



**FCC 47 CFR PART 15 SUBPART C  
INDUSTRY CANADA RSS-210 ISSUE 8**

**CERTIFICATION TEST REPORT  
FOR  
SMART WATCH with BT and BLE  
MODEL NUMBER: LG-W100, W100, LGW100**

**FCC ID: ZNFW100  
IC ID: 2703C-W100**

**REPORT NUMBER: 14U17492-1**

**ISSUE DATE: APRIL 23, 2014**

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**NVLAP LAB CODE 200065-0**

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
--	4/23/14	Initial issue	P. Kim

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# 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** LG ELECTRONICS MOBILECOMM U.S.A., INC.  
**EUT DESCRIPTION:** Smart Watch with BT and BLE  
**MODEL:** LG-W100, W100, LGW100  
**SERIAL NUMBER:** 15D9C (RADIATED) & 15D9D (CONDUCTE)  
**DATE TESTED:** April 15 – 23, 2014

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-210 ISSUE 8	Pass
INDUSTRY CANADA RSS-GEN ISSUE 3	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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## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2009, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-GEN Issue 3, and RSS-210 Issue 8.

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

## 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:

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

### 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 Smart Watch with BT and BLE.

### 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	9.31	8.53
2402 - 2480	Enhanced 8PSK	10.51	11.24

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 showing compliance. For average power data please refer to section 8.6.

### 5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an metal antenna, with a maximum gain of -4 dBi.

### 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-02WD	DB390078751	N/A
Cradle	LG	W0	N/A	N/A

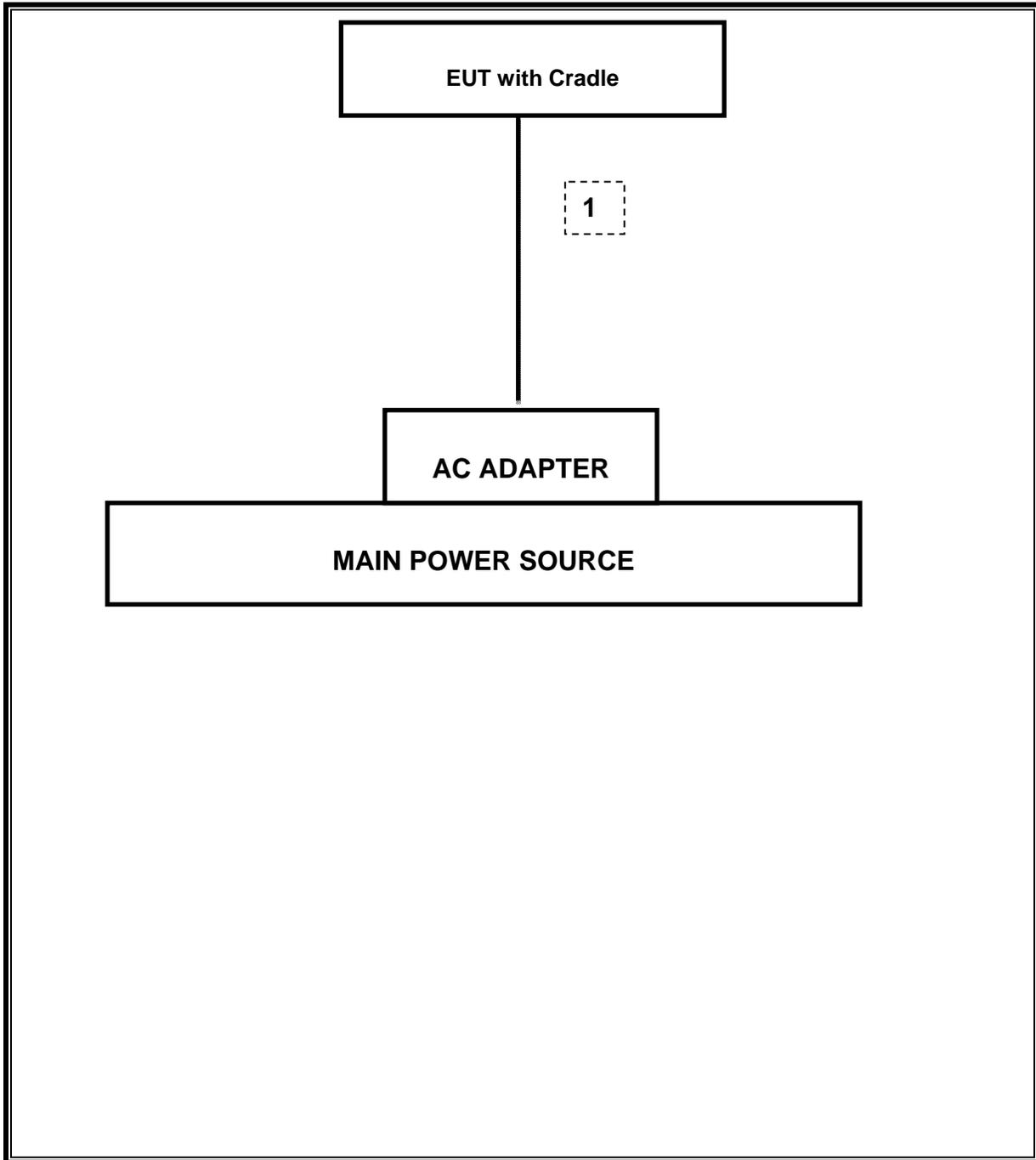
### I/O CABLES

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

The EUT is continuously communicating to the Bluetooth tester during the tests. 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	10/25/14
Antenna, Horn, 25.5 GHz	ARA	MWH-1826/B	C00980	11/14/14
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00580	01/28/15
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01052	10/22/14
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/14
CBT Bluetooth Tester	R & S	CBT	None	07/12/14
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/14
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/14
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	12/13/14
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/14

## 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	1.222MHz
2.1051, 15.247 (d)	RSS-210 A8.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	-48.056dBm
15.247 (b)(1)	RSS-210 A8.4	TX conducted output power	<21dBm		Pass	10.51dBm
15.247 (a)(1)	RSS-210 A8.1(b)	Hopping frequency separation	> 25KHz		Pass	1MHz
15.247 (a)(1)(iii)	RSS-210 A8.1(d)	Number of Hopping channels	More than 15 non-overlapping channels		Pass	79
15.247 (a)(1)(iii)	RSS-210 A8.1(d)	Avg Time of Occupancy	< 0.4sec		Pass	0.381sec
15.207 (a)	RSS-GEN 7.2.2	AC Power Line conducted emissions	Section 10		Radiated	Pass
15.205, 15.209	RSS-210 Clause 2.6, RSS-210 Clause 6	Radiated Spurious Emission	< 54dBuV/m	Pass		51.65dBuV/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

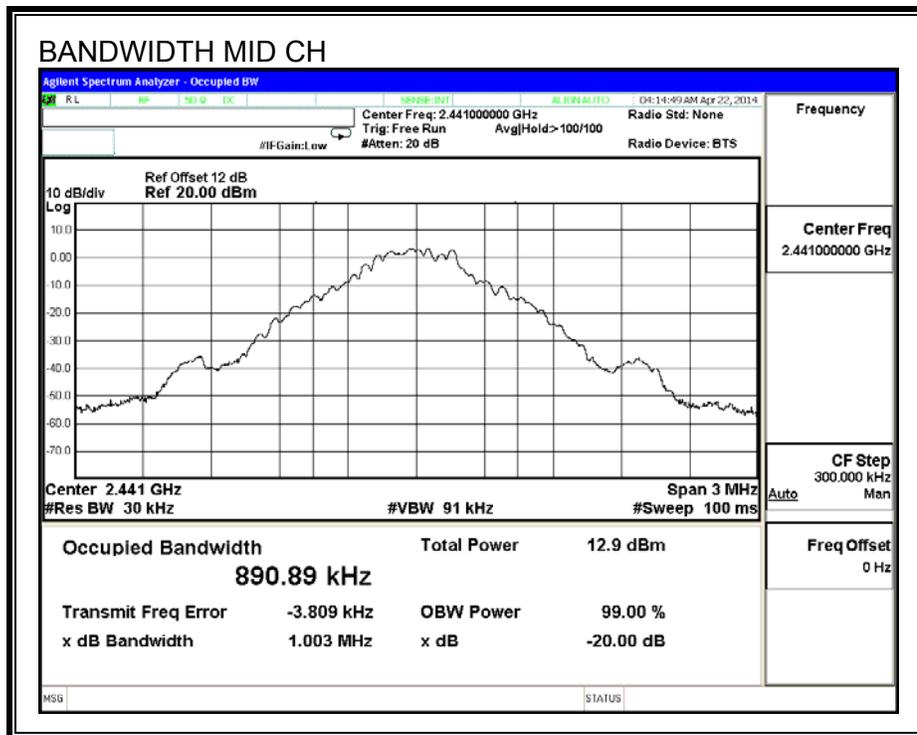
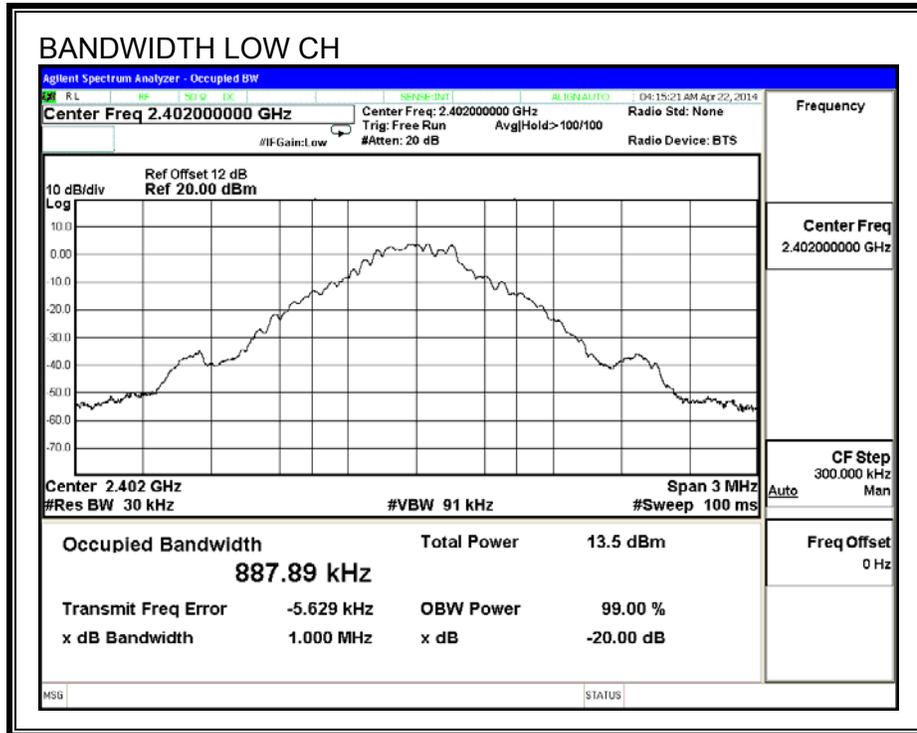
##### 8.1.1. BASIC DATA RATE GFSK MODULATION

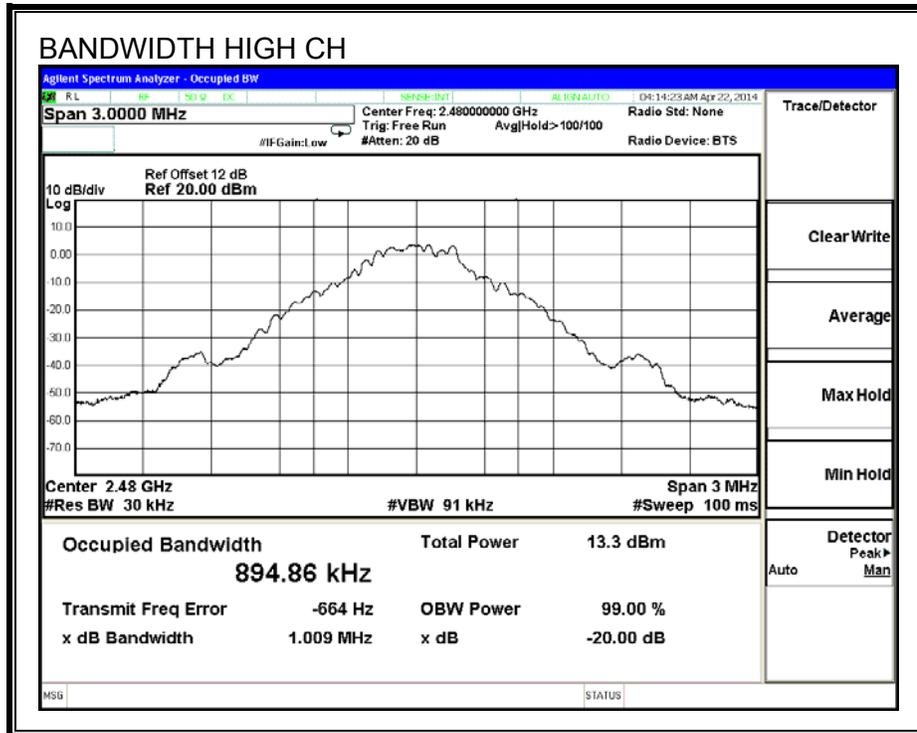
Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	2402	1.00	0.909
Middle	2441	1.00	0.904
High	2480	1.01	0.902
Worst		1.01	0.909

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

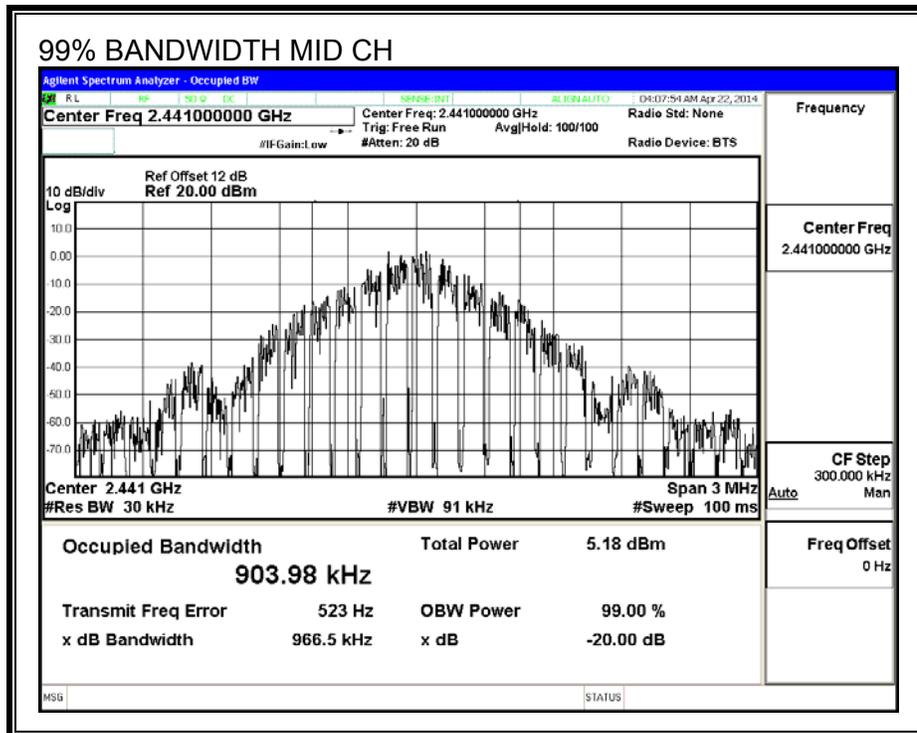
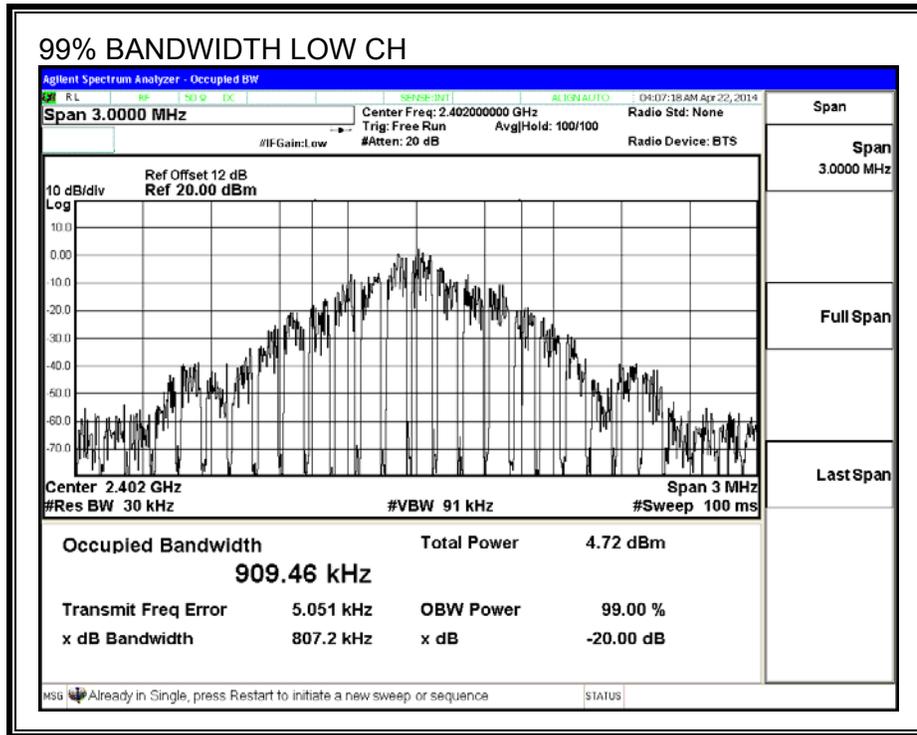
Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	2402	1.29	1.157
Middle	2441	1.29	1.222
High	2480	1.29	1.207
Worst		1.29	1.222

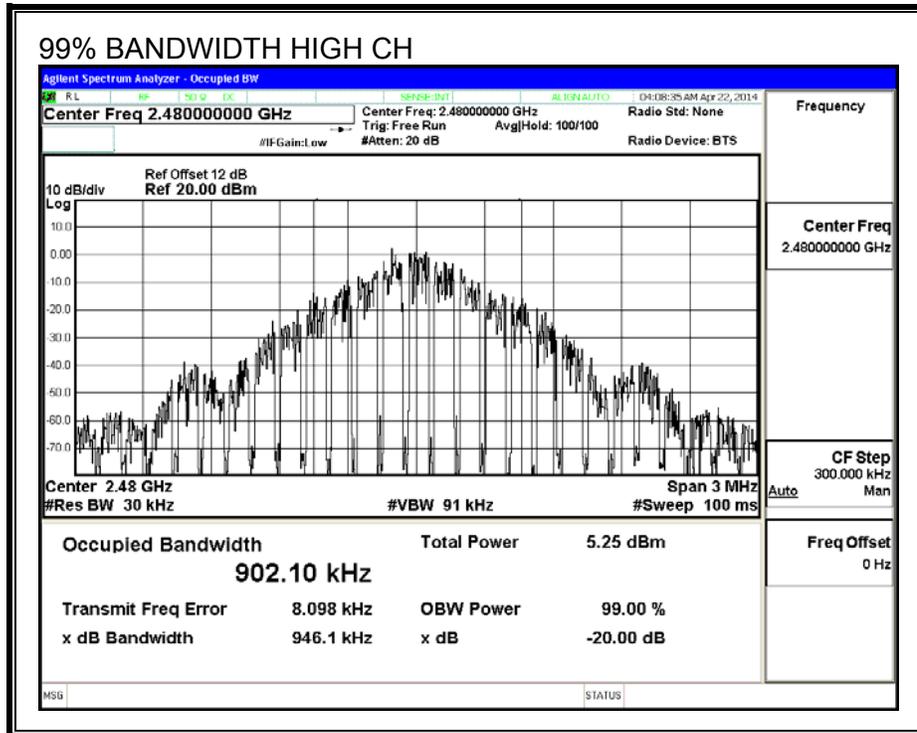
**GFSK 20 dB BANDWIDTH**



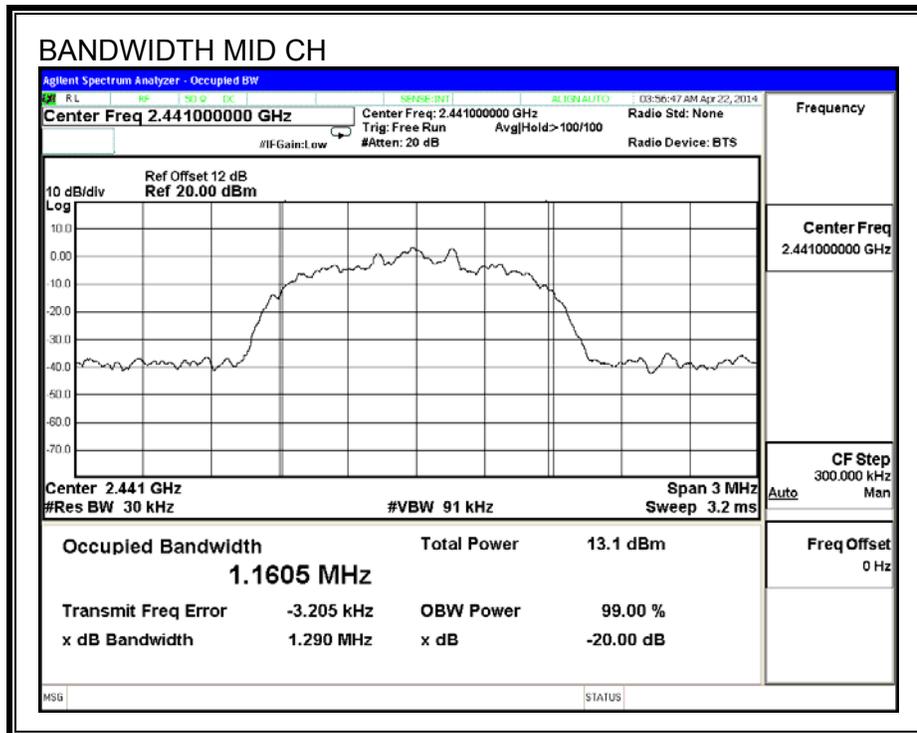
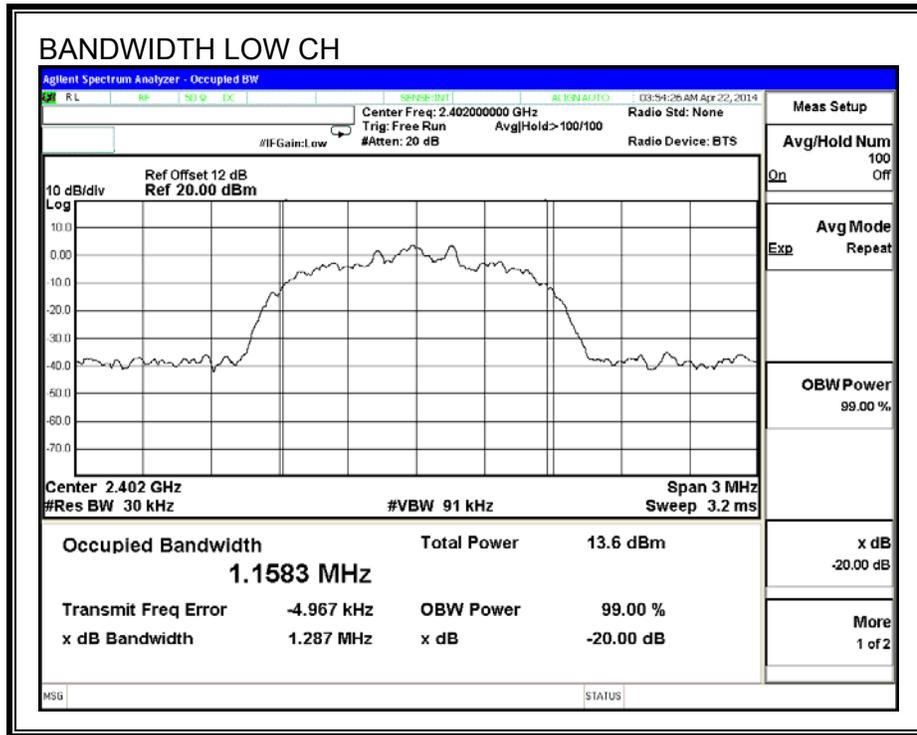


