



**FCC 47 CFR PART 15 SUBPART E**

**CERTIFICATION TEST REPORT**

**FOR**

**GSM/WCDMA/LTE PHABLET + BLUETOOTH, DTS/UNII a/b/g/n & NFC**

**MODEL NUMBER: LG-H740, LGH740, H740**

**FCC ID: ZNFH740**

**REPORT NUMBER: 15I21442-E5V1**

**ISSUE DATE: AUGUST 31, 2015**

*Prepared for*

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Revision History

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# 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** LG ELECTRONICS MOBILECOMM U.S.A., INC  
**EUT DESCRIPTION:** GSM/WCDMA/LTE PHABLET + BLUETOOTH, DTS/UNII a/b/g/n and NFC  
**MODEL:** LG-H740, LGH740, H740  
**SERIAL NUMBER:** 506CYBD000413  
**DATE TESTED:** AUGUST 4-10, 2015

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart E	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 E, and ANSI C63.10-2009.

### ANSI C63.10-2009 Deviation:

Radiated spurious emission above 1GHz was performed with the EUT elevated at 1.5m instead of 0.8m. 1.5m is the required height in ANSI C63.10:2013 as referenced by RSS GEN issue 4.

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

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

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

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

### 4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

### 4.3. MEASUREMENT UNCERTAINTY

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

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

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

## **5. EQUIPMENT UNDER TEST**

### **5.1. DESCRIPTION OF EUT**

The EUT is a GSM/WCDMA/LTE PHABLET + BLUETOOTH, DTS/UNII a/b/g/n and NFC

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

The transmitter has a maximum conducted output power as follows:

See original report for details.

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

The radio utilizes a PIFA antenna, with a maximum gain of -3.1 dBi.



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

Radiated emission below 1GHz 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 the X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in the X orientation.

Based on the baseline scan, the worst-case data rates were:

802.11a mode: 6 Mbps

802.11n HT20mode: MCS0

802.11n HT40mode: MCS0

## 5.5. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	LG	MCS-01WRE	RA560000025	N/A
Earphone	LG	-	-	-

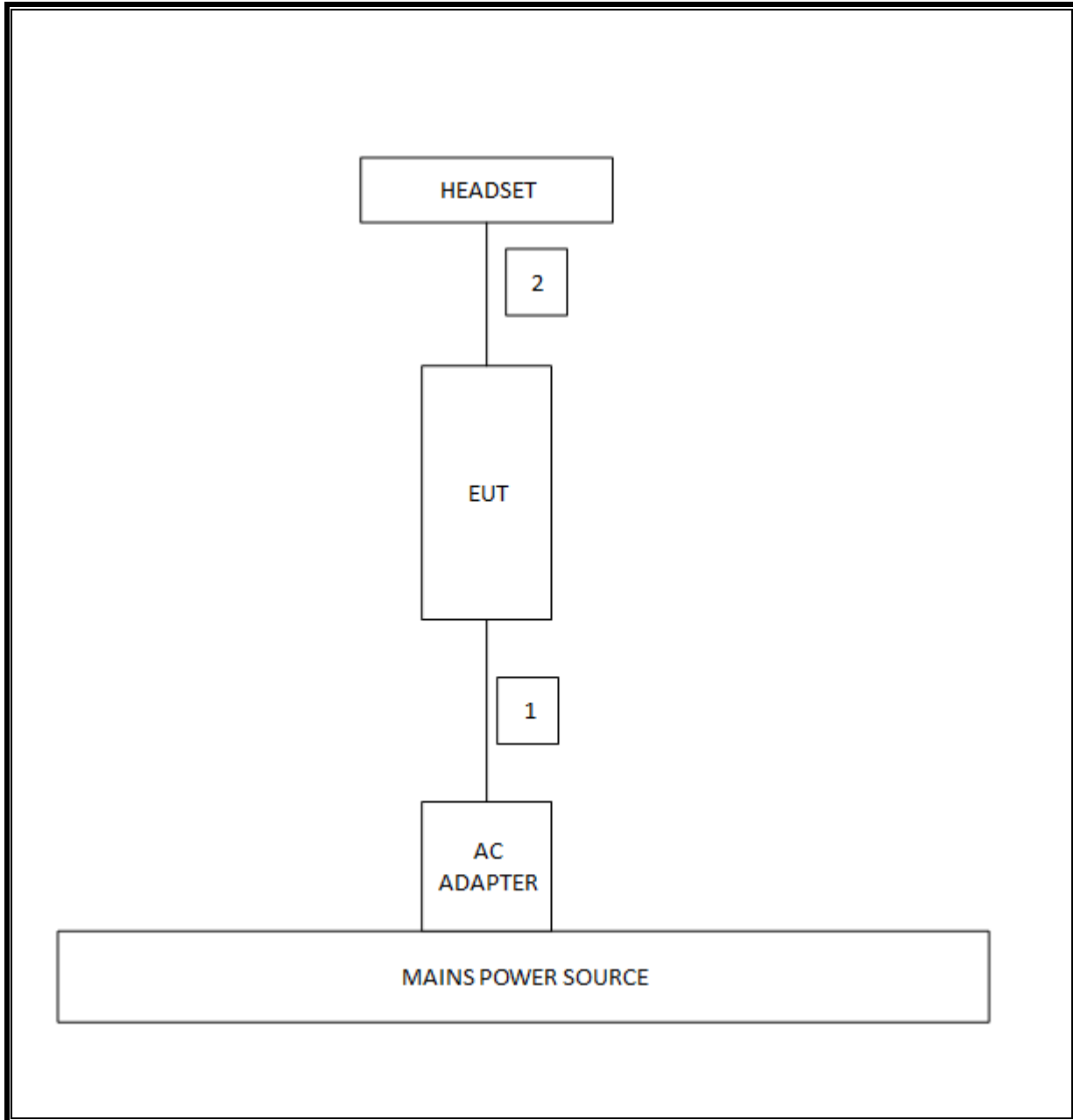
### I/O CABLES

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	1.0m	N/A

### TEST SETUP

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

**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	C01069	12/20/15
Spectrum Analyzer,9KHz-40GHz	HP	8564E	C00986	04/01/16
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	1000741	08/07/16
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/18/15
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15
Antenna, Horn, 1-18 GHz	ETS	3117	T119	01/05/16
Antenna, Horn, 1-18 GHz	ETS	3117	T136	03/03/16
Antenna, Horn, 1-18 GHz	ETS	3117	T345	03/03/16
Antenna, Horn,18- 26 GHz	ARA	MWH-1826/B	C00946	11/12/15
Antenna, Horn, 26-40 GHz	ARA	MWH-2640	C00891	06/28/16
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	T243	03/06/16
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
AC Power Supply, 2,500VA 45-500Hz	Elgar-Ametek	CW2501M	F00013	CNR
RF Preamplifier, 1GHz - 40GHz	Miteq	NSP4000-SP2	C00990	08/20/15
Attenuator / Switch driver	HP	11713A	F00204	CNR
Low Pass Filter 3GHz	Micro-Tronics	LPS17541	F00219	05/23/16
High Pass Filter 5GHz	Micro-Tronics	HPS17542	F00222	05/22/16
High Pass Filter 6GHz	Micro-Tronics	HPM17543	F00224	05/22/16
Radiated Software	UL	UL EMC	Ver 9.5, June 24, 2015	
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

C2PC reason: Please see LG-H740 change note for details.

FCC Part Section	RSS Section	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.407 (a)	RSS-247	Occupied Band width (26dB)	N/A	Conducted	Pass	See original
15.407	RSS-247 6.2.4	6dB Band width (5.8Ghz)	500KHz		Pass	See original
15.407 (a)(1)	RSS-247 6.2	TX Cond. Powe, 5.15-5.25	<24dBm (FCC)/ <23dBm or 10+10Log(OBW) (IC)		Pass	See original
15.407 (a)(2)	RSS-247 6.2	TX Cond. Powe, 5.25-5.35 & 5.47-5.725	<24dBm or 11+10Log(OBW)		Pass	See original
15.407 (a)(3)	RSS-247 6.2.4	TX Cond. Power 5.725-5.825	< 30dBm		Pass	See original
15.407 (a)(1)	RSS-247 6.2	PSD (5.2GHz)	<11dBm (FCC)/ <10dBm(IC)		Pass	See original
15.407 (a)(5)	RSS-247 6.2	PSD (5.3,5.5GHz)	<11dBm		Pass	See original
15.407 (a)(5)	RSS-247 6.2.4	PSD (5.8GHz)	30dBm per 500kHz		Pass	See original
15.207 (a)	RSS-GEN 8.8	AC Power Line conducted emissions	Section 10	Radiated	Pass	See original
15.407 (b) & 15.209	RSS-GEN 8.9/7	Radiated Spurious Emission	< 54dBuV/m		Pass	50.39 dBuV/m
15.407 (h)(2)	RSS-247 6.3	Dynamic Frequency Selection	N/A	Radiated / Conducted	Pass	N/A

## 8. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

### LIMITS

None; for reporting purposes only.

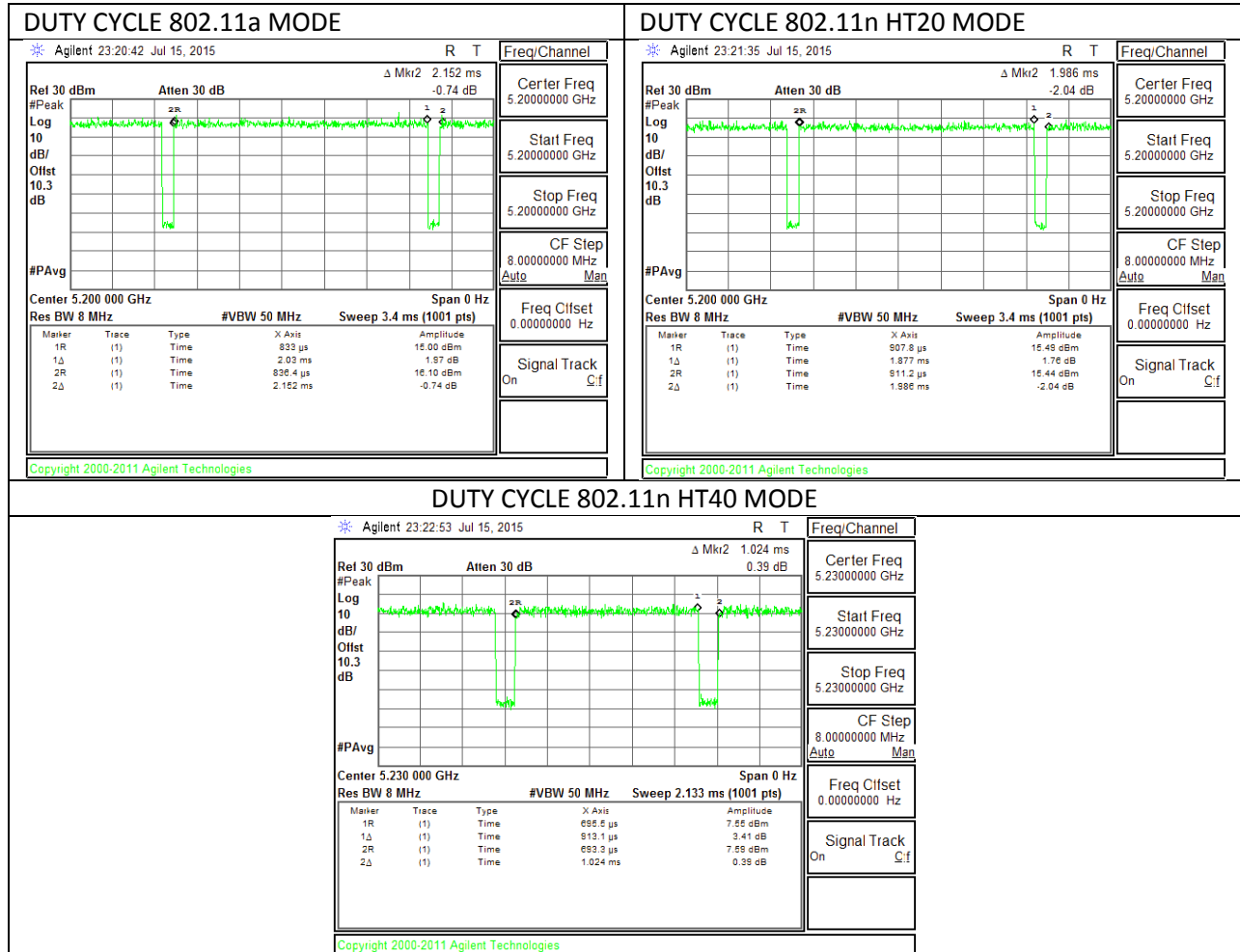
### PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

### 8.1. ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
802.11a	2.030	2.152	0.943	94.3%	0.25	0.493
802.11n HT20	1.877	1.986	0.945	94.5%	0.25	0.533
802.11n HT40	0.913	1.024	0.892	89.2%	0.50	1.095

## 8.2. DUTY CYCLE PLOTS



## 9. TRANSMITTER ABOVE 1 GHz

### LIMITS

FCC §15.205 and §15.209

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

### TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz and 150cm for above 1GHz. 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.

Reference to KDB 789033 UNII part G) 6) d) Method AD:

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor to the reading offset for average measurements.

The spectrum from 1GHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable 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.

### RESULTS

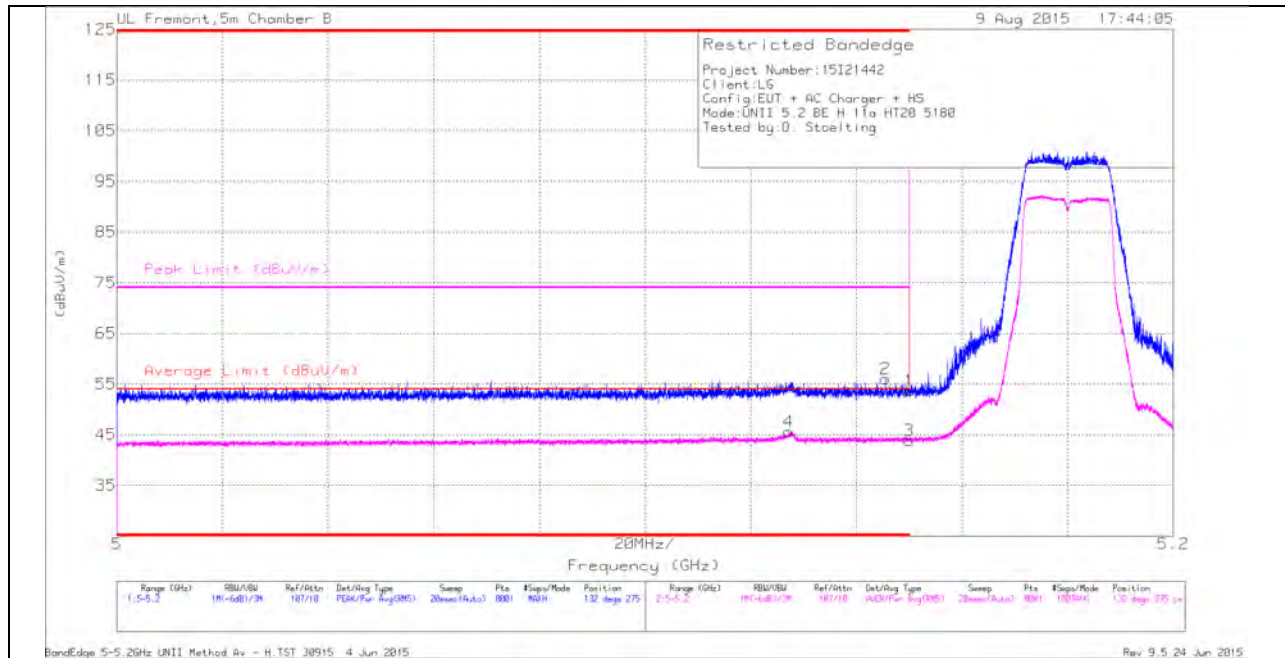


## 9.1. 5.2 GHz

### 9.1.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.2 GHz BAND

#### RESTRICTED BANDEDGE (LOW CHANNEL)

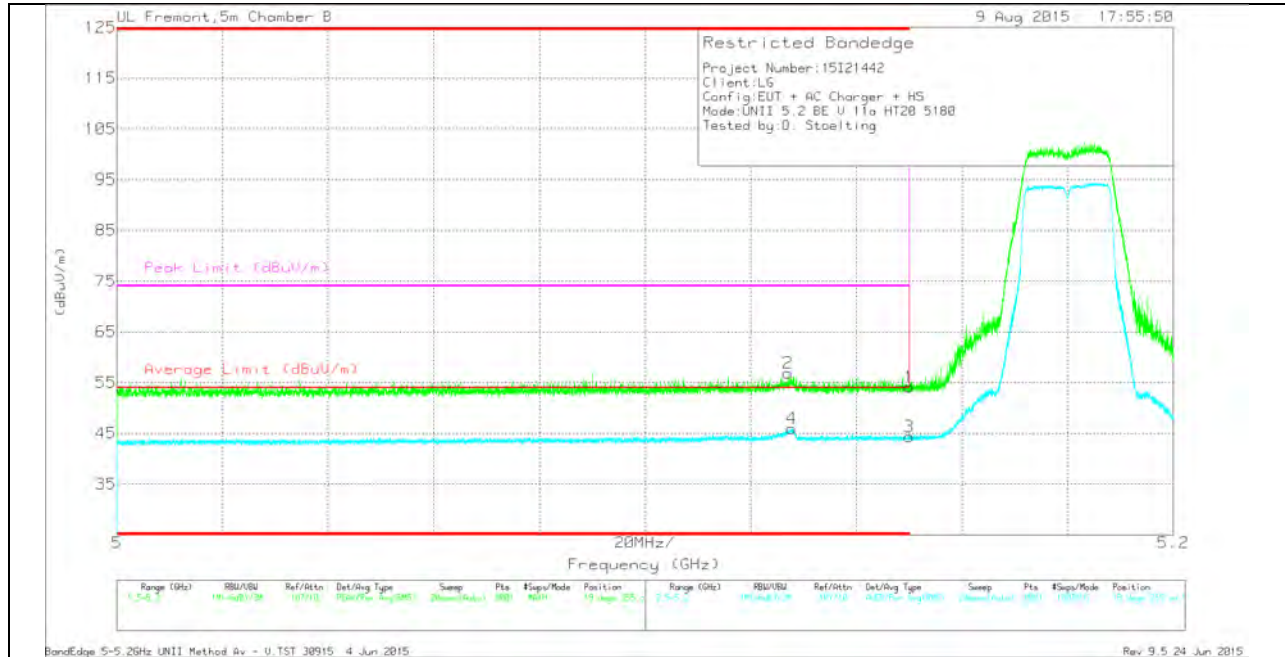
##### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Flt 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	* 5.15	41.56	Pk	34.1	-22	0	53.66	-	-	74	-20.34	132	275	H
2	* 5.145	43.93	Pk	34.1	-22	0	56.03	-	-	74	-17.97	132	275	H
3	* 5.15	31.52	RMS	34.1	-22	.25	43.87	-	-	-	-	132	275	H
4	* 5.127	33.25	RMS	34.1	-22	.25	45.6	-	-	-	-	132	275	H

**VERTICAL PEAK AND AVERAGE PLOT**

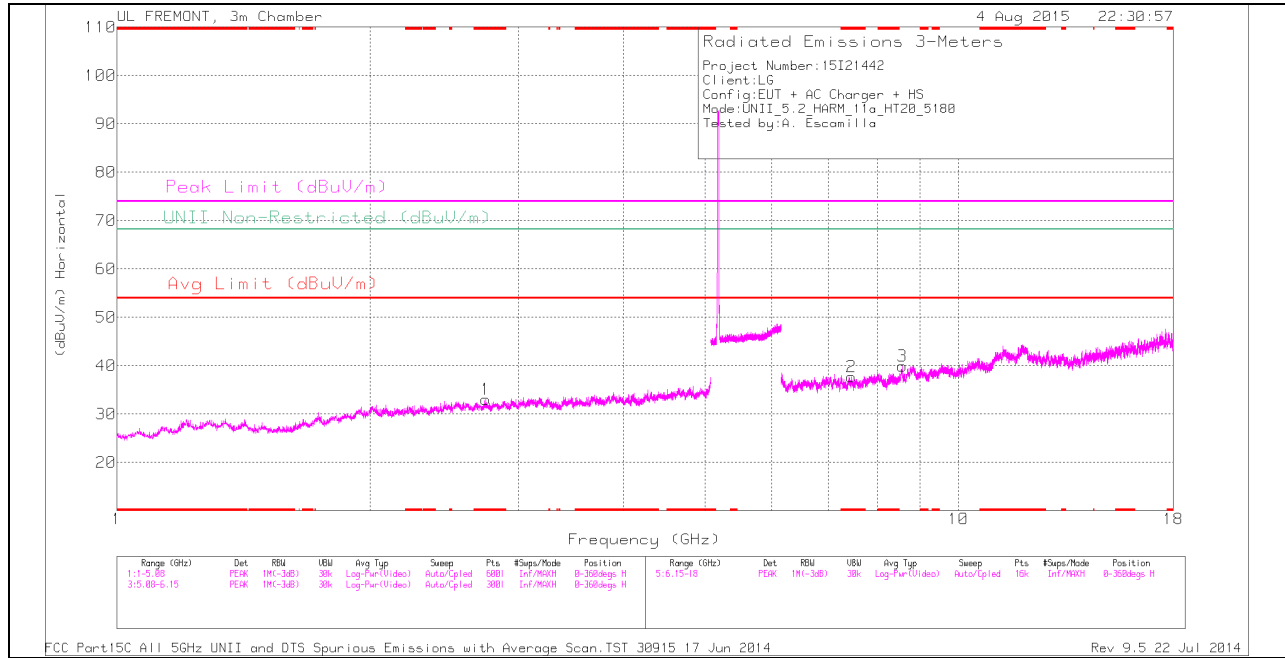


**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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
2	* 5.127	44.82	Pk	34.1	-22	0	56.92	-	-	74	-17.08	18	255	V
4	* 5.128	33.56	RMS	34.1	-22	.25	45.91	-	-	-	-	18	255	V
1	* 5.15	42.08	Pk	34.1	-22	0	54.18	-	-	74	-19.82	18	255	V
3	* 5.15	31.94	RMS	34.1	-22	.25	44.29	-	-	-	-	18	255	V

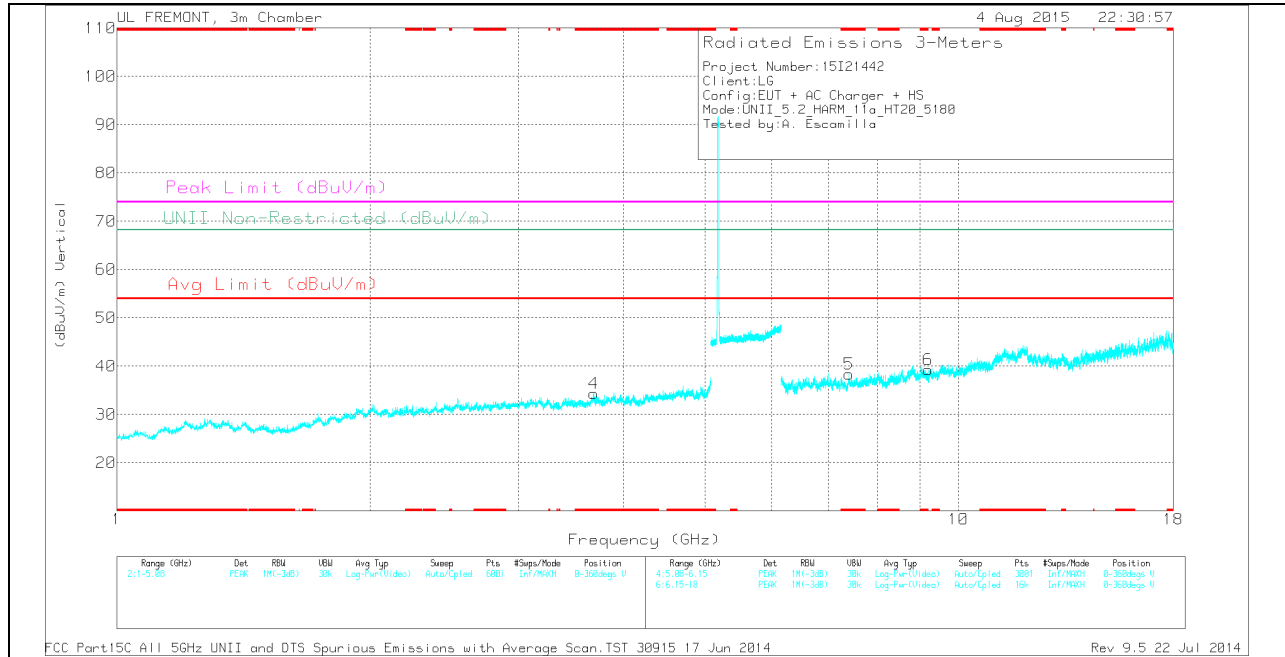
### HARMONICS AND SPURIOUS EMISSIONS

#### LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; 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 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL DATA**

TRACE MARKERS

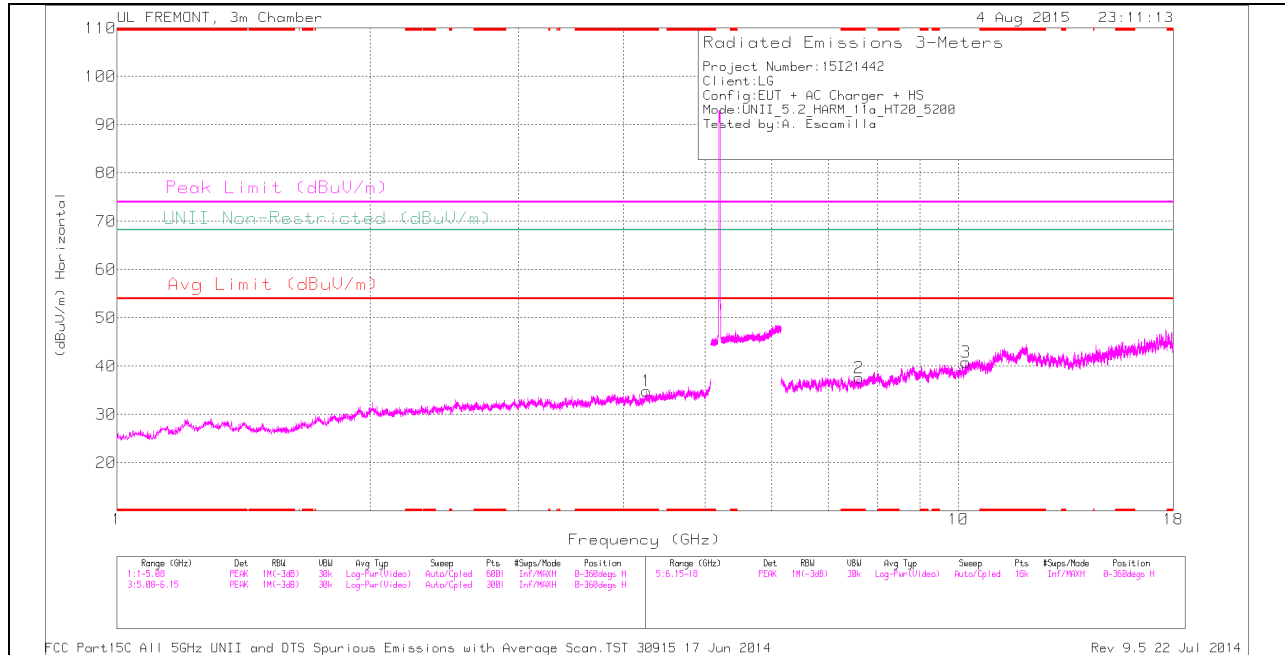
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cb/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.742	32.13	PK	32.4	-31.5	0	33.03	-	-	74	-40.97	-	-	0-360	200	H
4	* 3.69	31.37	PK	33	-30	0	34.37	-	-	74	-39.63	-	-	0-360	200	V
2	* 7.461	29.49	PK	35.7	-27.5	0	37.69	-	-	74	-36.31	-	-	0-360	200	H
5	* 7.409	30.14	PK	35.6	-27.4	0	38.34	-	-	74	-35.66	-	-	0-360	100	V
6	* 9.197	28.87	PK	36.2	-25.8	0	39.27	-	-	74	-34.73	-	-	0-360	200	V
3	8.571	28.89	PK	35.8	-24.8	0	39.89	-	-	-	-	68.2	-28.31	0-360	100	H

PK - Peak detector

RADIATED EMISSIONS

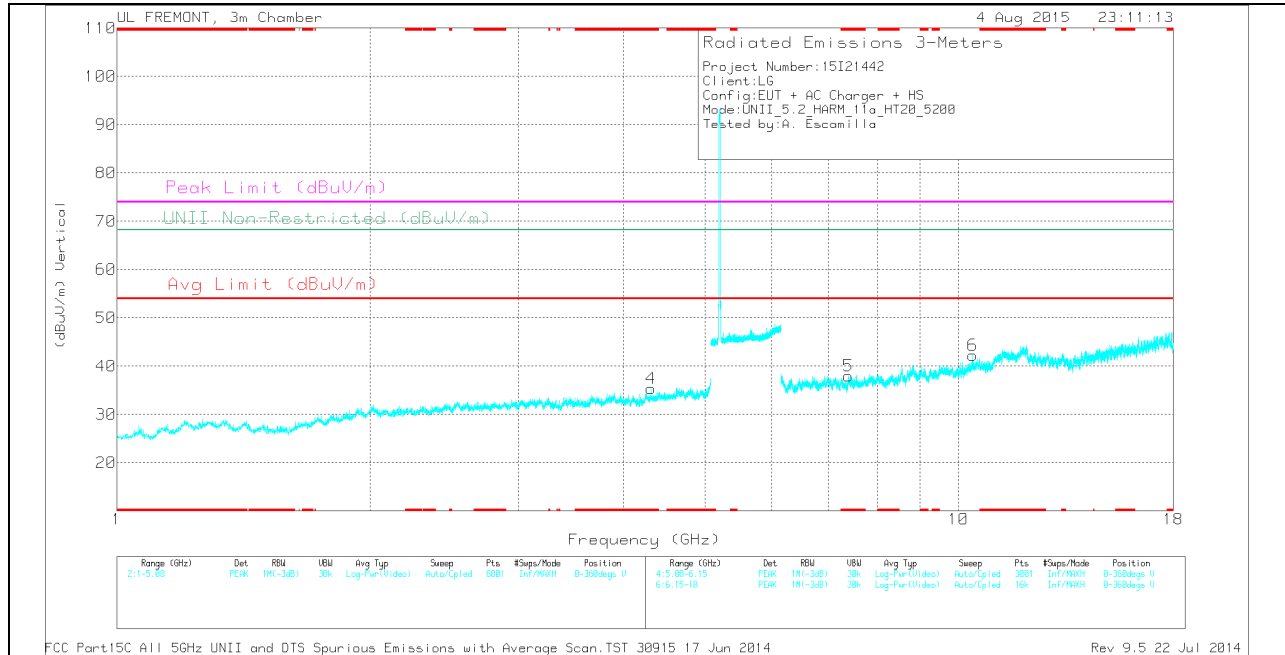
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cb/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.743	41.14	PK1	32.4	-31.5	0	42.04	-	-	74	-31.96	-	-	346	208	H
* 2.742	29.49	AD1	32.4	-31.5	.25	30.64	54	-23.36	-	-	-	-	346	208	H
* 3.69	40.11	PK1	33	-30	0	43.11	-	-	74	-30.89	-	-	307	231	V
* 3.688	28.83	AD1	33	-30	.25	32.08	54	-21.92	-	-	-	-	307	231	V
* 7.461	38.91	PK1	35.7	-27.5	0	47.11	-	-	74	-26.89	-	-	259	208	H
* 7.461	27.44	AD1	35.7	-27.5	.25	35.89	54	-18.11	-	-	-	-	259	208	H
* 7.411	39.26	PK1	35.6	-27.5	0	47.36	-	-	74	-26.64	-	-	108	184	V
* 7.409	27.65	AD1	35.6	-27.3	.25	36.2	54	-17.8	-	-	-	-	108	184	V
* 9.197	38.41	PK1	36.2	-25.8	0	48.81	-	-	74	-25.19	-	-	5	232	V
* 9.196	26.52	AD1	36.2	-25.8	.25	37.17	54	-16.83	-	-	-	-	5	232	V
8.57	25.81	AD1	35.8	-24.8	.25	37.06	-	-	-	-	-	-	216	118	H
8.571	37.13	PK1	35.8	-24.8	0	48.13	-	-	-	-	68.2	-20.07	216	118	H

**MID CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; 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/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.259	31.5	PK	33.4	-30	0	34.9	-	-	74	-39.1	-	-	0-360	100	H
4	* 4.309	31.23	PK	33.5	-29.4	0	35.33	-	-	74	-38.67	-	-	0-360	200	V
2	* 7.614	29.33	PK	35.7	-27.4	0	37.63	-	-	74	-36.37	-	-	0-360	200	H
5	* 7.403	29.85	PK	35.6	-27.5	0	37.95	-	-	74	-36.05	-	-	0-360	100	V
3	10.211	28.12	PK	37	-24.3	0	40.82	-	-	-	-	68.2	-27.38	0-360	200	H
6	10.4	29.28	PK	37.3	-24.3	0	42.28	-	-	-	-	68.2	-25.92	0-360	100	V

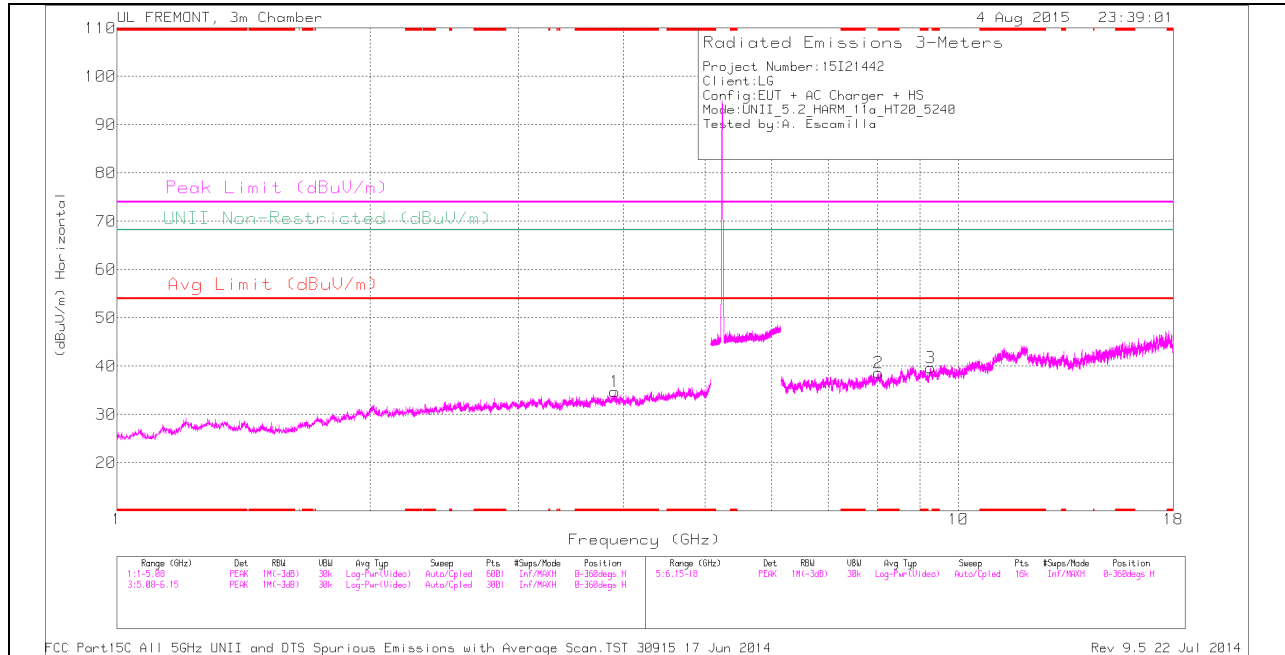
PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.261	40.01	PK1	33.4	-30	0	43.41	-	-	74	-30.59	-	-	25	151	H
* 4.257	28.74	AD1	33.4	-29.9	.25	32.49	54	-21.51	-	-	-	-	25	151	H
* 4.31	40.29	PK1	33.5	-29.4	0	44.39	-	-	74	-29.61	-	-	67	169	V
* 4.308	28.48	AD1	33.5	-29.4	.25	32.83	54	-21.17	-	-	-	-	67	169	V
* 7.615	38.58	PK1	35.7	-27.3	0	46.98	-	-	74	-27.02	-	-	112	200	H
* 7.613	27.11	AD1	35.7	-27.3	.25	35.76	54	-18.24	-	-	-	-	112	200	H
* 7.402	39.62	PK1	35.6	-27.6	0	47.62	-	-	74	-26.38	-	-	321	223	V
* 7.402	27.46	AD1	35.6	-27.6	.25	35.71	54	-18.29	-	-	-	-	321	223	V
10.209	36.13	PK1	37	-24.3	0	48.83	-	-	-	-	68.2	-19.37	171	257	H
10.211	24.8	AD1	37	-24.3	.25	37.75	-	-	-	-	-	-	171	257	H
10.401	36.33	PK1	37.3	-24.3	0	49.33	-	-	-	-	68.2	-18.87	352	129	V
10.402	25.21	AD1	37.3	-24.3	.25	38.46	-	-	-	-	-	-	352	129	V

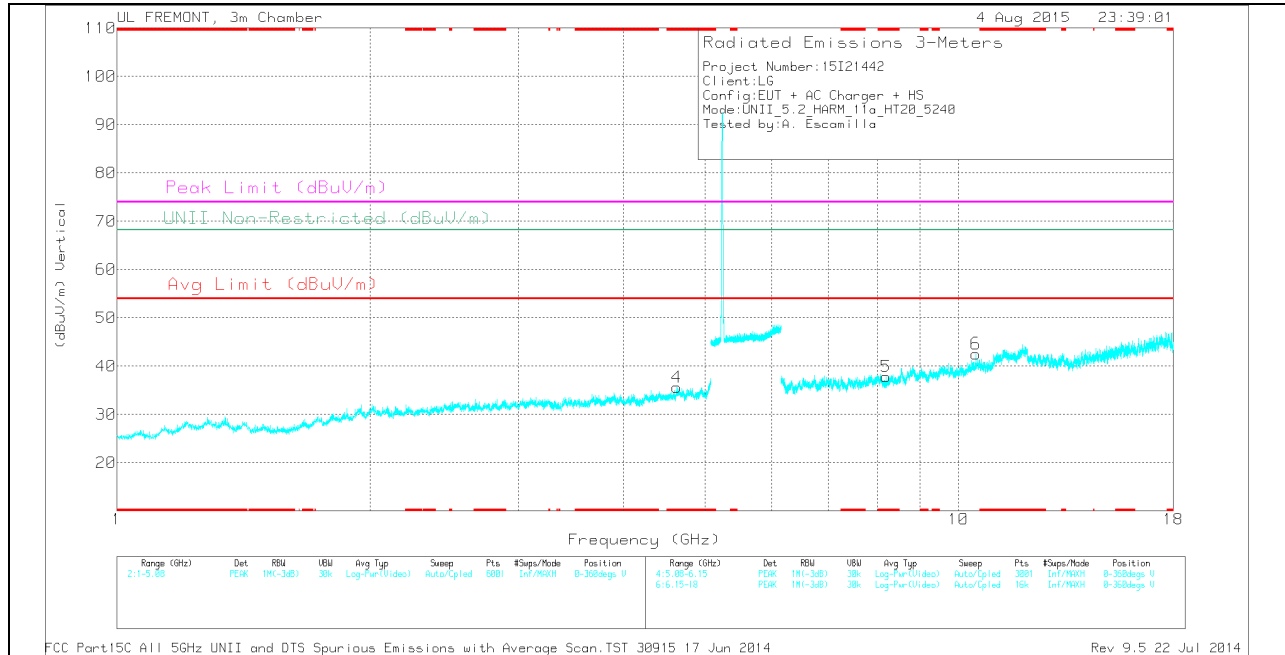


**HIGH CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; 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/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.906	31.81	PK	33.2	-30.3	0	34.71	-	-	74	-39.29	-	-	0-360	200	H
4	* 4.626	31.24	PK	33.9	-29.5	0	35.64	-	-	74	-38.36	-	-	0-360	100	V
2	* 8.03	29.53	PK	35.7	-26.6	0	38.63	-	-	74	-35.37	-	-	0-360	200	H
5	* 8.196	29.89	PK	35.8	-27.8	0	37.89	-	-	74	-36.11	-	-	0-360	200	V
3	9.272	27.94	PK	36.3	-24.6	0	39.64	-	-	-	-	68.2	-28.56	0-360	100	H
6	10.479	29.38	PK	37.4	-24.2	0	42.58	-	-	-	-	68.2	-25.62	0-360	100	V

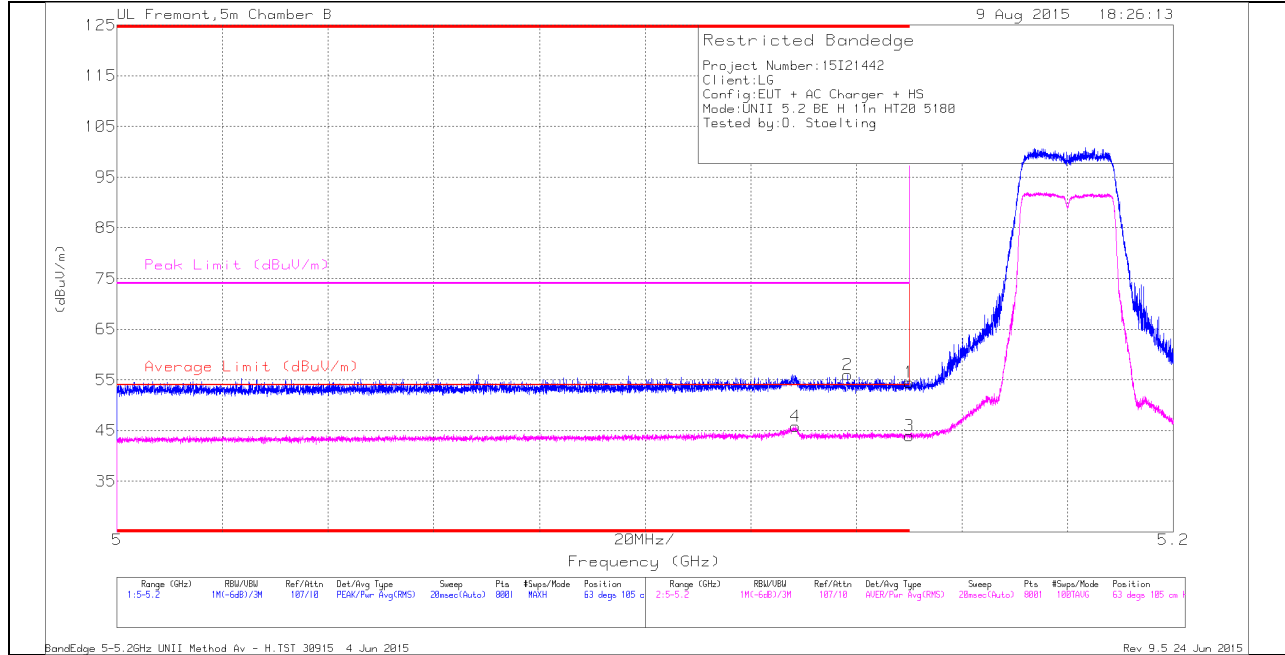
PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.906	40.92	PK1	33.2	-30.3	0	43.82	-	-	74	-30.18	-	-	338	176	H
* 3.906	29.1	AD1	33.2	-30.3	.25	32.25	54	-21.75	-	-	-	-	338	176	H
* 4.627	39.57	PK1	33.9	-29.5	0	43.97	-	-	74	-30.03	-	-	289	157	V
* 4.626	28.2	AD1	33.9	-29.5	.25	32.85	54	-21.15	-	-	-	-	289	157	V
* 8.031	38.28	PK1	35.7	-26.6	0	47.38	-	-	74	-26.62	-	-	190	175	H
* 8.032	26.53	AD1	35.7	-26.6	.25	35.88	54	-18.12	-	-	-	-	190	175	H
* 8.197	39.13	PK1	35.8	-27.8	0	47.13	-	-	74	-26.87	-	-	45	217	V
* 8.198	27.49	AD1	35.8	-27.8	.25	35.74	54	-18.26	-	-	-	-	45	217	V
9.271	37.52	PK1	36.3	-24.6	0	49.22	-	-	-	-	68.2	-18.98	134	144	H
9.272	25.59	AD1	36.3	-24.6	.25	37.54	-	-	-	-	-	-	134	144	H
10.48	36.44	PK1	37.4	-24.2	0	49.64	-	-	-	-	68.2	-18.56	16	144	V
10.481	25.23	AD1	37.4	-24.2	.25	38.68	-	-	-	-	-	-	16	144	V

**9.1.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.2 GHz BAND  
 RESTRICTED BANDEDGE (LOW CHANNEL)**

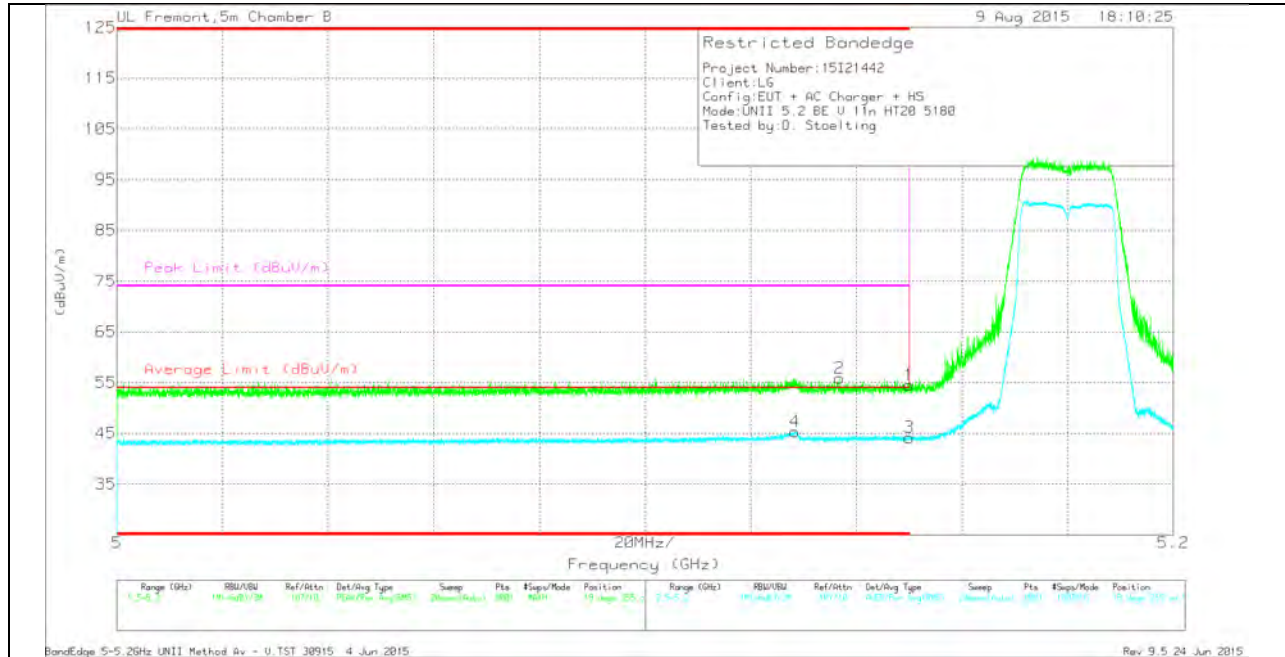
**HORIZONTAL PEAK AND AVERAGE PLOT**



**HORIZONTAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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
4	* 5.128	33.45	RMS	34.1	-22	.22	45.77	-	-	-	-	63	105	H
2	* 5.138	43.95	Pk	34.1	-22	0	56.05	-	-	74	-17.95	63	105	H
1	* 5.15	42.37	Pk	34.1	-22	0	54.47	-	-	74	-19.53	63	105	H
3	* 5.15	31.65	RMS	34.1	-22	.22	43.97	-	-	-	-	63	105	H

**VERTICAL PEAK AND AVERAGE PLOT**

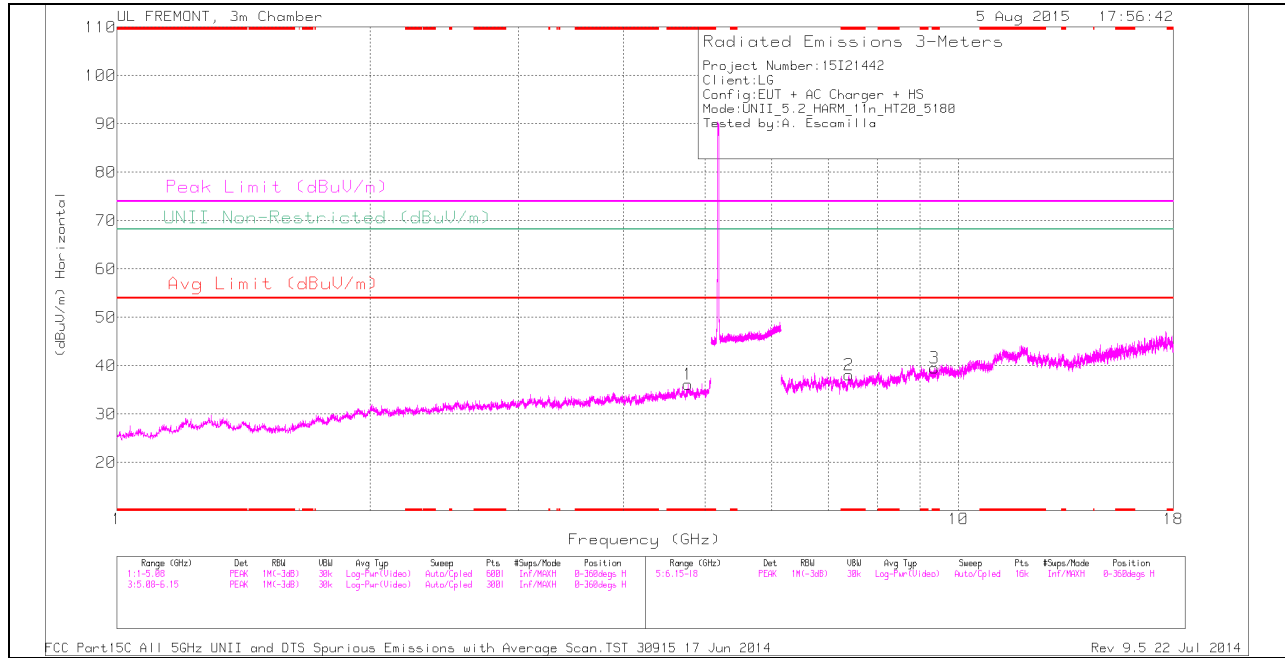


**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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
4	* 5.128	33.06	RMS	34.1	-22	.22	45.38	-	-	-	-	18	255	V
2	* 5.137	43.75	Pk	34.1	-22	0	55.85	-	-	74	-18.15	18	255	V
1	* 5.15	42.36	Pk	34.1	-22	0	54.46	-	-	74	-19.54	18	255	V
3	* 5.15	31.83	RMS	34.1	-22	.22	44.15	-	-	-	-	18	255	V

