



**FCC 47 CFR PART 15 SUBPART C**

**CERTIFICATION TEST REPORT  
FOR  
GSM/WCDMA/LTE PHONE + BLUETOOTH & 2.4GHz DTS b/g/n**

**MODEL NUMBER: LG-L33L, LGL33L, L33L**

**FCC ID: ZNFL33L**

**REPORT NUMBER: 14I19561-E2**

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Revision History

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# 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** LG ELECTRONICS MOBILECOMM U.S.A., INC  
**EUT DESCRIPTION:** GSM/WCDMA/LTE PHONE + BLUETOOTH & 2.4GHz DTS b/g/n  
**MODEL:** LG-L33L, LGL33L, L33L  
**SERIAL NUMBER:** 1HRKA (CONDUCTED), 1HRK9 (RADIATED)  
**DATE TESTED:** DECEMBER 12-31, 2014

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

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LAB ENGINEER  
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## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2009, FCC CFR 47 Part 2, and FCC CFR 47 Part 15C.

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
<input type="checkbox"/> Chamber A(IC: 2324B-1)	<input type="checkbox"/> Chamber D(IC: 2324B-4)
<input checked="" type="checkbox"/> Chamber B(IC: 2324B-2)	<input type="checkbox"/> Chamber E(IC: 2324B-5)
<input checked="" type="checkbox"/> Chamber C(IC: 2324B-3)	<input type="checkbox"/> Chamber F(IC: 2324B-6)
	<input type="checkbox"/> Chamber G(IC: 2324B-7)
	<input type="checkbox"/> Chamber H(IC: 2324B-8)

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://ts.nist.gov/standards/scopes/2000650.htm>.

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

### 4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \text{Cable} \\ &\text{Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

### 4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 18000 MHz	4.94 dB

Uncertainty figures are valid to a confidence level of 95%.

## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE PHONE + BLUETOOTH & 2.4GHz DTS b/g/n

### 5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2402 - 2480	Basic GFSK	7.91	6.18
2402 - 2480	Enhanced 8PSK	8.22	6.64

Note: GFSK, Pi/4-DQPSK, 8PSK average Power are all investigated, The GFSK & 8PSK Power are the worst case. Testing is based on this mode to show compliance. For average power data please refer to section 8.6.

### 5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of 2.9dBi.

## **5.4. WORST-CASE CONFIGURATION AND MODE**

Radiated emission and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X, Y, Z, it was determined that X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X orientation.

## 5.5. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	LG	MCS-01WR	RD4X0891946	N/A
Earphone	LG	LG-L33L	N/A	N/A

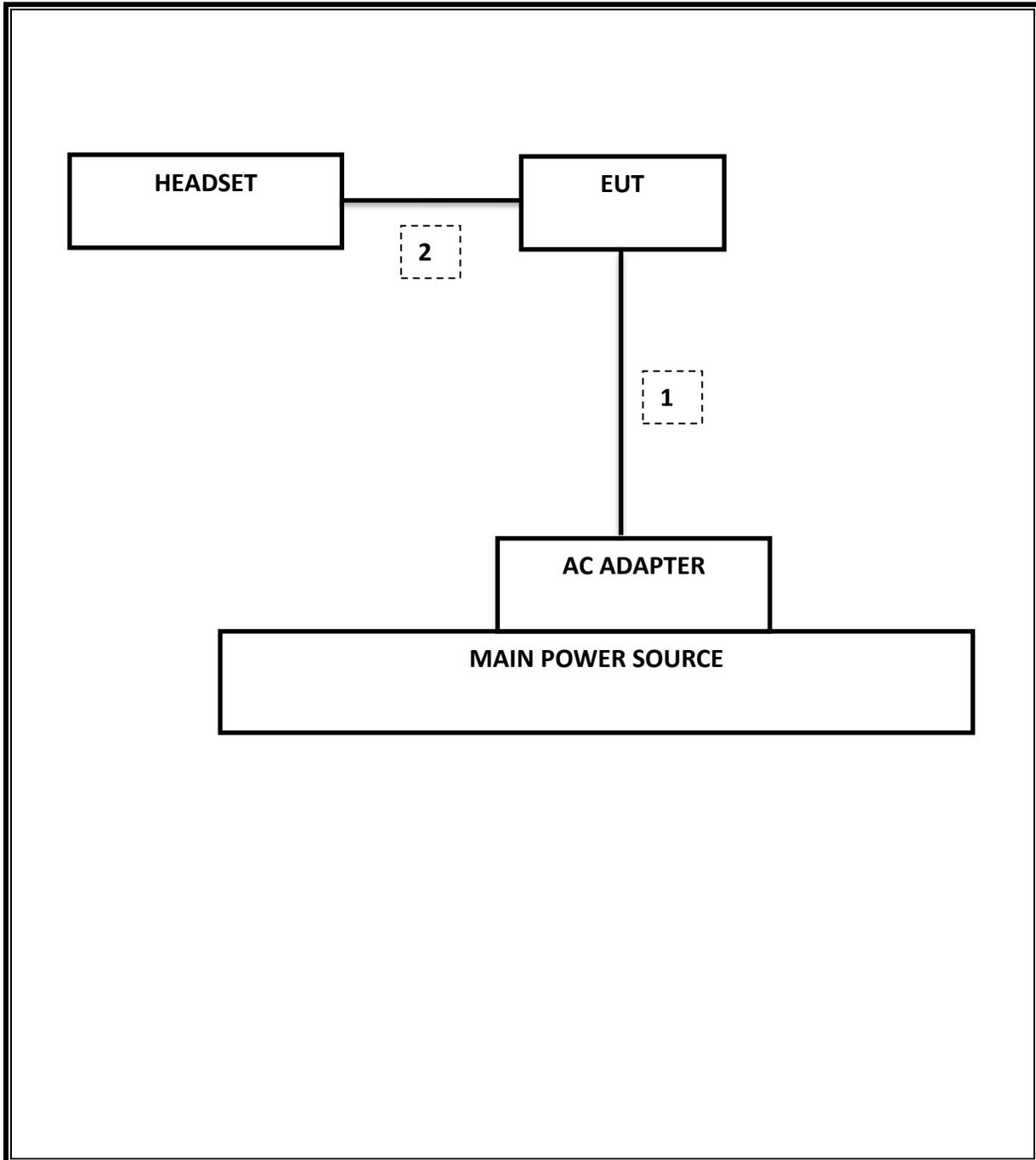
### I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC Power	1	Mini-USB	Shielded	1.2m	N/A
2	Audio	1	Mini-Jack	Unshielded	1m	N/A

### TEST SETUP

EUT was set in the Hidden menu mode to enable BT communications.

**SETUP DIAGRAM FOR TESTS**



## 6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment List				
Description	Manufacturer	Model	Asset	Cal Due
Antenna, Biconolog, 30MHz-1 GHz	Sunol Sciences	JB1	C01171	02/13/15
Antenna, Horn, 18GHz	EMCO	3115	C00783	10/25/15
Antenna, Horn, 26.5 GHz	ARA	MWH-1826/B	C00980	11/14/15
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00580	01/28/15
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01052	10/22/15
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/15
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15
LISN, 30 MHz	FCC	50/250-25-2	C00626	01/14/15
Reject Filter, 2.4GHz	Micro-Tronics	BRM50702	N02684	CNR
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15

## 7. SUMMARY TABLE

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Worst Case
2.1049	RSS-GEN 4.6	Occupied Band width (99%)	N/A	Conducted	Pass	1.193 MHz
2.1051, 15.247 (d)	RSS-210 A8.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	-42.74 dBm
15.247 (b)(1)	RSS-210 A8.4	TX conducted output power	<21dBm		Pass	8.22 dBm
15.247 (a)(1)	RSS-210 A8.1(b)	Hopping frequency separation	> 25KHz		Pass	1 MHz
15.247 (a)(1)(iii)	RSS-210 A8.1(d)	Number of Hopping channels	More than 15 non-overlapping channels		Pass	79 ch
15.247 (a)(1)(iii)	RSS-210 A8.1(d)	Avg Time of Occupancy	< 0.4sec		Pass	0.27 s
15.207 (a)	RSS-GEN 7.2.2	AC Power Line conducted emissions	Section 10	Radiated	Pass	50.62 dBuV(AV)
15.205, 15.209	RSS-210 Clause 2.6, RSS-210 Clause 6	Radiated Spurious Emission	< 54dBuV/m		Pass	41.06 dBuV/m

## 8. ANTENNA PORT TEST RESULTS

### 8.1. 20 dB AND 99% BANDWIDTH

#### LIMIT

None; for reporting purposes only.

#### TEST PROCEDURE

DA 00-705: The transmitter output is connected to a spectrum analyzer. The RBW is set to  $\geq 1\%$  of the 20 dB bandwidth. The VBW is set to  $\geq$  RBW. The sweep time is coupled.

#### RESULTS

##### 8.1.1. BASIC DATA RATE GFSK MODULATION

Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	2402	0.940	0.899
Middle	2441	0.938	0.899
High	2480	0.940	0.900
Worst		0.940	0.899

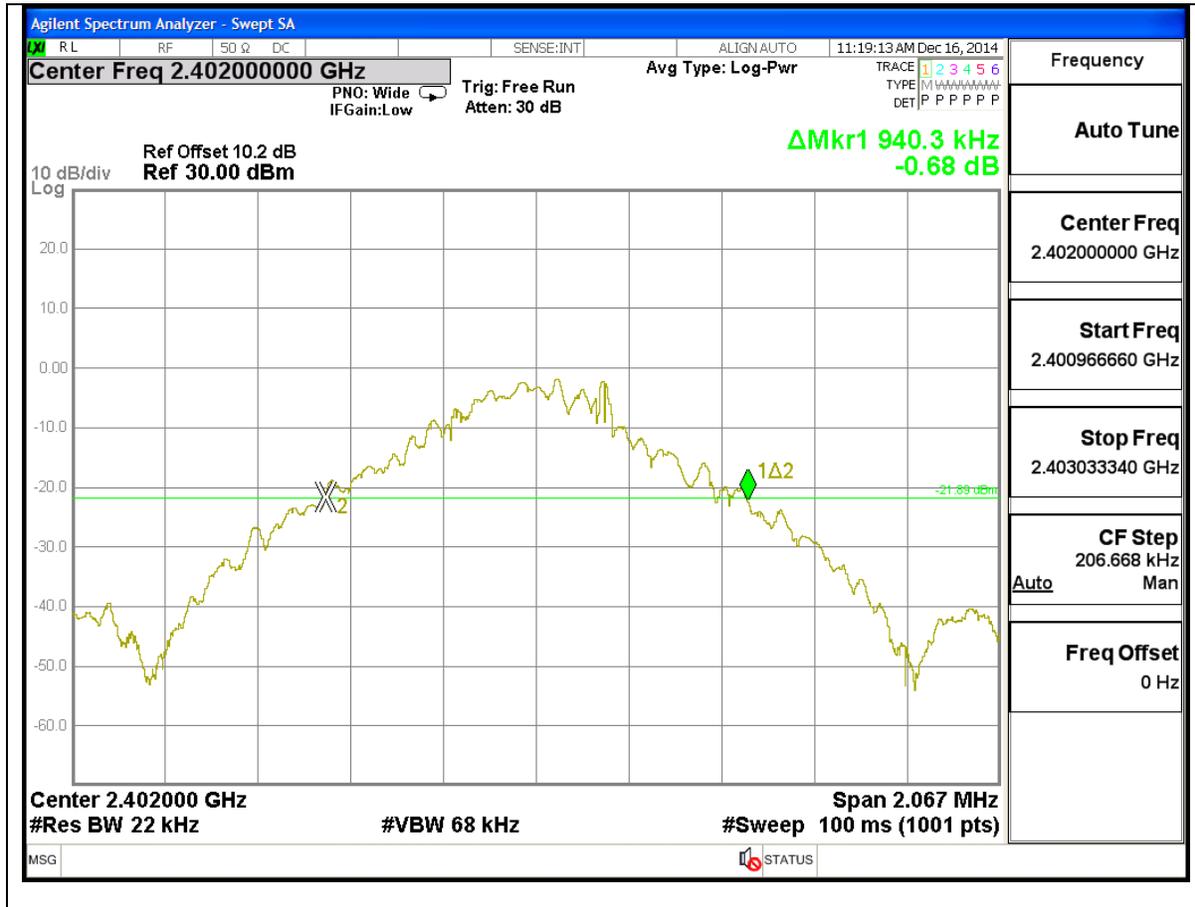
##### 8.1.2. ENHANCED DATA RATE 8PSK MODULATION

Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	2402	1.275	1.193
Middle	2441	1.284	1.187
High	2480	1.279	1.187
Worst		1.284	1.193