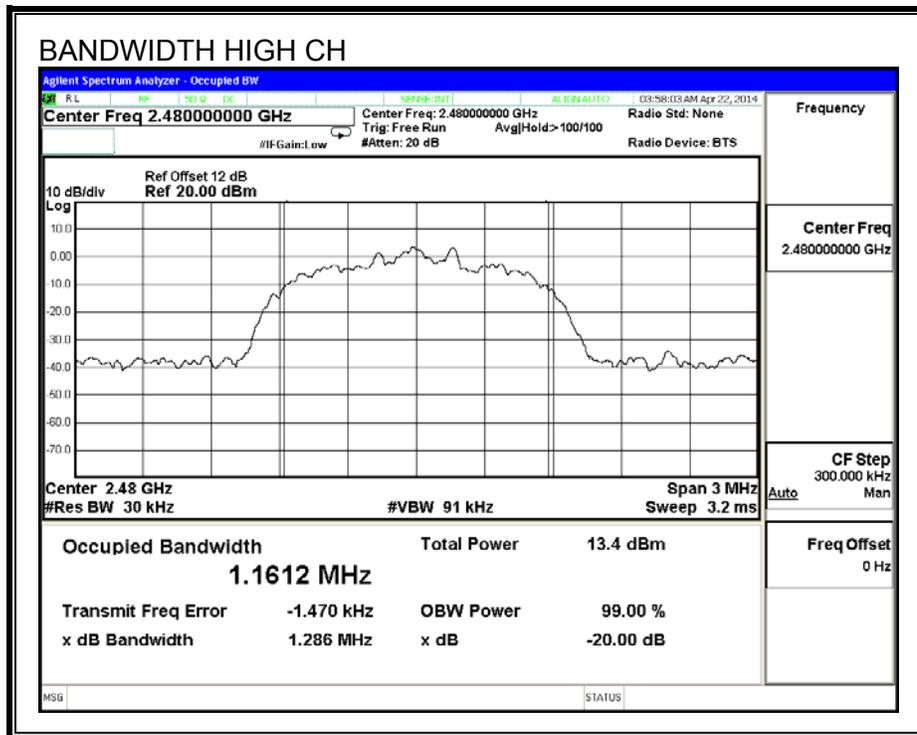
**GFSK 99% BANDWIDTH**



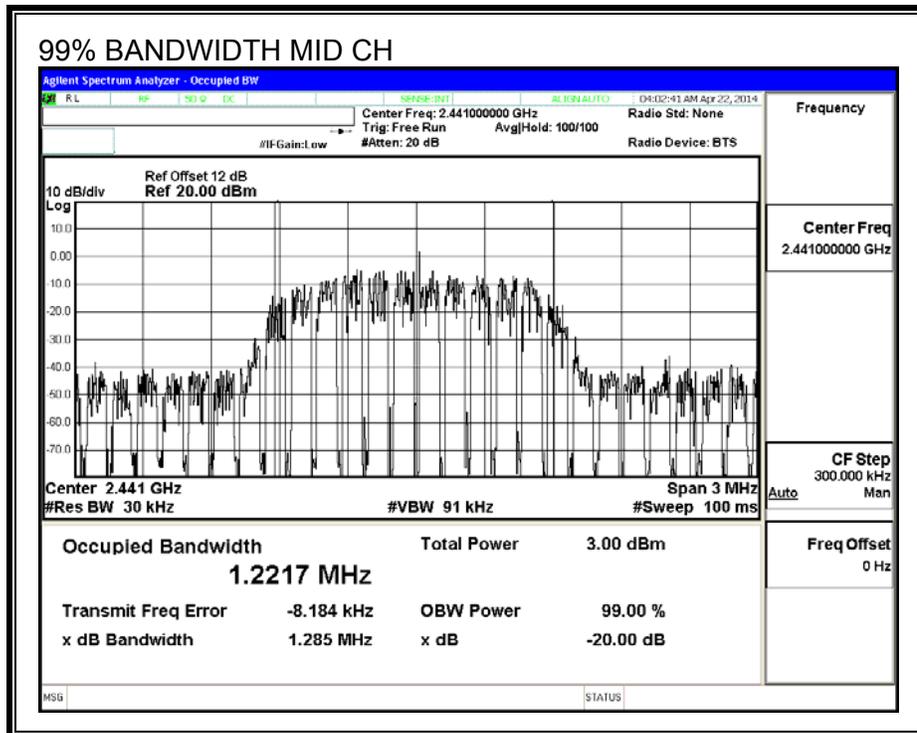
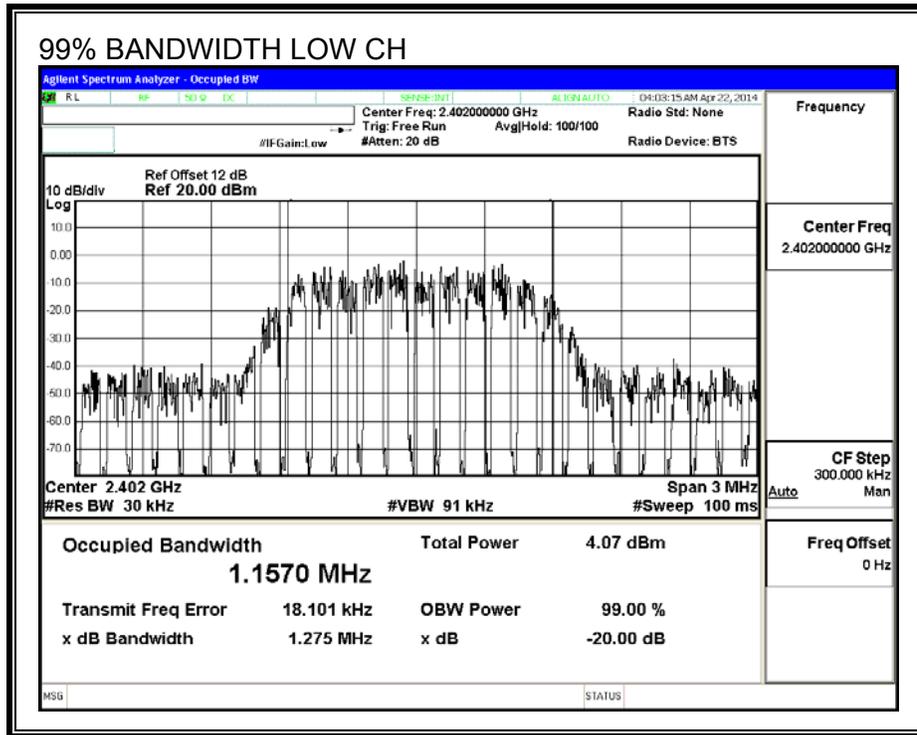


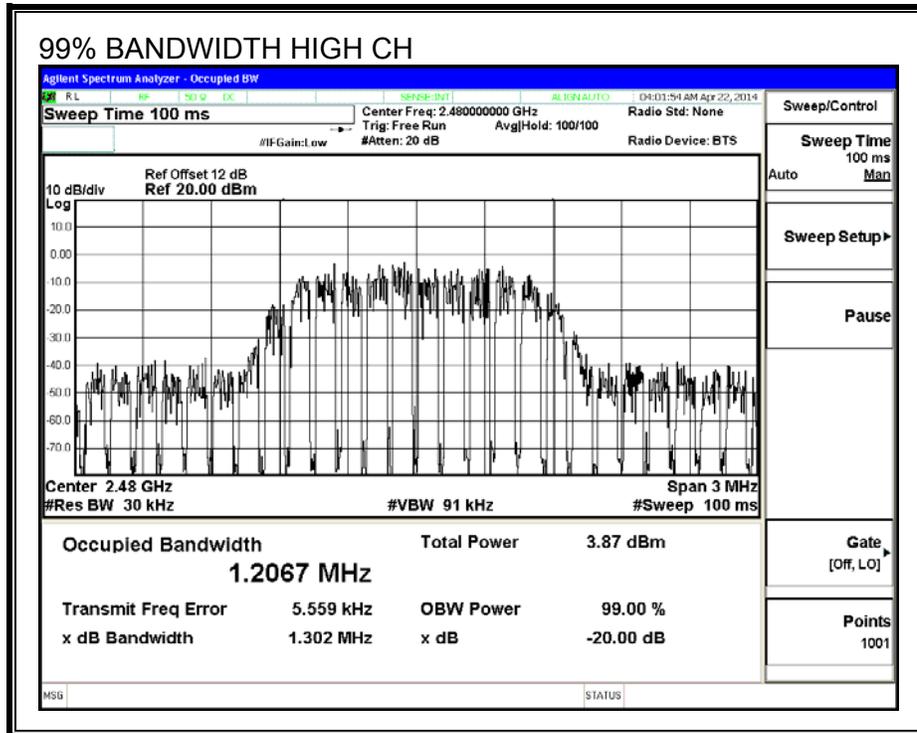
**8PSK 20 dB BANDWIDTH**





**8PSK 99% BANDWIDTH**





## **8.2. HOPPING FREQUENCY SEPARATION**

### **LIMIT**

FCC §15.247 (a) (1)

IC RSS-210 A8.1 (b)

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.

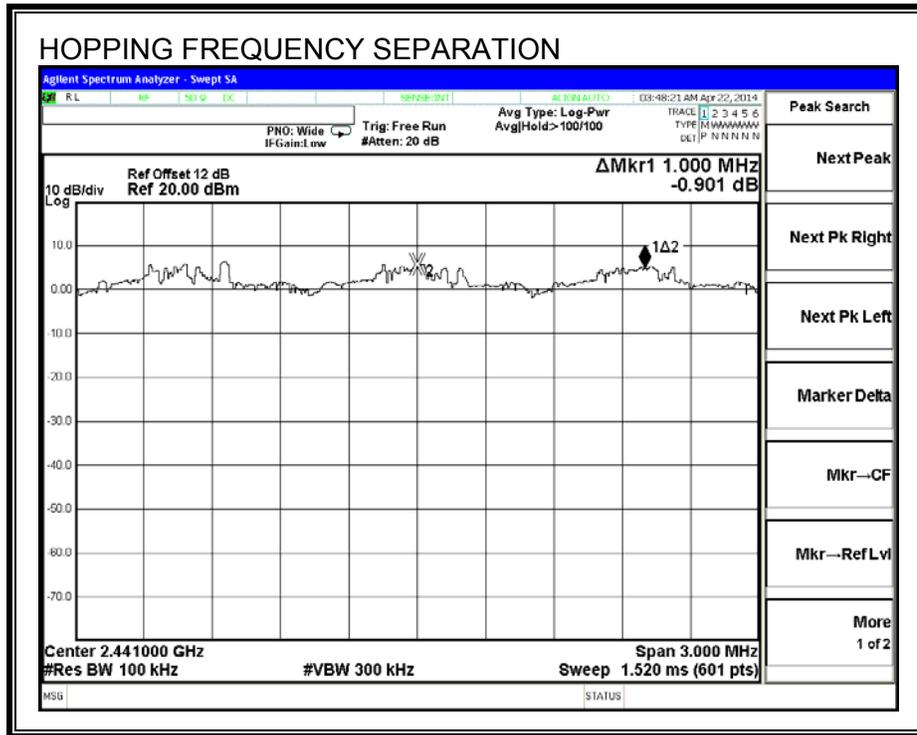
Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than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

### **TEST PROCEDURE**

DA 00-705: The transmitter output is connected to a spectrum analyzer. The RBW is set to 100 kHz and the VBW is set to 300 kHz. The sweep time is coupled.

### **RESULTS**

**HOPPING FREQUENCY SEPARATION**



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

#### **LIMIT**

FCC §15.247 (a) (1) (iii)

IC RSS-210 A8.1 (d)

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

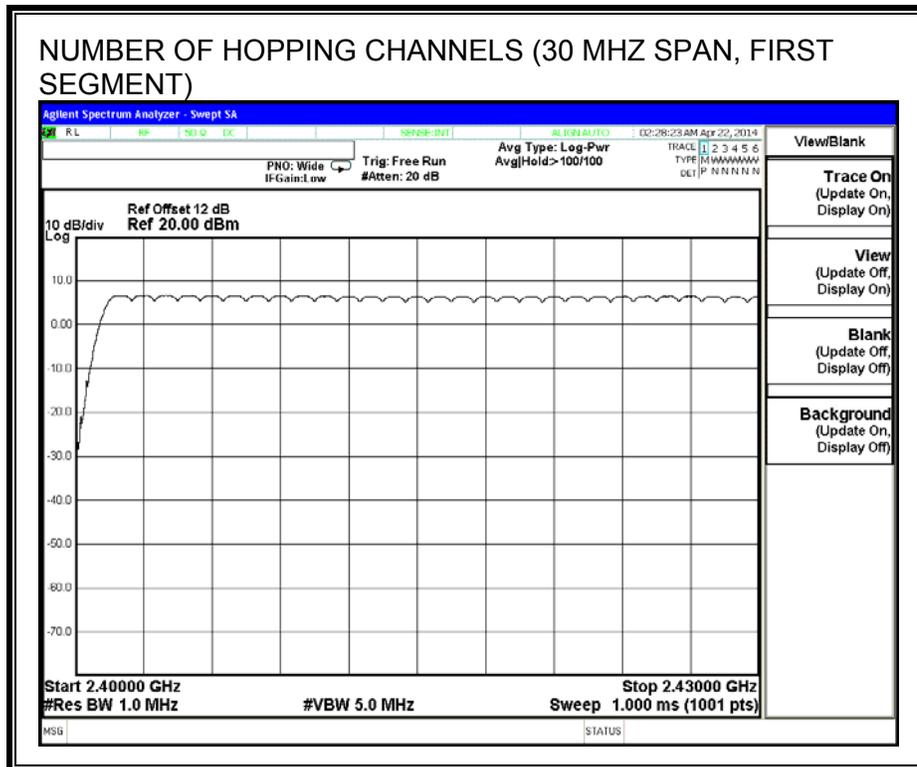
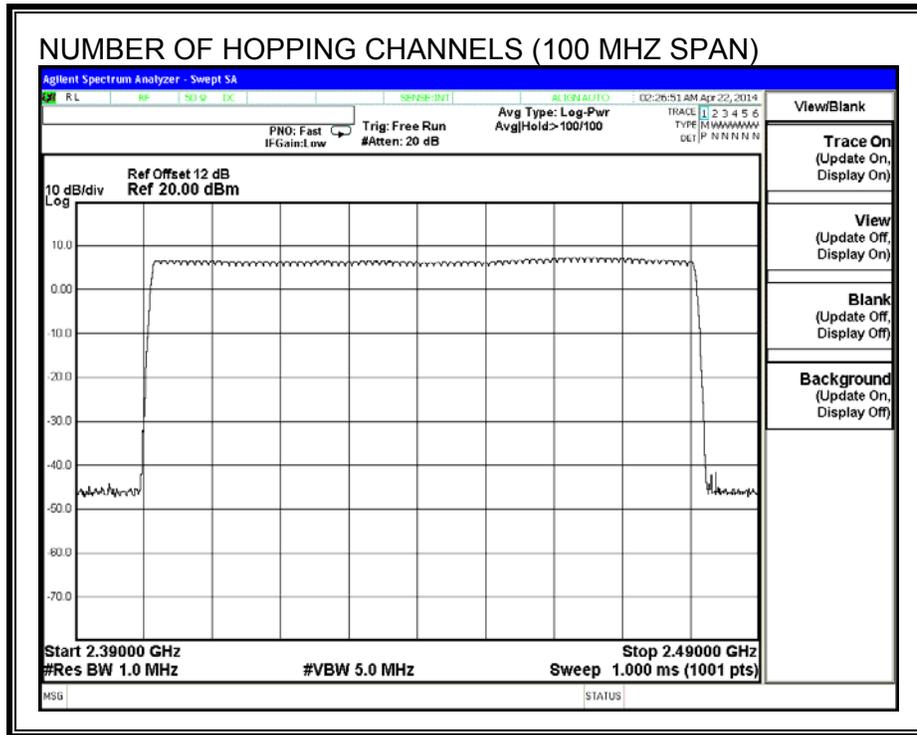
#### **TEST PROCEDURE**

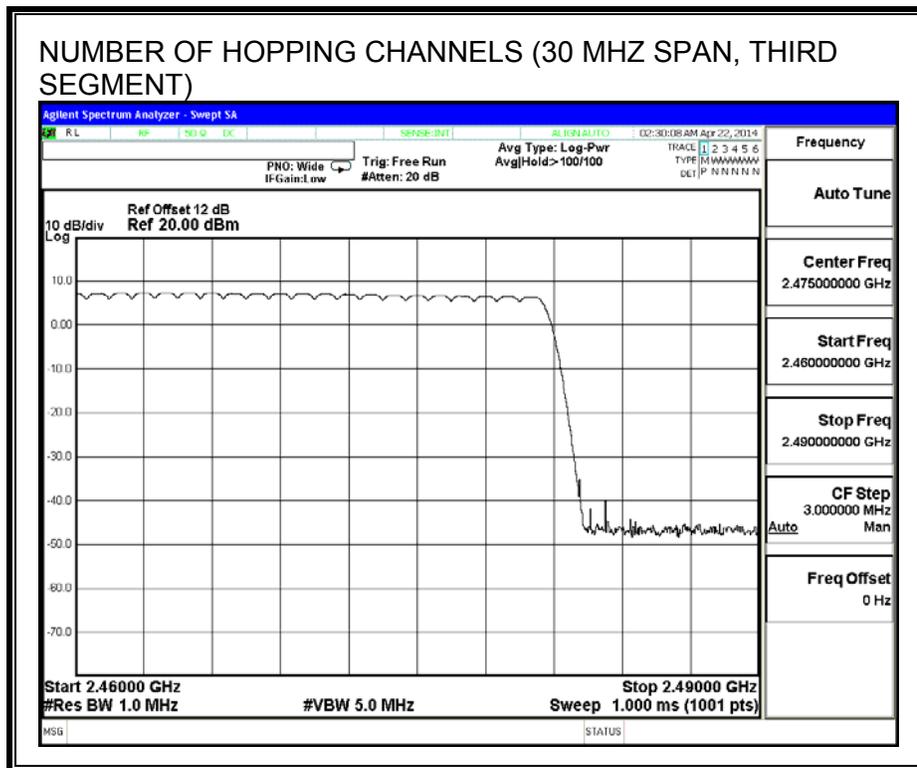
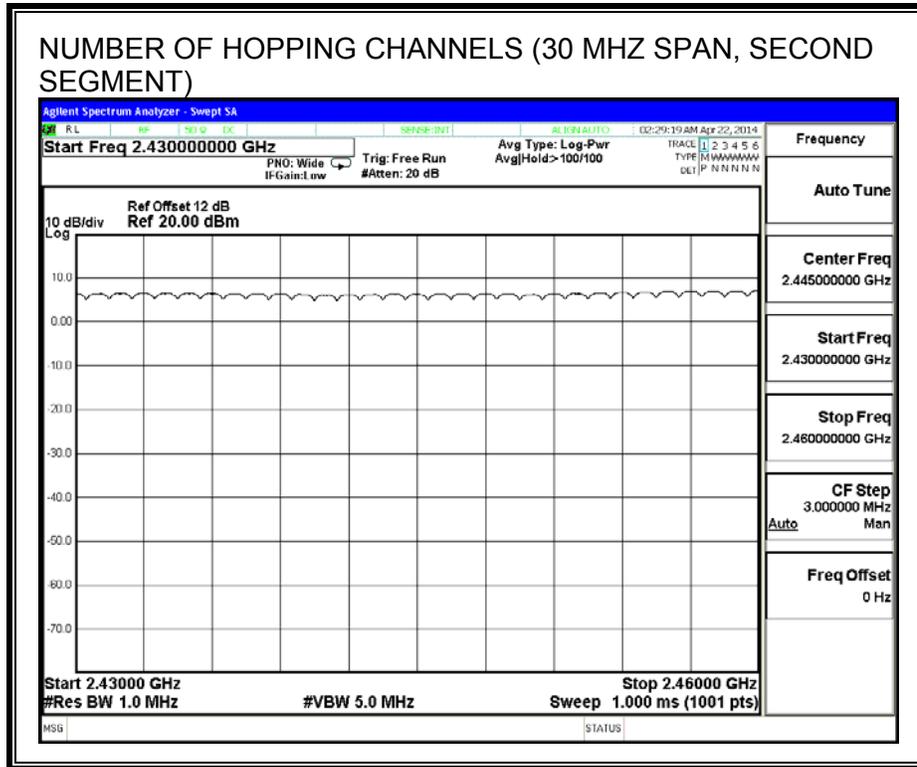
DA 00-705: The transmitter output is connected to a spectrum analyzer. The span is set to cover the entire authorized band, in either a single sweep or in multiple contiguous sweeps. The RBW is set to a maximum of 1 % of the span. The analyzer is set to Max Hold.

#### **RESULTS**

Normal Mode: 79 Channels observed.

**NUMBER OF HOPPING CHANNELS**





## 8.4. AVERAGE TIME OF OCCUPANCY

### LIMIT

FCC §15.247 (a) (1) (iii)

IC RSS-210 A8.1 (d)

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.

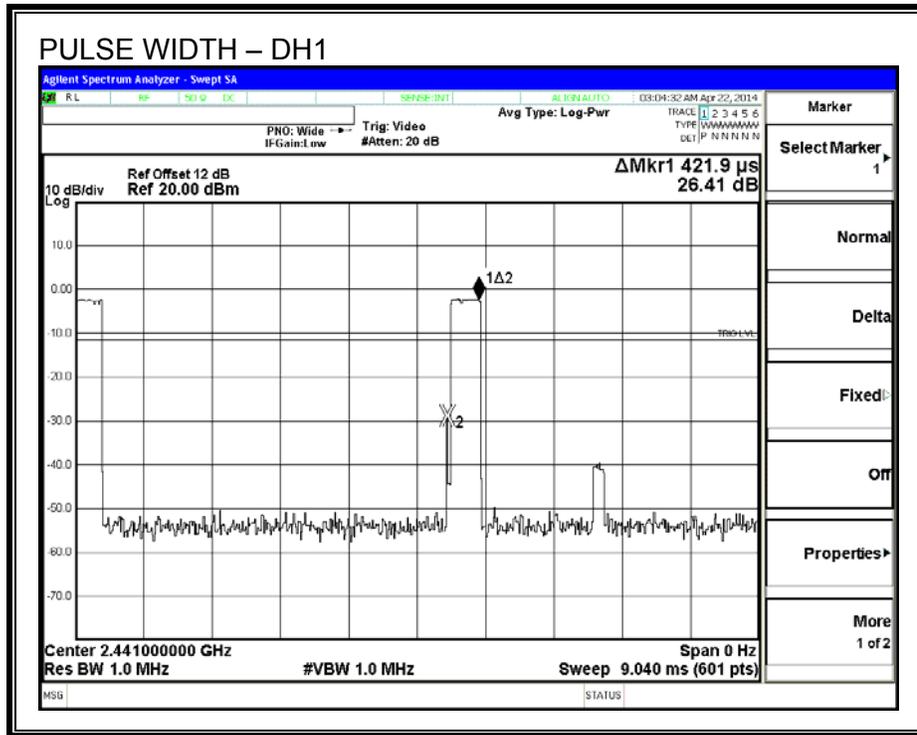
The average time of occupancy in the specified 31.6 second period (79 channels \* 0.4 s) is equal to  $10 * (\# \text{ of pulses in } 3.16 \text{ s}) * \text{ pulse width}$ .