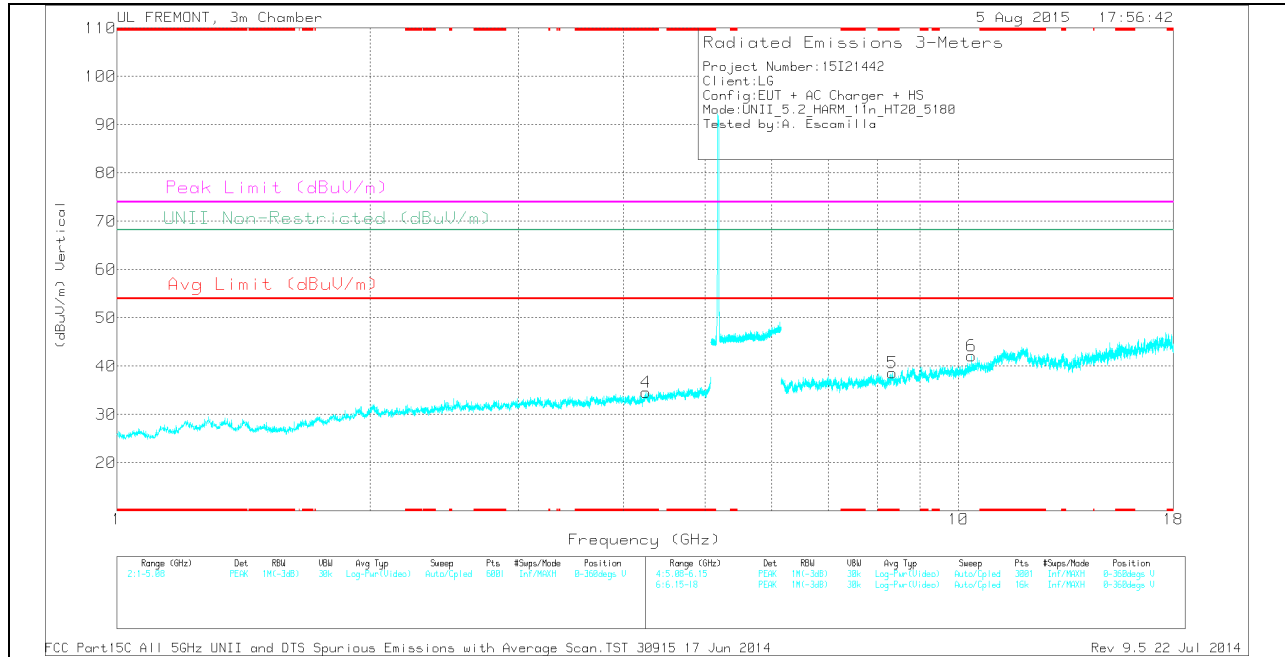
### HARMONICS AND SPURIOUS EMISSIONS

#### LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; 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 40GHz; 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/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.773	31.87	PK	34	-29.7	0	36.17	-	-	74	-37.83	-	-	0-360	100	H
4	* 4.252	31.15	PK	33.4	-30	0	34.55	-	-	74	-39.45	-	-	0-360	100	V
2	* 7.411	30.02	PK	35.6	-27.5	0	38.12	-	-	74	-35.88	-	-	0-360	100	H
3	* 9.36	27.45	PK	36.4	-24.3	0	39.55	-	-	74	-34.45	-	-	0-360	200	H
5	* 8.343	28.45	PK	35.8	-25.6	0	38.65	-	-	74	-35.35	-	-	0-360	200	V
6	10.359	28.87	PK	37.2	-24	0	42.07	-	-	-	-	68.2	-26.13	0-360	100	V

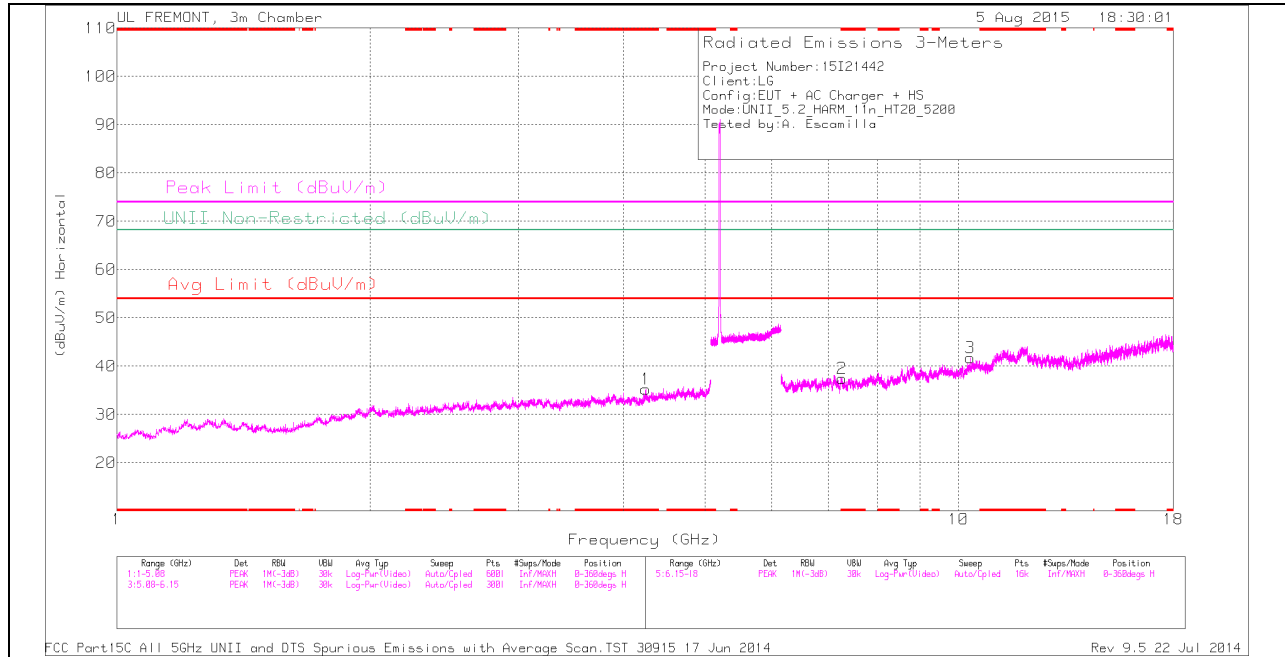
PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.775	40.91	PK1	34	-29.7	0	45.21	-	-	74	-28.79	-	-	12	141	H
* 4.773	29.4	AD1	34	-29.7	.22	33.92	54	-20.08	-	-	-	-	12	141	H
* 4.252	40.47	PK1	33.4	-30	0	43.87	-	-	74	-30.13	-	-	38	167	V
* 4.25	28.85	AD1	33.4	-30	.22	32.47	54	-21.53	-	-	-	-	38	167	V
* 7.412	39.68	PK1	35.6	-27.5	0	47.78	-	-	74	-26.22	-	-	112	148	H
* 7.412	27.56	AD1	35.6	-27.5	.22	35.88	54	-18.12	-	-	-	-	112	148	H
* 9.36	36.4	PK1	36.4	-24.3	0	48.5	-	-	74	-25.5	-	-	182	231	H
* 9.358	25.01	AD1	36.4	-24.3	.22	37.33	54	-16.67	-	-	-	-	182	231	H
* 8.344	37.95	PK1	35.8	-25.6	0	48.15	-	-	74	-25.85	-	-	119	212	V
* 8.341	26.63	AD1	35.8	-25.6	.22	37.05	54	-16.95	-	-	-	-	119	212	V
10.36	35.97	PK1	37.2	-24	0	49.17	-	-	-	-	68.2	-19.03	25	163	V
10.36	24.38	AD1	37.2	-24	.22	37.8	-	-	-	-	-	-	25	163	V

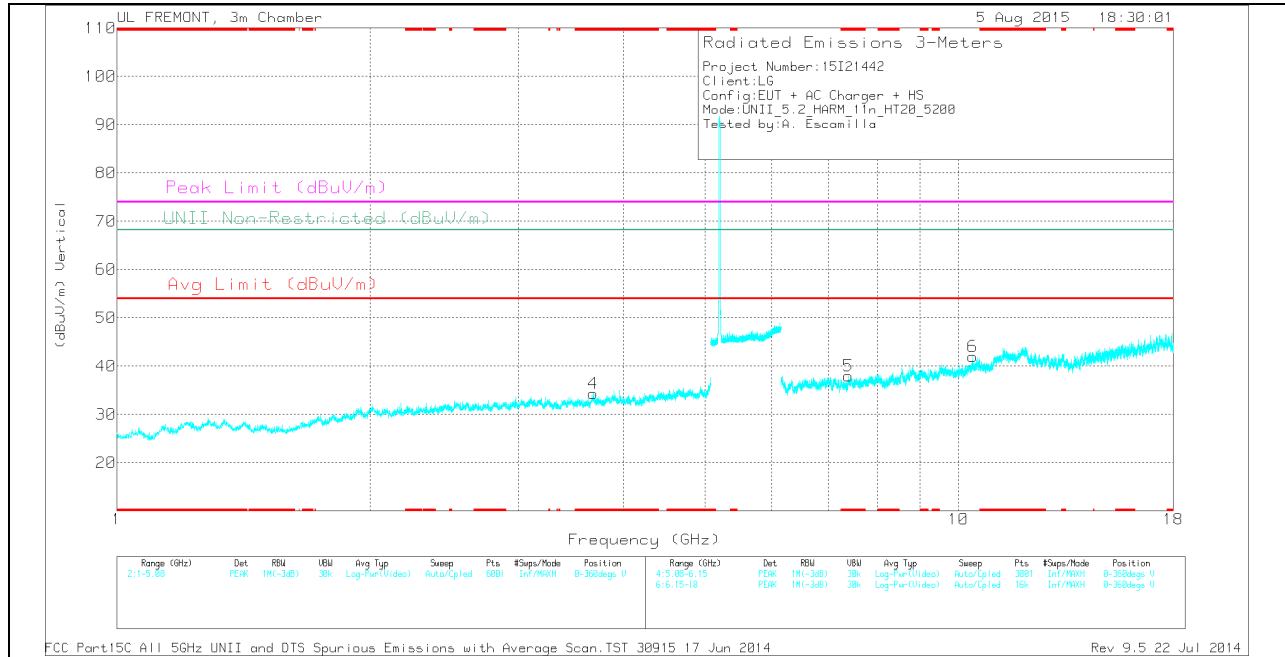


**MID CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL DATA**

TRACE MARKERS

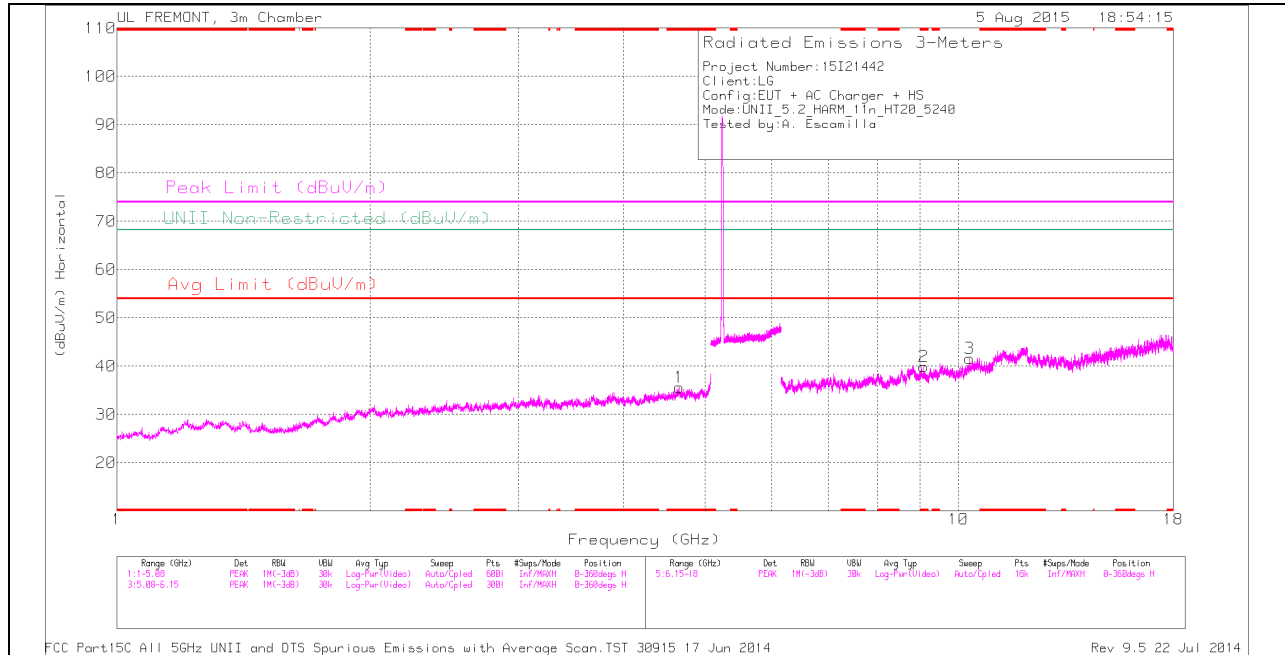
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.249	31.95	PK	33.4	-30.1	0	35.25	-	-	74	-38.75	-	-	0-360	100	H
4	* 3.679	31.09	PK	33	-29.7	0	34.39	-	-	74	-39.61	-	-	0-360	200	V
2	* 7.276	30.34	PK	35.6	-28.5	0	37.44	-	-	74	-36.56	-	-	0-360	100	H
5	* 7.399	30.05	PK	35.6	-27.7	0	37.95	-	-	74	-36.05	-	-	0-360	200	V
3	10.321	27.86	PK	37.1	-23.2	0	41.76	-	-	-	-	68.2	-26.44	0-360	100	H
6	10.4	28.98	PK	37.3	-24.3	0	41.98	-	-	-	-	68.2	-26.22	0-360	100	V

PK - Peak detector

RADIATED EMISSIONS

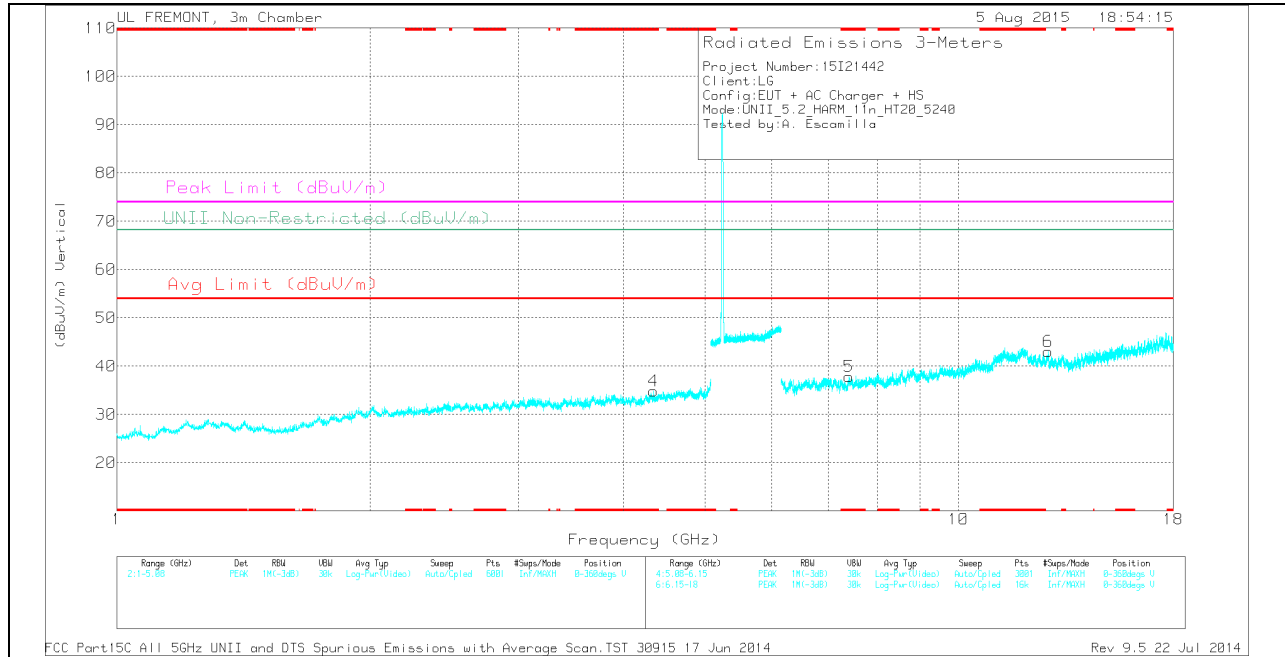
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.25	40.89	PK1	33.4	-30	0	44.29	-	-	74	-29.71	-	-	30	128	H
* 4.25	28.9	AD1	33.4	-30	.22	32.52	54	-21.48	-	-	-	-	30	128	H
* 3.677	40.26	PK1	33	-29.7	0	43.56	-	-	74	-30.44	-	-	59	155	V
* 3.68	28.6	AD1	33	-29.7	.22	32.12	54	-21.88	-	-	-	-	59	155	V
* 7.277	39.48	PK1	35.6	-28.5	0	46.58	-	-	74	-27.42	-	-	154	136	H
* 7.278	27.56	AD1	35.6	-28.5	.22	34.88	54	-19.12	-	-	-	-	154	136	H
* 7.398	39.69	PK1	35.6	-27.7	0	47.59	-	-	74	-26.41	-	-	175	200	V
* 7.398	27.38	AD1	35.6	-27.7	.22	35.5	54	-18.5	-	-	-	-	175	200	V
10.322	35.84	PK1	37.1	-23.3	0	49.64	-	-	-	-	68.2	-18.56	187	211	H
10.323	24.24	AD1	37.1	-23.3	.22	38.26	-	-	-	-	-	-	187	211	H
10.402	37.37	PK1	37.3	-24.3	0	50.37	-	-	-	-	68.2	-17.83	142	176	V
10.402	25.11	AD1	37.3	-24.3	.22	38.33	-	-	-	-	-	-	142	176	V

**HIGH CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; 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/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.655	31.16	PK	34	-29.5	0	35.66	-	-	74	-38.34	-	-	0-360	200	H
4	* 4.342	31.02	PK	33.6	-29.8	0	34.82	-	-	74	-39.18	-	-	0-360	200	V
2	* 9.096	27.91	PK	36.1	-24.1	0	39.91	-	-	74	-34.09	-	-	0-360	100	H
5	* 7.416	29.69	PK	35.6	-27.4	0	37.89	-	-	74	-36.11	-	-	0-360	200	V
3	10.305	27.87	PK	37.1	-23.4	0	41.57	-	-	-	-	68.2	-26.63	0-360	100	H
6	12.789	28.94	PK	39.1	-25	0	43.04	-	-	-	-	68.2	-25.16	0-360	200	V

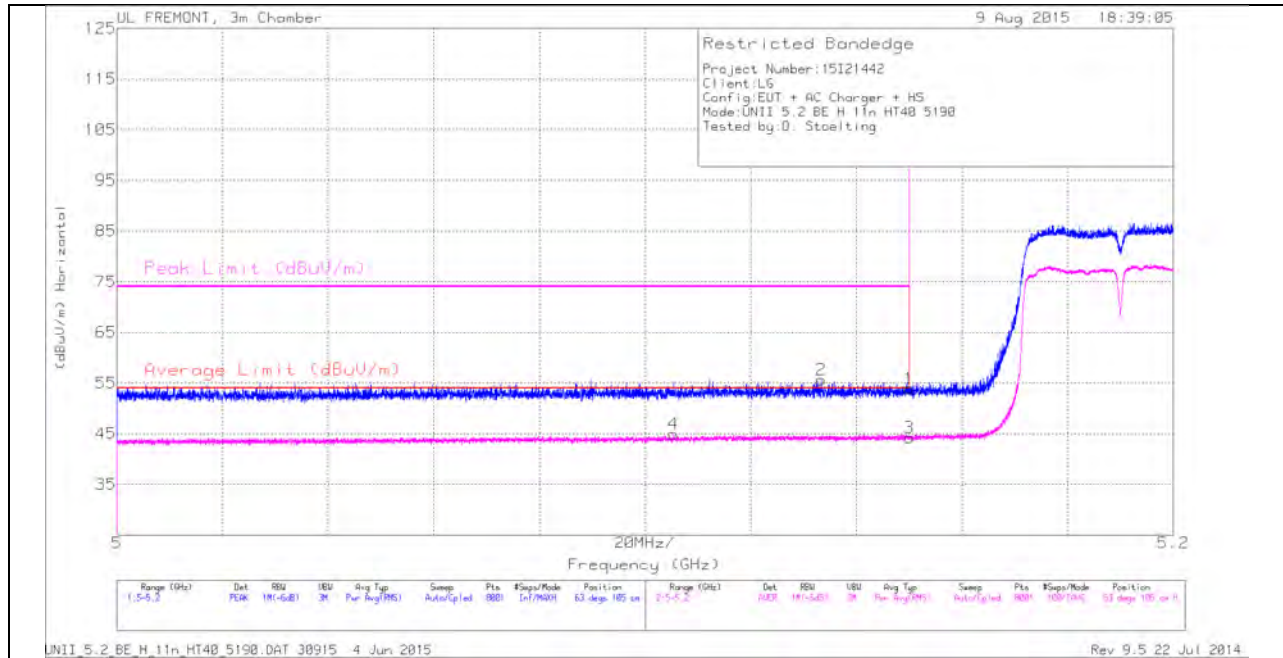
PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.656	39.99	PK1	34	-29.5	0	44.49	-	-	74	-29.51	-	-	184	141	H
* 4.654	28.72	AD1	34	-29.5	.22	33.44	54	-20.56	-	-	-	-	184	141	H
* 4.342	40.28	PK1	33.6	-29.8	0	44.08	-	-	74	-29.92	-	-	171	159	V
* 4.342	28.17	AD1	33.6	-29.8	.22	32.19	54	-21.81	-	-	-	-	171	159	V
* 9.098	36.38	PK1	36.1	-24.1	0	48.38	-	-	74	-25.62	-	-	136	126	H
* 9.095	25.32	AD1	36.1	-24	.22	37.64	54	-16.36	-	-	-	-	136	126	H
* 7.415	38.97	PK1	35.6	-27.5	0	47.07	-	-	74	-26.93	-	-	322	244	V
* 7.417	27.42	AD1	35.6	-27.4	.22	35.84	54	-18.16	-	-	-	-	322	244	V
10.304	35.42	PK1	37.1	-23.4	0	49.12	-	-	-	-	68.2	-19.08	240	204	H
10.306	24.22	AD1	37.1	-23.3	.22	38.24	-	-	-	-	-	-	240	204	H
12.788	25.96	AD1	39.1	-25	.22	40.28	-	-	-	-	-	-	358	202	V
12.79	37.73	PK1	39.1	-25	0	51.83	-	-	-	-	68.2	-16.37	358	202	V

### 9.1.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

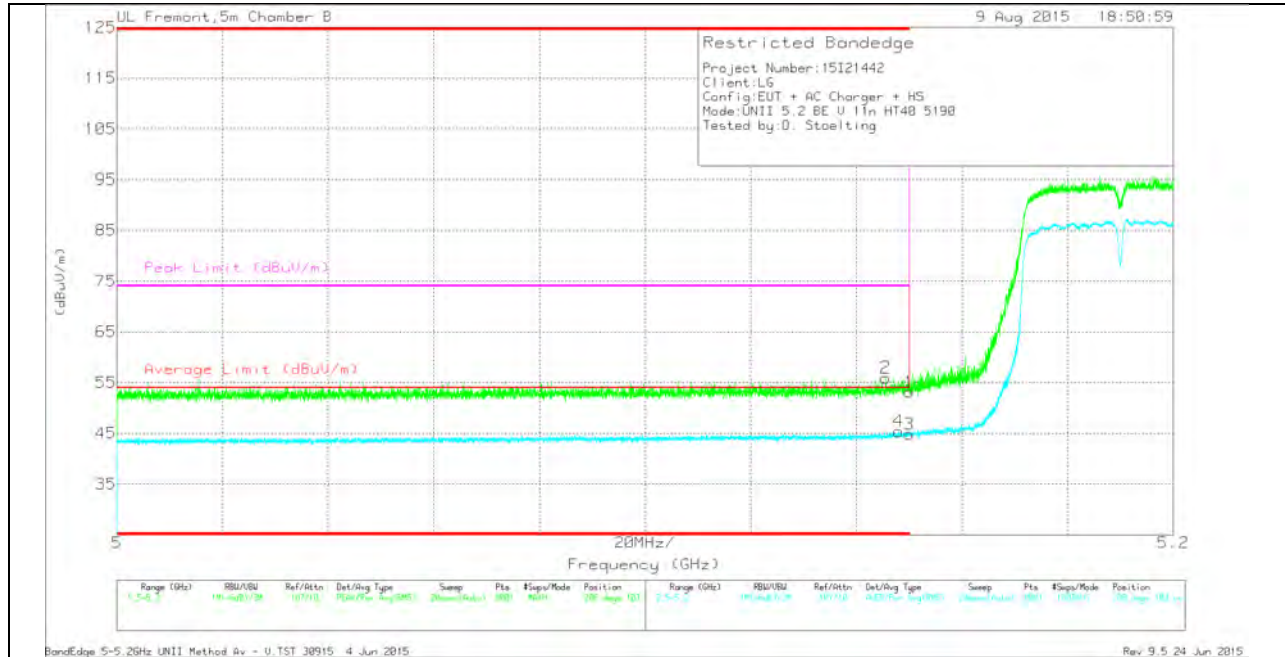
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

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
4	5.105	32.56	RMS	34	-22.1	.51	44.97	54	-9.03	-	-	63	105	H
2	5.133	43.58	PK	34.1	-22	0	55.68	-	-	74	-18.32	63	105	H
1	5.15	41.79	PK	34.1	-22	0	53.89	-	-	74	-20.11	63	105	H
3	5.15	31.59	RMS	34.1	-22	.51	44.2	54	-9.8	-	-	63	105	H

**VERTICAL PEAK AND AVERAGE PLOT**



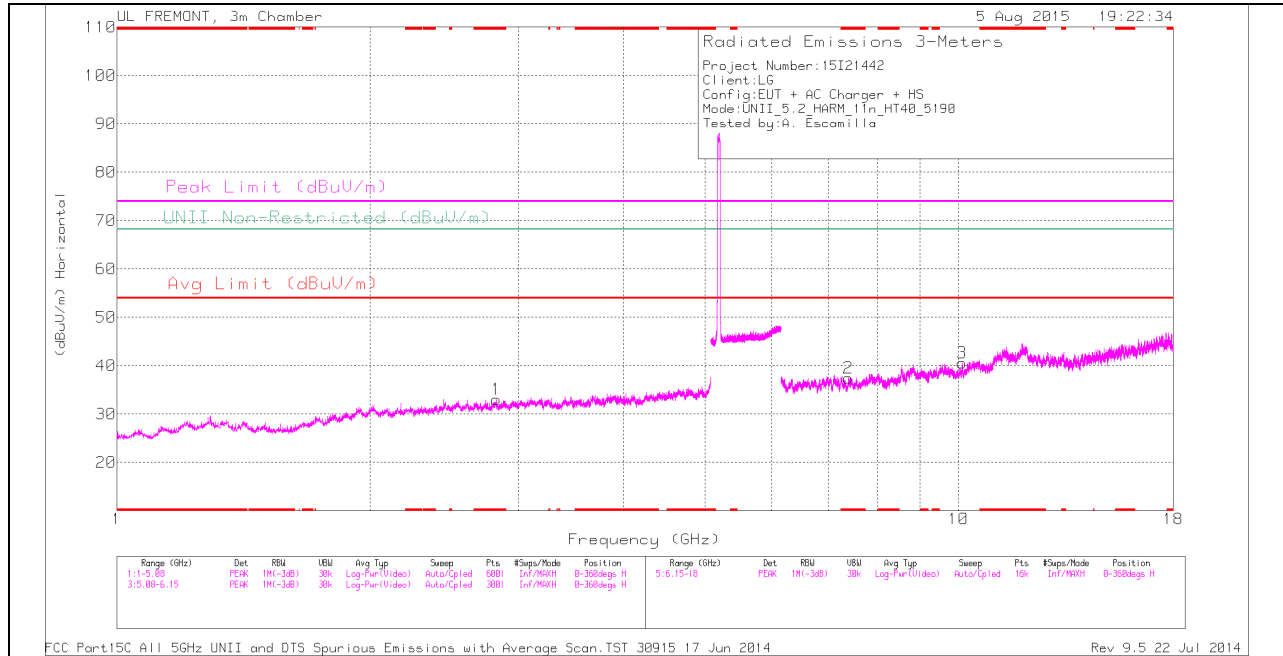
**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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
2	* 5.146	43.84	Pk	34.1	-22	0	55.94	-	-	74	-18.06	208	103	V
4	* 5.148	32.78	RMS	34.1	-22	.51	45.39	-	-	-	-	208	103	V
1	* 5.15	41.02	Pk	34.1	-22	0	53.12	-	-	74	-20.88	208	103	V
3	* 5.15	32.2	RMS	34.1	-22	.51	44.81	-	-	-	-	208	103	V



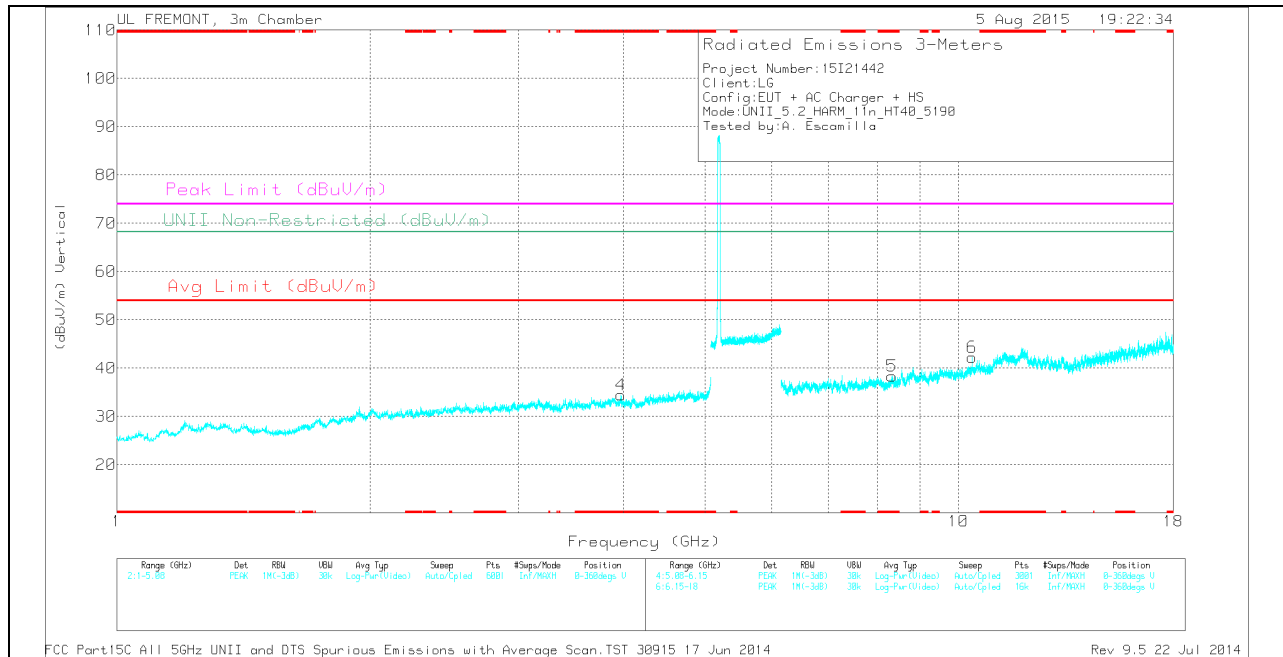
### HARMONICS AND SPURIOUS EMISSIONS

#### LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; 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 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL DATA**

TRACE MARKERS

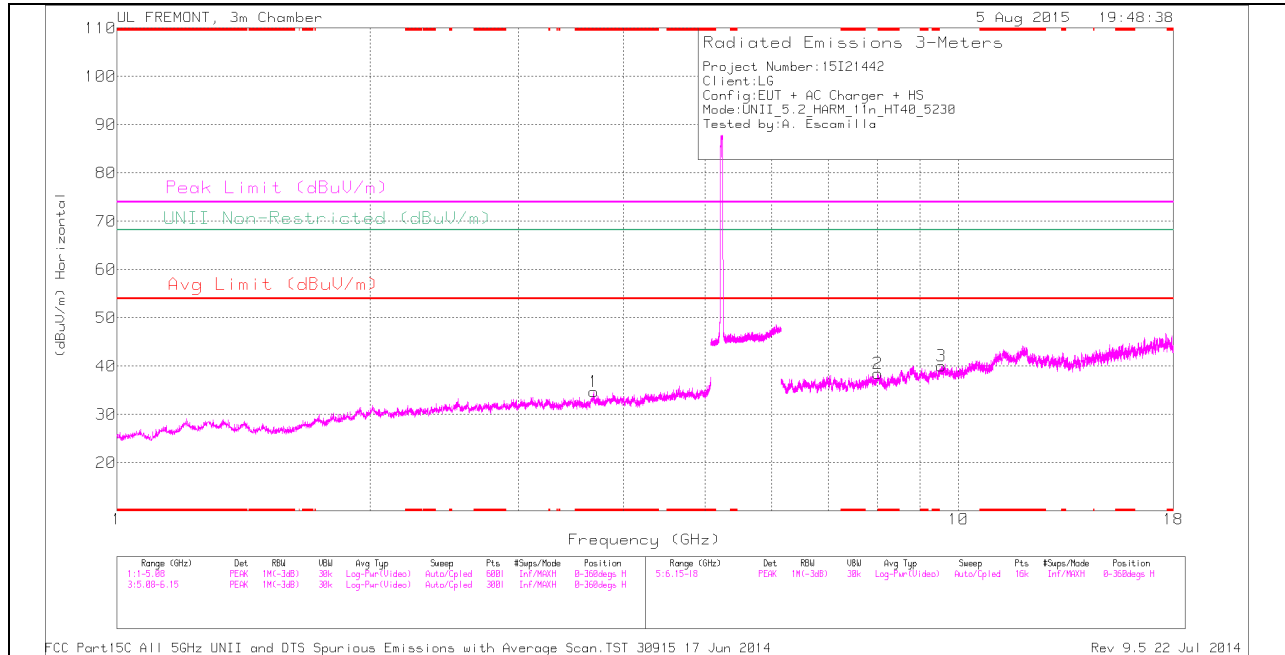
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.824	32.29	PK	32.6	-31.8	0	33.09	-	-	74	-40.91	-	-	0-360	100	H
4	* 3.973	32.29	PK	33.2	-31	0	34.49	-	-	74	-39.51	-	-	0-360	200	V
2	* 7.398	29.56	PK	35.6	-27.7	0	37.46	-	-	74	-36.54	-	-	0-360	200	H
5	* 8.337	28.2	PK	35.8	-25.6	0	38.4	-	-	74	-35.6	-	-	0-360	200	V
3	10.1	26.93	PK	37	-23.4	0	40.53	-	-	-	-	68.2	-27.67	0-360	100	H
6	10.38	28.9	PK	37.2	-23.8	0	42.3	-	-	-	-	68.2	-25.9	0-360	100	V

PK - Peak detector

RADIATED EMISSIONS

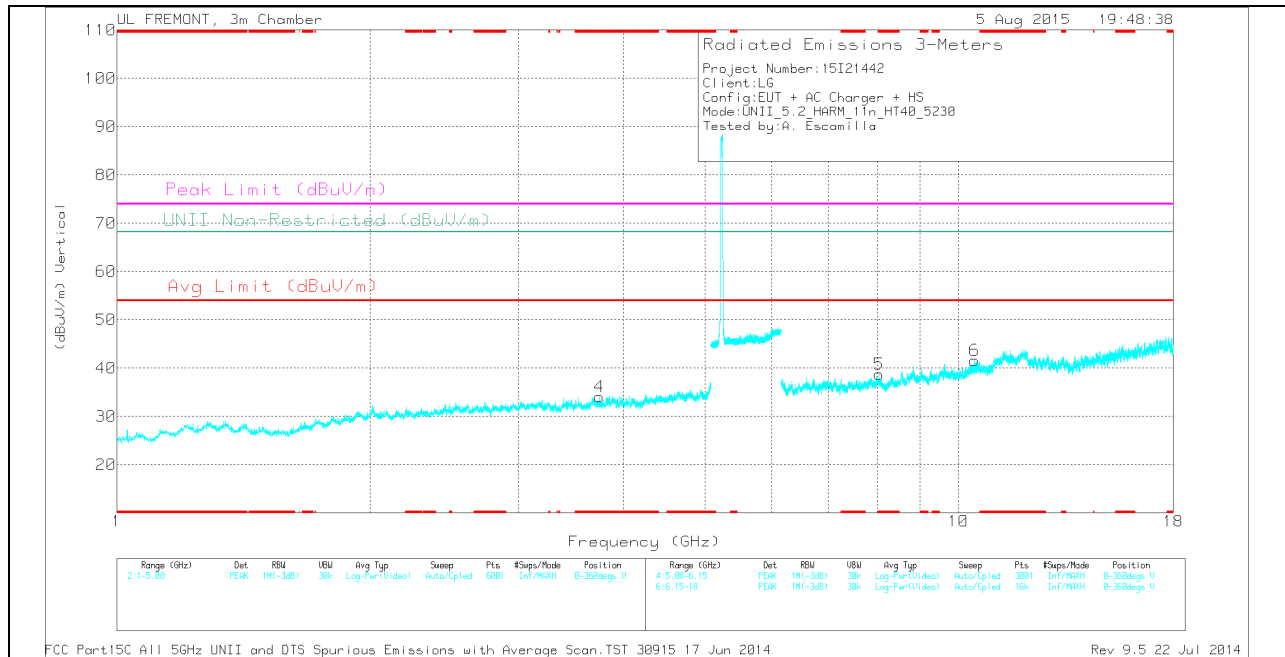
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.825	41.12	PK1	32.6	-31.7	0	42.02	-	-	74	-31.98	-	-	347	134	H
* 2.824	29.38	AD1	32.6	-31.8	.51	30.69	54	-23.31	-	-	-	-	347	134	H
* 3.972	40.66	PK1	33.2	-30.9	0	42.96	-	-	74	-31.04	-	-	328	175	V
* 3.973	29.37	AD1	33.2	-30.9	.51	32.18	54	-21.82	-	-	-	-	328	175	V
* 7.398	38.8	PK1	35.6	-27.7	0	46.7	-	-	74	-27.3	-	-	276	193	H
* 7.399	27.49	AD1	35.6	-27.7	.51	35.9	54	-18.1	-	-	-	-	276	193	H
* 8.336	38.09	PK1	35.8	-25.6	0	48.29	-	-	74	-25.71	-	-	187	192	V
* 8.335	26.42	AD1	35.8	-25.6	.51	37.13	54	-16.87	-	-	-	-	187	192	V
10.098	36.47	PK1	37	-23.4	0	50.07	-	-	-	-	68.2	-18.13	198	174	H
10.099	24.96	AD1	37	-23.4	.51	39.07	-	-	-	-	-	-	198	174	H
10.38	36.59	PK1	37.2	-23.8	0	49.99	-	-	-	-	68.2	-18.21	55	145	V
10.38	26.97	AD1	37.2	-23.8	.51	40.88	-	-	-	-	-	-	55	145	V

**MID CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; 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/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.689	31.73	PK	33	-30	0	34.73	-	-	74	-39.27	-	-	0-360	200	H
4	* 3.747	31.67	PK	33.1	-30.7	0	34.07	-	-	74	-39.93	-	-	0-360	100	V
2	* 8.027	29.49	PK	35.7	-26.7	0	38.49	-	-	74	-35.51	-	-	0-360	100	H
5	* 8.047	29.47	PK	35.7	-26.4	0	38.77	-	-	74	-35.23	-	-	0-360	200	V
3	9.54	27.48	PK	36.6	-24	0	40.08	-	-	-	-	68.2	-28.12	0-360	100	H
6	10.459	28.49	PK	37.4	-24.3	0	41.59	-	-	-	-	68.2	-26.61	0-360	100	V

PK - Peak detector

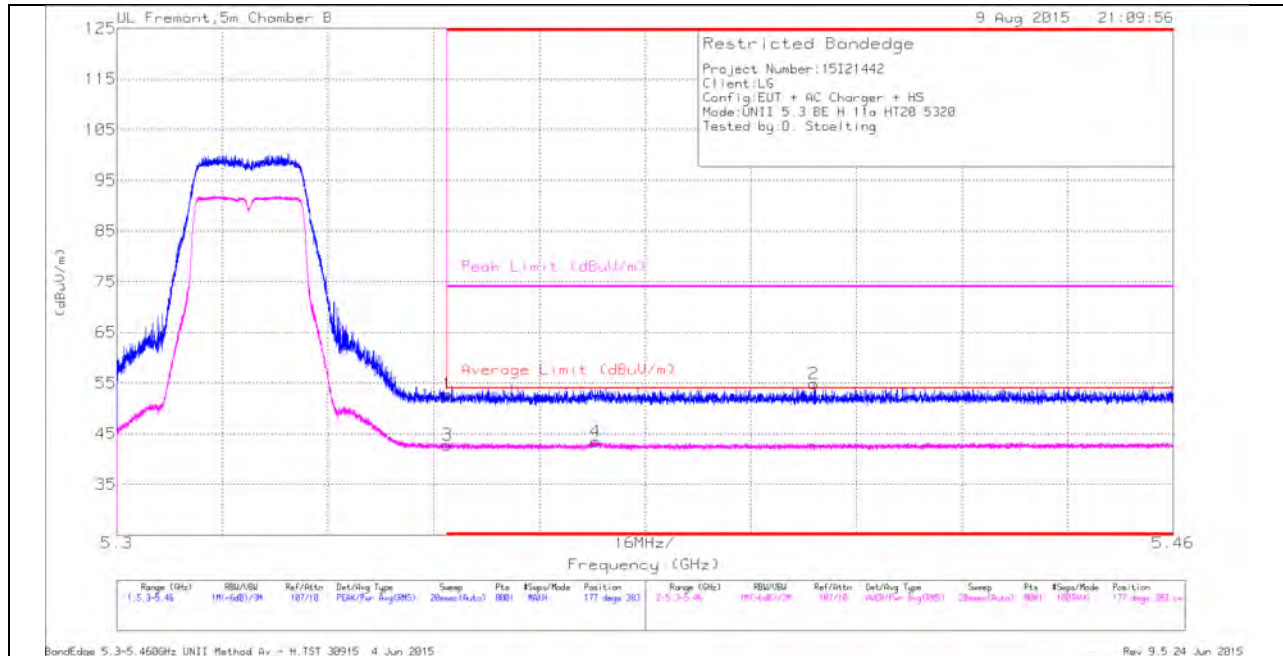
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.687	40.14	PK1	33	-29.9	0	43.24	-	-	74	-30.76	-	-	33	161	H
* 3.689	28.59	AD1	33	-30	.51	32.1	54	-21.9	-	-	-	-	33	161	H
* 3.749	40.13	PK1	33.1	-30.8	0	42.43	-	-	74	-31.57	-	-	18	180	V
* 3.748	28.87	AD1	33.1	-30.8	.51	31.68	54	-22.32	-	-	-	-	18	180	V
* 8.027	38.32	PK1	35.7	-26.7	0	47.32	-	-	74	-26.68	-	-	77	161	H
* 8.027	26.36	AD1	35.7	-26.7	.51	35.87	54	-18.13	-	-	-	-	77	161	H
* 8.046	38.64	PK1	35.7	-26.4	0	47.94	-	-	74	-26.06	-	-	185	179	V
* 8.048	26.23	AD1	35.7	-26.5	.51	35.94	54	-18.06	-	-	-	-	185	179	V
9.539	37.63	PK1	36.6	-24	0	50.23	-	-	-	-	68.2	-17.97	168	137	H
9.542	24.36	AD1	36.6	-23.9	.51	37.57	-	-	-	-	-	-	168	137	H
10.46	36.13	PK1	37.4	-24.3	0	49.23	-	-	-	-	68.2	-18.97	148	126	V
10.461	24.52	AD1	37.4	-24.3	.51	38.13	-	-	-	-	-	-	148	126	V

## 9.2. 5.3 GHz

### 9.2.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.3 GHz BAND AUTHORIZED BANDEDGE (HIGH CHANNEL)

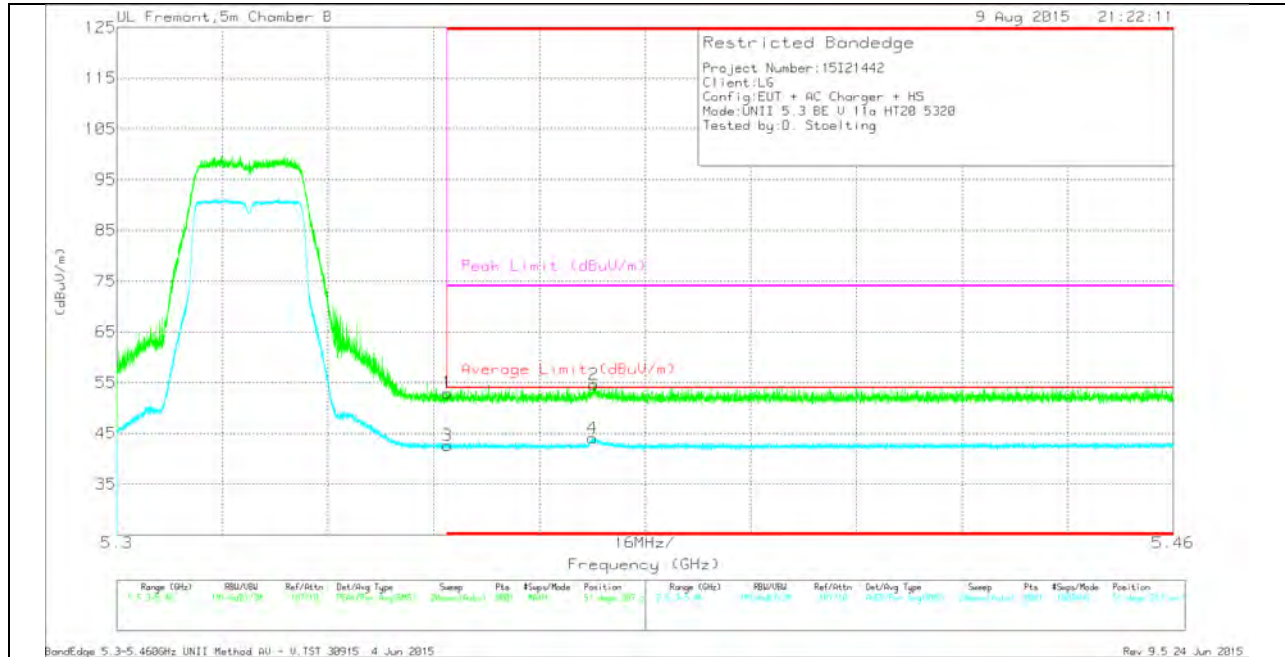
**HORIZONTAL PEAK AND AVERAGE PLOT**



**HORIZONTAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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	* 5.35	40.48	Pk	34.4	-22.1	0	52.78	-	-	74	-21.22	177	383	H
3	* 5.35	30.23	RMS	34.4	-22.1	.25	42.78	-	-	-	-	177	383	H
4	* 5.372	30.81	RMS	34.4	-22	.25	43.46	-	-	-	-	177	383	H
2	* 5.406	42.44	Pk	34.5	-22	0	54.94	-	-	74	-19.06	177	383	H

**VERTICAL PEAK AND AVERAGE PLOT**



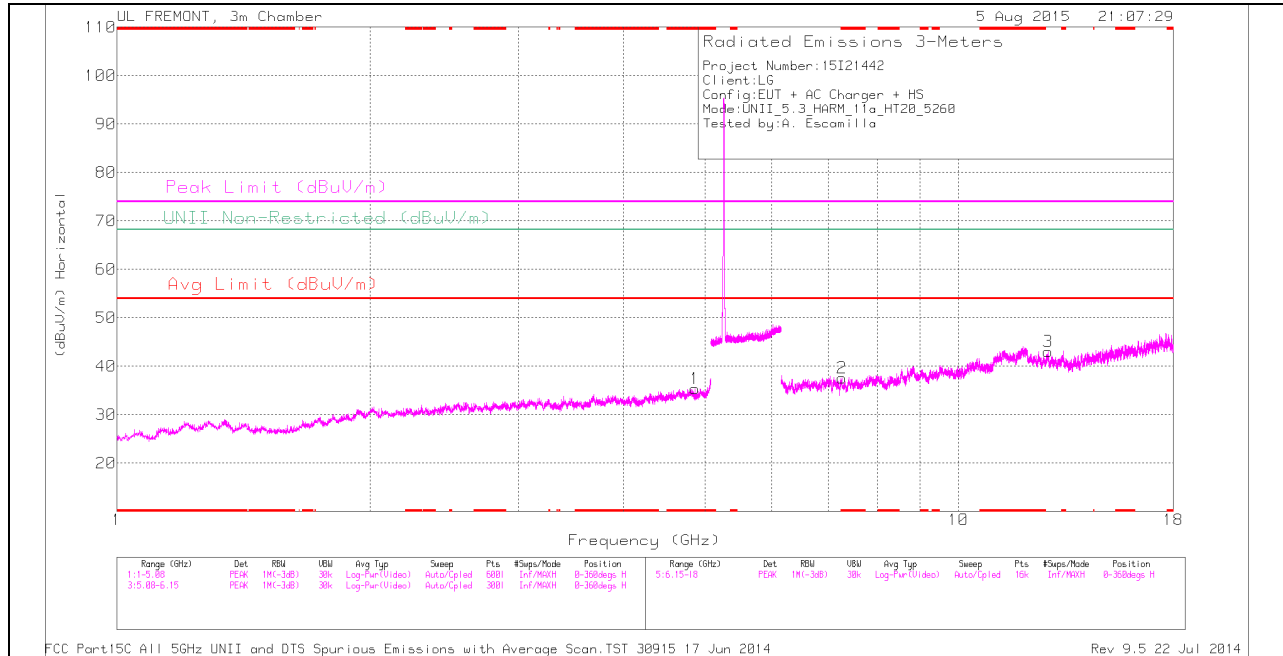
**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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	* 5.35	40.66	Pk	34.4	-22.1	0	52.96	-	-	74	-21.04	51	287	V
3	* 5.35	30.04	RMS	34.4	-22.1	.25	42.59	-	-	-	-	51	287	V
2	* 5.372	42.27	Pk	34.4	-22	0	54.67	-	-	74	-19.33	51	287	V
4	* 5.372	31.43	RMS	34.4	-22	.25	44.08	-	-	-	-	51	287	V



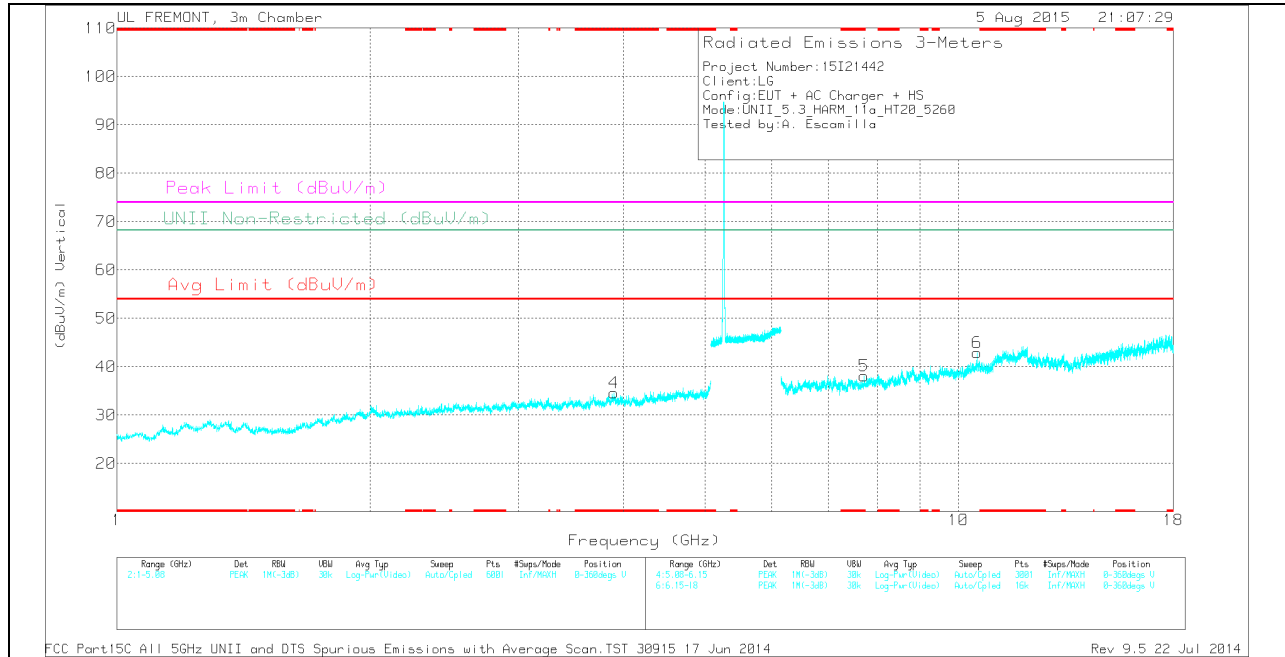
### HARMONICS AND SPURIOUS EMISSIONS

#### LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; 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 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL DATA**

