



FCC 47 CFR PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

LTE Watch + BLUETOOTH and WLAN 2.4GHz b/g/n & NFC

MODEL NUMBER: LG-W200V, LGW200V, W200V, LG-W200VW, LGW200VW, W200VW

FCC ID: ZNFW200V

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	09/28/15	Initial Issue	
V2	09/30/15	Updated Section 2	V. Tran

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	5
2. TEST METHODOLOGY	7
3. FACILITIES AND ACCREDITATION	7
4. CALIBRATION AND UNCERTAINTY	7
4.1. MEASURING INSTRUMENT CALIBRATION	7
4.2. SAMPLE CALCULATION	7
4.3. MEASUREMENT UNCERTAINTY.....	8
5. EQUIPMENT UNDER TEST	9
5.1. DESCRIPTION OF EUT	9
5.2. MAXIMUM OUTPUT POWER.....	9
5.3. DESCRIPTION OF AVAILABLE ANTENNAS	9
5.4. WORST-CASE CONFIGURATION AND MODE	9
5.5. DESCRIPTION OF TEST SETUP.....	10
6. TEST AND MEASUREMENT EQUIPMENT	12
7. SUMMARY TABLE	13
8. ANTENNA PORT TEST RESULTS	14
8.1. 20 dB AND 99% BANDWIDTH	14
8.1.1. BASIC DATA RATE GFSK MODULATION	14
8.1.1. ENHANCED DATA RATE 8PSK MODULATION	14
8.2. HOPPING FREQUENCY SEPARATION	23
8.3. NUMBER OF HOPPING CHANNELS.....	25
8.4. AVERAGE TIME OF OCCUPANCY.....	28
8.5. OUTPUT POWER.....	32
8.5.1. BASIC DATA RATE GFSK MODULATION	32
8.5.2. ENHANCED DATA RATE 8PSK MODULATION	32
8.1. AVERAGE POWER	37
8.1.1. BASIC DATA RATE GFSK MODULATION	38
8.1.2. DATA RATE PI/4-DQPSK MODULATION	38
8.1.3. ENHANCED DATA RATE 8PSK MODULATION	38
8.2. CONDUCTED SPURIOUS EMISSIONS.....	39
8.2.1. BASIC DATA RATE GFSK MODULATION	40
8.2.1. ENHANCED DATA RATE 8PSK MODULATION	44
9. RADIATED TEST RESULTS.....	48
9.1. LIMITS AND PROCEDURE	48
9.2. TRANSMITTER ABOVE 1 GHz	49

9.2.1.	BASIC DATA RATE GFSK MODULATION	49
9.2.1.	ENHANCED DATA RATE 8PSK MODULATION	62
9.1.	WORST-CASE BELOW 1 GHz.....	75
10.	AC POWER LINE CONDUCTED EMISSIONS	78
11.	SETUP PHOTOS	81

1. ATTESTATION OF TEST RESULTS

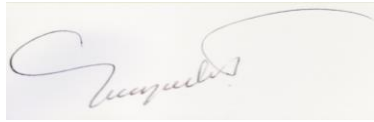
COMPANY NAME: LG ELECTRONICS MOBILECOMM U.S.A., INC.
EUT DESCRIPTION: LTE Watch + Bluetooth and WLAN 2.4GHz b/g/n & NFC
MODEL: LG-W200V, LGW200V, W200V, LG-W200VW, LGW200VW, W200VW
SERIAL NUMBER: 0a930e7384e9da39 (Conducted); 0a930d208484da47 (Radiated)
DATE TESTED: SEPTEMBER 17 – 24, 2015

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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Tested By:



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WiSE LAB ENGINEER
UL VERIFICATION SERVICES INC

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013, FCC CFR 47 Part 2, and FCC CFR 47 Part 15.

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
☒ Chamber A(IC: 2324B-1)	☐ Chamber D(IC: 2324B-4)
☐ Chamber B(IC: 2324B-2)	☐ Chamber E(IC: 2324B-5)
☒ Chamber C(IC: 2324B-3)	☐ Chamber F(IC: 2324B-6)
	☐ Chamber G(IC: 2324B-7)
	☐ 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:

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

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 LTE Watch + Bluetooth and WLAN 2.4 GHz b/g/n & NFC.

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	9.90	9.77
2402 - 2480	Enhanced 8PSK	7.80	6.03

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 FPCB antenna, with a maximum gain of -4.7 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

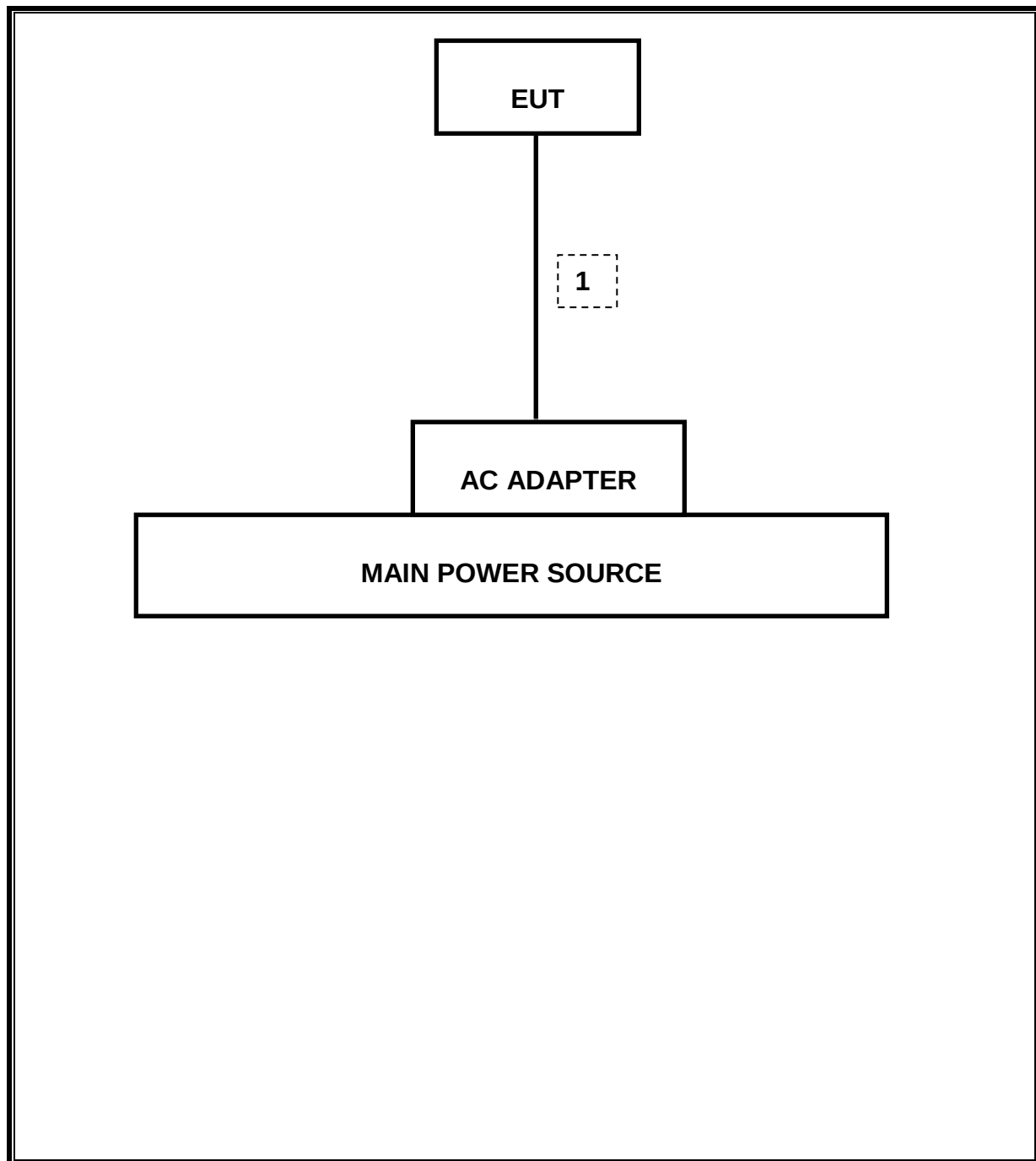
Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	LG	MCS-02WR	RA71011271	N/A

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:

Description	Manufacturer	Model	Asset	Cal Due
Antenna, Biconolog, 30MHz-1 GHz	Sunol Sciences	JB1	C01171	02/13/16
Antenna, Horn, 18GHz	EMCO	3115	C00783	10/25/15
Antenna, Horn, 26.5 GHz	ARA	MWH-1826/B	C00980	11/14/15
RF Preamplifier, 100KHz -> 1300MHz	HP	TBD	C00825	06/01/16
RF Preamplifier, 1GHz - 18GHz	Miteq	NSP4000-SP2	924343	03/23/16
RF Preamplifier, 1GHz - 26.5GHz	HP	8449B	T404	06/29/16
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/15
CBT Bluetooth Tester	R & S	CBT	T258	06/30/16
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	01/14/16
Reject Filter, 2.4GHz	Micro-Tronics	BRM50702	N02684	CNR
Radiated Software	UL	UL EMC	Ver 9.5, July 22, 2014	
Conducted Software	UL	UL EMC	Ver 9.5, May 17 2012	
CLT Software	UL	UL RF	Ver 1.0, Feb 2 2015	
Antenna Port Software	UL	UL RF	Ver 2.1.1.1, Jan 20 2015	

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	1.218 MHz
2.1051, 15.247 (d)	RSS-247 5.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	-52.738dBm
15.247 (b)(1)	RSS-247 5.4.2	TX conducted output power	<21dBm		Pass	9.9 dBm
15.247 (a)(1)	RSS-247 5.1.2	Hopping frequency separation	> 25KHz		Pass	1MHz
15.247 (a)(1)(iii)	RSS-247 5.1.4	Number of Hopping channels	More than 15 non-overlapping channels		Pass	79
15.247 (a)(1)(iii)	RSS-247 5.1.4	Avg Time of Occupancy	< 0.4sec		Pass	0.084 s
15.207 (a)	RSS-GEN 8.8	AC Power Line conducted emissions	Section 10	Radiated	Pass	47.86dBuV
15.205, 15.209	RSS-GEN 8.9/7	Radiated Spurious Emission	< 54dBuV/m		Pass	43.64 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.

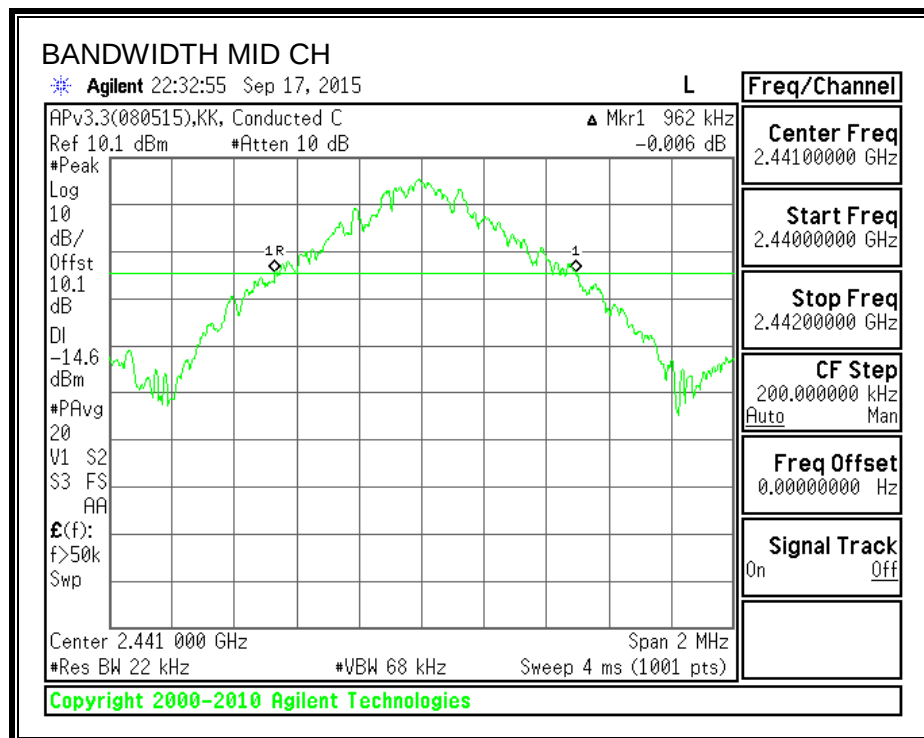
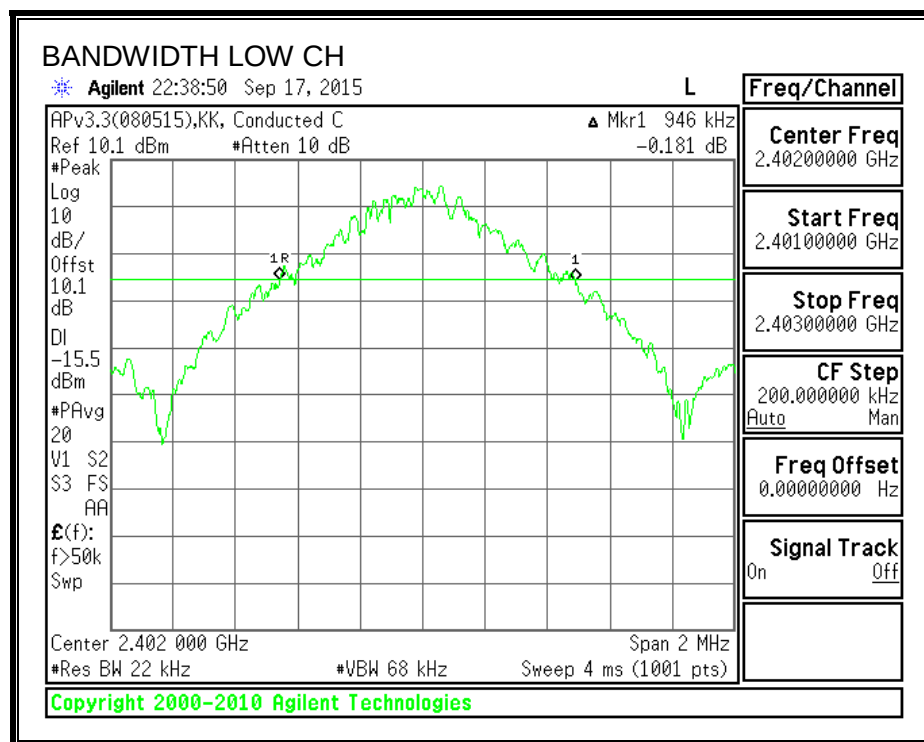
RESULTS

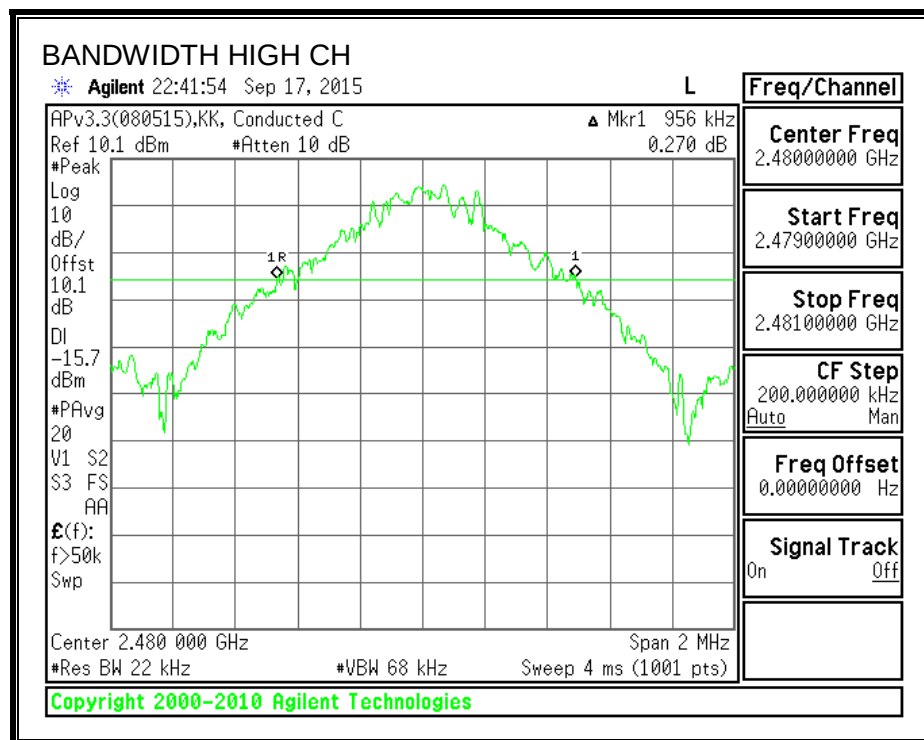
8.1.1. BASIC DATA RATE GFSK MODULATION

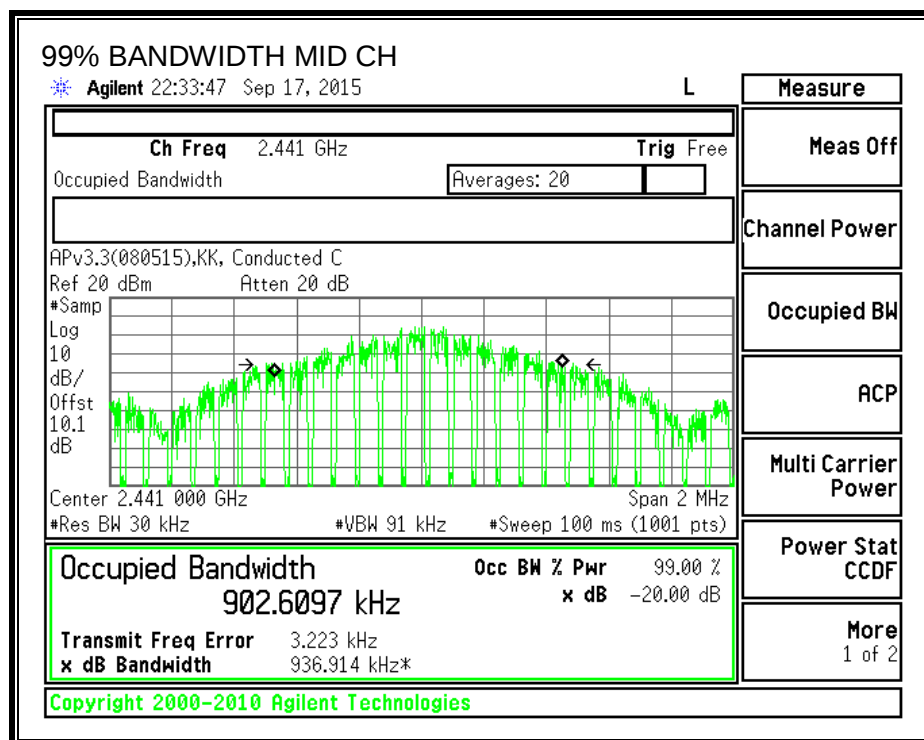
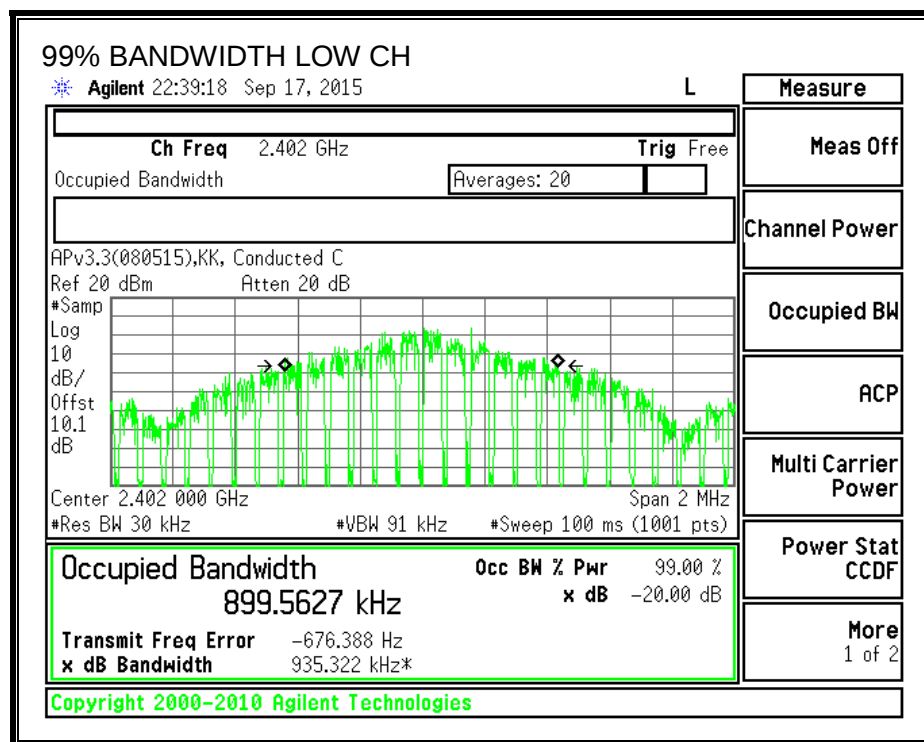
Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	2402	0.946	0.899
Middle	2441	0.962	0.902
High	2480	0.956	0.900
Worst		0.962	0.902

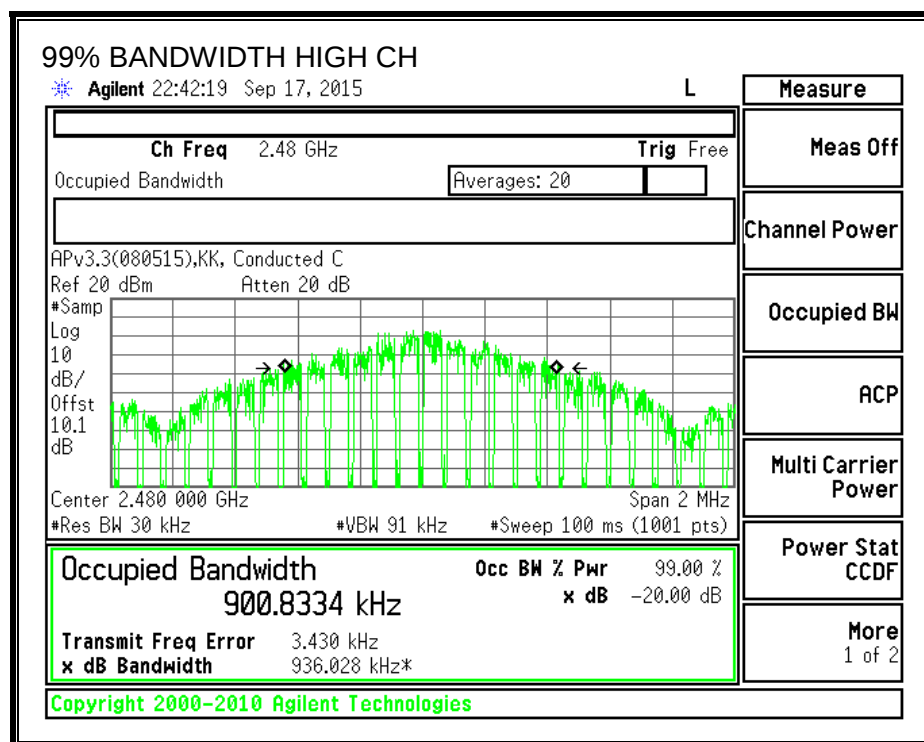
8.1.1. ENHANCED DATA RATE 8PSK MODULATION

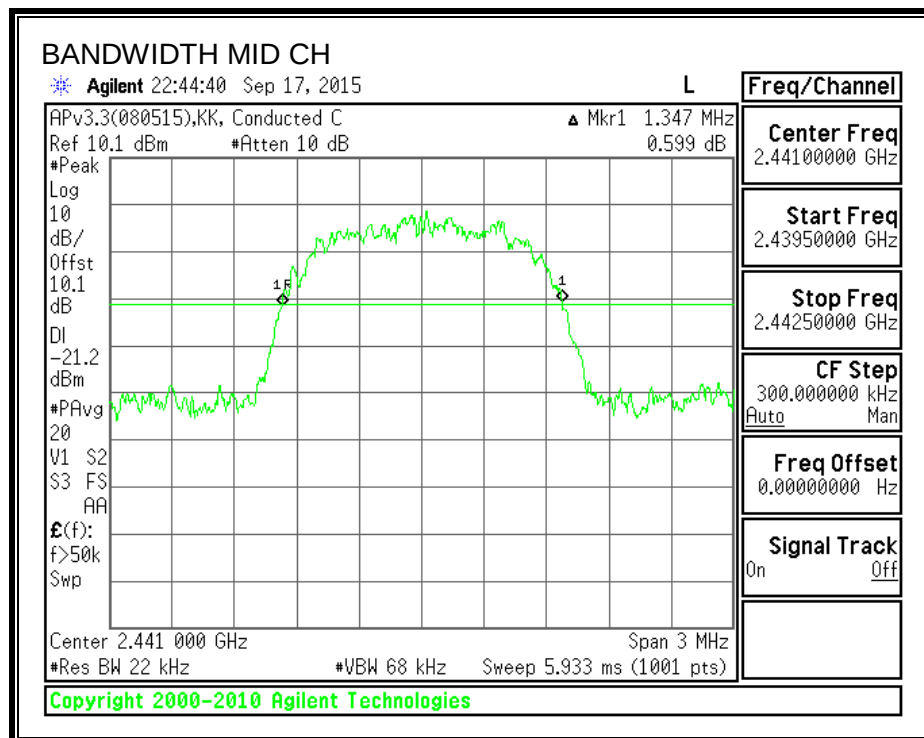
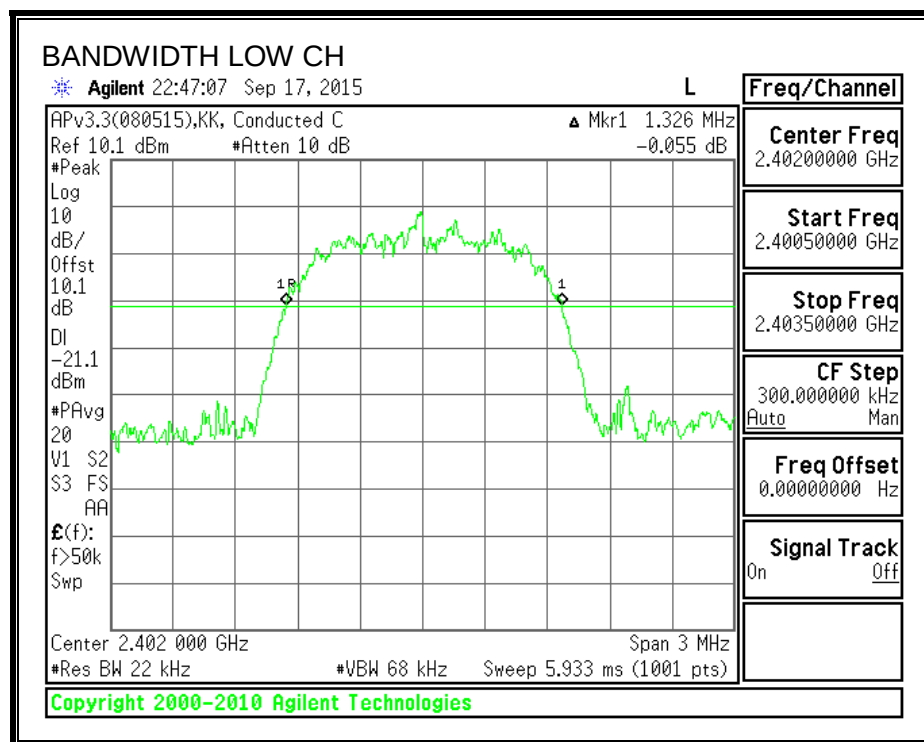
Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	2402	1.326	1.215
Middle	2441	1.347	1.217
High	2480	1.335	1.218
Worst		1.347	1.218