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

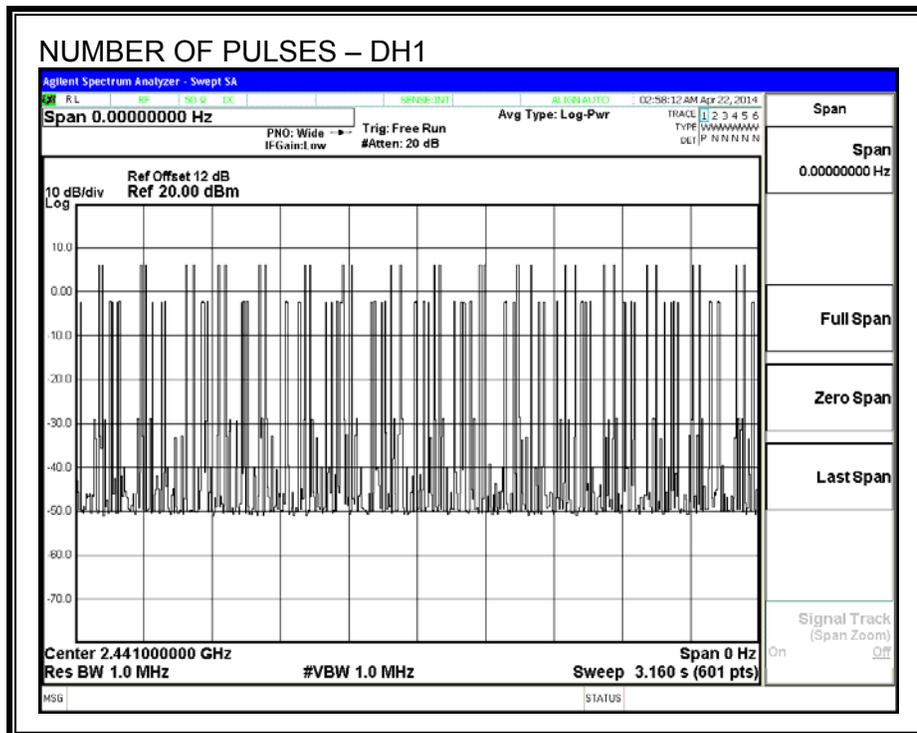
### RESULTS

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	0.4219	30	0.127	0.4	-0.273
DH3	1.639	16	0.262	0.4	-0.138
DH5	2.927	13	0.381	0.4	-0.019
<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	0.4219	8	0.034	0.4	-0.366
DH3	1.639	4	0.066	0.4	-0.334
DH5	2.927	4	0.117	0.4	-0.283

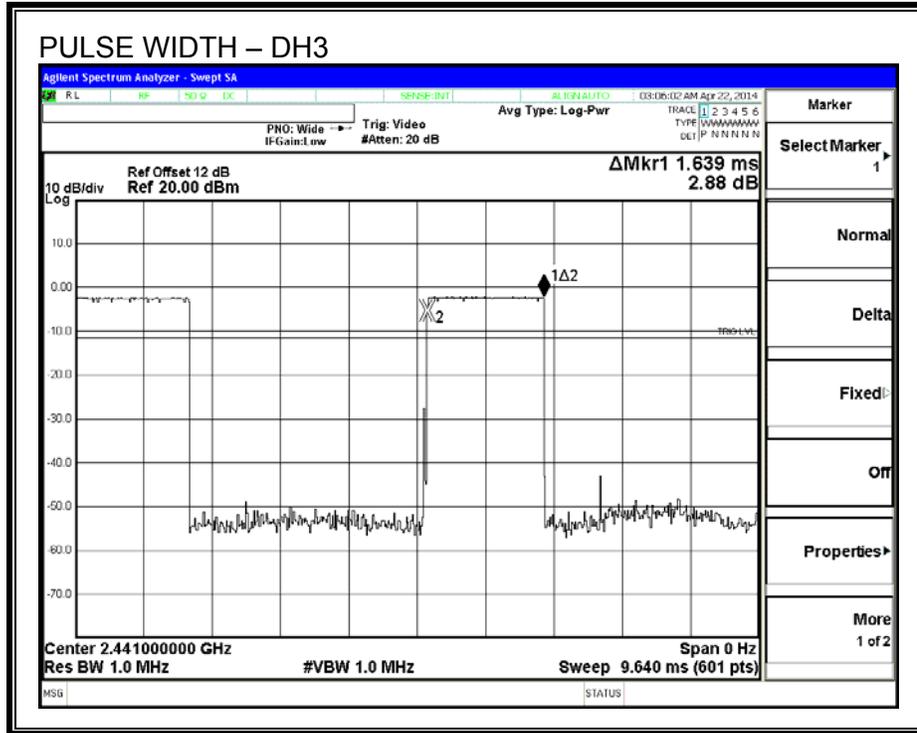
**PULSE WIDTH - DH1**



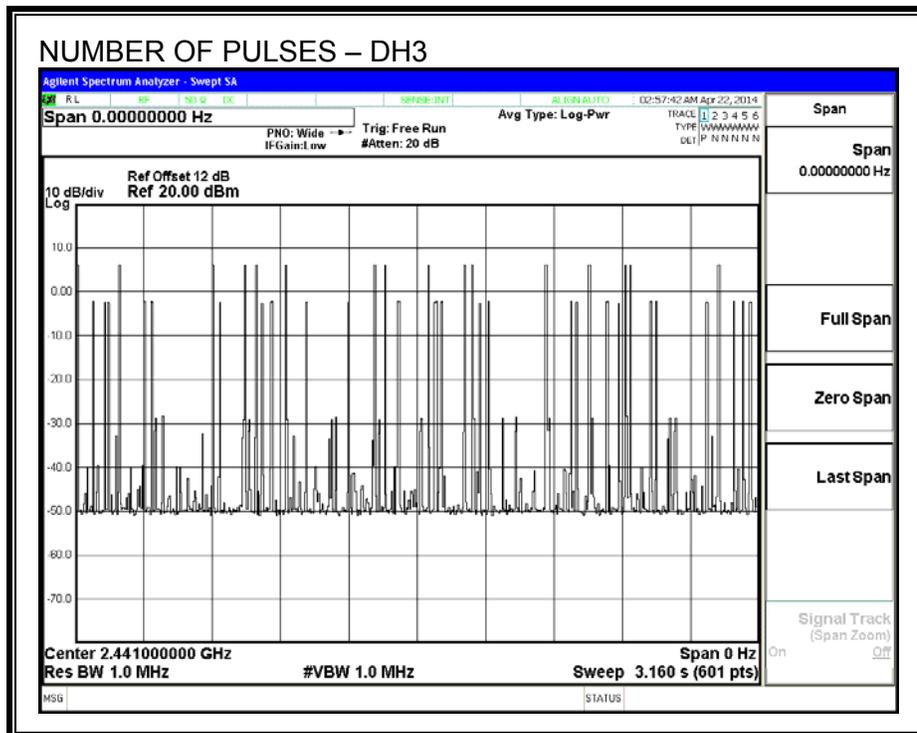
**NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD - DH1**



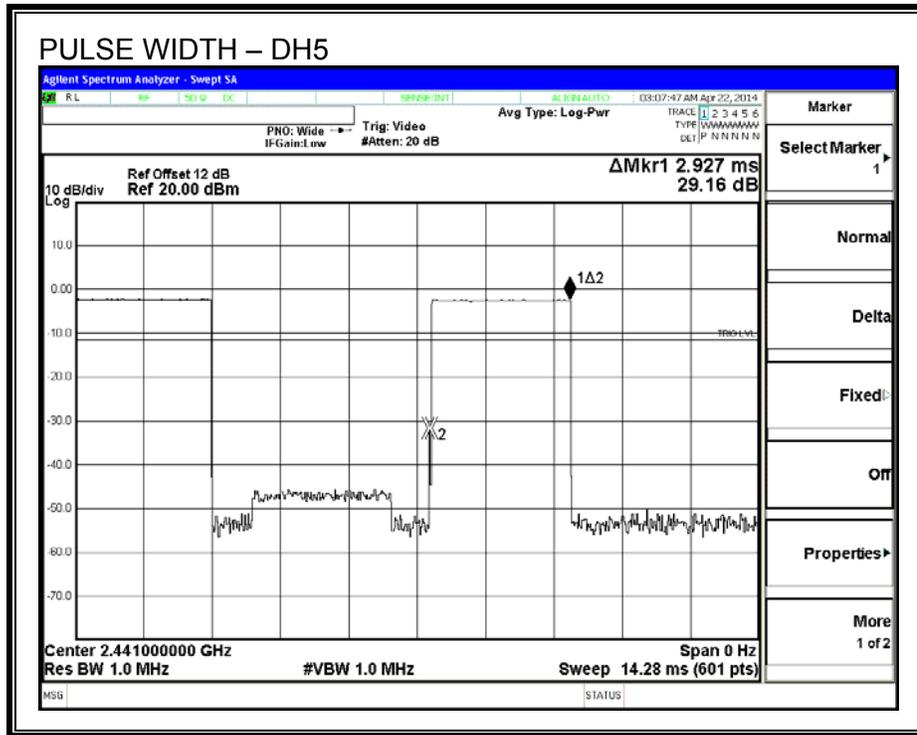
**PULSE WIDTH – DH3**



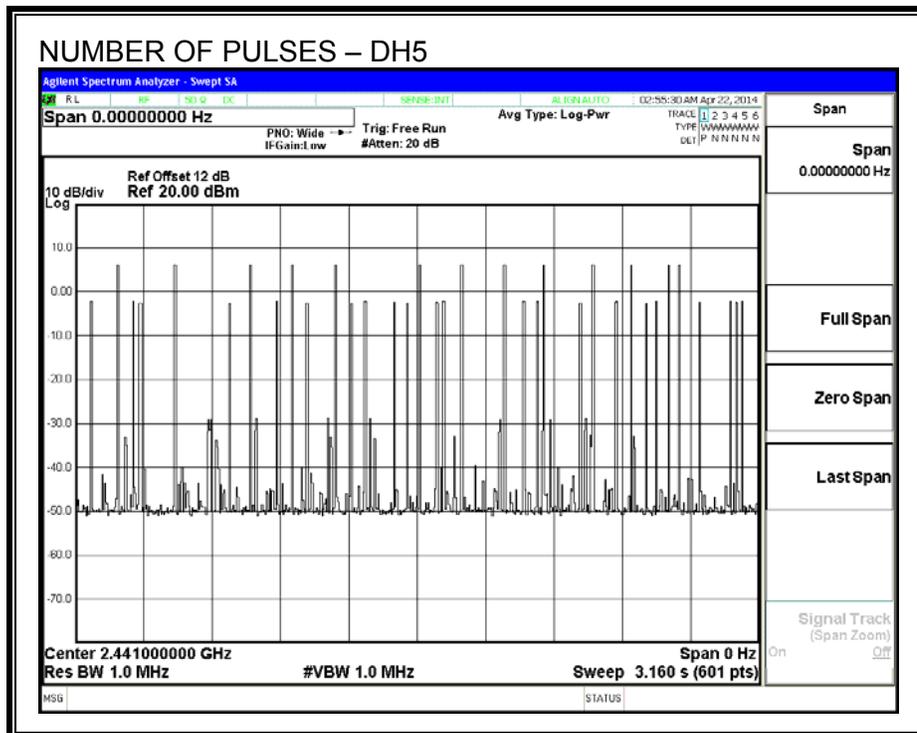
**NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH3**



**PULSE WIDTH – DH5**



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



## 8.5. OUTPUT POWER

### LIMIT

§15.247 (b) (1)

RSS-210 Issue 7 Clause A8.4

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

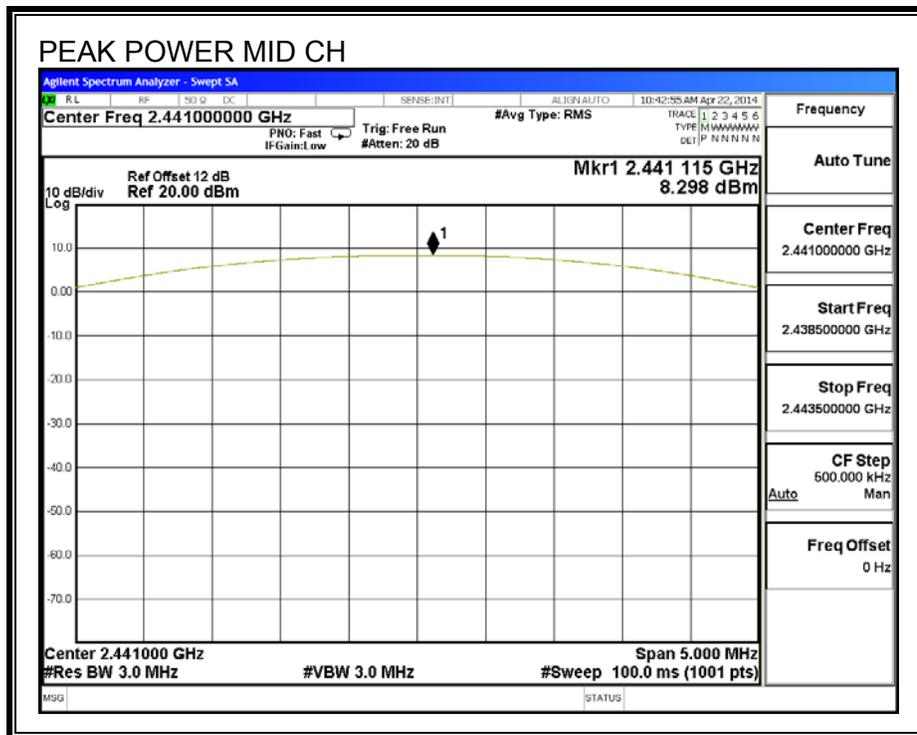
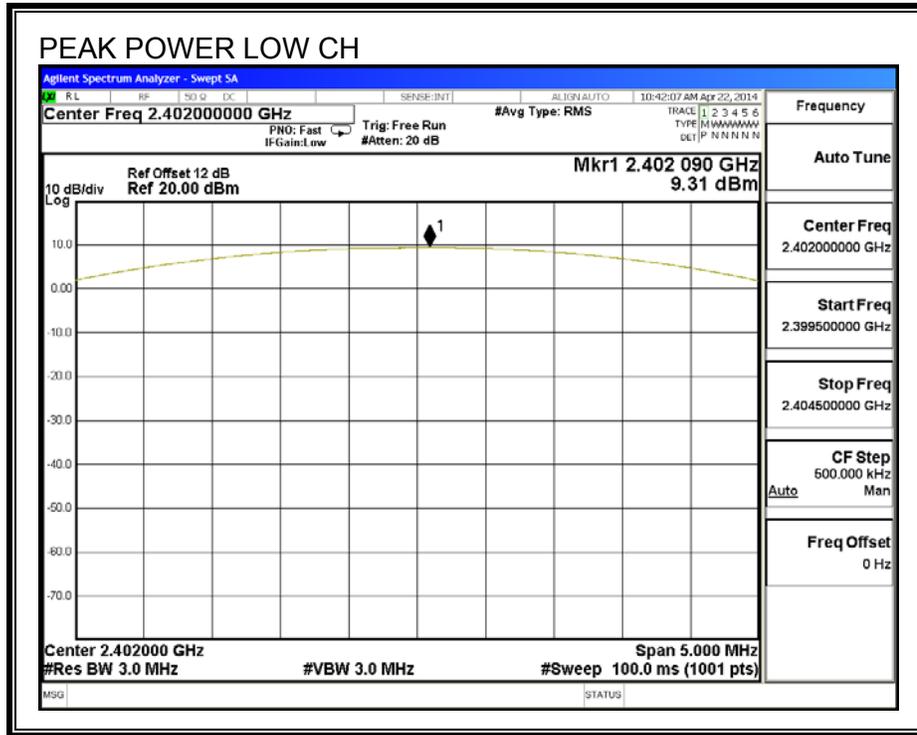
#### 8.5.1. BASIC DATA RATE GFSK MODULATION

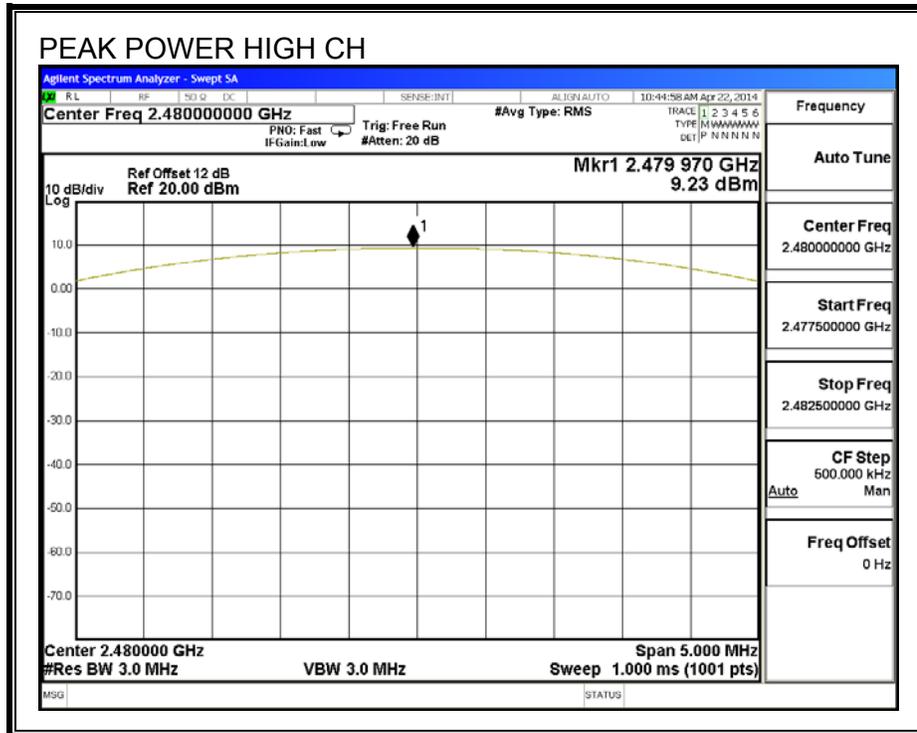
Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	9.31	21	-11.69
Middle	2441	8.30	21	-12.70
High	2480	9.23	21	-11.77
Worst		9.31		-11.69

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

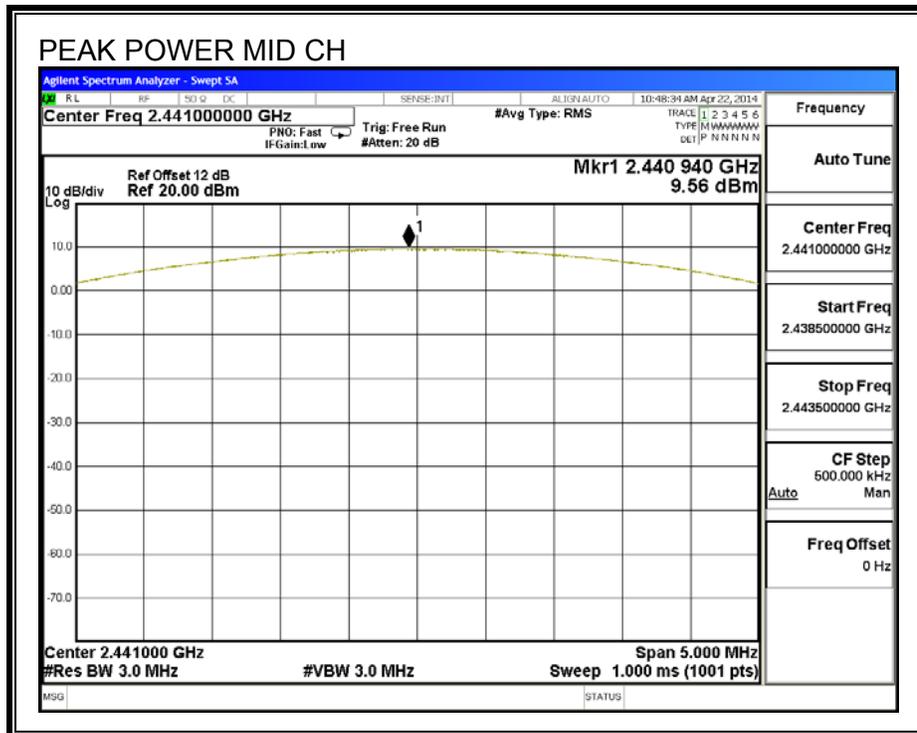
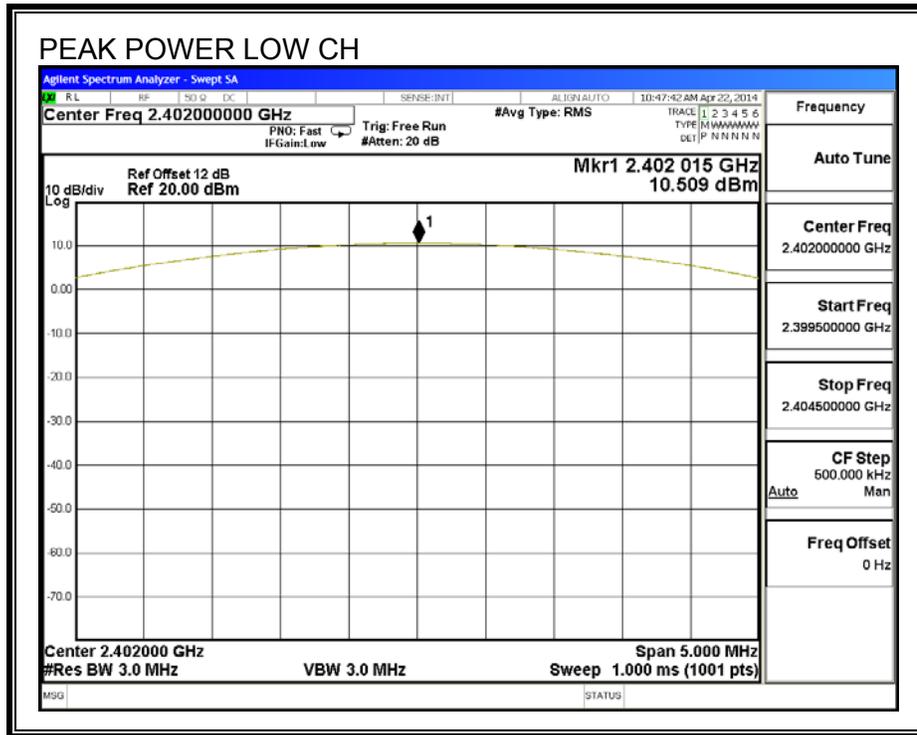
Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	10.51	21	-10.49
Middle	2441	9.56	21	-11.44
High	2480	10.45	21	-10.55
Worst		10.51		-10.49

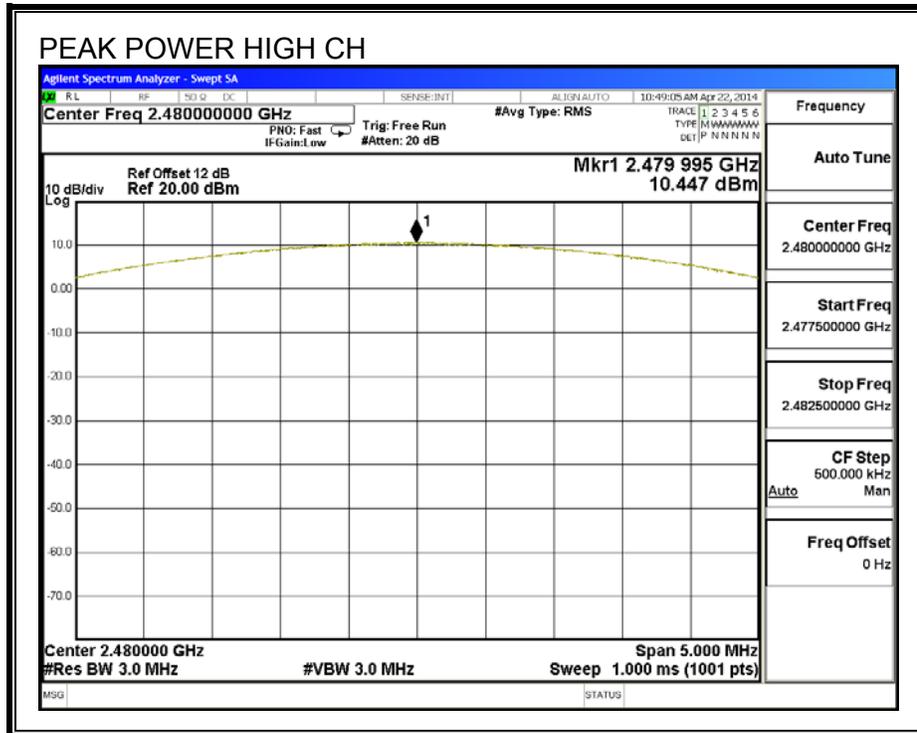
**GFSK OUTPUT POWER**





**8PSK OUTPUT POWER**





## 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	8.49
Middle	2441	8.04
High	2480	8.94
Worst		8.94

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

Channel	Frequency (MHz)	Average Power (dBm)
Low	2402	7.12
Middle	2441	6.72
High	2480	7.55
Worst		7.55

## **8.7. CONDUCTED SPURIOUS EMISSIONS**

### **LIMITS**

FCC §15.247 (d)