*TRACE MARKERS*

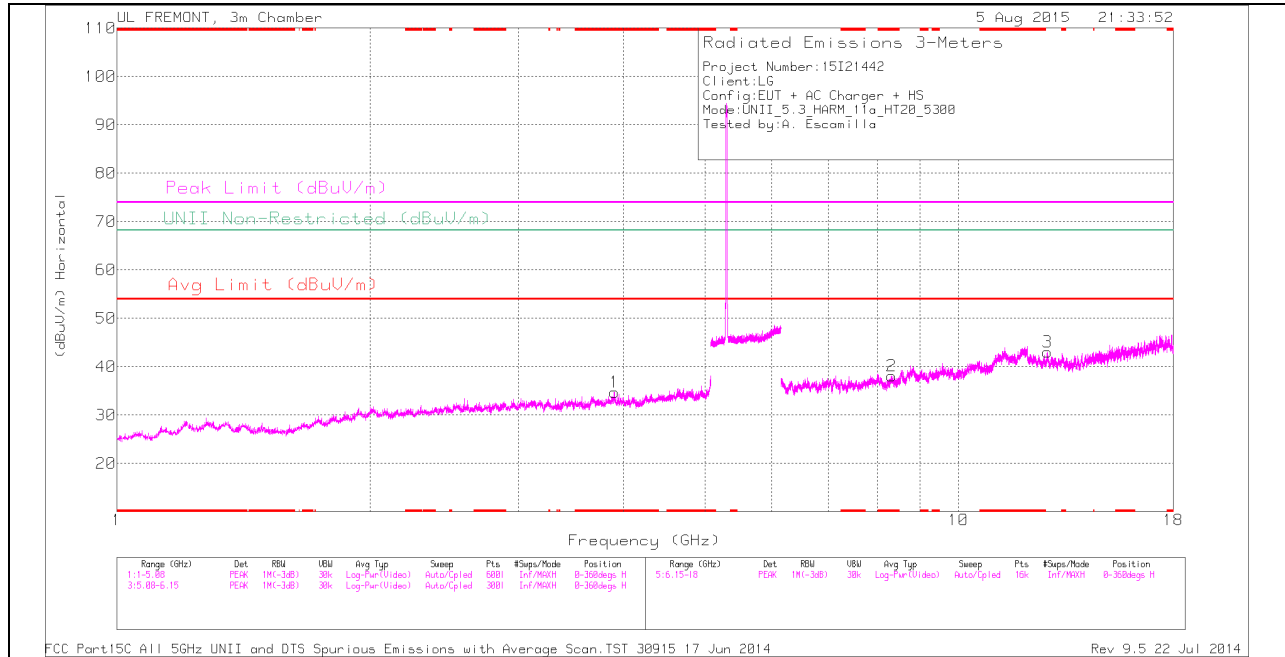
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.862	31.02	PK	34	-29.7	0	35.32	-	-	74	-38.68	-	-	0-360	100	H
4	* 3.896	31.35	PK	33.2	-29.9	0	34.65	-	-	74	-39.35	-	-	0-360	100	V
2	* 7.275	30.51	PK	35.6	-28.5	0	37.61	-	-	74	-36.39	-	-	0-360	200	H
5	* 7.723	30.25	PK	35.8	-27.9	0	38.15	-	-	74	-35.85	-	-	0-360	100	V
6	10.519	28.93	PK	37.5	-23.5	0	42.93	-	-	-	-	68.2	-25.27	0-360	100	V
3	12.784	28.81	PK	39.1	-24.9	0	43.01	-	-	-	-	68.2	-25.19	0-360	200	H

PK - Peak detector

*RADIATED EMISSIONS*

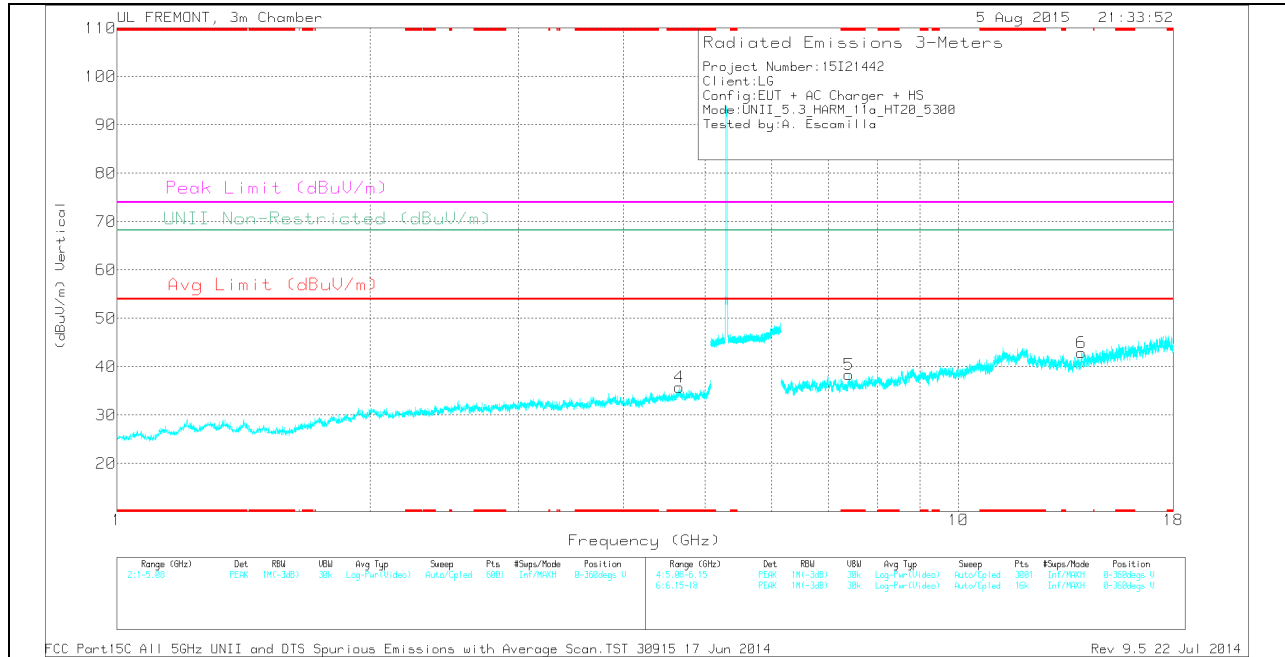
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.86	39.93	PK1	34	-29.7	0	44.23	-	-	74	-29.77	-	-	20	121	H
* 4.86	28.56	AD1	34	-29.7	.25	33.11	54	-20.89	-	-	-	-	20	121	H
* 3.898	40.95	PK1	33.2	-30	0	44.15	-	-	74	-29.85	-	-	48	149	V
* 3.896	28.9	AD1	33.2	-29.9	.25	32.45	54	-21.55	-	-	-	-	48	149	V
* 7.273	38.55	PK1	35.6	-28.5	0	45.65	-	-	74	-28.35	-	-	170	172	H
* 7.277	27.53	AD1	35.6	-28.5	.25	34.88	54	-19.12	-	-	-	-	170	172	H
* 7.722	39.33	PK1	35.8	-27.9	0	47.23	-	-	74	-26.77	-	-	197	172	V
* 7.721	27.7	AD1	35.8	-28	.25	35.75	54	-18.25	-	-	-	-	197	172	V
10.519	38.25	PK1	37.5	-23.5	0	52.25	-	-	-	-	68.2	-15.95	181	147	V
10.52	27.22	AD1	37.5	-23.5	.25	41.47	-	-	-	-	-	-	181	147	V
12.784	37.36	PK1	39.1	-24.9	0	51.56	-	-	-	-	68.2	-16.64	206	196	H
12.784	25.98	AD1	39.1	-24.9	.25	40.43	-	-	-	-	-	-	206	196	H

**MID CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL DATA**

*TRACE MARKERS*

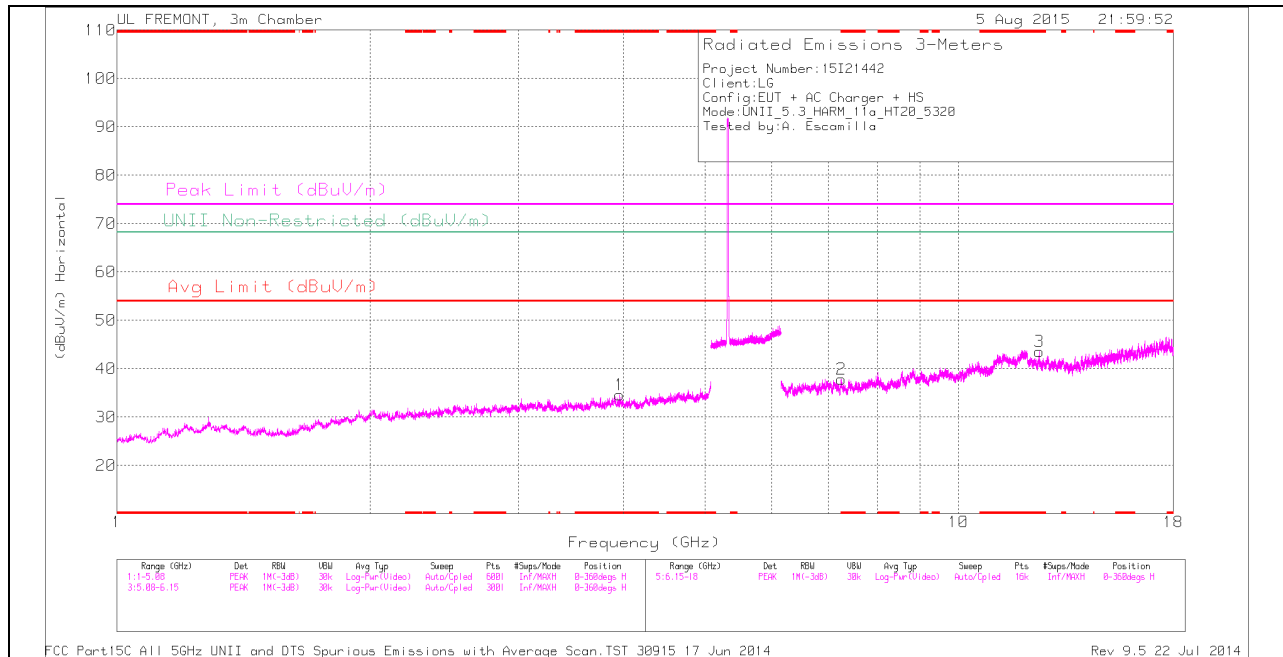
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.9	31.7	PK	33.2	-30.2	0	34.7	-	-	74	-39.3	-	-	0-360	100	H
4	* 4.655	31.28	PK	34	-29.5	0	35.78	-	-	74	-38.22	-	-	0-360	200	V
2	* 8.325	27.95	PK	35.8	-25.7	0	38.05	-	-	74	-35.95	-	-	0-360	100	H
5	* 7.405	30.17	PK	35.6	-27.4	0	38.37	-	-	74	-35.63	-	-	0-360	200	V
3	12.766	28.78	PK	39.1	-24.9	0	42.98	-	-	-	-	68.2	-25.22	0-360	100	H
6	14.002	31.25	PK	38.8	-27.2	0	42.85	-	-	-	-	68.2	-25.35	0-360	100	V

PK - Peak detector

*RADIATED EMISSIONS*

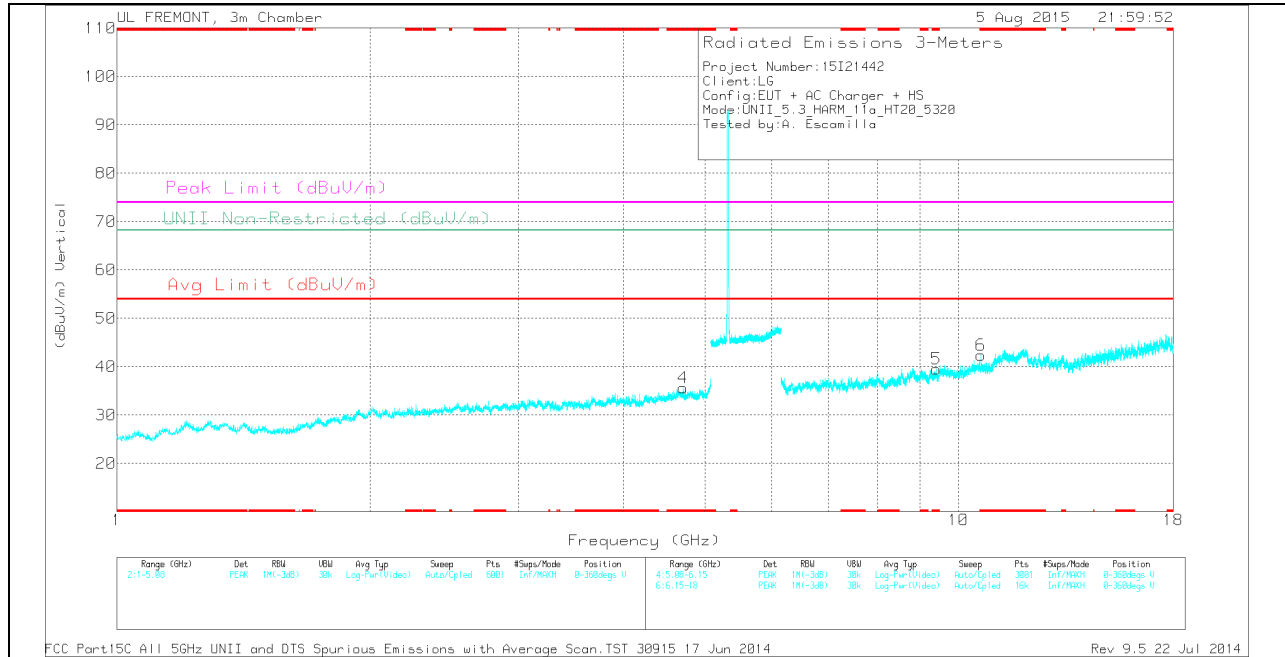
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.899	40.72	PK1	33.2	-30.1	0	43.82	-	-	74	-30.18	-	-	360	126	H
* 3.898	28.98	AD1	33.2	-30	.25	32.43	54	-21.57	-	-	-	-	360	126	H
* 4.654	40.39	PK1	34	-29.5	0	44.89	-	-	74	-29.11	-	-	338	221	V
* 4.654	28.64	AD1	34	-29.5	.25	33.39	54	-20.61	-	-	-	-	338	221	V
* 8.326	37.71	PK1	35.8	-25.6	0	47.91	-	-	74	-26.09	-	-	211	146	H
* 8.324	26.63	AD1	35.8	-25.7	.25	36.98	54	-17.02	-	-	-	-	211	146	H
* 7.407	38.54	PK1	35.6	-27.3	0	46.84	-	-	74	-27.16	-	-	61	166	V
* 7.406	27.24	AD1	35.6	-27.3	.25	35.79	54	-18.21	-	-	-	-	61	166	V
12.767	37.78	PK1	39.1	-24.9	0	51.98	-	-	-	-	68.2	-16.22	174	104	H
12.768	26.28	AD1	39.1	-24.9	.25	40.73	-	-	-	-	-	-	174	104	H
14.001	28.87	AD1	38.8	-27.2	.25	40.72	-	-	-	-	-	-	23	204	V
14.002	40.35	PK1	38.8	-27.2	0	51.95	-	-	-	-	68.2	-16.25	23	204	V

**HIGH CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; 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/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.954	32.12	PK	33.2	-30.7	0	34.62	-	-	74	-39.38	-	-	0-360	100	H
4	* 4.71	31.4	PK	34.1	-29.9	0	35.6	-	-	74	-38.4	-	-	0-360	100	V
2	* 7.253	30.27	PK	35.6	-28	0	37.87	-	-	74	-36.13	-	-	0-360	100	H
3	* 12.468	29.37	PK	39	-24.8	0	43.57	-	-	74	-30.43	-	-	0-360	200	H
5	* 9.417	28.26	PK	36.4	-25.1	0	39.56	-	-	74	-34.44	-	-	0-360	100	V
6	* 10.639	28.34	PK	37.7	-23.6	0	42.44	-	-	74	-31.56	-	-	0-360	100	V

PK - Peak detector

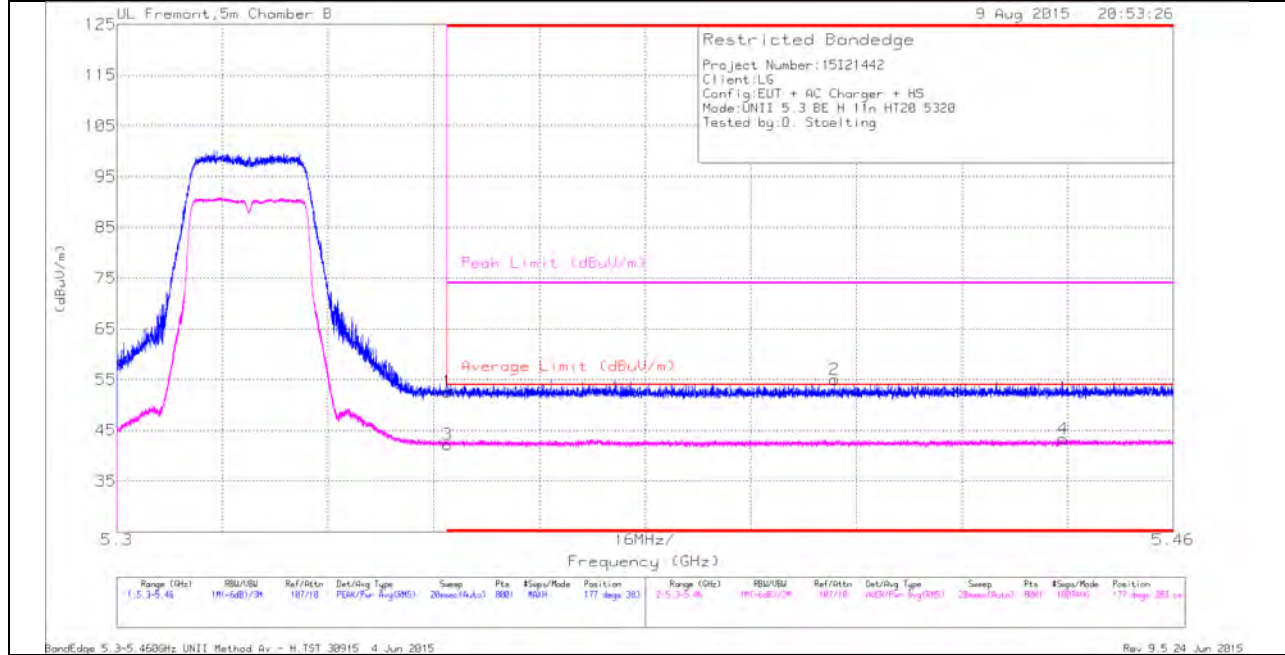
*RADIATED EMISSIONS*

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.953	40.43	PK1	33.2	-30.7	0	42.93	-	-	74	-31.07	-	-	10	120	H
* 3.956	28.95	AD1	33.2	-30.7	.25	31.7	54	-22.3	-	-	-	-	10	120	H
* 4.711	40.78	PK1	34.1	-29.9	0	44.98	-	-	74	-29.02	-	-	28	202	V
* 4.711	28.76	AD1	34.1	-29.9	.25	33.21	54	-20.79	-	-	-	-	28	202	V
* 7.255	39.6	PK1	35.6	-28	0	47.2	-	-	74	-26.8	-	-	144	160	H
* 7.255	27.66	AD1	35.6	-28	.25	35.51	54	-18.49	-	-	-	-	144	160	H
* 12.468	37.4	PK1	39	-24.8	0	51.6	-	-	74	-22.4	-	-	179	200	H
* 12.466	26.11	AD1	39	-24.8	.25	40.56	54	-13.44	-	-	-	-	179	200	H
* 9.418	36.56	PK1	36.4	-25.1	0	47.86	-	-	74	-26.14	-	-	117	137	V
* 9.416	25.57	AD1	36.4	-25.1	.25	37.12	54	-16.88	-	-	-	-	117	137	V
* 10.64	38.24	PK1	37.7	-23.6	0	52.34	-	-	74	-21.66	-	-	175	111	V
* 10.64	25.86	AD1	37.7	-23.6	.25	40.21	54	-13.79	-	-	-	-	175	111	V

### 9.2.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.3 GHz BAND

#### AUTHORIZED BANDEDGE (HIGH CHANNEL)

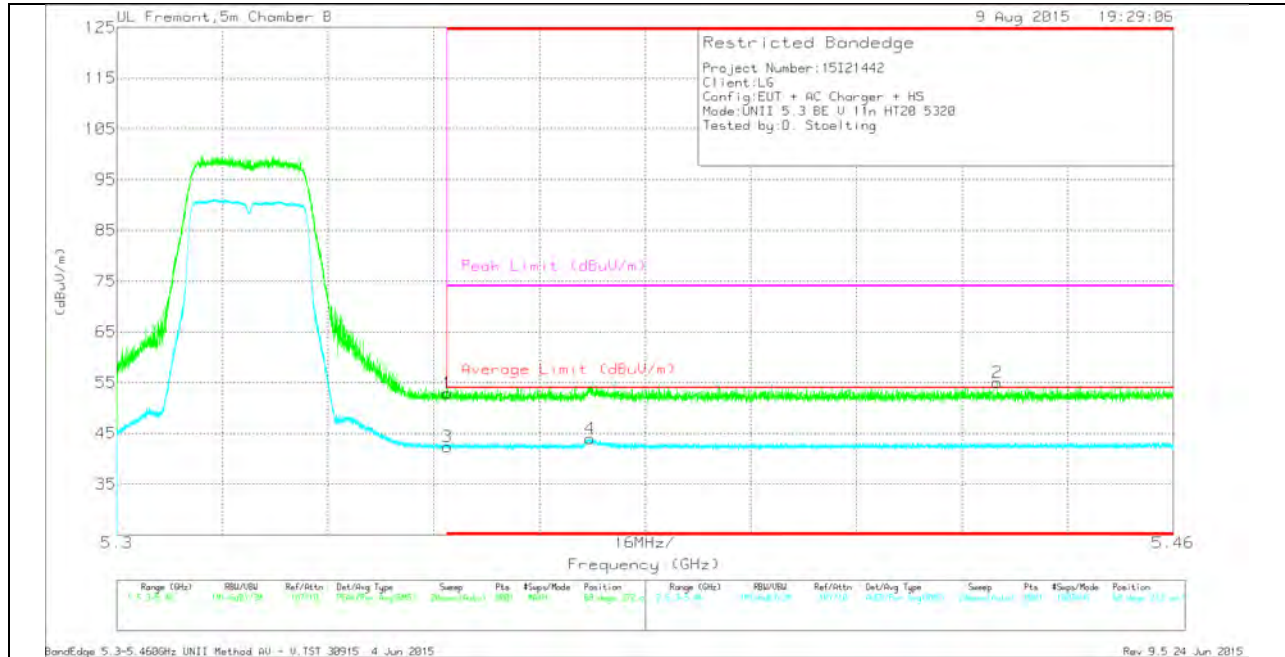
#### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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	* 5.35	40.29	Pk	34.4	-22.1	0	52.59	-	-	74	-21.41	177	383	H
3	* 5.35	29.72	RMS	34.4	-22.1	.22	42.24	-	-	-	-	177	383	H
2	* 5.409	42.5	Pk	34.5	-22	0	55	-	-	74	-19	177	383	H
4	* 5.443	30.69	RMS	34.5	-22.1	.22	43.31	-	-	-	-	177	383	H

**VERTICAL PEAK AND AVERAGE PLOT**

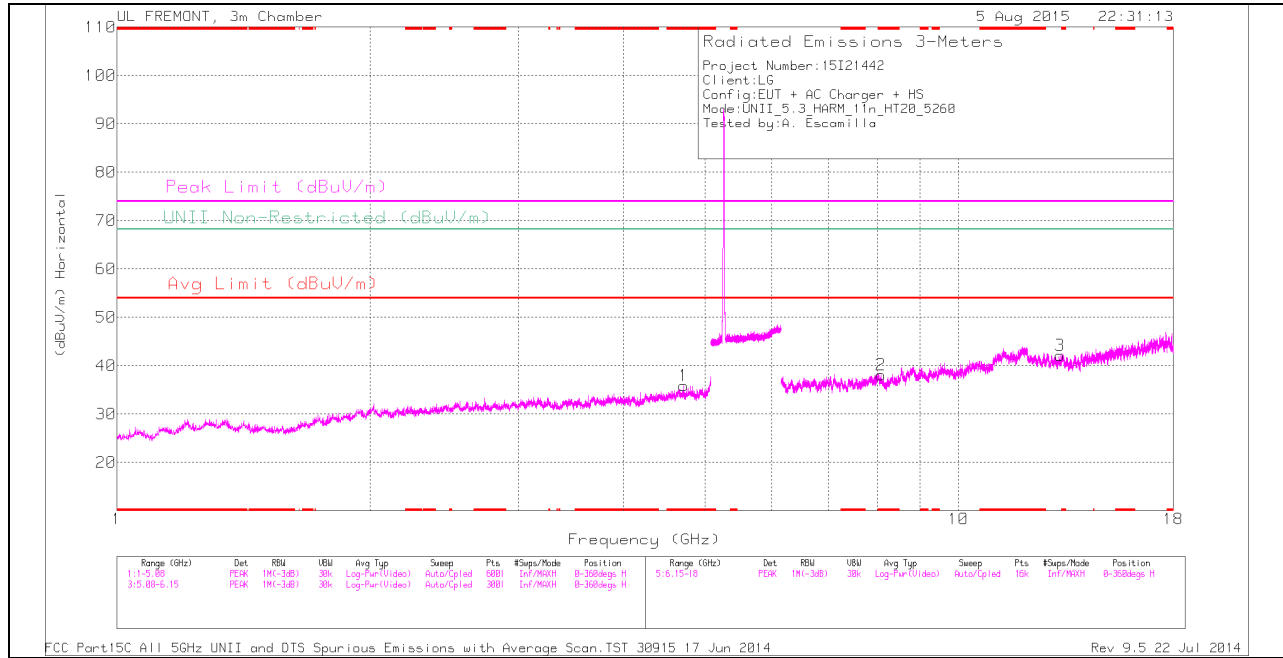


**VERTICAL DATA**

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	* 5.35	40.55	Pk	34.4	-22.1	0	52.85	-	-	74	-21.15	68	272	V
3	* 5.35	29.79	RMS	34.4	-22.1	.22	42.31	-	-	-	-	68	272	V
4	* 5.372	31.33	RMS	34.4	-22	.22	43.95	-	-	-	-	68	272	V
2	* 5.433	42.51	Pk	34.5	-22	0	55.01	-	-	74	-18.99	68	272	V

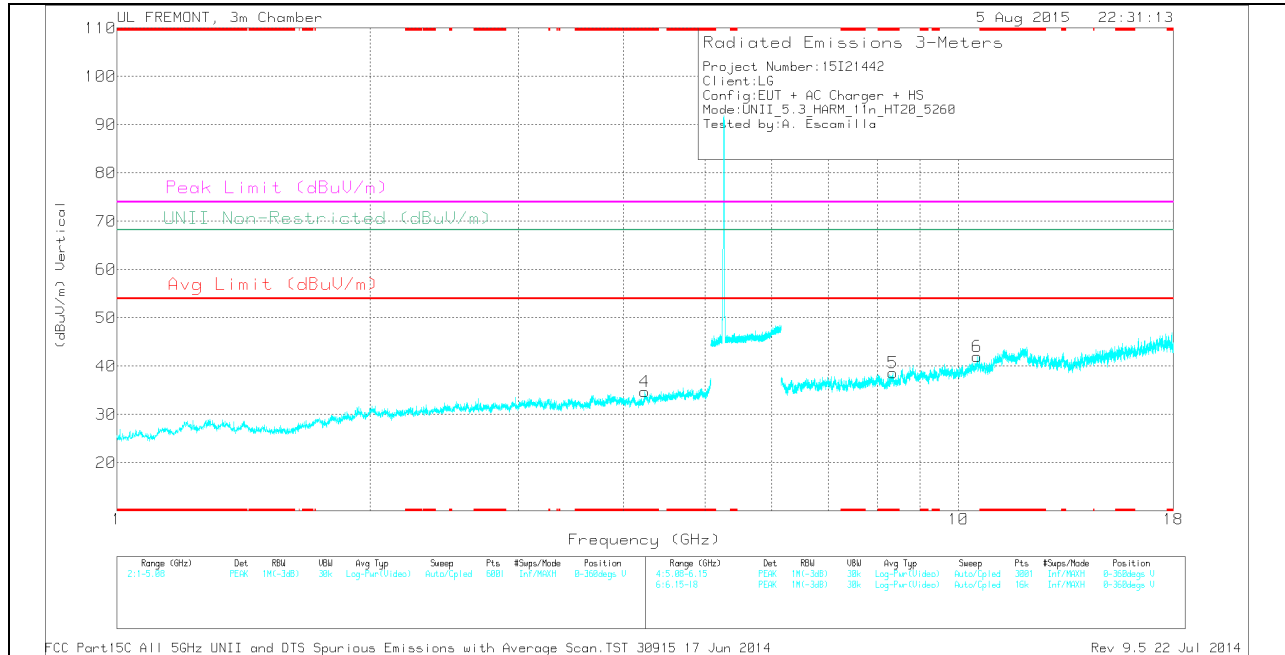
## HARMONICS AND SPURIOUS EMISSIONS

### LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; 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 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL DATA**

*TRACE MARKERS*

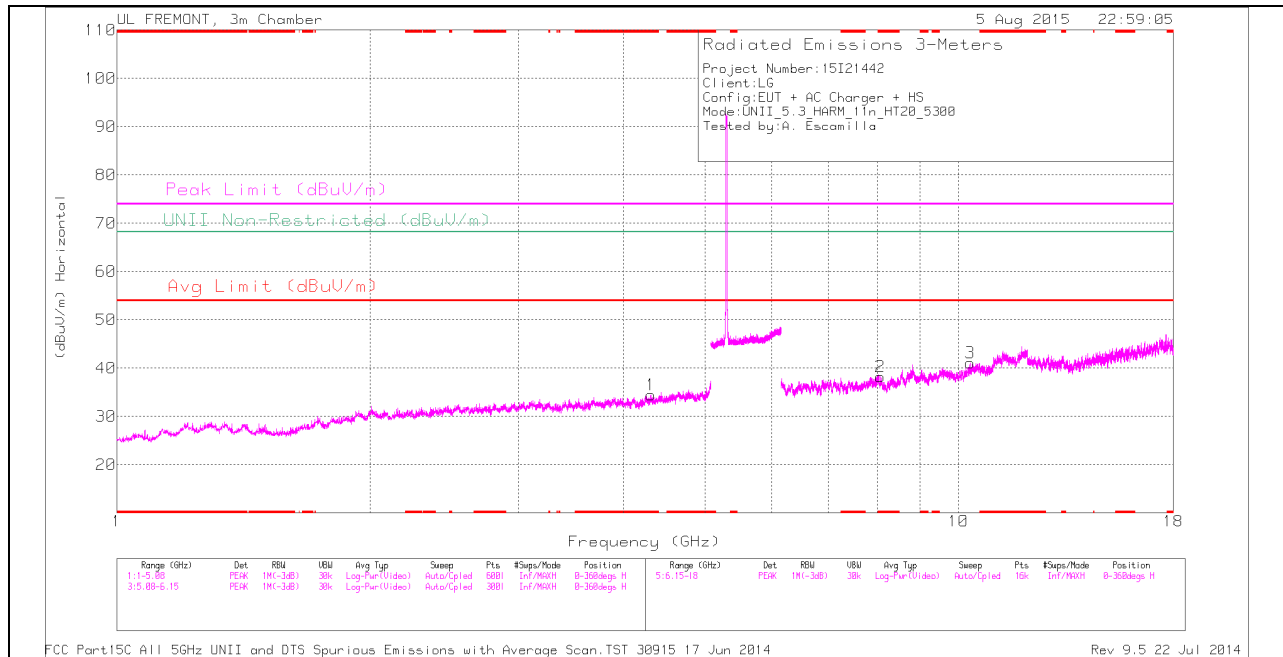
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.715	31.68	PK	34.1	-29.9	0	35.88	-	-	74	-38.12	-	-	0-360	200	H
4	* 4.24	31.43	PK	33.4	-30.1	0	34.73	-	-	74	-39.27	-	-	0-360	200	V
2	* 8.089	28.6	PK	35.7	-26.2	0	38.1	-	-	74	-35.9	-	-	0-360	200	H
5	* 8.355	28.31	PK	35.8	-25.5	0	38.61	-	-	74	-35.39	-	-	0-360	100	V
6	10.519	28.02	PK	37.5	-23.5	0	42.02	-	-	-	-	68.2	-26.18	0-360	100	V
3	13.201	29.18	PK	38.9	-26	0	42.08	-	-	-	-	68.2	-26.12	0-360	100	H

PK - Peak detector

*RADIATED EMISSIONS*

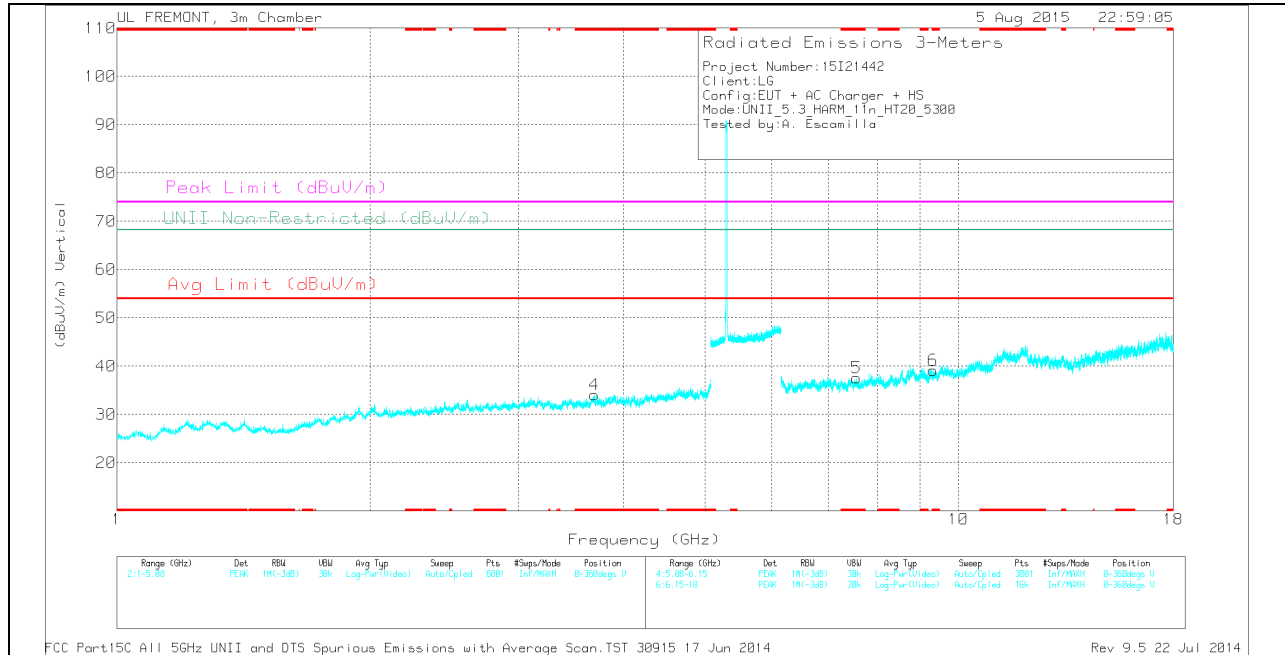
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.714	40.16	PK1	34.1	-29.9	0	44.36	-	-	74	-29.64	-	-	0	171	H
* 4.714	28.8	AD1	34.1	-29.9	.22	33.22	54	-20.78	-	-	-	-	0	171	H
* 4.239	40.28	PK1	33.4	-30.2	0	43.48	-	-	74	-30.52	-	-	30	189	V
* 4.242	28.8	AD1	33.4	-30.1	.22	32.32	54	-21.68	-	-	-	-	30	189	V
* 8.09	37.29	PK1	35.7	-26.2	0	46.79	-	-	74	-27.21	-	-	332	242	H
* 8.09	25.87	AD1	35.7	-26.2	.22	35.59	54	-18.41	-	-	-	-	332	242	H
* 8.354	38.23	PK1	35.8	-25.6	0	48.43	-	-	74	-25.57	-	-	300	204	V
* 8.354	26.49	AD1	35.8	-25.6	.22	36.91	54	-17.09	-	-	-	-	300	204	V
10.52	36.66	PK1	37.5	-23.4	0	50.76	-	-	-	-	68.2	-17.44	241	152	V
10.52	25.49	AD1	37.5	-23.5	.22	39.71	-	-	-	-	-	-	241	152	V
13.202	26.95	AD1	38.9	-26	.22	40.07	-	-	-	-	-	-	356	223	H
13.203	38.59	PK1	38.9	-26	0	51.49	-	-	-	-	68.2	-16.71	356	223	H

**MID CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.



**MID CHANNEL DATA**

*TRACE MARKERS*

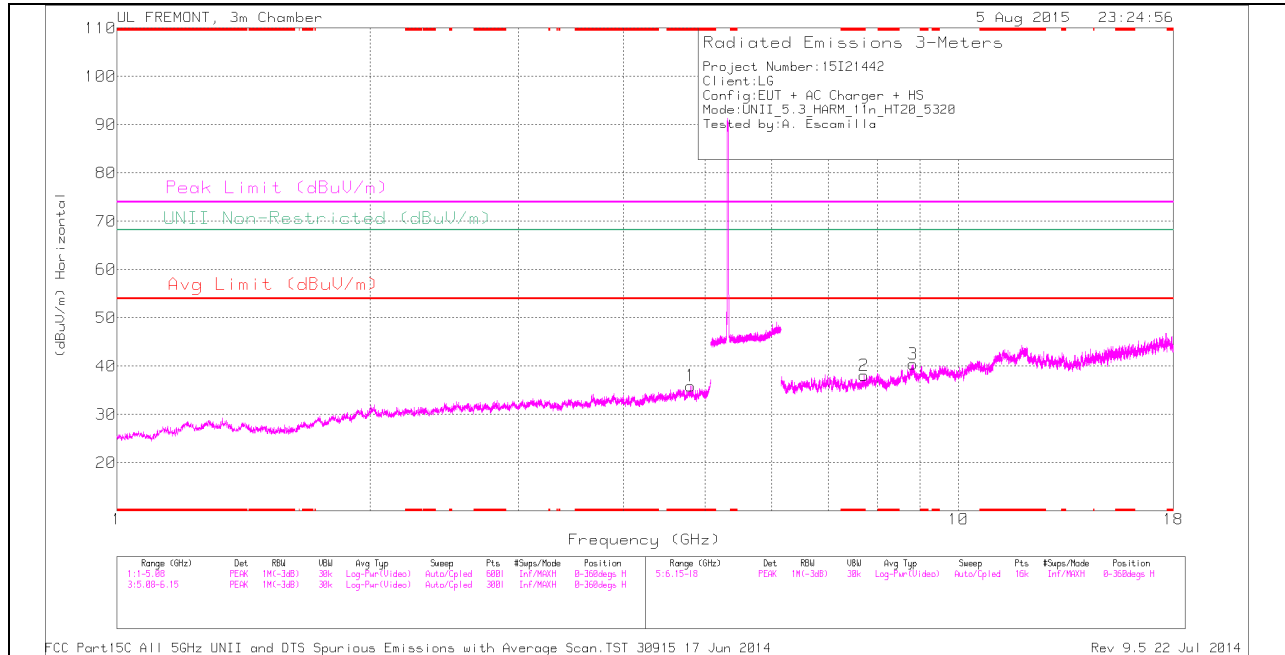
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.31	30.34	PK	33.5	-29.4	0	34.44	-	-	74	-39.56	-	-	0-360	100	H
4	* 3.692	31.08	PK	33	-30	0	34.08	-	-	74	-39.92	-	-	0-360	200	V
2	* 8.076	28.94	PK	35.7	-26.4	0	38.24	-	-	74	-35.76	-	-	0-360	100	H
5	* 7.564	29.13	PK	35.7	-27.3	0	37.53	-	-	74	-36.47	-	-	0-360	100	V
6	* 9.338	27.19	PK	36.3	-24.4	0	39.09	-	-	74	-34.91	-	-	0-360	200	V
3	10.319	27.14	PK	37.1	-23.2	0	41.04	-	-	-	-	68.2	-27.16	0-360	100	H

PK - Peak detector

*RADIATED EMISSIONS*

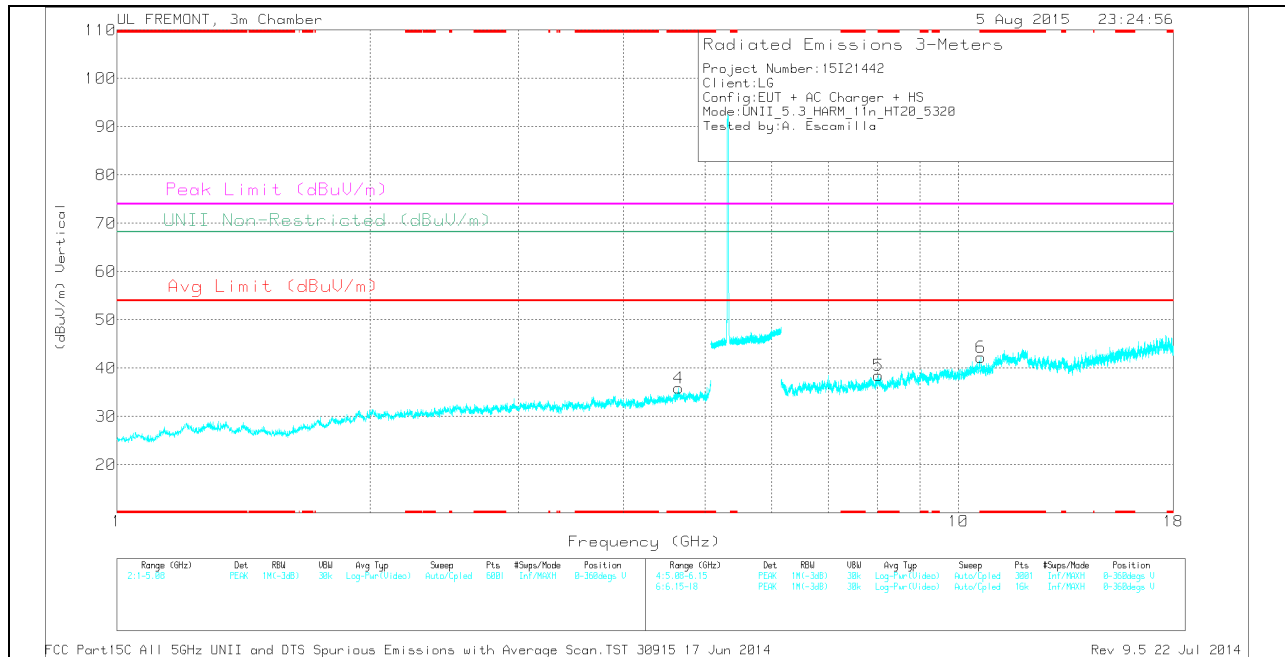
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.311	40.05	PK1	33.5	-29.4	0	44.15	-	-	74	-29.85	-	-	321	118	H
* 4.31	28.13	AD1	33.5	-29.4	.22	32.45	54	-21.55	-	-	-	-	321	118	H
* 3.692	40.45	PK1	33	-30	0	43.45	-	-	74	-30.55	-	-	277	189	V
* 3.691	28.45	AD1	33	-30	.22	31.67	54	-22.33	-	-	-	-	277	189	V
* 8.077	37.92	PK1	35.7	-26.4	0	47.22	-	-	74	-26.78	-	-	184	156	H
* 8.078	26.19	AD1	35.7	-26.3	.22	35.81	54	-18.19	-	-	-	-	184	156	H
* 7.562	39.2	PK1	35.7	-27.4	0	47.5	-	-	74	-26.5	-	-	197	110	V
* 7.562	27.53	AD1	35.7	-27.4	.22	36.05	54	-17.95	-	-	-	-	197	110	V
* 9.337	36.23	PK1	36.3	-24.4	0	48.13	-	-	74	-25.87	-	-	36	191	V
* 9.337	24.88	AD1	36.3	-24.4	.22	37	54	-17	-	-	-	-	36	191	V
10.32	35.64	PK1	37.1	-23.2	0	49.54	-	-	-	-	68.2	-18.66	168	174	H
10.32	24.18	AD1	37.1	-23.2	.22	38.3	-	-	-	-	-	-	168	174	H

**HIGH CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; 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/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.805	31.36	PK	34	-29.4	0	35.96	-	-	74	-38.04	-	-	0-360	200	H
4	* 4.648	31.49	PK	34	-29.6	0	35.89	-	-	74	-38.11	-	-	0-360	200	V
2	* 7.72	30.31	PK	35.8	-28	0	38.11	-	-	74	-35.89	-	-	0-360	200	H
5	* 8.038	29.24	PK	35.7	-26.4	0	38.54	-	-	74	-35.46	-	-	0-360	200	V
6	* 10.639	28.12	PK	37.7	-23.6	0	42.22	-	-	74	-31.78	-	-	0-360	100	V
3	8.834	29	PK	35.9	-24.4	0	40.5	-	-	-	-	68.2	-27.7	0-360	100	H

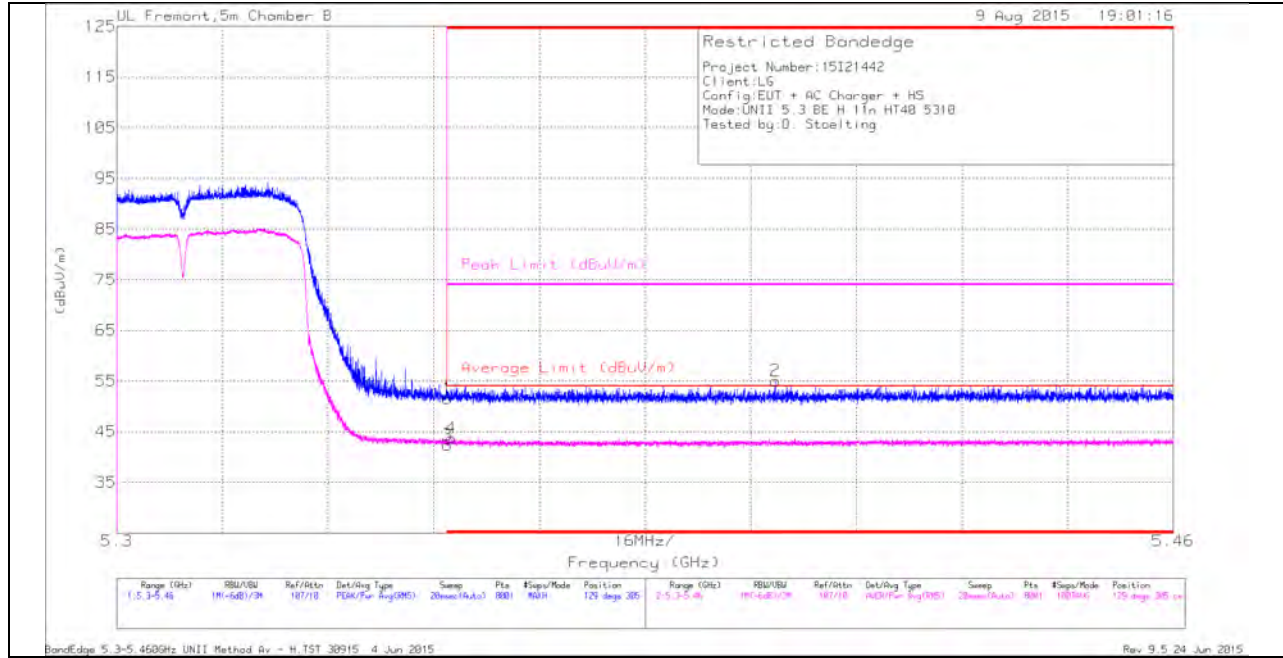
PK - Peak detector

*RADIATED EMISSIONS*

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.806	39.83	PK1	34	-29.4	0	44.43	-	-	74	-29.57	-	-	178	171	H
* 4.806	28.71	AD1	34	-29.4	.22	33.53	54	-20.47	-	-	-	-	178	171	H
* 4.646	39.76	PK1	33.9	-29.6	0	44.06	-	-	74	-29.94	-	-	201	189	V
* 4.646	28.55	AD1	33.9	-29.6	.22	33.07	54	-20.93	-	-	-	-	201	189	V
* 7.722	39.06	PK1	35.8	-27.9	0	46.96	-	-	74	-27.04	-	-	161	209	H
* 7.721	27.6	AD1	35.8	-28	.22	35.62	54	-18.38	-	-	-	-	161	209	H
* 8.039	38.16	PK1	35.7	-26.4	0	47.46	-	-	74	-26.54	-	-	239	185	V
* 8.04	26.46	AD1	35.7	-26.4	.22	35.98	54	-18.02	-	-	-	-	239	185	V
* 10.641	35.79	PK1	37.7	-23.6	0	49.89	-	-	74	-24.11	-	-	82	140	V
* 10.64	24.76	AD1	37.7	-23.6	.22	39.08	54	-14.92	-	-	-	-	82	140	V
8.835	37.16	PK1	35.9	-24.4	0	48.66	-	-	-	-	68.2	-19.54	118	161	H
8.836	25.44	AD1	35.9	-24.4	.22	37.16	-	-	-	-	-	-	118	161	H

### 9.2.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.3 GHz BAND AUTHORIZED BANDEDGE (HIGH CHANNEL)

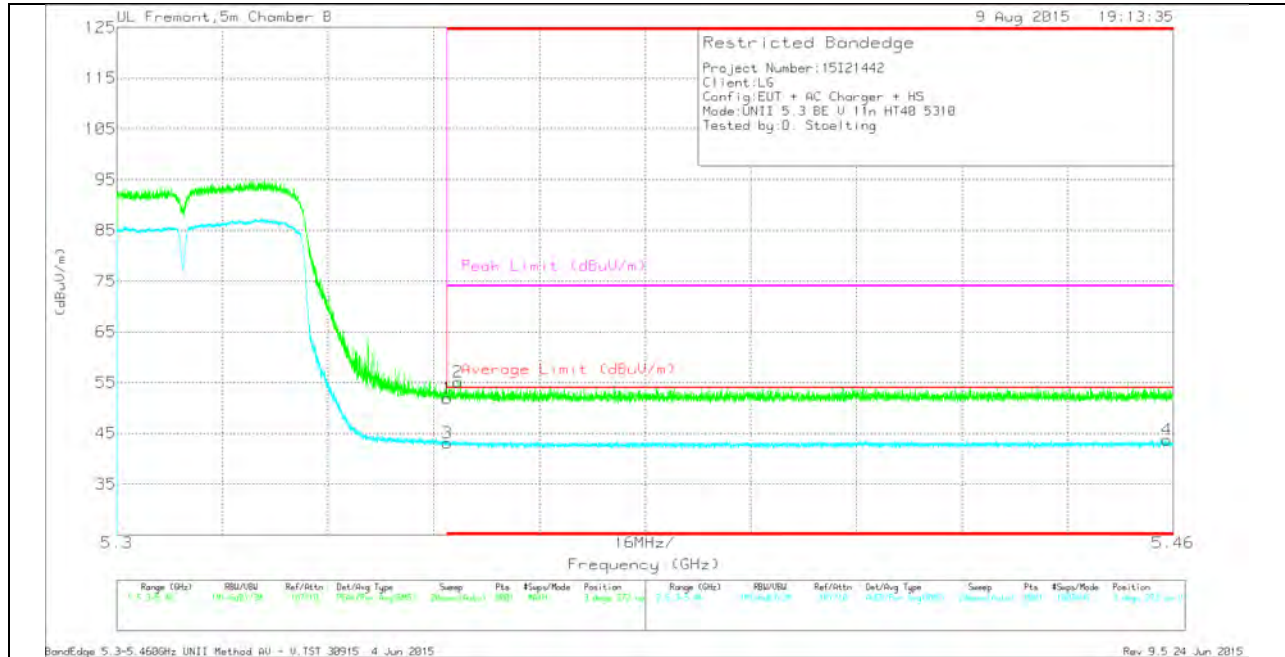
#### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fitter/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	* 5.35	39.18	Pk	34.4	-22.1	0	51.48	-	-	74	-22.52	129	305	H
3	* 5.35	29.5	RMS	34.4	-22.1	.51	42.31	-	-	-	-	129	305	H
4	* 5.351	30.94	RMS	34.4	-22.1	.51	43.75	-	-	-	-	129	305	H
2	* 5.4	42.57	Pk	34.5	-22	0	55.07	-	-	74	-18.93	129	305	H

**VERTICAL PEAK AND AVERAGE PLOT**

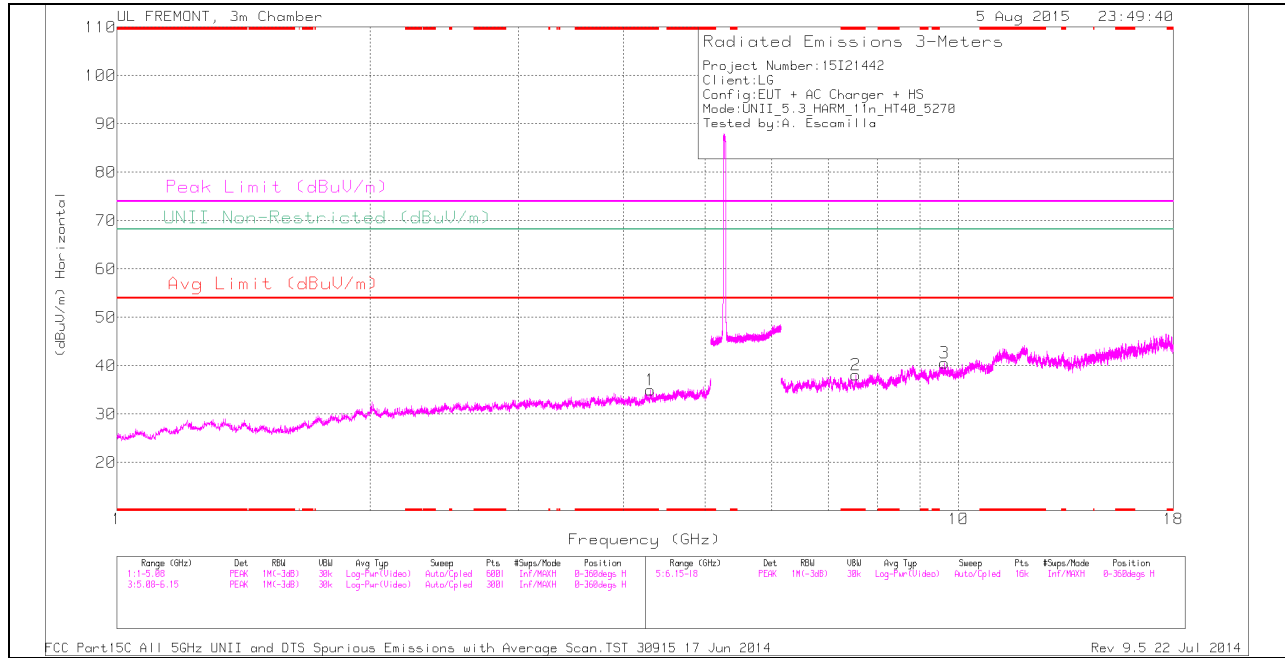


**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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	* 5.35	39.65	Pk	34.4	-22.1	0	51.95	-	-	74	-22.05	3	272	V
3	* 5.35	30.27	RMS	34.4	-22.1	.51	43.08	-	-	-	-	3	272	V
2	* 5.352	42.78	Pk	34.4	-22	0	55.18	-	-	74	-18.82	3	272	V
4	* 5.459	30.7	RMS	34.5	-22	.51	43.71	-	-	-	-	3	272	V

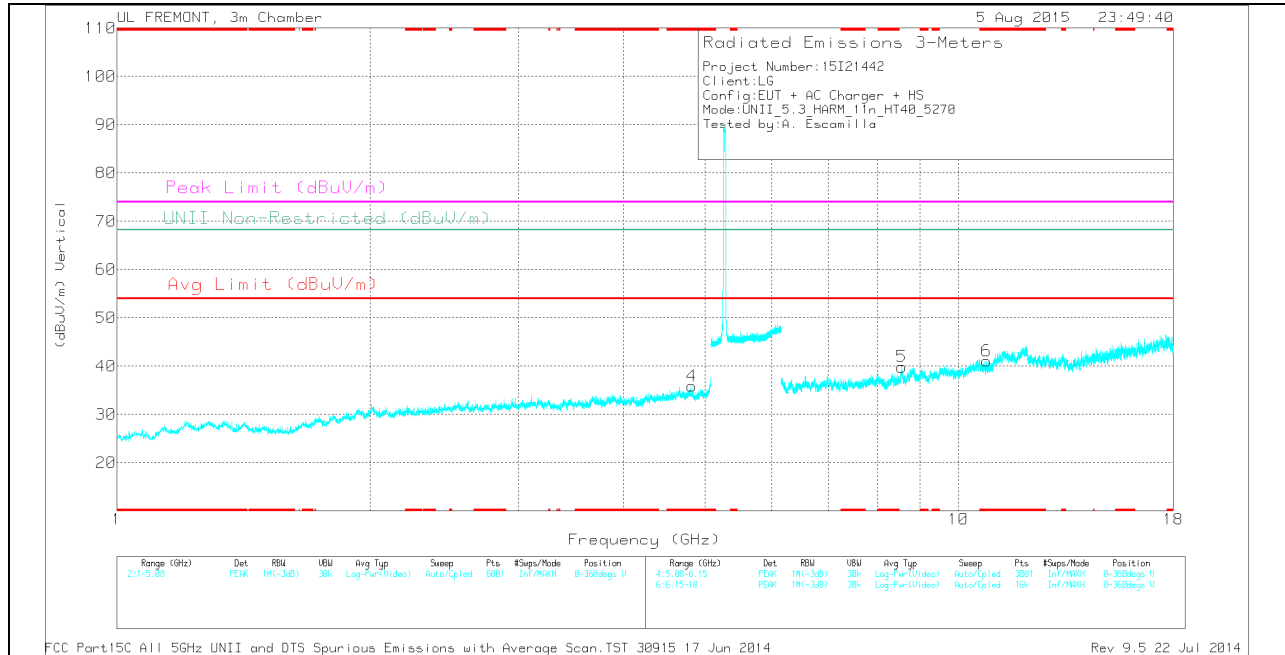
### HARMONICS AND SPURIOUS EMISSIONS

#### LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; 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 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.



