

# 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 27, 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-FC046**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 – Band 41 (5)	2557.5 – 2652.5	4M50G7D	QPSK	0.147	21.68
		4M51W7D	16QAM	0.123	20.89
		4M51W7D	64QAM	0.100	19.99
LTE – Band 41 (10)	2560.0 – 2650.0	8M96G7D	QPSK	0.154	21.87
		8M96W7D	16QAM	0.131	21.16
		8M96W7D	64QAM	0.105	20.21
LTE – Band 41 (15)	2562.5 – 2647.5	13M4G7D	QPSK	0.143	21.56
		13M5W7D	16QAM	0.119	20.77
		13M5W7D	64QAM	0.096	19.84
LTE – Band 41 (20)	2565.0 – 2645.0	17M9G7D	QPSK	0.135	21.29
		17M9W7D	16QAM	0.113	20.52
		17M9W7D	64QAM	0.091	19.58

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**

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## Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-1804-FC046	April 27, 2018	- First Approval Report

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# MEASUREMENT REPORT

## 1. GENERAL INFORMATION

<b>Applicant Name:</b>	SAMSUNG Electronics Co., Ltd.
<b>Address:</b>	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
<b>FCC ID:</b>	A3LSMG8750
<b>Application Type:</b>	Certification
<b>FCC Classification:</b>	Licensed Portable Transmitter Held to Ear (PCE)
<b>FCC Rule Part(s):</b>	§27, §2
<b>EUT Type:</b>	Mobile Phone
<b>Model(s):</b>	SM-G8750
<b>Tx Frequency:</b>	2557.5 – 2652.5 : 5 MHz 2560.0 – 2650.0 : 10 MHz 2562.5 – 2647.5 : 15 MHz 2565.0 – 2645.0 : 20 MHz
<b>Date(s) of Tests:</b>	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**

<b>Test Description</b>	<b>Test Procedure Used</b>
Occupied Bandwidth	- KDB 971168 D01 v03r01 – Section 4.3 - ANSI C63.26-2015 – Section 5.4.4
Band Edge	- KDB 971168 D01 v03r01 – Section 6.0 - ANSI C63.26-2015 – Section 5.7
Spurious and Harmonic Emissions at Antenna Terminal	- KDB 971168 D01 v03r01 – Section 6.0 - 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 - ANSI C63.26-2015 – Section 5.2.3.4 - ANSI C63.26-2015 – Section 5.2.6(only GSM)
Frequency stability	- ANSI C63.26-2015 – Section 5.6
Effective Radiated Power/ Effective Isotropic Radiated Power	- KDB 971168 D01 v03r01 – Section 5.2 & 5.8 - ANSI C63.26-2015 – Section 5.2 - ANSI/TIA-603-E-2016 – Section 2.2.17
Radiated Spurious and Harmonic Emissions	- KDB 971168 D01 v03r01 – Section 6.2 - 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  $\geq 3 \times$  RBW
4. Span = 1.5 times the OBW
5. No. of sweep points  $> 2 \times$  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;

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

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**

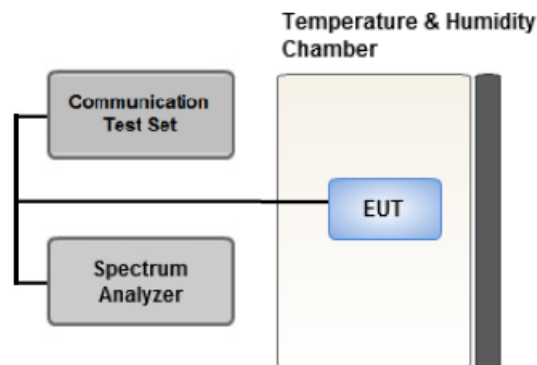
1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW  $\geq 3 \times$  RBW
3. Span = 1.5 times the OBW
4. No. of sweep points  $> 2 \times$  span / RBW
5. Detector = Peak
6. Trace mode = Max Hold
7. The trace was allowed to stabilize
8. Test channel : Low/ Middle/ High
9.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

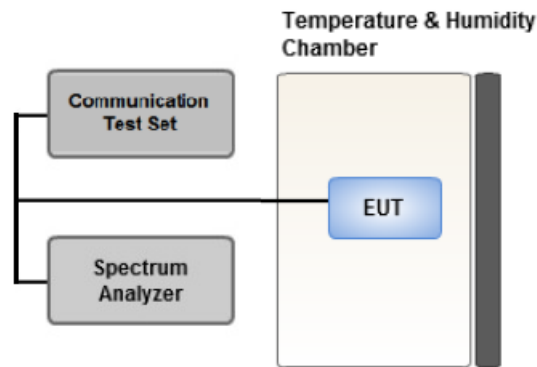
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

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  $\geq 3 \times$  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

### 3.5 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL



Test setup

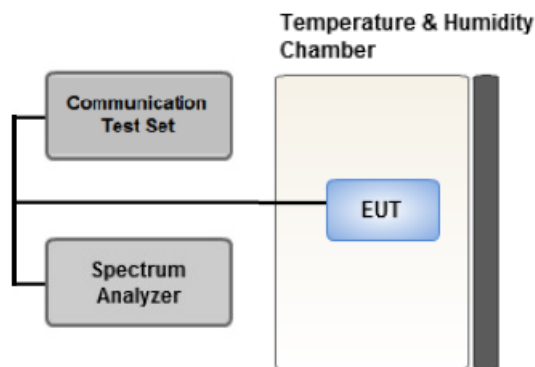
#### Test Overview

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  $\geq$  3 MHz
3. Detector = Peak
4. Trace Mode = max hold
5. Sweep time = auto
6. Number of points in sweep  $\geq 2 * \text{Span} / \text{RBW}$

### 3.6 CHANNEL 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.

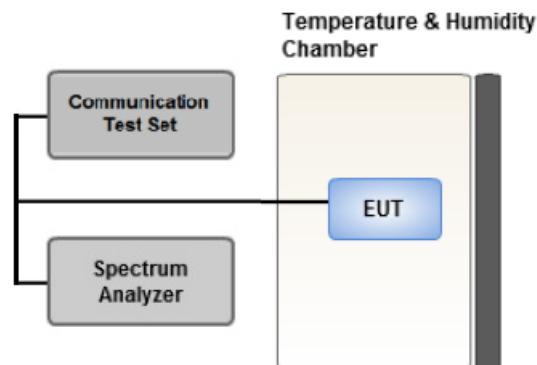
#### Test Settings

1. Start and stop frequency were set such that the channel 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 > 2% of the emission bandwidth
4. VBW > 3 x RBW
5. Detector = RMS
6. Number of sweep points  $\geq 2 \times \text{Span/RBW}$
7. Trace mode = trace average
8. Sweep time = auto couple
9. The trace was allowed to stabilize

#### Test Notes

1. 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. In addition, the attenuation factor shall not be less than  $43 + 10 \log (P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log (P)$  dB at or below 2490.5 MHz.
2. All measurements were done at 3 channels.
3. The channel edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

### 3.7 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  $U_{\text{CISPR}}$  measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded Uncertainty ( $\pm$ 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(m)(4)	<ul style="list-style-type: none"> <li>■ <math>&lt; 40 + 10\log_{10} (P[\text{Watts}])</math> at Channel edges</li> <li>■ <math>&lt; 43 + 10\log_{10} (P[\text{Watts}])</math> between 5 and X MHz from Channel edges</li> <li>■ <math>&lt; 55 + 10\log_{10} (P[\text{Watts}])</math> beyond X MHz beyond from Channel edges</li> <li>■ <math>&lt; 43 + 10 \log (P)</math> dB on all frequencies between 2490.5 MHz and 2496 MHz</li> </ul>	PASS
Conducted Output Power	§2.1046	N/A	<u>See Note1</u>
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(h)(2)	$< 2$ Watts max. EIRP	PASS
Radiated Spurious and Harmonic Emissions	§2.1053, §27.53(m)(4)	$< 55 + 10\log_{10} (P[\text{Watts}])$	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

$$\text{ERP} = \text{Substitute LEVEL(dBm)} + \text{Ant. Gain} - \text{CL(Cable Loss)}$$

- 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
40620	2593.0	-15.75	18.45	9.90	1.76	H	0.456	26.59

$$\text{EIRP} = \text{Substitute LEVEL(dBm)} + \text{Ant. Gain} - \text{CL(Cable Loss)}$$

- 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)	Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
2557.5	LTE B41/ 5 MHz	QPSK	-23.55	12.46	10.99	2.39	H	< 2.00	0.128	21.06
		16-QAM	-24.38	11.63	10.99	2.39	H		0.105	20.23
		64-QAM	-25.29	10.72	10.99	2.39	H		0.085	19.32
2605.0		QPSK	-22.98	13.05	11.03	2.40	H		0.147	21.68
		16-QAM	-23.77	12.26	11.03	2.40	H		0.123	20.89
		64-QAM	-24.67	11.36	11.03	2.40	H		0.100	19.99
2652.5		QPSK	-24.75	11.33	11.07	2.43	H		0.099	19.97
		16-QAM	-25.51	10.57	11.07	2.43	H		0.083	19.21
		64-QAM	-26.42	9.66	11.07	2.43	H		0.068	18.30

Freq (MHz)	Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
2560.0	LTE B41/ 10 MHz	QPSK	-23.63	12.45	11.00	2.39	H	< 2.00	0.128	21.06
		16-QAM	-24.38	11.70	11.00	2.39	H		0.107	20.31
		64-QAM	-25.32	10.76	11.00	2.39	H		0.086	19.37
2605.0		QPSK	-22.79	13.24	11.03	2.40	H		0.154	21.87
		16-QAM	-23.50	12.53	11.03	2.40	H		0.131	21.16
		64-QAM	-24.45	11.58	11.03	2.40	H		0.105	20.21
2650.0		QPSK	-24.54	11.54	11.07	2.43	H		0.104	20.18
		16-QAM	-25.23	10.85	11.07	2.43	H		0.089	19.49
		64-QAM	-26.17	9.91	11.07	2.43	H		0.072	18.55

Freq (MHz)	Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
2562.5	LTE B41/ 15 MHz	QPSK	-23.58	12.44	11.00	2.39	H	< 2.00	0.127	21.05
		16-QAM	-24.39	11.63	11.00	2.39	H		0.106	20.24
		64-QAM	-25.33	10.69	11.00	2.39	H		0.085	19.30
2605.0		QPSK	-23.10	12.93	11.03	2.40	H		0.143	21.56
		16-QAM	-23.89	12.14	11.03	2.40	H		0.119	20.77
		64-QAM	-24.82	11.21	11.03	2.40	H		0.096	19.84
2647.5		QPSK	-24.33	11.75	11.07	2.43	H		0.109	20.39
		16-QAM	-25.10	10.98	11.07	2.43	H		0.092	19.62
		64-QAM	-26.06	10.02	11.07	2.43	H		0.073	18.66

Freq (MHz)	Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
2565.0	LTE B41/ 20 MHz	QPSK	-23.67	12.30	11.00	2.39	H	< 2.00	0.123	20.91
		16-QAM	-24.46	11.51	11.00	2.39	H		0.103	20.12
		64-QAM	-25.40	10.57	11.00	2.39	H		0.083	19.18
2605.0		QPSK	-23.37	12.66	11.03	2.40	H		0.135	21.29
		16-QAM	-24.14	11.89	11.03	2.40	H		0.113	20.52
		64-QAM	-25.08	10.95	11.03	2.40	H		0.091	19.58
2645.0		QPSK	-24.06	12.02	11.07	2.43	H		0.116	20.66
		16-QAM	-24.80	11.28	11.07	2.43	H		0.098	19.92
		64-QAM	-25.74	10.34	11.07	2.43	H		0.079	18.98

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
2605.0	LTE B41/ 10 MHz (With WPC)	QPSK	-23.79	12.24	11.03	2.40	V	< 2.00	0.122	20.87

## 8.2 RADIATED SPURIOUS EMISSIONS

- OPERATING FREQUENCY : 2605.00 MHz
- MEASURED OUTPUT POWER: 21.68 dBm = 0.147 W
- MODE: LTE B41
- MODULATION SIGNAL: 5 MHz QPSK
- DISTANCE: 1 meters
- LIMIT:  $55 + 10 \log_{10} (W) =$  46.68 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	EIRP (dBm)	dBc
40265 (2557.5)	5,115.00	-35.22	12.74	-47.45	3.44	H	-38.15	59.83
	7,672.50	-41.79	11.59	-49.68	4.25	H	-42.34	64.02
	10,230.00	-53.69	10.89	-57.86	5.08	V	-52.05	73.73
	12,787.50	-52.37	13.72	-56.88	5.69	H	-48.85	70.53
40740 (2605.0)	5,210.00	-33.04	12.88	-46.52	3.48	H	-37.12	58.80
	7,815.00	-40.60	11.50	-48.96	4.24	V	-41.70	63.38
	10,420.00	-55.48	10.78	-58.22	5.07	H	-52.51	74.19
	13,025.00	-53.41	13.42	-57.97	5.76	H	-50.31	71.99
41215 (2652.5)	5,305.00	-37.57	13.01	-51.96	3.51	H	-42.46	64.14
	7,957.50	-39.68	11.37	-46.28	4.37	H	-39.28	60.96
	10,610.00	-53.15	10.72	-56.45	5.14	V	-50.87	72.55
	13,262.50	-52.12	13.00	-55.22	5.79	H	-48.01	69.69

- OPERATING FREQUENCY : 2605.00 MHz
- MEASURED OUTPUT POWER: 21.87 dBm = 0.154 W
- MODE: LTE B41
- MODULATION SIGNAL: 10 MHz QPSK
- DISTANCE: 1 meters
- LIMIT:  $55 + 10 \log_{10} (W) =$  46.87 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	EIRP (dBm)	dBc
40290 (2560.0)	5,120.00	-33.19	12.57	-44.99	3.44	H	-35.86	57.73
	7,680.00	-41.03	11.58	-49.35	4.26	H	-42.03	63.90
	10,240.00	-56.05	10.88	-60.37	5.06	H	-54.55	76.42
	12,800.00	-50.86	13.70	-55.71	5.68	H	-47.69	69.56
40740 (2605.0)	5,210.00	-33.84	12.88	-47.32	3.48	H	-37.92	59.79
	7,815.00	-46.08	11.50	-54.44	4.24	H	-47.18	69.05
	10,420.00	-56.48	10.78	-59.22	5.07	H	-53.51	75.38
	13,025.00	-54.33	13.42	-58.89	5.76	H	-51.23	73.10
41190 (2650.0)	5,300.00	-37.38	13.00	-52.08	3.51	H	-42.59	64.46
	7,950.00	-41.85	11.37	-48.26	4.37	H	-41.26	63.13
	10,600.00	-57.30	10.72	-61.18	5.14	H	-55.60	77.47
	13,250.00	-52.43	13.02	-55.60	5.81	H	-48.39	70.26

- OPERATING FREQUENCY : 2605.00 MHz
- MEASURED OUTPUT POWER: 21.56 dBm = 0.143 W
- MODE: LTE B41
- MODULATION SIGNAL: 15 MHz QPSK
- DISTANCE: 1 meters
- LIMIT:  $55 + 10 \log_{10} (W) =$  46.56 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	EIRP (dBm)	dBc
40315 (2562.5)	5,125.00	-34.64	12.75	-46.35	3.44	H	-37.04	58.60
	7,687.50	-44.03	11.58	-52.52	4.26	H	-45.20	66.76
	10,250.00	-55.49	10.88	-60.04	5.04	H	-54.20	75.76
	12,812.50	-50.79	13.68	-55.84	5.71	H	-47.87	69.43
40740 (2605.0)	5,210.00	-35.09	12.88	-48.57	3.48	H	-39.17	60.73
	7,815.00	-45.05	11.50	-53.41	4.24	H	-46.15	67.71
	10,420.00	-57.44	10.78	-60.18	5.07	H	-54.47	76.03
	13,025.00	-54.97	13.42	-59.53	5.76	H	-51.87	73.43
41165 (2647.5)	5,295.00	-36.29	12.99	-51.05	3.51	H	-41.57	63.13
	7,942.50	-40.20	11.38	-47.07	4.36	H	-40.05	61.61
	10,590.00	-55.50	10.72	-59.67	5.14	H	-54.09	75.65
	13,237.50	-51.47	13.05	-55.12	5.84	H	-47.91	69.47

- OPERATING FREQUENCY : 2605.00 MHz
- MEASURED OUTPUT POWER: 21.29 dBm = 0.135 W
- MODE: LTE B41
- MODULATION SIGNAL: 20 MHz QPSK
- DISTANCE: 1 meters
- LIMIT:  $55 + 10 \log_{10} (W) =$  46.29 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	EIRP (dBm)	dBc
40340 (2565.0)	5,130.00	-30.02	12.76	-41.47	3.44	H	-32.15	53.44
	7,695.00	-42.72	11.57	-51.36	4.26	H	-44.05	65.34
	10,260.00	-57.00	10.87	-62.12	5.00	H	-56.25	77.54
	12,825.00	-52.77	13.67	-57.96	5.74	H	-50.03	71.32
40740 (2605.0)	5,210.00	-32.59	12.88	-46.07	3.48	H	-36.67	57.96
	7,815.00	-43.56	11.50	-51.92	4.24	H	-44.66	65.95
	10,420.00	-56.86	10.78	-59.60	5.07	H	-53.89	75.18
	13,025.00	-55.39	13.42	-59.95	5.76	H	-52.29	73.58
41140 (2645.0)	5,290.00	-35.47	12.99	-50.30	3.51	H	-40.82	62.11
	7,935.00	-40.03	11.40	-47.23	4.37	H	-40.20	61.49
	10,580.00	-55.40	10.72	-59.60	5.13	H	-54.01	75.30
	13,225.00	-52.09	13.07	-55.88	5.86	H	-48.67	69.96