IC RSS-210 A8.5

Limit = -20 dBc

### **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.

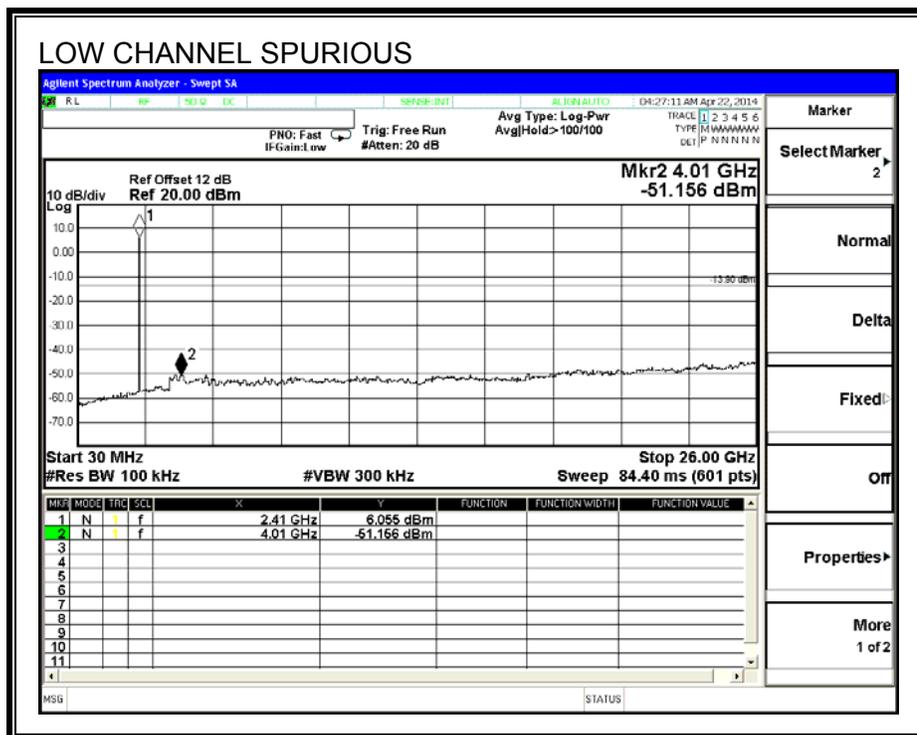
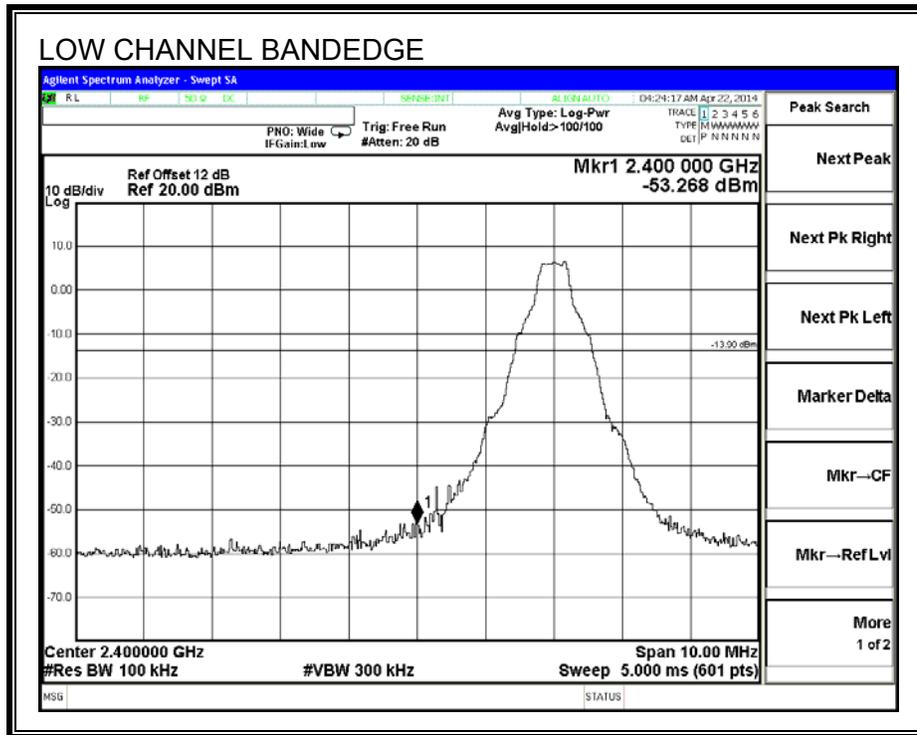
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

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

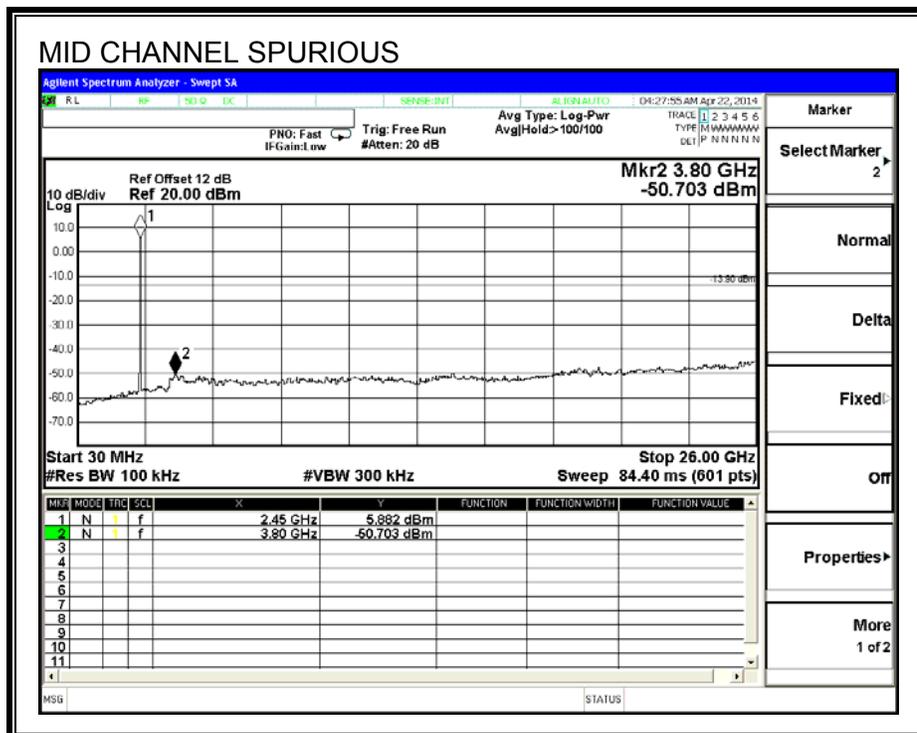
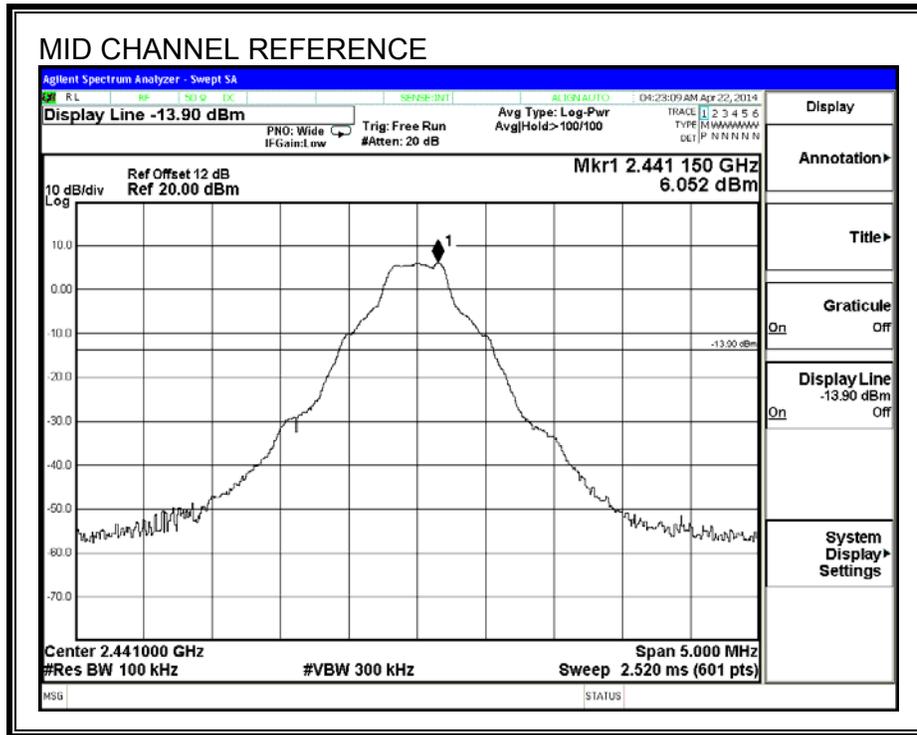
### **RESULTS**

### 8.7.1. BASIC DATA RATE GFSK MODULATION

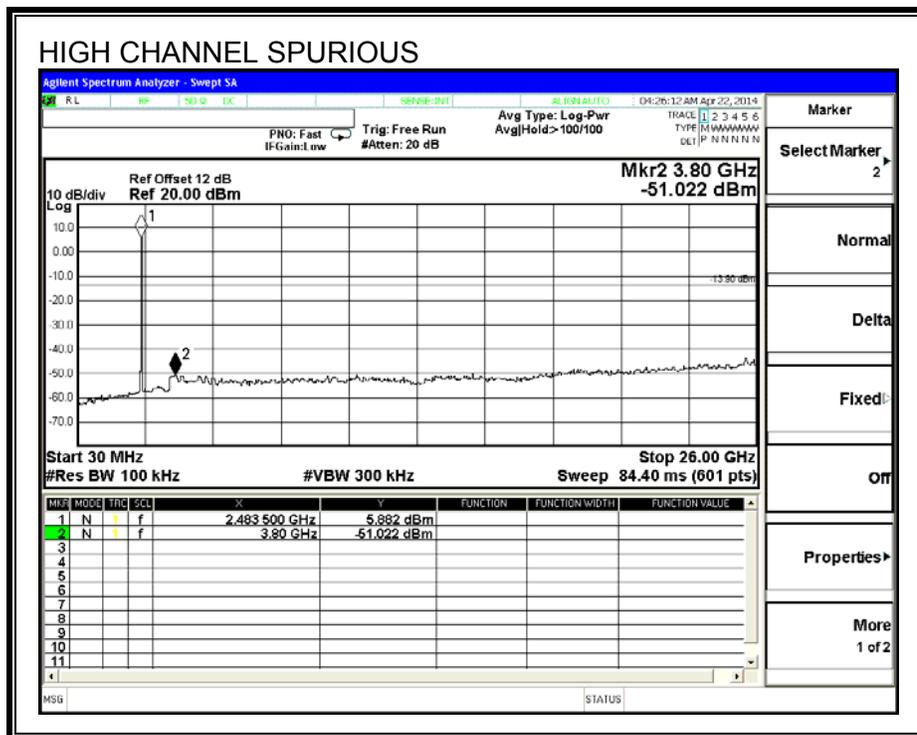
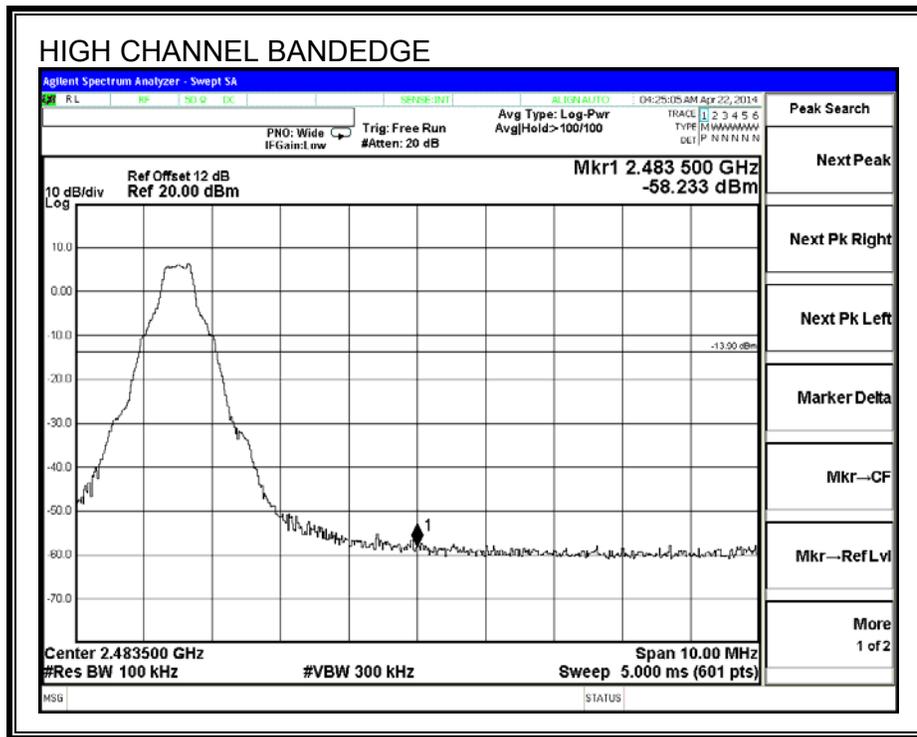
#### SPURIOUS EMISSIONS, LOW CHANNEL



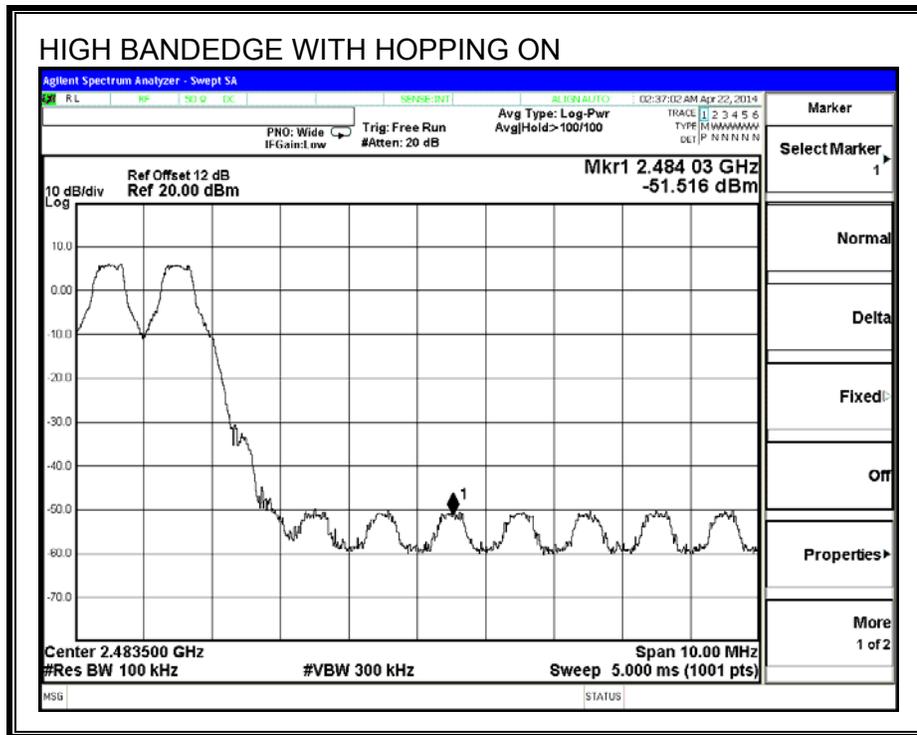
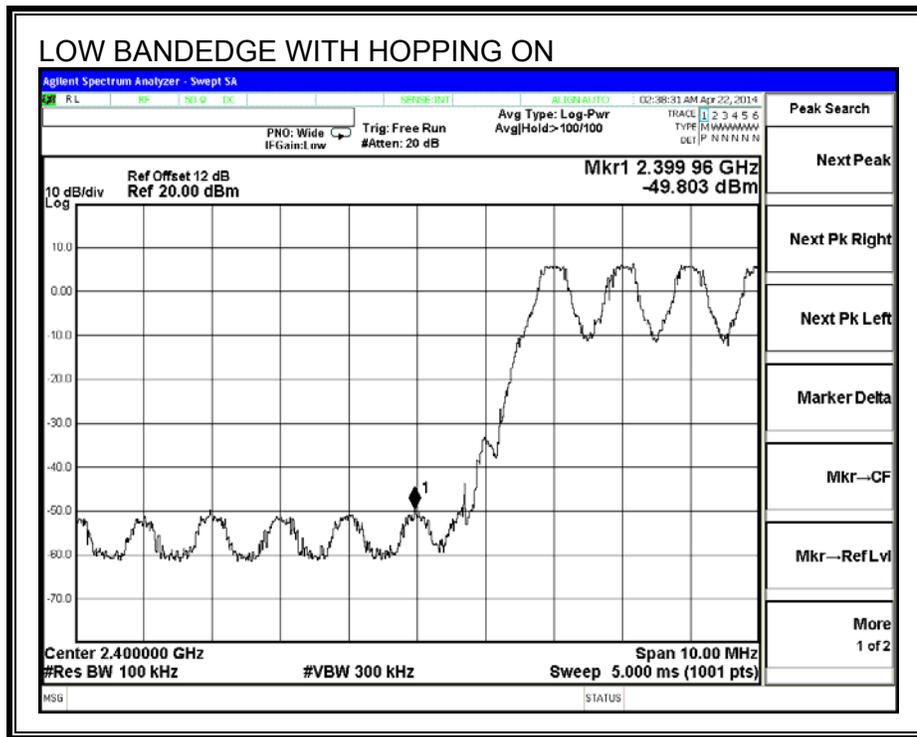
**SPURIOUS EMISSIONS, MID CHANNEL**



**SPURIOUS EMISSIONS, HIGH CHANNEL**

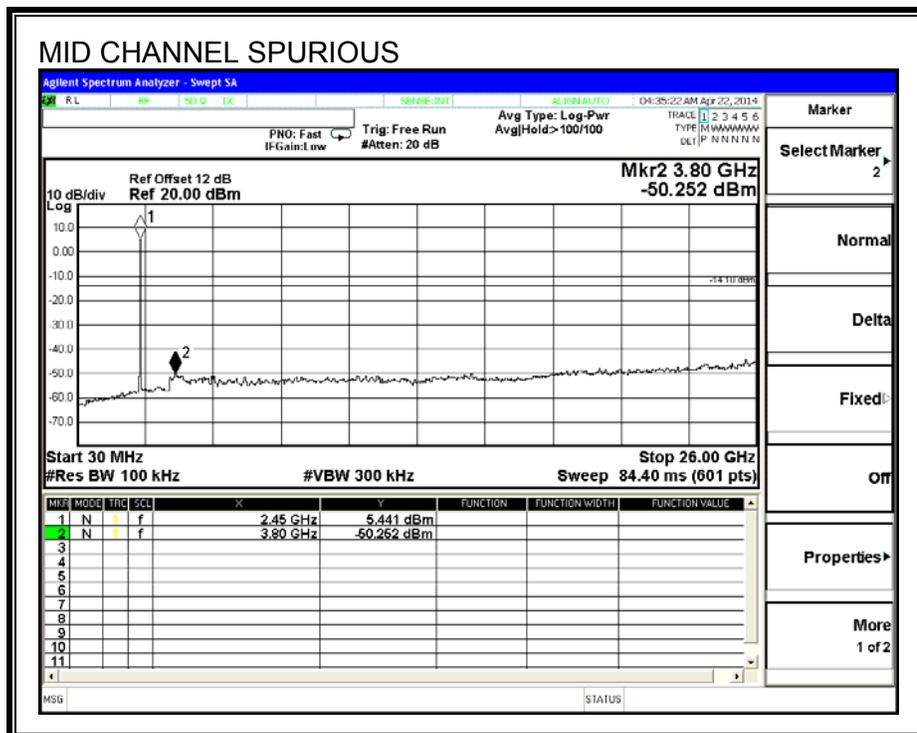
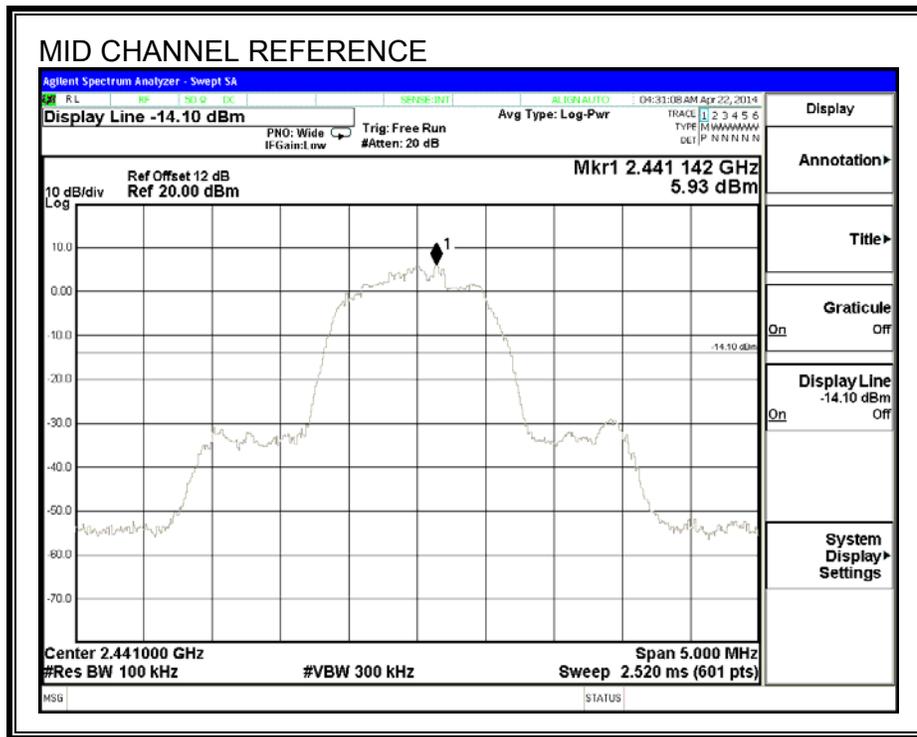


**SPURIOUS BANDEDGE EMISSIONS WITH GFSK HOPPING ON**

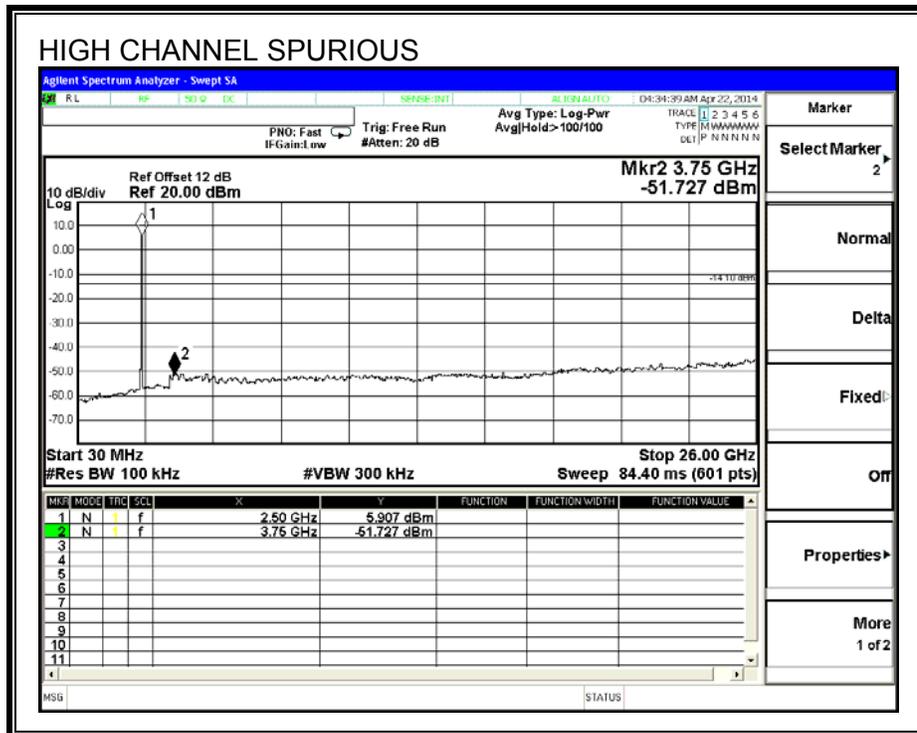
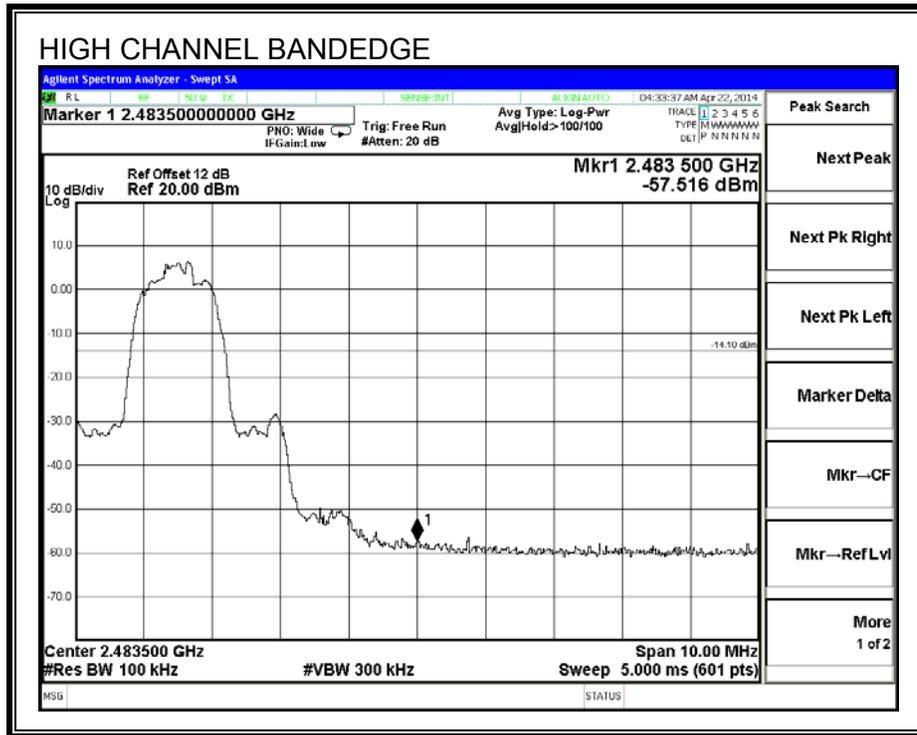