**LOW CHANNEL DATA**

*TRACE MARKERS*

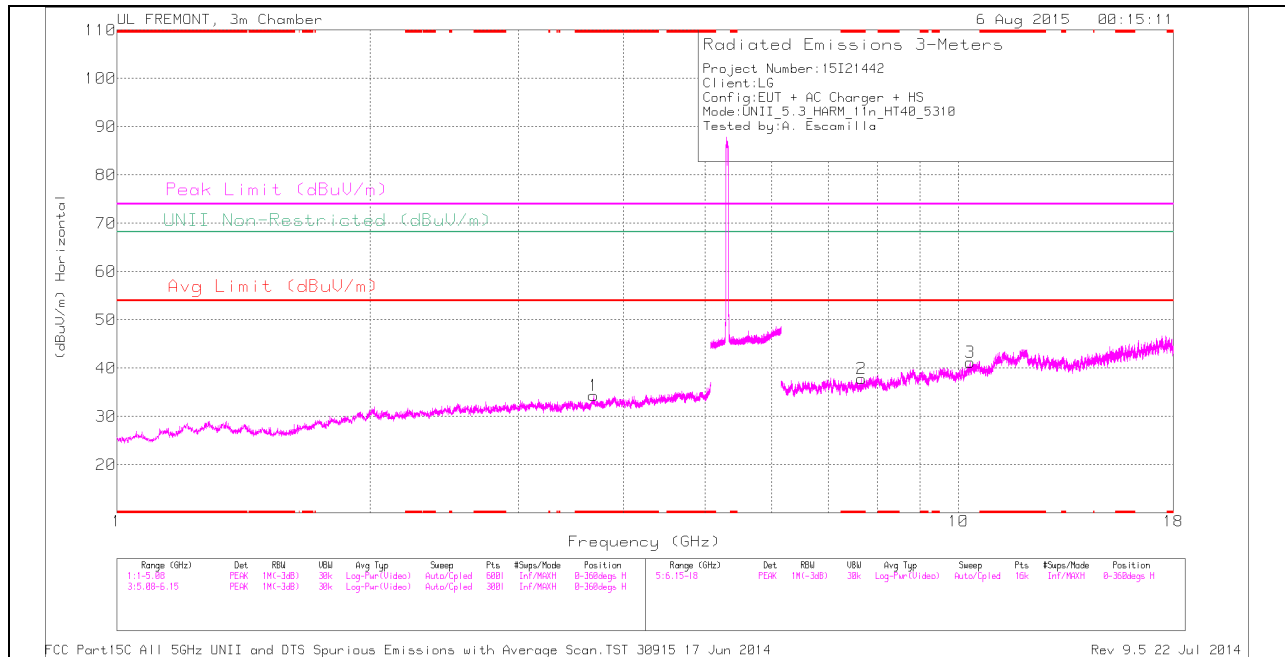
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.305	30.86	PK	33.5	-29.4	0	34.96	-	-	74	-39.04	-	-	0-360	200	H
4	* 4.82	31.54	PK	34	-29.6	0	35.94	-	-	74	-38.06	-	-	0-360	100	V
2	* 7.553	30.01	PK	35.7	-27.6	0	38.11	-	-	74	-35.89	-	-	0-360	100	H
6	* 10.801	26.64	PK	37.9	-23.4	0	41.14	-	-	74	-32.86	-	-	0-360	200	V
5	8.559	28.76	PK	35.8	-24.7	0	39.86	-	-	-	-	68.2	-28.34	0-360	200	V
3	9.63	27.74	PK	36.8	-24	0	40.54	-	-	-	-	68.2	-27.66	0-360	100	H

PK - Peak detector

*RADIATED EMISSIONS*

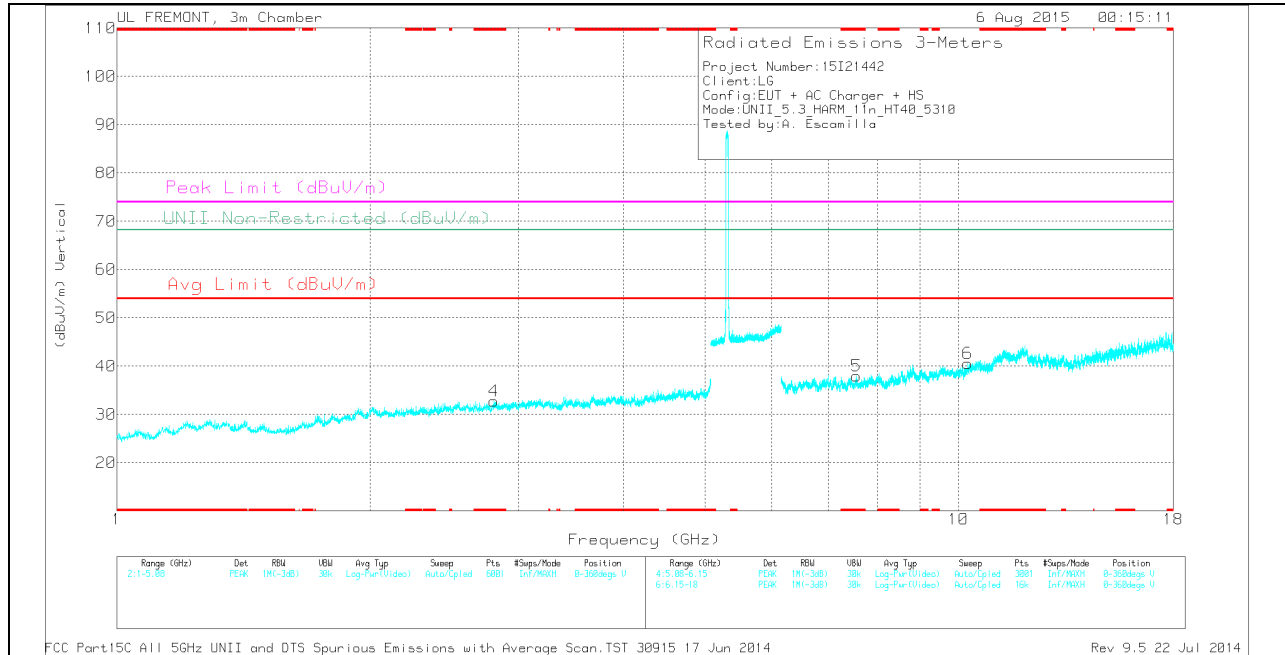
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.307	39.68	PK1	33.5	-29.4	0	43.78	-	-	74	-30.22	-	-	35	223	H
* 4.304	27.98	AD1	33.5	-29.4	.51	32.59	54	-21.41	-	-	-	-	35	223	H
* 4.82	40.54	PK1	34	-29.6	0	44.94	-	-	74	-29.06	-	-	89	139	V
* 4.819	28.74	AD1	34	-29.6	.51	33.65	54	-20.35	-	-	-	-	89	139	V
* 7.552	39.28	PK1	35.7	-27.7	0	47.28	-	-	74	-26.72	-	-	186	260	H
* 7.551	27.91	AD1	35.7	-27.7	.51	36.42	54	-17.58	-	-	-	-	186	260	H
* 10.799	36.62	PK1	37.9	-23.4	0	51.12	-	-	74	-22.88	-	-	323	226	V
* 10.8	25.02	AD1	37.9	-23.4	.51	40.03	54	-13.97	-	-	-	-	323	226	V
8.56	37.59	PK1	35.8	-24.6	0	48.79	-	-	-	-	68.2	-19.41	354	196	V
8.56	26.08	AD1	35.8	-24.6	.51	37.79	-	-	-	-	-	-	354	196	V
9.632	36.81	PK1	36.8	-24	0	49.61	-	-	-	-	68.2	-18.59	173	229	H
9.632	24.92	AD1	36.8	-24	.51	38.23	-	-	-	-	-	-	173	229	H

**HIGH CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; 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/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.684	31.15	PK	33	-29.8	0	34.35	-	-	74	-39.65	-	-	0-360	200	H
4	* 2.805	31.89	PK	32.6	-31.7	0	32.79	-	-	74	-41.21	-	-	0-360	100	V
2	* 7.675	29.59	PK	35.8	-27.6	0	37.79	-	-	74	-36.21	-	-	0-360	100	H
5	* 7.567	29.46	PK	35.7	-27.2	0	37.96	-	-	74	-36.04	-	-	0-360	200	V
6	10.255	27.31	PK	37.1	-23.8	0	40.61	-	-	-	-	68.2	-27.59	0-360	100	V
3	10.335	27.95	PK	37.2	-23.9	0	41.25	-	-	-	-	68.2	-26.95	0-360	200	H

PK - Peak detector

*RADIATED EMISSIONS*

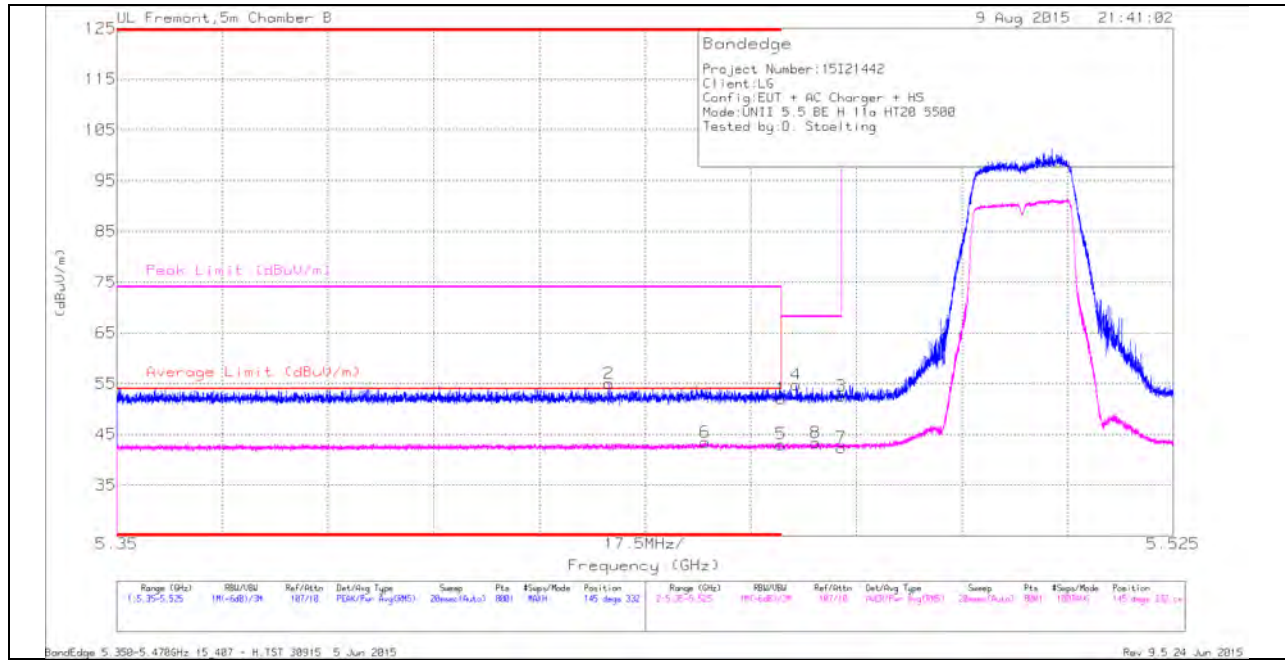
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.685	40.41	PK1	33	-29.8	0	43.61	-	-	74	-30.39	-	-	351	157	H
* 3.683	28.58	AD1	33	-29.7	.51	32.39	54	-21.61	-	-	-	-	351	157	H
* 2.804	41.5	PK1	32.6	-31.7	0	42.4	-	-	74	-31.6	-	-	324	139	V
* 2.804	29.34	AD1	32.6	-31.7	.51	30.75	54	-23.25	-	-	-	-	324	139	V
* 7.673	38.49	PK1	35.8	-27.6	0	46.69	-	-	74	-27.31	-	-	358	199	H
* 7.675	27.1	AD1	35.8	-27.6	.51	35.81	54	-18.19	-	-	-	-	358	199	H
* 7.566	38.77	PK1	35.7	-27.2	0	47.27	-	-	74	-26.73	-	-	28	188	V
* 7.565	27.52	AD1	35.7	-27.2	.51	36.53	54	-17.47	-	-	-	-	28	188	V
10.256	36.08	PK1	37.1	-23.8	0	49.38	-	-	-	-	68.2	-18.82	7	133	V
10.257	24.6	AD1	37.1	-23.8	.51	38.41	-	-	-	-	-	-	7	133	V
10.337	35.76	PK1	37.2	-23.9	0	49.06	-	-	-	-	68.2	-19.14	181	239	H
10.337	24.24	AD1	37.2	-23.9	.51	38.05	-	-	-	-	-	-	181	239	H

### 9.3. 5.5-5.6 GHz

#### 9.3.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.5 GHz BAND

#### RESTRICTED BANDEDGE (LOW CHANNEL)

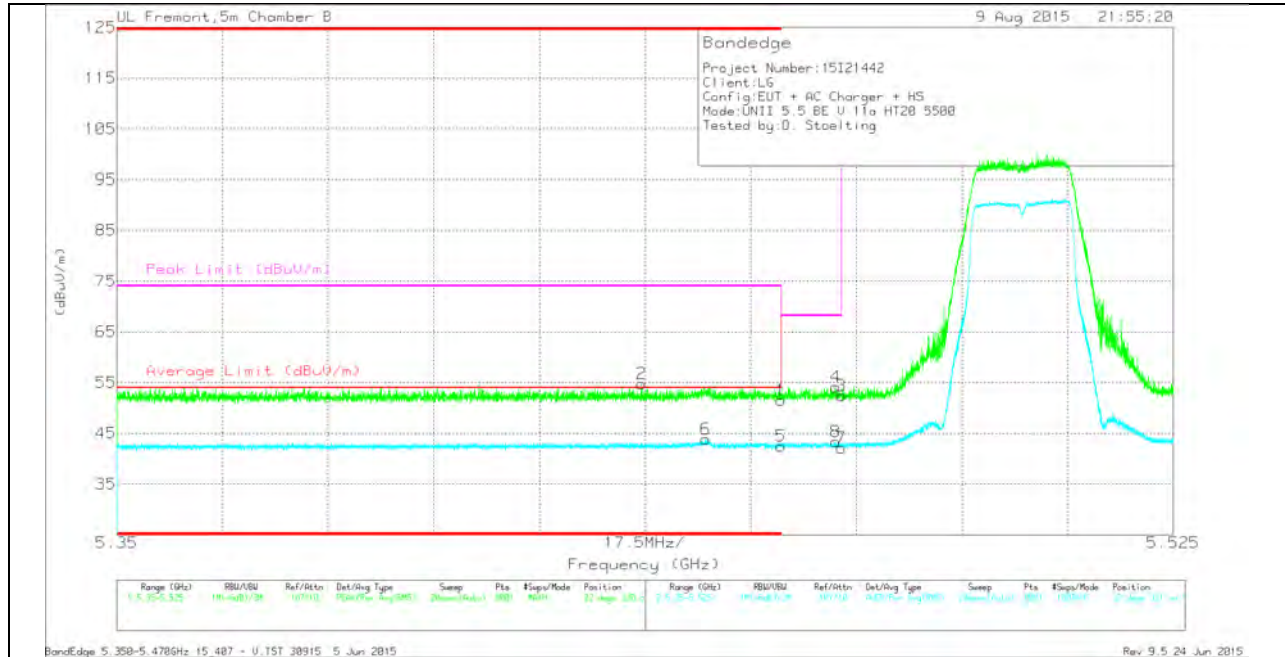
#### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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
2	* 5.431	42.55	Pk	34.5	-22	0	55.05	-	-	74	-18.95	145	332	H
6	* 5.447	30.67	RMS	34.5	-22	.25	43.42	-	-	-	-	145	332	H
1	* 5.46	39.48	PK	34.5	-22	0	51.98	-	-	74	-22.02	145	332	H
5	* 5.46	30.28	RMS	34.5	-22	.25	43.03	-	-	-	-	145	332	H
4	5.463	42.26	PK	34.5	-22	0	54.76	-	-	68.2	-13.44	145	332	H
8	5.466	30.59	RMS	34.5	-22	.25	43.34	-	-	-	-	145	332	H
3	5.47	40.11	PK	34.5	-22.1	0	52.51	-	-	68.2	-15.69	145	332	H
7	5.47	29.72	RMS	34.5	-22.1	.25	42.37	-	-	-	-	145	332	H

**VERTICAL PEAK AND AVERAGE PLOT**

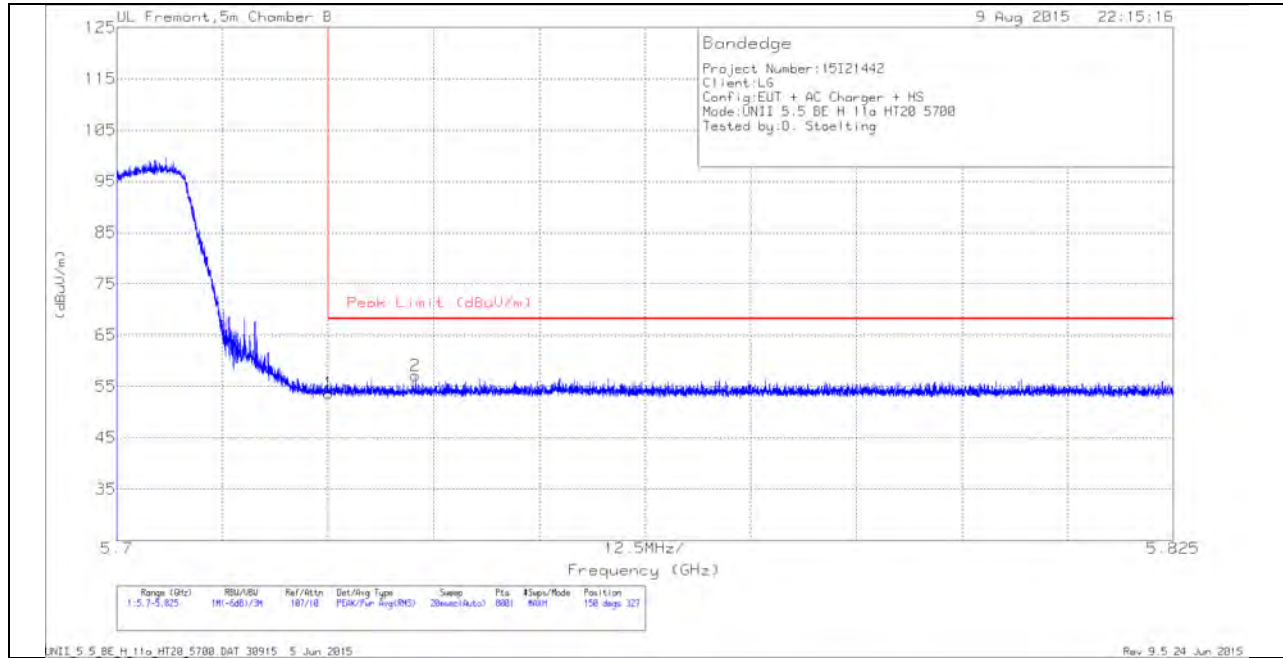


**VERTICAL DATA**

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
2	* 5.437	42.29	Pk	34.5	-22	0	54.79	-	-	74	-19.21	22	330	V
6	* 5.447	31.15	RMS	34.5	-22	.22	43.87	-	-	-	-	22	331	V
1	* 5.46	39.08	Pk	34.5	-22	0	51.58	-	-	74	-22.42	22	330	V
5	* 5.46	29.8	RMS	34.5	-22	.22	42.52	-	-	-	-	22	331	V
4	5.469	41.75	Pk	34.5	-22.1	0	54.15	-	-	68.2	-14.05	22	330	V
8	5.469	30.71	RMS	34.5	-22.1	.22	43.33	-	-	-	-	22	331	V
3	5.47	40.05	Pk	34.5	-22.1	0	52.45	-	-	68.2	-15.75	22	330	V
7	5.47	29.46	RMS	34.5	-22.1	.22	42.08	-	-	-	-	22	331	V

### AUTHORIZED BANDEDGE (HIGH CHANNEL)

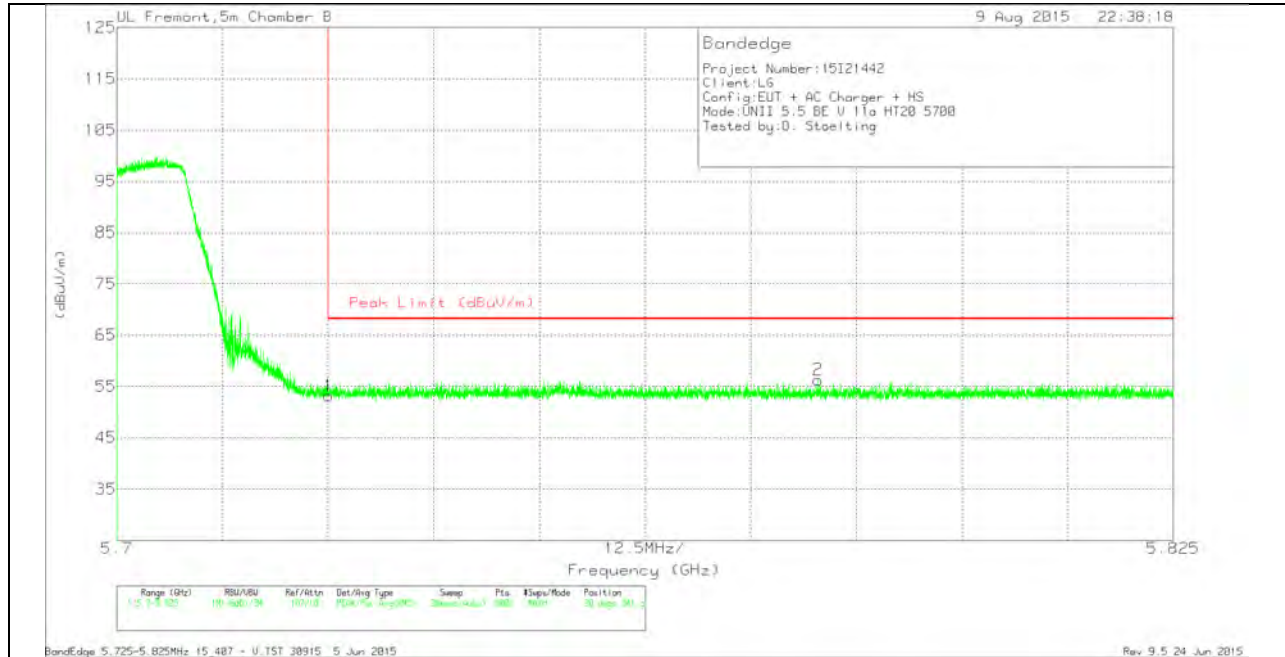
#### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/F ltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	40.41	Pk	35	-21.7	0	53.71	68.2	-14.49	150	327	H
2	5.735	43.8	Pk	35	-21.7	0	57.1	68.2	-11.1	150	327	H

**VERTICAL PEAK AND AVERAGE PLOT**



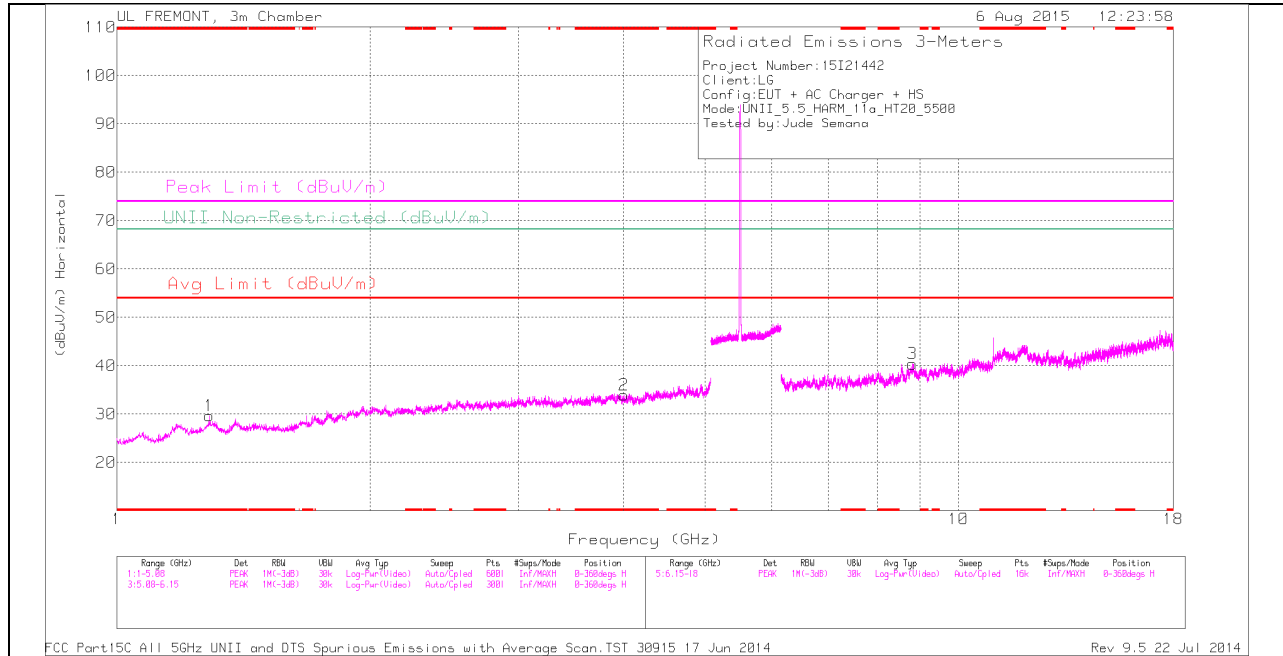
**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	39.88	Pk	35	-21.7	53.18	68.2	-15.02	20	341	V
2	5.783	42.92	Pk	35.1	-21.7	56.32	68.2	-11.88	20	341	V



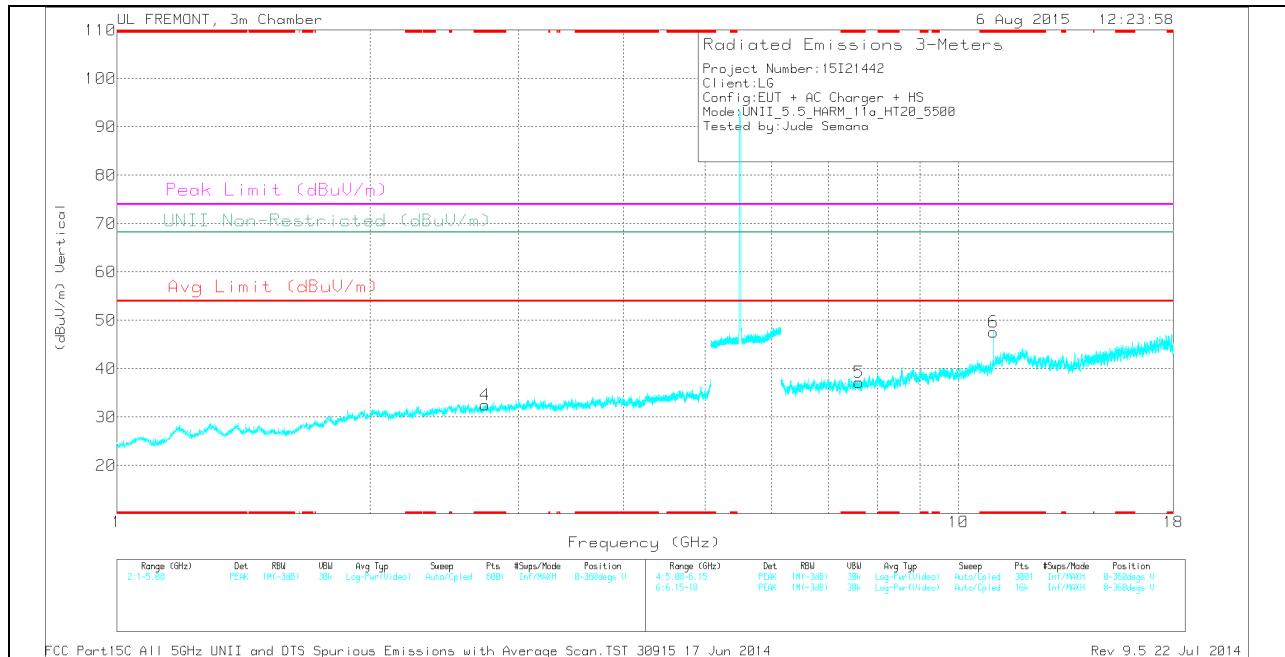
### HARMONICS AND SPURIOUS EMISSIONS

#### LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; 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 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL DATA**

*TRACE MARKERS*

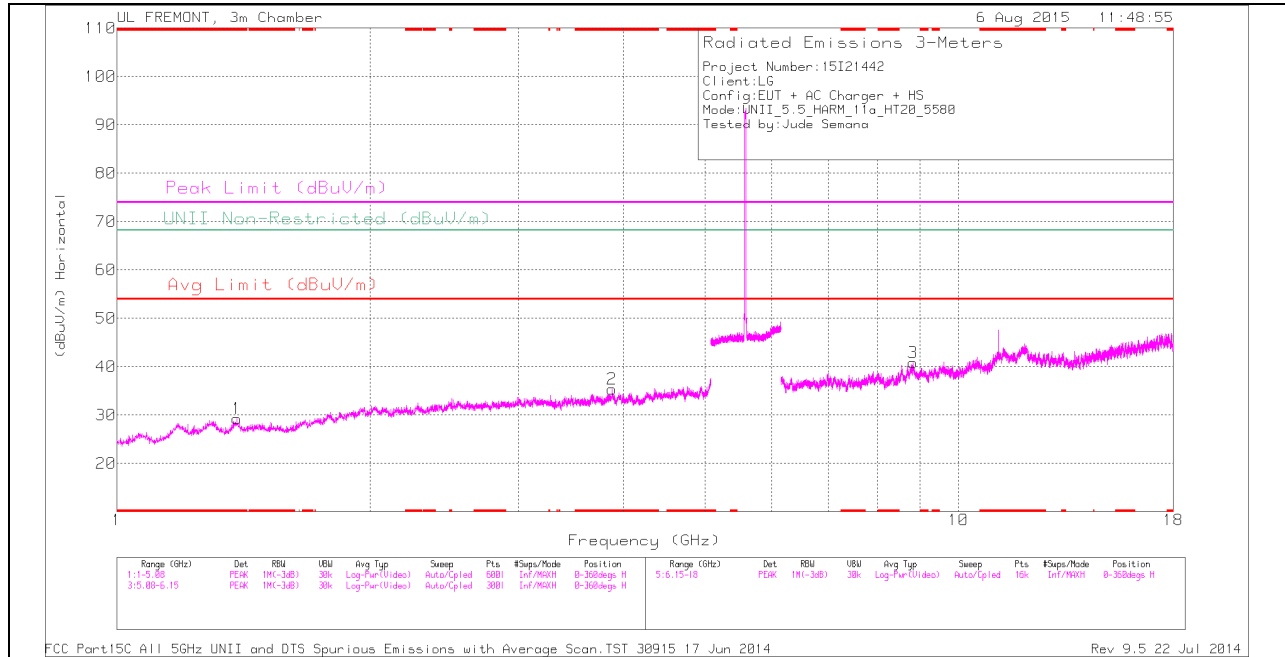
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.286	32.87	PK	29.8	-33	0	29.67	-	-	74	-44.33	-	-	0-360	100	H
2	* 4.005	31.68	PK	33.2	-30.9	0	33.98	-	-	74	-40.02	-	-	0-360	100	H
4	* 2.738	31.73	PK	32.4	-31.6	0	32.53	-	-	74	-41.47	-	-	0-360	200	V
5	* 7.616	28.74	PK	35.7	-27.3	0	37.14	-	-	74	-36.86	-	-	0-360	200	V
6	* 11	32.93	PK	37.9	-23.3	0	47.53	-	-	74	-26.47	-	-	0-360	100	V
3	8.822	28.68	PK	35.9	-24.2	0	40.38	-	-	-	-	68.2	-27.82	0-360	200	H

PK - Peak detector

*RADIATED EMISSIONS*

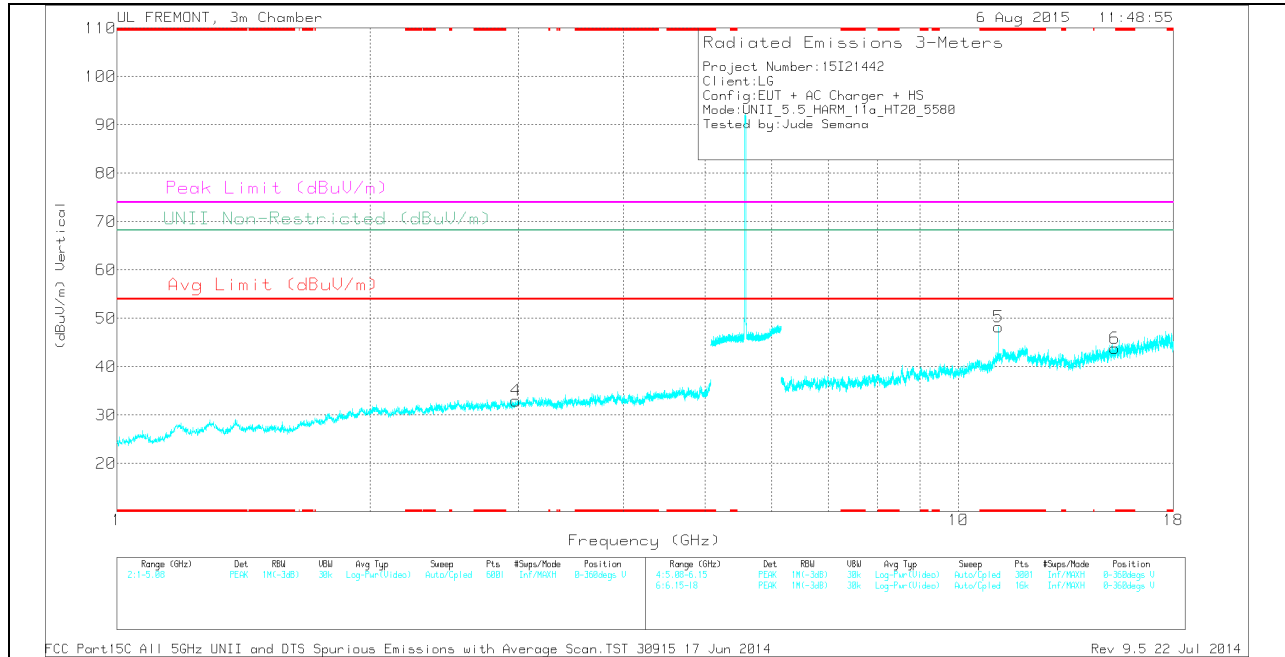
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.285	41.09	PK1	29.7	-33	0	37.79	-	-	74	-36.21	-	-	360	100	H
* 1.287	29.61	AD1	29.8	-33	.26	26.67	54	-27.33	-	-	-	-	360	100	H
* 4.003	40.97	PK1	33.2	-30.9	0	43.27	-	-	74	-30.73	-	-	360	100	H
* 4.003	29.37	AD1	33.2	-30.9	.26	31.93	54	-22.07	-	-	-	-	360	100	H
* 2.737	41.59	PK1	32.4	-31.6	0	42.39	-	-	74	-31.61	-	-	360	200	V
* 2.737	29.53	AD1	32.4	-31.6	.26	30.59	54	-23.41	-	-	-	-	360	200	V
* 7.617	38.7	PK1	35.7	-27.3	0	47.1	-	-	74	-26.9	-	-	360	200	V
* 7.614	27.39	AD1	35.7	-27.3	.26	36.05	54	-17.95	-	-	-	-	360	200	V
* 11	40.68	PK1	37.9	-23.3	0	55.28	-	-	74	-18.72	-	-	354	101	V
* 11	32.61	AD1	37.9	-23.3	.26	47.47	54	-6.53	-	-	-	-	354	101	V
8.824	37.05	PK1	35.9	-24.3	0	48.65	-	-	-	-	68.2	-19.55	360	200	H
8.824	25.71	AD1	35.9	-24.3	.26	37.57	-	-	-	-	-	-	360	200	H

**MID CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL DATA**

*TRACE MARKERS*

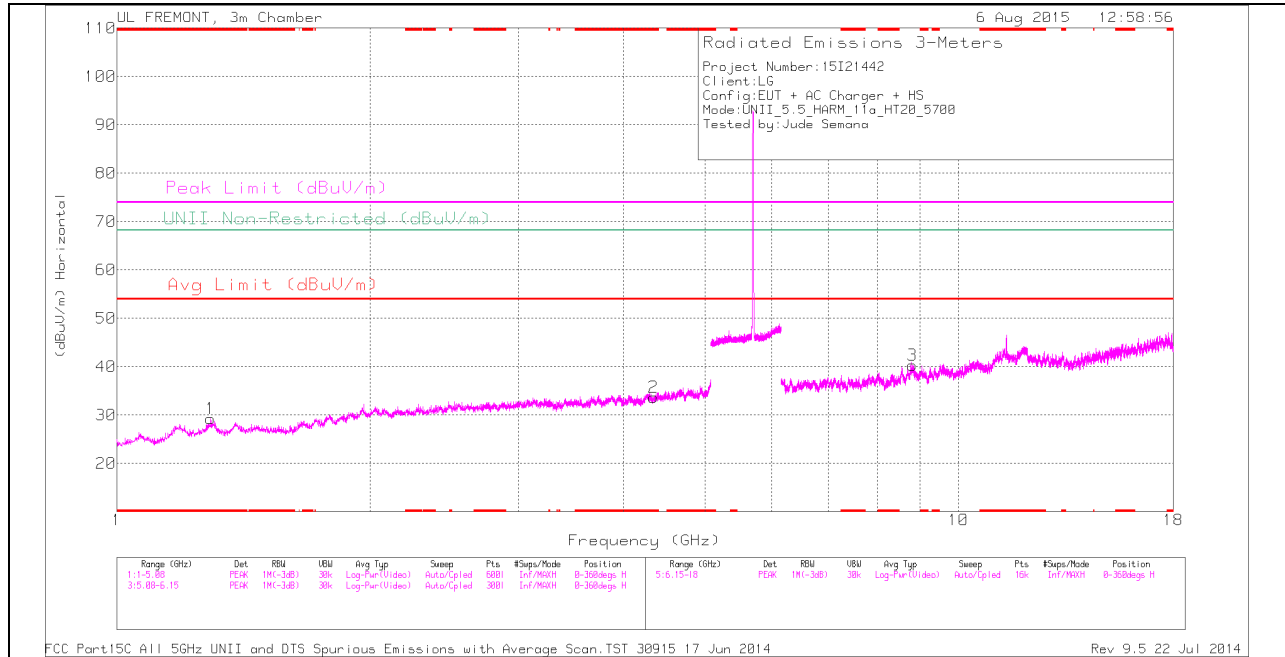
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.389	32.78	PK	28.8	-32.3	0	29.28	-	-	74	-44.72	-	-	0-360	200	H
2	* 3.876	32.41	PK	33.2	-30.2	0	35.41	-	-	74	-38.59	-	-	0-360	100	H
5	* 11.159	33.8	PK	37.9	-23.5	0	48.2	-	-	74	-25.8	-	-	0-360	100	V
4	2.98	31.48	PK	32.7	-31.2	0	32.98	-	-	-	-	68.2	-35.22	0-360	200	V
3	8.835	29.31	PK	35.9	-24.4	0	40.81	-	-	-	-	68.2	-27.39	0-360	100	H
6	15.329	29.93	PK	40	-26.1	0	43.83	-	-	-	-	68.2	-24.37	0-360	200	V

PK - Peak detector

*RADIATED EMISSIONS*

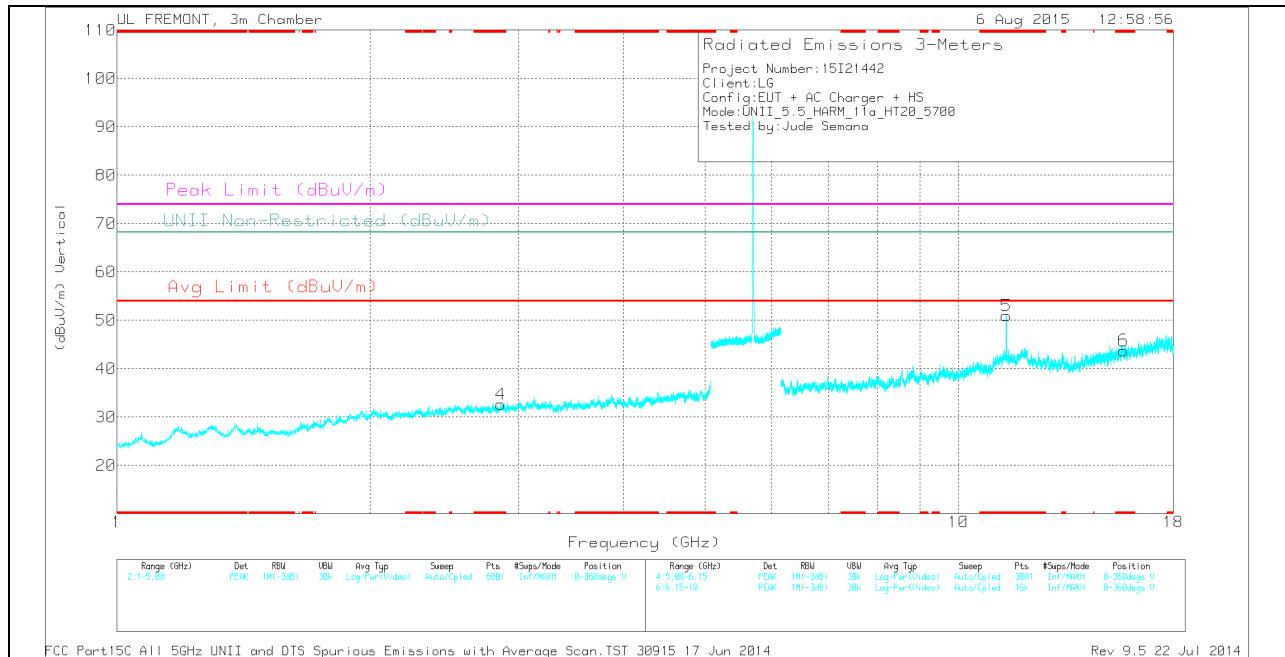
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.389	42.22	PK1	28.8	-32.3	0	38.72	-	-	74	-35.28	-	-	0	200	H
* 1.389	30.31	AD1	28.8	-32.3	.26	27.07	54	-26.93	-	-	-	-	0	200	H
* 3.876	40.87	PK1	33.2	-30.2	0	43.87	-	-	74	-30.13	-	-	0	100	H
* 3.875	29.32	AD1	33.2	-30.2	.26	32.58	54	-21.42	-	-	-	-	0	100	H
* 11.16	40.39	PK1	37.9	-23.5	0	54.79	-	-	74	-19.21	-	-	338	101	V
* 11.16	33.8	AD1	37.9	-23.5	.26	48.46	54	-5.54	-	-	-	-	338	101	V
2.981	40.84	PK1	32.7	-31.2	0	42.34	-	-	-	-	68.2	-25.86	0	200	V
2.982	29.28	AD1	32.7	-31.2	.26	31.04	-	-	-	-	-	-	0	200	V
8.834	37.83	PK1	35.9	-24.4	0	49.33	-	-	-	-	68.2	-18.87	0	100	H
8.837	25.9	AD1	35.9	-24.4	.26	37.66	-	-	-	-	-	-	0	100	H
15.329	27.99	AD1	40	-26.1	.26	42.15	-	-	-	-	-	-	338	200	V
15.33	39.2	PK1	40	-26	0	53.2	-	-	-	-	68.2	-15	338	200	V

**HIGH CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; 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/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.292	32.47	PK	29.8	-33	0	29.27	-	-	74	-44.73	-	-	0-360	200	H
2	* 4.339	29.92	PK	33.6	-29.8	0	33.72	-	-	74	-40.28	-	-	0-360	100	H
4	* 2.857	31.66	PK	32.6	-31.6	0	32.66	-	-	74	-41.34	-	-	0-360	200	V
5	* 11.4	35.9	PK	38.2	-23.1	0	51	-	-	74	-23	-	-	0-360	100	V
6	* 15.704	29.55	PK	40.4	-26.2	0	43.75	-	-	74	-30.25	-	-	0-360	200	V
3	8.822	28.6	PK	35.9	-24.2	0	40.3	-	-	-	-	68.2	-27.9	0-360	100	H

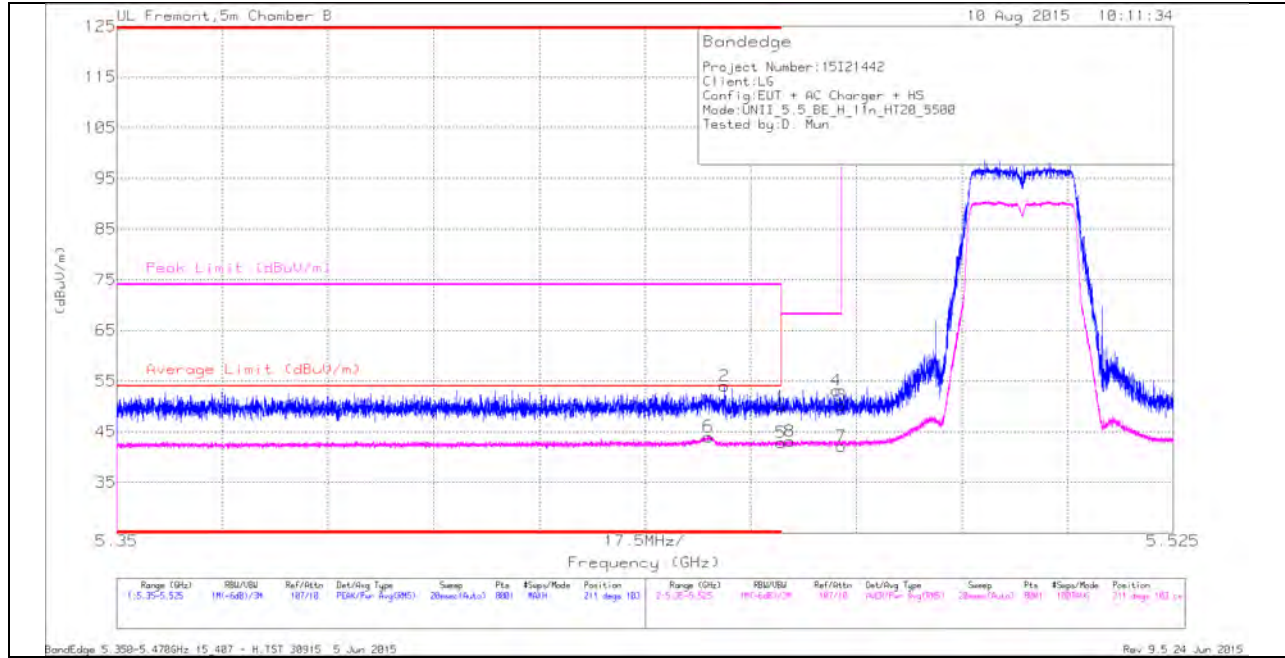
PK - Peak detector

*RADIATED EMISSIONS*

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.294	41.15	PK1	29.8	-33	0	37.95	-	-	74	-36.05	-	-	360	200	H
* 1.291	29.7	AD1	29.8	-33	.26	26.76	54	-27.24	-	-	-	-	360	200	H
* 4.338	40.07	PK1	33.6	-29.9	0	43.77	-	-	74	-30.23	-	-	360	100	H
* 4.34	28.15	AD1	33.6	-29.8	.26	32.21	54	-21.79	-	-	-	-	360	100	H
* 2.856	41.07	PK1	32.6	-31.6	0	42.07	-	-	74	-31.93	-	-	360	200	V
* 2.855	29.39	AD1	32.6	-31.6	.26	30.65	54	-23.35	-	-	-	-	360	200	V
* 11.4	41.59	PK1	38.2	-23.1	0	56.69	-	-	74	-17.31	-	-	345	102	V
* 11.4	34.45	AD1	38.2	-23.1	.26	49.81	54	-4.19	-	-	-	-	345	102	V
* 15.703	38.96	PK1	40.4	-26.2	0	53.16	-	-	74	-20.84	-	-	345	200	V
* 15.703	27.37	AD1	40.4	-26.2	.26	41.83	54	-12.17	-	-	-	-	345	200	V
8.823	37.34	PK1	35.9	-24.2	0	49.04	-	-	-	-	68.2	-19.16	360	100	H
8.824	25.96	AD1	35.9	-24.3	.26	37.82	-	-	-	-	-	-	360	100	H

