



**FCC 47 CFR PART 15 SUBPART E**

**CERTIFICATION TEST REPORT**

**FOR**

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

**MODEL NUMBER: LG-H443, H443, LGH443**

**FCC ID: ZNFH443**

**REPORT NUMBER: 14I19589-E5 REVISION A**

**ISSUE DATE: FEBRUARY 13, 2015**

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**NVLAP LAB CODE 200065-0**

Revision History

Rev.	Date	Revisions	Revised By
---	01/06/15	Initial Issue	D. Corona
A	02/12/15	Update information page 10	D. Corona

## TABLE OF CONTENTS

<b>1. ATTESTATION OF TEST RESULTS .....</b>	<b>6</b>
<b>2. TEST METHODOLOGY .....</b>	<b>7</b>
<b>3. FACILITIES AND ACCREDITATION .....</b>	<b>7</b>
<b>4. CALIBRATION AND UNCERTAINTY .....</b>	<b>7</b>
4.1. <i>MEASURING INSTRUMENT CALIBRATION .....</i>	<i>7</i>
4.2. <i>SAMPLE CALCULATION .....</i>	<i>7</i>
4.3. <i>MEASUREMENT UNCERTAINTY.....</i>	<i>8</i>
<b>5. EQUIPMENT UNDER TEST .....</b>	<b>9</b>
5.1. <i>DESCRIPTION OF EUT .....</i>	<i>9</i>
5.2. <i>MAXIMUM OUTPUT POWER.....</i>	<i>9</i>
5.3. <i>DESCRIPTION OF AVAILABLE ANTENNAS .....</i>	<i>9</i>
5.4. <i>WORST-CASE CONFIGURATION AND MODE.....</i>	<i>10</i>
5.5. <i>DESCRIPTION OF TEST SETUP.....</i>	<i>11</i>
<b>6. TEST AND MEASUREMENT EQUIPMENT .....</b>	<b>13</b>
<b>7. SUMMARY TABLE .....</b>	<b>14</b>
<b>8. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS .....</b>	<b>15</b>
<b>9. MEASUREMENT METHOD.....</b>	<b>17</b>
<b>10. ANTENNA PORT TEST RESULTS .....</b>	<b>18</b>
10.1. <i>6 dB BANDWIDTH .....</i>	<i>18</i>
10.2. <i>26 dB BANDWIDTH .....</i>	<i>22</i>
10.3. <i>99% BANDWIDTH .....</i>	<i>35</i>
10.3.1. <i>802.11a MODE IN THE 5.2 GHz BAND.....</i>	<i>36</i>
10.3.2. <i>802.11n HT20 MODE IN THE 5.2 GHz BAND .....</i>	<i>36</i>
10.3.3. <i>802.11n HT40 MODE IN THE 5.2 GHz BAND .....</i>	<i>36</i>
10.3.1. <i>802.11a MODE IN THE 5.3 GHz BAND.....</i>	<i>36</i>
10.3.1. <i>802.11n HT20 MODE IN THE 5.3 GHz BAND .....</i>	<i>37</i>
10.3.2. <i>802.11n HT40 MODE IN THE 5.3 GHz BAND .....</i>	<i>37</i>
10.3.3. <i>802.11a MODE IN THE 5.5 GHz BAND.....</i>	<i>37</i>
10.3.4. <i>802.11n HT20 MODE IN THE 5.5 GHz BAND .....</i>	<i>37</i>
10.3.5. <i>802.11n HT40 MODE IN THE 5.5 GHz BAND .....</i>	<i>38</i>
10.3.6. <i>802.11a MODE IN THE 5.8 GHz BAND.....</i>	<i>38</i>

10.3.7.	802.11n HT20 MODE IN THE 5.8 GHz BAND .....	38
10.3.8.	802.11n HT40 MODE IN THE 5.8 GHz BAND .....	38
10.3.1.	99% BANDWIDTH PLOTS .....	39
<b>10.4.</b>	<b>AVERAGE POWER .....</b>	<b>41</b>
10.4.1.	802.11a MODE IN THE 5.2 GHz BAND .....	42
10.4.2.	802.11n HT20 MODE IN THE 5.2 GHz BAND .....	42
10.4.3.	802.11n HT40 MODE IN THE 5.2 GHz BAND .....	42
10.4.4.	802.11a MODE IN THE 5.3 GHz BAND .....	42
10.4.5.	802.11n HT20 MODE IN THE 5.3 GHz BAND .....	43
10.4.6.	802.11n HT40 MODE IN THE 5.3 GHz BAND .....	43
10.4.7.	802.11a MODE IN THE 5.5 GHz BAND .....	43
10.4.8.	802.11n HT20 MODE IN THE 5.5 GHz BAND .....	44
10.4.9.	802.11n HT40 MODE IN THE 5.5 GHz BAND .....	44
10.4.10.	802.11a MODE IN THE 5.8 GHz BAND .....	44
10.4.11.	802.11n HT20 MODE IN THE 5.8 GHz BAND .....	45
10.4.12.	802.11n HT40 MODE IN THE 5.8 GHz BAND .....	45
<b>10.5.</b>	<b>OUTPUT POWER AND PPSD .....</b>	<b>46</b>
10.5.1.	802.11a MODE IN THE 5.2 GHz BAND .....	47
10.5.2.	802.11n HT20 MODE IN THE 5.2 GHz BAND .....	48
10.5.3.	802.11n HT40 MODE IN THE 5.2 GHz BAND .....	49
10.5.4.	802.11a MODE IN THE 5.3 GHz BAND .....	50
10.5.5.	802.11n HT20 MODE IN THE 5.3 GHz BAND .....	51
10.5.6.	802.11n HT40 MODE IN THE 5.3 GHz BAND .....	52
	802.11a MODE IN THE 5.5 GHz BAND .....	53
10.5.7.	802.11n HT20 MODE IN THE 5.5 GHz BAND .....	54
10.5.8.	802.11n HT40 MODE IN THE 5.5 GHz BAND .....	55
	802.11a MODE IN THE 5.8 GHz BAND .....	56
10.5.9.	802.11n HT20 MODE IN THE 5.8 GHz BAND .....	57
10.5.10.	802.11n HT40 MODE IN THE 5.8 GHz BAND .....	58
10.5.1.	OUTPUT POWER AND PPSD PLOTS, Chain 0 .....	59
<b>11.</b>	<b>TRANSMITTER ABOVE 1 GHz.....</b>	<b>61</b>
<b>11.1.</b>	<b>5.2 GHz.....</b>	<b>62</b>
11.1.1.	TX ABOVE 1 GHz 802.11a MODE IN THE 5.2 GHz BAND .....	62
11.1.2.	TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.2 GHz BAND .....	73
11.1.3.	TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.2 GHz BAND .....	84
<b>11.2.</b>	<b>5.3 GHz.....</b>	<b>92</b>
11.2.1.	TX ABOVE 1 GHz 802.11a MODE IN THE 5.3 GHz BAND .....	92
11.2.2.	TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.3 GHz BAND .....	103
11.2.3.	TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.3 GHz BAND .....	114
<b>11.3.</b>	<b>5.5-5.6 GHz.....</b>	<b>122</b>
11.3.1.	TX ABOVE 1 GHz 802.11a MODE IN THE 5.5 GHz BAND .....	122
11.3.2.	TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.5 GHz BAND .....	135
11.3.3.	TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.5 GHz BAND .....	148
<b>11.4.</b>	<b>5.8 GHz.....</b>	<b>161</b>

11.4.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.8 GHz BAND .....	161
11.4.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.8 GHz BAND.....	174
11.4.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.8 GHz BAND.....	187
<b>12. WORST-CASE BELOW 1 GHz (in the 5.3 GHz Band).....</b>	<b>197</b>
<b>13. AC POWER LINE CONDUCTED EMISSIONS .....</b>	<b>200</b>
<b>14. DYNAMIC FREQUENCY SELECTION.....</b>	<b>203</b>
14.1. OVERVIEW.....	203
14.1.1. LIMITS.....	203
14.1.2. TEST AND MEASUREMENT SYSTEM .....	208
14.1.3. SETUP OF EUT.....	211
14.1.4. DESCRIPTION OF EUT .....	212
14.2. RESULTS FOR 20 MHz BANDWIDTH.....	214
14.2.1. TEST CHANNEL .....	214
14.2.2. RADAR WAVEFORM AND TRAFFIC .....	214
14.2.3. OVERLAPPING CHANNEL TESTS.....	216
14.2.4. MOVE AND CLOSING TIME .....	216
14.3. RESULTS FOR 40 MHz BANDWIDTH.....	220
14.3.1. TEST CHANNEL .....	220
14.3.2. RADAR WAVEFORM AND TRAFFIC.....	220
14.3.3. OVERLAPPING CHANNEL TESTS.....	222
14.3.4. MOVE AND CLOSING TIME .....	222
14.3.5. 10-MINUTE BEACON MONITORING PERIOD .....	226
<b>15. SETUP PHOTOS.....</b>	<b>227</b>

# 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** LG ELECTRONICS MOBILECOMM U.S.A., INC  
**EUT DESCRIPTION:** GSM/WCDMA/LTE PHONE + BLUETOOTH, DTS/UNII a/b/g/n & NFC  
**MODEL NUMBER:** LG-H443, H443, LGH443  
**SERIAL NUMBER:** 43-03532 (Radiated); 43-03534 (Conducted)  
**DATE TESTED:** DECEMBER 16-23, 2014

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.

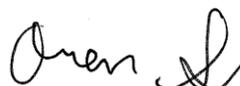
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UL Verification Services Inc.

## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2009. DFS portion of FCC CFR 47 Part 2, FCC CFR 47 Part 15, FCC 06-96, FCC KDB 789033, KDB 905462 D02 and D03, ANSI C63.10-2009

## 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 PHONE + BLUETOOTH, DTS/UNII a/b/g/n & NFC.

### 5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Total Output Power (dBm)	Total Output Power (mW)
5180 - 5240	802.11n HT20	10.24	10.57
5260 - 5320	802.11n HT20	9.7	9.33
5500 - 5700	802.11n HT20	8.9	7.76
5745 - 5825	802.11n HT20	12.26	16.83
5190 - 5230	802.11n HT40	9.68	9.29
5270 - 5310	802.11n HT40	9.39	8.69
5510 - 5670	802.11n HT40	10.44	11.07
5755 - 5795	802.11n HT40	10.48	11.17
5180 - 5240	802.11a	11.1	12.88
5260 - 5320	802.11a	10.79	11.99
5500 - 5700	802.11a	10.67	11.67
5745 - 5825	802.11a	12.09	16.18

### 5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -2.4 dBi.

## 5.4. WORST-CASE CONFIGURATION AND MODE

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

The fundamental of the EUT was investigated in three orthogonal orientations X, Y, Z it was determined that 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	N/A	N/A	N/A
Earphone	LG	N/A	N/A	N/A

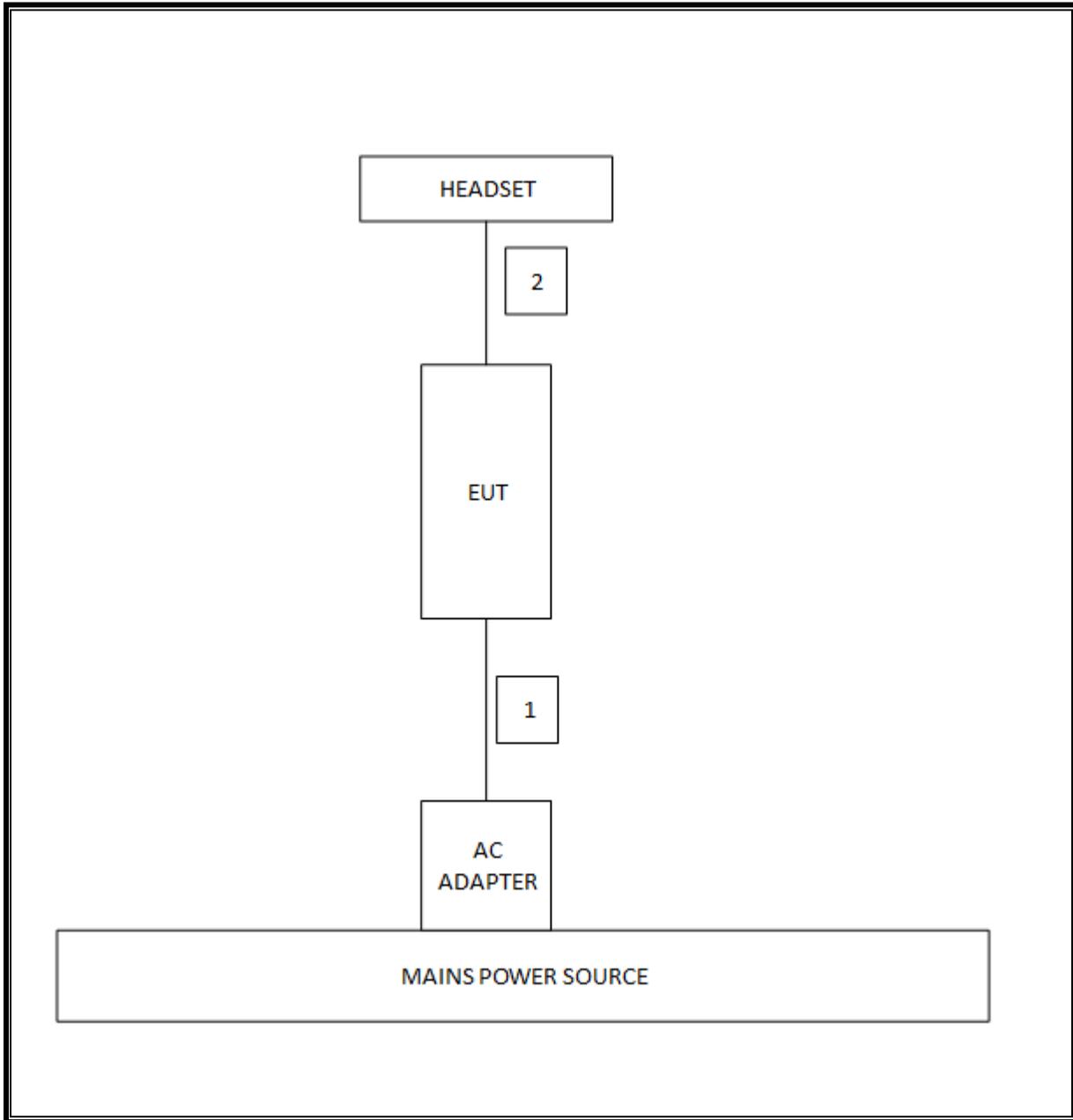
### I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC Power	1	Mini-USB	Shielded	1.2m	N/A
2	Audio	1	Mini-Jack	Unshielded	1.0m	N/A

### TEST SETUP

The EUT is setup as a stand-alone device.

**SETUP DIAGRAM FOR TESTS**



## 6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	Manufacturer	Model	Asset	Cal Due
Antenna, Biconolog, 30MHz-1 GHz	Sunol Sciences	JB1	C01171	02/13/15
Antenna, Horn, 18GHz	EMCO	3115	C00783	10/25/15
Antenna, Horn, 26.5 GHz	ARA	MWH-1826/B	C00980	11/14/15
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00580	01/28/15
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01052	10/22/15
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/15
CBT Bluetooth Tester	R & S	CBT	None	07/12/15
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15
LISN, 30 MHz	FCC	50/250-25-2	C00626	01/14/15
Reject Filter, 2.4GHz	Micro-Tronics	BRM50702	N02684	CNR
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15

## 7. SUMMARY TABLE

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.407 (a)	Occupied Band width (26dB)	N/A	Conducted	N/A	22.27 MHz
15.407	6dB Band width (5.8Ghz)	500KHz		Pass	16.409 MHz
15.407 (a)(2)	TX Cond. Power 5.15-2.25, 5.25-5.35 & 5.47-5.725	<24dBm or 11+10Log(OBW)		Pass	11.1 dBm
15.407 (a)(3)	TX Cond. Power 5.725-5.825	< 30dBm or 17+10Log(OBW)		Pass	12.26 dBm
15.407 (a)(5)	PSD (5.2,5.3,5.5GHz)	<11dBm		Pass	-1.3 dBm
15.407 (a)(5)	PSD (5.8GHz)	30dBm per 500kHz			0.52 dBm
15.207 (a)	AC Power Line conducted emissions	Section 10	Radiated	Pass	39.65 dBuV
15.407 (b) & 15.209	Radiated Spurious Emission	< 54dBuV/m		Pass	46.32 dBuV/m
15.407 (h)(2)	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**

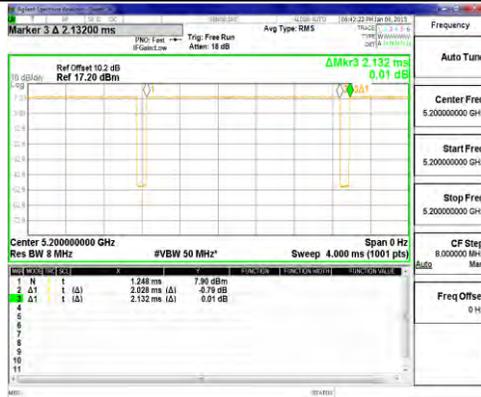
KDB 789033 Zero-Span Spectrum Analyzer Method.

### **RESULTS**

**ON TIME AND DUTY CYCLE RESULT AND PLOTS**

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	2.03	2.13	0.951	95.1%	0.22	0.493
802.11n HT20	1.88	2	0.949	94.9%	0.23	0.533
802.11n HT40	0.92	1	0.902	90.2%	0.45	1.092

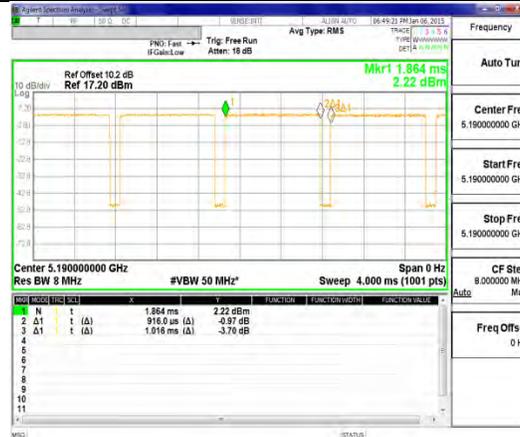
**DUTY CYCLE 802.11a MODE**



**DUTY CYCLE 802.11n HT20 MODE**



**DUTY CYCLE 802.11n HT40 MODE**



NOTE:

## 9. MEASUREMENT METHOD

789033 D02 General UNII Test Procedures New Rules v01

The Duty Cycle is less than 98% and consistent therefore KDB 789033 Method SA-2 is used for power and PPSD

The Duty Cycle is less than 98% and consistent, KDB 789033 Method AD with Power RMS Averaging and duty cycle correction is used.

## **10. ANTENNA PORT TEST RESULTS**

### **10.1. 6 dB BANDWIDTH**

#### **LIMITS**

FCC §15.407

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

#### **TEST PROCEDURE**

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW set to 100KHz, the VBW  $\geq 3 \times$  RBW, peak detector and max hold.

#### **RESULTS**

**6 dB BANDWIDTH PLOTS AND TABLE**

**802.11a MODE IN THE 5.8 GHz BAND TEST RESULT TABLE**

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	16.484	0.5
Mid	5785	16.409	0.5
High	5825	16.409	0.5
Worst		16.484	

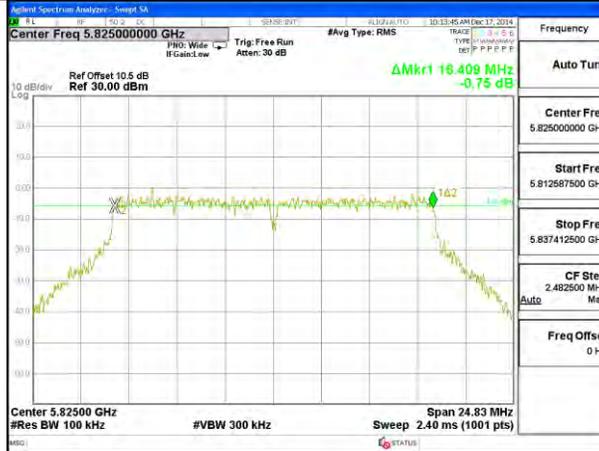
11a 5.8 Low Channel



11a 5.8 Mid Channel



11a 5.8 High Channel

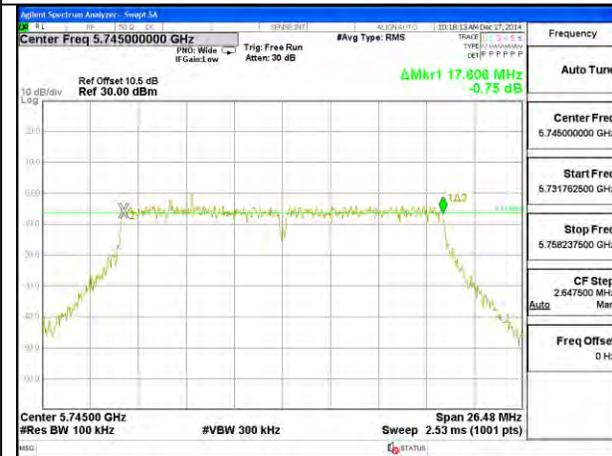


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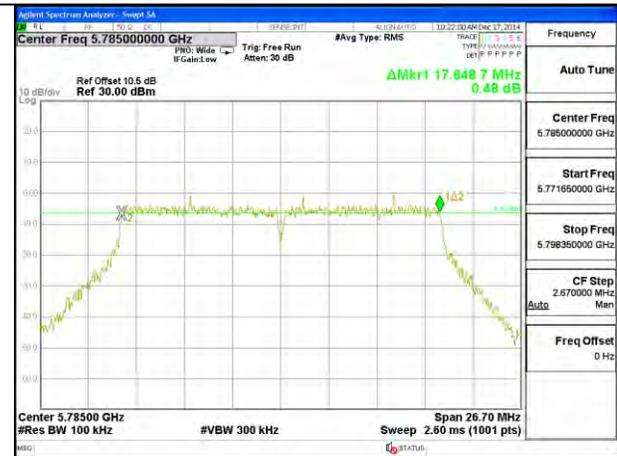
**802.11n HT20 MODE IN THE 5.8 GHz BAND TEST RESULT TABLE**

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	17.606	0.5
Mid	5785	17.649	0.5
High	5825	17.632	0.5
Worst		17.649	

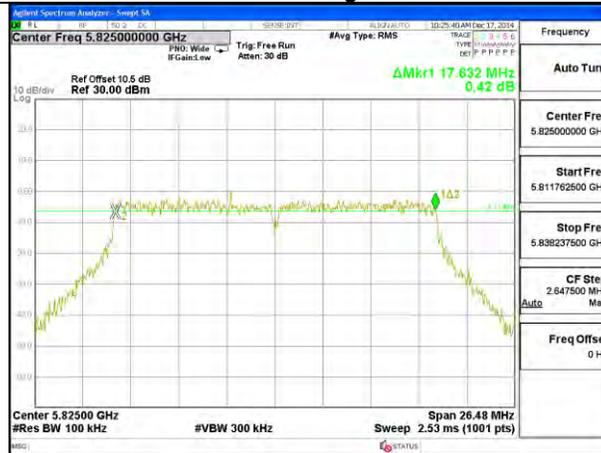
11n HT20 5.8 Low Channel



11n HT20 5.8 Mid Channel



11n HT20 5.8 High Channel



NOTE:

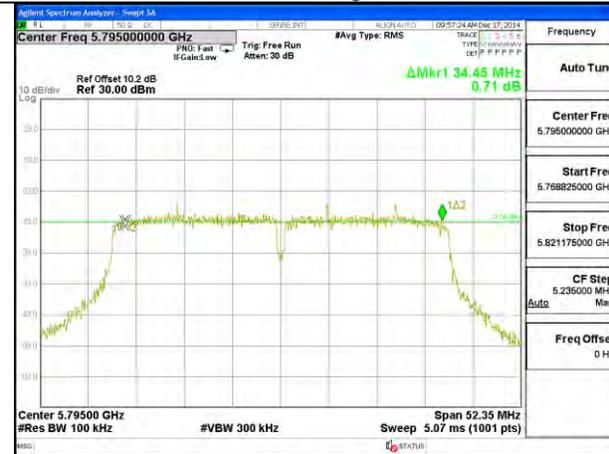
**802.11n HT40 MODE IN THE 5.8 GHz BAND TEST RESULT TABLE**

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5755	36.330	0.5
High	5795	34.450	0.5
Worst		36.330	

11n HT40 5.8 Low Channel



11n HT40 5.8 High Channel



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NOTE:

## **10.2. 26 dB BANDWIDTH**

### **LIMITS**

None; for reporting purposes only.

### **RESULTS**

**26 dB BANDWIDTH PLOTS AND TABLE**

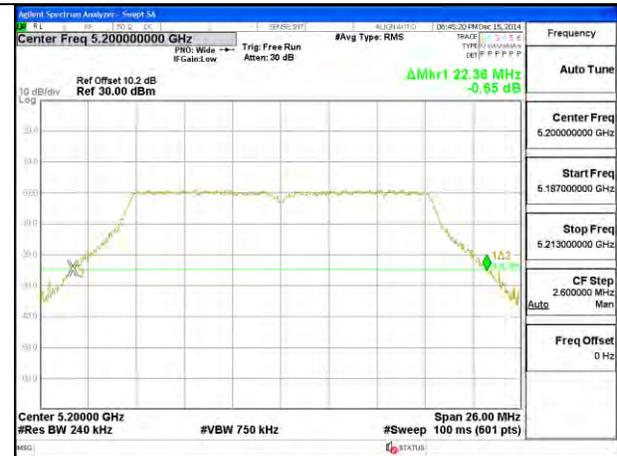
**802.11a MODE IN THE 5.2 GHz BAND TEST RESULT TABLE**

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	22.45
Mid	5200	22.36
High	5240	22.32
Worst		22.45

11a 5.2 Low Channel



11a 5.2 Mid Channel



11a 5.2 High Channel



NOTE:

**802.11n HT20 MODE IN THE 5.2 GHz BAND TEST RESULT TABLE**

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	22.62
Mid	5200	22.58
High	5240	22.66
Worst		22.66

11n HT20 5.2 Low Channel



11n HT20 5.2 Mid Channel



11n HT20 5.2 High Channel



NOTE:

**802.11n HT40 MODE IN THE 5.2 GHz BAND TEST RESULT TABLE**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
Low	5190	44.17
Mid	5230	44.46
Worst		44.46

11n HT40 5.2 Low Channel



11n HT40 5.2 High Channel



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NOTE:

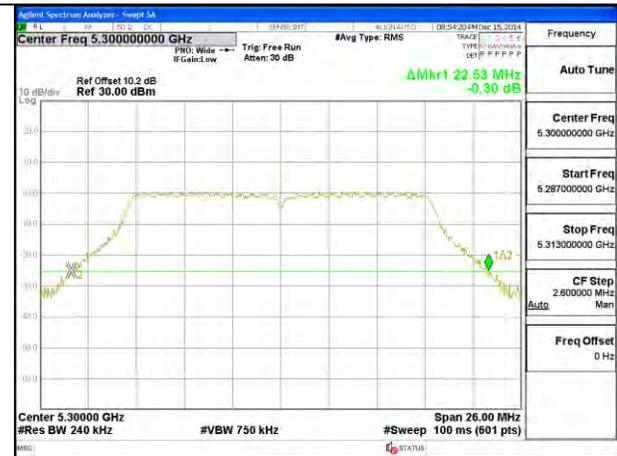
**802.11a MODE IN THE 5.3 GHz BAND TEST RESULT TABLE**

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	22.32
Mid	5300	22.53
High	5320	22.27
Worst		22.53

11a 5.3 Low Channel



11a 5.3 Mid Channel



11a 5.3 High Channel



NOTE:

**802.11n HT20 MODE IN THE 5.3 GHz BAND TEST RESULT TABLE**

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	22.66
Mid	5300	22.66
High	5320	22.71
Worst		22.71

11n HT20 5.3 Low Channel



11n HT20 5.3 Mid Channel



11n HT20 5.3 High Channel



NOTE:

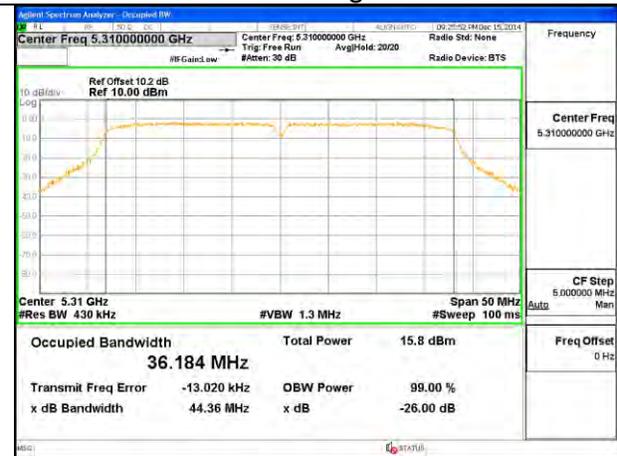
**802.11n HT40 MODE IN THE 5.3 GHz BAND TEST RESULT TABLE**

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5270	43.78
High	5310	43.78
Worst		43.78

**11n HT40 5.3 Low Channel**



**11n HT20 5.3 High Channel**



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NOTE:

**802.11a MODE IN THE 5.5 GHz BAND TEST RESULT TABLE**

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	22.49
Mid	5580	22.40
High	5700	22.27
Worst		22.49

11a 5.5 Low Channel



11a 5.5 Mid Channel



11a 5.5 High Channel  
2.38

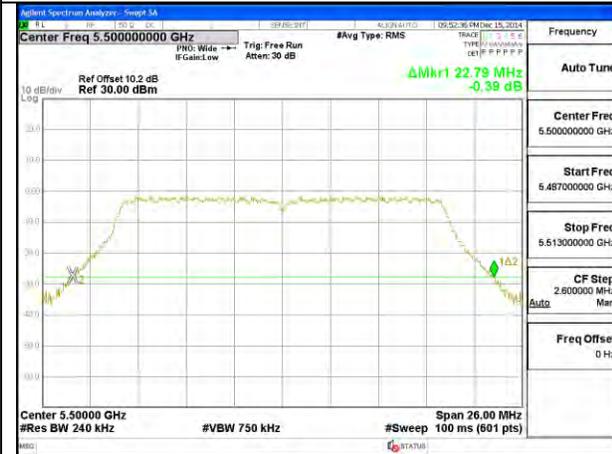


NOTE:

**802.11n HT20 MODE IN THE 5.5 GHz BAND TEST RESULT TABLE**

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	22.79
Mid	5580	22.75
High	5700	22.66
Worst		22.79

**11n HT20 5.5 Low Channel**



**11n HT20 5.5 Mid Channel**



**11n HT20 5.5 High Channel**



NOTE:

**802.11n HT40 MODE IN THE 5.5 GHz BAND TEST RESULT TABLE**

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	43.70
Mid	5550	44.60
High	5670	44.30
Worst		44.60

11n HT40 5.5 Low Channel



11n HT40 5.5 Mid Channel



11n HT40 5.5 High Channel



NOTE:

**802.11a MODE IN THE 5.8 GHz BAND TEST RESULT TABLE**

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	22.35
Mid	5785	22.40
High	5825	22.75
Worst		22.75

11a 5.8 Low Channel



11a 5.8 Mid Channel



11a 5.8 High Channel



NOTE:

**802.11n HT20 MODE IN THE 5.8 GHz BAND TEST RESULT TABLE**

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	23.10
Mid	5785	22.65
High	5825	22.95
Worst		23.10

11n HT20 5.8 Low Channel



11n HT20 5.8 Mid Channel



11n HT20 5.8 High Channel



NOTE:

**802.11n HT40 MODE IN THE 5.8 GHz BAND TEST RESULT TABLE**

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	44.10
High	5795	44.50
Worst		44.50

**11n HT40 5.8 Low Channel**



**11n HT40 5.8 Mid Channel**



**11n HT40 5.8 High Channel**



NOTE:

### **10.3. 99% BANDWIDTH**

#### **LIMITS**

None; for reporting purposes only.