#### With WCP

Ch	Mod	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)
40340 (2565.0)	20 MHz QPSK	5,130.00	-37.96	12.76	-49.41	3.44	H	-40.09
		7,695.00	-46.37	11.57	-55.01	4.26	H	-47.70
		10,260.00	-56.66	10.87	-61.78	5.00	H	-55.91
		12,825.00	-54.50	13.67	-59.69	5.74	H	-51.76

### 8.3 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data ( MHz )
41	5 MHz	2605.0	QPSK	25	0	4.5045
			16-QAM			4.5052
			64-QAM			4.5143
	10 MHz		QPSK	50		8.9569
			16-QAM			8.9597
			64-QAM			8.9592
	15 MHz		QPSK	75		13.439
			16-QAM			13.452
			64-QAM			13.458
	20 MHz		QPSK	100		17.940
			16-QAM			17.872
			64-QAM			17.904

**Note:**

1. Plots of the EUT's Occupied Bandwidth are shown Page 33 ~ 38.



#### 8.4 CONDUCTED SPURIOUS EMISSIONS

Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
41	5	2557.5	5.1112	28.591	-64.268	-35.677	-25.00
		2605.0	5.2064	28.591	-64.815	-36.224	
		2652.5	5.3101	28.591	-62.951	-34.360	
	10	2560.0	5.1117	28.591	-64.486	-35.895	
		2605.0	5.2019	28.591	-64.289	-35.698	
		2650.0	5.3096	28.591	-61.226	-32.635	
	15	2562.5	5.1122	28.591	-64.413	-35.822	
		2605.0	5.1970	28.591	-66.271	-37.680	
		2647.5	5.3091	28.591	-62.823	-34.232	
	20	2565.0	5.1127	28.591	-63.785	-35.194	
		2605.0	5.1930	28.591	-65.281	-36.690	
		2645.0	5.3086	28.591	-63.982	-35.391	

#### Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 45 ~ 56.
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

## 8.5 CHANNEL EDGE

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resoure Block Offset	C.E ~ (C.E ± 1MHz)		(C.E ± 1 MHz) ~ (C.E ± 5 MHz)	
						Lower	Upper	Lower	Upper
Band 41	5 MHz	2557.5	QPSK	25	0	-26.62	-26.83	-21.52	-22.92
		2605.0	QPSK	25	0	-26.78	-26.88	-22.95	-24.61
		2652.5	QPSK	25	0	-23.98	-24.60	-17.15	-18.46
	10 MHz	2560.0	QPSK	50	0	-26.75	-27.92	-23.42	-25.29
		2605.0	QPSK	50	0	-29.13	-29.36	-24.63	-26.69
		2650.0	QPSK	50	0	-24.26	-25.91	-19.07	-21.11
	15 MHz	2562.5	QPSK	75	0	-29.52	-29.72	-25.06	-26.13
		2605.0	QPSK	75	0	-29.78	-29.78	-25.97	-27.24
		2647.5	QPSK	75	0	-25.74	-27.41	-21.20	-23.05
	20 MHz	2565.0	QPSK	100	0	-28.85	-30.31	-26.20	-28.13
		2605.0	QPSK	100	0	-29.46	-30.39	-26.81	-28.92
		2645.0	QPSK	100	0	-25.20	-27.86	-21.59	-24.59
Limit						-10.0		-10.0	

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resoure Block Offset	(C.E ± 5 MHz) ~ (C.E ± X MHz)		Above (C.E ± X MHz)	
						Lower	Upper	Lower	Upper
Band 41	5 MHz	2557.5	QPSK	25	0	-39.44	-37.82	-40.75	-39.95
		2605.0	QPSK	25	0	-41.19	-37.77	-43.52	-40.81
		2652.5	QPSK	25	0	-33.32	-32.53	-34.18	-33.35
	10 MHz	2560.0	QPSK	50	0	-28.52	-29.32	-43.14	-40.28
		2605.0	QPSK	50	0	-30.07	-30.52	-45.99	-40.67
		2650.0	QPSK	50	0	-24.48	-25.63	-37.84	-35.24
	15 MHz	2562.5	QPSK	75	0	-28.48	-29.38	-44.42	-41.90
		2605.0	QPSK	75	0	-29.45	-30.35	-46.76	-41.88
		2647.5	QPSK	75	0	-24.35	-26.54	-40.60	-37.54
	20 MHz	2565.0	QPSK	100	0	-29.10	-31.03	-44.86	-42.60
		2605.0	QPSK	100	0	-29.78	-31.72	-46.82	-42.41
		2645.0	QPSK	100	0	-25.09	-27.13	-44.11	-39.40
Limit						-13.0		-25.0	

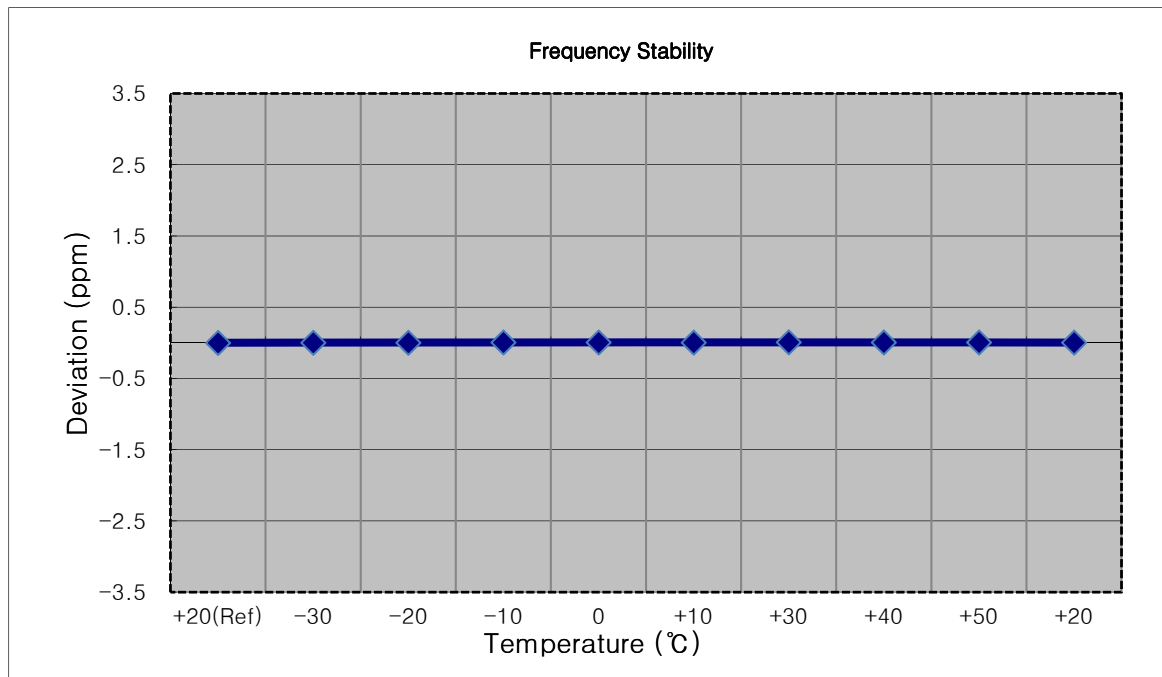
### Note:

1. C.E = Channel Edge
2. X = X is the greater of 6MHz or the actual emission bandwidth.
3. X = 6MHz(5MHz Bandwidth), 10MHz(10MHz Bandwidth), 15MHz(15MHz Bandwidth), 20MHz(20MHz Bandwidth)
4. Plots of the EUT's Channel Edge are shown Page 39 ~ 44.

## 8.6 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

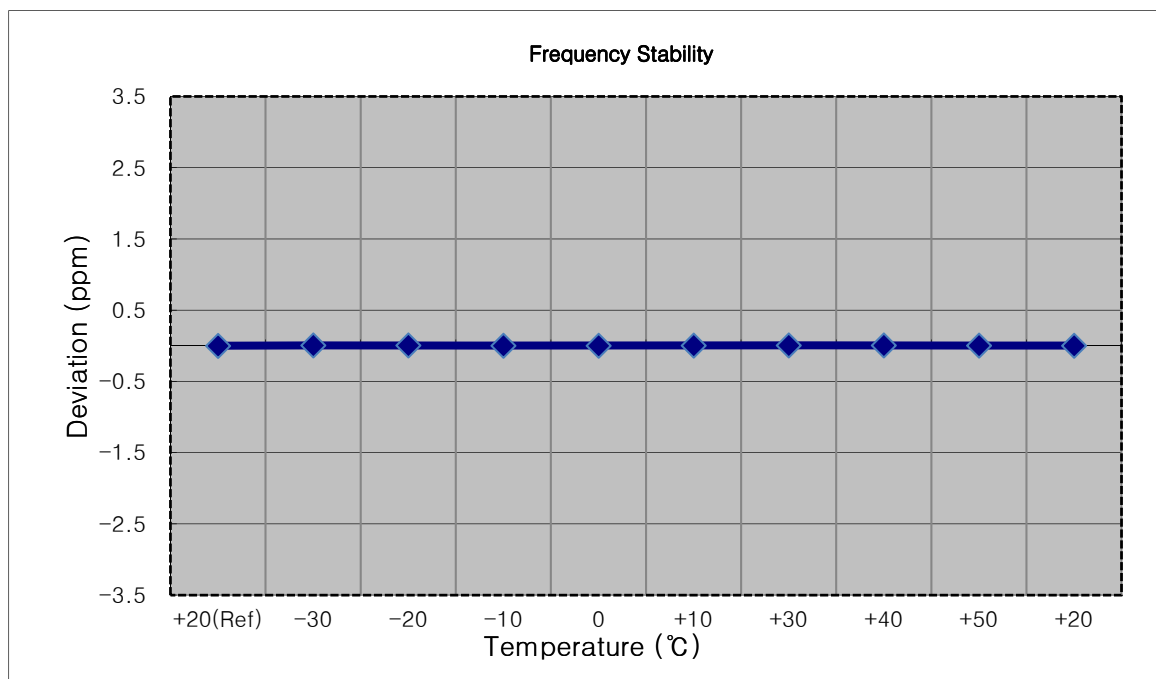
- ☐ MODE: LTE 41  
☐ OPERATING FREQUENCY: 2605.000.000 Hz  
☐ CHANNEL: 40740 (5 MHz)  
☐ REFERENCE VOLTAGE: 4.00 VDC  
☐ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	4.00	+20(Ref)	2605 000 011	0.0	0.000 000	0.000
100%		-30	2605 000 017	6.5	0.000 000	0.002
100%		-20	2605 000 018	7.3	0.000 000	0.003
100%		-10	2605 000 030	19.4	0.000 001	0.007
100%		0	2605 000 027	16.1	0.000 001	0.006
100%		+10	2605 000 020	9.0	0.000 000	0.003
100%		+30	2605 000 033	22.2	0.000 001	0.009
100%		+40	2605 000 030	18.8	0.000 001	0.007
100%		+50	2605 000 027	15.9	0.000 001	0.006
85%	3.40	+20	2605 000 021	10.0	0.000 000	0.004



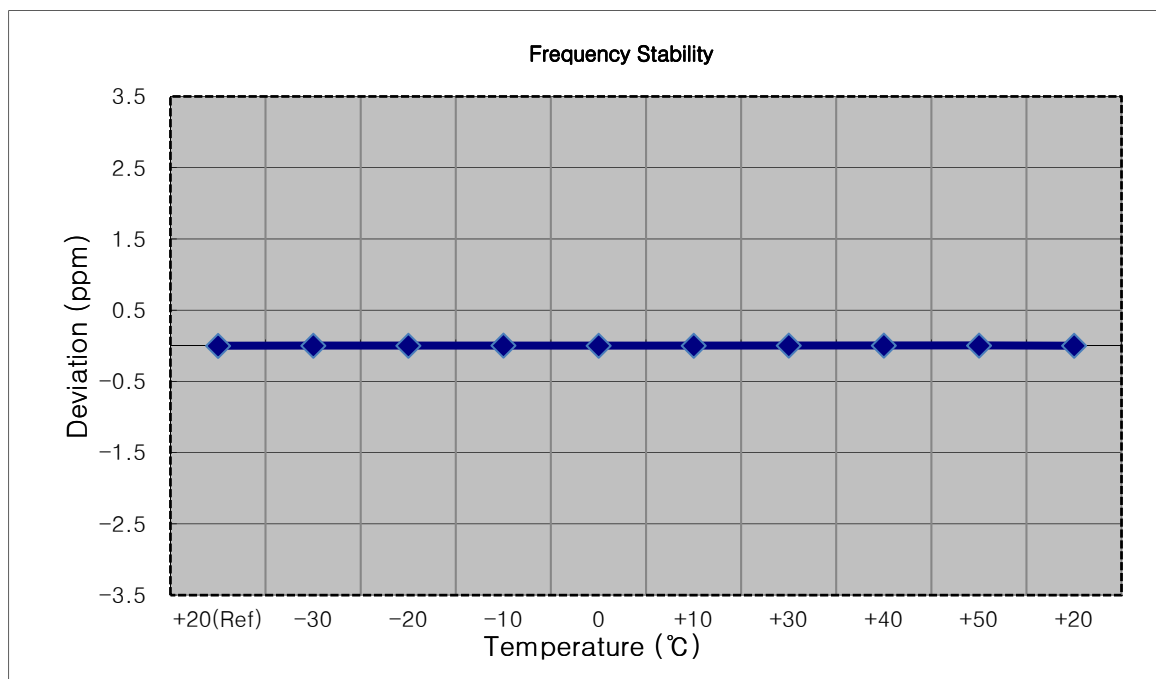
- MODE: LTE 41
- OPERATING FREQUENCY: 2605,000,000 Hz
- CHANNEL: 40740 (10 MHz)
- REFERENCE VOLTAGE: 4.00 VDC
- DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	4.00	+20(Ref)	2605 000 006	0.0	0.000 000	0.000
100%		-30	2605 000 020	14.3	0.000 001	0.005
100%		-20	2605 000 024	18.3	0.000 001	0.007
100%		-10	2605 000 012	6.4	0.000 000	0.002
100%		0	2605 000 010	4.3	0.000 000	0.002
100%		+10	2605 000 018	12.3	0.000 000	0.005
100%		+30	2605 000 023	16.9	0.000 001	0.006
100%		+40	2605 000 020	13.9	0.000 001	0.005
100%		+50	2605 000 014	8.6	0.000 000	0.003
85%	3.40	+20	2605 000 011	5.4	0.000 000	0.002



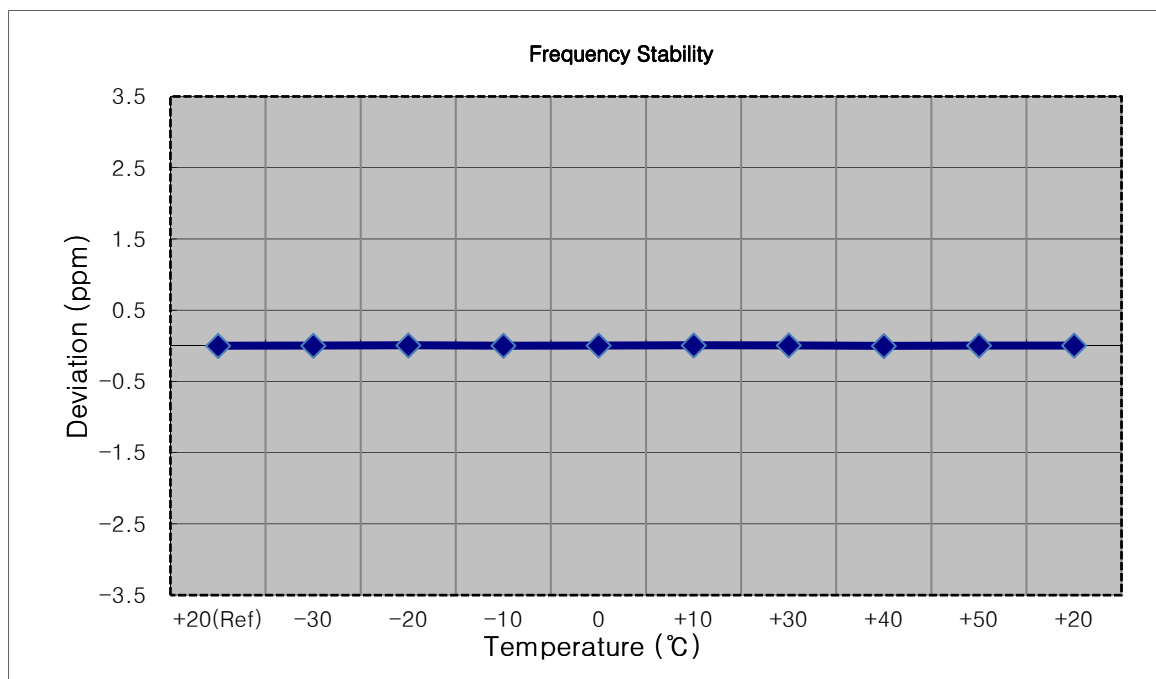
- MODE: LTE 41
- OPERATING FREQUENCY: 2605,000,000 Hz
- CHANNEL: 40740 (15 MHz)
- REFERENCE VOLTAGE: 4.00 VDC
- DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	4.00	+20(Ref)	2605 000 020	0.0	0.000 000	0.000
100%		-30	2605 000 025	5.4	0.000 000	0.002
100%		-20	2605 000 025	4.9	0.000 000	0.002
100%		-10	2605 000 030	10.3	0.000 000	0.004
100%		0	2605 000 026	6.3	0.000 000	0.002
100%		+10	2605 000 024	4.5	0.000 000	0.002
100%		+30	2605 000 032	12.4	0.000 000	0.005
100%		+40	2605 000 031	10.7	0.000 000	0.004
100%		+50	2605 000 032	12.4	0.000 000	0.005
85%	3.40	+20	2605 000 023	3.2	0.000 000	0.001



- ☐ MODE: LTE 41  
☐ OPERATING FREQUENCY: 2605.000.000 Hz  
☐ CHANNEL: 40740 (20 MHz)  
☐ REFERENCE VOLTAGE: 4.00 VDC  
☐ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	4.00	+20(Ref)	2605 000 016	0.0	0.000 000	0.000
100%		-30	2605 000 023	6.3	0.000 000	0.002
100%		-20	2605 000 036	19.4	0.000 001	0.007
100%		-10	2605 000 020	3.4	0.000 000	0.001
100%		0	2605 000 026	9.7	0.000 000	0.004
100%		+10	2605 000 033	16.8	0.000 001	0.006
100%		+30	2605 000 031	14.8	0.000 001	0.006
100%		+40	2605 000 012	-4.0	0.000 000	-0.002
100%		+50	2605 000 026	10.2	0.000 000	0.004
85%	3.40	+20	2605 000 026	9.7	0.000 000	0.004



## 8.7 GEO-LOCATION MECHANISM

The device uses a geo-location mechanism based on the cellular MCC codes in order to only enable certain LTE bands when the device is not in the USA.

