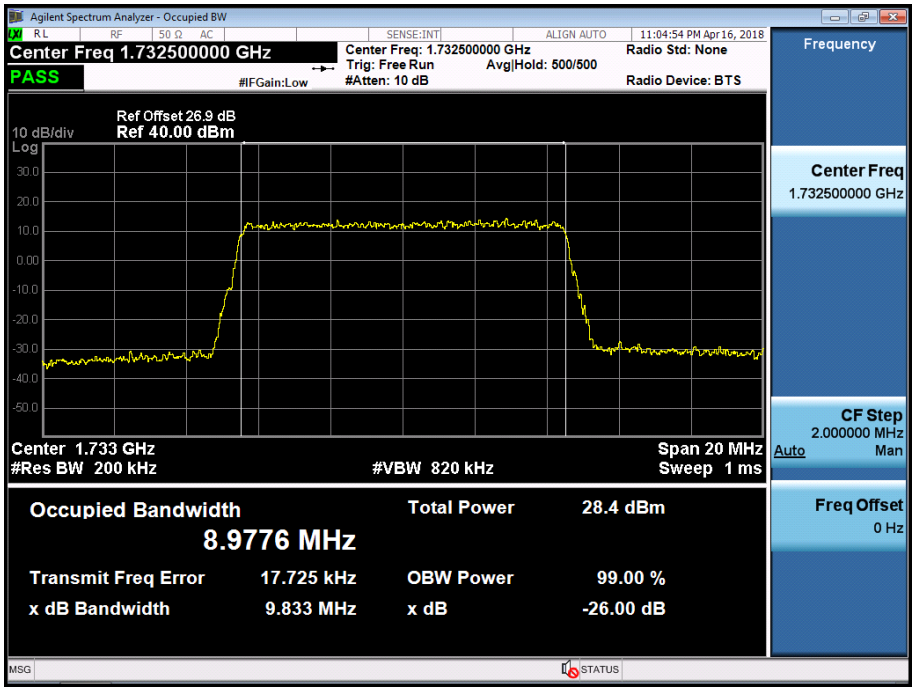
BAND 4. Occupied Bandwidth Plot (5M BW Ch.20175 64QAM RB 25)



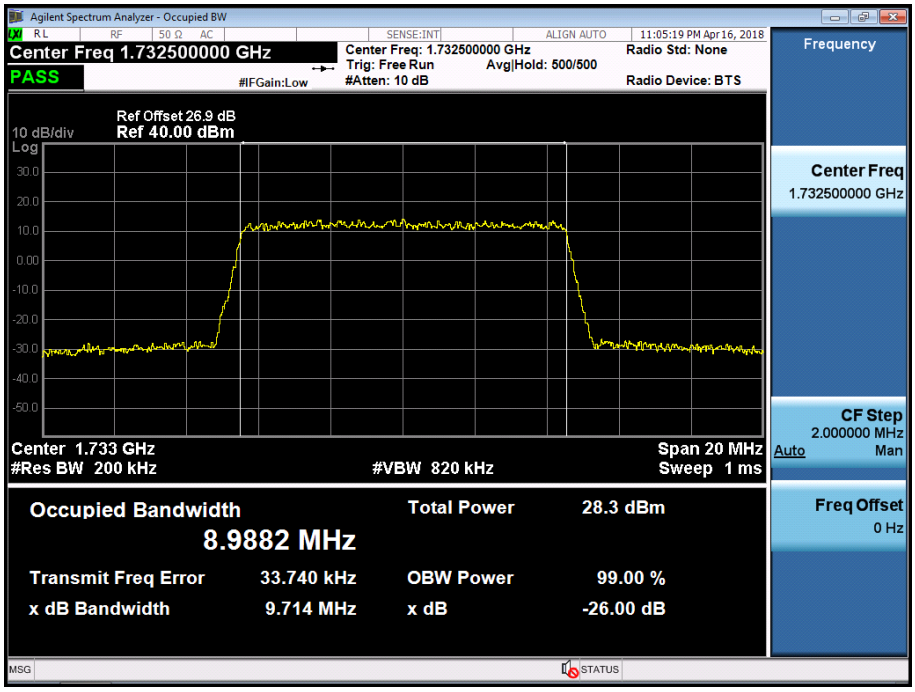

BAND 4. Occupied Bandwidth Plot (10M BW Ch.20175 QPSK RB 50)



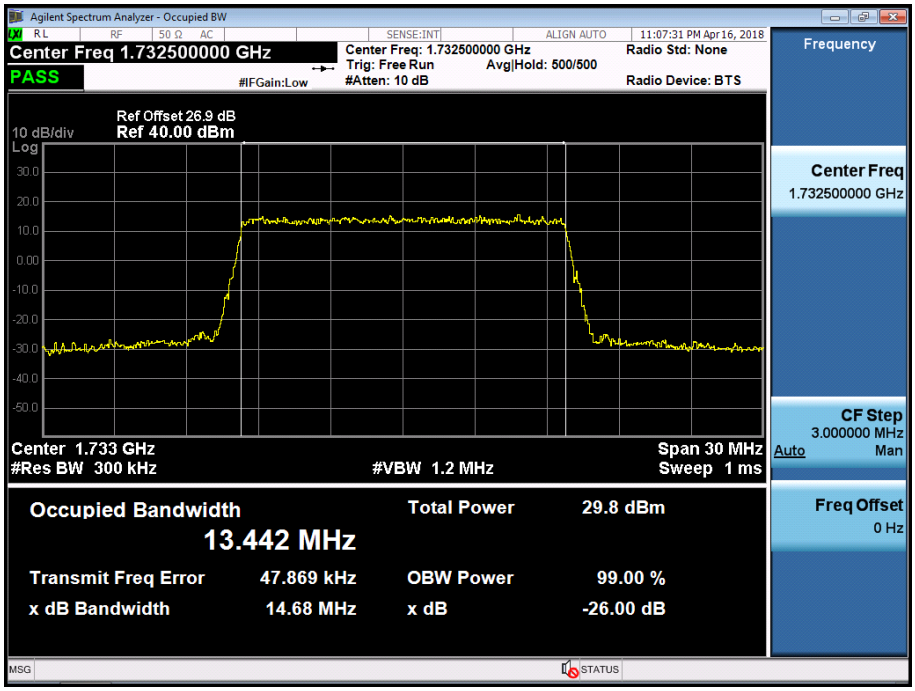
BAND 4. Occupied Bandwidth Plot (10M BW Ch.20175 16QAM RB 50)



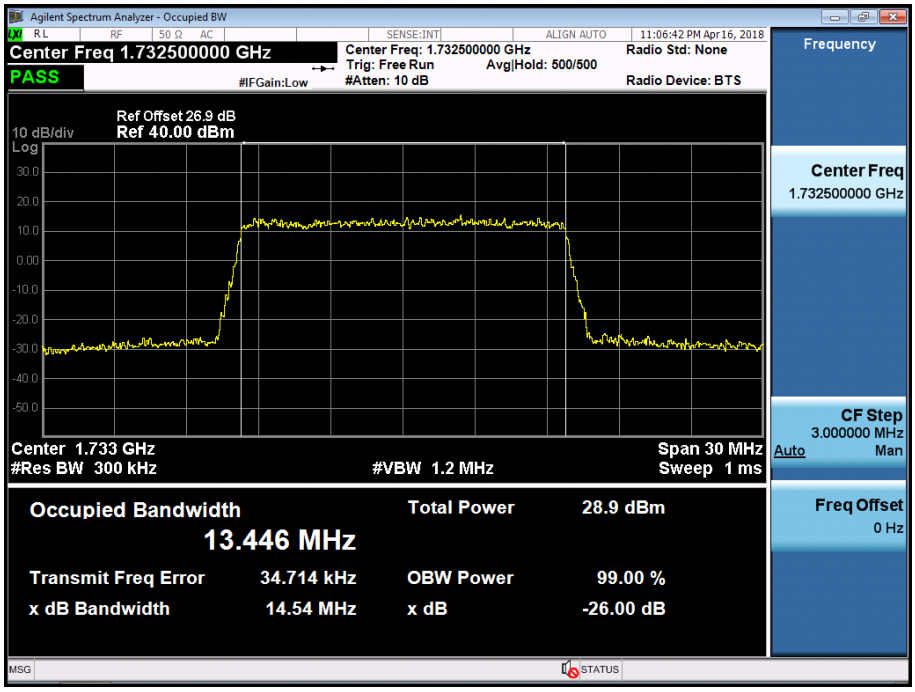

BAND 4. Occupied Bandwidth Plot (10M BW Ch.20175 64QAM RB 50)



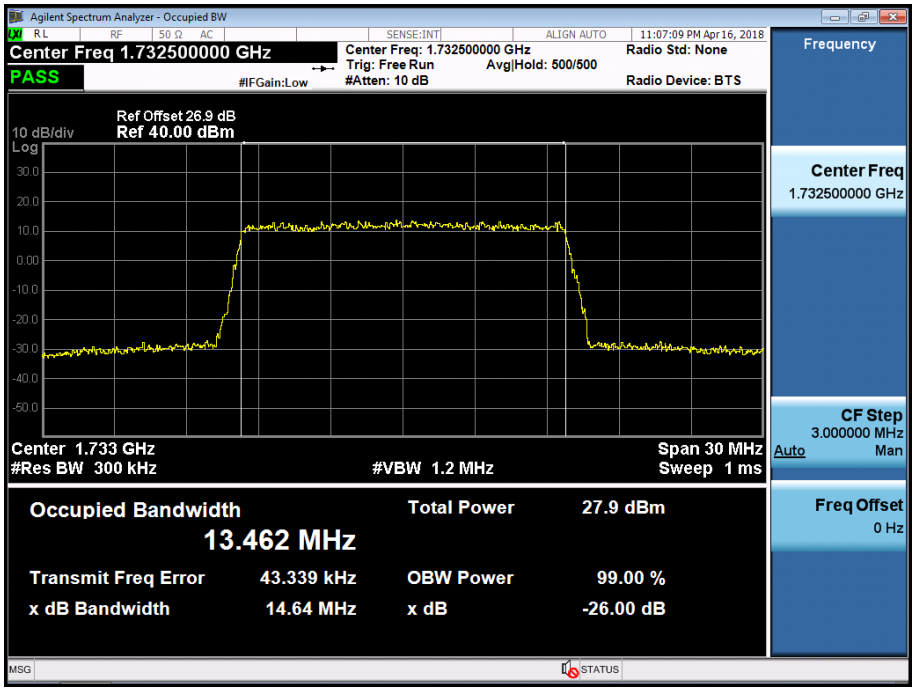
BAND 4. Occupied Bandwidth Plot (15M BW Ch.20175 QPSK RB 75)



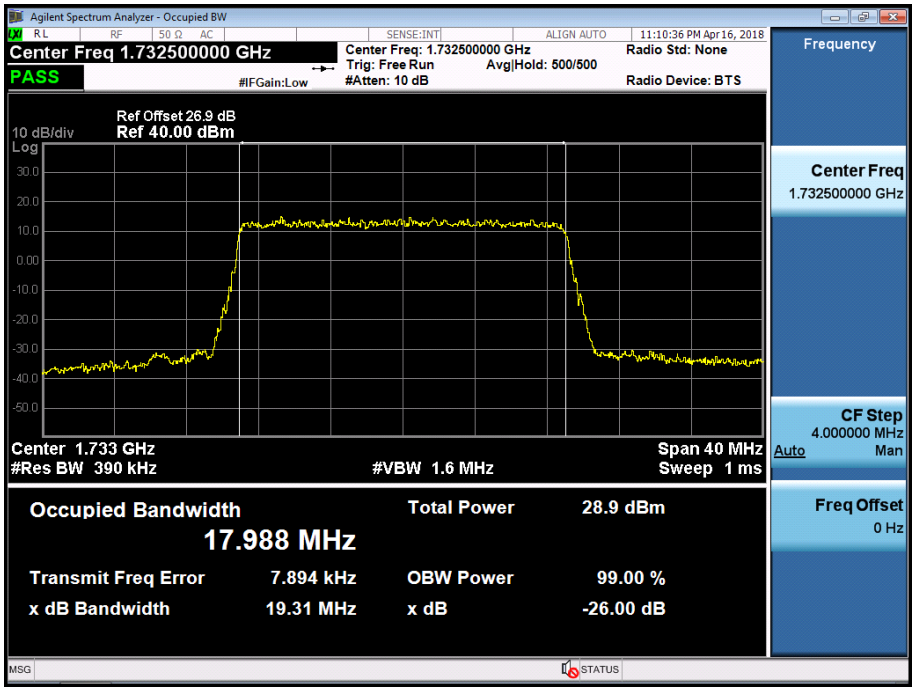

BAND 4. Occupied Bandwidth Plot (15M BW Ch.20175 16QAM RB 75)



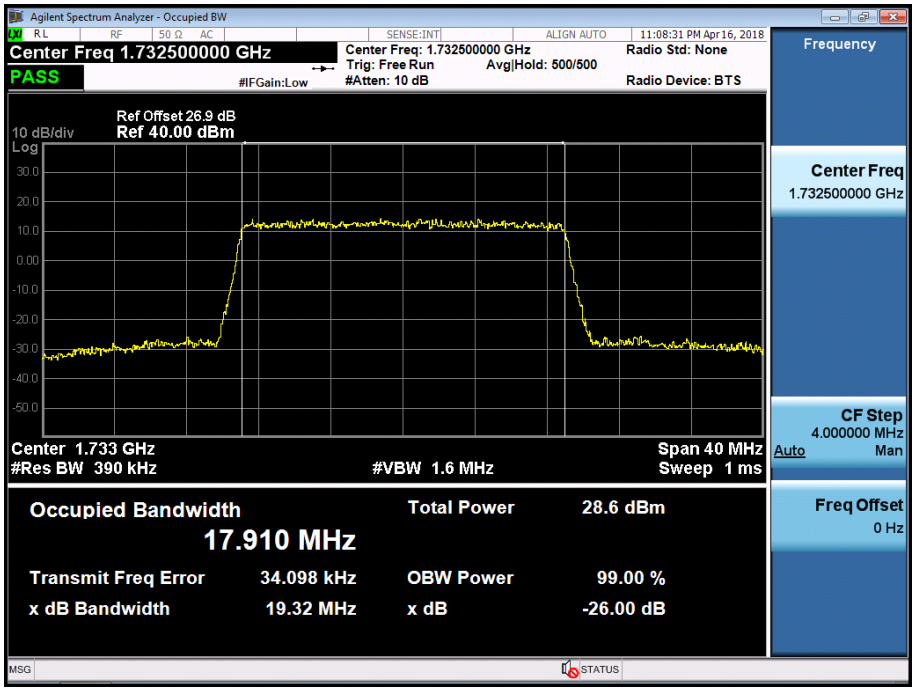
BAND 4. Occupied Bandwidth Plot (15M BW Ch.20175 64QAM RB 75)



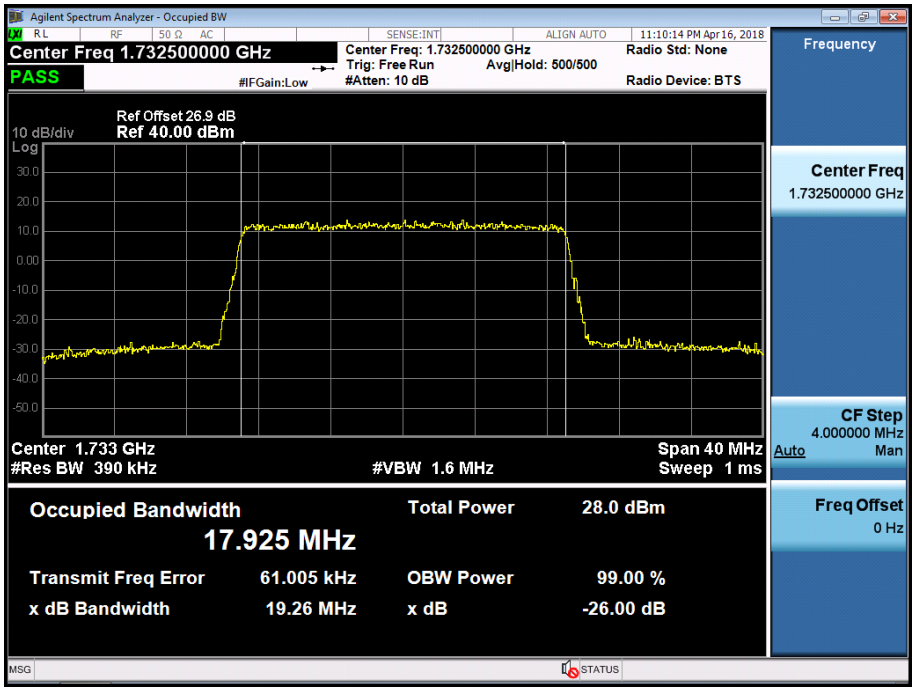

BAND 4. Occupied Bandwidth Plot (20M BW Ch.20175 QPSK RB 100)



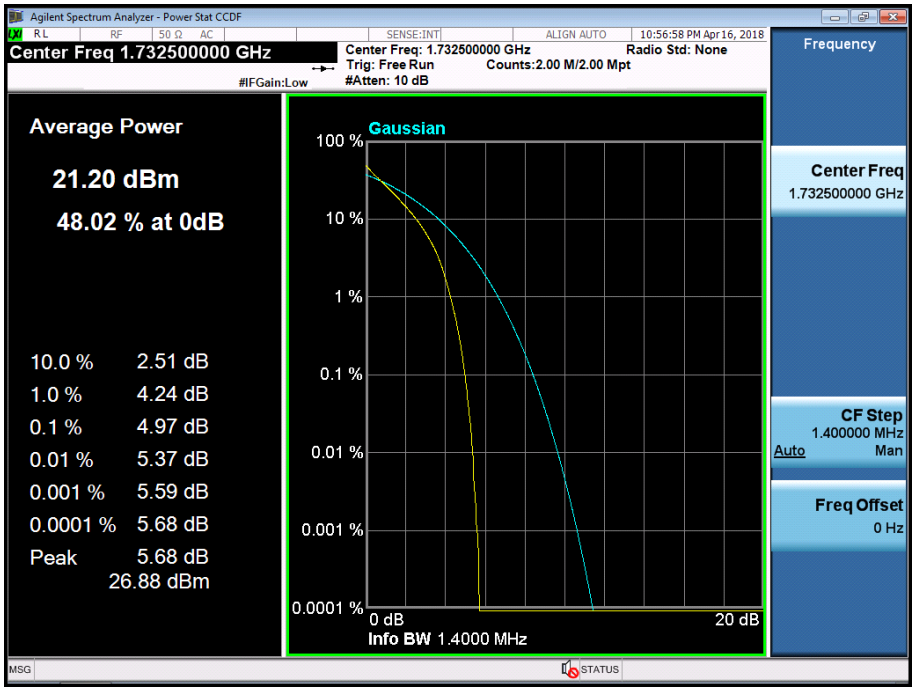
BAND 4. Occupied Bandwidth Plot (20M BW Ch.20175 16QAM RB 100)