#### **RESULTS**

**10.3.1. 802.11a MODE IN THE 5.2 GHz BAND**

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	16.80
Mid	5200	16.80
High	5240	16.81
Worst		16.81

**10.3.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND**

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	17.92
Mid	5200	17.93
High	5240	17.91
Worst		17.93

**10.3.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND**

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5190	36.19
Mid	5230	36.18
Worst		36.19

**10.3.1. 802.11a MODE IN THE 5.3 GHz BAND**

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	16.81
Mid	5300	16.81
High	5320	16.82
Worst		16.82

**10.3.1. 802.11n HT20 MODE IN THE 5.3 GHz BAND**

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	17.93
Mid	5300	17.92
High	5320	17.91
Worst		17.93

**10.3.2. 802.11n HT40 MODE IN THE 5.3 GHz BAND**

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5270	36.17
High	5310	36.18
Worst		36.18

**10.3.3. 802.11a MODE IN THE 5.5 GHz BAND**

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	16.80
Mid	5580	16.81
High	5700	16.79
Worst		16.81

**10.3.4. 802.11n HT20 MODE IN THE 5.5 GHz BAND**

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	17.90
Mid	5580	17.93
High	5700	17.89
Worst		17.93

**10.3.5. 802.11n HT40 MODE IN THE 5.5 GHz BAND**

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5510	36.19
Mid	5550	36.21
High	5670	36.20
Worst		36.21

**10.3.6. 802.11a MODE IN THE 5.8 GHz BAND**

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	16.82
Mid	5785	16.80
High	5825	16.79
Worst		16.82

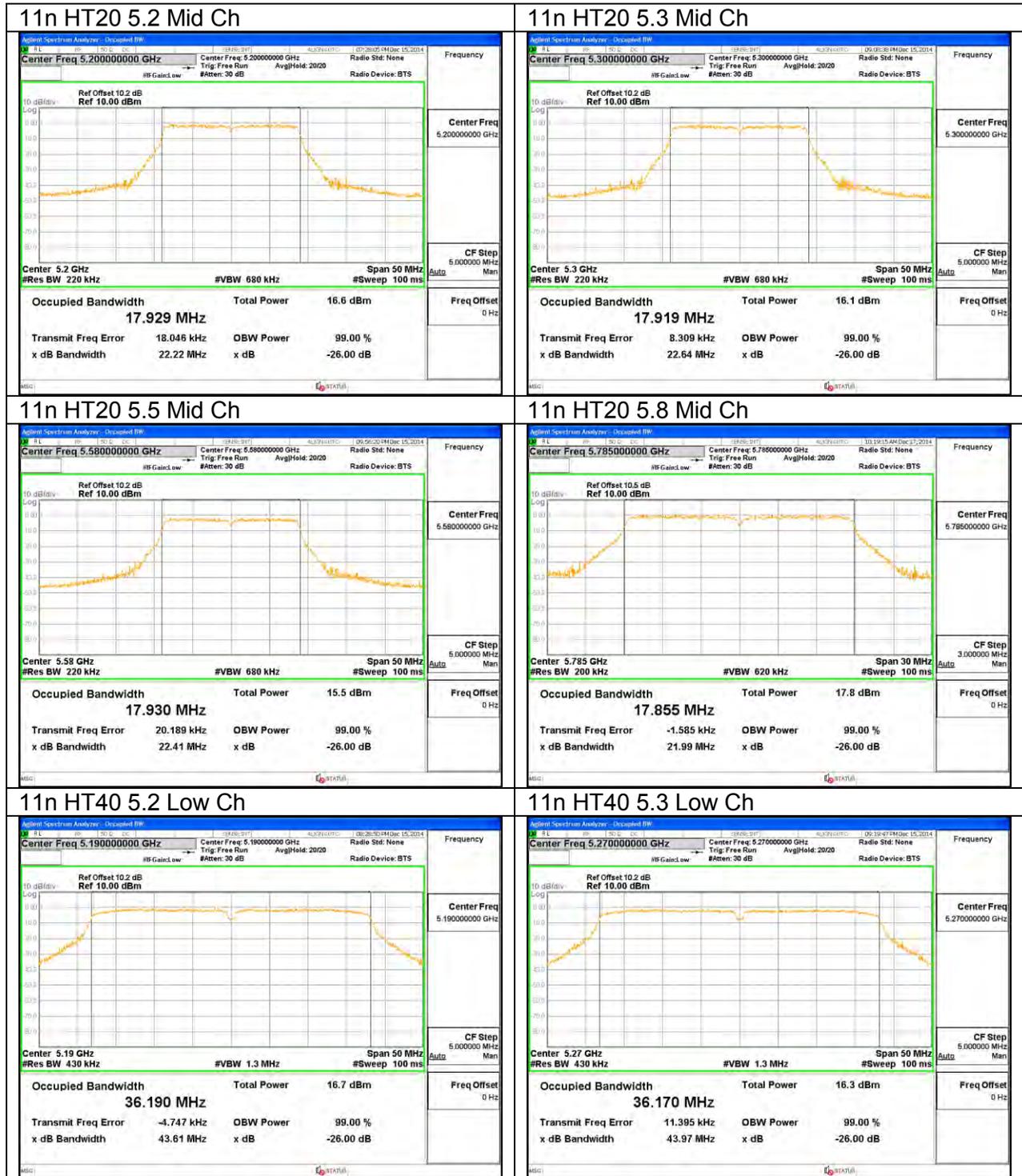
**10.3.7. 802.11n HT20 MODE IN THE 5.8 GHz BAND**

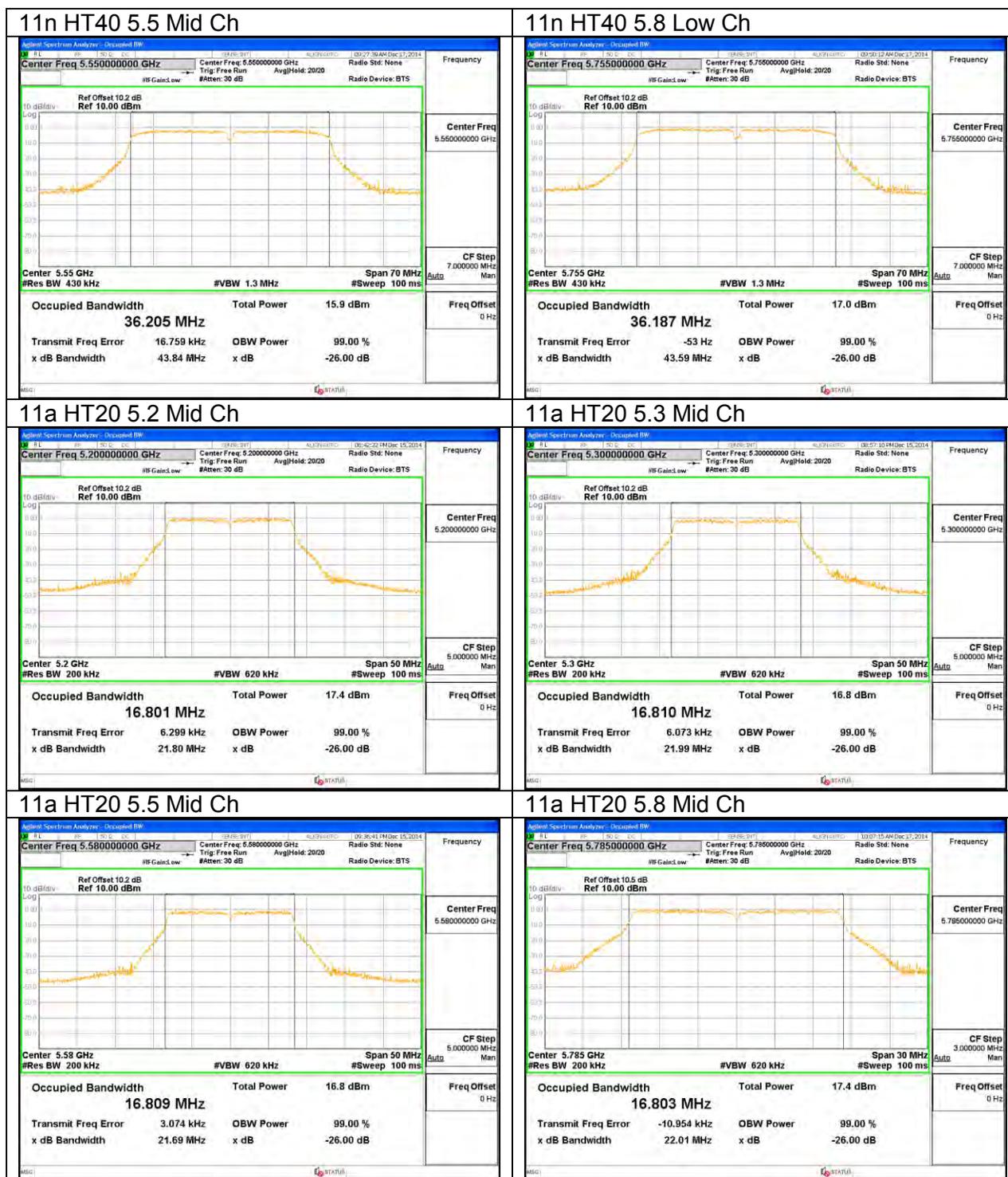
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.87
Mid	5785	17.86
High	5825	17.87
Worst		17.87

**10.3.8. 802.11n HT40 MODE IN THE 5.8 GHz BAND**

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.19
High	5795	36.23
Worst		36.23

### 10.3.1. 99% BANDWIDTH PLOTS





## **10.4. AVERAGE POWER**

### **LIMITS**

None; for reporting purposes only.

### **TEST PROCEDURE**

The transmitter output is connected to a power meter.

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

### **RESULTS**

**10.4.1. 802.11a MODE IN THE 5.2 GHz BAND**

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	10.85
Mid	5200	10.80
High	5240	11.10
Worst		11.10

**10.4.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND**

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	9.90
Mid	5200	10.00
High	5240	10.20
Worst		10.20

**10.4.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND**

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5190	9.70
Mid	5230	9.70
Worst		9.70

**10.4.4. 802.11a MODE IN THE 5.3 GHz BAND**

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5260	11.10
Mid	5300	11.10
High	5320	11.00
Worst		11.10

**10.4.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND**

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5260	10.20
Mid	5300	10.10
High	5320	10.20
Worst		10.20

**10.4.6. 802.11n HT40 MODE IN THE 5.3 GHz BAND**

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5270	9.80
High	5310	9.90
Worst		9.90

**10.4.7. 802.11a MODE IN THE 5.5 GHz BAND**

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5500	10.70
Mid	5580	10.70
High	5700	9.50
Worst		10.70

**10.4.8. 802.11n HT20 MODE IN THE 5.5 GHz BAND**

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5500	9.70
Mid	5580	9.90
High	5700	8.40
Worst		9.90

**10.4.9. 802.11n HT40 MODE IN THE 5.5 GHz BAND**

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5510	9.00
Mid	5550	9.50
High	5670	10.00
Worst		10.00

**10.4.10. 802.11a MODE IN THE 5.8 GHz BAND**

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	10.00
Mid	5785	10.40
High	5825	11.20
Worst		11.20

**10.4.11. 802.11n HT20 MODE IN THE 5.8 GHz BAND**

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	9.80
Mid	5785	10.40
High	5825	11.00
Worst		11.00

**10.4.12. 802.11n HT40 MODE IN THE 5.8 GHz BAND**

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5755	9.60
High	5795	9.90
Worst		9.90

## **10.5. OUTPUT POWER AND PPSD**

### **LIMITS**

FCC §15.407 (a) (1)

For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 4 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The maximum e.i.r.p. shall not exceed 200 mW or  $10 + 10 \log_{10} B$ , dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

### **DIRECTIONAL ANTENNA GAIN**

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

### **Test Methodology**

### **RESULTS**

**10.5.1. 802.11a MODE IN THE 5.2 GHz BAND**

**Bandwidth and Antenna Gain**

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	22.450	16.797	-2.40
Mid	5200	22.360	16.801	-2.40
High	5240	22.320	16.812	-2.40

**Limits**

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5180	24.00	22.25	24.65	24.00	11.00	10.00	10.00
Mid	5200	24.00	22.25	24.65	24.00	11.00	10.00	10.00
High	5240	24.00	22.26	24.66	24.00	11.00	10.00	10.00

<b>Duty Cycle CF (dB)</b>	0.22	<b>Included in Calculations of Corr'd Power &amp; PPSD</b>
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**Output Power Results**

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	10.889	11.11	24.00	-12.89
Mid	5200	10.731	10.95	24.00	-13.05
High	5240	10.599	10.82	24.00	-13.18

**PPSD Results**

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	-1.966	-1.75	10.00	-11.75
Mid	5200	-2.134	-1.91	10.00	-11.91
High	5240	-2.216	-2.00	10.00	-12.00

**10.5.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND**

**Bandwidth and Antenna Gain**

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	22.620	17.916	-2.40
Mid	5200	22.580	17.929	-2.40
High	5240	22.660	17.911	-2.40

**Limits**

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5180	24.00	22.53	24.93	24.00	11.00	10.00	10.00
Mid	5200	24.00	22.54	24.94	24.00	11.00	10.00	10.00
High	5240	24.00	22.53	24.93	24.00	11.00	10.00	10.00

<b>Duty Cycle CF (dB)</b>	0.23	<b>Included in Calculations of Corr'd Power &amp; PSD</b>
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**Output Power Results**

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	10.014	10.24	24.00	-13.76
Mid	5200	9.856	10.09	24.00	-13.91
High	5240	9.703	9.93	24.00	-14.07

**PPSD Results**

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	-3.092	-2.86	10.00	-12.86
Mid	5200	-3.259	-3.03	10.00	-13.03
High	5240	-3.092	-2.86	10.00	-12.86

**10.5.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND**

**Bandwidth and Antenna Gain**

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5190	44.1675	36.190	-2.40
Mid	5230	44.46	36.178	-2.40

**Limits**

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5190	24.00	23.00	25.40	24.00	11.00	10.00	10.00
Mid	5230	24.00	23.00	25.40	24.00	11.00	10.00	10.00
<b>Duty Cycle CF (dB)</b>		0.45	<b>Included in Calculations of Corr'd Power &amp; PPSD</b>					

**Output Power Results**

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	9.225	9.68	24.00	-14.33
Mid	5230	9.131	9.58	24.00	-14.42

**PPSD Results**

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5190	-6.633	-6.18	10.00	-16.18
Mid	5230	-6.754	-6.30	10.00	-16.30

**10.5.4. 802.11a MODE IN THE 5.3 GHz BAND**

**Bandwidth and Antenna Gain**

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5260	22.32	16.812	-2.40
Mid	5300	22.53	16.810	-2.40
High	5320	22.27	16.821	-2.40

**Limits**

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5260	24.00	23.26	29.26	23.26	11.00	11.00	11.00
Mid	5300	24.00	23.26	29.26	23.26	11.00	11.00	11.00
High	5320	24.00	23.26	29.26	23.26	11.00	11.00	11.00

<b>Duty Cycle CF (dB)</b>	0.22	<b>Included in Calculations of Corr'd Power &amp; PPSD</b>
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**Output Power Results**

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	10.574	10.79	23.26	-12.46
Mid	5300	10.285	10.51	23.26	-12.75
High	5320	10.041	10.26	23.26	-13.00

**PPSD Results**

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	-2.245	-2.03	11.00	-13.03
Mid	5300	-2.535	-2.32	11.00	-13.32
High	5320	-2.723	-2.50	11.00	-13.50

**10.5.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND**

**Bandwidth and Antenna Gain**

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5260	22.66	17.930	-2.40
Mid	5300	22.66	17.919	-2.40
High	5320	22.71	17.911	-2.40

**Limits**

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5260	24.00	23.54	29.54	23.54	11.00	11.00	11.00
Mid	5300	24.00	23.53	29.53	23.53	11.00	11.00	11.00
High	5320	24.00	23.53	29.53	23.53	11.00	11.00	11.00

<b>Duty Cycle CF (dB)</b>	0.23	<b>Included in Calculations of Corr'd Power &amp; PSD</b>
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**Output Power Results**

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	9.467	9.70	23.54	-13.84
Mid	5300	9.333	9.56	23.53	-13.97
High	5320	9.163	9.39	23.53	-14.14

**PPSD Results**

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	-3.614	-3.38	11.00	-14.38
Mid	5300	-3.725	-3.50	11.00	-14.50
High	5320	-3.943	-3.71	11.00	-14.71

**10.5.6. 802.11n HT40 MODE IN THE 5.3 GHz BAND**

**Bandwidth and Antenna Gain**

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5270	43.8	36.2	-2.40
High	5310	43.8	36.2	-2.40

**Limits**

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5270	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High	5310	24.00	24.00	30.00	24.00	11.00	11.00	11.00

<b>Duty Cycle CF (dB)</b>	0.45	<b>Included in Calculations of Corr'd Power &amp; PPSD</b>
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**Output Power Results**

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	8.94	9.39	24.00	-14.61
High	5310	8.63	9.08	24.00	-14.92

**PPSD Results**

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5270	-6.94	-6.49	11.00	-17.49
High	5310	-7.24	-6.79	11.00	-17.79

**802.11a MODE IN THE 5.5 GHz BAND**

**Bandwidth and Antenna Gain**

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	22.49	16.797	-2.40
Mid	5580	22.40	16.809	-2.40
High	5700	22.27	16.793	-2.40

**Limits**

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5500	24.00	23.25	29.25	23.25	11.00	11.00	11.00
Mid	5580	24.00	23.26	29.26	23.26	11.00	11.00	11.00
High	5700	24.00	23.25	29.25	23.25	11.00	11.00	11.00

<b>Duty Cycle CF (dB)</b>	0.22	<b>Included in Calculations of Corr'd Power &amp; PPSD</b>
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**Output Power Results**

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	10.007	10.23	23.25	-13.03
Mid	5580	10.449	10.67	23.26	-12.59
High	5700	9.390	9.61	23.25	-13.64

**PPSD Results**

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	-1.517	-1.30	11.00	-12.30
Mid	5580	-2.362	-2.14	11.00	-13.14
High	5700	-3.458	-3.24	11.00	-14.24

**10.5.7. 802.11n HT20 MODE IN THE 5.5 GHz BAND**

**Bandwidth and Antenna Gain**

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	22.79	17.903	-2.40
Mid	5580	22.75	17.930	-2.40
High	5700	22.66	17.894	-2.40

**Limits**

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5500	24.00	23.53	29.53	23.53	11.00	11.00	11.00
Mid	5580	24.00	23.54	29.54	23.54	11.00	11.00	11.00
High	5700	24.00	23.53	29.53	23.53	11.00	11.00	11.00

<b>Duty Cycle CF (dB)</b>	0.23	<b>Included in Calculations of Corr'd Power &amp; PPSD</b>
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**Output Power Results**

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	8.674	8.90	23.53	-14.63
Mid	5580	7.541	7.77	23.54	-15.76
High	5700	8.260	8.49	23.53	-15.04

**PPSD Results**

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	-4.425	-4.20	11.00	-15.20
Mid	5580	-5.495	-5.27	11.00	-16.27
High	5700	-3.621	-3.39	11.00	-14.39

**10.5.8. 802.11n HT40 MODE IN THE 5.5 GHz BAND**

**Bandwidth and Antenna Gain**

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5510	43.7	36.194	-2.40
Mid	5550	44.6	36.205	-2.40
High	5670	44.3	36.202	-2.40

**Limits**

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5510	24.00	24.00	30.00	24.00	11.00	11.00	11.00
Mid	5550	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High	5670	24.00	24.00	30.00	24.00	11.00	11.00	11.00

<b>Duty Cycle CF (dB)</b>	0.45	<b>Included in Calculations of Corr'd Power &amp; PPSD</b>
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**Output Power Results**

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	8.350	8.80	24.00	-15.20
Mid	5550	8.999	9.45	24.00	-14.55
High	5670	9.994	10.44	24.00	-13.56

**PPSD Results**

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5510	-6.447	-6.00	11.00	-17.00
Mid	5550	-5.591	-5.14	11.00	-16.14
High	5670	-4.499	-4.05	11.00	-15.05

### 802.11a MODE IN THE 5.8 GHz BAND

#### Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5745	22.4	16.8	-2.40
Mid	5785	22.4	16.8	-2.40
High	5825	22.8	16.8	-2.40

#### Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5745	30.00	29.26	35.26	29.26	30.00	17.00	17.00
Mid	5785	30.00	29.25	35.25	29.25	30.00	17.00	17.00
High	5825	30.00	29.25	35.25	29.25	30.00	17.00	17.00

<b>Duty Cycle CF (dB)</b>	0.22	<b>Included in Calculations of Corr'd Power &amp; PPSSD</b>
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#### Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	10.52	10.74	29.26	-18.51
Mid	5785	11.01	11.23	29.25	-18.02
High	5825	11.87	12.09	29.25	-17.16

#### PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	-1.01	-0.79	17.00	-17.79
Mid	5785	-0.50	-0.28	17.00	-17.28
High	5825	0.30	0.52	17.00	-16.48

**10.5.9. 802.11n HT20 MODE IN THE 5.8 GHz BAND**

**Bandwidth and Antenna Gain**

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5745	23.1	17.9	-2.40
Mid	5785	22.7	17.9	-2.40
High	5825	23.0	17.9	-2.40

**Limits**

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5745	30.00	29.52	35.52	29.52	30.00	17.00	17.00
Mid	5785	30.00	29.52	35.52	29.52	30.00	17.00	17.00
High	5825	30.00	29.52	35.52	29.52	30.00	17.00	17.00

<b>Duty Cycle CF (dB)</b>	0.23	<b>Included in Calculations of Corr'd Power &amp; PSD</b>
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**Output Power Results**

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	10.52	10.75	29.52	-18.77
Mid	5785	11.25	11.48	29.52	-18.03
High	5825	12.03	12.26	29.52	-17.26

**PPSD Results**

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	-1.37	-1.14	17.00	-18.14
Mid	5785	-0.48	-0.25	17.00	-17.25
High	5825	0.17	0.40	17.00	-16.60

**10.5.10. 802.11n HT40 MODE IN THE 5.8 GHz BAND**

**Bandwidth and Antenna Gain**

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5755	44.1	36.2	-2.40
High	5795	44.5	36.2	-2.40

**Limits**

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5755	30.00	30.00	36.00	30.00	30.00	17.00	17.00
High	5795	30.00	30.00	36.00	30.00	30.00	17.00	17.00

<b>Duty Cycle CF (dB)</b>	0.45	<b>Included in Calculations of Corr'd Power &amp; PPSD</b>
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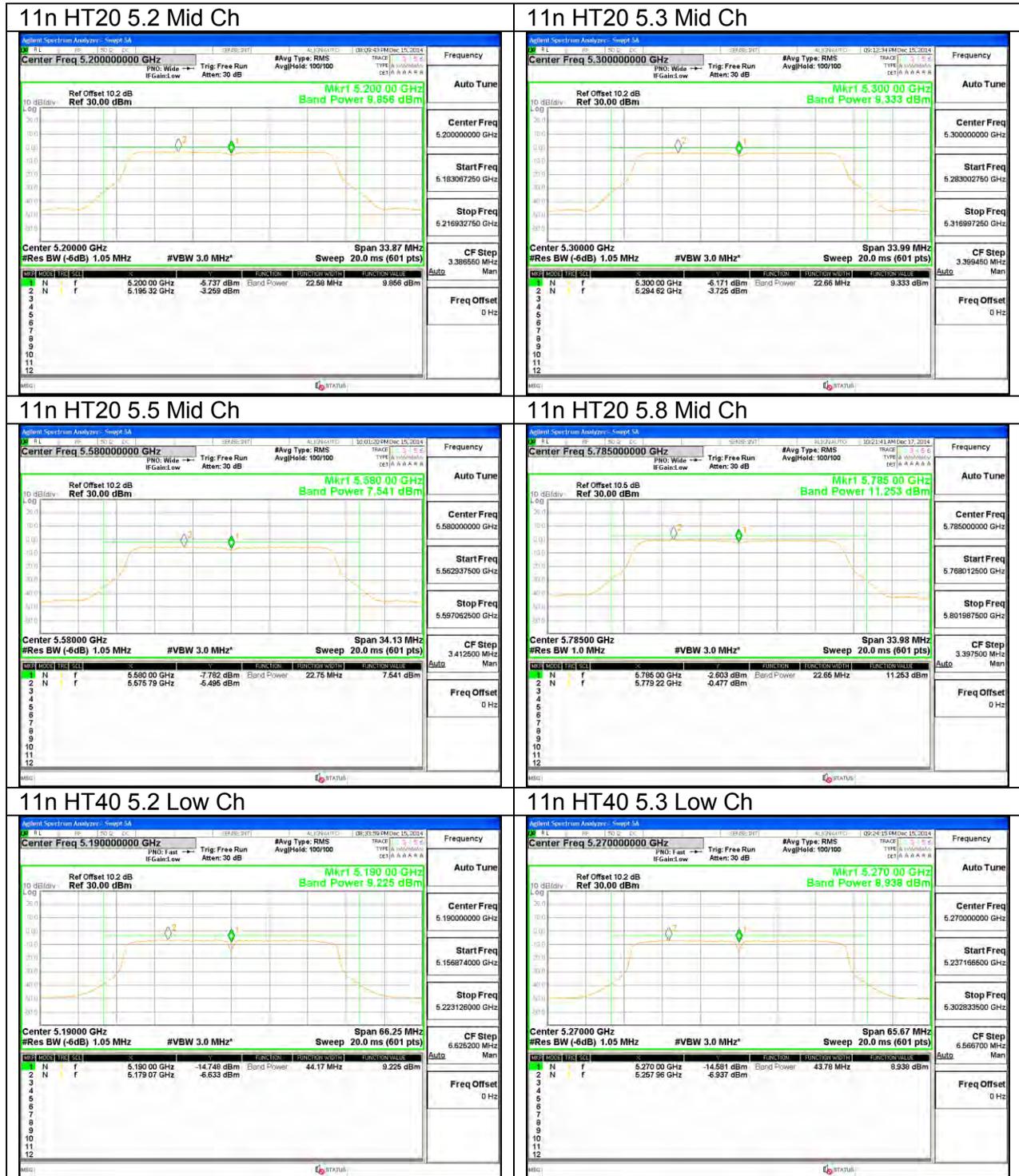
**Output Power Results**

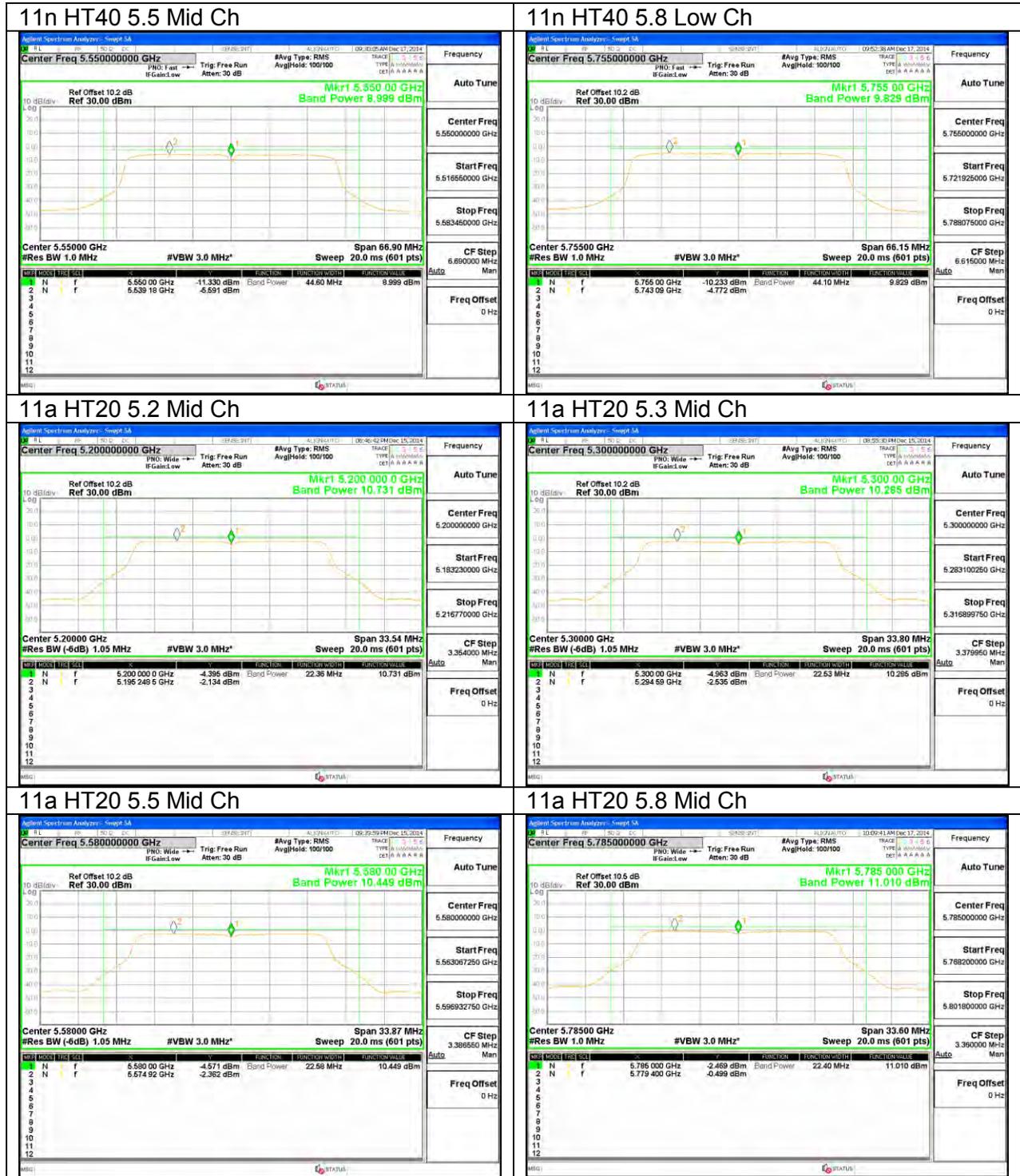
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	9.83	10.28	30.00	-19.72
High	5795	10.03	10.48	30.00	-19.52

**PPSD Results**

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5755	-4.77	-4.32	17.00	-21.32
High	5795	-4.54	-4.09	17.00	-21.09

### 10.5.1. OUTPUT POWER AND PPSD PLOTS, Chain 0





## 11. 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. 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 H) 6) d) Method VB:

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.

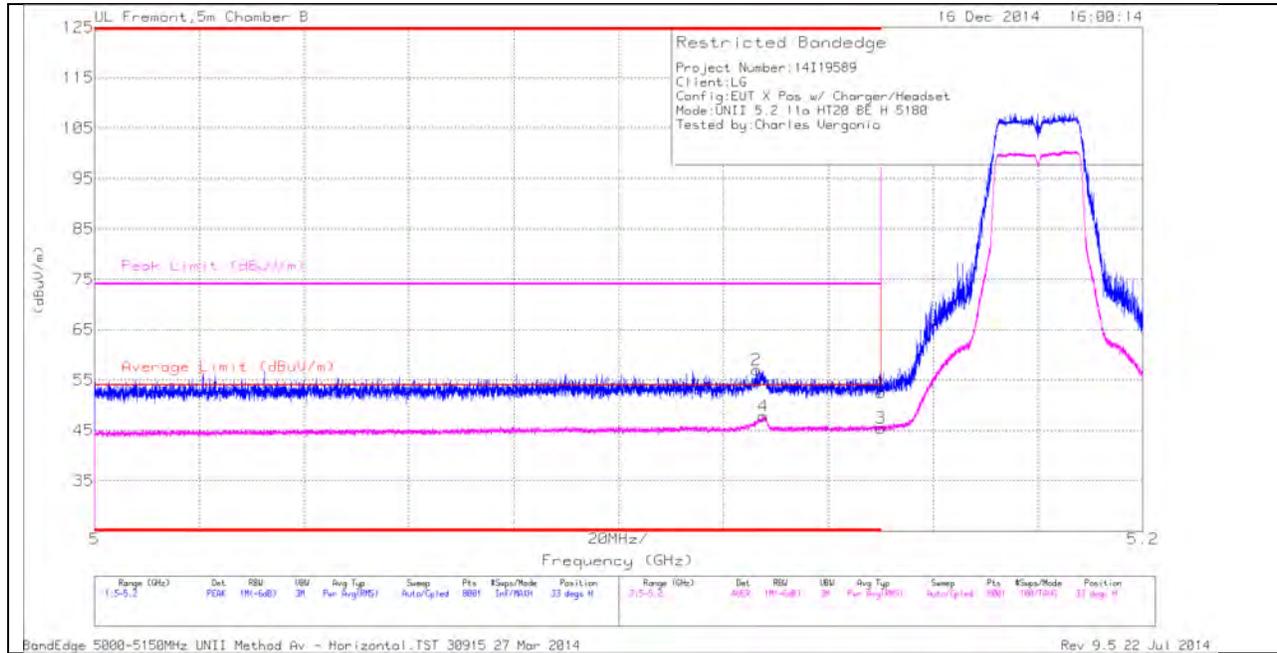
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

### 11.1. 5.2 GHz

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

#### RESTRICTED BANDEDGE (LOW CHANNEL)

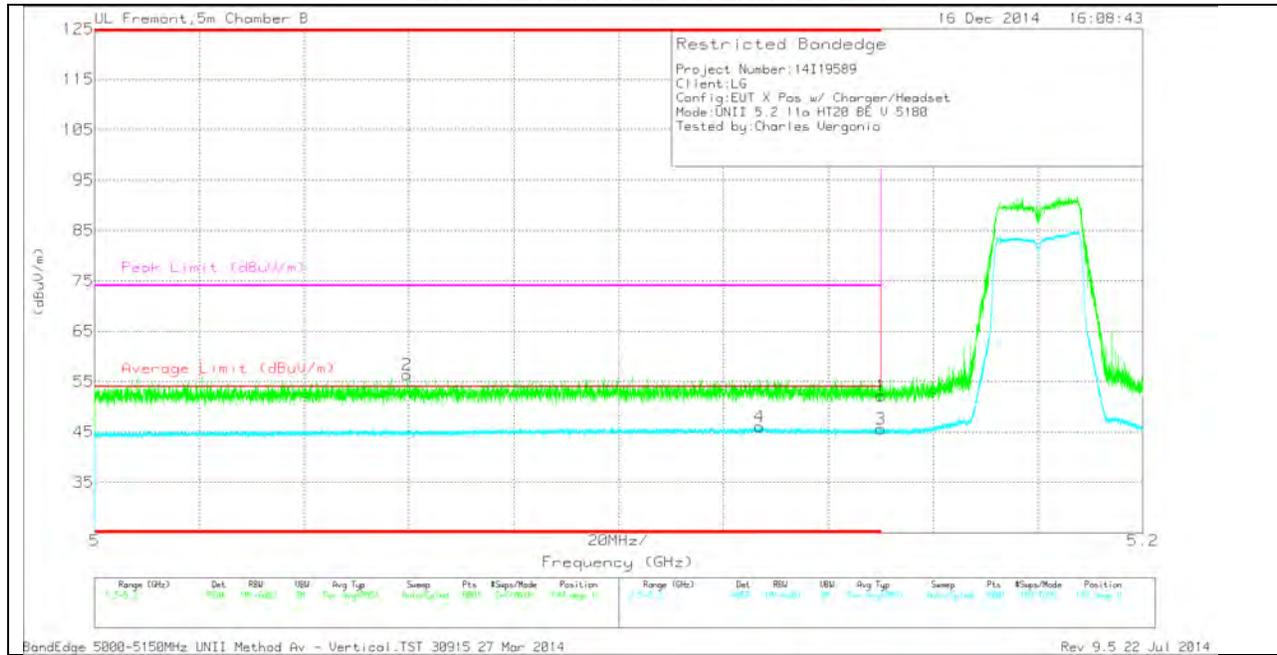
#### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/FI tr/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	* 5.126	43.17	PK	34.3	-20.5	0	56.97	-	-	74	-17.03	33	212	H
4	* 5.128	33.82	RMS	34.3	-20.5	.21	47.83	54	-6.17	-	-	33	212	H
1	* 5.15	38.7	PK	34.3	-20.5	0	52.5	-	-	74	-21.5	33	212	H
3	* 5.15	31.4	RMS	34.3	-20.5	.21	45.41	54	-8.59	-	-	33	212	H