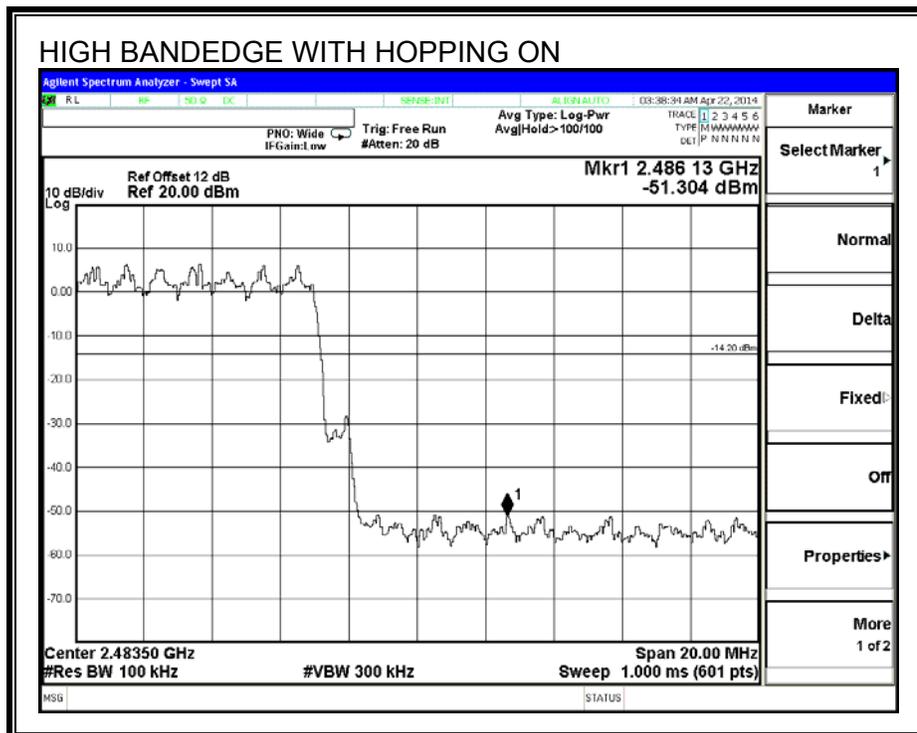
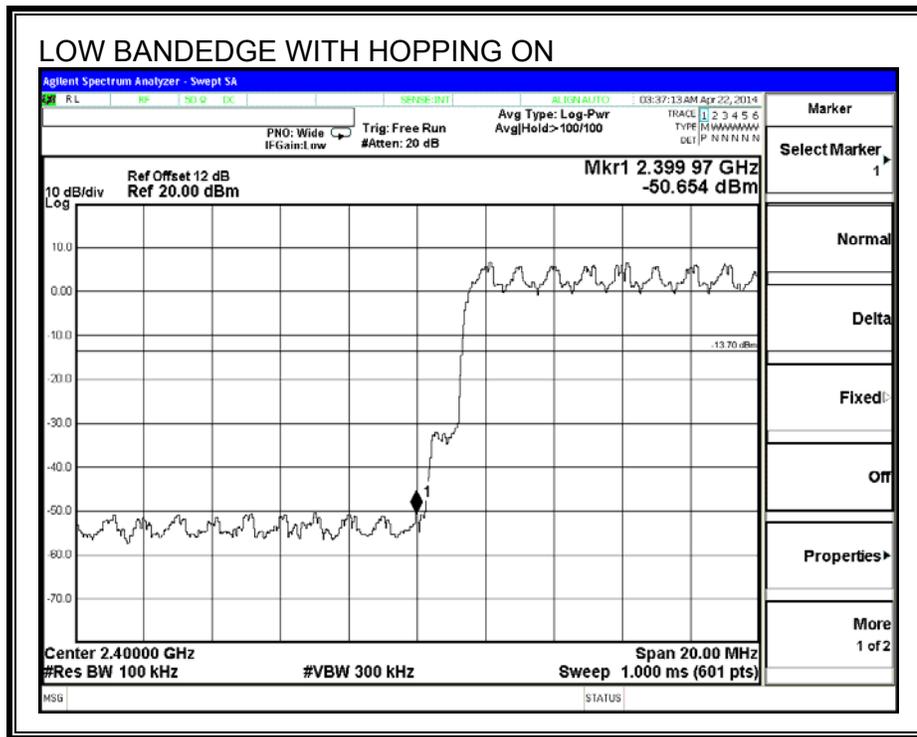
**SPURIOUS EMISSIONS, MID CHANNEL**



**SPURIOUS EMISSIONS, HIGH CHANNEL**



**SPURIOUS BANDEDGE EMISSIONS WITH GFSK HOPPING ON**



## 9. RADIATED TEST RESULTS

### 9.1. LIMITS AND PROCEDURE

#### LIMITS

FCC §15.205 and §15.209

IC RSS-210 Clause 2.6 (Transmitter)

IC RSS-GEN Clause 6 (Receiver)

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.  $GFSK = 1/T = 1 / 0.0029S = 350Hz$ .

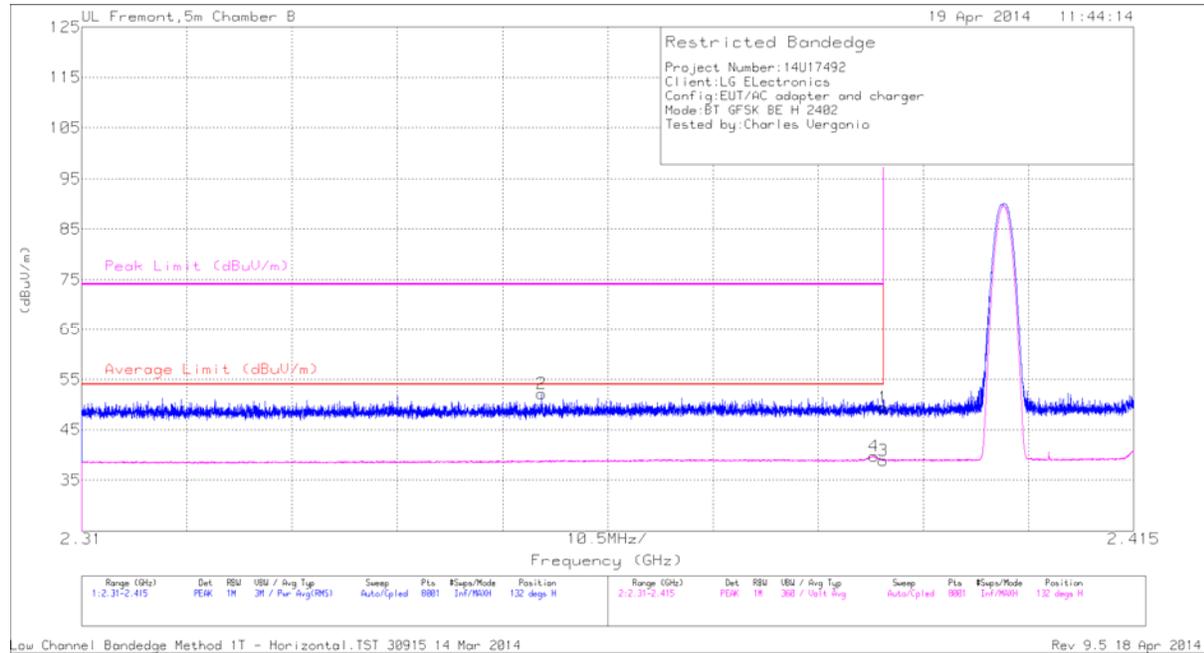
The spectrum from 1GHzHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

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)

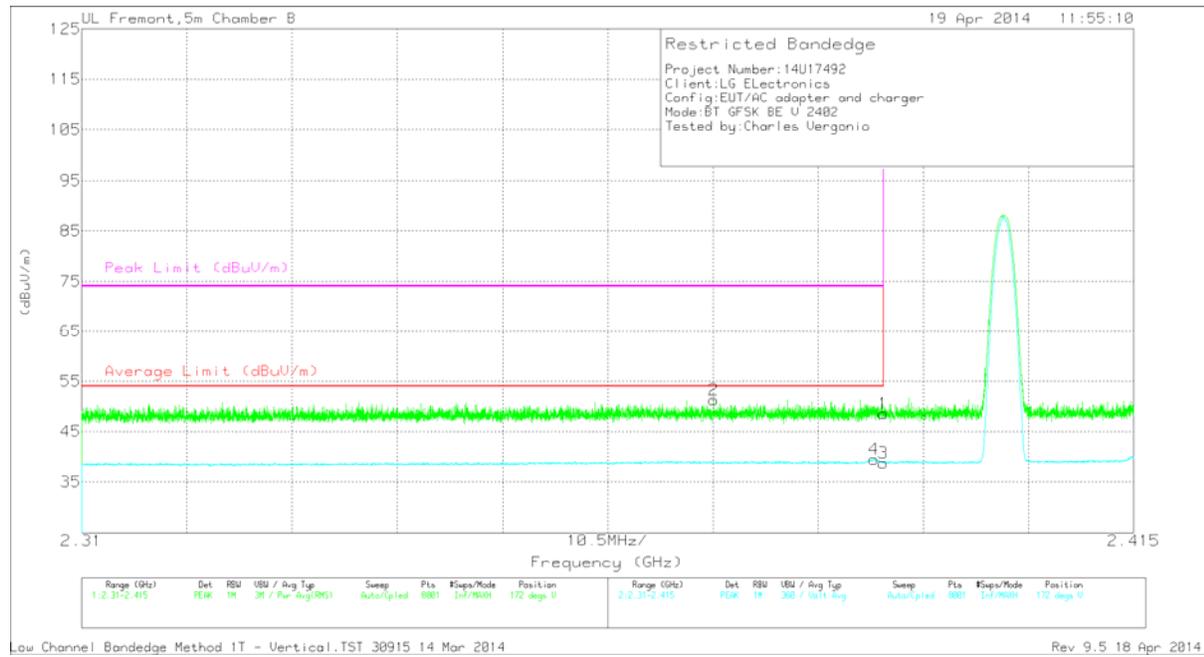


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	40.18	PK	32.1	-22.9	0	49.38	-	-	74	-24.62	132	176	H
2	* 2.356	43.19	PK	31.9	-22.9	0	52.19	-	-	74	-21.81	132	176	H
3	* 2.39	29.69	VB1T	32.1	-22.9	0	38.89	54	-15.11	-	-	132	176	H
4	* 2.389	30.59	VB1T	32.1	-22.9	0	39.79	54	-14.21	-	-	132	176	H

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

PK - Peak detector

**RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)**

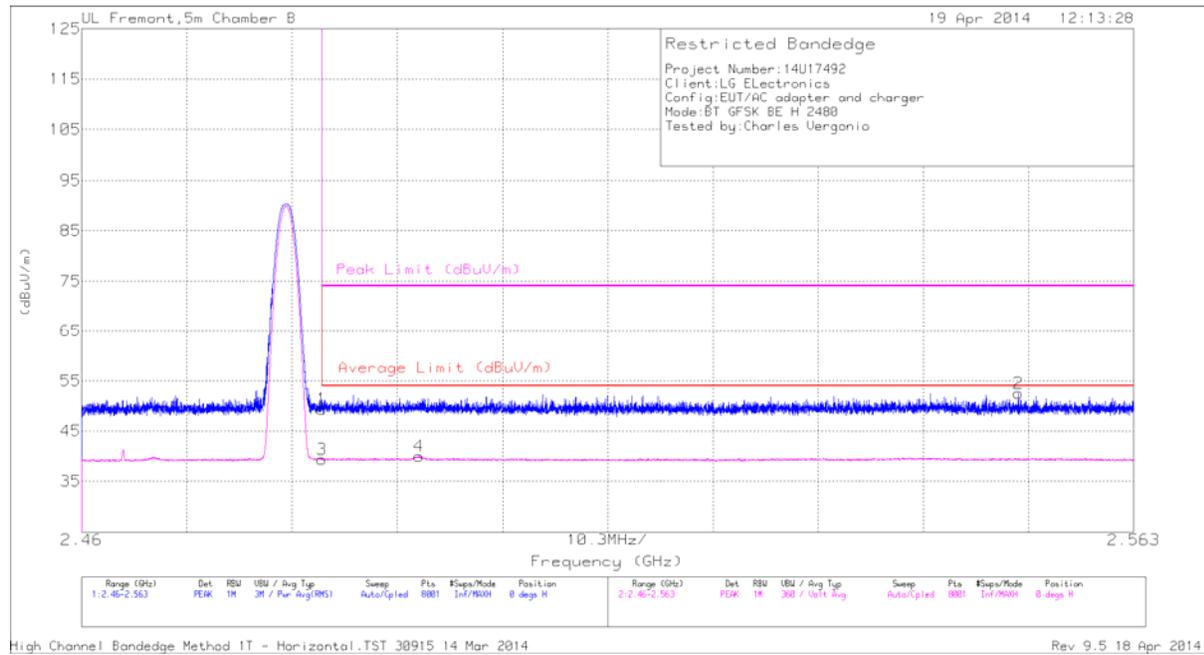


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	39.32	PK	32.1	-22.9	0	48.52	-	-	74	-25.48	172	375	V
2	* 2.373	42.12	PK	32	-22.8	0	51.32	-	-	74	-22.68	172	375	V
3	* 2.39	29.58	VB1T	32.1	-22.9	0	38.78	54	-15.22	-	-	172	375	V
4	* 2.389	30.28	VB1T	32.1	-22.9	0	39.48	54	-14.52	-	-	172	375	V

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

PK - Peak detector

**RESTRICTED BANDEGE (HIGH CHANNEL, HORIZONTAL)**

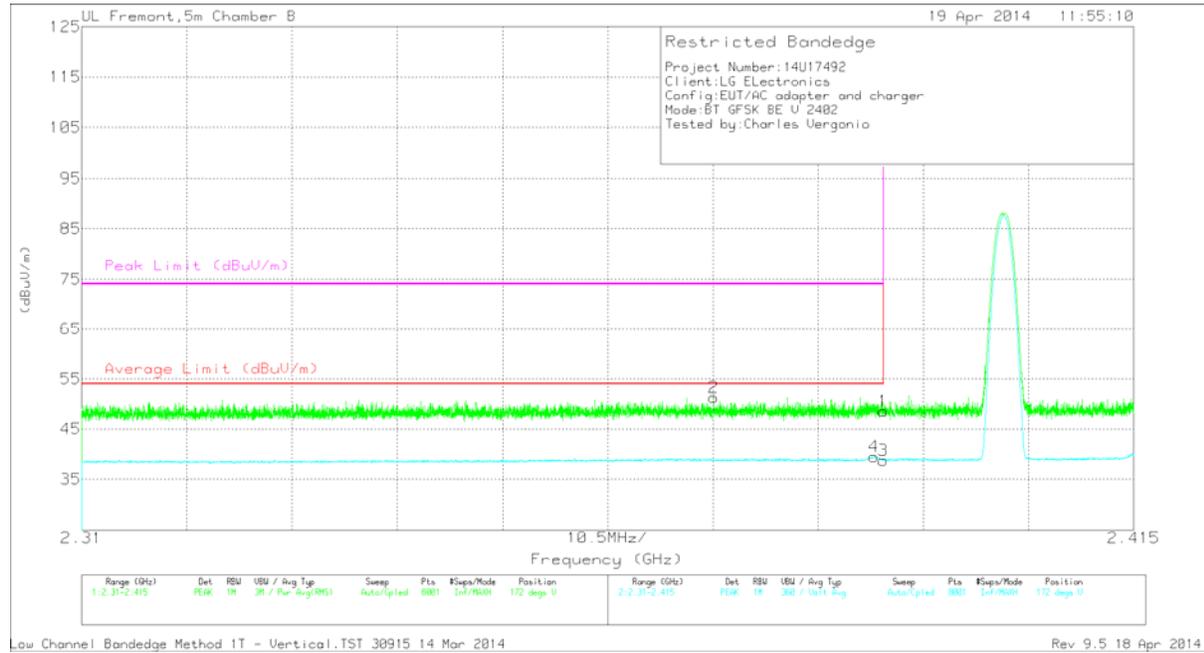


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	39.56	PK	32.4	-22.6	0	49.36	-	-	74	-24.64	0	250	H
3	* 2.484	29.52	VB1T	32.4	-22.6	0	39.32	54	-14.68	-	-	0	250	H
4	* 2.493	30.26	VB1T	32.4	-22.7	0	39.96	54	-14.04	-	-	0	250	H
2	2.552	42.75	PK	32.5	-22.7	0	52.55	-	-	74	-21.45	0	250	H

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

PK - Peak detector

**RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)**



Trace Markers

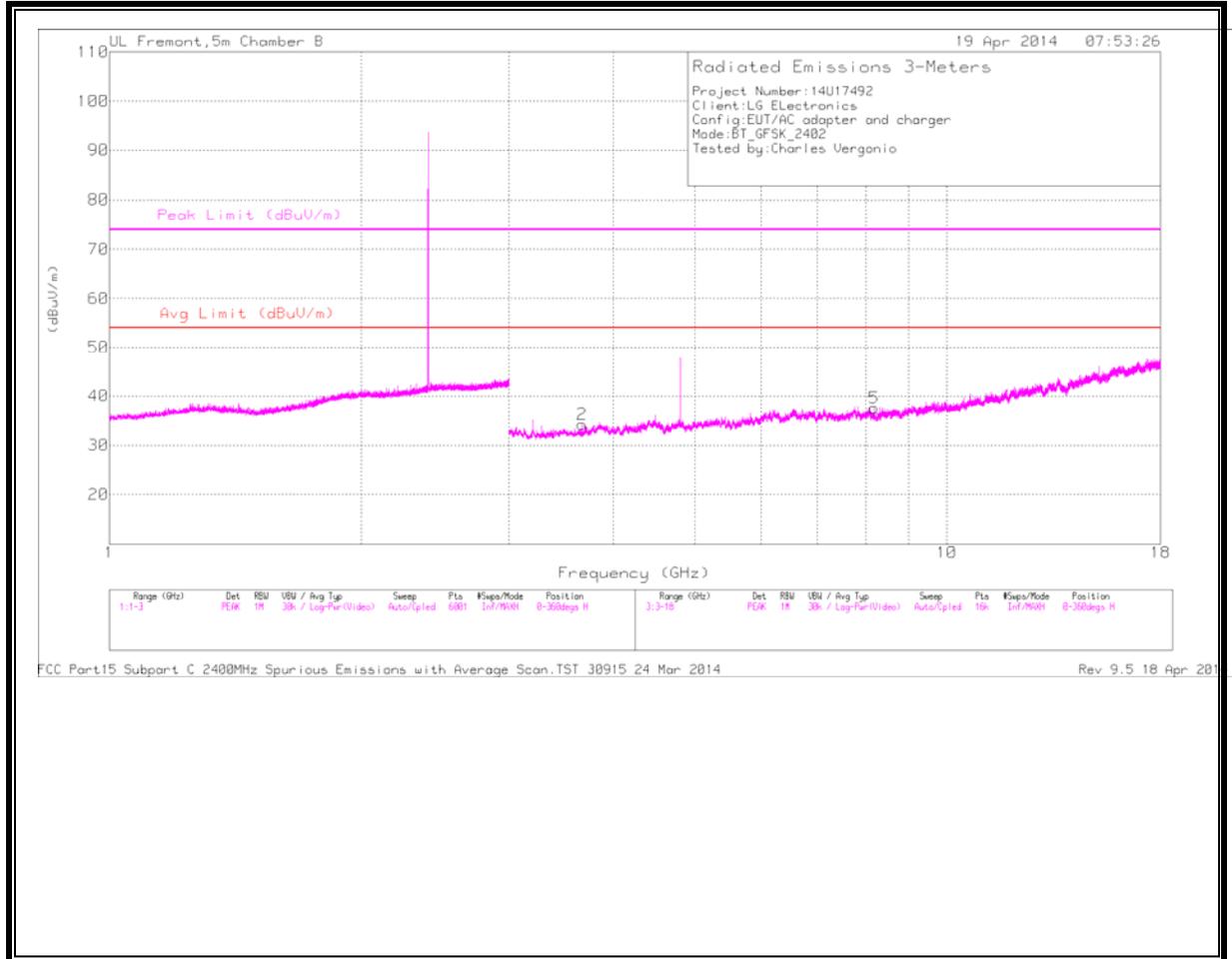
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	39.32	PK	32.1	-22.9	0	48.52	-	-	74	-25.48	172	375	V
2	* 2.373	42.12	PK	32	-22.8	0	51.32	-	-	74	-22.68	172	375	V
3	* 2.39	29.58	VB1T	32.1	-22.9	0	38.78	54	-15.22	-	-	172	375	V
4	* 2.389	30.28	VB1T	32.1	-22.9	0	39.48	54	-14.52	-	-	172	375	V

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

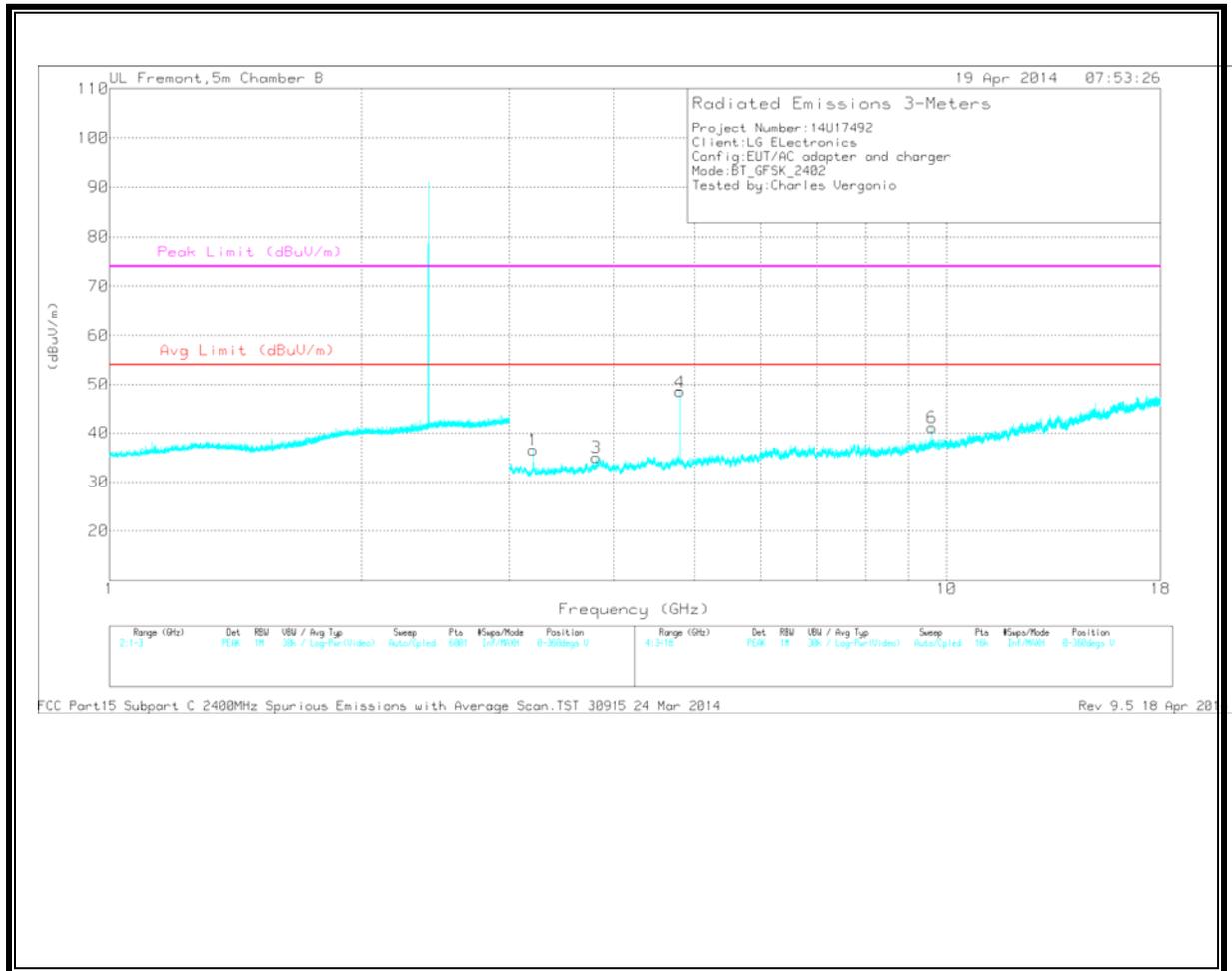
PK - Peak detector

### 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.



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

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/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	* 3.669	32.1	PK	33.3	-31.1	34.3	-	-	74	-39.7	0-360	202	H
5	* 8.181	28.8	PK	35.7	-26.9	37.6	-	-	74	-36.4	0-360	99	H
3	* 3.812	32.03	PK	33.7	-30.7	35.03	-	-	74	-38.97	0-360	202	V
4	* 4.804	43.08	PK	34.2	-28.8	48.48	-	-	74	-25.52	0-360	99	V
1	3.202	34.94	PK	32.8	-31.2	36.54	-	-	-	-	0-360	202	V
6	9.608	28.4	PK	36.8	-24.1	41.1	-	-	-	-	0-360	202	V

