



**FCC CFR47 PART 15 SUBPART C**

**CERTIFICATION TEST REPORT**

**FOR**

**GSM/WCDMA/LTE PHONE WITH BT & DTS WLAN b/g/n**

**MODEL NUMBER: LG-L61AL, L61AL, LGL61AL**

**FCC ID: ZNFL61AL**

**REPORT NUMBER: 15I22343-E4V2**

**ISSUE DATE: 12/28/2015**

*Prepared for*

**LG ELECTRONICS MOBILECOMM U.S.A., INC**

**1000 SYLVAN AVENUE**

**ENGLEWOOD CLIFFS,**

**NEW JERSEY, 07632, U.S.A**

*Prepared by*

**UL VERIFICATION SERVICES INC.**

**47173 BENICIA STREET**

**FREMONT, CA 94538, U.S.A.**

**TEL: (510) 771-1000**

**FAX: (510) 661-0888**



**NVLAP LAB CODE 200065-0**

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Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V1	12/21/2015	Initial Issue	D. CORONIA
V2	12/28/2015	Updated Section 8.2.1, 8.3.1 & 8.4.1/2/3	D. CORONIA

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# 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** LG ELECTRONICS MOBILECOMM U.S.A., INC.  
**EUT DESCRIPTION:** GSM/WCDMA/LTE PHONE WITH BT & DTS WLAN b/g/n  
**MODEL:** LG-L61AL, L61AL, LGL61AL  
**SERIAL NUMBER:** 510KP AE000152, 510KPFX00155, 510KPJP00156, 510KPBF00157  
**DATE TESTED:** NOVEMBER 30 - DECEMBER 7, 2015

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

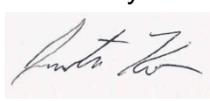
**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released  
For UL Verification Services Inc. By:



DAN CORONIA  
CONSUMER TECHNOLOGY DIVISION  
WISE PROJECT LEAD  
UL VERIFICATION SERVICES INC

Tested By:



JUSTIN KO  
CONSUMER TECHNOLOGY DIVISION  
WISE LAB ENGINEER  
UL VERIFICATION SERVICES INC



PENG ZHANG  
CONSUMER TECHNOLOGY DIVISION  
WISE OPERATION MANAGER  
UL VERIFICATION SERVICES INC

## TEST METHODOLOGY

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

## 2. 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 type="checkbox"/> Chamber A	<input type="checkbox"/> Chamber D
<input checked="" type="checkbox"/> Chamber B	<input type="checkbox"/> Chamber E
<input type="checkbox"/> Chamber C	<input type="checkbox"/> Chamber F
	<input type="checkbox"/> Chamber G
	<input type="checkbox"/> Chamber H

The above test sites and facilities are covered under FCC Test Firm Registration # 208313.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0.

Chambers A through H are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-8, respectively.

## 3. CALIBRATION AND UNCERTAINTY

### 3.1. 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.

### 3.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

### 3.3. 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%.

## 4. EQUIPMENT UNDER TEST

### 4.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE PHONE WITH BT & DTS WLAN b/g/n.

### 4.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2462	802.11b	16.00	39.81
2412 - 2462	802.11g	13.00	19.95
2412 - 2462	802.11n HT20	12.00	15.85

### 4.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of 0.24 dBi.

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

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

The fundamental of the EUT was investigated in three orthogonal orientations X, Y, Z it was determined that X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X orientation.

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

802.11b mode: 1 Mbps

802.11g mode: 6 Mbps

802.11n HT20mode: MCS0

**4.5. DESCRIPTION OF TEST SETUP**  
**SUPPORT EQUIPMENT**

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

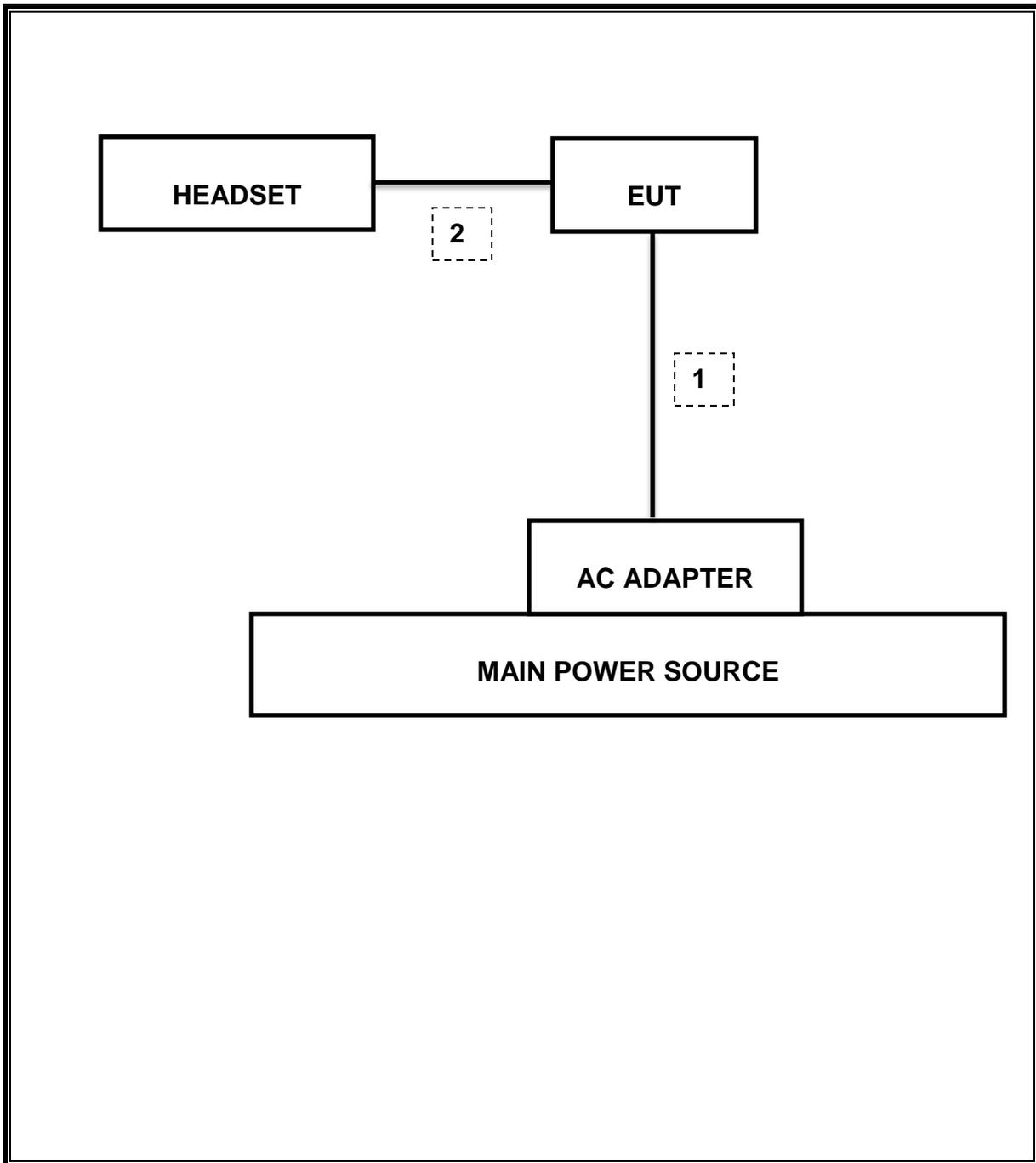
**I/O CABLES**

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	1m	N/A

**TEST SETUP**

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

**SETUP DIAGRAM FOR TESTS**



## 5. 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	T Number	Cal Due
Antenna, Biconolog, 30MHz-1 GHz	Sunol Sciences	JB1	130	09/01/16
Antenna, Biconolog, 30MHz-1 GHz	Sunol Sciences	JB1	477	06/10/16
Antenna, Horn, 18GHz	EMCO	3115	59	11/18/16
Antenna, Horn, 18GHz	ETS Lindgren	3117	345	03/03/16
Antenna, Horn, 18GHz	ETS Lindgren	3117	136	03/03/16
Antenna, Horn, 18GHz	ETS Lindgren	3117	863	04/10/16
Antenna, Horn, 26.5 GHz	ARA	MWH-1826/B	447	05/12/16
RF Pre-amplifier, 1GHz - 18GHz	Miteq	NSP4000-SP2	88	04/07/16
RF Pre-amplifier, 1GHz - 26.5GHz	HP	8449B	404	06/29/16
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	123	10/22/16
Spectrum Analyzer, PXA, 3 Hz to 44 GHz	Keysight	N9030A	908	03/03/16
Spectrum Analyzer, PXA, 3 Hz to 44 GHz	Keysight	N9030A	907	01/07/16
EMI Test Receiver, 9 KHz to 7 GHz	Rohde & Schwarz	ECSI7	284	09/10/16
Peak Power Meter	Agilent / HP	E4416A	84	01/26/16
Peak / Average Power Sensor	Keysight	E9327A	117	03/09/16
LISN, 30 MHz	FCC	50/250-25-2	24	01/16/16
Reject Filter, 2.4GHz	Micro-Tronics	BRM50702	160	CNR
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	417	05/04/16
High Pass Filter 6GHz	Micro-Tronics	HPS17542	893	04/25/16
High Pass Filter 3GHz	Micro-Tronics	HPS17543	898	04/25/16

Test Software List			
Description	Manufacturer	Model	Version
Radiated Software	UL	UL EMC	Ver 9.5, June 24, 2015
Conducted Software	UL	UL EMC	Ver 9.5, May 26, 2015
CLT Software	UL	UL RF	Ver 1.0, Feb 2, 2015
Antenna Port Software	UL	UL RF	Ver 3.7, Nov 12, 2015

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## 6. MEASUREMENT METHODS

On Time and Duty Cycle: KDB 558074 D01 v03r03, Section 6.0.

6 dB BW: KDB 558074 D01 v03r03, Section 8.1.

99% BW: ANSI C63.10-2013, Section 6.9.3.

Output Power: KDB 558074 D01 v03r03, Section 9.2.3.2.

Power Spectral Density: KDB 558074 D01 v03r03, Section 10.3.

Out-of-band emissions in non-restricted bands: KDB 558074 D01 v03r03, Section 11.0.

Out-of-band emissions in restricted bands: KDB 558074 D01 v03r03, Section 12.1.

AC Power Line Conducted Emissions: ANSI C63.10-2013 Section 6.2.