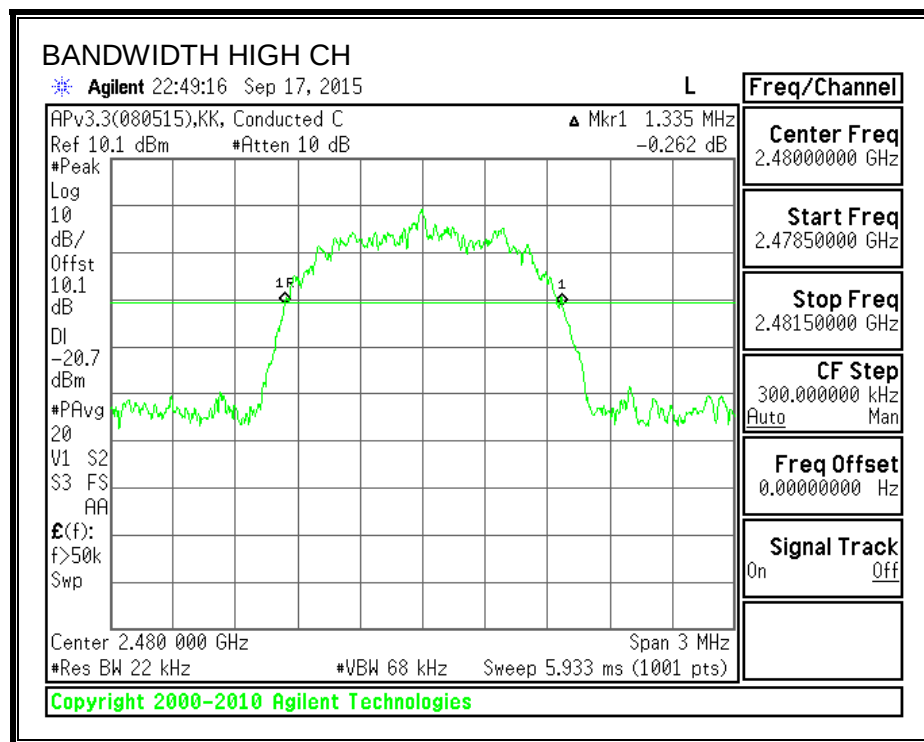
GFSK 20 dB BANDWIDTH

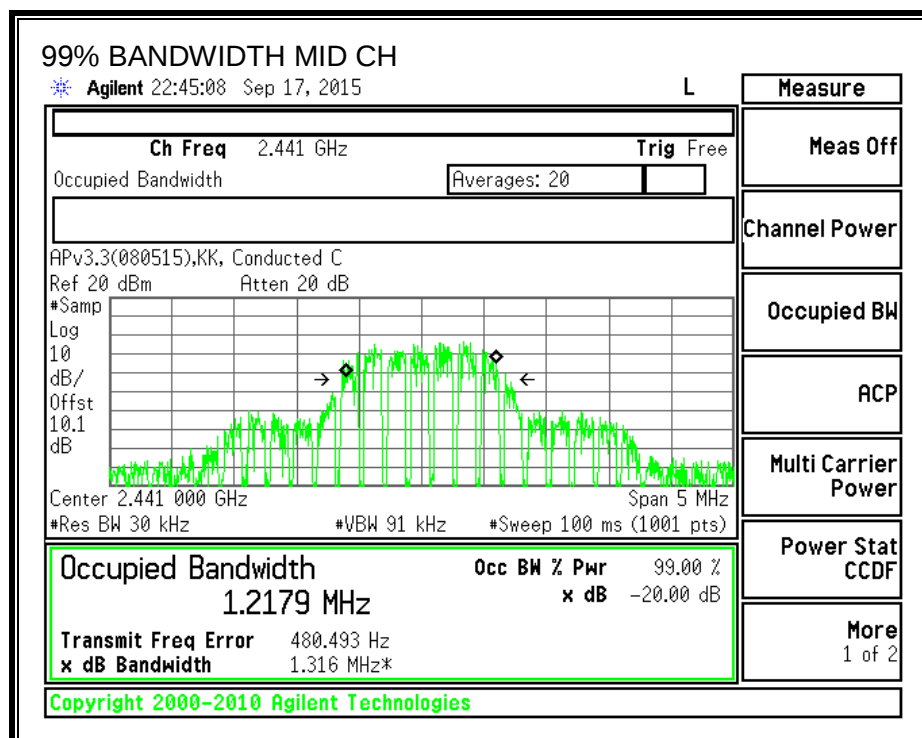
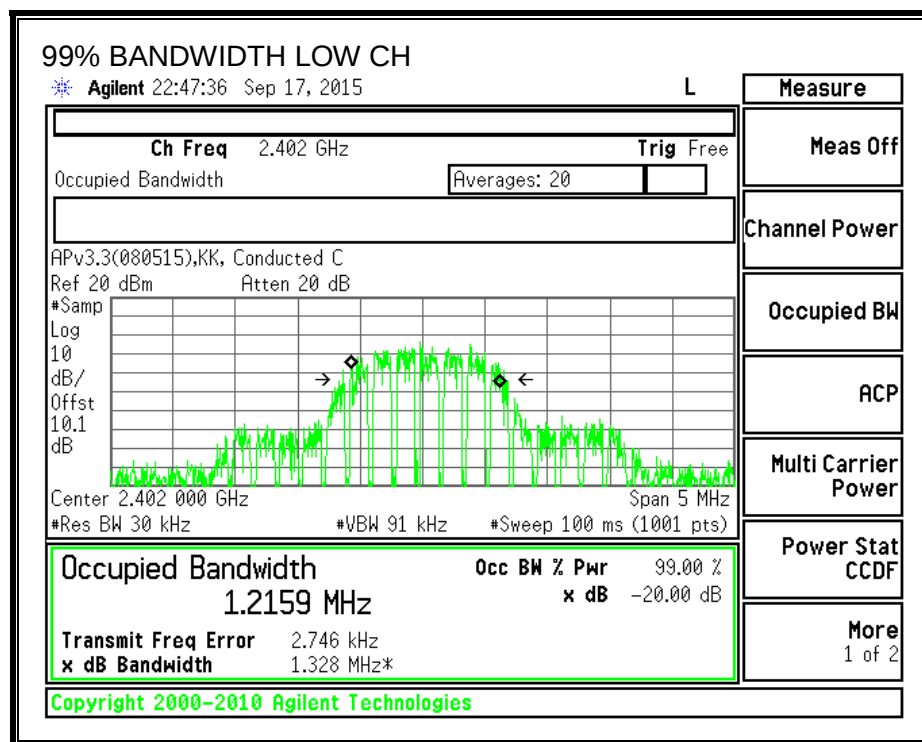


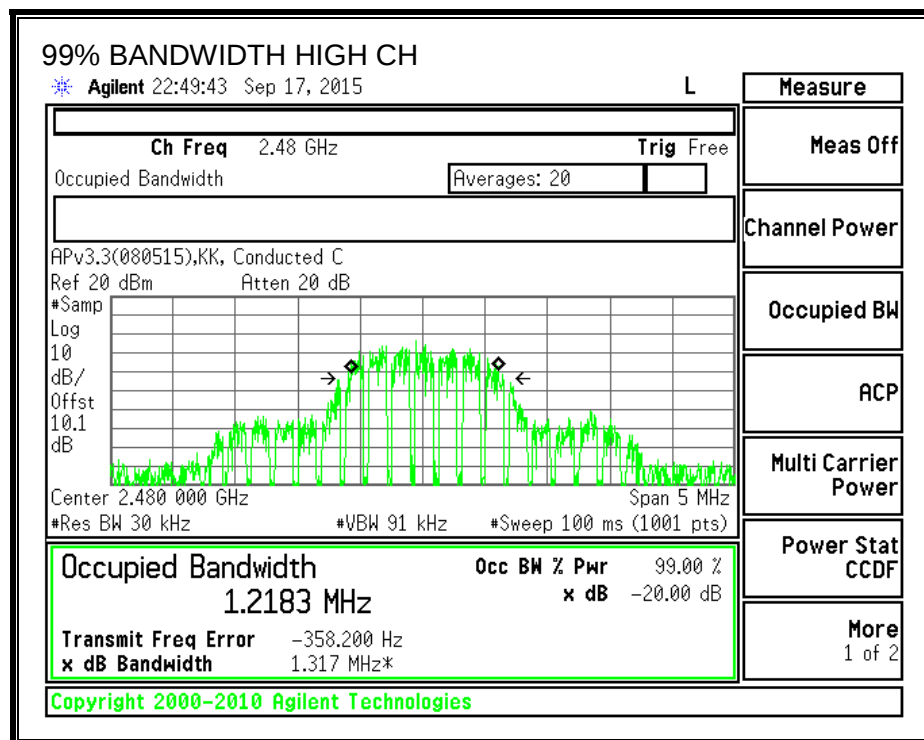
GFSK 99% BANDWIDTH



8PSK 20 dB BANDWIDTH



8PSK 99% BANDWIDTH



8.2. HOPPING FREQUENCY SEPARATION

LIMIT

FCC §15.247 (a) (1)

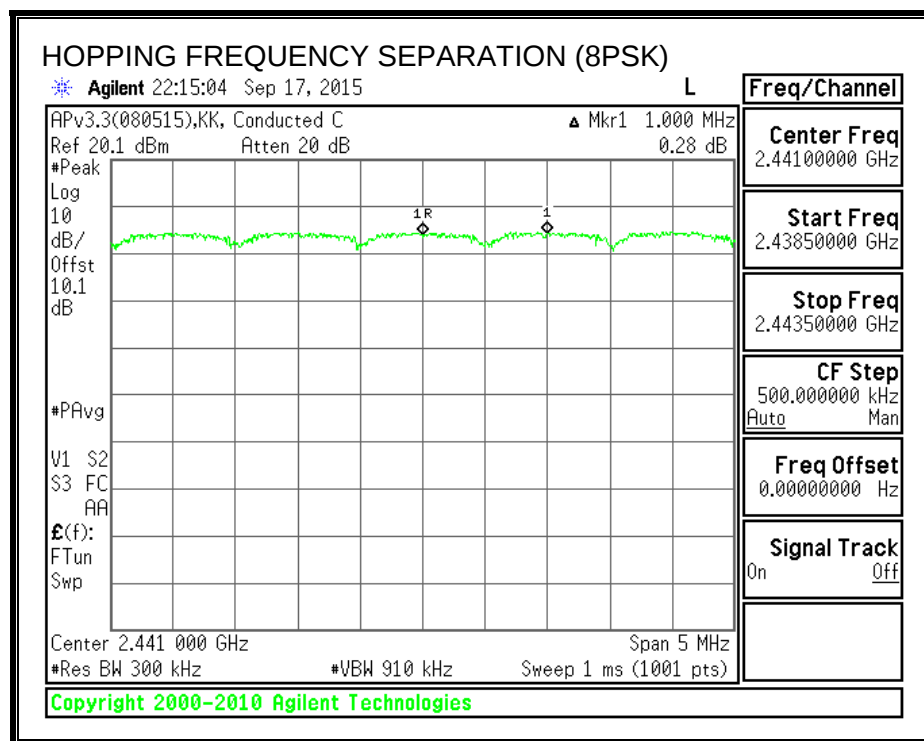
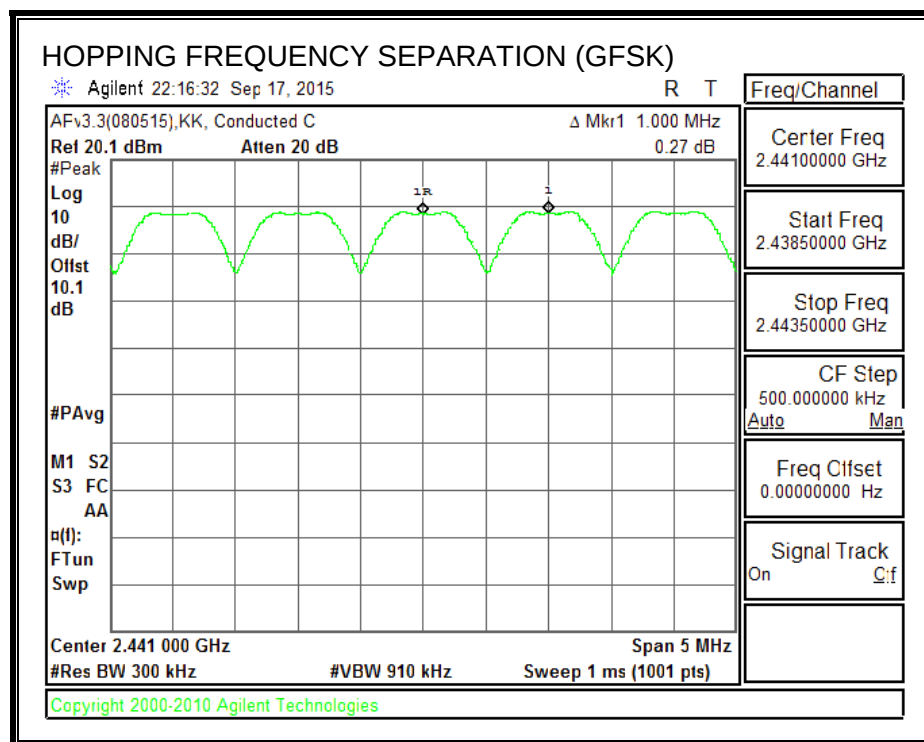
Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

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 3xRBW. The sweep time is coupled.

RESULTS

HOPPING FREQUENCY SEPARATION

8.3. NUMBER OF HOPPING CHANNELS

LIMIT

FCC §15.247 (a) (1) (iii)

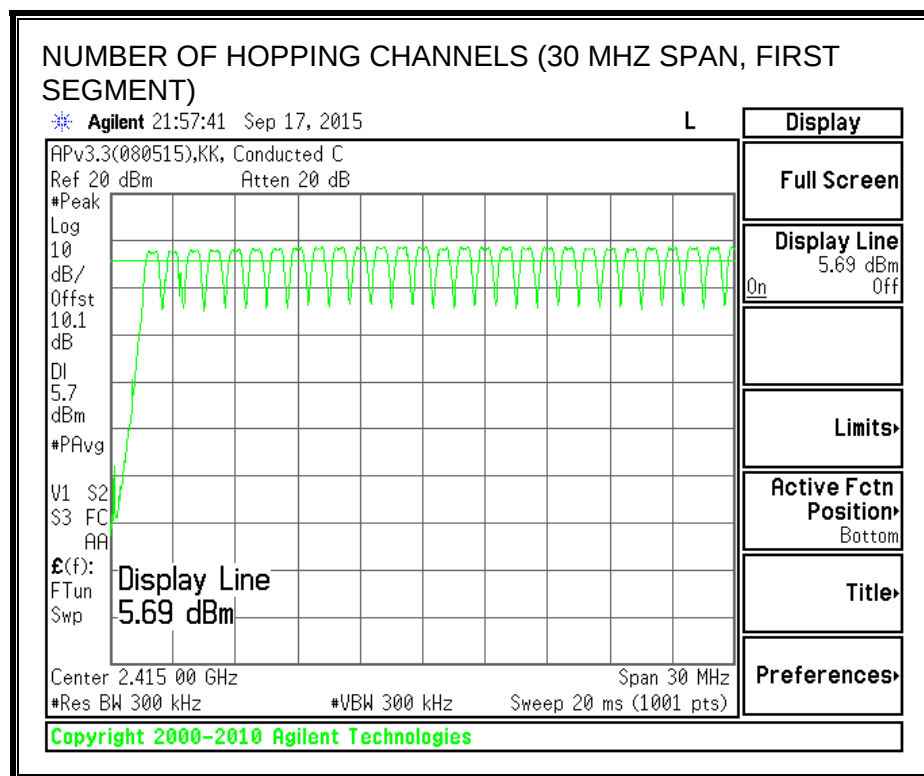
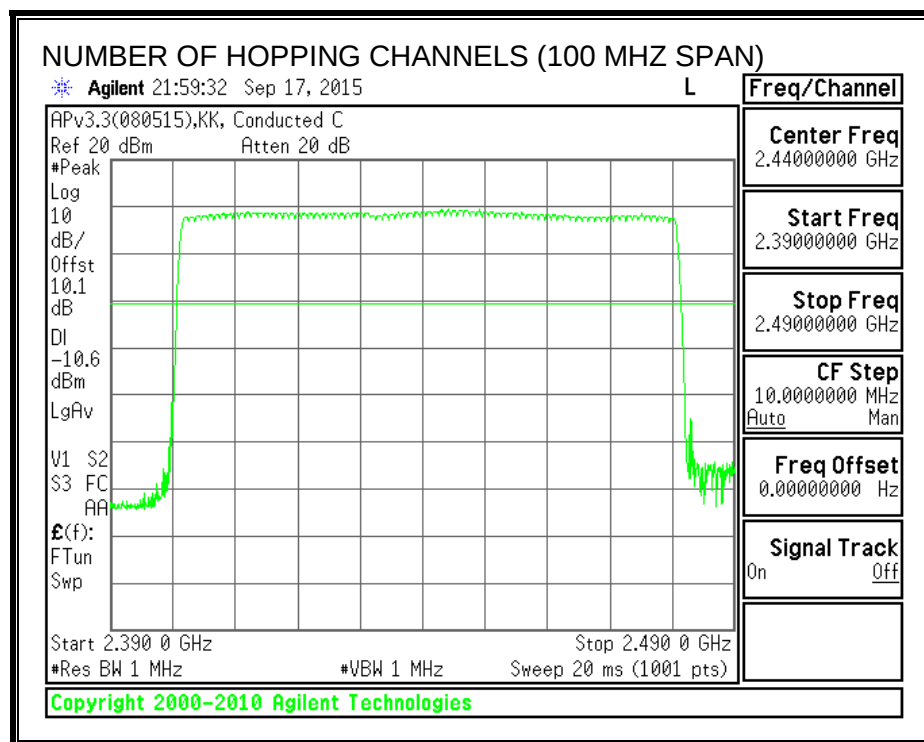
Frequency hopping systems in the 2400 – 2483.5 MHz band shall use at least 15 non-overlapping channels.

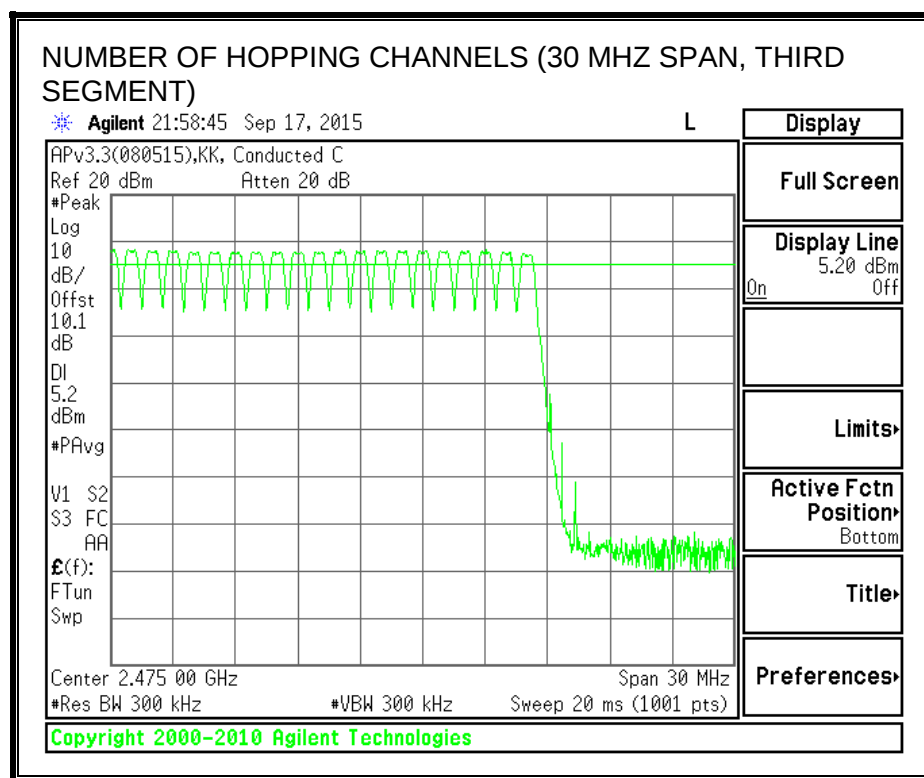
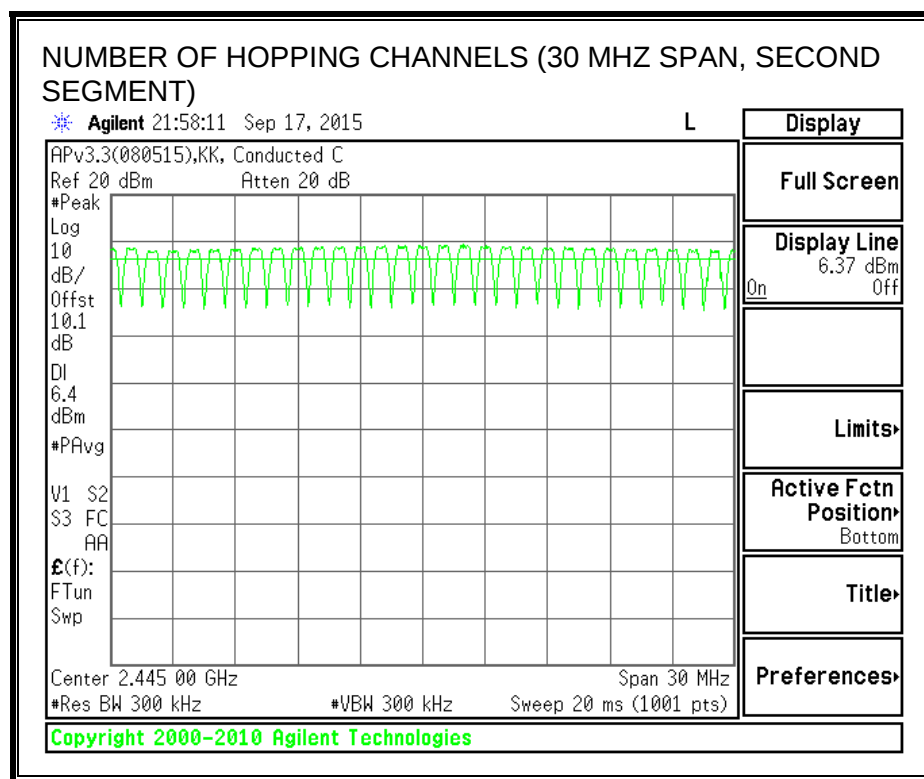
TEST PROCEDURE

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



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

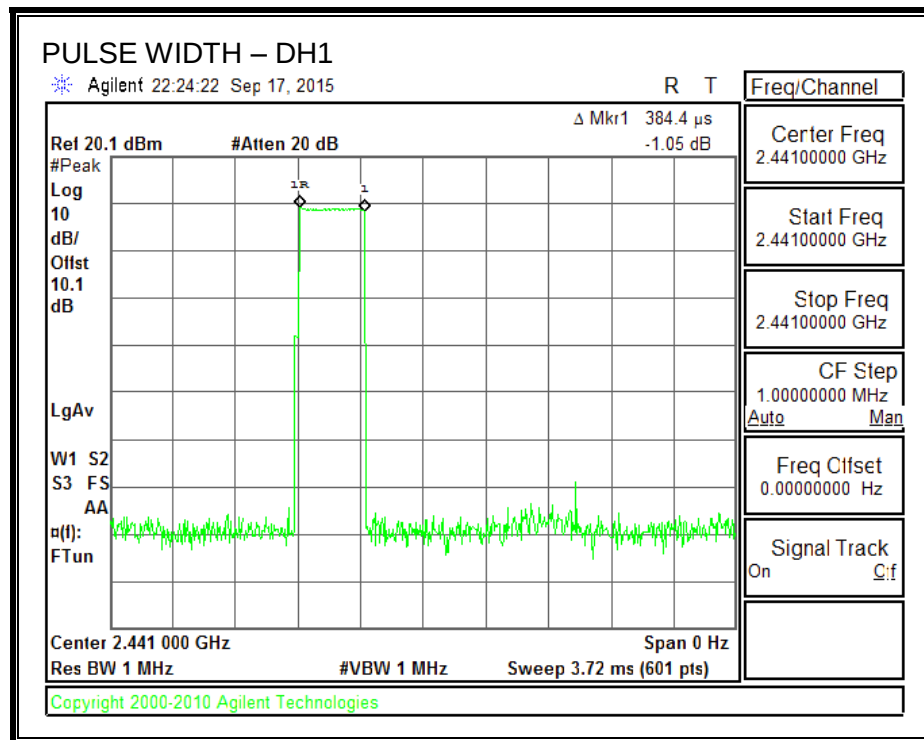
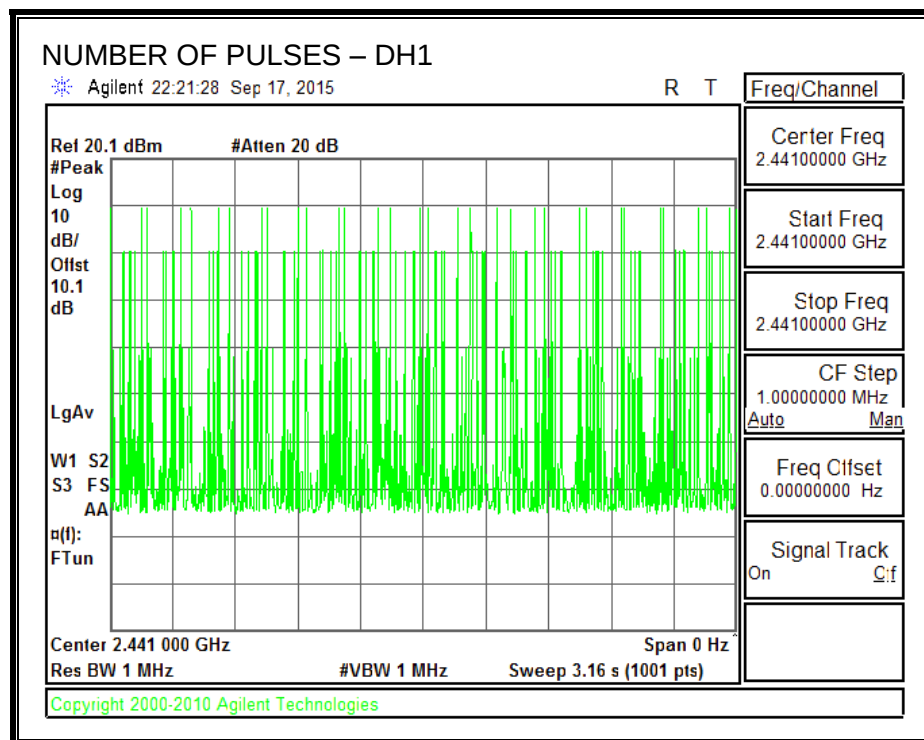
The transmitter output is connected to a spectrum analyzer. The span is set to 0 Hz, centered on a single, selected hopping channel. The width of a single pulse is measured in a fast scan. The number of pulses is measured in a 3.16 second scan, to enable resolution of each occurrence.