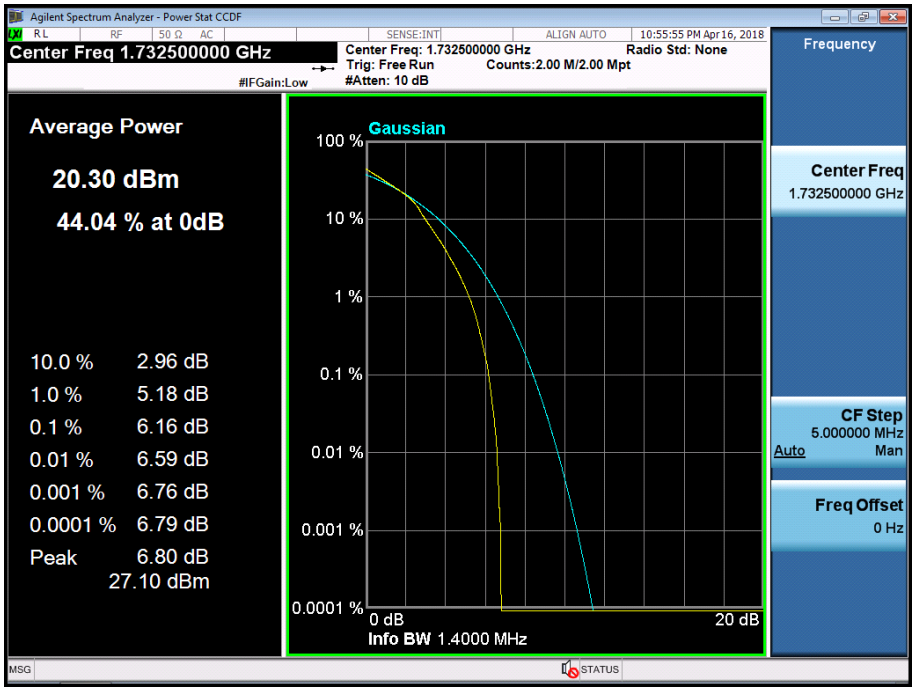

BAND 4. Occupied Bandwidth Plot (20M BW Ch.20175 64QAM RB 100)



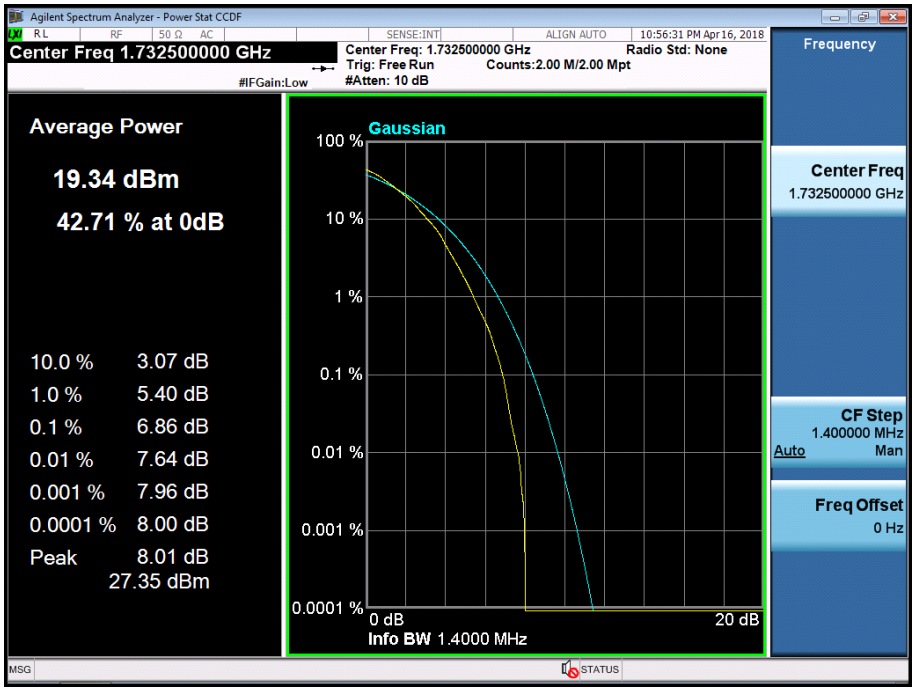
BAND 4. PAR Plot (1.4M BW_Ch.20175_QPSK_RB6_0)



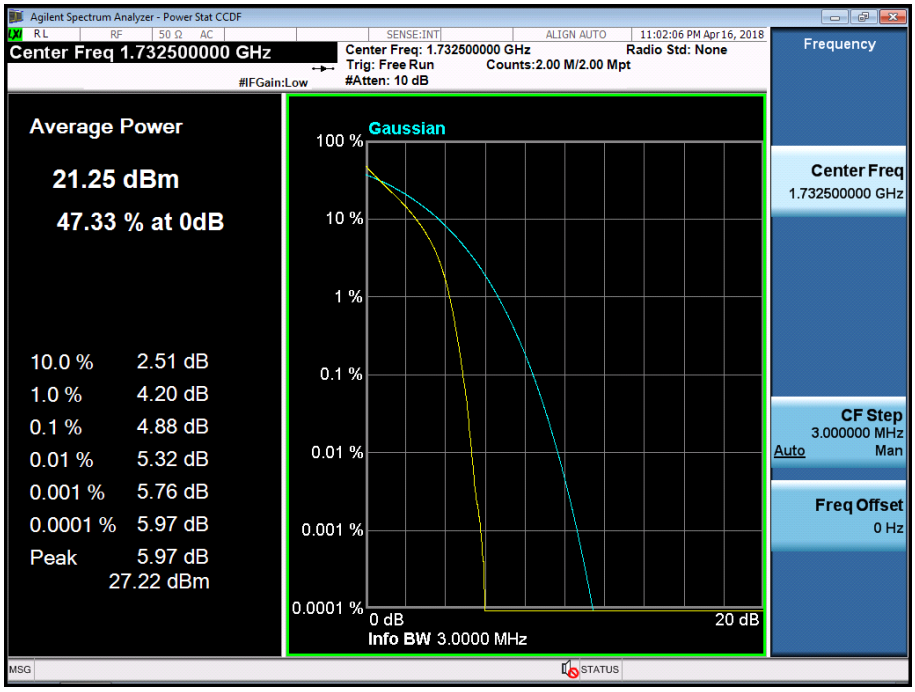

BAND 4. PAR Plot (1.4M BW_Ch.20175_16QAM_RB6_0)



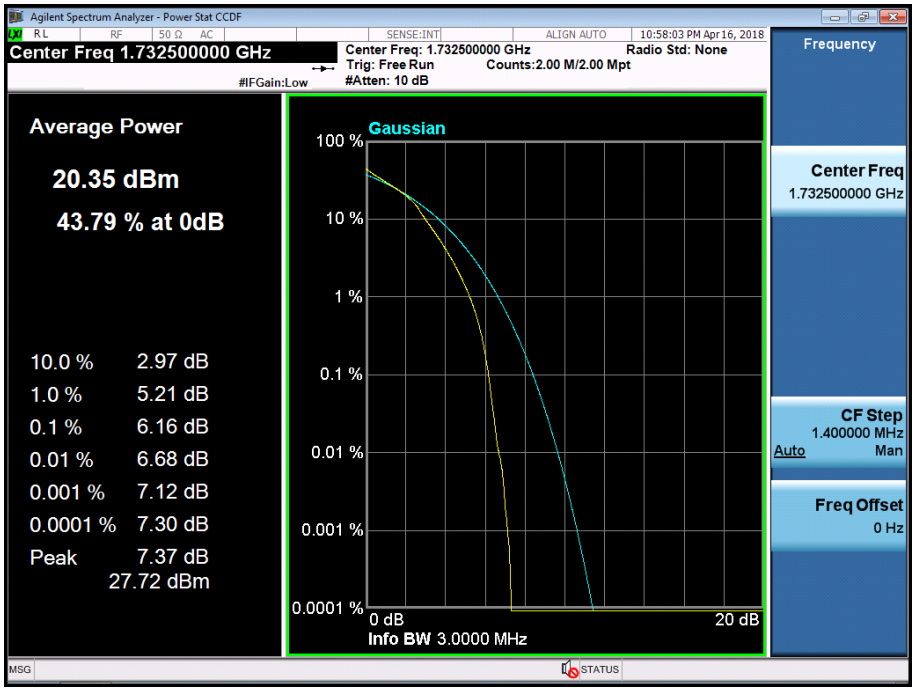
BAND 4. PAR Plot (1.4M BW_Ch.20175_64QAM_RB6_0)



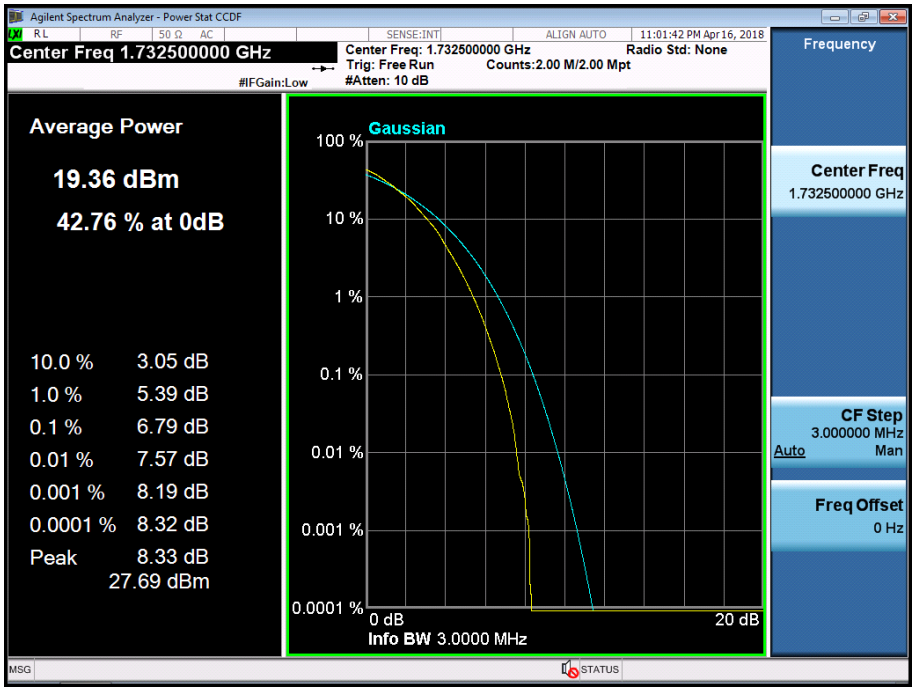

BAND 4. PAR Plot (3M BW_Ch.20175_QPSK_RB15_0)



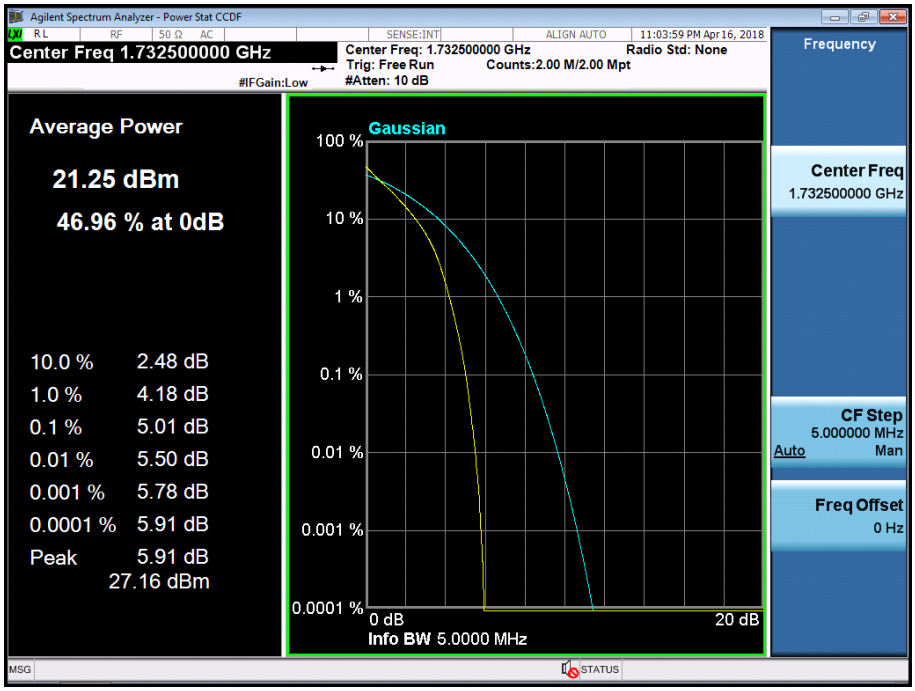
BAND 4. PAR Plot (3M BW_Ch.20175_16QAM_RB15_0)



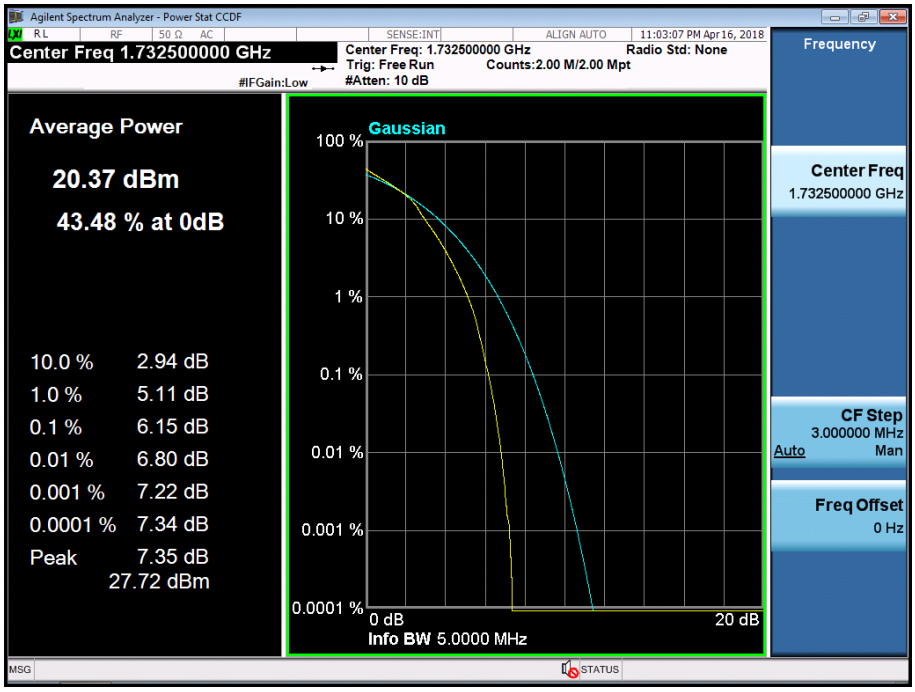

BAND 4. PAR Plot (3M BW_Ch.20175_64QAM_RB15_0)



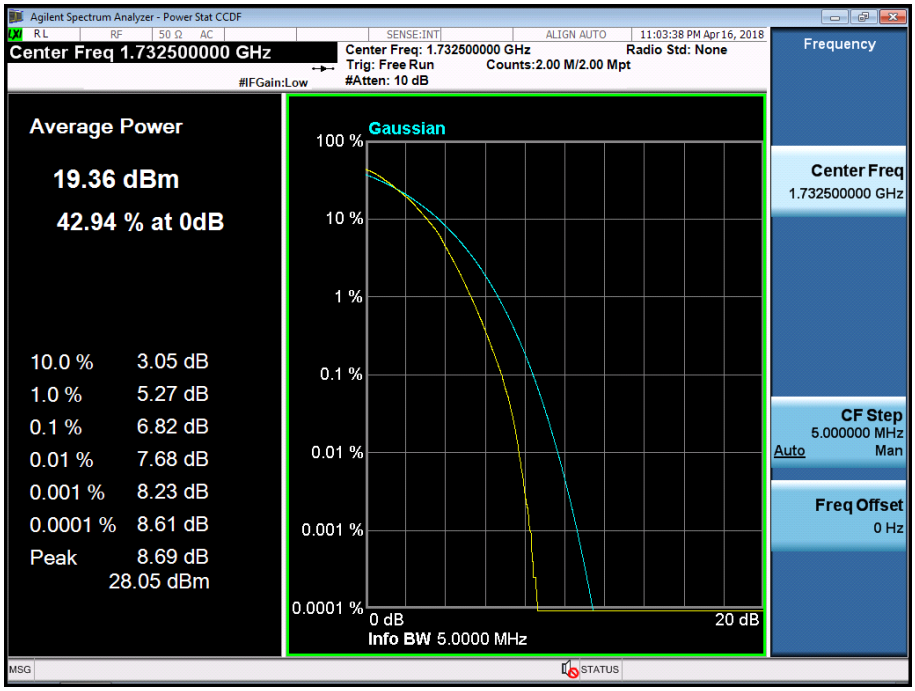
BAND 4. PAR Plot (5M BW_Ch.20175_QPSK_RB25_0)



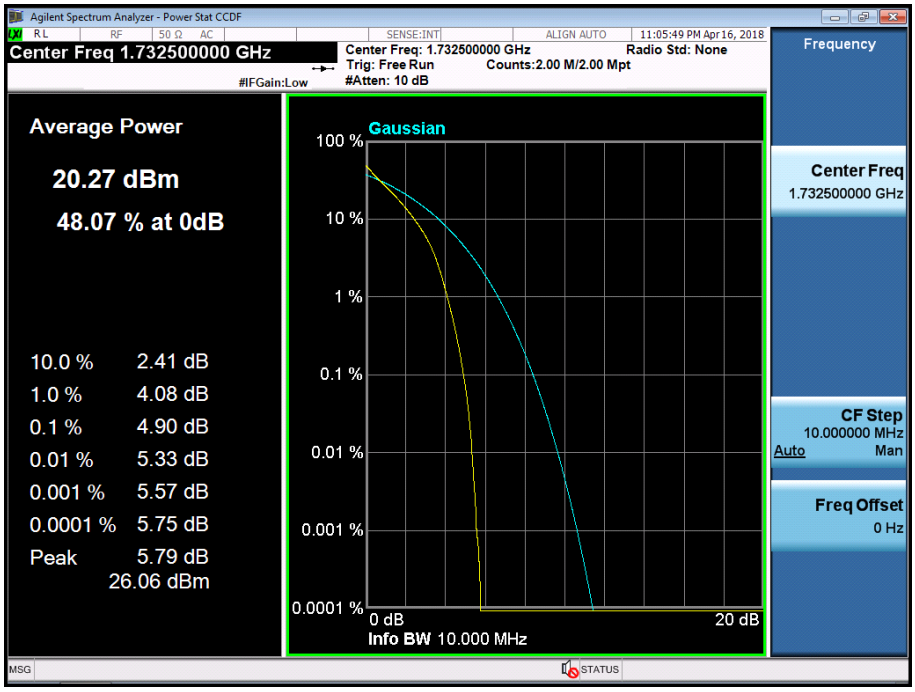

BAND 4. PAR Plot (5M BW_Ch.20175_16QAM_RB25_0)