The validation of this mechanism is provided below. The device was configured for cellular communications to a test set and the MCC code was adjusted on the test set between the US MCC and then an MCC code valid for a country where the LTE band is supported.

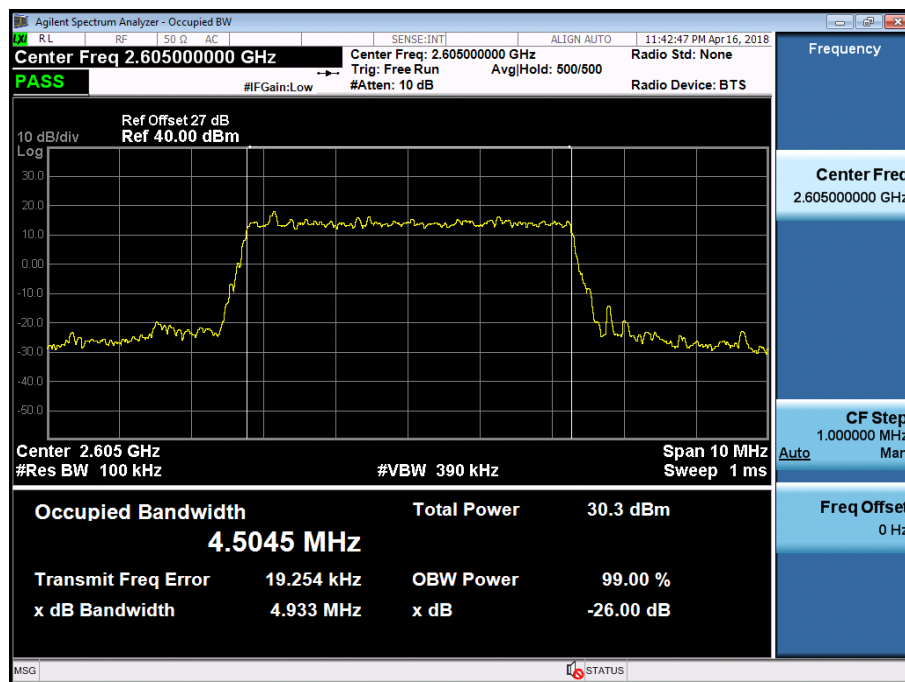
Band	MCC = USA	MCC = non US
7	Did not connect	Connected (Canada)
38	Did not connect	Connected (Canada)
40	Did not connect	Connected (Canada)

The verification tests confirmed the operational of the geo-location mechanism.

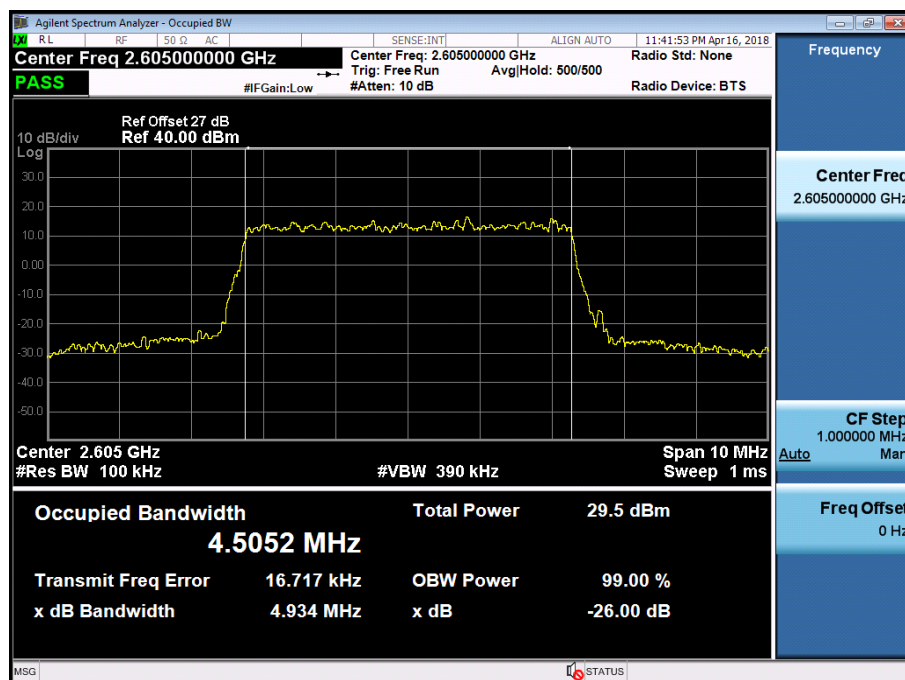
## 9. TEST PLOTS



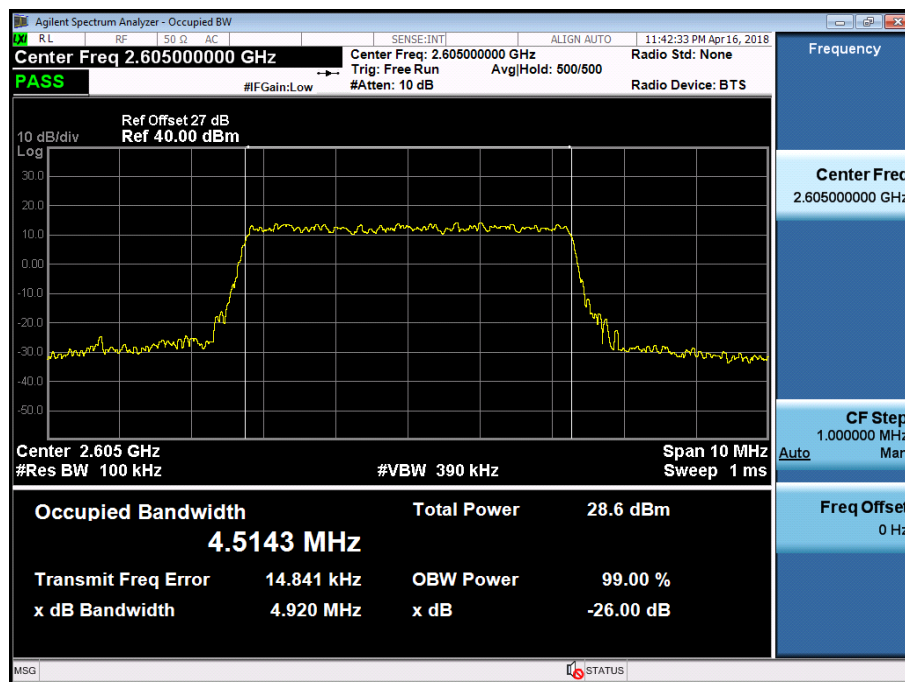
BAND 41. Occupied Bandwidth Plot (5 MHz Ch.40740 QPSK RB 25)



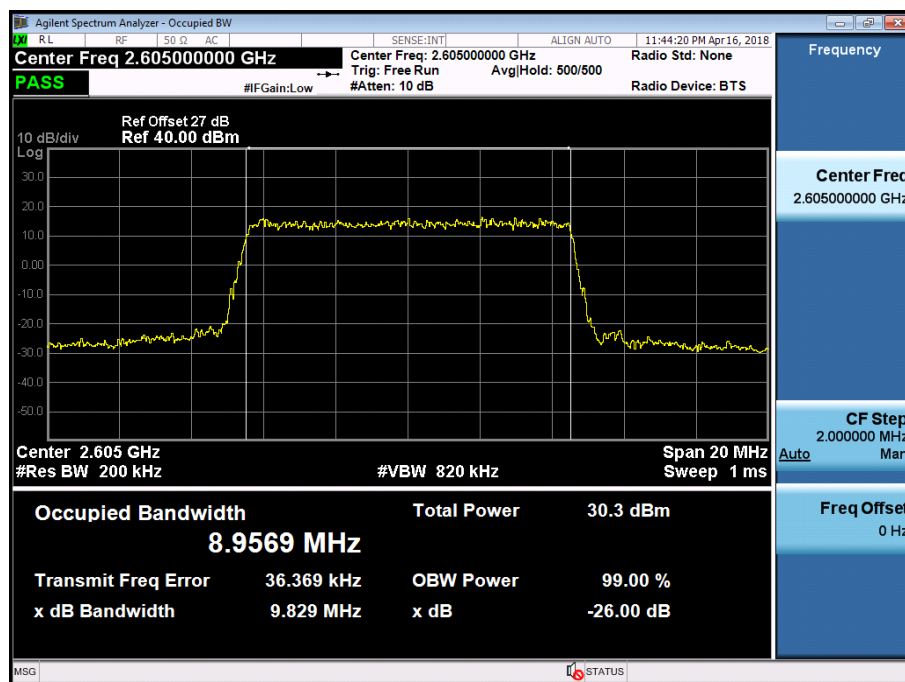
BAND 41. Occupied Bandwidth Plot (5 MHz Ch.40740 16-QAM RB 25)



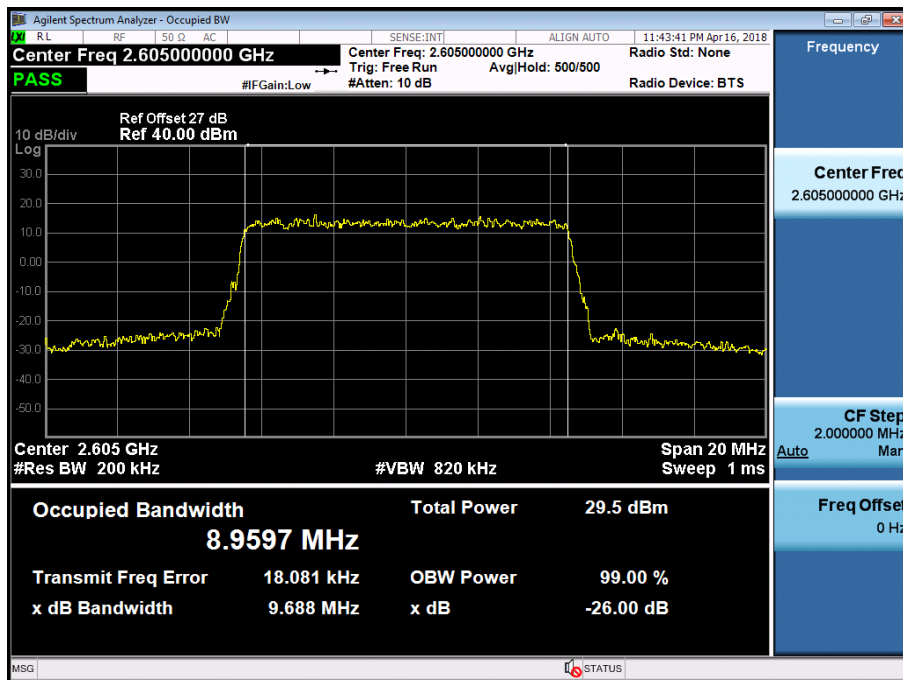
BAND 41. Occupied Bandwidth Plot (5 MHz Ch.40740 64-QAM RB 25)



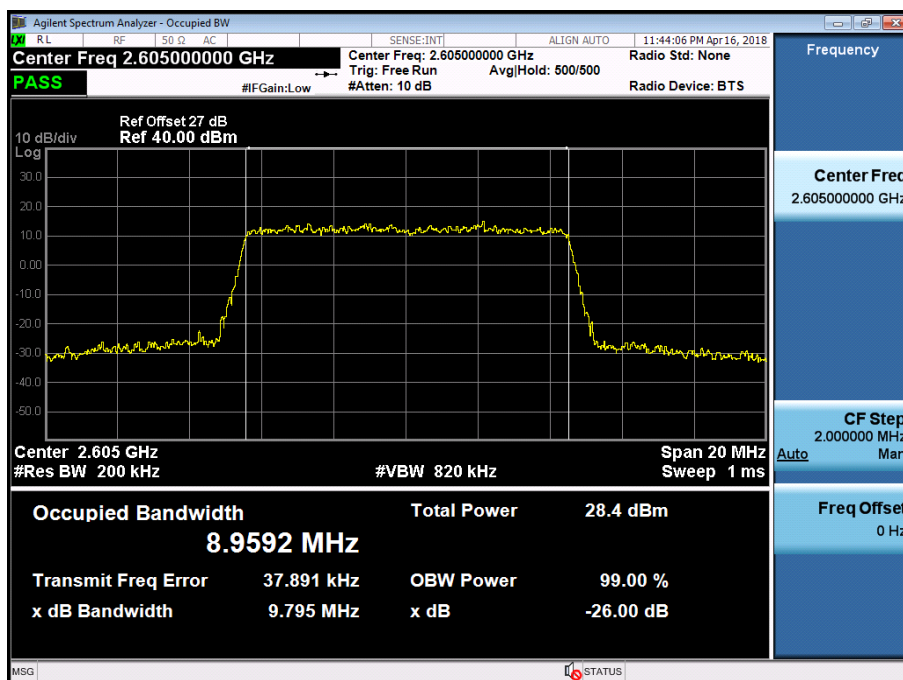
BAND 41. Occupied Bandwidth Plot (10 MHz Ch.40740 QPSK RB 50)



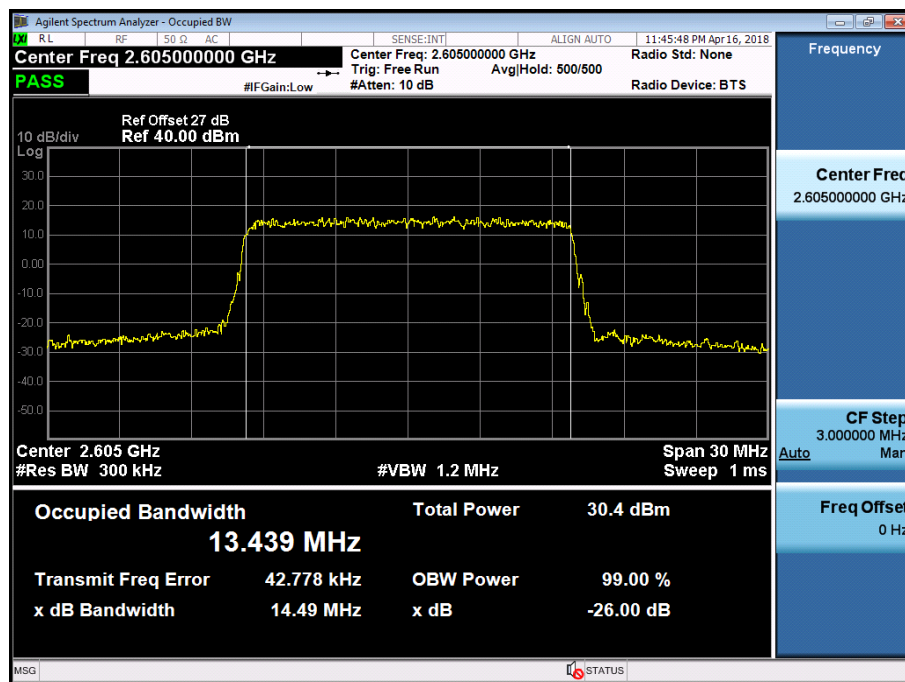
BAND 41. Occupied Bandwidth Plot (10 MHz Ch.40740 16-QAM RB 50)