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

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

## 7. SUMMARY TABLE

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.247 (a)(2)	RSS-247 5.2.1	Occupied Band width (6dB)	>500KHz	Conducted	Pass	7.128 MHz
2.1051, 15.247 (d)	RSS-247 5.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	-31.48 dBm
15.247	RSS-247 5.4.4	TX conducted output power	<30dBm		Pass	16 dBm
15.247	RSS-247 5.2.2	PSD	<8dBm		Pass	-4.919 dBm
15.207 (a)	RSS-GEN 8.8	AC Power Line conducted emissions	Section 10	Radiated	Pass	45.81 dBuV(AV)
15.205, 15.209	RSS-GEN 8.9/7	Radiated Spurious Emission	< 54dBuV/m		Pass	42.65 dBuV/m

## 8. ANTENNA PORT TEST RESULTS

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

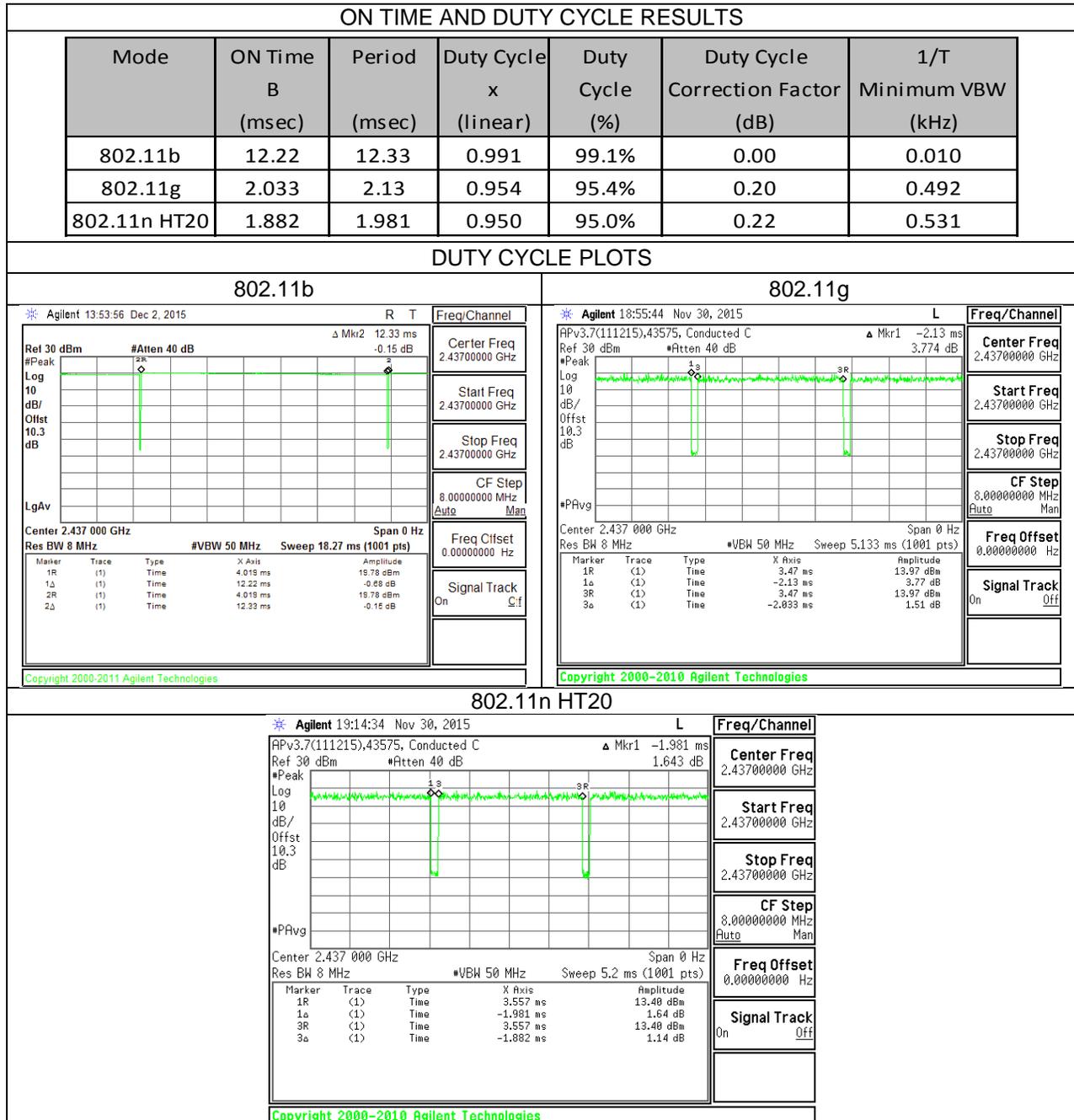
#### LIMITS

None; for reporting purposes only

#### PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method

### 8.1.1. ON TIME AND DUTY CYCLE RESULTS



## **8.2. 6 dB BANDWIDTH LIMITS**

FCC §15.247 (a) (2)

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

### **TEST PROCEDURE**

Reference to KDB 558074 D01 DTS Meas Guidance v03r03: 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**

### 8.2.1. 6 dB BANDWIDTH PLOTS AND TABLE

802.11b TEST RESULT TABLE			MID CHANNEL													
<table border="1"> <thead> <tr> <th>Channel</th> <th>Frequency (MHz)</th> <th>6 dB Bandwidth (MHz)</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>2412</td> <td>7.128</td> </tr> <tr> <td>Middle</td> <td>2437</td> <td>7.596</td> </tr> <tr> <td>High</td> <td>2462</td> <td>7.150</td> </tr> </tbody> </table>			Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Low	2412	7.128	Middle	2437	7.596	High	2462	7.150		
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)														
Low	2412	7.128														
Middle	2437	7.596														
High	2462	7.150														
<table border="1"> <thead> <tr> <th>Channel</th> <th>Frequency (MHz)</th> <th>6 dB Bandwidth (MHz)</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>2412</td> <td>16.425</td> </tr> <tr> <td>Middle</td> <td>2437</td> <td>16.400</td> </tr> <tr> <td>High</td> <td>2462</td> <td>16.400</td> </tr> </tbody> </table>			Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Low	2412	16.425	Middle	2437	16.400	High	2462	16.400		
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)														
Low	2412	16.425														
Middle	2437	16.400														
High	2462	16.400														
<table border="1"> <thead> <tr> <th>Channel</th> <th>Frequency (MHz)</th> <th>6 dB Bandwidth (MHz)</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>2412</td> <td>17.577</td> </tr> <tr> <td>Middle</td> <td>2437</td> <td>17.604</td> </tr> <tr> <td>High</td> <td>2462</td> <td>17.631</td> </tr> </tbody> </table>			Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Low	2412	17.577	Middle	2437	17.604	High	2462	17.631		
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)														
Low	2412	17.577														
Middle	2437	17.604														
High	2462	17.631														

NOTE: --

**8.3. 99% BANDWIDTH  
LIMITS**

None; for reporting purposes only.

**RESULTS**

### 8.3.1. 99% BANDWIDTH PLOTS AND TABLE

802.11b TEST RESULT TABLE			MID CHANNEL													
<table border="1"> <thead> <tr> <th>Channel</th> <th>Frequency (MHz)</th> <th>99% Bandwidth (MHz)</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>2412</td> <td>12.475</td> </tr> <tr> <td>Middle</td> <td>2437</td> <td>12.750</td> </tr> <tr> <td>High</td> <td>2462</td> <td>12.507</td> </tr> </tbody> </table>			Channel	Frequency (MHz)	99% Bandwidth (MHz)	Low	2412	12.475	Middle	2437	12.750	High	2462	12.507	<p>Agilent 18:33:36 Nov 30, 2015 L</p> <p>Ch Freq 2.437 GHz Trig Free</p> <p>Occupied Bandwidth Averages: 100</p> <p>APv3.7(111215),43575, Conducted C                  Ref 20 dBm #Atten 30 dB</p> <p>Center 2.437 00 GHz Span 40 MHz                  #Res BW 200 kHz #VBW 620 kHz Sweep 3.067 ms (1001 pts)</p> <p>Occupied Bandwidth 12.7501 MHz Occ BW % Pwr 99.00 %                  x dB -26.00 dB</p> <p>Transmit Freq Error 96.137 kHz                  x dB Bandwidth 16.085 MHz*</p> <p>Copyright 2000-2010 Agilent Technologies</p>	
Channel	Frequency (MHz)	99% Bandwidth (MHz)														
Low	2412	12.475														
Middle	2437	12.750														
High	2462	12.507														
802.11g TEST RESULT TABLE			MID CHANNEL													
<table border="1"> <thead> <tr> <th>Channel</th> <th>Frequency (MHz)</th> <th>99% Bandwidth (MHz)</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>2412</td> <td>16.474</td> </tr> <tr> <td>Middle</td> <td>2437</td> <td>16.519</td> </tr> <tr> <td>High</td> <td>2462</td> <td>16.520</td> </tr> </tbody> </table>			Channel	Frequency (MHz)	99% Bandwidth (MHz)	Low	2412	16.474	Middle	2437	16.519	High	2462	16.520	<p>Agilent 18:52:07 Nov 30, 2015 L</p> <p>Ch Freq 2.437 GHz Trig Free</p> <p>Occupied Bandwidth Averages: 100</p> <p>APv3.7(111215),43575, Conducted C                  Ref 20 dBm #Atten 30 dB</p> <p>Center 2.437 00 GHz Span 40 MHz                  #Res BW 330 kHz #VBW 1 MHz Sweep 1.133 ms (1001 pts)</p> <p>Occupied Bandwidth 16.5185 MHz Occ BW % Pwr 99.00 %                  x dB -26.00 dB</p> <p>Transmit Freq Error 54.323 kHz                  x dB Bandwidth 22.216 MHz*</p> <p>Copyright 2000-2010 Agilent Technologies</p>	
Channel	Frequency (MHz)	99% Bandwidth (MHz)														
Low	2412	16.474														
Middle	2437	16.519														
High	2462	16.520														
802.11n HT20 TEST RESULT TABLE			MID CHANNEL													
<table border="1"> <thead> <tr> <th>Channel</th> <th>Frequency (MHz)</th> <th>99% Bandwidth (MHz)</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>2412</td> <td>17.659</td> </tr> <tr> <td>Middle</td> <td>2437</td> <td>17.560</td> </tr> <tr> <td>High</td> <td>2462</td> <td>17.518</td> </tr> </tbody> </table>			Channel	Frequency (MHz)	99% Bandwidth (MHz)	Low	2412	17.659	Middle	2437	17.560	High	2462	17.518	<p>Agilent 19:10:46 Nov 30, 2015 L</p> <p>Ch Freq 2.437 GHz Trig Free</p> <p>Occupied Bandwidth Averages: 100</p> <p>APv3.7(111215),43575, Conducted C                  Ref 20 dBm #Atten 30 dB</p> <p>Center 2.437 00 GHz Span 40 MHz                  #Res BW 360 kHz #VBW 1.1 MHz Sweep 1 ms (1001 pts)</p> <p>Occupied Bandwidth 17.5603 MHz Occ BW % Pwr 99.00 %                  x dB -26.00 dB</p> <p>Transmit Freq Error 6.766 kHz                  x dB Bandwidth 21.787 MHz*</p> <p>Copyright 2000-2010 Agilent Technologies</p>	
Channel	Frequency (MHz)	99% Bandwidth (MHz)														
Low	2412	17.659														
Middle	2437	17.560														
High	2462	17.518														

NOTE: --

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## **8.4. OUTPUT POWER LIMITS**

FCC §15.247

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### **DIRECTIONAL ANTENNA GAIN**

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

### **RESULTS**

### 8.4.1. 802.11b MODE IN THE 2.4 GHz BAND

**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	0.24	30.00	30	36	30.00
Mid	2437	0.24	30.00	30	36	30.00
High	2462	0.24	30.00	30	36	30.00

**Results**

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	15.70	15.70	30.00	-14.30
Mid	2437	16.00	16.00	30.00	-14.00
High	2462	16.00	16.00	30.00	-14.00
Worst			16.00		

**Note:** the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

### 8.4.2. 802.11g MODE IN THE 2.4 GHz BAND

**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	0.24	30.00	30	36	30.00
Mid	2437	0.24	30.00	30	36	30.00
High	2462	0.24	30.00	30	36	30.00

**Results**

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	12.60	12.60	30.00	-17.40
Mid	2437	13.00	13.00	30.00	-17.00
High	2462	12.80	12.80	30.00	-17.20
Worst			13.00		

**Note:** the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

### 8.4.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

#### Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	0.24	30.00	30	36	30.00
Mid	2437	0.24	30.00	30	36	30.00
High	2462	0.24	30.00	30	36	30.00

#### Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	11.70	11.70	30.00	-18.30
Mid	2437	12.00	12.00	30.00	-18.00
High	2462	11.90	11.90	30.00	-18.10
Worst			12.00		