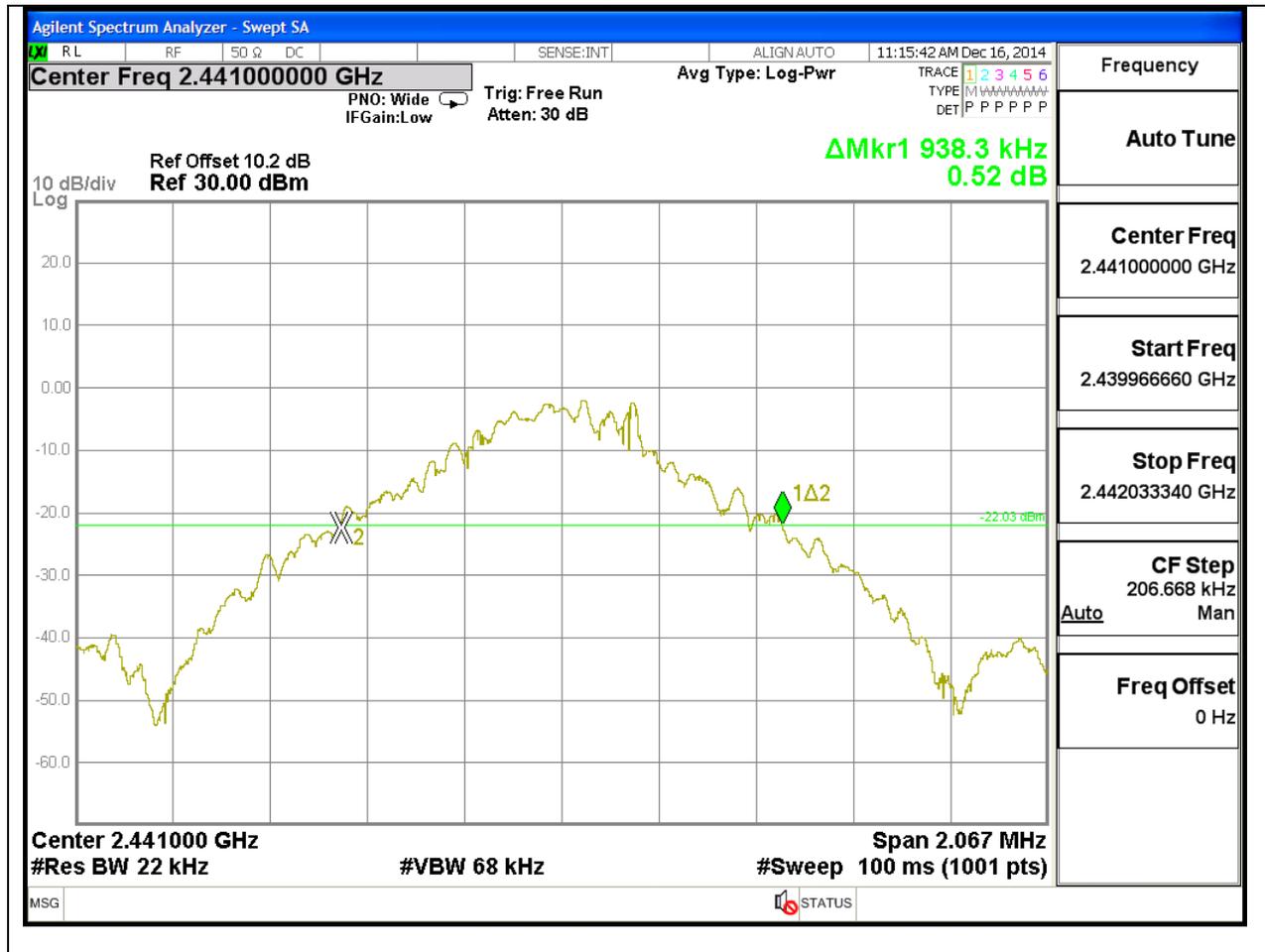
## 20 dB AND 99% BANDWIDTH PLOTS

### GFSK 20 dB BANDWIDTH

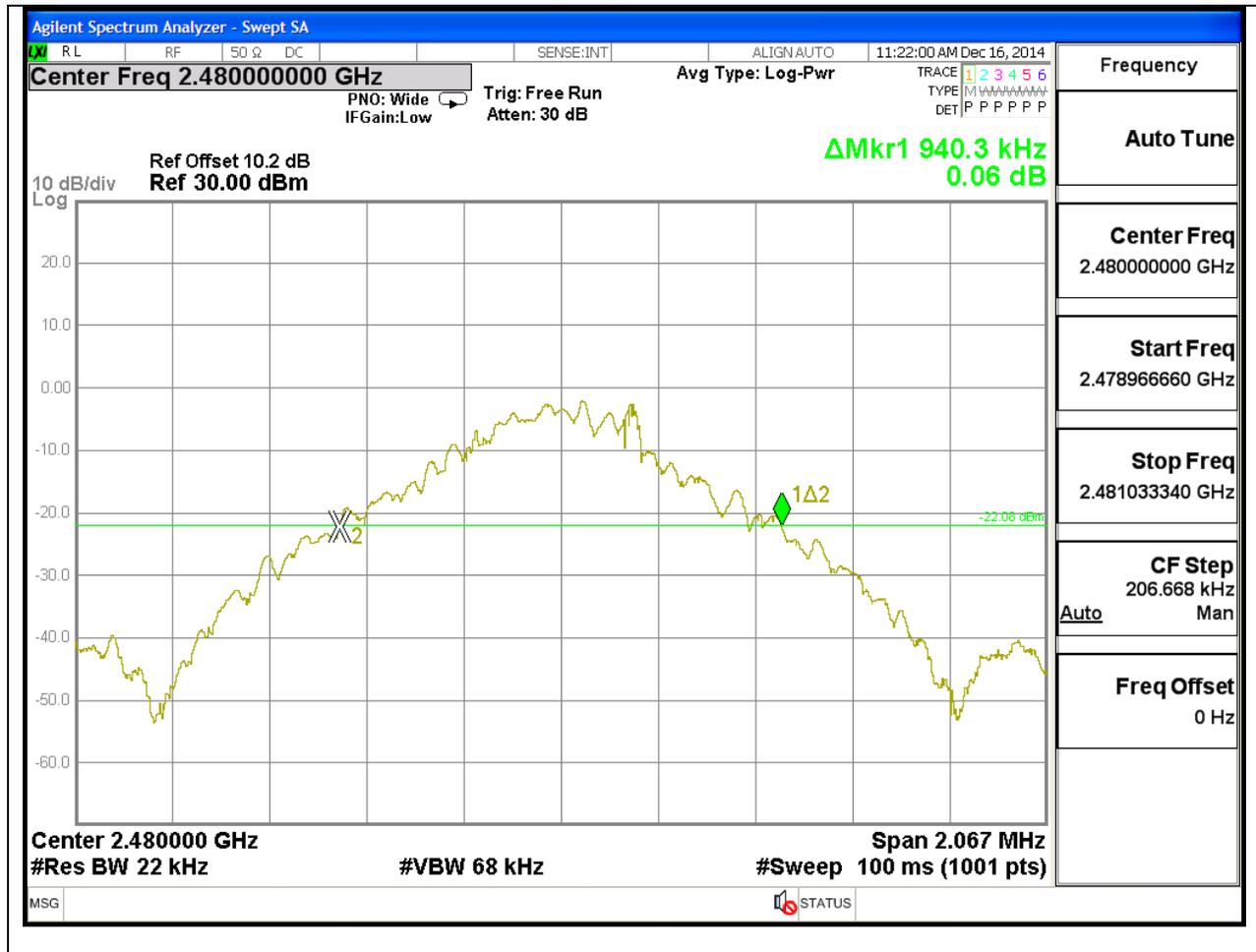
#### LOW CHANNEL



### MID CHANNEL

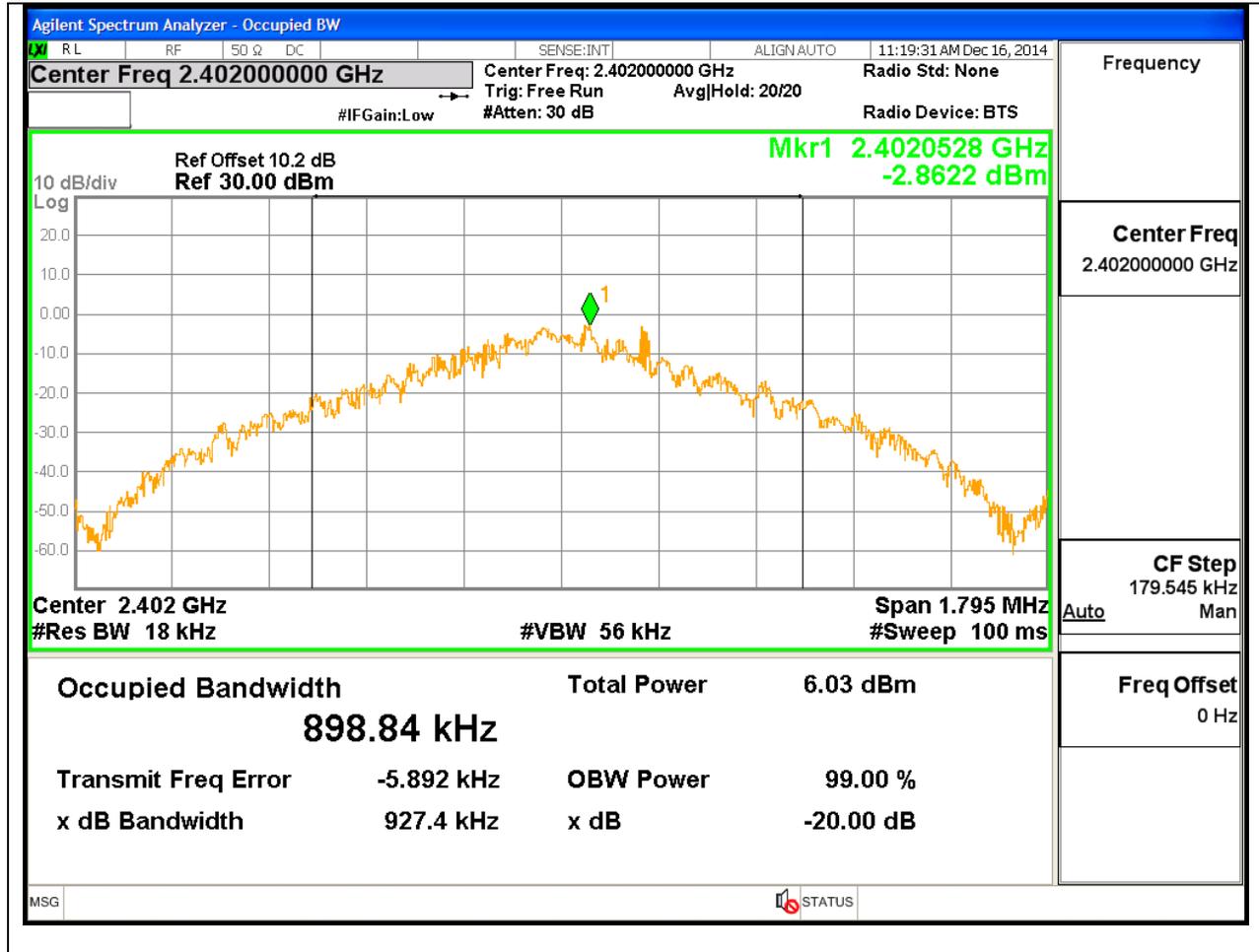


### HIGH CHANNEL

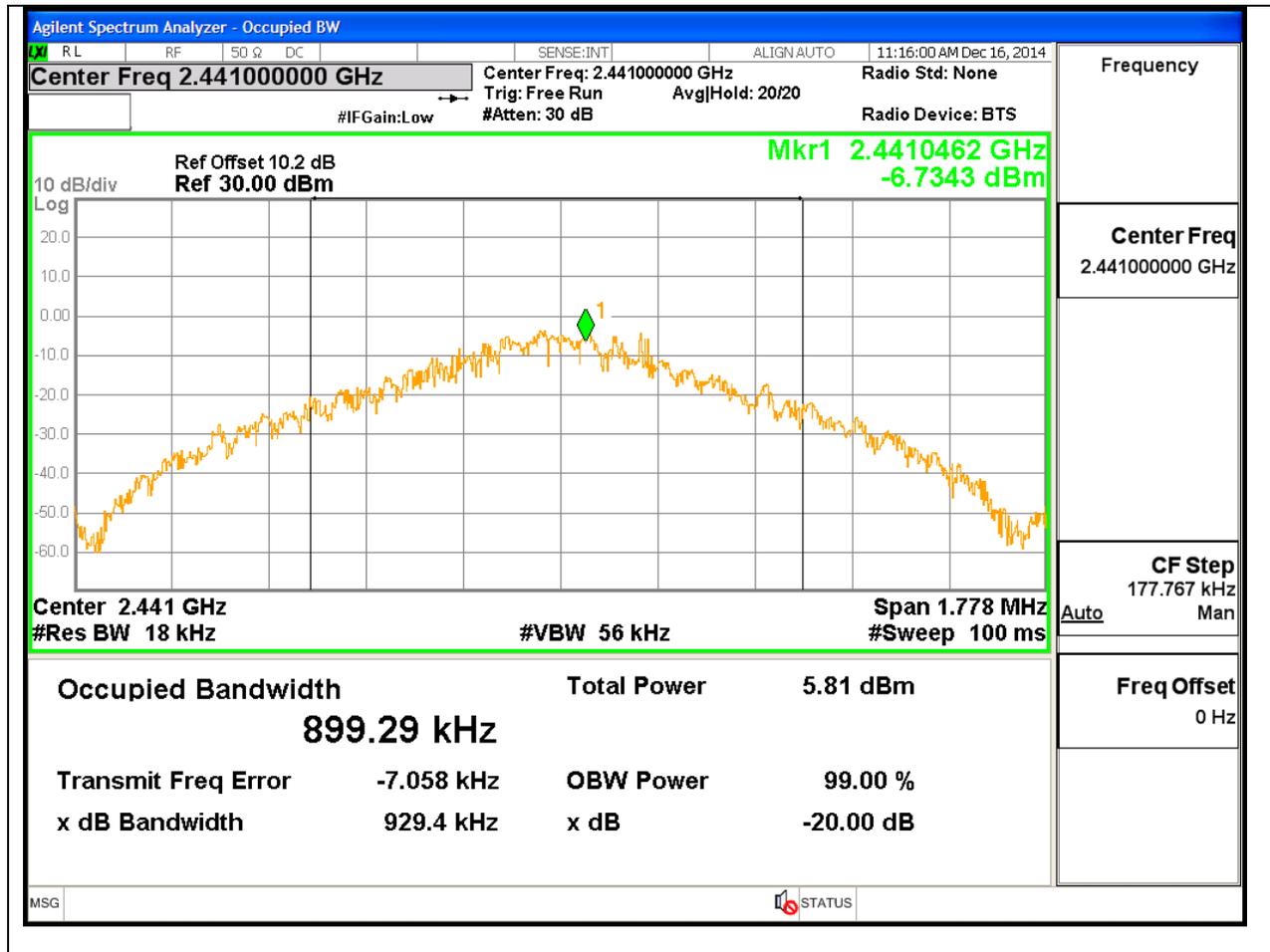


**GFSK 99% BANDWIDTH**

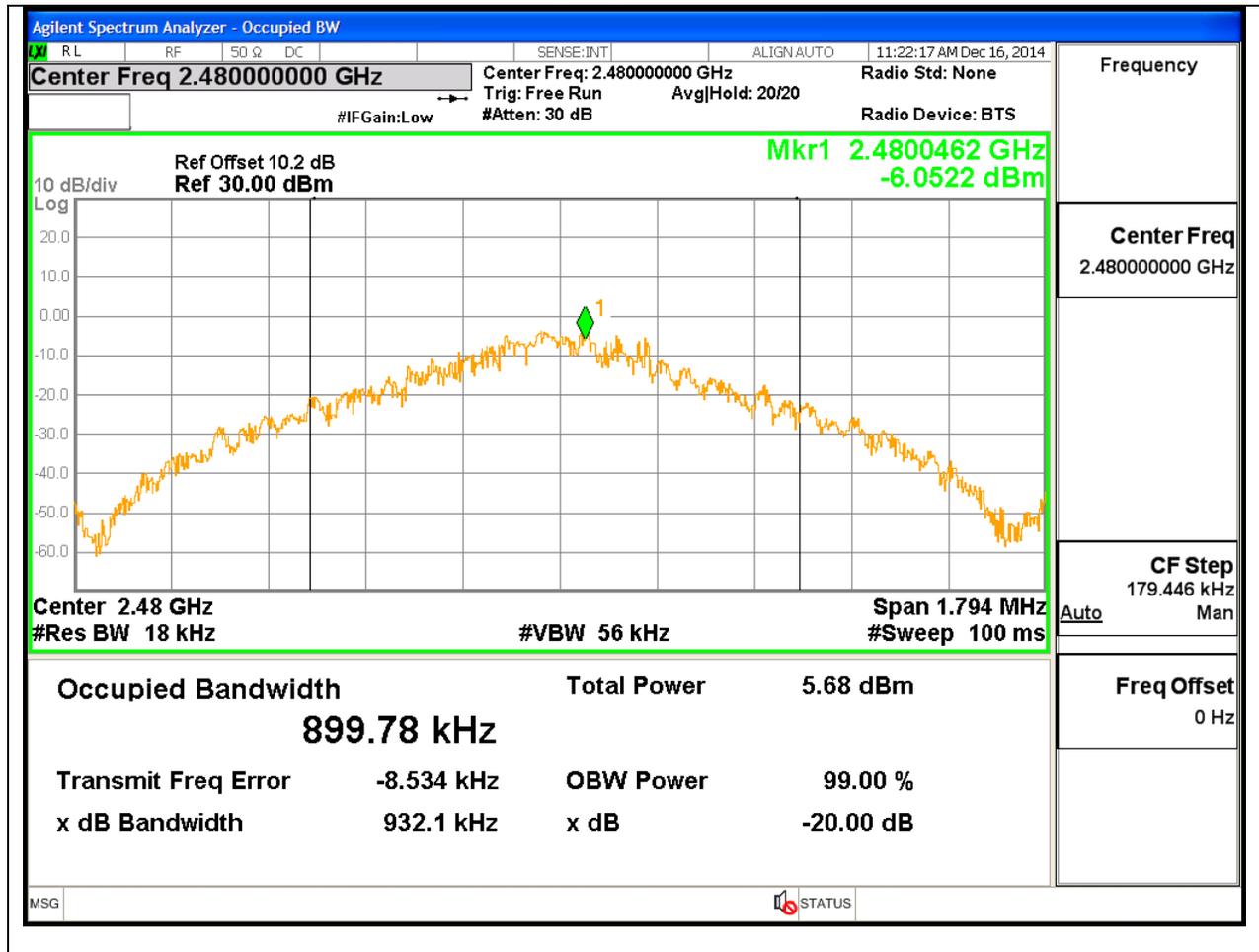
**LOW CHANNEL**



### MID CHANNEL



### HIGH CHANNEL

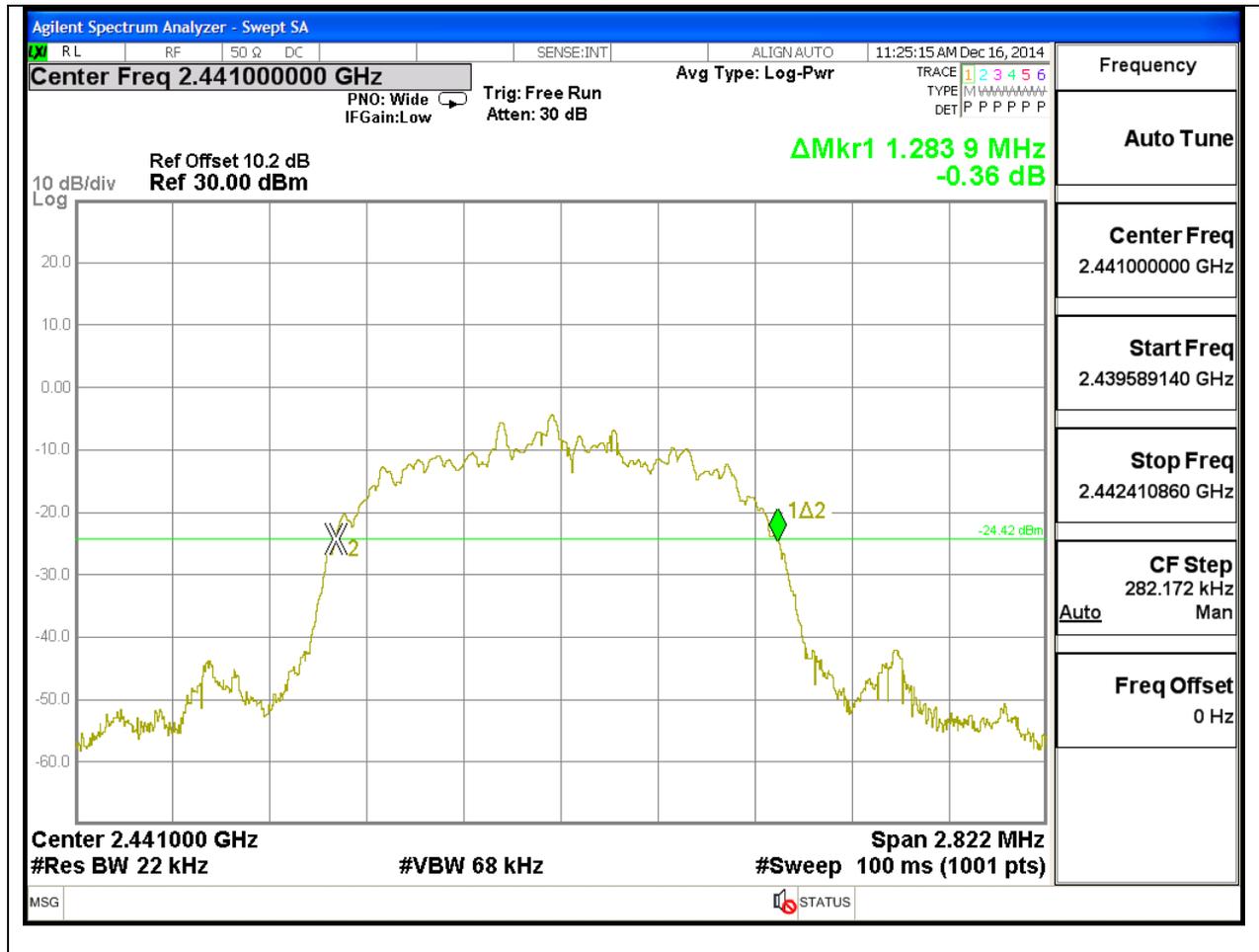


**8PSK 20 dB BANDWIDTH**

**LOW CHANNEL**



**MID CHANNEL**

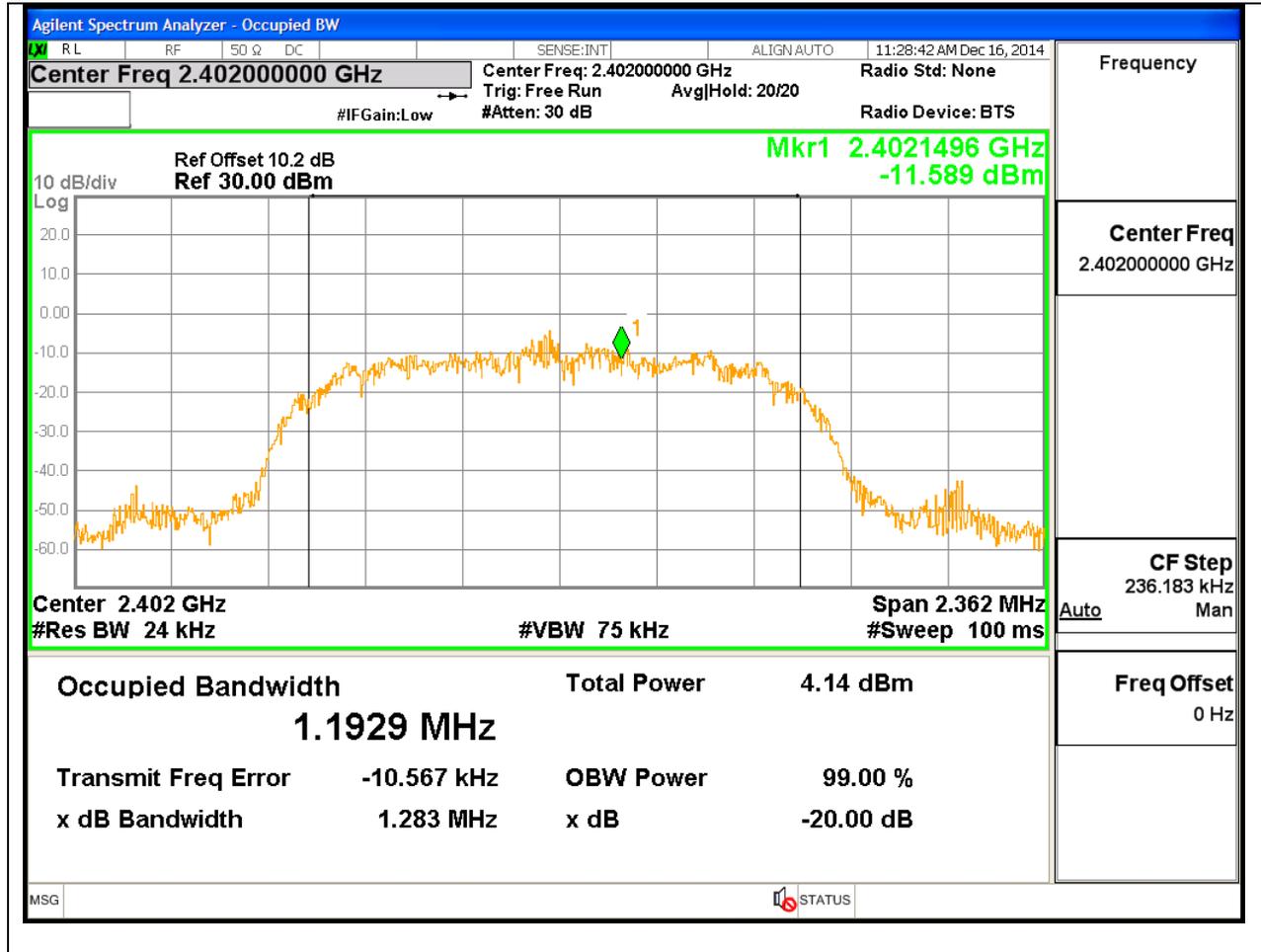


### HIGH CHANNEL

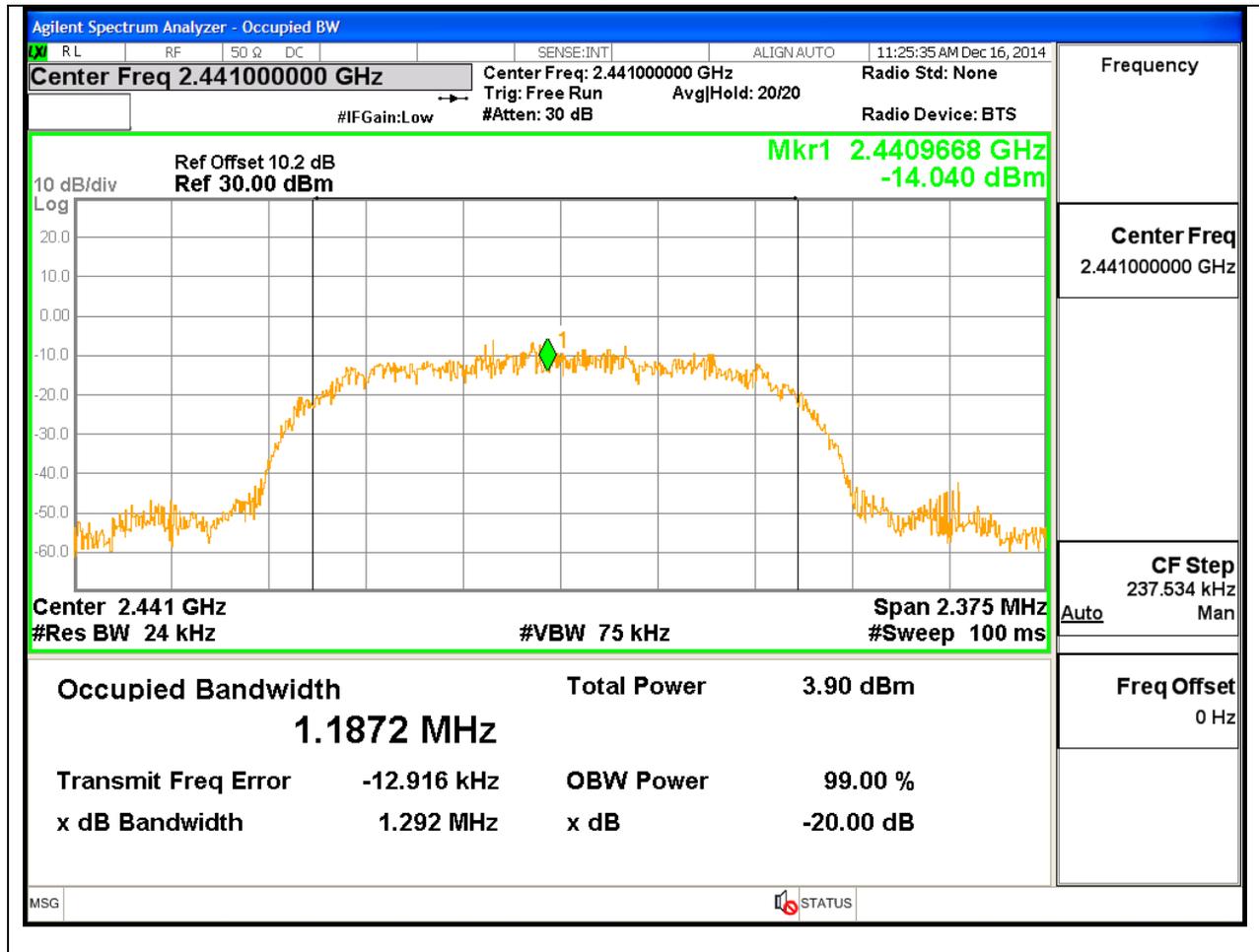


**8PSK 99% BANDWIDTH**

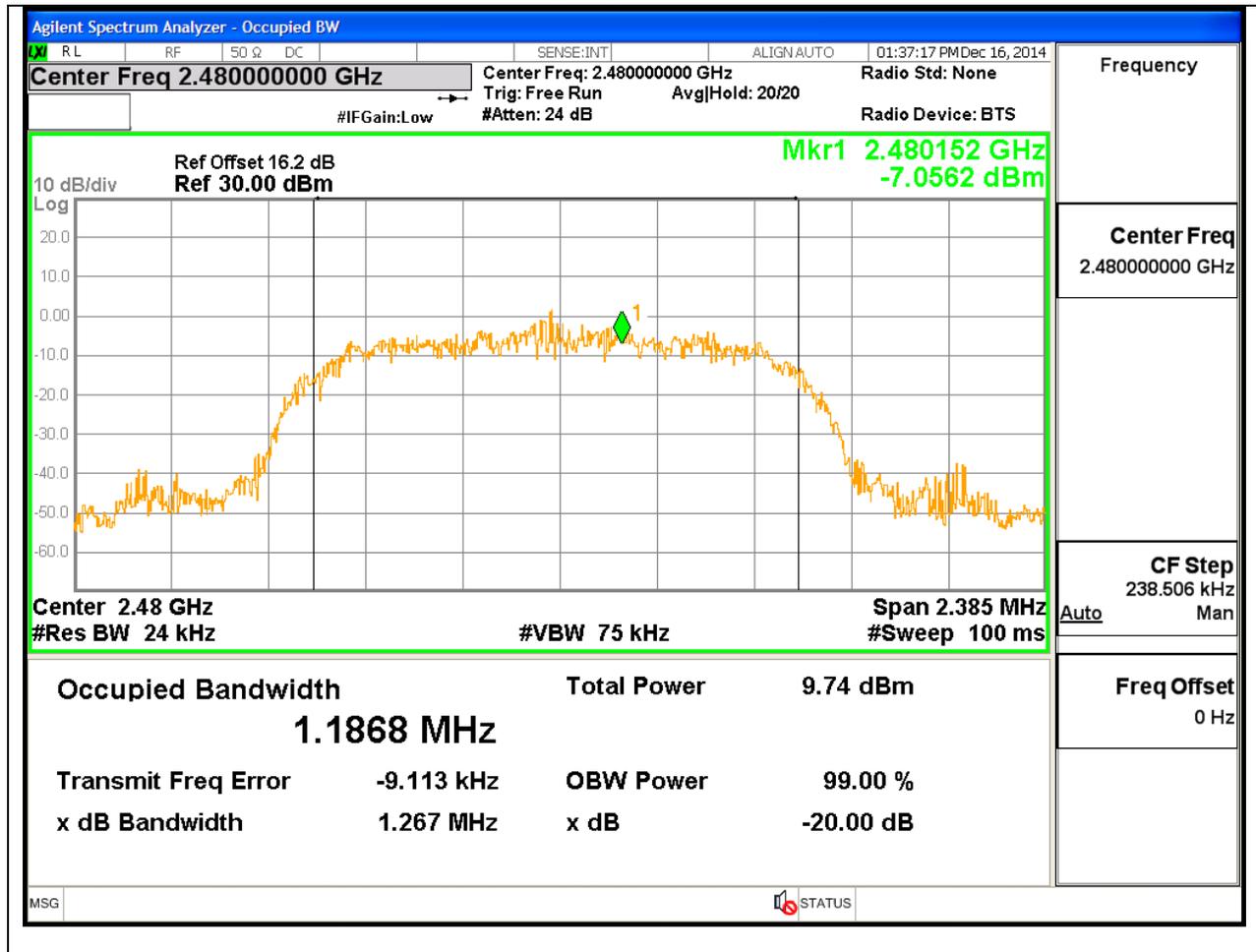
**LOW CHANNEL**



### MID CHANNEL



### HIGH CHANNEL



## **8.2. HOPPING FREQUENCY SEPARATION**

### **LIMIT**

FCC §15.247 (a) (1)

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

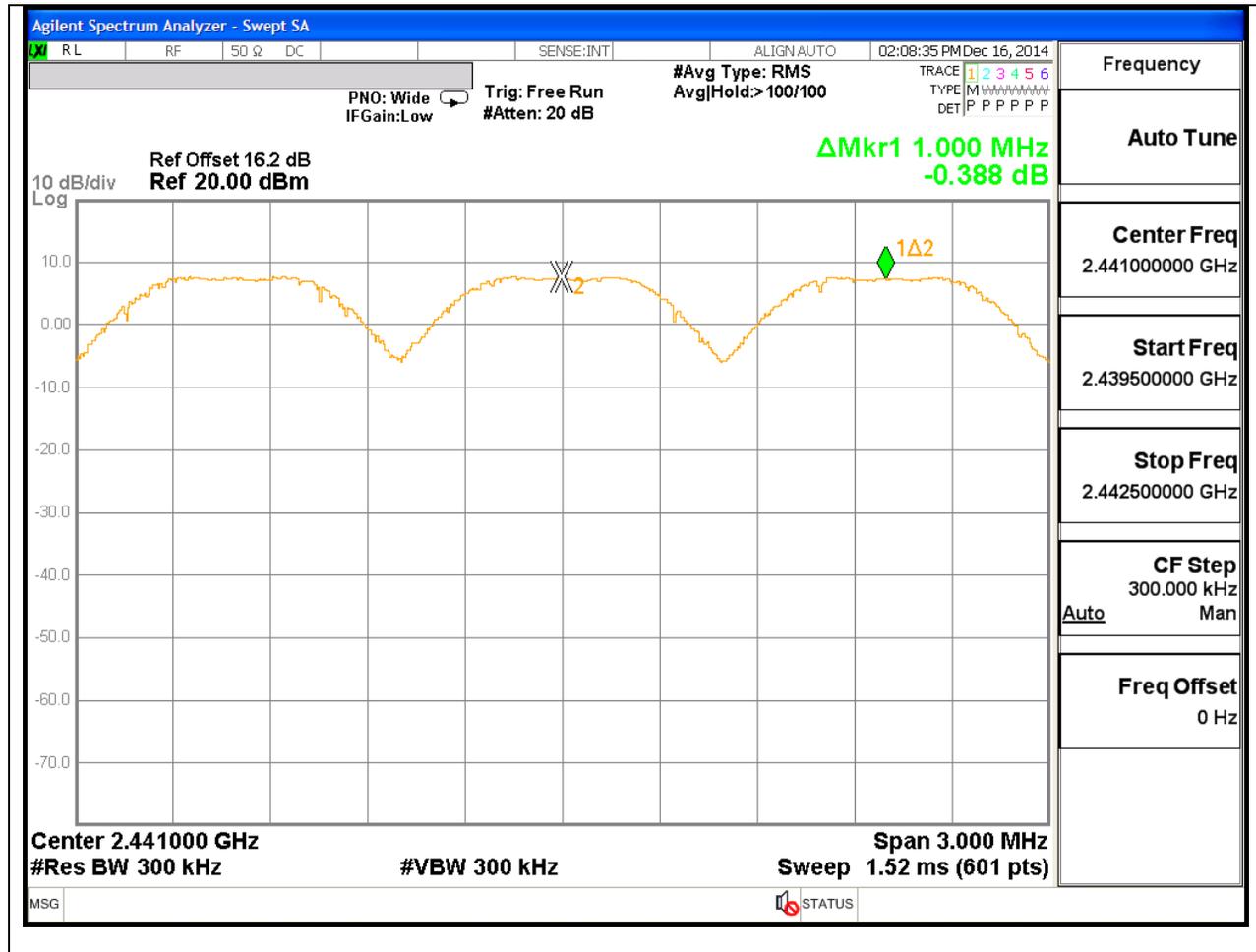
Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

### **TEST PROCEDURE**

DA 00-705: The transmitter output is connected to a spectrum analyzer. The RBW is set to 300 kHz and the VBW is set to 300 kHz. The sweep time is coupled.

### **RESULTS**

**HOPPING FREQUENCY SEPARATION PLOT**



### **8.3. NUMBER OF HOPPING CHANNELS**

#### **LIMIT**

FCC §15.247 (a) (1) (iii)

Frequency hopping systems in the 2400 – 2483.5 MHz band shall use at least 15 non-overlapping channels.

#### **TEST PROCEDURE**

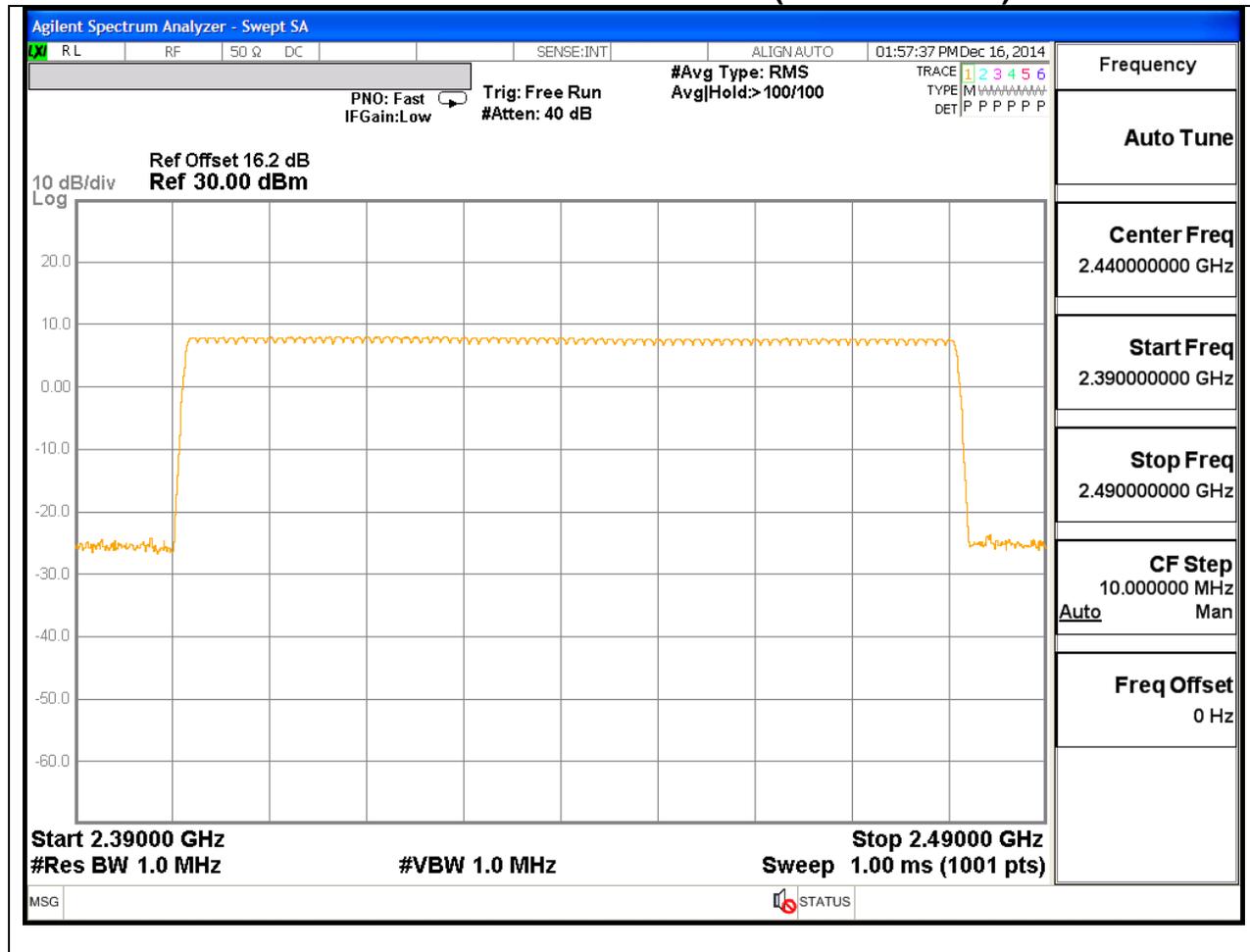
DA 00-705: The transmitter output is connected to a spectrum analyzer. The span is set to cover the entire authorized band, in either a single sweep or in multiple contiguous sweeps. The RBW is set to a maximum of 1 % of the span. The analyzer is set to Max Hold.

#### **RESULTS**

Normal Mode: 79 Channels observed.