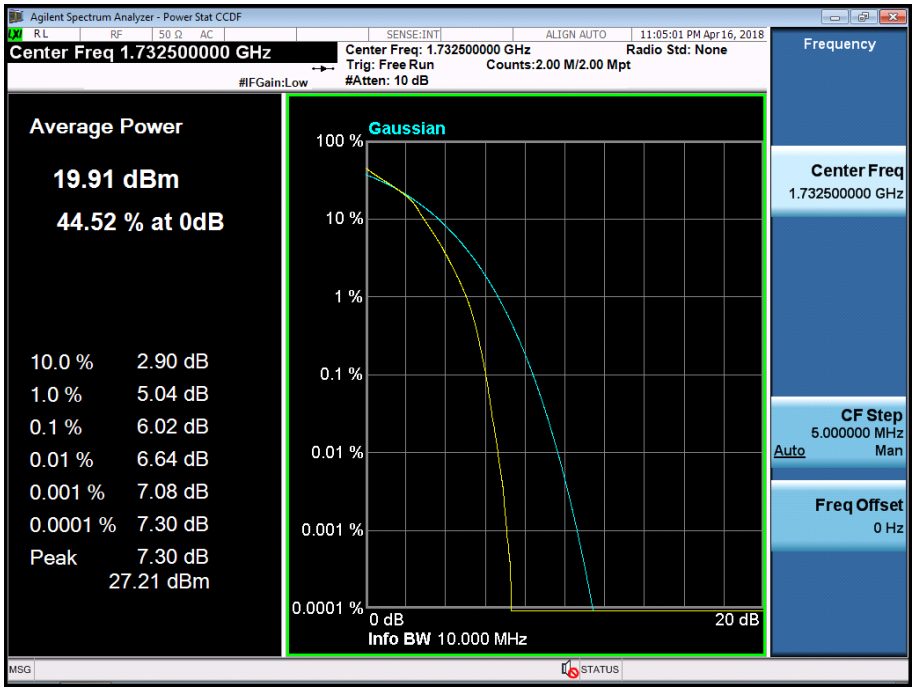
BAND 4. PAR Plot (5M BW_Ch.20175_64QAM_RB25_0)



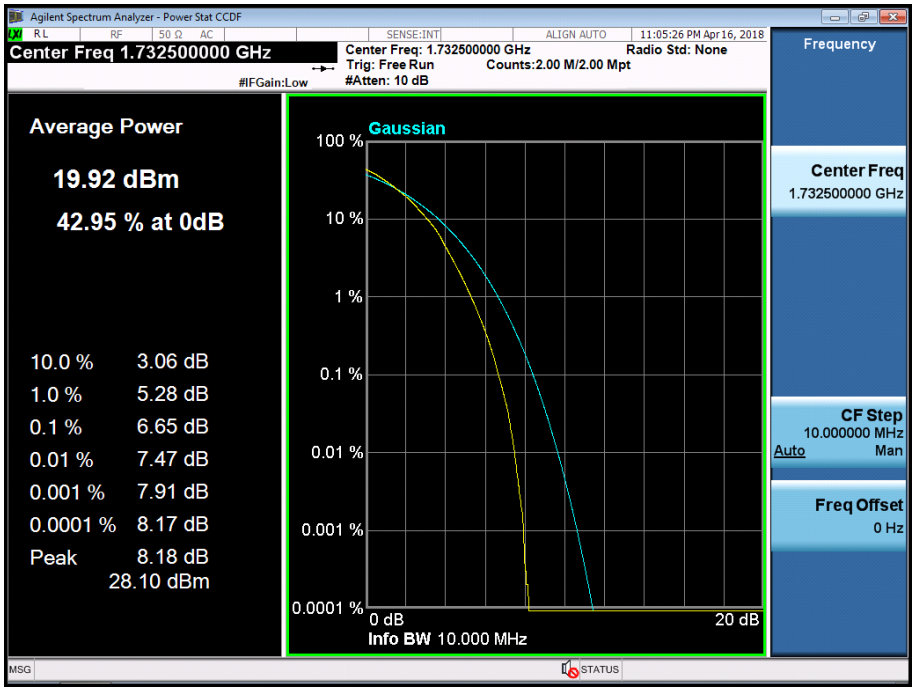

BAND 4. PAR Plot (10M BW_Ch.20175_QPSK_RB50_0)



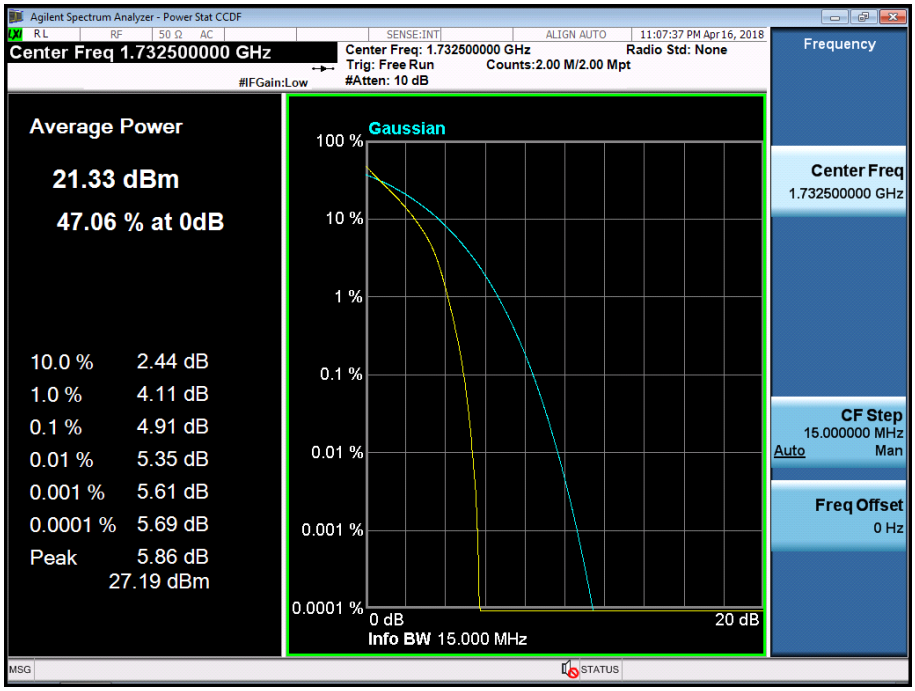
BAND 4. PAR Plot (10M BW_Ch.20175_16QAM_RB50_0)



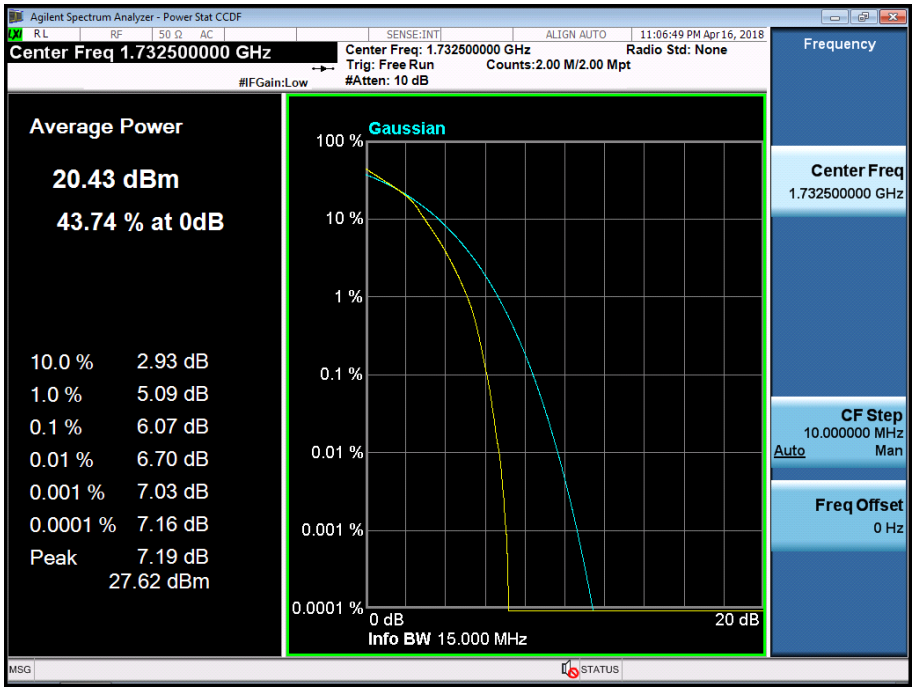

BAND 4. PAR Plot (10M BW_Ch.20175_64QAM_RB50_0)



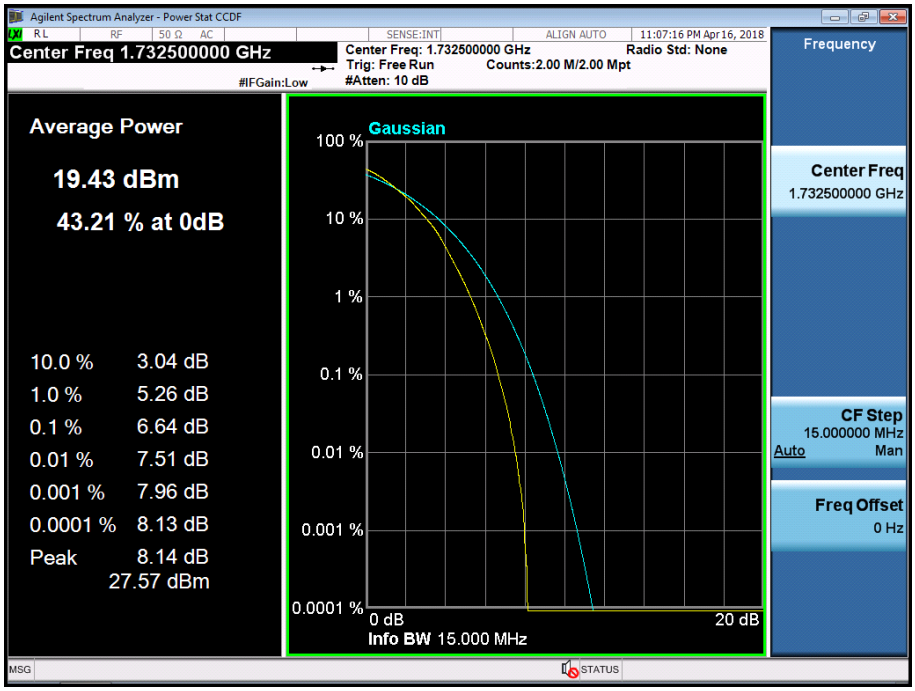
BAND 4. PAR Plot (15M BW_Ch.20175_QPSK_RB75_0)



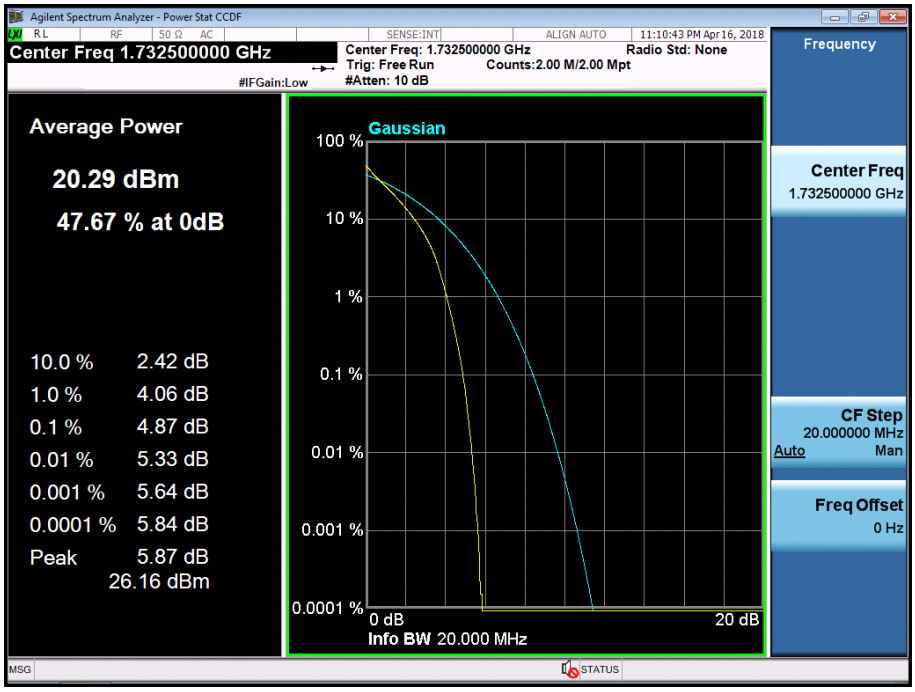

BAND 4. PAR Plot (15M BW_Ch.20175_16QAM_RB75_0)



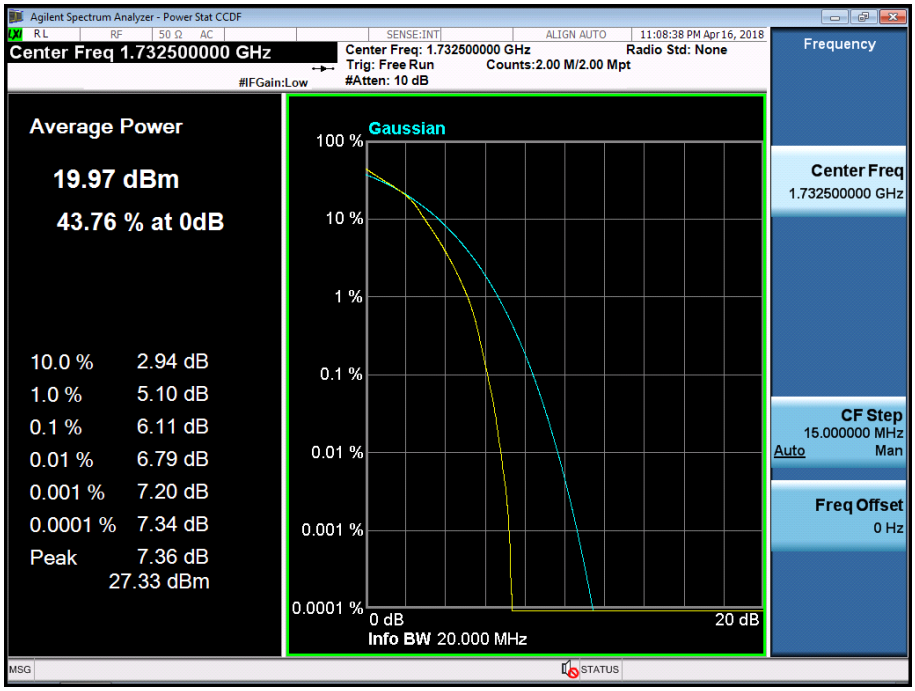
BAND 4. PAR Plot (15M BW_Ch.20175_64QAM_RB75_0)



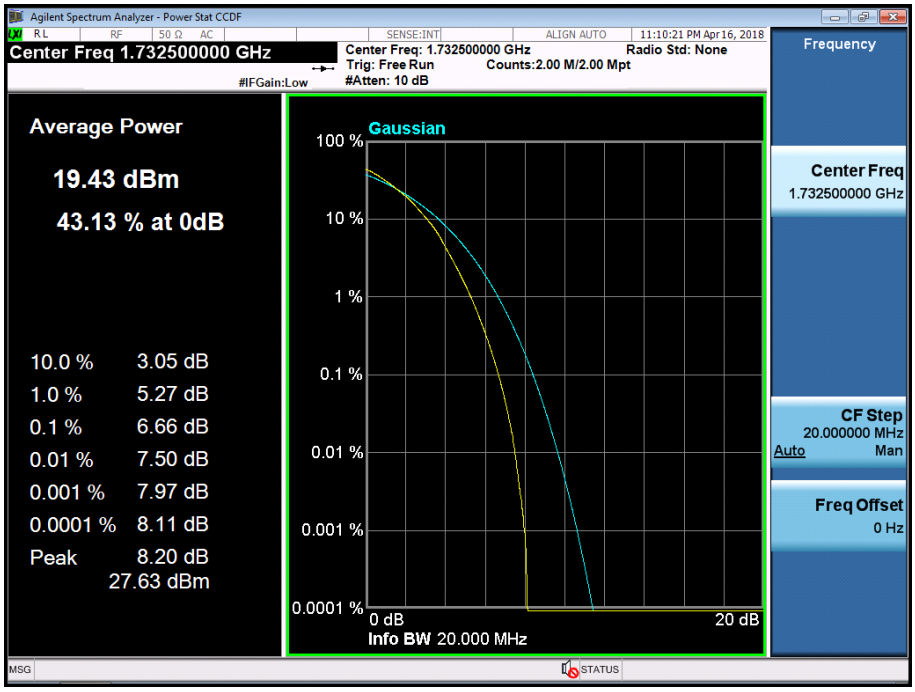

BAND 4. PAR Plot (20M BW_Ch.20175_QPSK_RB100_0)



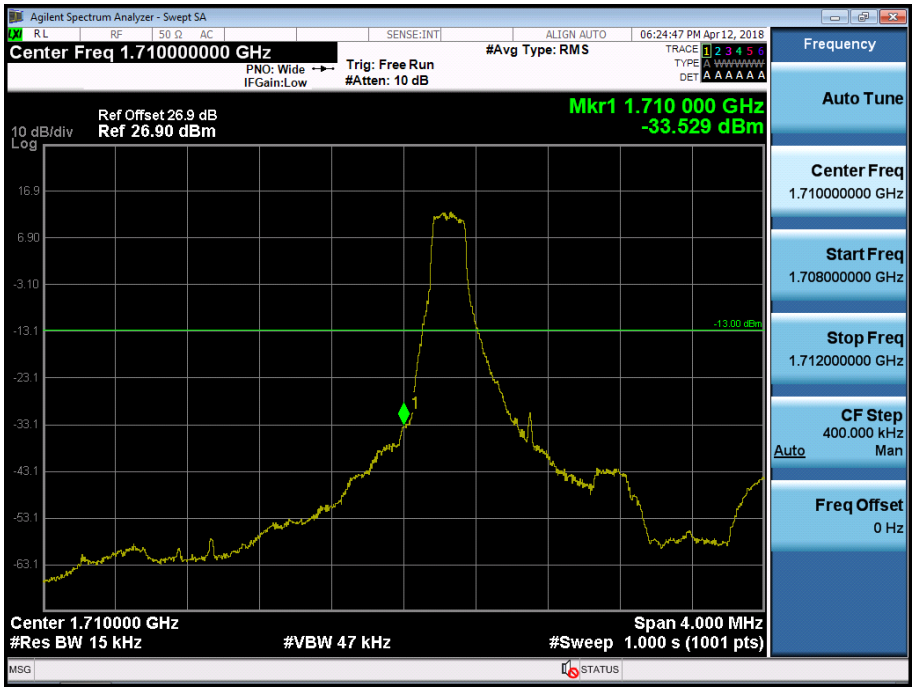
BAND 4. PAR Plot (20M BW_Ch.20175_16QAM_RB100_0)