**Note:** the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

**8.5. PSD**  
**LIMITS**

FCC §15.247

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

**RESULTS**

### 8.5.1. POWER SPECTRAL DENSITY PLOTS AND TABLE

802.11b TEST RESULT TABLE					MID CHANNEL	
					* Agilent 18:33:58 Nov 30, 2015 APV3.7(111215),43575, Conducted C Mkr1 2.436 984 GHz Ref 20 dBm Atten 20 dB -4.919 dBm #Avg Log 10 dB/ Offst 10.3 dB DI 8.0 dBm #PAvg 100 V1 S2 S3 FS AA E(f): FTun Swp	Measure Meas Off Channel Power Occupied BW ACP Multi Carrier Power Power Stat CCDF More 1 of 2
Channel	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Margin (dB)	Center 2.437 000 GHz	Span 20 MHz
Low	2412	-5.486	8	-13.486	#Res BW 30 kHz	#VBW 91 kHz Sweep 67.18 ms (1275 pts)
Middle	2437	-4.919	8	-12.919	Copyright 2000-2010 Agilent Technologies	
High	2462	-5.717	8	-13.717		
802.11g TEST RESULT TABLE					MID CHANNEL	
					* Agilent 18:52:46 Nov 30, 2015 APV3.7(111215),43575, Conducted C Mkr1 2.441 974 GHz Ref 20 dBm Atten 20 dB -11.538 dBm #Avg Log 10 dB/ Offst 10.3 dB DI 8.0 dBm #PAvg 100 V1 S2 S3 FS AA E(f): FTun Swp	Measure Meas Off Channel Power Occupied BW ACP Multi Carrier Power Power Stat CCDF More 1 of 2
Channel	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Margin (dB)	Center 2.437 000 GHz	Span 25 MHz
Low	2412	-11.84	8	-19.844	#Res BW 30 kHz	#VBW 91 kHz Sweep 83.98 ms (1852 pts)
Middle	2437	-11.54	8	-19.538	Copyright 2000-2010 Agilent Technologies	
High	2462	-12.10	8	-20.101		
802.11n HT20 TEST RESULT TABLE					MID CHANNEL	
					* Agilent 19:11:19 Nov 30, 2015 APV3.7(111215),43575, Conducted C Mkr1 2.444 485 GHz Ref 20 dBm Atten 20 dB -12.530 dBm #Avg Log 10 dB/ Offst 10.3 dB DI 8.0 dBm #PAvg 100 V1 S2 S3 FS AA E(f): FTun Swp	Measure Meas Off Channel Power Occupied BW ACP Multi Carrier Power Power Stat CCDF More 1 of 2
Channel	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Margin (dB)	Center 2.437 000 GHz	Span 27 MHz
Low	2412	-13.26	8	-21.259	#Res BW 30 kHz	#VBW 91 kHz Sweep 90.67 ms (1756 pts)
Middle	2437	-12.53	8	-20.53	Copyright 2000-2010 Agilent Technologies	
High	2462	-13.49	8	-21.489		

NOTE: --

## **8.6. OUT-OF-BAND EMISSIONS LIMITS**

FCC §15.247 (d)

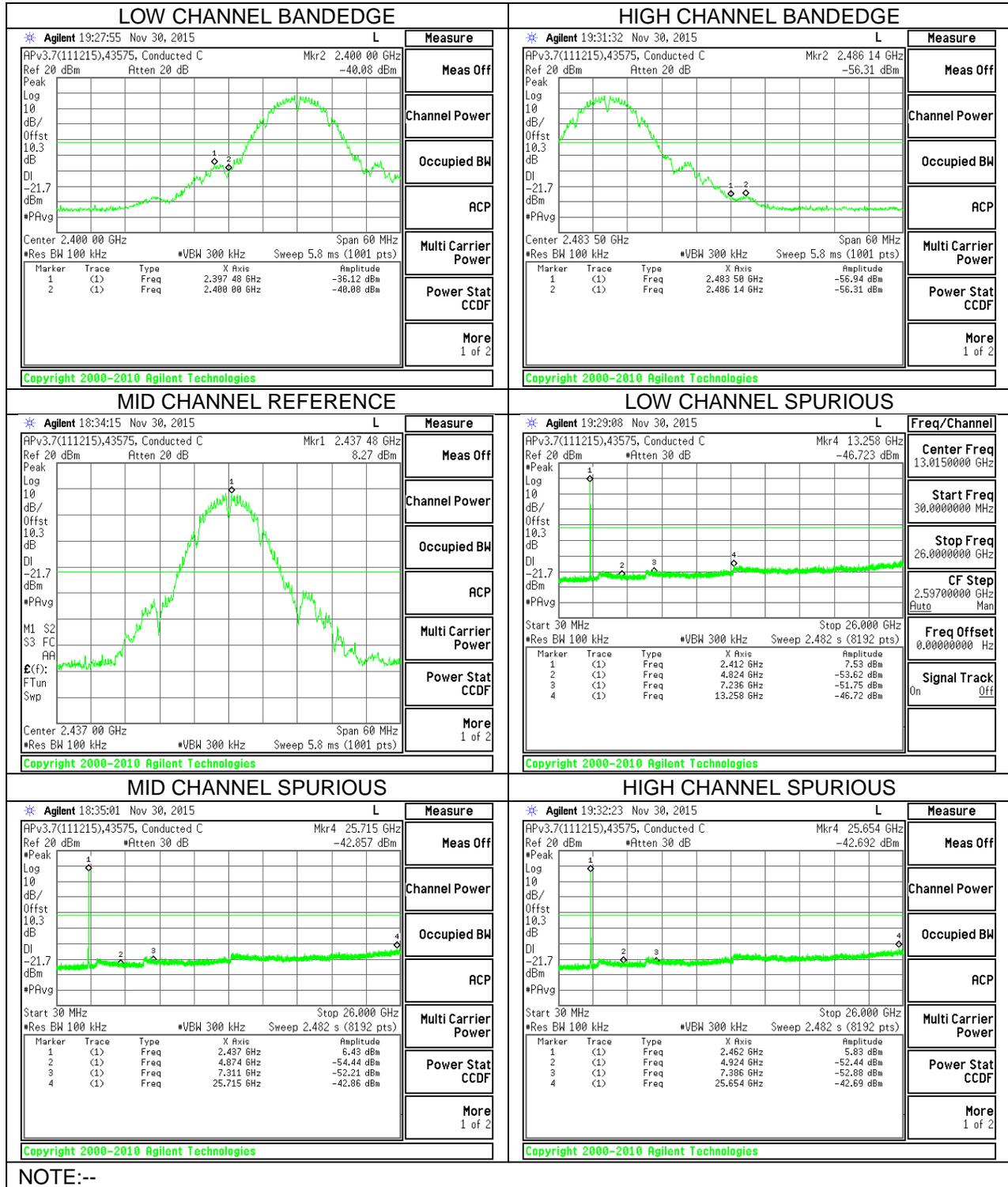
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

### **TEST PROCEDURE**

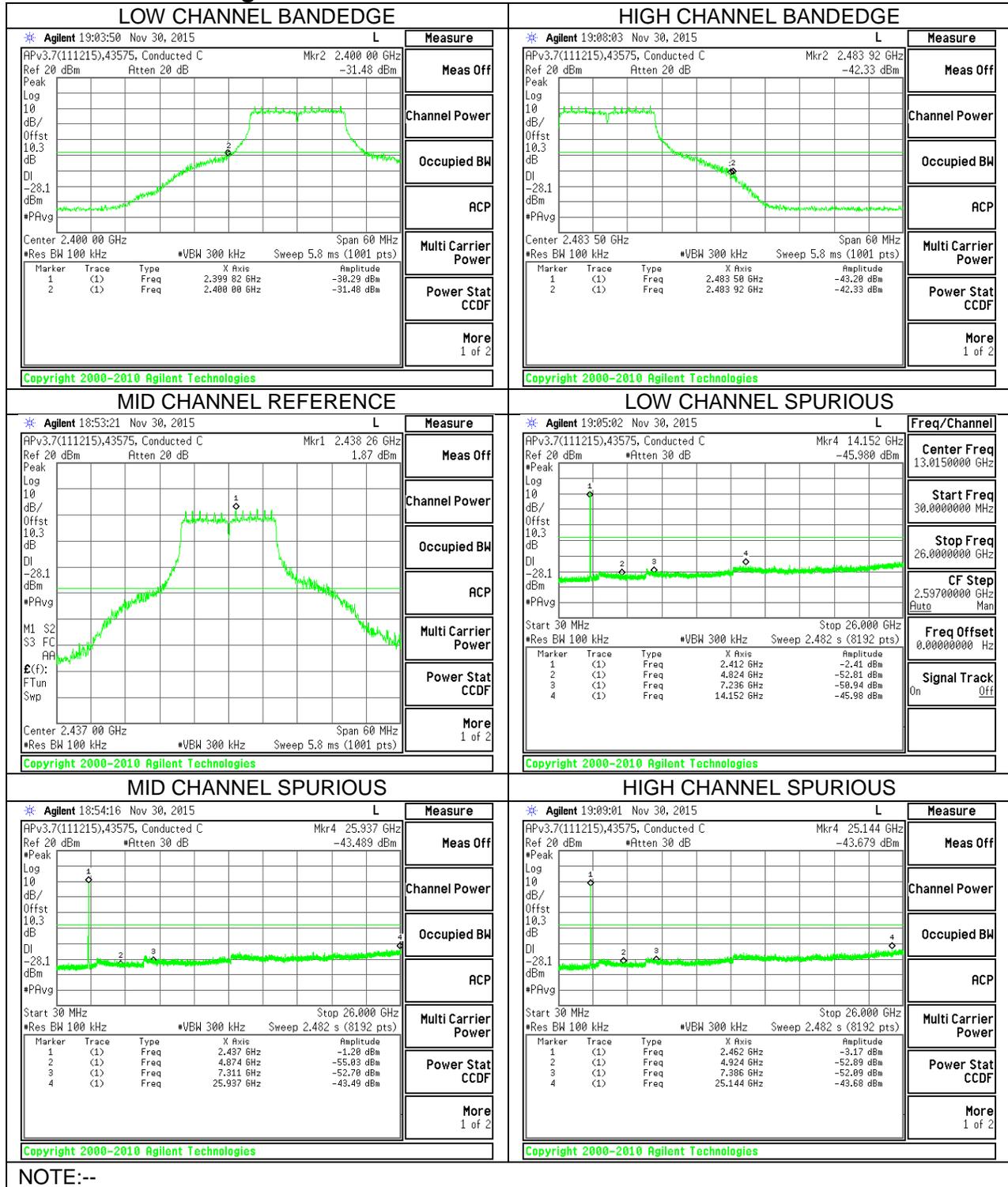
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

