



**FCC CFR47 PART 15 SUBPART C  
INDUSTRY CANADA RSS-210 ISSUE 8**

**BLUETOOTH LOW ENERGY  
C2PC CERTIFICATION TEST REPORT**

**FOR**

**SMART WATCH with 2.4 DTS b/g/n + BT and BLE**

**MODEL NUMBER: LG-W110, W110, LGW110**

**FCC ID: ZNFW110**

**IC: 2703C-W110**

**REPORT NUMBER: 14U18512-E2 REVISION A**

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# 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** LG ELECTRONICS MOBILECOMM U.S.A., INC  
**EUT DESCRIPTION:** SMART WATCH with 2.4 DTS b/g/n + BT and BLE  
**MODEL:** LG-W110, W110, LGW110  
**SERIAL NUMBER:** 1E8PK  
**DATE TESTED:** AUGUST 27 - 28, 2014

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-210 Issue 8 Annex 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 FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.4-2009, 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 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
<input checked="" type="checkbox"/> Chamber A	<input type="checkbox"/> Chamber D
<input checked="" type="checkbox"/> Chamber B	<input type="checkbox"/> Chamber E
<input type="checkbox"/> Chamber C	<input type="checkbox"/> Chamber F
	<input type="checkbox"/> Chamber G
	<input type="checkbox"/> Chamber H

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 SMART WATCH with 2.4 DTS + BT and BLE.

### **5.2. MAXIMUM OUTPUT POWER**

The transmitter has a maximum conducted output power as follows:

Please refer to project 14U18426 for details

### **5.3. DESCRIPTION OF AVAILABLE ANTENNAS**

The radio utilizes an FPCB antenna, with a maximum gain of -1.90 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, and 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	DB390078751	N/A
Cradle	LG	SDT-330	N/A	N/A

### I/O CABLES

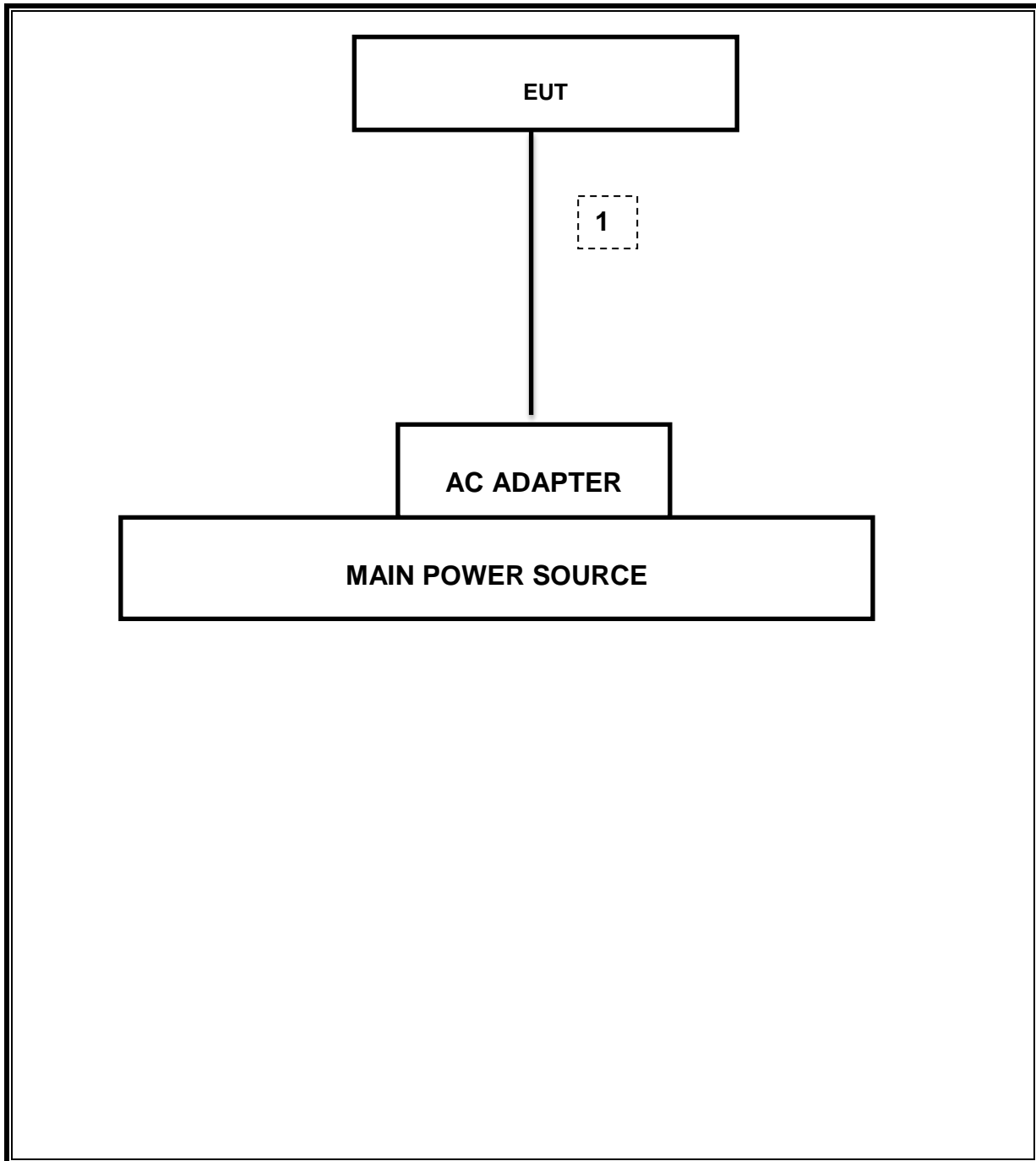
I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC Power	1	Mini-USB	Shielded	1.2m	N/A
2	Audio	1	Mini-Jack	Unshielded	1m	N/A

### TEST SETUP

The EUT is a stand-alone unit during the tests. Test software exercised the radio card.

EUT was set in the Hidden menu mode to enable BLE 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
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C00986	4/1/2015
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01179	2/26/2015
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	8/15/2015
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00580	5/8/2015
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01063	10/22/2014
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	N/A	3/6/2015
Antenna, Horn, 18 GHz	ETS	3117	C01022	2/21/2015
Antenna, Horn, 26.5 GHz	ARA	MWH-1826/B	C00589	12/17/2014
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/2014
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/2014
LISN, 30 MHz	FCC	50/250-25-2	C00626	1/14/2015

## 7. MEASUREMENT METHODS

KDB 558074 D01 DTS Meas Guidance v03r02: Peak power is measured using KDB558074 D01 DTS Meas Guidance v03r02 under section 9.1.1 utilizing spectrum analyzer.