### 9.3.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

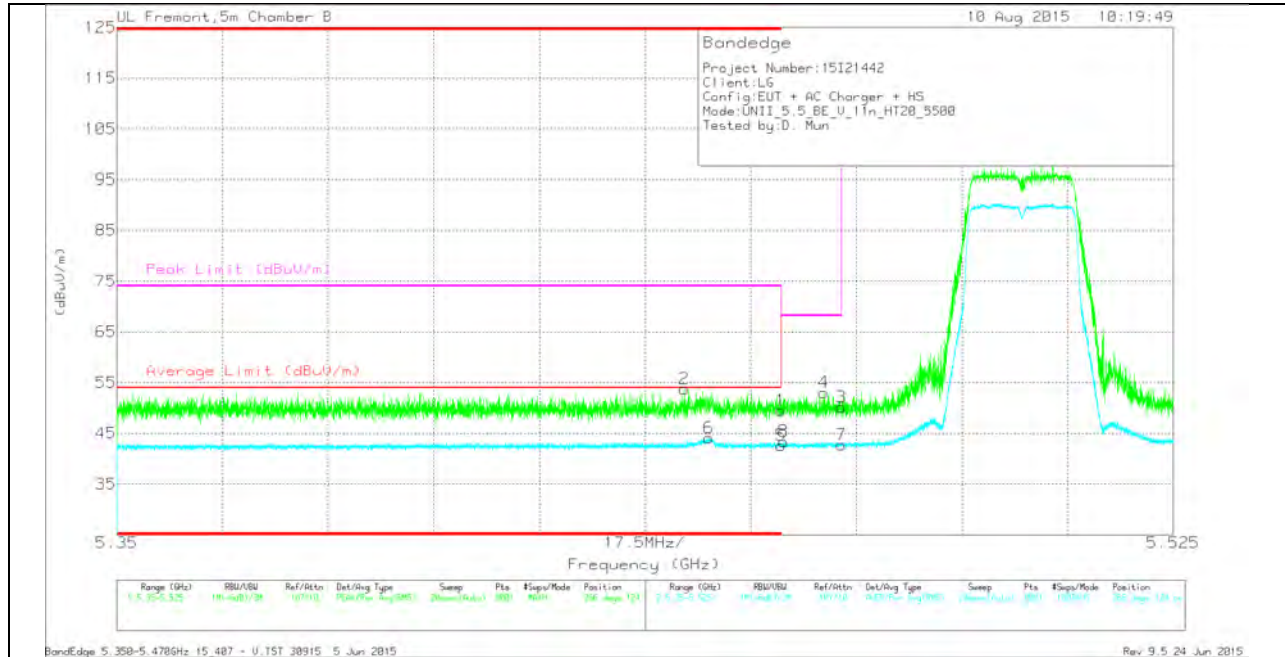
#### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

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	* 5.46	37.41	Pk	34.5	-22	0	49.91	-	-	74	-24.09	211	103	H
2	* 5.451	41.56	PK	34.5	-22.1	0	53.96	-	-	74	-20.04	211	103	H
5	* 5.46	30.35	RMS	34.5	-22	.22	43.07	-	-	-	-	211	103	H
6	* 5.448	31.52	RMS	34.5	-22	.22	44.24	-	-	-	-	211	103	H
8	5.461	30.62	RMS	34.5	-22	.22	43.34	-	-	-	-	211	103	H
4	5.469	40.78	Pk	34.5	-22.1	0	53.18	-	-	68.2	-15.02	211	103	H
3	5.47	37.77	Pk	34.5	-22.1	0	50.17	-	-	68.2	-18.03	211	103	H
7	5.47	29.65	RMS	34.5	-22.1	.22	42.27	-	-	-	-	211	103	H

**VERTICAL PEAK AND AVERAGE PLOT**

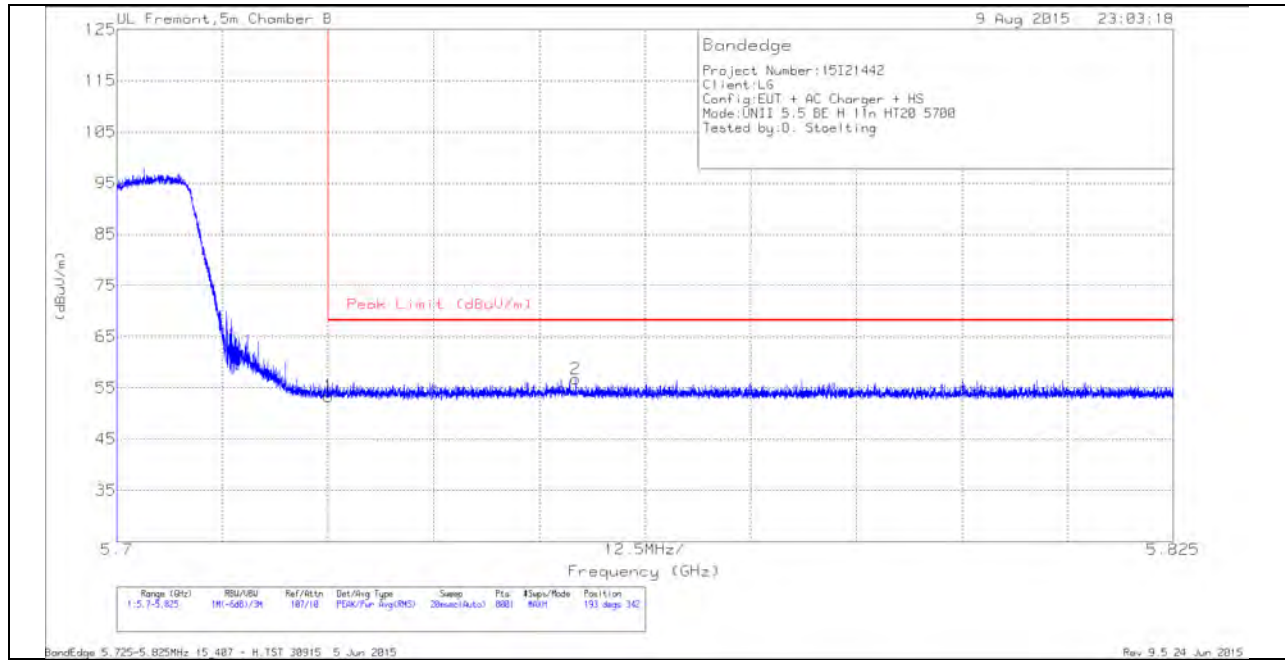


**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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	* 5.46	37	Pk	34.5	-22	0	49.5	-	-	74	-24.5	266	124	V
2	* 5.444	41.32	Pk	34.5	-22.1	0	53.72	-	-	74	-20.28	266	124	V
5	* 5.46	29.85	RMS	34.5	-22	.22	42.57	-	-	-	-	266	124	V
6	* 5.448	31.4	RMS	34.5	-22	.22	44.12	-	-	-	-	266	124	V
8	5.46	30.68	RMS	34.5	-22	.22	43.4	-	-	-	-	266	124	V
4	5.467	40.68	Pk	34.5	-22.1	0	53.08	-	-	68.2	-15.12	266	124	V
3	5.47	37.75	Pk	34.5	-22.1	0	50.15	-	-	68.2	-18.05	266	124	V
7	5.47	30.07	RMS	34.5	-22.1	.22	42.69	-	-	-	-	266	124	V

### AUTHORIZED BANDEDGE (HIGH CHANNEL)

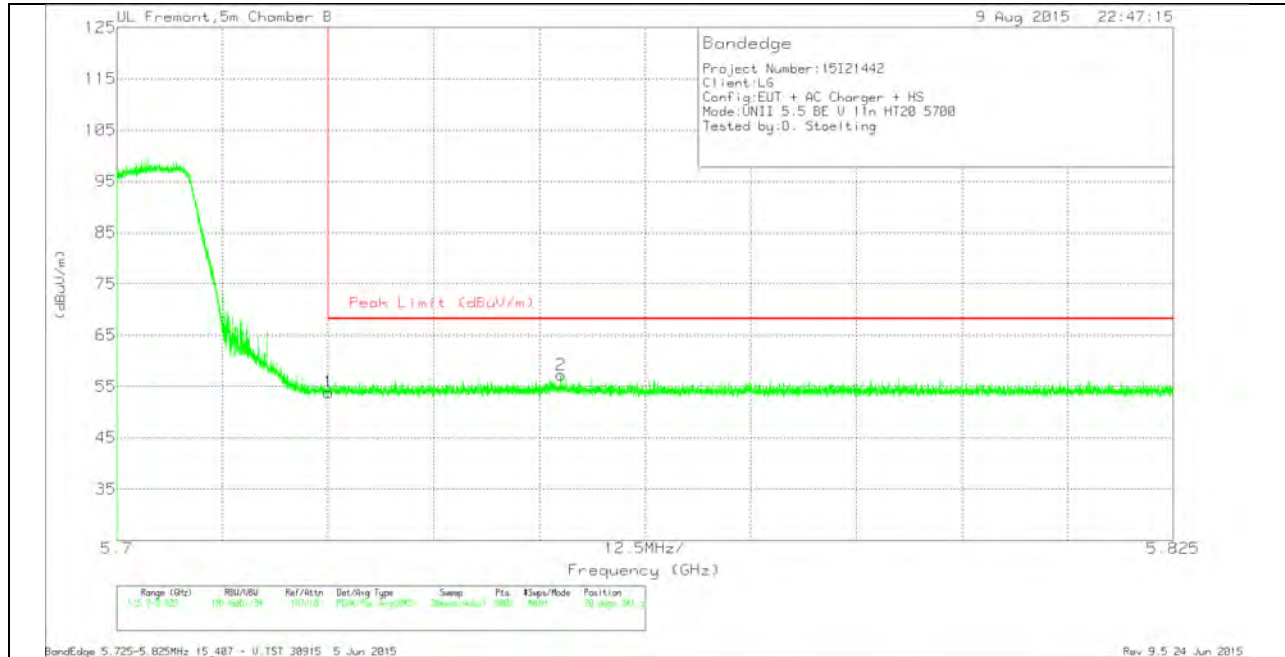
#### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	40.07	Pk	35	-21.7	53.37	68.2	-14.83	193	342	H
2	5.754	43.32	Pk	35.1	-21.7	56.72	68.2	-11.48	193	342	H

**VERTICAL PEAK AND AVERAGE PLOT**

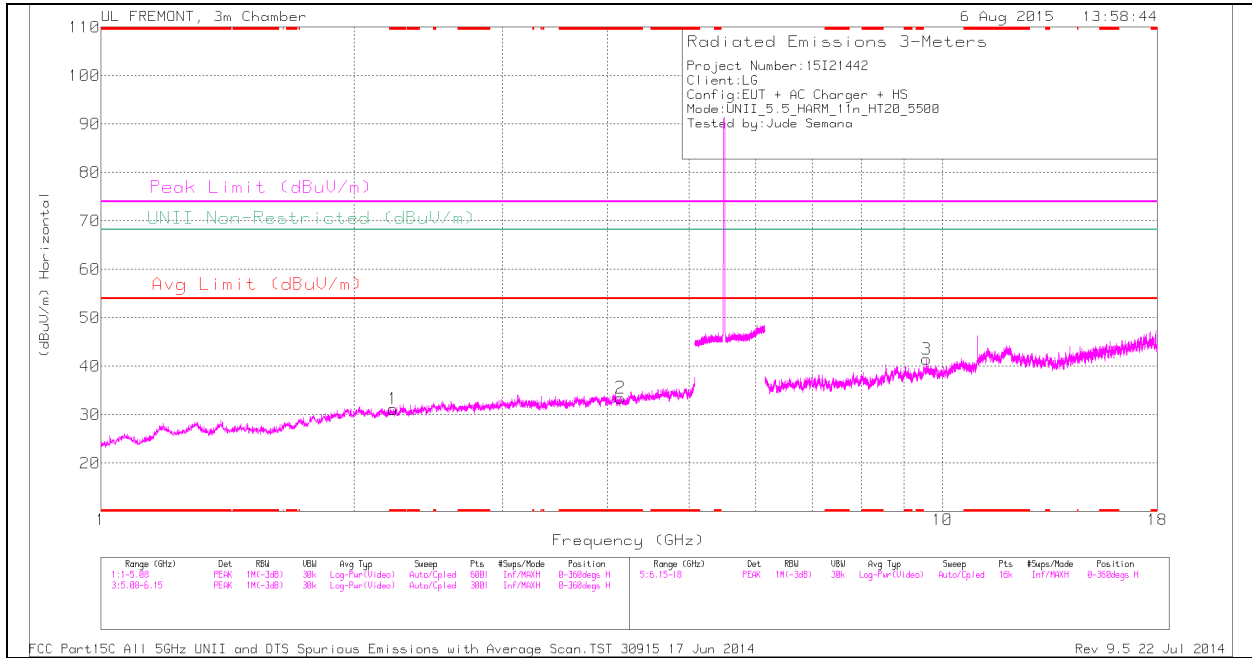


**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	40.56	Pk	35	-21.7	53.86	68.2	-14.34	20	341	V
2	5.753	43.8	Pk	35.1	-21.7	57.2	68.2	-11	20	341	V

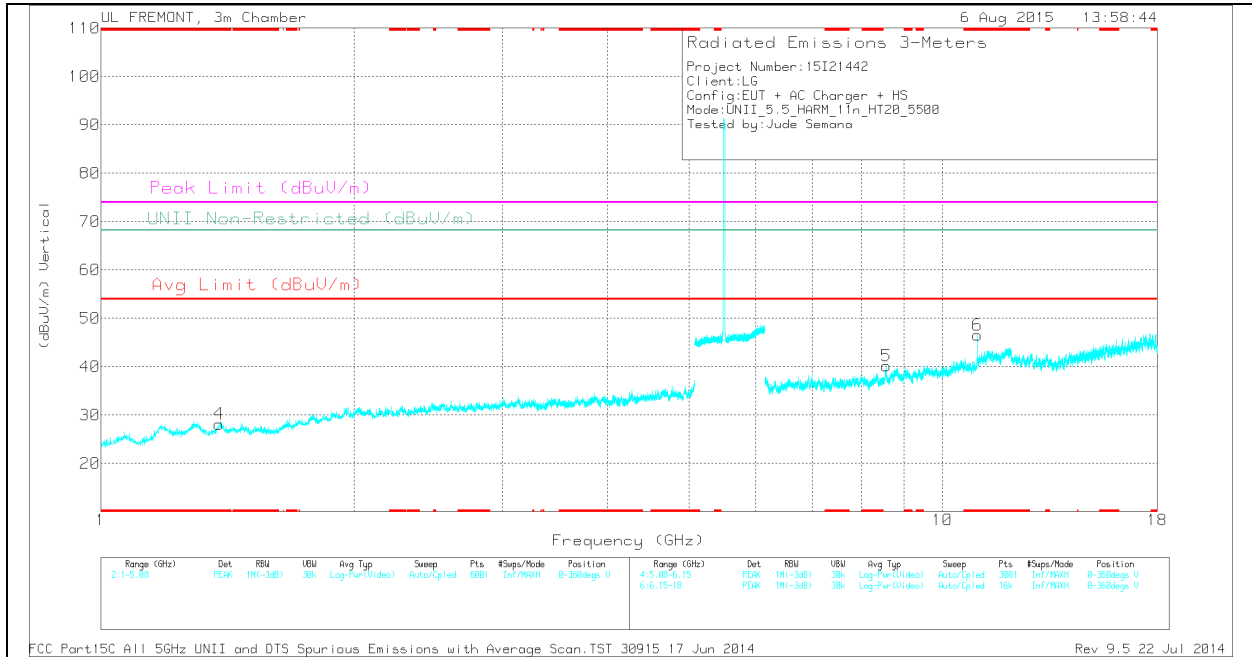
### HARMONICS AND SPURIOUS EMISSIONS

#### LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; 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 40GHz; 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/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.225	31.26	PK	31.5	-31.6	0	31.16	-	-	74	-42.84	-	-	0-360	200	H
2	* 4.147	30.49	PK	33.3	-30.3	0	33.49	-	-	74	-40.51	-	-	0-360	100	H
4	* 1.381	31.67	PK	28.9	-32.4	0	28.17	-	-	74	-45.83	-	-	0-360	200	V
6	* 11	31.94	PK	37.9	-23.3	0	46.54	-	-	74	-27.46	-	-	0-360	100	V
5	8.579	29.31	PK	35.8	-24.9	0	40.21	-	-	-	-	68.2	-27.99	0-360	200	V
3	9.577	28.38	PK	36.7	-23.6	0	41.48	-	-	-	-	68.2	-26.72	0-360	200	H

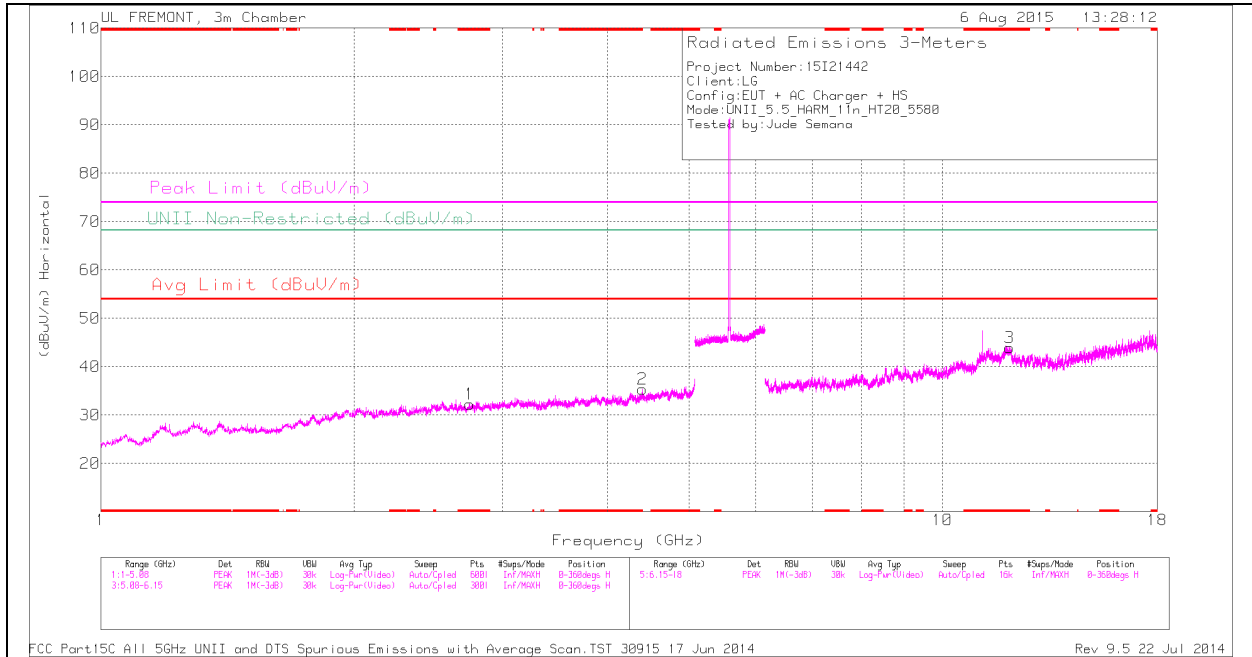
PK - Peak detector

*RADIATED EMISSIONS*

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.226	41.56	PK1	31.5	-31.6	0	41.46	-	-	74	-32.54	-	-	360	200	H
* 2.225	29.29	AD1	31.5	-31.6	.22	29.41	54	-24.59	-	-	-	-	360	200	H
* 4.146	41.07	PK1	33.3	-30.3	0	44.07	-	-	74	-29.93	-	-	360	100	H
* 4.145	28.71	AD1	33.3	-30.3	.22	31.93	54	-22.07	-	-	-	-	360	100	H
* 1.381	41.47	PK1	28.9	-32.4	0	37.97	-	-	74	-36.03	-	-	360	200	V
* 1.38	29.92	AD1	28.9	-32.4	.22	26.64	54	-27.36	-	-	-	-	360	200	V
* 11	39.47	PK1	37.9	-23.3	0	54.07	-	-	74	-19.93	-	-	351	105	V
* 11	31.78	AD1	37.9	-23.3	.22	46.6	54	-7.4	-	-	-	-	351	105	V
8.58	37.92	PK1	35.8	-25	0	48.72	-	-	-	-	68.2	-19.48	360	200	V
8.581	26.23	AD1	35.8	-25	.22	37.25	-	-	-	-	-	-	360	200	V
9.578	35.48	PK1	36.7	-23.6	0	48.58	-	-	-	-	68.2	-19.62	360	200	H
9.579	24.38	AD1	36.7	-23.6	.22	37.7	-	-	-	-	-	-	360	200	H

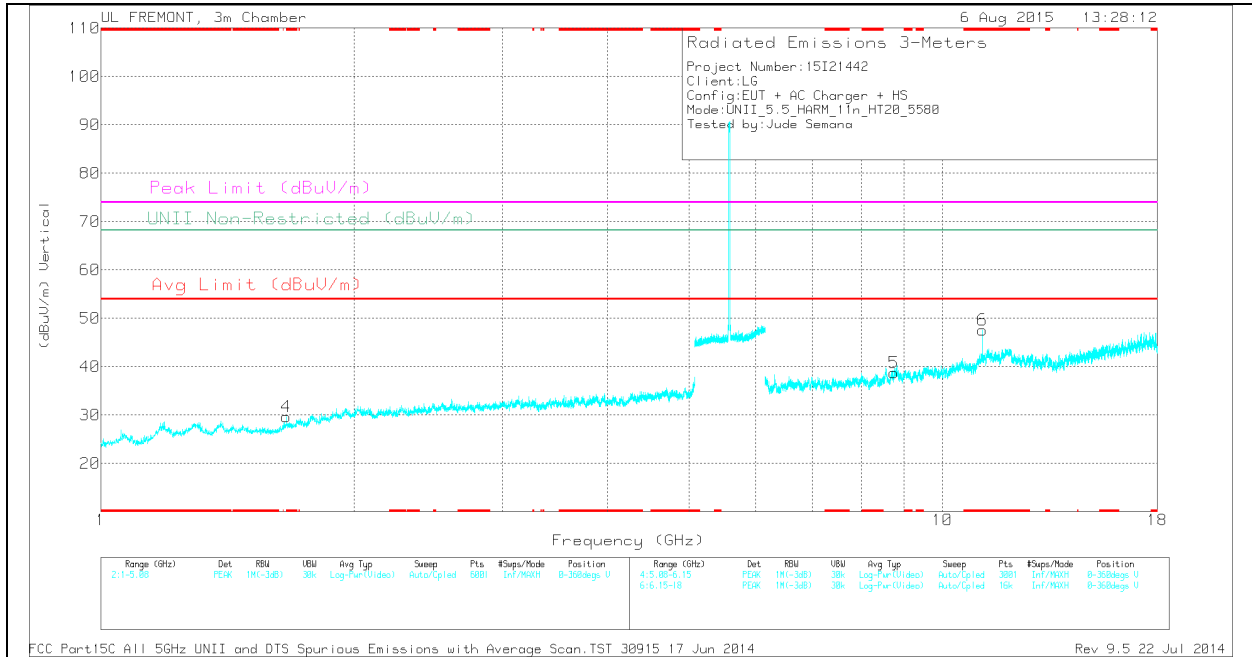


**MID CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL DATA**

*TRACE MARKERS*

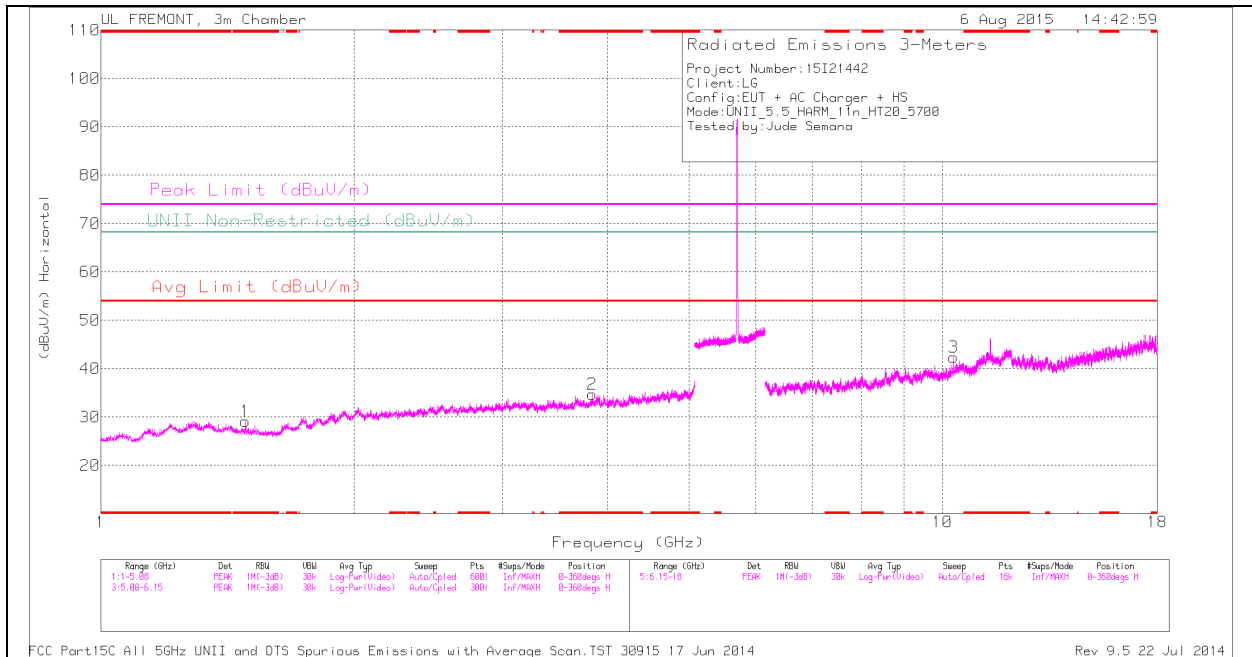
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.743	31.4	PK	32.4	-31.5	0	32.3	-	-	74	-41.7	-	-	0-360	100	H
4	* 1.66	32.96	PK	28.6	-31.9	0	29.66	-	-	74	-44.34	-	-	0-360	200	V
3	* 12.018	28.4	PK	39.1	-23.6	0	43.9	-	-	74	-30.1	-	-	0-360	100	H
6	* 11.16	33.2	PK	37.9	-23.5	0	47.6	-	-	74	-26.4	-	-	0-360	100	V
2	4.403	31.87	PK	33.6	-30.1	0	35.37	-	-	-	-	68.2	-32.83	0-360	100	H
5	8.753	28.19	PK	35.9	-25.3	0	38.79	-	-	-	-	68.2	-29.41	0-360	100	V

PK - Peak detector

*RADIATED EMISSIONS*

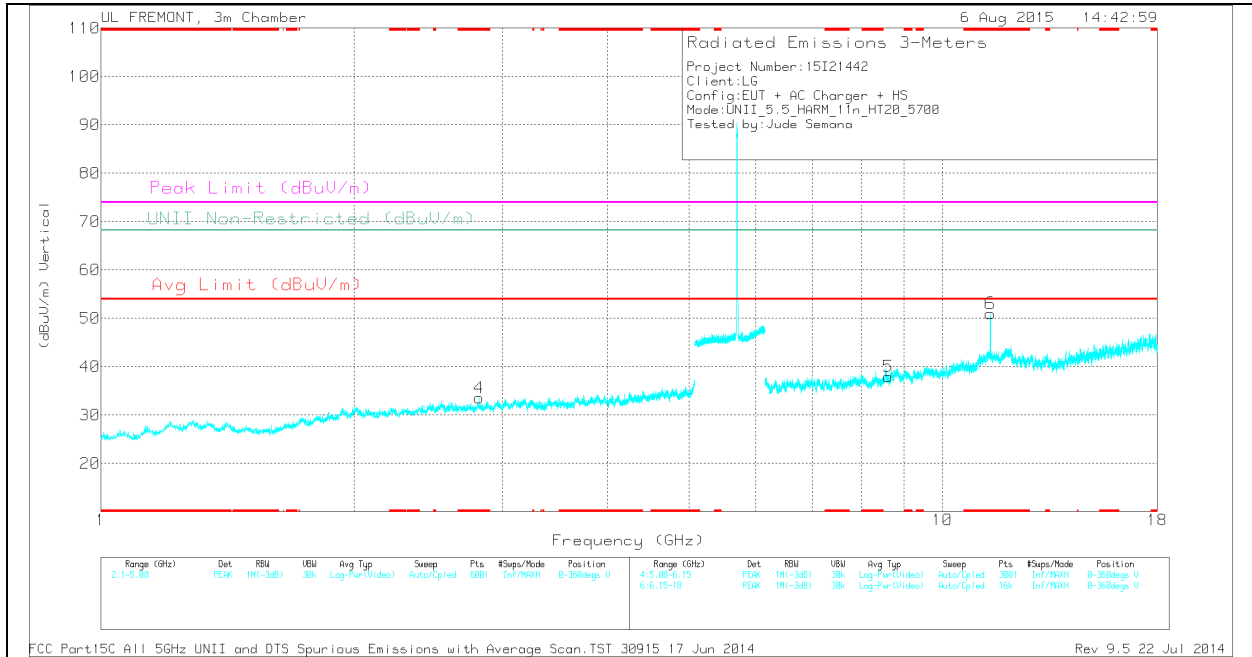
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.742	41	PK1	32.4	-31.5	0	41.9	-	-	74	-32.1	-	-	360	100	H
* 2.742	29.51	AD1	32.4	-31.5	.22	30.63	54	-23.37	-	-	-	-	360	100	H
* 1.66	41.51	PK1	28.6	-31.9	0	38.21	-	-	74	-35.79	-	-	360	200	V
* 1.66	29.98	AD1	28.6	-31.9	.22	26.9	54	-27.1	-	-	-	-	360	200	V
* 12.02	37.37	PK1	39.1	-23.6	0	52.87	-	-	74	-21.13	-	-	360	100	H
* 12.02	25.6	AD1	39.1	-23.6	.22	41.32	54	-12.68	-	-	-	-	360	100	H
* 11.16	38.89	PK1	37.9	-23.5	0	53.29	-	-	74	-20.71	-	-	345	108	V
* 11.16	31.77	AD1	37.9	-23.5	.22	46.39	54	-7.61	-	-	-	-	345	108	V
4.405	40.7	PK1	33.6	-30.2	0	44.1	-	-	-	-	68.2	-24.1	360	100	H
4.405	28.86	AD1	33.6	-30.2	.22	32.48	-	-	-	-	-	-	360	100	H
8.754	37.98	PK1	35.9	-25.2	0	48.68	-	-	-	-	68.2	-19.52	360	100	V
8.755	25.78	AD1	35.9	-25.2	.22	36.7	-	-	-	-	-	-	360	100	V

**HIGH CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; 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/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.486	33.22	PK	28.2	-32.3	0	29.12	-	-	74	-44.88	-	-	0-360	100	H
2	* 3.838	31.74	PK	33.1	-30.1	0	34.74	-	-	74	-39.26	-	-	0-360	200	H
4	* 2.815	32.62	PK	32.6	-31.7	0	33.52	-	-	74	-40.48	-	-	0-360	100	V
6	* 11.4	35.92	PK	38.2	-23.1	0	51.02	-	-	74	-22.98	-	-	0-360	100	V
5	8.626	27.82	PK	35.8	-25.6	0	38.02	-	-	-	-	68.2	-30.18	0-360	200	V
3	10.315	28.44	PK	37.1	-23.2	0	42.34	-	-	-	-	68.2	-25.86	0-360	100	H

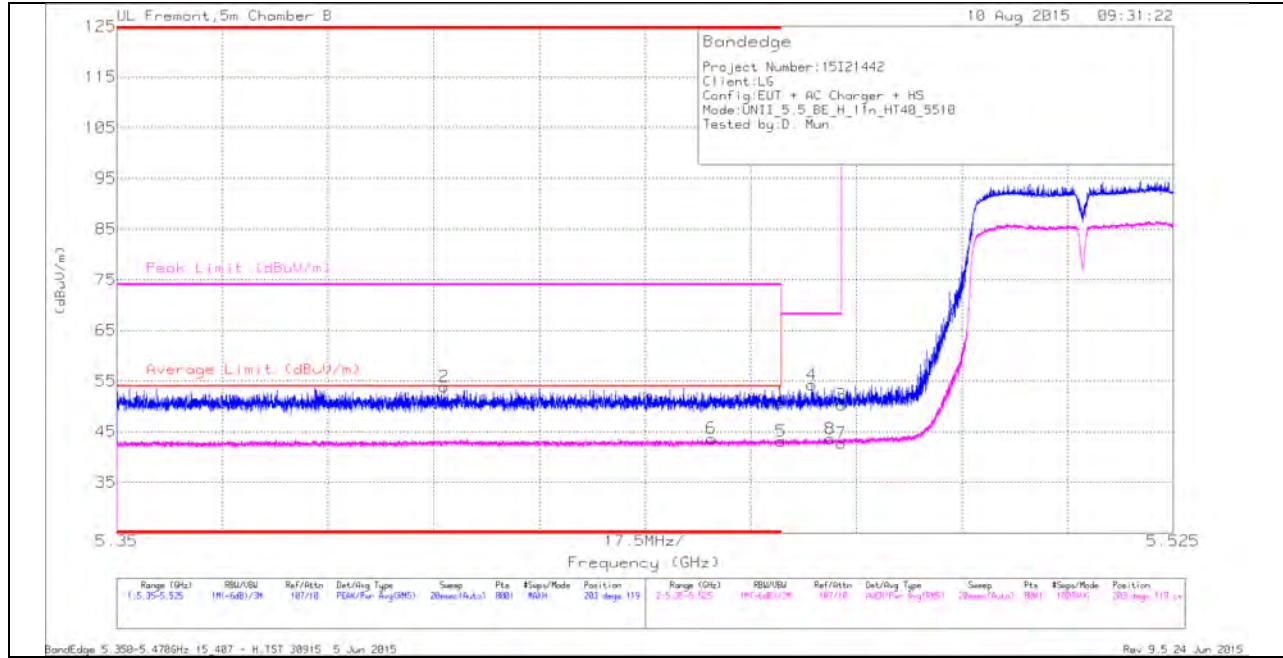
PK - Peak detector

*RADIATED EMISSIONS*

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.486	40.91	PK1	28.2	-32.3	0	36.81	-	-	74	-37.19	-	-	360	100	H
* 1.486	30.06	AD1	28.2	-32.3	.22	26.18	54	-27.82	-	-	-	-	360	100	H
* 3.838	40.14	PK1	33.1	-30.1	0	43.14	-	-	74	-30.86	-	-	360	200	H
* 3.839	28.78	AD1	33.1	-30.2	.22	31.9	54	-22.1	-	-	-	-	360	200	H
* 2.814	41.42	PK1	32.6	-31.7	0	42.32	-	-	74	-31.68	-	-	360	100	V
* 2.816	29.6	AD1	32.6	-31.7	.22	30.72	54	-23.28	-	-	-	-	360	100	V
* 11.4	42.48	PK1	38.2	-23.1	0	57.58	-	-	74	-16.42	-	-	341	100	V
* 11.4	35.07	AD1	38.2	-23.1	.22	50.39	54	-3.61	-	-	-	-	341	100	V
8.626	36.78	PK1	35.8	-25.6	0	46.98	-	-	-	-	68.2	-21.22	360	200	V
8.628	25.63	AD1	35.8	-25.7	.22	35.95	-	-	-	-	-	-	360	200	V
10.317	35.86	PK1	37.1	-23.2	0	49.76	-	-	-	-	68.2	-18.44	360	100	H
10.317	24.46	AD1	37.1	-23.2	.22	38.58	-	-	-	-	-	-	360	100	H

### 9.3.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

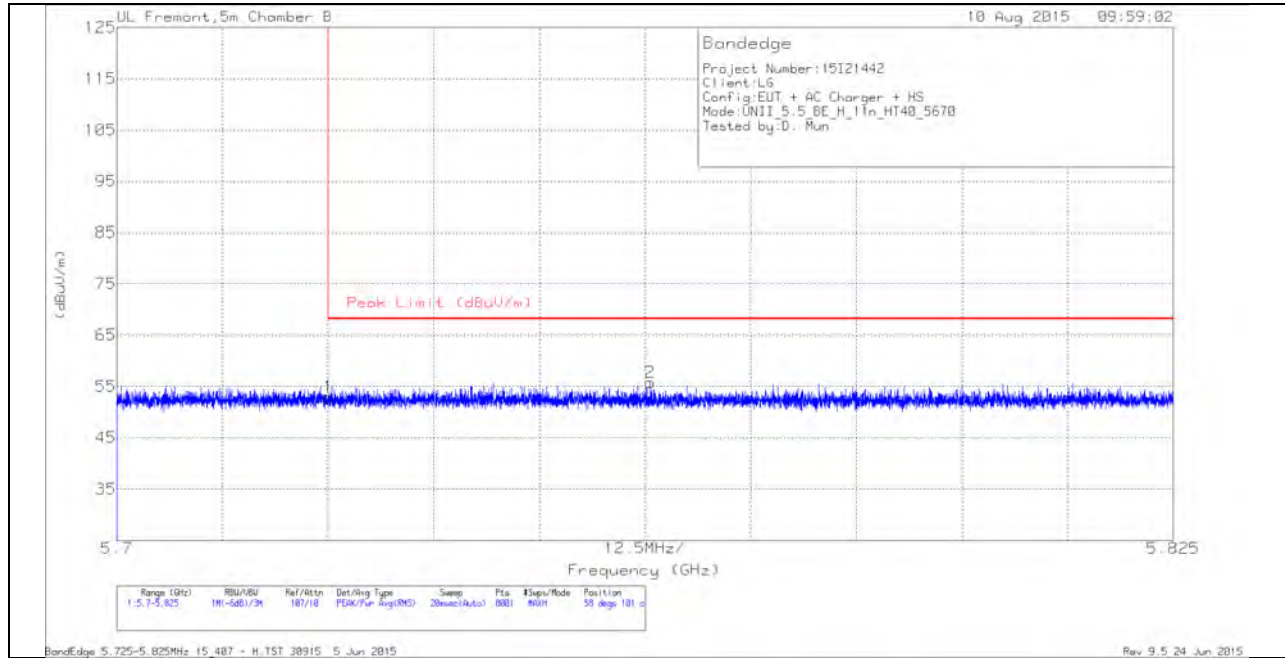
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	38.11	Pk	34.5	-22	0	50.61	-	-	74	-23.39	203	119	H
2	* 5.404	41.37	Pk	34.5	-22	0	53.87	-	-	74	-20.13	203	119	H
5	* 5.46	30.09	RMS	34.5	-22	.49	43.08	-	-	-	-	203	119	H
6	* 5.449	30.76	RMS	34.5	-22.1	.49	43.65	-	-	-	-	203	119	H
4	5.465	41.76	Pk	34.5	-22	0	54.26	-	-	68.2	-13.94	203	119	H
8	5.468	30.75	RMS	34.5	-22.1	.49	43.64	-	-	-	-	203	119	H
3	5.47	37.84	Pk	34.5	-22.1	0	50.24	-	-	68.2	-17.96	203	119	H
7	5.47	29.8	RMS	34.5	-22.1	.49	42.69	-	-	-	-	203	119	H





### AUTHORIZED BANDEGE (HIGH CHANNEL)

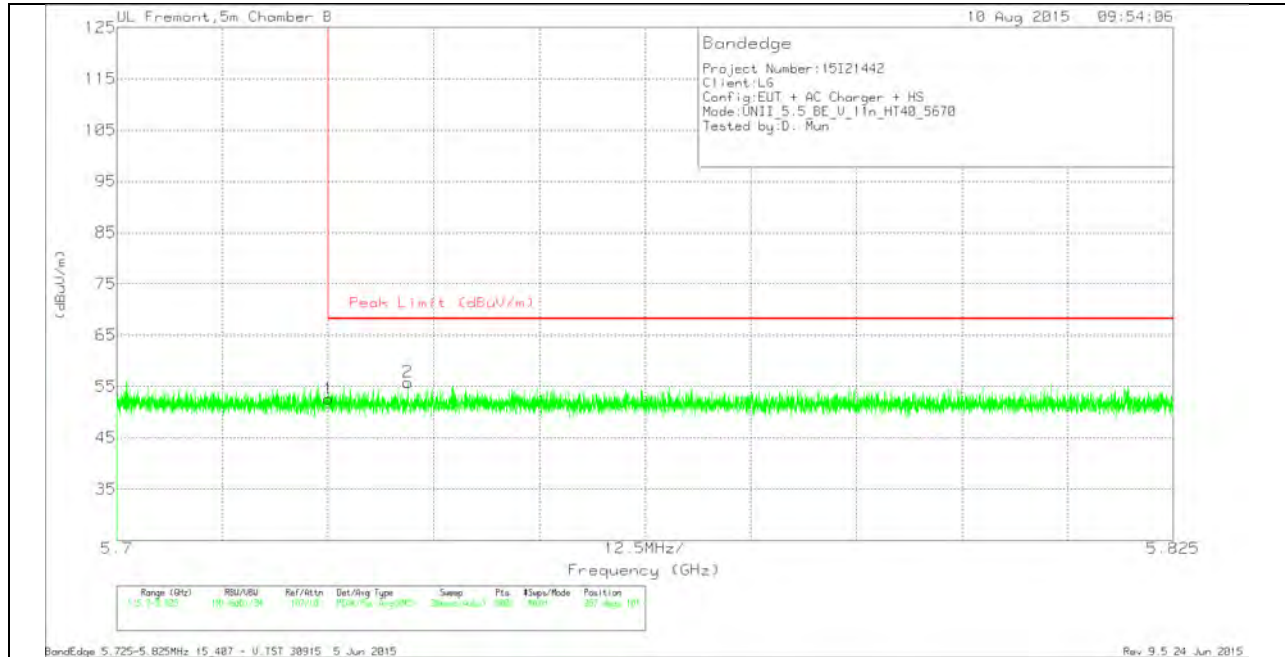
#### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/F ltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	39.68	Pk	35	-21.7	0	52.98	68.2	-15.22	58	101	H
2	5.763	42.39	Pk	35.1	-21.7	0	55.79	68.2	-12.41	58	101	H

**VERTICAL PEAK AND AVERAGE PLOT**

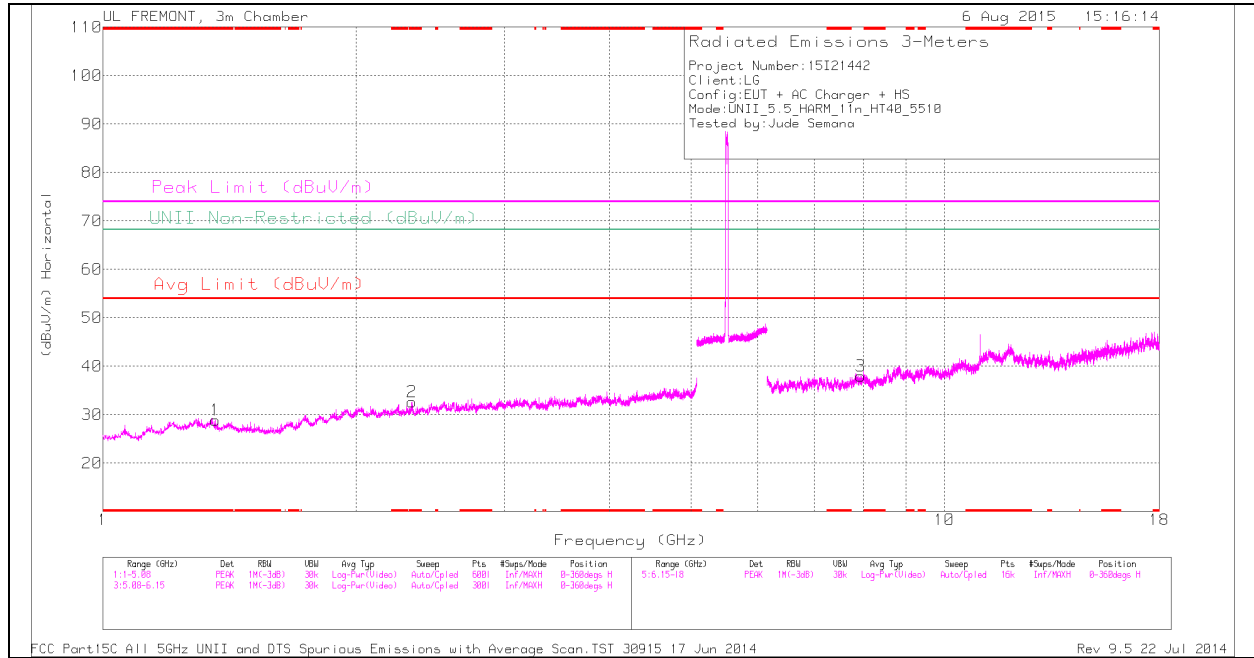


**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/F ltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	39.26	Pk	35	-21.7	0	52.56	68.2	-15.64	267	101	V
2	5.734	42.53	Pk	35	-21.7	0	55.83	68.2	-12.37	267	101	V

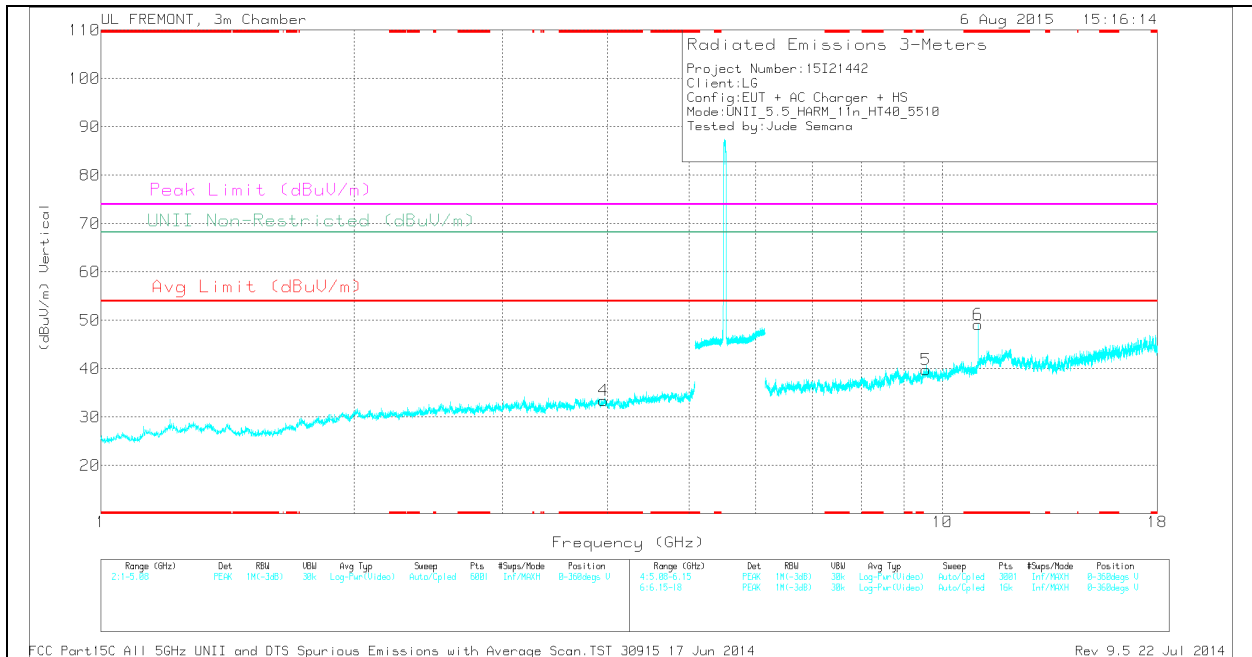
### HARMONICS AND SPURIOUS EMISSIONS

#### LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; 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 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL DATA**

*TRACE MARKERS*

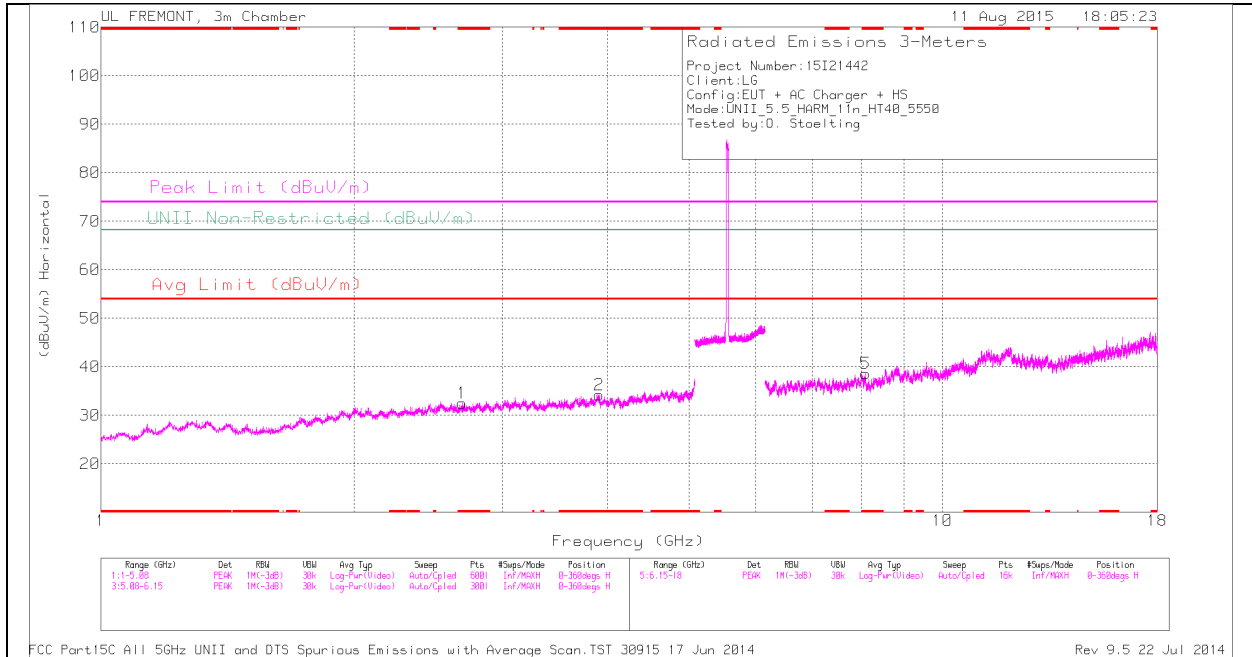
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.36	32.45	PK	29.1	-32.7	0	28.85	-	-	74	-45.15	-	-	0-360	100	H
2	* 2.329	32.89	PK	31.7	-31.9	0	32.69	-	-	74	-41.31	-	-	0-360	100	H
4	* 3.958	31.03	PK	33.2	-30.8	0	33.43	-	-	74	-40.57	-	-	0-360	100	V
6	* 11.019	34.16	PK	37.9	-22.9	0	49.16	-	-	74	-24.84	-	-	0-360	100	V
3	7.95	29.9	PK	35.8	-27.7	0	38	-	-	-	-	68.2	-30.2	0-360	200	H
5	9.55	26.9	PK	36.6	-23.7	0	39.8	-	-	-	-	68.2	-28.4	0-360	100	V