### **RESULTS**

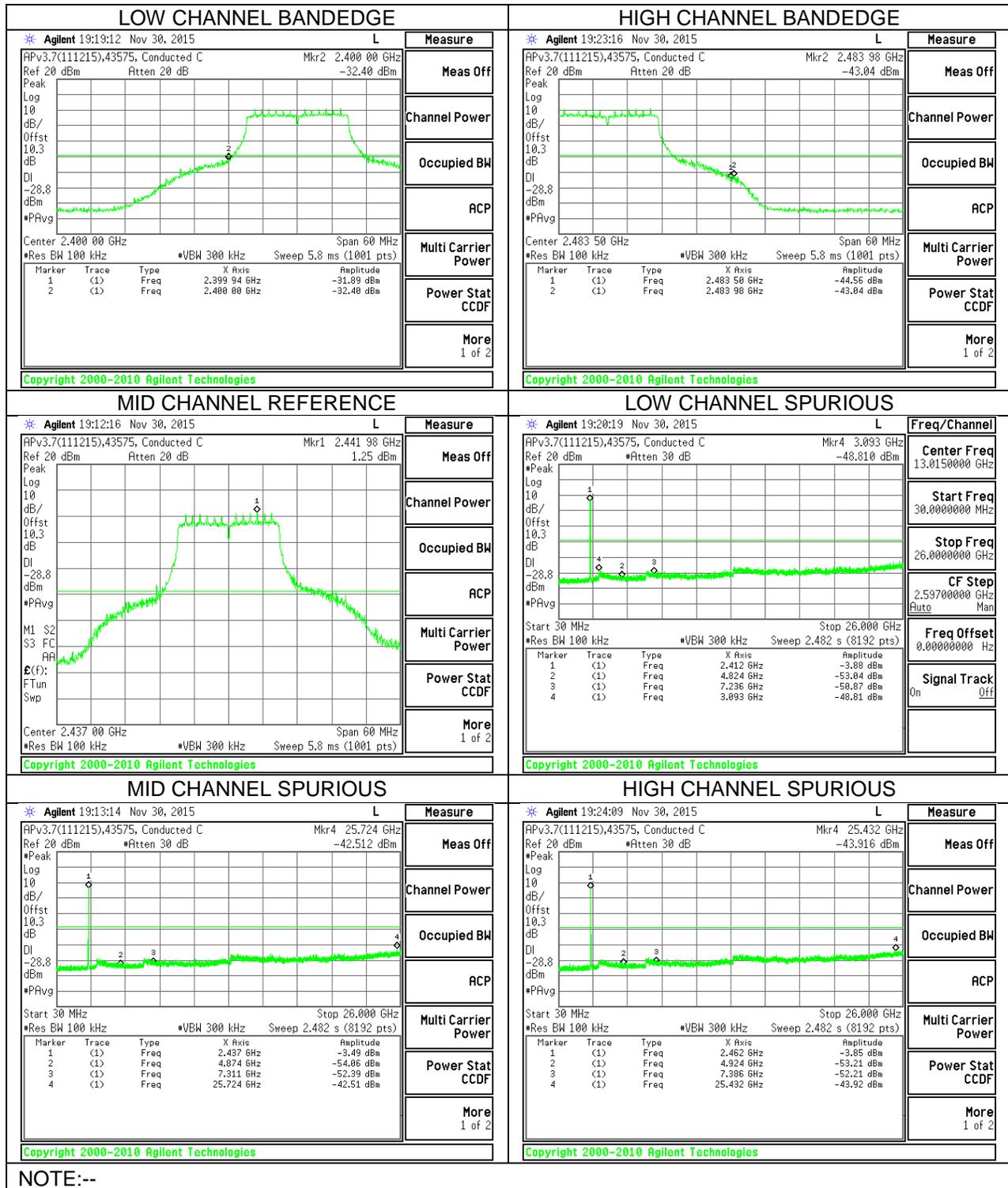
### 8.6.1. 802.11b MODE IN THE 2.4 GHz BAND



### 8.6.1. 802.11g MODE IN THE 2.4 GHz BAND



### 8.6.2. 802.11n HT20 MODE IN THE 2.4 GHz BAND



NOTE:--

## 9. RADIATED TEST RESULTS

### LIMITS

FCC §15.205 and §15.209

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

### TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz and 150cm for above 1GHz. The antenna to EUT distance is 3 meters.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and add duty cycle factor for average measurements. Duty cycle factor =  $10 \log(1/x)$ . For example: DCF =  $10 \log(1/0.626) = 2.03 \text{ dB}$  (Spectrum Analyzer round it up to 2 dB)

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

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

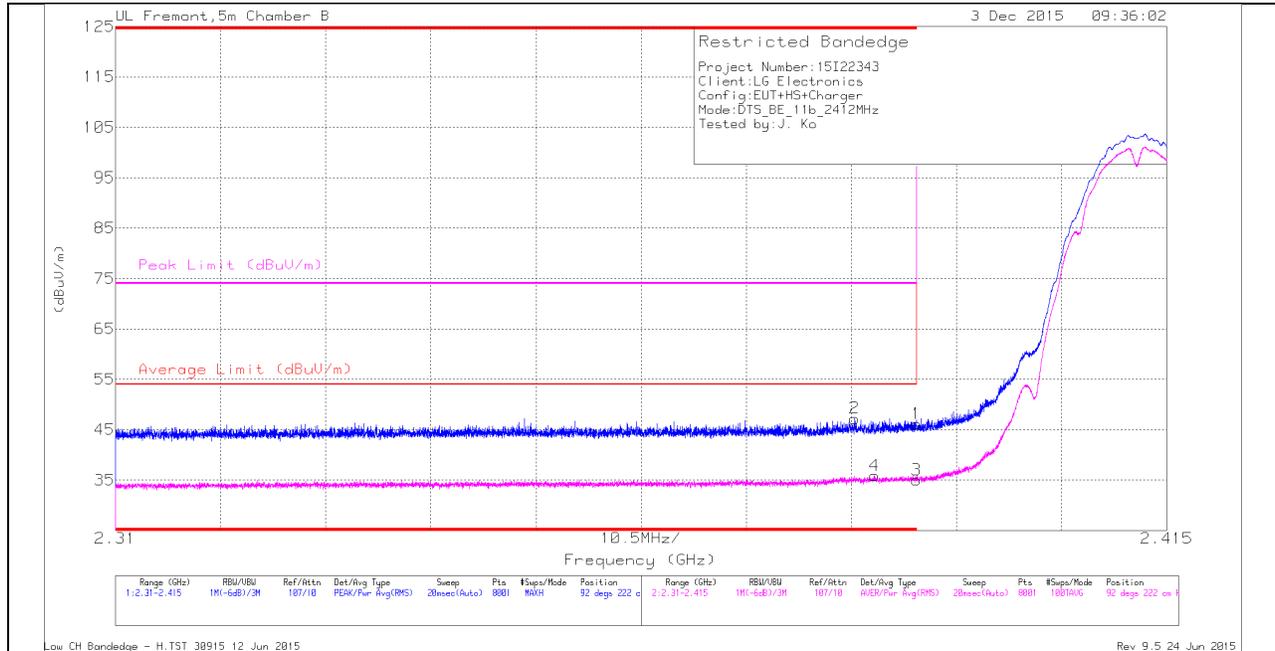
### RESULTS

## 9.1. TRANSMITTER ABOVE 1 GHz

### 9.1.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND

#### RESTRICTED BANDEDGE (LOW CHANNEL)

##### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

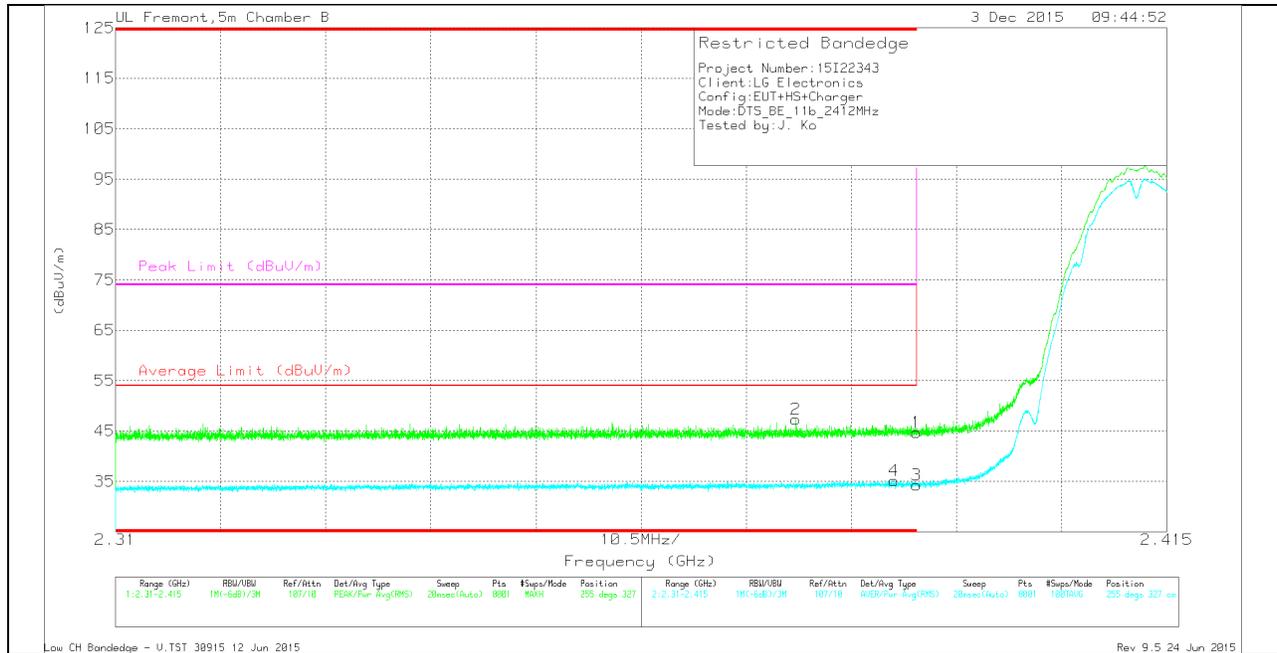
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.384	37.15	Pk	32	-21.9	0	47.25	-	-	74	-26.75	92	222	H
4	* 2.386	25.77	RMS	32	-21.9	0	35.87	54	-18.13	-	-	92	222	H
1	* 2.39	36.09	Pk	32	-21.9	0	46.19	-	-	74	-27.81	92	222	H
3	* 2.39	24.94	RMS	32	-21.9	0	35.04	54	-18.96	-	-	92	222	H

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

Pk - Peak detector

RMS - RMS detection

**VERTICAL PEAK AND AVERAGE PLOT**



**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.378	37.3	Pk	31.9	-21.9	0	47.3	-	-	74	-26.7	255	327	V
4	* 2.388	25.03	RMS	32	-21.9	0	35.13	54	-18.87	-	-	255	327	V
1	* 2.39	34.58	Pk	32	-21.9	0	44.68	-	-	74	-29.32	255	327	V
3	* 2.39	24.12	RMS	32	-21.9	0	34.22	54	-19.78	-	-	255	327	V

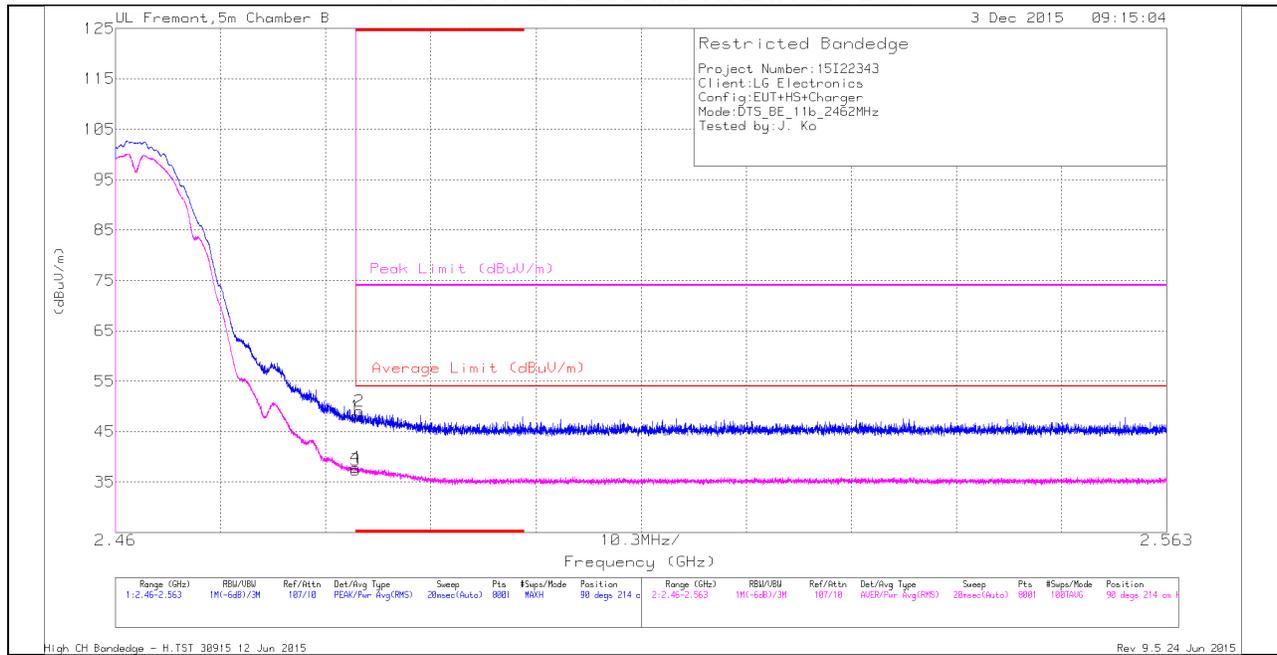
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