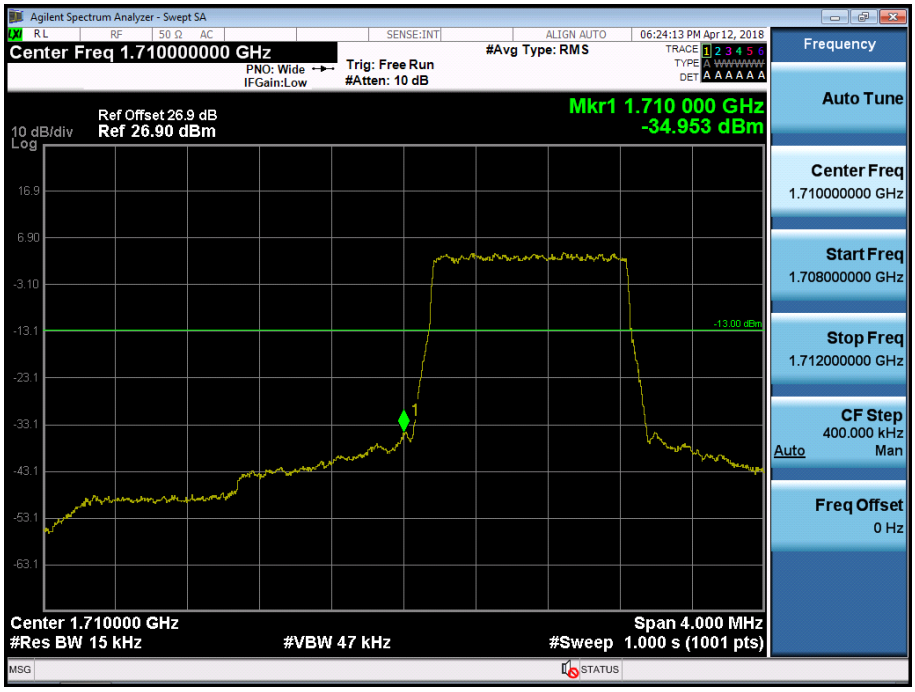

BAND 4. PAR Plot (20M BW_Ch.20175_64QAM_RB100_0)



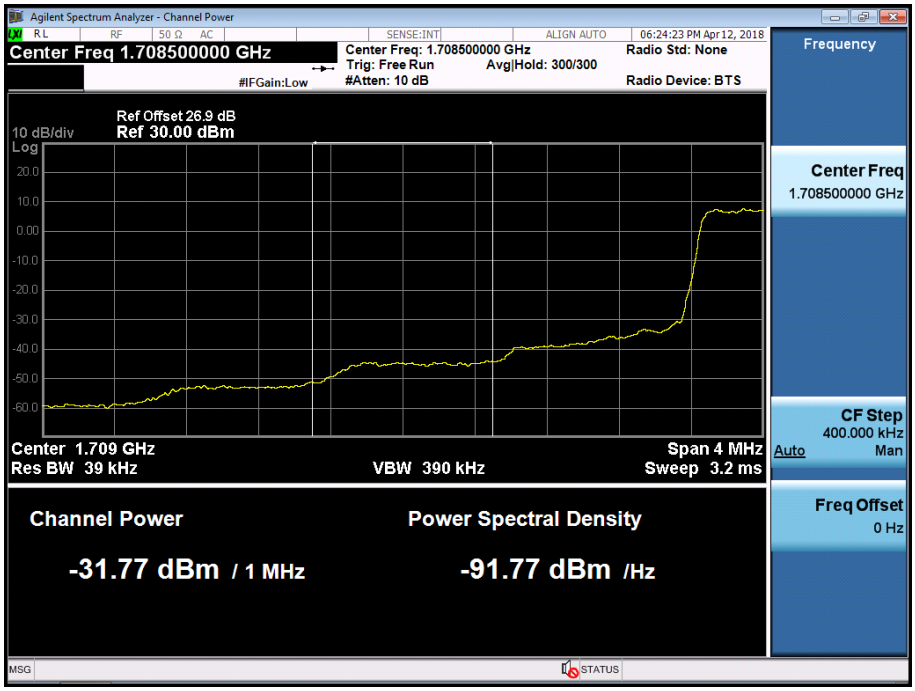
BAND 4. Lower Band Edge Plot (1.4M BW Ch.19957 QPSK RB 1, Offset 0) -1



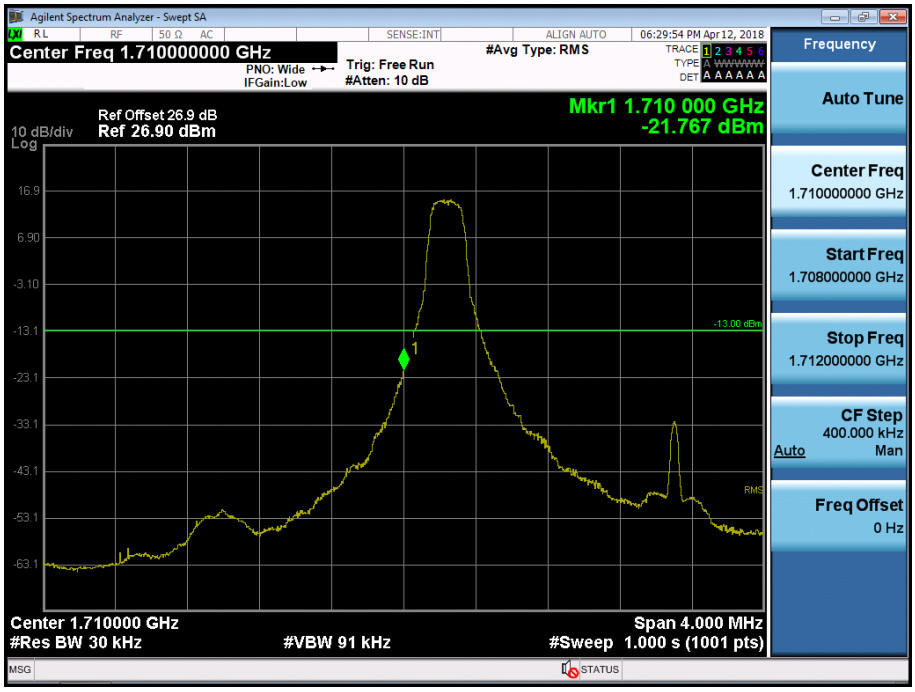

BAND 4. Lower Band Edge Plot (1.4M BW Ch.19957 QPSK RB 6) -2



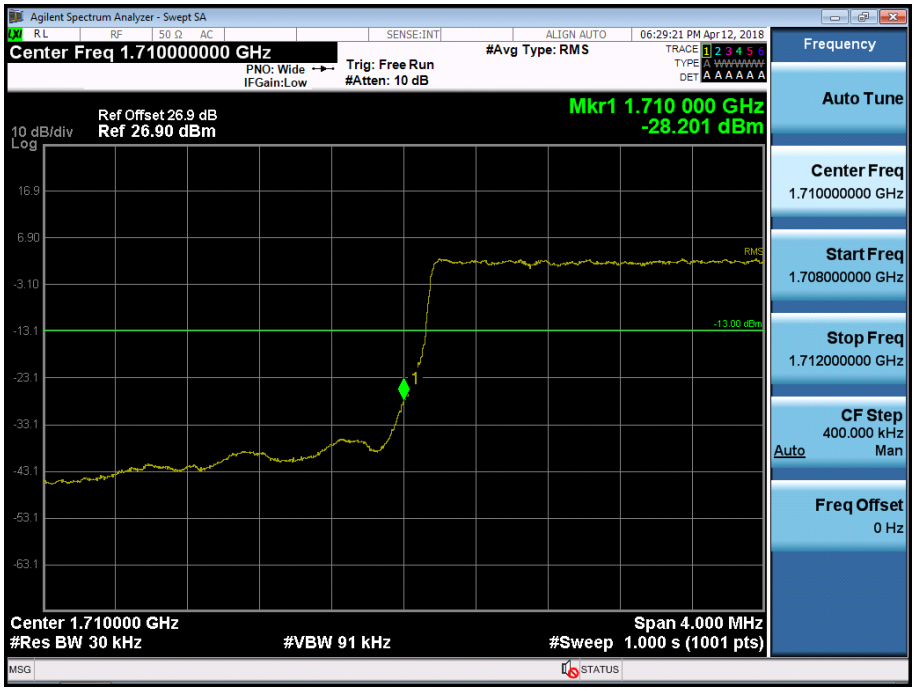
BAND 4. Lower Extended Band Edge Plot (1.4M BW Ch.19957 QPSK_RB6_0) -3



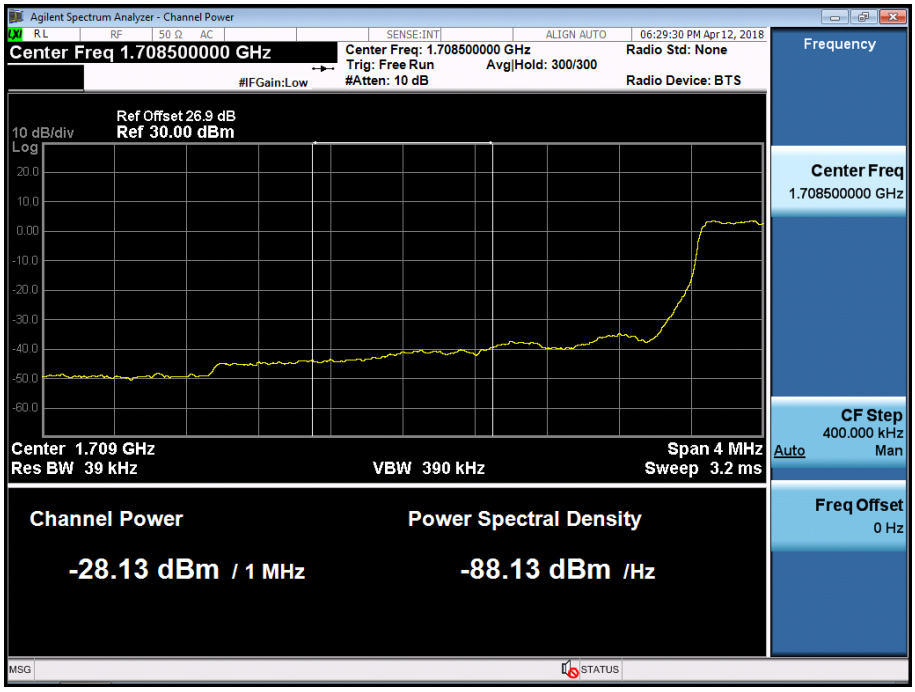

BAND 4. Lower Band Edge Plot (3M BW Ch.19965 QPSK RB 1, Offset 0) -1



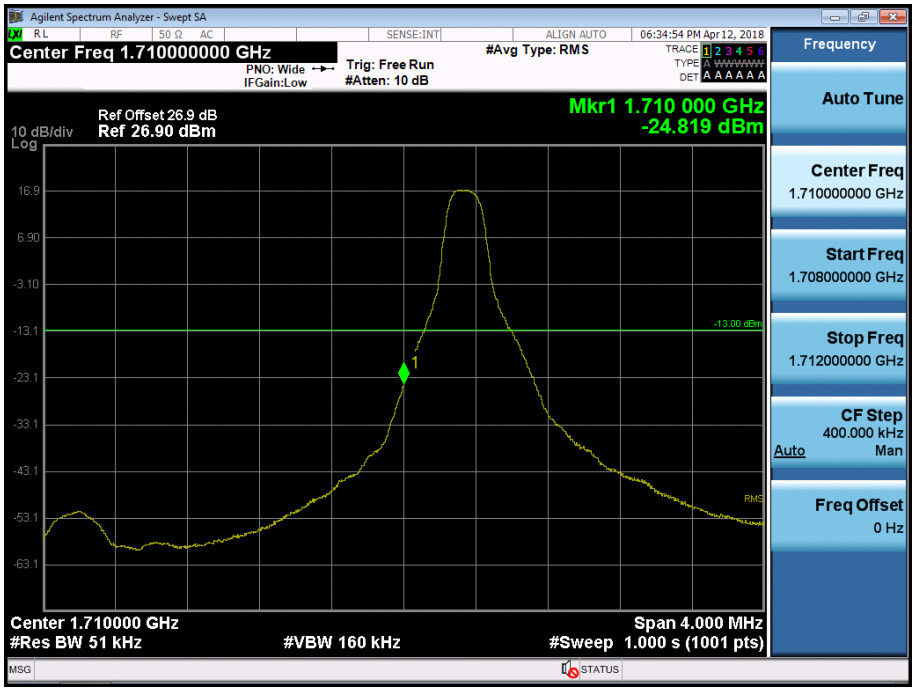
BAND 4. Lower Band Edge Plot (3M BW Ch.19965 QPSK RB 15) -2



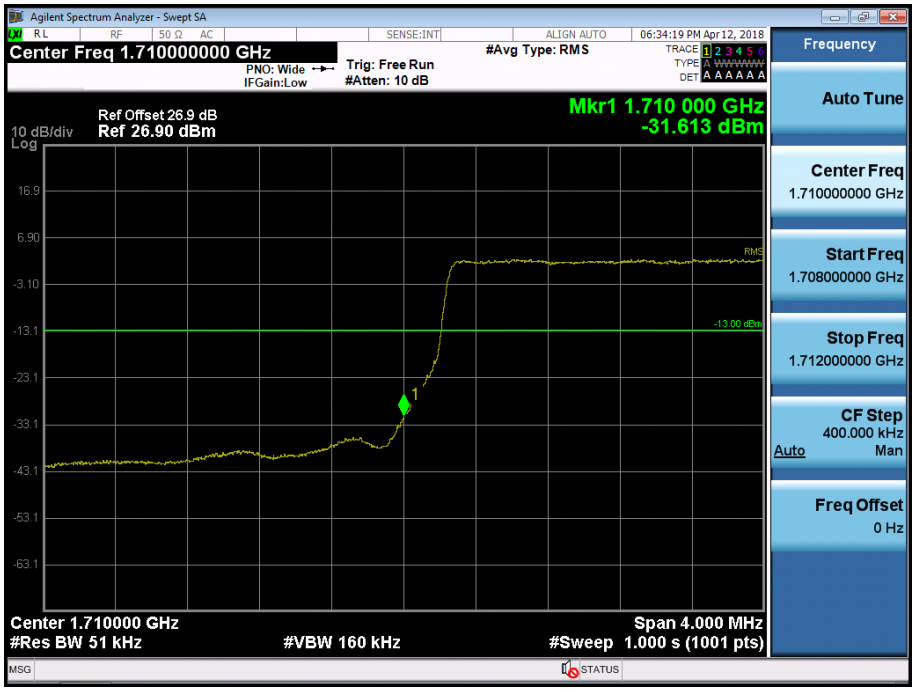

BAND 4. Lower Extended Band Edge Plot (3M BW Ch.19965 QPSK_RB15_0) -3



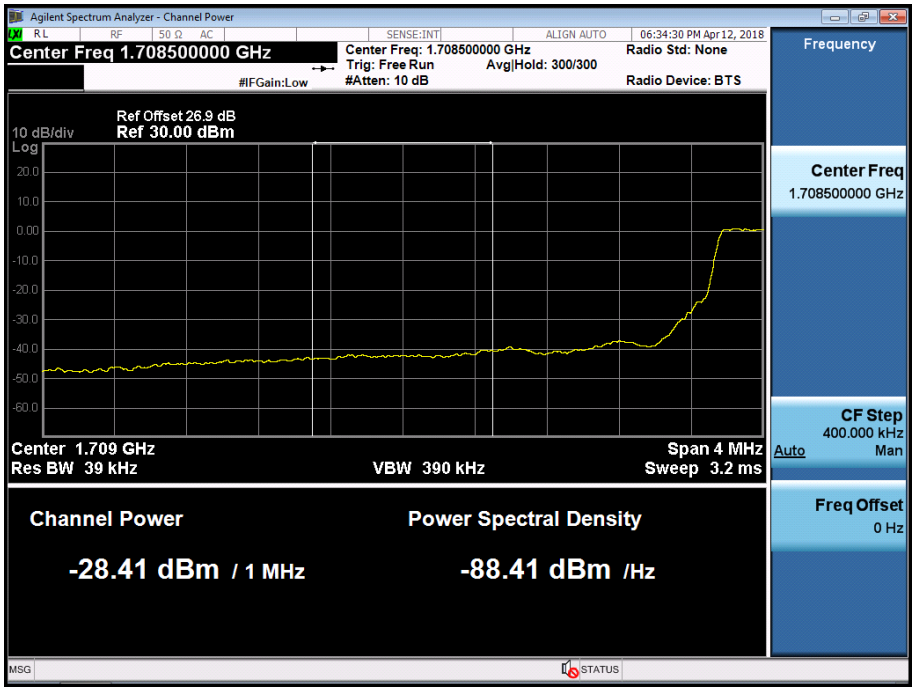
BAND 4. Lower Band Edge Plot (5M BW Ch.19975 QPSK RB 1, Offset 0) -1