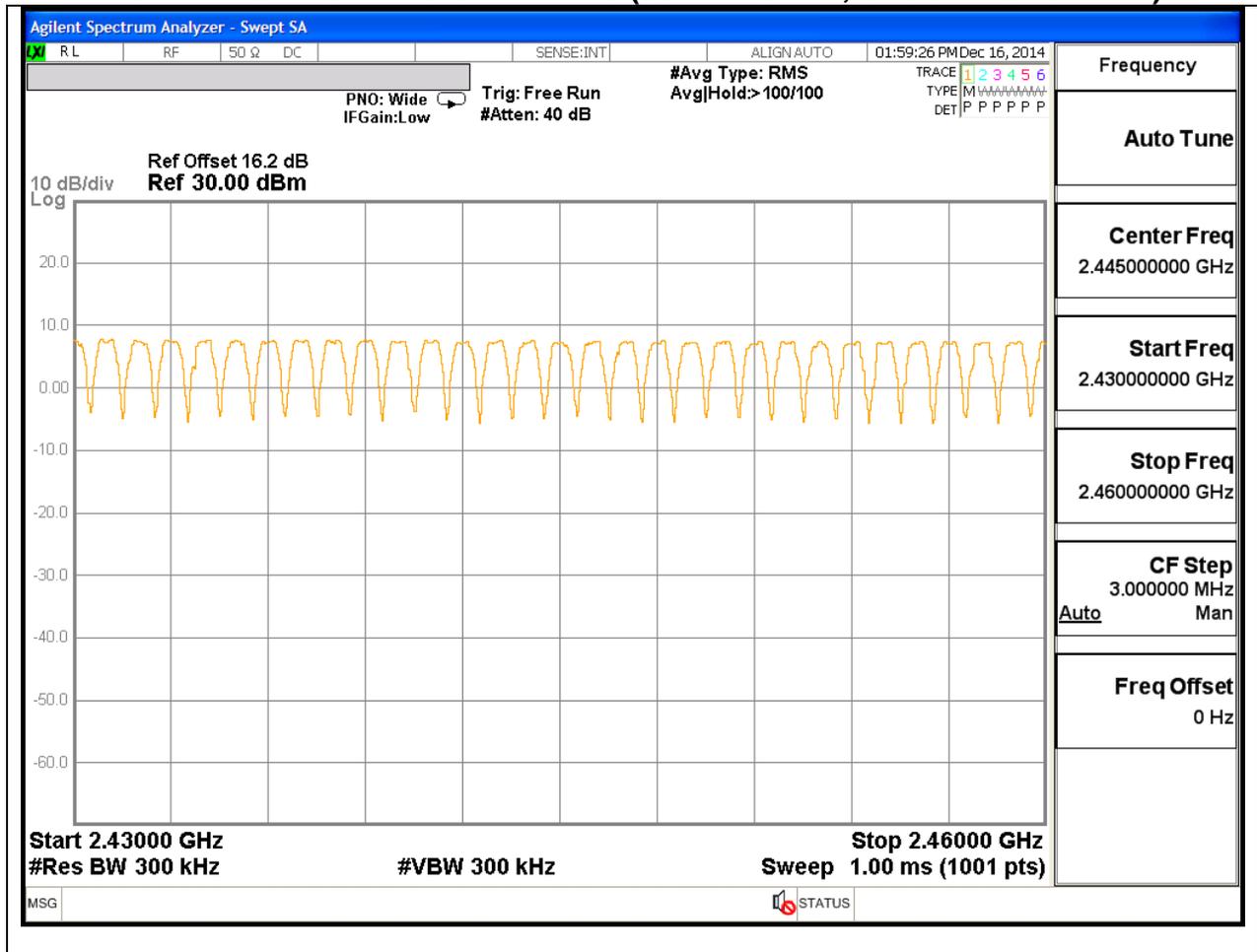
**NUMBER OF HOPPING CHANNELS PLOTS**

**NUMBER OF HOPPING CHANNELS (100 MHZ SPAN)**

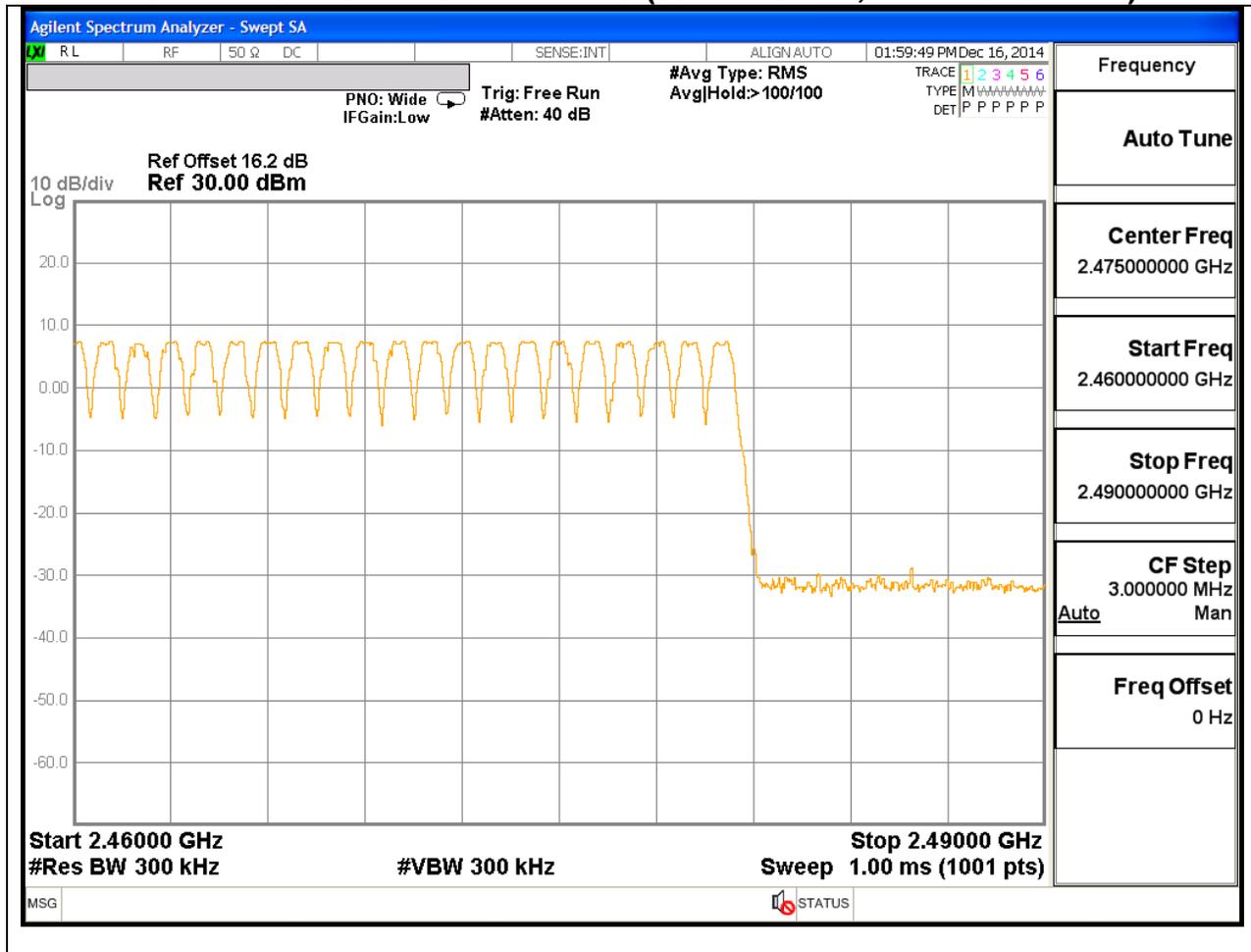




**NUMBER OF HOPPING CHANNELS (30 MHZ SPAN, SECOND SEGMENT)**



**NUMBER OF HOPPING CHANNELS (30 MHZ SPAN, THIRD SEGMENT)**



**8.4. AVERAGE TIME OF OCCUPANCY  
 LIMIT**

FCC §15.247 (a) (1) (iii)

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

**TEST PROCEDURE**

The transmitter output is connected to a spectrum analyzer. The span is set to 0 Hz, centered on a single, selected hopping channel. The width of a single pulse is measured in a fast scan. The number of pulses is measured in a 3.16 second scan, to enable resolution of each occurrence.

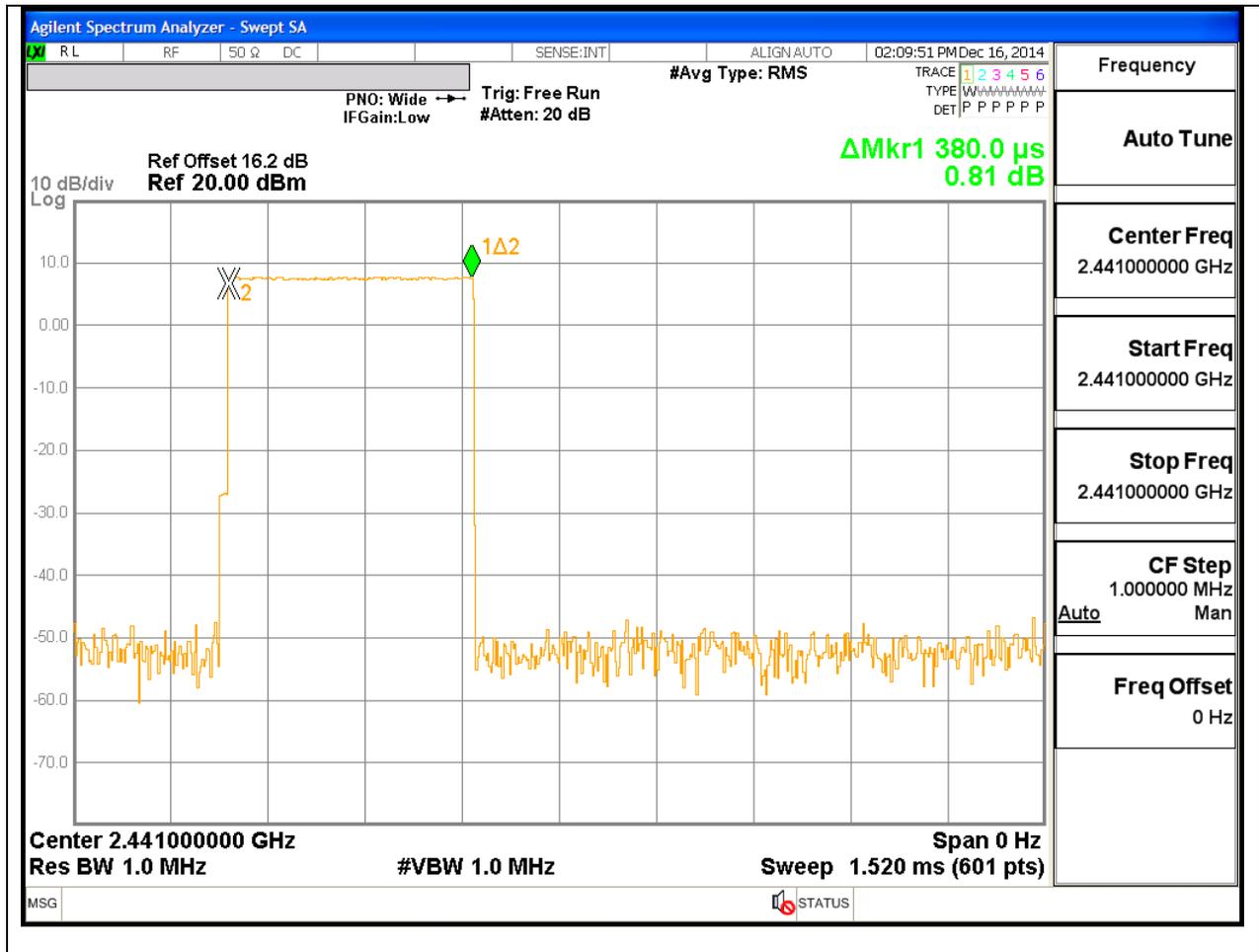
The average time of occupancy in the specified 31.6 second period (79 channels \* 0.4 s) is equal to 10 \* (# of pulses in 3.16 s) \* pulse width.

For AFH mode, the average time of occupancy in the specified 8 second period (20 channels \* 0.4 seconds) is equal to 10 \* (# of pulses in 0.8 s) \* pulse width.

**RESULTS**

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
<b>GFSK Normal Mode</b>					
DH1	0.380	31	0.1178	0.4	-0.2822
DH3	1.617	17	0.2749	0.4	-0.12511
DH5	2.850	9	0.2565	0.4	-0.1435
<b>GFSK AFH Mode</b>					
DH Packet	Pulse Width (msec)	Number of Pulses in 0.8 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
DH1	0.380	7.75	0.0295	0.4	-0.37055
DH3	1.617	4.25	0.0687	0.4	-0.33128
DH5	2.850	2.25	0.0641	0.4	-0.33588

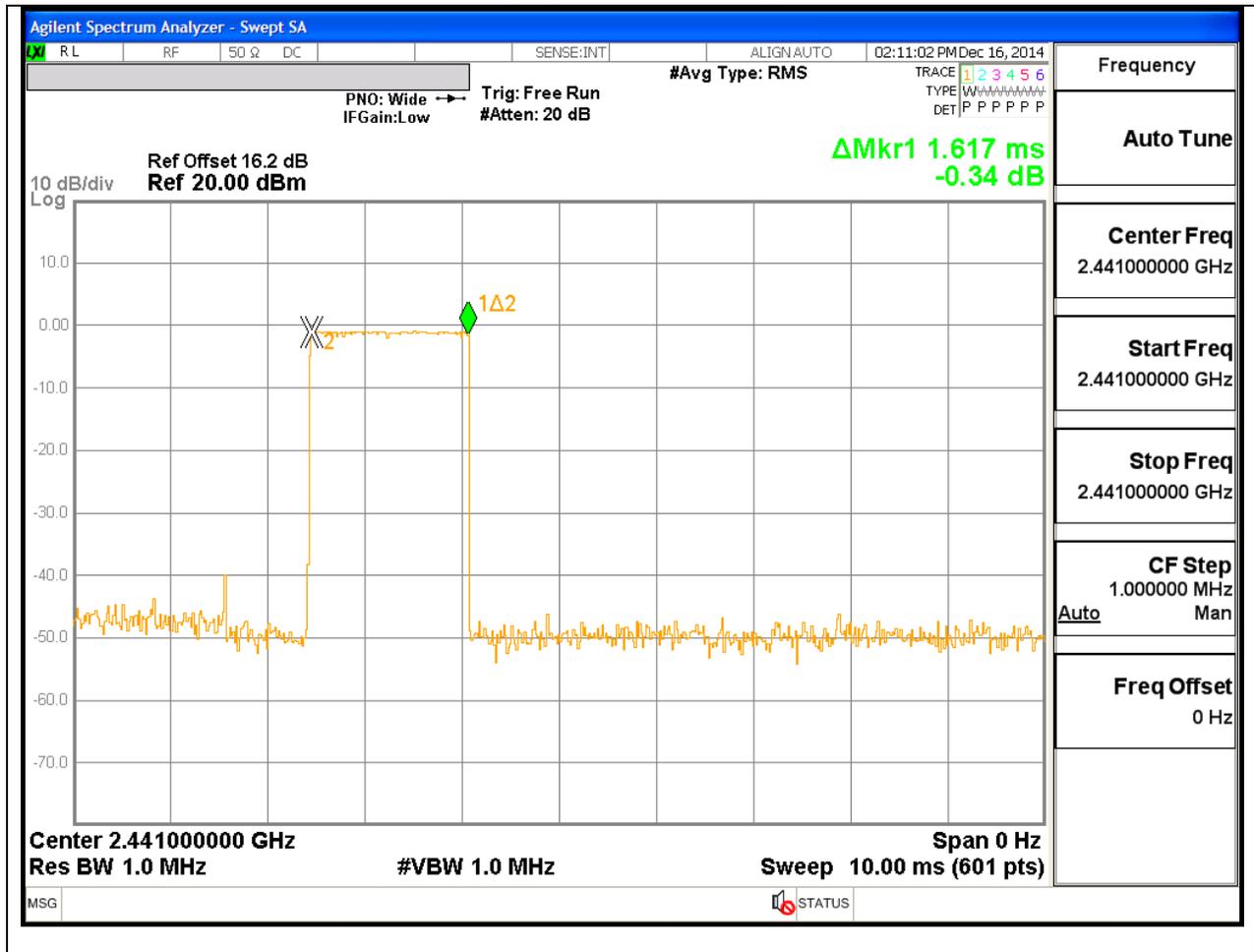
### PULSE WIDTH - DH1



**NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD - DH1**



### PULSE WIDTH - DH3







**NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD - DH5**



## 8.5. OUTPUT POWER

### LIMIT

§15.247 (b) (1)

The maximum antenna gain is less than 6 dBi, therefore the limit is 21 dBm.

### TEST PROCEDURE

DA 00-705: The transmitter output is connected to a spectrum analyzer the analyzer bandwidth is set to a value greater than the 20 dB bandwidth of the EUT.

### RESULTS

#### 8.5.1. BASIC DATA RATE GFSK MODULATION

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	7.91	21	-13.09
Middle	2441	7.86	21	-13.14
High	2480	7.27	21	-13.73
Worst		7.91		-13.09

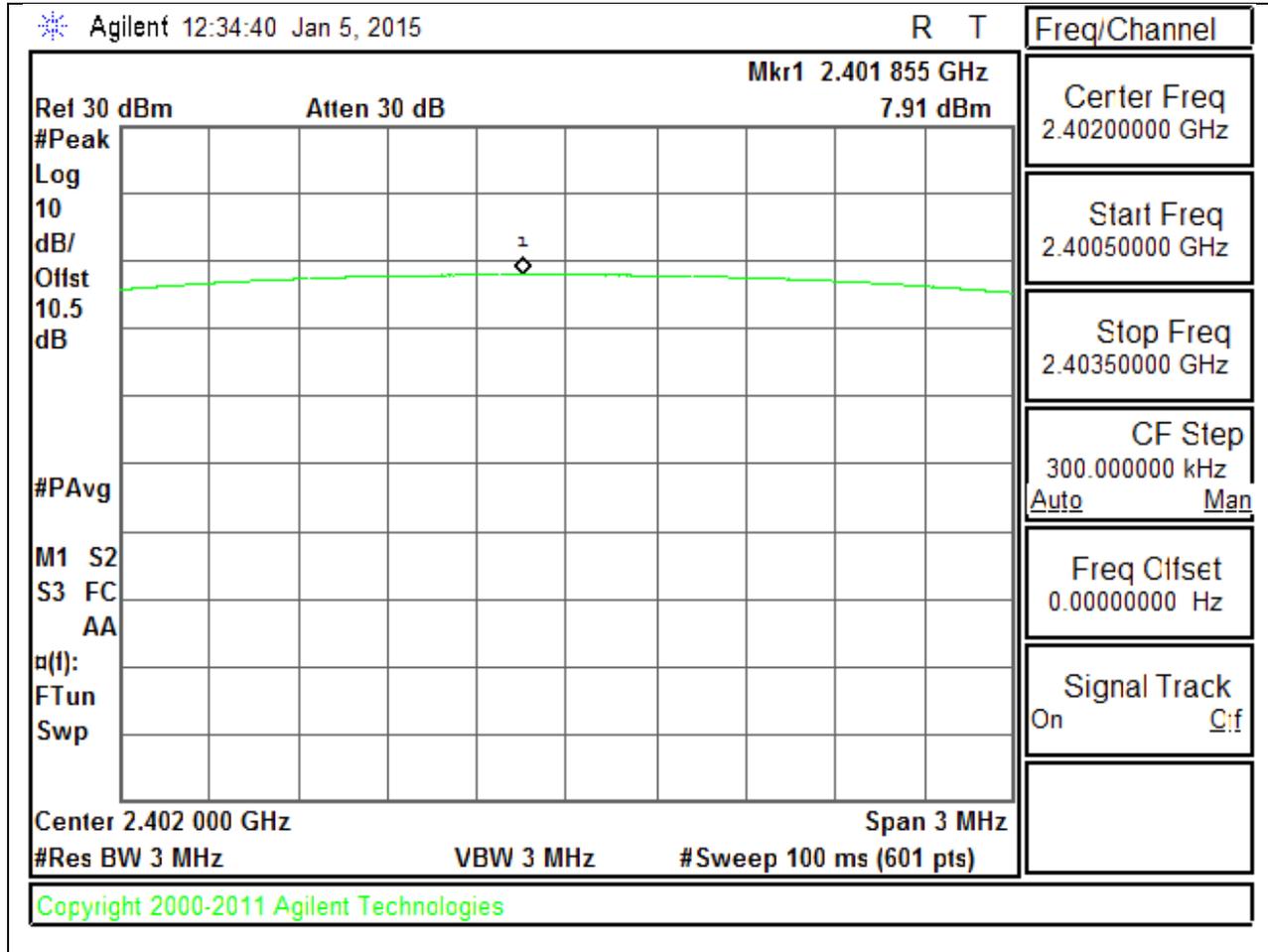
#### 8.5.2. ENHANCED DATA RATE 8PSK MODULATION

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	8.22	21	-12.78
Middle	2441	8.19	21	-12.81
High	2480	7.68	21	-13.32
Worst		8.22		-12.78

### 8.5.3. OUTPUT POWER PLOTS

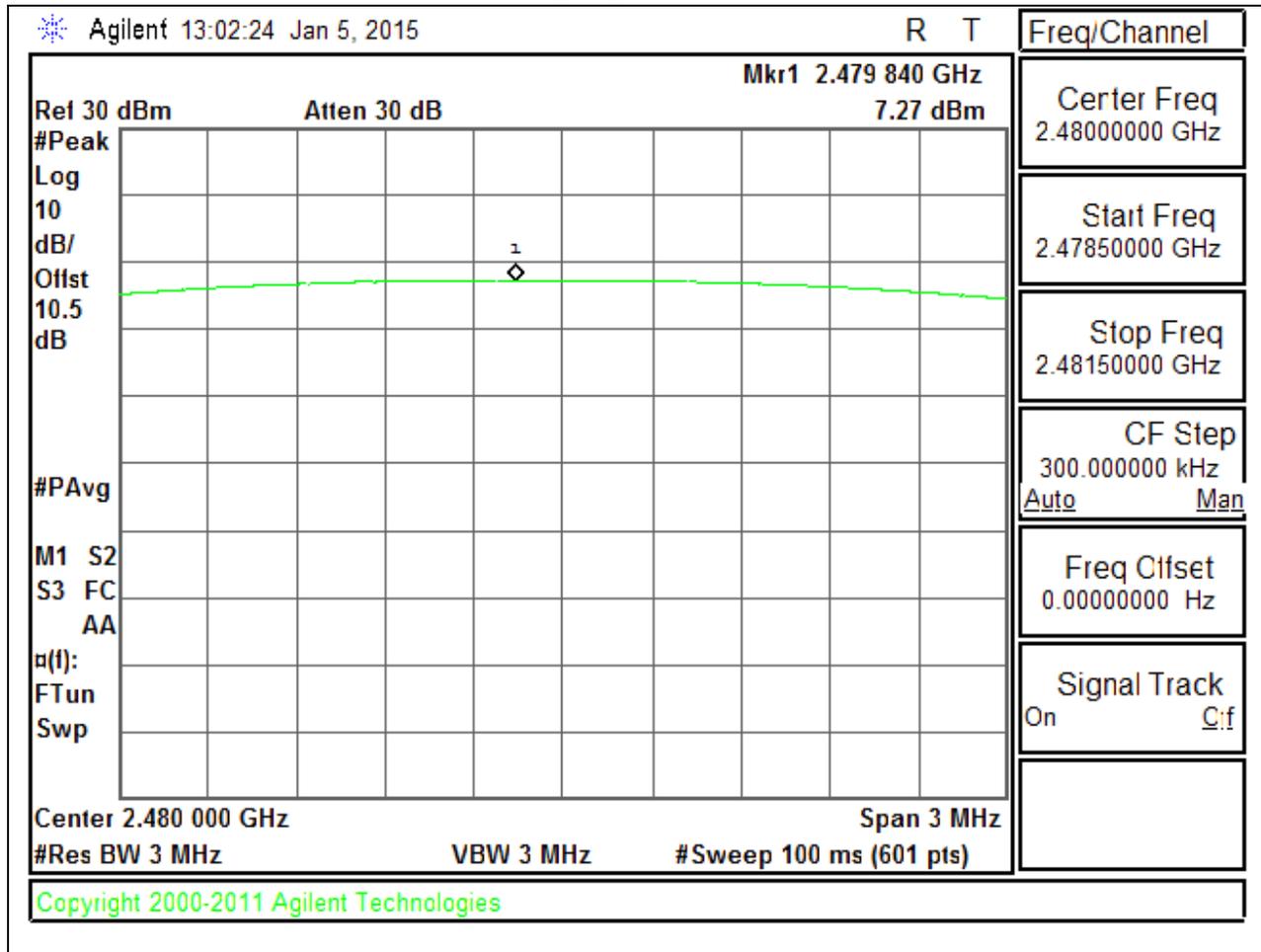
#### GFSK OUTPUT POWER

#### LOW CHANNEL



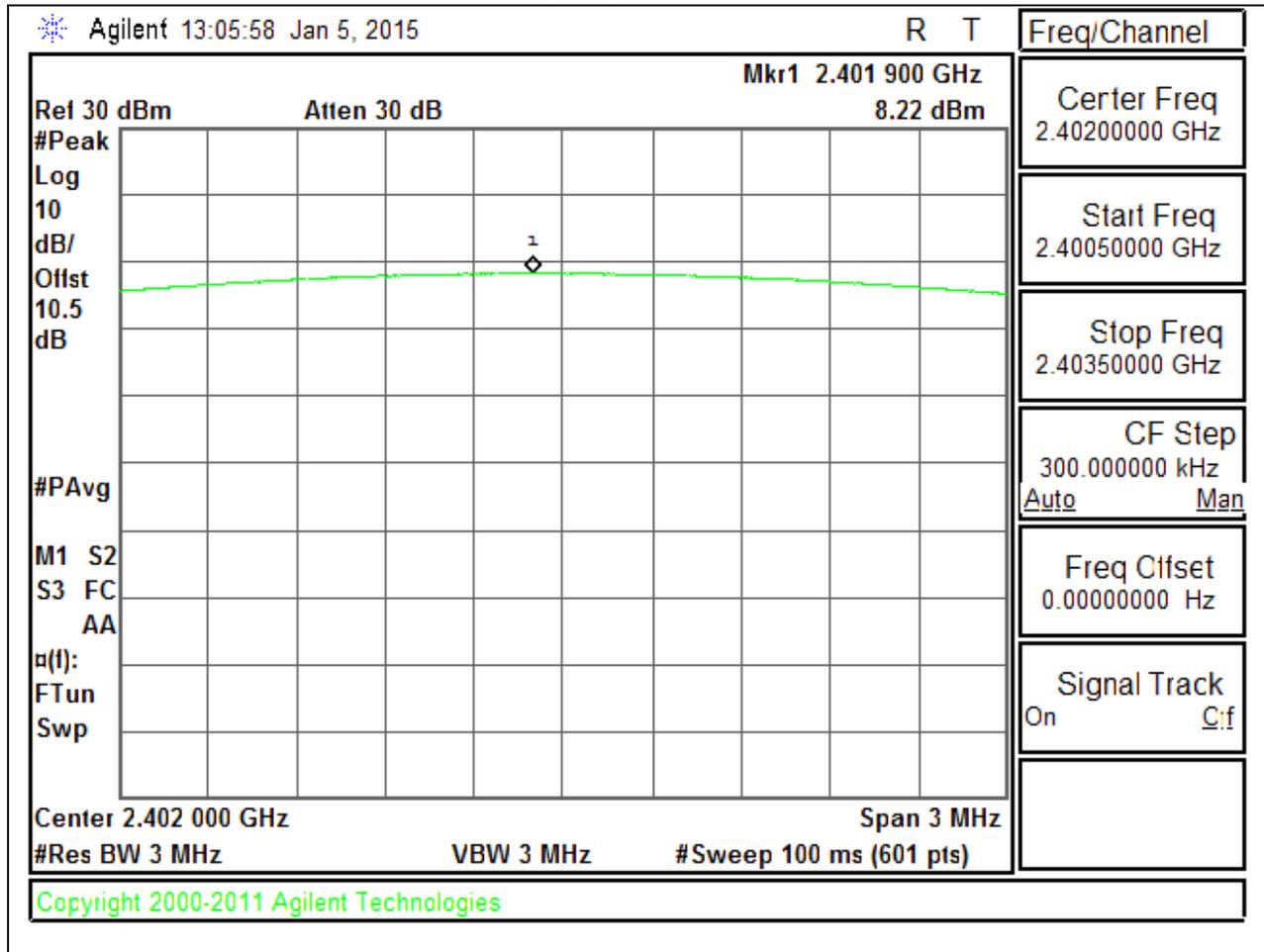


### HIGH CHANNEL



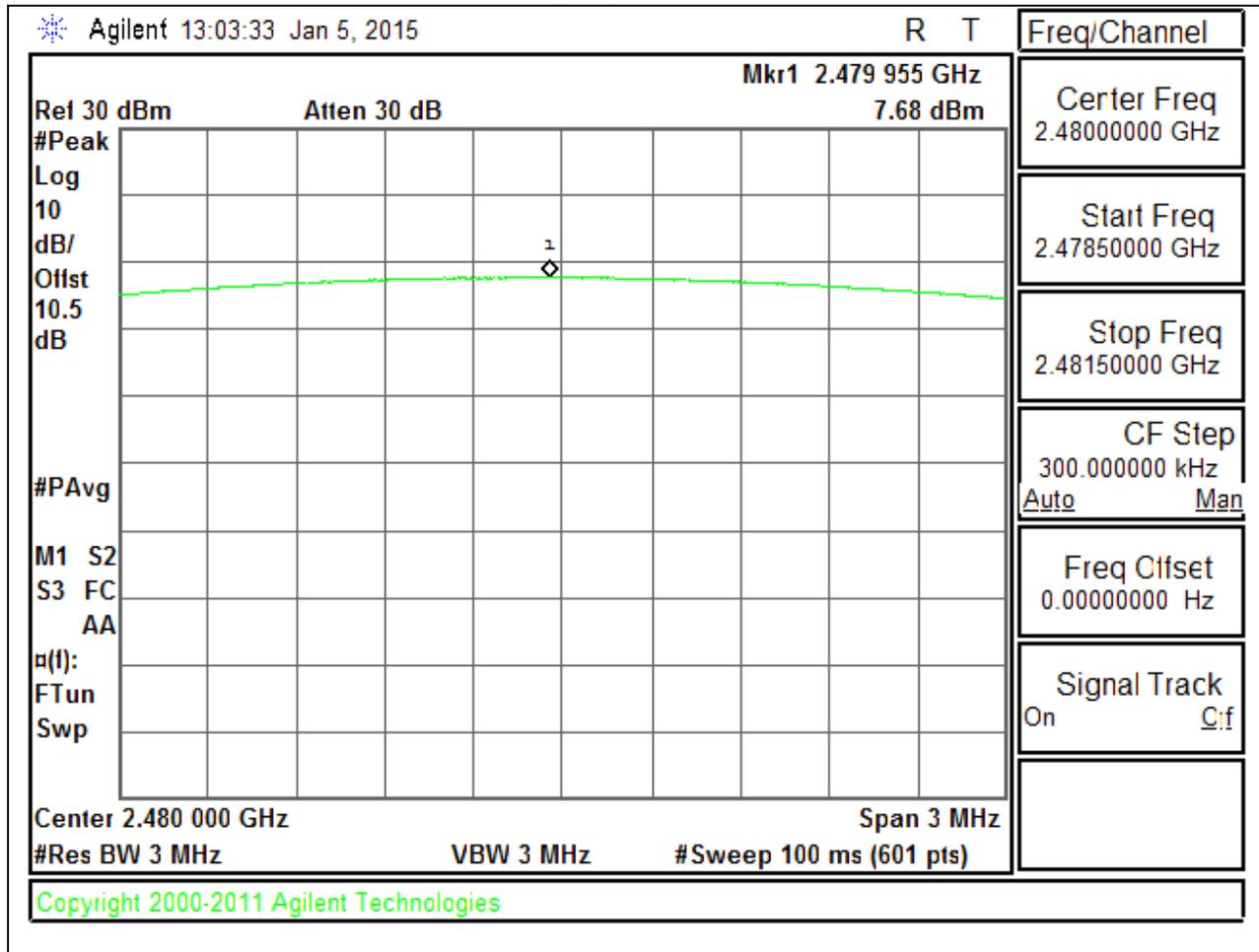
**8PSK OUTPUT POWER**

**LOW CHANNEL**





### HIGH CHANNEL



## 8.6. AVERAGE POWER

### LIMIT

None; for reporting purposes only.