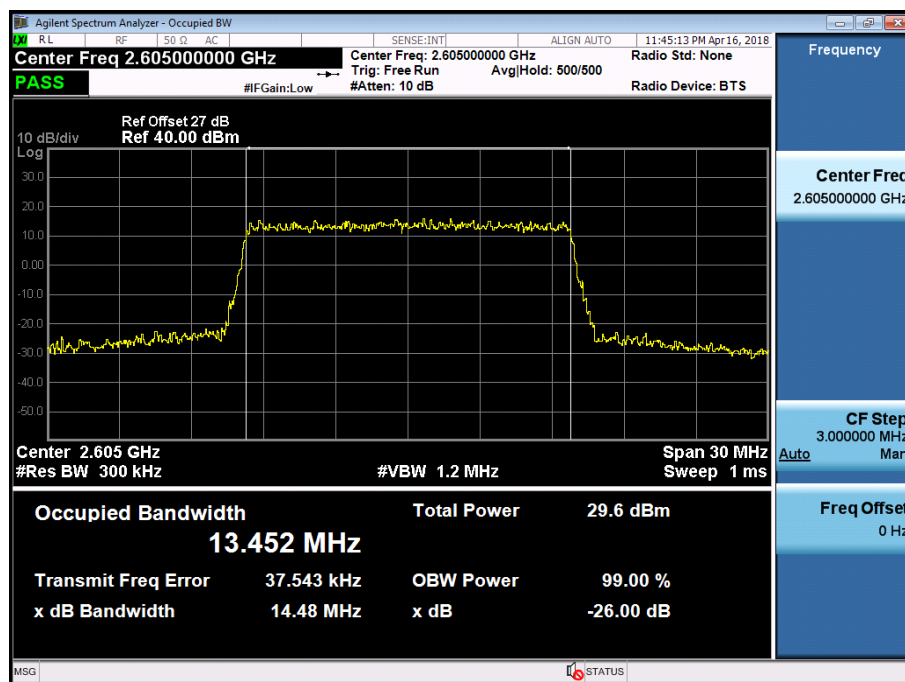
BAND 41. Occupied Bandwidth Plot (10 MHz Ch.40740 64-QAM RB 50)



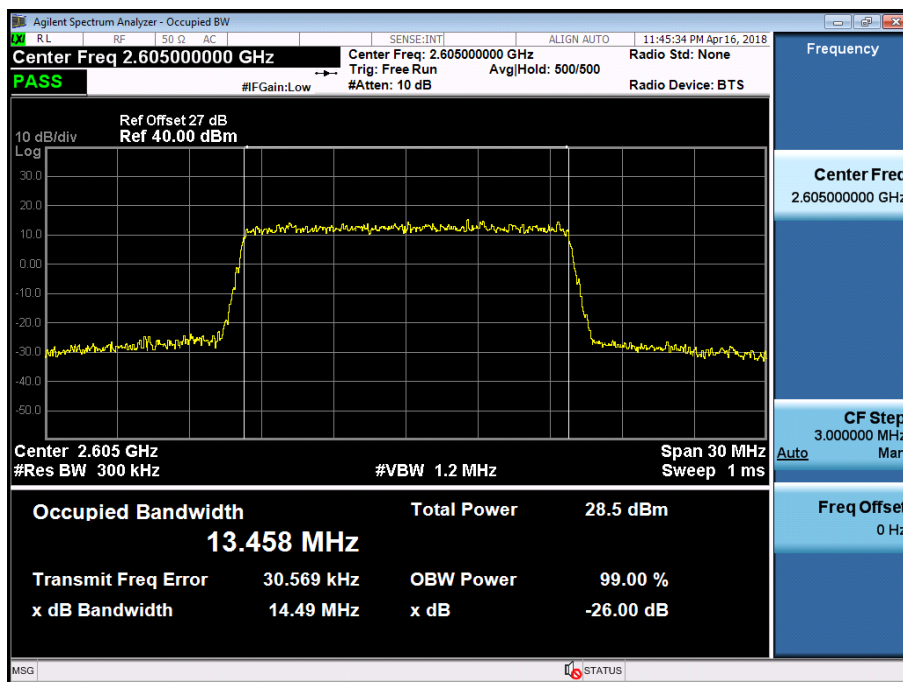
BAND 41. Occupied Bandwidth Plot (15 MHz Ch.40740 QPSK RB 75)



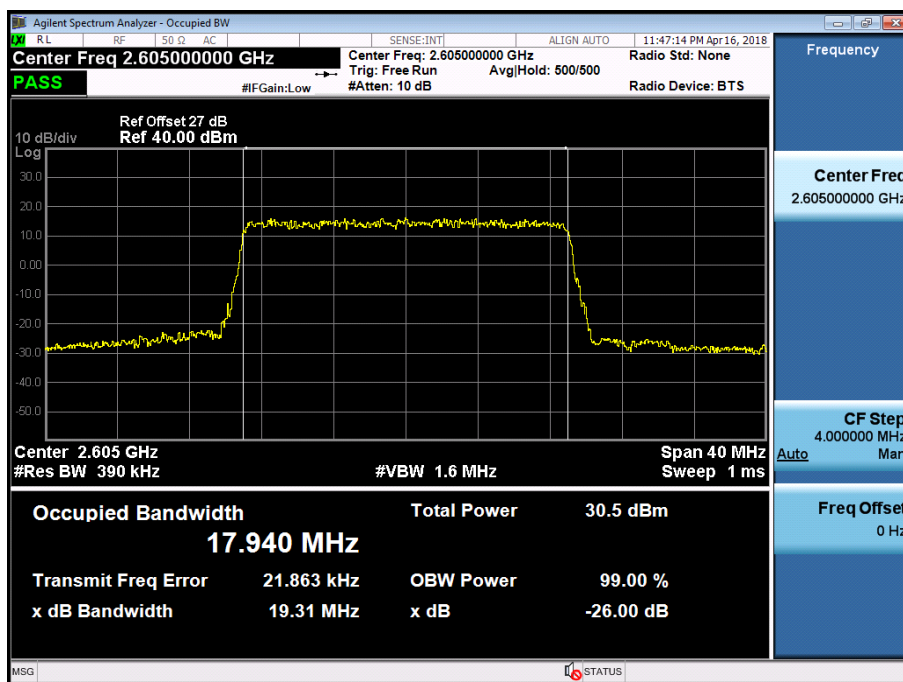
BAND 41. Occupied Bandwidth Plot (15 MHz Ch.40740 16-QAM RB 75)



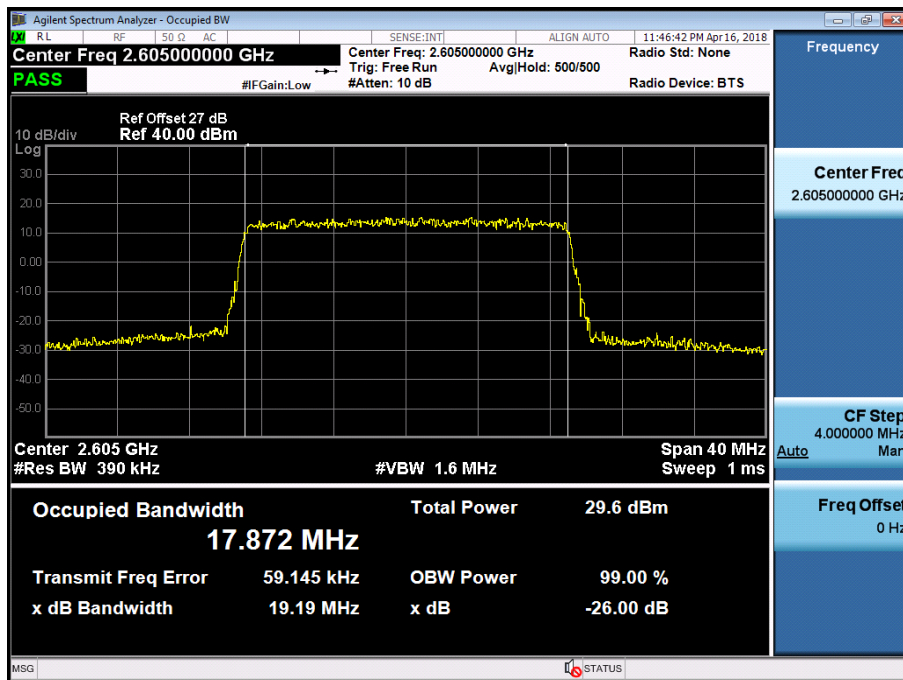
BAND 41. Occupied Bandwidth Plot (15 MHz Ch.40740 64-QAM RB 75)



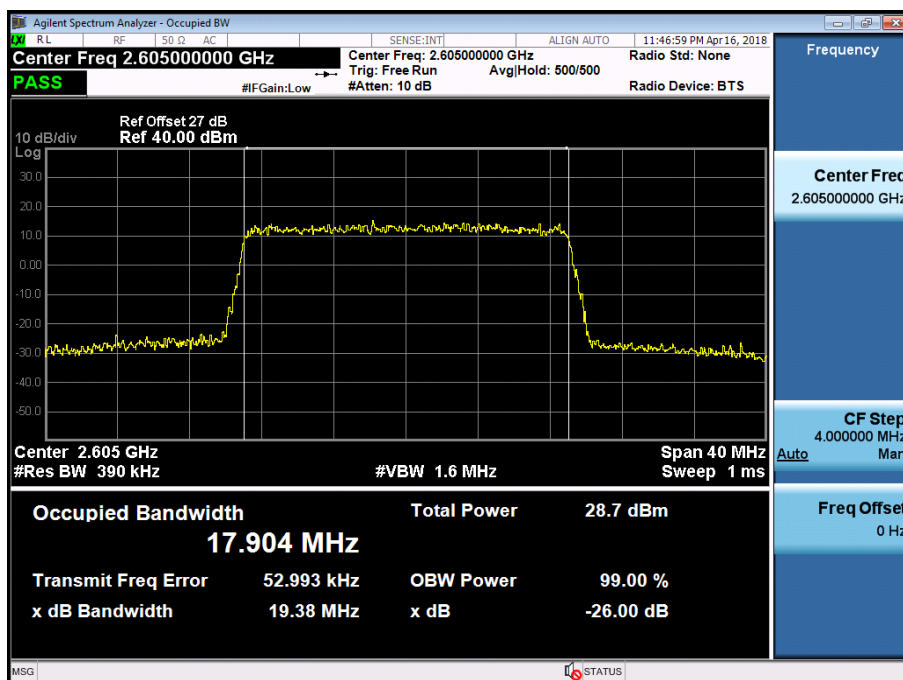
BAND 41. Occupied Bandwidth Plot (20 MHz Ch.40740 QPSK RB 100)



BAND 41. Occupied Bandwidth Plot (20 MHz Ch.40740 16-QAM RB 100)

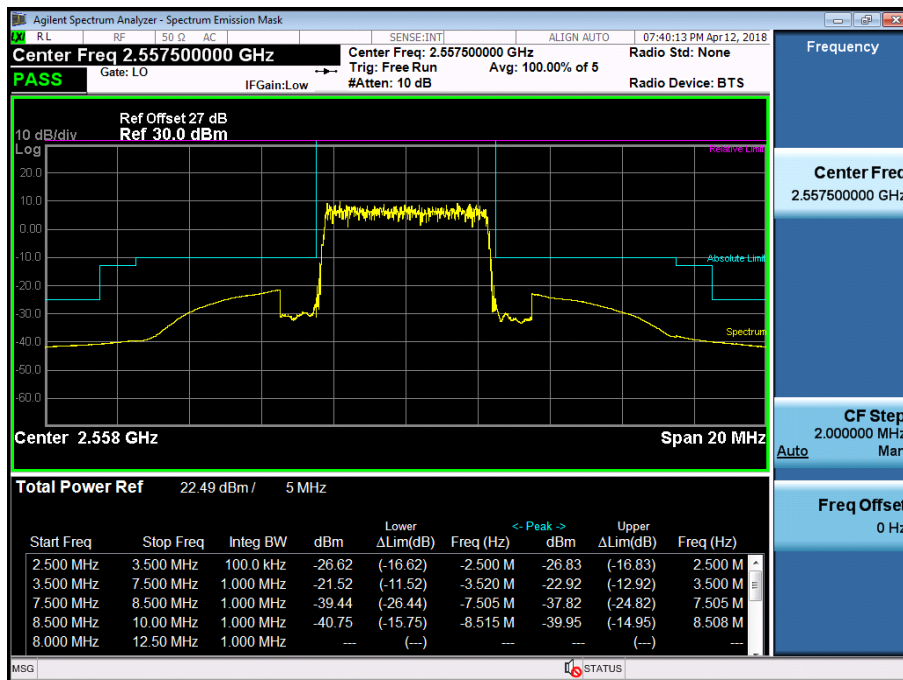


BAND 41. Occupied Bandwidth Plot (20 MHz Ch.40740 64-QAM RB 100)

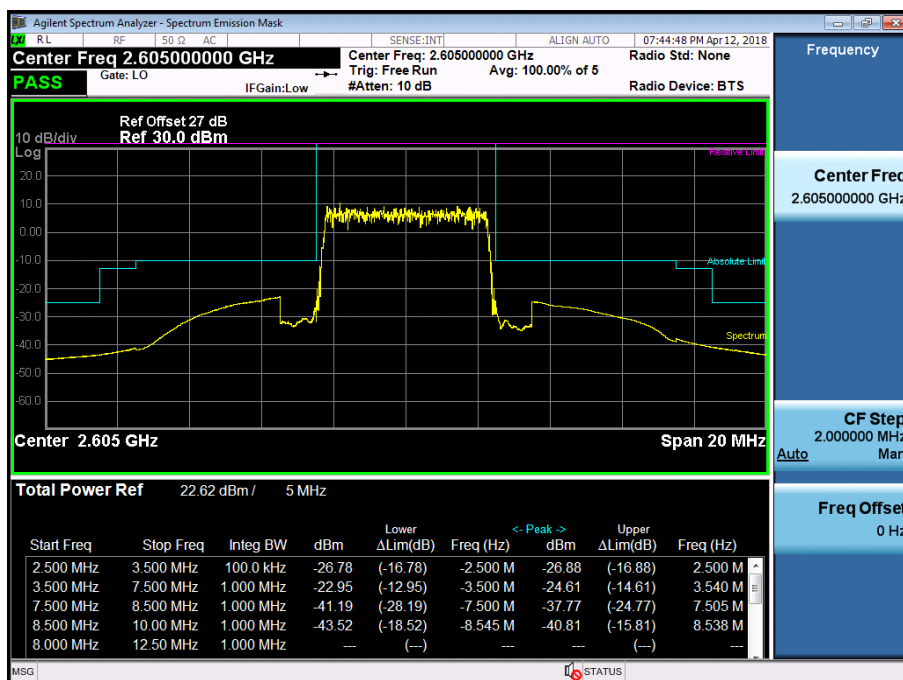




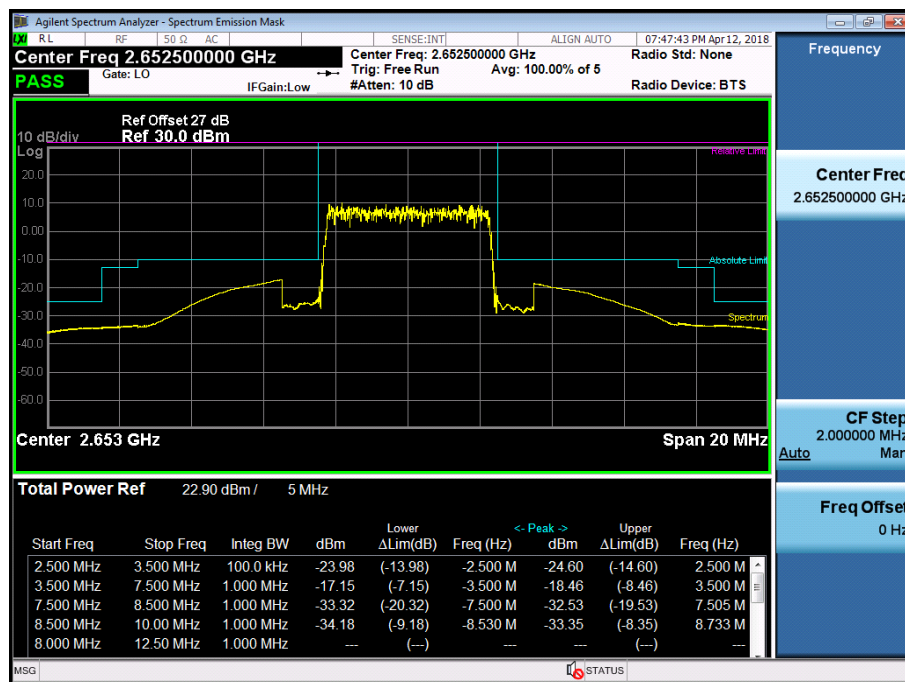
BAND 41. Low Channel Edge Plot (5 MHz Ch.40265 QPSK\_RB25\_Offset 0)