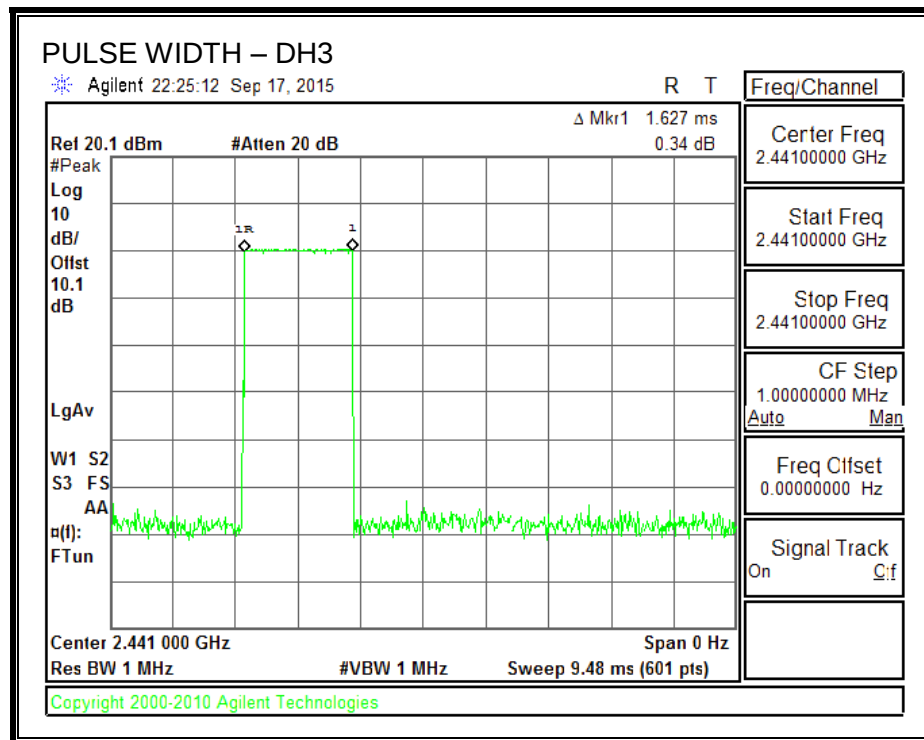
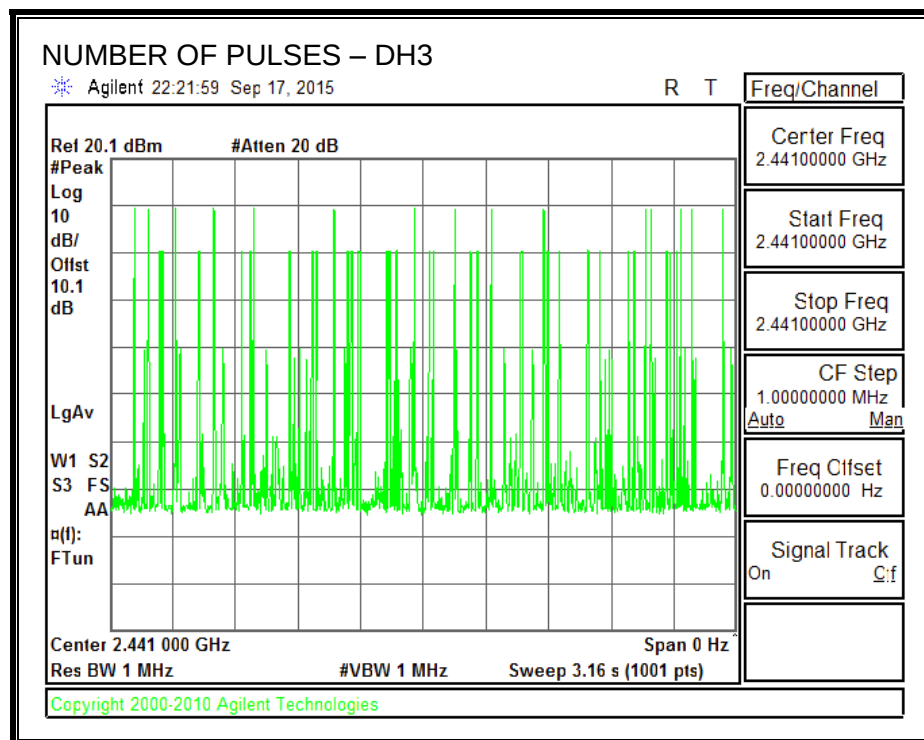
The average time of occupancy in the specified 31.6 second period (79 channels * 0.4 s) is equal to $10 * (\# \text{ of pulses in } 3.16 \text{ s}) * \text{pulse width}$.

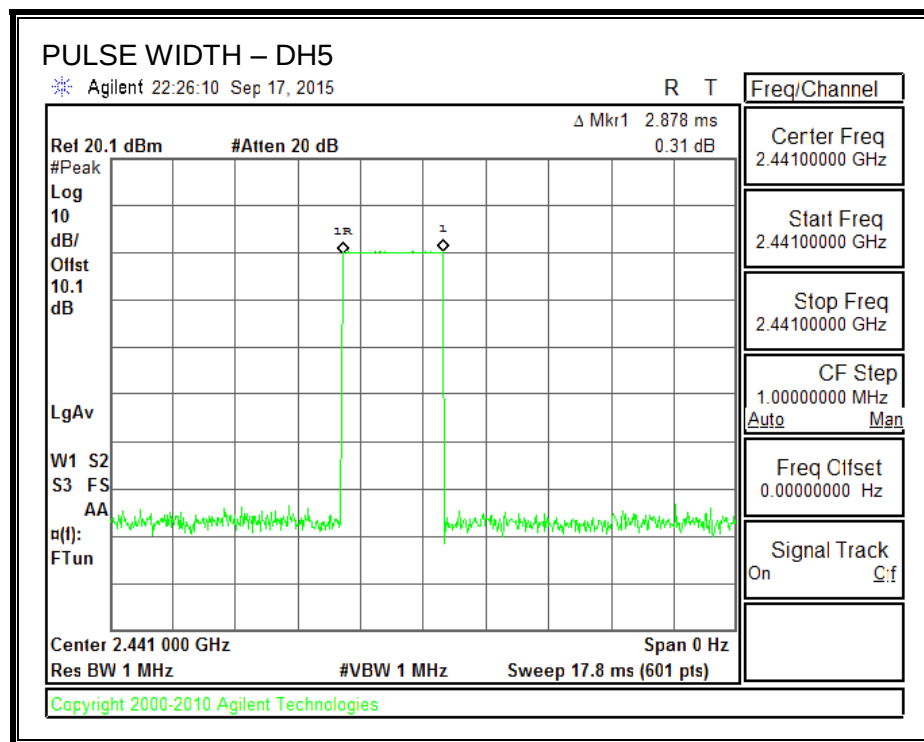
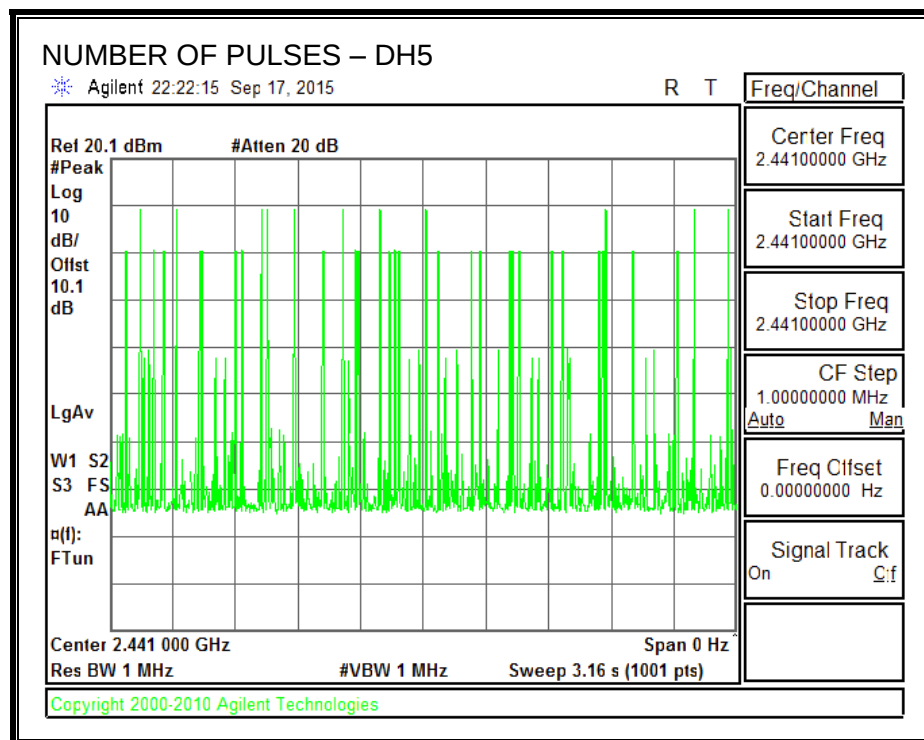
For AFH mode, the average time of occupancy in the specified 8 second period (20 channels * 0.4 seconds) is equal to $10 * (\# \text{ of pulses in } 0.8 \text{ s}) * \text{pulse width}$.

RESULTS

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
GFSK Normal Mode					
DH1	0.3844	33	0.127	0.4	-0.273
DH3	1.627	15	0.244	0.4	-0.156
DH5	2.878	11	0.317	0.4	-0.083
DH Packet	Pulse Width (msec)	Number of Pulses in 0.8 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
GFSK AFH Mode					
DH1	0.3844	33	0.127	0.4	-0.273
DH3	1.627	15	0.244	0.4	-0.156
DH5	2.878	11	0.317	0.4	-0.083

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)

The maximum antenna gain is less than 6dBi, 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.

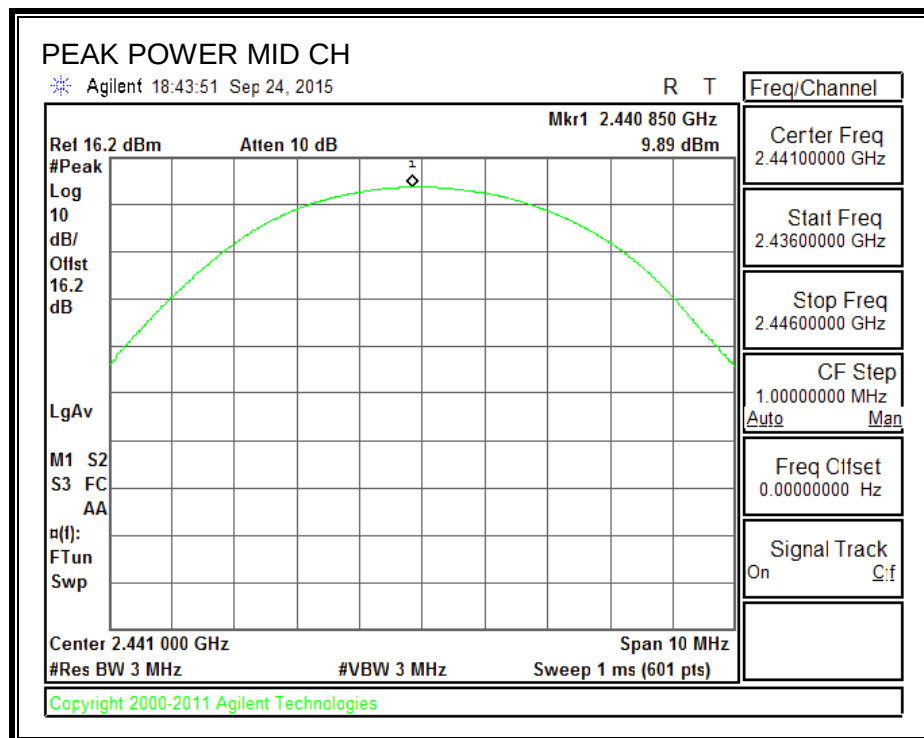
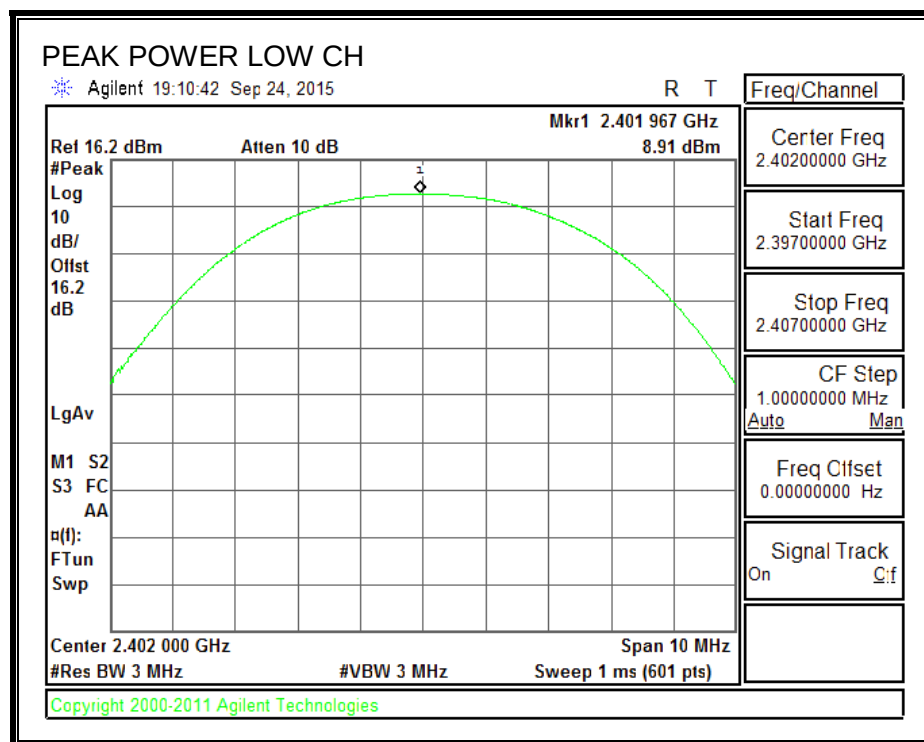
RESULTS

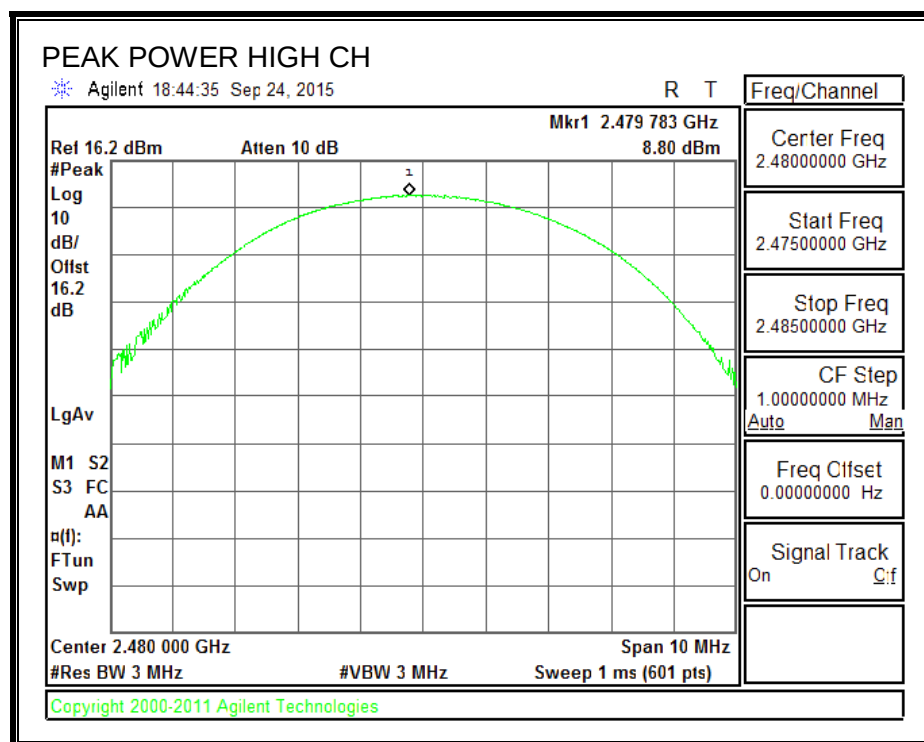
8.5.1. BASIC DATA RATE GFSK MODULATION

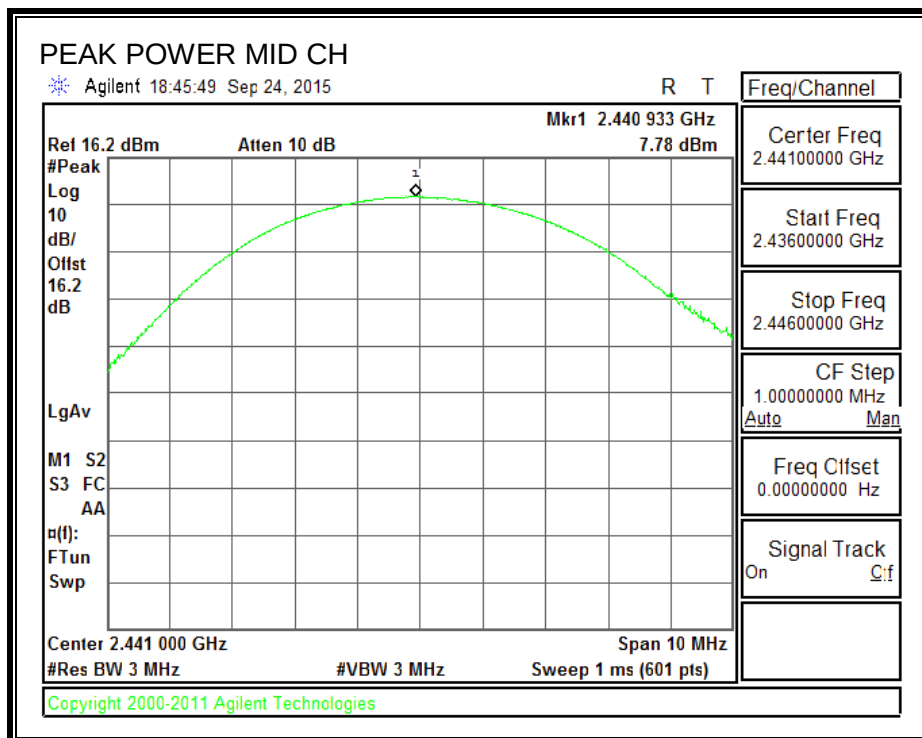
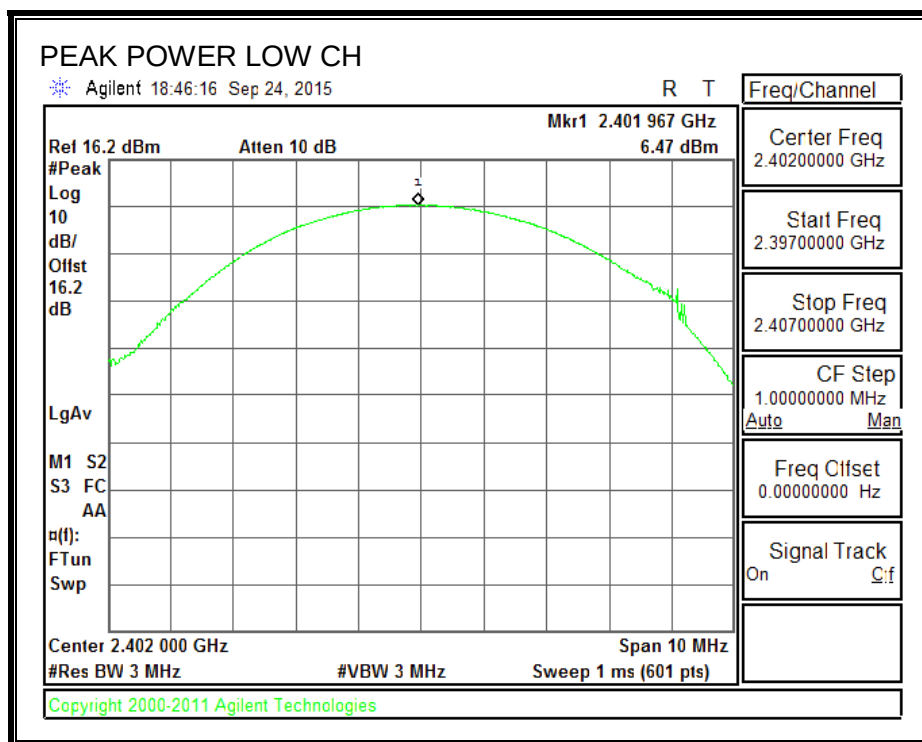
Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	8.9	21	-12.09
Middle	2441	9.9	21	-11.11
High	2480	8.8	21	-12.20
Worst		9.9		-11.11

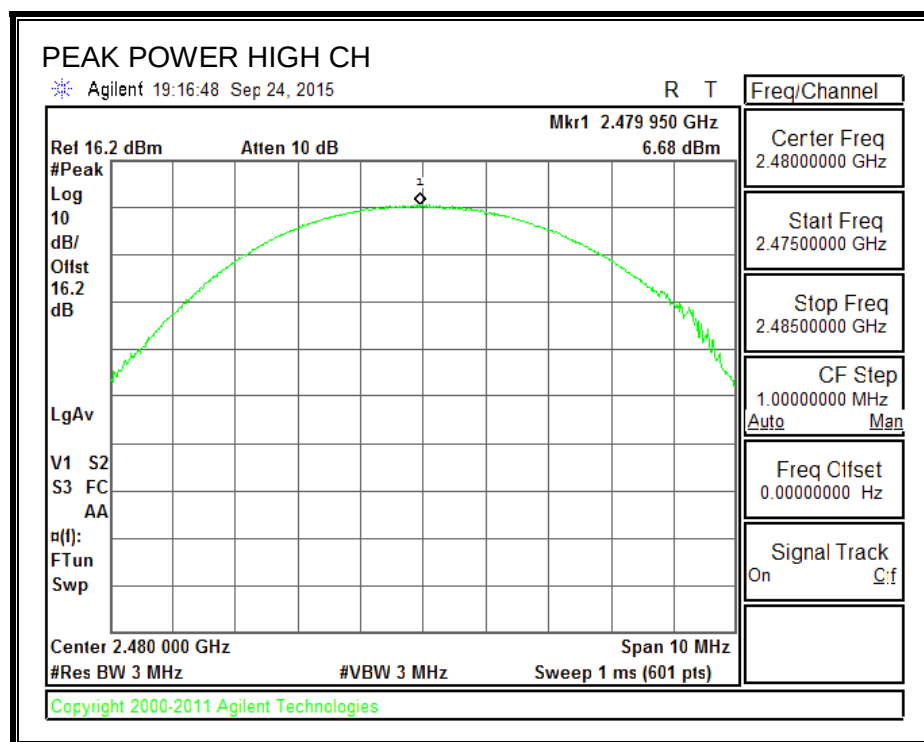
8.5.2. ENHANCED DATA RATE 8PSK MODULATION

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	6.5	21	-14.53
Middle	2441	7.8	21	-13.22
High	2480	6.7	21	-14.32
Worst		7.8		-13.22

GFSK OUTPUT POWER



8PSK OUTPUT POWER



8.1. 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.

8.1.1. BASIC DATA RATE GFSK MODULATION

Channel	Frequency (MHz)	Average Power (dBm)
Low	2402	8.6
Middle	2441	9.6
High	2480	8.2
Worst		9.6

8.1.2. DATA RATE PI/4-DQPSK MODULATION

Channel	Frequency (MHz)	Average Power (dBm)
Low	2402	4.6
Middle	2441	5.4
High	2480	3.8
Worst		5.4

8.1.3. ENHANCED DATA RATE 8PSK MODULATION

Channel	Frequency (MHz)	Average Power (dBm)
Low	2402	4.6
Middle	2441	5.4
High	2480	3.8
Worst		5.4

8.2. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

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.