## AUTHORIZED BANDEDGE (HIGH CHANNEL)

### HORIZONTAL PEAK AND AVERAGE PLOT



### HORIZONTAL DATA

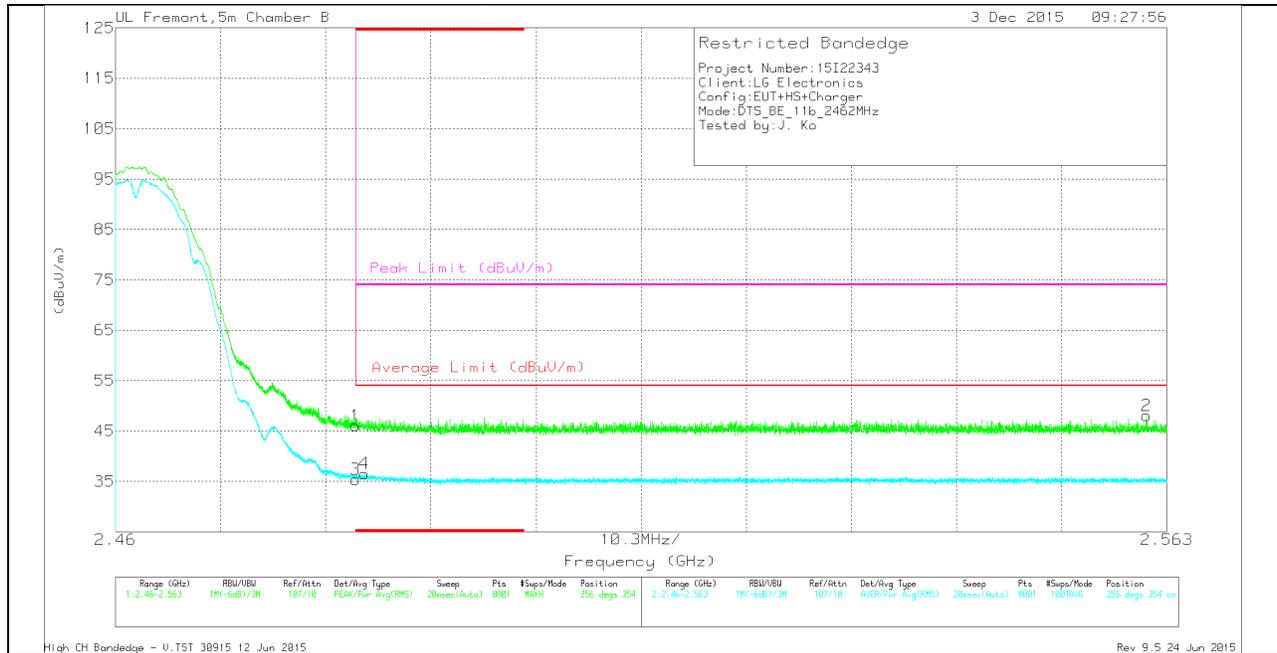
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	37.36	Pk	32.5	-21.8	0	48.06	-	-	74	-25.94	90	214	H
2	* 2.484	38.3	Pk	32.5	-21.8	0	49	-	-	74	-25	90	214	H
3	* 2.484	26.66	RMS	32.5	-21.8	0	37.36	54	-16.64	-	-	90	214	H
4	* 2.484	27.2	RMS	32.5	-21.8	0	37.9	54	-16.1	-	-	90	214	H

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

Pk - Peak detector

RMS - RMS detection

**VERTICAL PEAK AND AVERAGE PLOT**



**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	35.32	Pk	32.5	-21.8	0	46.02	-	-	74	-27.98	256	354	V
3	* 2.484	24.71	RMS	32.5	-21.8	0	35.41	54	-18.59	-	-	256	354	V
4	* 2.484	25.97	RMS	32.5	-21.9	0	36.57	54	-17.43	-	-	256	354	V
2	2.561	37.29	Pk	32.7	-21.9	0	48.09	-	-	74	-25.91	256	354	V

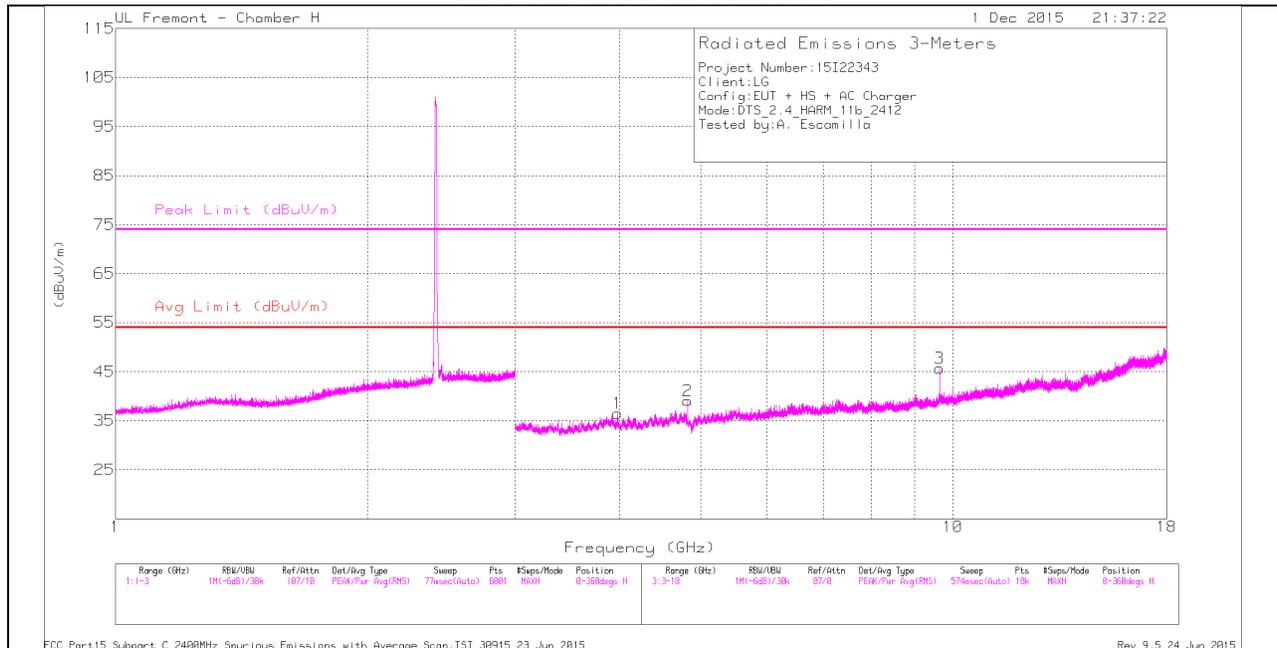
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

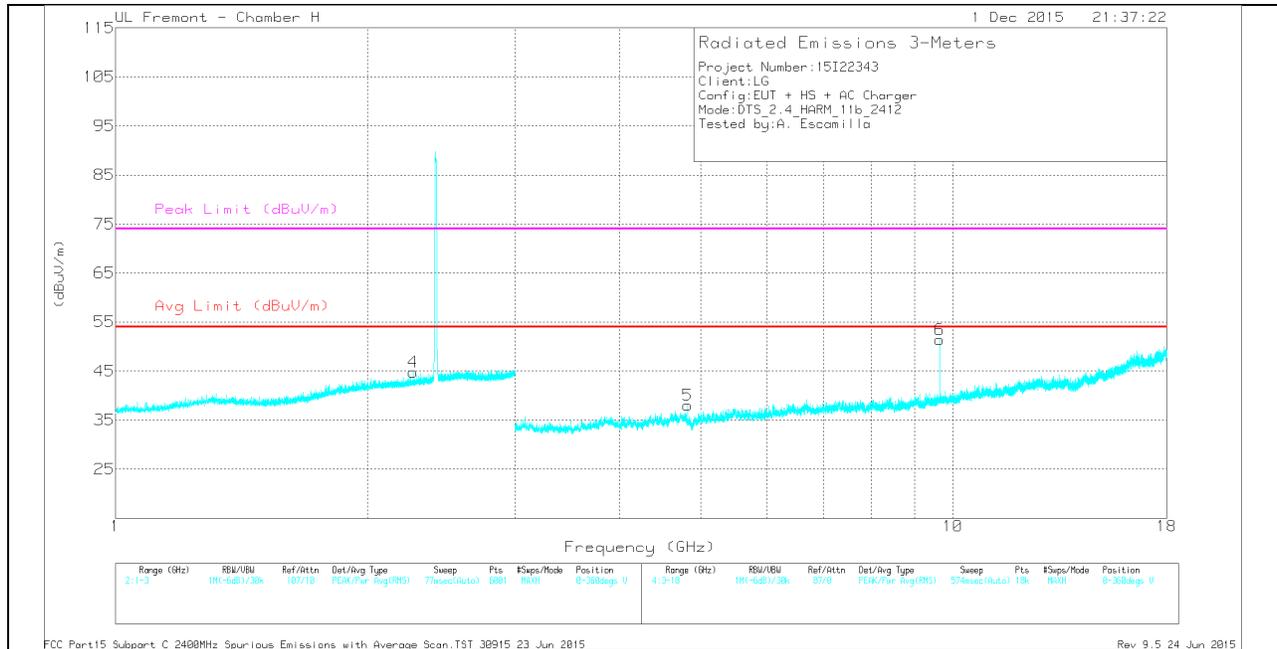
## HARMONICS AND SPURIOUS EMISSIONS

### LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL VERTICAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL DATA**

**TRACE MARKERS**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 2.269	36.65	Pk	31.7	-23.5	0	44.85	-	-	74	-29.15	0-360	200	V
1	* 3.975	34.76	Pk	33.5	-31.7	0	36.56	-	-	74	-37.44	0-360	100	H
2	* 4.824	36.12	Pk	34.2	-31.2	0	39.12	-	-	74	-34.88	0-360	100	H
5	* 4.824	35.03	PK	34.2	-31.2	0	38.03	-	-	74	-35.97	0-360	100	V
3	9.647	34.1	Pk	36.7	-25.1	0	45.7	-	-	74	-28.3	0-360	100	H
6	9.648	39.82	Pk	36.7	-25.1	0	51.42	-	-	74	-22.58	0-360	100	V