Unwanted emissions within Restricted Bands are measured using traditional radiated procedures.

Band edge emissions within Restricted Bands are measured using RMS with duty cycle factor offset method.

## 8. SUMMARY TABLE

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.247 (a)(2)	RSS-210 A8.2(a)	Occupied Band width (6dB)	>500KHz	Conducted	Pass	see original
2.1051, 15.247 (d)	RSS-210 A8.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	see original
15.247	RSS-210 A8.4	TX conducted output power	<30dBm		Pass	see original
15.247	RSS-210 A8.2	PSD	<8dBm		Pass	see original
15.207 (a)	RSS-GEN 7.2.2	AC Power Line conducted emissions	Section 10	Radiated	Pass	see original
15.205, 15.209	RSS-210 Clause 2.6, RSS-210 Clause 6	Radiated Spurious Emission	< 54dBuV/m		Pass	41.49dBuV/m

## 9. ANTENNA PORT TEST RESULTS

### 9.1. 6 dB BANDWIDTH

#### LIMITS

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

#### TEST PROCEDURE

Reference to KDB 558074 D01 DTS Meas Guidance v03r02: The transmitter output is connected to a spectrum analyzer with the RBW set to 100KHz, the VBW  $\geq 3 \times$  RBW, peak detector and max hold.

#### RESULTS

Please refer to project 14U18426 for details

## 9.2. 99% BANDWIDTH

### LIMITS

None; for reporting purposes only.

### TEST PROCEDURE

Reference to KDB558074 D01 DTS Meas Guidance v03r02: The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth and to 1% of the span. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

### RESULTS

Please refer to project 14U18426 for details

### 9.3. OUTPUT POWER

#### **LIMITS**

FCC §15.247

IC RSS-210 A8.4

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

#### **TEST PROCEDURE**

Peak power is measured using KDB 558074 D01 DTS Meas Guidance v03r02 under section 9.1.1 utilizing spectrum analyzer.

#### **RESULTS**

Please refer to project 14U18426 for details

## 9.4. AVERAGE POWER

### LIMITS

None; for reporting purposes only.

### TEST PROCEDURE

The transmitter output is connected to a power meter.

### RESULTS

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Please refer to project 14U18426 for details

## 9.5. PSD

### LIMITS

FCC §15.247

IC RSS-210 A8.2

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

### TEST PROCEDURE

Power Spectral Density was performed utilizing the "Method PKPSD (Peak PSD)" under KDB558074 D01 DTS Meas Guidance v03r02.

### RESULTS

Please refer to project 14U18426 for details



## 9.1. CONDUCTED SPURIOUS EMISSIONS

### LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

### 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.

### RESULTS

Please refer to project 14U18426 for details

## 10. RADIATED TEST RESULTS

### 10.1. 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.

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 measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 1 MHz for peak measurements and add duty cycle factor for average measurements.

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
BLE Mode	0.375	1	0.600	60.00%	2.22	N/A

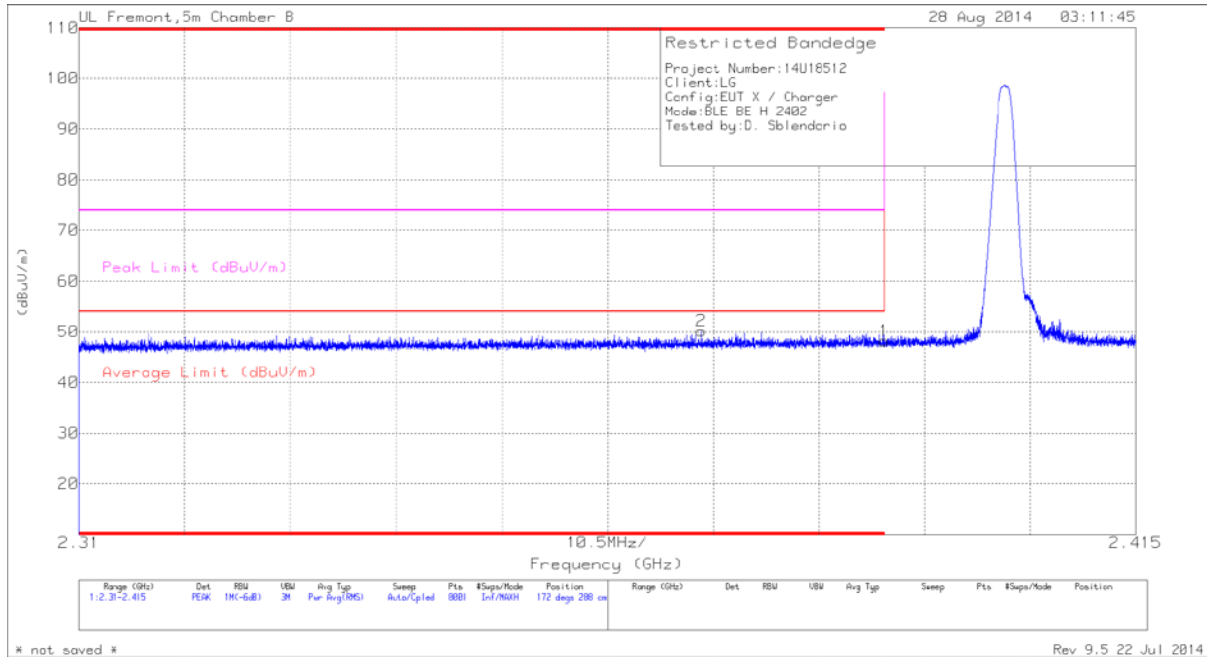
The spectrum from 1GHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

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.