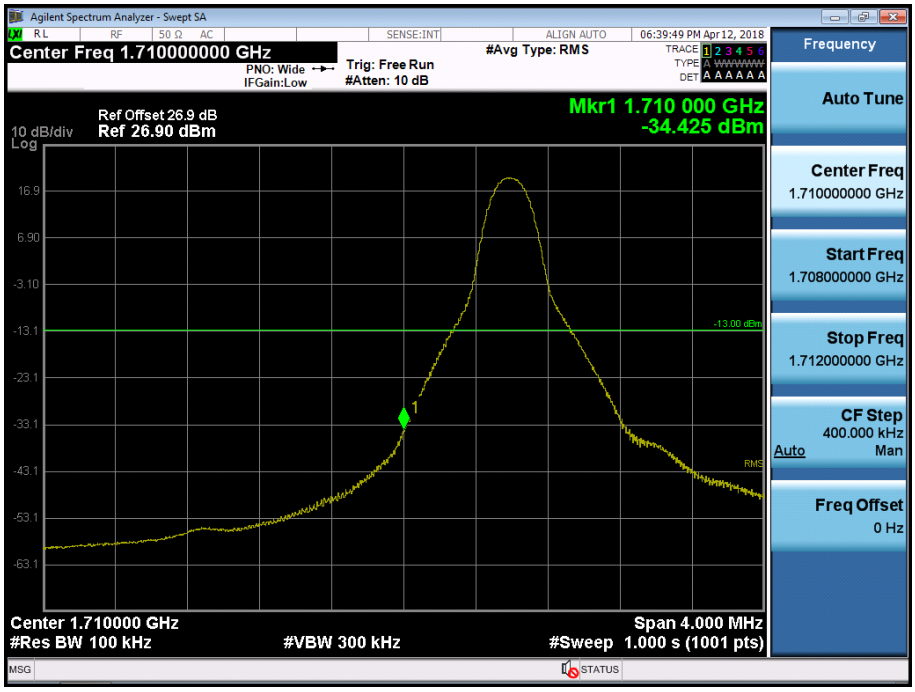

BAND 4. Lower Band Edge Plot (5M BW Ch.19975 QPSK RB 25) -2



BAND 4. Lower Extended Band Edge Plot (5M BW Ch.19975 QPSK_RB25_0) -3

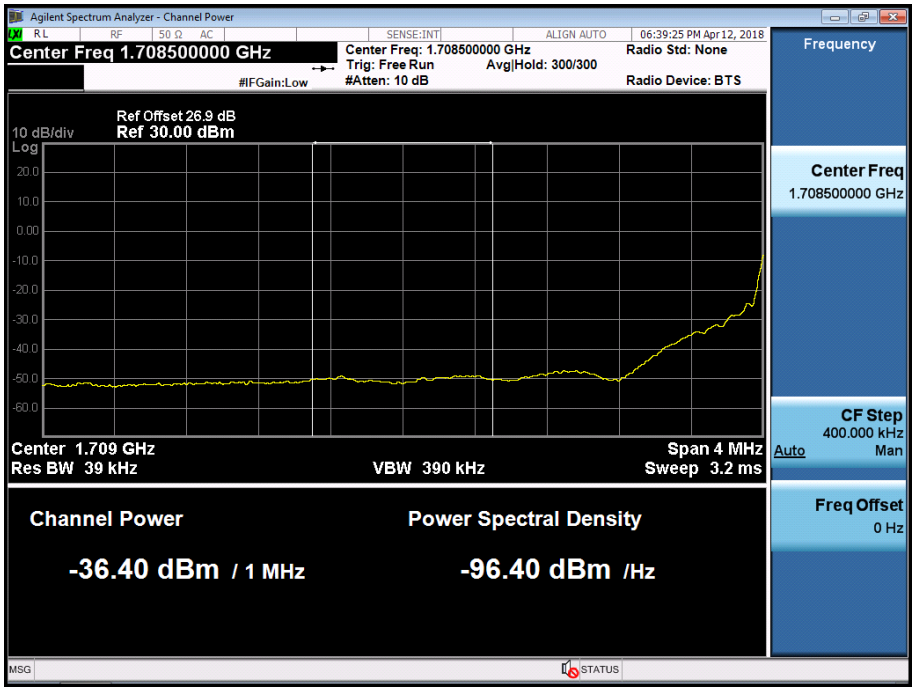



BAND 4. Lower Band Edge Plot (10M BW Ch.20000 QPSK RB 1, Offset 0) -1

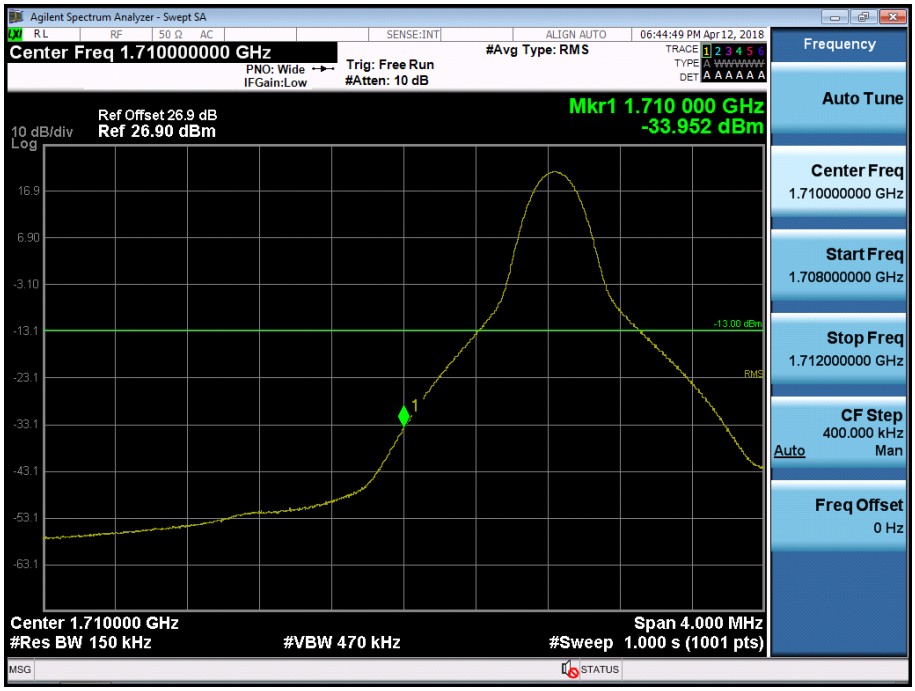


BAND 4. Lower Band Edge Plot (10M BW Ch.20000 QPSK RB 50) -2

BAND 4. Lower Extended Band Edge Plot (10M BW Ch.20000 QPSK_RB50_0) -3

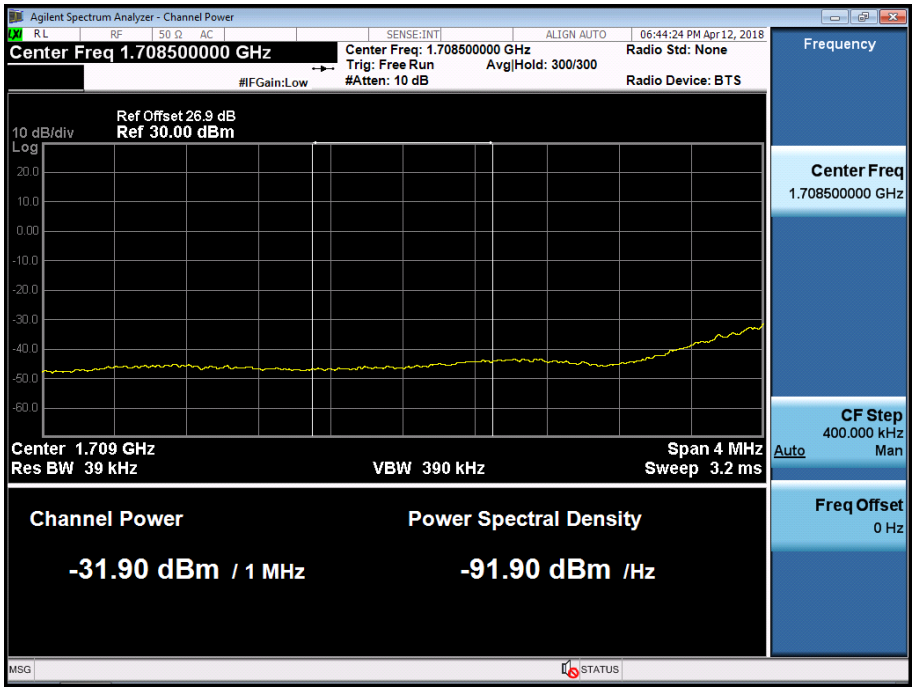


BAND 4. Lower Band Edge Plot (15M BW Ch.20025 QPSK RB 1, Offset 0) -1




BAND 4. Lower Band Edge Plot (15M BW Ch.20025 QPSK RB 75) -2

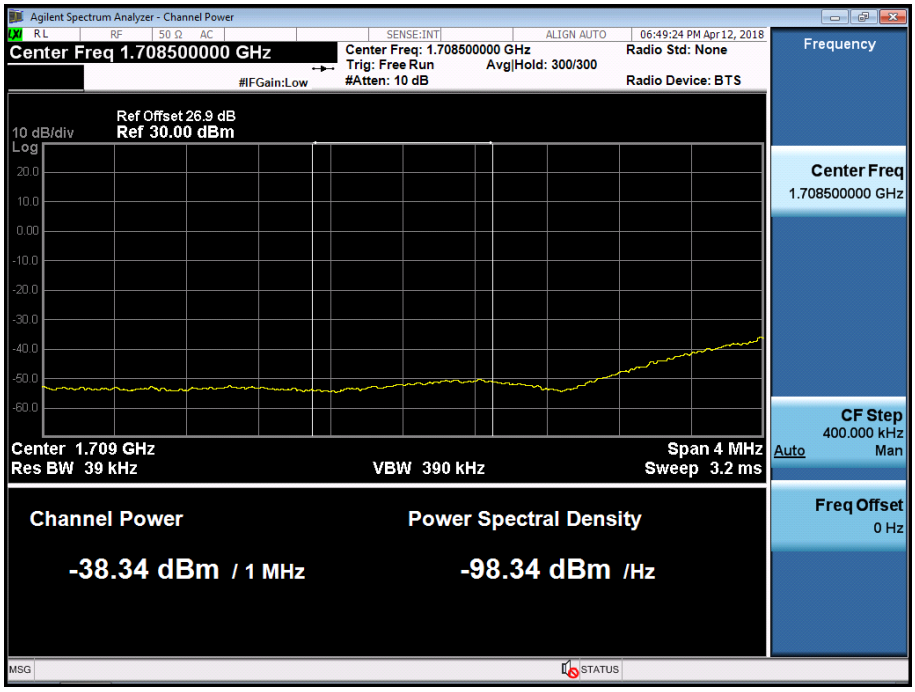
BAND 4. Lower Extended Band Edge Plot (15M BW Ch.20025 QPSK_RB75_0) -3



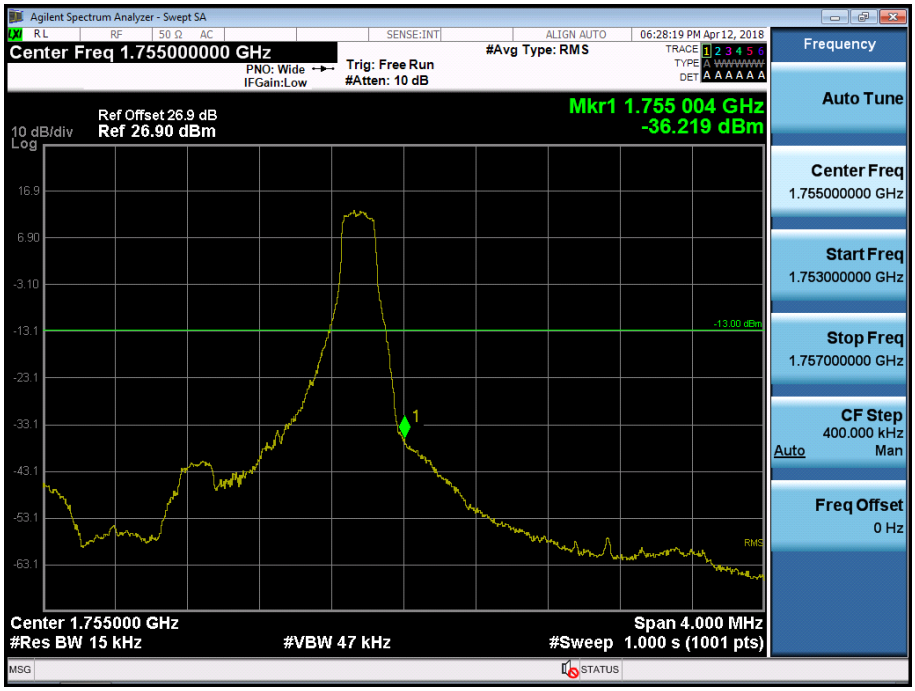

BAND 4. Lower Band Edge Plot (20M BW Ch.20050 QPSK RB 1, Offset 0) -1

BAND 4. Lower Band Edge Plot (20M BW Ch.20050 QPSK RB 100) -2

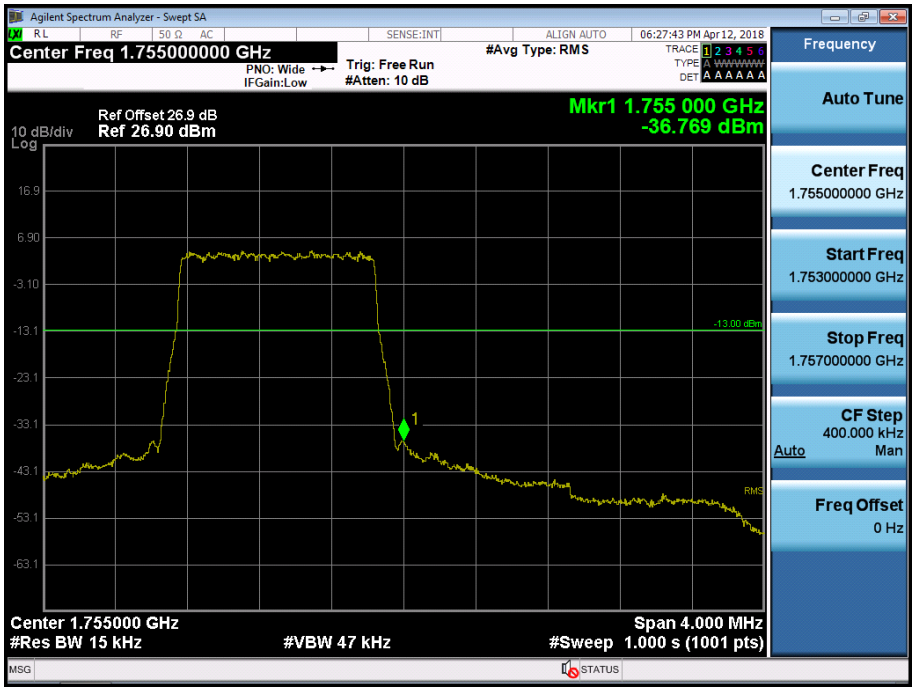
BAND 4. Lower Extended Band Edge Plot (20M BW Ch.20050 QPSK_RB100_0) -3



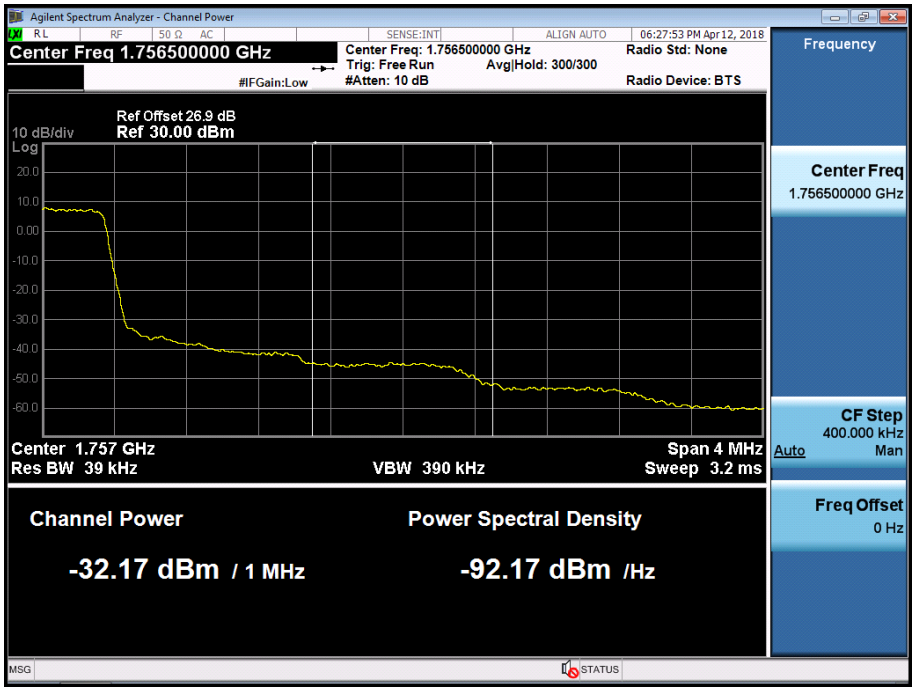
BAND 4. Upper Band Edge Plot (1.4M BW Ch.20393 QPSK_RB1_Offset 5) -1