### TEST PROCEDURE

DA 00-705: The transmitter output is connected to a power meter.

### RESULTS

The cable assembly insertion loss of 10.7 dB (including 10 dB pad and 0.7 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

#### 8.6.1. BASIC DATA RATE GFSK MODULATION

Channel	Frequency (MHz)	Average Power (dBm)
Low	2402	6.2
Middle	2441	6.0
High	2480	7.1
Worst		7.1

#### 8.6.2. ENHANCED DATA RATE 8PSK MODULATION

Channel	Frequency (MHz)	Average Power (dBm)
Low	2402	3.9
Middle	2441	3.6
High	2480	4.7
Worst		4.7

## **8.7. CONDUCTED SPURIOUS EMISSIONS**

### **LIMITS**

FCC §15.247 (d)

### **TEST PROCEDURE**

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

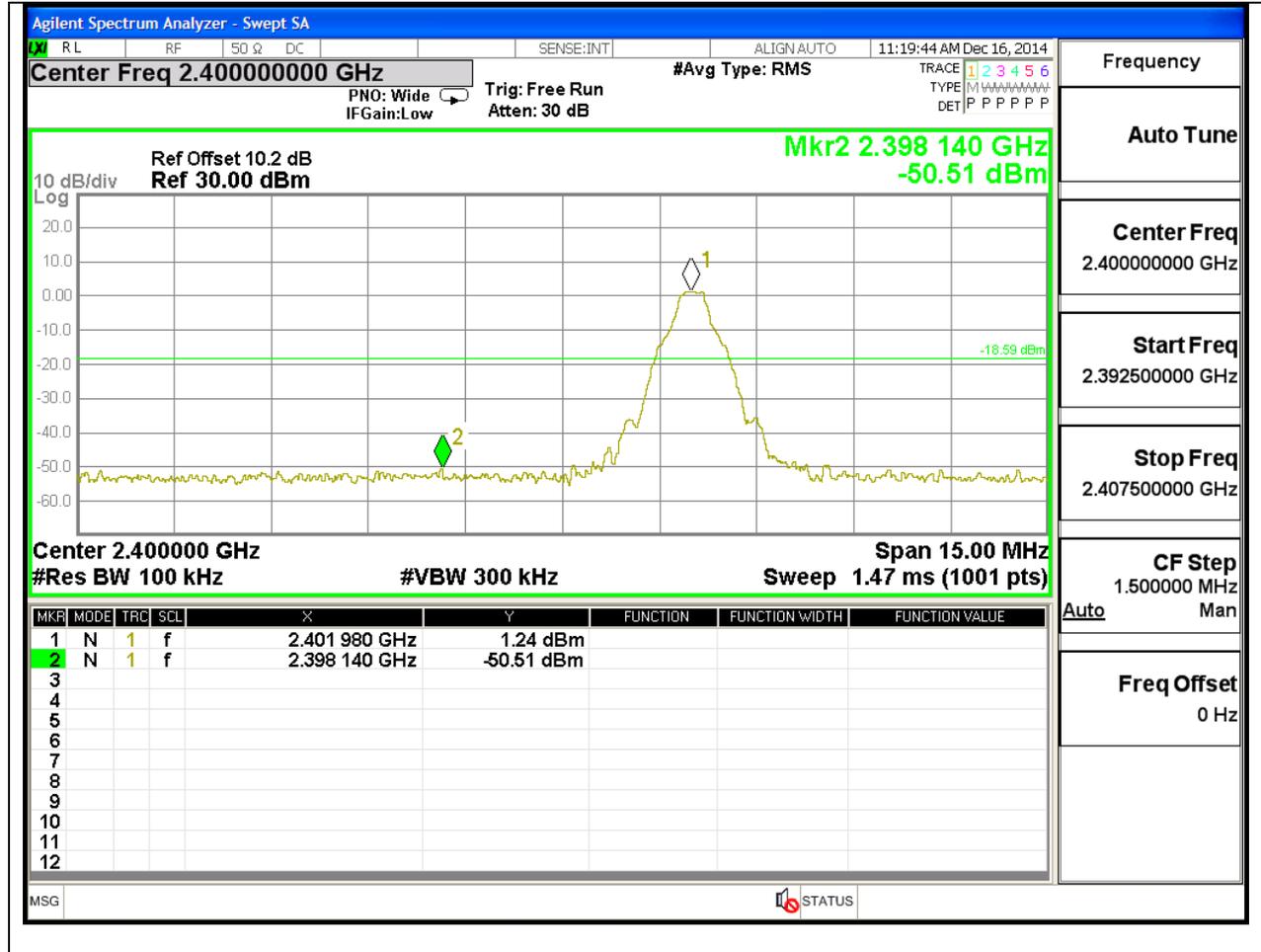
The bandedges at 2.4 and 2.4835 GHz are investigated with the transmitter set to the normal hopping mode.

### **RESULTS**

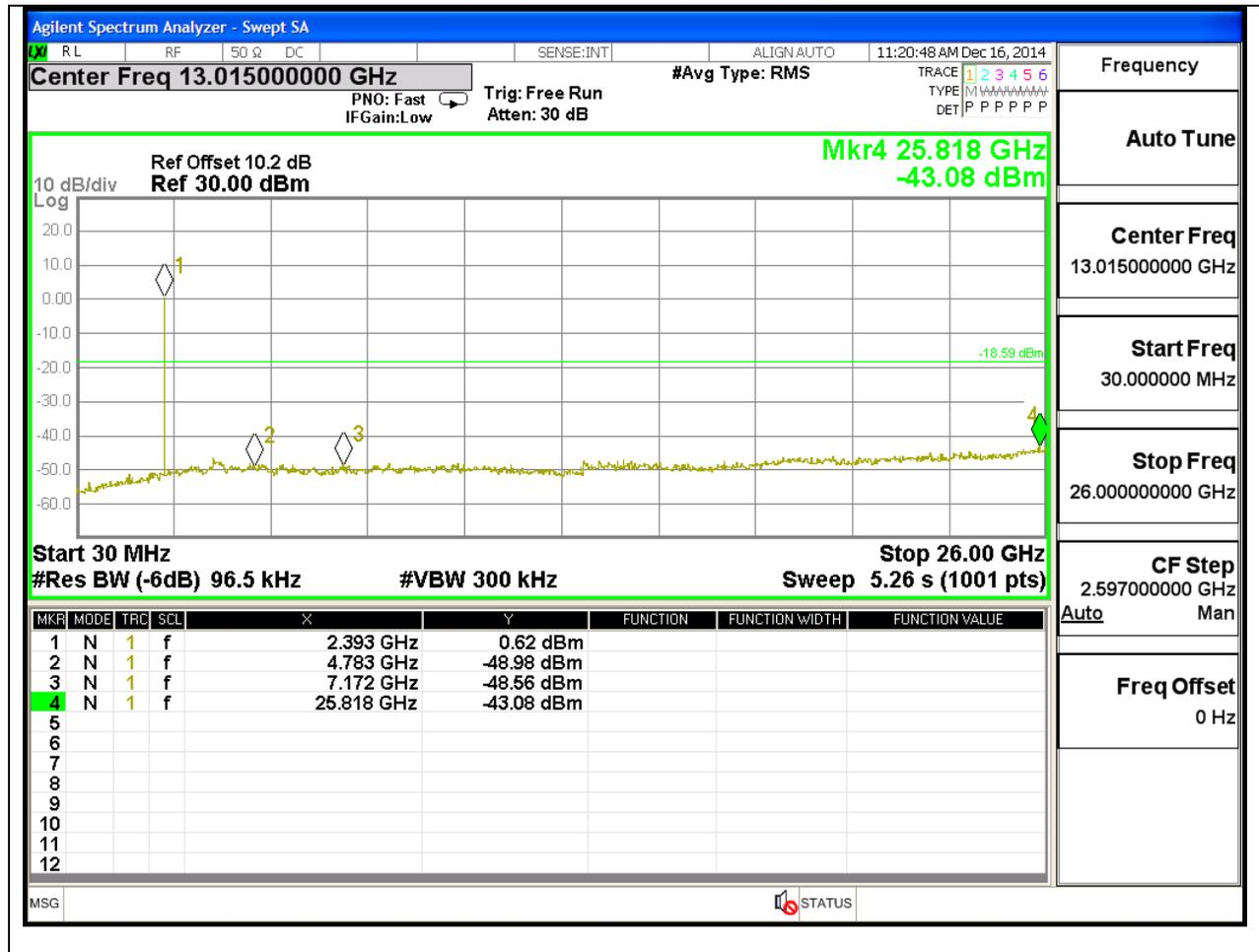
### 8.7.1. BASIC DATA RATE GFSK MODULATION