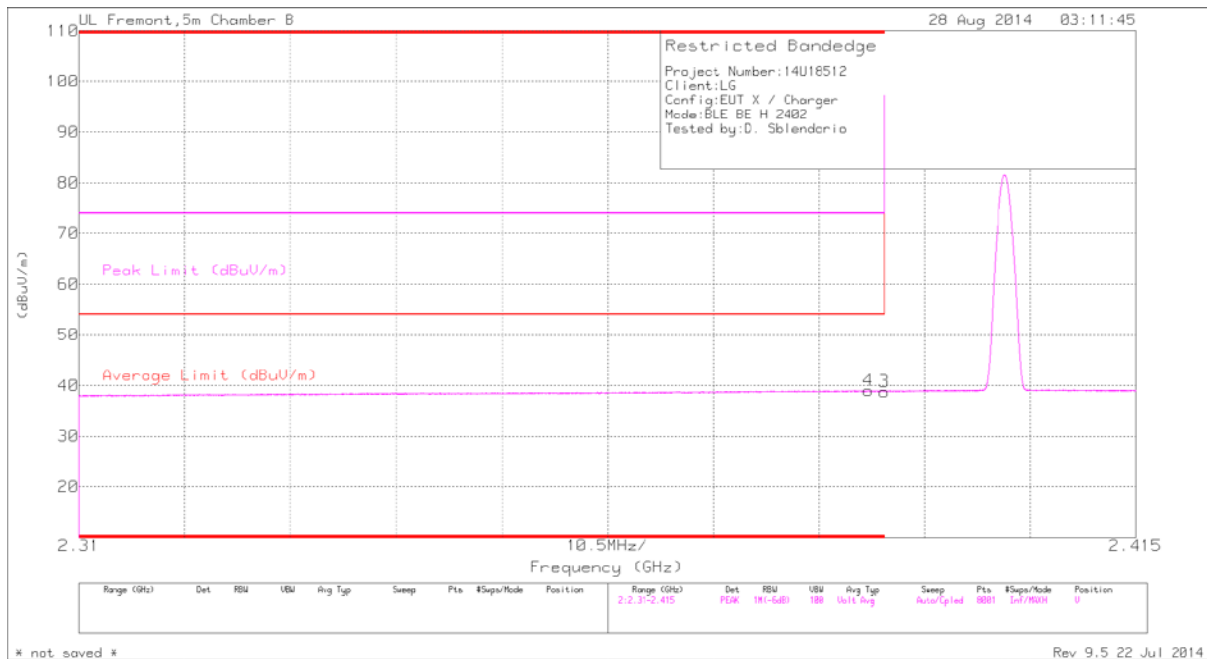
## 10.2. TRANSMITTER ABOVE 1 GHz

### RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

#### LOW CHANNEL RESTRICTED, PEAK HORIZONTAL



#### LOW CHANNEL RESTRICTED, PEAK HORIZONTAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Filtr/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	40.12	PK	32.2	-24.1	0	48.22	-	-	74	-25.78	172	288	H
2	* 2.372	42.17	PK	32.1	-24.1	0	50.17	-	-	74	-23.83	172	288	H

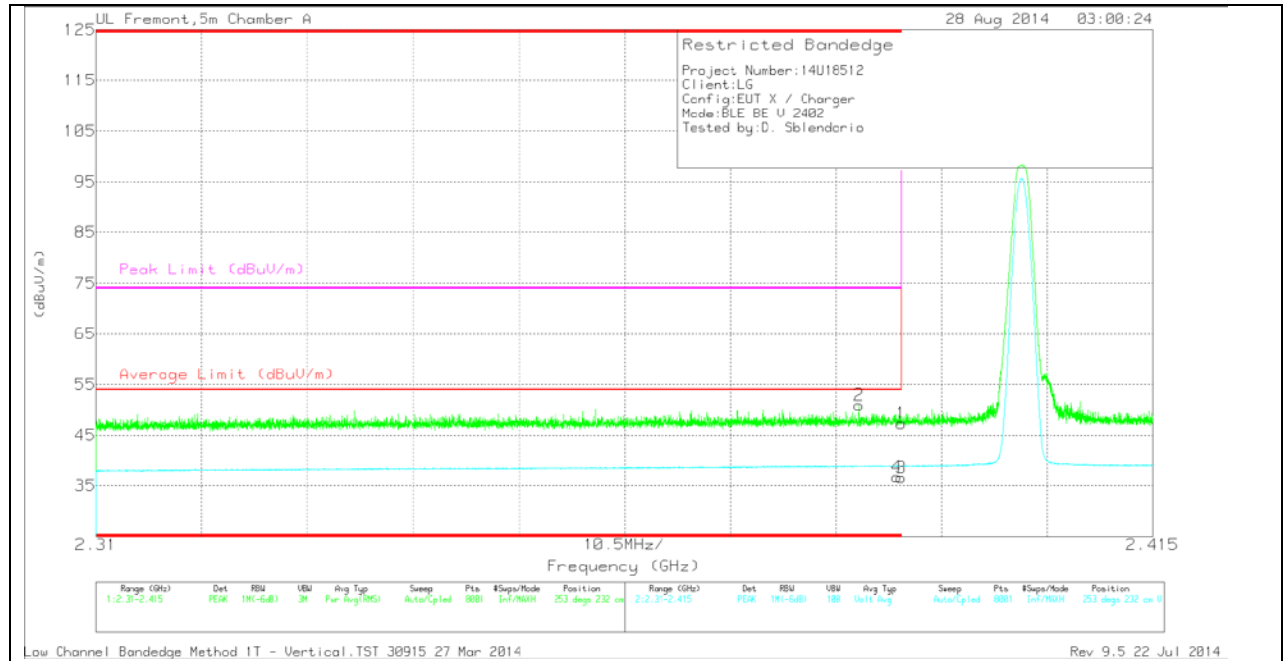
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band  
 PK - Peak detector

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
4	* 2.388	30.86	RMS	32.2	-24.1	2.22	41.18	54	-12.82	-	-
3	* 2.39	30.73	RMS	32.2	-24.1	2.22	41.05	54	-12.95	-	-