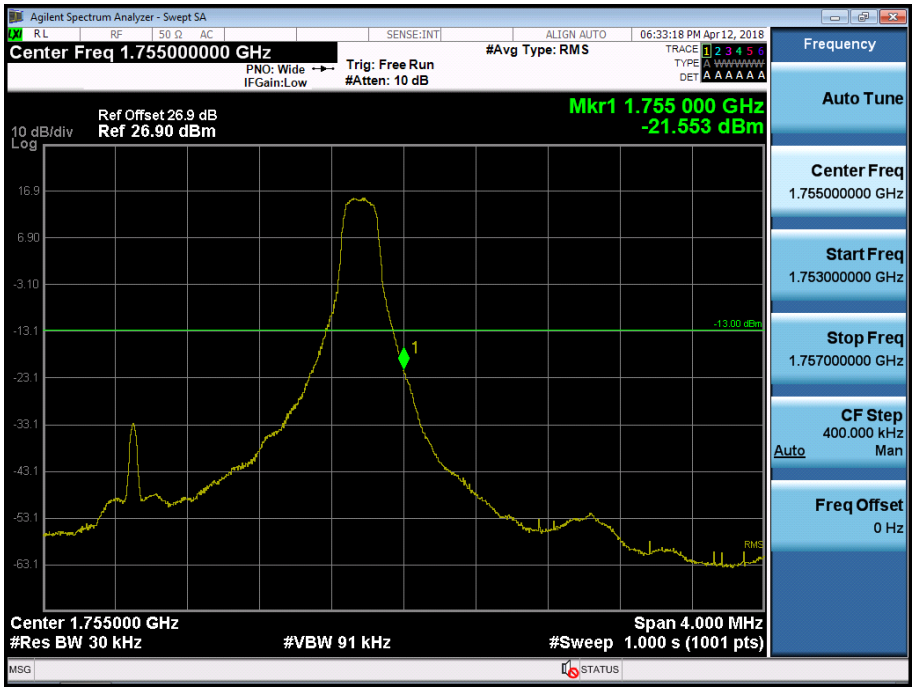

BAND 4. Upper Band Edge Plot (1.4M BW Ch.20393 QPSK_RB6) -2



BAND 4. Upper Extended Band Edge Plot (1.4M BW Ch. 20393 QPSK_RB6_0) -3

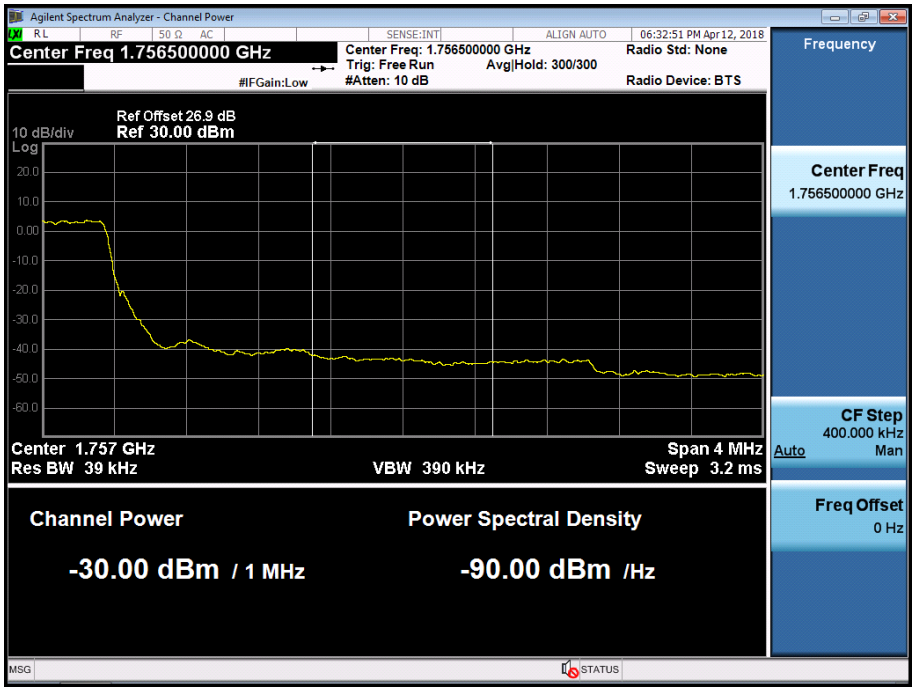



BAND 4. Upper Band Edge Plot (3M BW Ch.20385 QPSK_RB1_Offset 14) -1

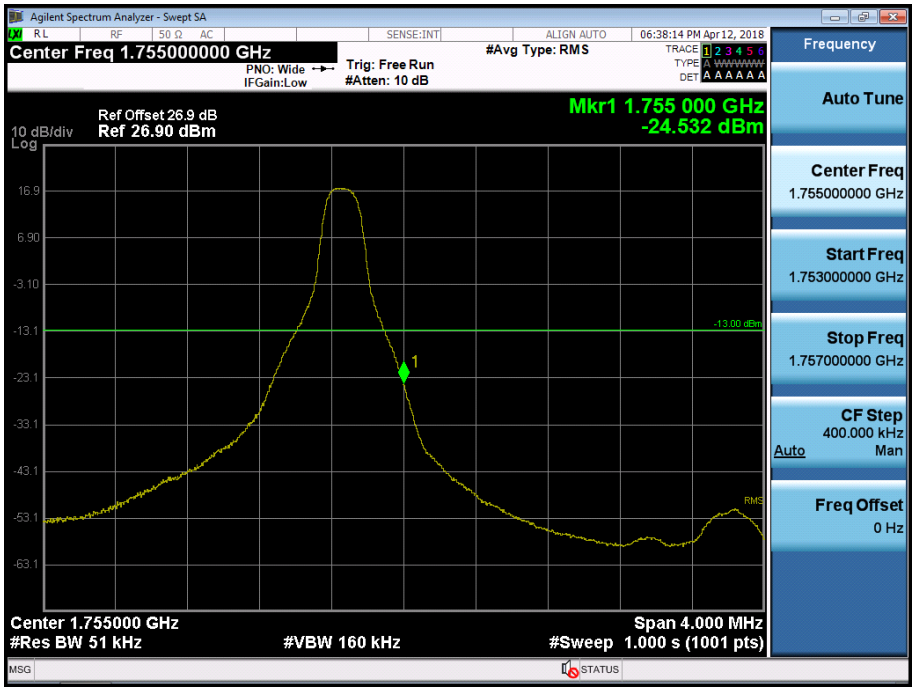


BAND 4. Upper Band Edge Plot (3M BW Ch.20385 QPSK_RB15) -2

BAND 4. Upper Extended Band Edge Plot (3M BW Ch.20385 QPSK_RB15_0) -3

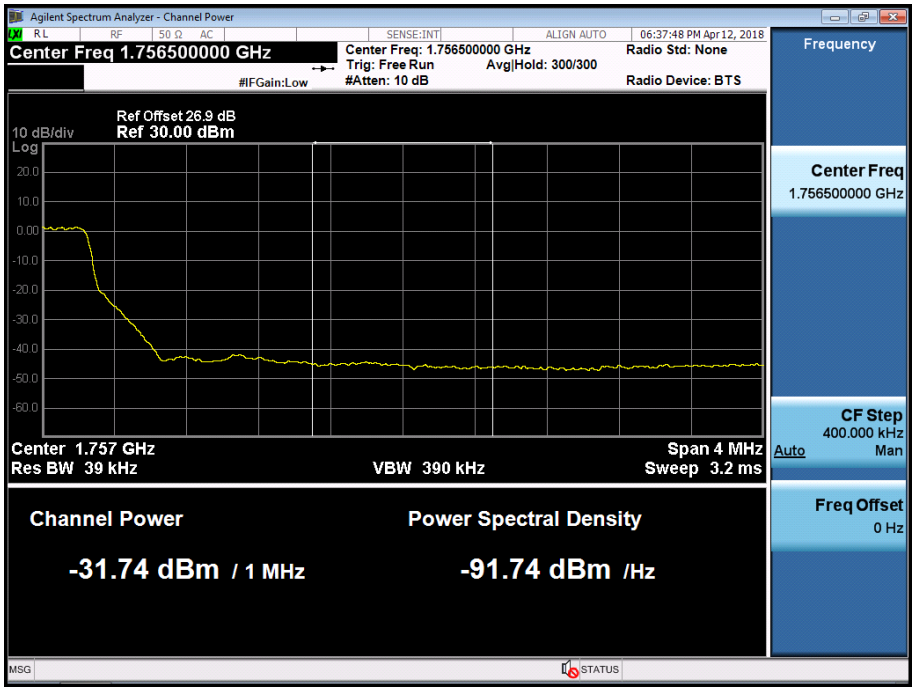


BAND 4. Upper Band Edge Plot (5M BW Ch.20375 QPSK_RB1_Offset 24) -1

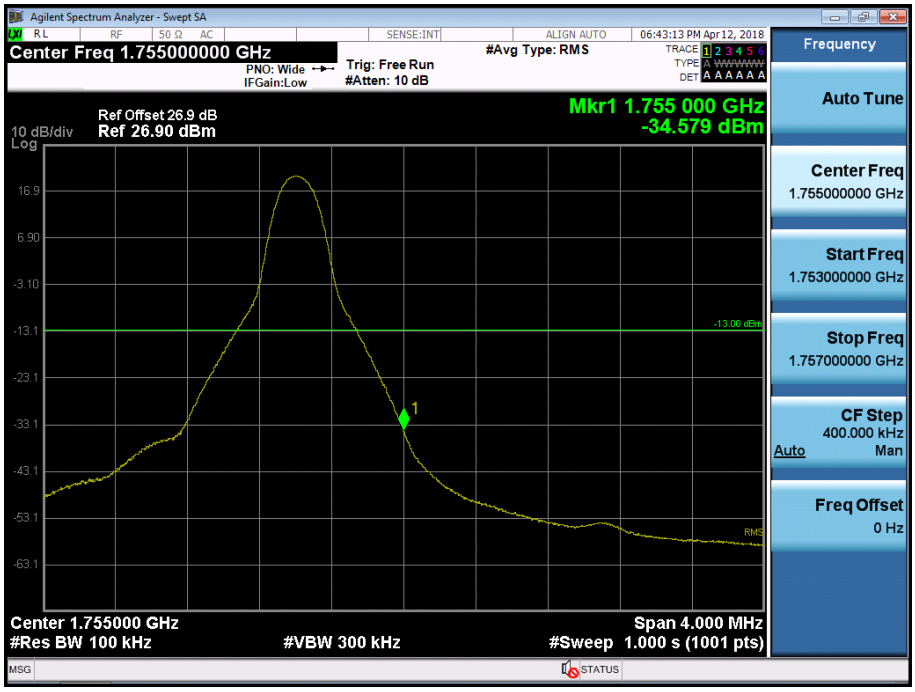



BAND 4. Upper Band Edge Plot (5M BW Ch.20375 QPSK_RB25) -2

BAND 4. Upper Extended Band Edge Plot (5M BW Ch.20375 QPSK_RB25) -3

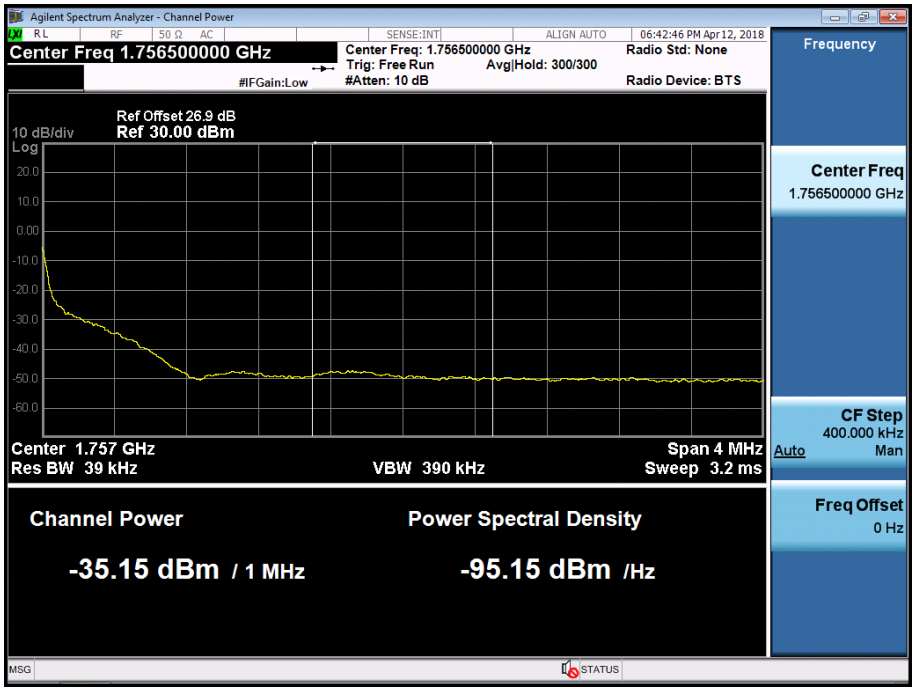



BAND 4. Upper Band Edge Plot (10M BW Ch.20350 QPSK_RB1_Offset 49) -1

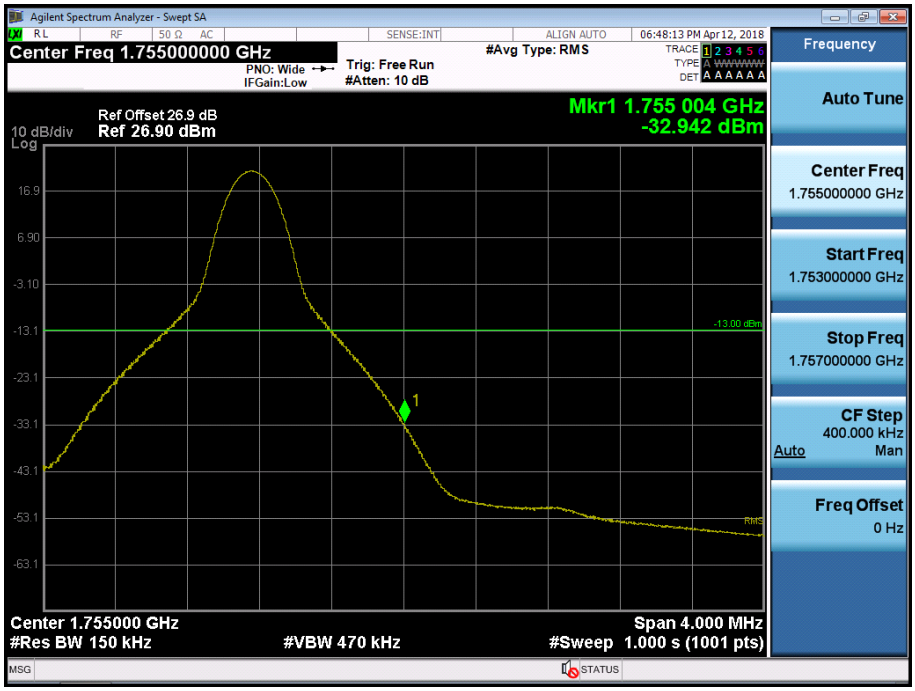


BAND 4. Upper Band Edge Plot (10M BW Ch.20350 QPSK_RB50) -2

BAND 4. Upper Extended Band Edge Plot (10M BW Ch.20350 QPSK_RB50) -3

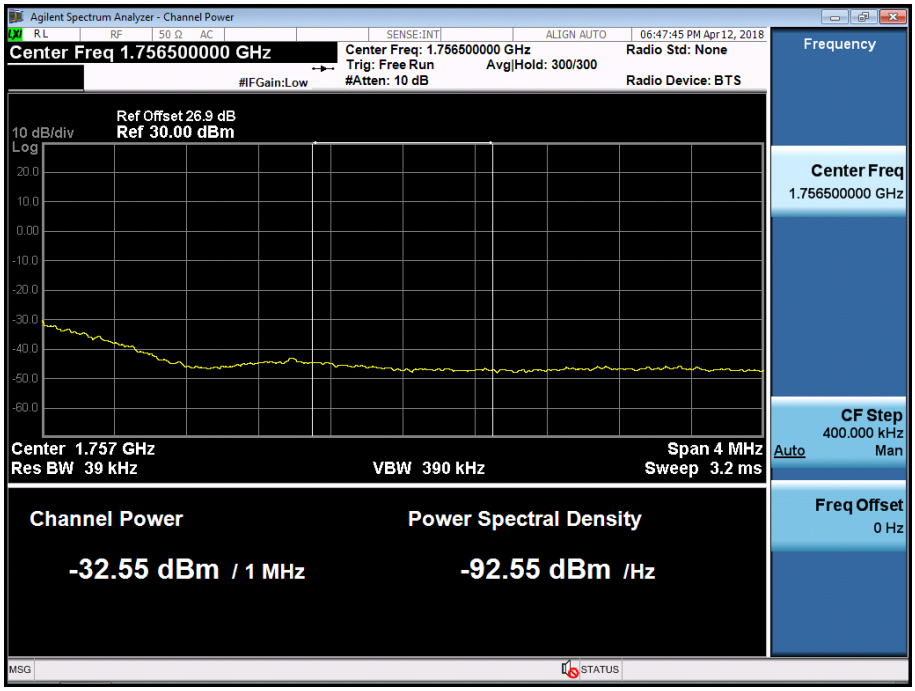


BAND 4. Upper Band Edge Plot (15M BW Ch.20325 QPSK_RB1_Offset 74) -1




BAND 4. Upper Band Edge Plot (15M BW Ch.20325 QPSK_RB75) -2

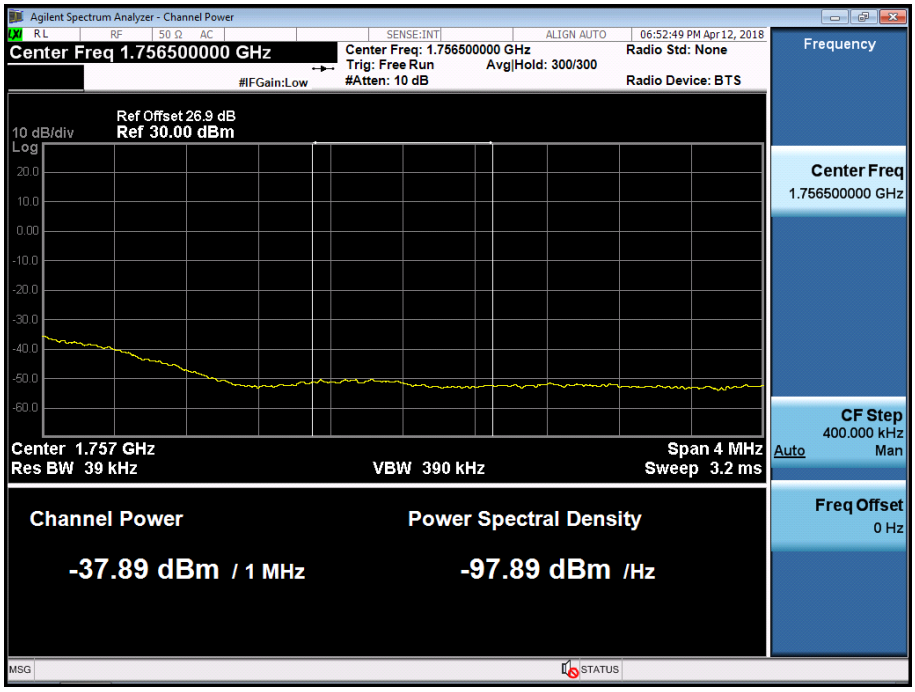
BAND 4. Upper Extended Band Edge Plot (15M BW Ch.20325 QPSK_RB75) -3



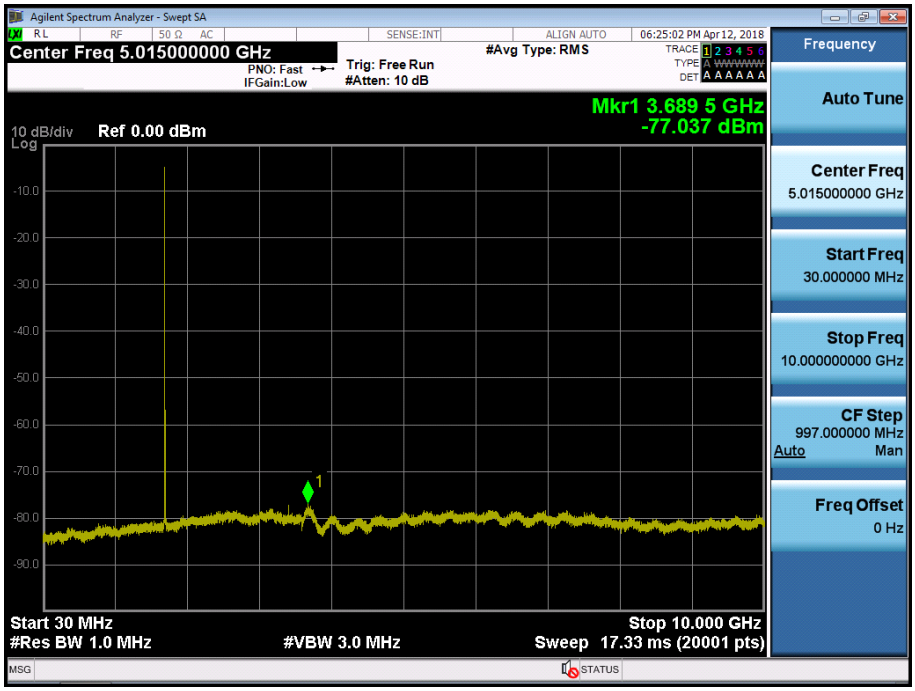

BAND 4. Upper Band Edge Plot (20M BW Ch.20300 QPSK_RB1_Offset 99) -1

BAND 4. Upper Band Edge Plot (20M BW Ch.20300 QPSK_RB100) -2

BAND 4. Upper Extended Band Edge Plot (20M BW Ch.20300 QPSK_RB100) -3

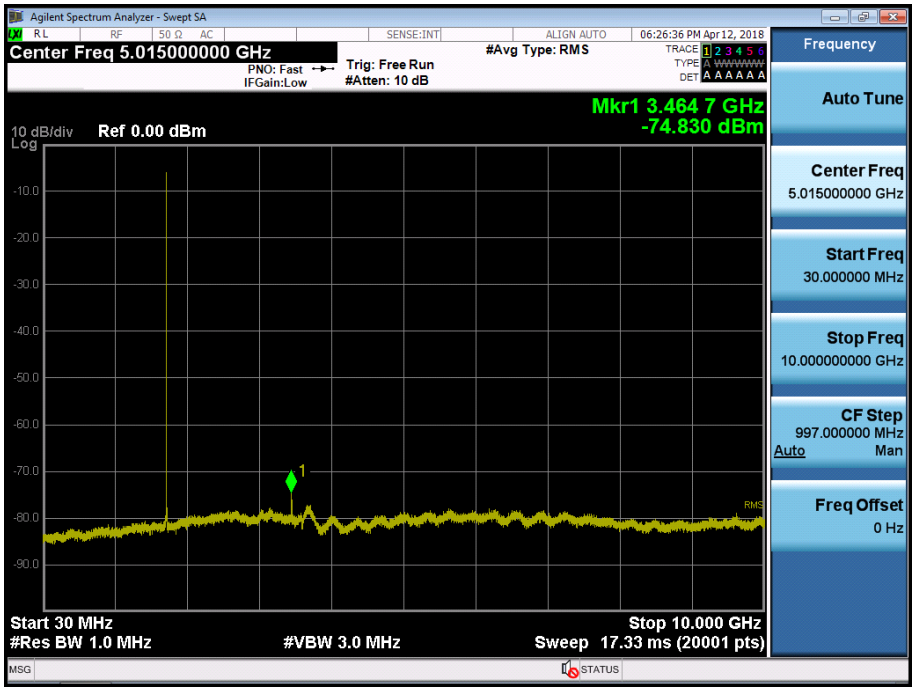


BAND 4. Conducted Spurious Plot_1 (19957ch_1.4MHz_QPSK_RB 1_0)