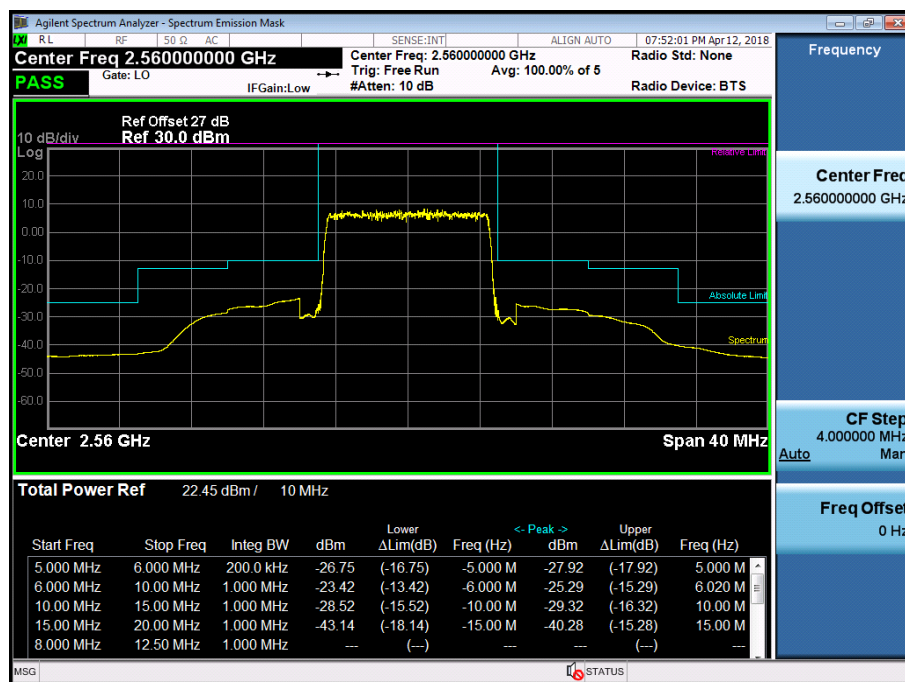
BAND 41. Mid Channel Edge Plot (5 MHz Ch.40740 QPSK RB 25)



BAND 41. High Channel Edge Plot (5 MHz Ch.41215 QPSK\_RB25\_Offset 0)

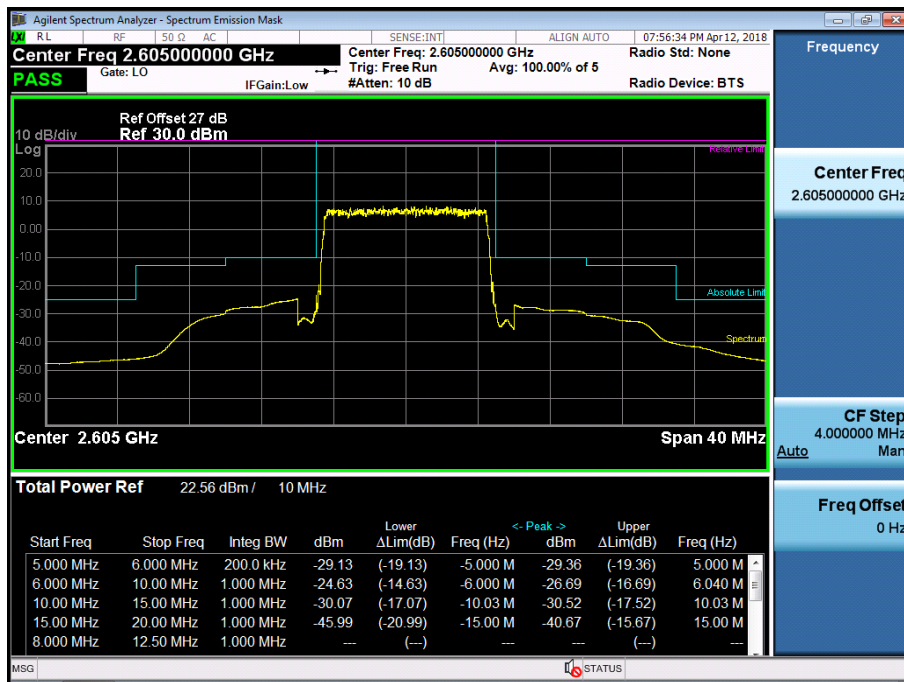


BAND 41. Low Channel Edge Plot (10 MHz Ch.40290 QPSK\_RB50\_Offset 0)

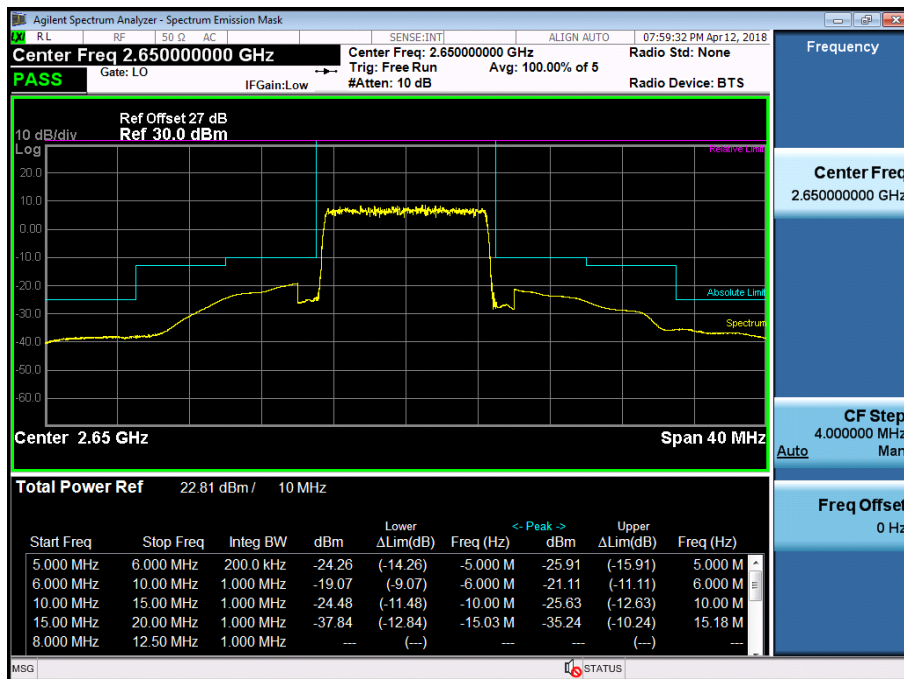




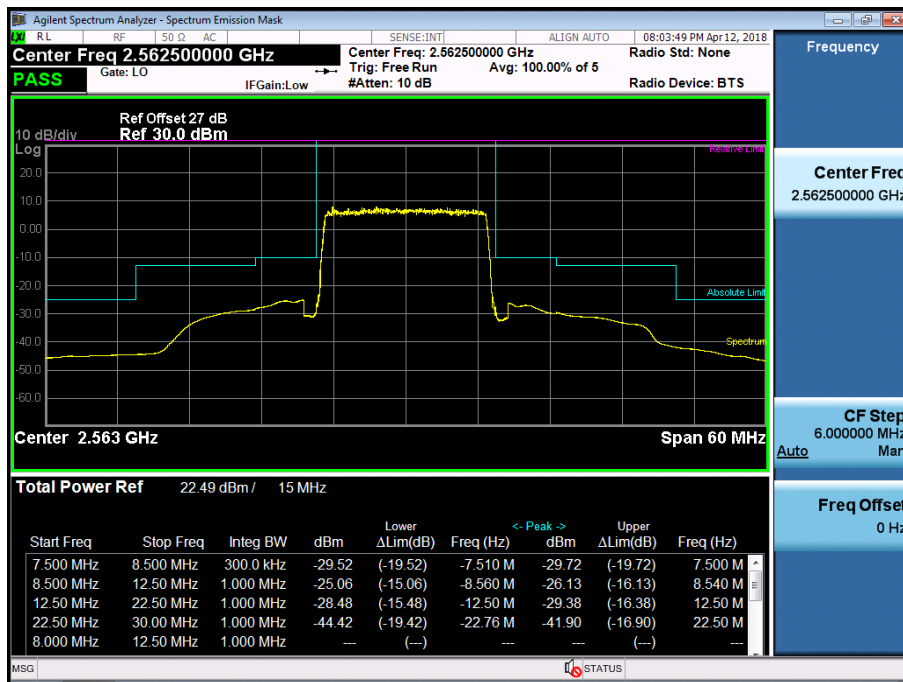
BAND 41. Mid Channel Edge Plot (10 MHz Ch.40740 QPSK RB 50)



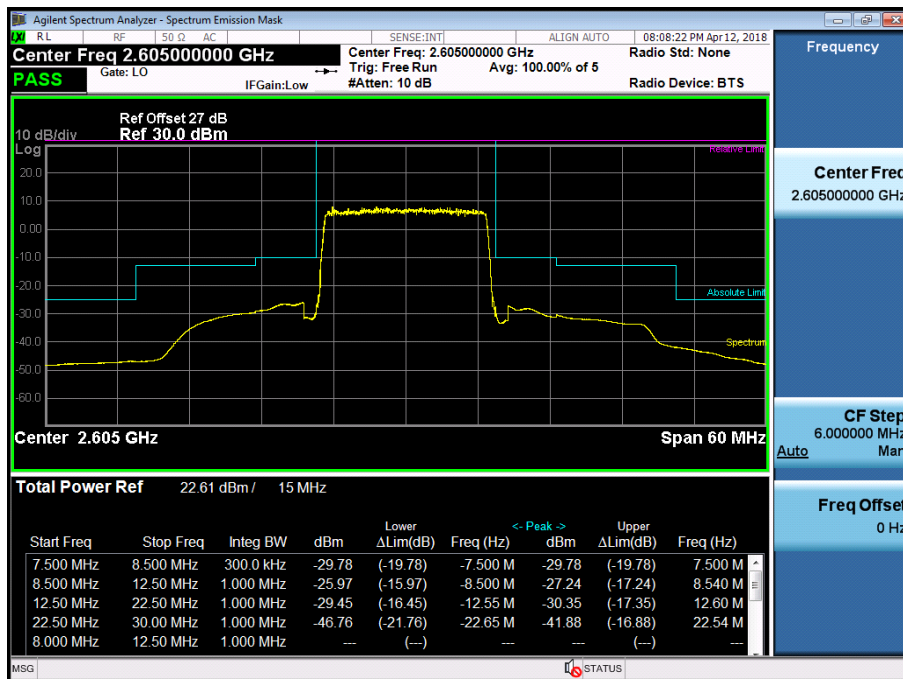
BAND 41. High Channel Edge Plot (10 MHz Ch.41190 QPSK\_RB50\_Offset 0)



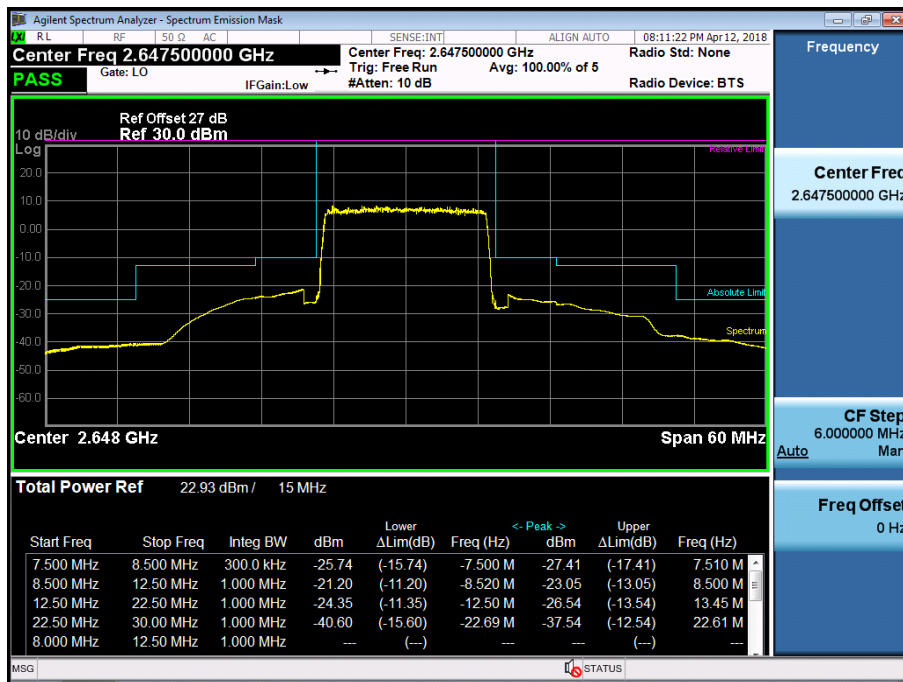
BAND 41. Low Channel Edge Plot (15 MHz Ch.40315 QPSK\_RB75\_Offset 0)



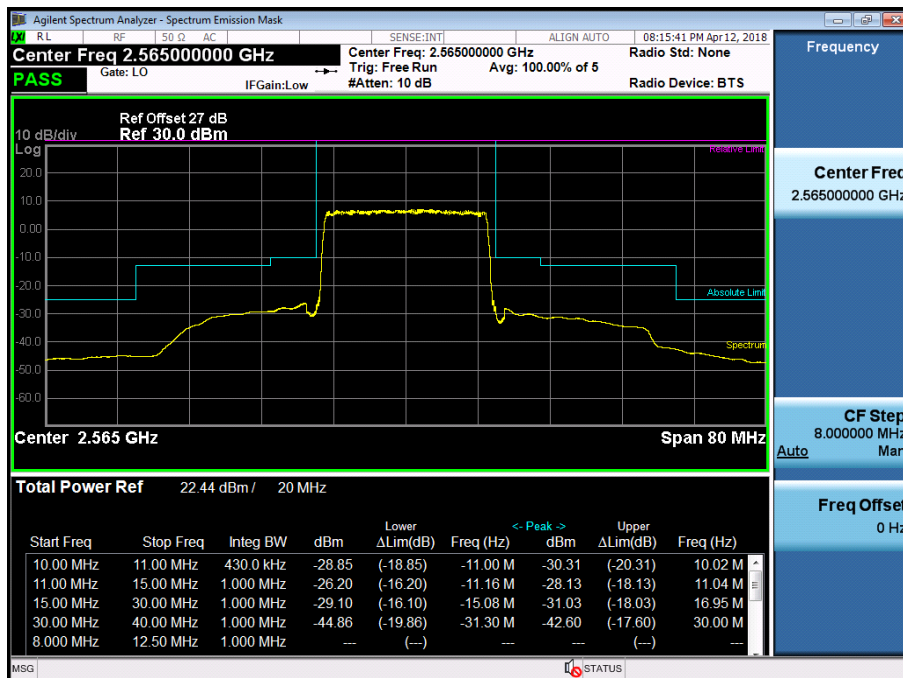
BAND 41. Mid Channel Edge Plot (15 MHz Ch.40740 QPSK RB 75)



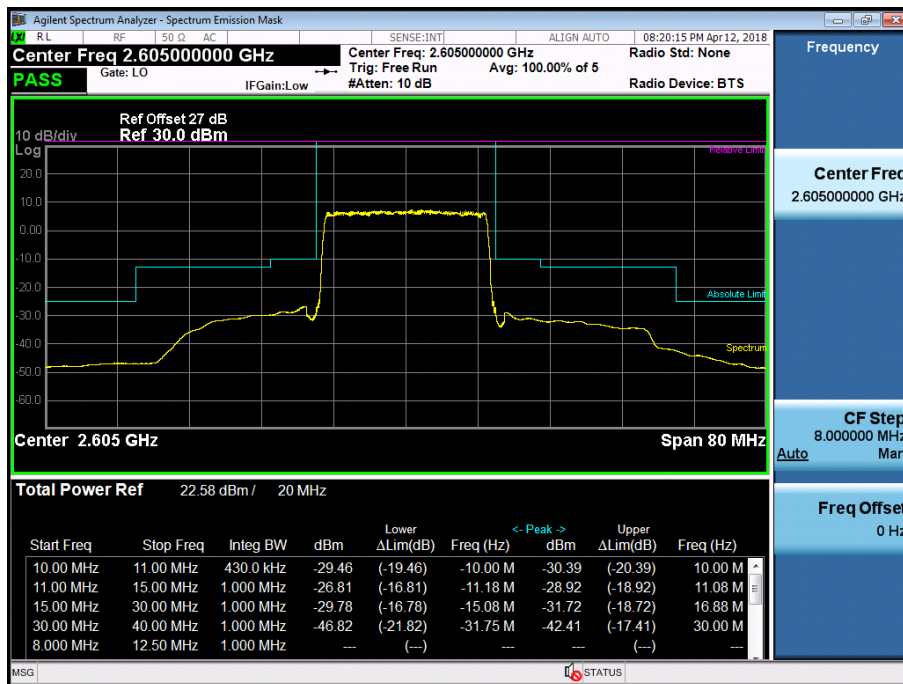
BAND 41. High Channel Edge Plot (15 MHz Ch.41165 QPSK\_RB75\_Offset 0)