#### SPURIOUS EMISSIONS, LOW CHANNEL

#### LOW CHANNEL BANDEDGE

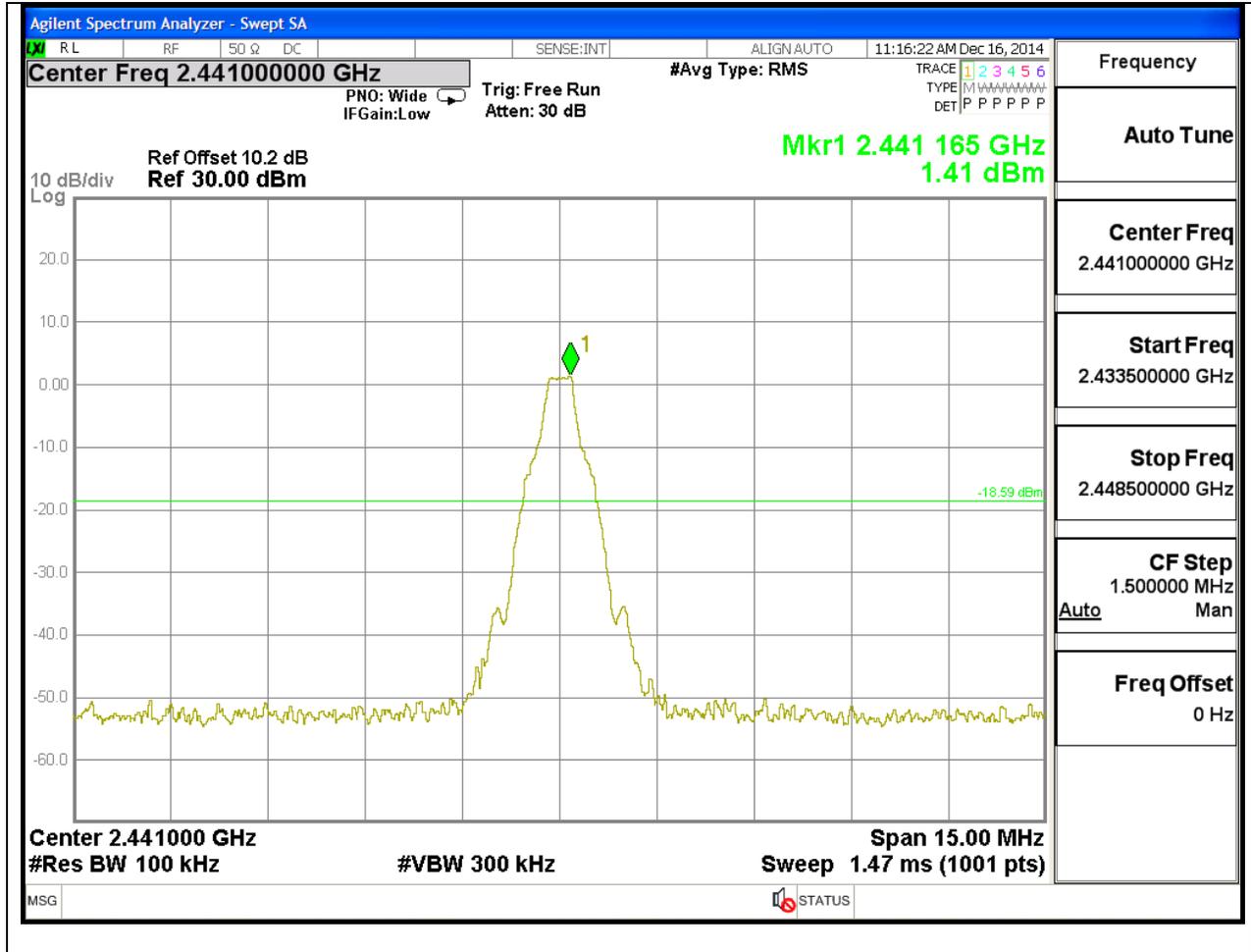


### LOW CHANNEL SPURIOUS

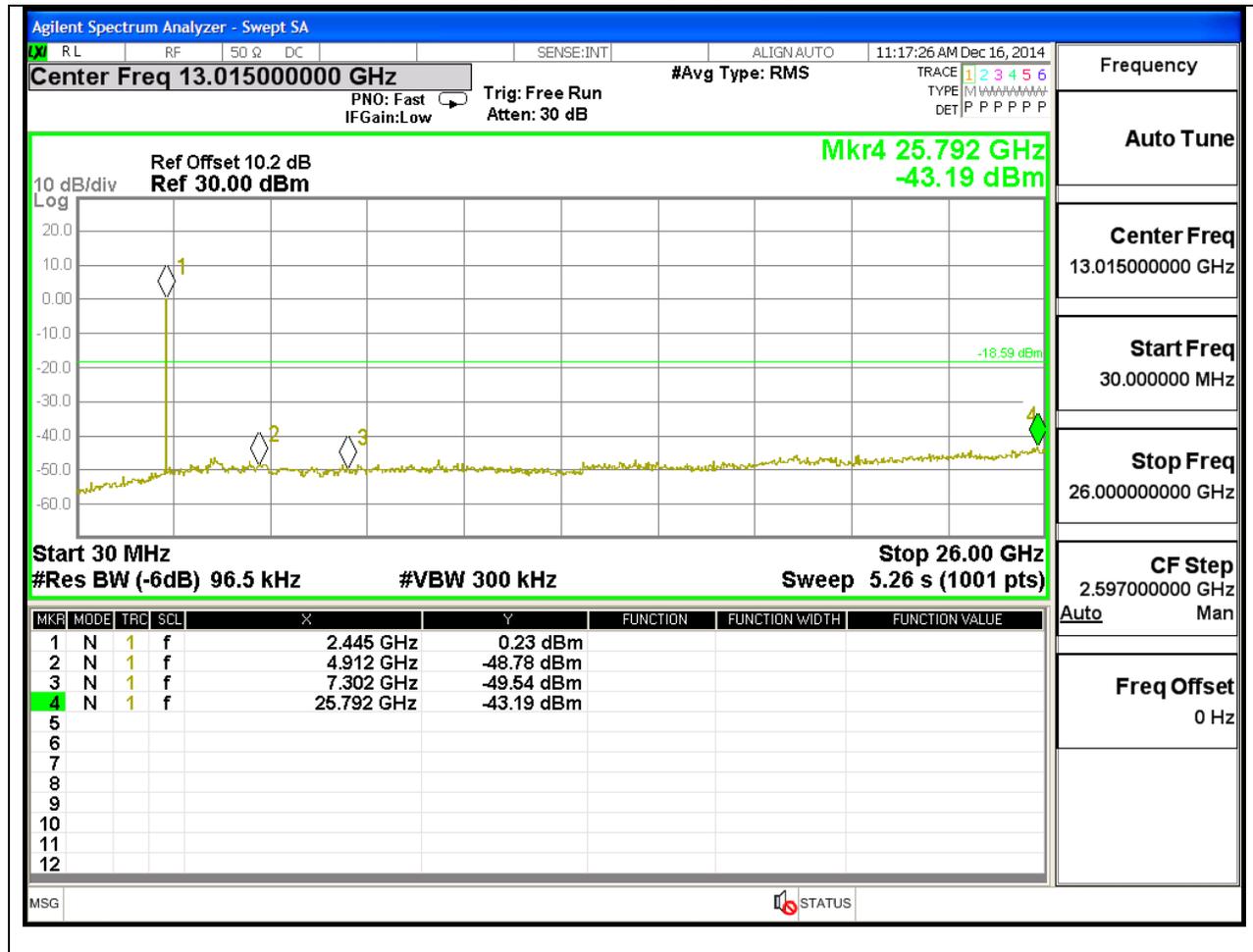


**SPURIOUS EMISSIONS, MID CHANNEL**

**MID CHANNEL REFERENCE**

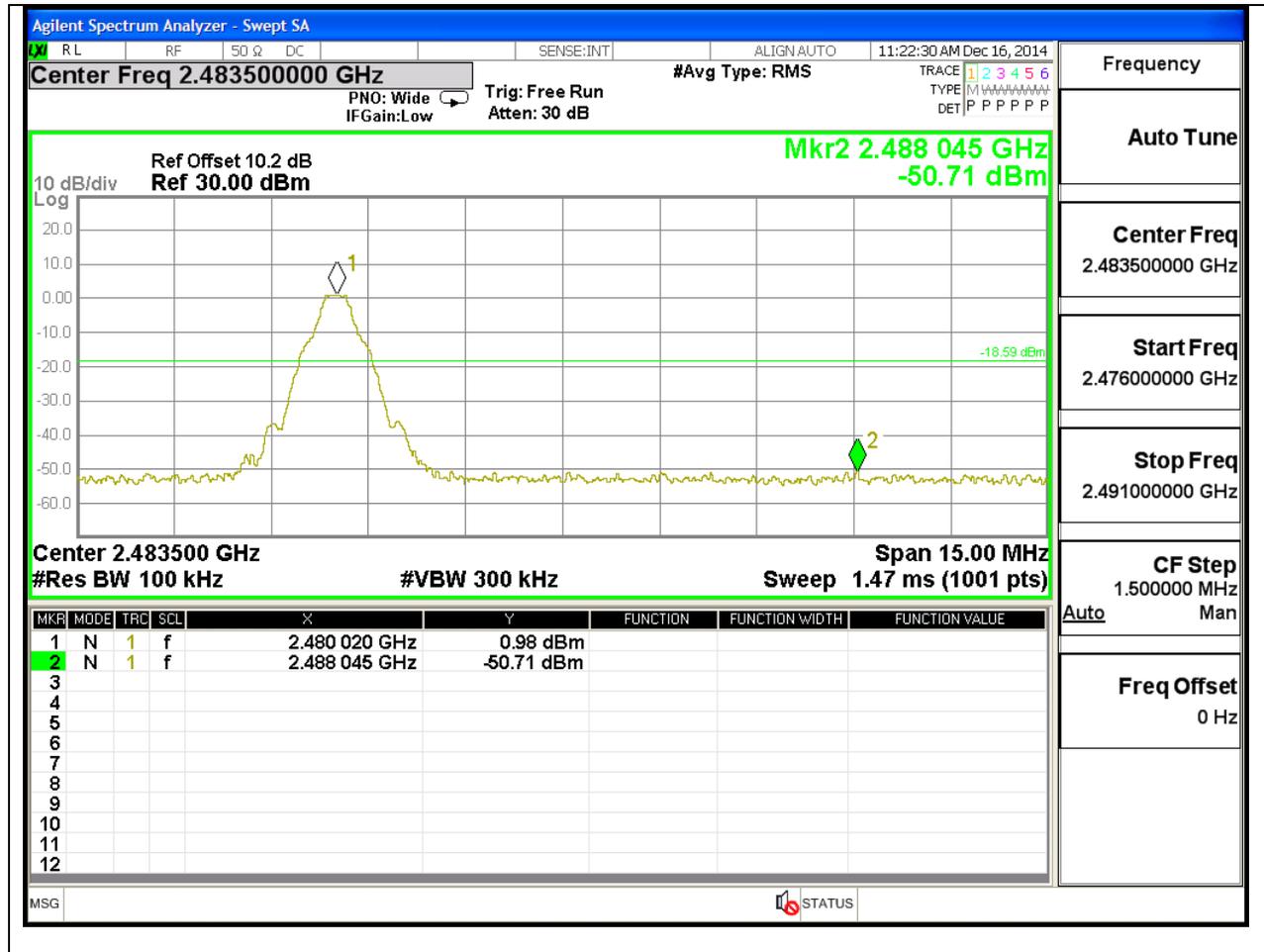


### MID CHANNEL SPURIOUS

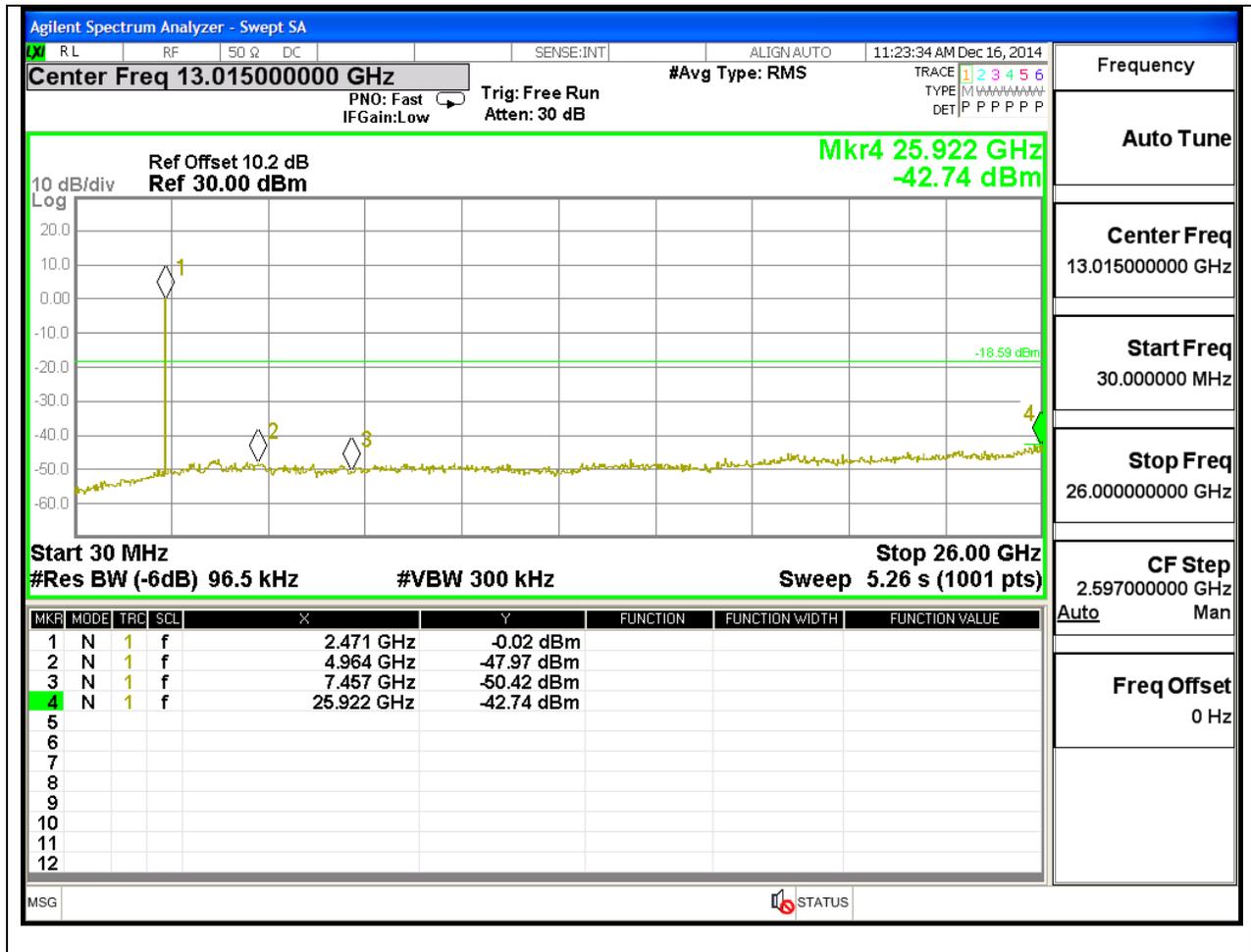


**SPURIOUS EMISSIONS, HIGH CHANNEL**

**HIGH CHANNEL BANDEDGE**

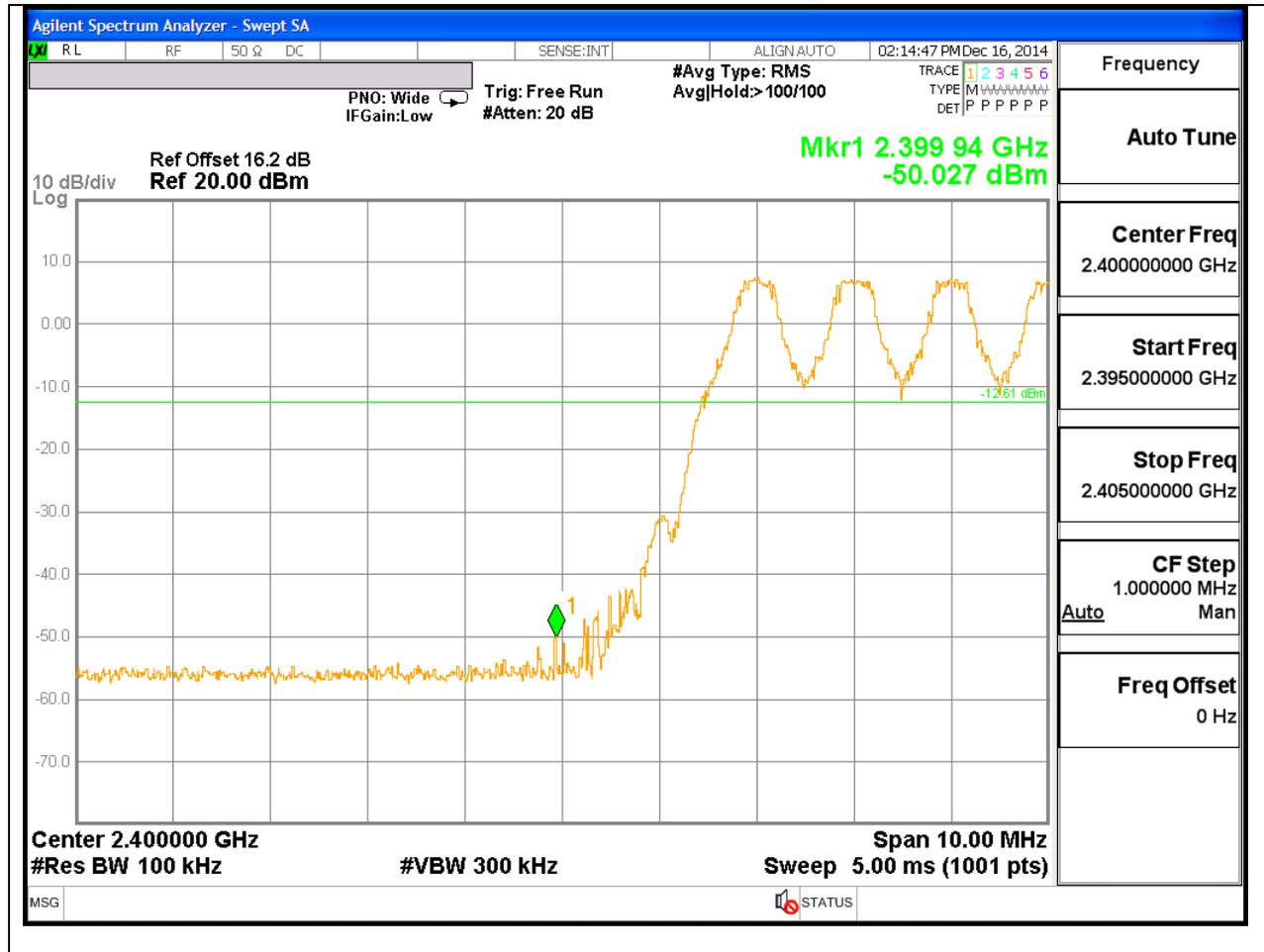


### HIGH CHANNEL SPURIOUS

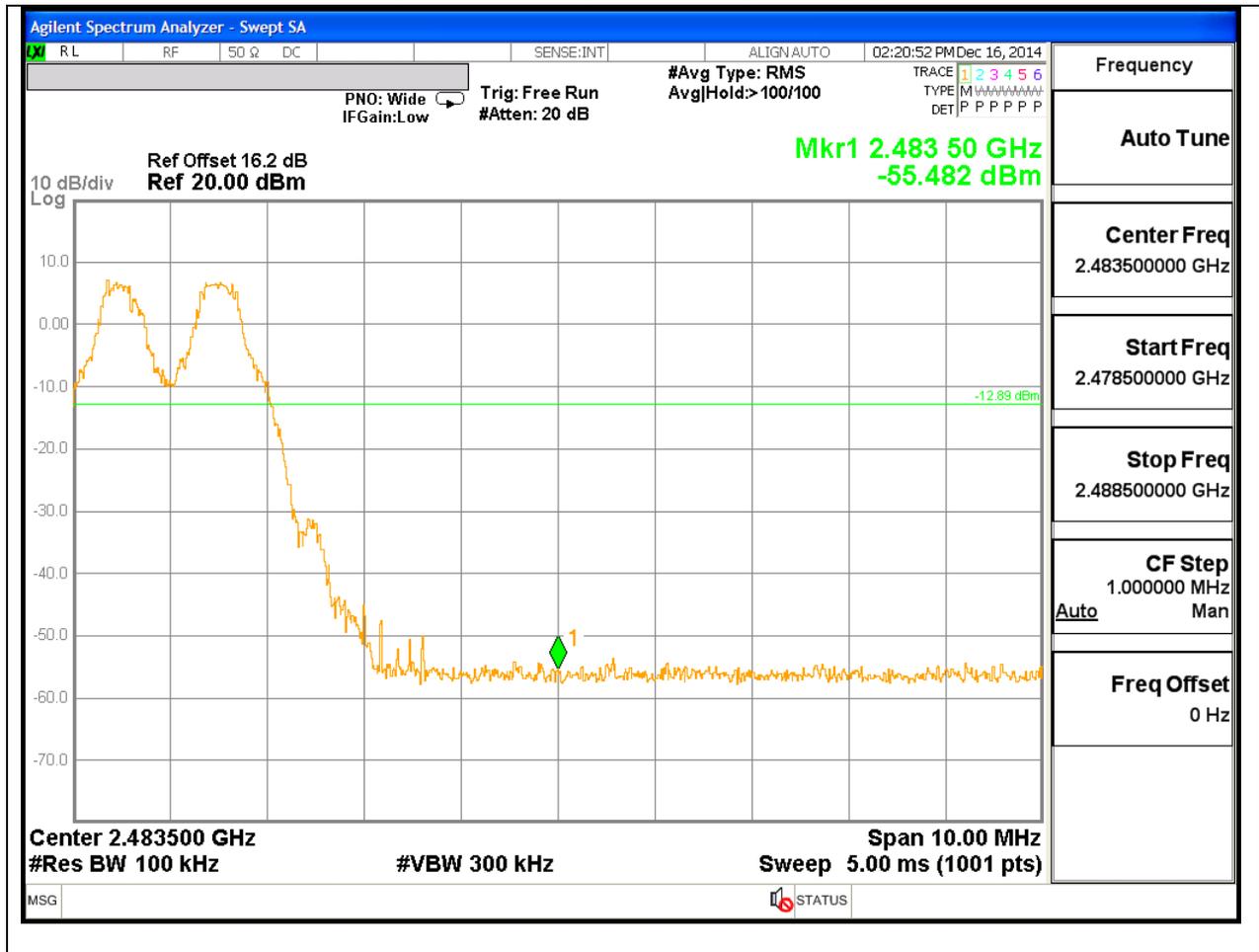


**SPURIOUS BANDEGE EMISSIONS WITH HOPPING ON**

**LOW BANDEGE WITH HOPPING ON**



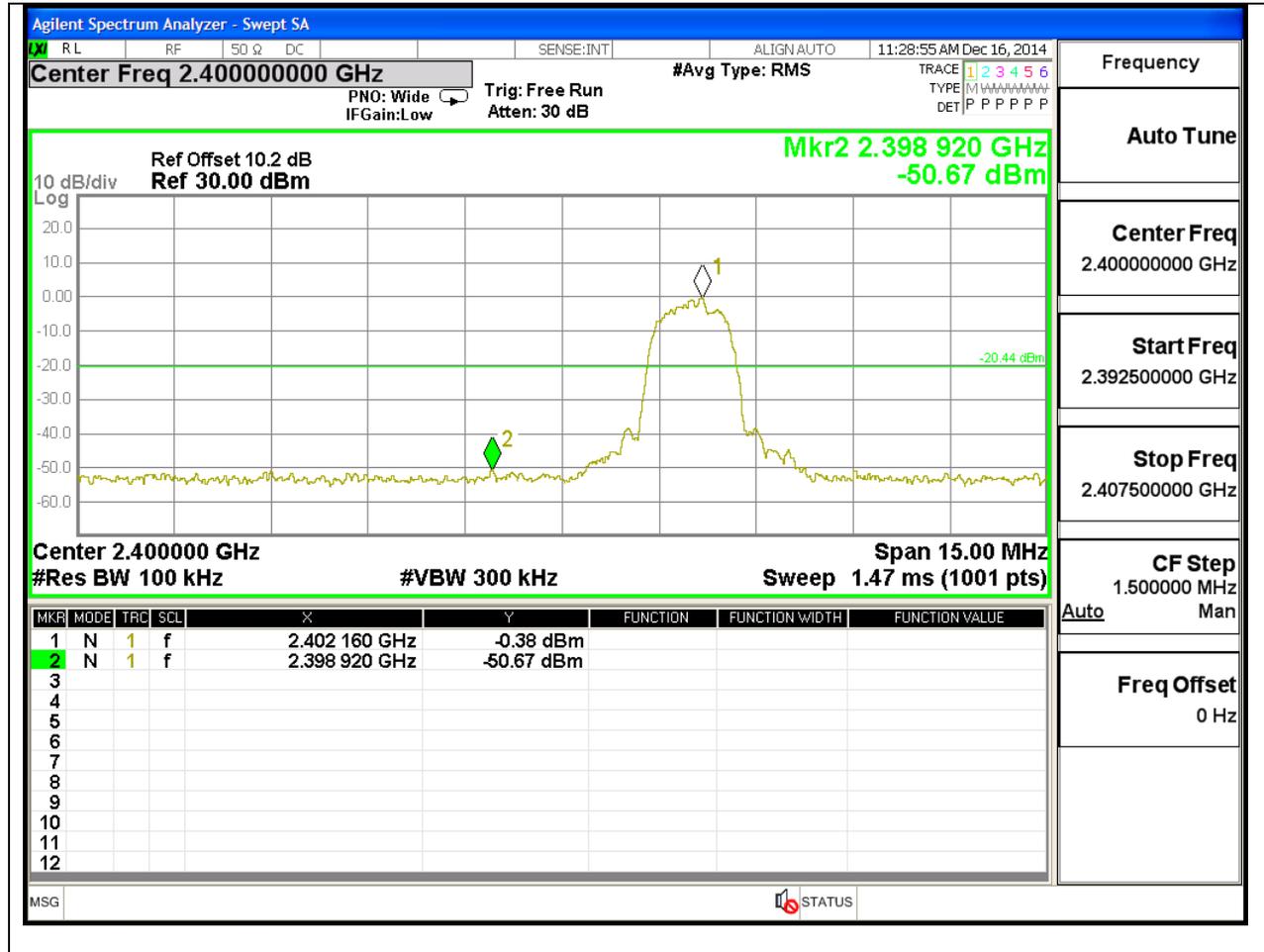
### HIGH BANDEGE WITH HOPPING ON



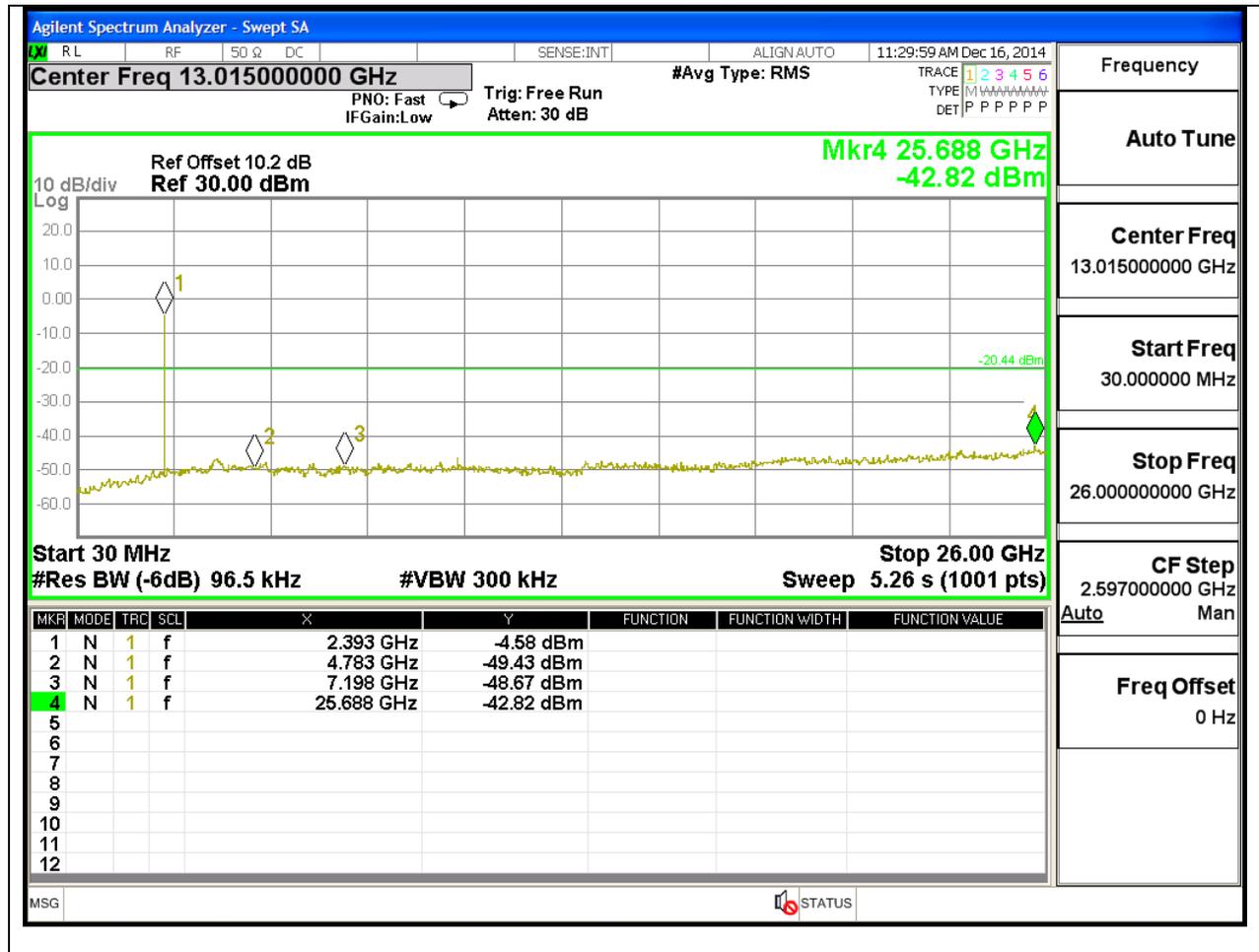
## ENHANCED DATA RATE 8PSK MODULATION

### SPURIOUS EMISSIONS, LOW CHANNEL

### LOW CHANNEL BANDEDGE

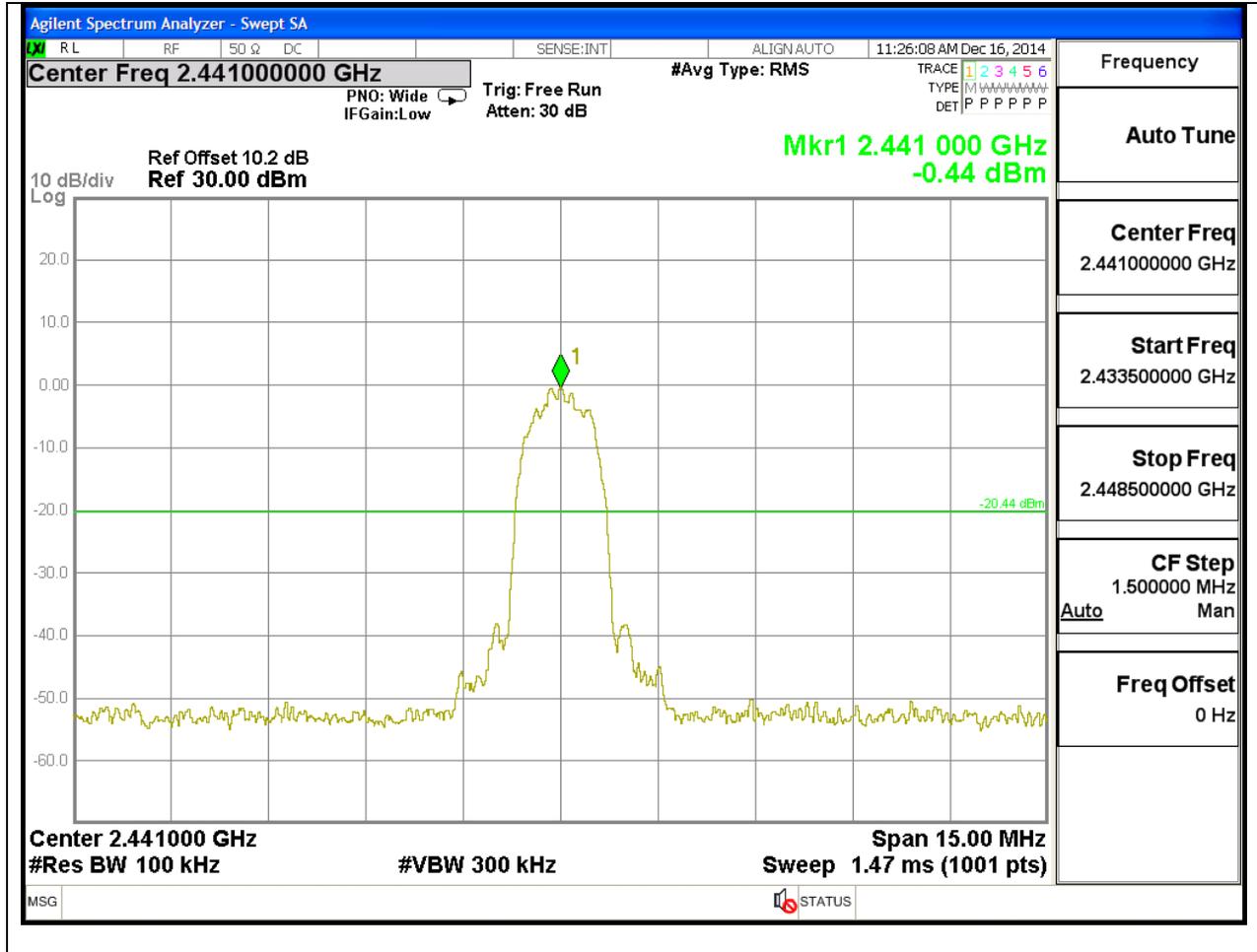


### LOW CHANNEL SPURIOUS

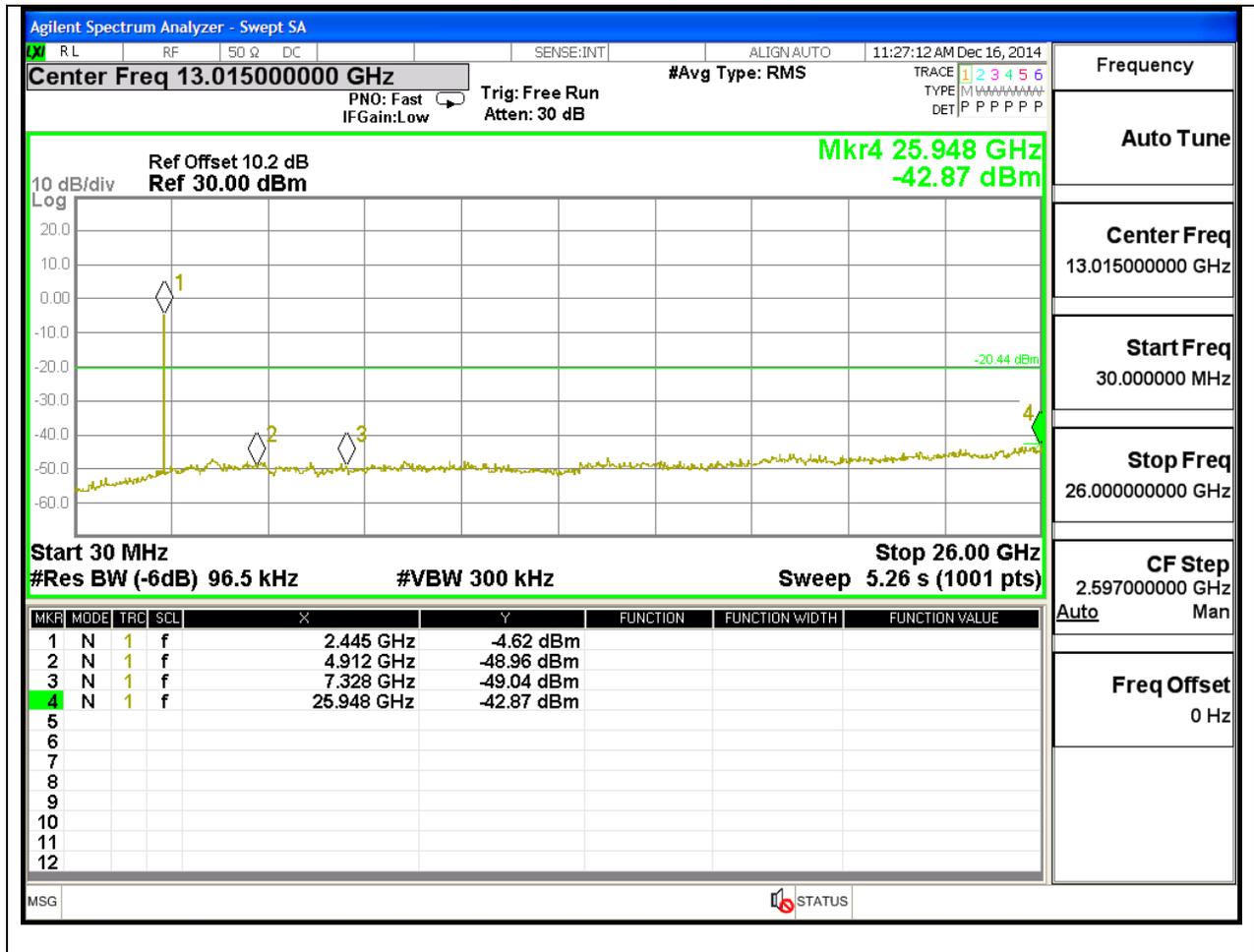


**SPURIOUS EMISSIONS, MID CHANNEL**

**MID CHANNEL REFERENCE**

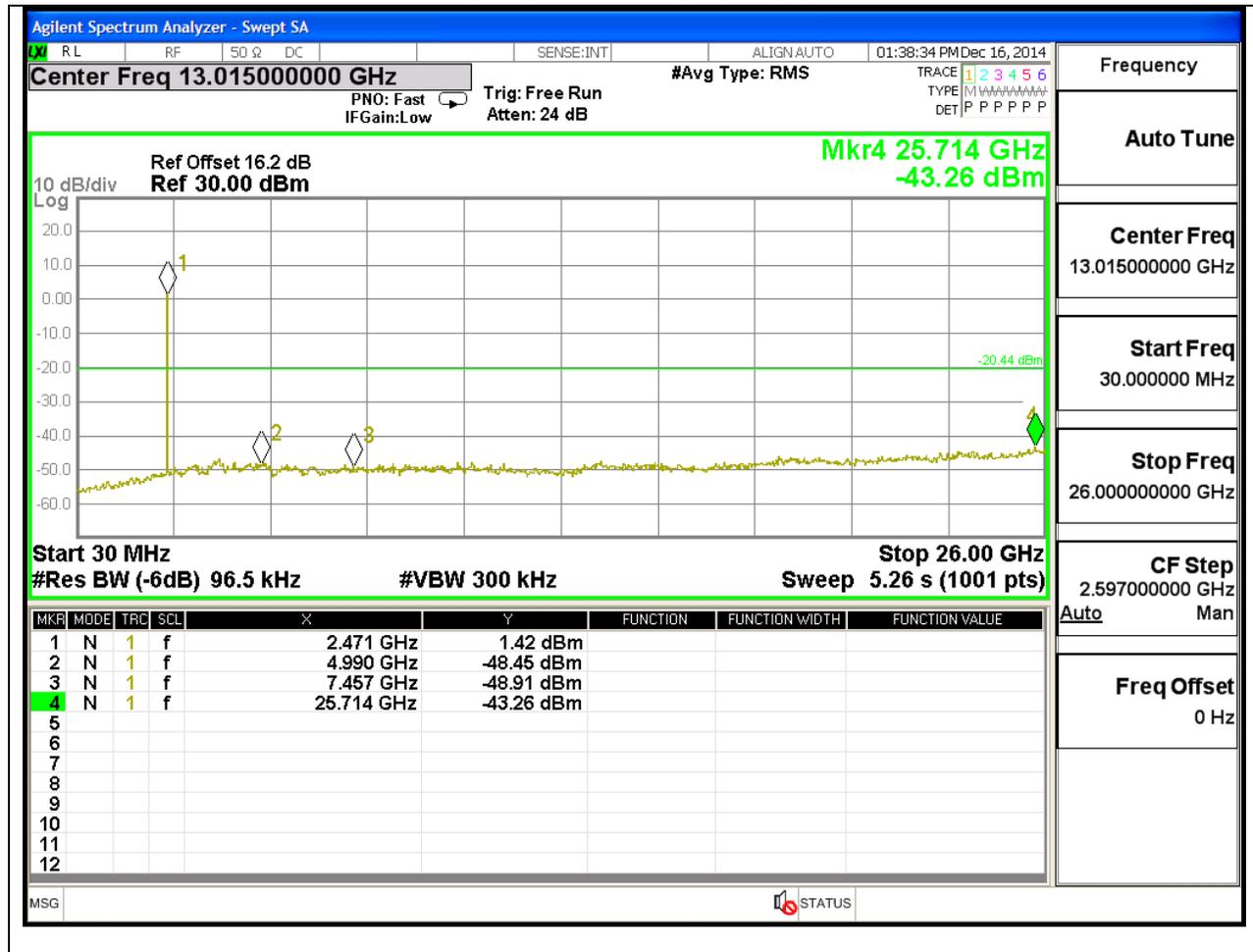


### MID CHANNEL SPURIOUS



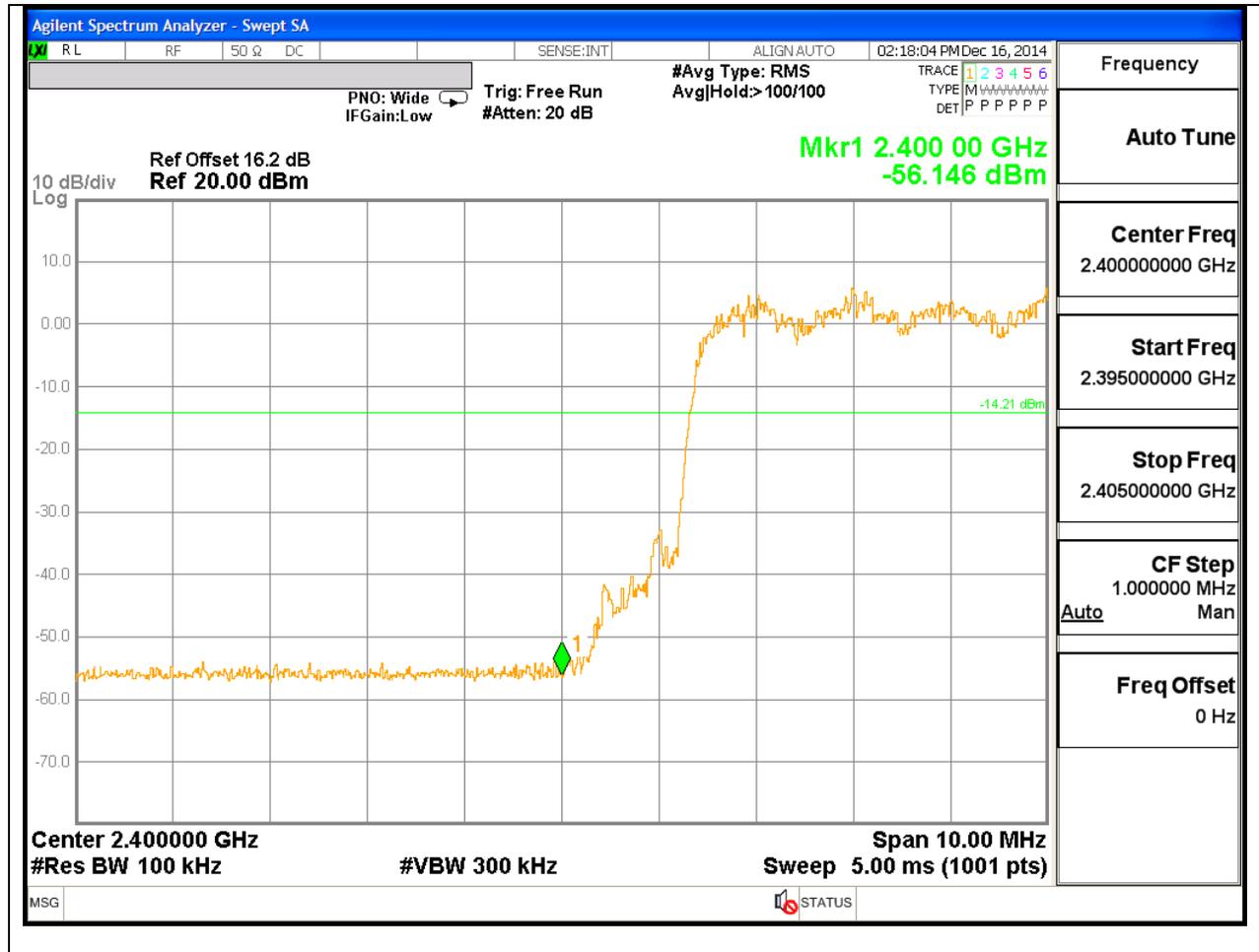


### HIGH CHANNEL SPURIOUS

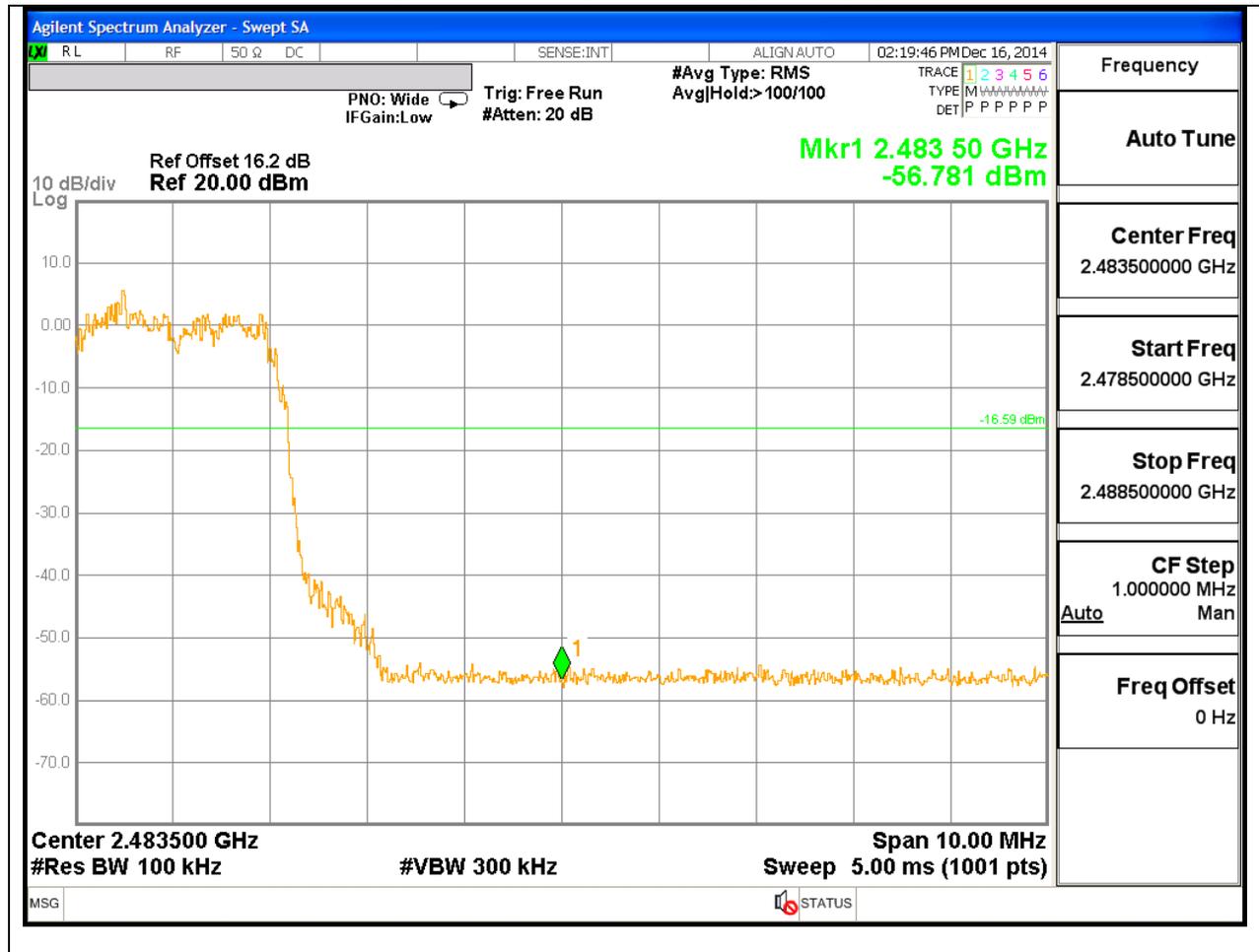


**SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON**

**LOW BANDEDGE WITH HOPPING ON**



### HIGH BANDEGE WITH HOPPING ON



## 9. RADIATED TEST RESULTS

### 9.1. LIMITS AND PROCEDURE

#### LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

#### TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.4. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For band edge measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 1/T (on time) for average measurement.  
 $GFSK = 1/T = 1 / 0.0038S = 260Hz.$