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

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

**LOW CHANNEL RESTRICTED, PEAK AND AVG, VERTICAL**

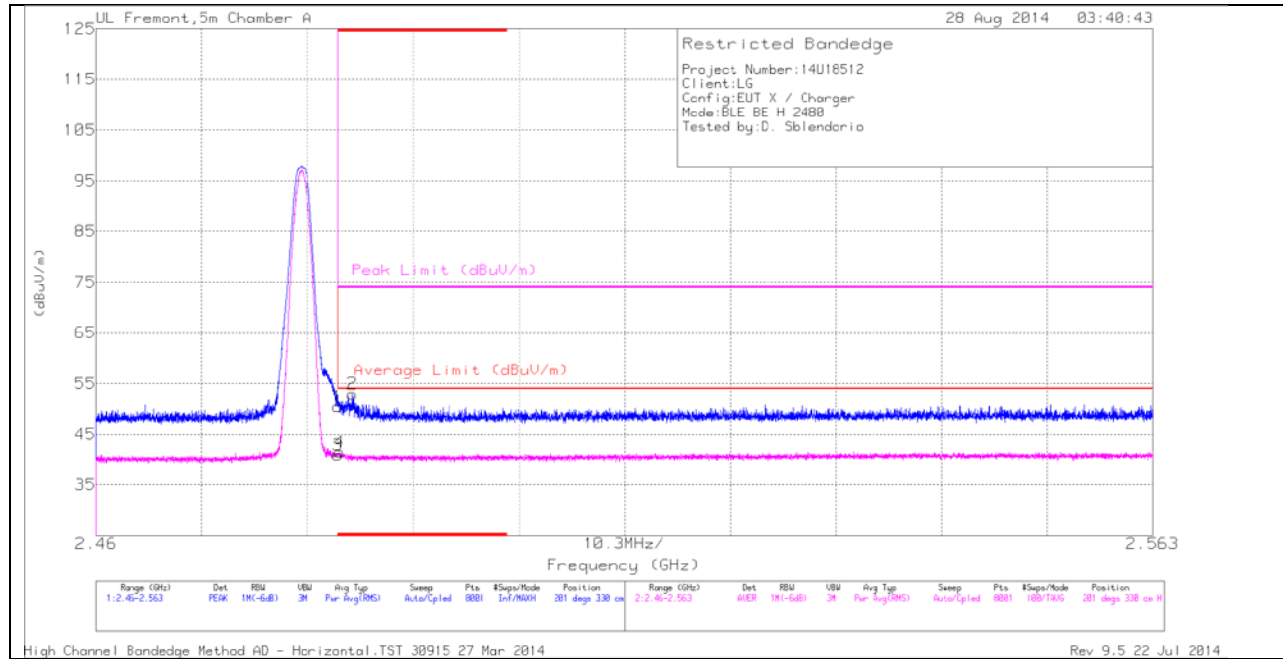


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	39.17	PK	32.2	-24.1	0	47.27	-	-	74	-26.73	253	232	V
2	* 2.386	42.77	PK	32.2	-24	0	50.97	-	-	74	-23.03	253	232	V
3	* 2.39	28.5	RMS	32.2	-24.1	2.22	38.82	54	-15.18	-	-	253	232	V
4	* 2.39	28.71	RMS	32.2	-24.1	2.22	36.81	54	-17.19	-	-	253	232	V

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band  
 PK - Peak detector  
 RMS - RMS detection

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

**HIGH CHANNEL RESTRICTED, PEAK AND AVG, HORIZONTAL**

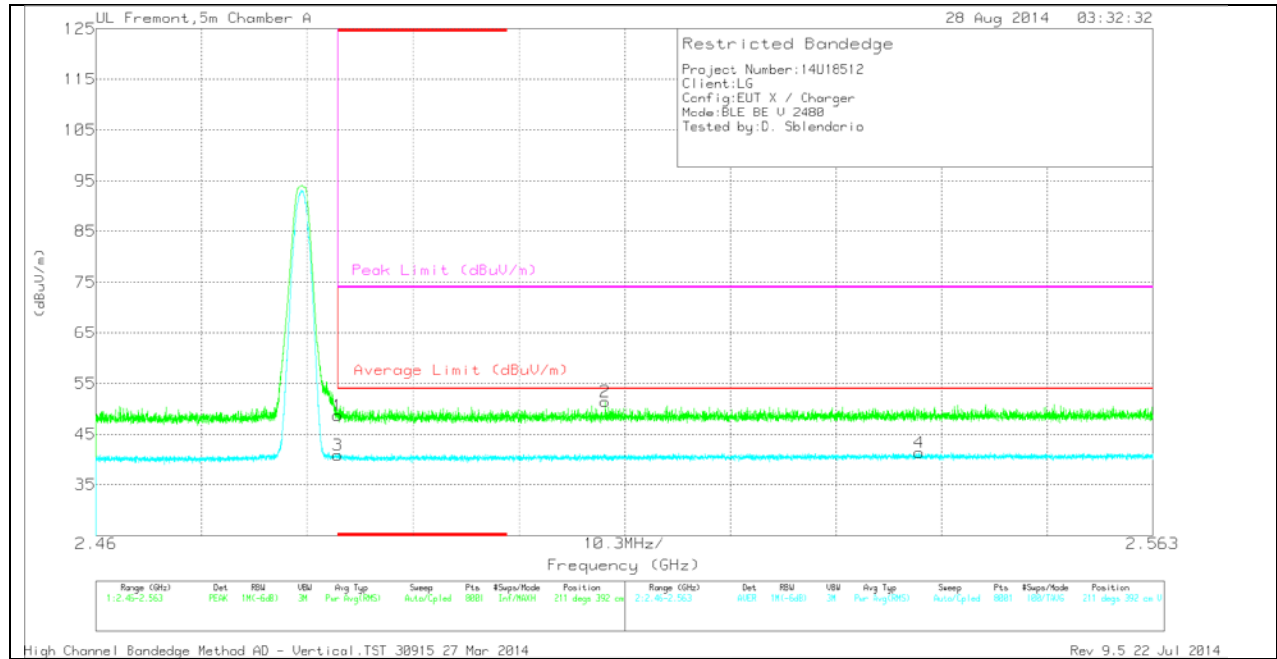


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	41.96	PK	32.7	-24.2	0	50.46	-	-	74	-23.54	201	330	H
2	* 2.485	44.36	PK	32.7	-24.1	0	52.96	-	-	74	-21.04	201	330	H
3	* 2.484	30.09	RMS	32.7	-24.2	2.22	40.81	54	-13.19	-	-	201	330	H
4	* 2.484	30.77	RMS	32.7	-24.2	2.22	41.49	54	-12.51	-	-	201	330	H

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band  
 PK - Peak detector  
 RMS - RMS detection