**VERTICAL PEAK AND AVERAGE PLOT**

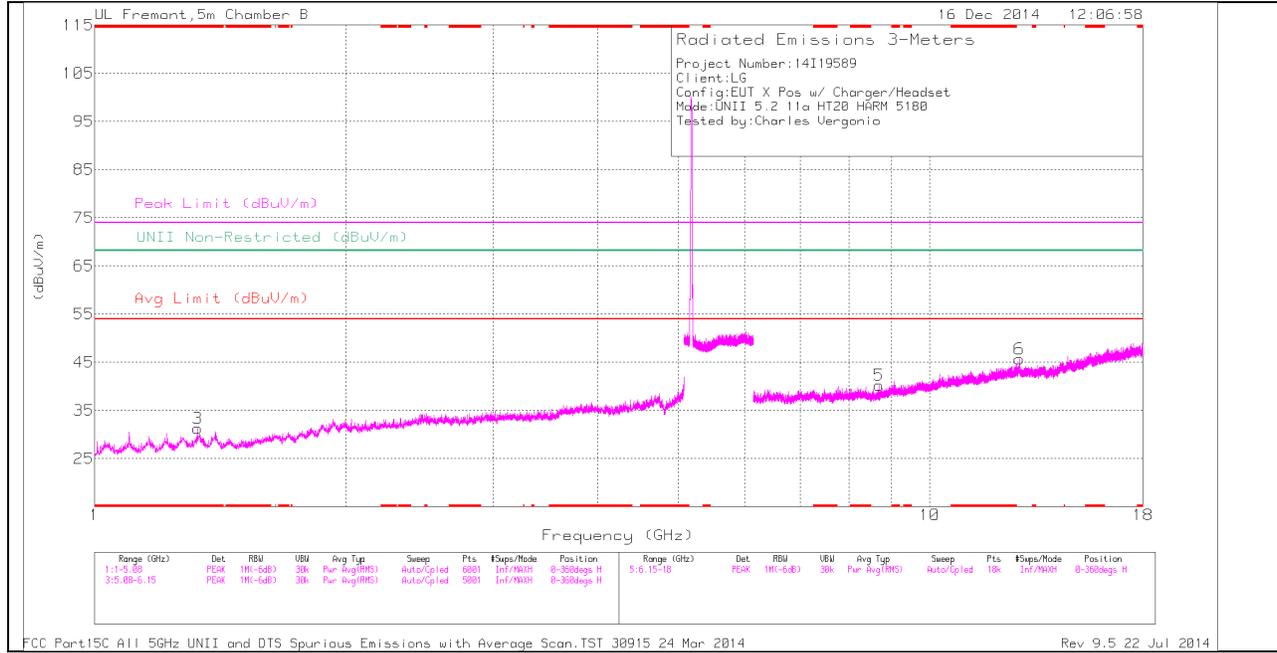


**VERTICAL DATA**

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.06	42.66	PK	34.2	-20.5	0	56.36	-	-	74	-17.64	149	188	V
4	* 5.127	32.01	RMS	34.3	-20.5	.21	46.02	54	-7.98	-	-	149	188	V
1	* 5.15	38.36	PK	34.3	-20.5	0	52.16	-	-	74	-21.84	149	188	V
3	* 5.15	31.52	RMS	34.3	-20.5	.21	45.53	54	-8.47	-	-	149	188	V

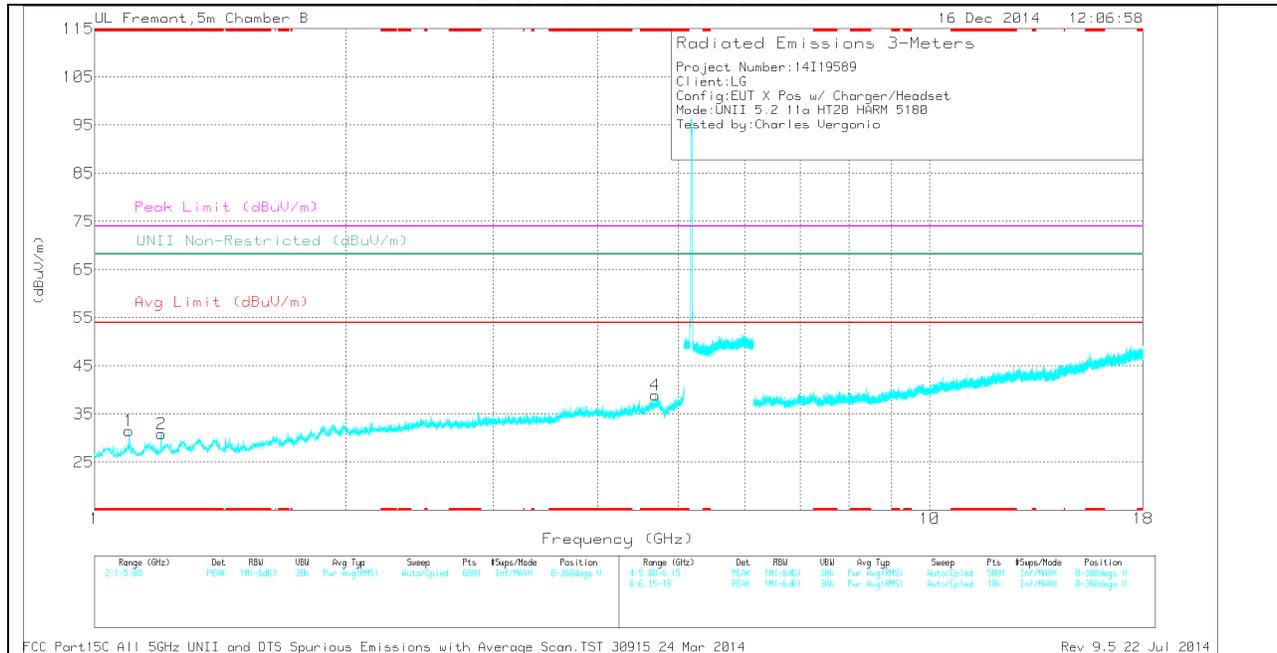
### HARMONICS AND SPURIOUS EMISSIONS

#### 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**

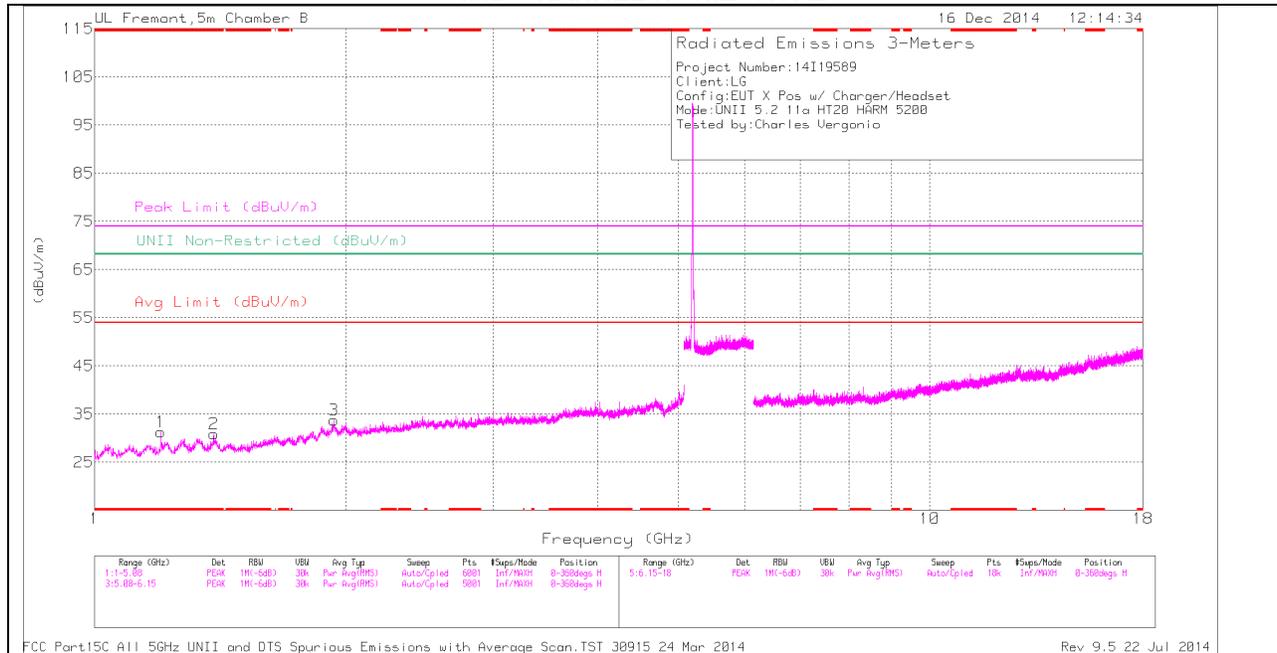
TRACE MARKERS

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/CbI/Flt r/Pad (dB)	Correcte d 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	* 1.1	38.51	PK	27.4	-34.4	31.51	-	-	74	-42.49	-	-	0-360	101	V
2	* 1.201	37.24	PK	28.2	-34.6	30.84	-	-	74	-43.16	-	-	0-360	101	V
3	* 1.328	36.43	PK	28.8	-33.9	31.33	-	-	74	-42.67	-	-	0-360	199	H
4	* 4.69	34.73	PK	34.2	-30	38.93	-	-	74	-35.07	-	-	0-360	101	V
6	12.799	27.97	PK	39.2	-21.5	45.67	-	-	-	-	68.2	-22.53	0-360	199	H
5	8.698	30.59	PK	35.9	-26.2	40.29	-	-	-	-	68.2	-27.91	0-360	101	H

PK - Peak detector

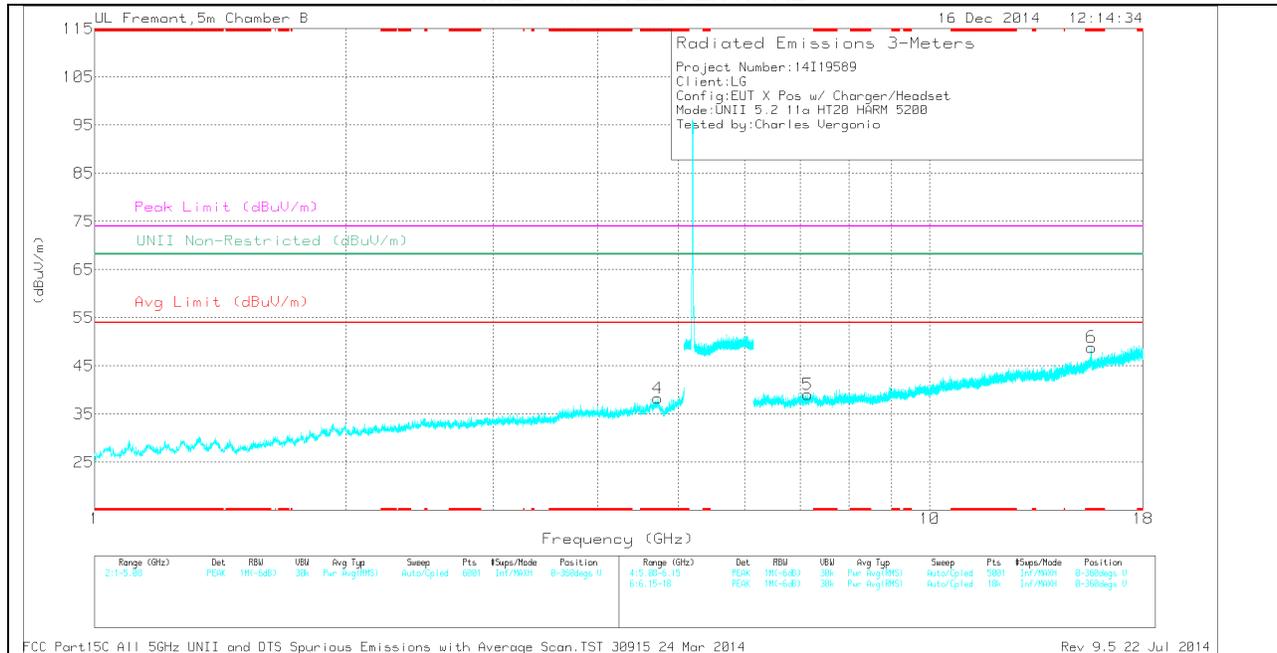
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

**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**

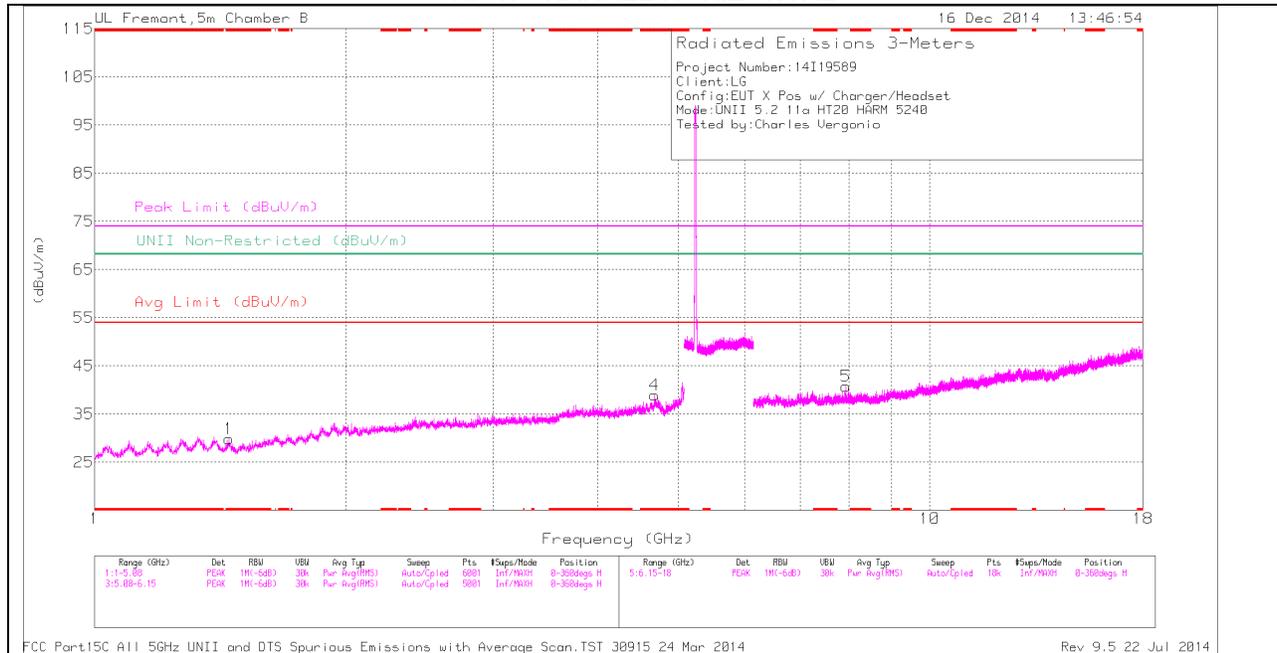
TRACE MARKERS

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fit r/Pad (dB)	Correcte d 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	* 1.2	37.74	PK	28.2	-34.6	31.34	-	-	74	-42.66	-	-	0-360	199	H
2	* 1.39	36.1	PK	28.5	-33.7	30.9	-	-	74	-43.1	-	-	0-360	199	H
6	* 15.606	28.48	PK	40.6	-20.2	48.88	-	-	74	-25.12	-	-	0-360	199	V
4	* 4.72	34.25	PK	34.2	-30.1	38.35	-	-	74	-35.65	-	-	0-360	199	V
3	1.934	35.2	PK	31.2	-32.7	33.7	-	-	-	-	68.2	-34.5	0-360	99	H
5	7.147	31.49	PK	35.6	-28	39.09	-	-	-	-	68.2	-29.11	0-360	101	V

PK - Peak detector

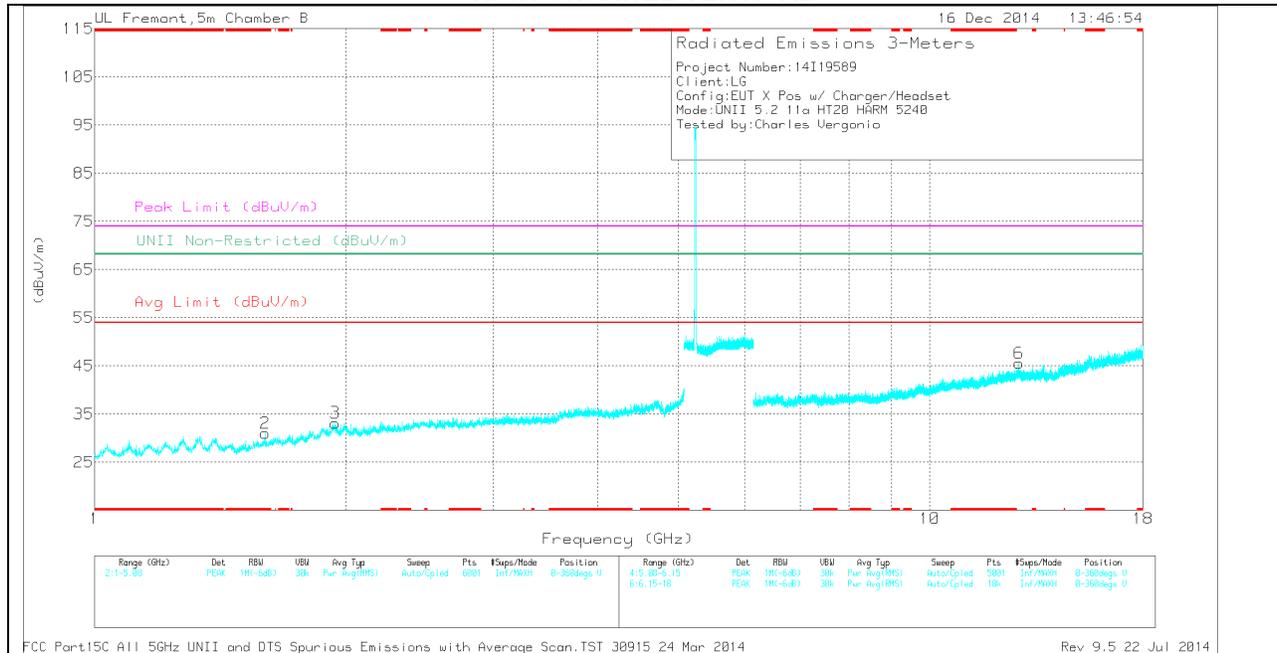
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

**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

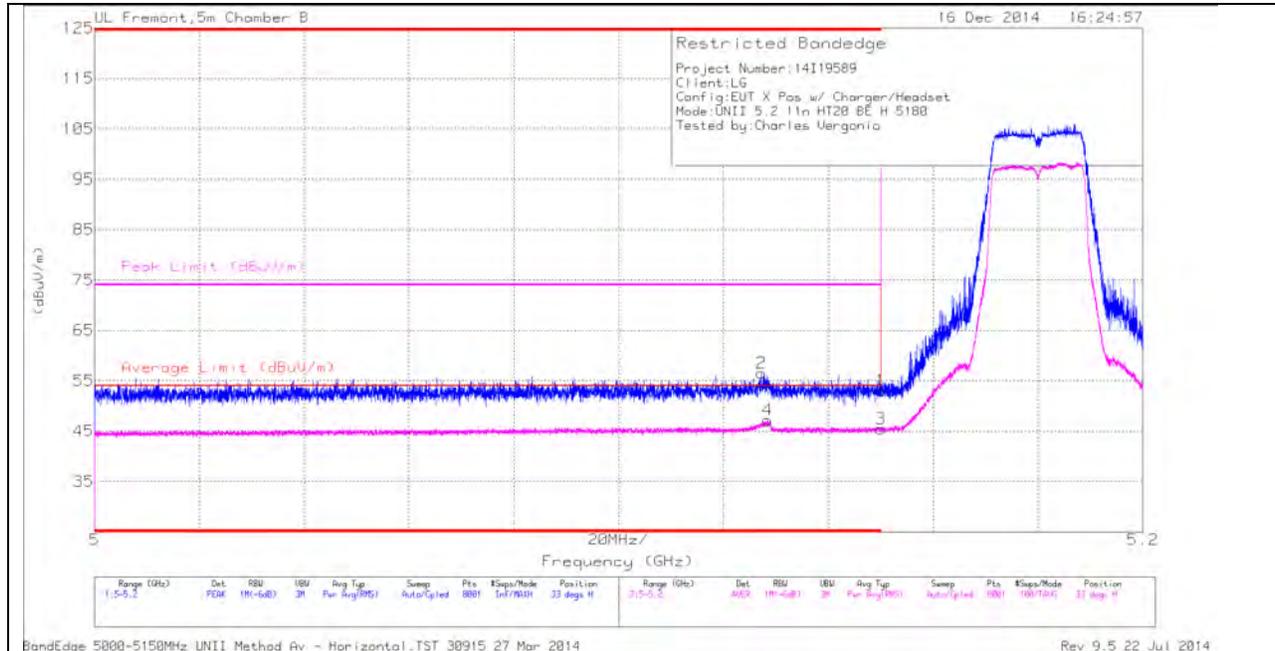
Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/CbI/Fit r/Pad (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.449	35.81	PK	28.2	-34.2	29.81	-	-	74	-44.19	-	-	0-360	199	H
2	* 1.599	35.75	PK	28.5	-33.2	31.05	-	-	74	-42.95	-	-	0-360	101	V
4	* 4.682	34.49	PK	34.2	-29.8	38.89	-	-	74	-35.11	-	-	0-360	100	H
3	1.94	34.57	PK	31.2	-32.6	33.17	-	-	-	-	68.2	-35.03	0-360	199	V
6	12.789	27.72	PK	39.2	-21.4	45.52	-	-	-	-	68.2	-22.68	0-360	101	V
5	7.93	32.57	PK	35.7	-27.5	40.77	-	-	-	-	68.2	-27.43	0-360	199	H

PK - Peak detector

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

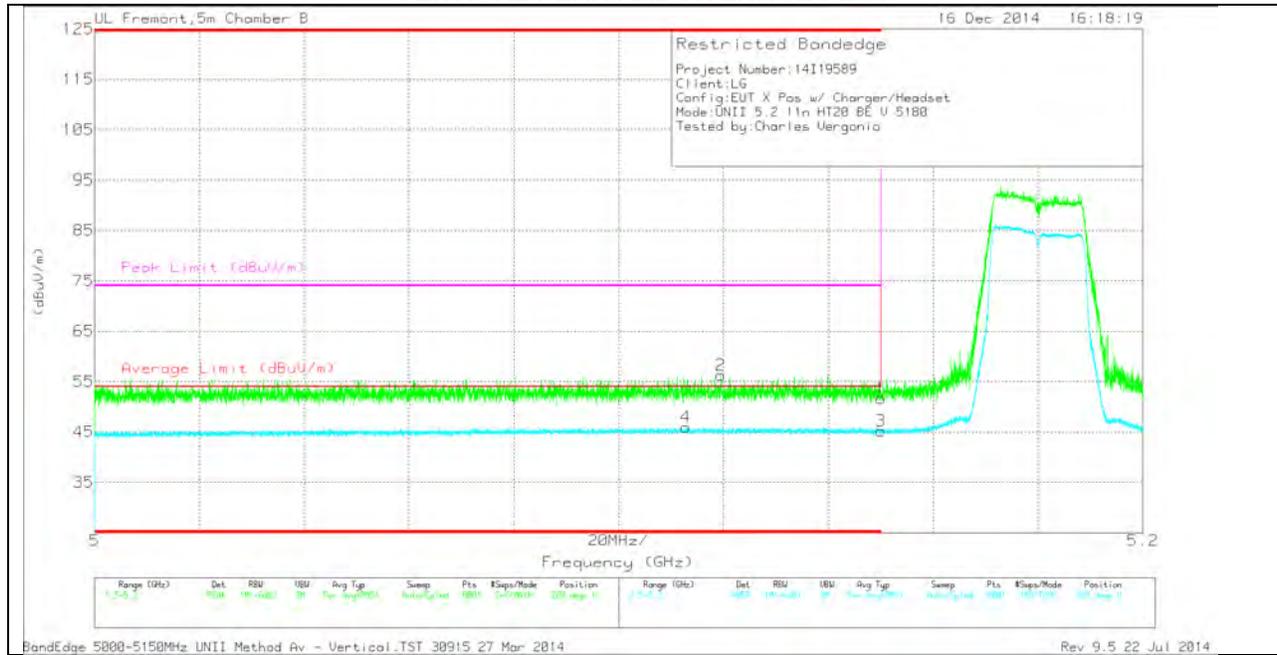
#### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.127	42.73	PK	34.3	-20.5	0	56.53	-	-	74	-17.47	33	211	H
4	* 5.128	33.1	RMS	34.3	-20.5	.23	47.13	54	-6.87	-	-	33	211	H
1	* 5.15	39.18	PK	34.3	-20.5	0	52.98	-	-	74	-21.02	33	211	H
3	* 5.15	31.37	RMS	34.3	-20.5	.23	45.4	54	-8.6	-	-	33	211	H

**VERTICAL PEAK AND AVERAGE PLOT**

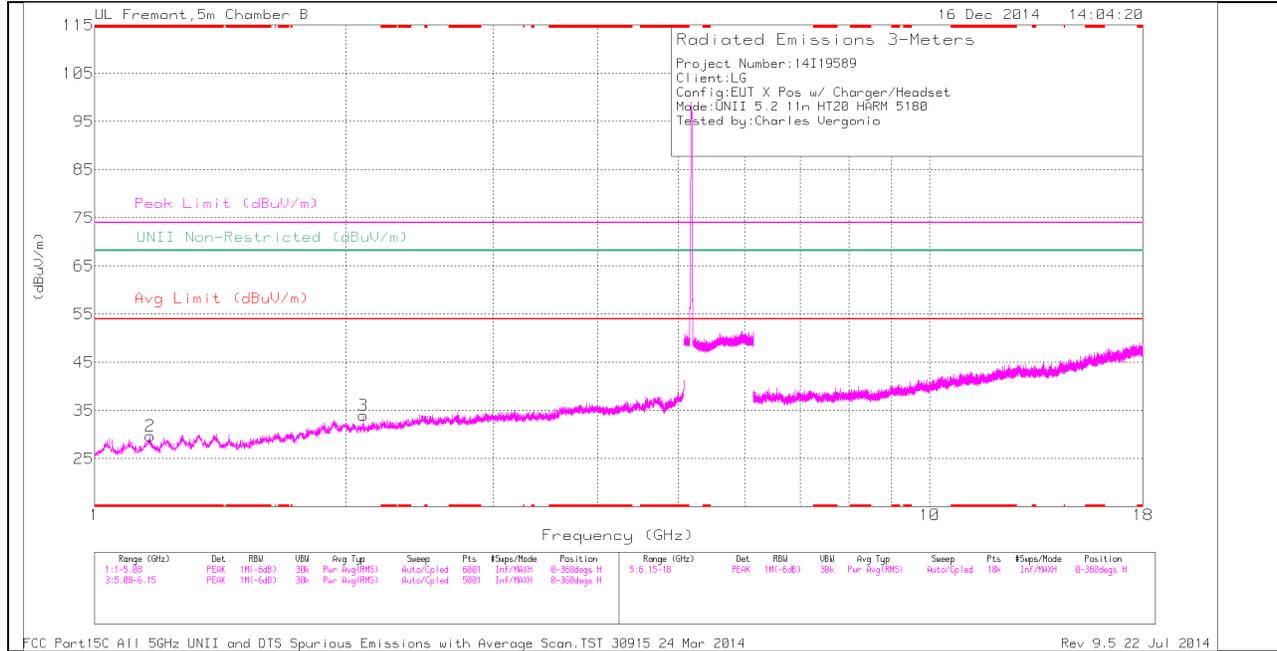


**VERTICAL DATA**

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 5.113	31.87	RMS	34.3	-20.4	.23	46	54	-8	-	-	269	110	V
2	* 5.12	42.49	PK	34.3	-20.5	0	56.29	-	-	74	-17.71	269	110	V
1	* 5.15	37.85	PK	34.3	-20.5	0	51.65	-	-	74	-22.35	269	110	V
3	* 5.15	31.19	RMS	34.3	-20.5	.23	45.22	54	-8.78	-	-	269	110	V

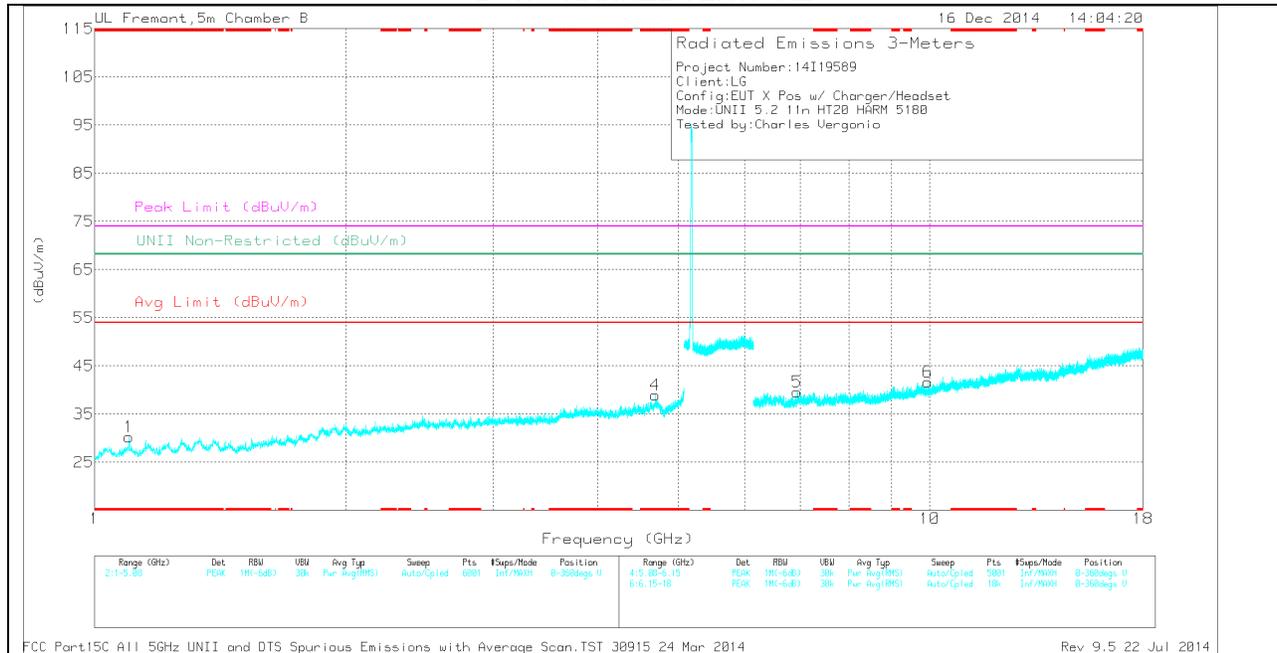
### HARMONICS AND SPURIOUS EMISSIONS

#### 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**

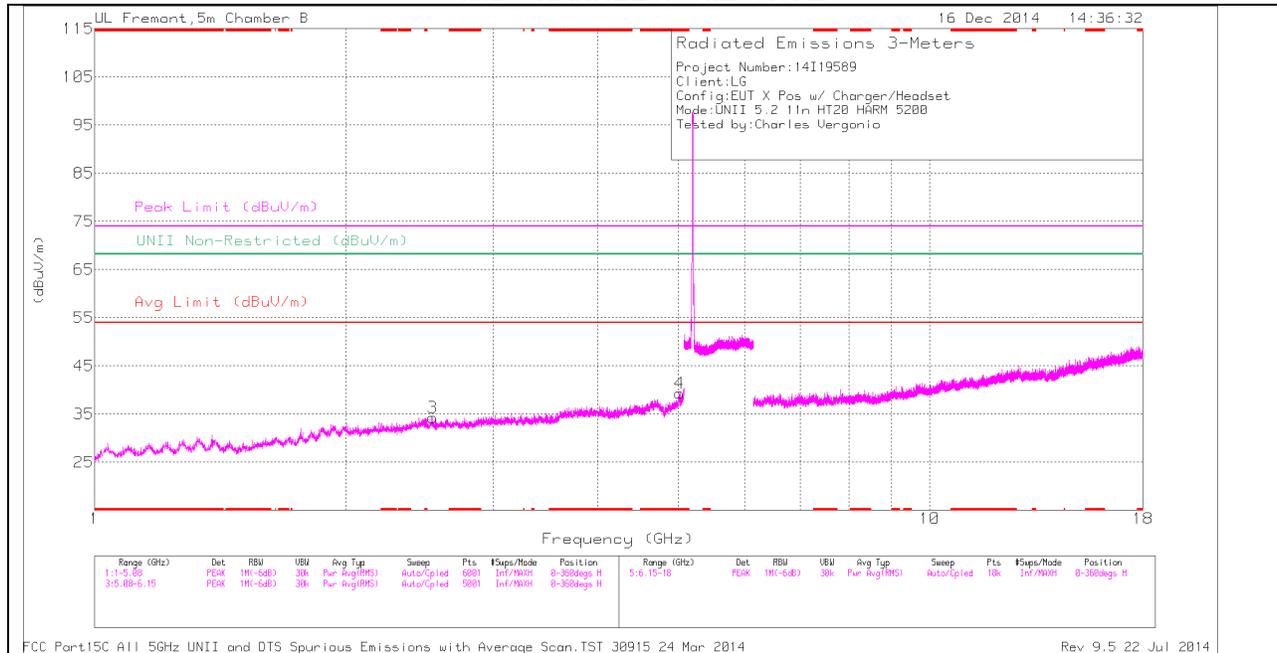
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Filter/Pad (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	* 1.1	37.29	PK	27.4	-34.4	30.29	-	-	74	-43.71	-	-	0-360	199	V
2	* 1.165	36.43	PK	27.9	-34.6	29.73	-	-	74	-44.27	-	-	0-360	101	H
4	* 4.688	34.67	PK	34.2	-29.9	38.97	-	-	74	-35.03	-	-	0-360	101	V
3	2.098	36.47	PK	31.2	-33.6	34.07	-	-	-	-	68.2	-34.13	0-360	101	H
5	6.941	31.58	PK	35.6	-27.6	39.58	-	-	-	-	68.2	-28.62	0-360	101	V
6	9.938	29.26	PK	37	-24.6	41.66	-	-	-	-	68.2	-26.54	0-360	199	V

PK - Peak detector

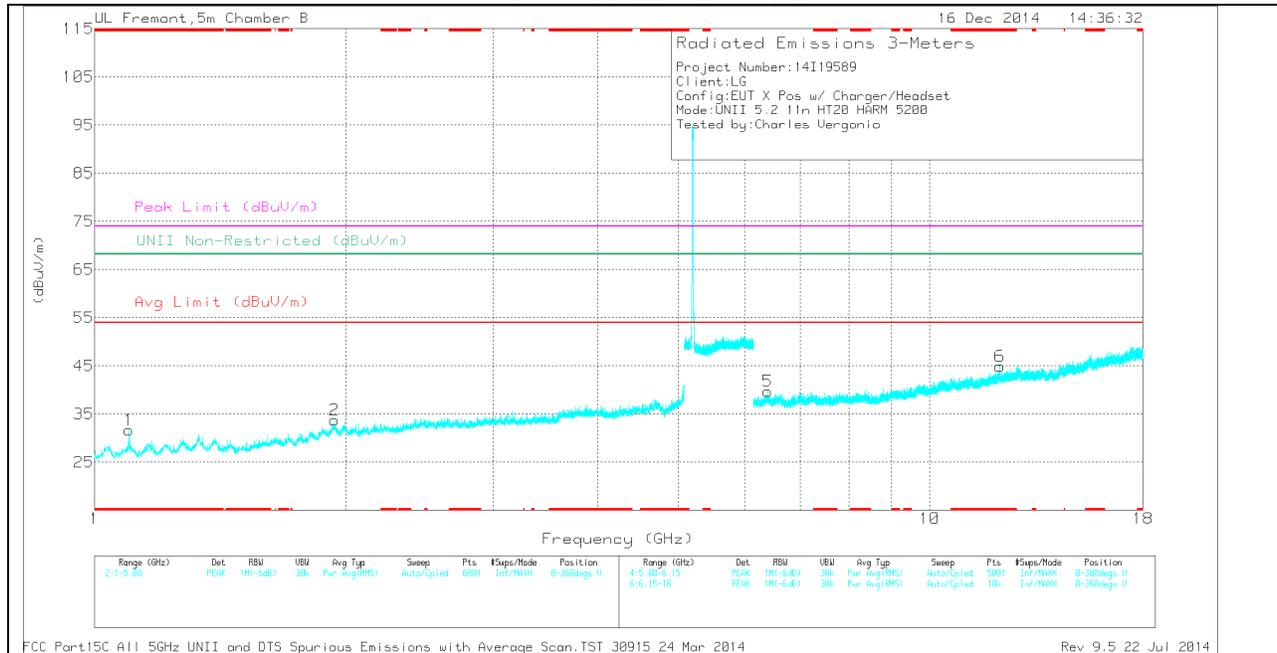
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**MID CHANNEL HORIZONTAL**