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

PK - Peak detector

Radiated Emissions

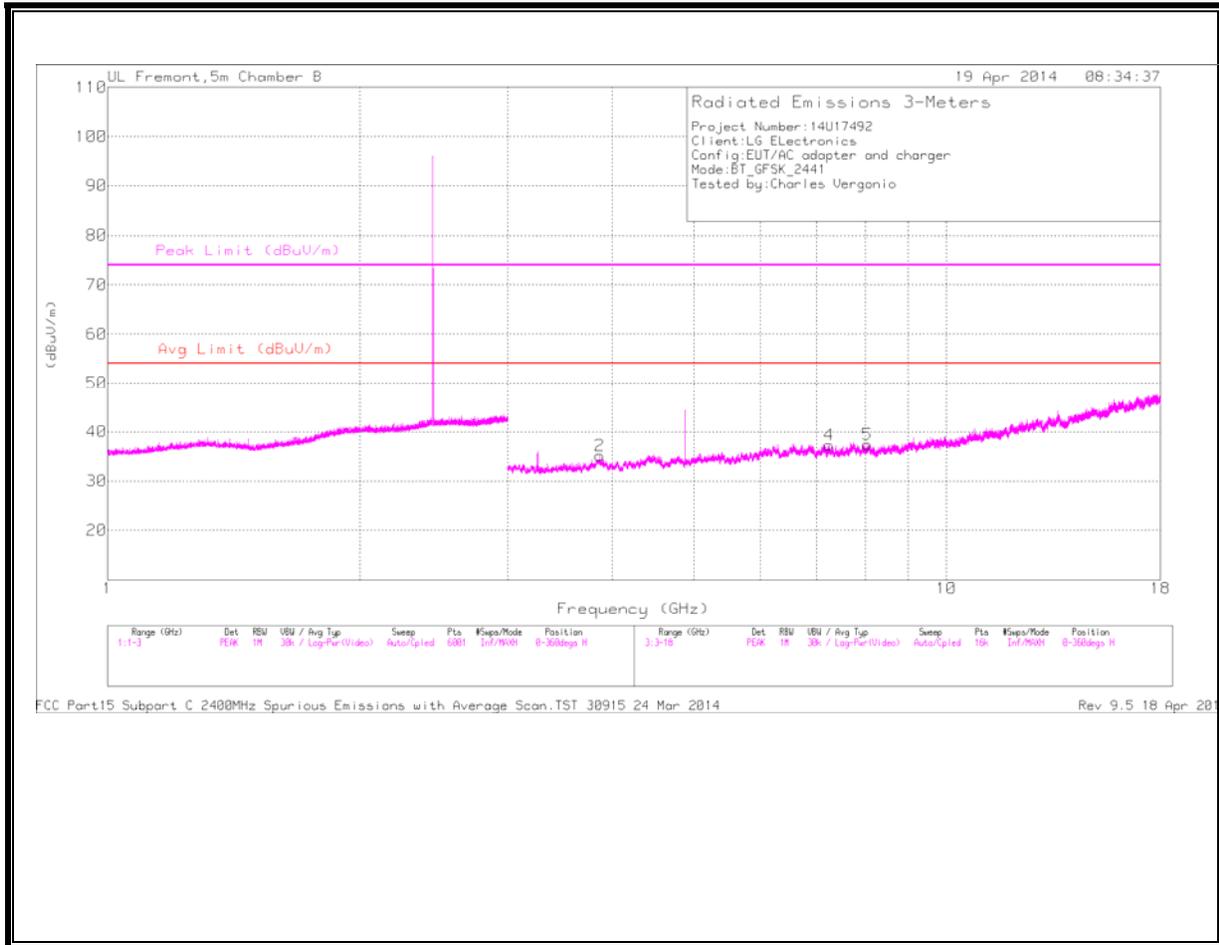
Frequency (GHz)	Meter Reading (dBuV)	Det	AFT345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.669	41.34	PK3	33.3	-31	43.64	54	-10.36	74	-30.36	359	100	H
* 8.183	37.63	PK3	35.7	-26.9	46.43	54	-7.57	74	-27.57	359	100	H
* 3.812	40.49	PK3	33.7	-30.7	43.49	54	-10.51	74	-30.51	359	100	V
* 4.804	51.23	PK3	34.2	-30.6	54.83			74	-19.17			V
* 4.804	42.26	VB1T	34.2	-28.8	47.66	54	-6.34			287	106	V
3.2	28.56	VB1T	32.8	-31.2	30.16	54	-23.84	74	-43.84	181	392	V
3.202	41.07	PK3	32.8	-31.2	42.67	54	-11.33	74	-31.33	181	392	V
9.611	35.36	PK3	36.8	-24.1	48.06	54	-5.94	74	-25.94	287	100	V
9.613	22.58	VB1T	36.8	-24.1	35.28	54	-18.72	74	-38.72	287	100	V

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

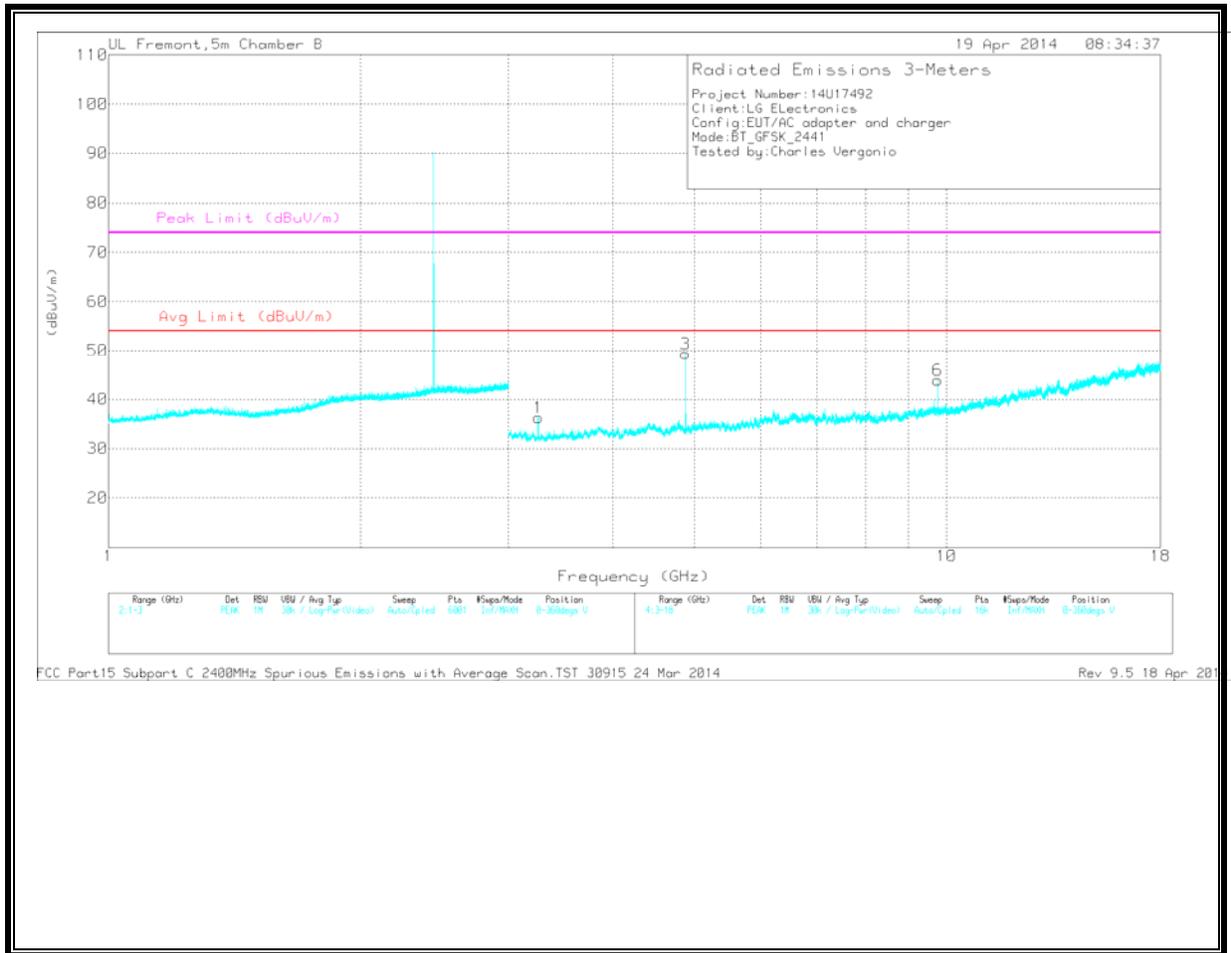
PK3 - FHSS Method: Maximum Peak

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

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.



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

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.862	31.68	PK	33.7	-30.2	0	35.18	-	-	74	-38.82	0-360	99	H
5	* 8.043	28.08	PK	35.7	-26.3	0	37.48	-	-	74	-36.52	0-360	99	H
3	* 4.882	45.79	PK	34.2	-30.6	0	49.39	-	-	74	-24.61	0-360	202	V
1	3.258	34.47	PK	32.8	-31	0	36.27	-	-	-	-	0-360	202	V
4	7.247	29.06	PK	35.6	-27.4	0	37.26	-	-	-	-	0-360	99	H
6	9.764	31.22	PK	36.9	-24.2	0	43.92	-	-	-	-	0-360	202	V

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

PK - Peak detector

Radiated Emissions

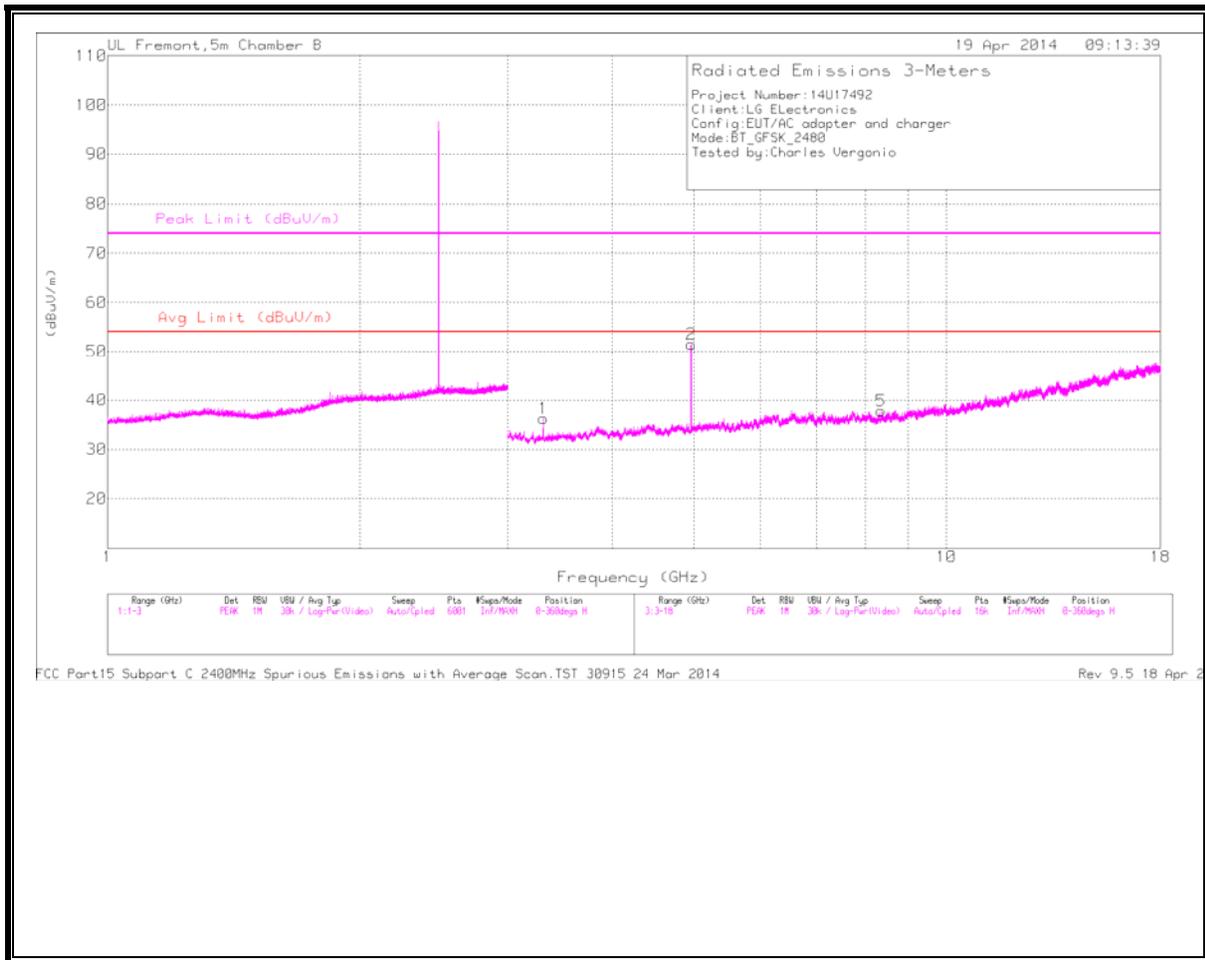
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.862	40.68	PK3	33.7	-30.2	0	44.18	54	-9.82	74	-29.82	359	100	H
* 8.042	38.01	PK3	35.7	-26.3	0	47.41	54	-6.59	74	-26.59	359	100	H
* 4.882	51.23	PK3	34.2	-30.6	0	54.83			74	-19.17	344	280	V
* 4.882	45.54	VB1T	34.2	-30.6	0	49.14	54	-4.86	74	-24.86	344	280	V
3.257	42.34	PK3	32.8	-31	0	44.14	54	-9.86	74	-29.86	359	347	V
3.257	28	VB1T	32.8	-31	0	29.8	54	-24.2	74	-44.2	359	347	V
7.248	39.13	PK3	35.6	-27.4	0	47.33	54	-6.67	74	-26.67	359	100	H
9.764	38.34	PK3	36.9	-24.2	0	51.04	54	-2.96	74	-22.96	166	294	V
9.764	28.73	VB1T	36.9	-24.2	0	41.43	54	-12.57	74	-32.57	166	294	V

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

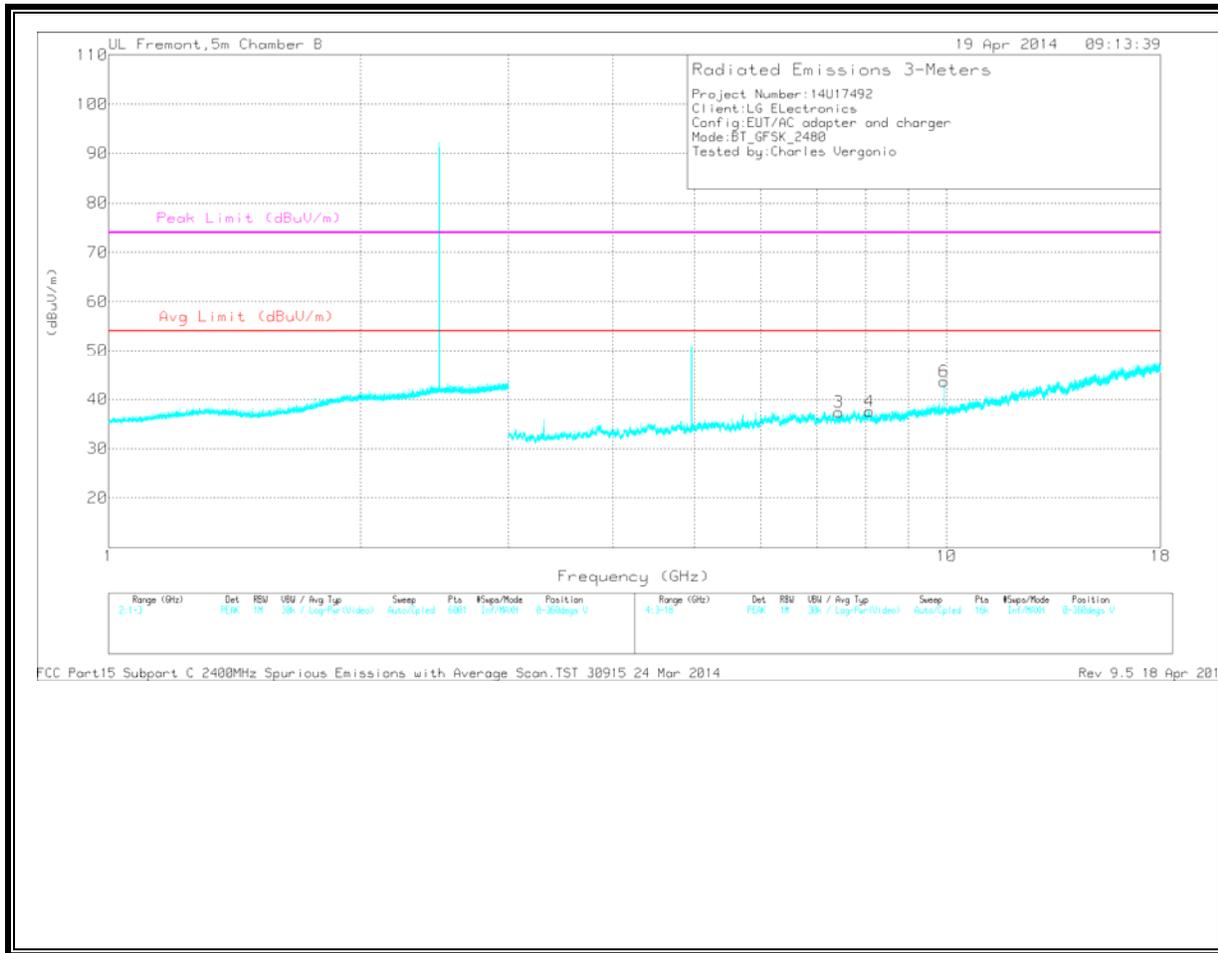
PK3 - FHSS Method: Maximum Peak

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

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.



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

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.96	47.5	PK	34.2	-30.2	0	51.5	-	-	74	-22.5	0-360	202	H
5	* 8.358	27.63	PK	35.7	-25.5	0	37.83	-	-	74	-36.17	0-360	99	H
3	* 7.44	28.59	PK	35.6	-26.8	0	37.39	-	-	74	-36.61	0-360	202	V
4	* 8.087	27.71	PK	35.7	-25.8	0	37.61	-	-	74	-36.39	0-360	202	V
1	3.307	34.74	PK	32.8	-31.3	0	36.24	-	-	-	-	0-360	202	H
6	9.919	30.61	PK	37	-24	0	43.61	-	-	-	-	0-360	202	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 8.359	36.84	PK3	35.7	-25.5	0	47.04	54	-6.96	74	-26.96	1	100	H
* 4.96	51.21	PK3	34.2	-30.2	0	55.21			74	-18.79	138	263	H
* 4.96	47.65	VB1T	34.2	-30.2	0	51.65	54	-2.35	74	-22.35	138	263	H
* 7.439	38.3	PK3	35.6	-26.7	0	47.2	54	-6.8	74	-26.8	1	100	V
* 8.087	37.6	PK3	35.7	-25.8	0	47.5	54	-6.5	74	-26.5	1	100	V
3.307	42.46	PK3	32.8	-31.3	0	43.96	54	-10.04	74	-30.04	150	323	H
3.307	33.6	VB1T	32.8	-31.3	0	35.1	54	-18.9	74	-38.9	150	323	H
9.92	39.27	PK3	37	-24	0	52.27			74	-21.73	149	258	V
9.92	31.21	VB1T	37	-24	0	44.21	54	-9.79	74	-29.79	149	258	V

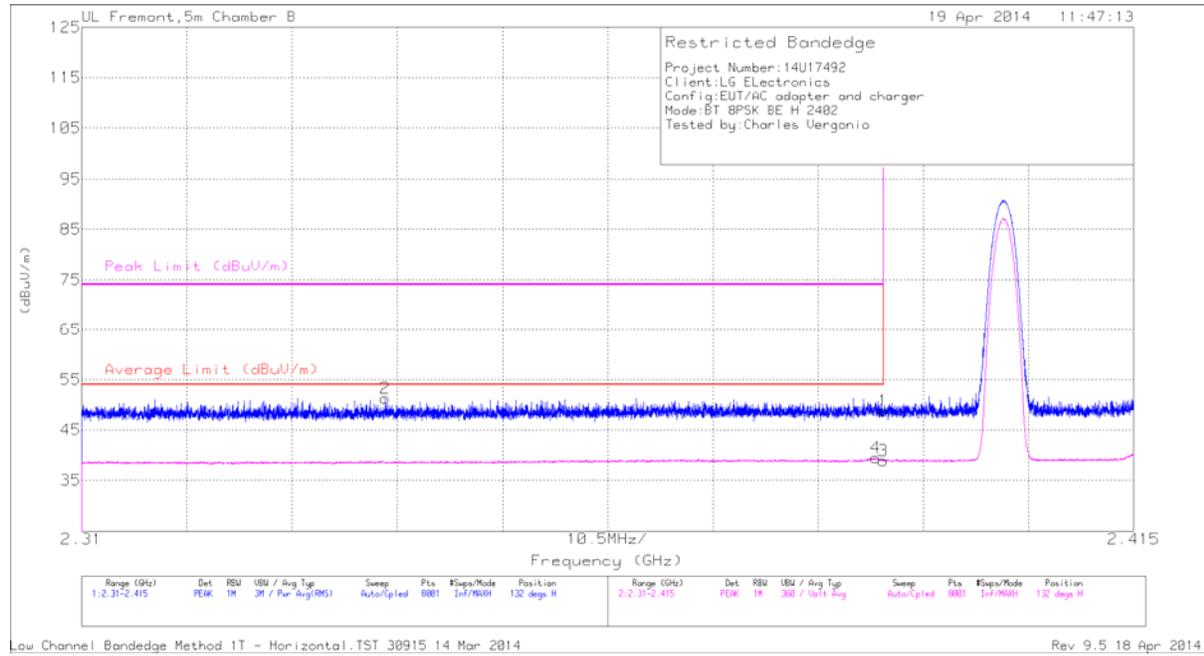
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - FHSS Method: Maximum Peak