PK - Peak detector

*RADIATED EMISSIONS*

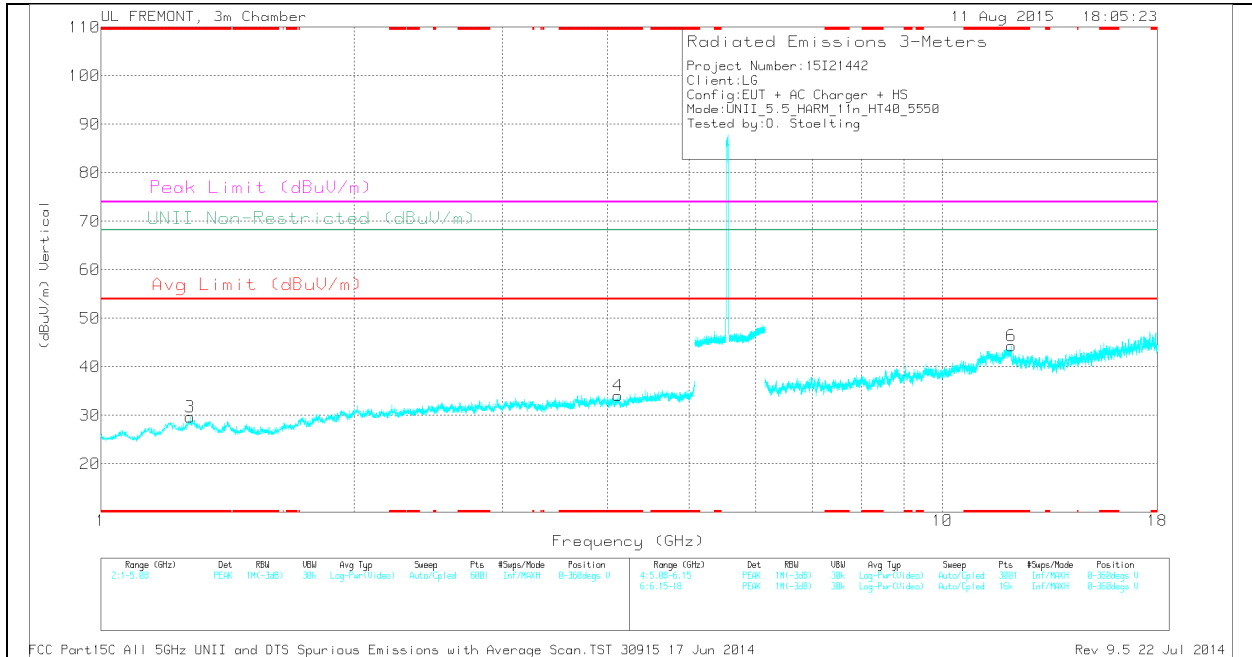
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.359	41.39	PK1	29.1	-32.7	0	37.79	-	-	74	-36.21	-	-	360	100	H
* 1.358	29.87	AD1	29.1	-32.7	.49	26.76	54	-27.24	-	-	-	-	360	100	H
* 2.329	41.38	PK1	31.7	-31.9	0	41.18	-	-	74	-32.82	-	-	360	100	H
* 2.33	29.56	AD1	31.7	-32	.49	29.75	54	-24.25	-	-	-	-	360	100	H
* 3.958	40.24	PK1	33.2	-30.8	0	42.64	-	-	74	-31.36	-	-	360	100	V
* 3.957	29.08	AD1	33.2	-30.8	.49	31.97	54	-22.03	-	-	-	-	360	100	V
* 11.02	40.29	PK1	37.9	-22.9	0	55.29	-	-	74	-18.71	-	-	347	106	V
* 11.02	33.72	AD1	37.9	-22.9	.49	49.21	54	-4.79	-	-	-	-	347	106	V
7.951	38.59	PK1	35.8	-27.7	0	46.69	-	-	-	-	68.2	-21.51	360	200	H
7.951	27.12	AD1	35.8	-27.7	.49	35.71	-	-	-	-	-	-	360	200	H
9.55	36.02	PK1	36.6	-23.7	0	48.92	-	-	-	-	68.2	-19.28	360	100	V
9.552	24.76	AD1	36.6	-23.7	.49	38.15	-	-	-	-	-	-	360	100	V

**MID CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; 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/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.689	31.76	PK	32.3	-31.5	0	32.56	-	-	74	-41.44	-	-	0-360	200	H
2	* 3.907	31.36	PK	33.2	-30.3	0	34.26	-	-	74	-39.74	-	-	0-360	200	H
3	* 1.276	32.84	PK	29.7	-32.9	0	29.64	-	-	74	-44.36	-	-	0-360	100	V
4	* 4.117	31.22	PK	33.3	-30.4	0	34.12	-	-	74	-39.88	-	-	0-360	200	V
5	* 8.098	29.15	PK	35.7	-26.2	0	38.65	-	-	74	-35.35	-	-	0-360	100	H
6	* 12.074	29.42	PK	39	-24.1	0	44.32	-	-	74	-29.68	-	-	0-360	100	V

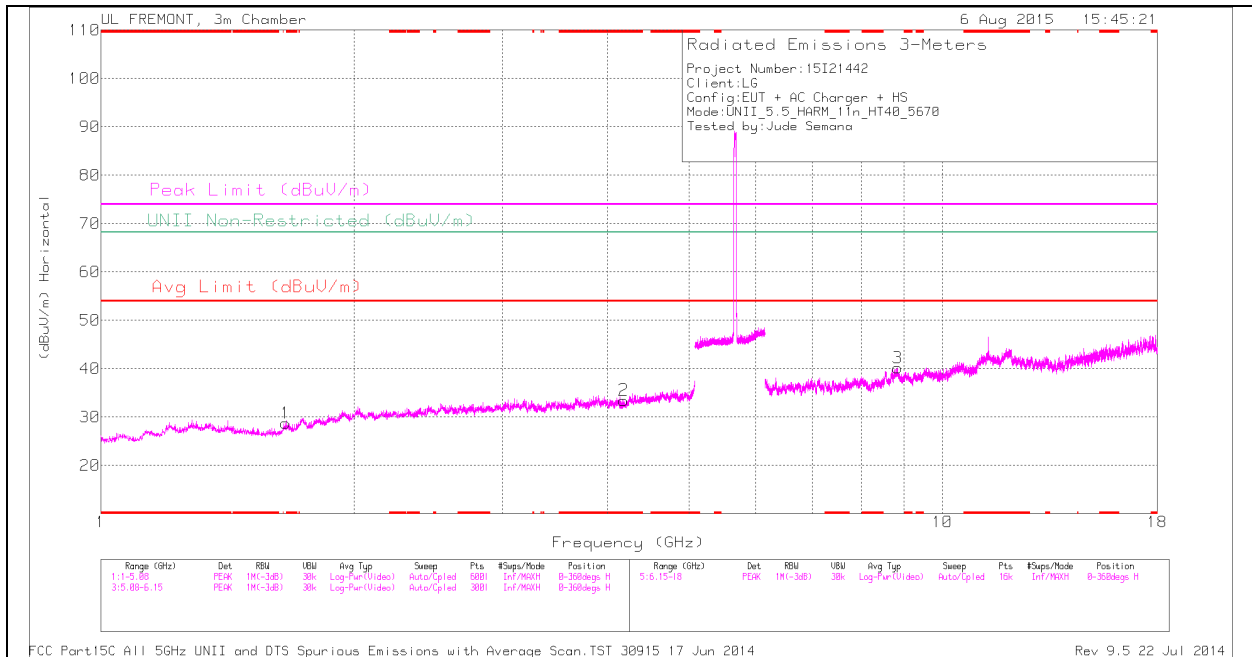
PK - Peak detector

*RADIATED EMISSIONS*

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.69	40.94	PK1	32.3	-31.5	0	41.74	-	-	74	-32.26	-	-	360	200	H
* 2.687	29.48	AD1	32.3	-31.6	.49	30.67	54	-23.33	-	-	-	-	360	200	H
* 3.907	40.29	PK1	33.2	-30.3	0	43.19	-	-	74	-30.81	-	-	360	200	H
* 3.906	28.61	AD1	33.2	-30.3	.49	32	54	-22	-	-	-	-	360	200	H
* 1.275	42.38	PK1	29.7	-33	0	39.08	-	-	74	-34.92	-	-	360	100	V
* 1.276	30.18	AD1	29.7	-32.9	.49	27.47	54	-26.53	-	-	-	-	360	100	V
* 4.116	40.42	PK1	33.3	-30.3	0	43.42	-	-	74	-30.58	-	-	360	200	V
* 4.115	29.08	AD1	33.3	-30.3	.49	32.57	54	-21.43	-	-	-	-	360	200	V
* 8.099	37.9	PK1	35.7	-26.2	0	47.4	-	-	74	-26.6	-	-	360	100	H
* 8.099	26.51	AD1	35.7	-26.2	.49	36.5	54	-17.5	-	-	-	-	360	100	H
* 12.076	37.63	PK1	39	-24.1	0	52.53	-	-	74	-21.47	-	-	334	252	V
* 12.076	25.61	AD1	39	-24.1	.49	41	54	-13	-	-	-	-	334	252	V

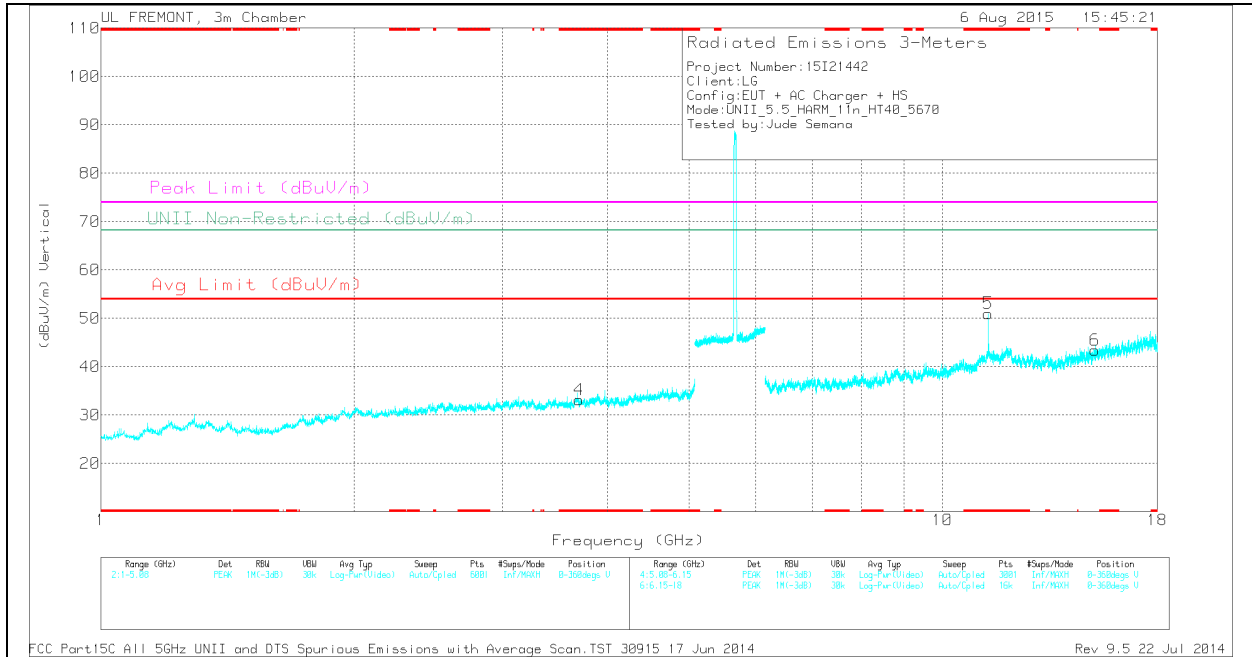


**HIGH CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; 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/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.18	30.69	PK	33.3	-30.5	0	33.49	-	-	74	-40.51	-	-	0-360	200	H
4	* 3.699	30.37	PK	33	-30.2	0	33.17	-	-	74	-40.83	-	-	0-360	200	V
5	* 11.34	35.62	PK	38.1	-22.7	0	51.02	-	-	74	-22.98	-	-	0-360	100	V
1	1.656	32.1	PK	28.6	-32	0	28.7	-	-	-	-	68.2	-39.5	0-360	200	H
3	8.841	28.93	PK	35.9	-24.7	0	40.13	-	-	-	-	68.2	-28.07	0-360	100	H
6	15.173	29.68	PK	39.9	-26.1	0	43.48	-	-	-	-	68.2	-24.72	0-360	100	V

PK - Peak detector

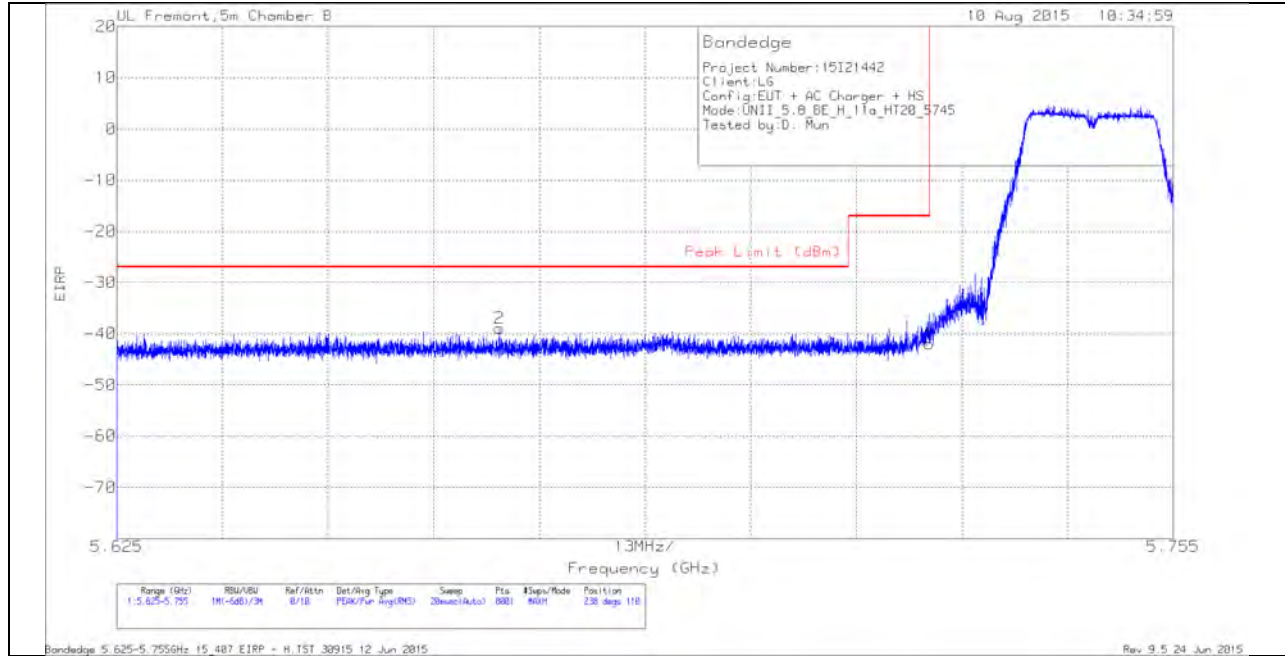
*RADIATED EMISSIONS*

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.182	40.82	PK1	33.3	-30.5	0	43.62	-	-	74	-30.38	-	-	360	200	H
* 4.181	28.62	AD1	33.3	-30.5	.49	31.91	54	-22.09	-	-	-	-	360	200	H
* 3.7	39.86	PK1	33	-30.2	0	42.66	-	-	74	-31.34	-	-	360	200	V
* 3.697	28.44	AD1	33	-30.2	.49	31.73	54	-22.27	-	-	-	-	360	200	V
* 11.34	41.11	PK1	38.1	-22.7	0	56.51	-	-	74	-17.49	-	-	348	102	V
* 11.34	33.97	AD1	38.1	-22.7	.49	49.86	54	-4.14	-	-	-	-	348	102	V
1.654	29.96	AD1	28.5	-32.1	.49	26.85	-	-	-	-	-	-	360	200	H
1.657	41.46	PK1	28.6	-32	0	38.06	-	-	-	-	68.2	-30.14	360	200	H
8.841	38.22	PK1	35.9	-24.7	0	49.42	-	-	-	-	68.2	-18.78	360	100	H
8.843	26.13	AD1	35.9	-24.7	.49	37.82	-	-	-	-	-	-	360	100	H
15.172	27.69	AD1	39.9	-26.1	.49	41.98	-	-	-	-	-	-	348	100	V
15.173	39.33	PK1	39.9	-26.1	0	53.13	-	-	-	-	68.2	-15.07	348	100	V

## 9.4. 5.8 GHz

### 9.4.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.8 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

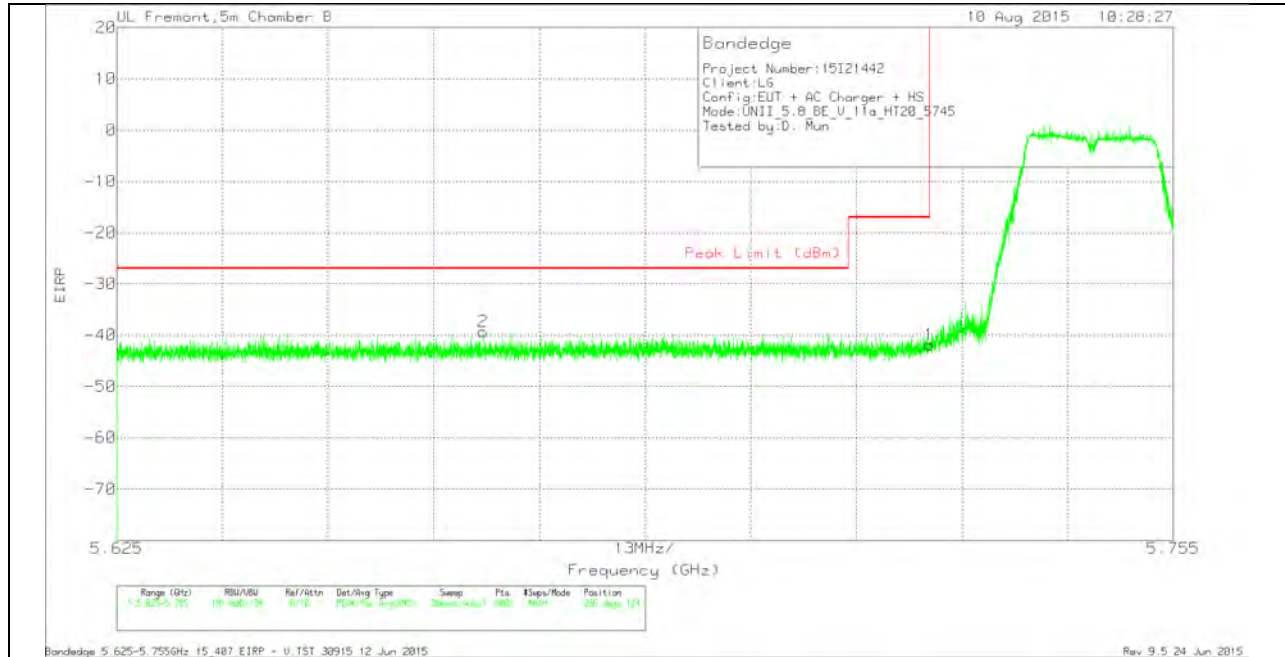
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AFT345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.672	-63.85	Pk	34.9	-21.8	11.8	0	-38.95	-27	-11.95	238	110	H
1	5.725	-67.11	Pk	35	-21.7	11.8	0	-42.01	-17	-25.01	238	110	H

**VERTICAL PEAK AND AVERAGE PLOT**

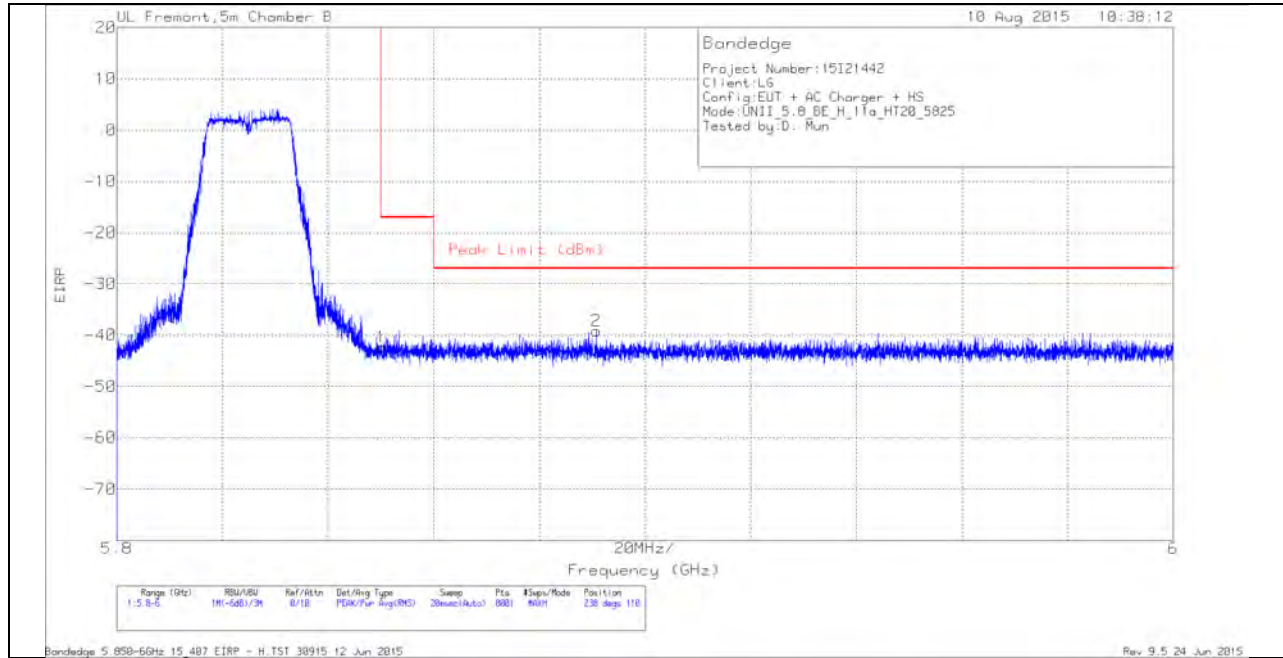


**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.67	-64.16	Pk	34.9	-21.8	11.8	0	-39.26	-27	-12.26	266	124	V
1	5.725	-66.98	Pk	35	-21.7	11.8	0	-41.88	-17	-24.88	266	124	V

### AUTHORIZED BANDEGE (HIGH CHANNEL)

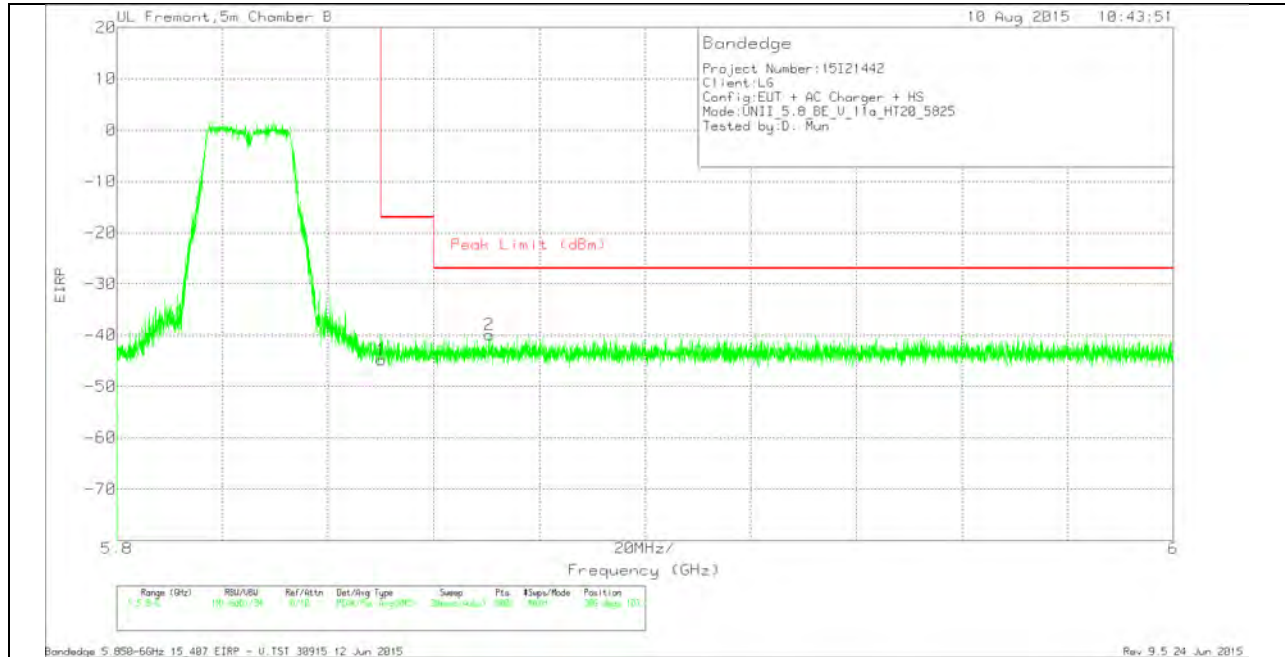
#### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cb/ Fitr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.93	Pk	35.4	-21.6	11.8	0	-42.33	-17	-25.33	238	110	H
2	5.891	-64.91	Pk	35.5	-21.6	11.8	0	-39.21	-27	-12.21	238	110	H

**VERTICAL PEAK AND AVERAGE PLOT**

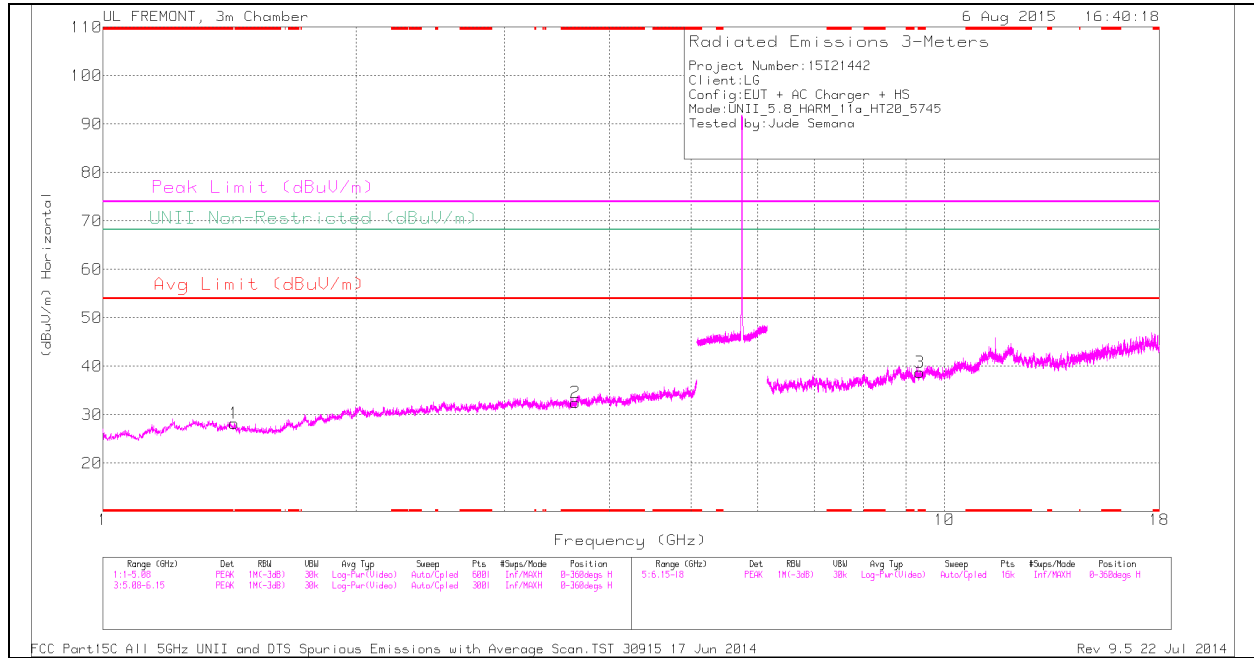


**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AFT345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-70.38	Pk	35.4	-21.6	11.8	0	-44.78	-17	-27.78	309	103	V
2	5.871	-65.54	Pk	35.4	-21.6	11.8	0	-39.94	-27	-12.94	309	103	V

### HARMONICS AND SPURIOUS EMISSIONS

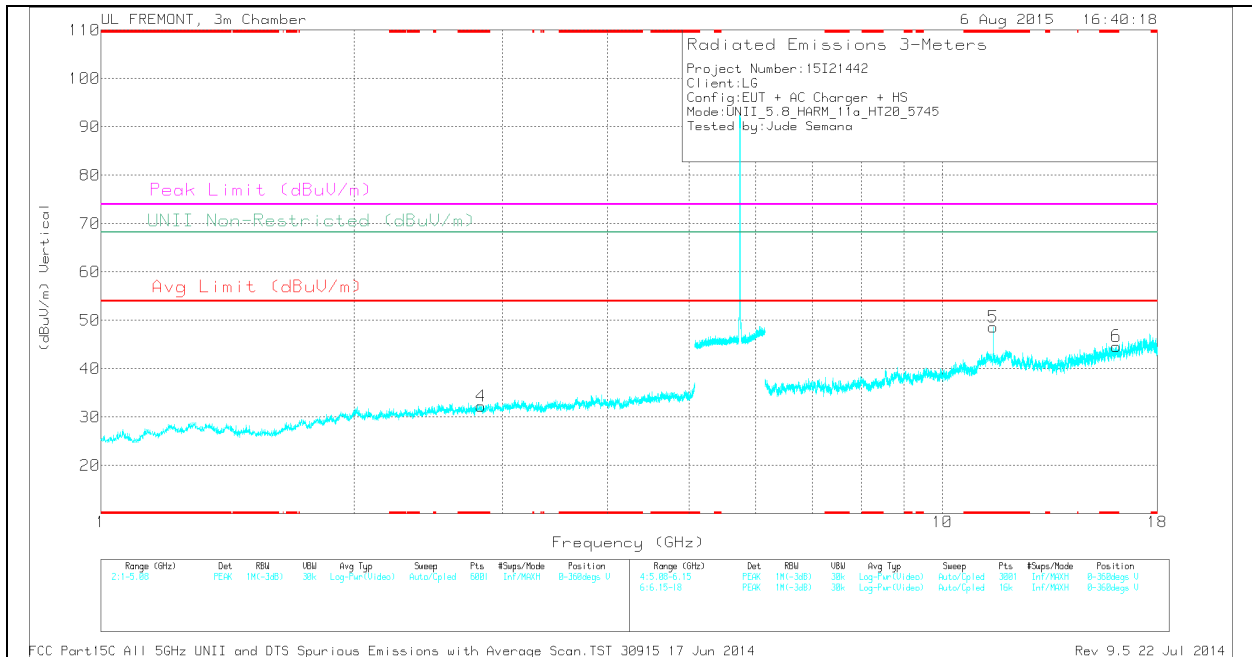
#### LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; 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 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL DATA**

*TRACE MARKERS*

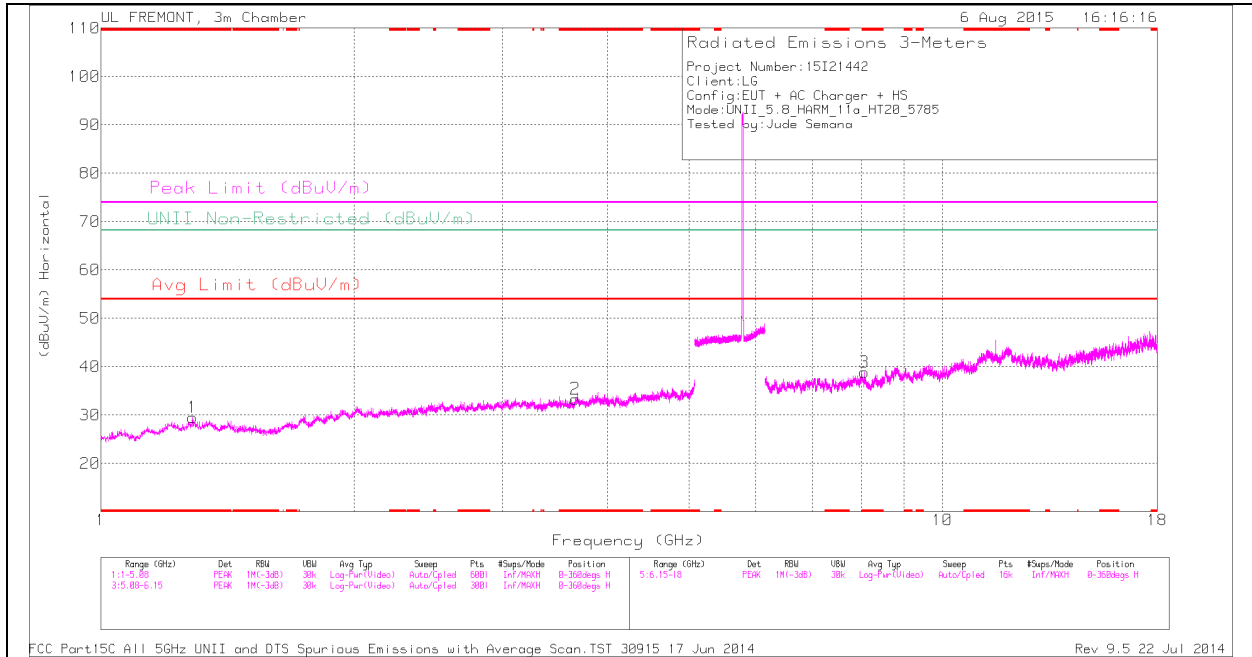
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.646	30.17	PK	32.9	-30.5	0	32.57	-	-	74	-41.43	-	-	0-360	100	H
4	* 2.829	31.31	PK	32.6	-31.7	0	32.21	-	-	74	-41.79	-	-	0-360	200	V
3	* 9.343	26.75	PK	36.3	-24.3	0	38.75	-	-	74	-35.25	-	-	0-360	100	H
5	* 11.49	33.38	PK	38.4	-23.1	0	48.68	-	-	74	-25.32	-	-	0-360	100	V
6	* 16.092	28.76	PK	40.3	-24.4	0	44.66	-	-	74	-29.34	-	-	0-360	200	V
1	1.433	31.95	PK	28.4	-32.1	0	28.25	-	-	-	-	68.2	-39.95	0-360	200	H

PK - Peak detector

*RADIATED EMISSIONS*

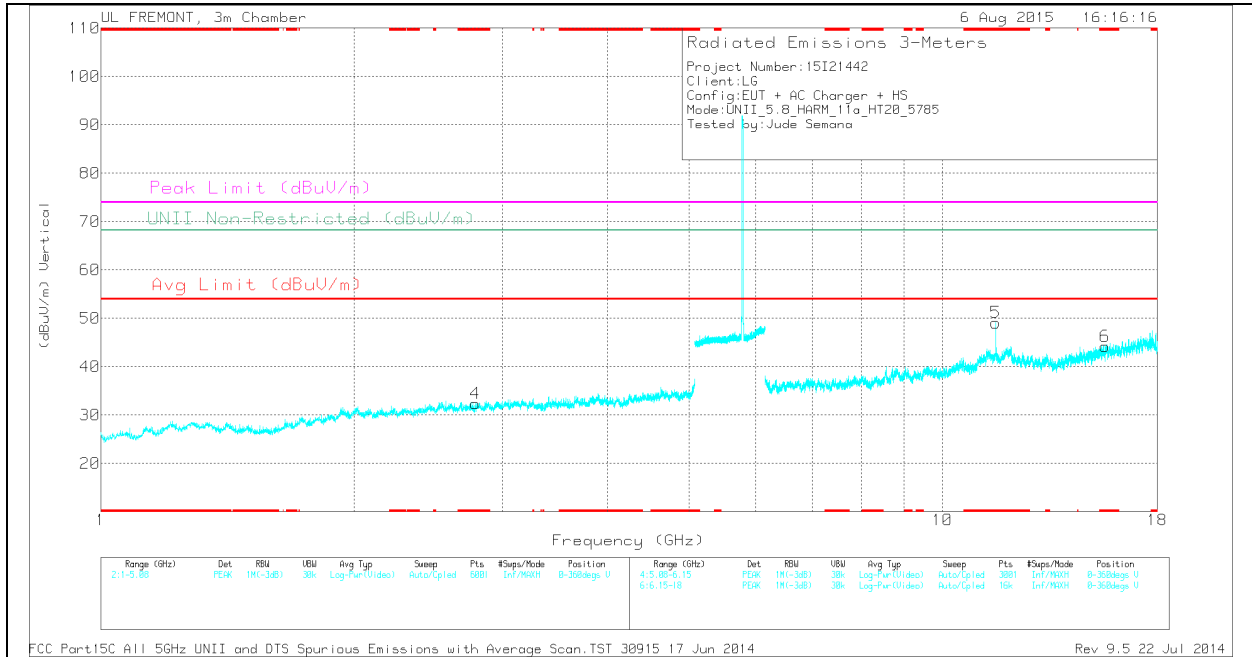
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.647	39.12	PK1	32.9	-30.4	0	41.62	-	-	74	-32.38	-	-	360	100	H
* 3.647	27.87	AD1	32.9	-30.4	.22	30.59	54	-23.41	-	-	-	-	360	100	H
* 2.828	41.13	PK1	32.6	-31.7	0	42.03	-	-	74	-31.97	-	-	360	200	V
* 2.827	29.21	AD1	32.6	-31.7	.22	30.33	54	-23.67	-	-	-	-	360	200	V
* 9.343	36.31	PK1	36.3	-24.3	0	48.31	-	-	74	-25.69	-	-	360	100	H
* 9.345	24.8	AD1	36.3	-24.3	.22	37.02	54	-16.98	-	-	-	-	360	100	H
* 11.49	40.99	PK1	38.4	-23.1	0	56.29	-	-	74	-17.71	-	-	333	100	V
* 11.49	33.01	AD1	38.4	-23.1	.22	48.53	54	-5.47	-	-	-	-	333	100	V
* 16.092	37.88	PK1	40.3	-24.4	0	53.78	-	-	74	-20.22	-	-	333	200	V
* 16.09	26.69	AD1	40.3	-24.5	.22	42.71	54	-11.29	-	-	-	-	333	200	V
1.433	40.87	PK1	28.4	-32.1	0	37.17	-	-	-	-	68.2	-31.03	360	200	H
1.433	29.58	AD1	28.4	-32.1	.22	26.1	-	-	-	-	-	-	360	200	H

**MID CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL DATA**

*TRACE MARKERS*

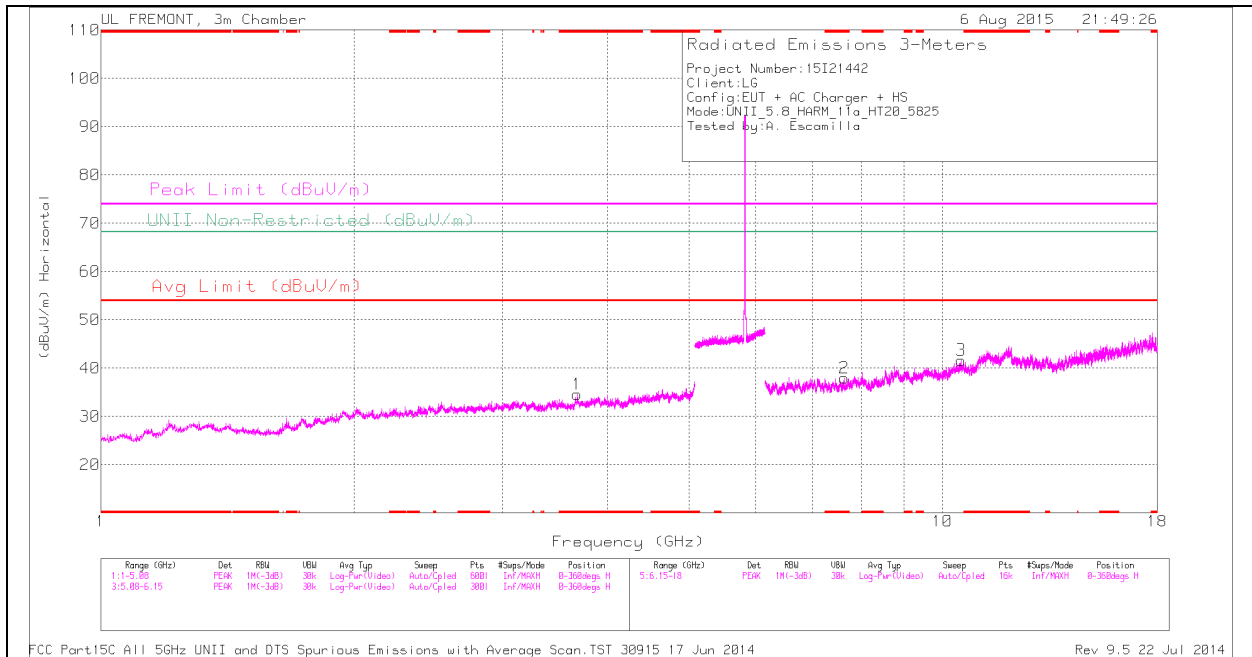
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.284	32.82	PK	29.7	-33	0	29.52	-	-	74	-44.48	-	-	0-360	100	H
2	* 3.664	30.36	PK	32.9	-29.9	0	33.36	-	-	74	-40.64	-	-	0-360	200	H
4	* 2.784	31.54	PK	32.5	-31.7	0	32.34	-	-	74	-41.66	-	-	0-360	100	V
3	* 8.07	29.69	PK	35.7	-26.5	0	38.89	-	-	74	-35.11	-	-	0-360	200	H
5	* 11.57	33.18	PK	38.6	-22.7	0	49.08	-	-	74	-24.92	-	-	0-360	100	V
6	* 15.611	28.96	PK	40.3	-25.1	0	44.16	-	-	74	-29.84	-	-	0-360	200	V

PK - Peak detector

*RADIATED EMISSIONS*

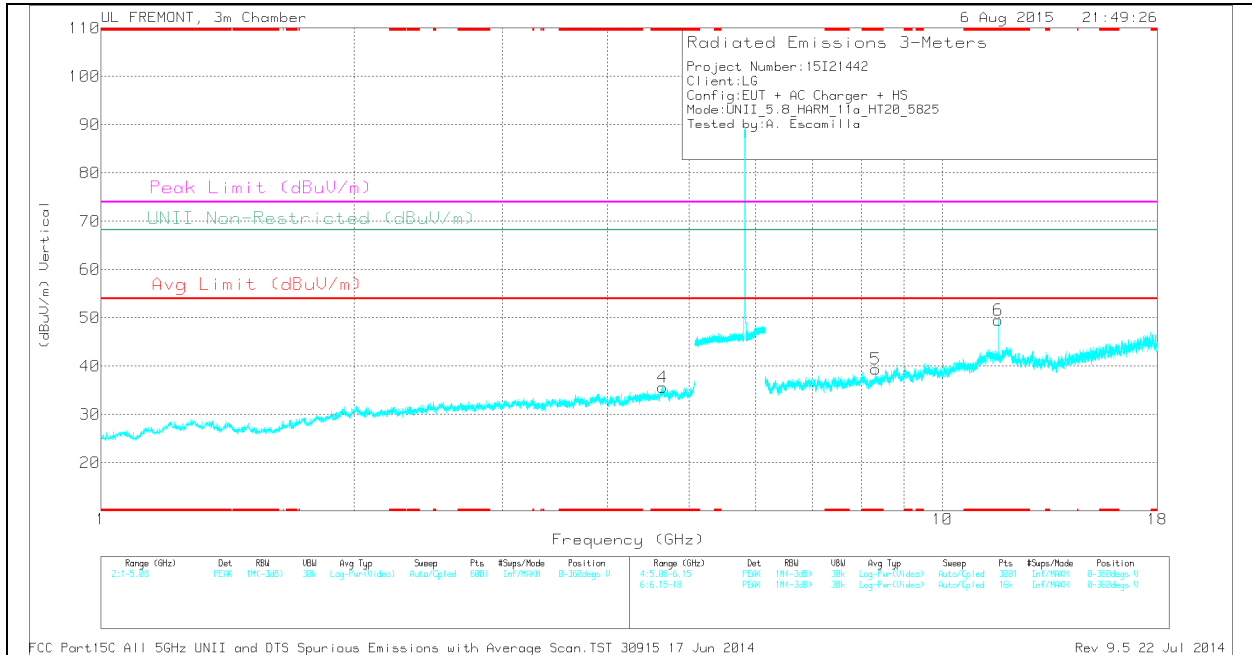
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.284	41.8	PK1	29.7	-33	0	38.5	-	-	74	-35.5	-	-	359	100	H
* 1.283	30.35	AD1	29.7	-33	.22	27.27	54	-26.73	-	-	-	-	359	100	H
* 3.662	40.24	PK1	32.9	-30	0	43.14	-	-	74	-30.86	-	-	359	200	H
* 3.662	28.58	AD1	32.9	-30	.22	31.7	54	-22.3	-	-	-	-	359	200	H
* 8.072	37.83	PK1	35.7	-26.5	0	47.03	-	-	74	-26.97	-	-	359	200	H
* 8.072	26.39	AD1	35.7	-26.5	.22	35.81	54	-18.19	-	-	-	-	359	200	H
* 11.569	38.46	PK1	38.6	-22.7	0	54.36	-	-	74	-19.64	-	-	359	100	V
* 11.57	29.78	AD1	38.6	-22.7	.22	45.9	54	-8.1	-	-	-	-	359	100	V
* 15.61	39.15	PK1	40.3	-25.1	0	54.35	-	-	74	-19.65	-	-	359	200	V
* 15.61	27.55	AD1	40.3	-25.1	.22	42.97	54	-11.03	-	-	-	-	359	200	V

**HIGH CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; 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/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.683	31.3	PK	33	-29.7	0	34.6	-	-	74	-39.4	-	-	0-360	100	H
4	* 4.652	31.26	PK	34	-29.6	0	35.66	-	-	74	-38.34	-	-	0-360	100	V
2	* 7.644	30.06	PK	35.8	-27.9	0	37.96	-	-	74	-36.04	-	-	0-360	100	H
5	* 8.324	29.34	PK	35.8	-25.7	0	39.44	-	-	74	-34.56	-	-	0-360	100	V
6	* 11.65	34.26	PK	38.7	-23.4	0	49.56	-	-	74	-24.44	-	-	0-360	100	V
3	10.518	27.77	PK	37.5	-23.6	0	41.67	-	-	-	-	68.2	-26.53	0-360	100	H

PK - Peak detector

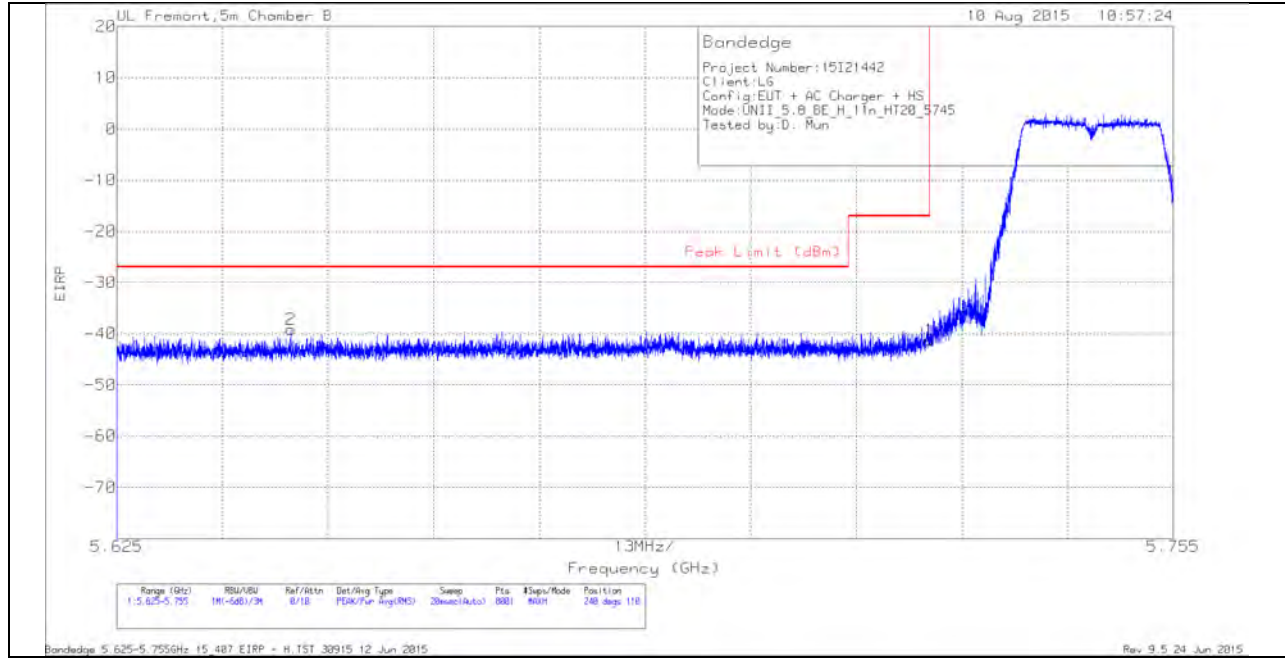
*RADIATED EMISSIONS*

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.681	40.4	PK1	33	-29.7	0	43.7	-	-	74	-30.3	-	-	22	169	H
* 3.682	28.53	AD1	33	-29.7	.22	32.05	54	-21.95	-	-	-	-	22	169	H
* 4.654	40.47	PK1	34	-29.5	0	44.97	-	-	74	-29.03	-	-	108	150	V
* 4.651	28.73	AD1	34	-29.6	.22	33.35	54	-20.65	-	-	-	-	108	150	V
* 7.645	38.68	PK1	35.8	-27.9	0	46.58	-	-	74	-27.42	-	-	182	132	H
* 7.643	27.52	AD1	35.8	-27.9	.22	35.64	54	-18.36	-	-	-	-	182	132	H
* 8.322	38.44	PK1	35.8	-25.7	0	48.54	-	-	74	-25.46	-	-	137	207	V
* 8.322	26.78	AD1	35.8	-25.7	.22	37.1	54	-16.9	-	-	-	-	137	207	V
* 11.65	40.06	PK1	38.7	-23.4	0	55.36	-	-	74	-18.64	-	-	128	102	V
* 11.65	32.2	AD1	38.7	-23.4	.22	47.72	54	-6.28	-	-	-	-	128	102	V
10.517	36.06	PK1	37.5	-23.6	0	49.96	-	-	-	-	68.2	-18.24	194	216	H
10.52	24.89	AD1	37.5	-23.5	.22	39.11	-	-	-	-	-	-	194	216	H



**9.4.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.8 GHz BAND  
 RESTRICTED BANDEDGE (LOW CHANNEL)**

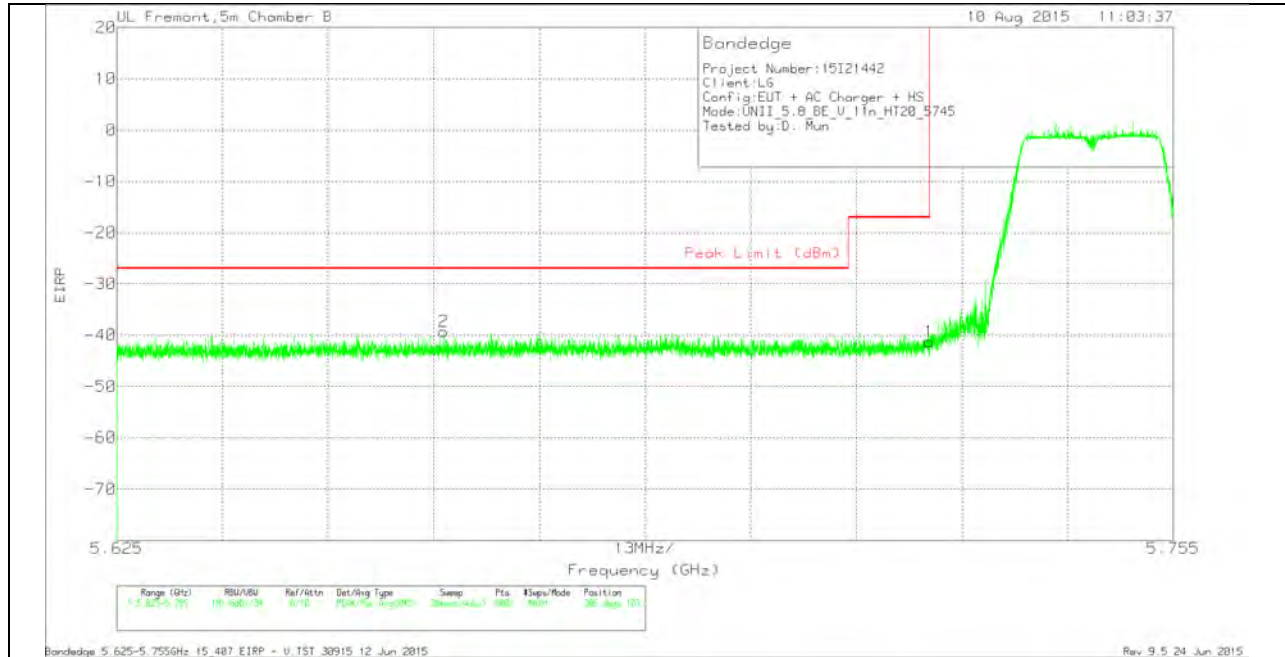
**HORIZONTAL PEAK AND AVERAGE PLOT**



**HORIZONTAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cb/ Ftr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.646	-63.93	Pk	34.8	-21.8	11.8	0	-39.13	-27	-12.13	240	110	H
1	5.725	-66.33	Pk	35	-21.7	11.8	0	-41.23	-17	-24.23	240	110	H