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**

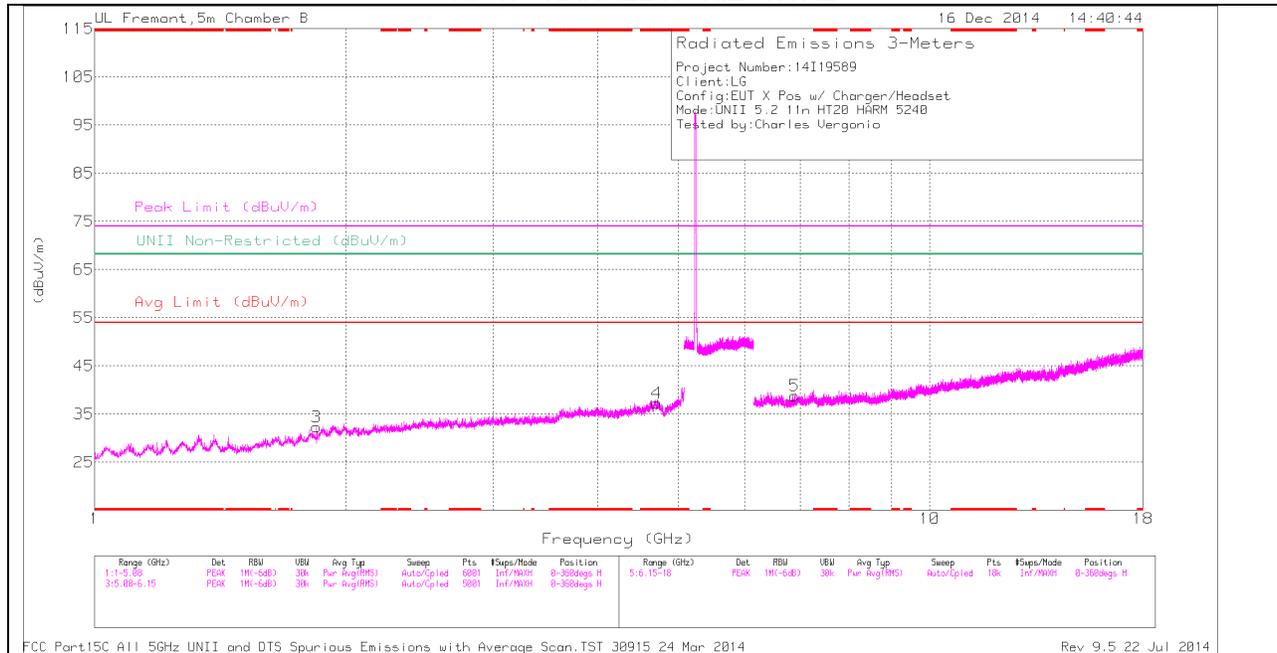
TRACE MARKERS

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fit r/Pad (dB)	Correcte d 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	* 5.015	33.79	PK	34.2	-28.6	39.39	-	-	74	-34.61	-	-	0-360	200	H
1	* 1.1	38.68	PK	27.4	-34.4	31.68	-	-	74	-42.32	-	-	0-360	100	V
6	* 12.133	28.26	PK	38.9	-22.2	44.96	-	-	74	-29.04	-	-	0-360	199	V
2	1.938	35.1	PK	31.2	-32.6	33.7	-	-	-	-	68.2	-34.5	0-360	199	V
3	2.539	34.45	PK	32.5	-32.7	34.25	-	-	-	-	68.2	-33.95	0-360	100	H
5	6.397	32.31	PK	35.6	-28.2	39.71	-	-	-	-	68.2	-28.49	0-360	101	V

PK - Peak detector

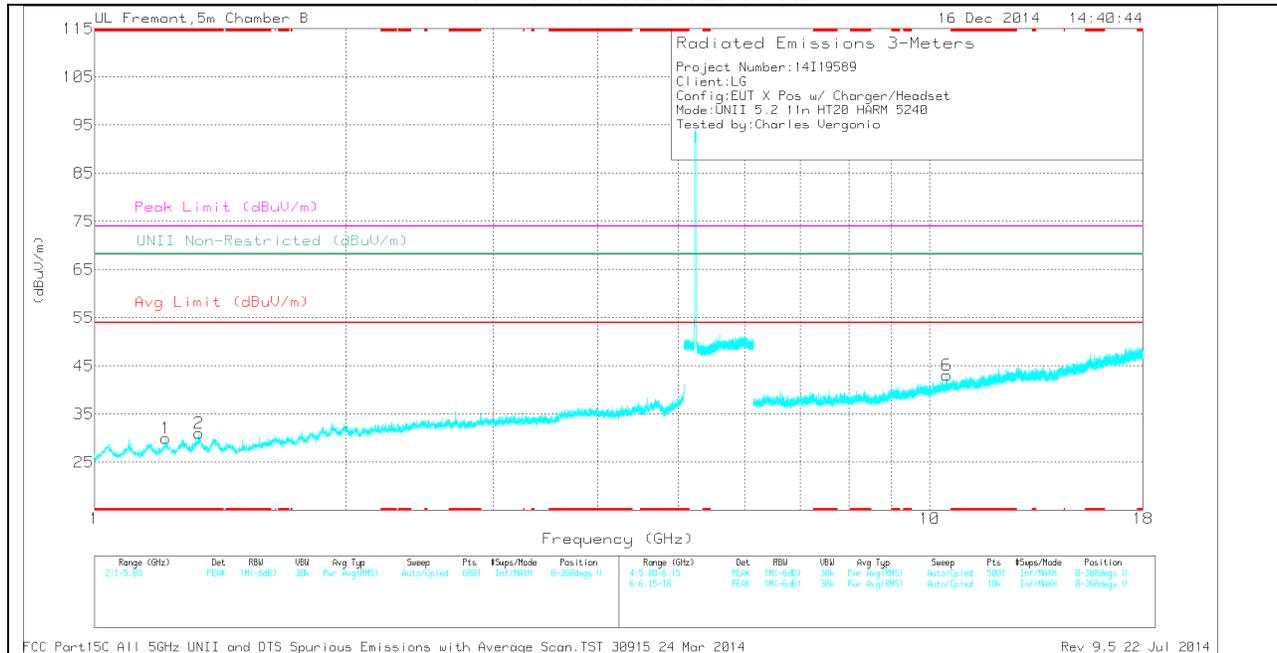
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

**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

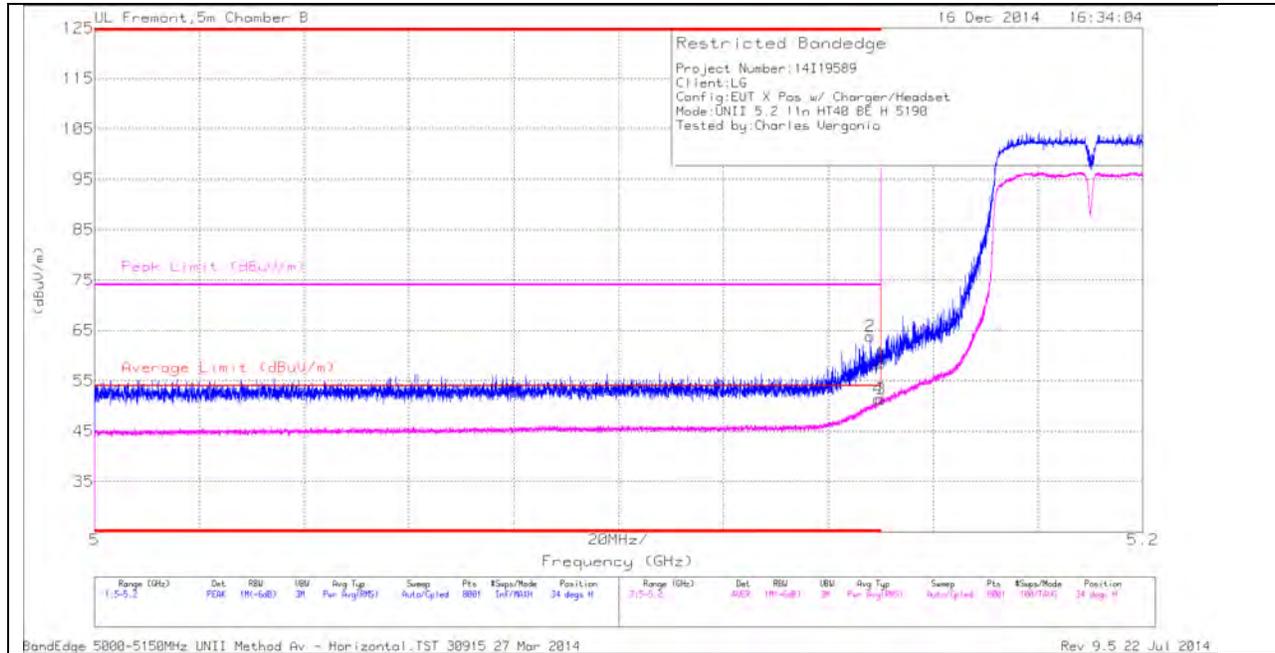
Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/CbI/Flt r/Pad (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 4.711	33.23	PK	34.2	-30.2	37.23	-	-	74	-36.77	-	-	0-360	200	H
1	* 1.216	36.34	PK	28.3	-34.6	30.04	-	-	74	-43.96	-	-	0-360	101	V
2	* 1.334	36.16	PK	28.7	-33.8	31.06	-	-	74	-42.94	-	-	0-360	200	V
3	1.845	35.2	PK	30.6	-33.5	32.3	-	-	-	-	68.2	-35.9	0-360	200	H
5	6.893	31.66	PK	35.6	-28.4	38.86	-	-	-	-	68.2	-29.34	0-360	200	H
6	10.48	29.79	PK	37.4	-24.1	43.09	-	-	-	-	68.2	-25.11	0-360	200	V

PK - Peak detector

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

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

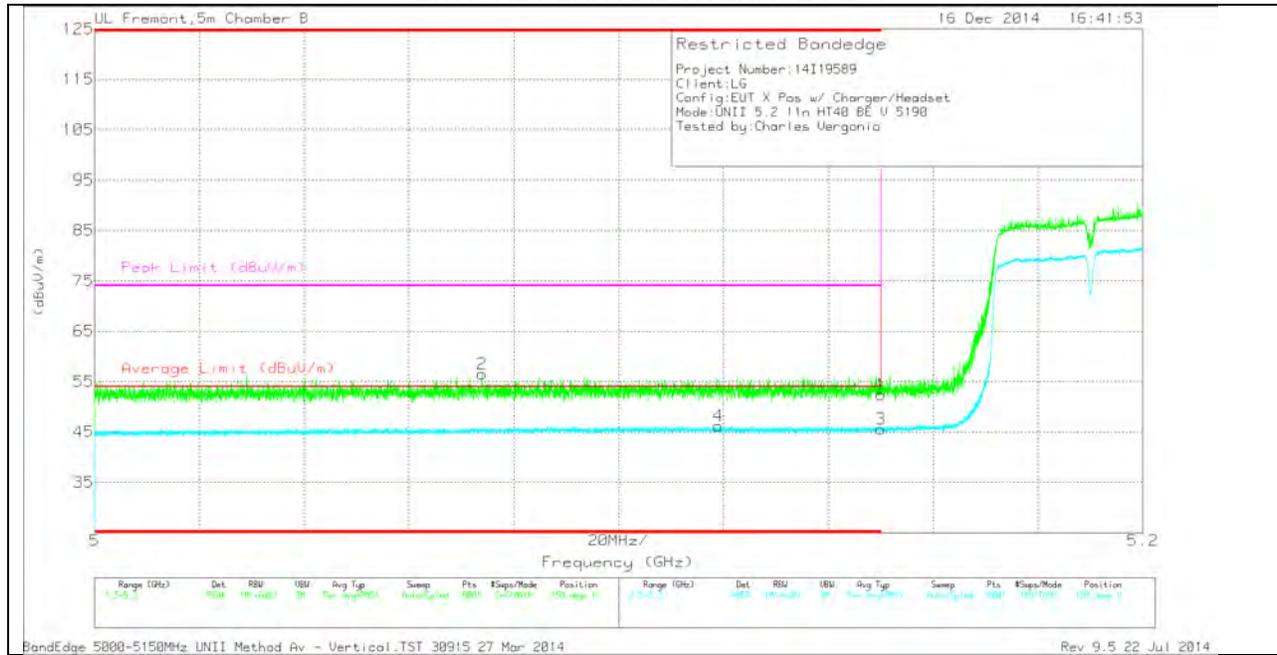
#### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.148	50.03	PK	34.3	-20.5	0	63.83	-	-	74	-10.17	34	214	H
1	* 5.15	44.63	PK	34.3	-20.5	0	58.43	-	-	74	-15.57	34	214	H
3	* 5.15	37.11	RMS	34.3	-20.5	.49	51.4	54	-2.6	-	-	34	214	H
4	* 5.15	37.07	RMS	34.3	-20.5	.49	51.36	54	-2.64	-	-	34	214	H

**VERTICAL PEAK AND AVERAGE PLOT**

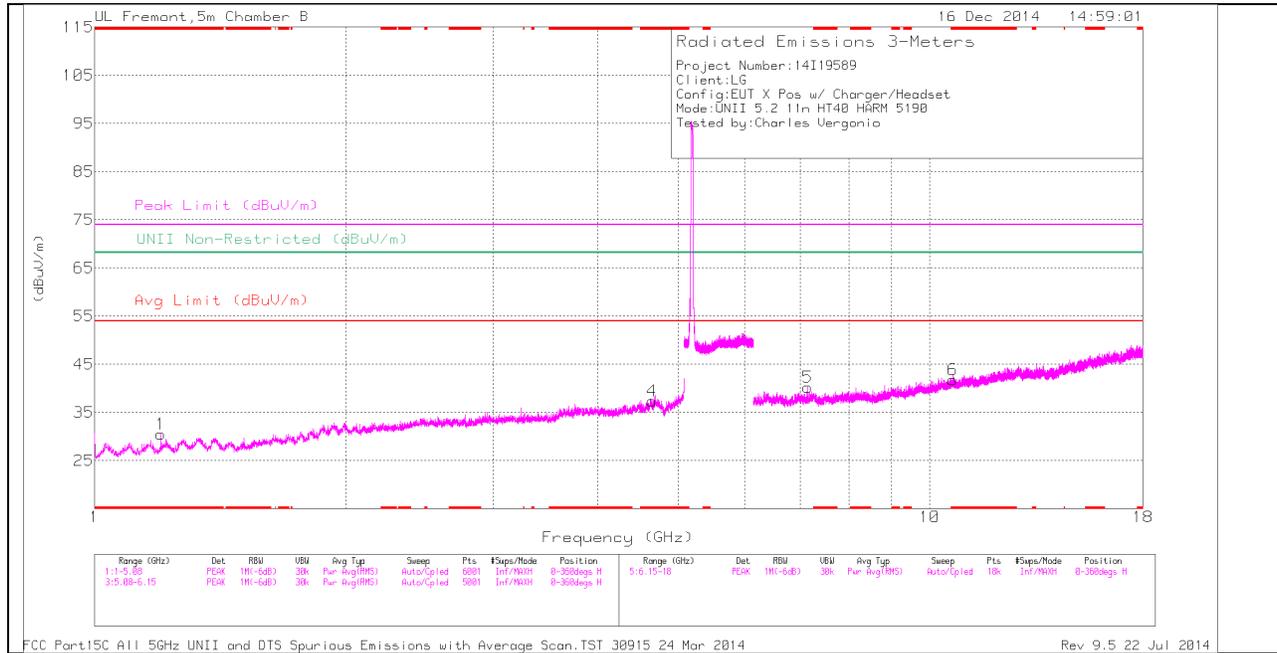


**VERTICAL DATA**

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.074	42.73	PK	34.2	-20.4	0	56.53	-	-	74	-17.47	150	188	V
4	* 5.119	31.88	RMS	34.3	-20.5	.49	46.17	54	-7.83	-	-	150	188	V
1	* 5.15	38.61	PK	34.3	-20.5	0	52.41	-	-	74	-21.59	150	188	V
3	* 5.15	31.3	RMS	34.3	-20.5	.49	45.59	54	-8.41	-	-	150	188	V

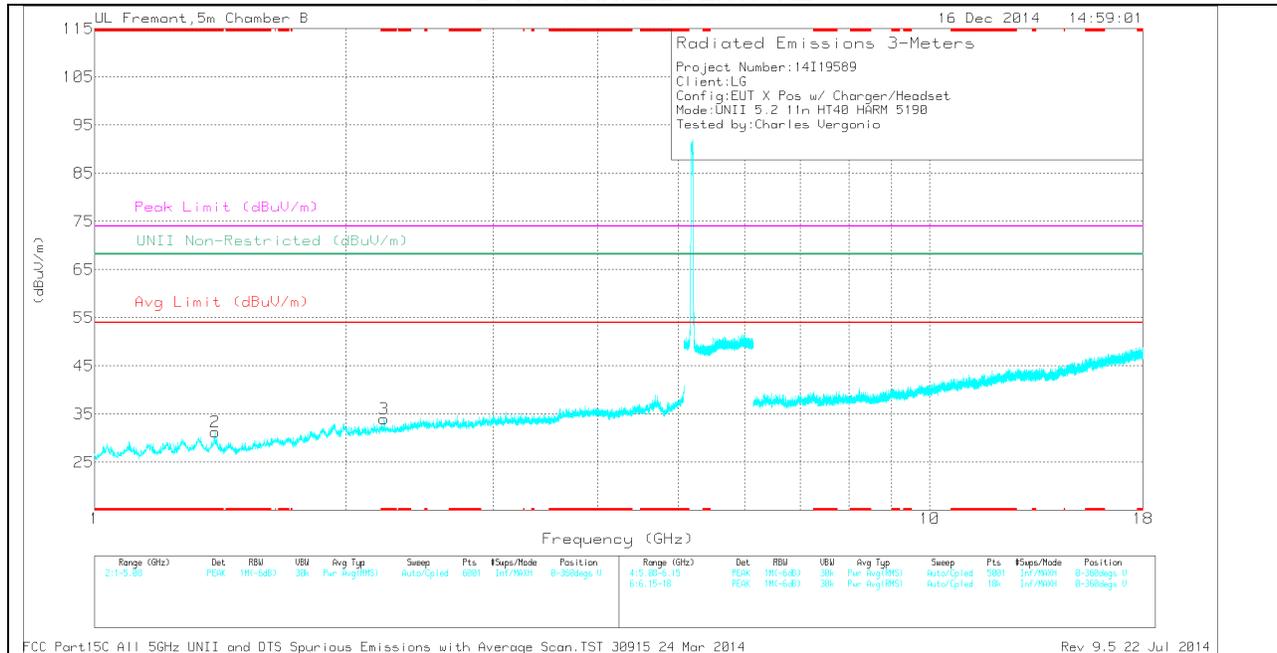
### HARMONICS AND SPURIOUS EMISSIONS

#### 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**

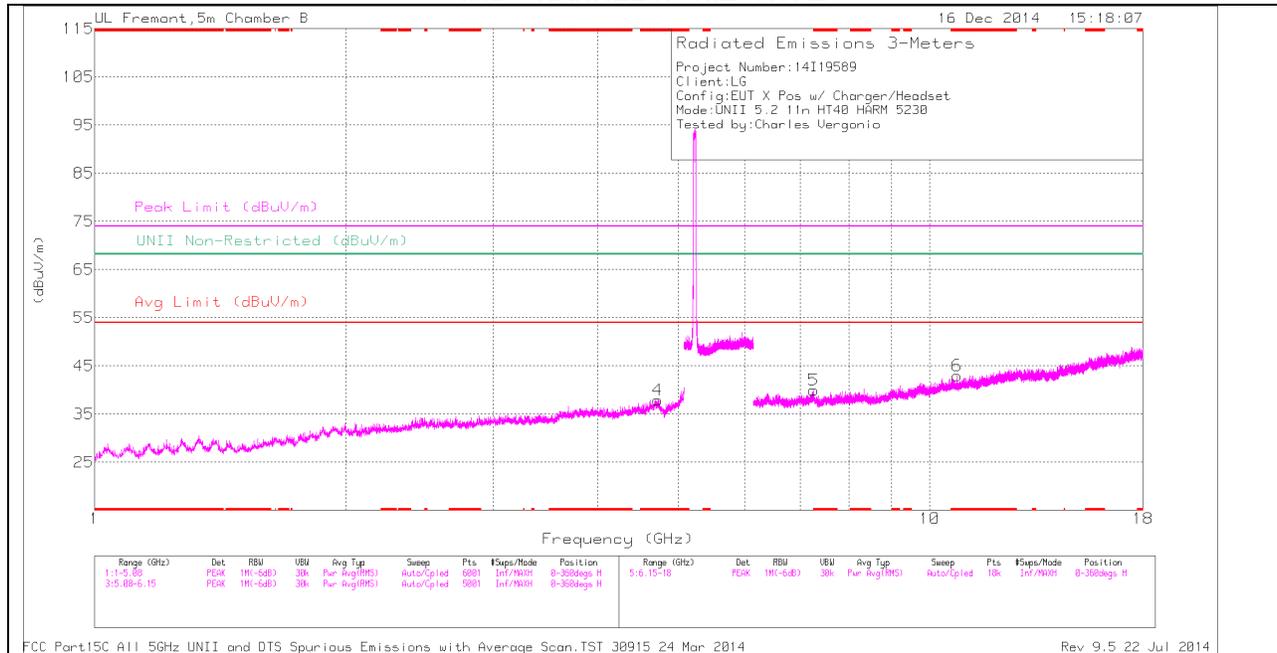
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Filter/Pad (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	* 1.201	36.88	PK	28.2	-34.6	30.48	-	-	74	-43.52	-	-	0-360	200	H
2	* 1.394	36.45	PK	28.5	-33.7	31.25	-	-	74	-42.75	-	-	0-360	101	V
6	* 10.644	27.06	PK	37.7	-23	41.76	-	-	74	-32.24	-	-	0-360	200	H
3	* 2.222	35.07	PK	31.4	-32.4	34.07	-	-	74	-39.93	-	-	0-360	101	V
4	* 4.647	32.59	PK	34.2	-29.4	37.39	-	-	74	-36.61	-	-	0-360	200	H
5	7.137	32.96	PK	35.6	-28.3	40.26	-	-	-	-	68.2	-27.94	0-360	200	H

PK - Peak detector

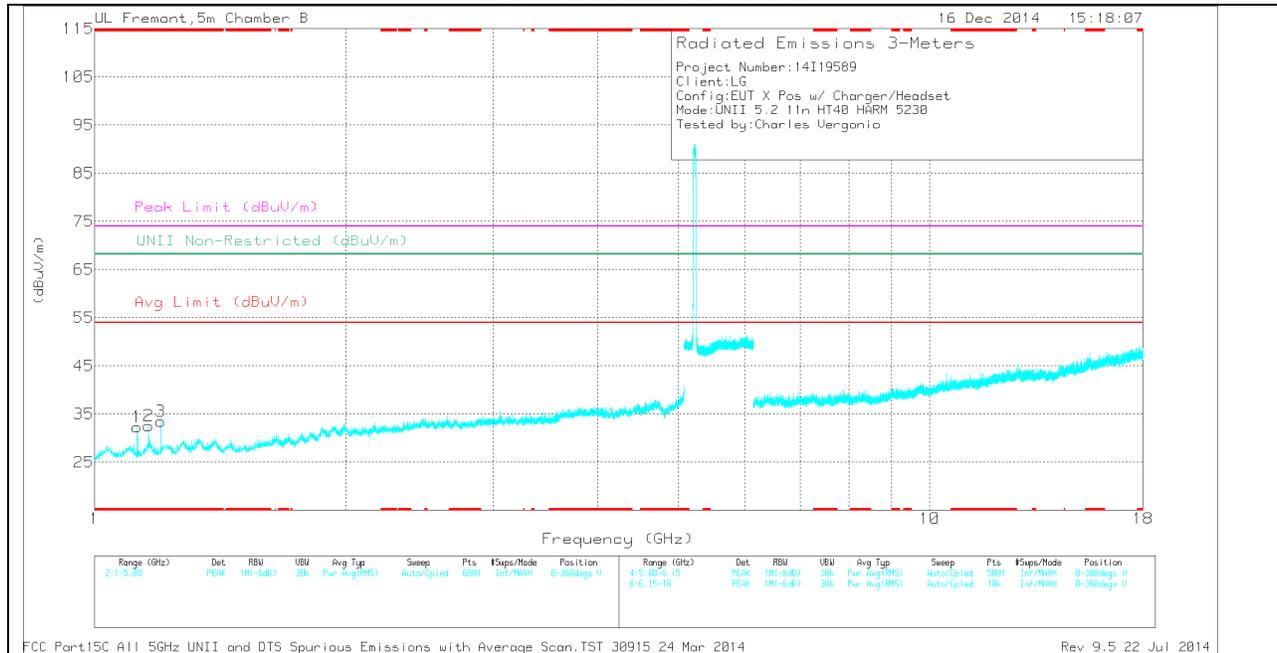
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

**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	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fit r/Pad (dB)	Correcte d 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	* 1.124	39.24	PK	27.6	-34.5	32.34	-	-	74	-41.66	-	-	0-360	199	V
2	* 1.16	39.18	PK	27.9	-34.5	32.58	-	-	74	-41.42	-	-	0-360	101	V
3	* 1.2	39.87	PK	28.2	-34.6	33.47	-	-	74	-40.53	-	-	0-360	101	V
6	* 10.784	28.98	PK	37.8	-23.8	42.98	-	-	74	-31.02	-	-	0-360	199	H
4	* 4.726	33.71	PK	34.2	-30	37.91	-	-	74	-36.09	-	-	0-360	199	H
5	* 7.26	31.21	PK	35.6	-26.8	40.01	-	-	74	-33.99	-	-	0-360	101	H

PK - Peak detector

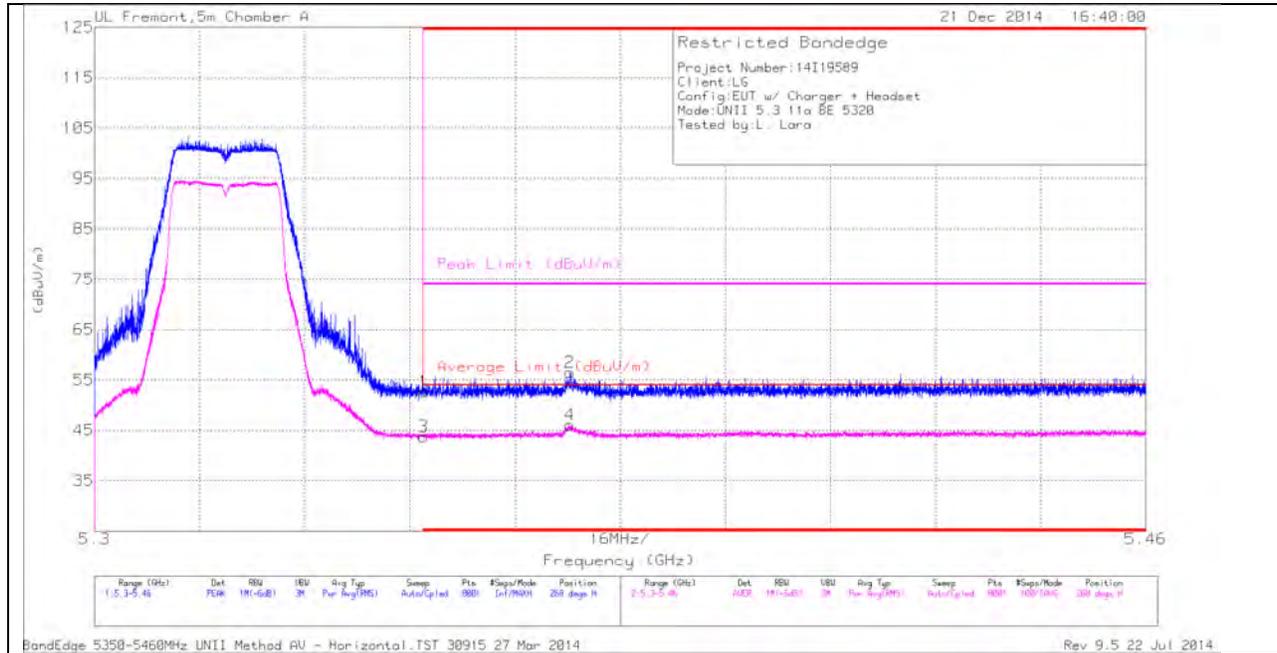
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

## 11.2. 5.3 GHz

### 11.2.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.3 GHz BAND

#### AUTHORIZED BANDEDGE (HIGH CHANNEL)

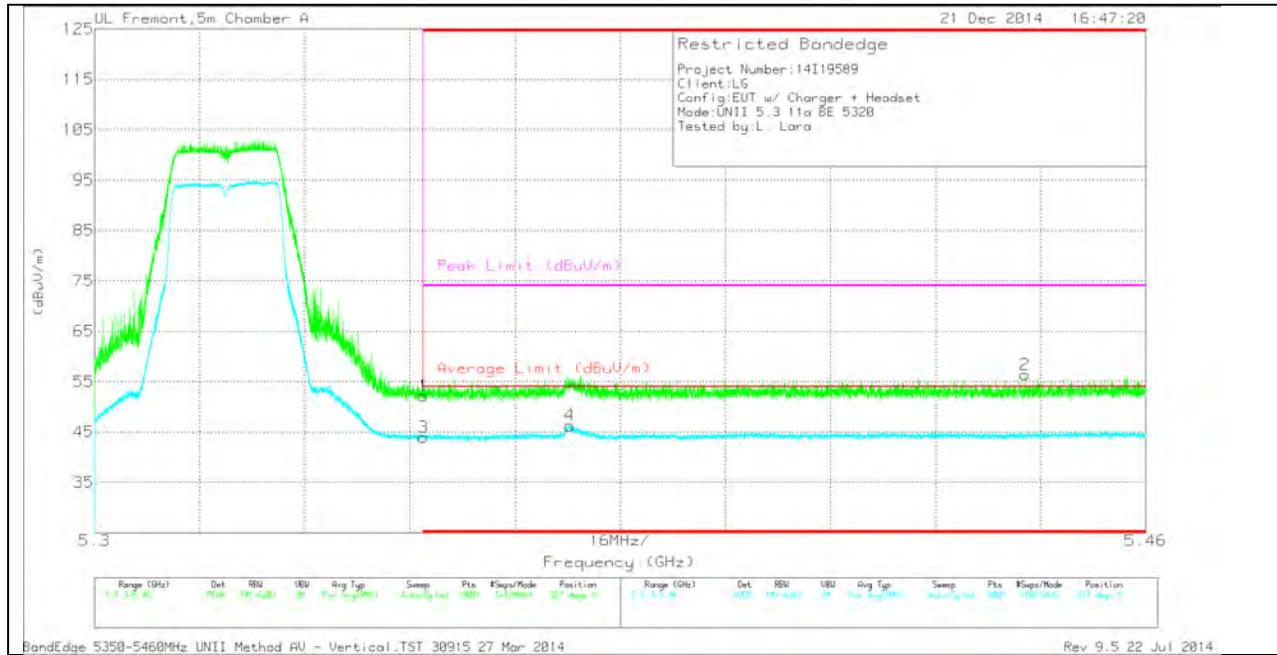
#### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	37.43	PK	34.3	-19.1	0	52.63	-	-	74	-21.37	268	244	H
3	* 5.35	28.36	RMS	34.3	-19.1	.21	43.77	54	-10.23	-	-	268	244	H
2	* 5.372	41.01	PK	34.3	-18.8	0	56.51	-	-	74	-17.49	268	244	H
4	* 5.372	30.39	RMS	34.3	-18.8	.21	46.1	54	-7.9	-	-	268	244	H

**VERTICAL PEAK AND AVERAGE PLOT**

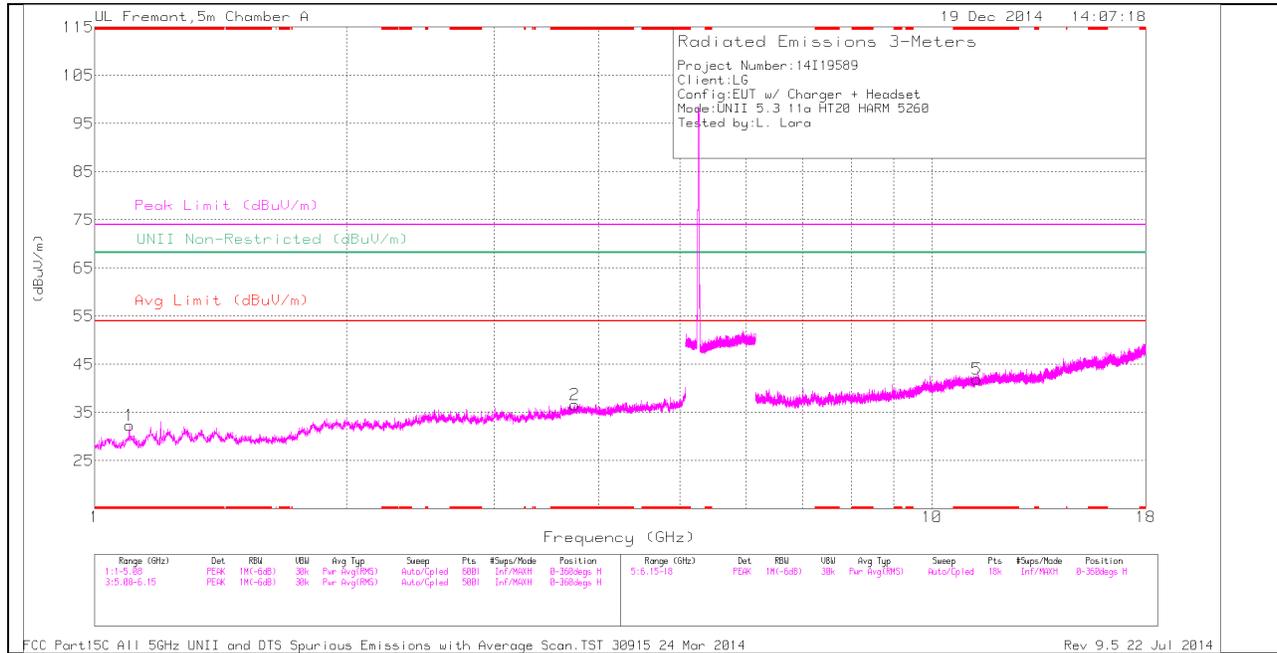


**VERTICAL DATA**

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	36.93	PK	34.3	-19.1	0	52.13	-	-	74	-21.87	327	295	V
3	* 5.35	28.58	RMS	34.3	-19.1	.21	43.99	54	-10.01	-	-	327	295	V
4	* 5.372	30.55	RMS	34.3	-18.8	.21	46.26	54	-7.74	-	-	327	295	V
2	* 5.442	40.77	PK	34.4	-18.8	0	56.37	-	-	74	-17.63	327	295	V