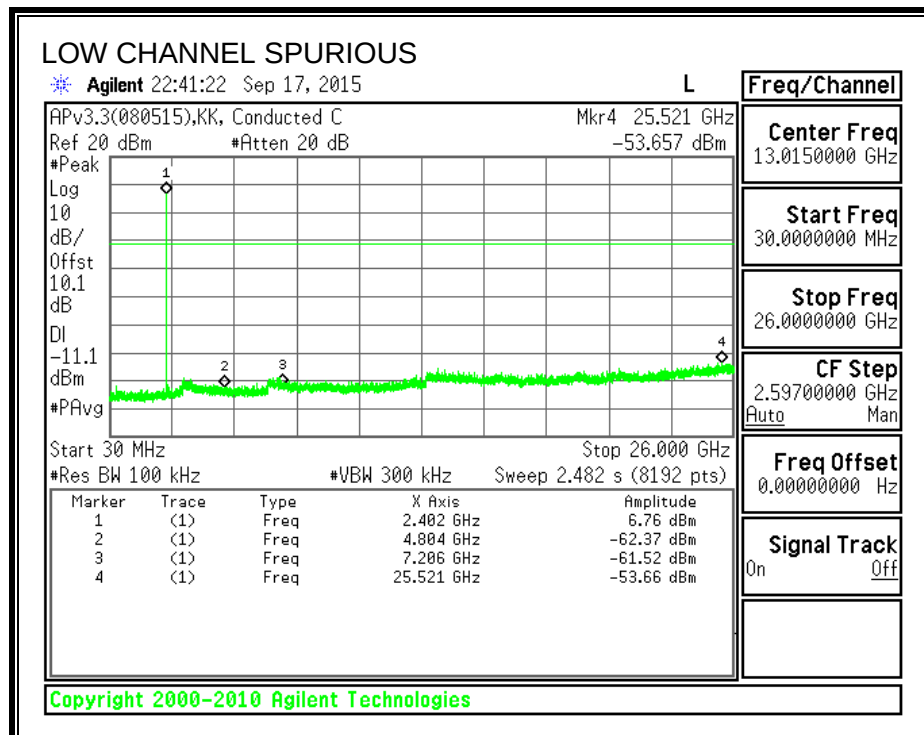
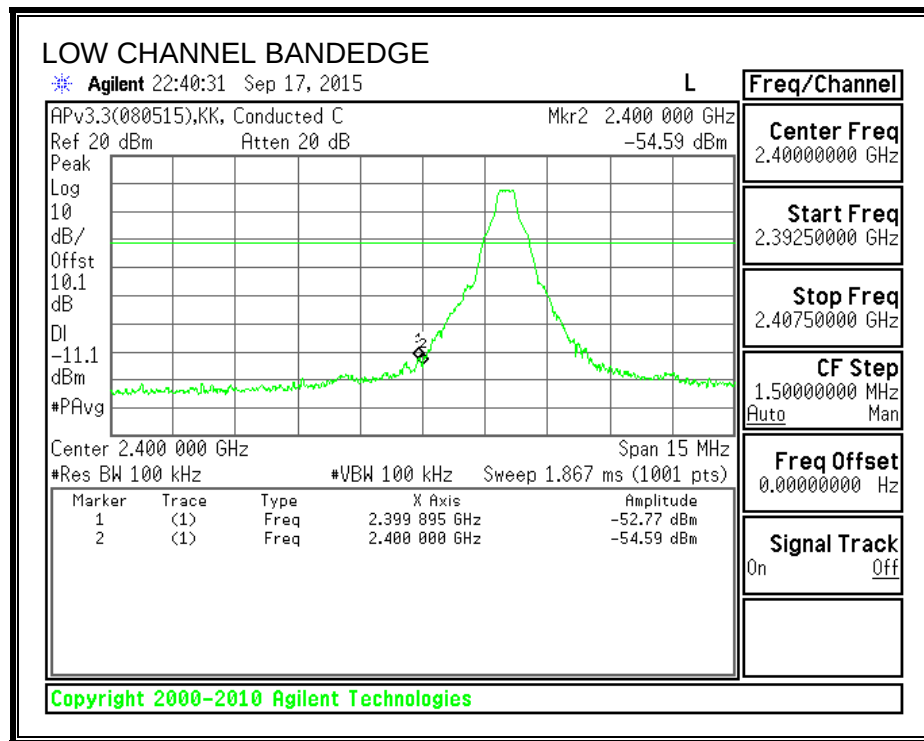
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

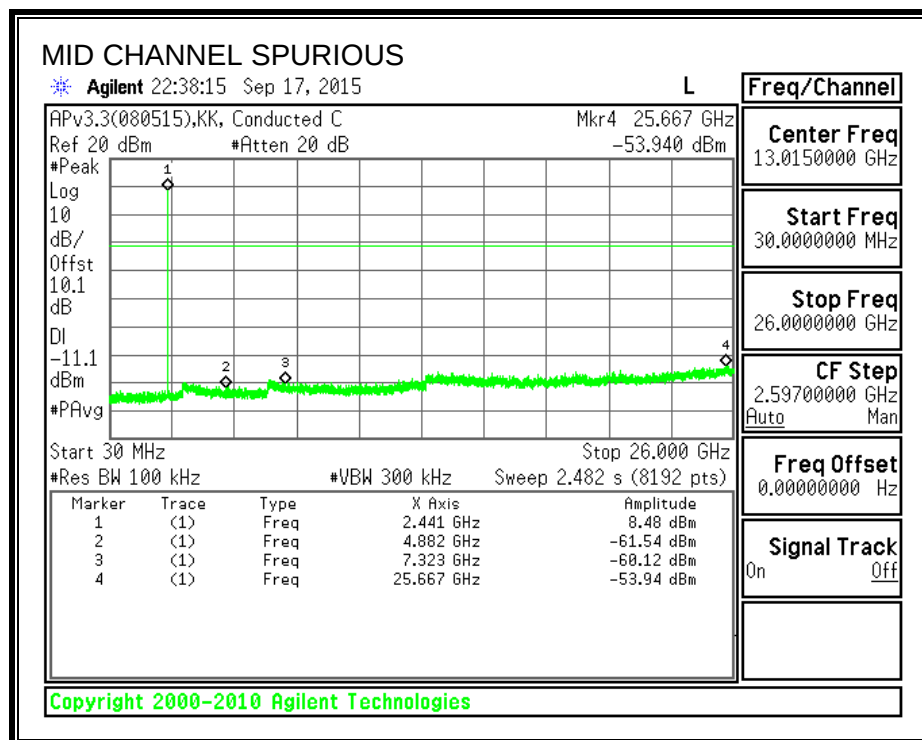
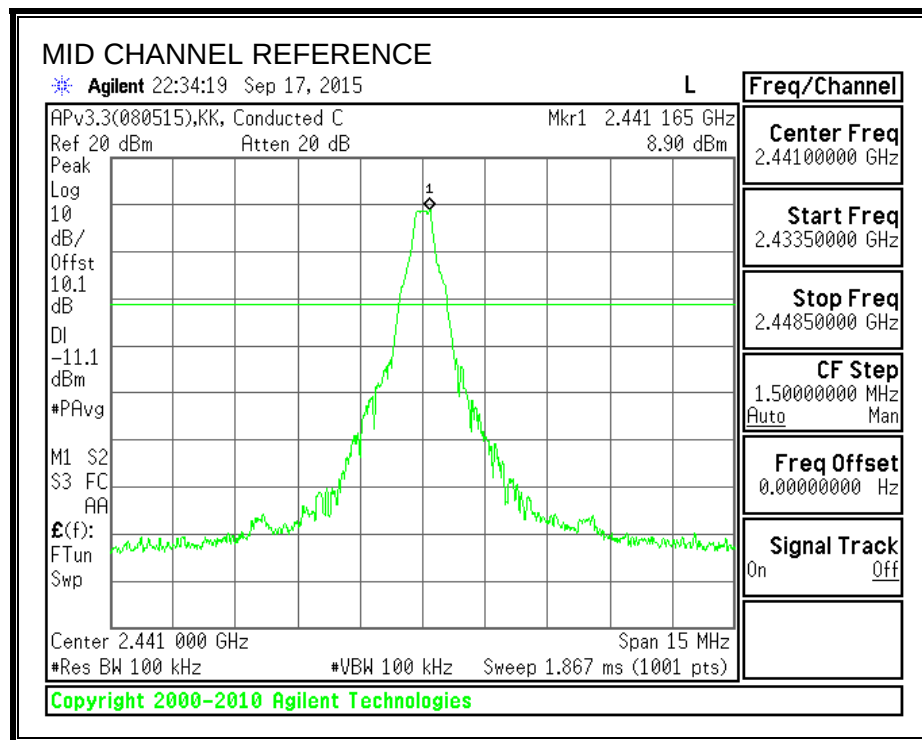
The bandedges at 2.4 and 2.4835 GHz are investigated with the transmitter set to the normal hopping mode.

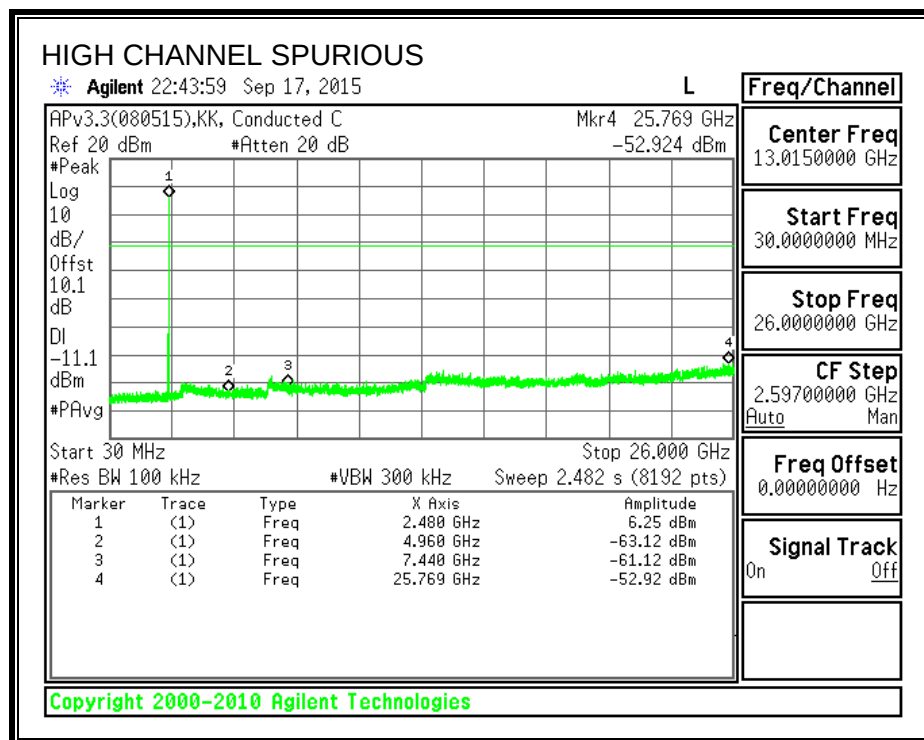
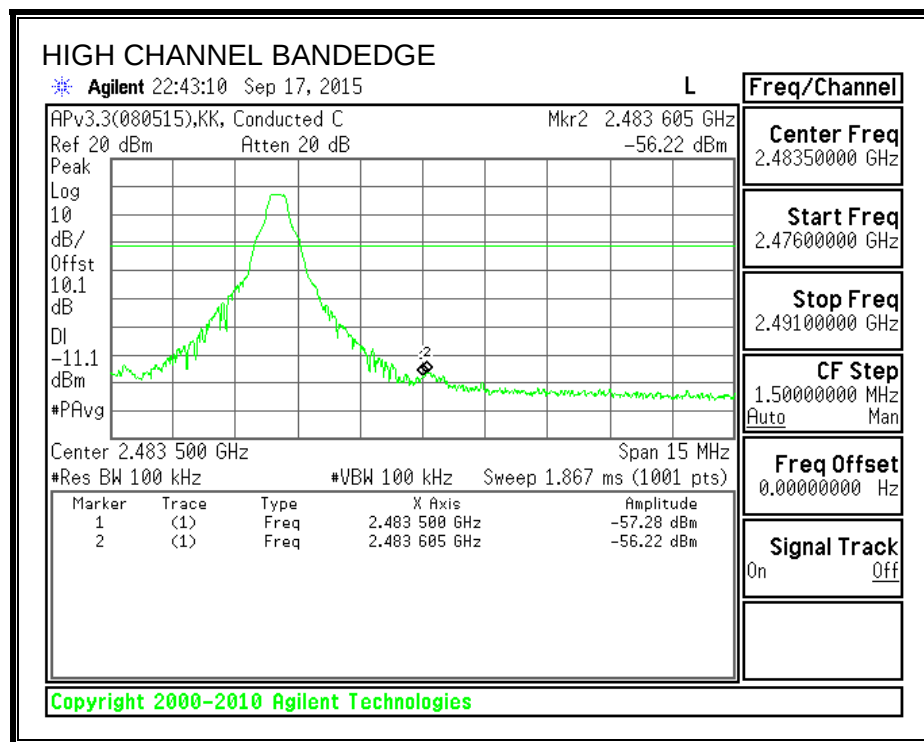
RESULTS

8.2.1. BASIC DATA RATE GFSK MODULATION

SPURIOUS EMISSIONS, LOW CHANNEL



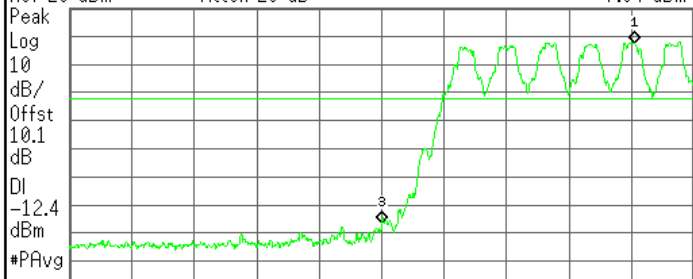
SPURIOUS EMISSIONS, MID CHANNEL

SPURIOUS EMISSIONS, HIGH CHANNEL**SPURIOUS BANDEDGE EMISSIONS WITH GFSK HOPPING ON**

LOW BANDEDGE WITH HOPPING ON

* Agilent 21:46:56 Sep 17, 2015

L

APv3.3(080515),KK, Conducted C Mkr1 2.406 060 GHz
Ref 20 dBm Atten 20 dB 7.64 dBmCenter 2.400 000 GHz Span 15 MHz
#Res BW 100 kHz #VBW 300 kHz Sweep 1.467 ms (1001 pts)

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.406 060 GHz	7.64 dBm
2	(1)	Freq	2.400 000 GHz	-56.21 dBm
3	(1)	Freq	2.400 000 GHz	-56.21 dBm

Freq/Channel

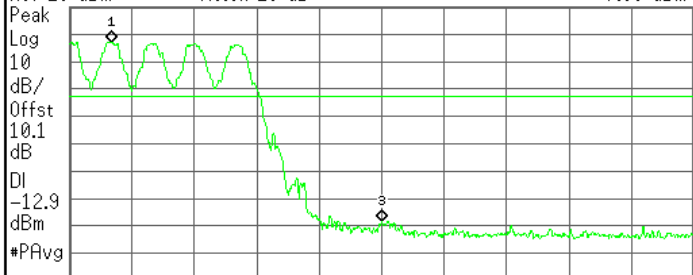
Center Freq
2.40000000 GHzStart Freq
2.39250000 GHzStop Freq
2.40750000 GHzCF Step
1.50000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

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HIGH BANDEDGE WITH HOPPING ON

* Agilent 21:47:58 Sep 17, 2015

L

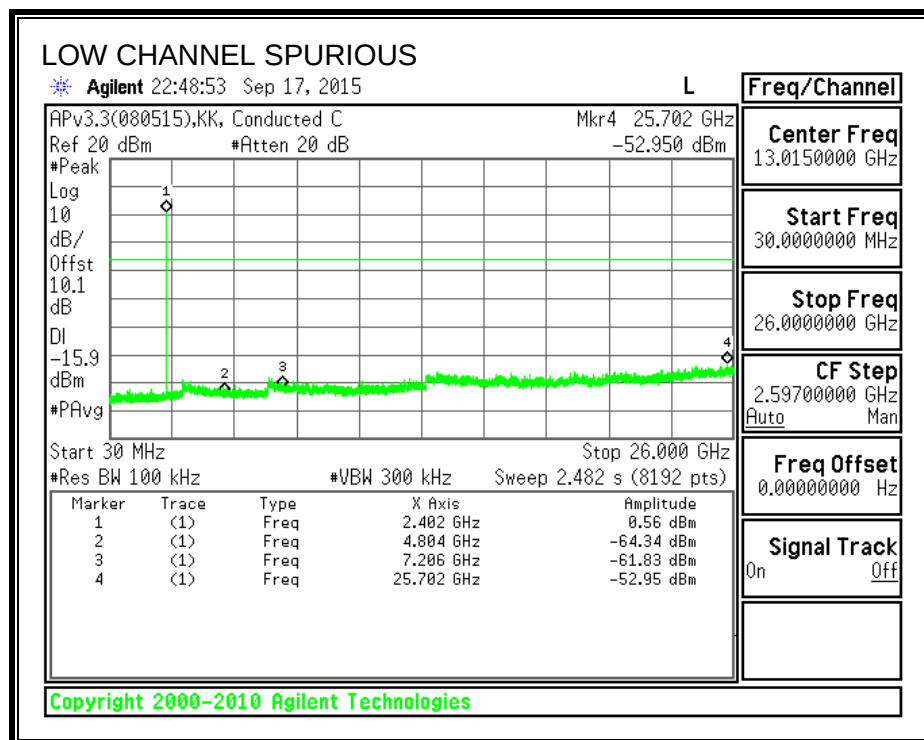
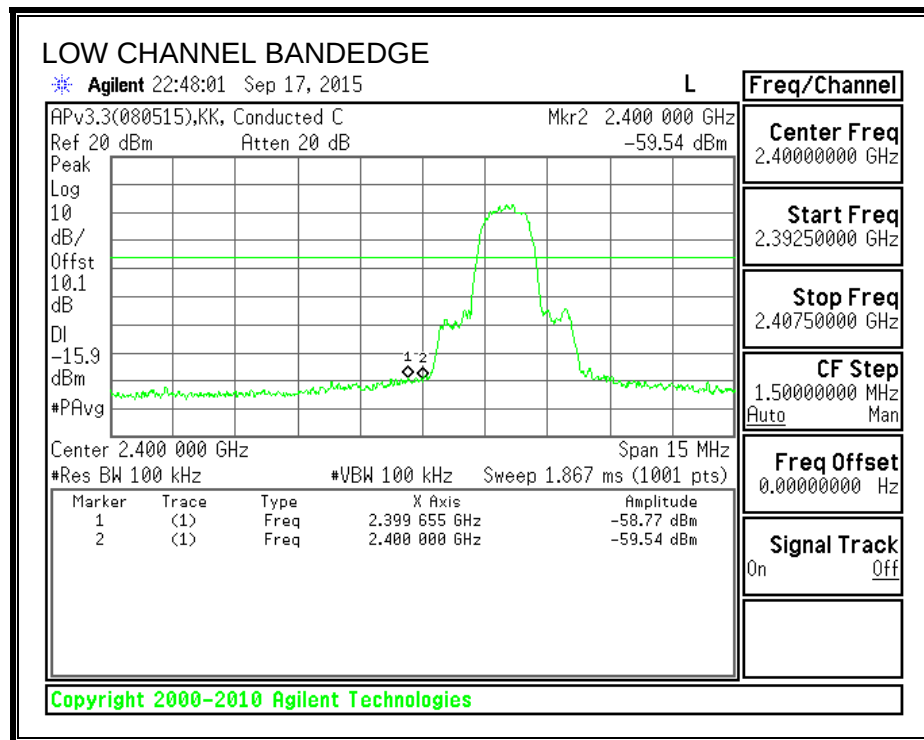
APv3.3(080515),KK, Conducted C Mkr1 2.477 005 GHz
Ref 20 dBm Atten 20 dB 7.09 dBmCenter 2.483 500 GHz Span 15 MHz
#Res BW 110 kHz #VBW 330 kHz Sweep 1.2 ms (1001 pts)

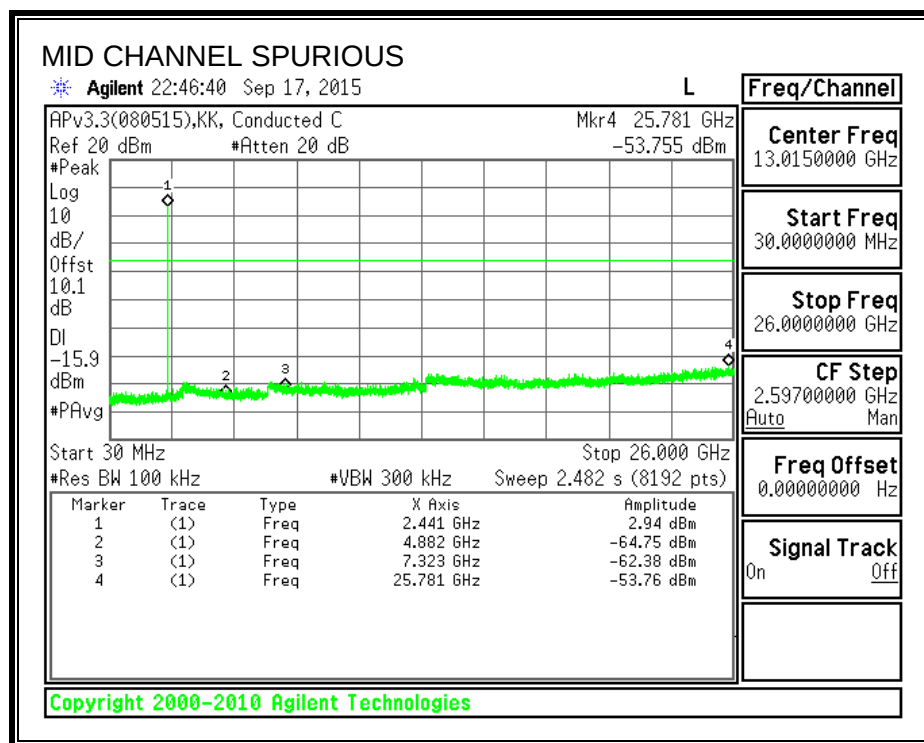
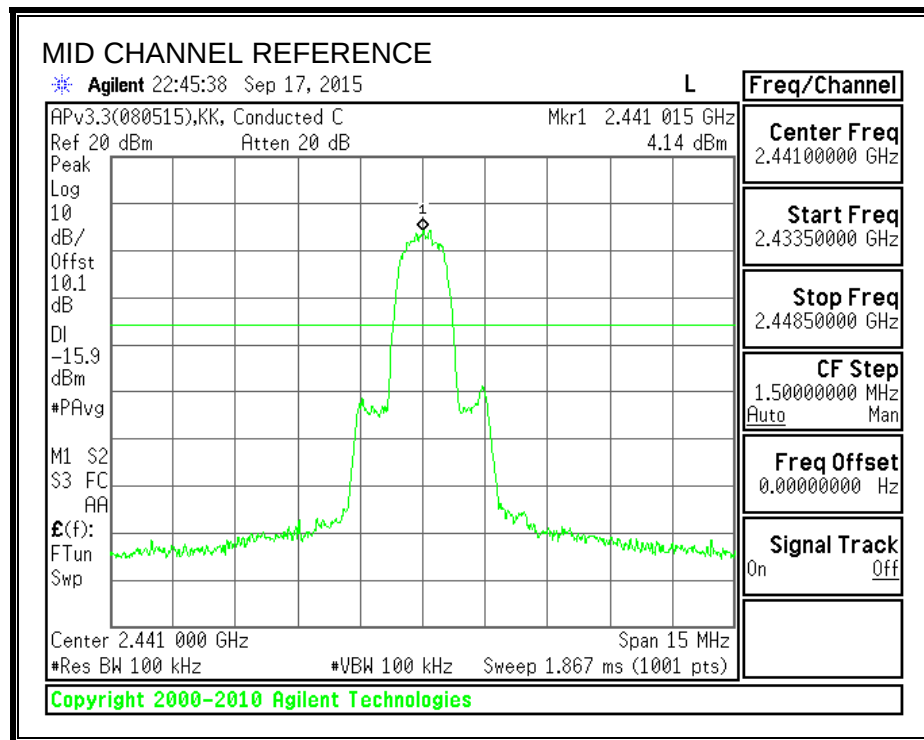
Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.477 005 GHz	7.09 dBm
2	(1)	Freq	2.483 500 GHz	-58.38 dBm
3	(1)	Freq	2.483 500 GHz	-58.38 dBm

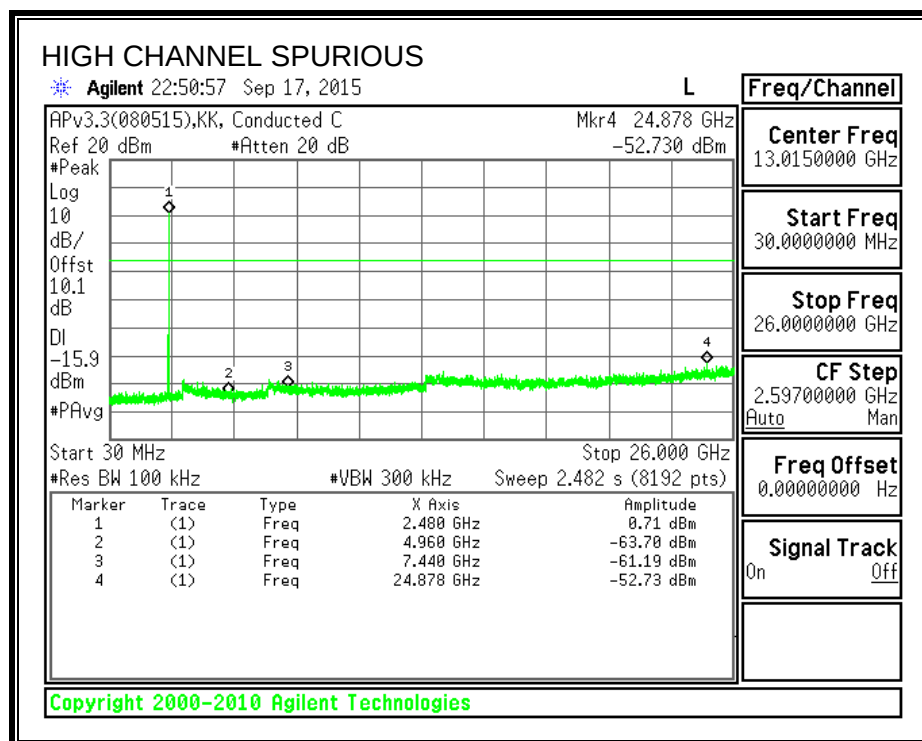
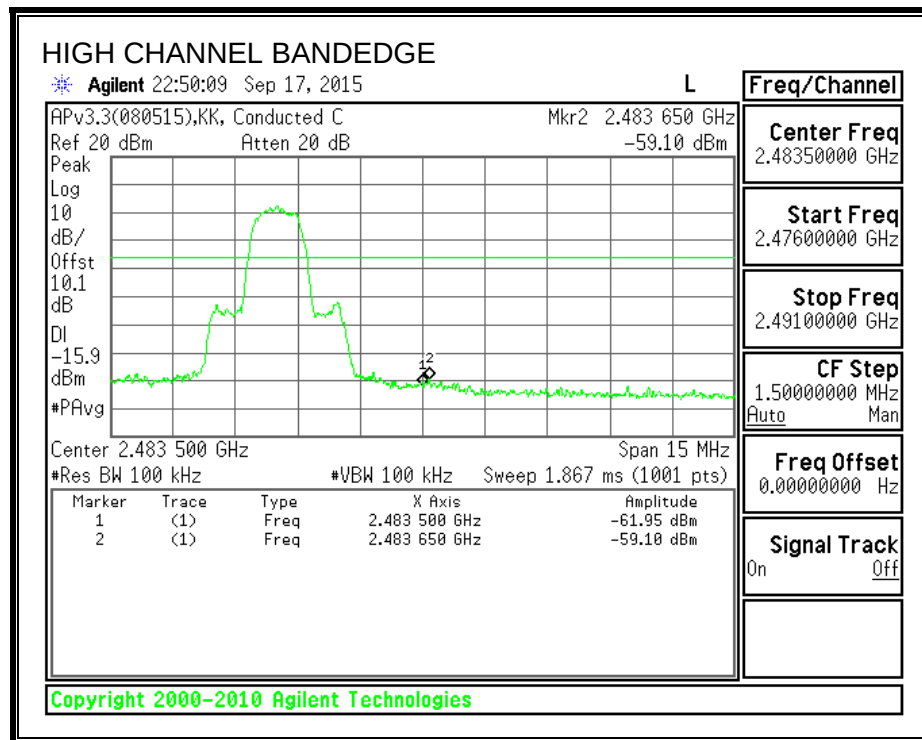
Freq/Channel