**VERTICAL PEAK AND AVERAGE PLOT**

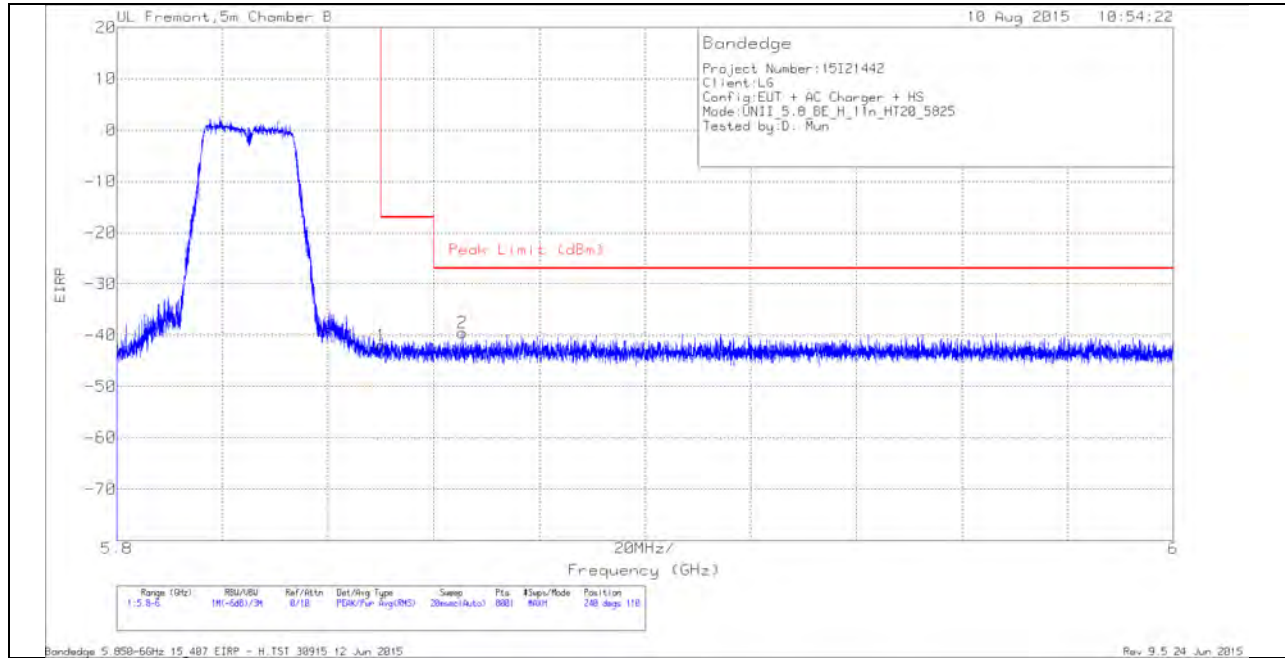


**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.665	-64.13	Pk	34.9	-21.9	11.8	0	-39.33	-27	-12.33	306	103	V
1	5.725	-66.37	Pk	35	-21.7	11.8	0	-41.27	-17	-24.27	306	103	V

### AUTHORIZED BANDEDGE (HIGH CHANNEL)

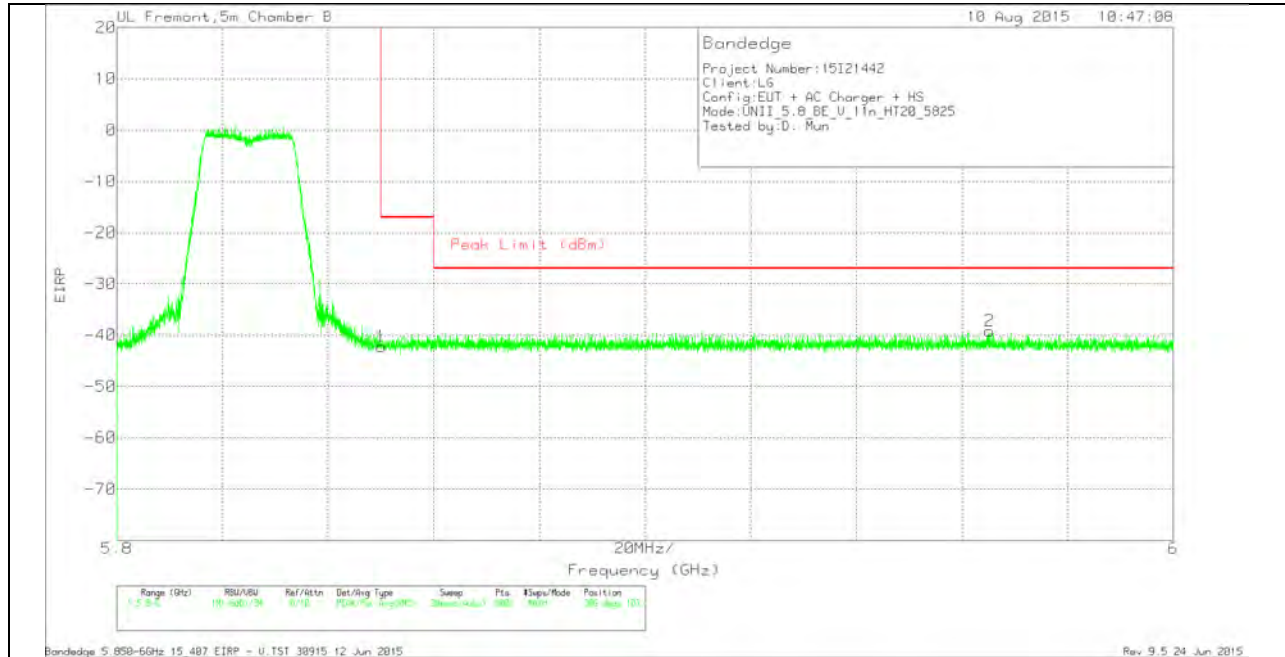
#### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.54	Pk	35.4	-21.6	11.8	0	-41.94	-17	-24.94	240	110	H
2	5.865	-65.12	Pk	35.4	-21.6	11.8	0	-39.52	-27	-12.52	240	110	H

**VERTICAL PEAK AND AVERAGE PLOT**

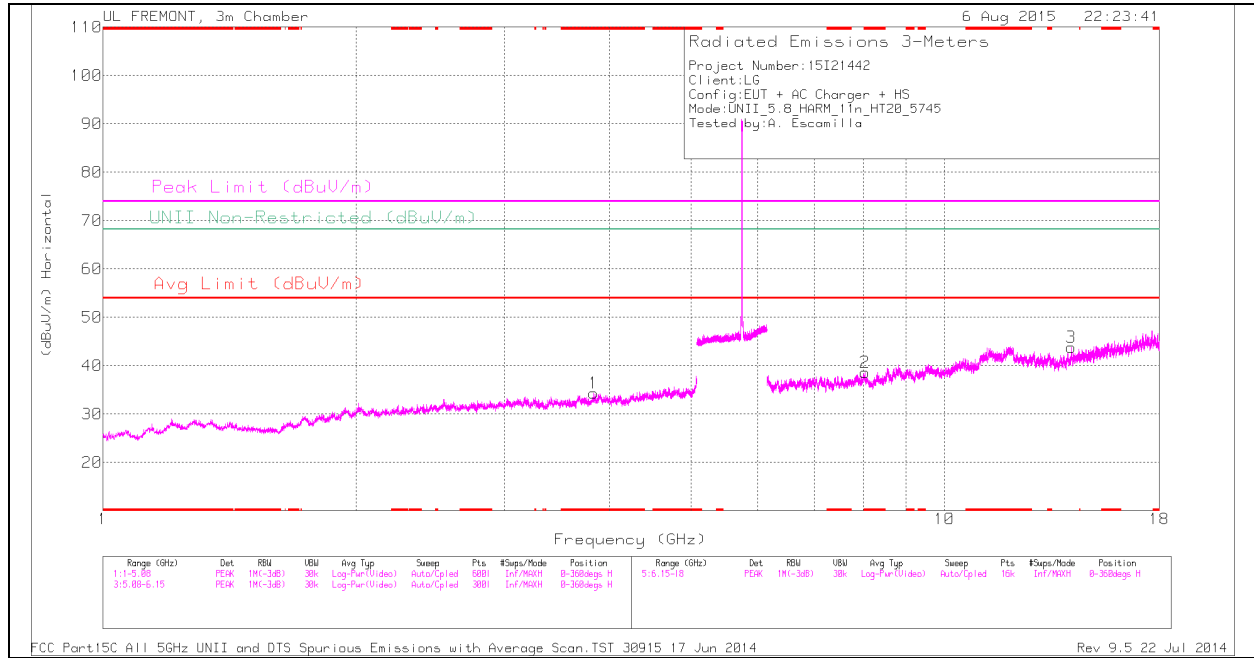


**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AFT345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.78	Pk	35.4	-21.6	11.8	0	-42.18	-17	-25.18	309	103	V
2	5.965	-64.92	Pk	35.6	-21.6	11.8	0	-39.12	-27	-12.12	309	103	V

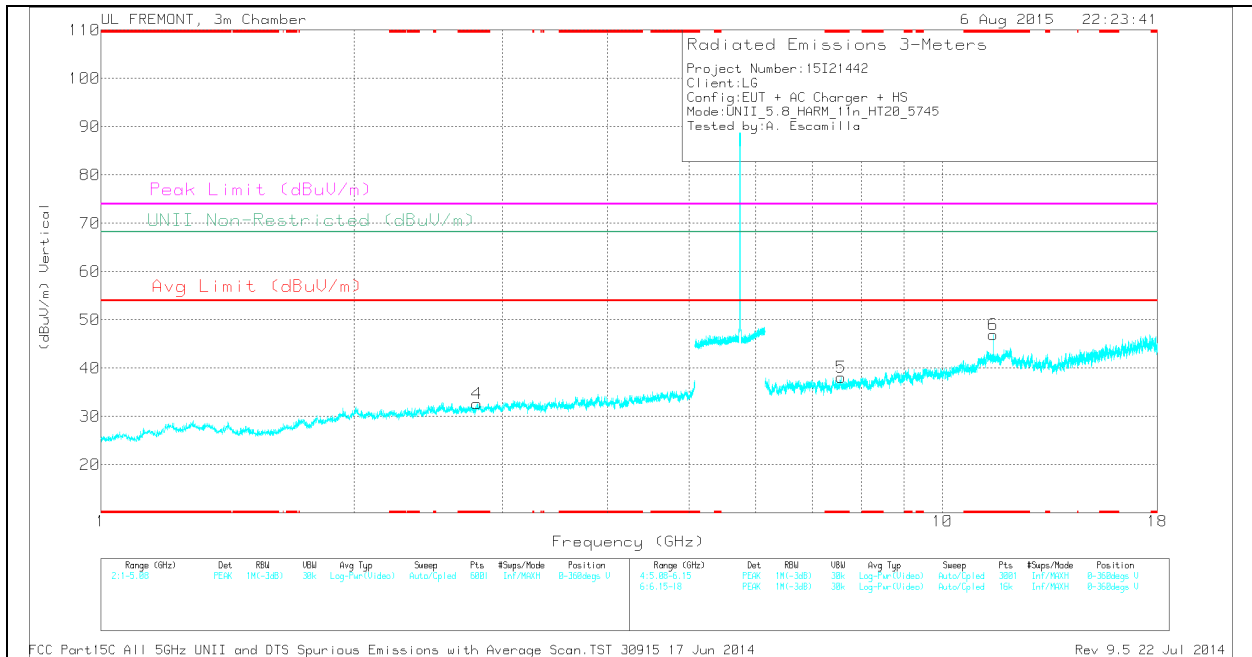
### HARMONICS AND SPURIOUS EMISSIONS

#### LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; 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 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL DATA**

*TRACE MARKERS*

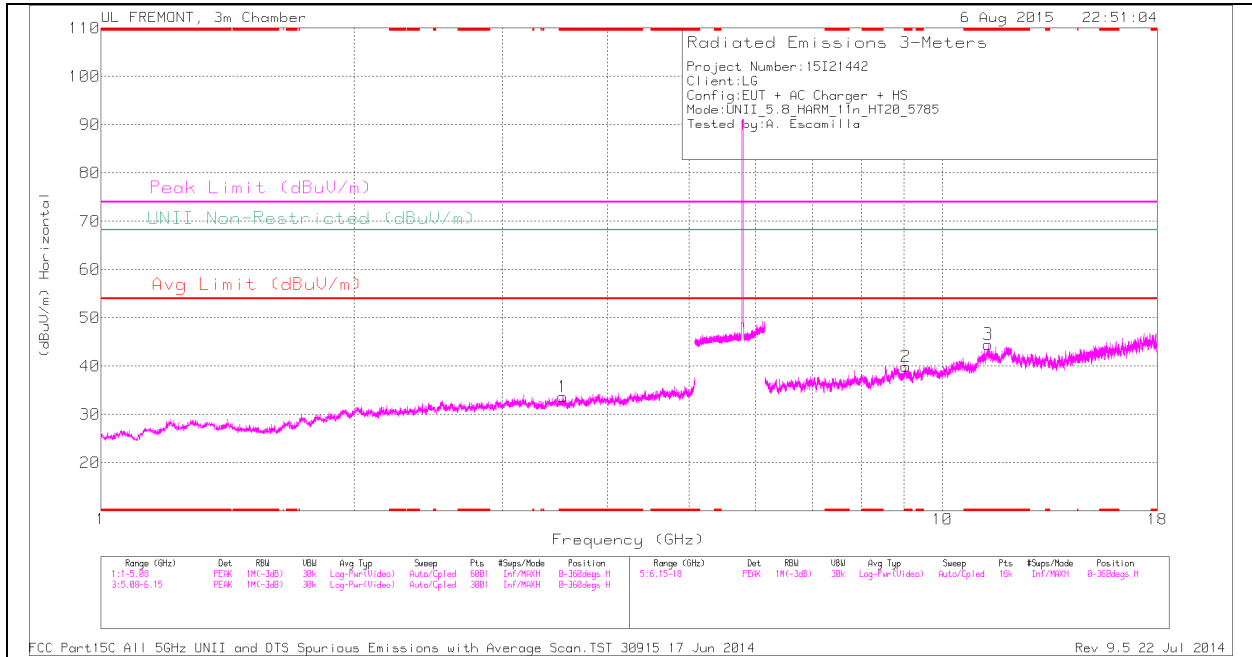
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.826	31.47	PK	33.1	-30.2	0	34.37	-	-	74	-39.63	-	-	0-360	100	H
4	* 2.798	31.7	PK	32.6	-31.6	0	32.7	-	-	74	-41.3	-	-	0-360	200	V
2	* 8.044	29.27	PK	35.7	-26.4	0	38.57	-	-	74	-35.43	-	-	0-360	200	H
5	* 7.578	29.9	PK	35.7	-27.5	0	38.1	-	-	74	-35.9	-	-	0-360	200	V
6	* 11.49	31.68	PK	38.4	-23.1	0	46.98	-	-	74	-27.02	-	-	0-360	100	V
3	14.145	31.95	PK	39	-27.1	0	43.85	-	-	-	-	68.2	-24.35	0-360	100	H

PK - Peak detector

*RADIATED EMISSIONS*

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.828	40.3	PK1	33.1	-30.2	0	43.2	-	-	74	-30.8	-	-	25	120	H
* 3.827	28.7	AD1	33.1	-30.2	.22	31.82	54	-22.18	-	-	-	-	25	120	H
* 2.797	41.05	PK1	32.6	-31.7	0	41.95	-	-	74	-32.05	-	-	70	172	V
* 2.798	29.29	AD1	32.6	-31.6	.22	30.51	54	-23.49	-	-	-	-	70	172	V
* 8.045	37.59	PK1	35.7	-26.4	0	46.89	-	-	74	-27.11	-	-	143	200	H
* 8.046	26.54	AD1	35.7	-26.4	.22	36.06	54	-17.94	-	-	-	-	143	200	H
* 7.578	39.45	PK1	35.7	-27.5	0	47.65	-	-	74	-26.35	-	-	196	156	V
* 7.576	27.6	AD1	35.7	-27.4	.22	36.12	54	-17.88	-	-	-	-	196	156	V
* 11.49	38.9	PK1	38.4	-23.1	0	54.2	-	-	74	-19.8	-	-	131	106	V
* 11.49	30.76	AD1	38.4	-23.1	.22	46.28	54	-7.72	-	-	-	-	131	106	V
14.145	40.08	PK1	39	-27.1	0	51.98	-	-	-	-	68.2	-16.22	196	181	H
14.145	28.69	AD1	39	-27.1	.22	40.81	-	-	-	-	-	-	196	181	H

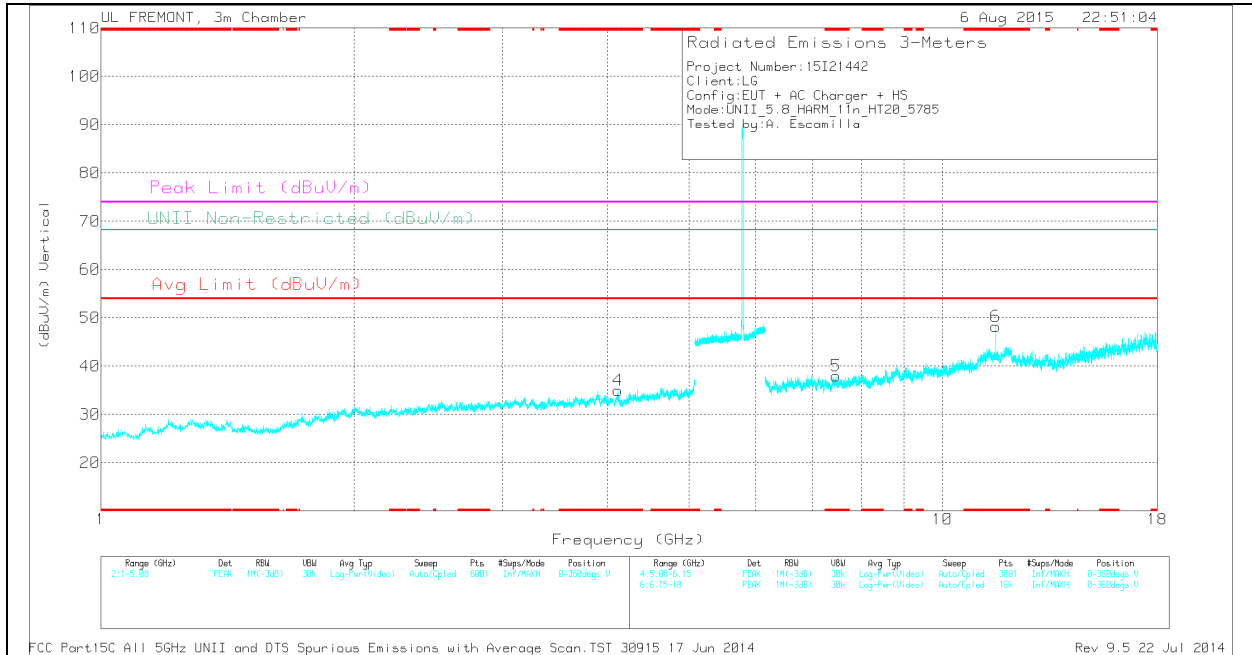
**MID CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL DATA**

*TRACE MARKERS*

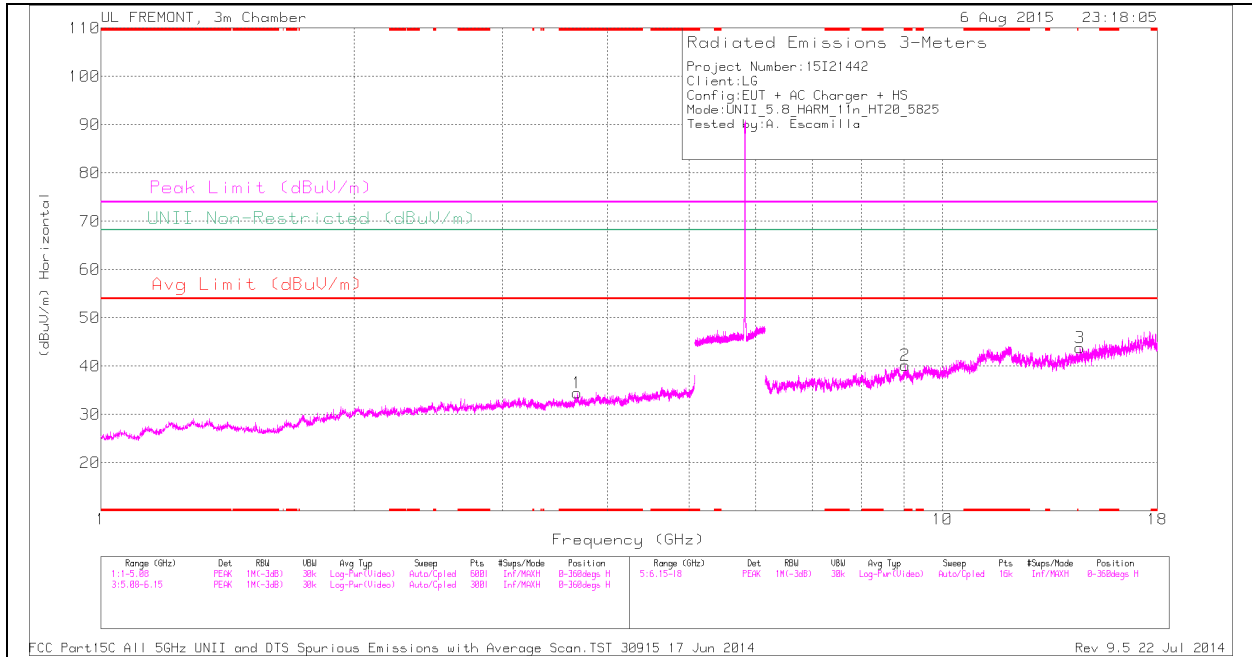
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.54	32.02	PK	32.8	-31.1	0	33.72	-	-	74	-40.28	-	-	0-360	100	H
4	* 4.118	32.06	PK	33.3	-30.4	0	34.96	-	-	74	-39.04	-	-	0-360	100	V
2	* 9.044	27.58	PK	36.1	-23.8	0	39.88	-	-	74	-34.12	-	-	0-360	200	H
3	* 11.34	29.13	PK	38.1	-22.7	0	44.53	-	-	74	-29.47	-	-	0-360	200	H
5	* 7.47	29.85	PK	35.7	-27.6	0	37.95	-	-	74	-36.05	-	-	0-360	100	V
6	* 11.57	32.32	PK	38.6	-22.7	0	48.22	-	-	74	-25.78	-	-	0-360	100	V

PK - Peak detector

*RADIATED EMISSIONS*

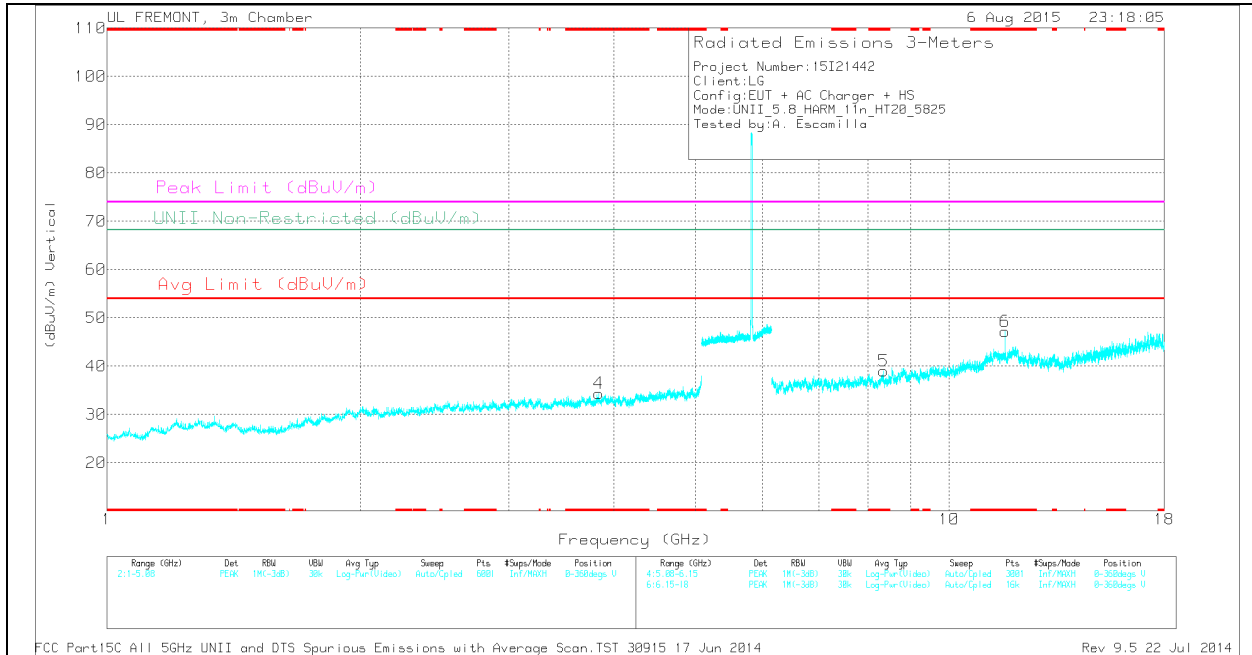
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.541	41.05	PK1	32.8	-31.2	0	42.65	-	-	74	-31.35	-	-	0	119	H
* 3.54	29.08	AD1	32.8	-31.1	.22	31	54	-23	-	-	-	-	0	119	H
* 4.119	40.92	PK1	33.3	-30.4	0	43.82	-	-	74	-30.18	-	-	23	145	V
* 4.116	29.03	AD1	33.3	-30.4	.22	32.15	54	-21.85	-	-	-	-	23	145	V
* 9.042	36.81	PK1	36.1	-23.8	0	49.11	-	-	74	-24.89	-	-	132	164	H
* 9.044	25.05	AD1	36.1	-23.8	.22	37.57	54	-16.43	-	-	-	-	132	164	H
* 11.341	36.75	PK1	38.1	-22.7	0	52.15	-	-	74	-21.85	-	-	180	188	H
* 11.341	25.52	AD1	38.1	-22.7	.22	41.14	54	-12.86	-	-	-	-	180	188	H
* 7.468	38.75	PK1	35.7	-27.5	0	46.95	-	-	74	-27.05	-	-	342	145	V
* 7.468	27.4	AD1	35.7	-27.5	.22	35.82	54	-18.18	-	-	-	-	342	145	V
* 11.57	38.86	PK1	38.6	-22.7	0	54.76	-	-	74	-19.24	-	-	137	101	V
* 11.57	30.71	AD1	38.6	-22.7	.22	46.83	54	-7.17	-	-	-	-	137	101	V

**HIGH CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; 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/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.681	31.2	PK	33	-29.7	0	34.5	-	-	74	-39.5	-	-	0-360	200	H
4	* 3.837	31.4	PK	33.1	-30.1	0	34.4	-	-	74	-39.6	-	-	0-360	100	V
2	* 9.038	27.8	PK	36.1	-23.7	0	40.2	-	-	74	-33.8	-	-	0-360	100	H
5	* 8.352	28.76	PK	35.8	-25.6	0	38.96	-	-	74	-35.04	-	-	0-360	200	V
6	* 11.65	31.88	PK	38.7	-23.4	0	47.18	-	-	74	-26.82	-	-	0-360	100	V
3	14.573	30.3	PK	39.8	-26.3	0	43.8	-	-	-	-	68.2	-24.4	0-360	100	H

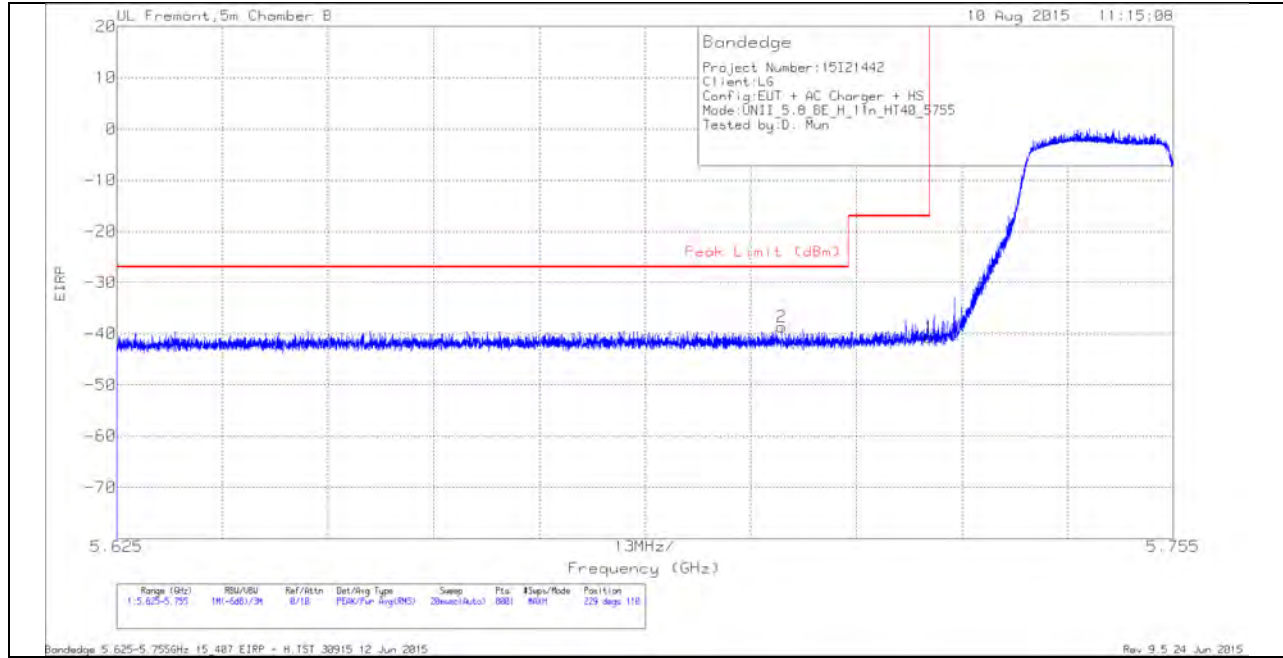
PK - Peak detector

*RADIATED EMISSIONS*

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.682	40.67	PK1	33	-29.7	0	43.97	-	-	74	-30.03	-	-	28	171	H
* 3.68	28.63	AD1	33	-29.7	.22	32.15	54	-21.85	-	-	-	-	28	171	H
* 3.839	40.32	PK1	33.1	-30.2	0	43.22	-	-	74	-30.78	-	-	77	153	V
* 3.838	28.59	AD1	33.1	-30.1	.22	31.81	54	-22.19	-	-	-	-	77	153	V
* 9.036	37.49	PK1	36.1	-23.7	0	49.89	-	-	74	-24.11	-	-	175	110	H
* 9.038	25.28	AD1	36.1	-23.7	.22	37.9	54	-16.1	-	-	-	-	175	110	H
* 8.352	37.45	PK1	35.8	-25.6	0	47.65	-	-	74	-26.35	-	-	93	200	V
* 8.351	26.09	AD1	35.8	-25.6	.22	36.51	54	-17.49	-	-	-	-	93	200	V
* 11.65	39.65	PK1	38.7	-23.4	0	54.95	-	-	74	-19.05	-	-	131	101	V
* 11.65	31.9	AD1	38.7	-23.4	.22	47.42	54	-6.58	-	-	-	-	131	101	V
14.574	39.93	PK1	39.8	-26.3	0	53.43	-	-	-	-	68.2	-14.77	140	219	H
14.574	28.19	AD1	39.8	-26.3	.22	41.91	-	-	-	-	-	-	140	219	H

### 9.4.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.8 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

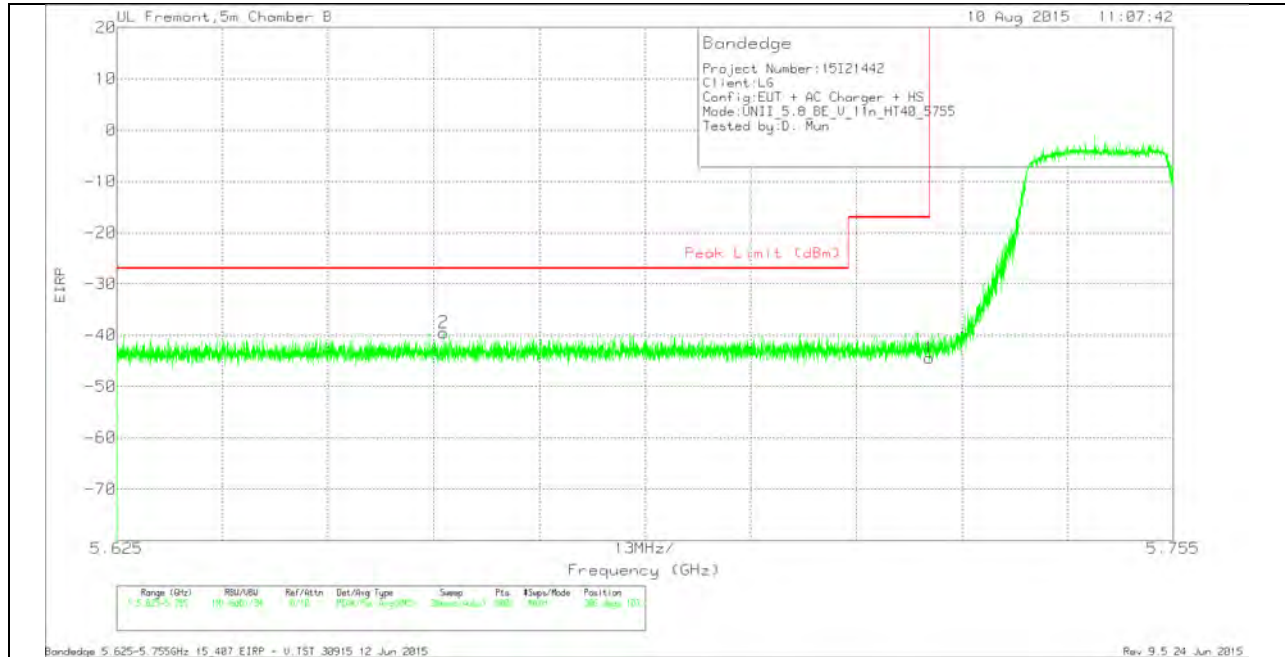
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cb/ Ftr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.707	-63.73	Pk	35	-21.7	11.8	0	-38.63	-27	-11.63	229	110	H
1	5.725	-65.82	Pk	35	-21.7	11.8	0	-40.72	-17	-23.72	229	110	H

**VERTICAL PEAK AND AVERAGE PLOT**

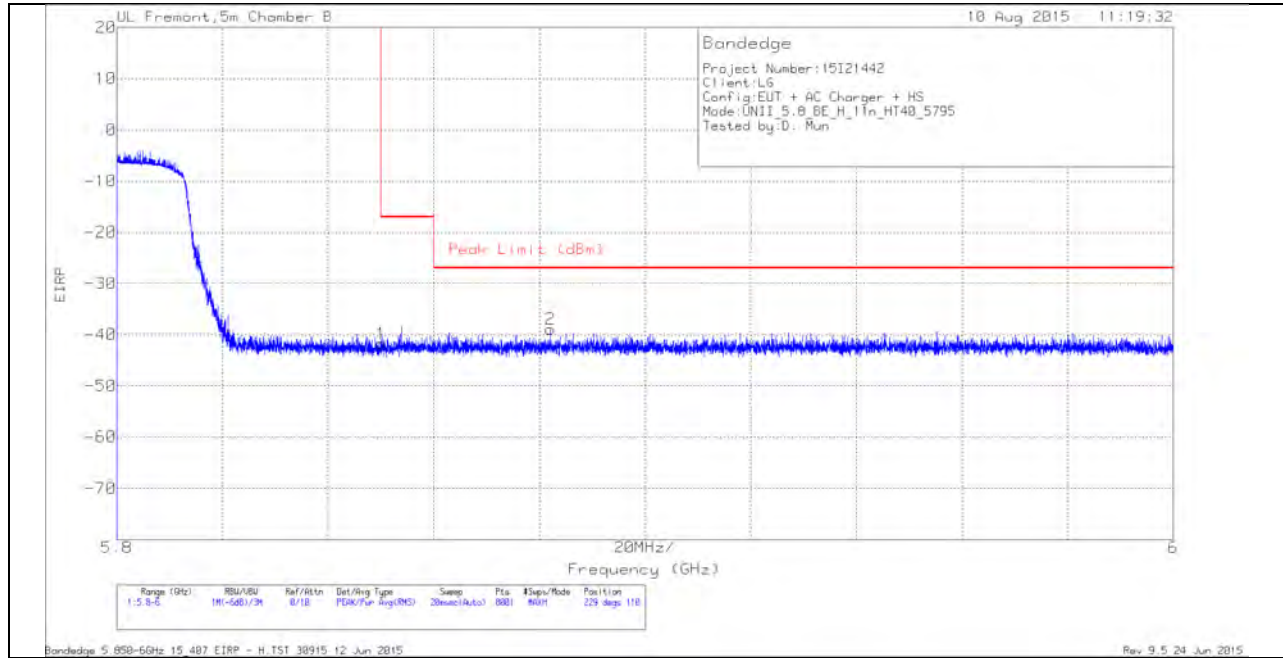


**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.665	-64.27	Pk	34.9	-21.9	11.8	0	-39.47	-27	-12.47	306	103	V
1	5.725	-69.56	Pk	35	-21.7	11.8	0	-44.46	-17	-27.46	306	103	V

### AUTHORIZED BANDEGE (HIGH CHANNEL)

#### HORIZONTAL PEAK AND AVERAGE PLOT

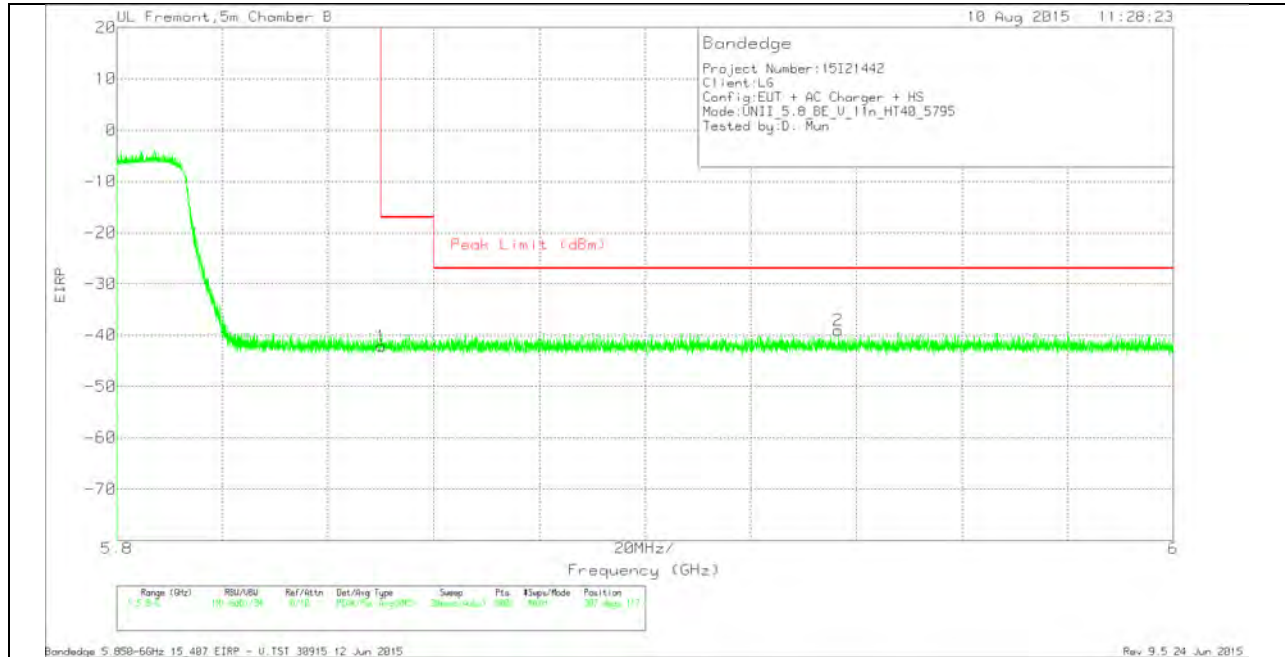


#### HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cb/ Ftr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.35	Pk	35.4	-21.6	11.8	0	-41.75	-17	-24.75	229	110	H
2	5.882	-64.67	Pk	35.5	-21.6	11.8	0	-38.97	-27	-11.97	229	110	H



**VERTICAL PEAK AND AVERAGE PLOT**

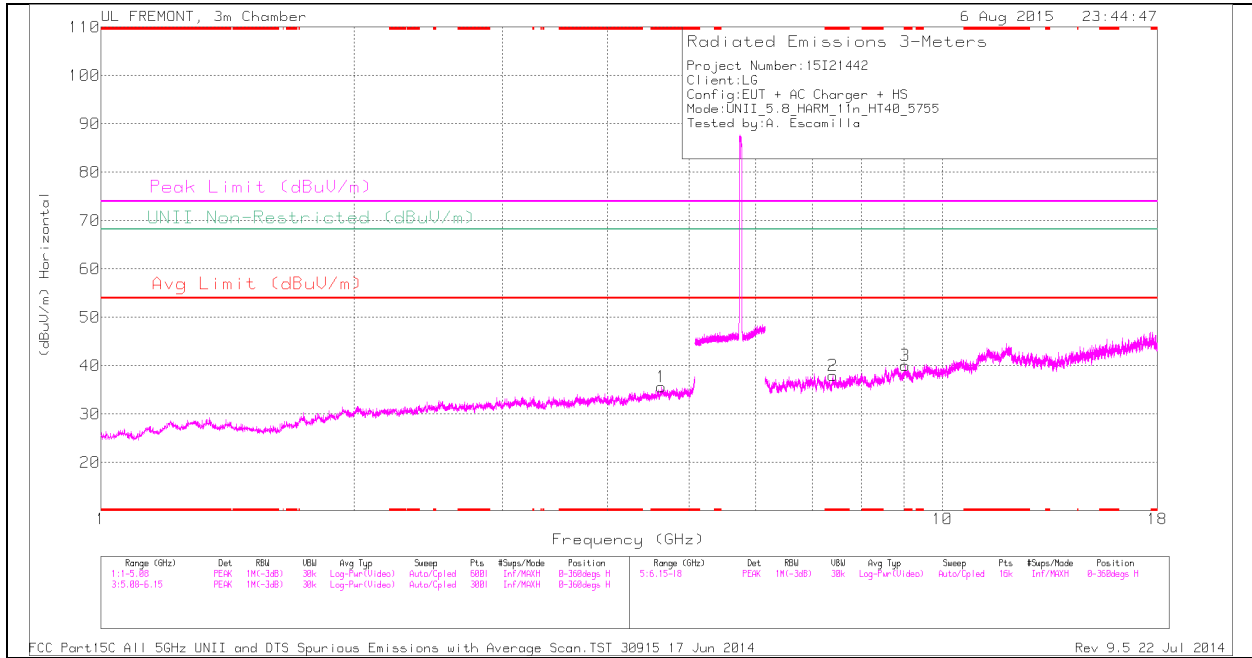


**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AFT345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.74	Pk	35.4	-21.6	11.8	0	-42.14	-17	-25.14	307	117	V
2	5.937	-64.89	Pk	35.6	-21.6	11.8	0	-39.09	-27	-12.09	307	117	V

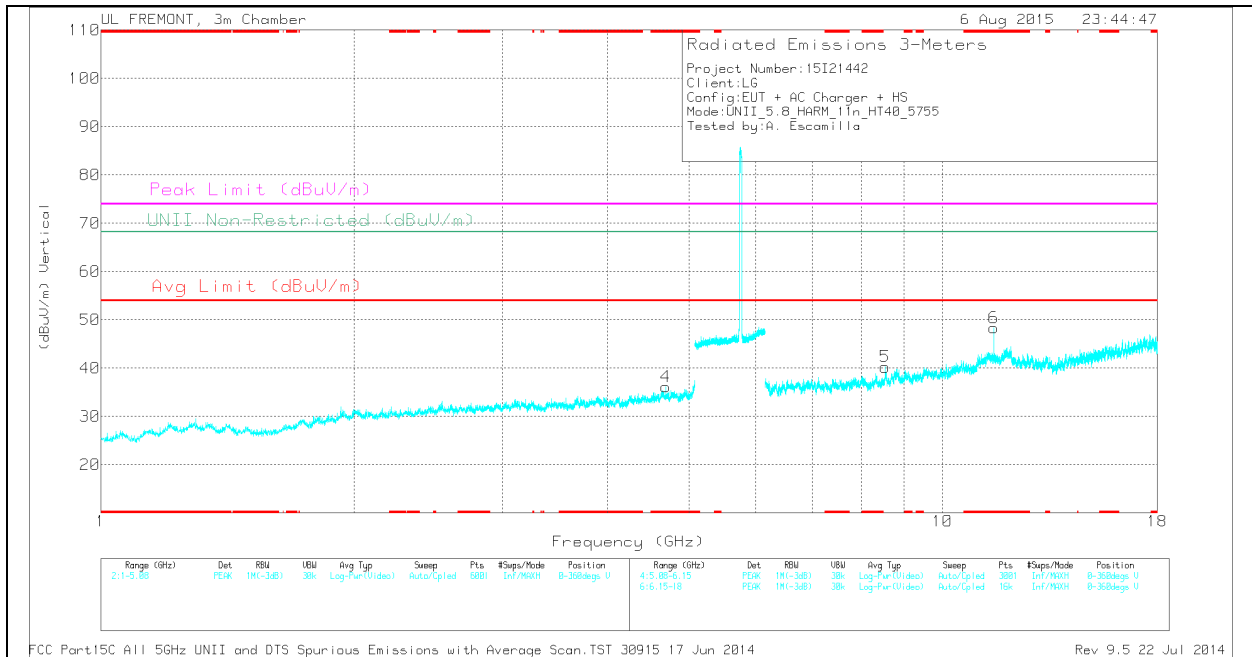
### HARMONICS AND SPURIOUS EMISSIONS

#### LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; 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 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL DATA**

*TRACE MARKERS*

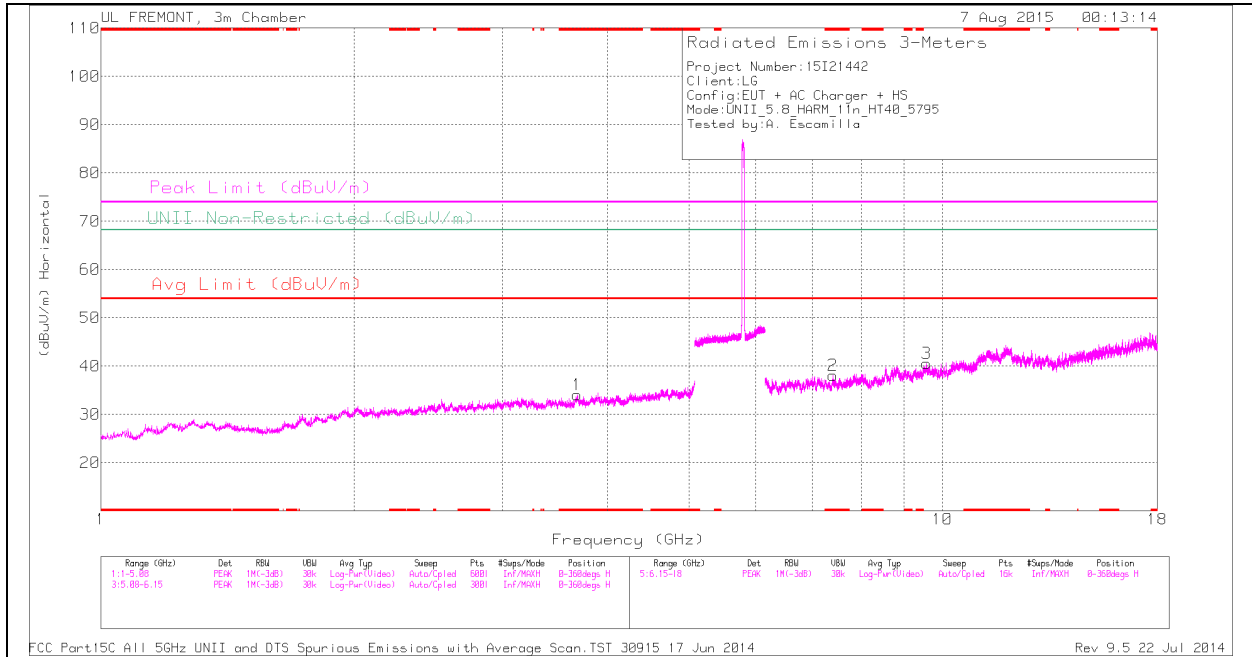
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.638	31.38	PK	33.9	-29.6	0	35.68	-	-	74	-38.32	-	-	0-360	200	H
4	* 4.69	31.95	PK	34	-29.8	0	36.15	-	-	74	-37.85	-	-	0-360	200	V
2	* 7.407	29.64	PK	35.6	-27.3	0	37.94	-	-	74	-36.06	-	-	0-360	100	H
3	* 9.034	27.65	PK	36.1	-23.7	0	40.05	-	-	74	-33.95	-	-	0-360	100	H
6	* 11.51	33.03	PK	38.4	-23.1	0	48.33	-	-	74	-25.67	-	-	0-360	100	V
5	8.55	29.35	PK	35.8	-24.9	0	40.25	-	-	-	-	68.2	-27.95	0-360	100	V