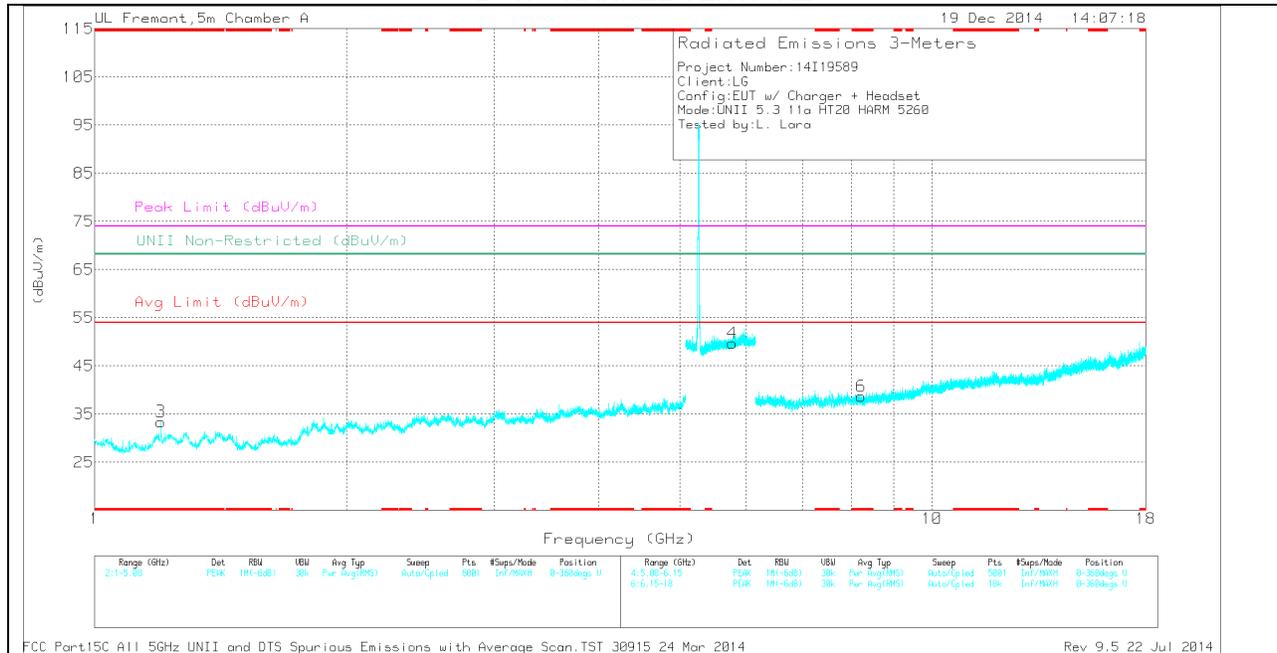
### HARMONICS AND SPURIOUS EMISSIONS

#### 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	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restrict ed (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.1	37.78	PK	28.4	-33.9	0	32.28	-	-	74	-41.72	-	-	0-360	100	H
2	* 3.744	32.62	PK	33.5	-29.5	0	36.62	-	-	74	-37.38	-	-	0-360	201	H
3	* 1.2	37.83	PK	29.3	-33.7	0	33.43	-	-	74	-40.57	-	-	0-360	100	V
5	* 11.313	25.25	PK	38	-21.3	0	41.95	-	-	74	-32.05	-	-	0-360	100	H
6	* 8.235	28.42	PK	35.6	-25.3	0	38.72	-	-	74	-35.28	-	-	0-360	201	V
4	5.776	34.06	PK	34.7	-19	0	49.76	-	-	-	-	68.2	-18.44	0-360	201	V

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

PK - Peak detector

Radiated Emissions

Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	DC Corr (dB)	Correcte d 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
* 11.315	32.83	PK1	38	-21.3	0	49.53	-	-	74	-24.47	-	-	359	100	H
* 11.313	22.26	AD1	38	-21.3	.21	39.17	54	-14.83	-	-	-	-	359	100	H

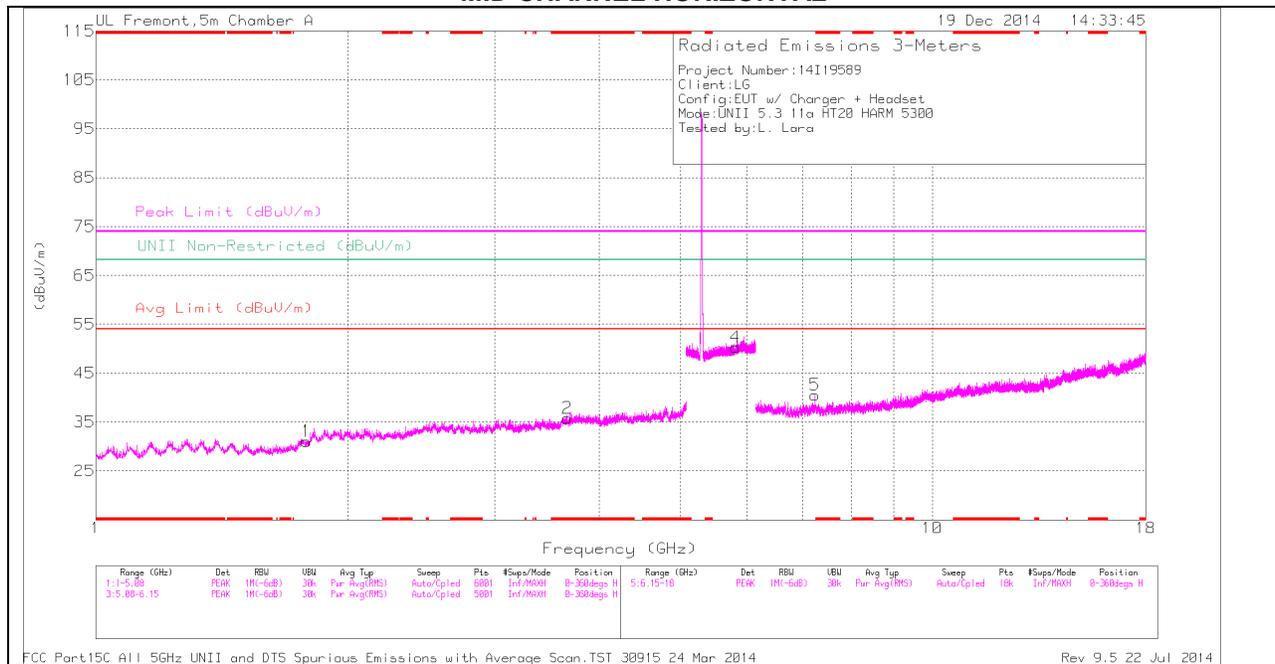
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

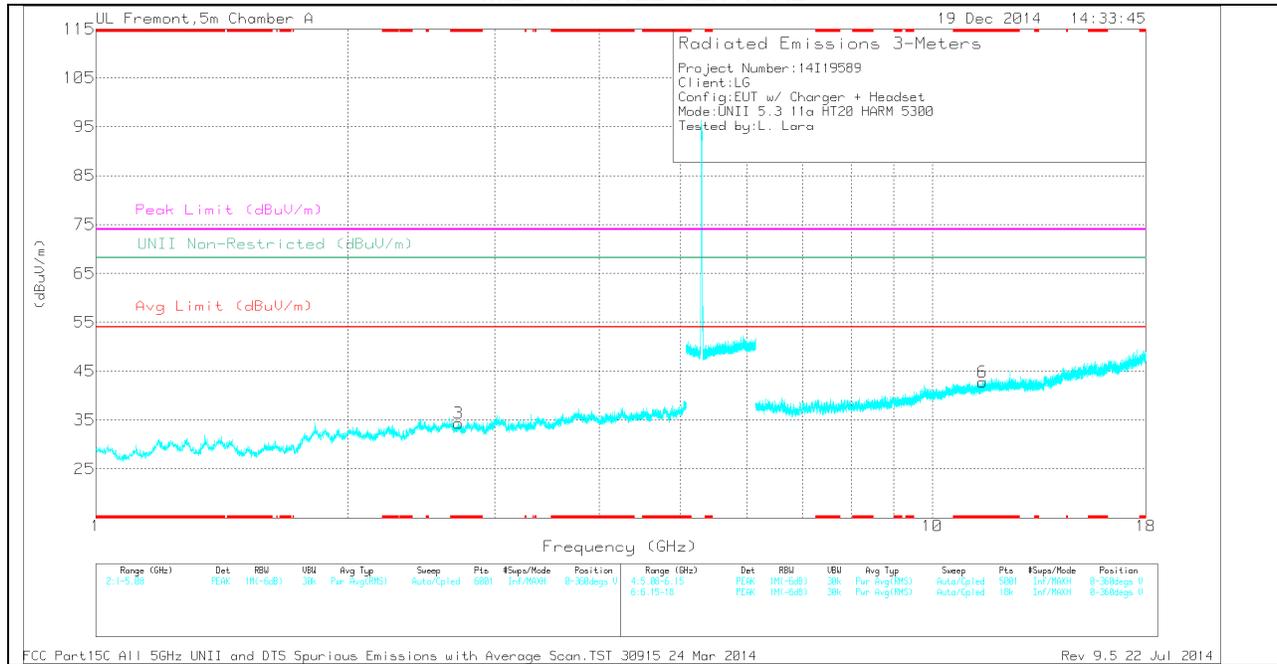
FCC Part15C All 5GHz UNII and DTS Spurious Emissions with Average Scan.TST 30915 24 Mar 2014

**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	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/ Ftr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restrict ed (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.664	32.88	PK	33.3	-30.4	0	35.78	-	-	74	-38.22	-	-	0-360	201	H
3	* 2.715	32.93	PK	32.7	-31.3	0	34.33	-	-	74	-39.67	-	-	0-360	201	V
6	* 11.487	26.27	PK	38.3	-21.8	0	42.77	-	-	74	-31.23	-	-	0-360	201	V
1	1.785	32.98	PK	30.3	-32.2	0	31.08	-	-	-	-	68.2	-37.12	0-360	100	H
4	5.82	34.09	PK	34.8	-18.6	0	50.29	-	-	-	-	68.2	-17.91	0-360	201	H
5	7.242	30.13	PK	35.2	-24.8	0	40.53	-	-	-	-	68.2	-27.67	0-360	100	H

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

PK - Peak detector

Radiated Emissions

Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/ Ftr/Pad (dB)	DC Corr (dB)	Correcte d 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
* 11.488	33.58	PK1	38.3	-21.8	0	50.08	-	-	74	-23.92	-	-	359	202	V
* 11.486	22.41	AD1	38.3	-21.8	.21	39.12	54	-14.88	-	-	-	-	359	202	V

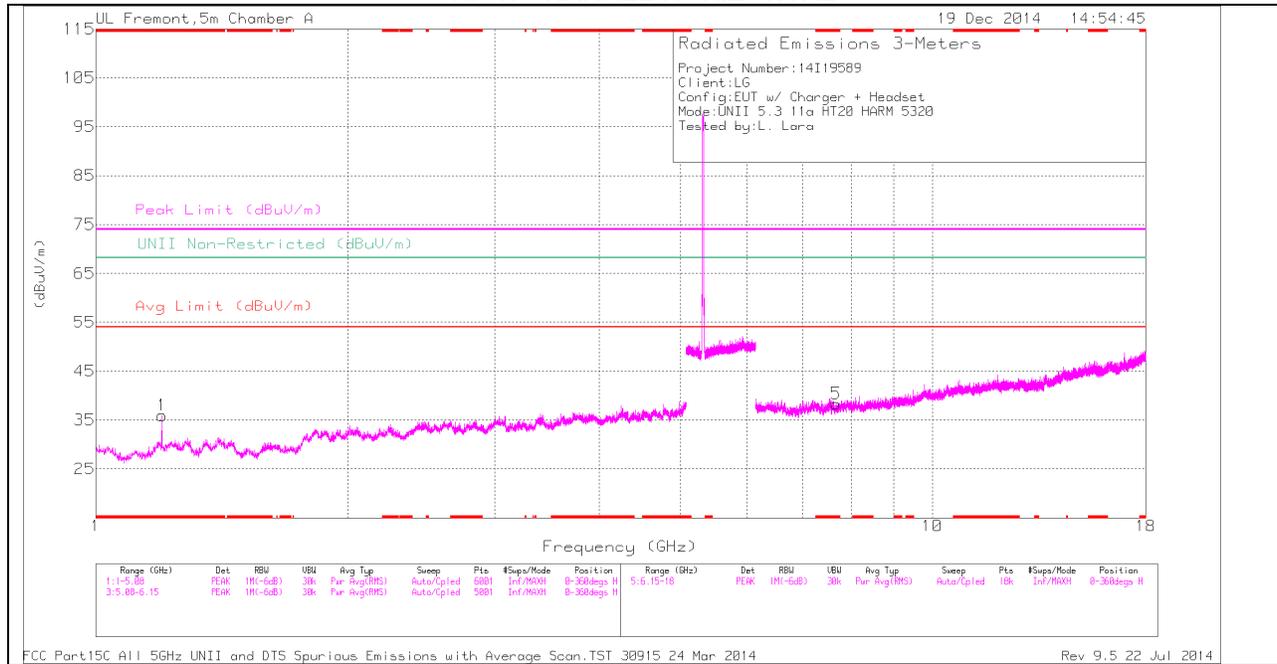
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

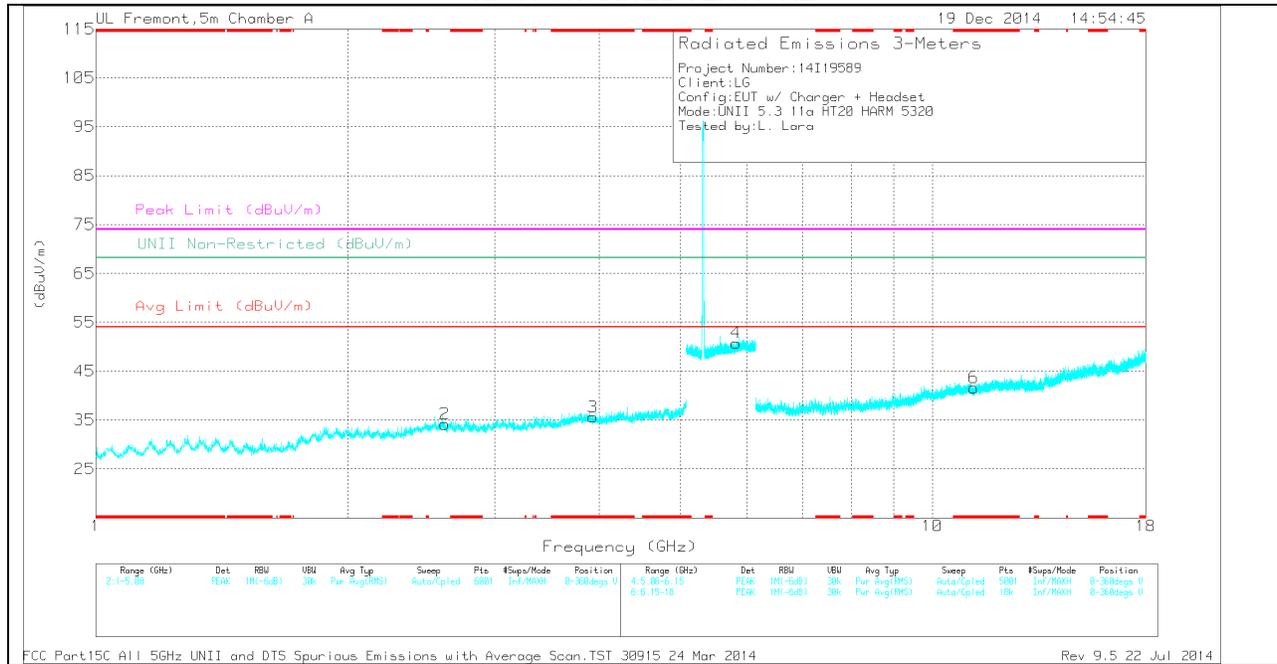
FCC Part15C All 5GHz UNII and DTS Spurious Emissions with Average Scan.TST 30915 24 Mar 2014

**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	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/ Ftr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restrict ed (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.2	40.36	PK	29.3	-33.7	0	35.96	-	-	74	-38.04	-	-	0-360	201	H
3	* 3.93	31.52	PK	33.8	-29.7	0	35.62	-	-	74	-38.38	-	-	0-360	201	V
5	* 7.681	28.95	PK	35.4	-26	0	38.35	-	-	74	-35.65	-	-	0-360	100	H
6	* 11.21	25.58	PK	37.8	-21.8	0	41.58	-	-	74	-32.42	-	-	0-360	100	V
2	2.615	32.99	PK	32.9	-31.7	0	34.19	-	-	-	-	68.2	-34.01	0-360	100	V
4	5.828	34.47	PK	34.8	-18.5	0	50.77	-	-	-	-	68.2	-17.43	0-360	100	V

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

PK - Peak detector

Radiated Emissions

Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/ Ftr/Pad (dB)	DC Corr (dB)	Correcte d 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
* 11.21	33.2	PK1	37.8	-21.8	0	49.2	-	-	74	-24.8	-	-	359	100	V
* 11.209	22.55	AD1	37.8	-21.8	.21	38.76	54	-15.24	-	-	-	-	359	100	V

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

PK1 - KDB789033 Method: Peak

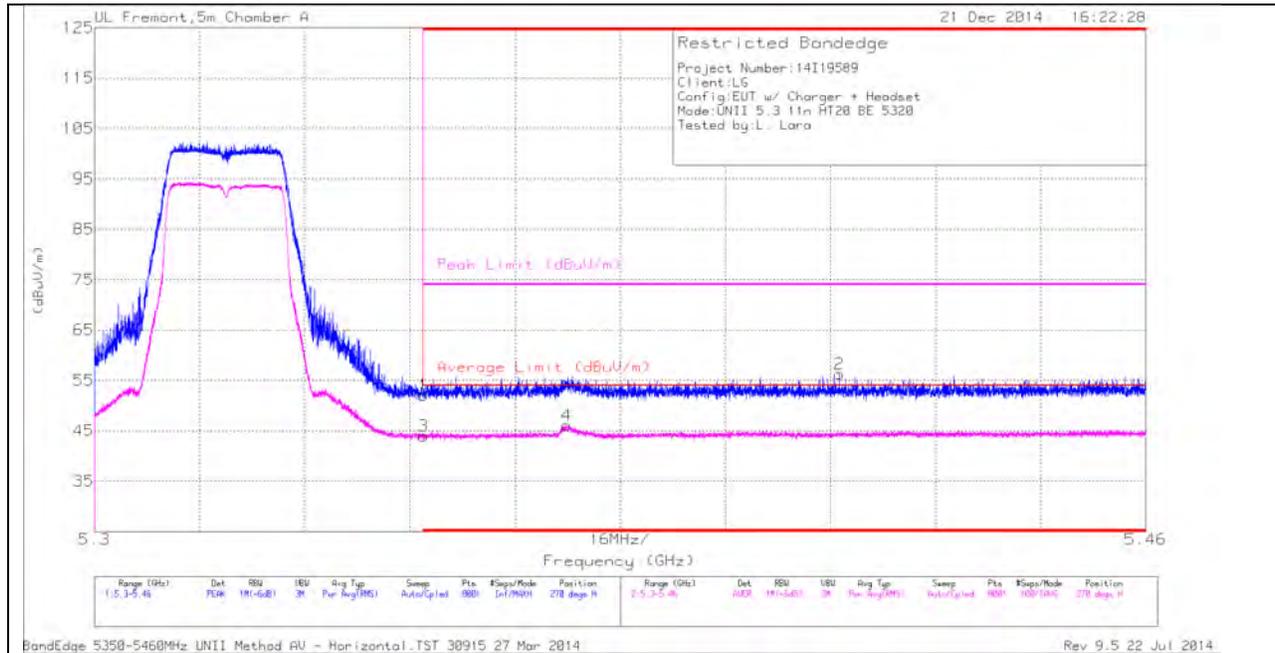
AD1 - KDB789033 Method: AD Primary Power Average

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**11.2.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.3 GHz BAND**

**AUTHORIZED BANDEDGE (HIGH CHANNEL)**

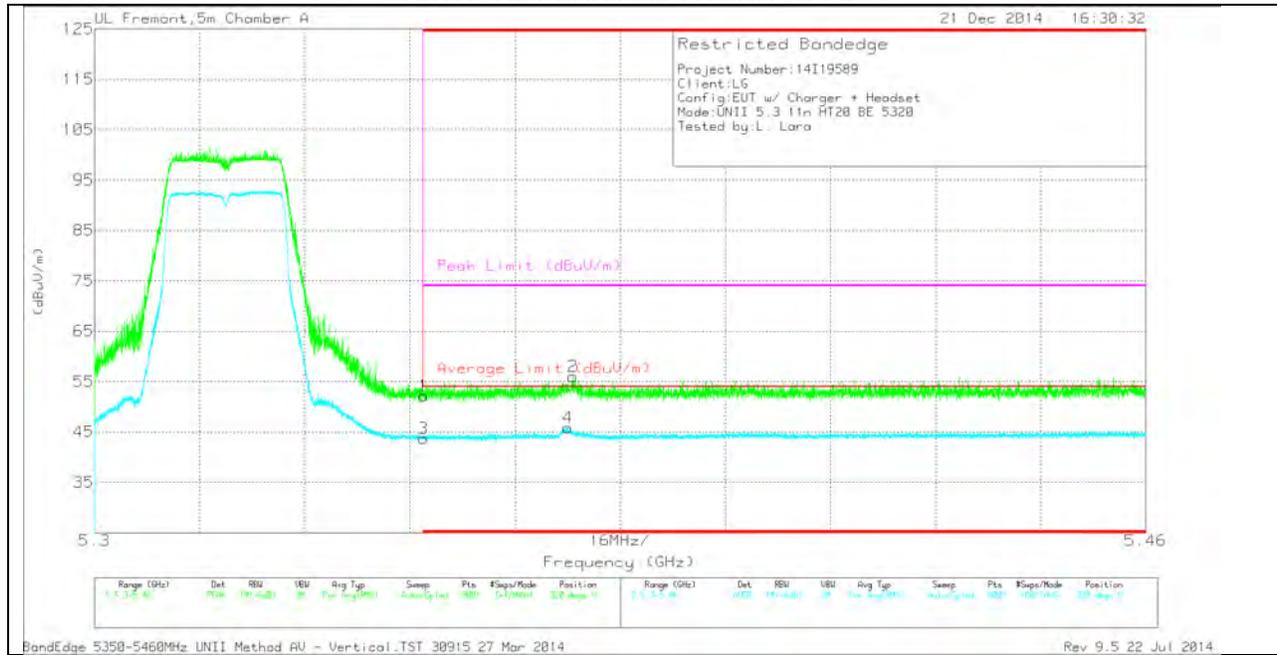
**HORIZONTAL PEAK AND AVERAGE PLOT**



**HORIZONTAL DATA**

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	36.84	PK	34.3	-19.1	0	52.04	-	-	74	-21.96	270	245	H
3	* 5.35	28.51	RMS	34.3	-19.1	.24	43.95	54	-10.05	-	-	270	245	H
4	* 5.372	30.38	RMS	34.3	-18.8	.24	46.12	54	-7.88	-	-	270	245	H
2	* 5.413	40.62	PK	34.4	-18.8	0	56.22	-	-	74	-17.78	270	245	H

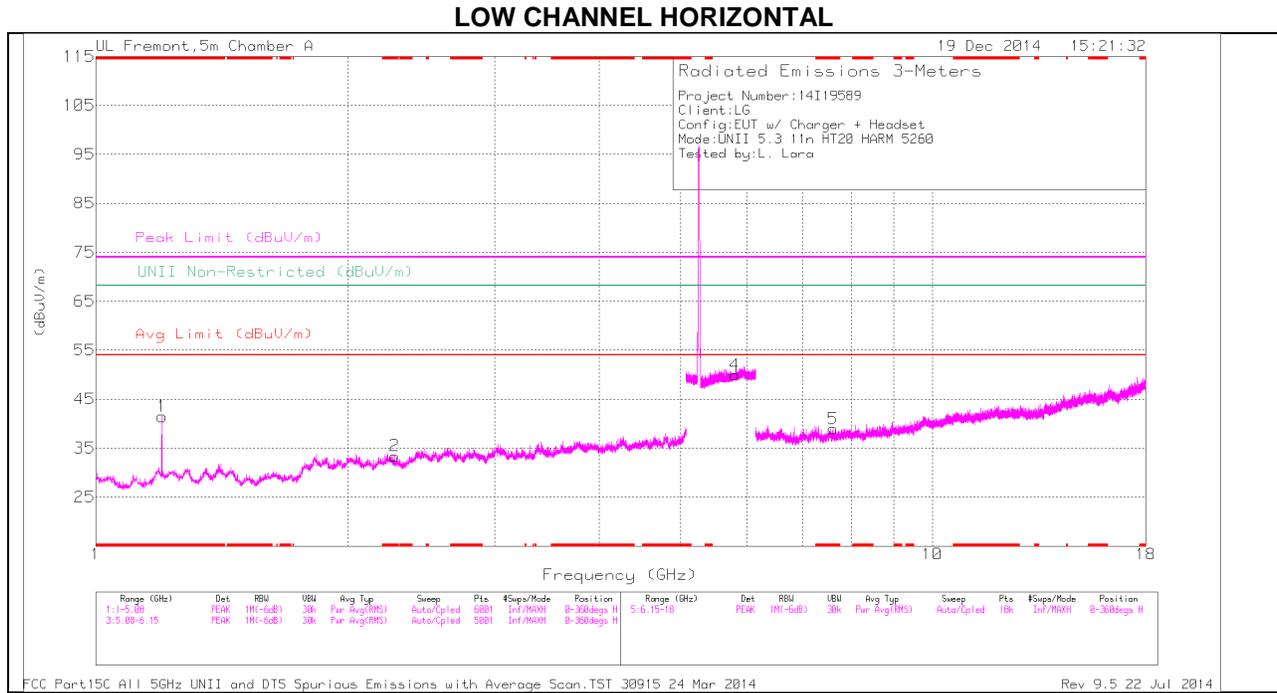
**VERTICAL PEAK AND AVERAGE PLOT**



**VERTICAL DATA**

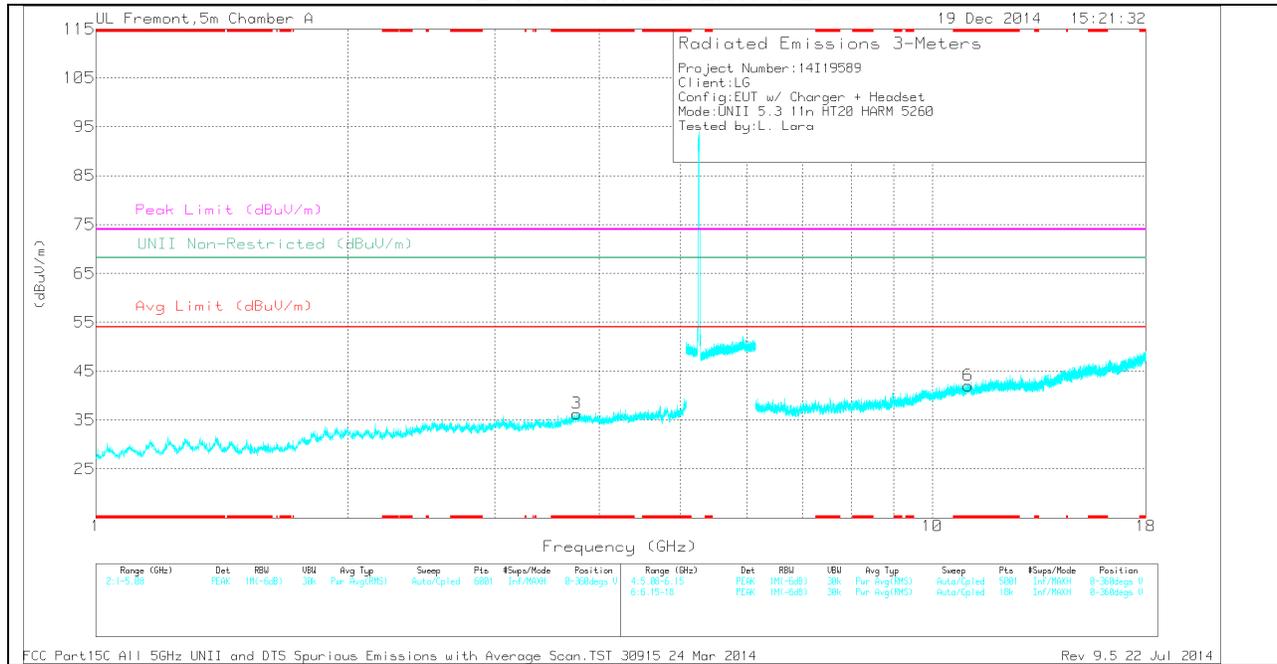
Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	37.01	PK	34.3	-19.1	0	52.21	-	-	74	-21.79	320	273	V
3	* 5.35	28.23	RMS	34.3	-19.1	.24	43.67	54	-10.33	-	-	320	273	V
4	* 5.372	30.1	RMS	34.3	-18.8	.24	45.84	54	-8.16	-	-	320	273	V
2	* 5.373	40.64	PK	34.3	-18.9	0	56.04	-	-	74	-17.96	320	273	V

### HARMONICS AND SPURIOUS EMISSIONS



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	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Ftrr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restrict ed (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.1	37.78	PK	28.4	-33.9	0	32.28	-	-	74	-41.72	-	-	0-360	100	H
2	* 3.744	32.62	PK	33.5	-29.5	0	36.62	-	-	74	-37.38	-	-	0-360	201	H
3	* 1.2	37.83	PK	29.3	-33.7	0	33.43	-	-	74	-40.57	-	-	0-360	100	V
5	*	25.25	PK	38	-21.3	0	41.95	-	-	74	-32.05	-	-	0-360	100	H
	11.313															
6	* 8.235	28.42	PK	35.6	-25.3	0	38.72	-	-	74	-35.28	-	-	0-360	201	V
4	5.776	34.06	PK	34.7	-19	0	49.76	-	-	-	-	68.2	-18.44	0-360	201	V

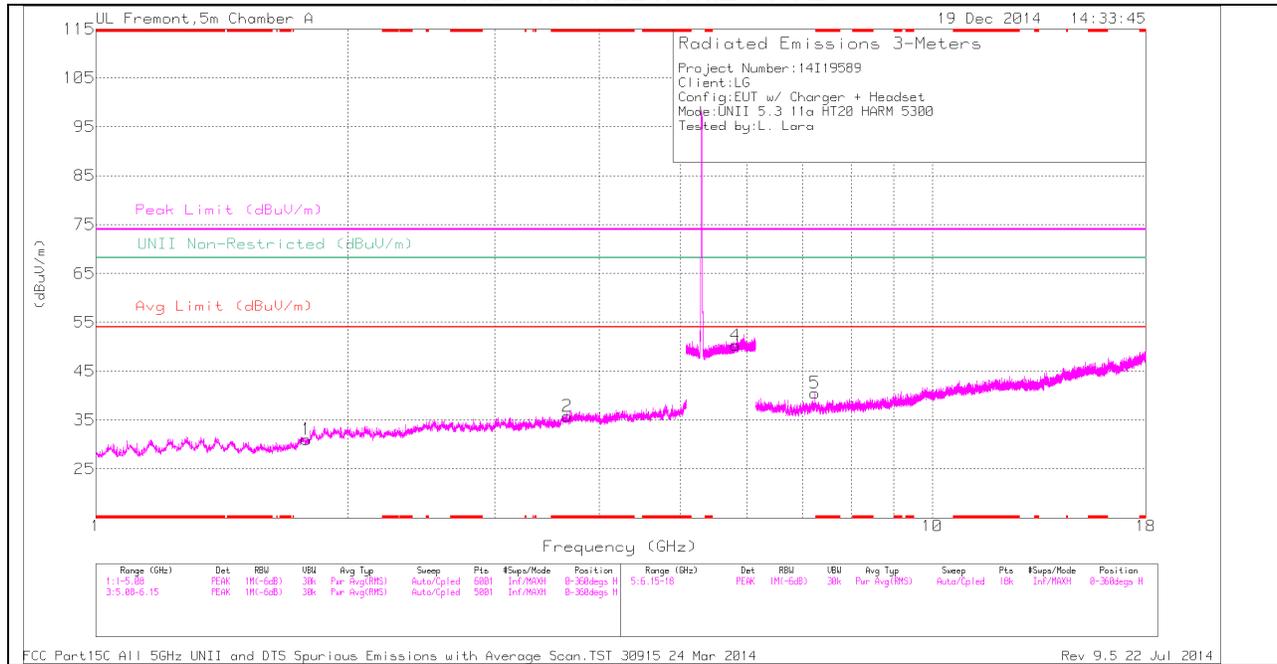
PK - Peak detector

*RADIATED EMISSIONS*

Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Ftrr/Pad (dB)	DC Corr (dB)	Correcte d 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
* 11.315	32.83	PK1	38	-21.3	0	49.53	-	-	74	-24.47	-	-	359	100	H
* 11.313	22.26	AD1	38	-21.3	.21	39.17	54	-14.83	-	-	-	-	359	100	H