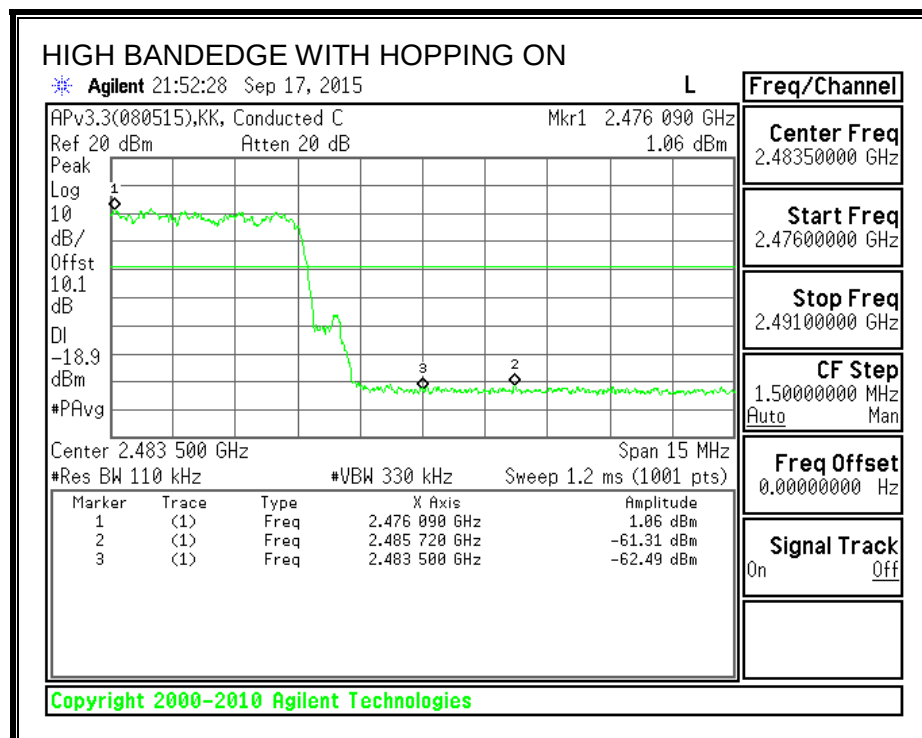
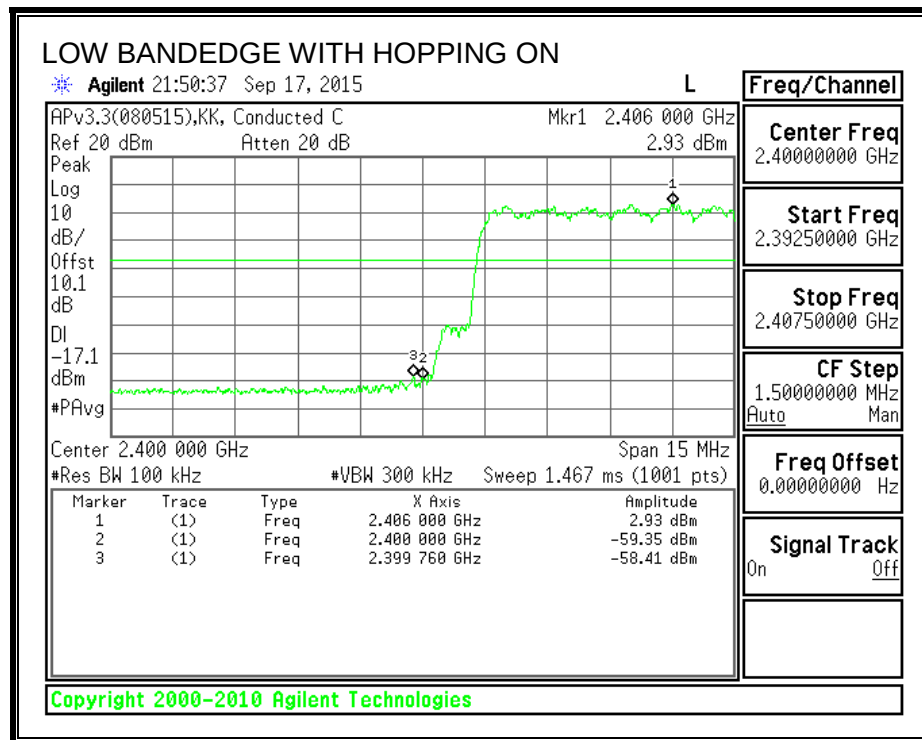
Center Freq
2.48350000 GHzStart Freq
2.47600000 GHzStop Freq
2.49100000 GHzCF Step
1.50000000 MHz
Auto ManFreq Offset
0.00000000 HzSignal Track
On Off

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8.2.1. ENHANCED DATA RATE 8PSK MODULATION**SPURIOUS EMISSIONS, LOW CHANNEL**

SPURIOUS EMISSIONS, MID CHANNEL

SPURIOUS EMISSIONS, HIGH CHANNEL

SPURIOUS BANDEDGE EMISSIONS WITH 8PSK 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 1.5 meter above the ground plane. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10 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. $GFSK = 1/T = 1 / 0.002883S = 346Hz$.

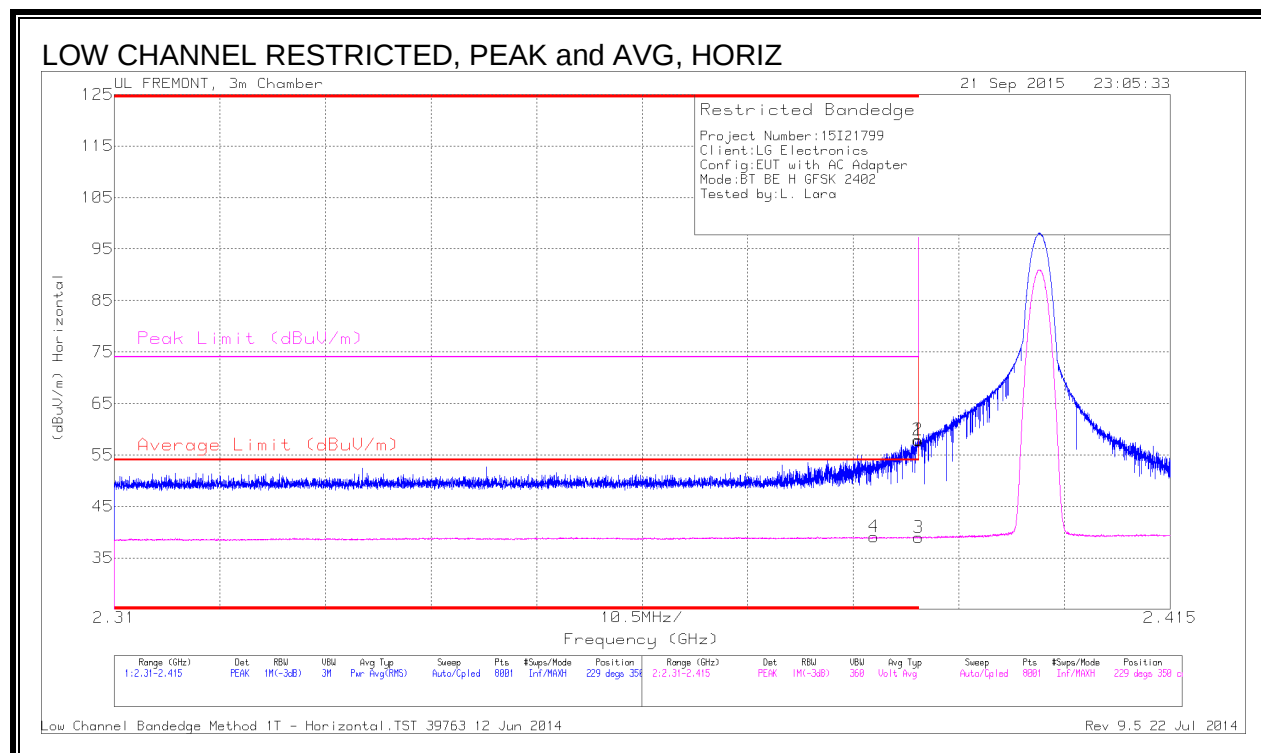
The spectrum from 1GHzHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

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)



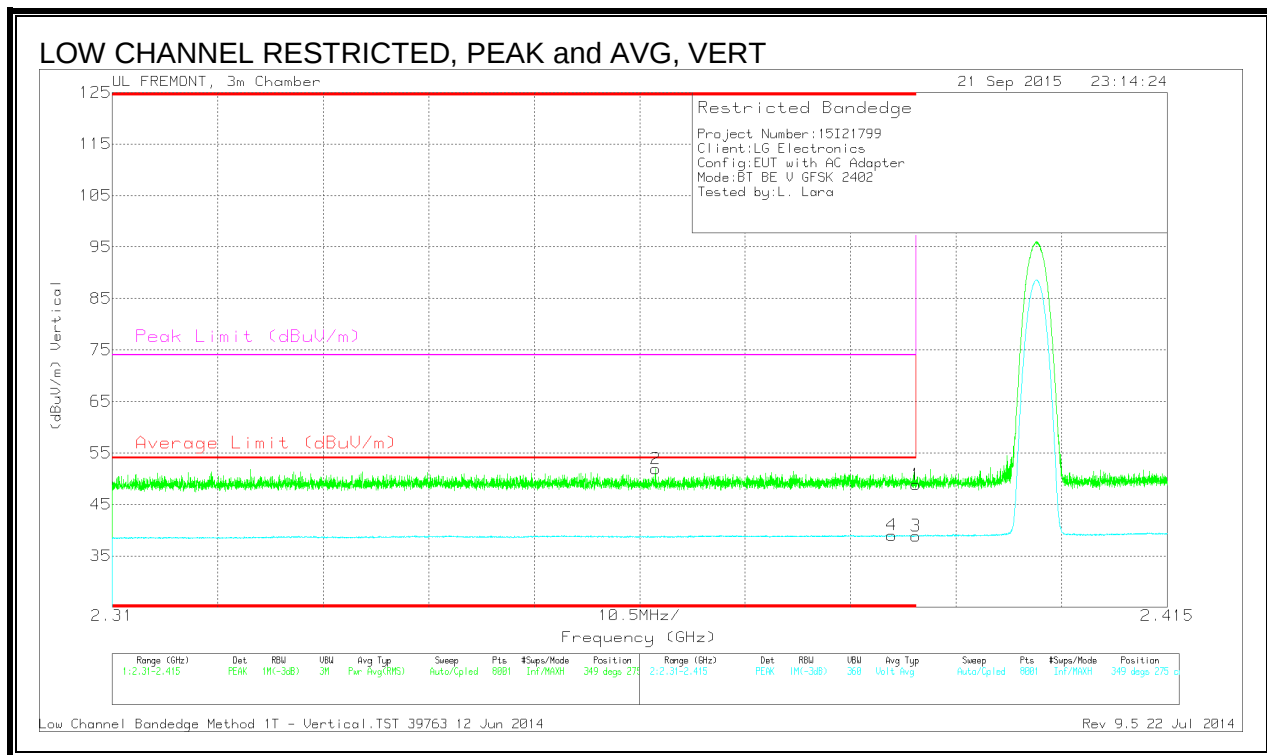
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT119 (dB/m)	Amp/Cbl/ Filt/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	* 2.386	29.53	VB1T	32	-22.4	39.13	54	-14.87	-	-	229	350	H
1	* 2.39	48.23	PK	32	-22.4	57.83	-	-	74	-16.17	229	350	H
2	* 2.39	48.34	PK	32	-22.4	57.94	-	-	74	-16.06	229	350	H
3	* 2.39	29.39	VB1T	32	-22.4	38.99	54	-15.01	-	-	229	350	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

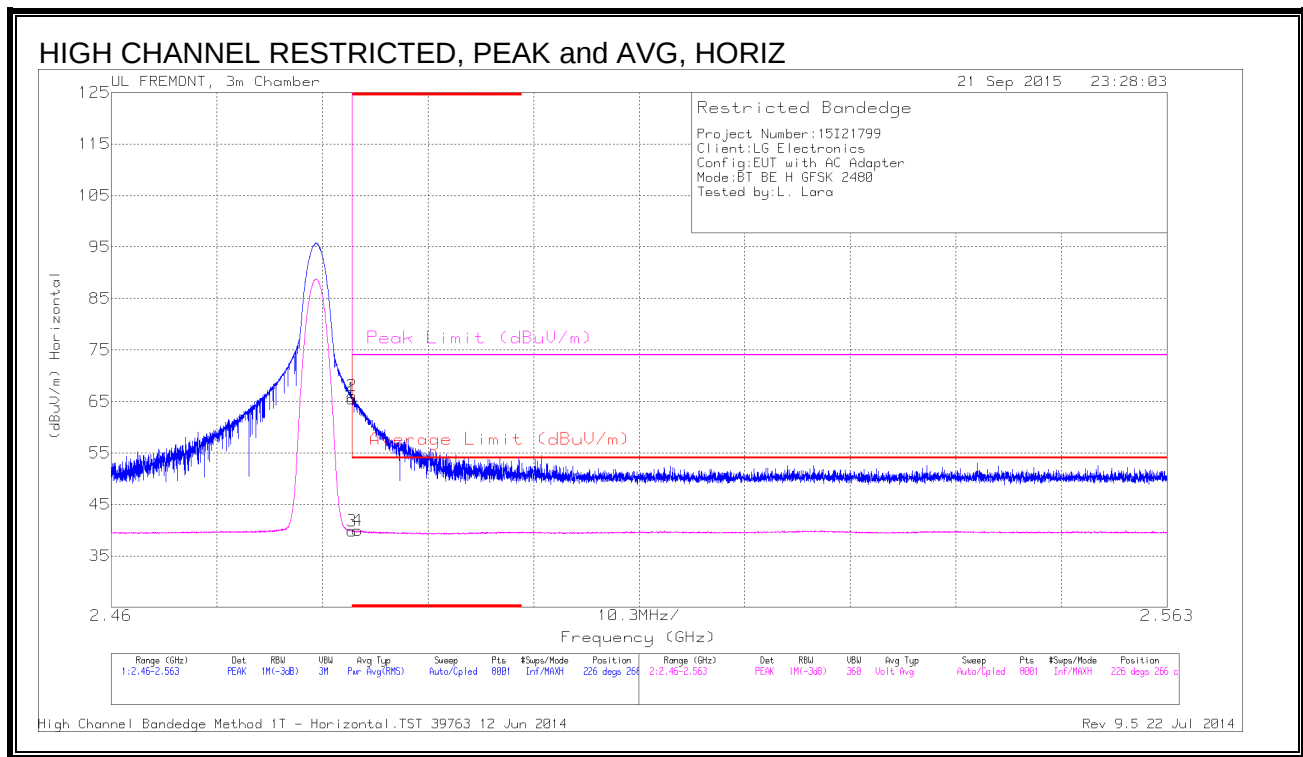
RESTRICTED BANDEGE (LOW CHANNEL, VERTICAL)**Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/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	* 2.364	42.48	PK	31.9	-22.5	51.88	-	-	74	-22.12	349	275	V
4	* 2.388	29.42	VB1T	32	-22.4	39.02	54	-14.98	-	-	349	275	V
1	* 2.39	39.26	PK	32	-22.4	48.86	-	-	74	-25.14	349	275	V
3	* 2.39	29.26	VB1T	32	-22.4	38.86	54	-15.14	-	-	349	275	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

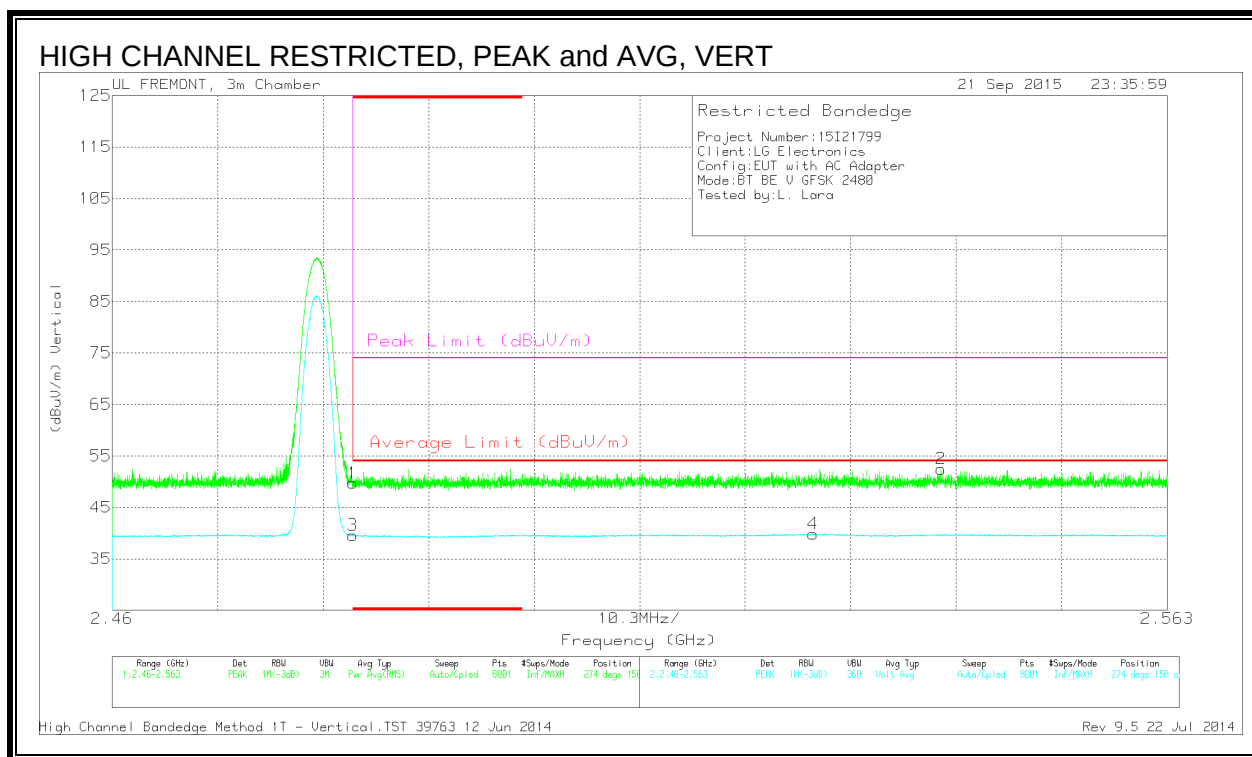
RESTRICTED BANDEGE (HIGH CHANNEL, HORIZONTAL)**Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/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	55.32	PK	32.3	-22.1	65.52	-	-	74	-8.48	226	266	H
2	* 2.484	55.84	PK	32.3	-22.1	66.04	-	-	74	-7.96	226	266	H
3	* 2.484	29.59	VB1T	32.3	-22.1	39.79	54	-14.21	-	-	226	266	H
4	* 2.484	29.72	VB1T	32.3	-22.1	39.92	54	-14.08	-	-	226	266	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

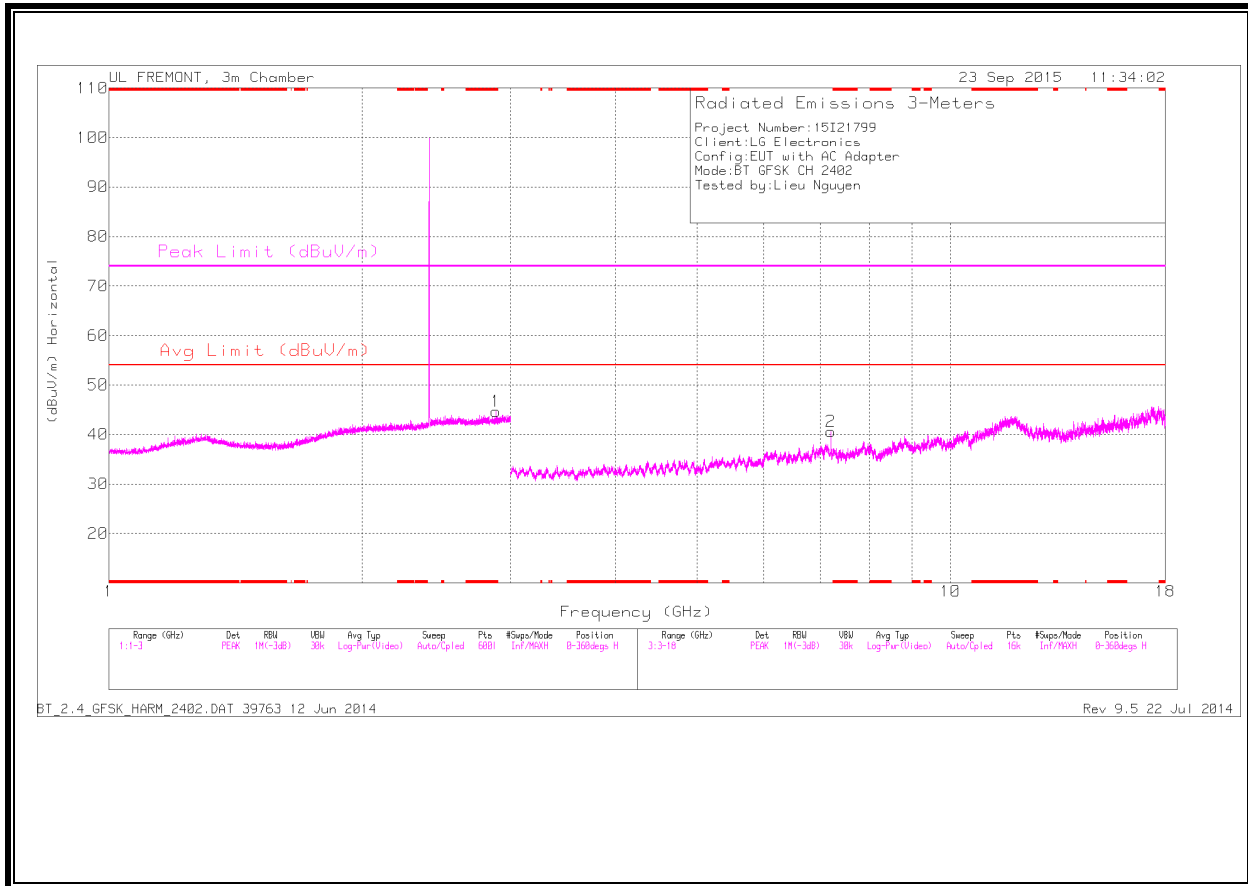
RESTRICTED BANDEGE (HIGH CHANNEL, VERTICAL)**Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Filt/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	39.51	PK	32.3	-22.1	49.71	-	-	74	-24.29	274	150	V
3	* 2.484	29.39	VB1T	32.3	-22.1	39.59	54	-14.41	-	-	274	150	V
4	2.528	29.44	VB1T	32.4	-22	39.84	54	-14.16	-	-	274	150	V
2	2.541	41.97	PK	32.4	-21.9	52.47	-	-	74	-21.53	274	150	V

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

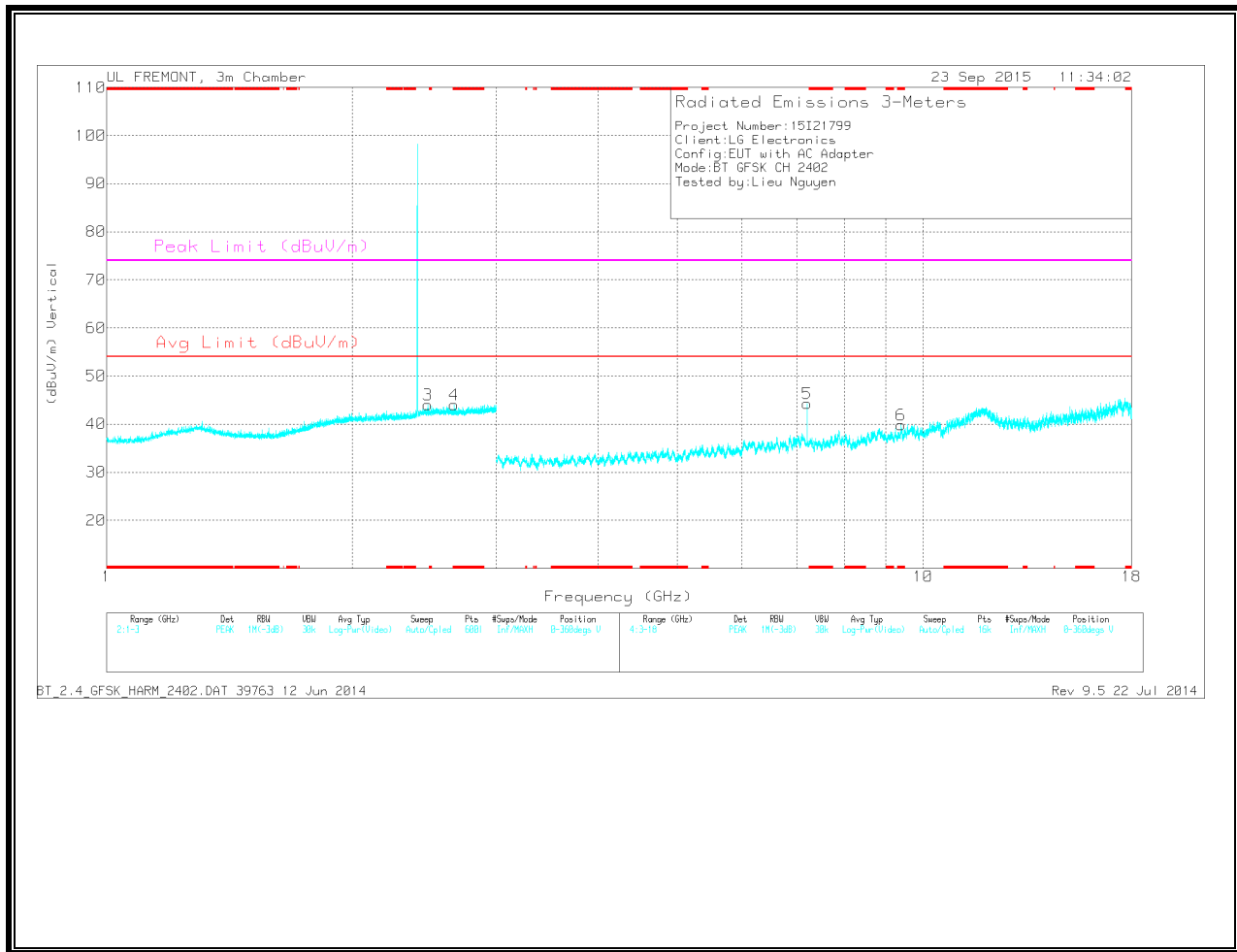
PK - Peak detector

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.