The spectrum from 1GHzHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

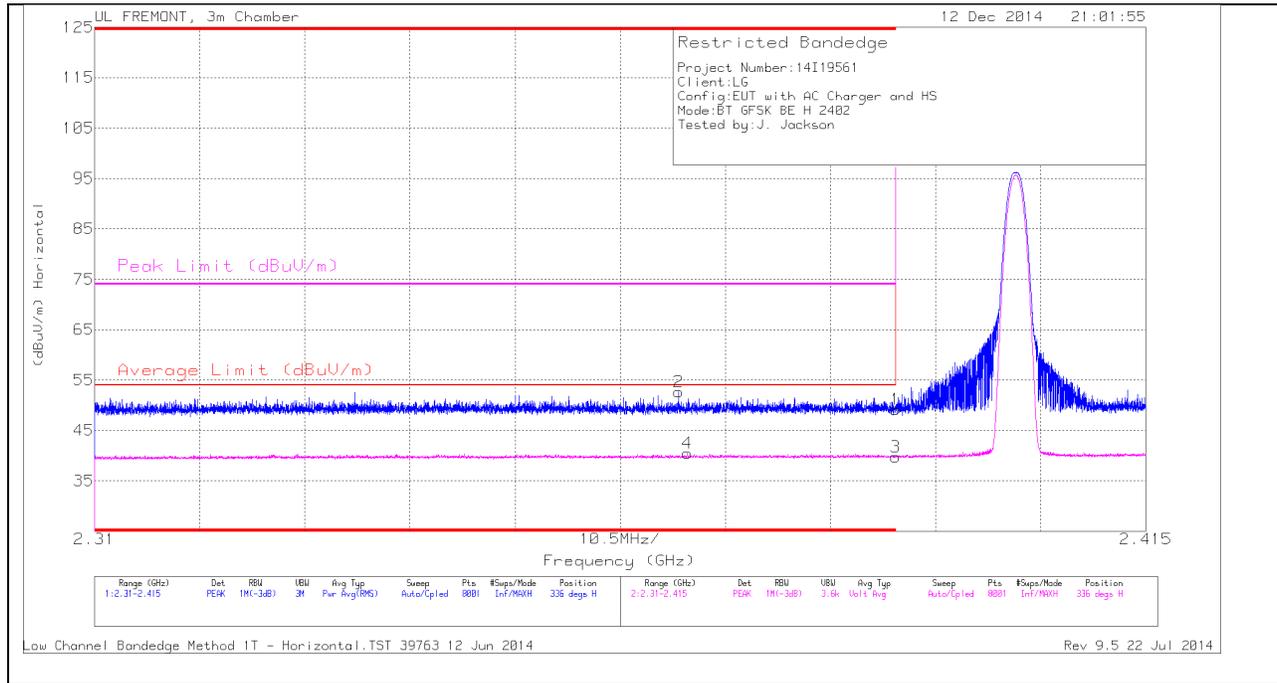
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

## 9.2. TRANSMITTER ABOVE 1 GHz

### 9.2.1. BASIC DATA RATE GFSK MODULATION

#### RESTRICTED BANDEDGE (LOW CHANNEL)

##### HORIZONTAL PEAK AND AVERAGE PLOT

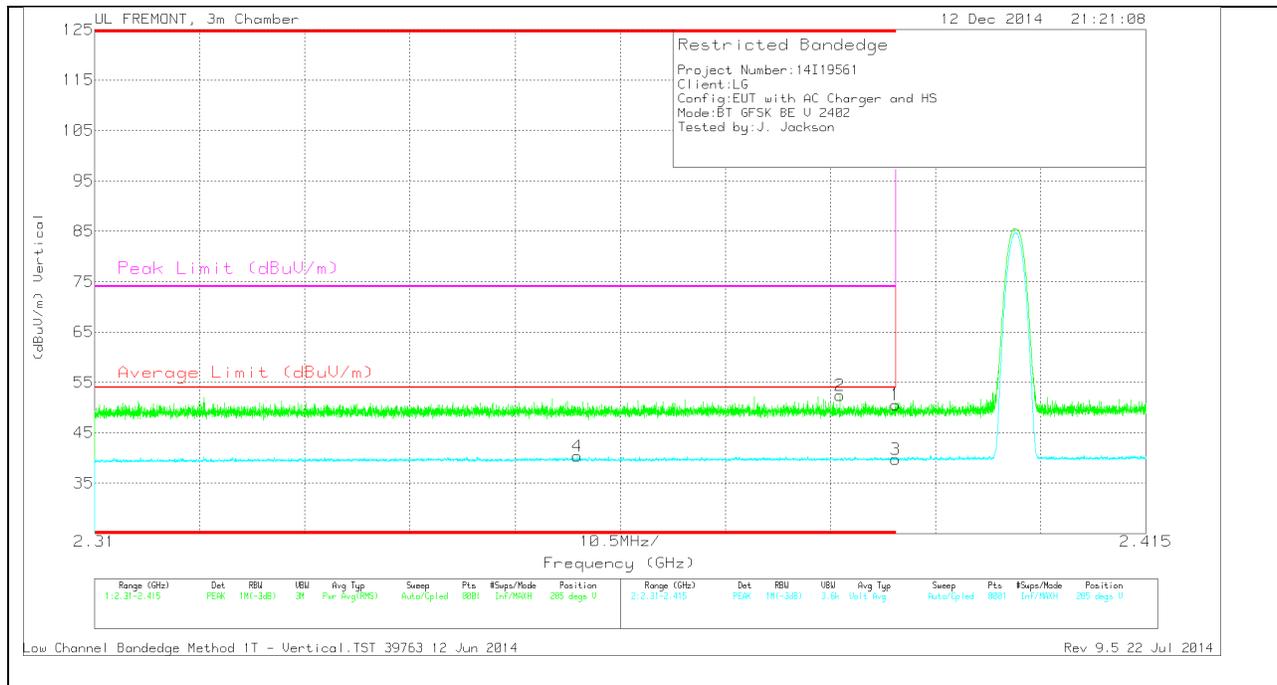


##### HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	40.2	PK	32.1	-23.1	49.2	-	-	74	-24.8	336	145	H
2	* 2.368	43.75	PK	32	-23.1	52.65	-	-	74	-21.35	336	145	H
3	* 2.39	30.79	VB1T	32.1	-23.1	39.79	54	-14.21	-	-	336	145	H
4	* 2.369	31.57	VB1T	32	-23.1	40.47	54	-13.53	-	-	336	145	H

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

**VERTICAL PEAK AND AVERAGE PLOT**



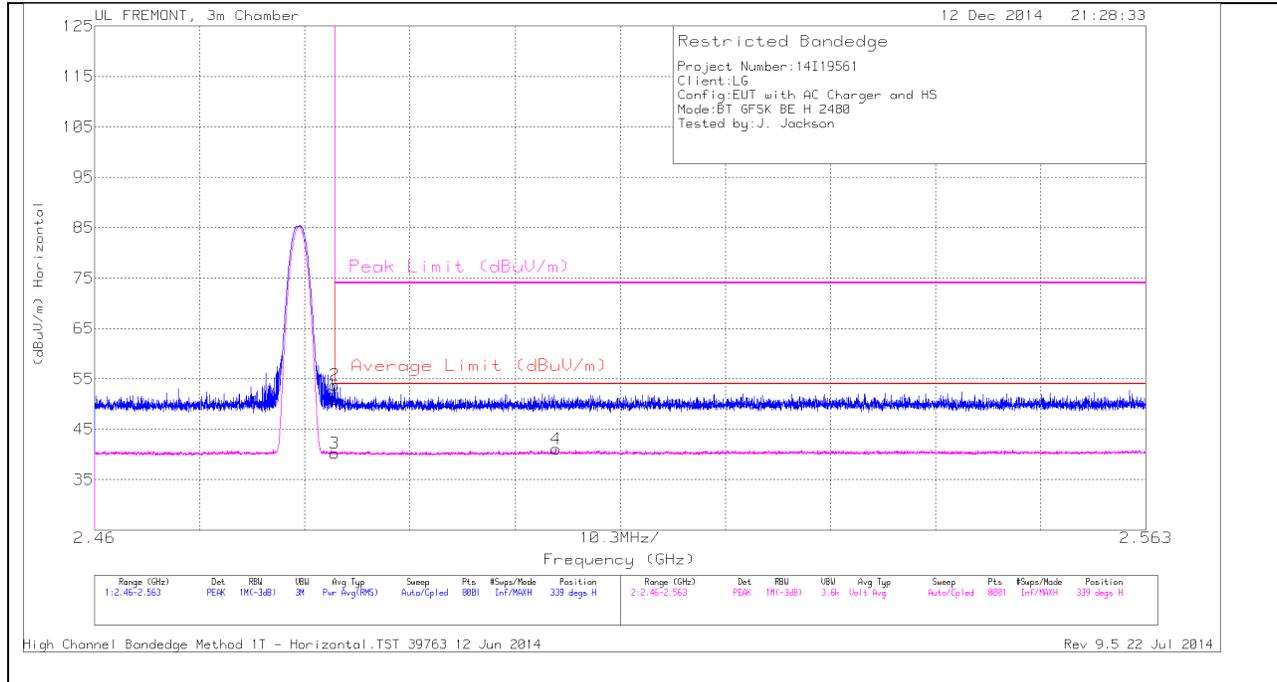
**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 2.358	31.45	VB1T	32	-23.1	40.35	54	-13.65	-	-	285	392	V
2	* 2.384	43.35	PK	32.1	-23.1	52.35	-	-	74	-21.65	285	392	V
1	* 2.39	41.6	PK	32.1	-23.1	50.6	-	-	74	-23.4	285	392	V
3	* 2.39	30.74	VB1T	32.1	-23.1	39.74	54	-14.26	-	-	285	392	V

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

**AUTHORIZED BANDEDGE (HIGH CHANNEL)**

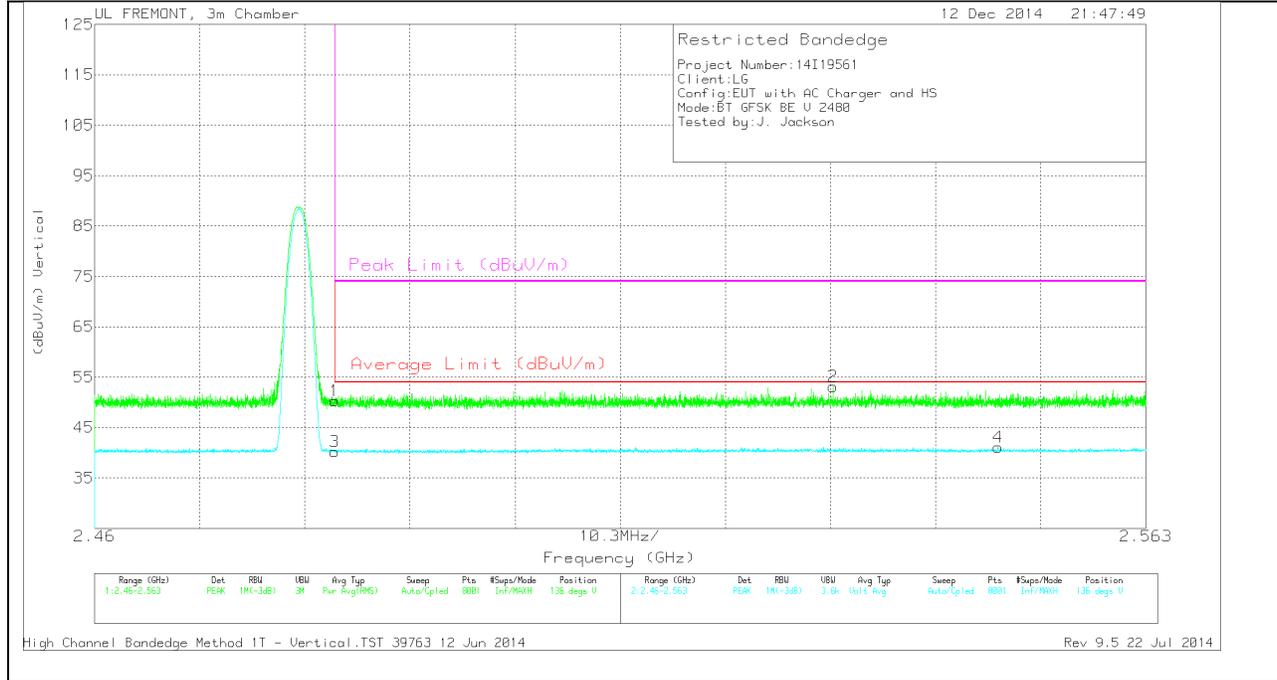
**HORIZONTAL PEAK AND AVERAGE PLOT**



**HORIZONTAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.484	41.37	PK	32.3	-22.8	50.87	-	-	74	-23.13	339	382	H
2	2.484	44.23	PK	32.3	-22.8	53.73	-	-	74	-20.27	339	382	H
3	2.484	30.79	VB1T	32.3	-22.8	40.29	54	-13.71	-	-	339	382	H
4	2.505	31.55	VB1T	32.3	-22.8	41.05	54	-12.95	-	-	339	382	H

**VERTICAL PEAK AND AVERAGE PLOT**

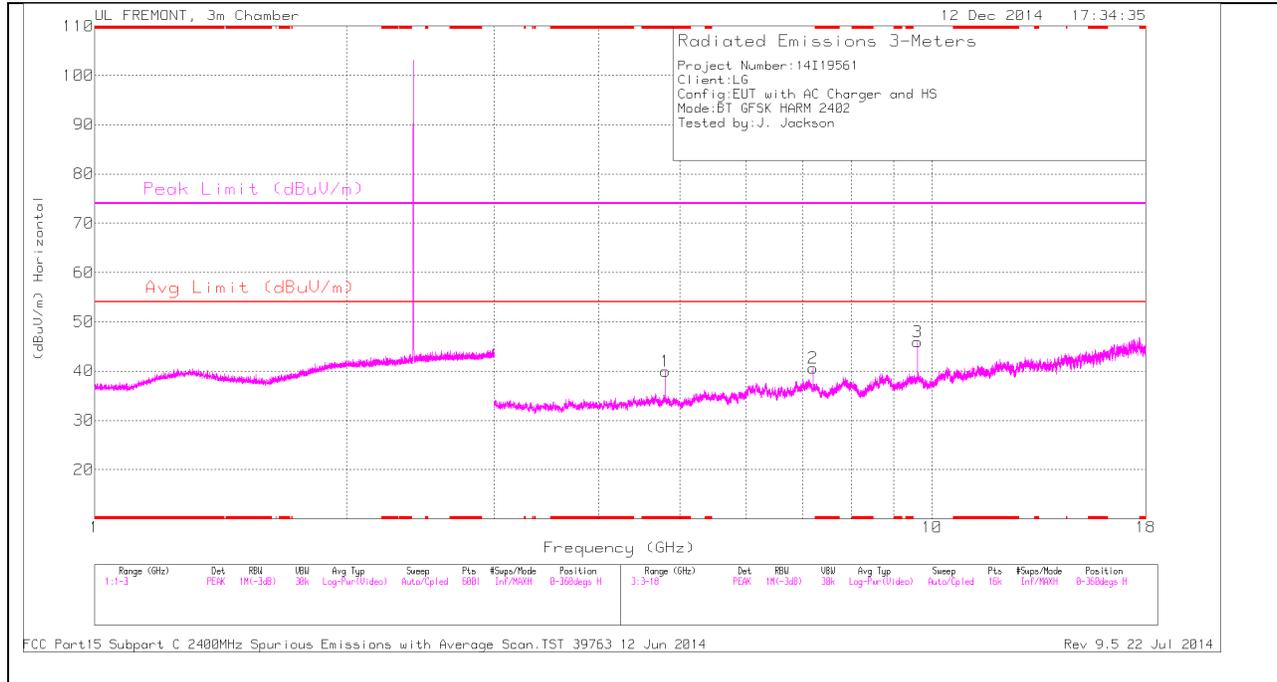


**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.484	40.76	PK	32.3	-22.8	50.26	-	-	74	-23.74	136	205	V
3	2.484	30.69	VB1T	32.3	-22.8	40.19	54	-13.81	-	-	136	205	V
2	2.532	43.42	PK	32.4	-22.7	53.12	-	-	74	-20.88	136	205	V
4	2.549	31.36	VB1T	32.4	-22.7	41.06	54	-12.94	-	-	136	205	V

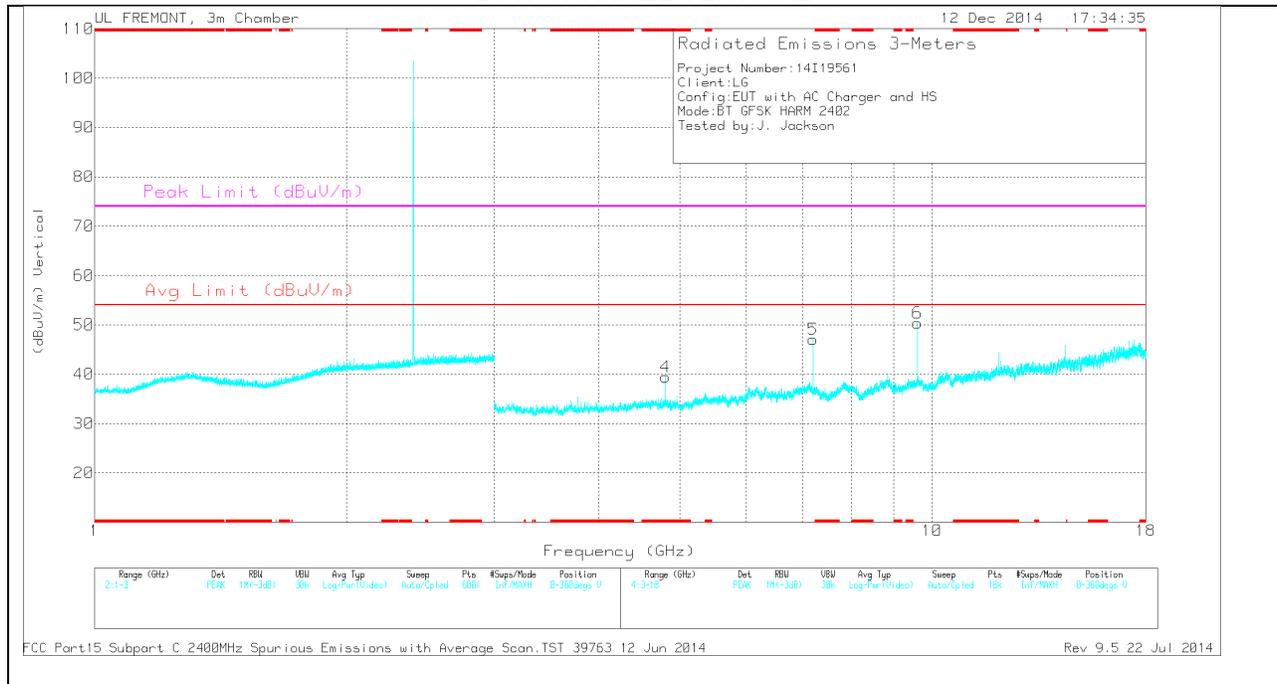
### HARMONICS AND SPURIOUS EMISSIONS

#### LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL VERTICAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL DATA**

*TRACE MARKERS*

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.804	36.12	PK	34.1	-30.3	39.92	-	-	74	-34.08	0-360	200	H
4	* 4.804	35.65	PK	34.1	-30.3	39.45	-	-	74	-34.55	0-360	200	V
5	7.205	40.72	PK	35.6	-29.2	47.12	-	-	-	-	0-360	100	V
2	7.206	34.22	PK	35.6	-29.2	40.62	-	-	-	-	0-360	200	H
3	9.607	34.42	PK	36.7	-25.2	45.92	-	-	-	-	0-360	200	H
6	9.608	38.97	PK	36.7	-25.3	50.37	-	-	-	-	0-360	100	V

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

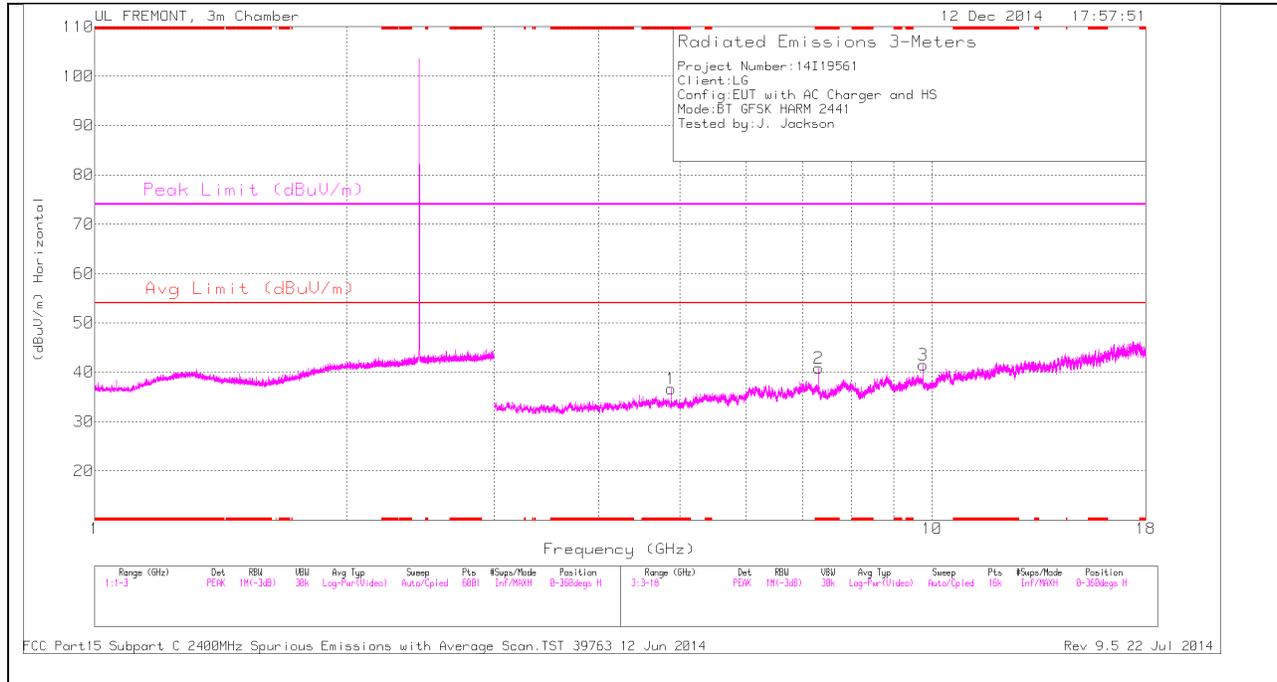
*RADIATED EMISSIONS*

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.804	44.15	PK3	34.1	-30.3	47.95	-	-	74	-26.05	41	275	H
* 4.804	36.73	VB1T	34.1	-30.3	40.53	54	-13.47	-	-	41	275	H
* 4.804	43.73	PK3	34.1	-30.3	47.53	-	-	74	-26.47	163	366	V
* 4.804	35.03	VB1T	34.1	-30.3	38.83	54	-15.17	-	-	163	366	V

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

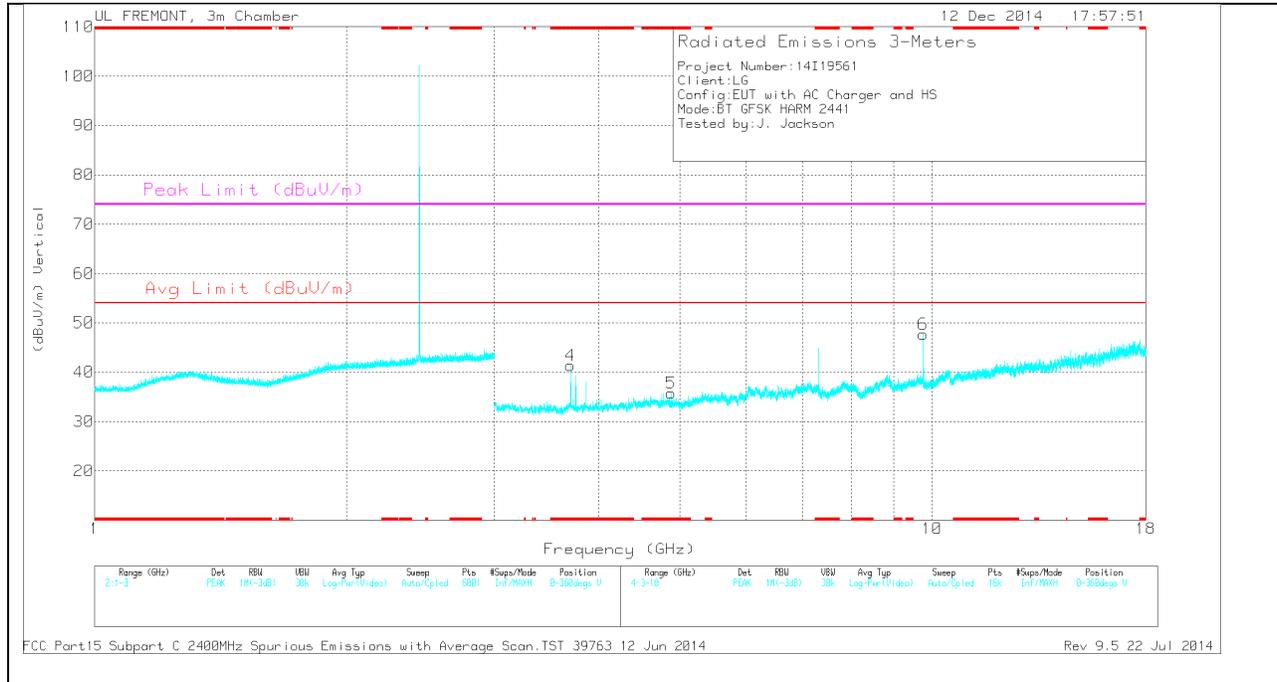
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

**MID CHANNEL HORIZONTAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL VERTICAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL DATA**

*TRACE MARKERS*

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.881	32.84	PK	34	-30.2	36.64	-	-	74	-37.36	0-360	200	H
2	* 7.323	33.67	PK	35.6	-28.4	40.87	-	-	74	-33.13	0-360	200	H
4	* 3.702	39.01	PK	33.2	-30.8	41.41	-	-	74	-32.59	0-360	200	V
5	* 4.882	31.93	PK	34	-30.1	35.83	-	-	74	-38.17	0-360	200	V
3	9.764	30.64	PK	36.9	-26	41.54	-	-	-	-	0-360	200	H
6	9.764	36.79	PK	36.9	-26	47.69	-	-	-	-	0-360	100	V
1	* 4.881	32.84	PK	34	-30.2	36.64	-	-	74	-37.36	0-360	200	H