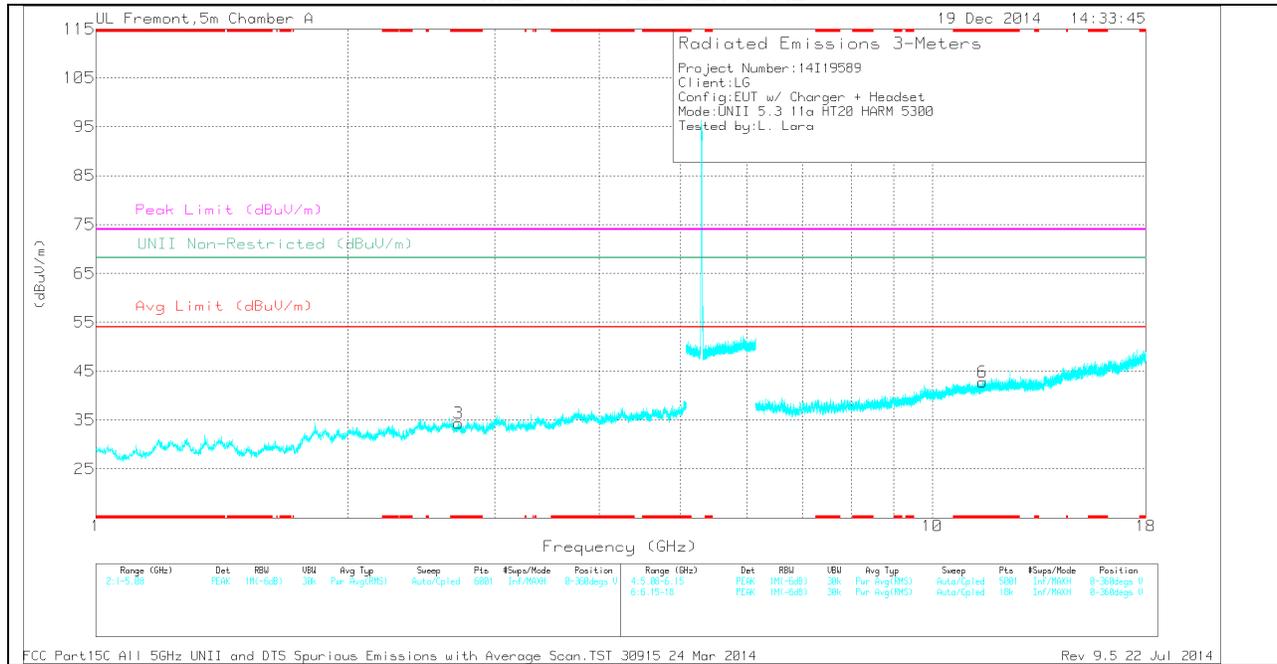
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**MID CHANNEL HORIZONTAL**



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	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/ Ftr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restrict ed (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.664	32.88	PK	33.3	-30.4	0	35.78	-	-	74	-38.22	-	-	0-360	201	H
3	* 2.715	32.93	PK	32.7	-31.3	0	34.33	-	-	74	-39.67	-	-	0-360	201	V
6	* 11.487	26.27	PK	38.3	-21.8	0	42.77	-	-	74	-31.23	-	-	0-360	201	V
1	1.785	32.98	PK	30.3	-32.2	0	31.08	-	-	-	-	68.2	-37.12	0-360	100	H
4	5.82	34.09	PK	34.8	-18.6	0	50.29	-	-	-	-	68.2	-17.91	0-360	201	H
5	7.242	30.13	PK	35.2	-24.8	0	40.53	-	-	-	-	68.2	-27.67	0-360	100	H

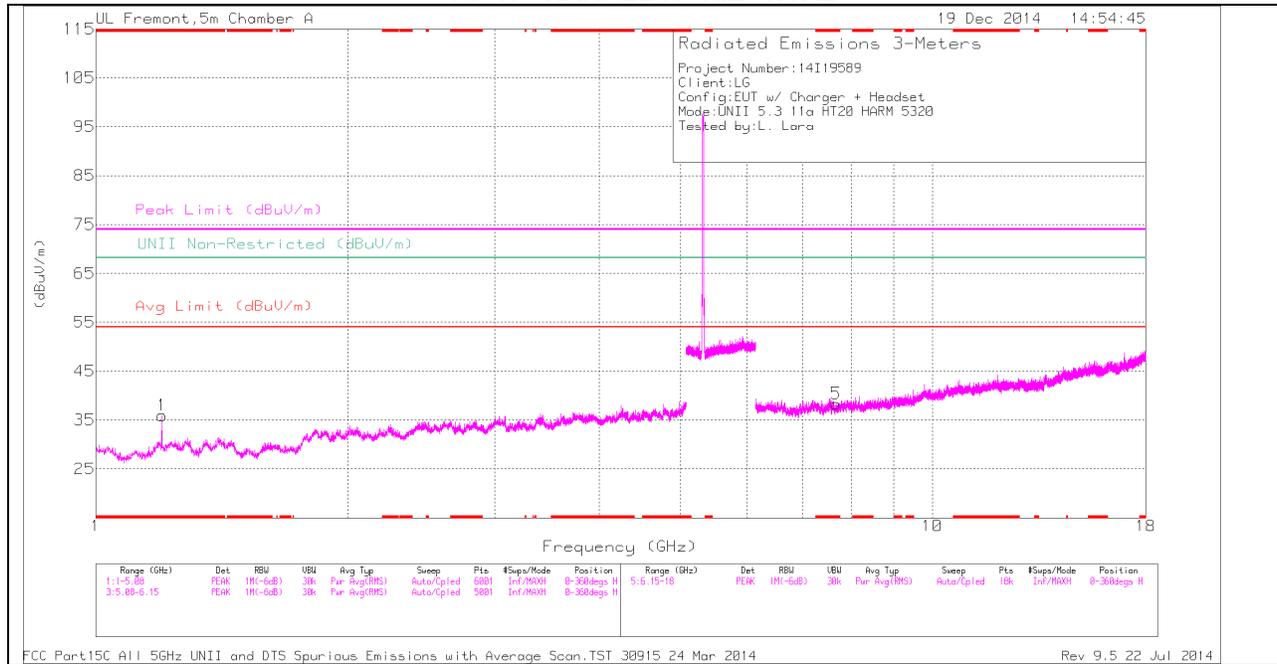
PK - Peak detector

*RADIATED EMISSIONS*

Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/ Ftr/Pad (dB)	DC Corr (dB)	Correcte d 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
* 11.488	33.58	PK1	38.3	-21.8	0	50.08	-	-	74	-23.92	-	-	359	202	V
* 11.486	22.41	AD1	38.3	-21.8	.21	39.12	54	-14.88	-	-	-	-	359	202	V

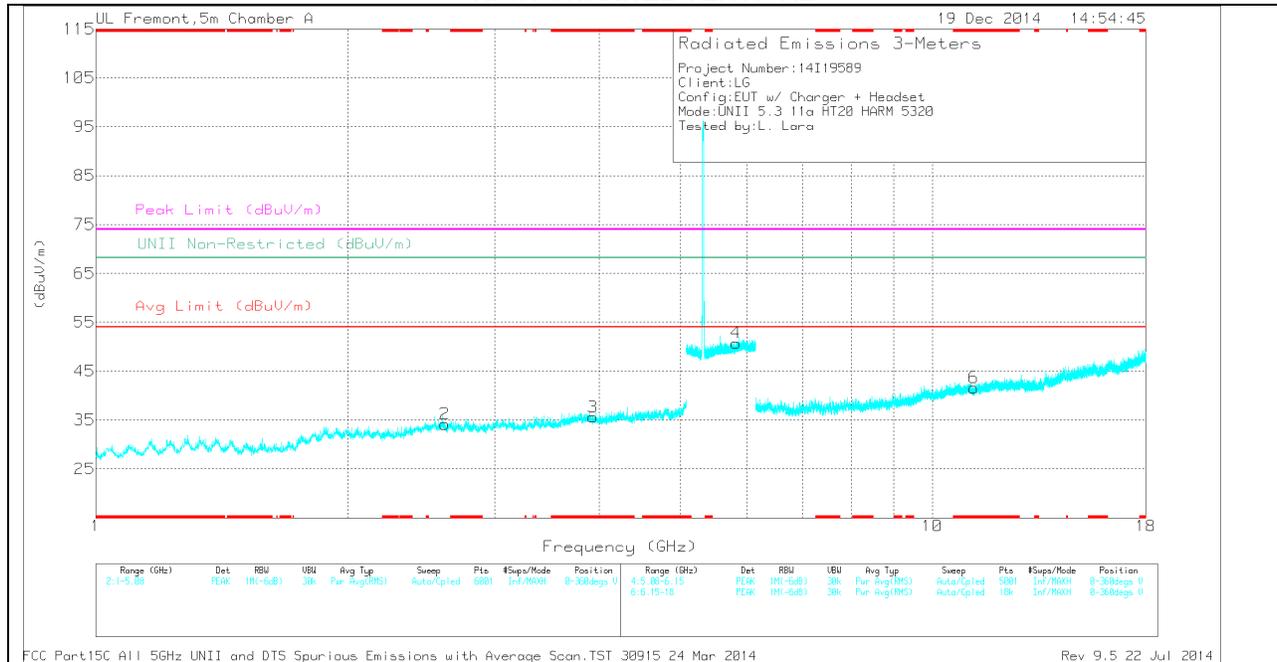
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**HIGH CHANNEL HORIZONTAL**



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	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/ F tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNI Non- Restrict ed (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.2	40.36	PK	29.3	-33.7	0	35.96	-	-	74	-38.04	-	-	0-360	201	H
3	* 3.93	31.52	PK	33.8	-29.7	0	35.62	-	-	74	-38.38	-	-	0-360	201	V
5	* 7.681	28.95	PK	35.4	-26	0	38.35	-	-	74	-35.65	-	-	0-360	100	H
6	* 11.21	25.58	PK	37.8	-21.8	0	41.58	-	-	74	-32.42	-	-	0-360	100	V
2	2.615	32.99	PK	32.9	-31.7	0	34.19	-	-	-	-	68.2	-34.01	0-360	100	V
4	5.828	34.47	PK	34.8	-18.5	0	50.77	-	-	-	-	68.2	-17.43	0-360	100	V

PK - Peak detector

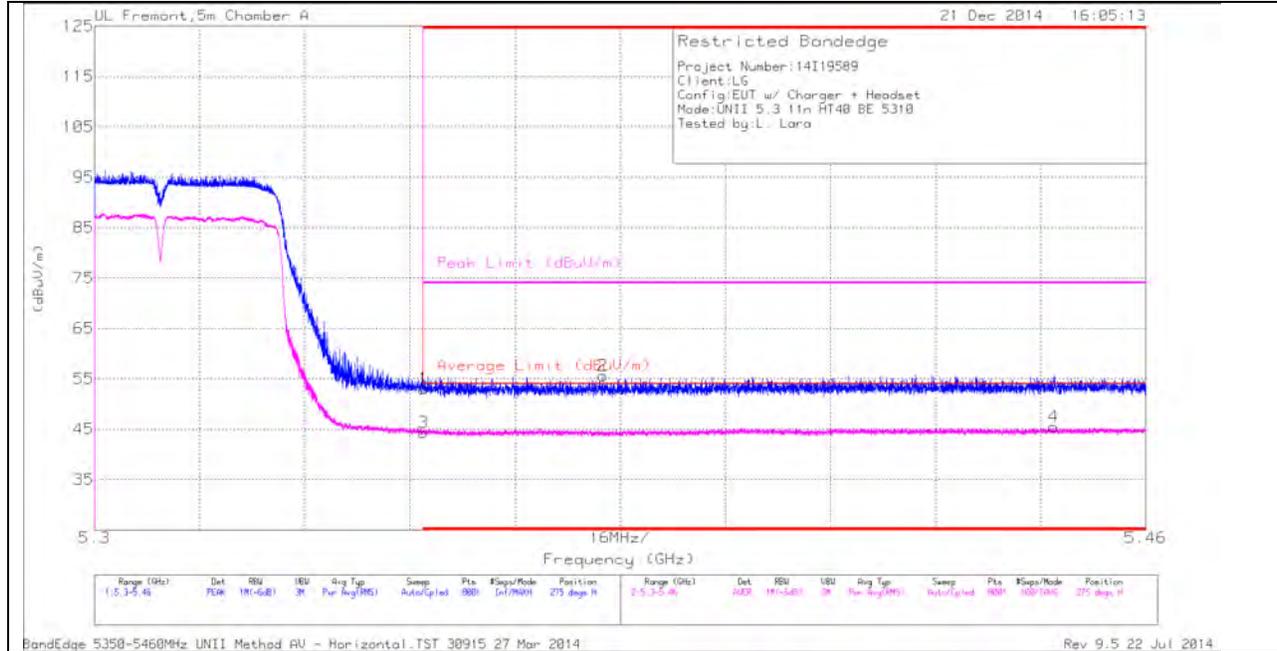
*RADIATED EMISSIONS*

Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/ F tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNI Non- Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.21	33.2	PK1	37.8	-21.8	0	49.2	-	-	74	-24.8	-	-	359	100	V
* 11.209	22.55	AD1	37.8	-21.8	.21	38.76	54	-15.24	-	-	-	-	359	100	V

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

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

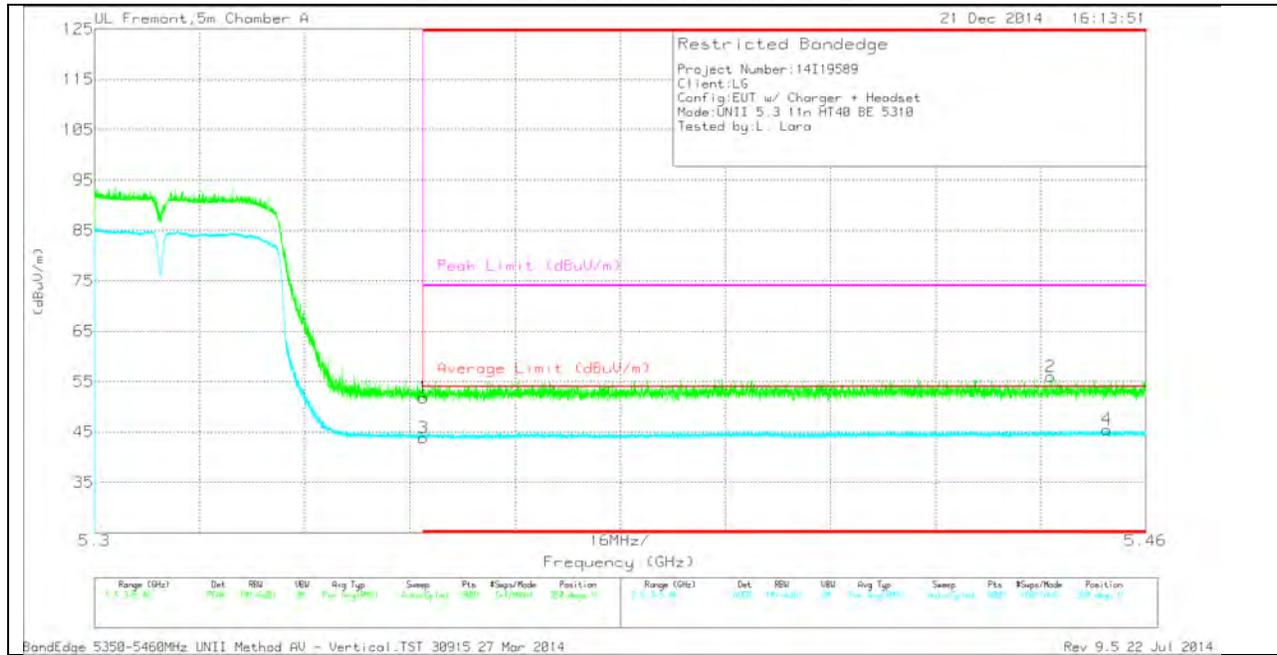
**HORIZONTAL PEAK AND AVERAGE PLOT**



**HORIZONTAL DATA**

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	37.78	PK	34.3	-19.1	0	52.98	-	-	74	-21.02	275	179	H
2	* 5.377	40.36	PK	34.3	-19	0	55.66	-	-	74	-18.34	275	179	H
3	* 5.35	28.7	RMS	34.3	-19.1	.47	44.37	54	-9.63	-	-	275	179	H
4	* 5.446	29.27	RMS	34.4	-18.7	.47	45.44	54	-8.56	-	-	275	179	H

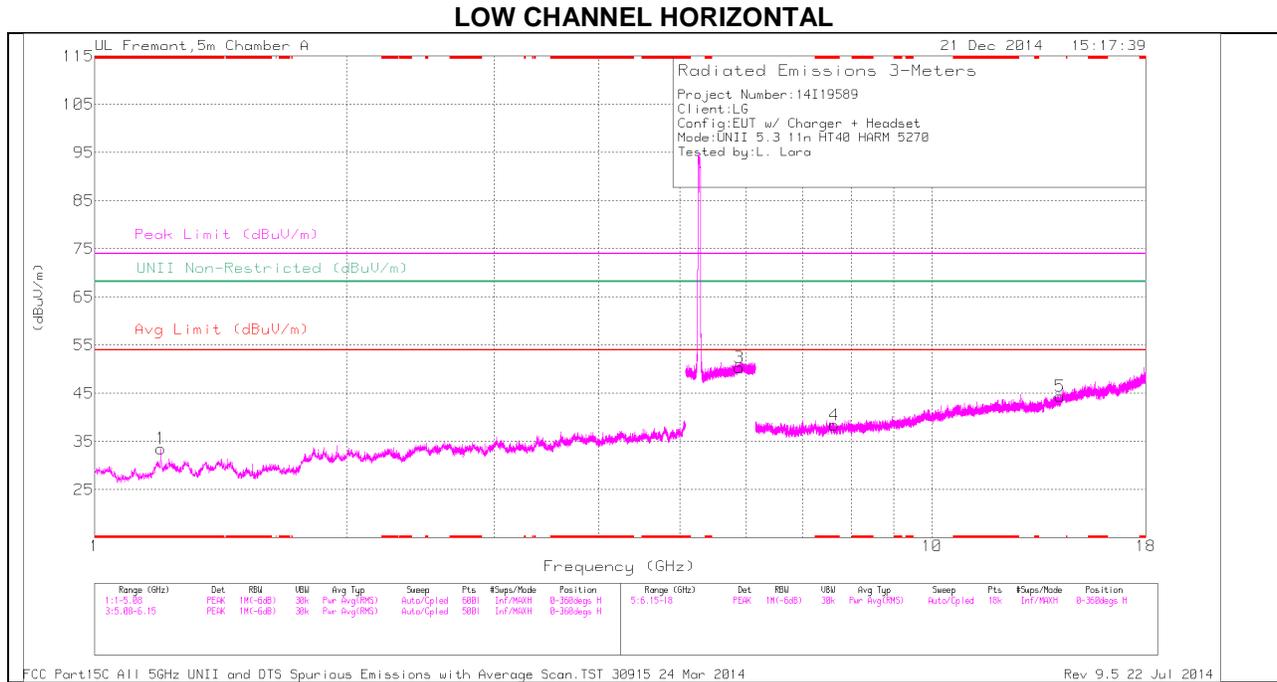
**VERTICAL PEAK AND AVERAGE PLOT**



**VERTICAL DATA**

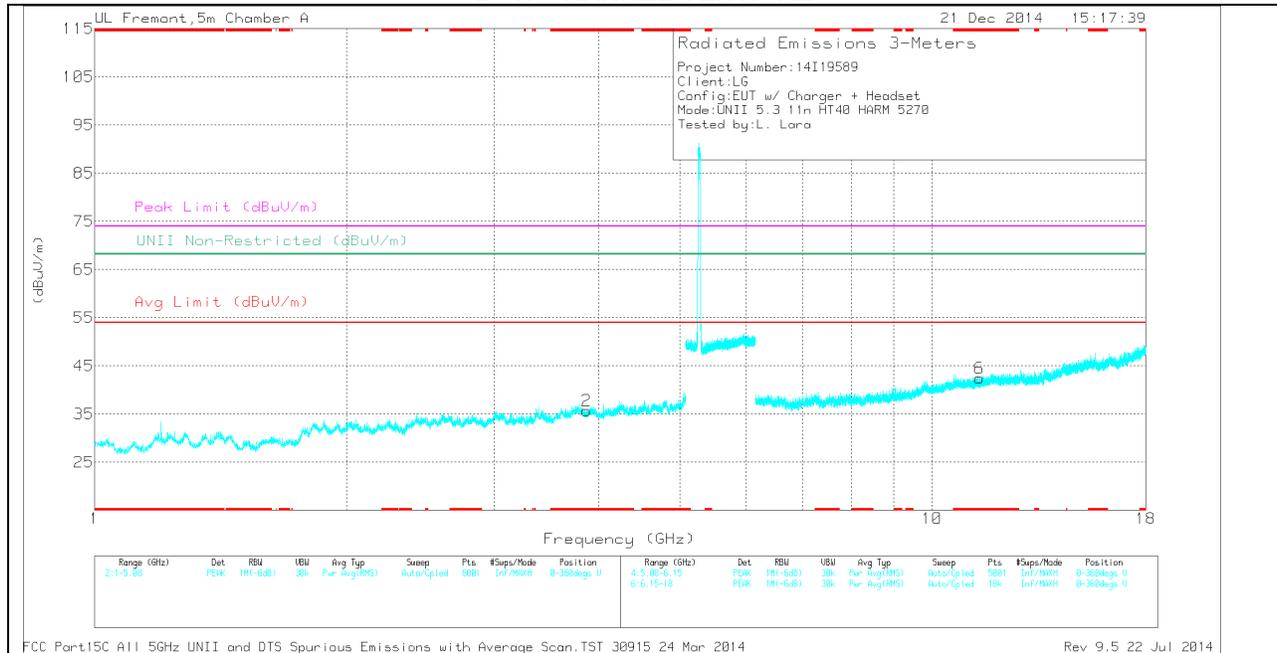
Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	36.64	PK	34.3	-19.1	0	51.84	-	-	74	-22.16	350	204	V
3	* 5.35	28.12	RMS	34.3	-19.1	.47	43.79	54	-10.21	-	-	350	204	V
2	* 5.445	40.25	PK	34.4	-18.7	0	55.95	-	-	74	-18.05	350	204	V
4	* 5.454	29.34	RMS	34.4	-18.7	.47	45.51	54	-8.49	-	-	350	204	V

### HARMONICS AND SPURIOUS EMISSIONS



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	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/CbI/ Ftrr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restrict ed (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.2	37.96	PK	29.3	-33.7	0	33.56	-	-	74	-40.44	-	-	0-360	201	H
2	* 3.868	31.96	PK	33.7	-29.9	0	35.76	-	-	74	-38.24	-	-	0-360	100	V
4	* 7.648	28.94	PK	35.4	-25.9	0	38.44	-	-	74	-35.56	-	-	0-360	201	H
6	*	26.26	PK	38.1	-21.9	0	42.46	-	-	74	-31.54	-	-	0-360	201	V
	11.389															
3	5.886	33.87	PK	35	-18.5	0	50.37	-	-	-	-	68.2	-17.83	0-360	100	H
5	14.207	27	PK	39.4	-22	0	44.4	-	-	-	-	68.2	-23.8	0-360	100	H

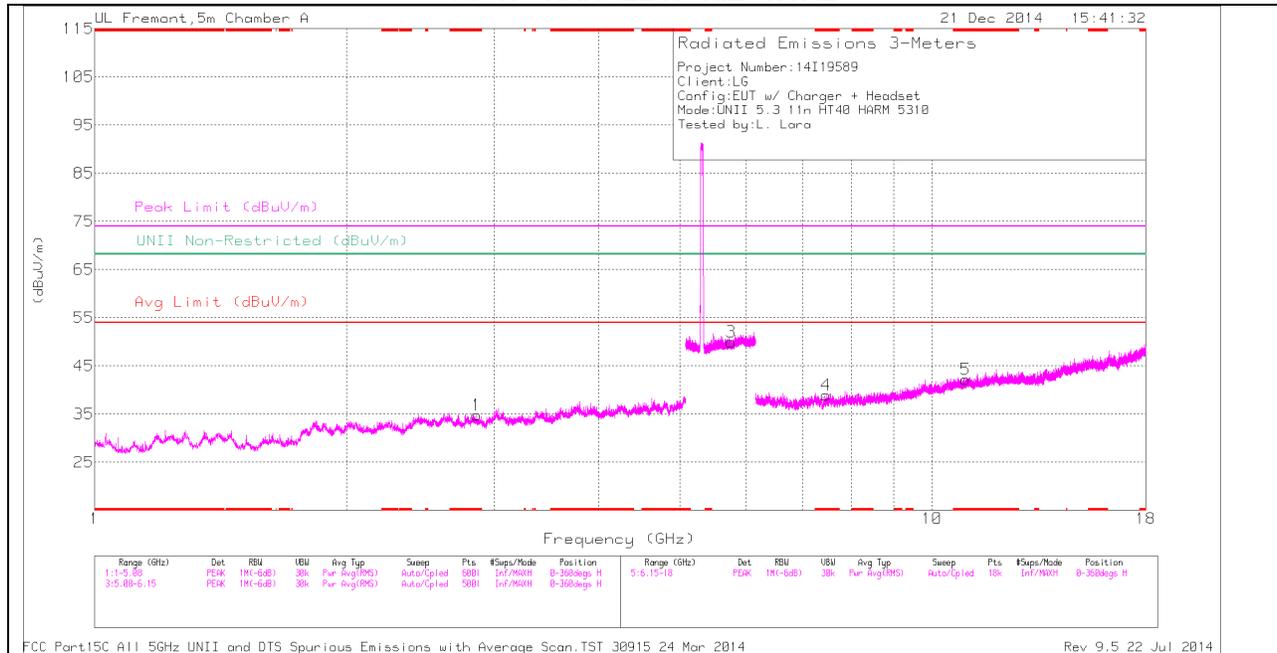
PK - Peak detector

*RADIATED EMISSIONS*

Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/CbI/ Ftrr/Pad (dB)	DC Corr (dB)	Correcte d 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
* 11.387	33.96	PK1	38.1	-21.9	0	50.16	-	-	74	-23.84	-	-	1	202	V
* 11.388	22.52	AD1	38.1	-21.9	.47	39.19	54	-14.81	-	-	-	-	1	202	V

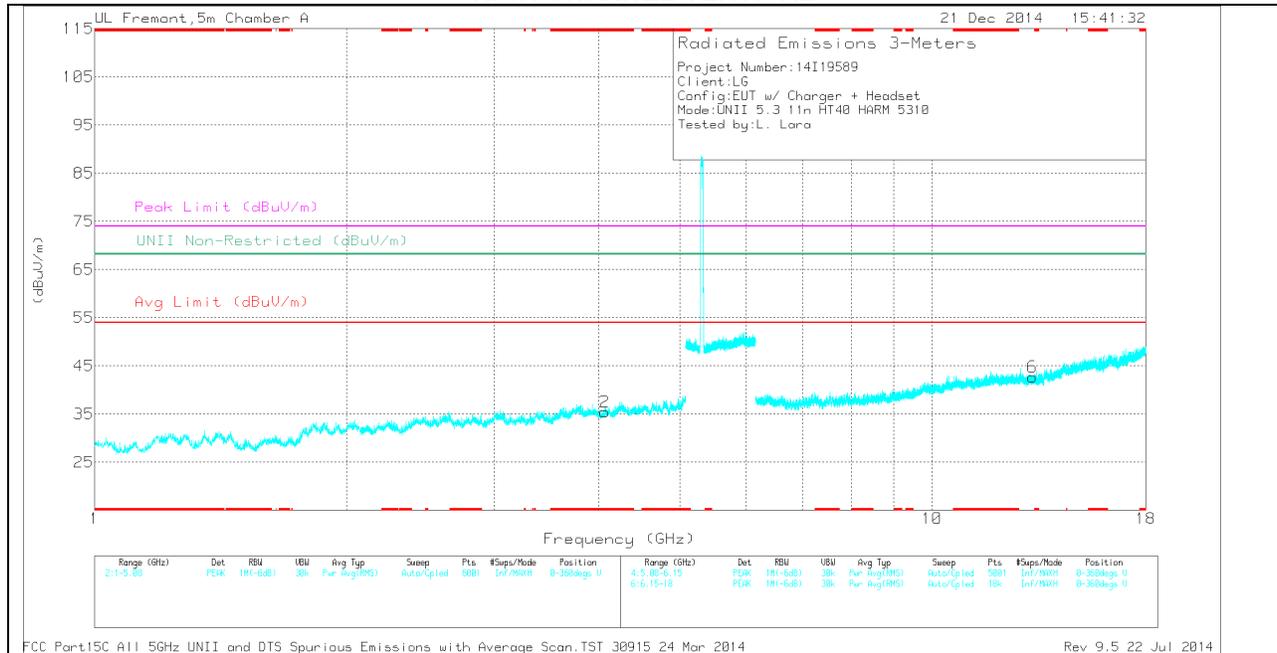
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**HIGH CHANNEL HORIZONTAL**



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	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/ F ltr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restrict ed (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.856	33.91	PK	32.6	-31.7	0	34.81	-	-	74	-39.19	-	-	0-360	100	H
2	* 4.063	31.2	PK	33.8	-29.6	0	35.4	-	-	74	-38.6	-	-	0-360	201	V
4	* 7.471	29.12	PK	35.3	-25.5	0	38.92	-	-	74	-35.08	-	-	0-360	100	H
5	* 10.971	26.36	PK	37.8	-22	0	42.16	-	-	74	-31.84	-	-	0-360	201	H
3	5.756	34.41	PK	34.7	-19.1	0	50.01	-	-	-	-	68.2	-18.19	0-360	100	H
6	13.184	25.76	PK	39	-22.1	0	42.66	-	-	-	-	68.2	-25.54	0-360	201	V

PK - Peak detector

*RADIATED EMISSIONS*

Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/ F ltr/Pad (dB)	DC Corr (dB)	Correcte d 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
* 10.971	33.29	PK1	37.8	-22	0	49.09	-	-	74	-24.91	-	-	1	202	H
* 10.97	22.84	AD1	37.8	-22	.47	39.11	54	-14.89	-	-	-	-	1	202	H

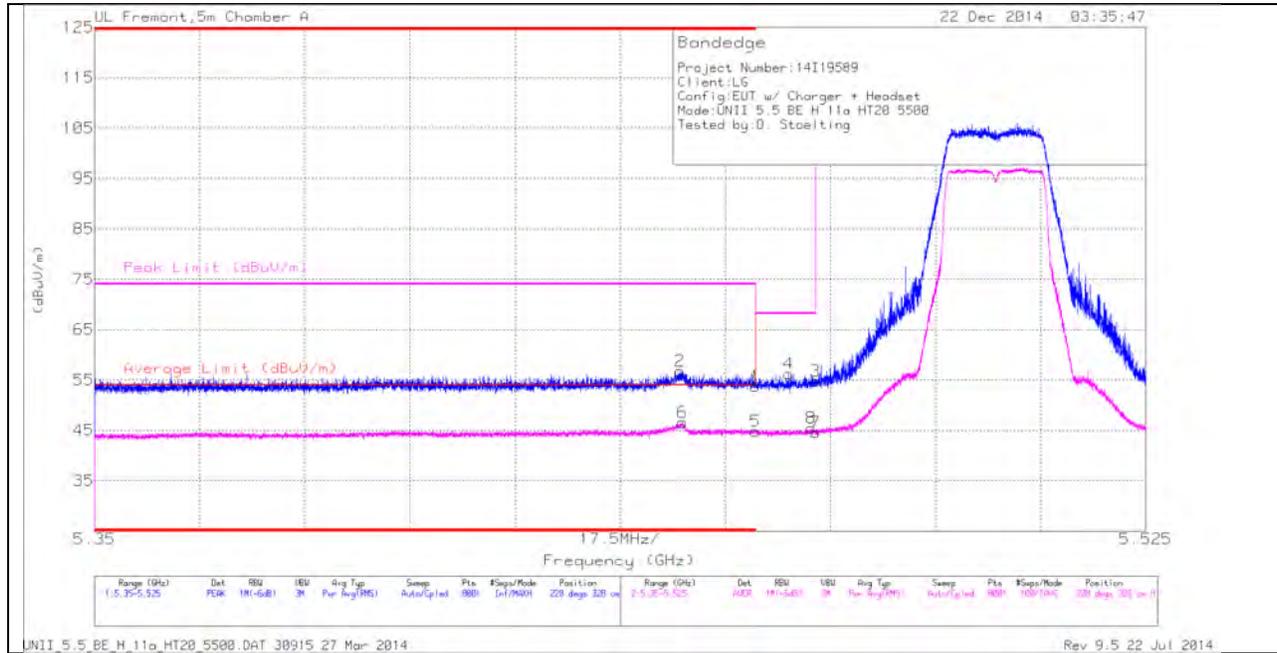
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### 11.3. 5.5-5.6 GHz

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

#### RESTRICTED BANDEDGE (LOW CHANNEL)

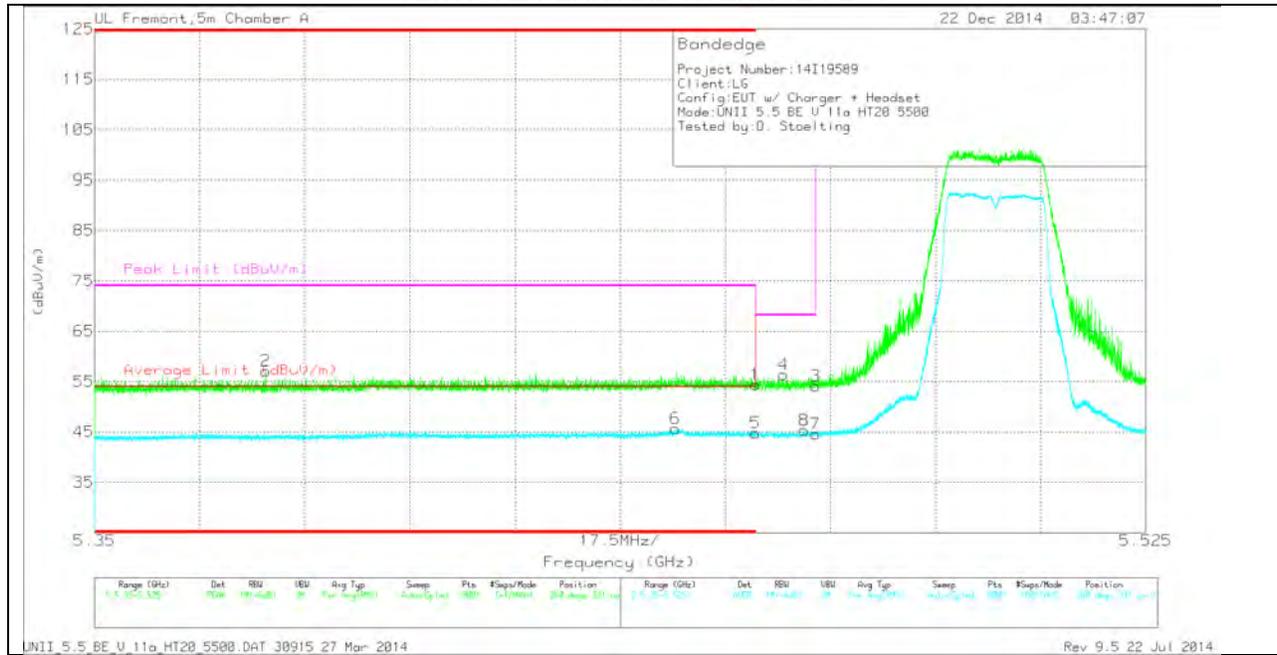
#### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/FI tr/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	38.16	PK	34.4	-18.8	0	53.76	-	-	74	-20.24	228	328	H
2	* 5.447	41.09	PK	34.4	-18.7	0	56.79	-	-	74	-17.21	228	328	H
5	* 5.46	29.01	RMS	34.4	-18.8	.21	44.82	54	-9.18	-	-	228	328	H
6	* 5.448	30.68	RMS	34.4	-18.7	.21	46.59	54	-7.41	-	-	228	328	H
4	5.466	40.76	PK	34.4	-18.9	0	56.26	-	-	68.2	-11.94	228	328	H
8	5.469	29.78	RMS	34.4	-18.9	.21	45.49	-	-	-	-	228	328	H
3	5.47	39.26	PK	34.4	-18.9	0	54.76	-	-	68.2	-13.44	228	328	H
7	5.47	28.85	RMS	34.4	-18.9	.21	44.56	-	-	-	-	228	328	H