PK - Peak detector

*RADIATED EMISSIONS*

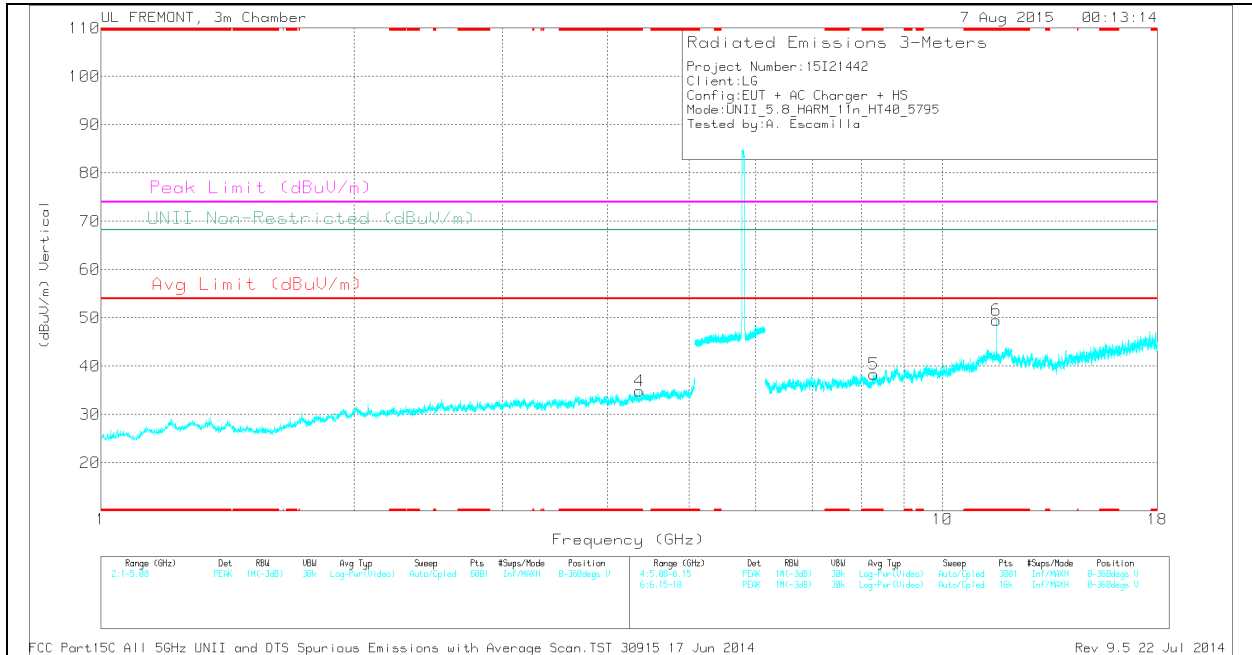
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.64	40.06	PK1	33.9	-29.6	0	44.36	-	-	74	-29.64	-	-	3	181	H
* 4.636	28.29	AD1	33.9	-29.6	.51	33.1	54	-20.9	-	-	-	-	3	181	H
* 7.405	39.33	PK1	35.6	-27.4	0	47.53	-	-	74	-26.47	-	-	34	131	H
* 7.407	27.53	AD1	35.6	-27.3	.51	36.34	54	-17.66	-	-	-	-	34	131	H
* 9.034	36.7	PK1	36.1	-23.7	0	49.1	-	-	74	-24.9	-	-	267	166	H
* 9.035	25.16	AD1	36.1	-23.7	.51	38.07	54	-15.93	-	-	-	-	267	166	H
* 11.51	39.45	PK1	38.4	-23.2	0	54.65	-	-	74	-19.35	-	-	129	101	V
* 11.51	32.01	AD1	38.4	-23.2	.51	47.72	54	-6.28	-	-	-	-	129	101	V
8.55	26.3	AD1	35.8	-24.9	.51	37.71	-	-	-	-	-	-	170	148	V
8.551	38.03	PK1	35.8	-24.9	0	48.93	-	-	-	-	68.2	-19.27	170	148	V

**HIGH CHANNEL HORIZONTAL**



Note: Emission was scanned up to 40GHz; 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 40GHz; 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/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 11.59	33.88	PK	38.6	-22.9	0	49.58	-	-	74	-24.42	-	-	0-360	100	V
1	* 3.681	30.76	PK	33	-29.7	0	34.06	-	-	74	-39.94	-	-	0-360	100	H
4	* 4.361	31.3	PK	33.6	-30	0	34.9	-	-	74	-39.1	-	-	0-360	200	V
2	* 7.407	29.76	PK	35.6	-27.3	0	38.06	-	-	74	-35.94	-	-	0-360	100	H
5	* 8.293	28.33	PK	35.8	-25.8	0	38.33	-	-	74	-35.67	-	-	0-360	100	V
3	9.571	27.45	PK	36.7	-23.6	0	40.55	-	-	-	-	68.2	-27.65	0-360	100	H

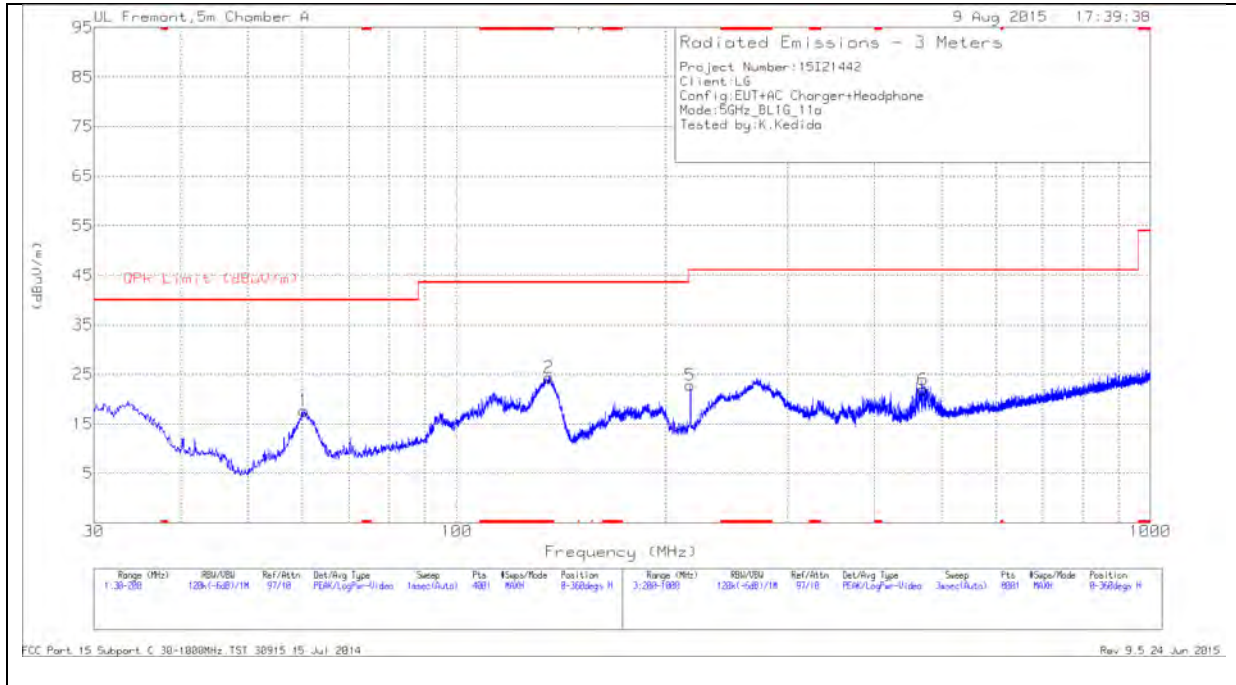
PK - Peak detector

*RADIATED EMISSIONS*

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.681	39.76	PK1	33	-29.7	0	43.06	-	-	74	-30.94	-	-	356	134	H
* 3.681	28.55	AD1	33	-29.7	.51	32.36	54	-21.64	-	-	-	-	356	134	H
* 4.361	39.94	PK1	33.6	-30	0	43.54	-	-	74	-30.46	-	-	321	225	V
* 4.361	28.08	AD1	33.6	-30	.51	32.19	54	-21.81	-	-	-	-	321	225	V
* 7.406	39.13	PK1	35.6	-27.3	0	47.43	-	-	74	-26.57	-	-	235	206	H
* 7.407	27.65	AD1	35.6	-27.3	.51	36.46	54	-17.54	-	-	-	-	235	206	H
* 8.292	37.96	PK1	35.8	-25.8	0	47.96	-	-	74	-26.04	-	-	187	219	V
* 8.291	26.18	AD1	35.8	-25.8	.51	36.69	54	-17.31	-	-	-	-	187	219	V
* 11.59	38.75	PK1	38.6	-22.9	0	54.45	-	-	74	-19.55	-	-	85	110	V
* 11.59	30	AD1	38.6	-22.9	.51	46.21	54	-7.79	-	-	-	-	85	110	V
9.572	35.58	PK1	36.7	-23.6	0	48.68	-	-	-	-	68.2	-19.52	133	188	H
9.573	24.43	AD1	36.7	-23.5	.51	38.14	-	-	-	-	-	-	133	188	H

## 10. WORST-CASE BELOW 1 GHz

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





**SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)**



**Below 1G Data**

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 135.6975	40.79	Pk	13.9	-30.3	24.39	43.52	-19.13	0-360	100	H
4	* 108.71	39.46	Pk	12.3	-30.5	21.26	43.52	-22.26	0-360	101	V
8	* 273.8	38.09	Pk	13.2	-29.5	21.79	46.02	-24.23	0-360	299	V
3	33.655	45.48	Pk	18.6	-31.2	32.88	40	-7.12	0-360	101	V
1	60.26	40.79	Pk	7.7	-30.9	17.59	40	-22.41	0-360	399	H
5	217.3	42.01	Pk	10.6	-29.8	22.81	46.02	-23.21	0-360	101	H
7	217.3	38.49	Pk	10.6	-29.8	19.29	46.02	-26.73	0-360	101	V
9	395.4	35.06	Pk	15.1	-29.1	21.06	46.02	-24.96	0-360	299	V
6	470.3	33.32	Pk	17.3	-28.7	21.92	46.02	-24.1	0-360	199	H

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

## 11. DYNAMIC FREQUENCY SELECTION

### 11.1. OVERVIEW

#### 11.1.1. LIMITS

#### **INDUSTRY CANADA**

IC RSS-247 is closely harmonized with FCC Part 15 DFS rules. The deviations are as follows:

RSS-247 Issue 1

**Note:** For the band 5600–5650 MHz, no operation is permitted.

Until further notice, devices subject to this annex shall not be capable of transmitting in the band 5600–5650 MHz. This restriction is for the protection of Environment Canada weather radars operating in this band.

#### **FCC**

§15.407 (h), FCC KDB 905462 D02 “COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVICES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION” and KDB 905462 D03 “U-NII CLIENT DEVICES WITHOUT RADAR DETECTION CAPABILITY”.

**Table 1: Applicability of DFS requirements prior to use of a channel**

Requirement	Operational Mode		
	Master	Client (without radar detection)	Client (with radar detection)
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

**Table 2: Applicability of DFS requirements during normal operation**

Requirement	Operational Mode		
	Master	Client (without DFS)	Client (with DFS)
DFS Detection Threshold	Yes	Not required	Yes
Channel Closing Transmission Time	Yes	Yes	Yes
Channel Move Time	Yes	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required	Yes

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar DFS	Client (without DFS)
<i>U-NII Detection Bandwidth and Statistical Performance Check</i>	All BW modes must be tested	Not required
<i>Channel Move Time and Channel Closing Transmission Time</i>	Test using widest BW mode available	Test using the widest BW mode available for the link
<i>All other tests</i>	Any single BW mode	Not required
<p><b>Note:</b> Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in all 20 MHz channel blocks and a null frequency between the bonded 20 MHz channel blocks.</p>		

**Table 3: Interference Threshold values, Master or Client incorporating In-Service Monitoring**

Maximum Transmit Power	Value (see notes)
E.I.R.P. $\geq$ 200 mill watt	-64 dBm
E.I.R.P. < 200 mill watt and power spectral density < 10 dBm/MHz	-62 dBm
E.I.R.P. < 200 mill watt that do not meet power spectral density requirement	-64 dBm
<p><b>Note 1:</b> This is the level at the input of the receiver assuming a 0 dBi receive antenna</p> <p><b>Note 2:</b> Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.</p> <p><b>Note 3:</b> E.I.R.P. is based on the highest antenna gain. For MIMO devices refer to KDB publication 662911 D01.</p>	

**Table 4: DFS Response requirement values**

Parameter	Value
<i>Non-occupancy period</i>	30 minutes
<i>Channel Availability Check Time</i>	60 seconds
<i>Channel Move Time</i>	10 seconds (See Note 1)
<i>Channel Closing Transmission Time</i>	200 milliseconds + approx. 60 milliseconds over remaining 10 second period. (See Notes 1 and 2)
<i>U-NII Detection Bandwidth</i>	Minimum 100% of the U-NII 99% transmission power bandwidth. (See Note 3)
<p><b>Note 1:</b> <i>Channel Move Time</i> and the <i>Channel Closing Transmission Time</i> should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.</p> <p><b>Note 2:</b> The <i>Channel Closing Transmission Time</i> is comprised of 200 milliseconds starting at the beginning of the <i>Channel Move Time</i> plus any additional intermittent control signals required to facilitate a <i>Channel</i> move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.</p> <p><b>Note 3:</b> During the <i>U-NII Detection Bandwidth</i> detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.</p>	

**Table 5 – Short Pulse Radar Test Waveforms**

Radar Type	Pulse Width (usec)	PRI (usec)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in table 5a	Roundup: $\{(1/360) \times (19 \times 10^6 \text{ PRI}_{\text{usec}})\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 usec. With a minimum increment of 1 usec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
<b>Note 1:</b> Short Pulse Radar Type 0 should be used for the <i>Detection Bandwidth</i> test, <i>Channel Move Time</i> , and <i>Channel Closing Time</i> tests.					

**Table 6 – Long Pulse Radar Test Signal**

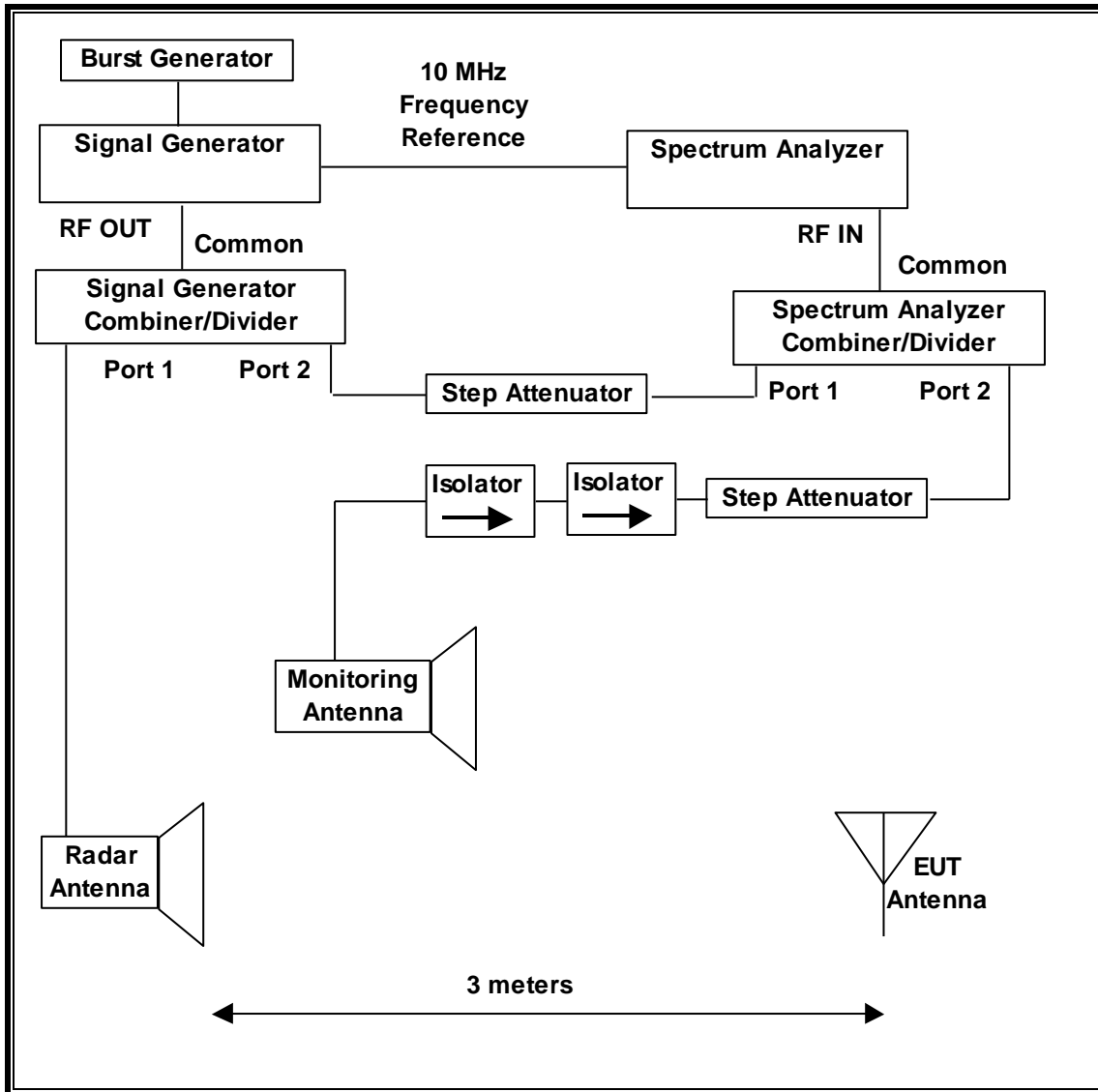
Radar Waveform Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

**Table 7 – Frequency Hopping Radar Test Signal**

Radar Waveform Type	Pulse Width ( $\mu$ sec)	PRI ( $\mu$ sec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Trials
6	1	333	9	0.333	300	70%	30

### 11.1.2. TEST AND MEASUREMENT SYSTEM

#### RADIATED METHOD SYSTEM BLOCK DIAGRAM



## **SYSTEM OVERVIEW**

The short pulse and long pulse signal generating system utilizes the NTIA software. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

The short pulse types 1, 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of KDB 905462 D02. The frequency of the signal generator is incremented in 1 MHz steps from  $F_L$  to  $F_H$  for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold.

## **SYSTEM CALIBRATION**

A 50-ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to a horn antenna via a coaxial cable, with the reference level offset set to (horn antenna gain – coaxial cable loss). The signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of –64 dBm as measured on the spectrum analyzer.

Without changing any of the instrument settings, the spectrum analyzer is reconnected to the Common port of the Spectrum Analyzer Combiner/Divider. The Reference Level Offset of the spectrum analyzer is adjusted so that the displayed amplitude of the signal is –64 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –64 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.



**ADJUSTMENT OF DISPLAYED TRAFFIC LEVEL**

A link is established between the Master and Slave and the distance between the units is adjusted as needed to provide a suitable received level at the Master and Slave devices. The video test file is streamed to generate WLAN traffic. The monitoring antenna is adjusted so that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold.

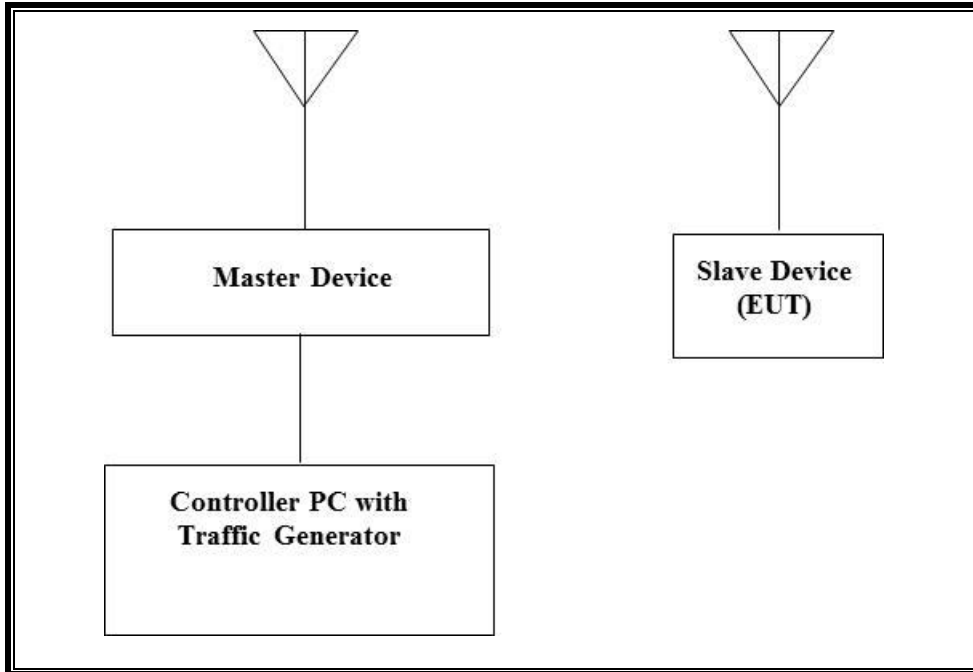
**TEST AND MEASUREMENT EQUIPMENT**

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

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	Cal Due
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	US51350187	06/01/16
Signal Generator, MXG X-Series RF Vector	Agilent	N5172B	MY51350337	02/17/16

### 11.1.3. SETUP OF EUT

#### RADIATED METHOD EUT TEST SETUP



#### SUPPORT EQUIPMENT

The following support equipment was utilized for the DFS tests documented in this report:

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
802.11ac Dual Band Wireless Access Point	Cisco	AIR-CAP3702E-A-K9	FTX181570A6	LDK102087
P.O.E. Injector	Phihong	POE30U-560(G)	PHI170102N2	DoC
Notebook PC (Controller/Server)	Lenovo	Type 4236-B92	PB-HEX04 12/05	DoC
AC Adapter (Controller/Server PC)	Lenovo	42T4418	11S42T4418Z1ZGWG08 R90M	DoC

#### **11.1.4. DESCRIPTION OF EUT**

For FCC the EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges.

For IC the EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges, excluding the 5600-5650 MHz range.

The EUT is a Slave Device without Radar Detection.

The highest power level within these bands is 14.24 dBm EIRP in the 5250-5350 MHz band and 13.85 dBm EIRP in the 5470-5725 MHz band.

The highest gain antenna assembly utilized with the EUT has a gain of -3.1 dBi in the 5250-5350 MHz band and -3.1 dBi in the 5470-5725 MHz band. The lowest gain antenna assembly utilized with the EUT has a gain of -3.1 dBi in the 5250-5350 MHz band and -3.1 dBi in the 5470-5725 MHz band.

The only antenna assembly utilized with the EUT has a gain of -3.1 dBi.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is -64 dBm. After correction for procedural adjustments, the required radiated threshold at the antenna port is  $-64 + 1 = -63$  dBm.

The calibrated radiated DFS Detection Threshold level is set to -64 dBm. The tested level is lower than the required level hence it provides a margin to the limit.

The EUT uses one transmitter/receiver chains and one receives only chain, each connected to an antenna to perform radiated tests.

WLAN traffic that meets or exceeds the minimum required loading was generated by transferring a data stream from the controller/server PC to the EUT using iPerf version 2.0.5 software package.

TPC is not required since the maximum EIRP is less than 500 mW (27 dBm).

The EUT utilizes the 802.11n architecture. Two nominal channel bandwidths are implemented: 20MHz and 40MHz.

The software installed in the EUT is Android version 5.1.1, Software version H74007c

#### **UNIFORM CHANNEL SPREADING**

This function is not required per KDB 905462.

This is requirement not applicable to Slave Devices.

**OVERVIEW OF MASTER DEVICE WITH RESPECT TO §15.407 (h) REQUIREMENTS**

The Master Device is a Cisco Access Point, FCC ID: LDK102087. The minimum antenna gain for the Master Device is 6 dBi.

The rated output power of the Master unit is  $> 23\text{dBm}$  (EIRP). Therefore the required interference threshold level is  $-64\text{ dBm}$ . After correction for procedural adjustments, the required radiated threshold at the antenna port is  $-64 + 1 = -63\text{ dBm}$ .

The calibrated radiated DFS Detection Threshold level is set to  $-64\text{ dBm}$ . The tested level is lower than the required level hence it provides a margin to the limit.

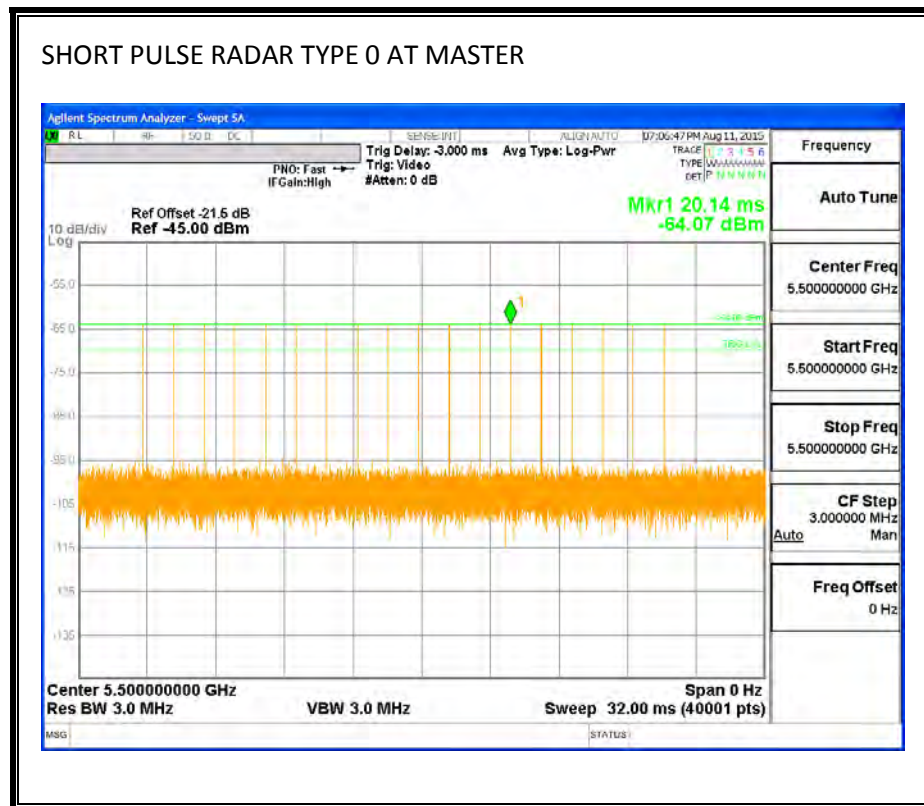
## 11.1. RESULTS FOR 20 MHz BANDWIDTH

### 11.1.1. TEST CHANNEL

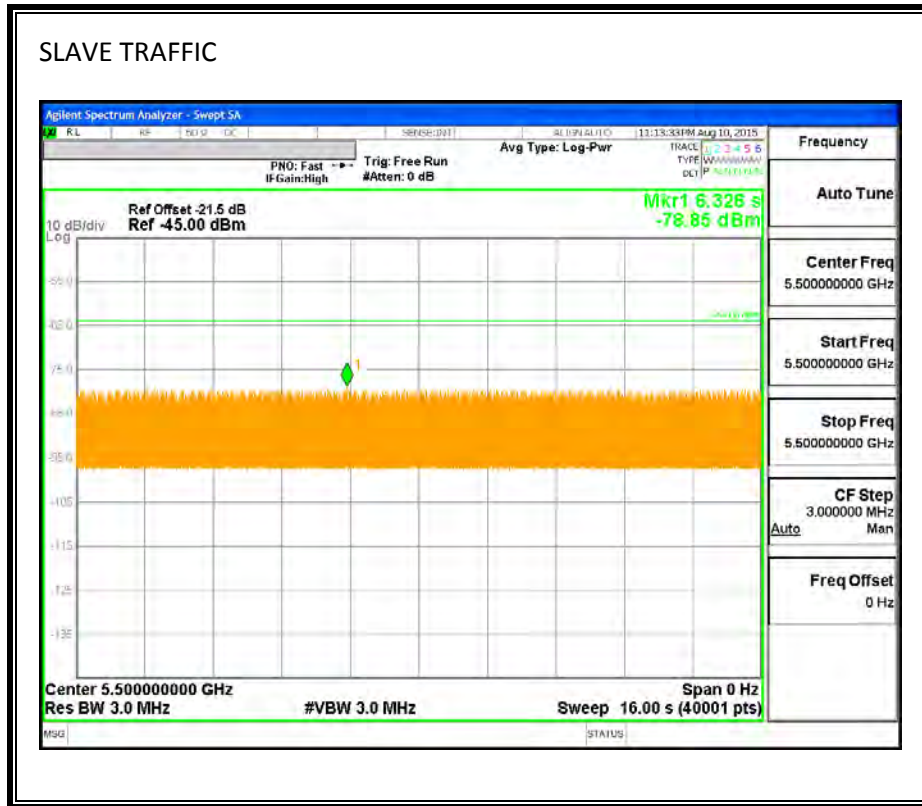
All tests were performed at a channel center frequency of 5500 MHz.

### 11.1.2. RADAR WAVEFORM AND TRAFFIC

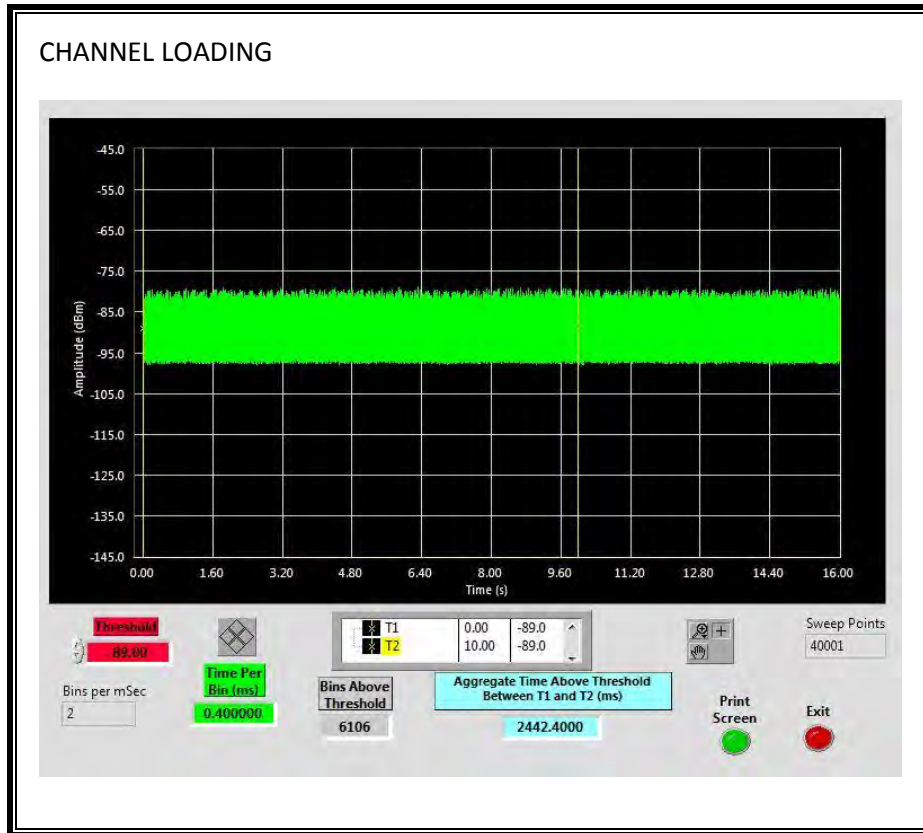
#### RADAR WAVEFORM



**TRAFFIC**



**CHANNEL LOADING**



The level of traffic loading on the channel by the EUT is 24.424%

### 11.1.3. OVERLAPPING CHANNEL TESTS

#### RESULTS

These tests are not applicable.

### 11.1.4. MOVE AND CLOSING TIME

#### REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =

(Number of analyzer bins showing transmission) \* (dwell time per bin)

The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

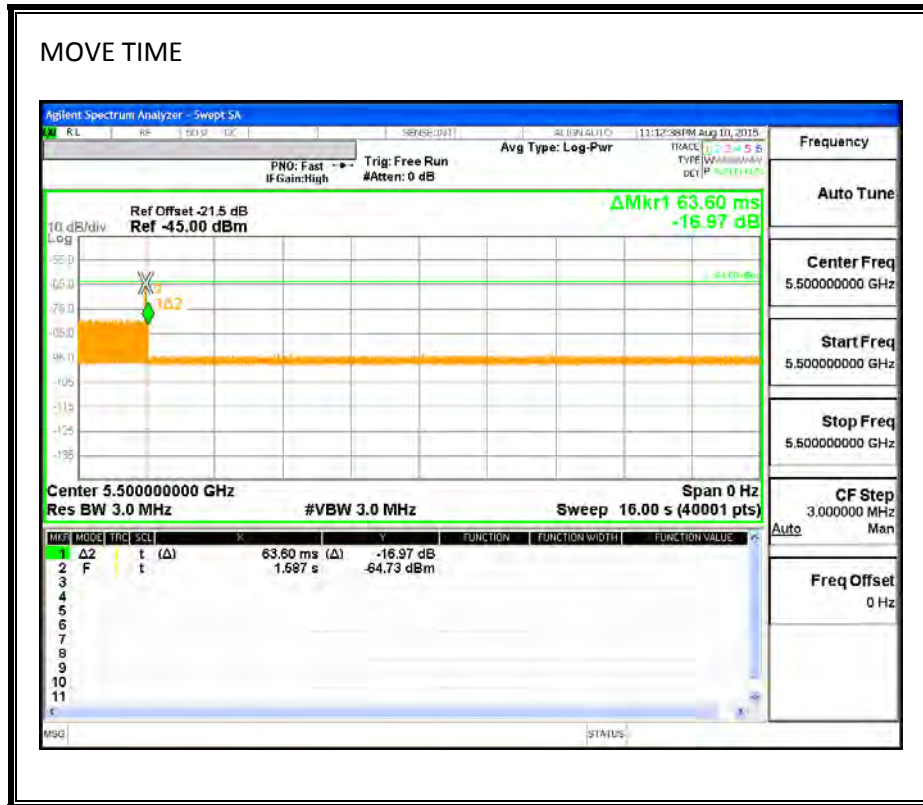
#### RESULTS

Channel Move Time (sec)	Limit (sec)
0.064	10

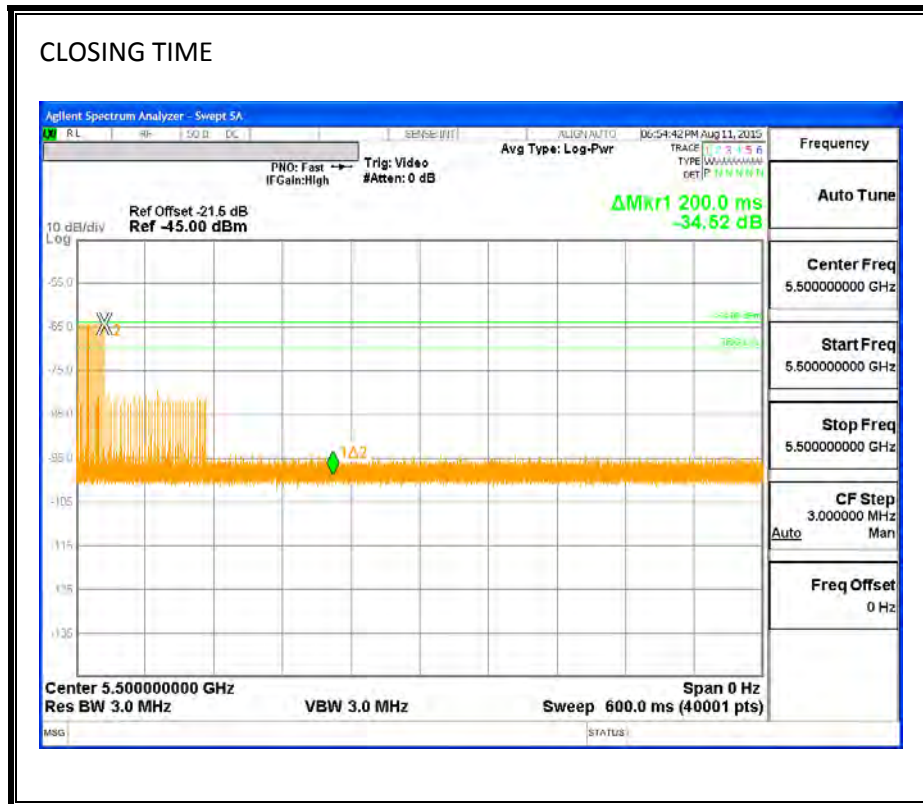
Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0.0	60



**MOVE TIME**

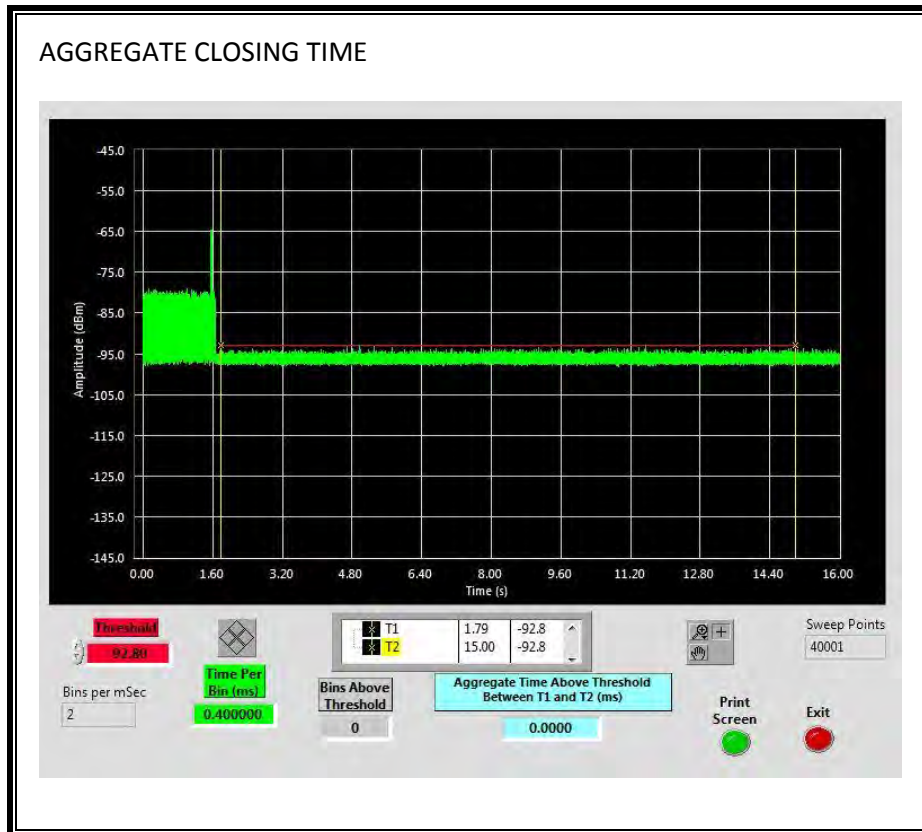


**CHANNEL CLOSING TIME**



**AGGREGATE CHANNEL CLOSING TRANSMISSION TIME**

No transmissions are observed during the aggregate monitoring period.



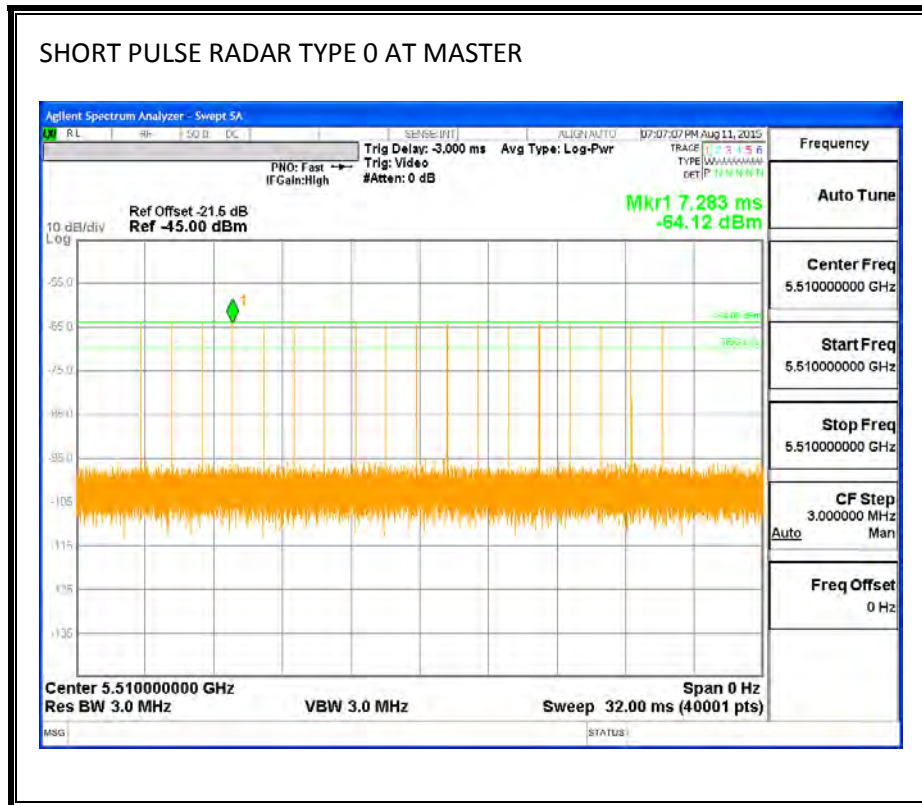
## 11.2. RESULTS FOR 40 MHz BANDWIDTH

### 11.2.1. TEST CHANNEL

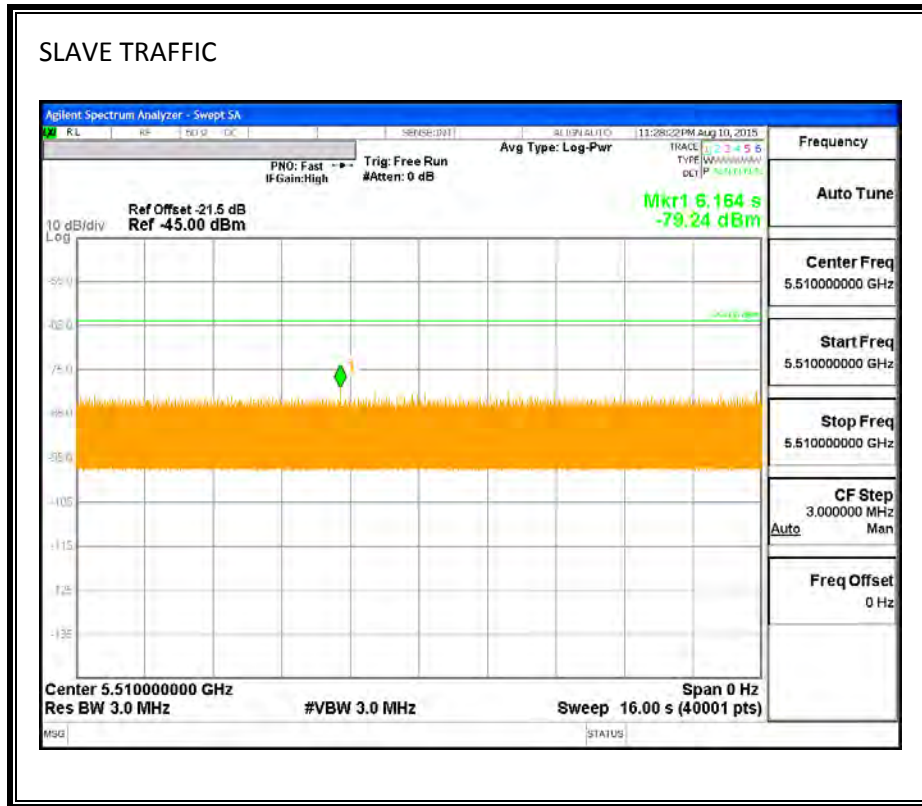
All tests were performed at a channel center frequency of 5510 MHz.

### 11.2.2. RADAR WAVEFORM AND TRAFFIC

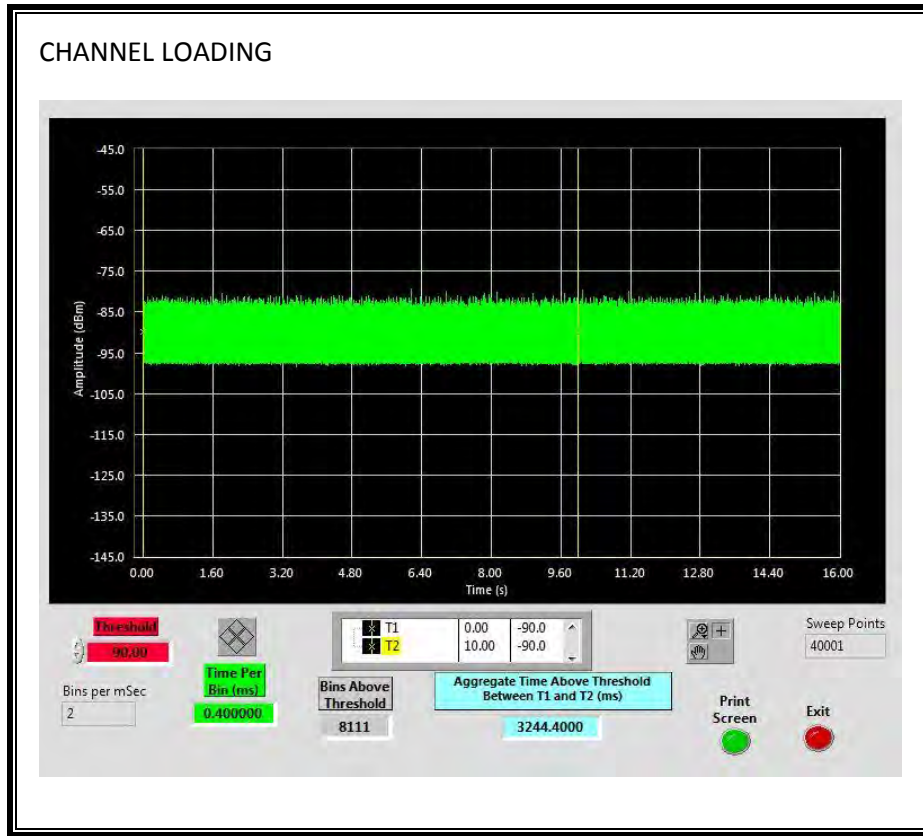
#### RADAR WAVEFORM



**TRAFFIC**



**CHANNEL LOADING**



The level of traffic loading on the channel by the EUT is 32.444%

### 11.2.3. OVERLAPPING CHANNEL TESTS

#### RESULTS

These tests are not applicable.

### 11.2.4. MOVE AND CLOSING TIME

#### REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =  
(Number of analyzer bins showing transmission) \* (dwell time per bin)

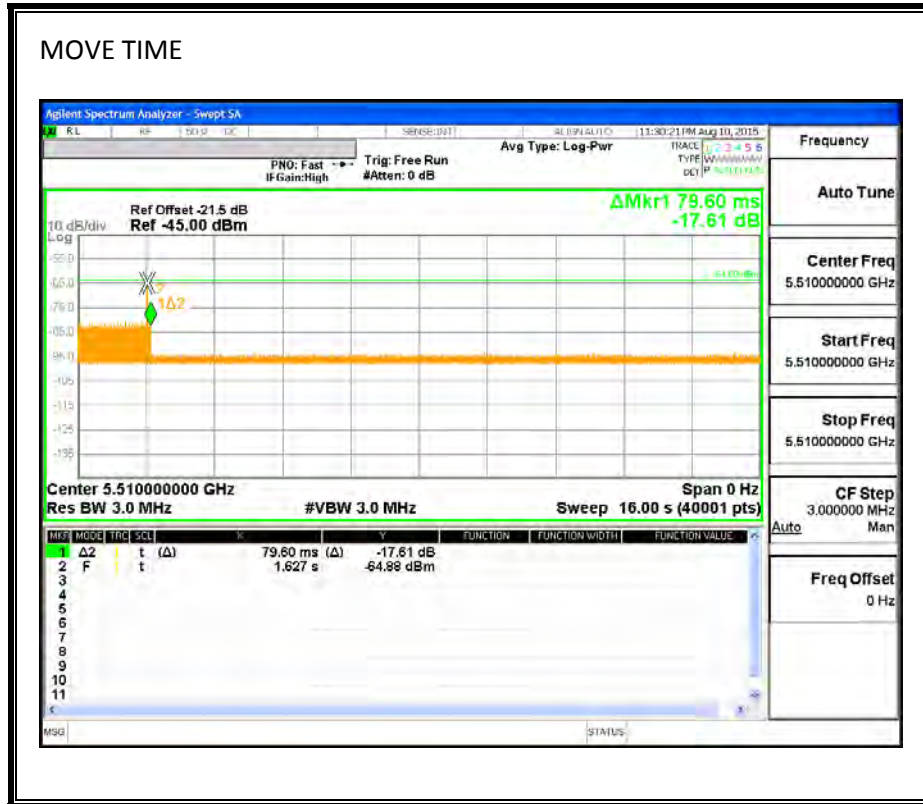
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

#### RESULTS

Channel Move Time (sec)	Limit (sec)
0.080	10

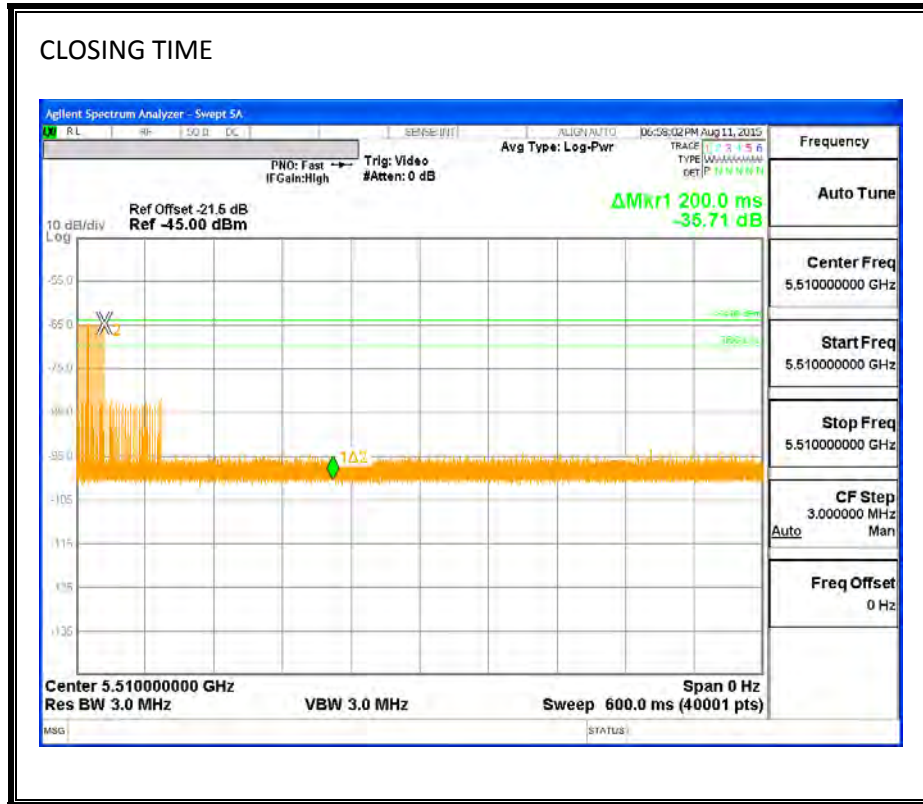
Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0.0	60

**MOVE TIME**



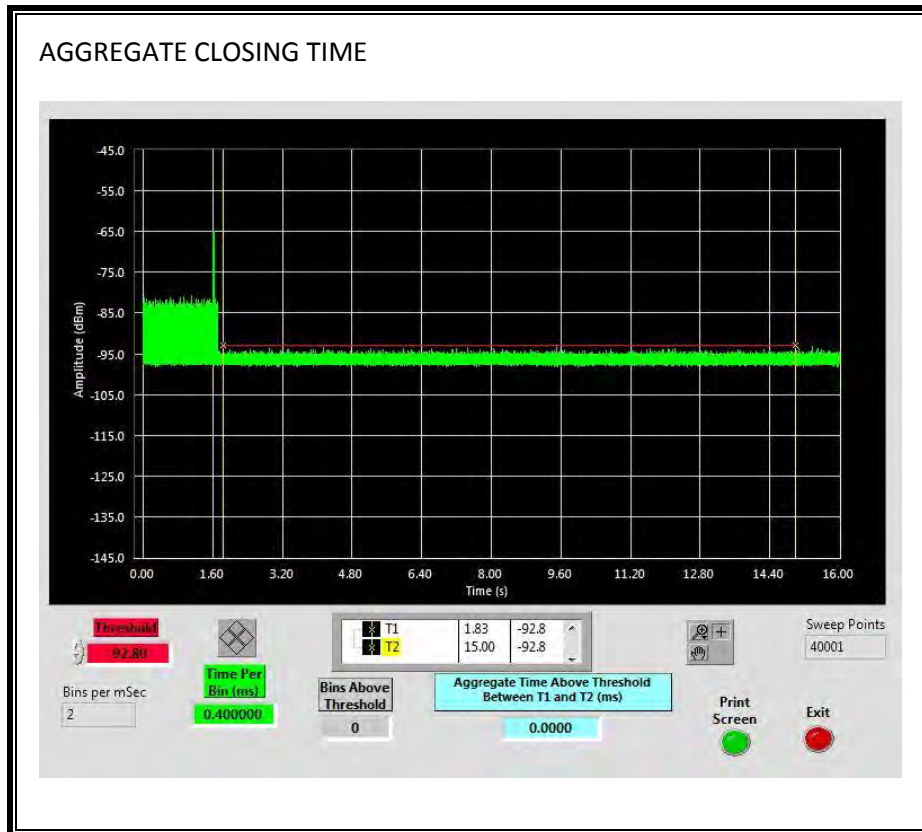


**CHANNEL CLOSING TIME**



**AGGREGATE CHANNEL CLOSING TRANSMISSION TIME**

No transmissions are observed during the aggregate monitoring period.



### 11.2.5. 10-MINUTE BEACON MONITORING PERIOD

#### RESULTS

No EUT transmissions were observed on the test channel during the 10-minute observation time.