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

## 9.2.2. ENHANCED DATA RATE 8PSK MODULATION

### RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



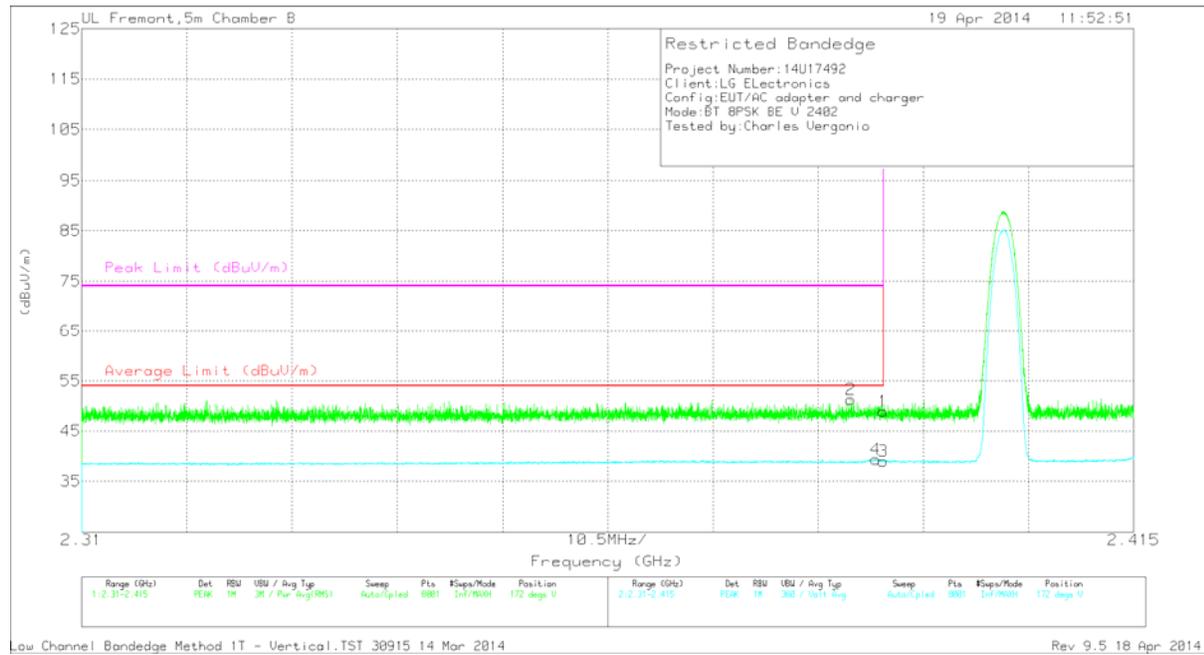
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	39.65	PK	32.1	-22.9	0	48.85	-	-	74	-25.15	132	176	H
2	* 2.34	42.63	PK	31.8	-23.1	0	51.33	-	-	74	-22.67	132	176	H
3	* 2.39	29.64	VB1T	32.1	-22.9	0	38.84	54	-15.16	-	-	132	176	H
4	* 2.389	30.25	VB1T	32.1	-22.9	0	39.45	54	-14.55	-	-	132	176	H

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

PK - Peak detector

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

**RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)**



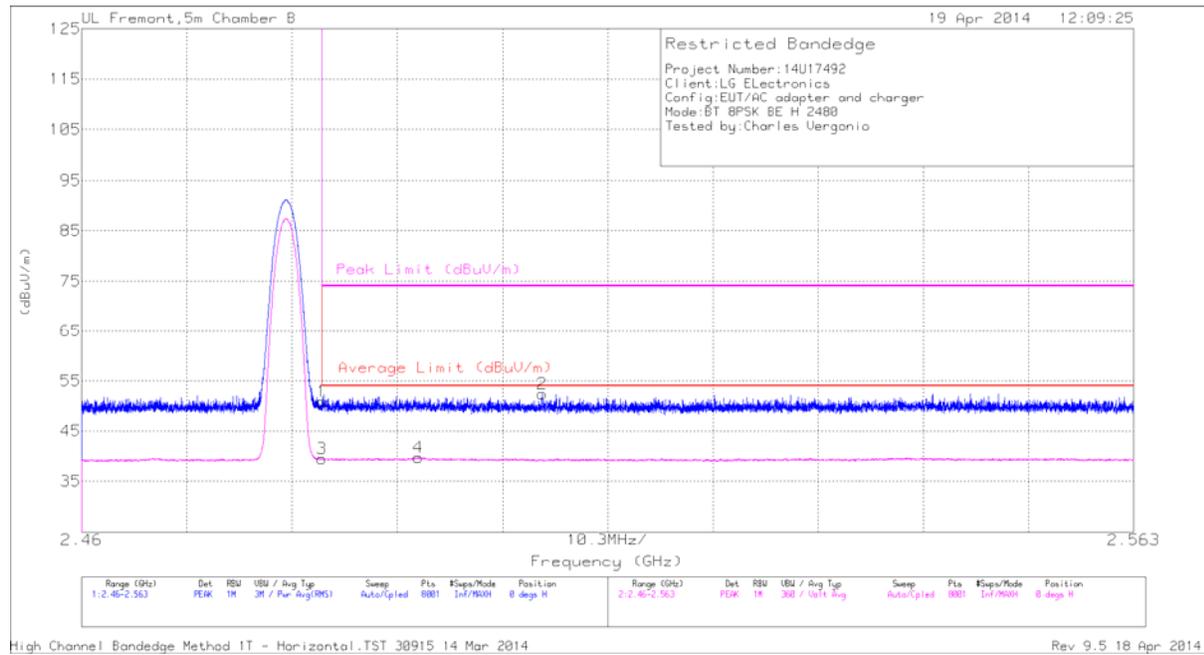
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	39.74	PK	32.1	-22.9	0	48.94	-	-	74	-25.06	172	375	V
2	* 2.387	42.1	PK	32.1	-22.9	0	51.3	-	-	74	-22.7	172	375	V
3	* 2.39	29.78	VB1T	32.1	-22.9	0	38.98	54	-15.02	-	-	172	375	V
4	* 2.389	30.11	VB1T	32.1	-22.9	0	39.31	54	-14.69	-	-	172	375	V

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

PK - Peak detector

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

**RESTRICTED BANDEGE (HIGH CHANNEL, HORIZONTAL)**



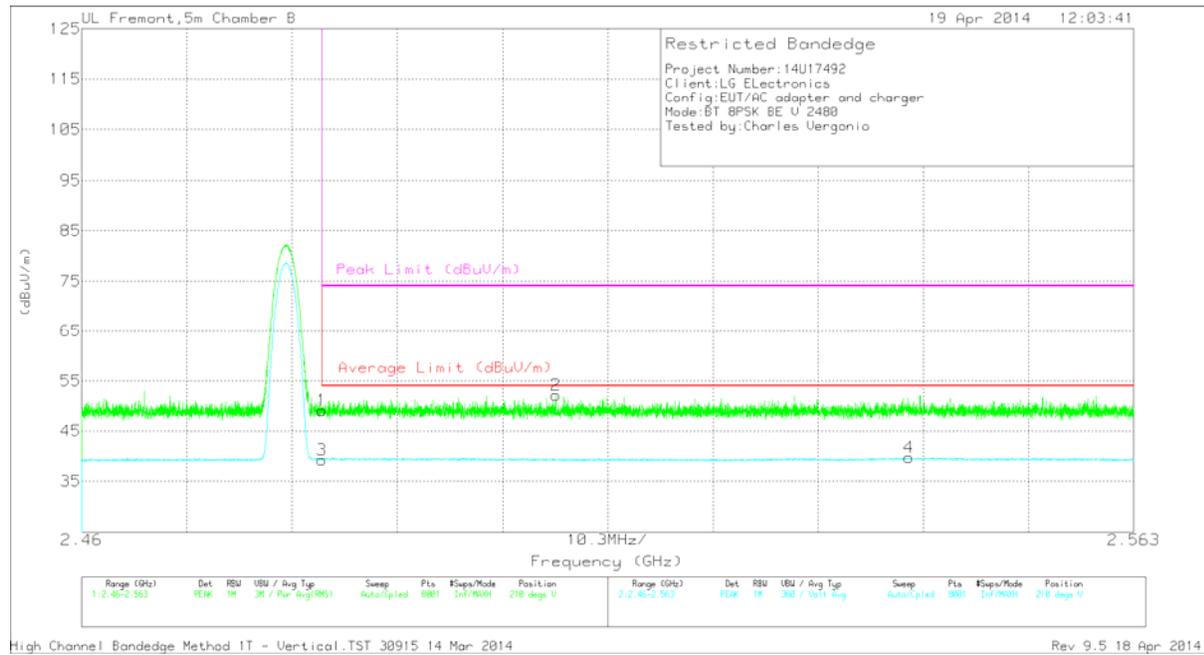
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	41.13	PK	32.4	-22.6	0	50.93	-	-	74	-23.07	0	250	H
3	* 2.484	29.65	VB1T	32.4	-22.6	0	39.45	54	-14.55	-	-	0	250	H
4	* 2.493	30.08	VB1T	32.4	-22.7	0	39.78	54	-14.22	-	-	0	250	H
2	2.505	42.82	PK	32.4	-22.8	0	52.42	-	-	74	-21.58	0	250	H

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

PK - Peak detector

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

**RESTRICTED BANDEGE (HIGH CHANNEL, VERTICAL)**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fit r/Pad (dB)	DC Corr (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	39.31	PK	32.4	-22.6	0	49.11	-	-	74	-24.89	210	317	V
3	* 2.484	29.49	VB1T	32.4	-22.6	0	39.29	54	-14.71	-	-	210	317	V
2	2.506	42.52	PK	32.4	-22.8	0	52.12	-	-	74	-21.88	210	317	V
4	2.541	29.69	VB1T	32.5	-22.5	0	39.69	54	-14.31	-	-	210	317	V

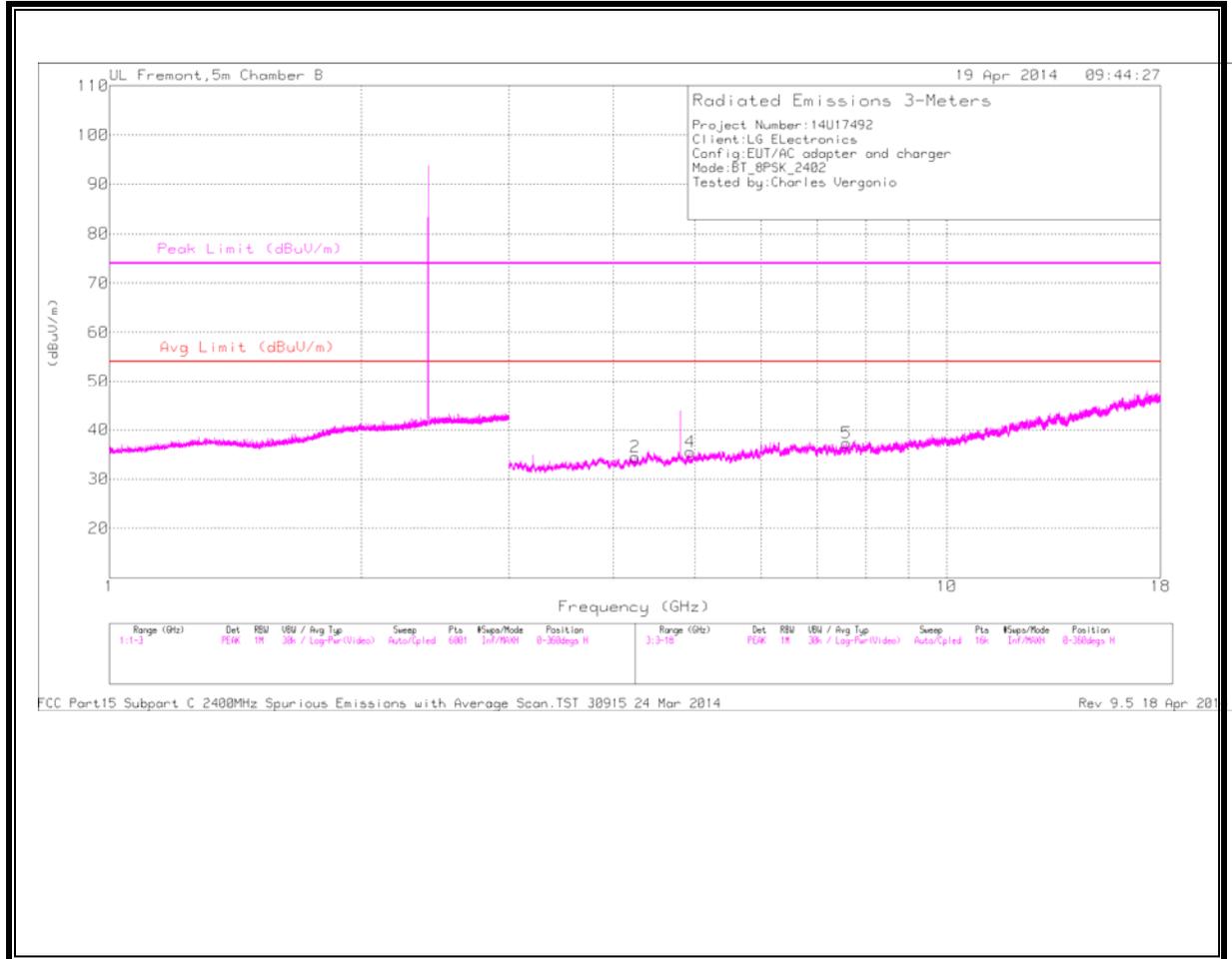
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

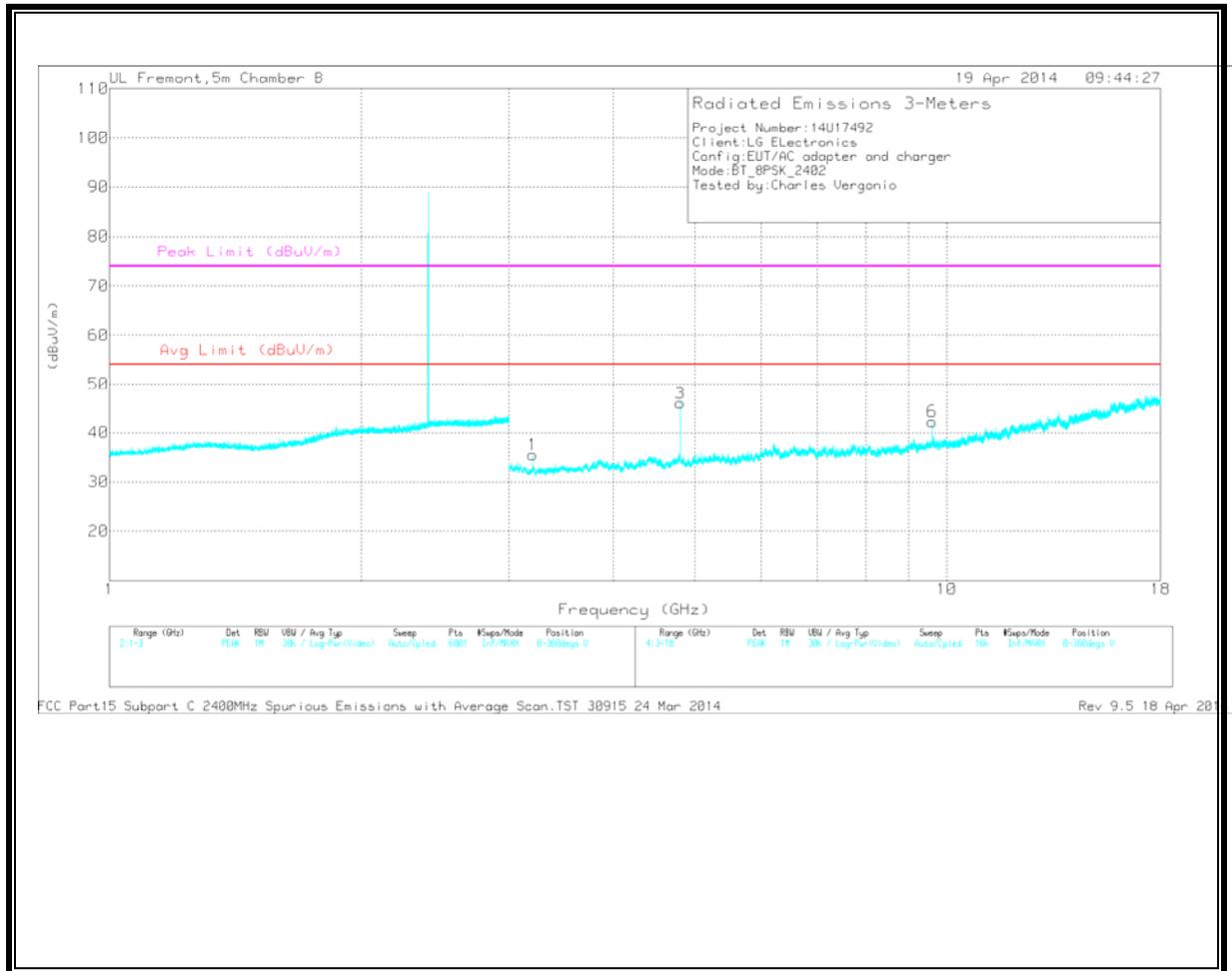
VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

**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.



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

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.244	31.52	PK	33.6	-30.6	0	34.52	-	-	74	-39.48	0-360	99	H
4	* 4.941	31.7	PK	34.2	-30.4	0	35.5	-	-	74	-38.5	0-360	99	H
5	* 7.594	29.01	PK	35.7	-27.4	0	37.31	-	-	74	-36.69	0-360	99	H
3	* 4.804	40.64	PK	34.2	-28.8	0	46.04	-	-	74	-27.96	0-360	99	V
1	3.202	33.98	PK	32.8	-31.2	0	35.58	-	-	-	-	0-360	202	V
6	9.608	29.61	PK	36.8	-24.1	0	42.31	-	-	-	-	0-360	202	V

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

PK - Peak detector

Radiated Emissions

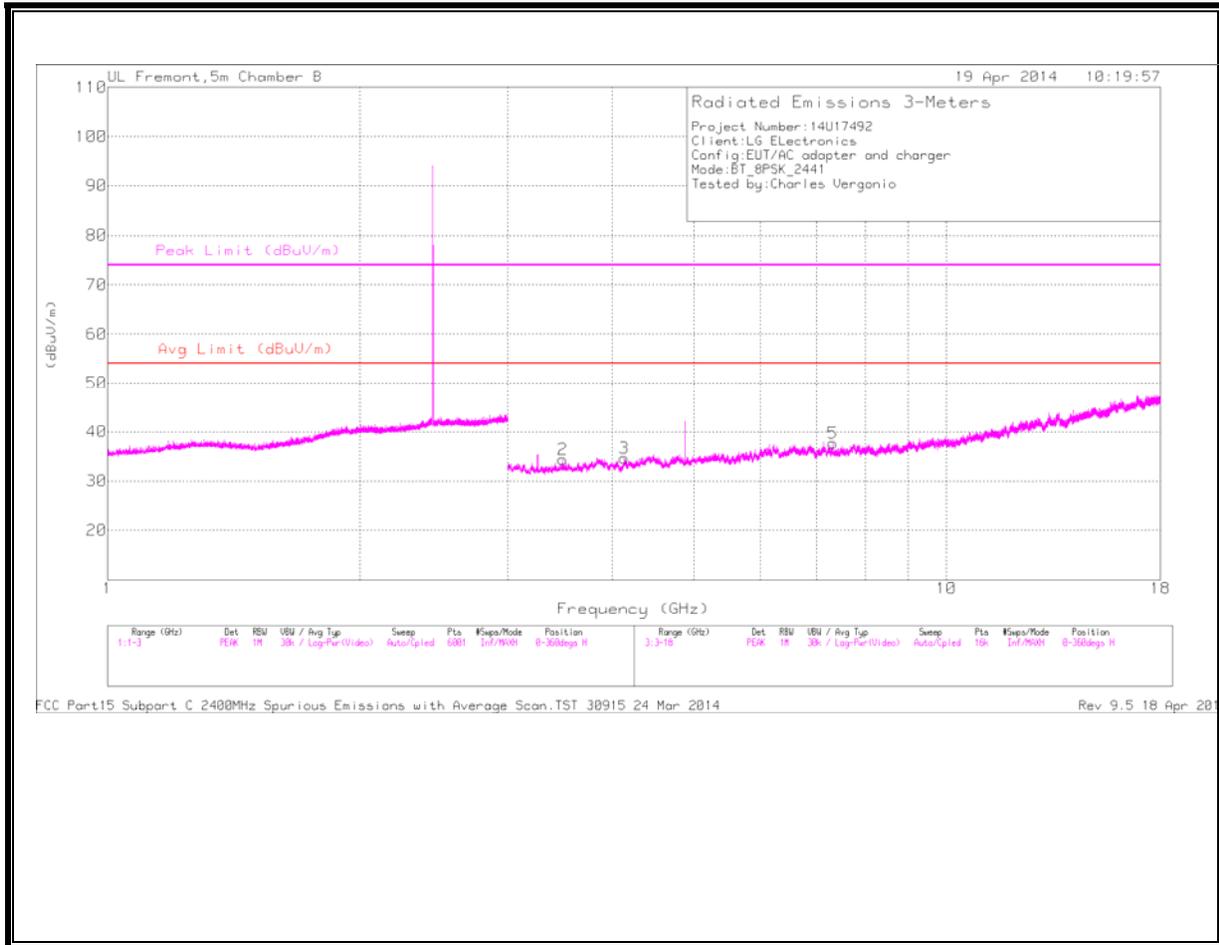
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.244	40.84	PK3	33.6	-30.6	0	43.84	54	-10.16	74	-30.16	2	100	H
* 4.941	40.57	PK3	34.2	-30.4	0	44.37	54	-9.63	74	-29.63	2	100	H
* 7.595	38.77	PK3	35.7	-27.4	0	47.07	54	-6.93	74	-26.93	2	100	H
* 4.804	49.94	PK3	34.2	-28.8	0	55.34			74	-18.66	323	323	V
* 4.804	42.26	VB1T	34.2	-28.8	0	47.66	54	-6.34	74	-26.34	323	323	V
3.203	42.76	PK3	32.8	-31.2	0	44.36	54	-9.64	74	-29.64	207	371	V
3.203	33.93	VB1T	32.8	-31.2	0	35.53	54	-18.47	74	-38.47	207	371	V
9.608	24.32	VB1T	36.8	-24.1	0	37.02	54	-16.98	74	-36.98	323	323	V
9.61	36.05	PK3	36.8	-24.1	0	48.75	54	-5.25	74	-25.25	323	323	V

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

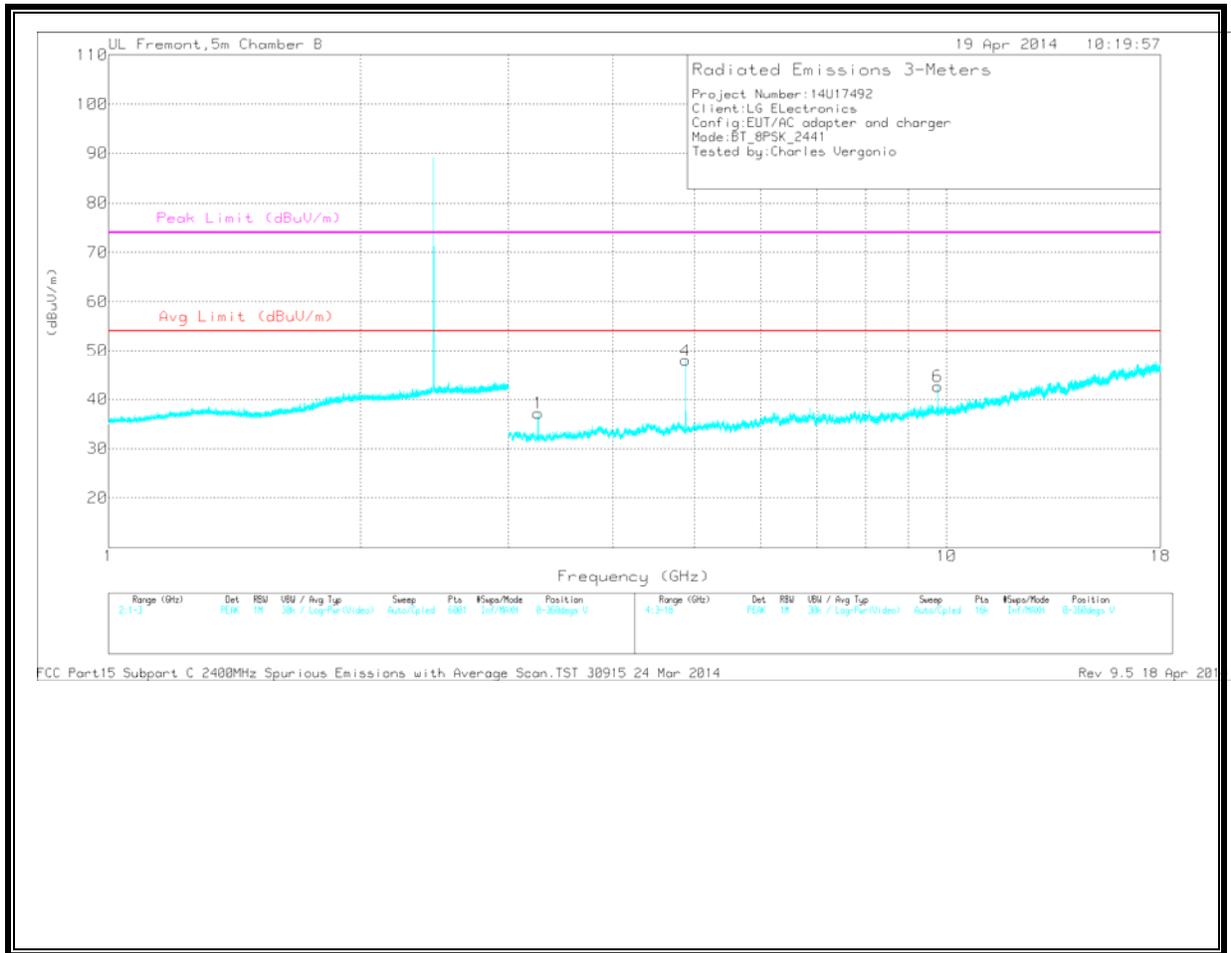
PK3 - FHSS Method: Maximum Peak

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

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.