**VERTICAL PEAK AND AVERAGE PLOT**

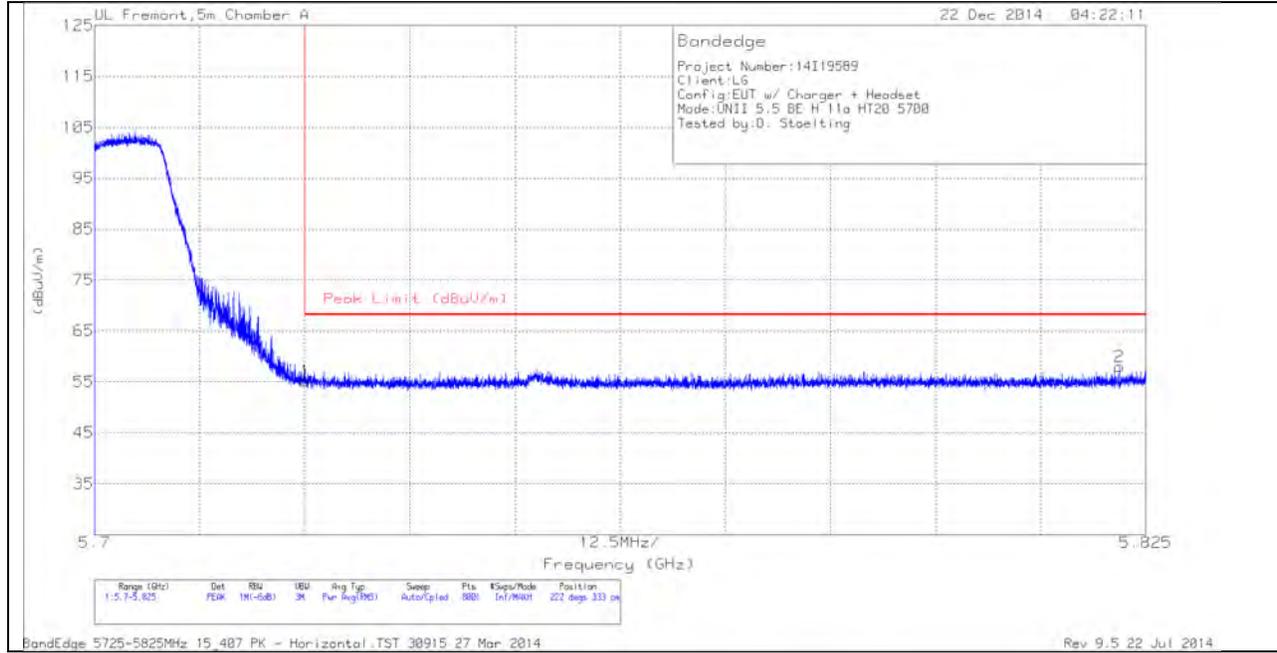


**VERTICAL DATA**

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	38.82	PK	34.4	-18.8	0	54.42	-	-	74	-19.58	260	331	V
2	* 5.379	41.84	PK	34.3	-19	0	57.14	-	-	74	-16.86	260	331	V
5	* 5.46	29.03	RMS	34.4	-18.8	.21	44.84	54	-9.16	-	-	260	331	V
6	* 5.447	29.78	RMS	34.4	-18.7	.21	45.69	54	-8.31	-	-	260	331	V
4	5.465	40.9	PK	34.4	-18.9	0	56.4	-	-	68.2	-11.8	260	331	V
8	5.468	29.58	RMS	34.4	-18.9	.21	45.29	-	-	-	-	260	331	V
3	5.47	38.63	PK	34.4	-18.9	0	54.13	-	-	68.2	-14.07	260	331	V
7	5.47	28.82	RMS	34.4	-18.9	.21	44.53	-	-	-	-	260	331	V

**AUTHORIZED BANDEDGE (HIGH CHANNEL)**

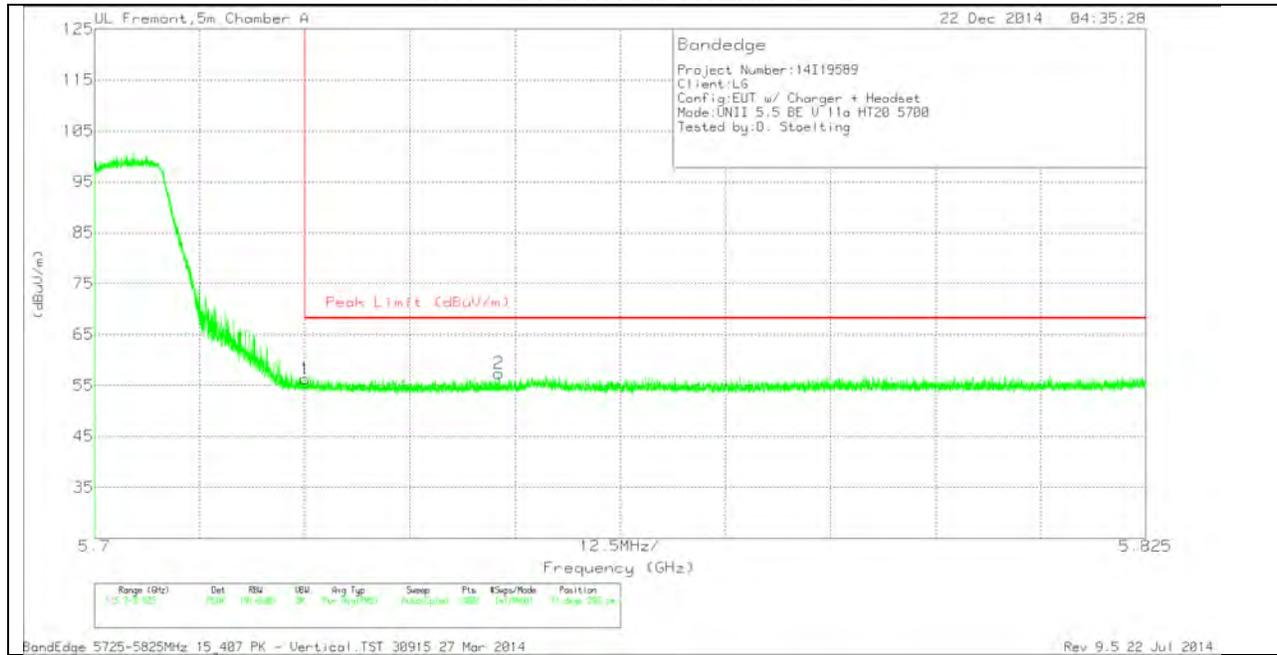
**HORIZONTAL PEAK AND AVERAGE PLOT**



**HORIZONTAL DATA**

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	39.55	PK	34.6	-19	0	55.15	68.2	-13.05	222	333	H
2	5.822	41.71	PK	34.8	-18.5	0	58.01	68.2	-10.19	222	333	H

**VERTICAL PEAK AND AVERAGE PLOT**

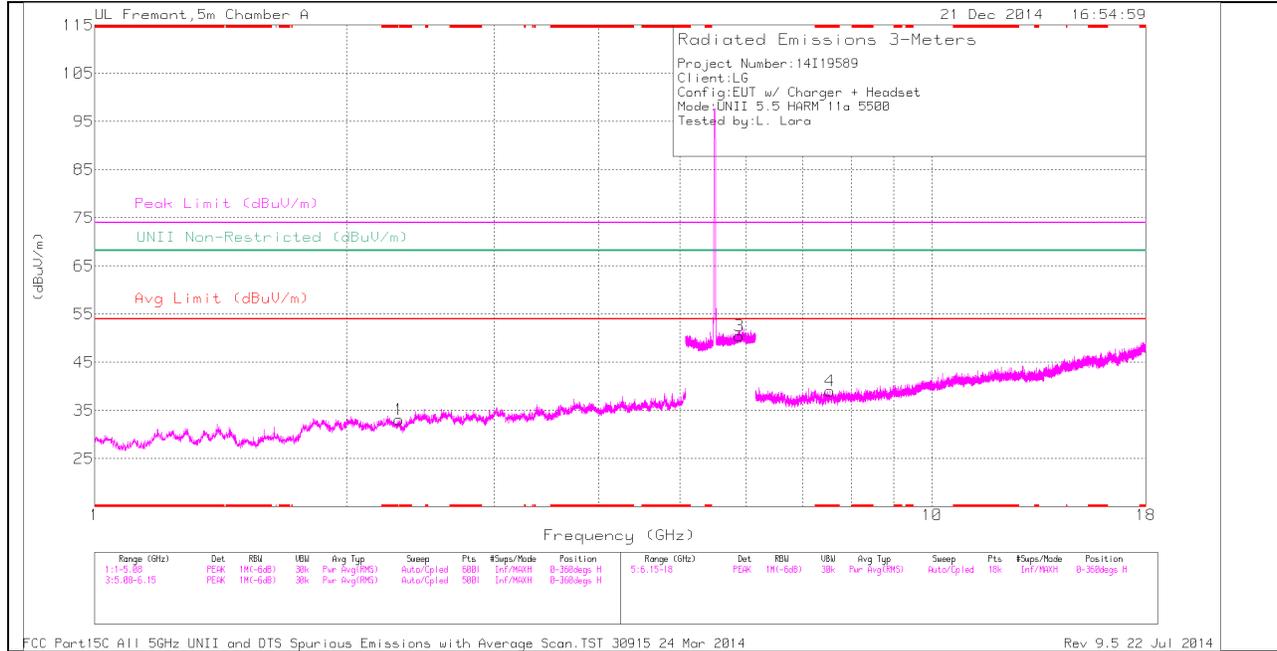


**VERTICAL DATA**

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	40.67	PK	34.6	-19	0	56.27	68.2	-11.93	71	296	V
2	5.748	41.82	PK	34.6	-19	0	57.42	68.2	-10.78	71	296	V

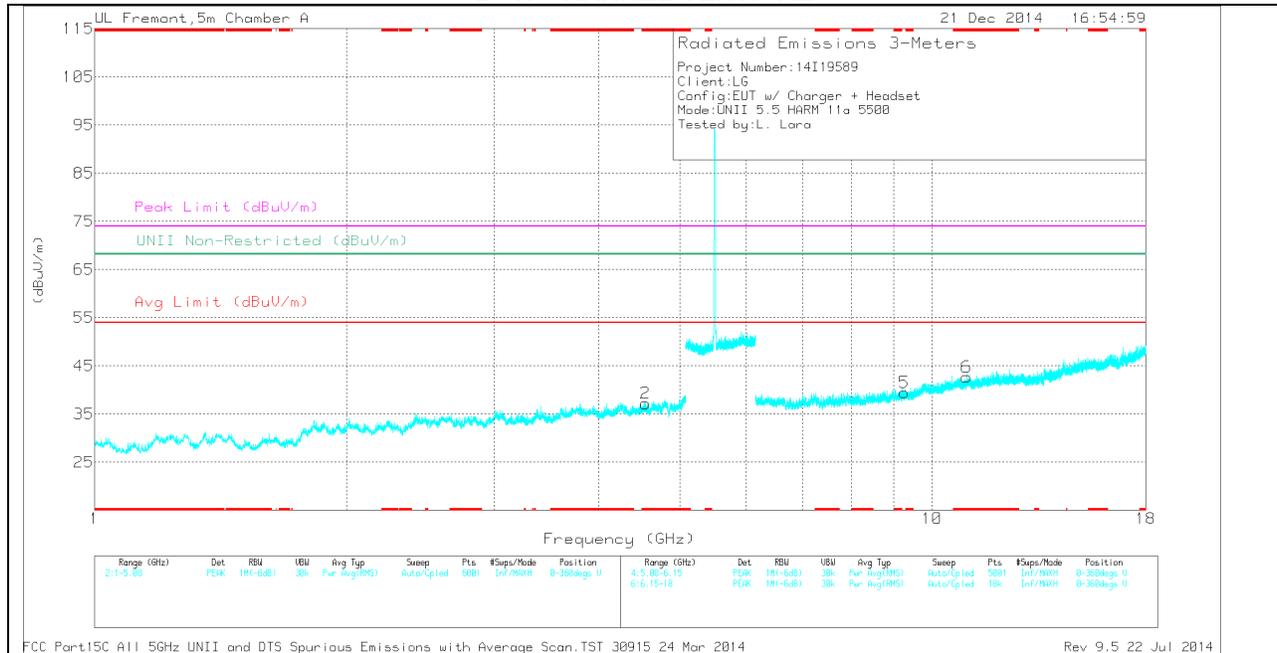
### HARMONICS AND SPURIOUS EMISSIONS

#### 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	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Ftrr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restrict ed (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 10.996	26.69	PK	37.7	-21.7	0	42.69	-	-	74	-31.31	-	-	0-360	100	V
1	* 2.31	33.63	PK	31.6	-32.1	0	33.13	-	-	74	-40.87	-	-	0-360	100	H
2	* 4.551	32.6	PK	33.9	-29.3	0	37.2	-	-	74	-36.8	-	-	0-360	201	V
4	* 7.547	28.38	PK	35.3	-24.6	0	39.08	-	-	74	-34.92	-	-	0-360	100	H
3	5.884	33.98	PK	35	-18.5	0	50.48	-	-	-	-	68.2	-17.72	0-360	100	H
5	9.26	27.14	PK	36.2	-23.9	0	39.44	-	-	-	-	68.2	-28.76	0-360	100	V

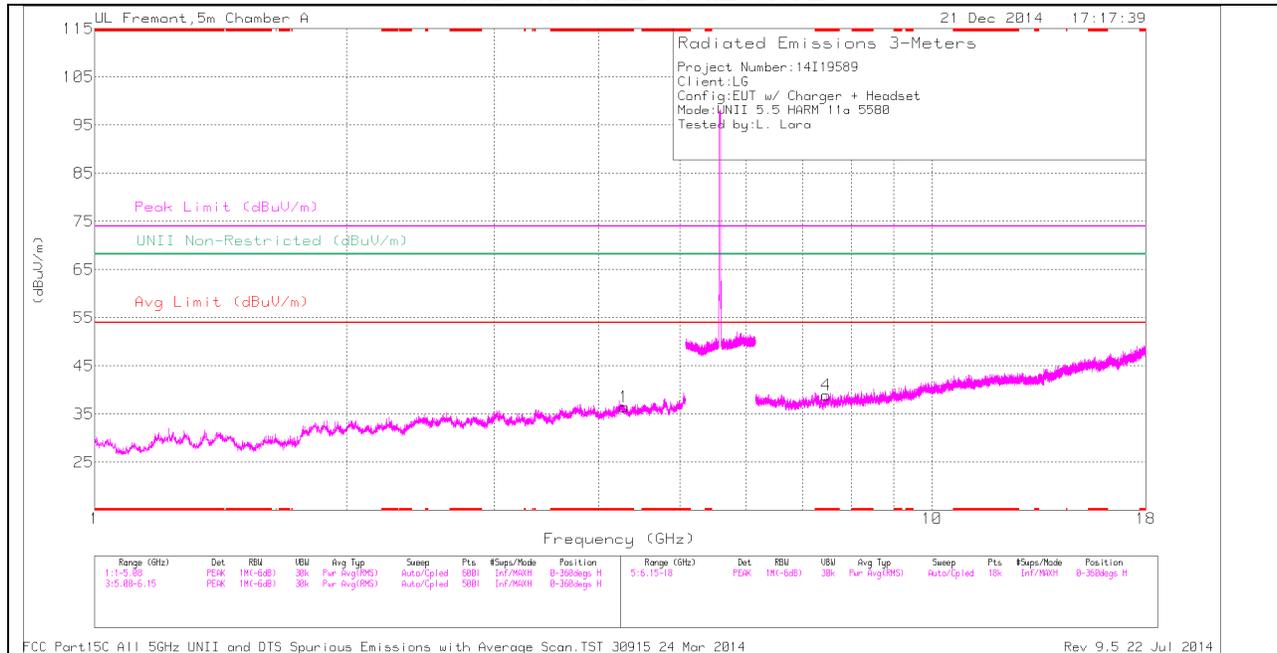
PK - Peak detector

*RADIATED EMISSIONS*

Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Ftrr/Pad (dB)	DC Corr (dB)	Correcte d 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
* 10.996	33.89	PK1	37.7	-21.7	0	49.89	-	-	74	-24.11	-	-	359	100	V
* 10.995	22.92	AD1	37.7	-21.7	.21	39.13	54	-14.87	-	-	-	-	359	100	V

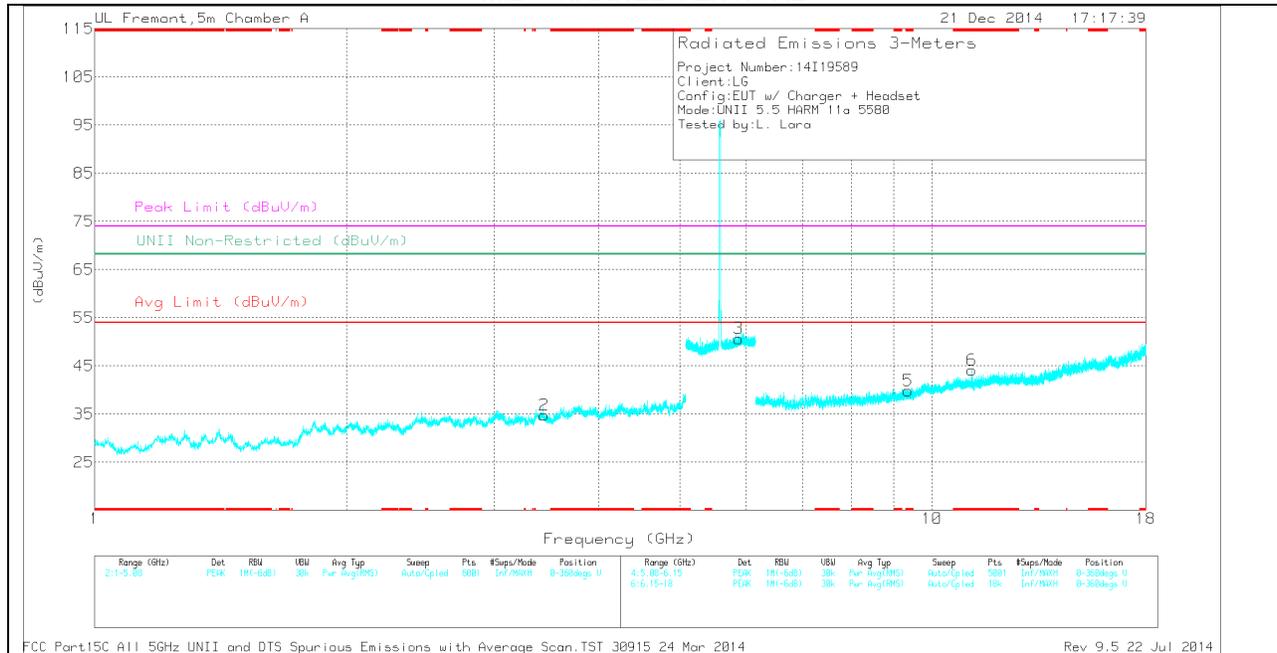
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**MID CHANNEL HORIZONTAL**



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	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/ Ftr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricte d (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.286	31.06	PK	34	-28.6	0	36.46	-	-	74	-37.54	-	-	0-360	100	H
4	* 7.474	29.12	PK	35.3	-25.5	0	38.92	-	-	74	-35.08	-	-	0-360	100	H
5	* 9.362	27.27	PK	36.3	-23.7	0	39.87	-	-	74	-34.13	-	-	0-360	201	V
6	* 11.16	28.19	PK	37.8	-21.9	0	44.09	-	-	74	-29.91	-	-	0-360	201	V
2	3.443	31.74	PK	33	-30	0	34.74	-	-	-	-	68.2	-33.46	0-360	201	V
3	5.875	34.4	PK	34.9	-18.6	0	50.7	-	-	-	-	68.2	-17.5	0-360	100	V

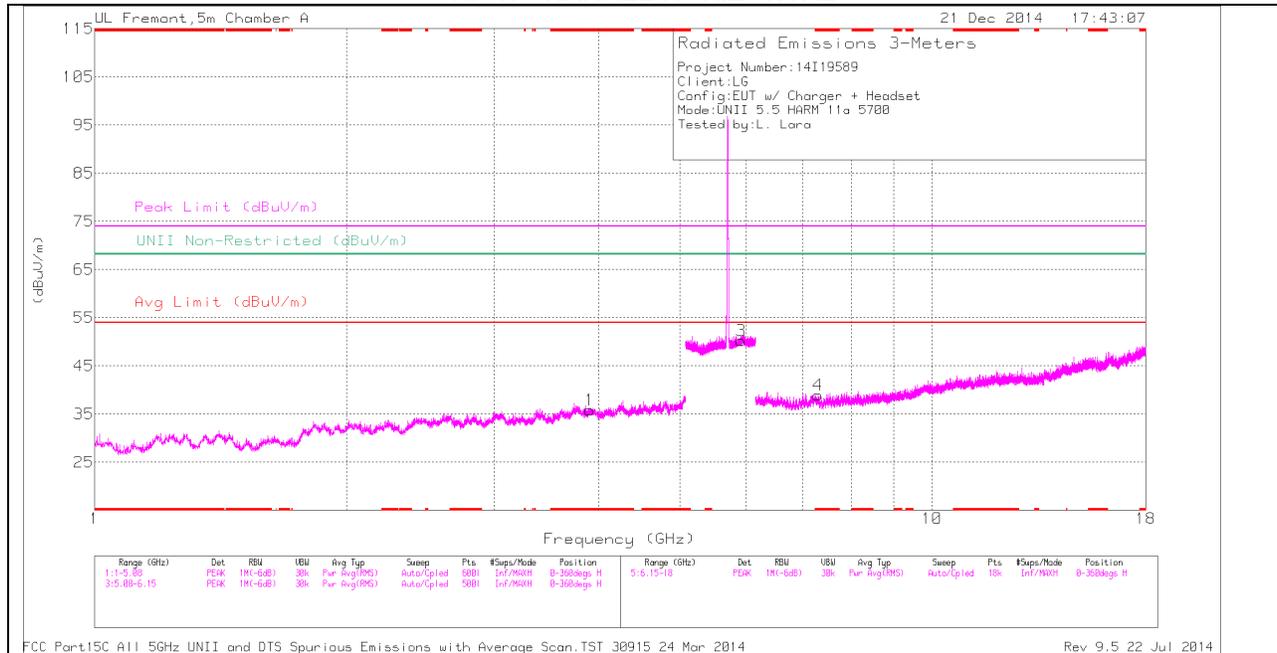
PK - Peak detector

*RADIATED EMISSIONS*

Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/ Ftr/Pad (dB)	DC Corr (dB)	Correcte d 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
* 11.16	34.86	PK1	37.8	-21.9	0	50.76	-	-	74	-23.24	-	-	360	202	V
* 11.16	23.98	AD1	37.8	-21.9	.21	40.09	54	-13.91	-	-	-	-	360	202	V

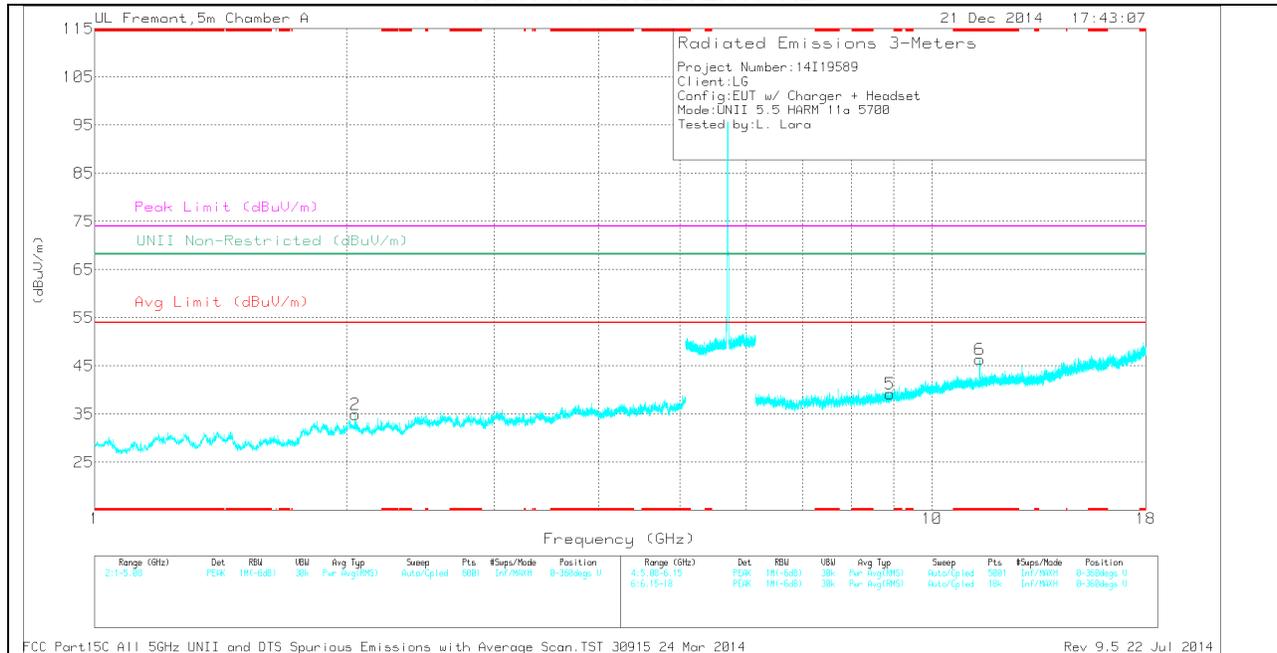
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**HIGH CHANNEL HORIZONTAL**



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 T136 (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)	UNI Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.904	31.96	PK	33.8	-29.9	0	35.86	-	-	74	-38.14	-	-	0-360	201	H
4	* 7.315	29.02	PK	35.2	-25.3	0	38.92	-	-	74	-35.08	-	-	0-360	100	H
6	* 11.4	30.1	PK	38.1	-21.9	0	46.3	-	-	74	-27.7	-	-	0-360	201	V
2	2.047	36.07	PK	31.9	-33	0	34.97	-	-	-	-	68.2	-33.23	0-360	201	V
3	5.917	33.57	PK	35.1	-18.4	0	50.27	-	-	-	-	68.2	-17.93	0-360	100	H
5	8.91	27.96	PK	35.8	-24.6	0	39.16	-	-	-	-	68.2	-29.04	0-360	201	V

PK - Peak detector

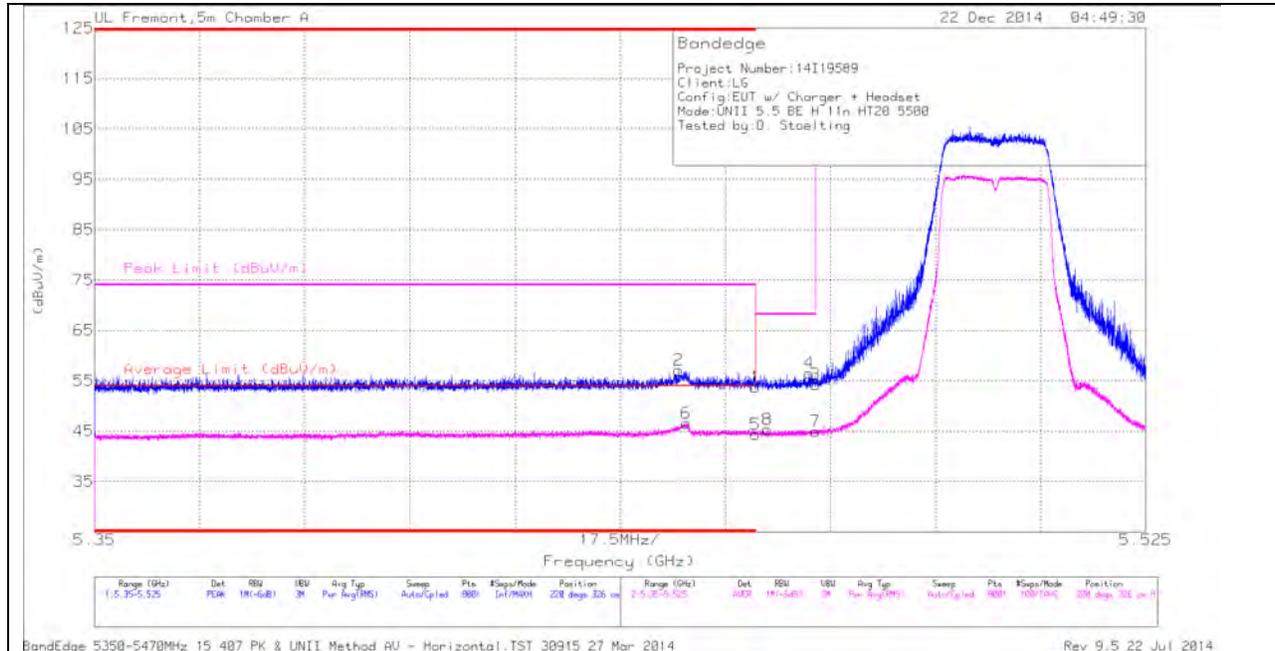
*RADIATED EMISSIONS*

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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)	UNI Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.4	36.45	PK1	38.1	-21.9	0	52.65	-	-	74	-21.35	-	-	25	200	V
* 11.4	29.75	AD1	38.1	-21.9	.21	46.16	54	-7.84	-	-	-	-	25	200	V

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

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

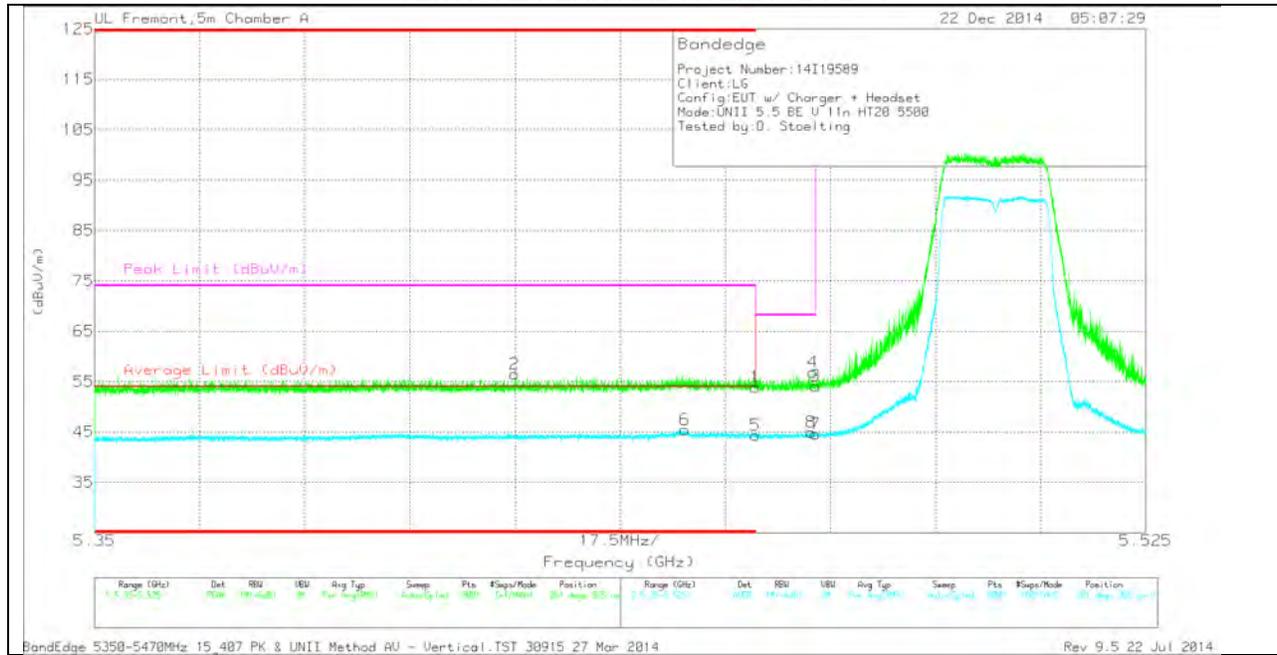
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.447	41.44	PK	34.4	-18.7	0	57.14	-	-	74	-16.86	220	326	H
6	* 5.448	30.61	RMS	34.4	-18.7	.24	46.55	54	-7.45	-	-	220	326	H
1	* 5.46	38.13	PK	34.4	-18.8	0	53.73	-	-	74	-20.27	220	326	H
5	* 5.46	28.47	RMS	34.4	-18.8	.24	44.31	54	-9.69	-	-	220	326	H
8	5.462	29.53	RMS	34.4	-18.9	.24	45.27	-	-	-	-	220	326	H
4	5.469	41	PK	34.4	-18.9	0	56.5	-	-	68.2	-11.7	220	326	H
3	5.47	38.75	PK	34.4	-18.9	0	54.25	-	-	68.2	-13.95	220	326	H
7	5.47	29.22	RMS	34.4	-18.9	.24	44.96	-	-	-	-	220	326	H