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

**HIGH CHANNEL RESTRICTED, PEAK AND AVG, VERTICAL**

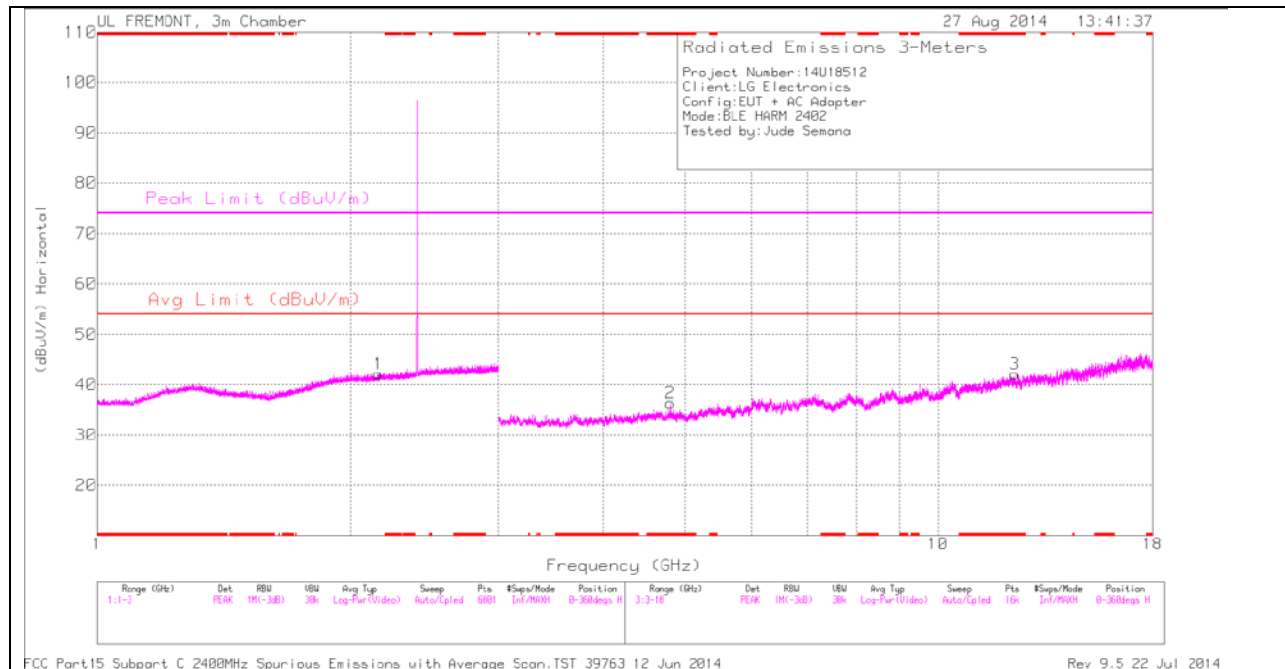


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	40.23	PK	32.7	-24.2	0	48.73	-	-	74	-25.27	211	392	V
3	* 2.484	30.13	RMS	32.7	-24.2	2.22	40.85	54	-13.15	-	-	211	392	V
2	2.51	42.66	PK	32.8	-24	0	51.46	-	-	74	-22.54	211	392	V
4	2.54	30.08	RMS	32.9	-23.8	2.22	41.4	54	-12.6	-	-	211	392	V

\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band  
 PK - Peak detector  
 RMS - RMS detection

**HARMONICS AND SPURIOUS EMISSIONS**

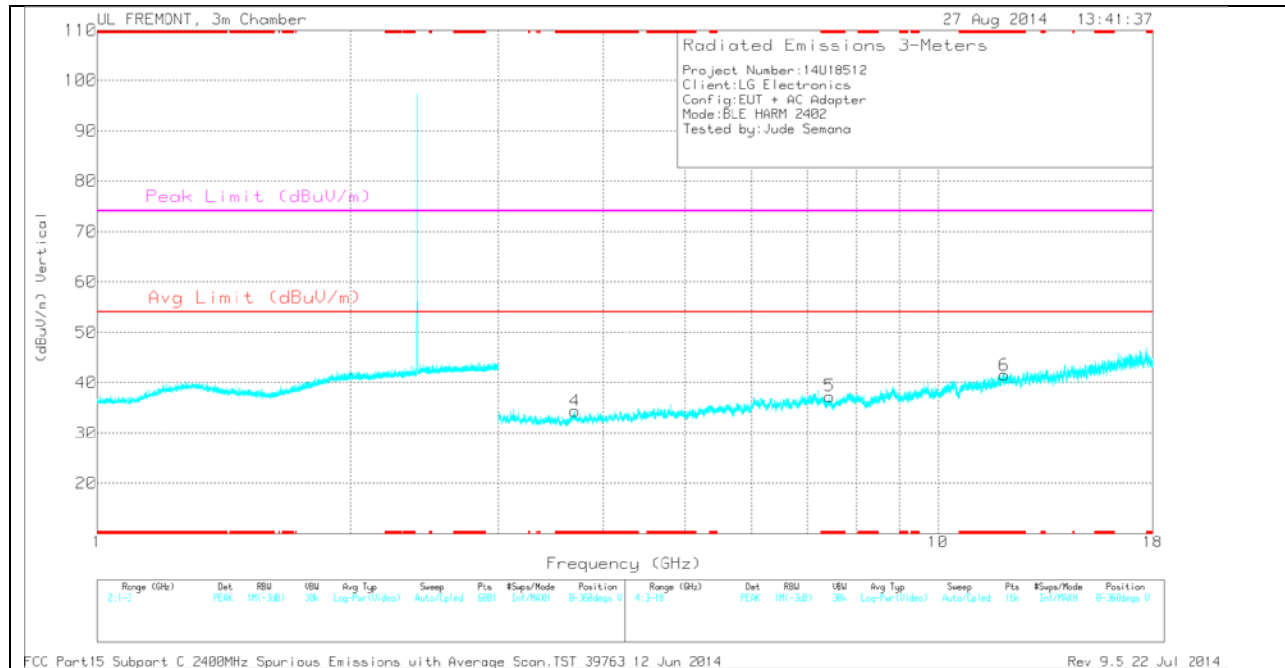
**LOW CHANNEL HORIZONTAL**



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.