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

Pk - Peak detector

**RADIATED EMISSIONS**

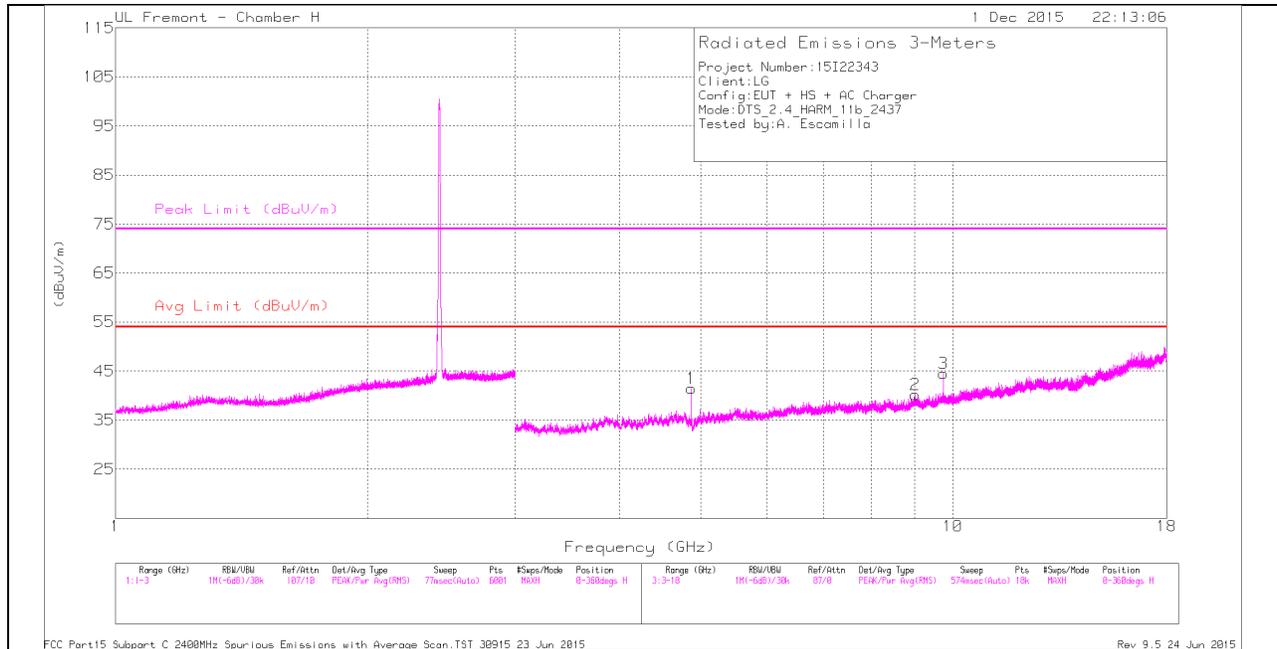
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/ Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.268	43.54	PK2	31.7	-23.5	0	51.74	-	-	74	-22.26	291	138	V
* 2.268	31.55	MAv1	31.7	-23.5	0	39.75	54	-14.25	-	-	291	138	V
* 3.973	41.65	PK2	33.5	-31.8	0	43.35	-	-	74	-30.65	203	171	H
* 3.974	30.52	MAv1	33.5	-31.8	0	32.22	54	-21.78	-	-	203	171	H
* 4.824	43.1	PK2	34.2	-31.2	0	46.1	-	-	74	-27.9	38	109	H
* 4.824	34.41	MAv1	34.2	-31.2	0	37.41	54	-16.59	-	-	38	109	H
* 4.824	43.26	PK2	34.2	-31.2	0	46.26	-	-	74	-27.74	328	101	V
* 4.824	33.65	MAv1	34.2	-31.2	0	36.65	54	-17.35	-	-	328	101	V
9.648	39.77	PK2	36.7	-25.1	0	51.37	-	-	74	-22.63	350	100	H
9.648	43.99	PK2	36.7	-25.1	0	55.59	-	-	74	-18.41	171	100	V

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

PK2 - KDB558074 Method: Maximum Peak

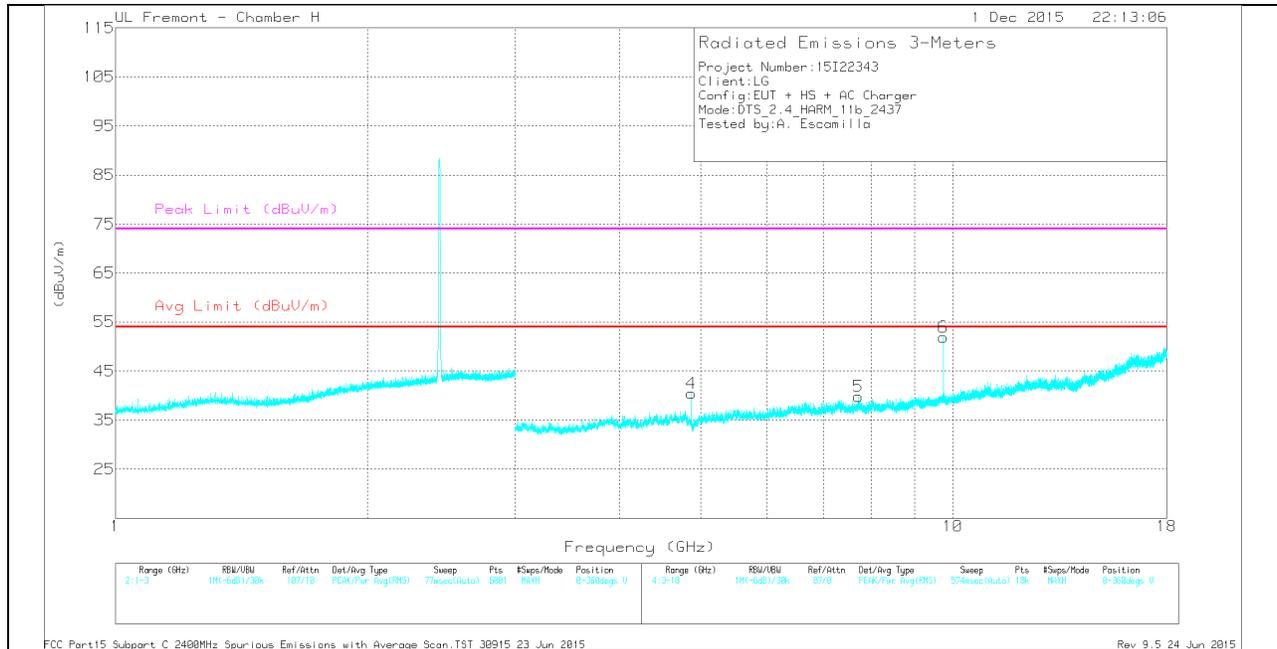
MAv1 - KDB558074 Option 1 Maximum RMS Average

**MID CHANNEL HORIZONTAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL VERTICAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL DATA**

**TRACE MARKERS**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.874	38.05	Pk	34.2	-30.8	0	41.45	-	-	74	-32.55	0-360	201	H
2	* 9.015	29.94	Pk	36.2	-25.9	0	40.24	-	-	74	-33.76	0-360	100	H
4	* 4.874	37.11	Pk	34.2	-30.8	0	40.51	-	-	74	-33.49	0-360	100	V
5	* 7.715	31.19	Pk	35.9	-27.3	0	39.79	-	-	74	-34.21	0-360	200	V
6	9.747	40.7	Pk	36.7	-25.5	0	51.9	-	-	74	-22.1	0-360	100	V
3	9.748	33.33	Pk	36.7	-25.5	0	44.53	-	-	74	-29.47	0-360	100	H

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

Pk - Peak detector

**RADIATED EMISSIONS**

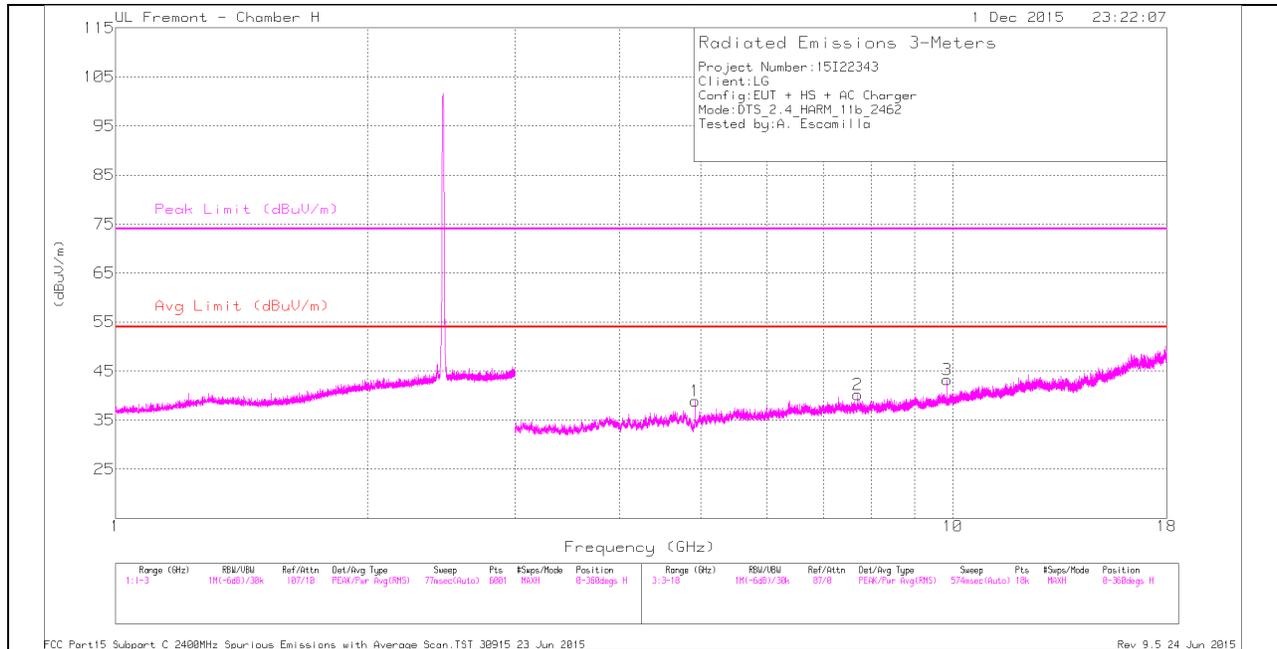
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.874	42.93	PK2	34.2	-30.8	0	46.33	-	-	74	-27.67	36	110	H
* 4.874	36.34	MAv1	34.2	-30.8	0	39.74	54	-14.26	-	-	36	110	H
* 9.016	36.85	PK2	36.2	-25.9	0	47.15	-	-	74	-26.85	143	128	H
* 9.014	25.94	MAv1	36.2	-25.9	0	36.24	54	-17.76	-	-	143	128	H
* 4.874	43.28	PK2	34.2	-30.8	0	46.68	-	-	74	-27.32	326	103	V
* 4.874	36.52	MAv1	34.2	-30.8	0	39.92	54	-14.08	-	-	326	103	V
* 7.713	38.24	PK2	35.9	-27.3	0	46.84	-	-	74	-27.16	182	122	V
* 7.714	27.13	MAv1	35.9	-27.3	0	35.73	54	-18.27	-	-	182	122	V
9.748	39.37	PK2	36.7	-25.5	0	50.57	-	-	74	-23.43	351	103	H
9.748	43.47	PK2	36.7	-25.5	0	54.67	-	-	74	-19.33	171	102	V