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	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
1	* 2.883	34.03	PK	32.6	-22	44.63	-	-	74	-29.37	0-360	100	H
4	* 2.664	33.77	PK	32.3	-22	44.07	-	-	74	-29.93	0-360	100	V
6	* 9.39	27.5	PK	36.4	-24.1	39.8	-	-	74	-34.2	0-360	100	V
3	2.474	33.82	PK	32.3	-22.1	44.02	-	-	-	-	0-360	100	V
5	7.205	37.07	PK	35.6	-28.4	44.27	-	-	-	-	0-360	100	V
2	7.206	33.43	PK	35.6	-28.4	40.63	-	-	-	-	0-360	200	H

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

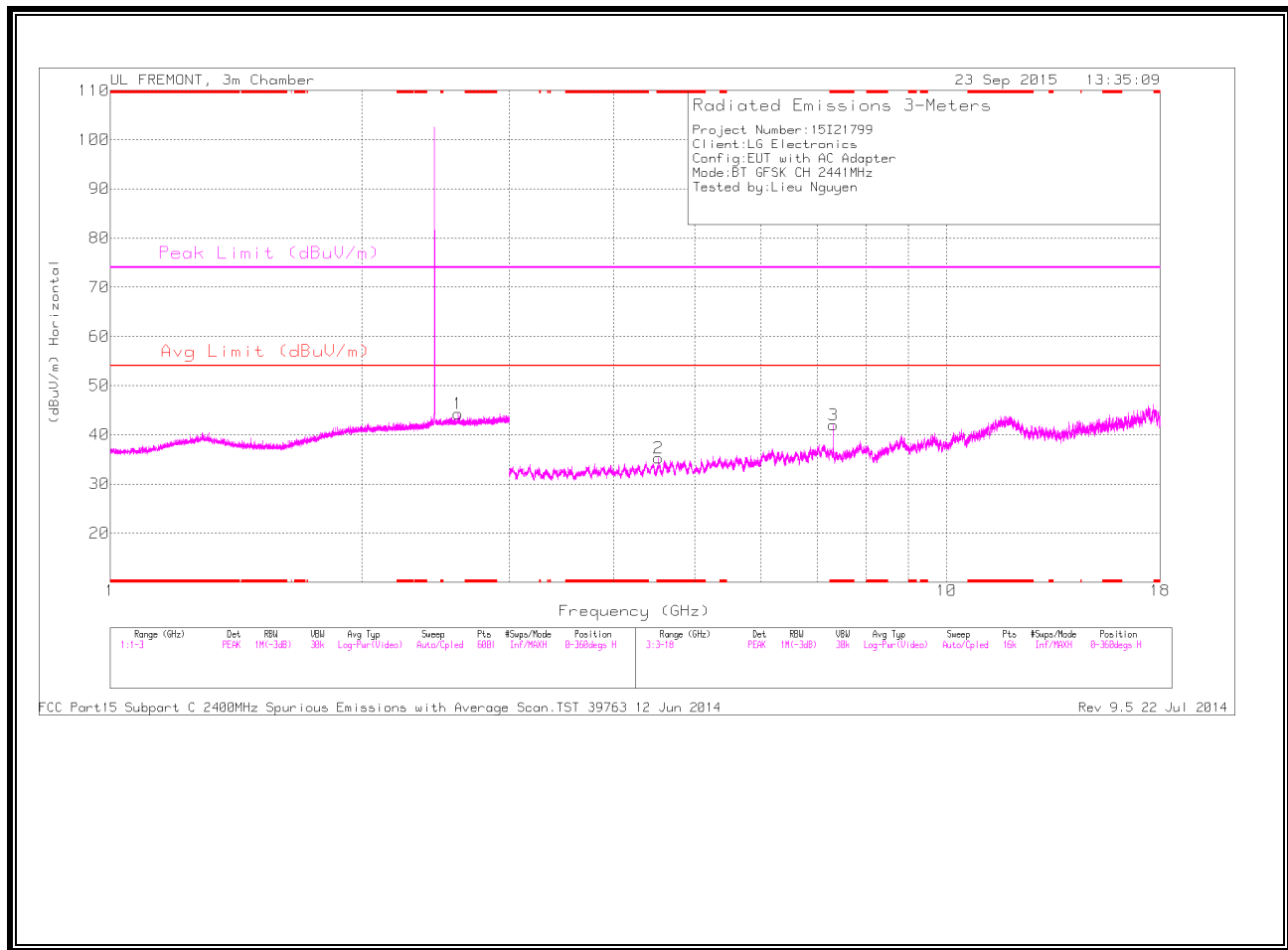
PK - Peak detector

Marker	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
1	* 2.885	42.6	PK3	32.6	-21.9	53.3	-	-	74	-20.7	71	155	H
	* 2.885	29.26	VB1T	32.6	-21.9	39.96	54	-14.04	-	-	71	155	H
4	* 2.665	42.8	PK3	32.3	-22	53.1	-	-	74	-20.9	299	136	V
	* 2.663	29.16	VB1T	32.3	-22	39.46	54	-14.54	-	-	299	136	V
6	* 9.392	36.25	PK3	36.4	-24.1	48.55	-	-	74	-25.45	100	121	V
	* 9.389	23.17	VB1T	36.4	-24.1	35.47	54	-18.53	-	-	100	121	V
3	2.475	42.51	PK3	32.3	-22.2	52.61	-	-	-	-	100	100	V
5	7.205	39.98	PK3	35.6	-28.4	47.18	-	-	-	-	100	100	V
2	7.206	39.01	PK3	35.6	-28.4	46.21	-	-	-	-	100	200	H

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

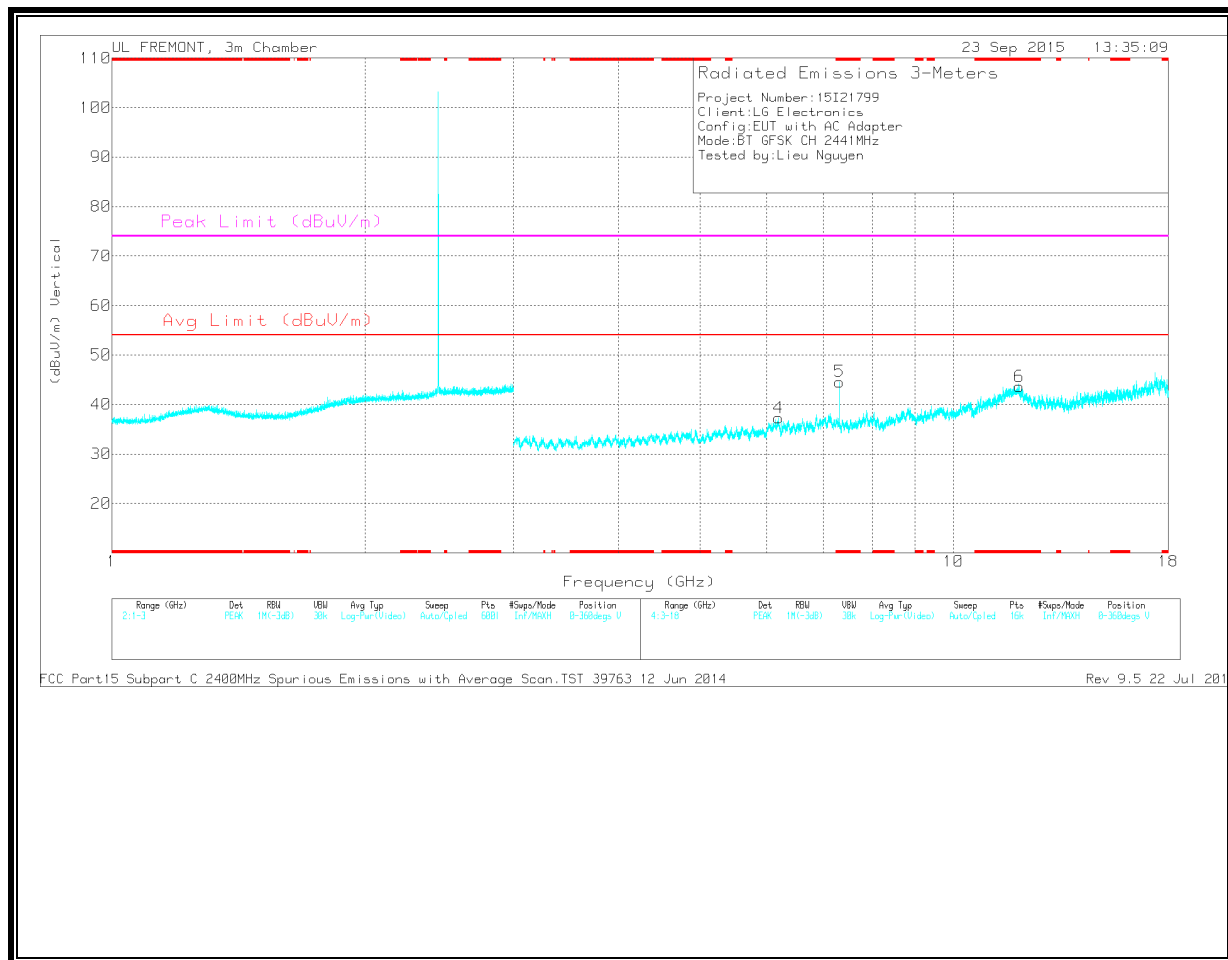
PK3 - FHSS Method: Maximum Peak

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.

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	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
2	* 4.527	32.03	PK	33.8	-30.6	35.23	-	-	74	-38.77	0-360	100	H
3	* 7.323	33.62	PK	35.6	-27.2	42.02	-	-	74	-31.98	0-360	200	H
5	* 7.323	36.2	PK	35.6	-27.2	44.6	-	-	74	-29.4	0-360	100	V
6	* 11.965	27.39	PK	39.1	-22.8	43.69	-	-	74	-30.31	0-360	200	V
1	2.607	33.85	PK	32.4	-22	44.25	-	-	-	-	0-360	200	H
4	6.201	31.18	PK	35.3	-29.2	37.28	-	-	-	-	0-360	100	V

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

PK - Peak detector

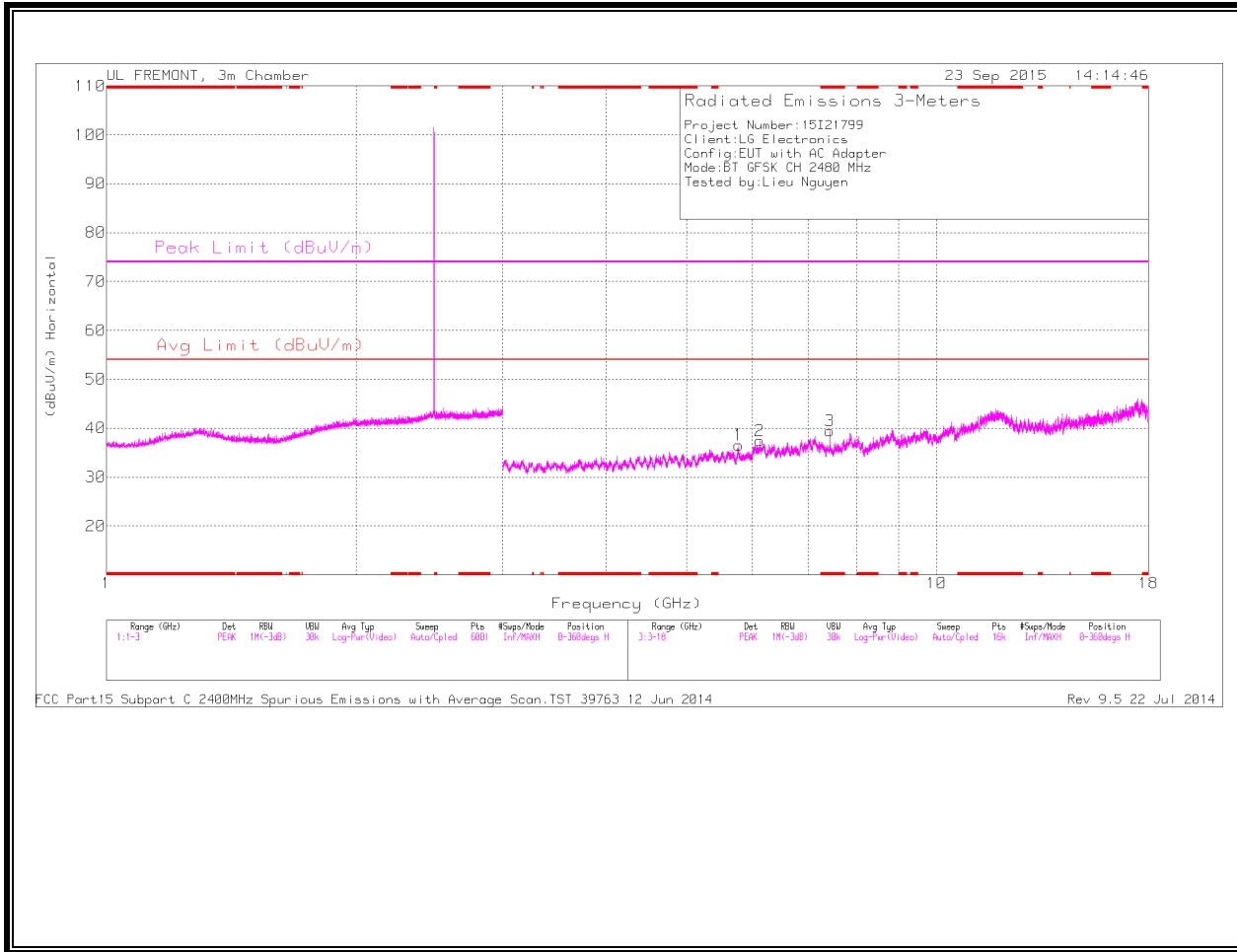
Radiated Emissions

Marker	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
2	* 4.528	40.89	PK3	33.8	-30.6	44.09	-	-	74	-29.91	81	117	H
	* 4.528	28.23	VB1T	33.8	-30.6	31.43	54	-22.57	-	-	81	117	H
3	* 7.324	41.76	PK3	35.6	-27.2	50.16	-	-	74	-23.84	283	258	H
	* 7.323	34.18	VB1T	35.6	-27.2	42.58	54	-11.42	-	-	283	258	H
5	* 7.323	41.86	PK3	35.6	-27.1	50.36	-	-	74	-23.64	194	396	V
	* 7.323	35.14	VB1T	35.6	-27.1	43.64	54	-10.36	-	-	194	396	V
6	* 11.967	36.88	PK3	39.1	-22.8	53.18	-	-	74	-20.82	133	102	V
	* 11.963	23.98	VB1T	39.1	-22.9	40.18	54	-13.82	-	-	133	102	V
1	2.609	41.92	PK3	32.4	-22	52.32	-	-	-	-	133	200	H
4	6.202	39.49	PK3	35.3	-29.3	45.49	-	-	-	-	133	100	V

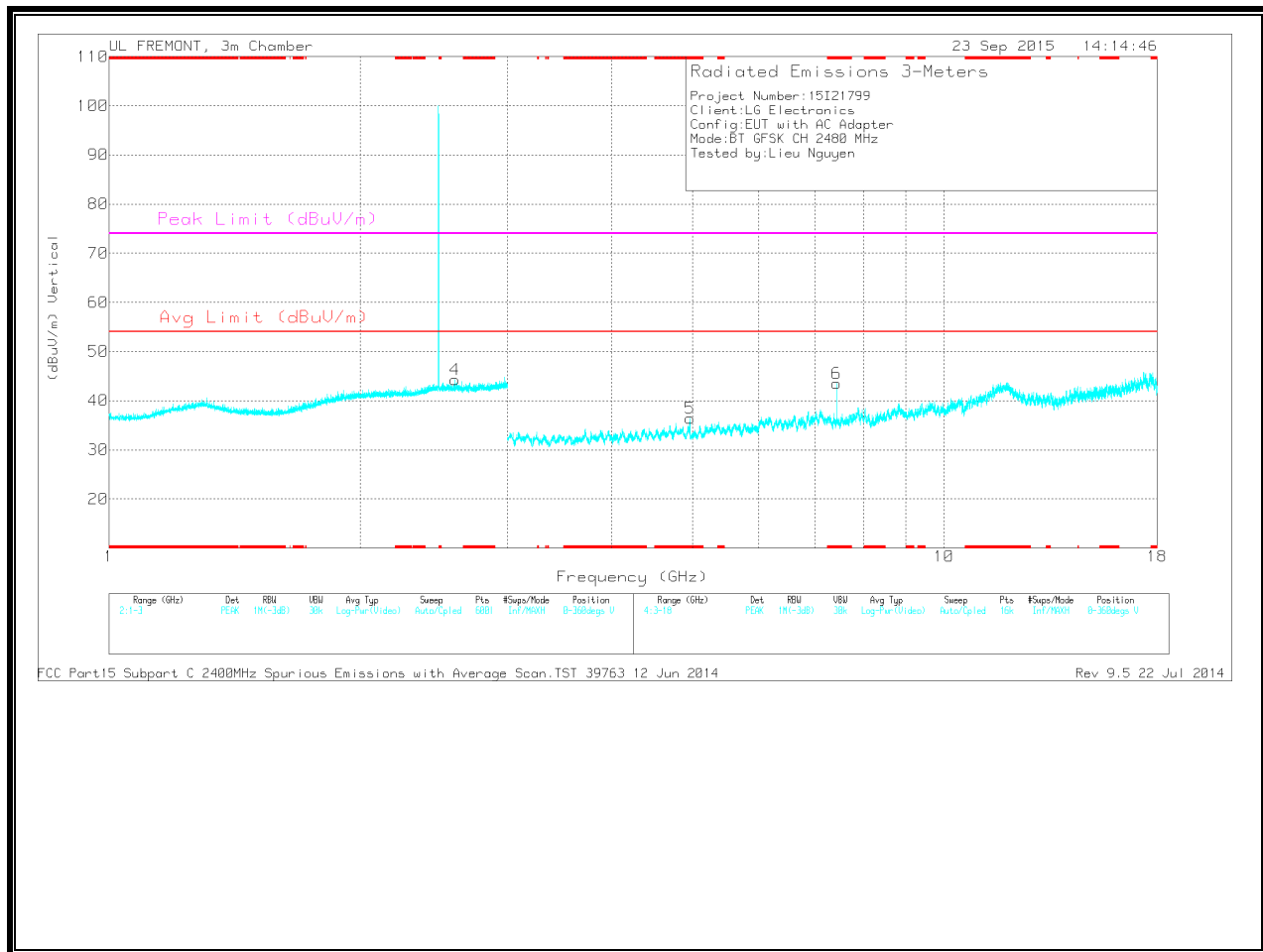
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - FHSS Method: Maximum Peak

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

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	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	* 7.44	31.21	PK	35.7	-27.5	39.41	-	-	74	-34.59	0-360	100	H
5	* 4.96	32.71	PK	34	-30.3	36.41	-	-	74	-37.59	0-360	100	V
6	* 7.441	35.39	PK	35.7	-27.6	43.49	-	-	74	-30.51	0-360	100	V
4	2.596	33.98	PK	32.4	-22.1	44.28	-	-	-	-	0-360	200	V
1	5.772	31.3	PK	34.8	-29.5	36.6	-	-	-	-	0-360	100	H
2	6.122	30.65	PK	35.2	-28.4	37.45	-	-	-	-	0-360	200	H

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

PK - Peak detector

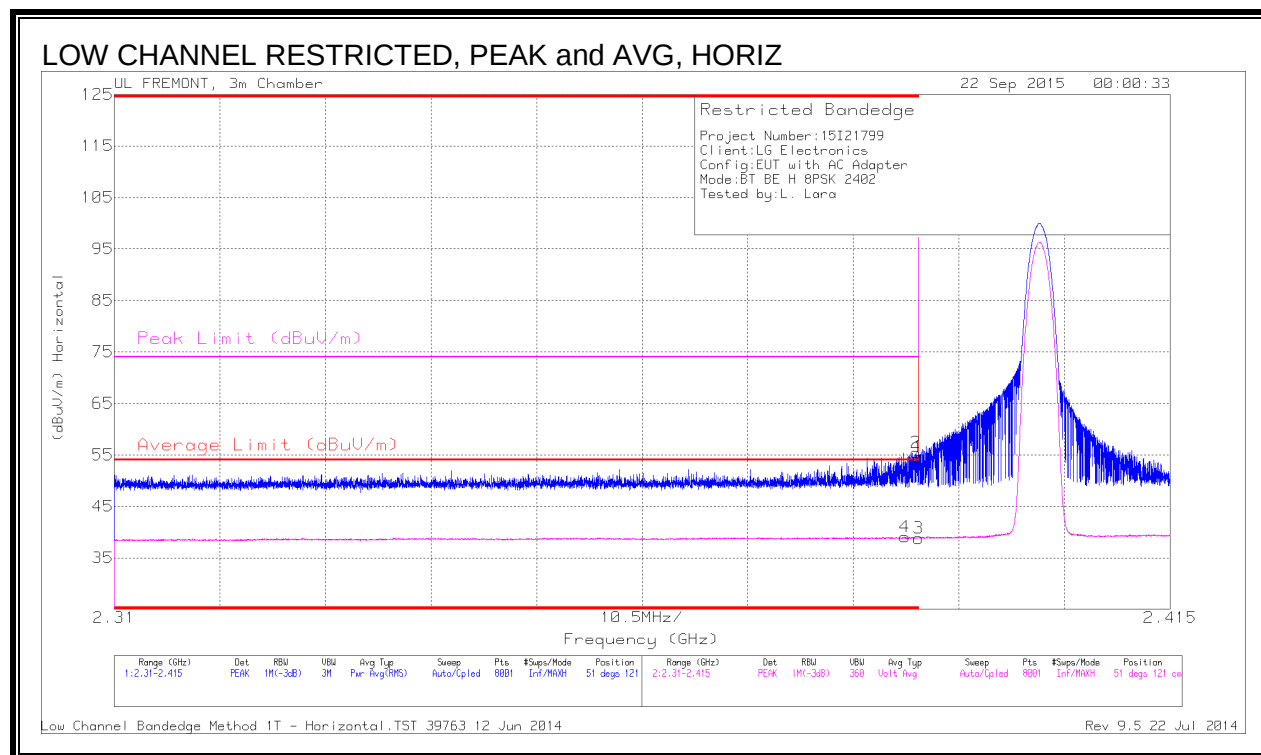
Radiated Emissions

Marker	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	* 7.439	42.43	PK3	35.7	-27.5	50.63	-	-	74	-23.37	290	243	H
	* 7.44	33.63	VB1T	35.7	-27.6	41.73	54	-12.27	-	-	290	243	H
5	* 4.961	41.56	PK3	34	-30.4	45.16	-	-	74	-28.84	2	104	V
	* 4.96	31.3	VB1T	34	-30.3	35	54	-19	-	-	2	104	V
6	* 7.439	41.97	PK3	35.7	-27.5	50.17	-	-	74	-23.83	174	399	V
	* 7.44	33.89	VB1T	35.7	-27.6	41.99	54	-12.01	-	-	174	399	V
4	2.594	42.54	PK3	32.4	-22.1	52.84	-	-	-	-	36	207	V
1	5.771	40.6	PK3	34.8	-29.5	45.9	-	-	-	-	59	100	H
2	6.123	38.3	PK3	35.2	-28.4	45.1	-	-	-	-	59	200	H