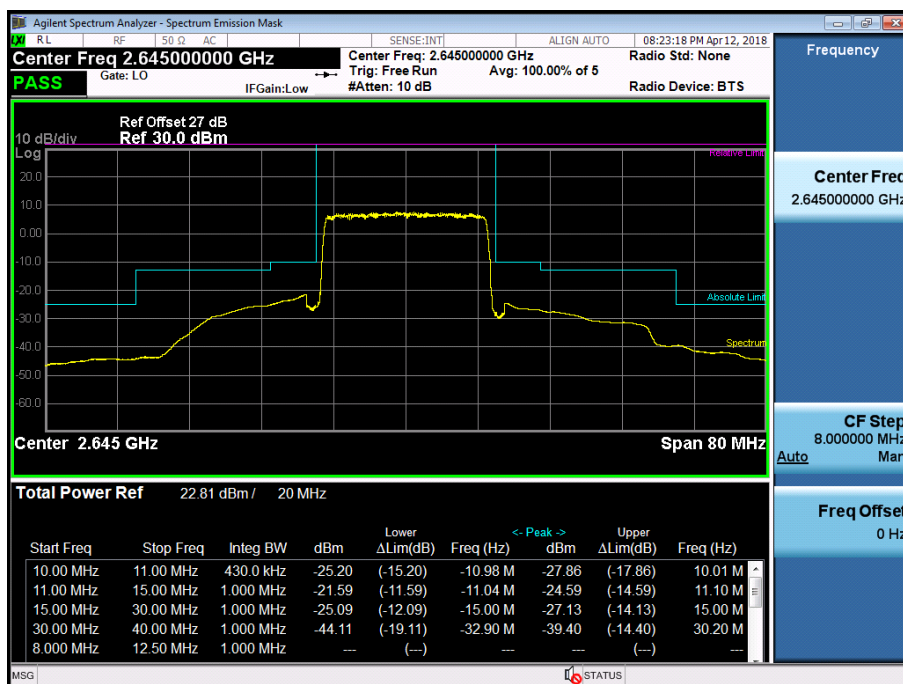
BAND 41. Low Channel Edge Plot (20 MHz Ch.40340 QPSK\_RB100\_Offset 0)



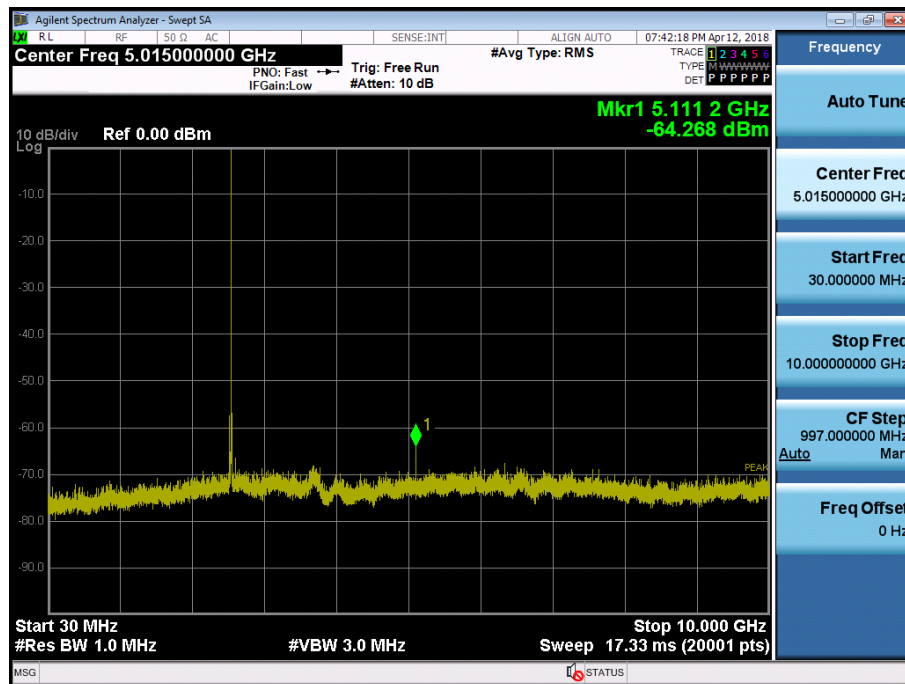
BAND 41. Mid Channel Edge Plot (20 MHz Ch.40740 QPSK RB 100)



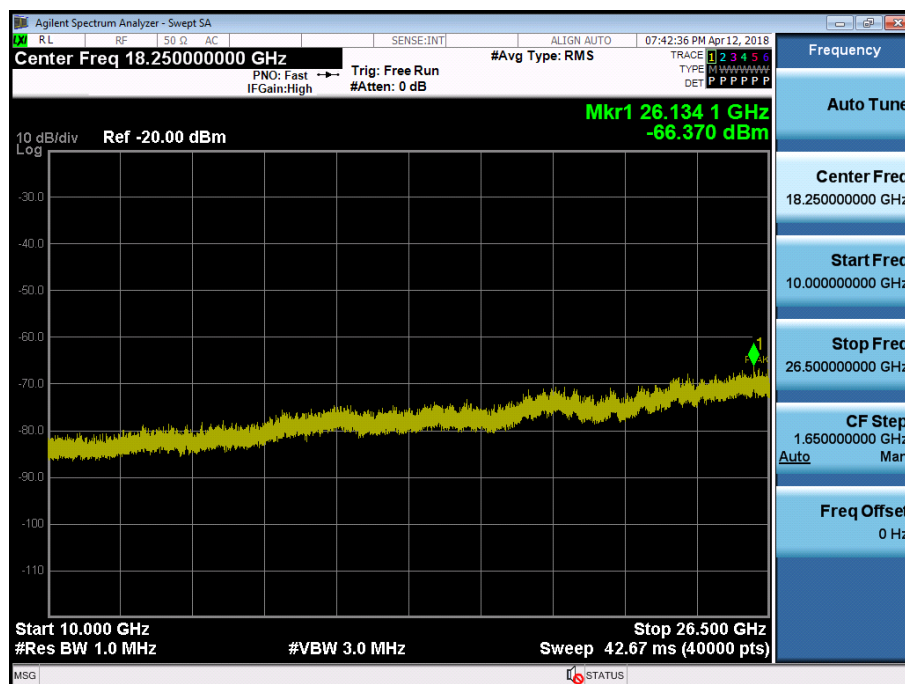
BAND 41. High Channel Edge Plot (20 MHz Ch.41140 QPSK\_RB100\_Offset 0)



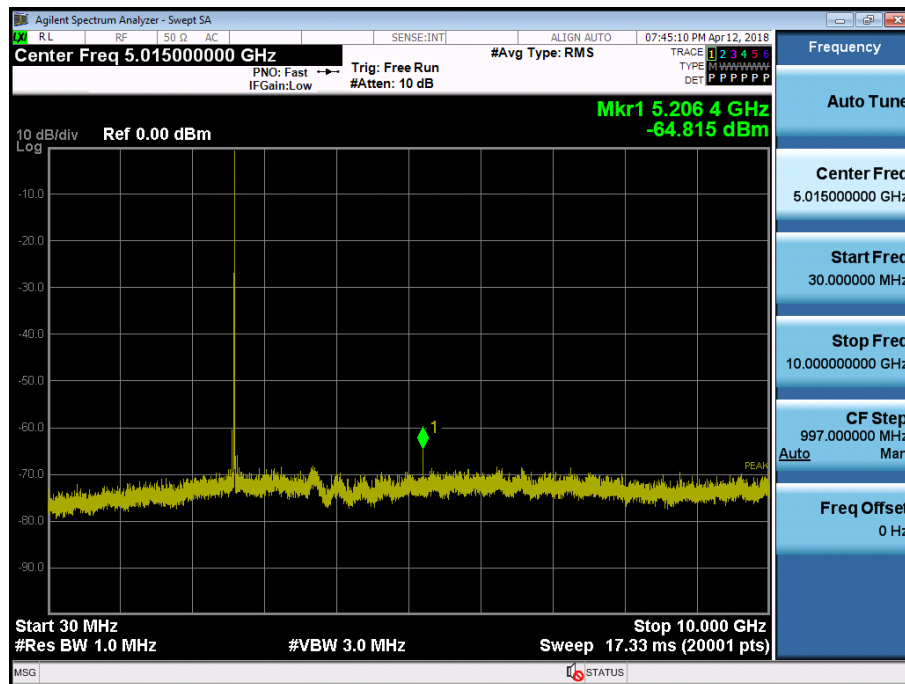
BAND 41. Conducted Spurious Plot 1 (5 MHz Ch.40265 QPSK RB 1, Offset 0)



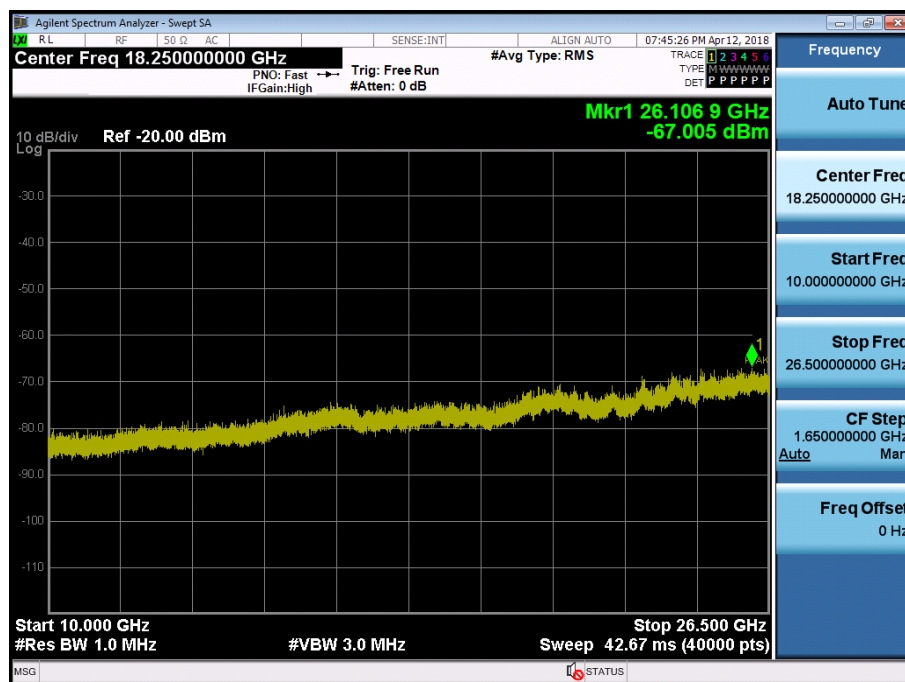
BAND 41. Conducted Spurious Plot 2 (5 MHz Ch. 40265 QPSK RB 1, Offset 0)



BAND 41. Conducted Spurious Plot 1 (5 MHz Ch.40740 QPSK RB 1, Offset 0)

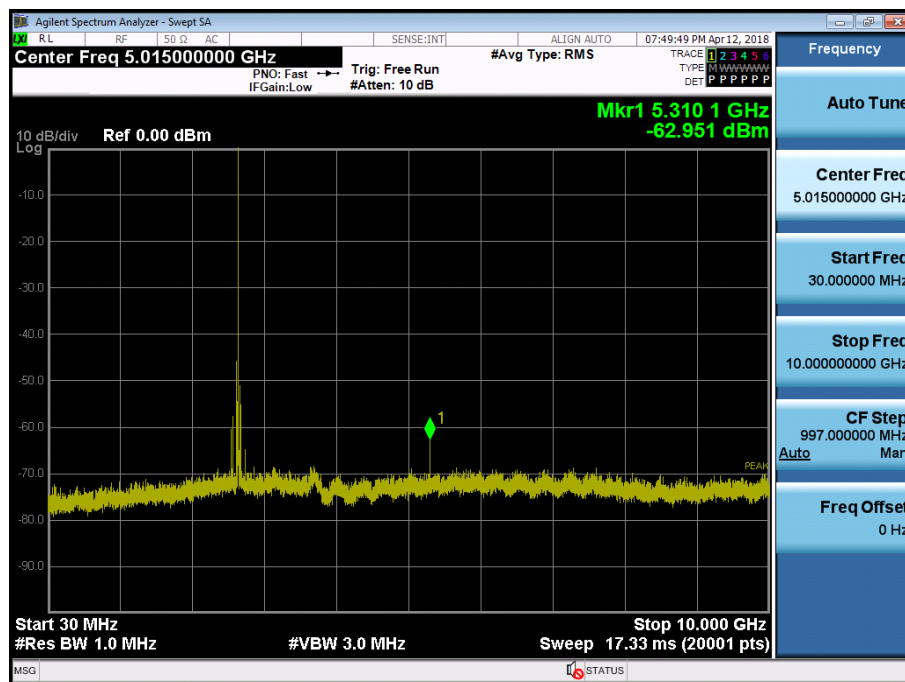


BAND 41. Conducted Spurious Plot 2 (5 MHz Ch. 40740 QPSK RB 1, Offset 0)

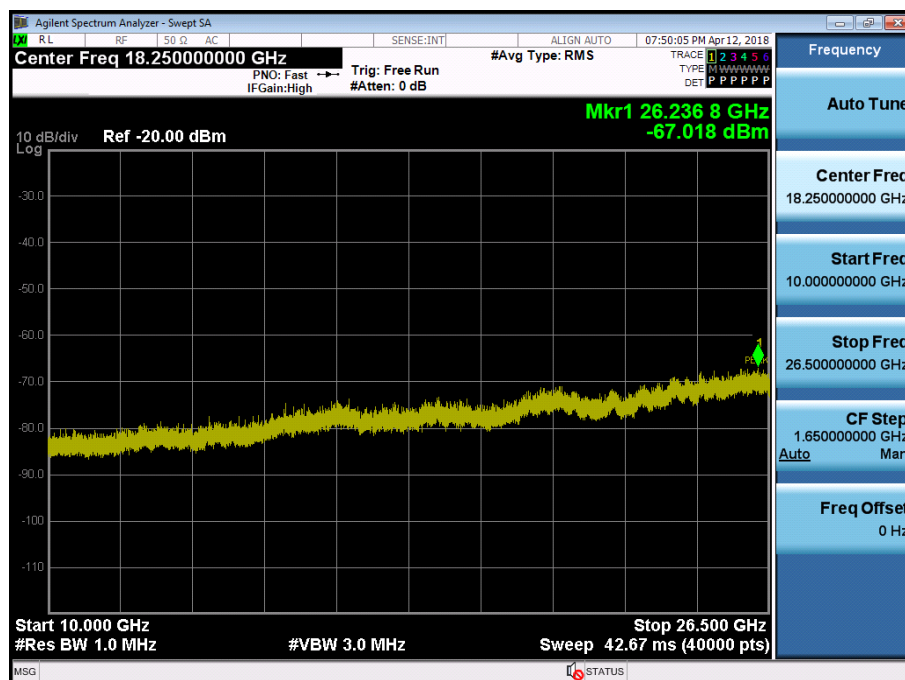




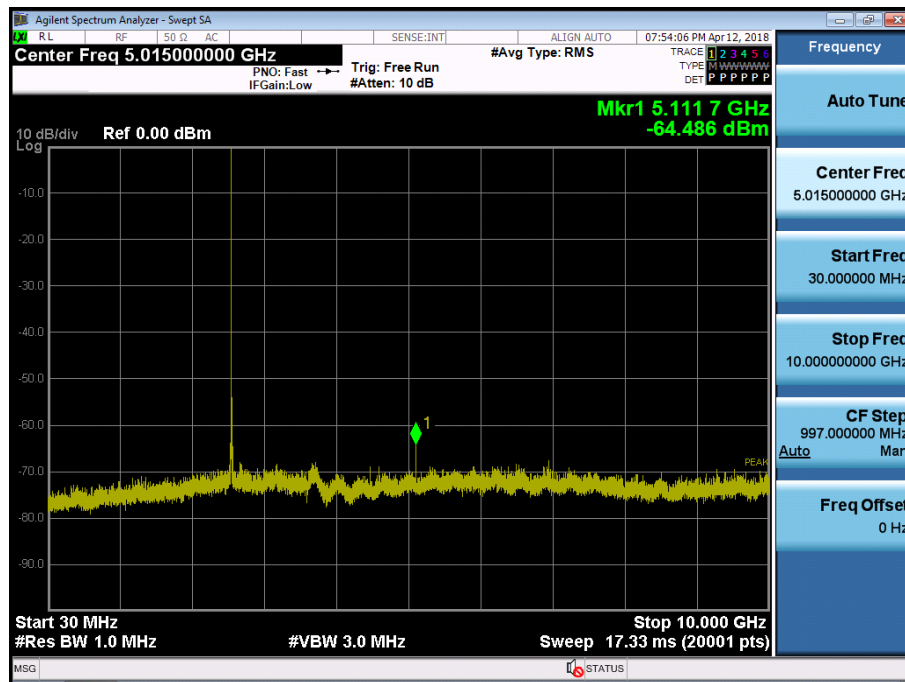
BAND 41. Conducted Spurious Plot 1 (5 MHz Ch.41215 QPSK RB 1, Offset 0)