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

PK2 - KDB558074 Method: Maximum Peak

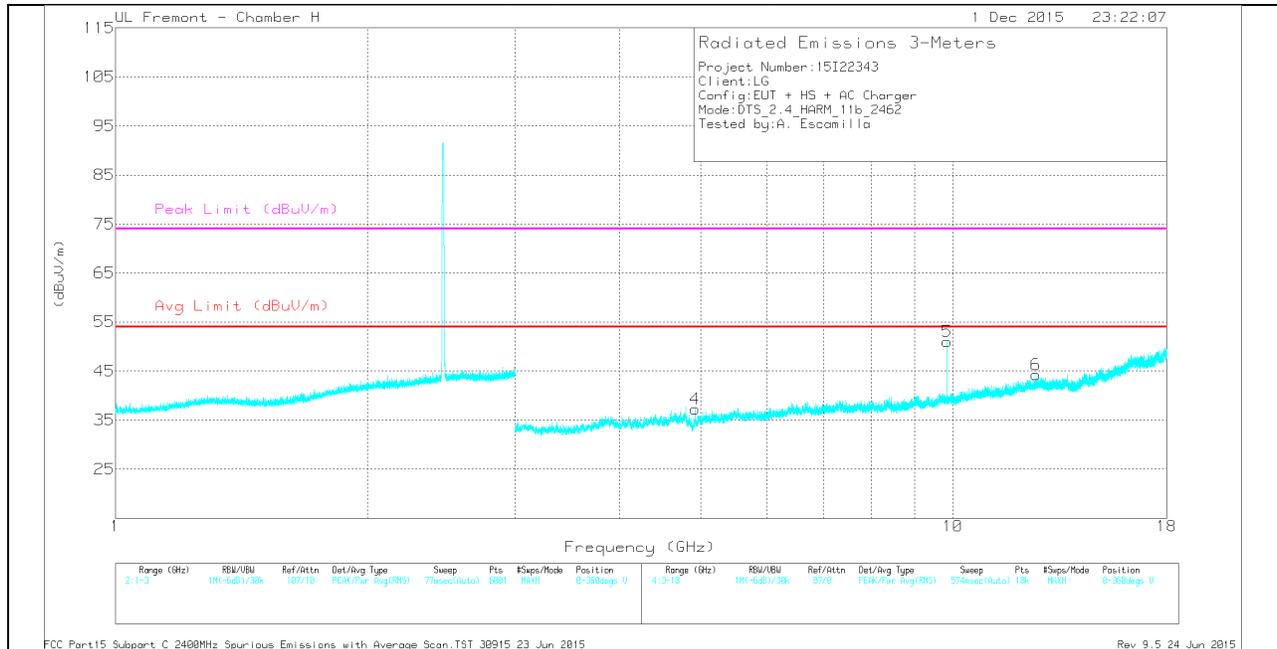
MAv1 - KDB558074 Option 1 Maximum RMS Average

**HIGH CHANNEL HORIZONTAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**HIGH CHANNEL VERTICAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**HIGH CHANNEL DATA**

**TRACE MARKERS**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.924	35.36	Pk	34.2	-30.6	0	38.96	-	-	74	-35.04	0-360	201	H
2	* 7.694	31.79	Pk	35.9	-27.5	0	40.19	-	-	74	-33.81	0-360	100	H
4	* 4.924	33.71	Pk	34.2	-30.6	0	37.31	-	-	74	-36.69	0-360	100	V
6	* 12.569	29.08	Pk	39.4	-24.2	0	44.28	-	-	74	-29.72	0-360	100	V
3	9.848	32.31	Pk	36.8	-25.9	0	43.21	-	-	74	-30.79	0-360	100	H
5	9.848	40.09	Pk	36.8	-25.9	0	50.99	-	-	74	-23.01	0-360	100	V

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

Pk - Peak detector

**RADIATED EMISSIONS**

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/ Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.924	40.61	PK2	34.2	-30.6	0	44.21	-	-	74	-29.79	35	107	H
* 4.924	32	MAv1	34.2	-30.6	0	35.6	54	-18.4	-	-	35	107	H
* 7.692	38.24	PK2	35.9	-27.6	0	46.54	-	-	74	-27.46	171	149	H
* 7.693	27.13	MAv1	35.9	-27.6	0	35.43	54	-18.57	-	-	171	149	H
* 4.924	41.61	PK2	34.2	-30.6	0	45.21	-	-	74	-28.79	325	104	V
* 4.924	33.08	MAv1	34.2	-30.6	0	36.68	54	-17.32	-	-	325	104	V
* 12.568	35.99	PK2	39.4	-24.2	0	51.19	-	-	74	-22.81	52	117	V
* 12.568	24.56	MAv1	39.4	-24.2	0	39.76	54	-14.24	-	-	52	117	V
9.848	38.31	PK2	36.8	-25.9	0	49.21	-	-	74	-24.79	351	100	H
9.848	43.72	PK2	36.8	-25.9	0	54.62	-	-	74	-19.38	181	103	V

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

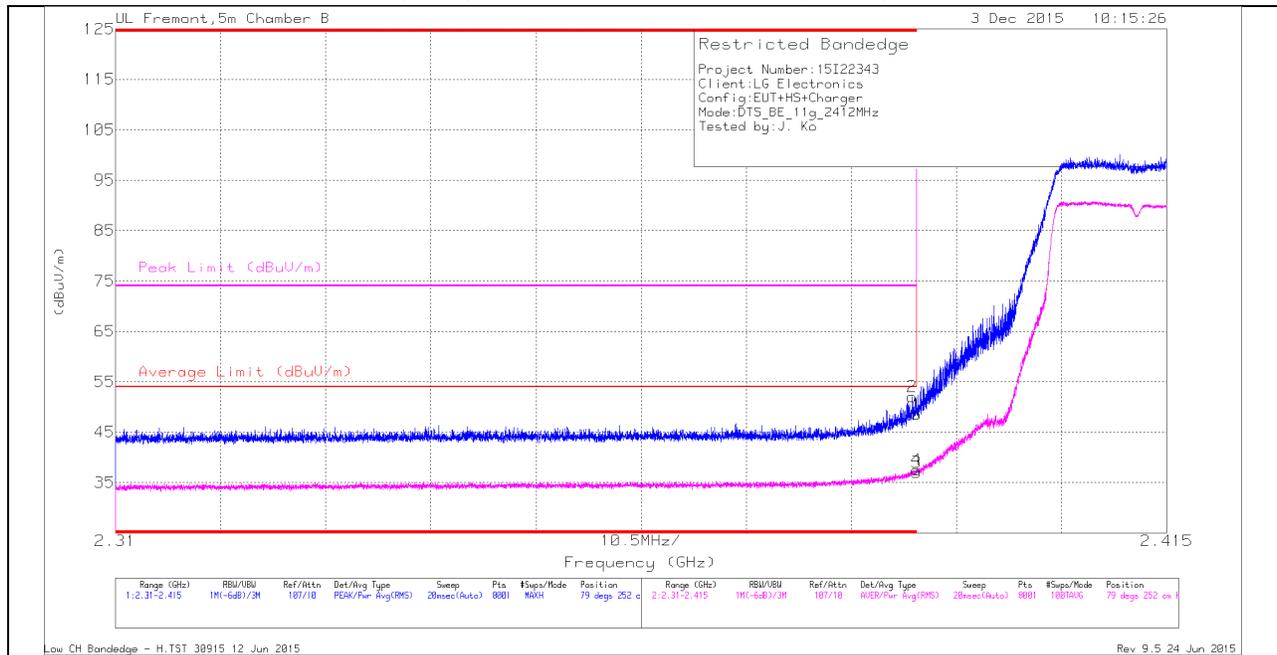
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

### 9.1.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND

#### RESTRICTED BANDEDGE (LOW CHANNEL)

##### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

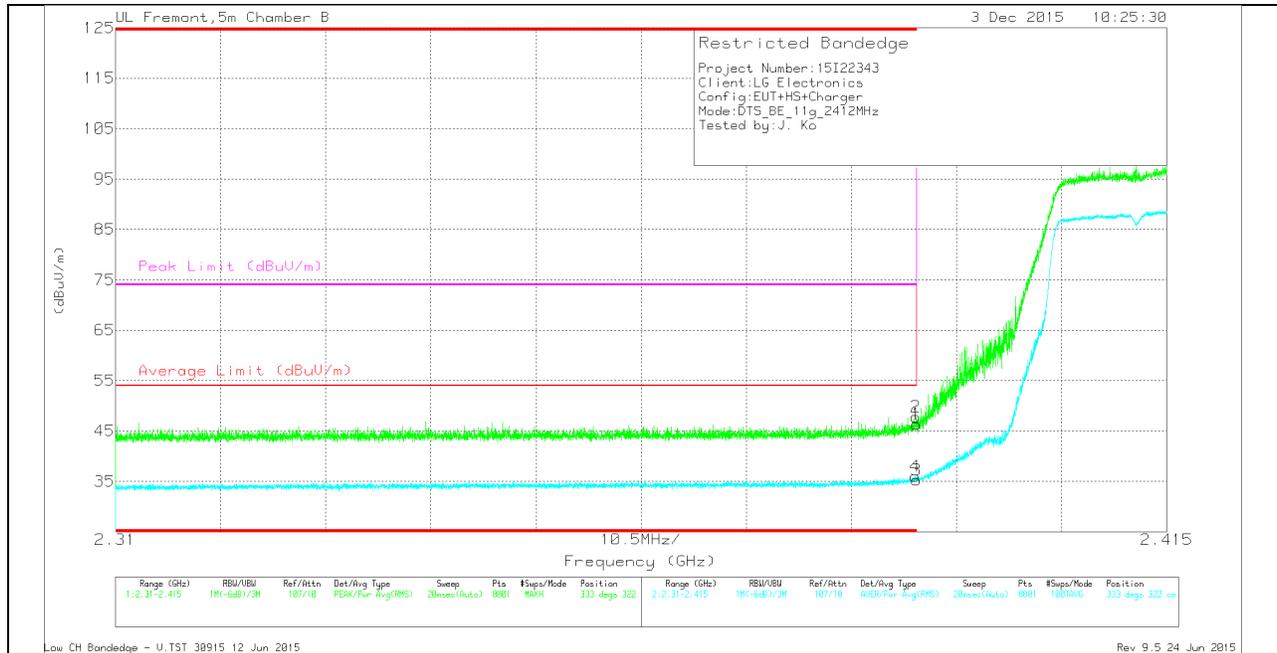
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	38.5	Pk	32	-21.9	0	48.6	-	-	74	-25.4	79	252	H
2	* 2.39	41.92	Pk	32	-21.9	0	52.02	-	-	74	-21.98	79	252	H
3	* 2.39	26.68	RMS	32	-21.9	.2	36.98	54	-17.02	-	-	79	252	H
4	* 2.39	27.17	RMS	32	-21.9	.2	37.47	54	-16.53	-	-	79	252	H

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

Pk - Peak detector

RMS - RMS detection

**VERTICAL PEAK AND AVERAGE PLOT**



**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	36.28	Pk	32	-21.9	0	46.38	-	-	74	-27.62	333	322	V
2	* 2.39	37.74	Pk	32	-21.9	0	47.84	-	-	74	-26.16	333	322	V
3	* 2.39	24.97	RMS	32	-21.9	.2	35.27	54	-18.73	-	-	333	322	V
4	* 2.39	25.67	RMS	32	-21.9	.2	35.97	54	-18.03	-	-	333	322	V