* - 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

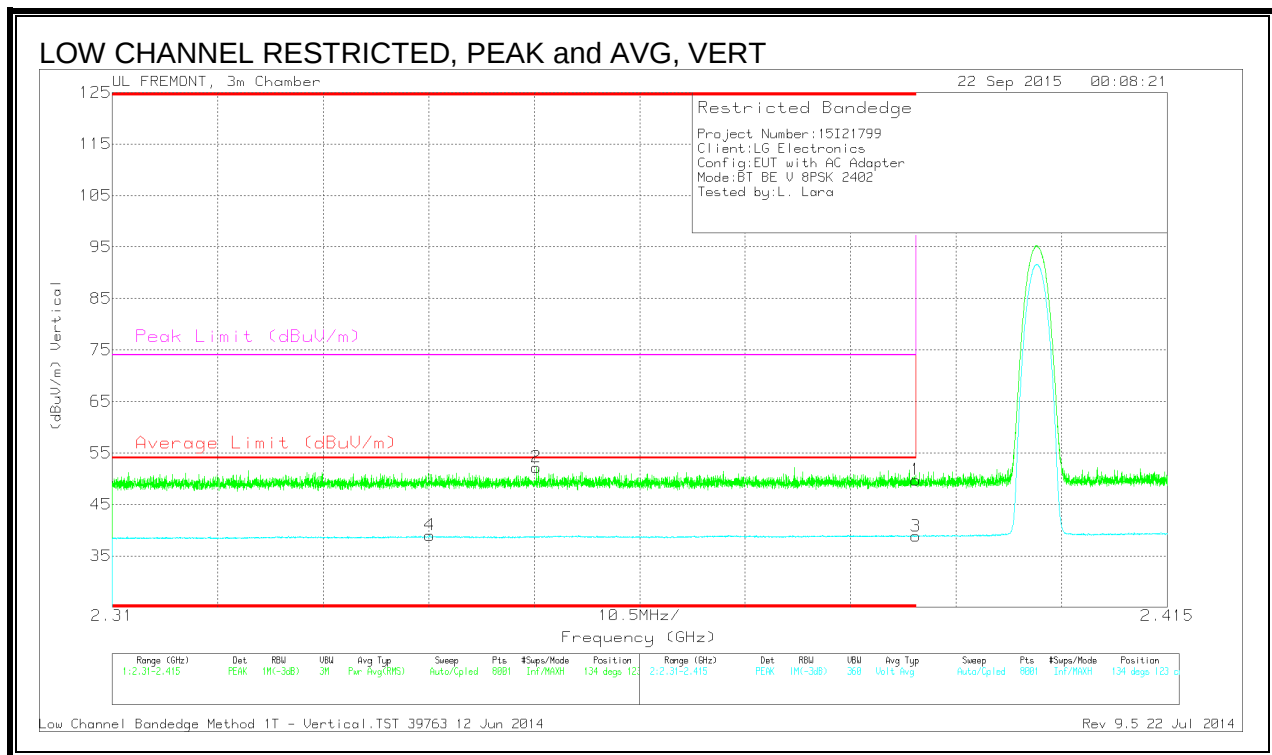
9.2.1. ENHANCED DATA RATE 8PSK MODULATION**RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)****Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Filt/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	* 2.389	29.46	VB1T	32	-22.4	39.06	54	-14.94	-	-	51	121	H
1	* 2.39	44.96	PK	32	-22.4	54.56	-	-	74	-19.44	51	121	H
2	* 2.39	45.85	PK	32	-22.4	55.45	-	-	74	-18.55	51	121	H
3	* 2.39	29.2	VB1T	32	-22.4	38.8	54	-15.2	-	-	51	121	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

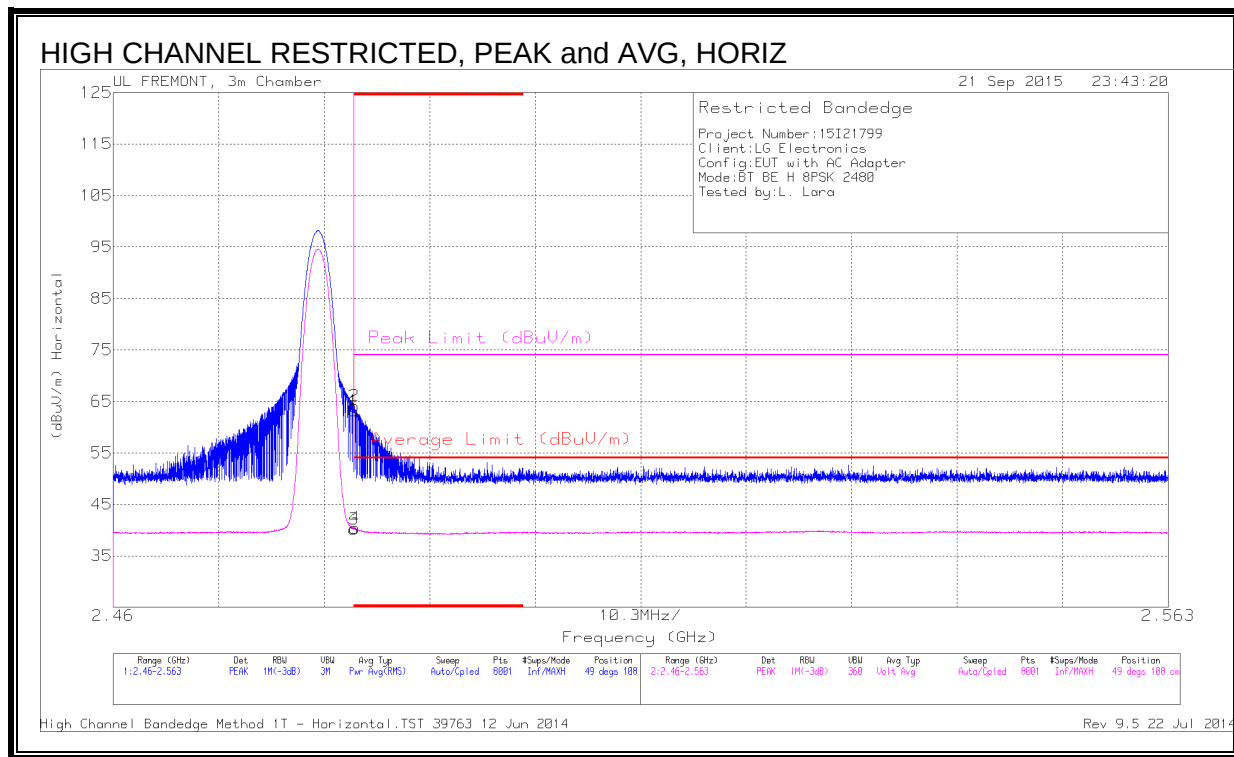
RESTRICTED BANDEGE (LOW CHANNEL, VERTICAL)**Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/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	* 2.342	29.62	VB1T	31.8	-22.4	39.02	54	-14.98	-	-	134	123	V
2	* 2.352	42.92	PK	31.8	-22.5	52.22	-	-	74	-21.78	134	123	V
1	* 2.39	40.18	PK	32	-22.4	49.78	-	-	74	-24.22	134	123	V
3	* 2.39	29.21	VB1T	32	-22.4	38.81	54	-15.19	-	-	134	123	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

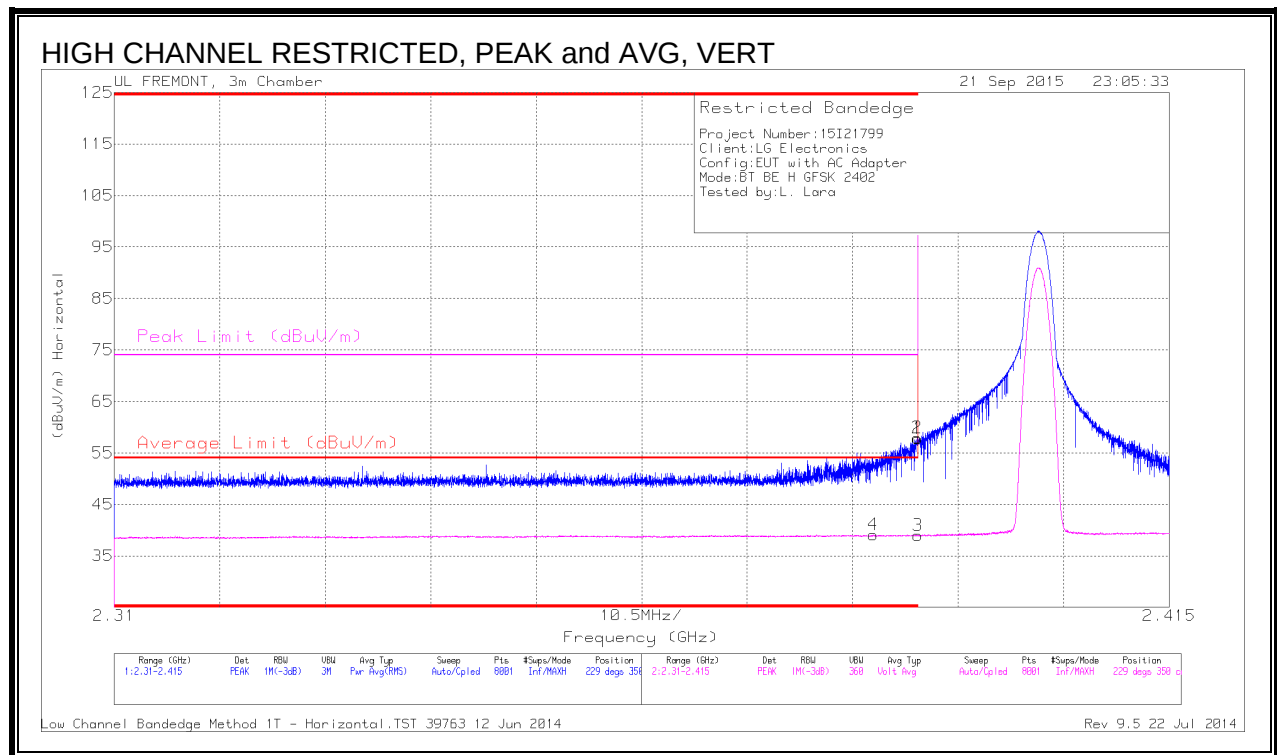
RESTRICTED BANDEGE (HIGH CHANNEL, HORIZONTAL)**Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/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	52.92	PK	32.3	-22.1	63.12	-	-	74	-10.88	49	108	H
2	* 2.484	53.88	PK	32.3	-22.1	64.08	-	-	74	-9.92	49	108	H
3	* 2.484	29.97	VB1T	32.3	-22.1	40.17	54	-13.83	-	-	49	108	H
4	* 2.484	30.19	VB1T	32.3	-22.1	40.39	54	-13.61	-	-	49	108	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

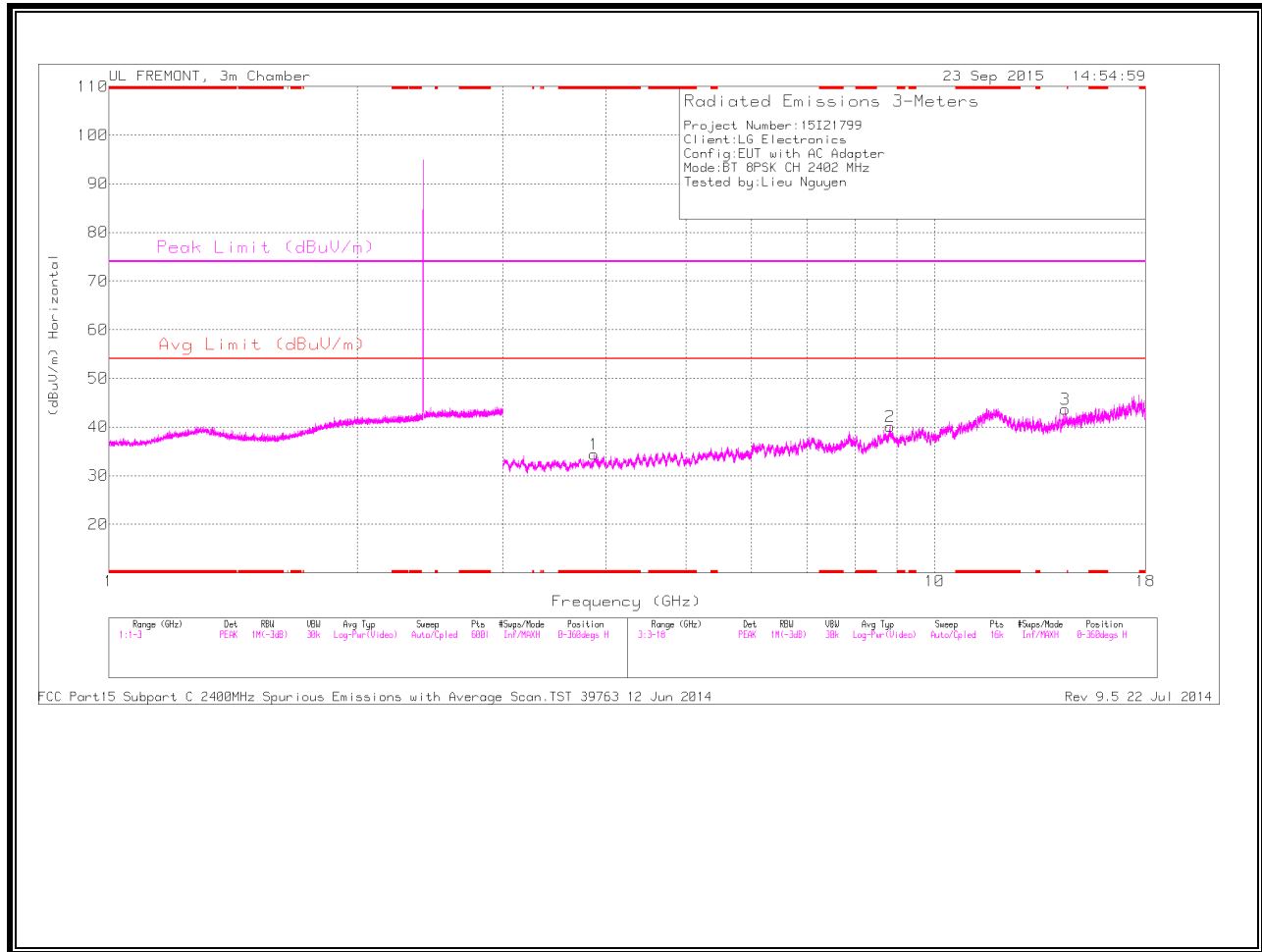
RESTRICTED BANDEGE (HIGH CHANNEL, VERTICAL)**Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/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	* 2.386	29.53	VB1T	32	-22.4	39.13	54	-14.87	-	-	229	350	H
1	* 2.39	48.23	PK	32	-22.4	57.83	-	-	74	-16.17	229	350	H
2	* 2.39	48.34	PK	32	-22.4	57.94	-	-	74	-16.06	229	350	H
3	* 2.39	29.39	VB1T	32	-22.4	38.99	54	-15.01	-	-	229	350	H

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

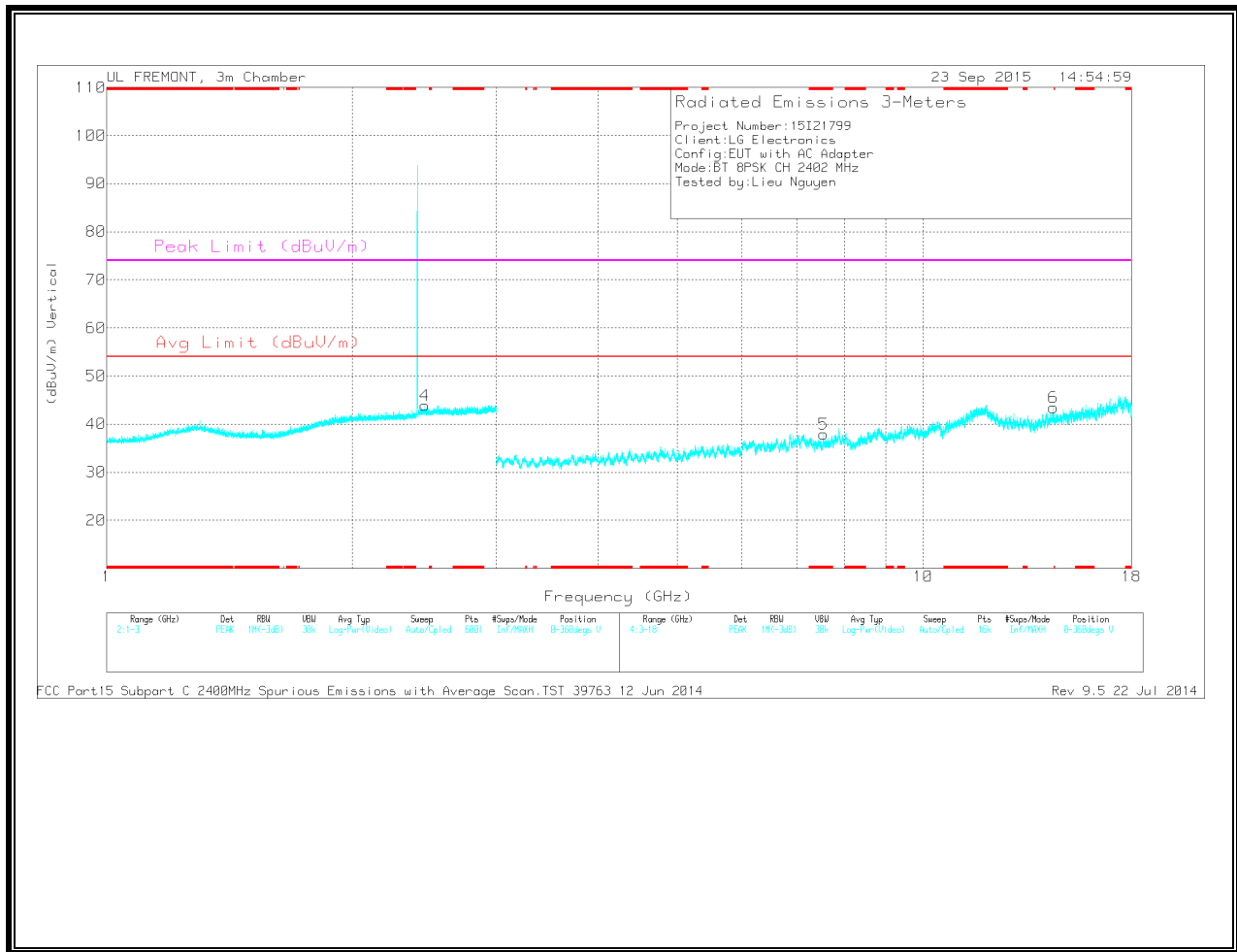
PK - Peak detector

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

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	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
1	* 3.868	31.66	PK	33.1	-30.4	34.36	-	-	74	-39.64	0-360	100	H
5	* 7.55	29.55	PK	35.7	-27.3	37.95	-	-	74	-36.05	0-360	100	V
4	2.451	33.85	PK	32.2	-22.2	43.85	-	-	-	-	0-360	200	V
2	8.833	29.18	PK	35.9	-25	40.08	-	-	-	-	0-360	100	H
3	14.399	29.56	PK	39.6	-25.5	43.66	-	-	-	-	0-360	100	H
6	14.451	30.06	PK	39.6	-26.2	43.46	-	-	-	-	0-360	100	V

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

PK - Peak detector

Radiated Emissions

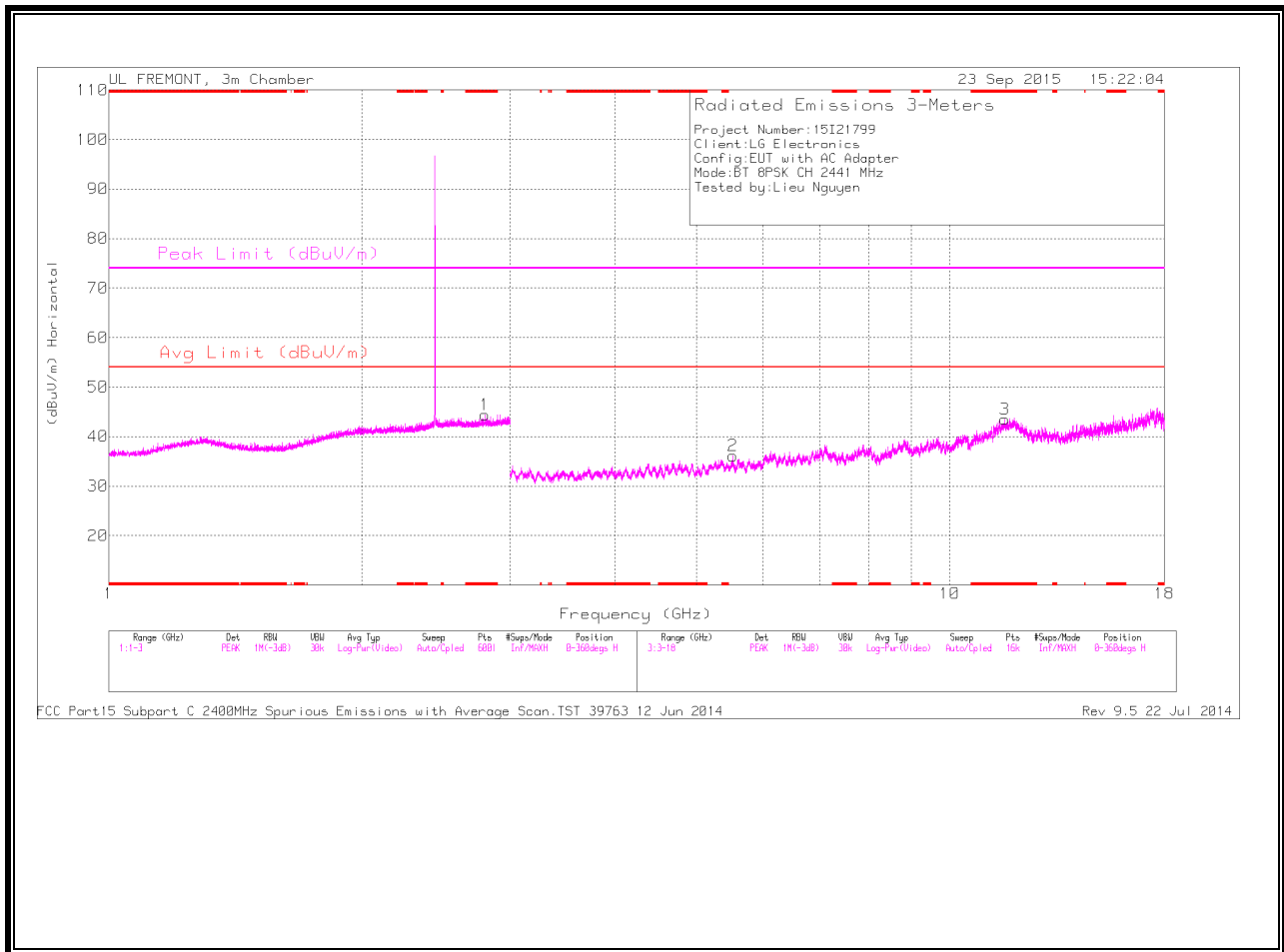
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.868	40.59	PK3	33.1	-30.4	43.29	-	-	74	-30.71	188	121	H
	* 3.869	27.77	VB1T	33.1	-30.4	30.47	54	-23.53	-	-	188	121	H
5	* 7.549	38.96	PK3	35.7	-27.3	47.36	-	-	74	-26.64	282	202	V
	* 7.549	26.11	VB1T	35.7	-27.3	34.51	54	-19.49	-	-	282	202	V
4	2.452	42.98	PK3	32.2	-22.2	52.98	-	-	-	-	0	200	V
2	8.832	36.57	PK3	35.9	-25	47.47	-	-	-	-	0	100	H
3	14.401	38.06	PK3	39.6	-25.4	52.26	-	-	-	-	188	100	H
6	14.453	38.6	PK3	39.6	-26.2	52	-	-	-	-	0	100	V

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

PK3 - FHSS Method: Maximum Peak

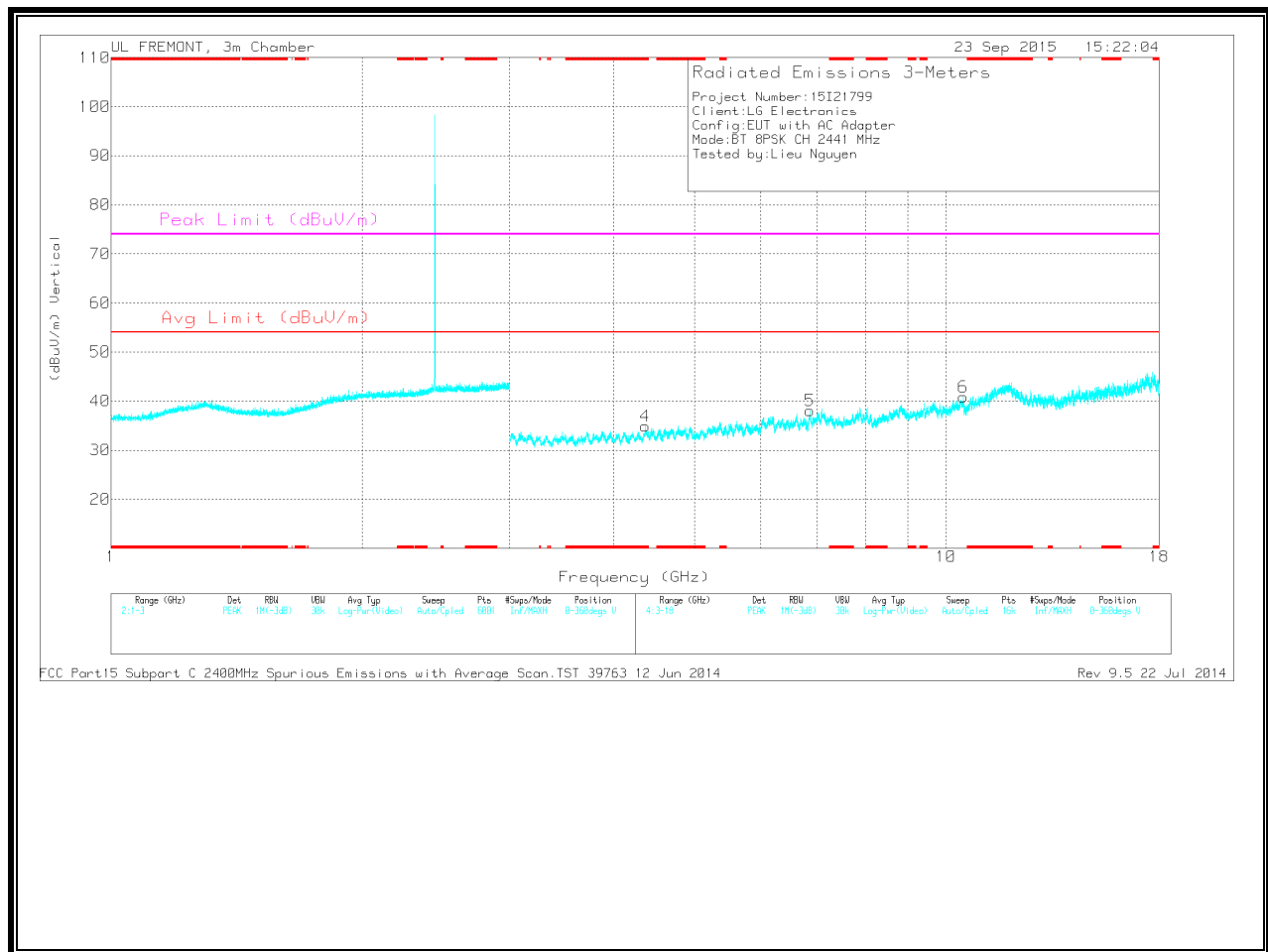
VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

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.