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

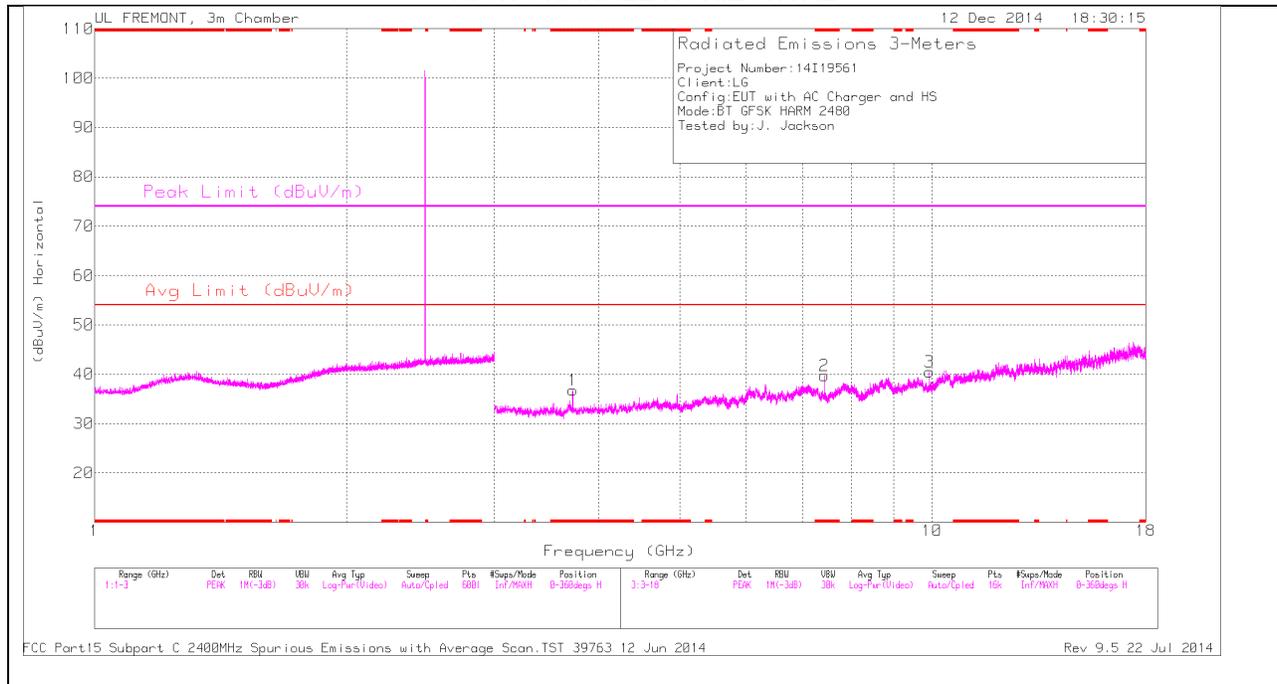
*RADIATED EMISSIONS*

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.882	42.51	PK3	34	-30.1	46.41	-	-	74	-27.59	82	244	H
* 4.882	33.7	VB1T	34	-30.1	37.6	54	-16.4	-	-	82	244	H
* 7.323	44.2	PK3	35.6	-28.4	51.4	-	-	74	-22.6	39	341	H
* 7.323	36.87	VB1T	35.6	-28.4	44.07	54	-9.93	-	-	39	341	H
* 3.702	42.23	PK3	33.2	-30.8	44.63	-	-	74	-29.37	353	115	V
* 3.702	29.35	VB1T	33.2	-30.8	31.75	54	-22.25	-	-	353	115	V
* 4.882	41.74	PK3	34	-30.1	45.64	-	-	74	-28.36	227	287	V
* 4.882	32.85	VB1T	34	-30.1	36.75	54	-17.25	-	-	227	287	V

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

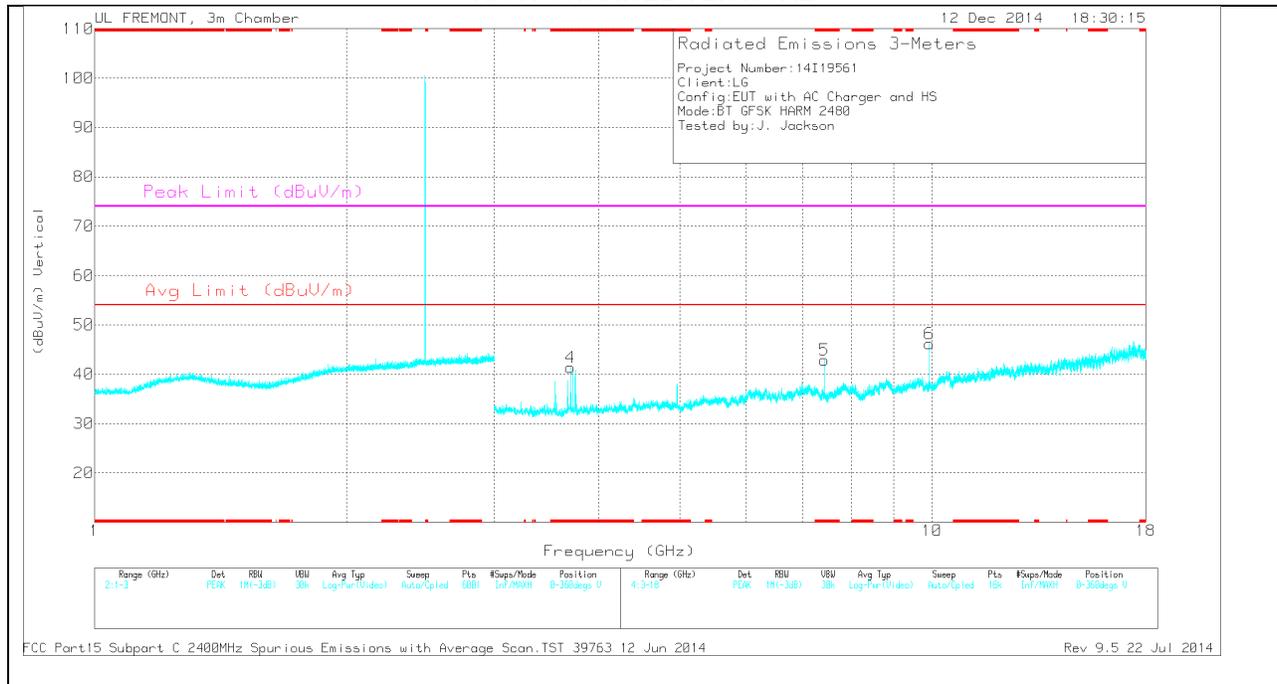
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### HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**HIGH CHANNEL VERTICAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**HIGH CHANNEL DATA**

*TRACE MARKERS*

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.723	34.52	PK	33.2	-30.9	36.82	-	-	74	-37.18	0-360	200	H
2	* 7.44	32.86	PK	35.7	-28.9	39.66	-	-	74	-34.34	0-360	200	H
4	* 3.701	38.94	PK	33.2	-30.8	41.34	-	-	74	-32.66	0-360	100	V
5	* 7.44	36.12	PK	35.7	-28.9	42.92	-	-	74	-31.08	0-360	200	V
6	9.919	34.89	PK	36.9	-25.6	46.19	-	-	-	-	0-360	100	V
3	9.92	29.18	PK	36.9	-25.6	40.48	-	-	-	-	0-360	200	H

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

*RADIATED EMISSIONS*

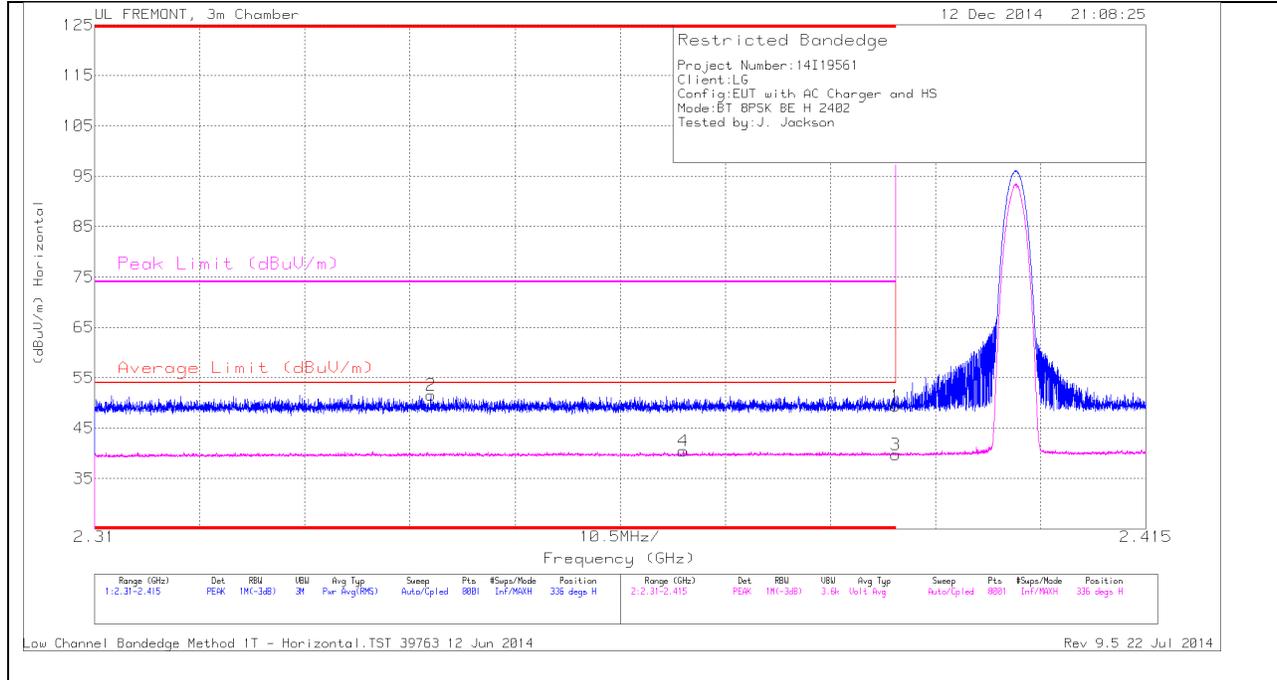
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.719	40.28	PK3	33.2	-30.9	42.58	-	-	74	-31.42	120	200	H
* 7.44	41.87	PK3	35.7	-28.9	48.67	-	-	74	-25.33	213	299	H
* 7.44	32.39	VB1T	35.7	-28.9	39.19	54	-14.81	-	-	213	299	H
* 3.702	40.75	PK3	33.2	-30.8	43.15	-	-	74	-30.85	216	100	V
* 7.44	44.65	PK3	35.7	-28.9	51.45	-	-	74	-22.55	77	226	V
* 7.44	36.19	VB1T	35.7	-28.9	42.99	54	-11.01	-	-	77	226	V

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

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## 9.2.2. ENHANCED DATA RATE 8PSK MODULATION RESTRICTED BANDEDGE (LOW CHANNEL)

### HORIZONTAL PEAK AND AVERAGE PLOT

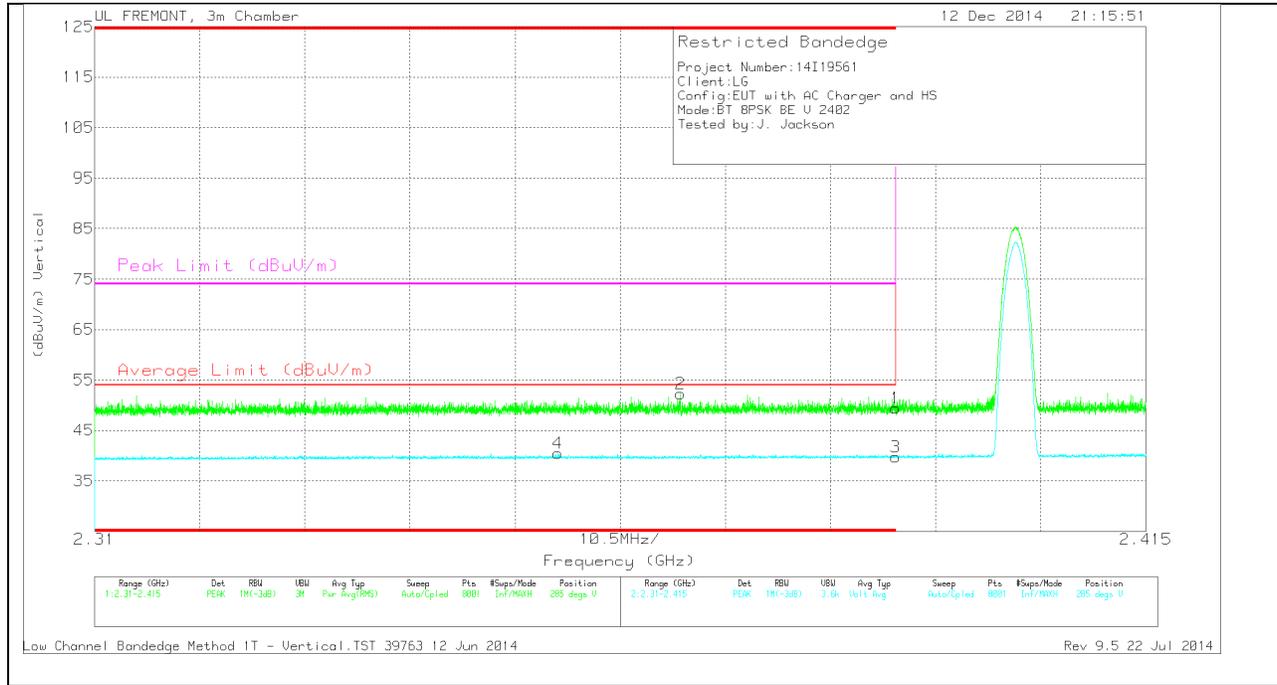


### HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cb/ Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.344	42.69	PK	32	-23.1	51.59	-	-	74	-22.41	336	145	H
4	* 2.369	31.58	VB1T	32	-23.1	40.48	54	-13.52	-	-	336	145	H
1	* 2.39	40.44	PK	32.1	-23.1	49.44	-	-	74	-24.56	336	145	H
3	* 2.39	30.71	VB1T	32.1	-23.1	39.71	54	-14.29	-	-	336	145	H

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

**VERTICAL PEAK AND AVERAGE PLOT**



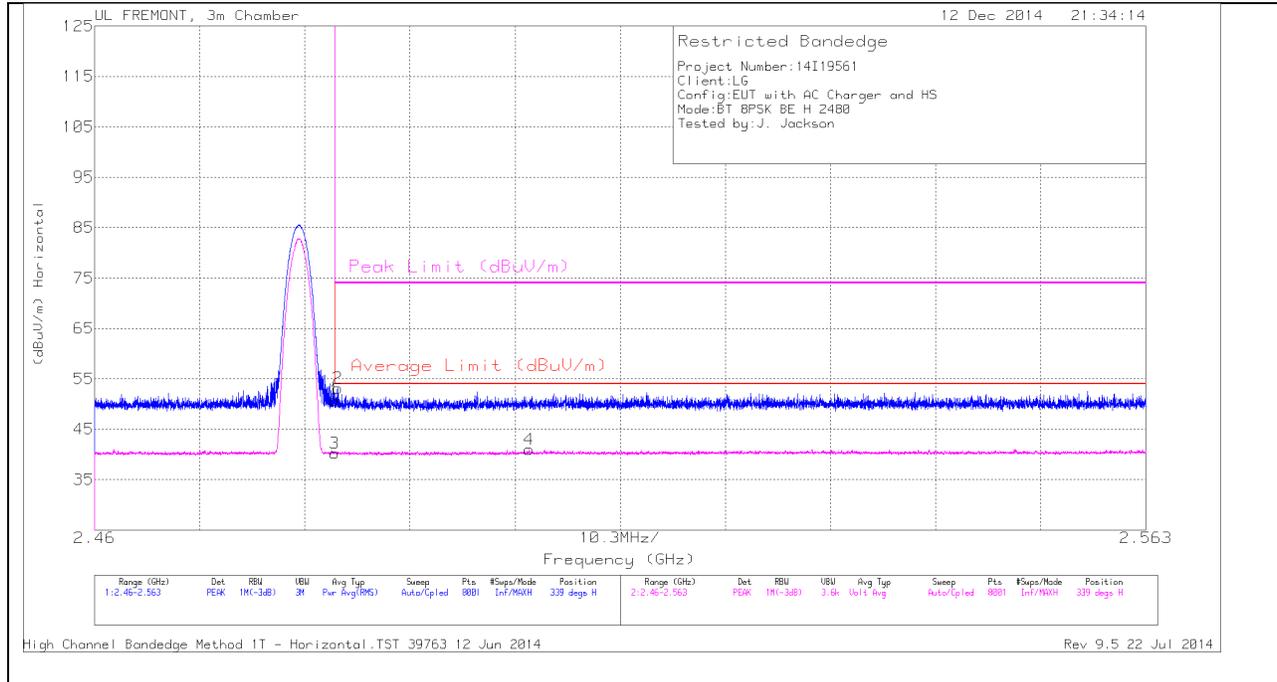
**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 2.356	31.54	VB1T	32	-23.1	40.44	54	-13.56	-	-	285	392	V
2	* 2.368	43.36	PK	32	-23.1	52.26	-	-	74	-21.74	285	392	V
1	* 2.39	40.39	PK	32.1	-23.1	49.39	-	-	74	-24.61	285	392	V
3	* 2.39	30.72	VB1T	32.1	-23.1	39.72	54	-14.28	-	-	285	392	V

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

**AUTHORIZED BANDEDGE (HIGH CHANNEL)**

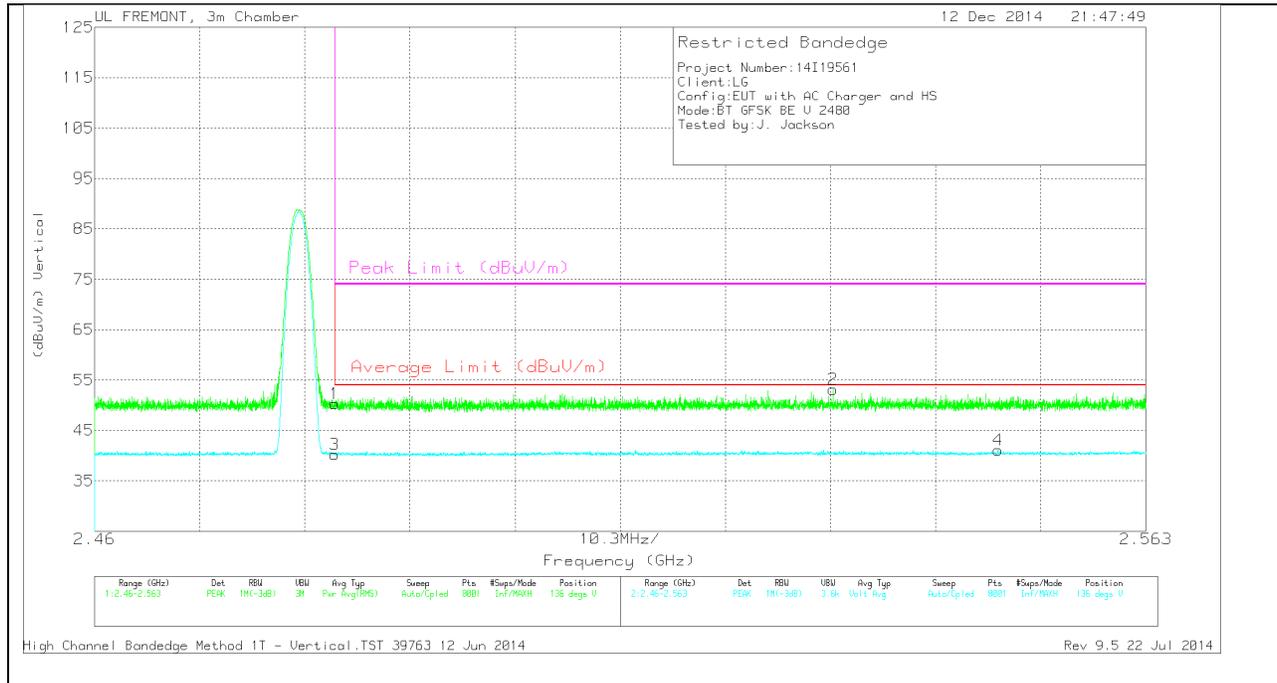
**HORIZONTAL PEAK AND AVERAGE PLOT**



**HORIZONTAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.484	41.3	PK	32.3	-22.8	50.8	-	-	74	-23.2	339	382	H
2	2.484	43.63	PK	32.3	-22.8	53.13	-	-	74	-20.87	339	382	H
3	2.484	30.74	VB1T	32.3	-22.8	40.24	54	-13.76	-	-	339	382	H
4	2.503	31.47	VB1T	32.3	-22.8	40.97	54	-13.03	-	-	339	382	H

**VERTICAL PEAK AND AVERAGE PLOT**

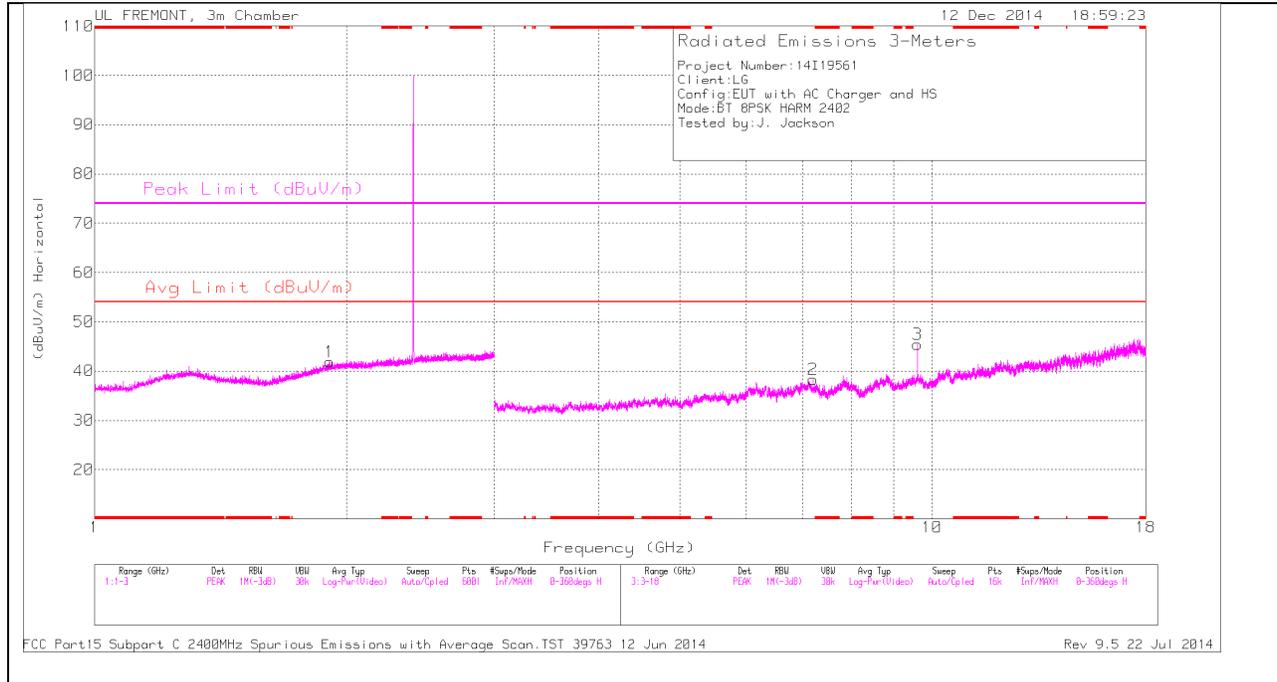


**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.484	40.76	PK	32.3	-22.8	50.26	-	-	74	-23.74	136	205	V
3	2.484	30.69	VB1T	32.3	-22.8	40.19	54	-13.81	-	-	136	205	V
2	2.532	43.42	PK	32.4	-22.7	53.12	-	-	74	-20.88	136	205	V
4	2.549	31.36	VB1T	32.4	-22.7	41.06	54	-12.94	-	-	136	205	V

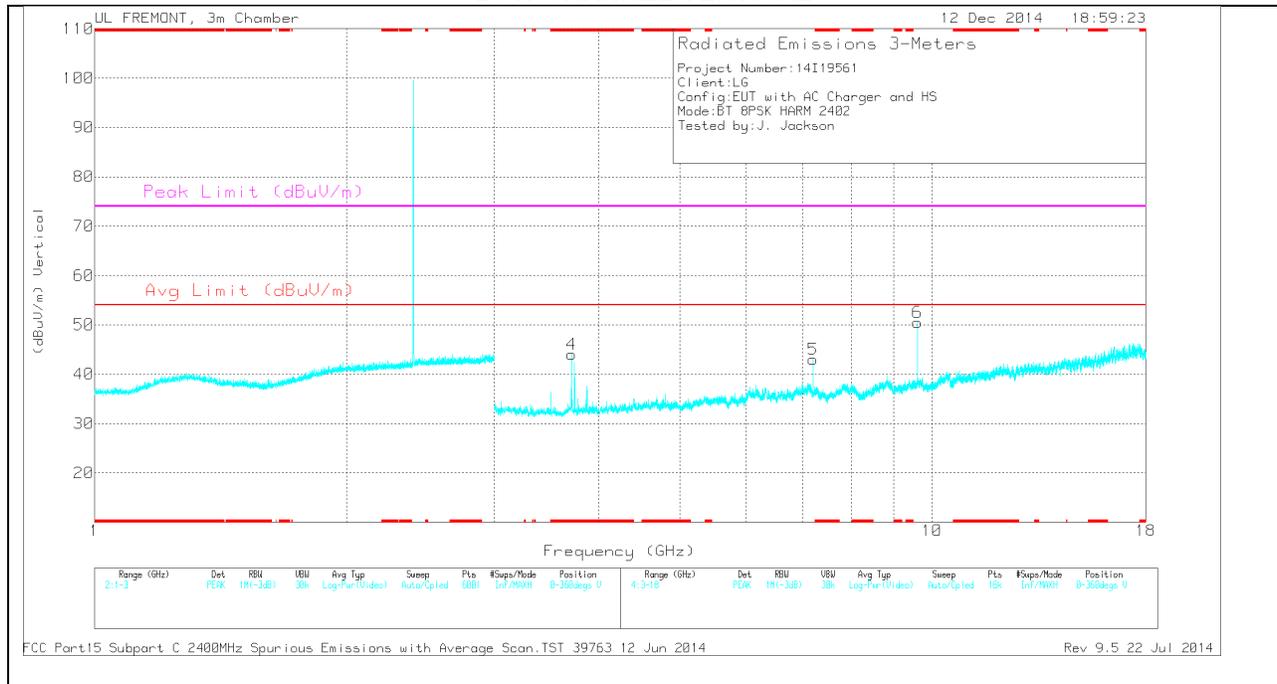
### HARMONICS AND SPURIOUS EMISSIONS

#### LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL VERTICAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL DATA**

*TRACE MARKERS*

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 3.713	41.73	PK	33.2	-30.9	44.03	-	-	74	-29.97	0-360	100	V
1	1.909	33.73	PK	31.3	-23.2	41.83	-	-	-	-	0-360	200	H
2	7.205	31.94	PK	35.6	-29.2	38.34	-	-	-	-	0-360	100	H
5	7.206	36.58	PK	35.6	-29.2	42.98	-	-	-	-	0-360	100	V
6	9.607	39.01	PK	36.7	-25.2	50.51	-	-	-	-	0-360	100	V
3	9.608	34.01	PK	36.7	-25.3	45.41	-	-	-	-	0-360	200	H

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

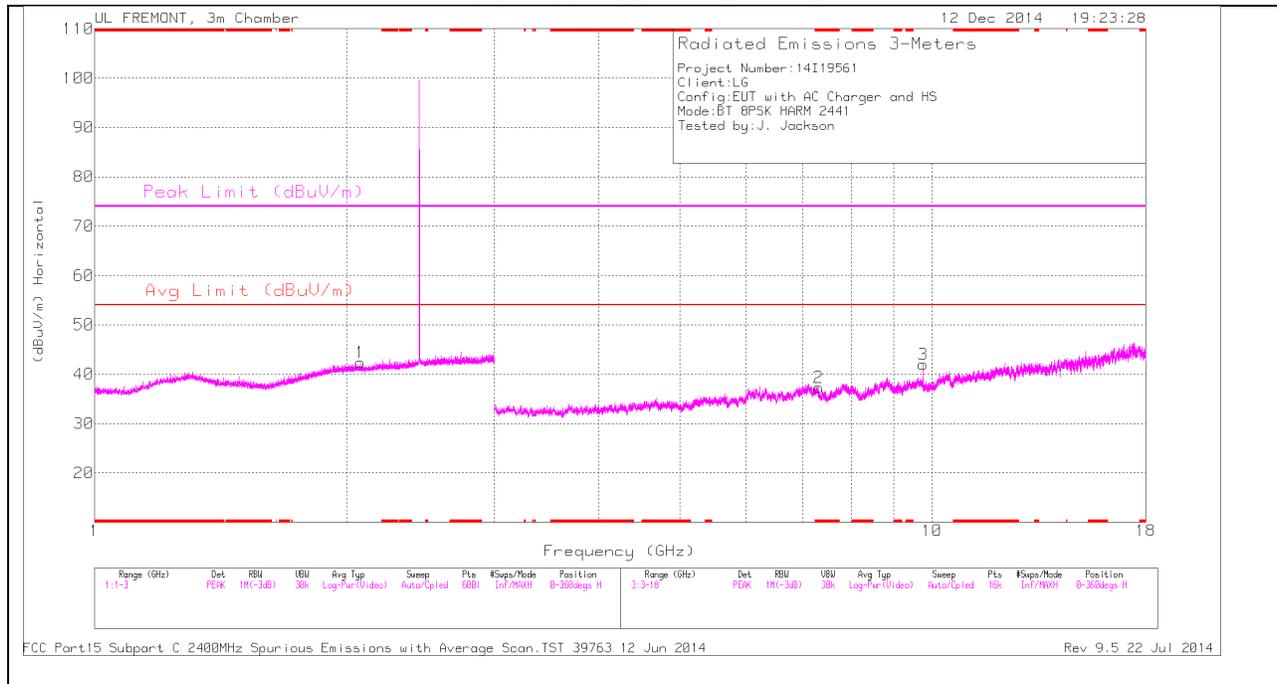
*RADIATED EMISSIONS*

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.714	41.04	PK3	33.2	-31	43.24	-	-	74	-30.76	48	100	V