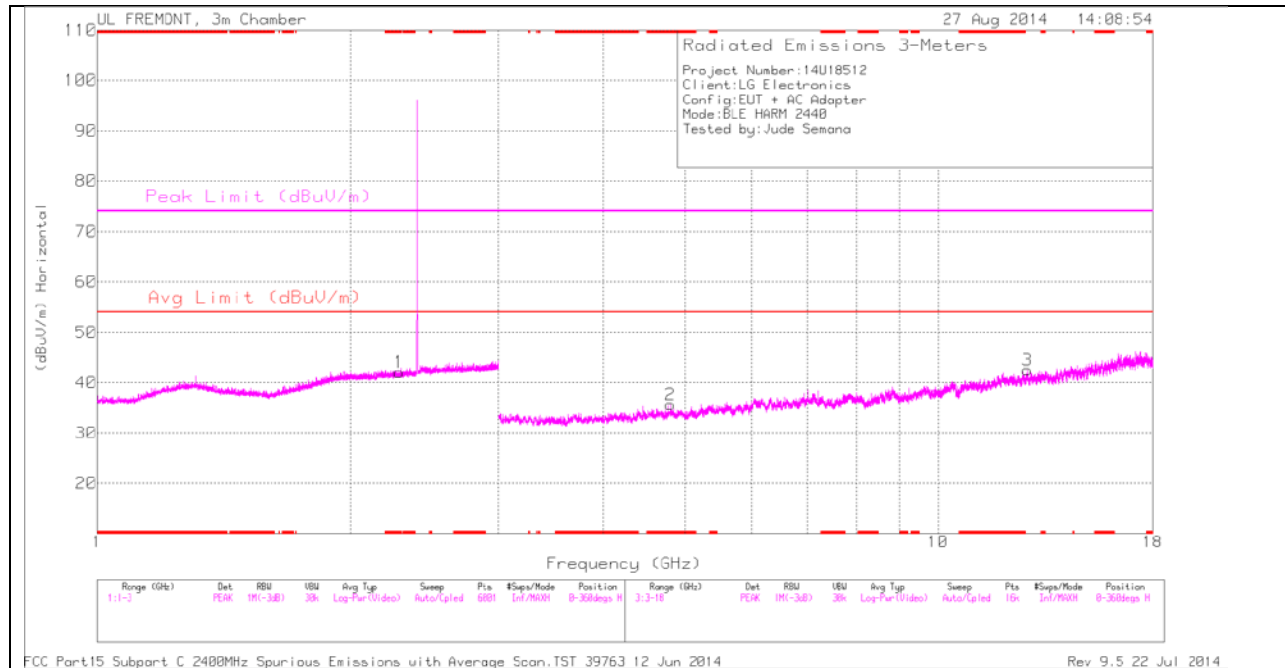
**LOW CHANNEL DATA**

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
2	* 4.804	32.55	PK	34.1	-30.3	36.35	-	-	74	-37.65	0-360	200	H
3	* 12.351	29.81	PK	39.1	-26.8	42.11	-	-	74	-31.89	0-360	200	H
4	* 3.699	31.96	PK	33.2	-30.8	34.36	-	-	74	-39.64	0-360	100	V
5	* 7.433	30.24	PK	35.7	-28.6	37.34	-	-	74	-36.66	0-360	200	V
6	* 11.984	28.3	PK	39	-25.8	41.5	-	-	74	-32.5	0-360	200	V
1	2.159	33.43	PK	31.6	-22.9	42.13	-	-	-	-	0-360	100	H