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

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 4.13	31	PK	33.6	-30	0	34.6	-	-	74	-39.4	0-360	202	H
5	* 7.323	29.92	PK	35.6	-27.8	0	37.72	-	-	74	-36.28	0-360	202	H
4	* 4.881	44.33	PK	34.2	-30.6	0	47.93	-	-	74	-26.07	0-360	202	V
1	3.255	35.34	PK	32.8	-31	0	37.14	-	-	-	-	0-360	202	V
2	3.487	33.01	PK	32.8	-31.4	0	34.41	-	-	-	-	0-360	202	H
6	9.764	29.94	PK	36.9	-24.2	0	42.64	-	-	-	-	0-360	202	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.128	40.27	PK3	33.6	-30.1	0	43.77	54	-10.23	74	-30.23	359	100	H
* 7.32	38.79	PK3	35.6	-27.7	0	46.69	54	-7.31	74	-27.31	359	100	H
* 4.882	50.68	PK3	34.2	-30.6	0	54.28			74	-19.72	123	294	V
* 4.882	43.15	VB1T	34.2	-30.6	0	46.75	54	-7.25	74	-27.25	123	294	V
3.254	41.89	PK3	32.8	-31	0	43.69	54	-10.31	74	-30.31	16	292	V
3.255	31.61	VB1T	32.8	-31	0	33.41	54	-20.59	74	-40.59	16	292	V
3.491	41.3	PK3	32.8	-31.4	0	42.7	54	-11.3	74	-31.3	359	100	H
9.764	35.48	PK3	36.9	-24.2	0	48.18	54	-5.82	74	-25.82	63	294	V
9.764	22.77	VB1T	36.9	-24.2	0	35.47	54	-18.53	74	-38.53	63	294	V

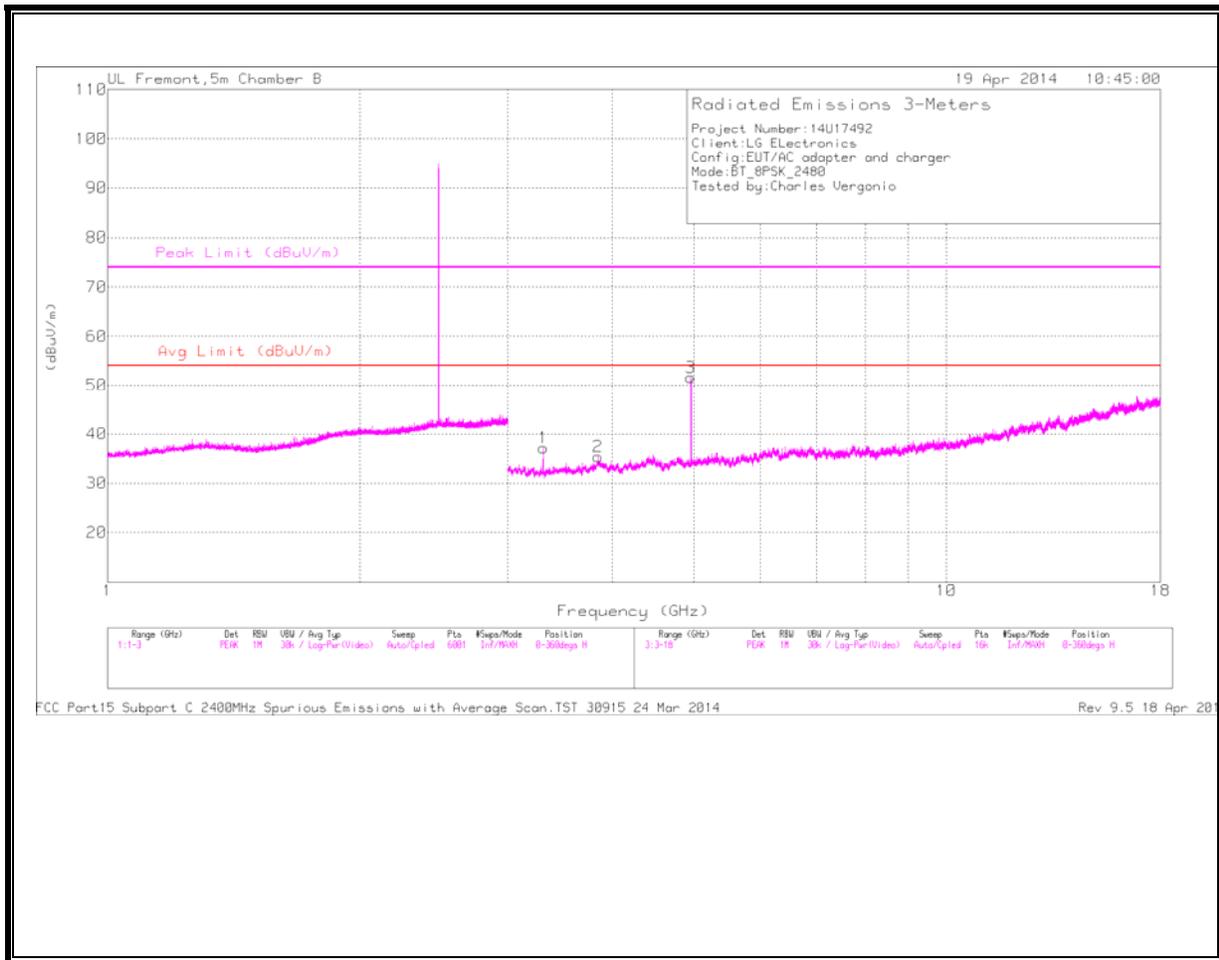
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - FHSS Method: Maximum Peak

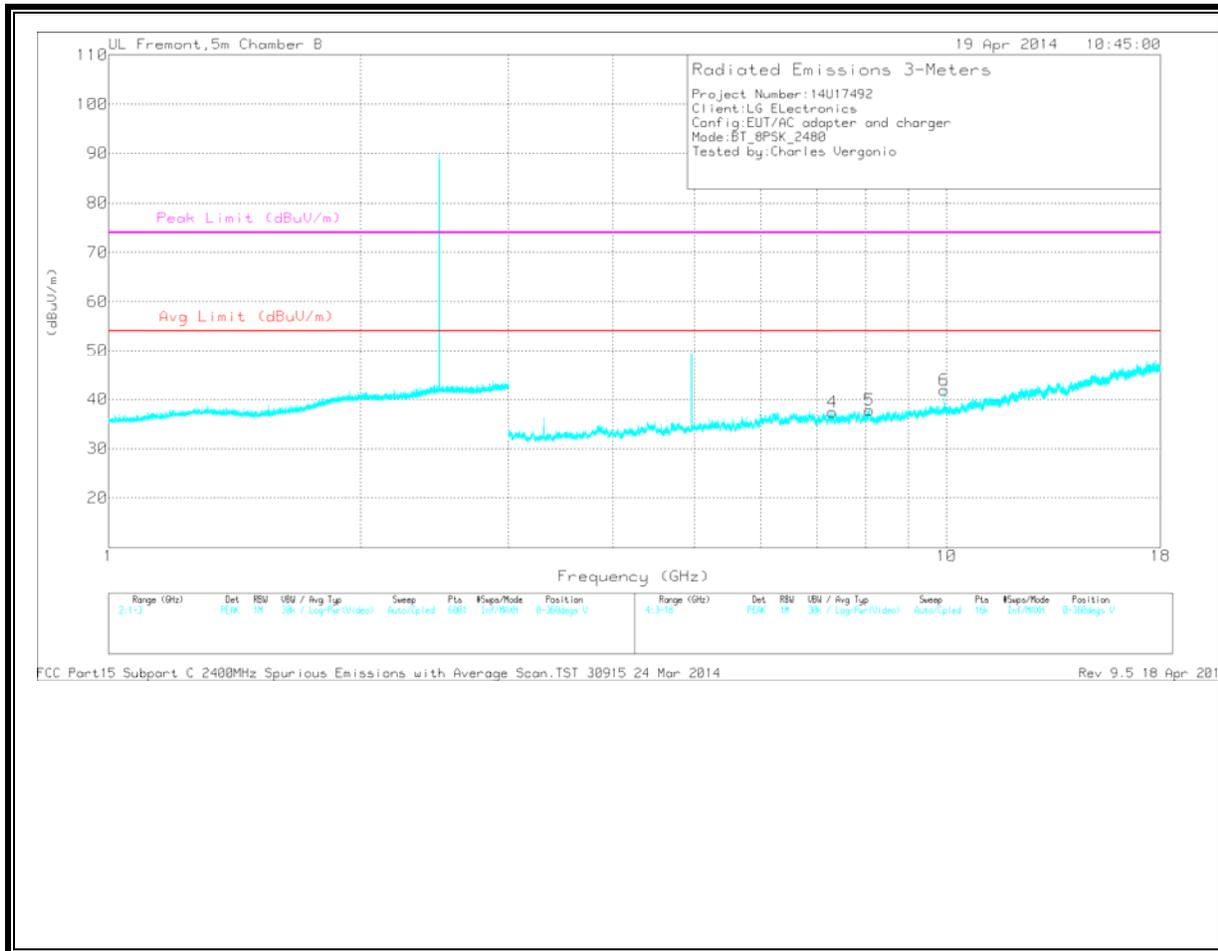
VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

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.



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

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.845	31.85	PK	33.7	-30.2	0	35.35	-	-	74	-38.65	0-360	202	H
3	* 4.959	47.64	PK	34.2	-30.2	0	51.64	-	-	74	-22.36	0-360	202	H
4	* 7.308	29.57	PK	35.6	-27.7	0	37.47	-	-	74	-36.53	0-360	202	V
5	* 8.095	28.07	PK	35.7	-26	0	37.77	-	-	74	-36.23	0-360	202	V
1	3.307	35.64	PK	32.8	-31.3	0	37.14	-	-	-	-	0-360	202	H
6	9.919	28.89	PK	37	-24	0	41.89	-	-	-	-	0-360	202	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.844	40.28	PK3	33.7	-30.2	0	43.78	54	-10.22	74	-30.22	1	100	H
* 4.96	52.59	PK3	34.2	-30.2	0	56.59			74	-17.41	157	207	H
* 4.96	45.17	VB1T	34.2	-30.2	0	49.17	54	-4.83	74	-24.83	157	207	H
* 7.306	39.16	PK3	35.6	-27.7	0	47.06	54	-6.94	74	-26.94	1	100	V
* 8.09	37.38	PK3	35.7	-25.9	0	47.18	54	-6.82	74	-26.82	1	100	V
3.307	42.27	PK3	32.8	-31.3	0	43.77	54	-10.23	74	-30.23	1	100	H
3.307	32.47	VB1T	32.8	-31.3	0	33.97	54	-20.03	74	-40.03	1	100	H
9.92	35.95	PK3	37	-24	0	48.95	54	-5.04	74	-25.04	1	100	V
9.92	22.92	VB1T	37	-24	0	35.92	54	-18.08	74	-38.08	1	100	V

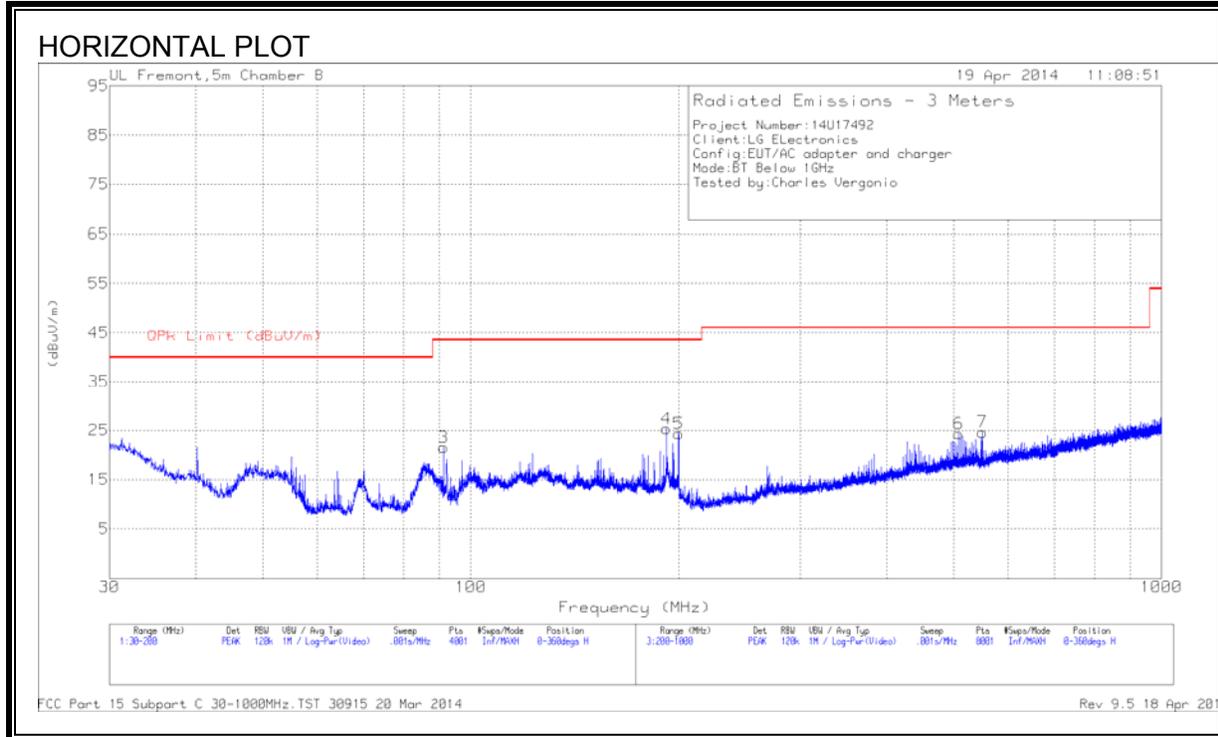
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

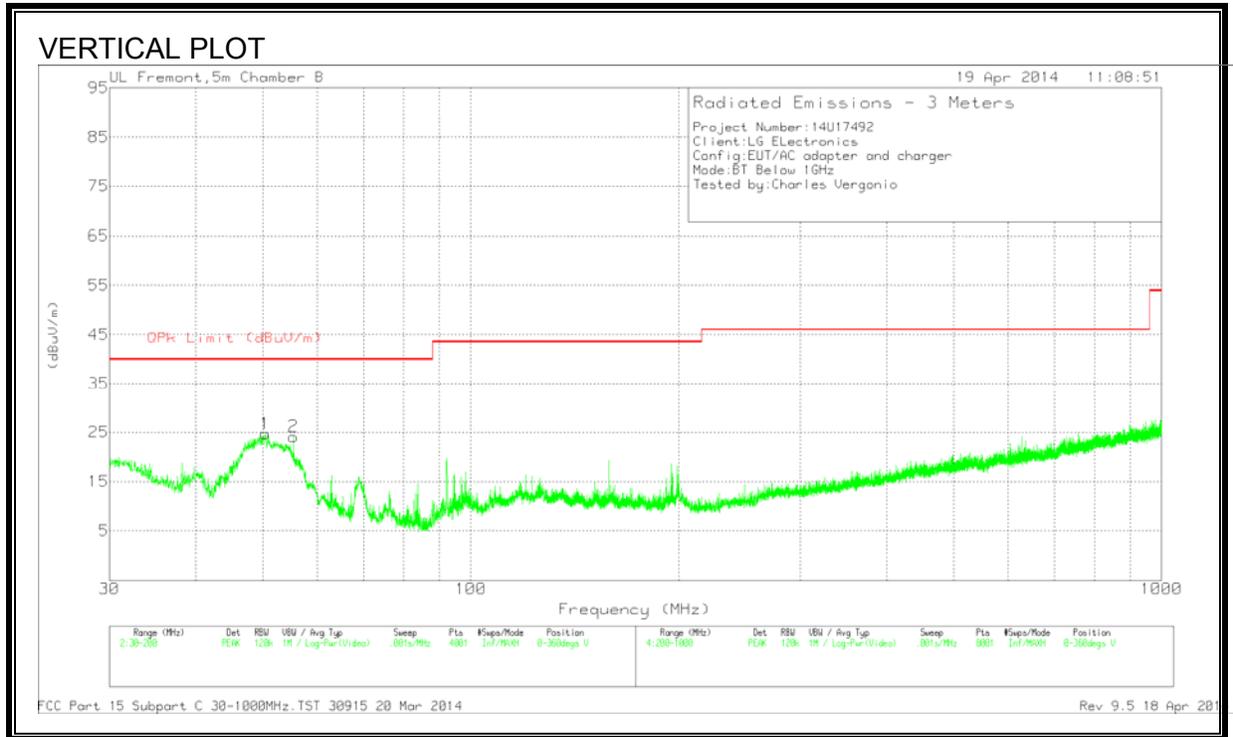
PK3 - FHSS Method: Maximum Peak

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

### 9.3. WORST-CASE BELOW 1 GHz

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





DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	50.4	45.63	PK	7.7	-28.6	24.73	40	-15.27	0-360	101	V
2	55.3725	45.74	PK	7	-28.6	24.14	40	-15.86	0-360	101	V
3	91.3275	41.61	PK	8	-28.1	21.51	43.52	-22.01	0-360	300	H
4	192.01	40.93	PK	11.5	-27.1	25.33	43.52	-18.19	0-360	200	H
5	199.9575	39.03	PK	12.3	-27	24.33	43.52	-19.19	0-360	200	H
6	508.8	32.28	PK	17.8	-25.7	24.38	46.02	-21.64	0-360	200	H
7	550	32.55	PK	17.7	-25.6	24.65	46.02	-21.37	0-360	200	H

PK - Peak detector

FCC Part 15 Subpart C 30-1000MHz.TST 30915 20 Mar 2014

## 10. AC POWER LINE CONDUCTED EMISSIONS

### LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

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

\*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-L1 .15 - 30MHz**

**Trace Markers**

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1 (dB)	LC Cables 1&3 (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin to Limit (dB)	CFR 47 Part 15 Class B Avg	Margin to Limit (dB)
1	.168	45.86	PK	1.2	0	47.06	65.1	-18.04	55.1	-8.04
2	.168	19.65	Av	1.2	0	20.85	65.1	-44.25	55.1	-34.25
3	1.3965	35.99	PK	.2	.1	36.29	56	-19.71	46	-9.71
4	1.3965	18.8	Av	.2	.1	19.1	56	-36.9	46	-26.9
5	13.2405	34.79	PK	.2	.2	35.19	60	-24.81	50	-14.81
6	13.2405	17.96	Av	.2	.2	18.36	60	-41.64	50	-31.64

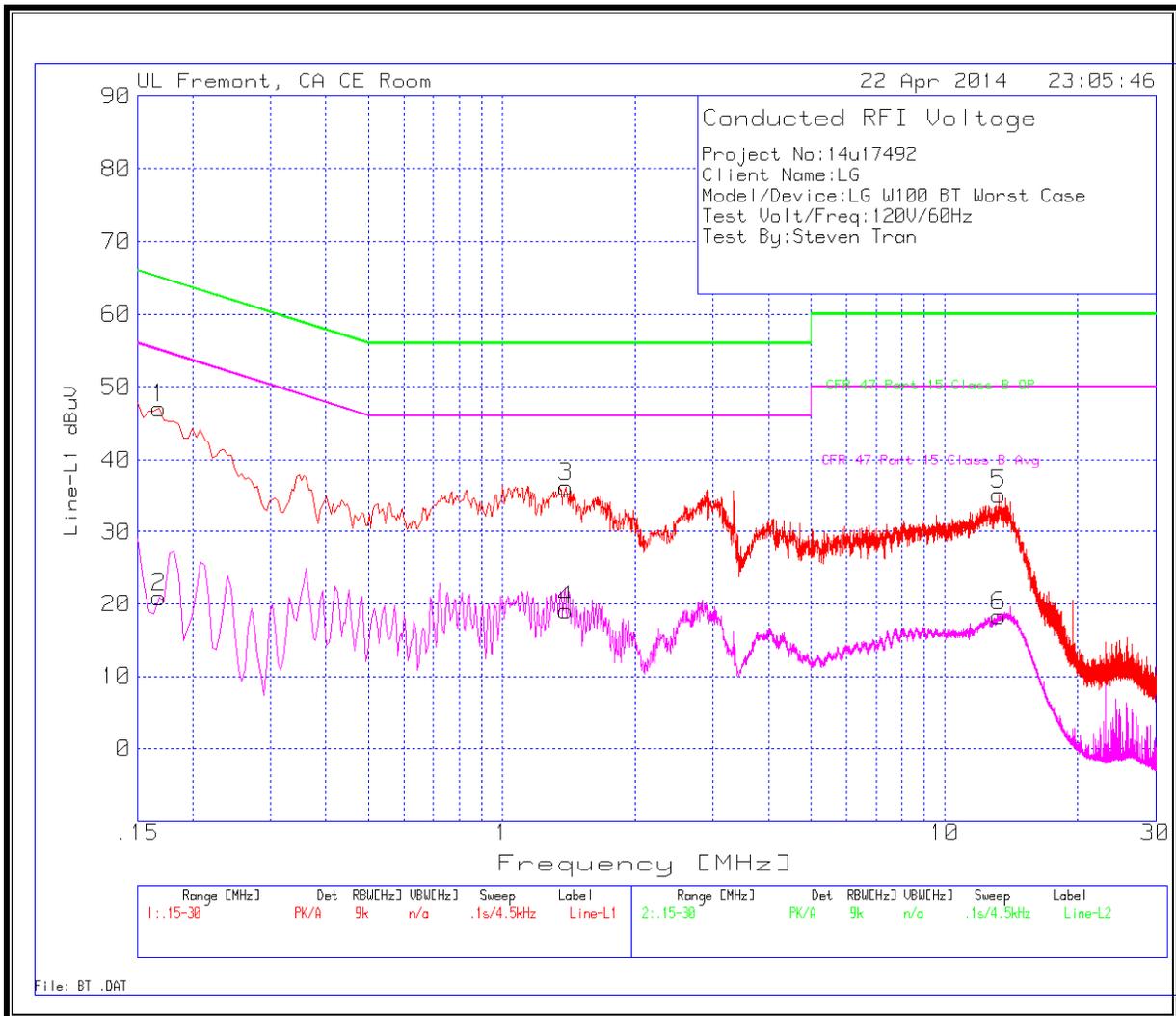
**Line-L2 .15 - 30MHz**

**Trace Markers**

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2 (dB)	LC Cables 2&3 (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin to Limit (dB)	CFR 47 Part 15 Class B Avg	Margin to Limit (dB)
7	.1635	38.68	PK	1.3	0	39.98	65.3	-25.32	55.3	-15.32
8	.1635	20.23	Av	1.3	0	21.53	65.3	-43.77	55.3	-33.77
9	1.086	33.86	PK	.3	0	34.16	56	-21.84	46	-11.84
10	1.086	16.6	Av	.3	0	16.9	56	-39.1	46	-29.1
11	13.623	31.91	PK	.3	.2	32.41	60	-27.59	50	-17.59
12	13.623	14.79	Av	.3	.2	15.29	60	-44.71	50	-34.71

PK - Peak detector  
 Av - average detection

**LINE 1 RESULTS**



**LINE 2 RESULTS**