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

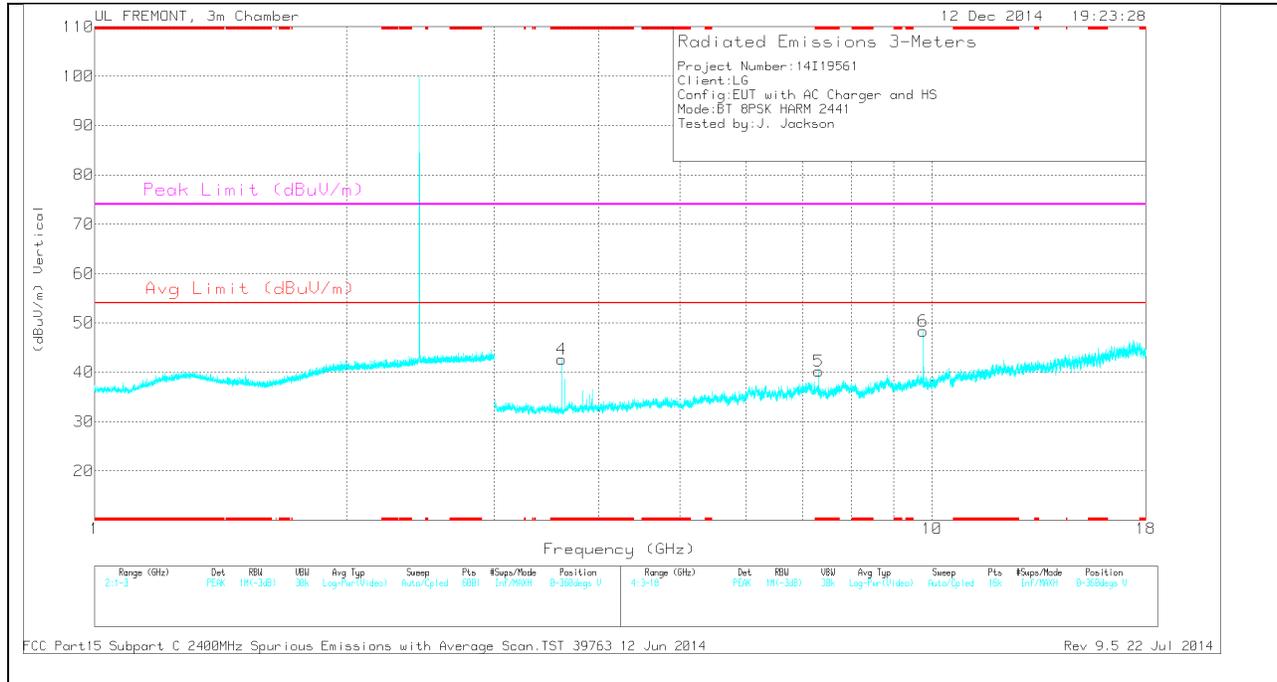
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**MID CHANNEL HORIZONTAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL VERTICAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL DATA**

*TRACE MARKERS*

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 7.323	30.13	PK	35.6	-28.4	37.33	-	-	74	-36.67	0-360	200	H
4	* 3.611	41.24	PK	33	-31.6	42.64	-	-	74	-31.36	0-360	200	V
5	* 7.323	33.01	PK	35.6	-28.4	40.21	-	-	74	-33.79	0-360	200	V
1	2.075	33.84	PK	31.6	-23.1	42.34	-	-	-	-	0-360	100	H
3	9.764	31.08	PK	36.9	-26	41.98	-	-	-	-	0-360	200	H
6	9.764	37.49	PK	36.9	-26	48.39	-	-	-	-	0-360	100	V

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

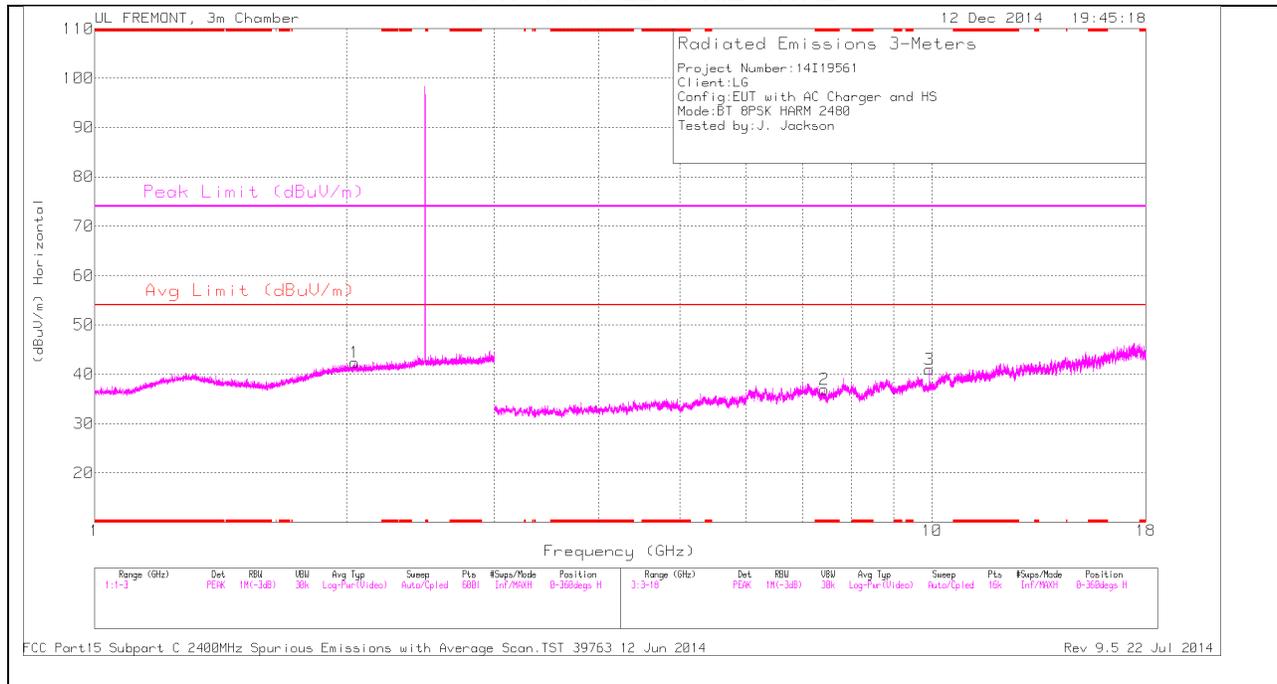
*RADIATED EMISSIONS*

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 7.323	41.87	PK3	35.6	-28.4	49.07	-	-	74	-24.93	72	365	H
* 7.323	31.9	VB1T	35.6	-28.4	39.1	54	-14.9	-	-	72	365	H
* 3.612	40.36	PK3	33	-31.6	41.76	-	-	74	-32.24	72	200	V
* 7.323	43.13	PK3	35.6	-28.4	50.33	-	-	74	-23.67	127	195	V
* 7.323	33.01	VB1T	35.6	-28.4	40.21	54	-13.79	-	-	127	195	V

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

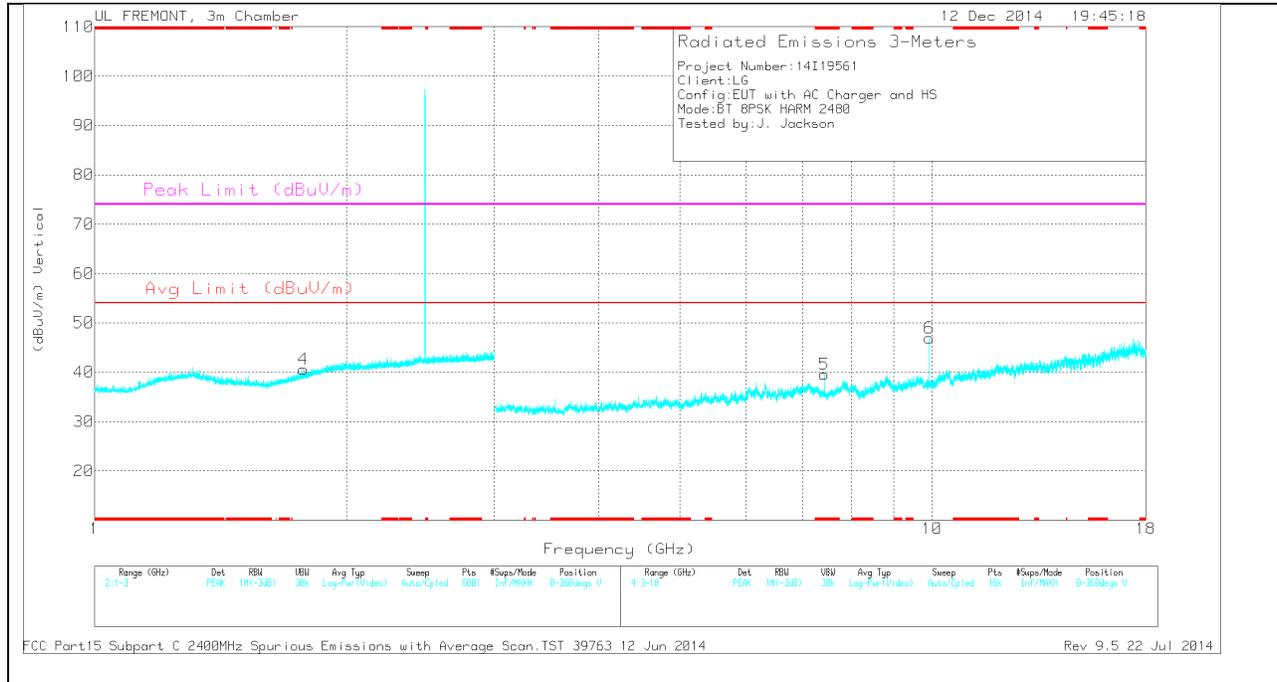
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### HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**HIGH CHANNEL VERTICAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**HIGH CHANNEL DATA**

*TRACE MARKERS*

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 7.44	30.14	PK	35.7	-28.9	36.94	-	-	74	-37.06	0-360	200	H
5	* 7.44	32.84	PK	35.7	-28.9	39.64	-	-	74	-34.36	0-360	100	V
4	1.775	34.02	PK	29.9	-23.3	40.62	-	-	-	-	0-360	200	V
1	2.046	33.94	PK	31.6	-23.2	42.34	-	-	-	-	0-360	100	H
3	9.919	29.71	PK	36.9	-25.6	41.01	-	-	-	-	0-360	200	H
6	9.919	35.64	PK	36.9	-25.6	46.94	-	-	-	-	0-360	200	V

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

*RADIATED EMISSIONS*

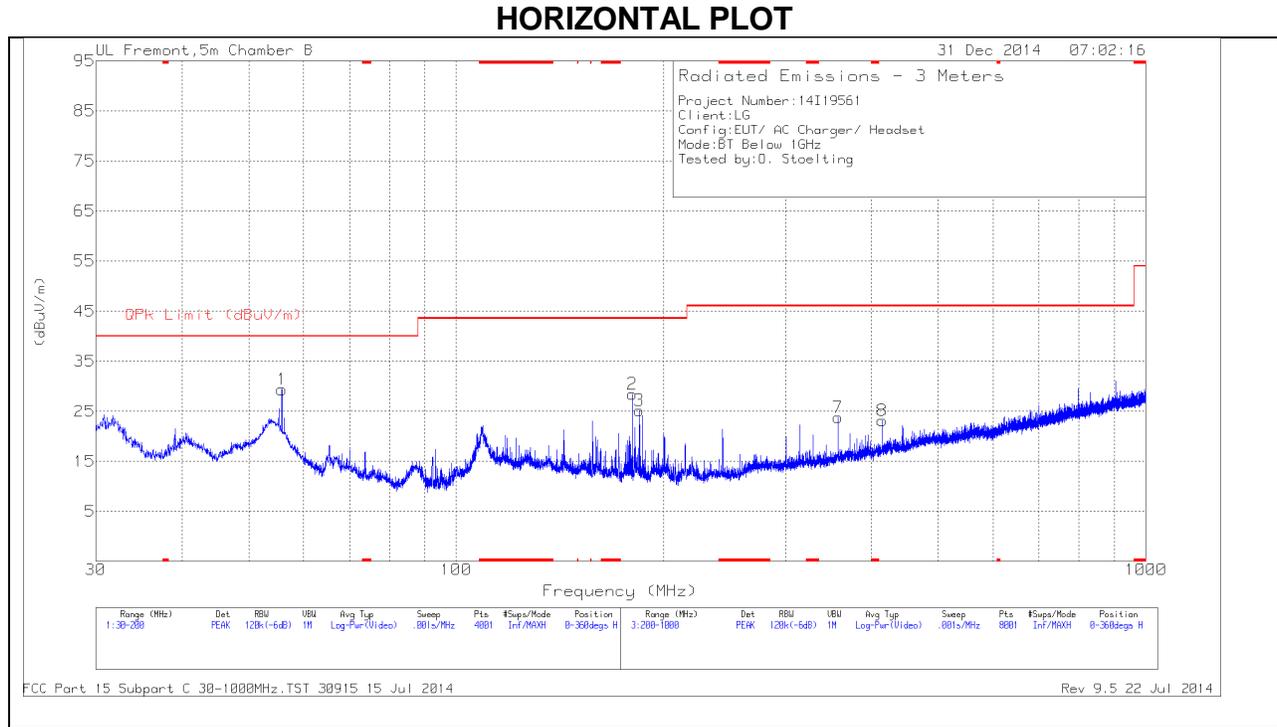
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 7.44	40.86	PK3	35.7	-28.9	47.66	-	-	74	-26.34	360	295	H
* 7.44	30.06	VB1T	35.7	-28.9	36.86	54	-17.14	-	-	360	295	H
* 7.44	41.66	PK3	35.7	-28.9	48.46	-	-	74	-25.54	71	246	V
* 7.44	40.86	PK3	35.7	-28.9	47.66	-	-	74	-26.34	360	295	H

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

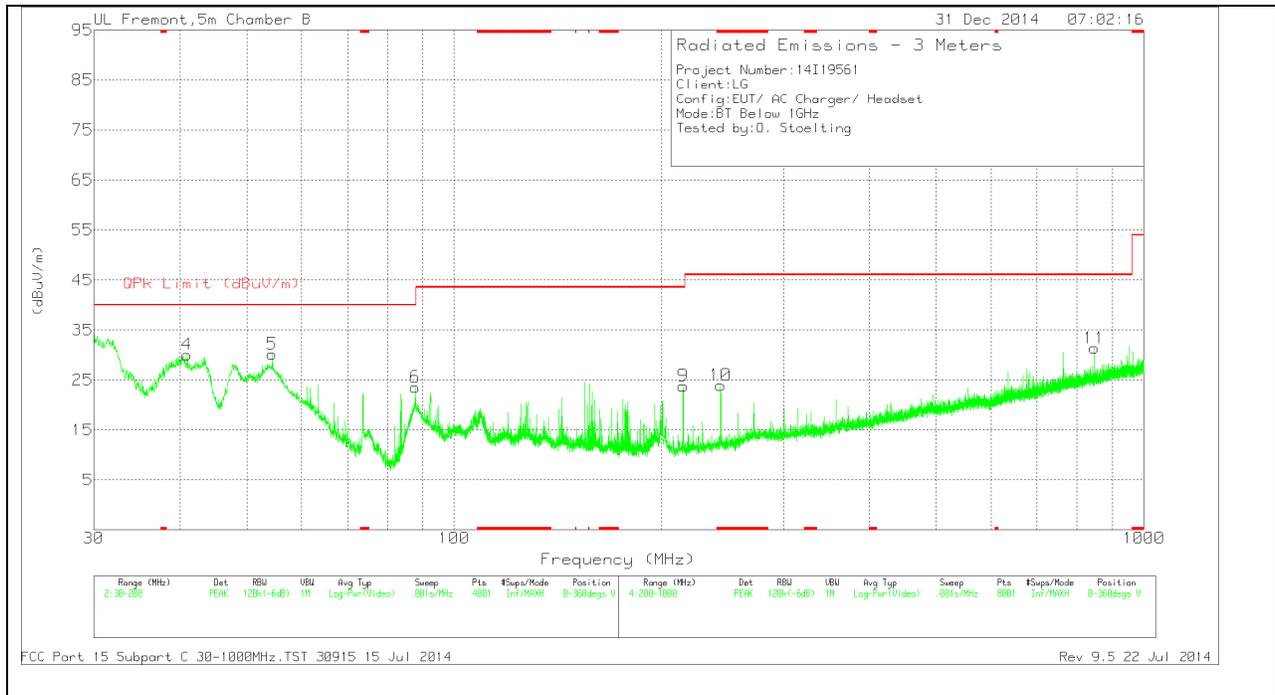
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### 9.3. WORST-CASE BELOW 1 GHz

#### GFSK SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)



### VERTICAL PLOT



**BELOW 1 GHz TABLE**

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T185 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10	* 243.4	38.76	PK	11.6	-26.4	23.96	46.02	-22.06	0-360	101	V
4	40.965	45.29	PK	13.4	-28.6	30.09	40	-9.91	0-360	101	V
5	54.4375	51.39	PK	7.4	-28.6	30.19	40	-9.81	0-360	101	V
1	55.8613	50.55	PK	7.3	-28.5	29.35	40	-10.65	0-360	300	H
6	87.8425	44.16	PK	7.5	-28.1	23.56	40	-16.44	0-360	101	V
2	179.9825	44.32	PK	11.2	-27.1	28.42	43.52	-15.1	0-360	200	H
3	184.3175	41.08	PK	11.2	-27.1	25.18	43.52	-18.34	0-360	200	H
9	214.8	40.03	PK	10.6	-26.8	23.83	43.52	-19.69	0-360	200	V
7	357.9	34.76	PK	14.8	-25.8	23.76	46.02	-22.26	0-360	200	H
8	414.7	33.07	PK	16	-25.9	23.17	46.02	-22.85	0-360	101	H
11	847.9	32.79	PK	22	-23.4	31.39	46.02	-14.63	0-360	101	V

PK - Peak detector

## 10. AC POWER LINE CONDUCTED EMISSIONS

### LIMITS

FCC §15.207 (a)

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 <sup>*</sup>	56 to 46 <sup>*</sup>
0.5-5	56	46
5-30	60	50

<sup>\*</sup> Decreases with the logarithm of the frequency.

### TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

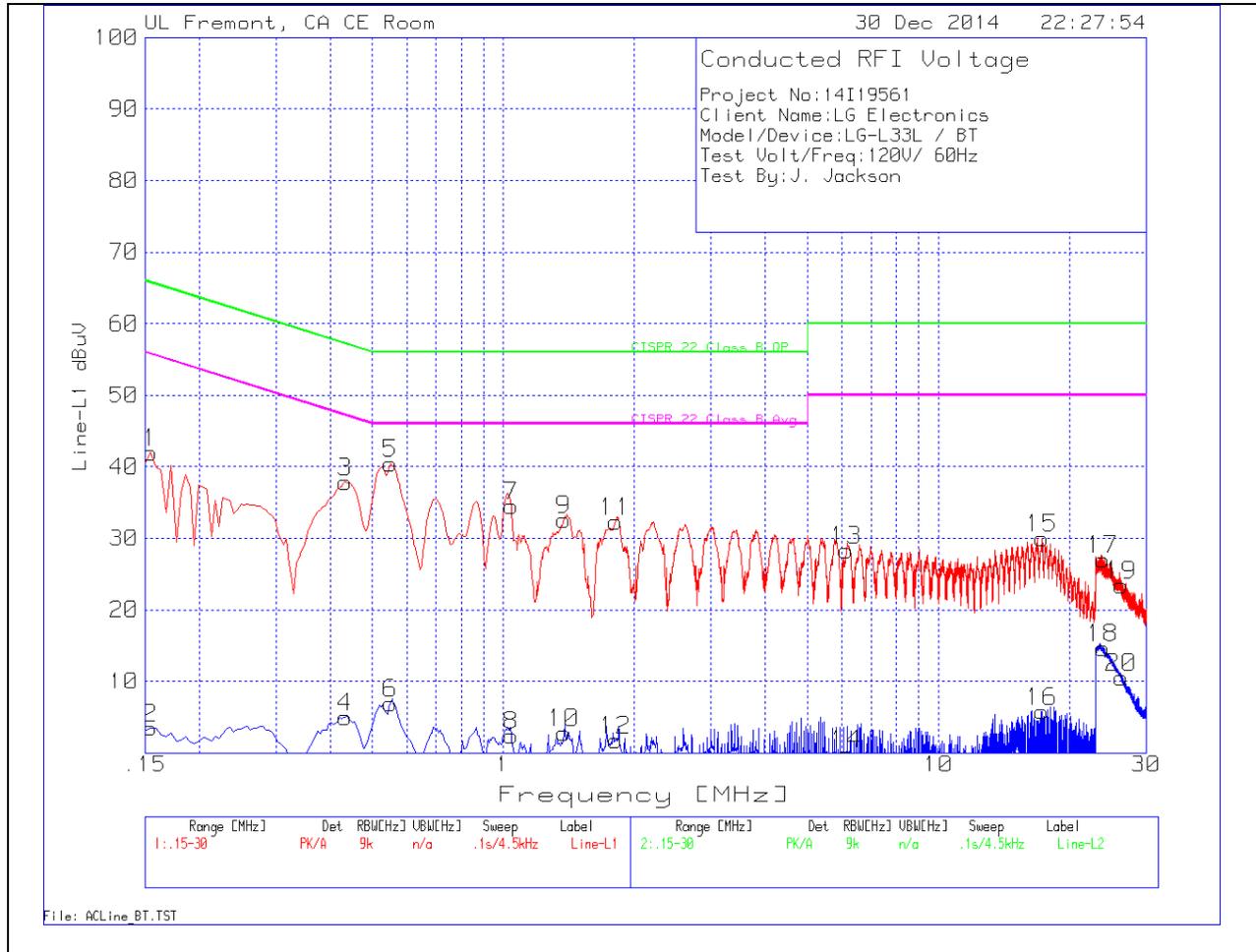
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

### RESULTS

**6 WORST EMISSIONS**

**LINE 1 PLOT**



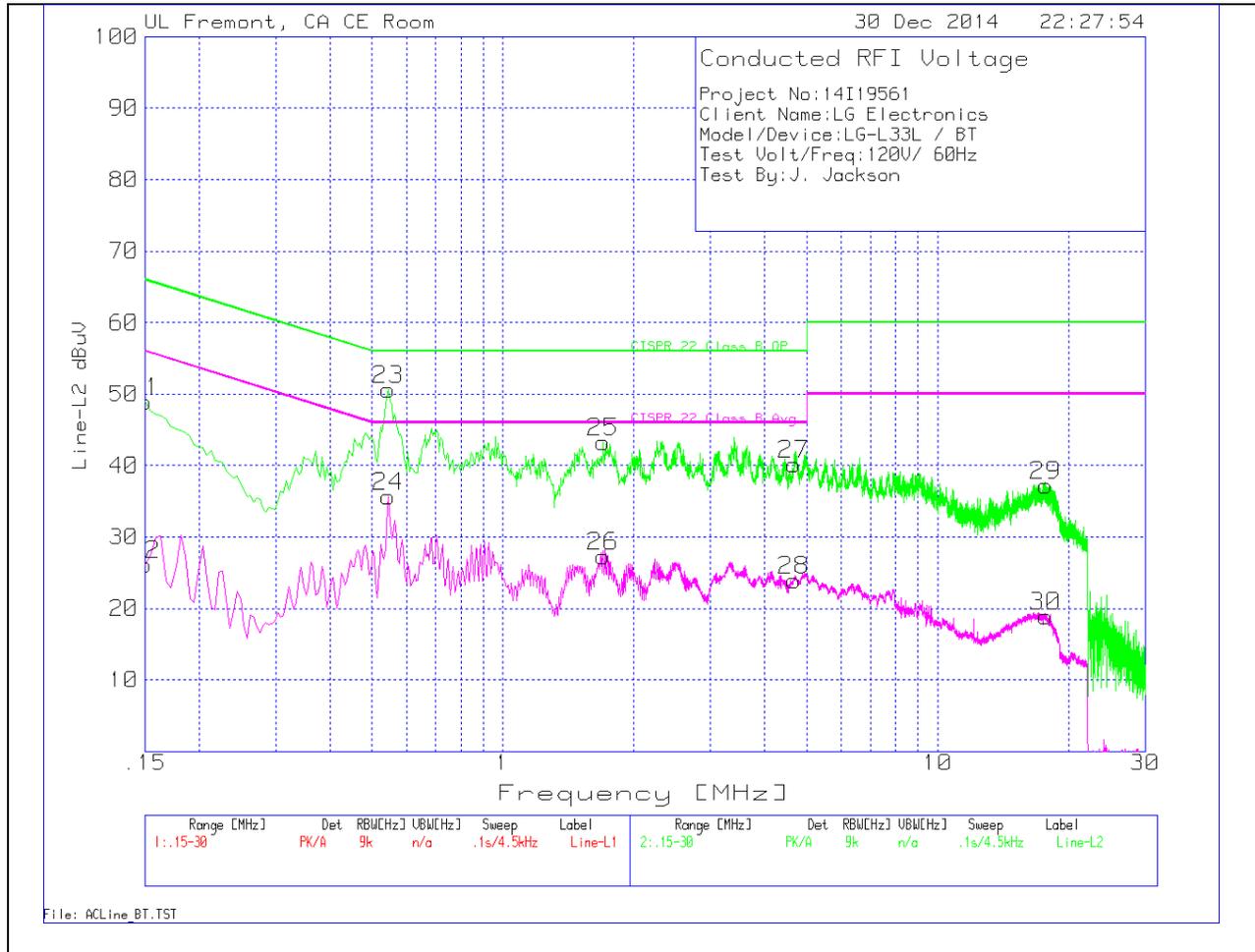
## LINE 1 RESULTS

Line-L1 .15 - 30MHz

### Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1 (dB)	LC Cables 1&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
1	.1545	40.7	PK	1.3	0	42	65.8	-23.8	-	-
2	.1545	2.2	Av	1.3	0	3.5	-	-	55.8	-52.3
3	.4335	37.43	PK	.4	0	37.83	57.2	-19.37	-	-
4	.4335	4.62	Av	.4	0	5.02	-	-	47.2	-42.18
5	.5505	40.19	PK	.3	0	40.49	56	-15.51	-	-
6	.5505	6.57	Av	.3	0	6.87	-	-	46	-39.13
7	1.041	34.27	PK	.2	0	34.47	56	-21.53	-	-
8	1.041	2.17	Av	.2	0	2.37	-	-	46	-43.63
9	1.3785	32.28	PK	.2	.1	32.58	56	-23.42	-	-
10	1.3785	2.49	Av	.2	.1	2.79	-	-	46	-43.21
11	1.8105	32.07	PK	.2	.1	32.37	56	-23.63	-	-
12	1.8105	1.51	Av	.2	.1	1.81	-	-	46	-44.19
13	6.144	28	PK	.2	.1	28.3	60	-31.7	-	-
14	6.144	-49	Av	.2	.1	-.19	-	-	50	-50.19
15	17.2815	29.54	PK	.3	.2	30.04	60	-29.96	-	-
16	17.2815	5.32	Av	.3	.2	5.82	-	-	50	-44.18
17	23.8425	26.54	PK	.3	.2	27.04	60	-32.96	-	-
18	23.8425	14.12	Av	.3	.2	14.62	-	-	50	-35.38
19	26.2905	22.8	PK	.3	.3	23.4	60	-36.6	-	-
20	26.2905	9.98	Av	.3	.3	10.58	-	-	50	-39.42

**LINE 2 PLOT**



**LINE 2 RESULTS**

Line-L2 .15 - 30MHz

**Trace Markers**

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2 (dB)	LC Cables 2&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
21	.15	47.48	PK	1.5	0	48.98	66	-17.02	-	-
22	.15	24.6	Av	1.5	0	26.1	-	-	56	-29.9
23	.546	50.32	PK	.3	0	50.62	56	-5.38	-	-
24	.546	35.39	Av	.3	0	35.69	-	-	46	-10.31
25	1.7025	42.95	PK	.2	.1	43.25	56	-12.75	-	-
26	1.7025	26.97	Av	.2	.1	27.27	-	-	46	-18.73
27	4.6635	39.85	PK	.2	.1	40.15	56	-15.85	-	-
28	4.6635	23.58	Av	.2	.1	23.88	-	-	46	-22.12
29	17.7225	36.77	PK	.3	.2	37.27	60	-22.73	-	-
30	17.7225	18.44	Av	.3	.2	18.94	-	-	50	-31.06

PK - Peak detector

Av - average detection