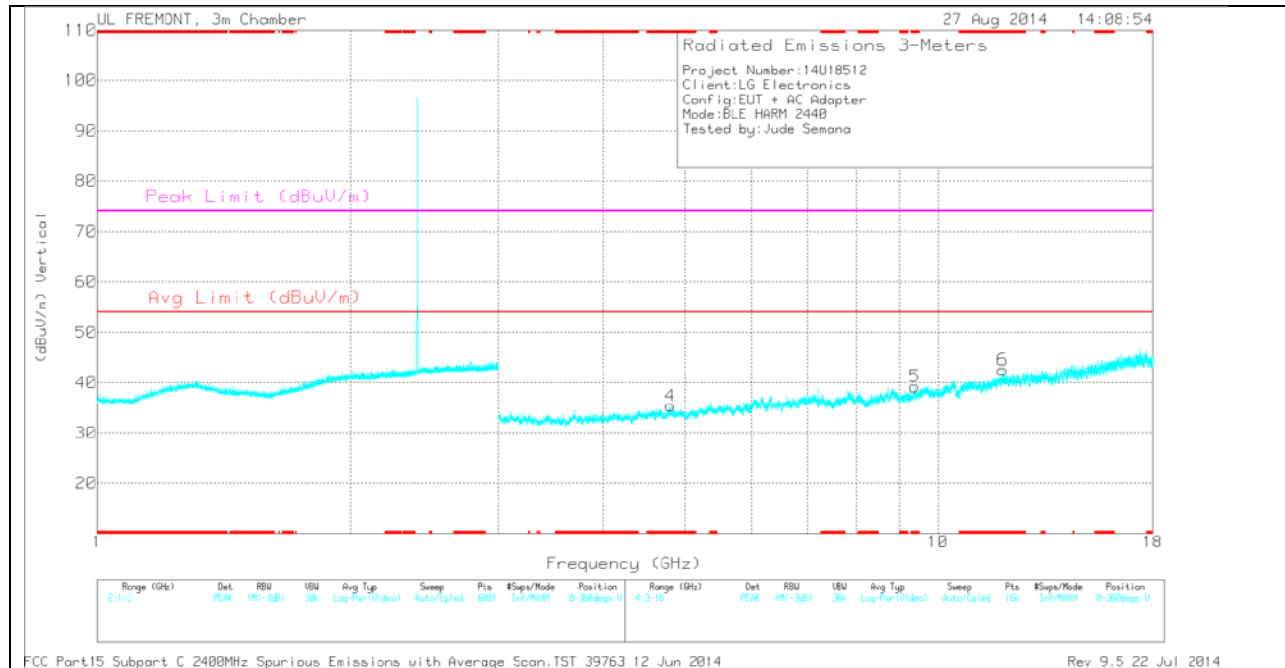
PK - Peak detector

### 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.

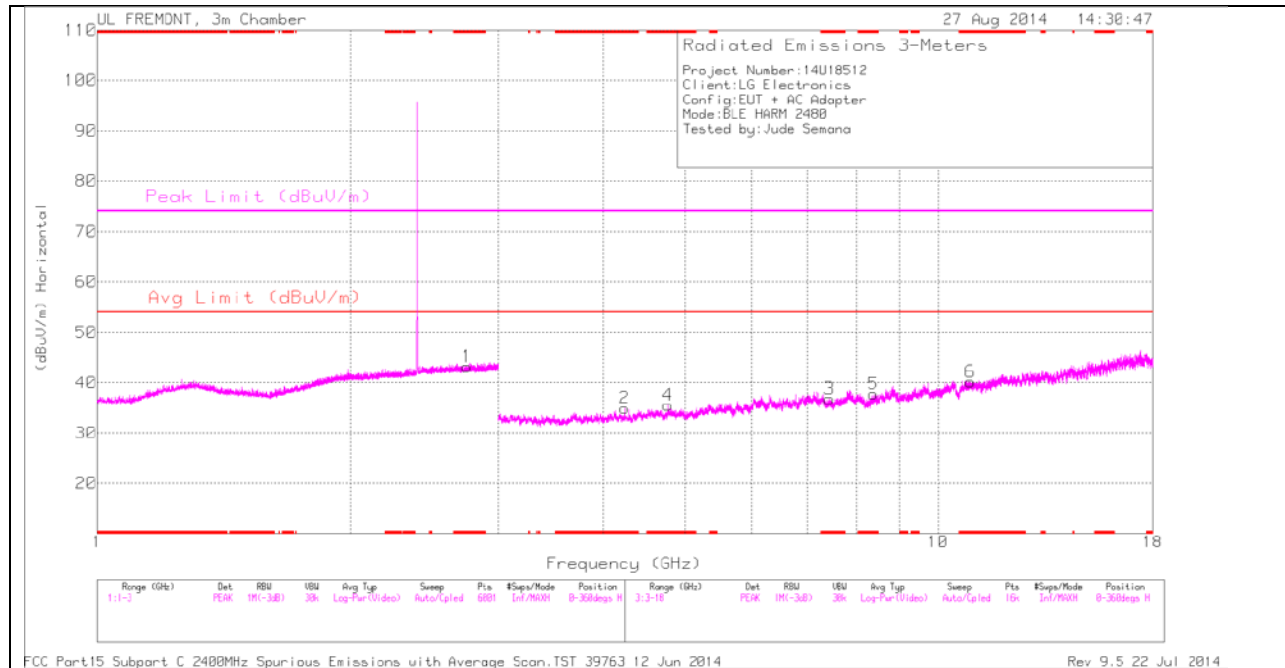
**MID CHANNEL DATA**

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cb/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	* 2.284	33.26	PK	31.8	-23	42.06	-	-	74	-31.94	0-360	200	H
2	* 4.804	31.85	PK	34.1	-30.3	35.65	-	-	74	-38.35	0-360	200	H
4	* 4.804	31.58	PK	34.1	-30.3	35.38	-	-	74	-38.62	0-360	200	V
5	* 9.387	28.64	PK	36.4	-25.8	39.24	-	-	74	-34.76	0-360	200	V
6	* 11.939	29.56	PK	39	-26	42.56	-	-	74	-31.44	0-360	200	V
3	12.774	30.1	PK	39.2	-26.8	42.5	-	-	-	-	0-360	100	H

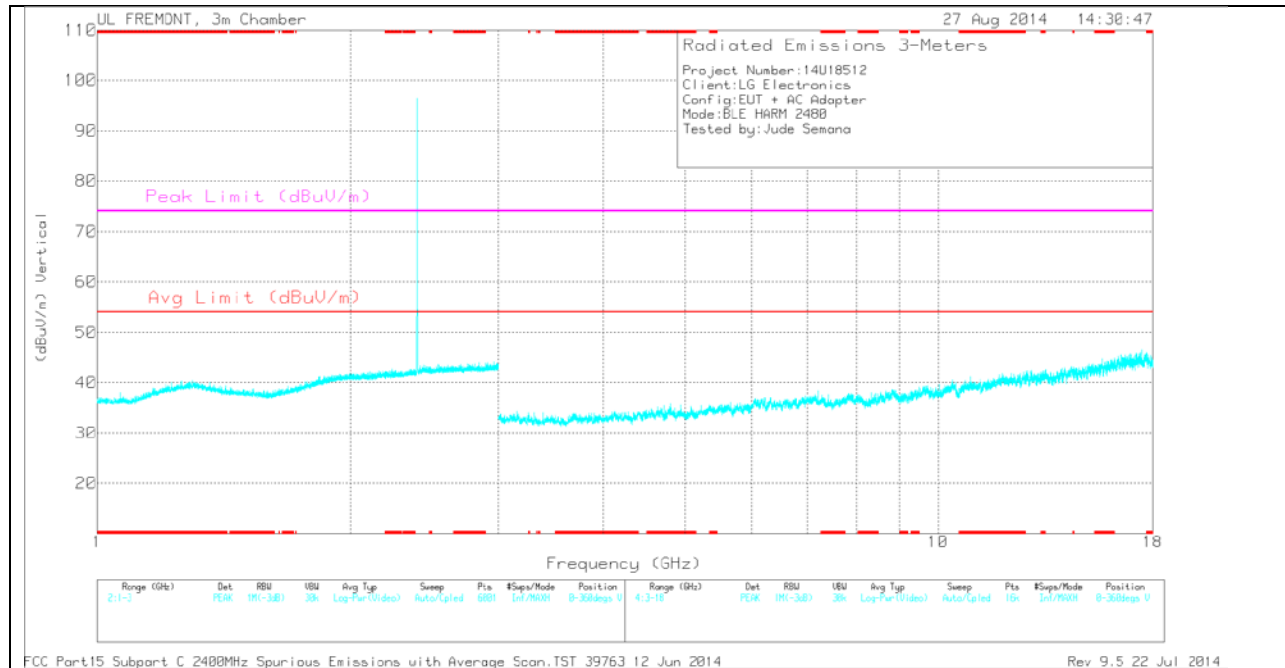
PK - Peak detector

### 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	* 2.752	33.39	PK	32.7	-22.9	43.19	-	-	74	-30.81	0-360	200	H
2	* 4.241	32.26	PK	33.5	-30.8	34.96	-	-	74	-39.04	0-360	200	H
3	* 7.424	29.7	PK	35.7	-28.6	36.8	-	-	74	-37.2	0-360	200	H
4	* 4.774	32.05	PK	34.1	-30.6	35.55	-	-	74	-38.45	0-360	200	H
5	* 8.384	28.76	PK	35.8	-26.8	37.76	-	-	74	-36.24	0-360	100	H
6	* 10.924	27.58	PK	37.9	-25.3	40.18	-	-	74	-33.82	0-360	200	H