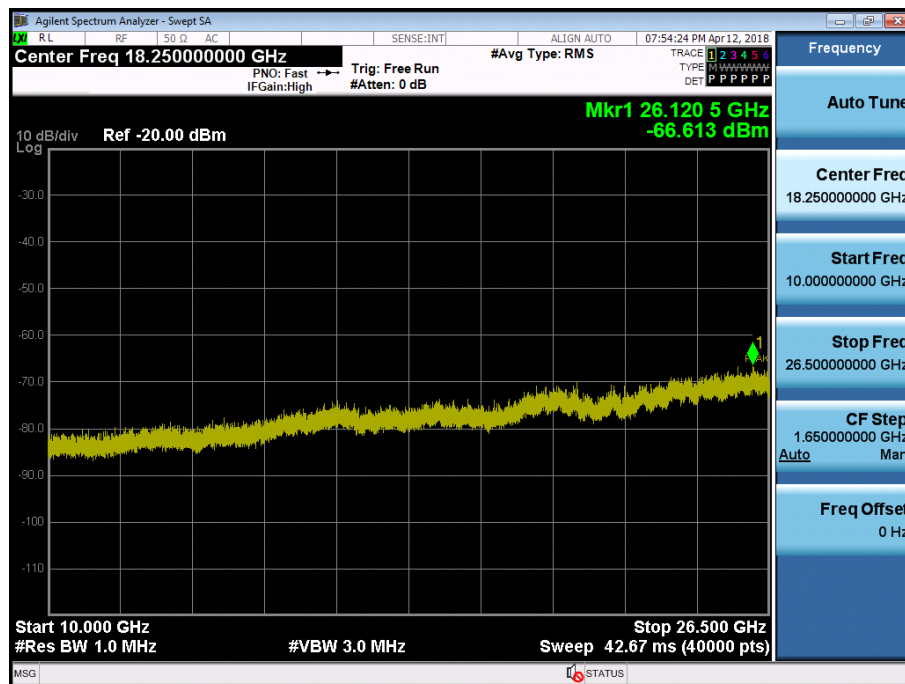
BAND 41. Conducted Spurious Plot 2 (5 MHz Ch. 41215 QPSK RB 1, Offset 0)



BAND 41. Conducted Spurious Plot 1 (10 MHz Ch.40290 QPSK RB 1, Offset 0)

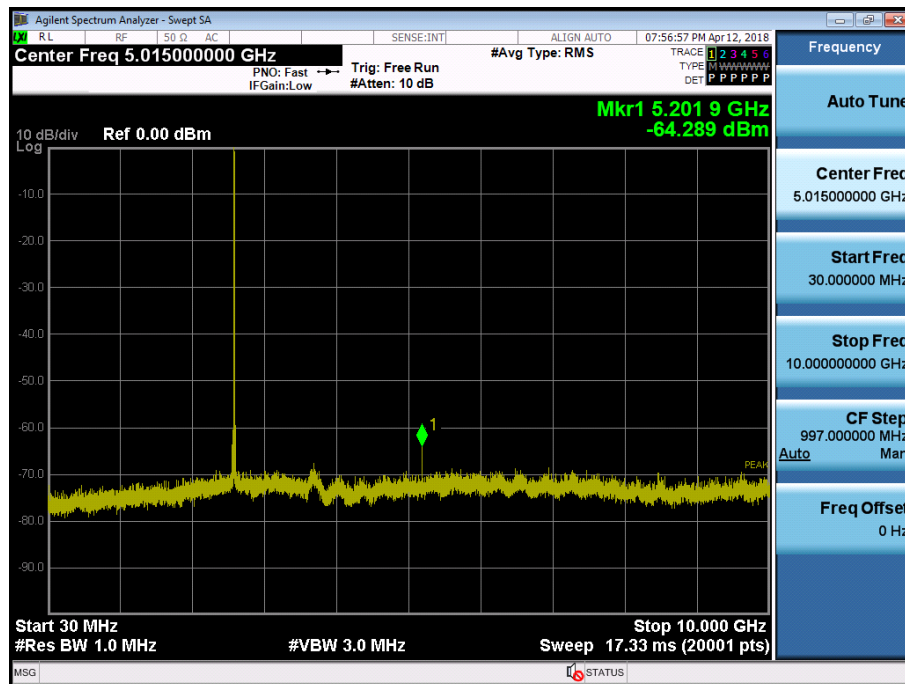


BAND 41. Conducted Spurious Plot 2 (10 MHz Ch. 40290 QPSK RB 1, Offset 0)

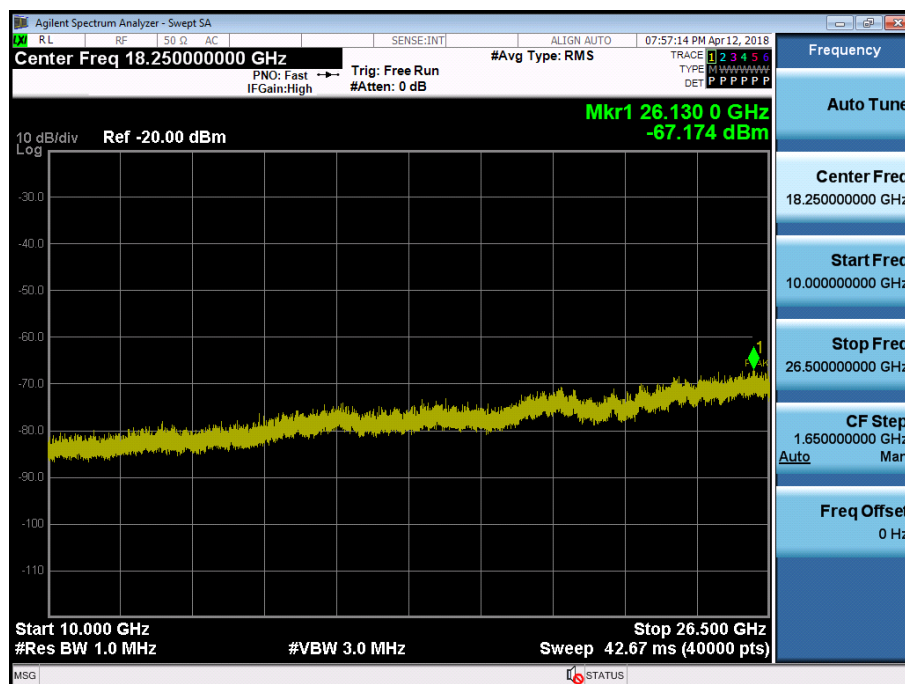




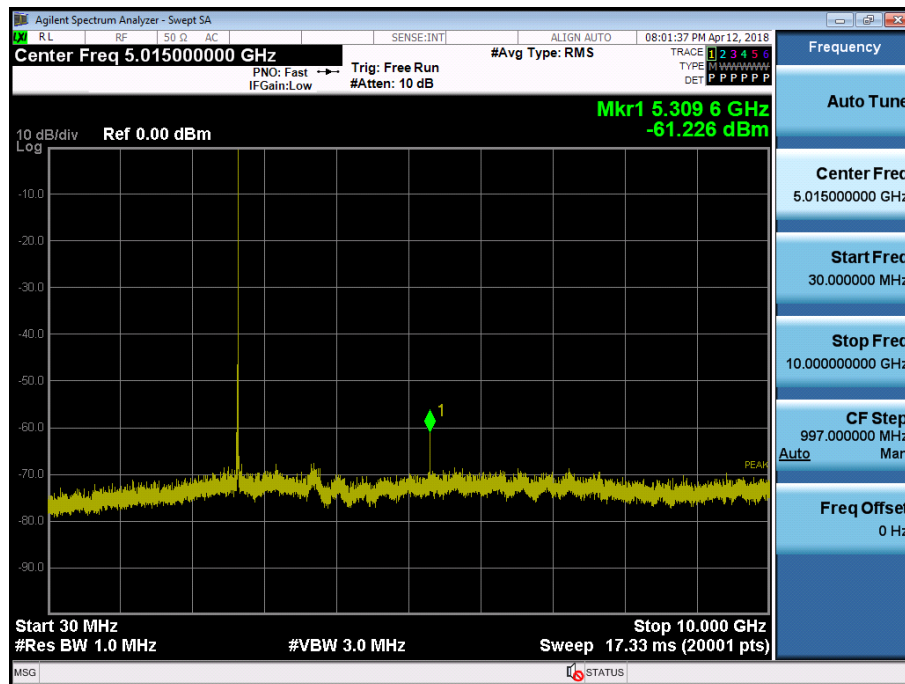
BAND 41. Conducted Spurious Plot 1 (10 MHz Ch.40740 QPSK RB 1, Offset 0)



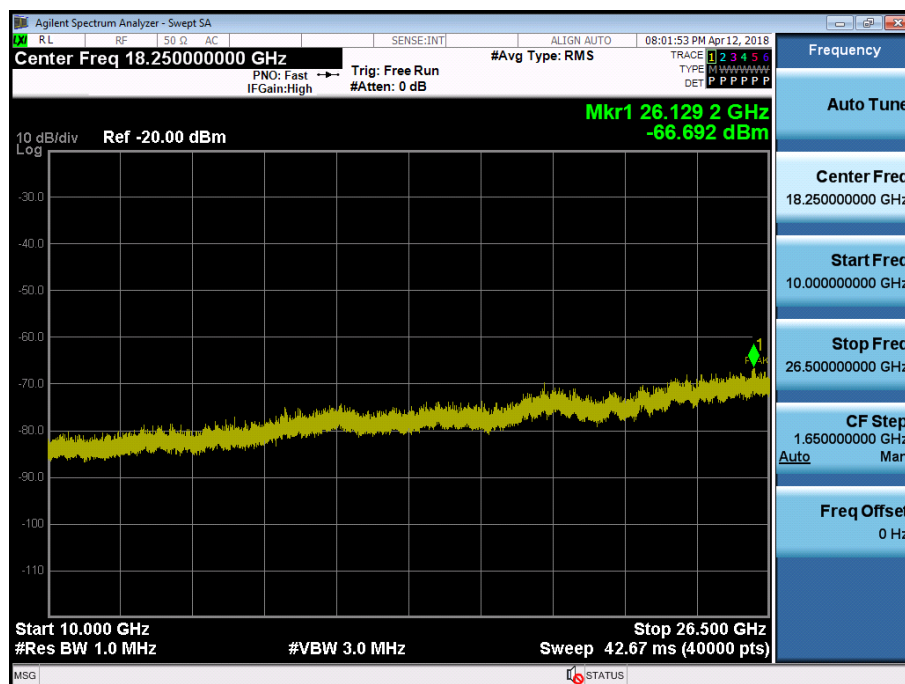
BAND 41. Conducted Spurious Plot 2 (10 MHz Ch. 40740 QPSK RB 1, Offset 0)



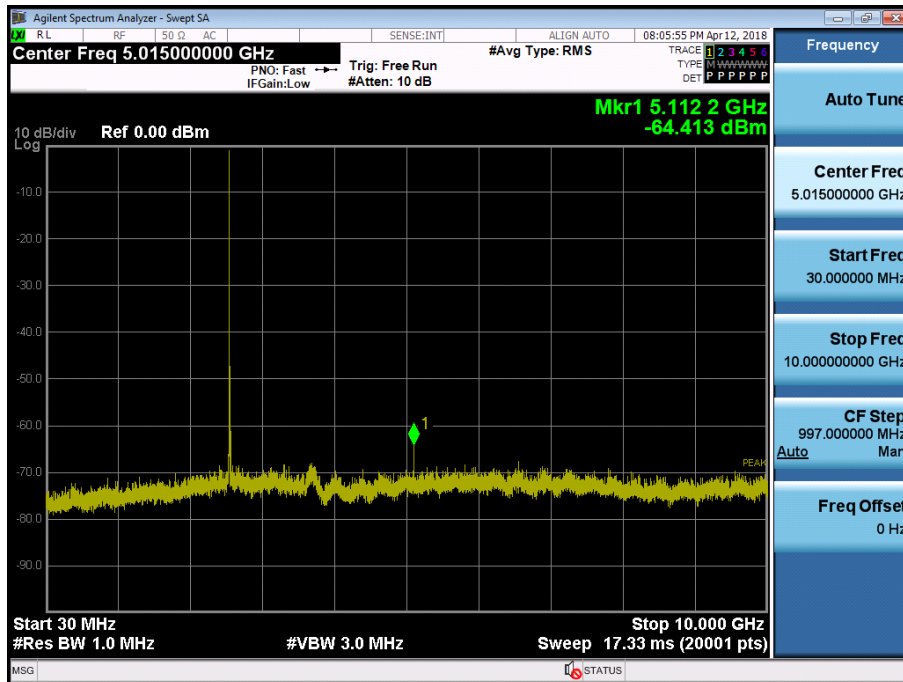
BAND 41. Conducted Spurious Plot 1 (10 MHz Ch. 41190 QPSK RB 1, Offset 0)



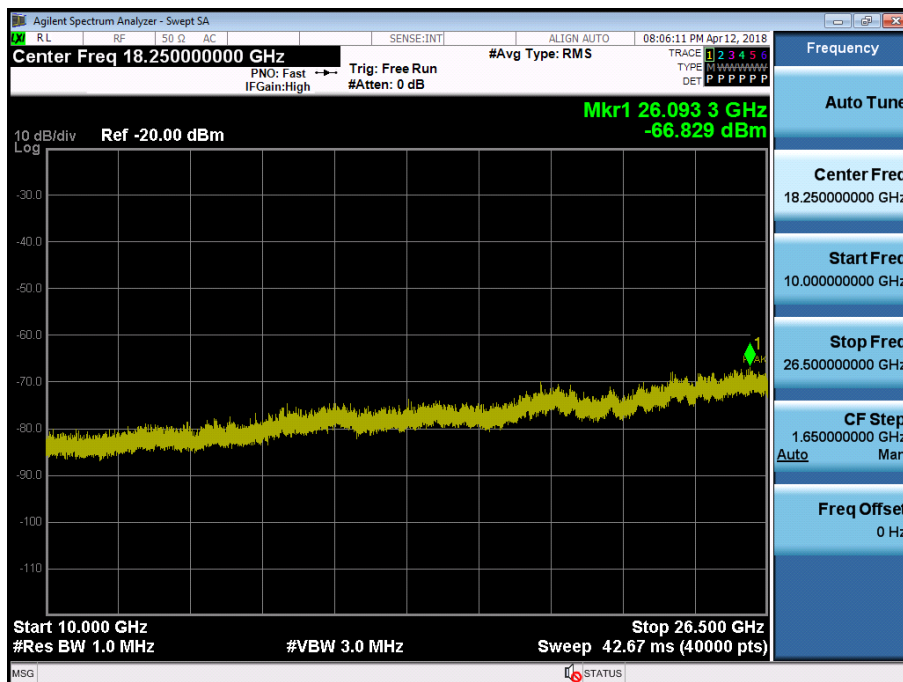
BAND 41. Conducted Spurious Plot 2 (10 MHz Ch. 41190 QPSK RB 1, Offset 0)



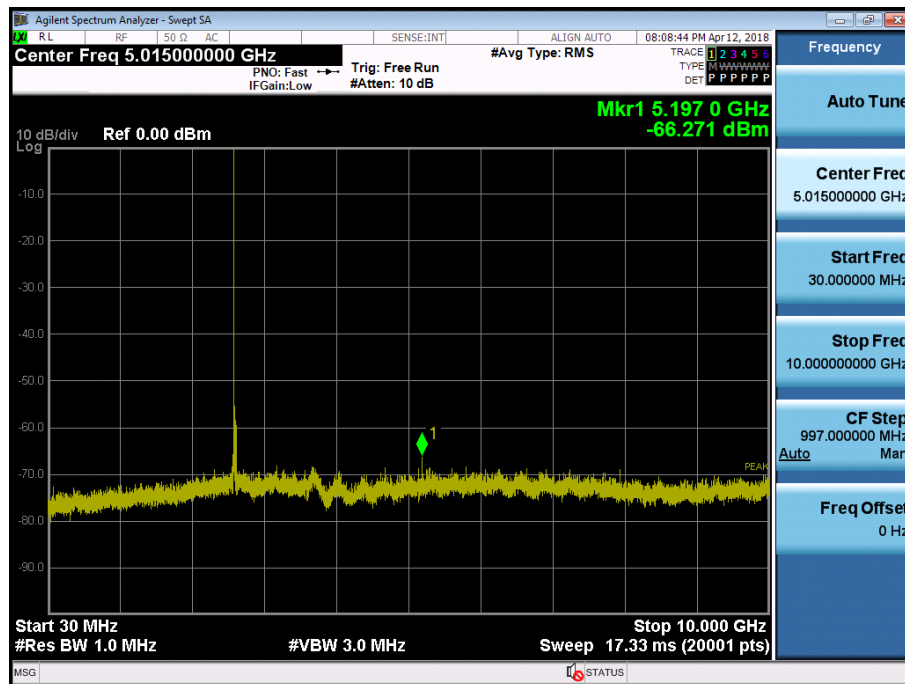
BAND 41. Conducted Spurious Plot 1 (15 MHz Ch.40315 QPSK RB 1, Offset 0)