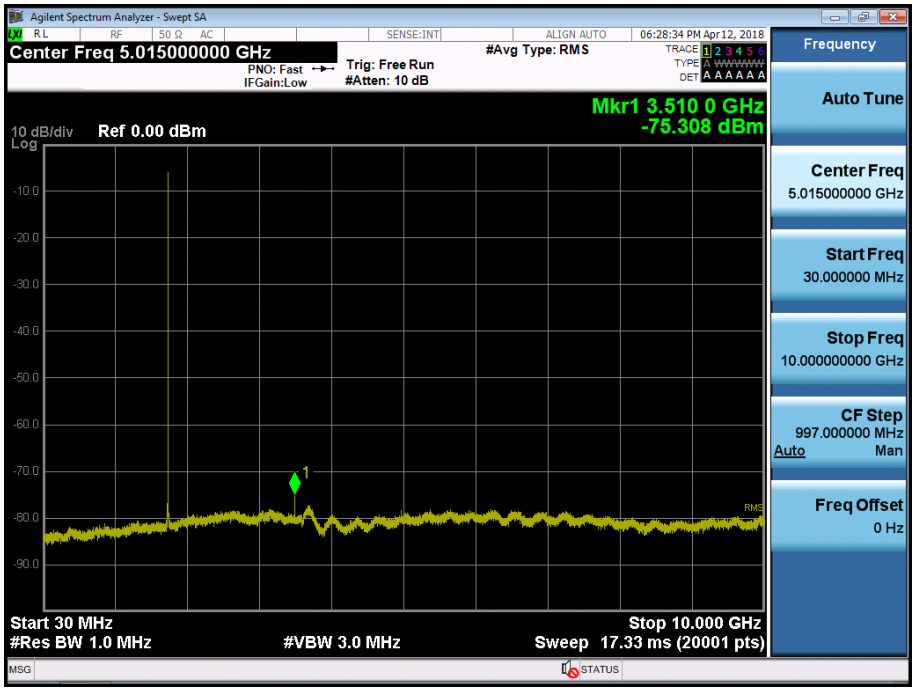

BAND 4. Conducted Spurious Plot_2 (19957ch_1.4MHz_QPSK_ RB 1_0)

BAND 4. Conducted Spurious Plot_1 (20175ch_1.4MHz_QPSK_ RB 1_0)



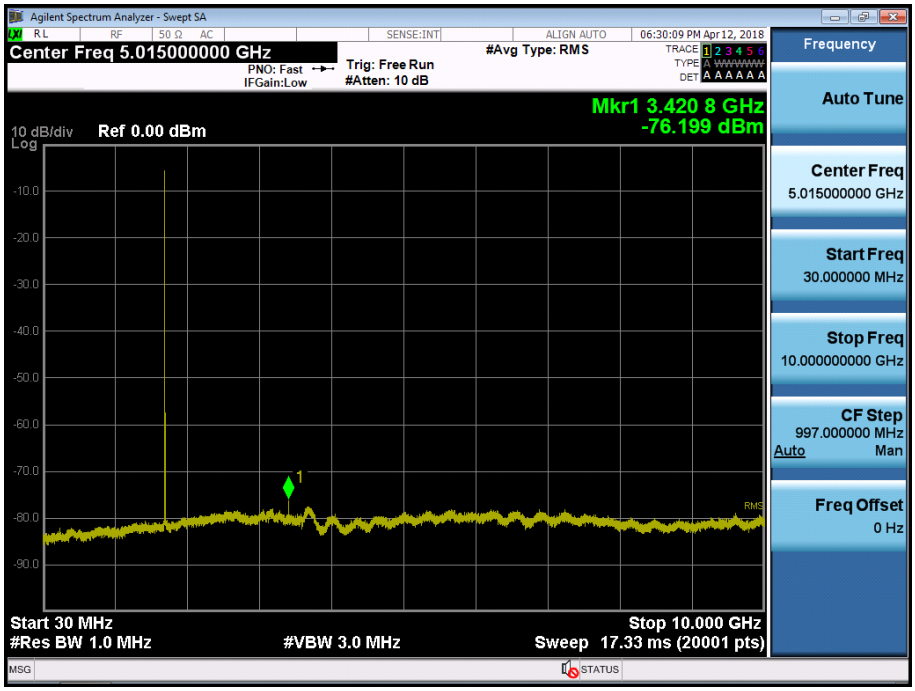

BAND 4. Conducted Spurious Plot_2 (20175ch_1.4MHz_QPSK_ RB 1_0)

BAND 4. Conducted Spurious Plot_1 (20393ch_1.4MHz_QPSK_ RB 1_0)



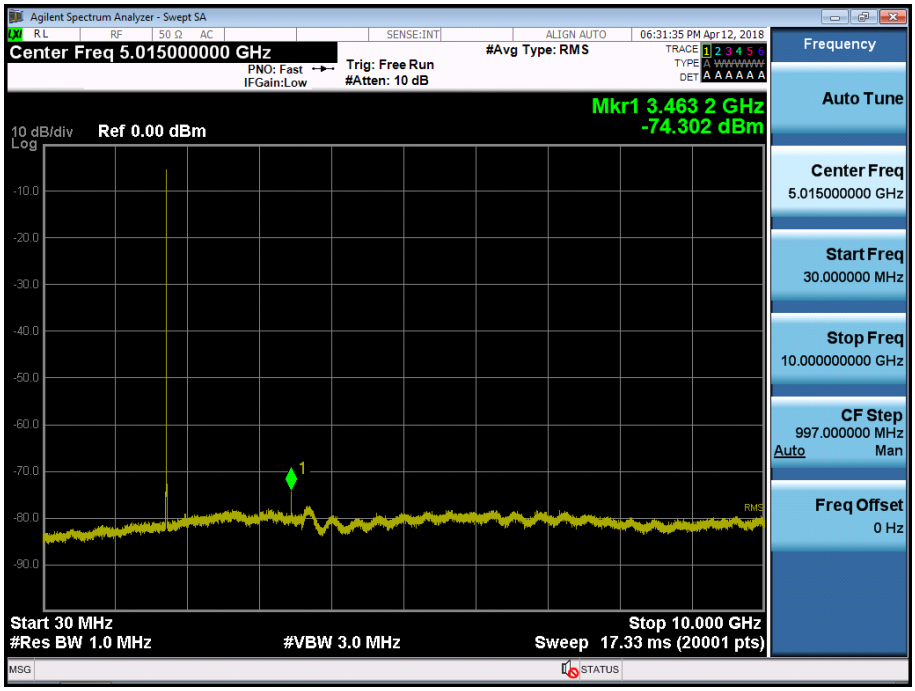

BAND 4. Conducted Spurious Plot_2 (20393ch_1.4MHz_QPSK_ RB 1_0)

BAND 4. Conducted Spurious Plot_1 (19965ch_3MHz_QPSK_ RB 1_0)



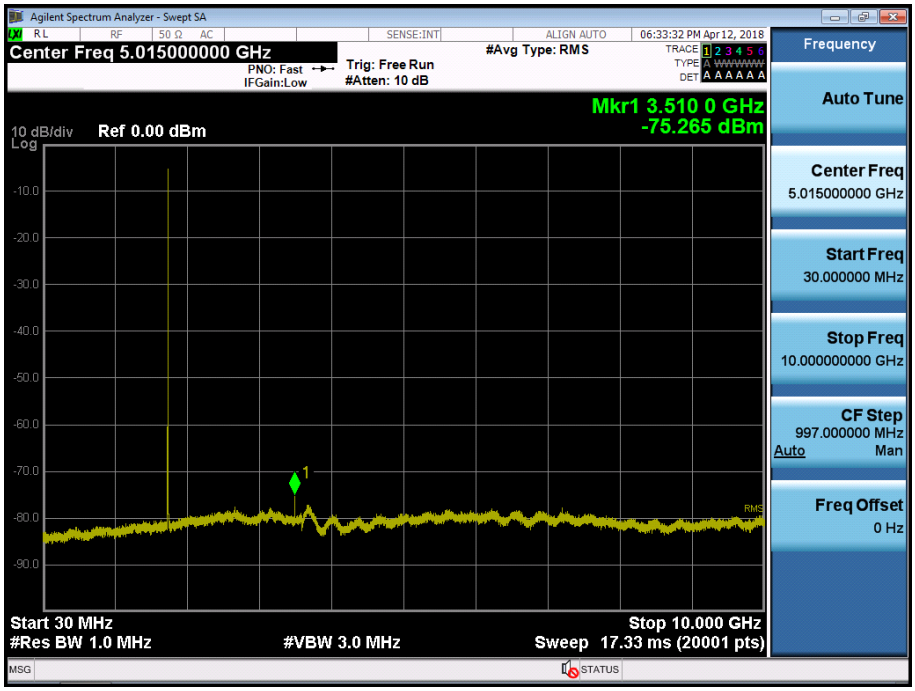

BAND 4. Conducted Spurious Plot_2 (19965ch_3MHz_QPSK_ RB 1_0)

BAND 4. Conducted Spurious Plot_1 (20175ch_3MHz_QPSK_ RB 1_0)



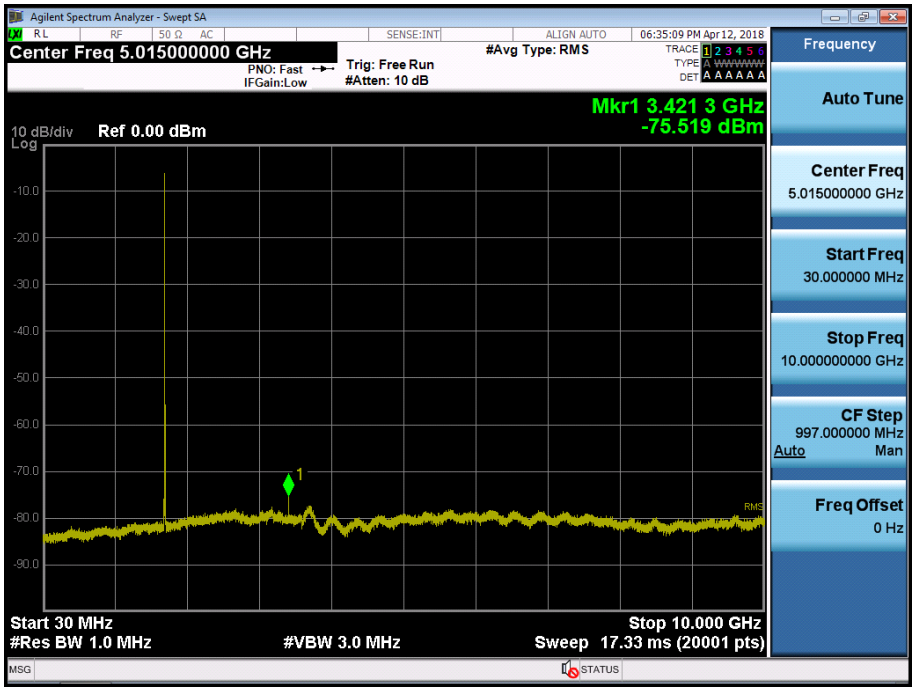

BAND 4. Conducted Spurious Plot_2 (20175ch_3MHz_QPSK_ RB 1_0)

BAND 4. Conducted Spurious Plot_1 (20385ch_3MHz_QPSK_ RB 1_0)



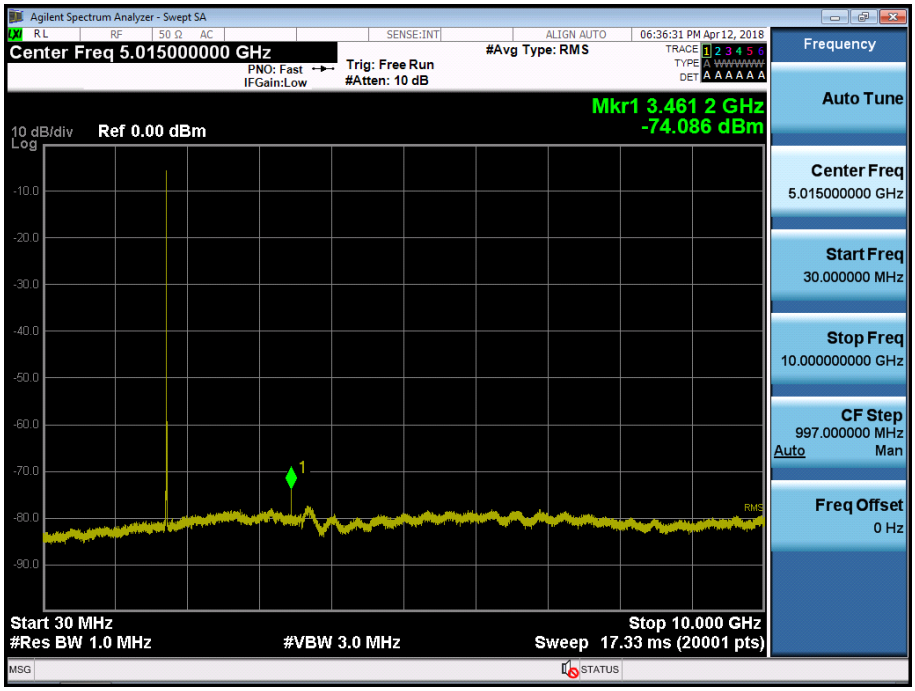

BAND 4. Conducted Spurious Plot_2 (20385ch_3MHz_QPSK_ RB 1_0)

BAND 4. Conducted Spurious Plot_1 (19975ch_5MHz_QPSK_ RB 1_0)



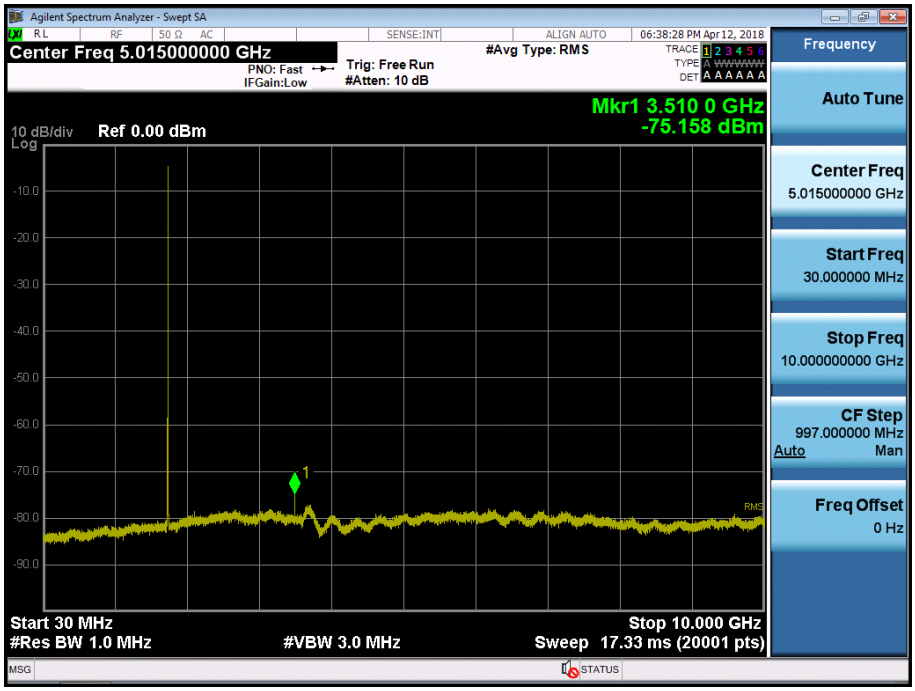

BAND 4. Conducted Spurious Plot_2 (19975ch_5MHz_QPSK_ RB 1_0)

BAND 4. Conducted Spurious Plot_1 (20175ch_5MHz_QPSK_ RB 1_0)



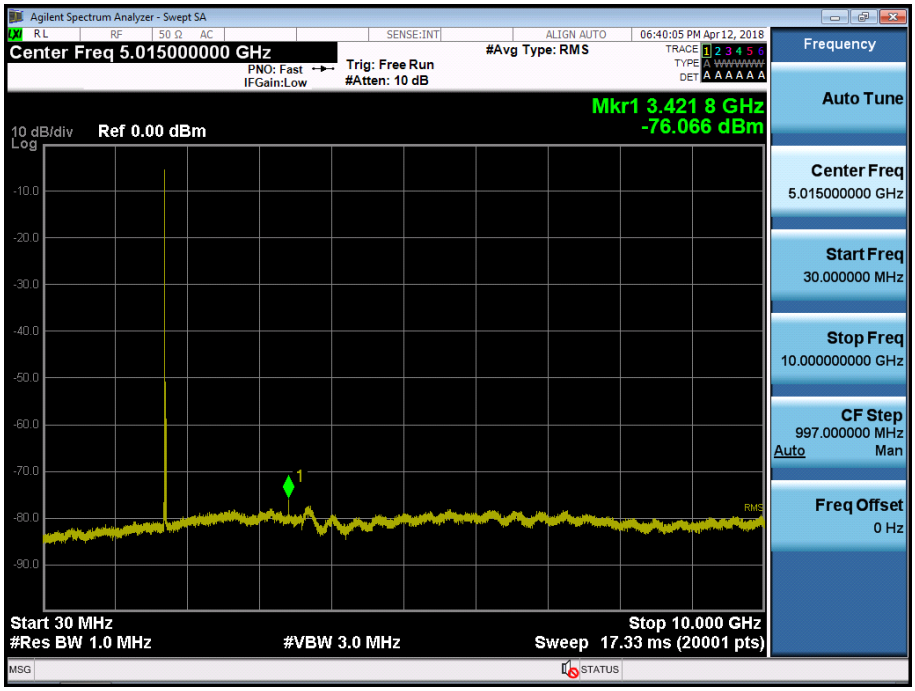

BAND 4. Conducted Spurious Plot_2 (20175ch_5MHz_QPSK_ RB 1_0)