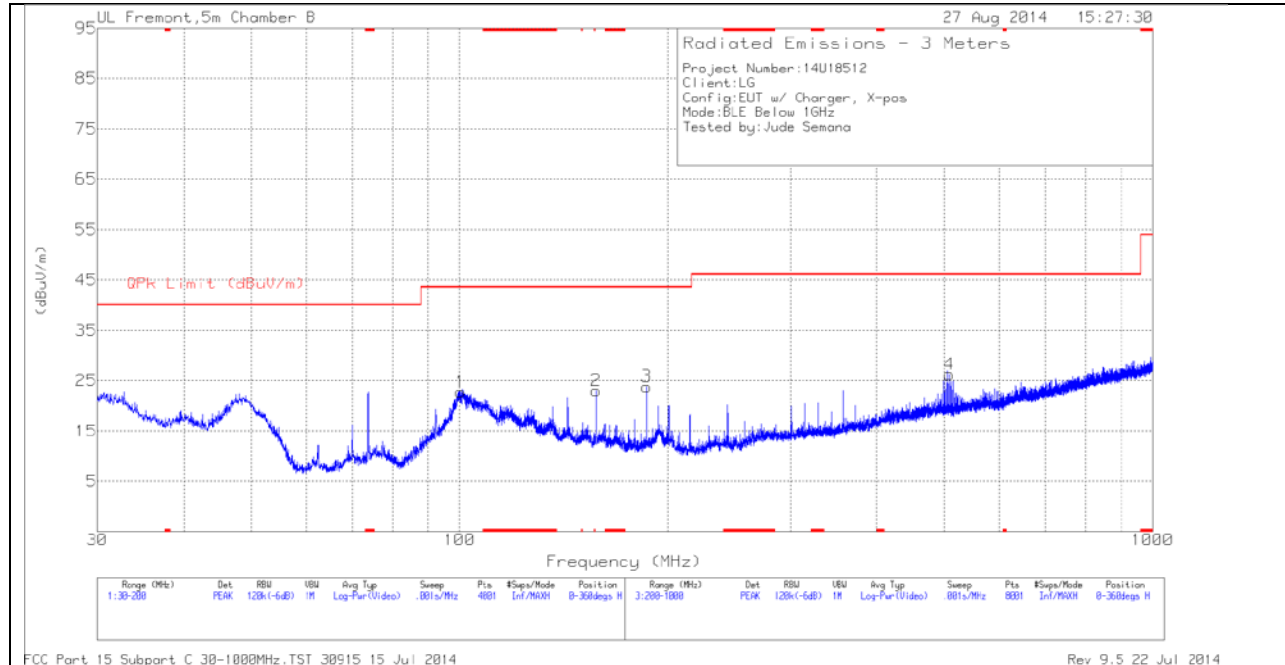
PK - Peak detector



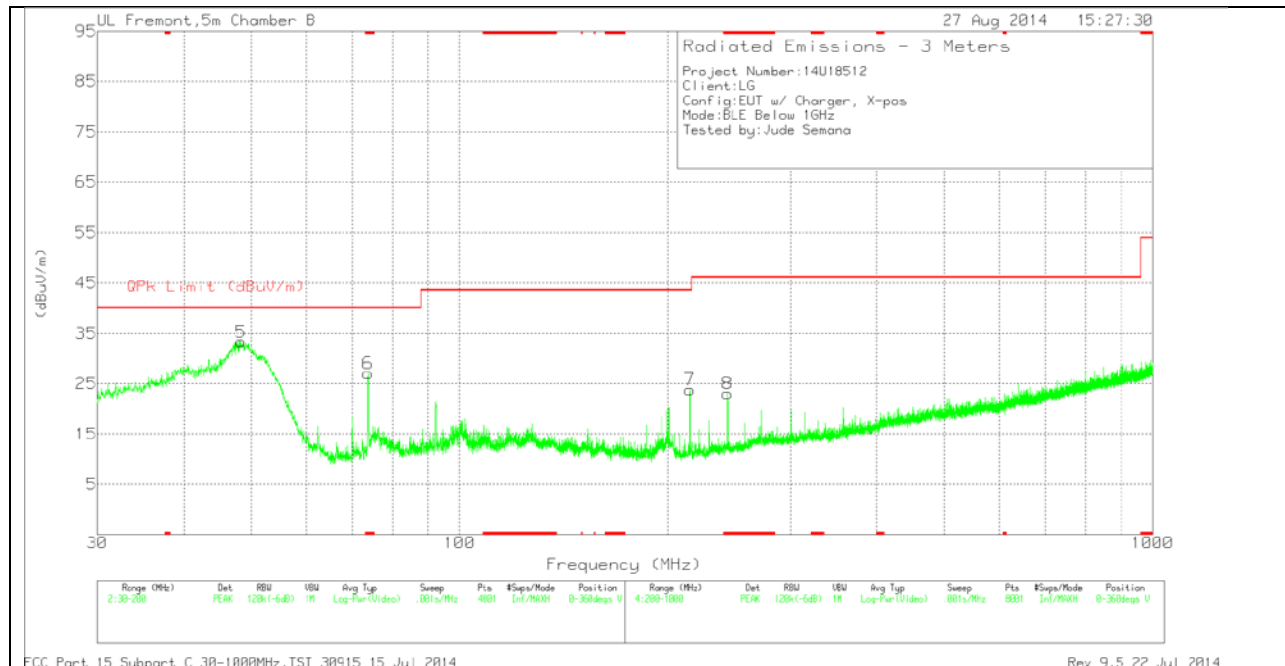
### 10.1. WORST-CASE BELOW 1 GHz

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

##### HORIZONTAL PLOT



##### VERTICAL PLOT



**BELOW 1 GHz TABLE**

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 73.7325	47.25	PK	8.1	-28.3	27.05	40	-12.95	0-360	101	V
8	* 243.4	37.74	PK	11.7	-26.4	23.04	46.02	-22.98	0-360	101	V
5	48.36	53.08	PK	8.7	-28.5	33.28	40	-6.72	0-360	101	V
1	100.38	40.57	PK	10.2	-28	22.77	43.52	-20.75	0-360	200	H
2	157.5	38.2	PK	12.2	-27.4	23	43.52	-20.52	0-360	200	H
3	186.145	39.93	PK	10.9	-27	23.83	43.52	-19.69	0-360	101	H
7	214.8	40	PK	10.6	-26.8	23.8	43.52	-19.72	0-360	200	V
4	508.8	34.22	PK	17.7	-25.7	26.22	46.02	-19.8	0-360	200	H

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

## 10.2. 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

ANSI C63.4 - 2009

### RESULTS

Please refer to project 14U18426 for details