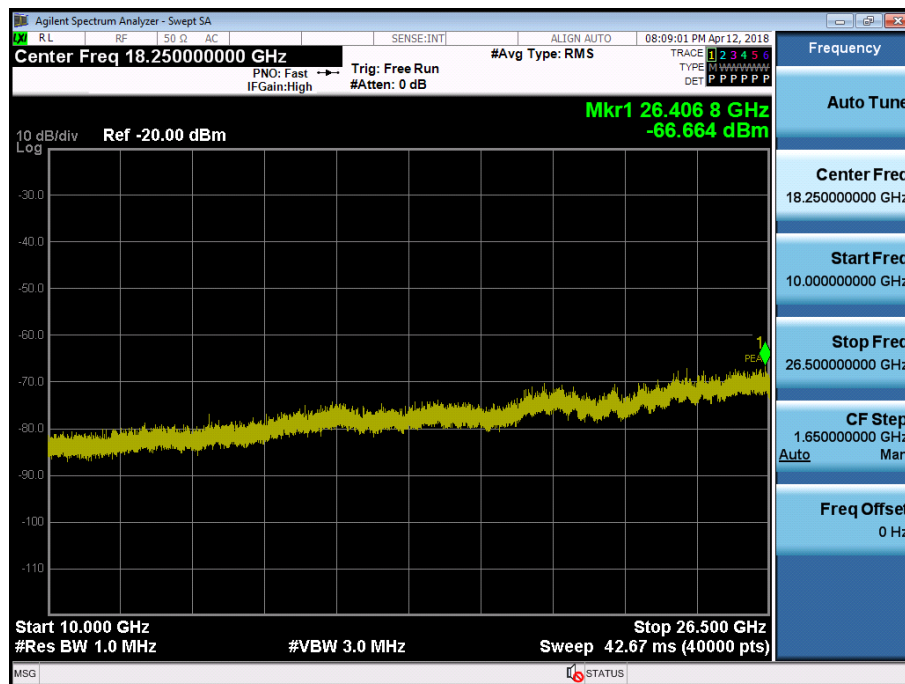
BAND 41. Conducted Spurious Plot 2 (15 MHz Ch. 40315 QPSK RB 1, Offset 0)



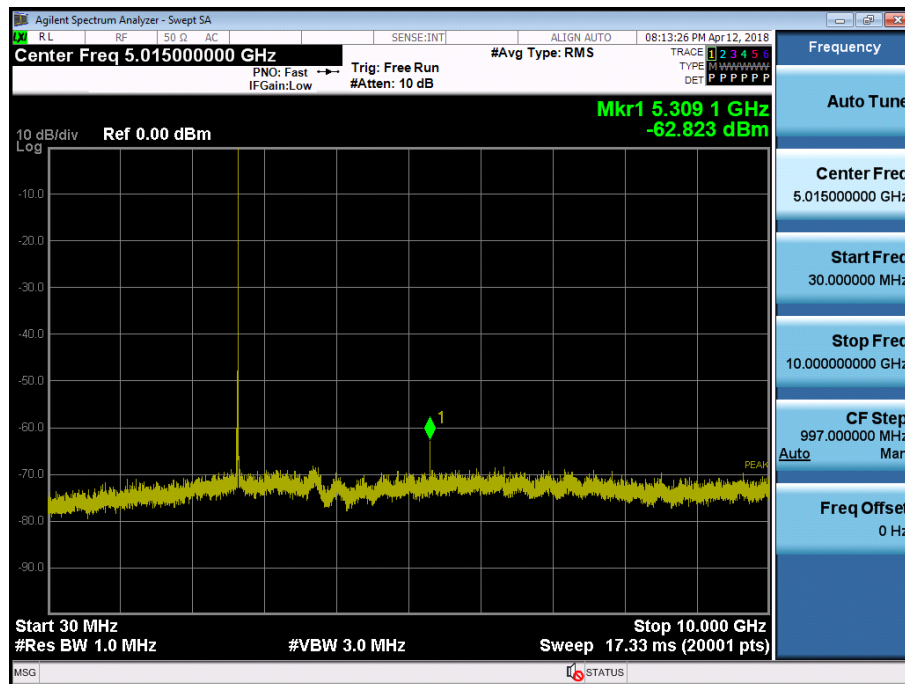
BAND 41. Conducted Spurious Plot 1 (15 MHz Ch.40740 QPSK RB 1, Offset 0)



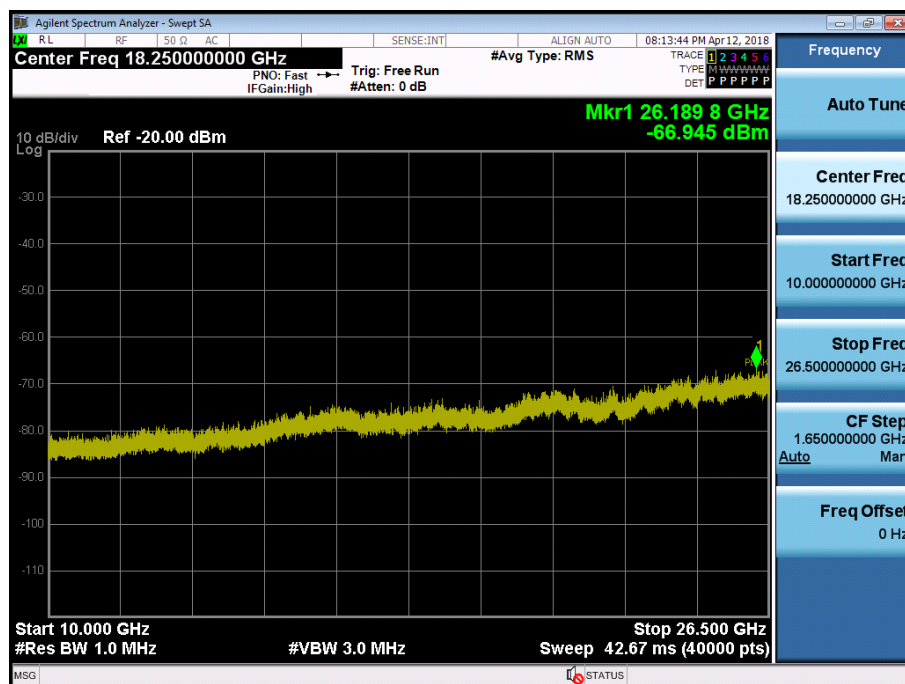
BAND 41. Conducted Spurious Plot 2 (15 MHz Ch. 40740 QPSK RB 1, Offset 0)



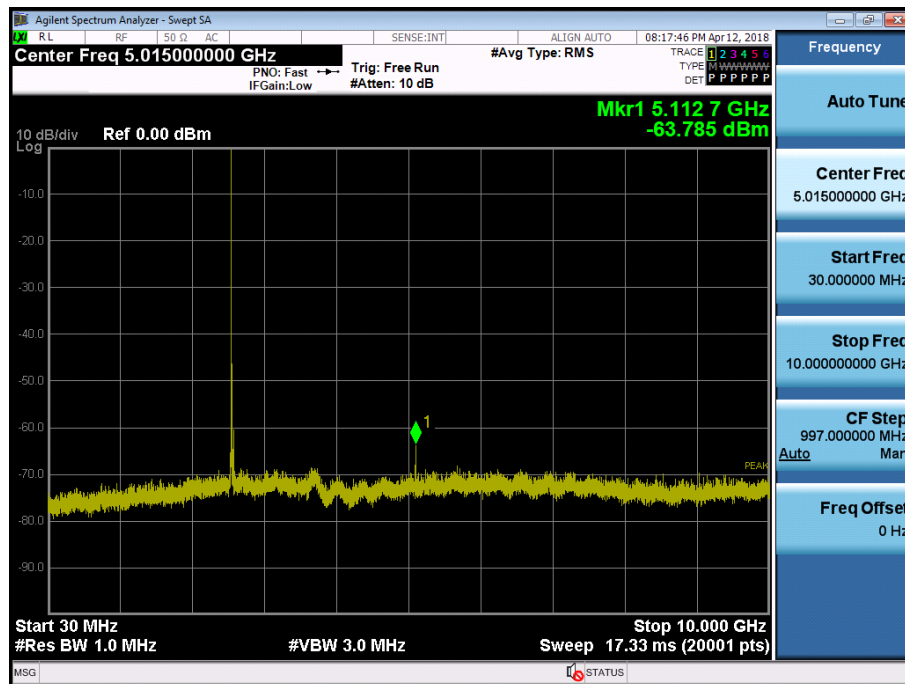
BAND 41. Conducted Spurious Plot 1 (15 MHz Ch.41165 QPSK RB 1, Offset 0)



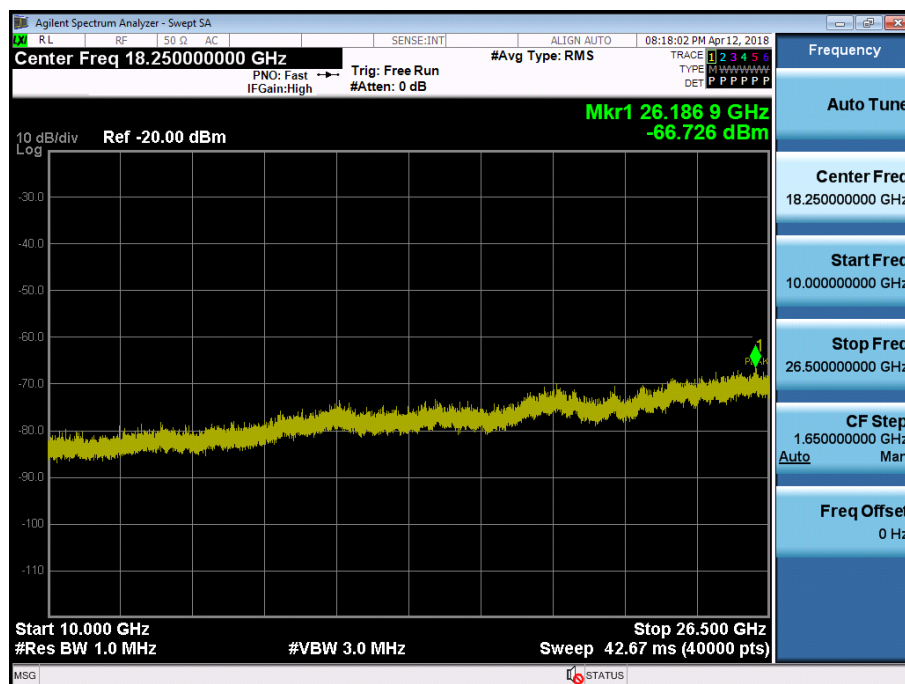
BAND 41. Conducted Spurious Plot 2 (15 MHz Ch. 41165 QPSK RB 1, Offset 0)



## BAND 41. Conducted Spurious Plot 1 (20 MHz Ch.40340 QPSK RB 1, Offset 0)

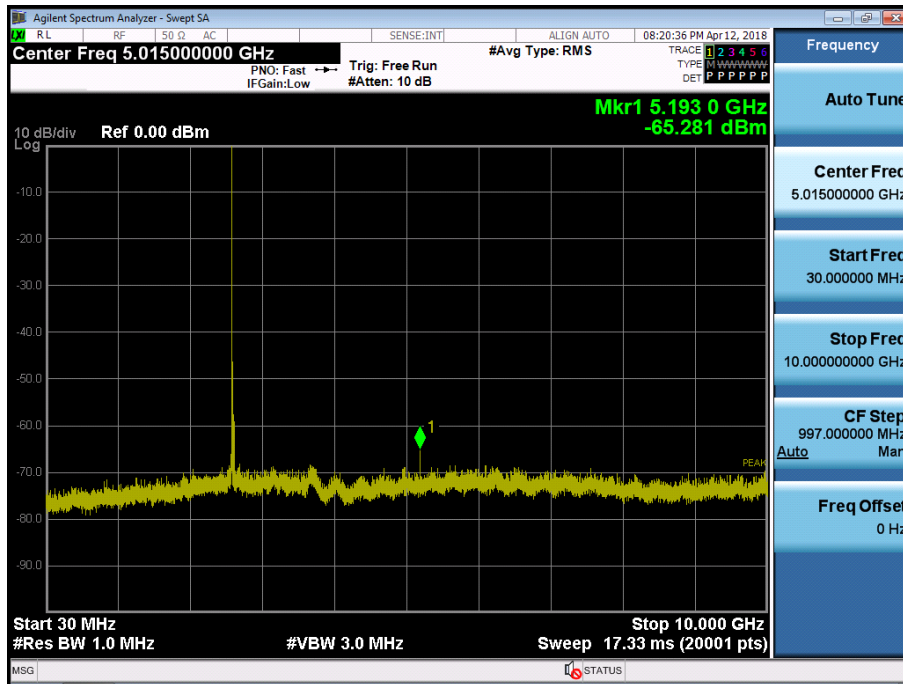


## BAND 41. Conducted Spurious Plot 2 (20 MHz Ch. 40340 QPSK RB 1, Offset 0)

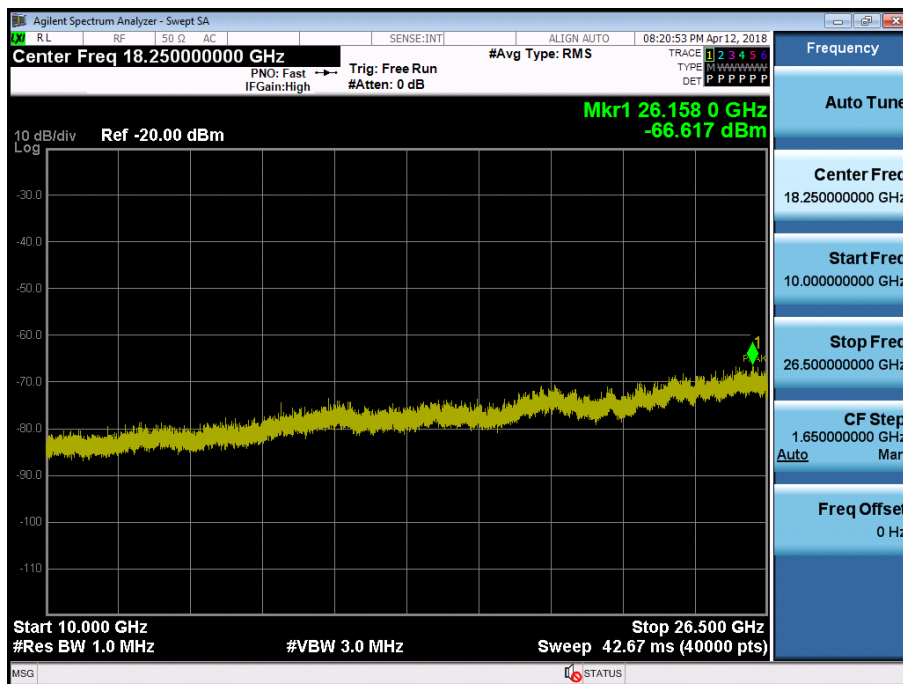




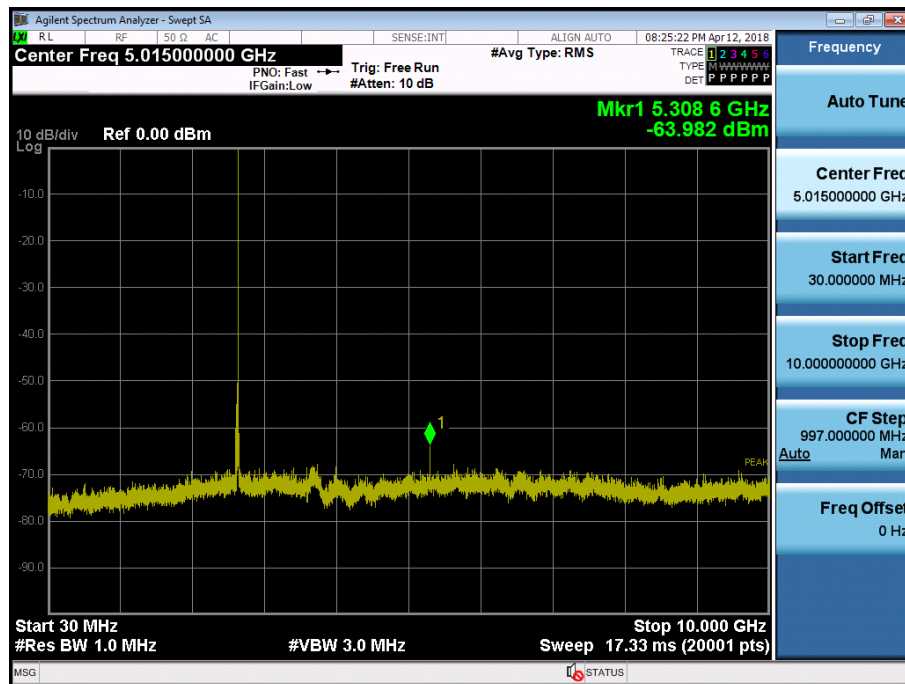
BAND 41. Conducted Spurious Plot 1 (20 MHz Ch.40740 QPSK RB 1, Offset 0)



BAND 41. Conducted Spurious Plot 2 (20 MHz Ch. 40740 QPSK RB 1, Offset 0)



BAND 41. Conducted Spurious Plot 1 (20 MHz Ch.41140 QPSK RB 1, Offset 0)



BAND 41. Conducted Spurious Plot 2 (20 MHz Ch. 41140 QPSK RB 1, Offset 0)