**VERTICAL PEAK AND AVERAGE PLOT**

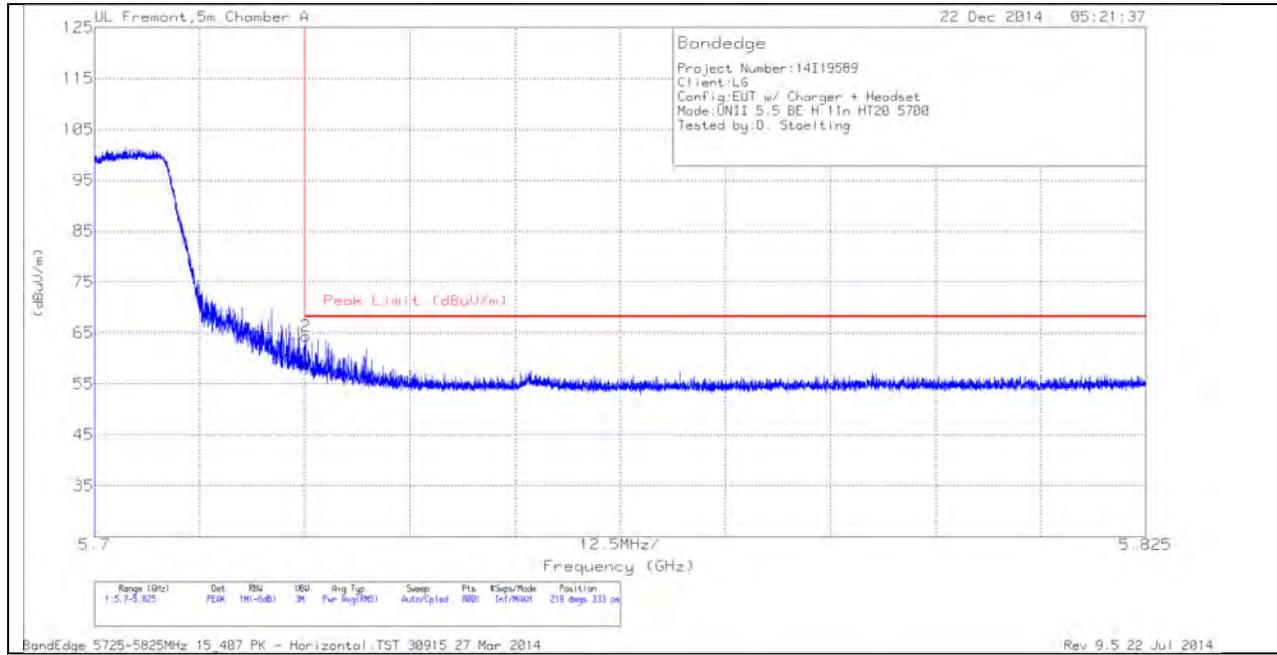


**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.42	40.75	PK	34.4	-18.7	56.45	-	-	74	-17.55	261	365	V
6	* 5.448	29.75	RMS	34.4	-18.7	45.45	54	-8.55	-	-	261	365	V
1	* 5.46	38.28	PK	34.4	-18.8	53.88	-	-	74	-20.12	261	365	V
5	* 5.46	28.72	RMS	34.4	-18.8	44.32	54	-9.68	-	-	261	365	V
8	5.469	29.41	RMS	34.4	-18.9	44.91	-	-	-	-	261	365	V
3	5.47	38.59	PK	34.4	-18.9	54.09	-	-	68.2	-14.11	261	365	V
4	5.47	41.37	PK	34.4	-18.9	56.87	-	-	68.2	-11.33	261	365	V
7	5.47	29.04	RMS	34.4	-18.9	44.54	-	-	-	-	261	365	V

**AUTHORIZED BANDEDGE (HIGH CHANNEL)**

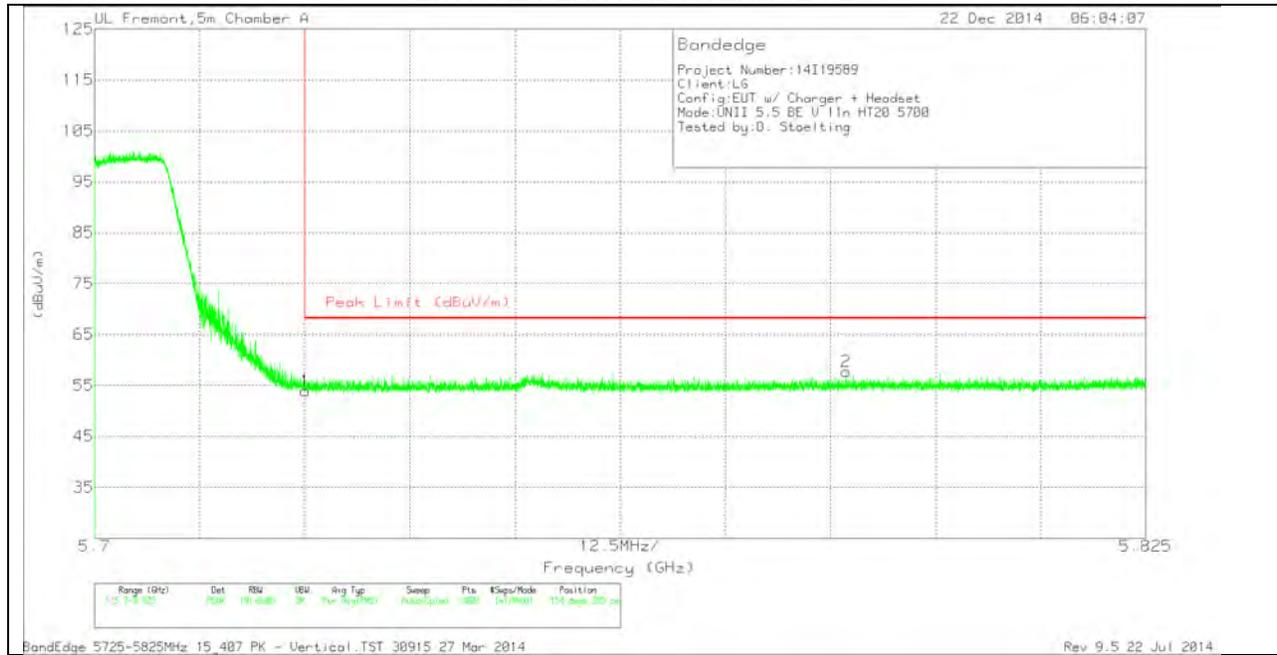
**HORIZONTAL PEAK AND AVERAGE PLOT**



**HORIZONTAL DATA**

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	43.37	PK	34.6	-19	0	58.97	68.2	-9.23	219	333	H
2	5.725	48.75	PK	34.6	-19	0	64.35	68.2	-3.85	219	333	H

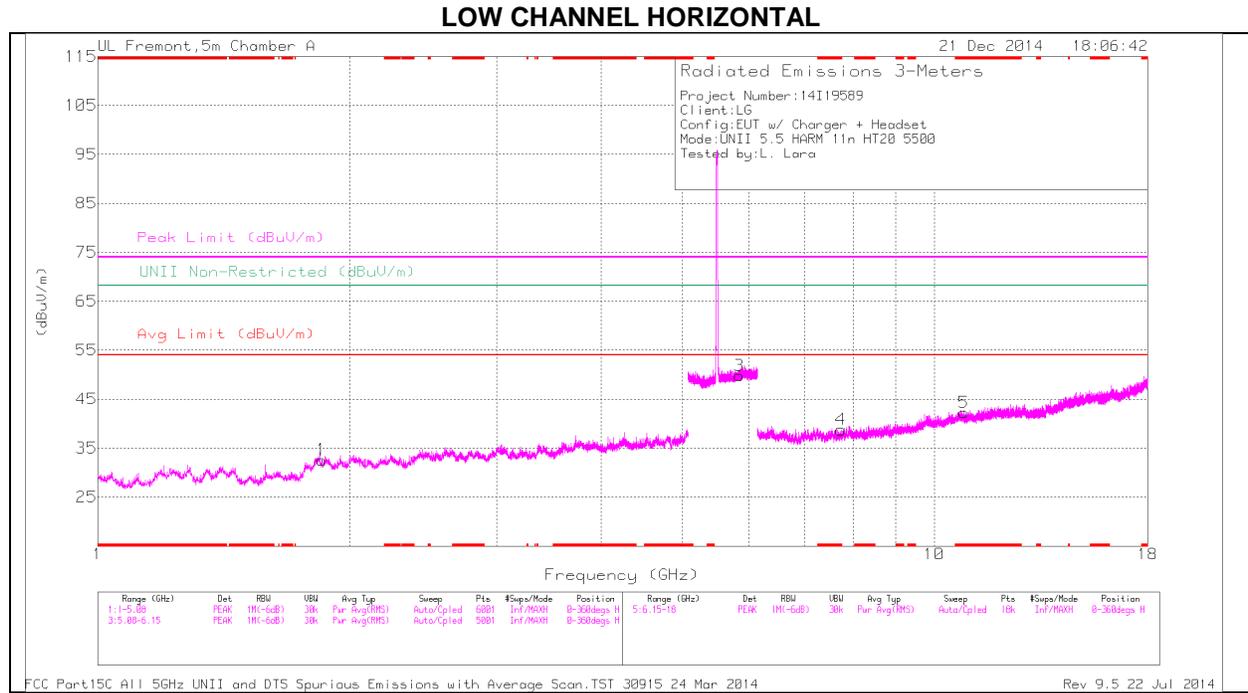
**VERTICAL PEAK AND AVERAGE PLOT**



**VERTICAL DATA**

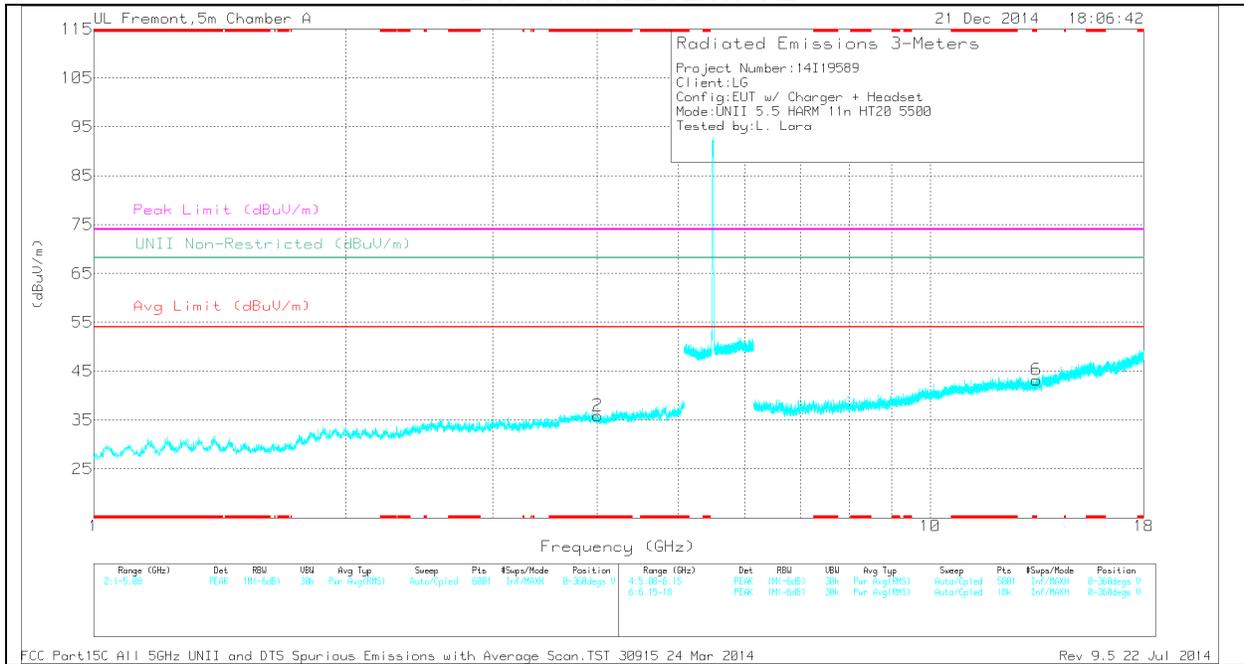
Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	38.3	PK	34.6	-19	0	53.9	68.2	-14.3	154	285	V
2	5.789	41.88	PK	34.7	-18.8	0	57.78	68.2	-10.42	154	285	V

### HARMONICS AND SPURIOUS EMISSIONS



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	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Ftrr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restrict ed (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.006	31.63	PK	33.7	-29.4	0	35.93	-	-	74	-38.07	-	-	0-360	201	V
4	* 7.737	29.17	PK	35.4	-25.8	0	38.77	-	-	74	-35.23	-	-	0-360	201	H
5	* 10.843	26.68	PK	37.9	-22.3	0	42.28	-	-	74	-31.72	-	-	0-360	100	H
6	* 13.395	26.23	PK	39	-22	0	43.23	-	-	74	-30.77	-	-	0-360	201	V
1	1.851	33.52	PK	31.1	-32	0	32.62	-	-	-	-	68.2	-35.58	0-360	100	H
3	5.848	33.62	PK	34.9	-18.7	0	49.82	-	-	-	-	68.2	-18.38	0-360	201	H

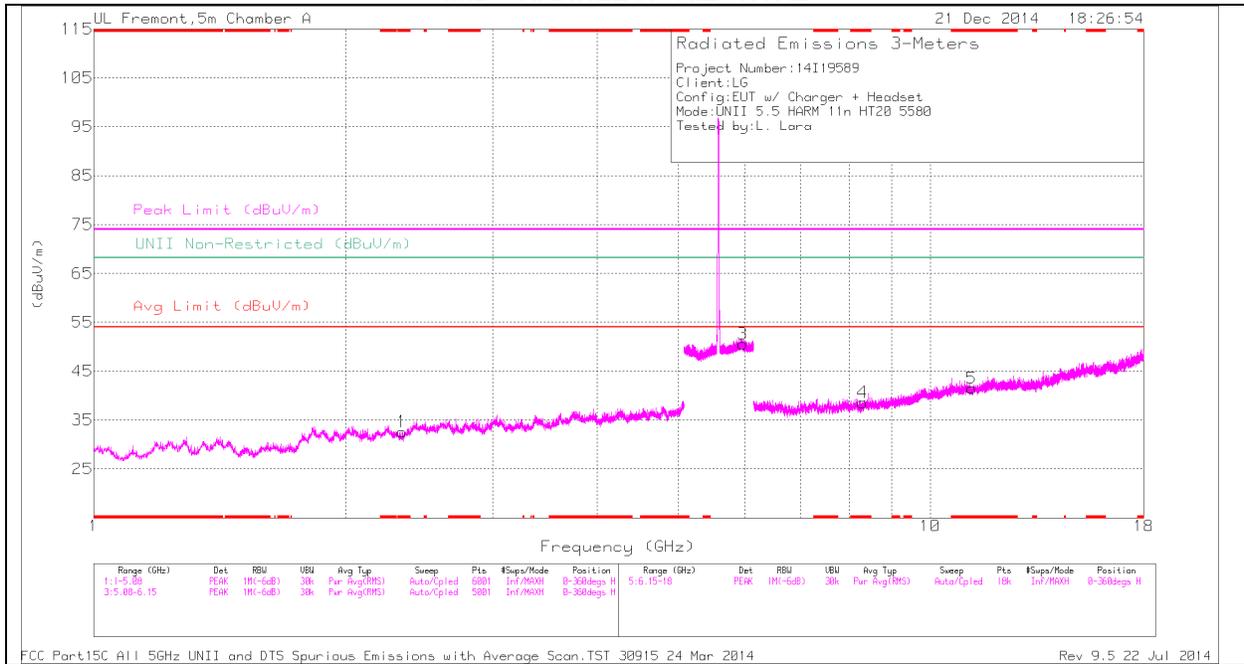
PK - Peak detector

*RADIATED EMISSIONS*

Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Ftrr/Pad (dB)	DC Corr (dB)	Correcte d 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
* 10.843	33.55	PK1	37.9	-22.3	0	49.15	-	-	74	-24.85	-	-	1	100	H
* 10.842	22.93	AD1	37.9	-22.3	.24	38.77	54	-15.23	-	-	-	-	1	100	H

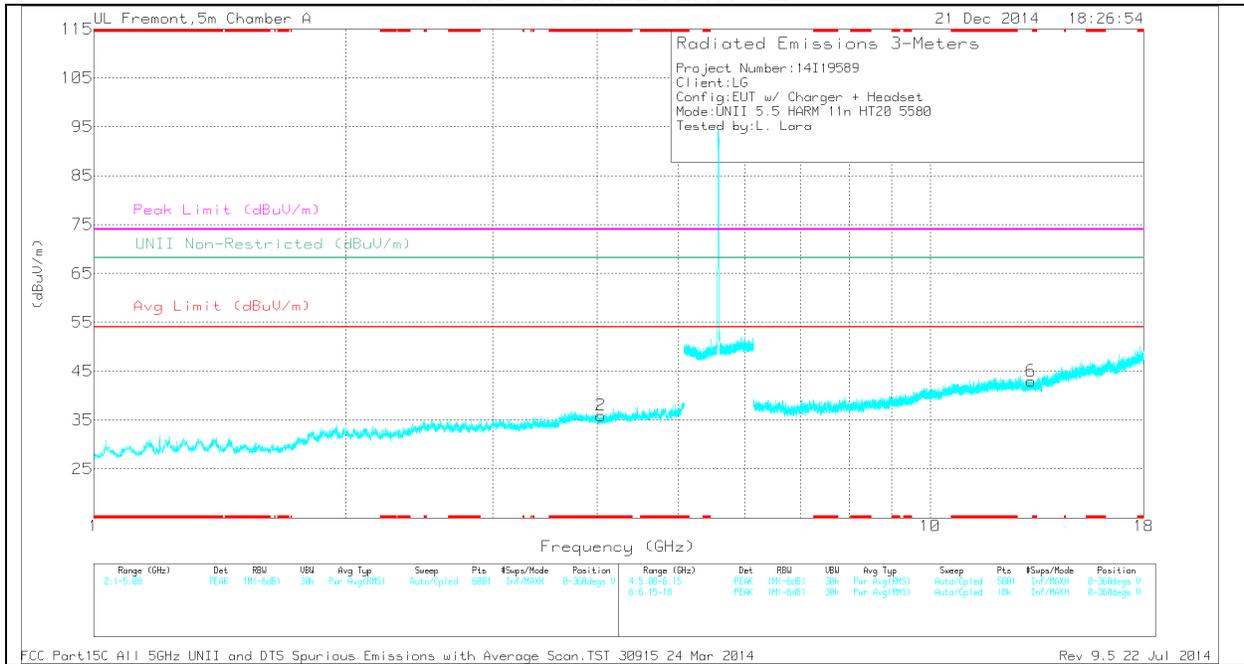
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**MID CHANNEL HORIZONTAL**



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	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/CbI/ Ftr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restrict ed (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.337	32.99	PK	31.8	-32.2	0	32.59	-	-	74	-41.41	-	-	0-360	201	H
2	* 4.042	31.45	PK	33.8	-29.3	0	35.95	-	-	74	-38.05	-	-	0-360	201	V
4	* 8.303	28.3	PK	35.6	-25.3	0	38.6	-	-	74	-35.4	-	-	0-360	201	H
5	* 11.217	25.52	PK	37.8	-21.8	0	41.52	-	-	74	-32.48	-	-	0-360	201	H
3	5.971	33.88	PK	35.2	-18.5	0	50.58	-	-	-	-	68.2	-17.62	0-360	201	H
6	13.208	26.17	PK	39.1	-22.3	0	42.97	-	-	-	-	68.2	-25.23	0-360	100	V

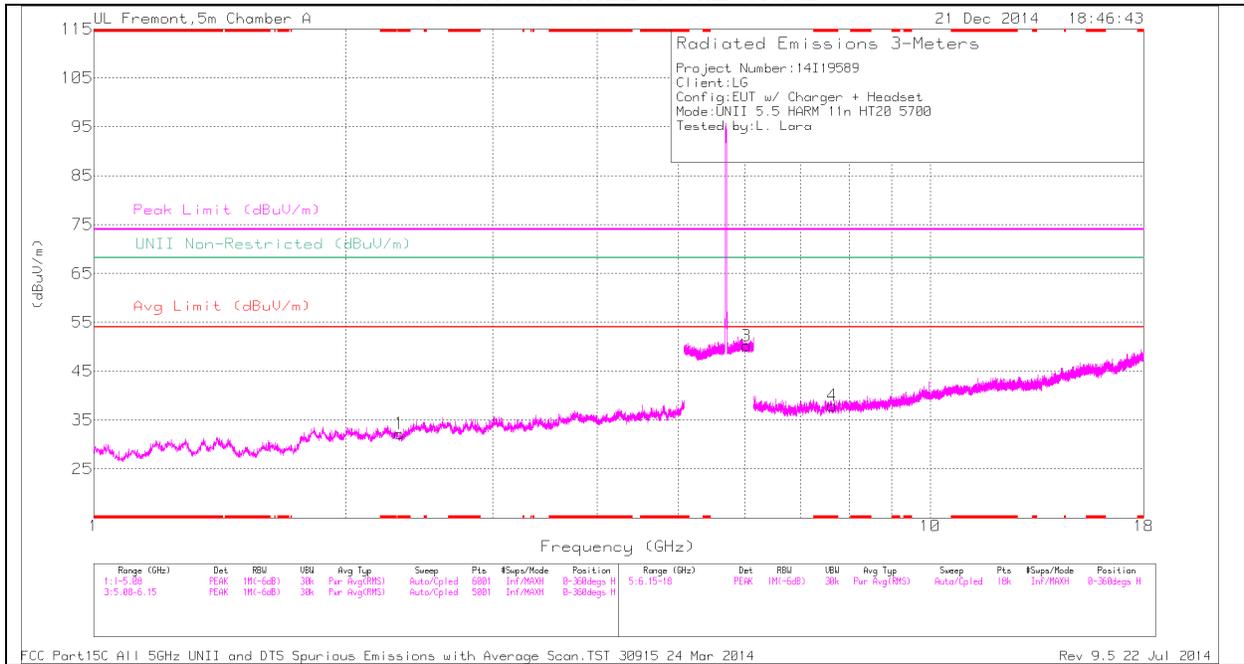
PK - Peak detector

*RADIATED EMISSIONS*

Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/CbI/ Ftr/Pad (dB)	DC Corr (dB)	Correcte d 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
* 11.219	33.2	PK1	37.8	-21.8	0	49.2	-	-	74	-24.8	-	-	1	202	H
* 11.215	22.38	AD1	37.8	-21.8	.24	38.62	54	-15.38	-	-	-	-	1	202	H

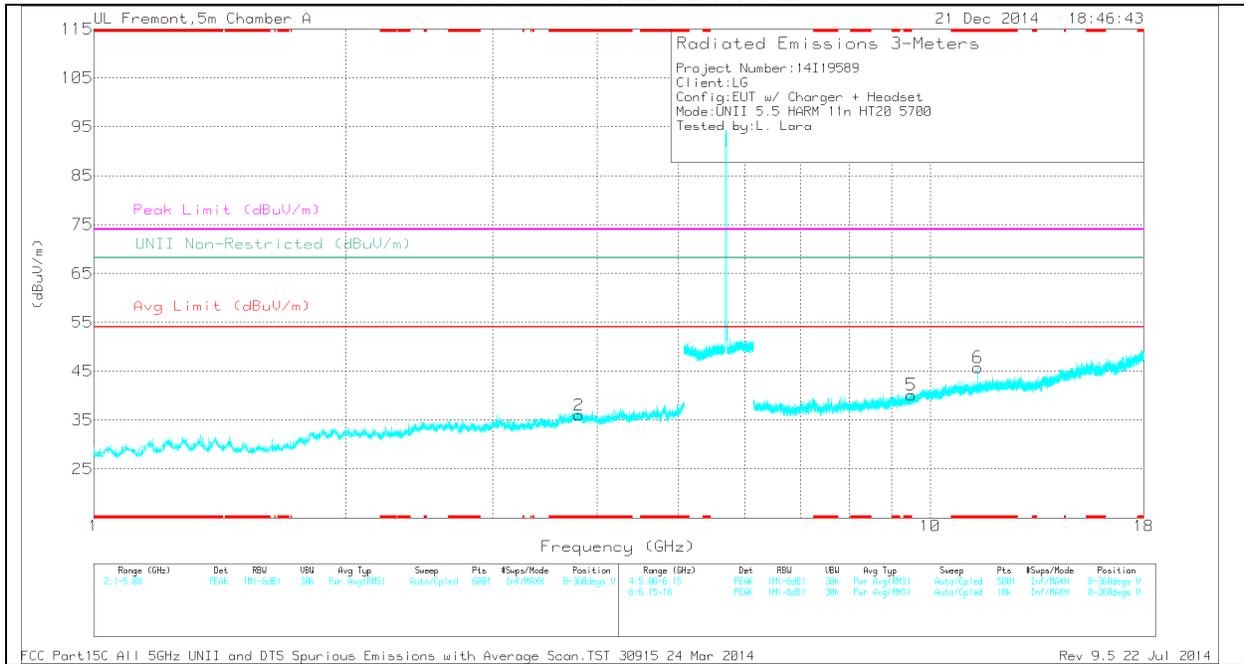
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**HIGH CHANNEL HORIZONTAL**



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	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Ftrr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restrict ed (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.321	32.83	PK	31.6	-32.2	0	32.23	-	-	74	-41.77	-	-	0-360	201	H
2	* 3.805	31.92	PK	33.6	-29.5	0	36.02	-	-	74	-37.98	-	-	0-360	201	V
4	* 7.64	28.35	PK	35.4	-25.8	0	37.95	-	-	74	-36.05	-	-	0-360	100	H
5	* 9.494	27.43	PK	36.6	-23.9	0	40.13	-	-	74	-33.87	-	-	0-360	201	V
6	*	29.54	PK	38.1	-21.9	0	45.74	-	-	74	-28.26	-	-	0-360	201	V
	11.399															
3	6.033	33.4	PK	35.3	-18.5	0	50.2	-	-	-	-	68.2	-18	0-360	100	H

PK - Peak detector

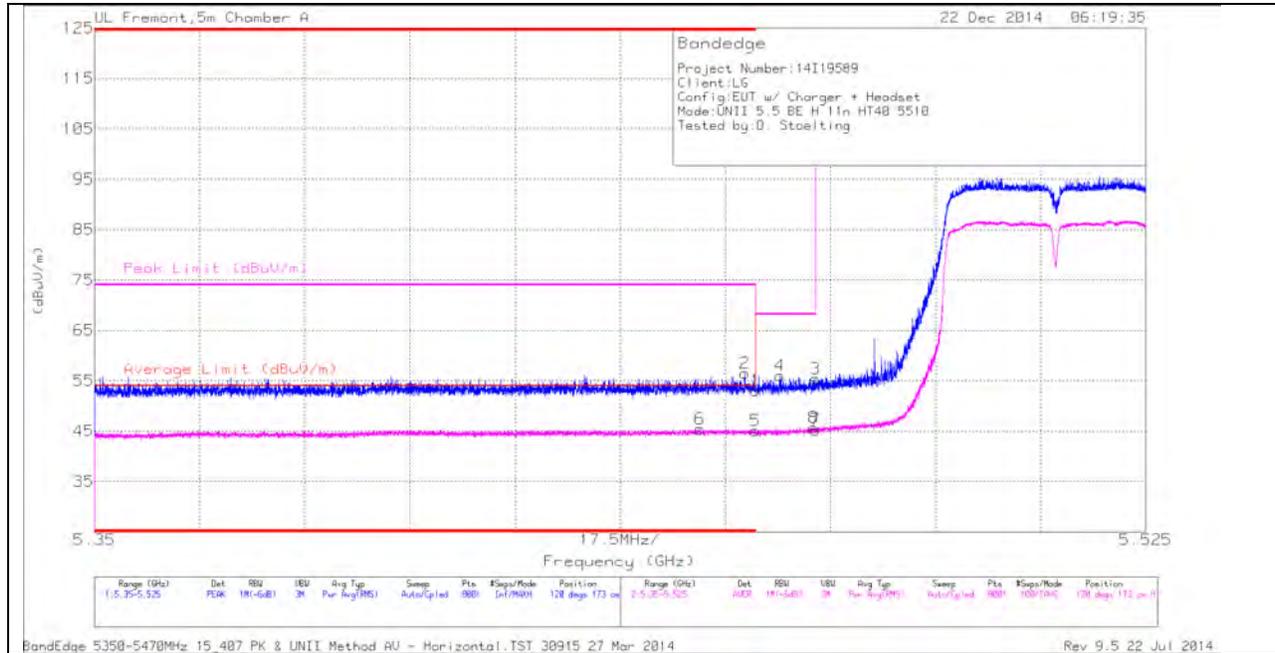
*RADIATED EMISSIONS*

Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Ftrr/Pad (dB)	DC Corr (dB)	Correcte d 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
* 11.4	35.85	PK1	38.1	-21.9	0	52.05	-	-	74	-21.95	-	-	27	198	V
* 11.4	28.4	AD1	38.1	-21.9	.24	44.84	54	-9.16	-	-	-	-	27	198	V

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

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

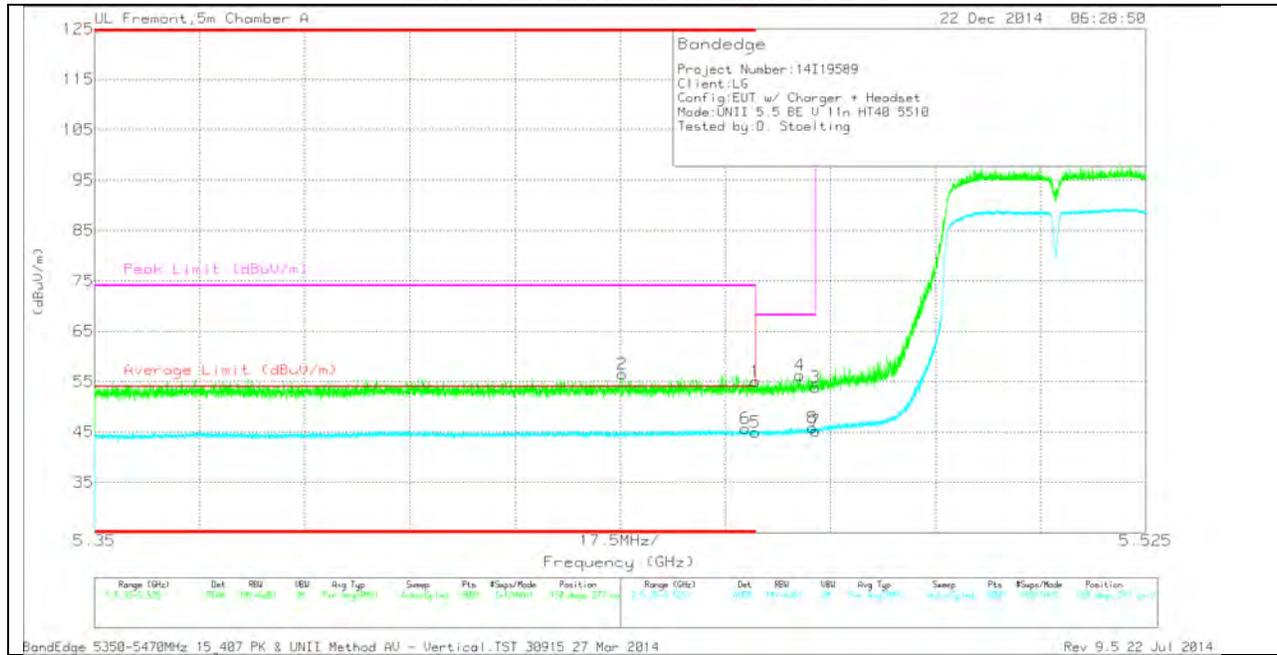
HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 5.451	29.22	RMS	34.4	-18.7	.47	45.39	54	-8.61	-	-	120	173	H
2	* 5.458	40.86	PK	34.4	-18.8	0	56.46	-	-	74	-17.54	120	173	H
1	* 5.46	37.47	PK	34.4	-18.8	0	53.07	-	-	74	-20.93	120	173	H
5	* 5.46	29.03	RMS	34.4	-18.8	.47	45.1	54	-8.9	-	-	120	173	H
4	5.464	40.51	PK	34.4	-18.9	0	56.01	-	-	68.2	-12.19	120	173	H
3	5.47	39.93	PK	34.4	-18.9	0	55.43	-	-	68.2	-12.77	120	173	H
7	5.47	29.29	RMS	34.4	-18.9	.47	45.26	-	-	-	-	120	173	H
8	5.47	29.73	RMS	34.4	-18.9	.47	45.7	-	-	-	-	120	173	H

**VERTICAL PEAK AND AVERAGE PLOT**

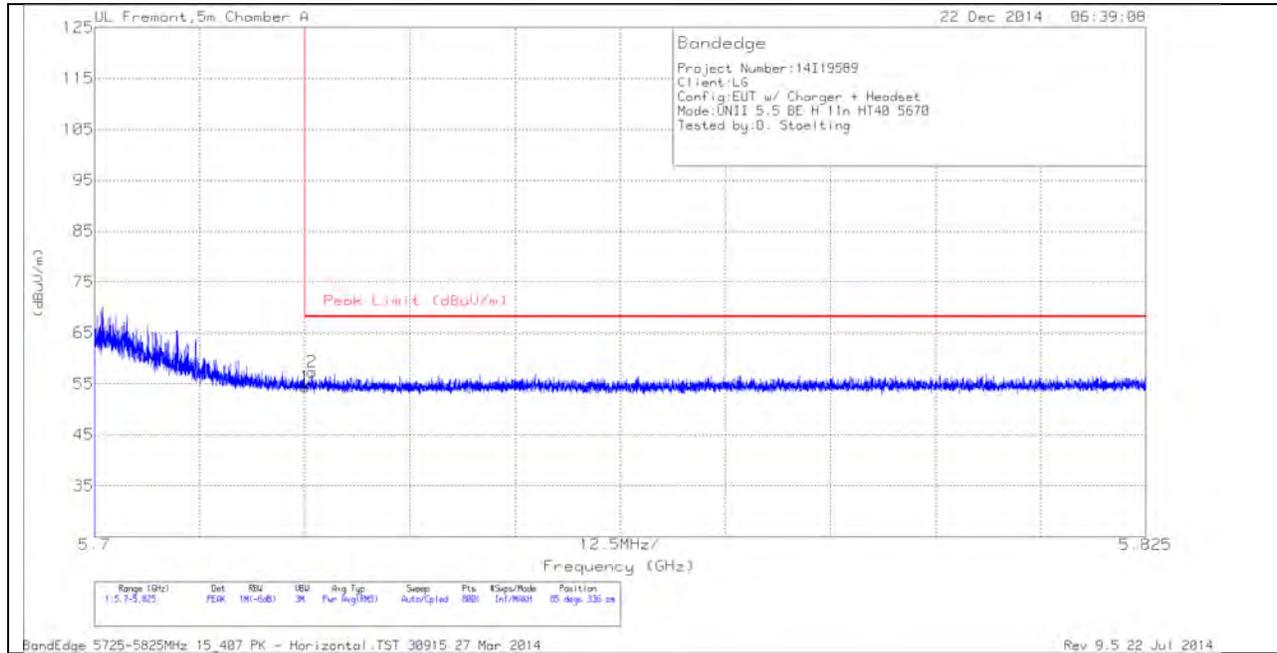


**VERTICAL DATA**

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.438	40.9	PK	34.4	-18.8	0	56.5	-	-	74	-17.5	150	277	V
6	* 5.458	29.62	RMS	34.4	-18.8	.47	45.69	54	-8.31	-	-	150	277	V
1	* 5.46	39.41	PK	34.4	-18.8	0	55.01	-	-	74	-18.99	150	277	V
5	* 5.46	28.92	RMS	34.4	-18.8	.47	44.99	54	-9.01	-	-	150	277	V
4	5.467	40.81	PK	34.4	-18.9	0	56.31	-	-	68.2	-11.89	150	277	V
3	5.47	38.35	PK	34.4	-18.9	0	53.85	-	-	68.2	-14.35	150	277	V
7	5.47	29.21	RMS	34.4	-18.9	.47	45.18	-	-	-	-	150	277	V
8	5.47	29.9	RMS	34.4	-18.9	.47	45.87	-	-	-	-	150	277	V

### AUTHORIZED BANDEGE (HIGH CHANNEL)

#### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	38.86	PK	34.6	-19	0	54.46	68.2	-13.74	85	336	H
2	5.726	41.74	PK	34.6	-19	0	57.34	68.2	-10.86	85	336	H