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	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
1	* 2.799	33.84	PK	32.6	-22	44.44	-	-	74	-29.56	0-360	100	H
3	* 11.619	27.12	PK	38.7	-22.3	43.52	-	-	74	-30.48	0-360	100	H
4	* 4.364	30.81	PK	33.6	-29.5	34.91	-	-	74	-39.09	0-360	200	V
2	5.52	31.2	PK	34.6	-29.7	36.1	-	-	-	-	0-360	100	H
5	6.866	29.88	PK	35.6	-27.4	38.08	-	-	-	-	0-360	200	V
6	10.481	27.04	PK	37.4	-23.6	40.84	-	-	-	-	0-360	100	V

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

PK - Peak detector

Radiated Emissions

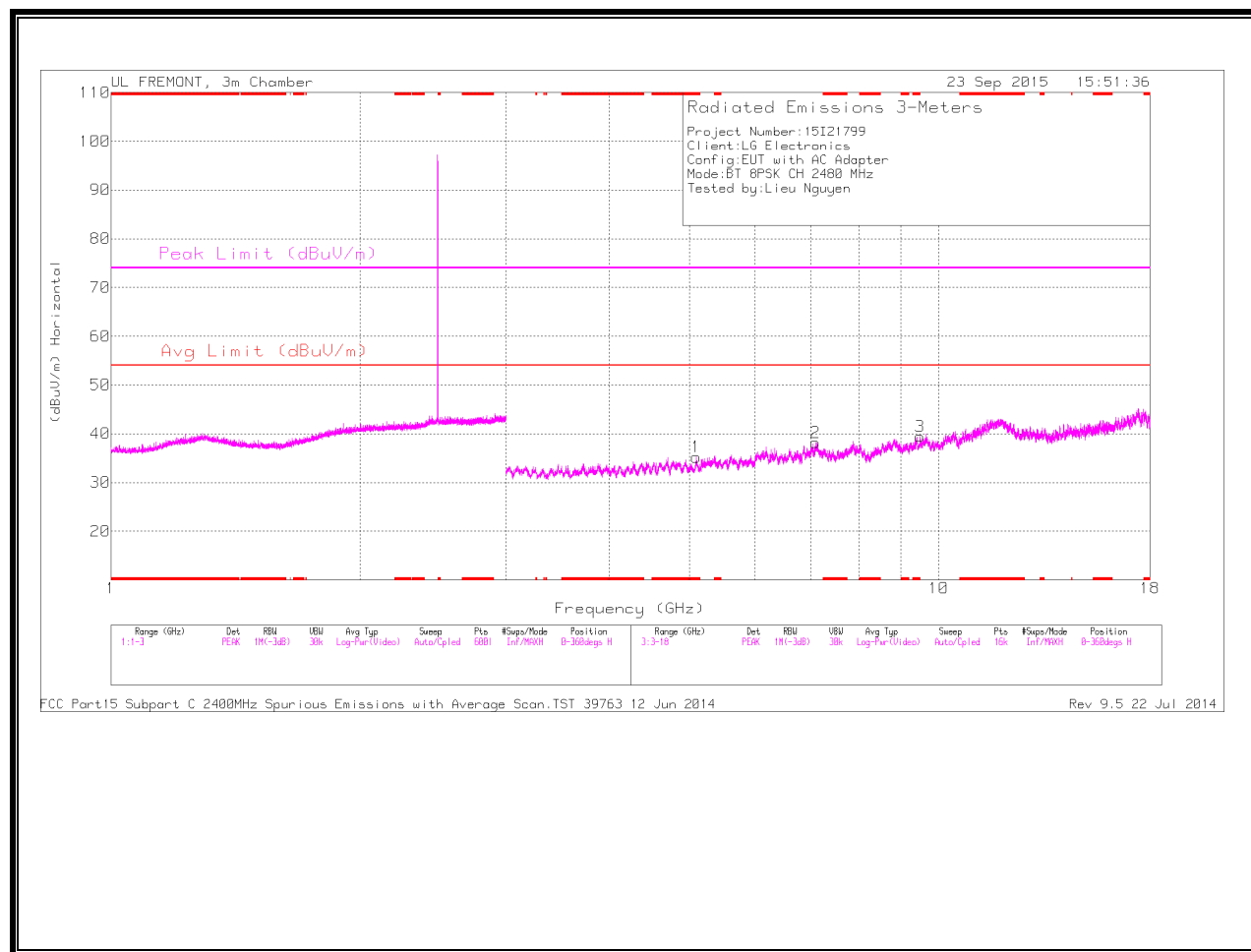
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.798	42.4	PK3	32.6	-22.1	52.9	-	-	74	-21.1	194	219	H
	* 2.798	29.49	VB1T	32.6	-22.1	39.99	54	-14.01	-	-	194	219	H
3	* 11.619	36.83	PK3	38.7	-22.3	53.23	-	-	74	-20.77	143	133	H
	* 11.618	23.68	VB1T	38.7	-22.3	40.08	54	-13.92	-	-	143	133	H
4	* 4.365	39.97	PK3	33.6	-29.4	44.17	-	-	74	-29.83	260	126	V
	* 4.362	26.76	VB1T	33.6	-29.5	30.86	54	-23.14	-	-	260	126	V
2	5.519	39.91	PK3	34.6	-29.7	44.81	-	-	-	-	260	100	H
5	6.867	38.48	PK3	35.6	-27.4	46.68	-	-	-	-	260	200	V
6	10.48	35.08	PK3	37.4	-23.6	48.88	-	-	-	-	260	100	V

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

PK3 - FHSS Method: Maximum Peak

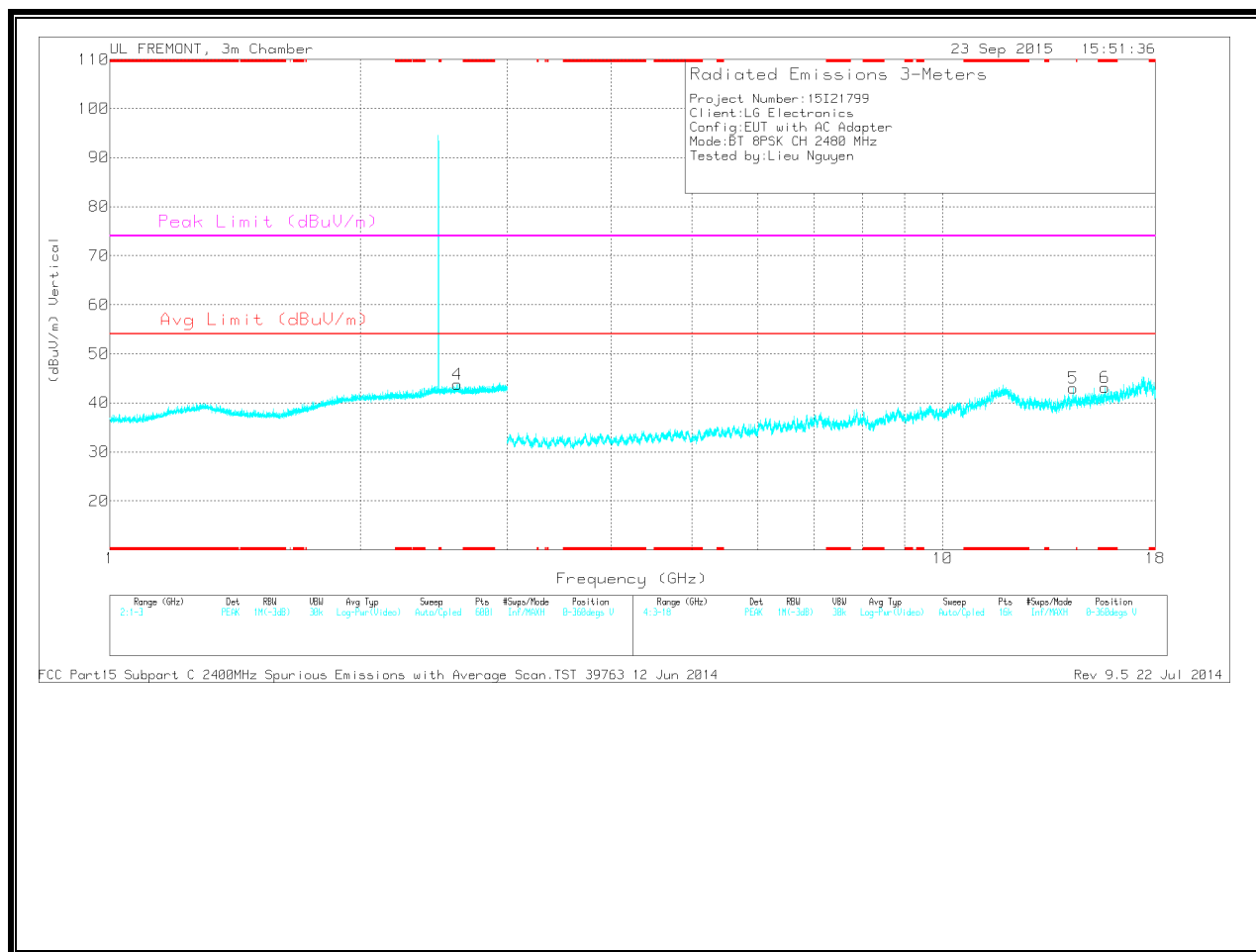
VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

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	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
1	* 5.094	30.21	PK	34.1	-29.1	35.21	-	-	74	-38.79	0-360	100	H
3	* 9.498	27.83	PK	36.6	-25	39.43	-	-	74	-34.57	0-360	100	H
6	* 15.652	28.26	PK	40.3	-25.4	43.16	-	-	74	-30.84	0-360	200	V
4	2.616	33.31	PK	32.4	-21.9	43.81	-	-	-	-	0-360	100	V
2	7.104	29.44	PK	35.6	-26.9	38.14	-	-	-	-	0-360	100	H
5	14.337	28.99	PK	39.4	-25.4	42.99	-	-	-	-	0-360	200	V

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

PK - Peak detector

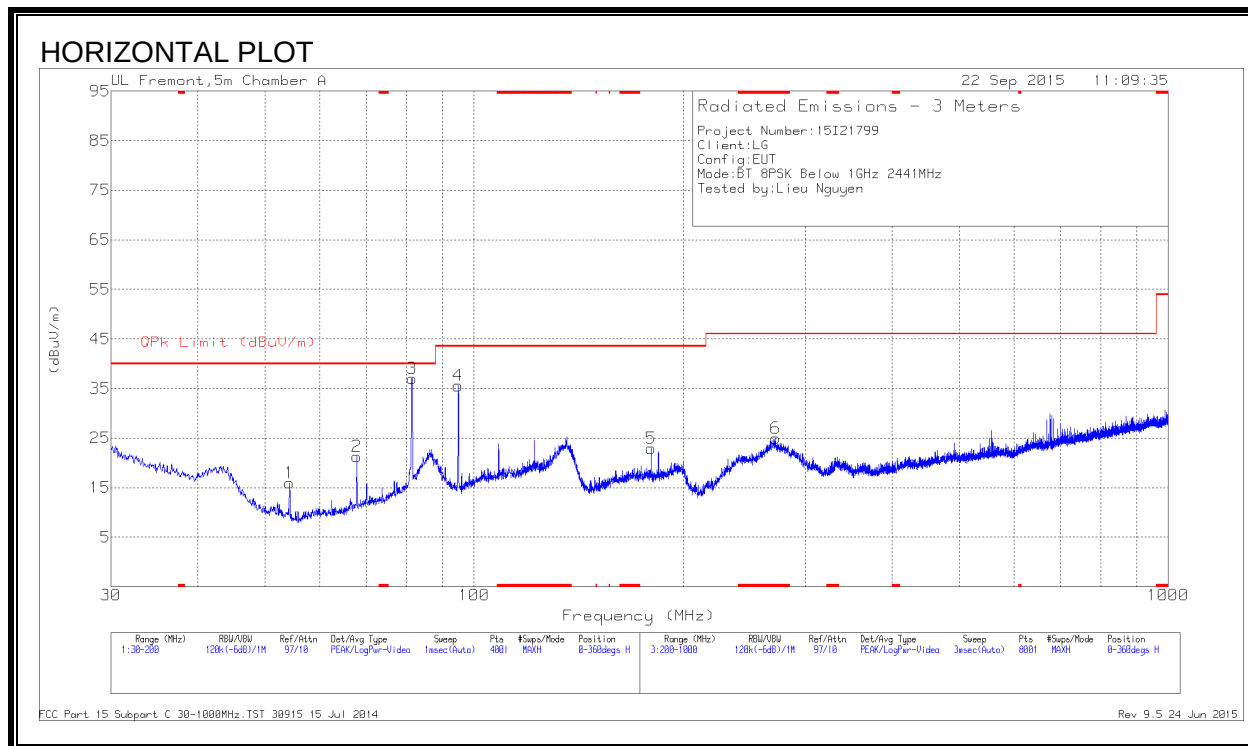
Radiated Emissions

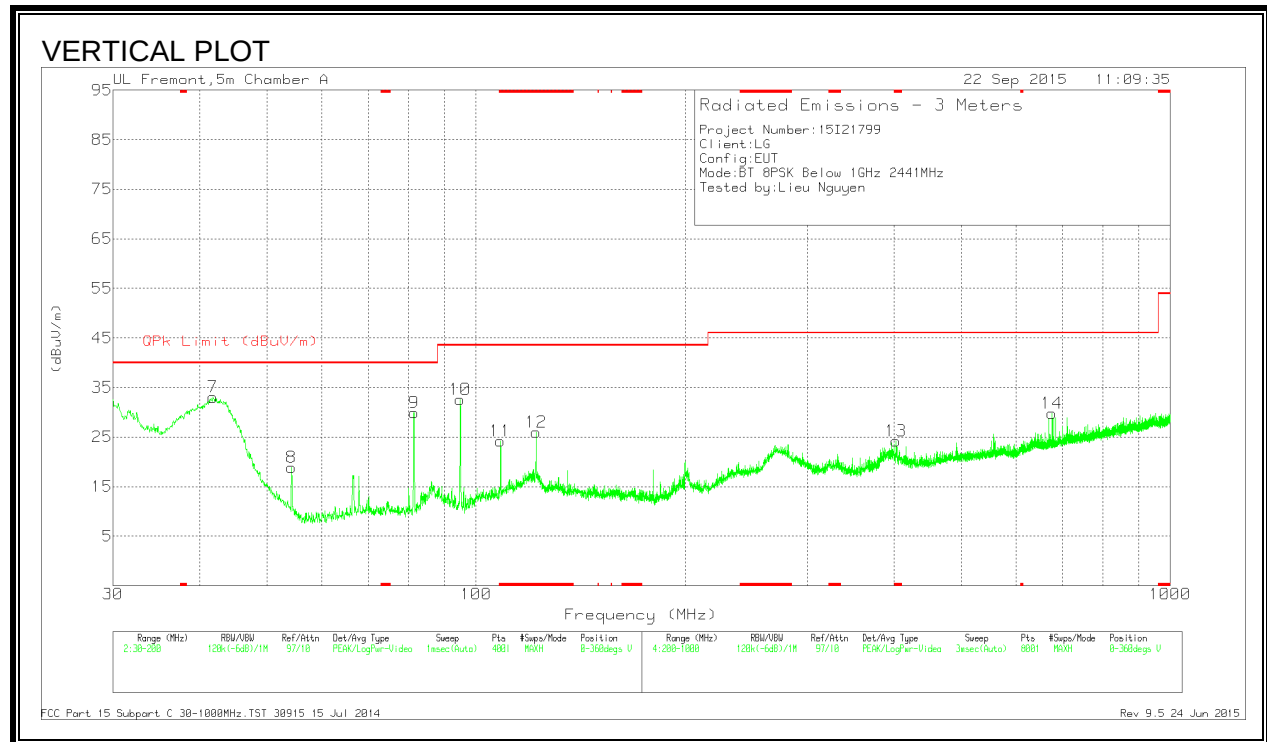
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.094	39.76	PK3	34.1	-29.1	44.76	-	-	74	-29.24	286	281	H
	* 5.094	26.94	VB1T	34.1	-29.1	31.94	54	-22.06	-	-	286	281	H
3	* 9.498	36.23	PK3	36.6	-25	47.83	-	-	74	-26.17	14	256	H
	* 9.499	23.2	VB1T	36.6	-25	34.8	54	-19.2	-	-	14	256	H
6	* 15.652	38.1	PK3	40.3	-25.4	53	-	-	74	-21	46	157	V
	* 15.652	24.78	VB1T	40.3	-25.4	39.68	54	-14.32	-	-	46	157	V
4	2.616	42.47	PK3	32.4	-21.9	52.97	-	-	-	-	46	100	V
2	7.105	38.47	PK3	35.6	-27	47.07	-	-	-	-	46	100	H
5	14.337	37.1	PK3	39.4	-25.4	51.1	-	-	-	-	46	200	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

9.1. WORST-CASE BELOW 1 GHz**GFSK SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)**



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T477 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
11	* 108.4975	38.38	Pk	16.3	-30.5	24.18	43.52	-19.34	0-360	101	V
12	* 122.055	38.72	Pk	17.7	-30.4	26.02	43.52	-17.5	0-360	101	V
6	* 271.8	37.32	Pk	17.2	-29.5	25.02	46.02	-21	0-360	101	H
13	* 402.5	33.59	Pk	19.7	-29.1	24.19	46.02	-21.83	0-360	299	V
7	41.7725	47.53	Pk	16.6	-31.1	33.03	40	-6.97	0-360	101	V
1	54.225	35.83	Pk	11.1	-31	15.93	40	-24.07	0-360	299	H
8	54.225	38.79	Pk	11.1	-31	18.89	40	-21.11	0-360	101	V
2	67.7825	40.23	Pk	11.9	-30.9	21.23	40	-18.77	0-360	199	H
3	81.3825	56.47	Pk	11.3	-30.7	37.07	40	-2.93	0-360	199	H
9	81.3825	49.28	Pk	11.3	-30.7	29.88	40	-10.12	0-360	101	V
4	94.8975	53.47	Pk	12.7	-30.6	35.57	43.52	-7.95	0-360	199	H
10	94.8975	50.51	Pk	12.7	-30.6	32.61	43.52	-10.91	0-360	101	V
5	179.9825	37.82	Pk	15.2	-30.1	22.92	43.52	-20.6	0-360	399	H
14	676	34.31	Pk	23.7	-28.2	29.81	46.02	-16.21	0-360	199	V

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

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T477 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 115.0122	22.95	Qp	17.3	-30.5	9.75	43.52	-33.77	1	199	H
* 114.9534	23.73	Qp	17.3	-30.5	10.53	43.52	-32.99	1	102	V
81.3617	37.43	Qp	11.3	-30.7	18.03	40	-21.97	1	198	H

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

Qp - Quasi-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 [*]	56 to 46 [*]
0.5-5	56	46
5-30	60	50

^{*} Decreases with the logarithm of the frequency.

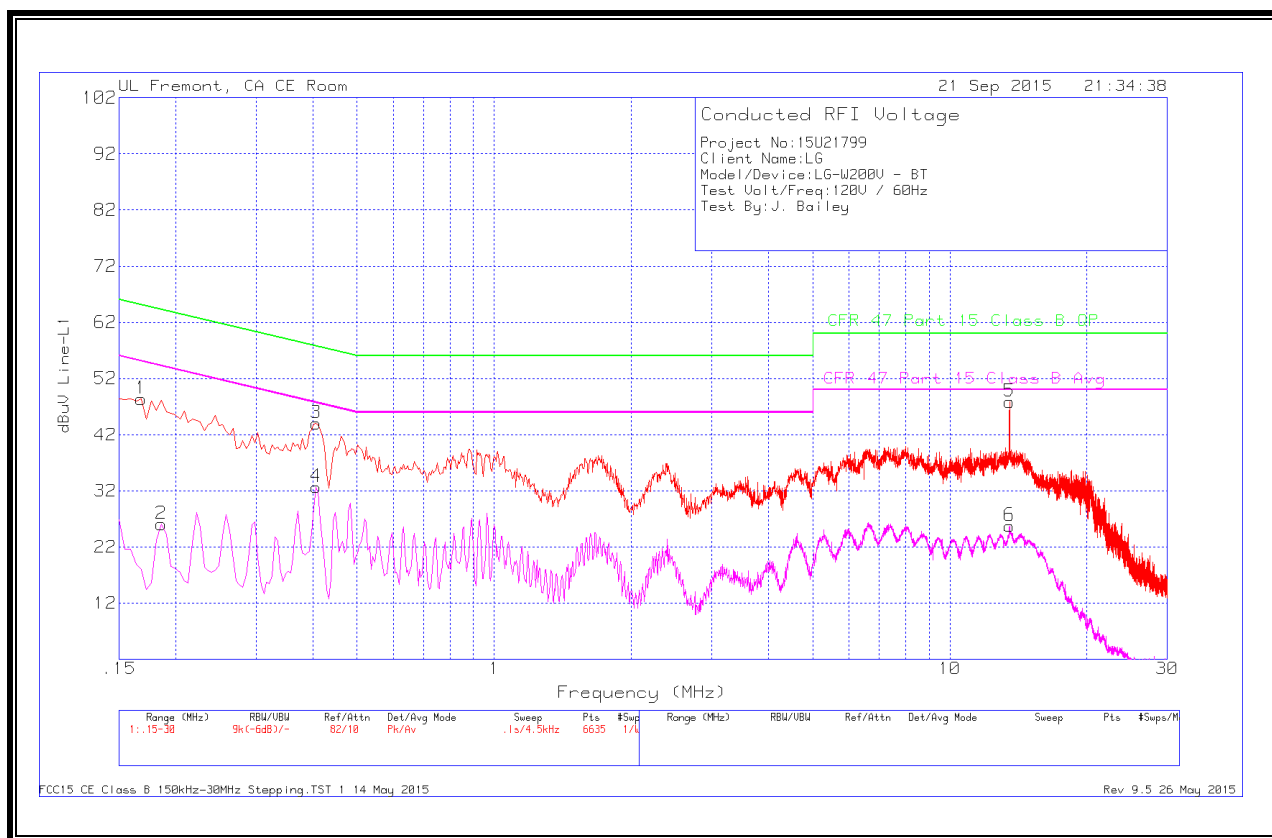
TEST PROCEDURE

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 C63.10

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

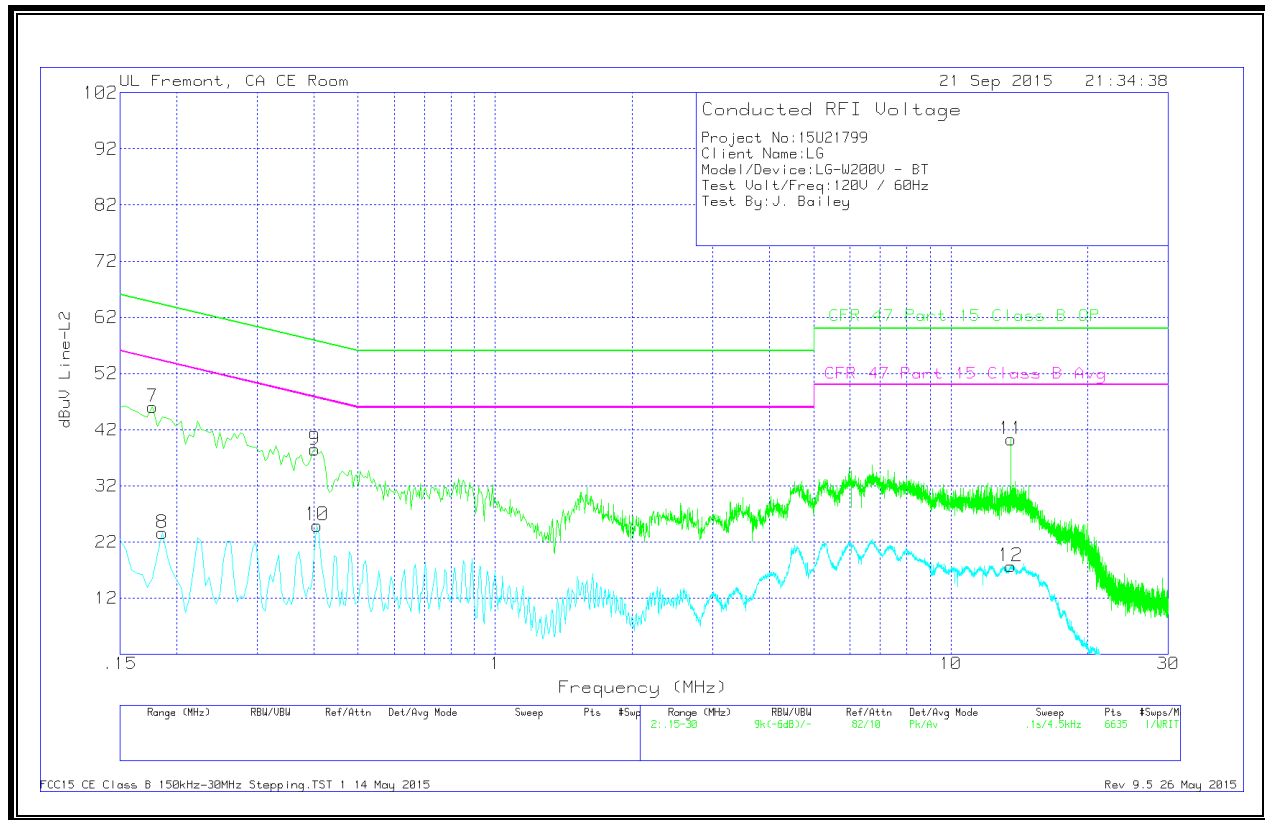
6 WORST EMISSIONS**LINE 1 PLOT****LINE 1 RESULTS****Trace Markers**

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
1	.168	47.17	Pk	1.2	0	48.37	65.06	-16.69	-	-
2	.186	25.07	Av	1	0	26.07	-	-	54.21	-28.14
3	.4065	43.64	Pk	.4	0	44.04	57.72	-13.68	-	-
4	.4065	32.27	Av	.4	0	32.67	-	-	47.72	-15.05
5	13.5195	47.46	Pk	.2	.2	47.86	60	-12.14	-	-
6	13.5195	25.35	Av	.2	.2	25.75	-	-	50	-24.25

Pk - Peak detector

Av - Average detection

LINE 2 PLOT**LINE 2 RESULTS****Trace Markers**

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
7	.177	44.88	Pk	1.2	0	46.08	64.63	-18.55	-	-
8	.186	22.52	Av	1.1	0	23.62	-	-	54.21	-30.59
9	.402	38.06	Pk	.4	0	38.46	57.81	-19.35	-	-
10	.4065	24.57	Av	.4	0	24.97	-	-	47.72	-22.75
11	13.56	39.89	Pk	.2	.2	40.29	60	-19.71	-	-
12	13.5375	17.3	Av	.2	.2	17.7	-	-	50	-32.3

Pk - Peak detector

Av - Average detection