BAND 4. Conducted Spurious Plot_1 (20375ch_5MHz_QPSK_ RB 1_0)



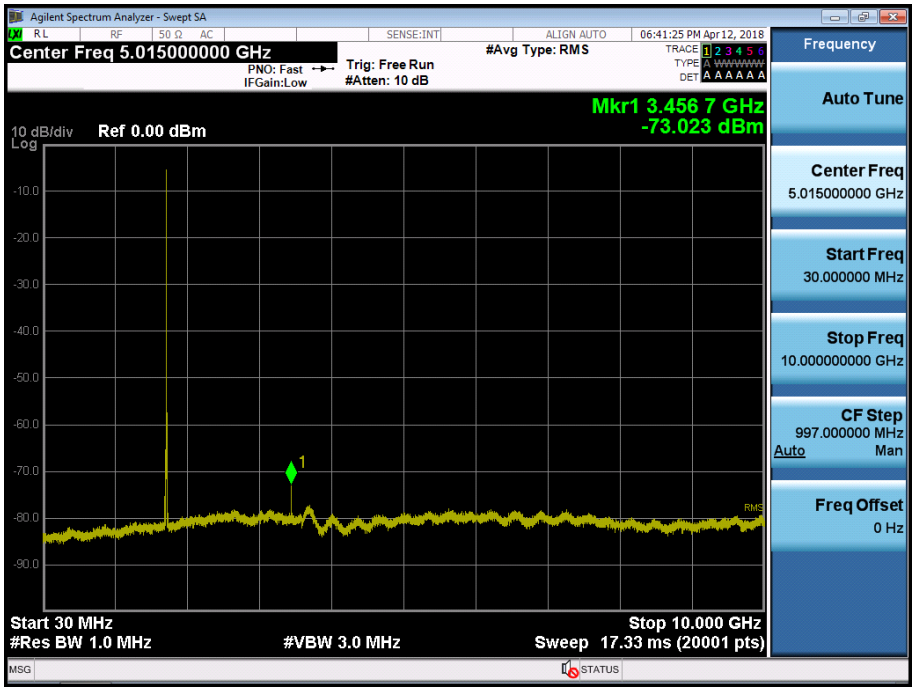

BAND 4. Conducted Spurious Plot_2 (20375ch_5MHz_QPSK_ RB 1_0)

BAND 4. Conducted Spurious Plot_1 (20000ch_10MHz_QPSK_ RB 1_0)



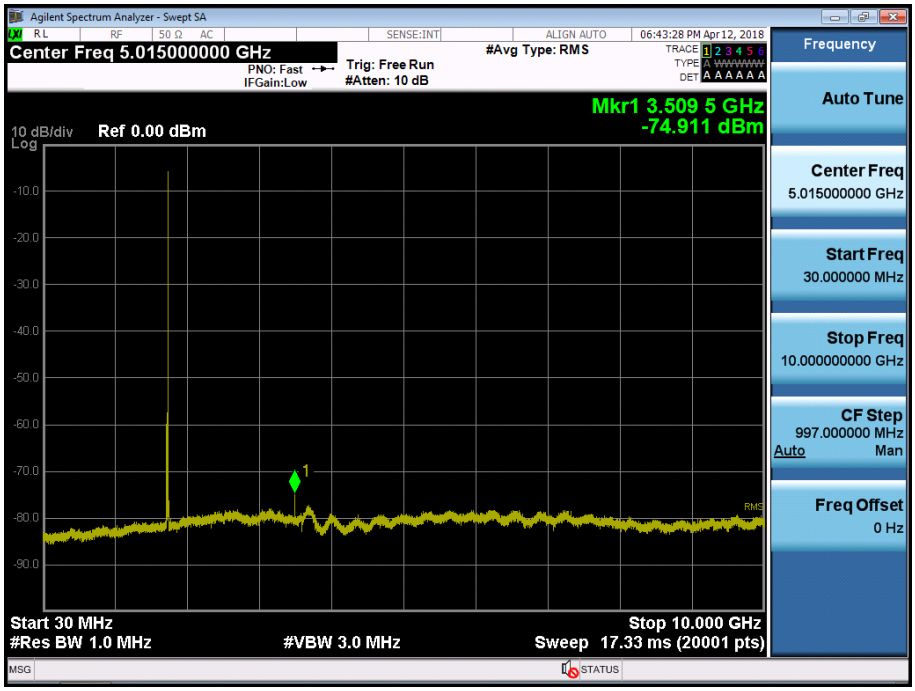

BAND 4. Conducted Spurious Plot_2 (20000ch_10MHz_QPSK_ RB 1_0)

BAND 4. Conducted Spurious Plot_1 (20175ch_10MHz_QPSK_ RB 1_0)



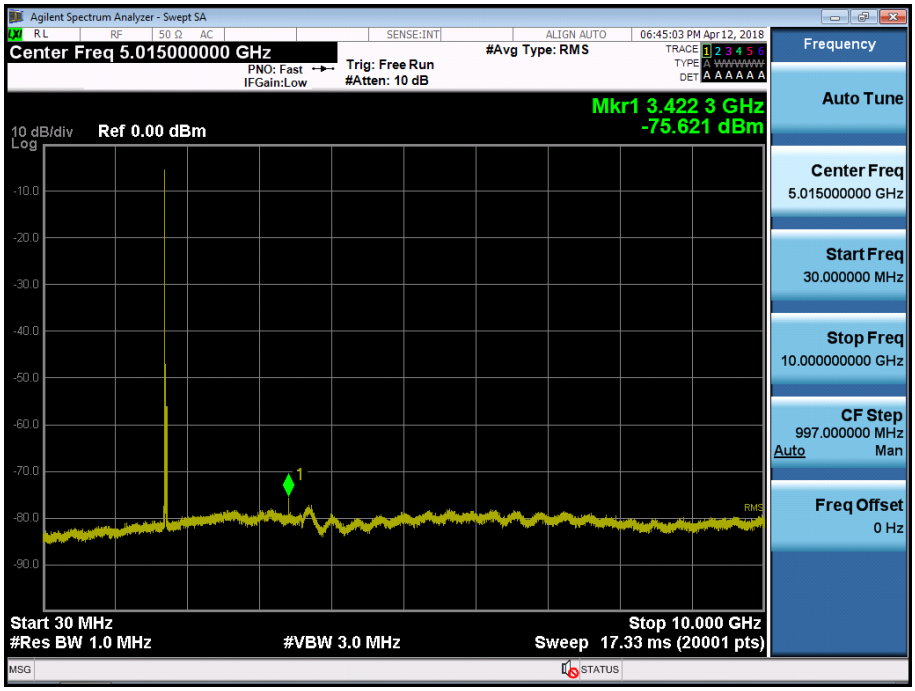

BAND 4. Conducted Spurious Plot_2 (20175ch_10MHz_QPSK_ RB 1_0)

BAND 4. Conducted Spurious Plot_1 (20350ch_10MHz_QPSK_ RB 1_0)



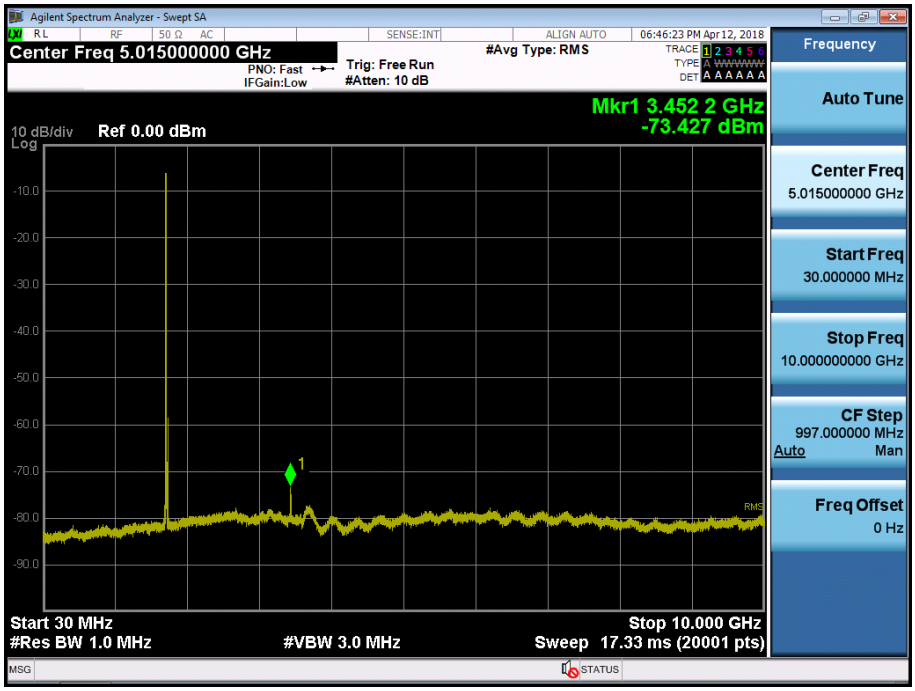

BAND 4. Conducted Spurious Plot_2 (20350ch_10MHz_QPSK_ RB 1_0)

BAND 4. Conducted Spurious Plot_1 (20025ch_15MHz_QPSK_ RB 1_0)



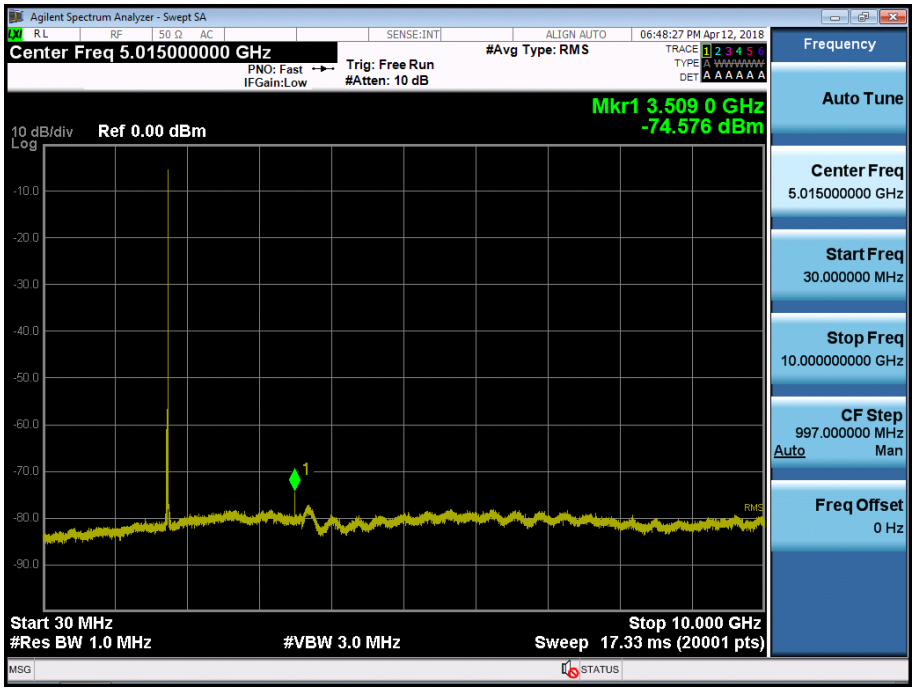

BAND 4. Conducted Spurious Plot_2 (20025ch_15MHz_QPSK_ RB 1_0)

BAND 4. Conducted Spurious Plot_1 (20175ch_15MHz_QPSK_ RB 1_0)



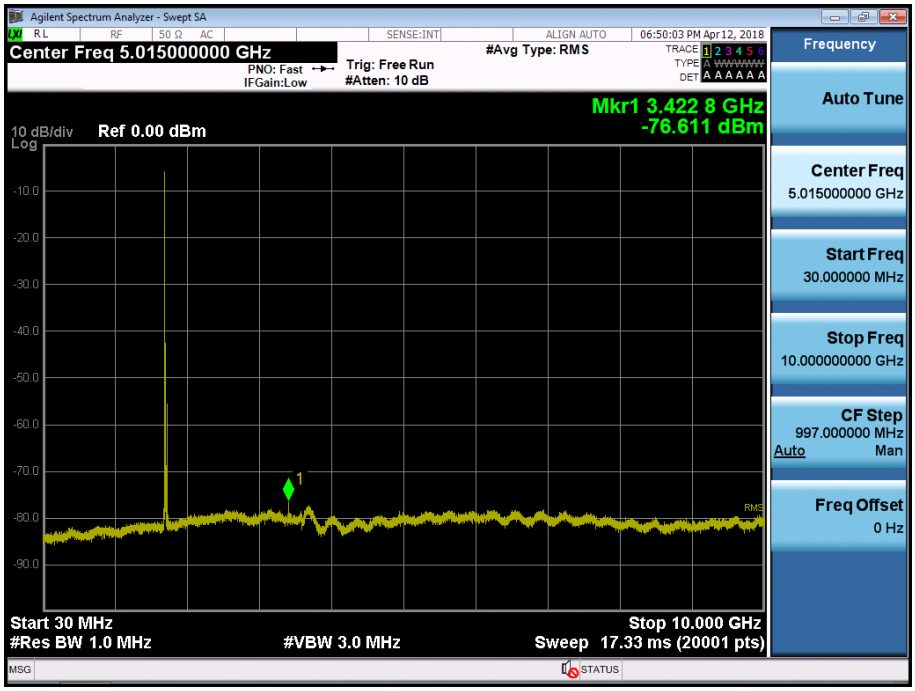

BAND 4. Conducted Spurious Plot_2 (20175ch_15MHz_QPSK_ RB 1_0)

BAND 4. Conducted Spurious Plot_1 (20325ch_15MHz_QPSK_ RB 1_0)



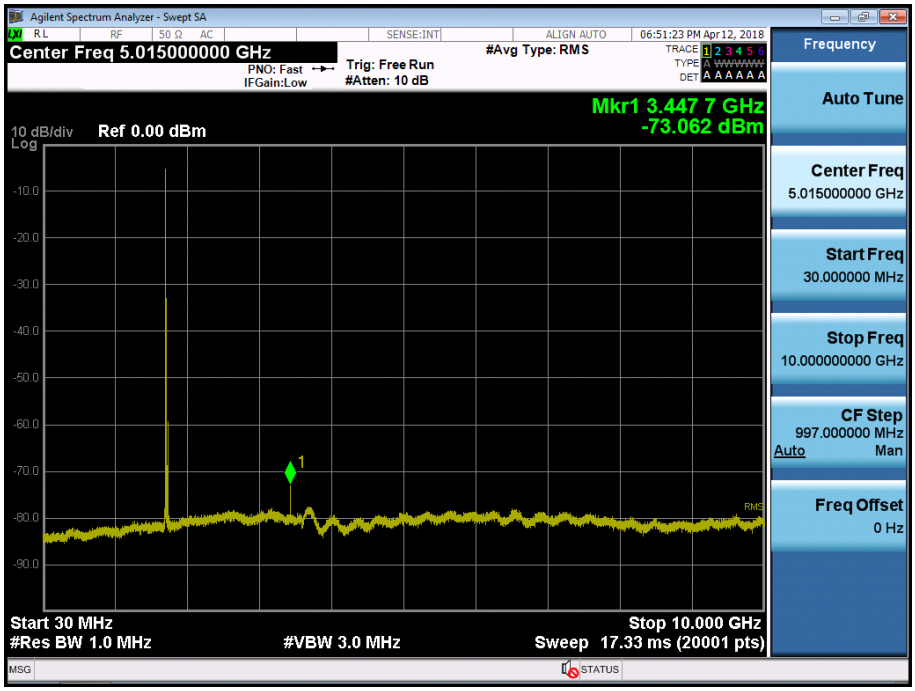

BAND 4. Conducted Spurious Plot_2 (20325ch_15MHz_QPSK_ RB 1_0)

BAND 4. Conducted Spurious Plot_1 (20050ch_20MHz_QPSK_ RB 1_0)



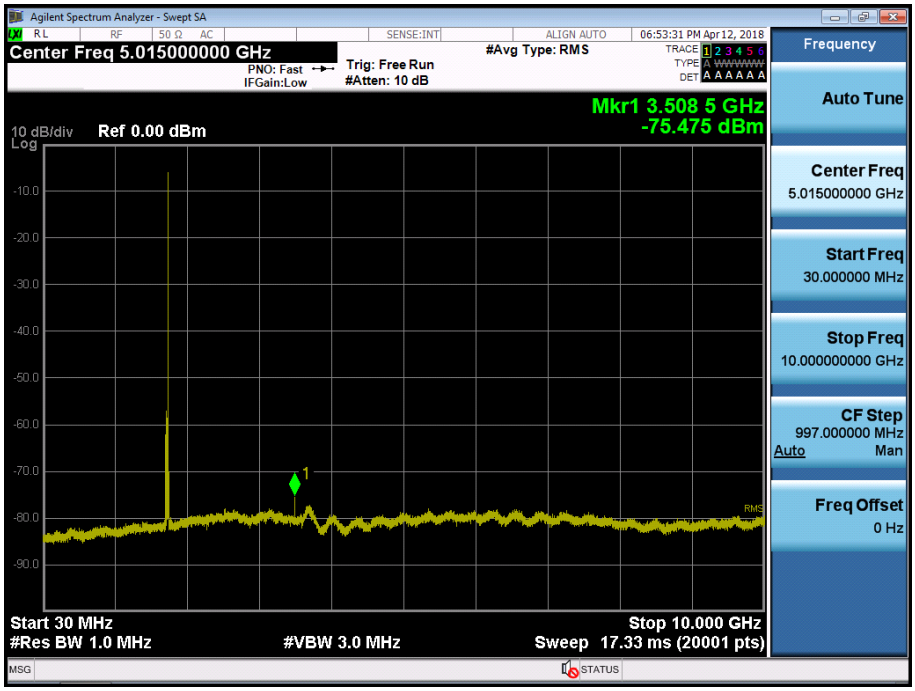

BAND 4. Conducted Spurious Plot_2 (20050ch_20MHz_QPSK_ RB 1_0)

BAND 4. Conducted Spurious Plot_1 (20175ch_20MHz_QPSK_ RB 1_0)




BAND 4. Conducted Spurious Plot_2 (20175ch_20MHz_QPSK_ RB 1_0)

BAND 4. Conducted Spurious Plot_1 (20300ch_20MHz_QPSK_ RB 1_0)




BAND 4. Conducted Spurious Plot_2 (20300ch_20MHz_QPSK_ RB 1_0)