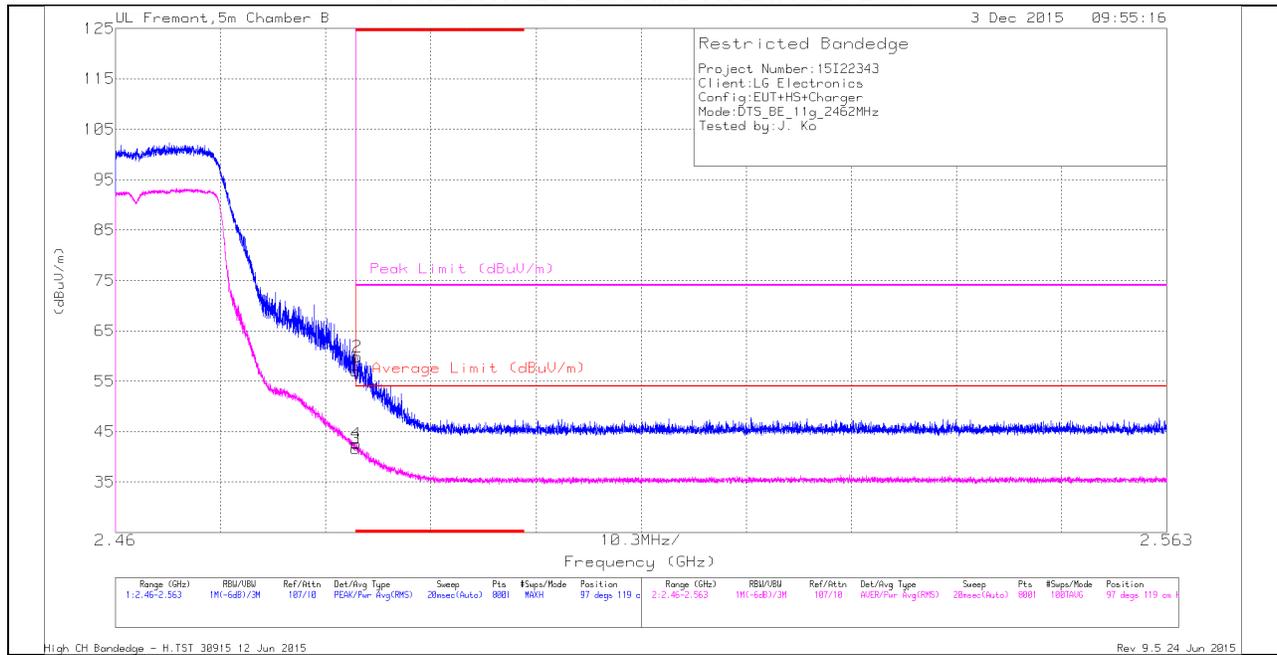
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

## AUTHORIZED BANDEDGE (HIGH CHANNEL)

### HORIZONTAL PEAK AND AVERAGE PLOT



### HORIZONTAL DATA

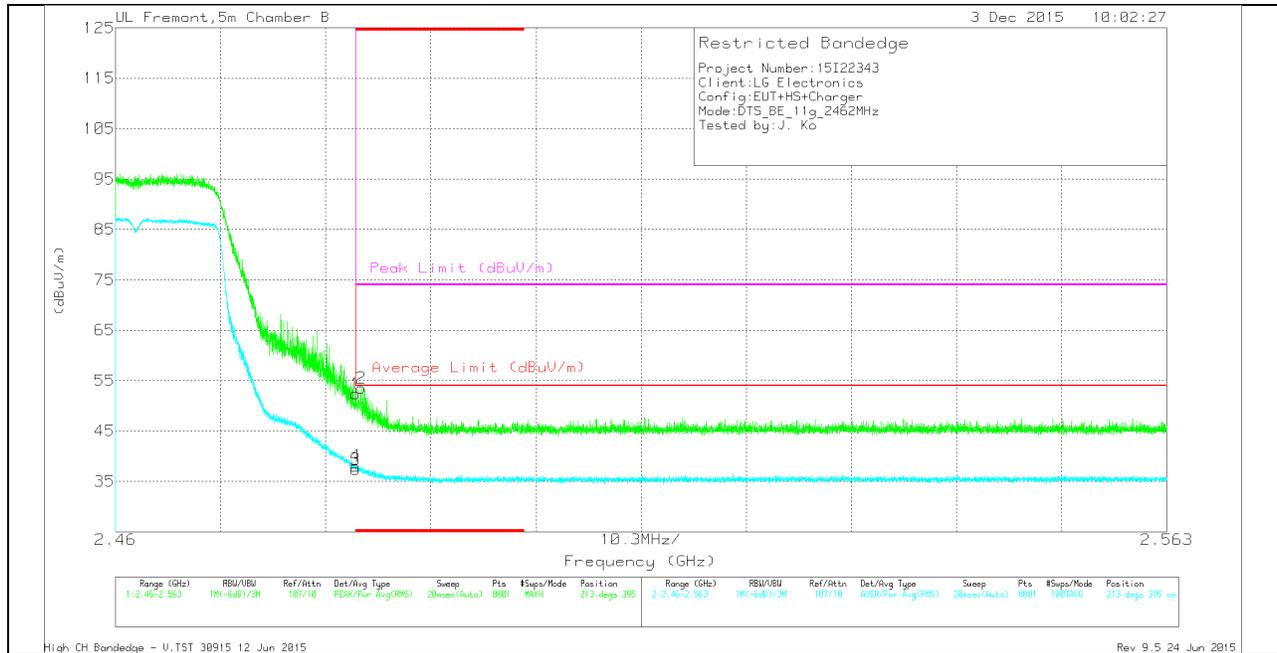
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	46.32	Pk	32.5	-21.8	0	57.02	-	-	74	-16.98	97	119	H
2	* 2.484	49.16	Pk	32.5	-21.8	0	59.86	-	-	74	-14.14	97	119	H
3	* 2.484	30.72	RMS	32.5	-21.8	.2	41.62	54	-12.38	-	-	97	119	H
4	* 2.484	31.75	RMS	32.5	-21.8	.2	42.65	54	-11.35	-	-	97	119	H

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

Pk - Peak detector

RMS - RMS detection

**VERTICAL PEAK AND AVERAGE PLOT**



**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	41.72	Pk	32.5	-21.8	0	52.42	-	-	74	-21.58	213	395	V
2	* 2.484	42.82	Pk	32.5	-21.8	0	53.52	-	-	74	-20.48	213	395	V
3	* 2.484	26.46	RMS	32.5	-21.8	.2	37.36	54	-16.64	-	-	213	395	V
4	* 2.484	27.16	RMS	32.5	-21.8	.2	38.06	54	-15.94	-	-	213	395	V

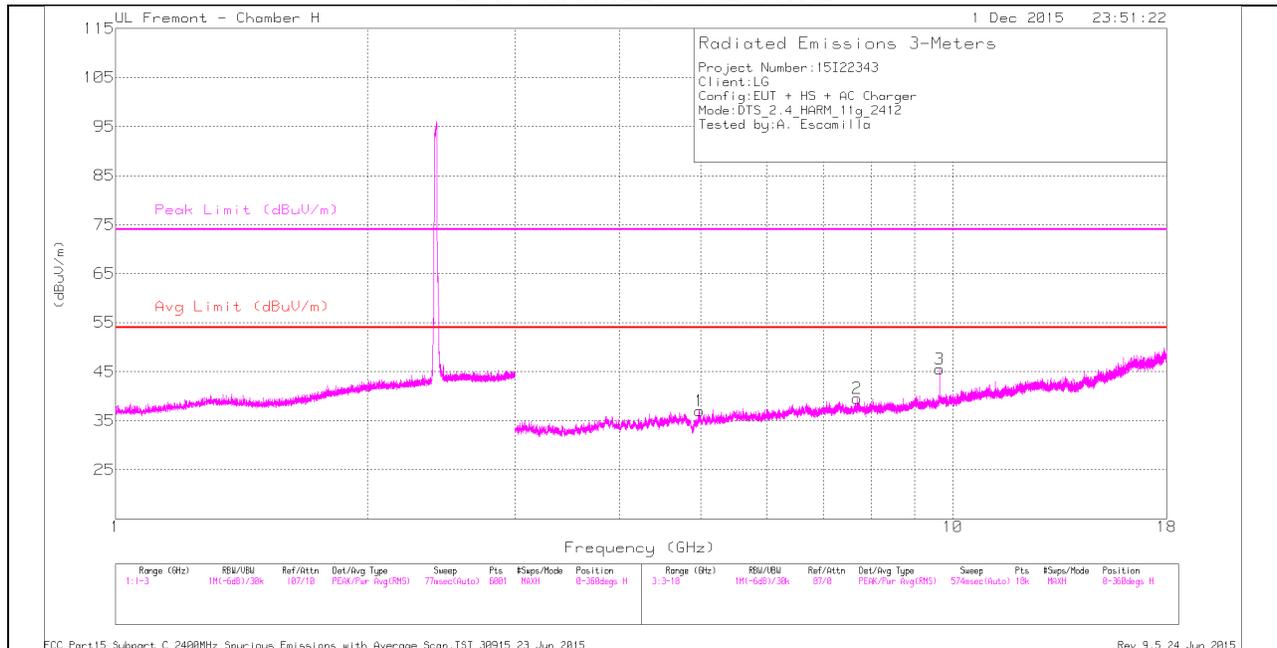
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

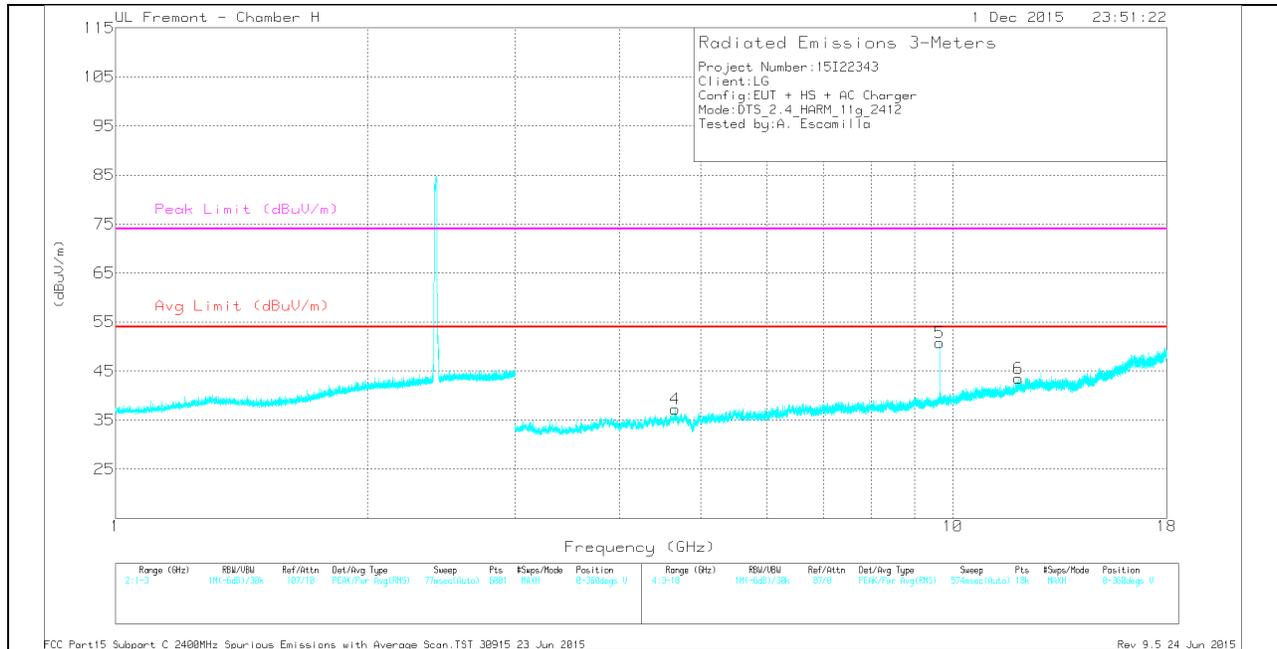
## HARMONICS AND SPURIOUS EMISSIONS

### LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL VERTICAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL DATA**

**TRACE MARKERS**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.979	33.19	Pk	34.3	-30.5	0	36.99	-	-	74	-37.01	0-360	201	H
2	* 7.689	31.34	Pk	35.9	-27.7	0	39.54	-	-	74	-34.46	0-360	100	H
4	* 4.659	33.65	Pk	34.1	-30.5	0	37.25	-	-	74	-36.75	0-360	100	V
6	* 11.98	28.24	Pk	38.7	-23.4	0	43.54	-	-	74	-30.46	0-360	200	V
3	9.648	33.98	Pk	36.7	-25.1	0	45.58	-	-	74	-28.42	0-360	100	H
5	9.648	39.19	Pk	36.7	-25.1	0	50.79	-	-	74	-23.21	0-360	100	V

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

Pk - Peak detector

**RADIATED EMISSIONS**

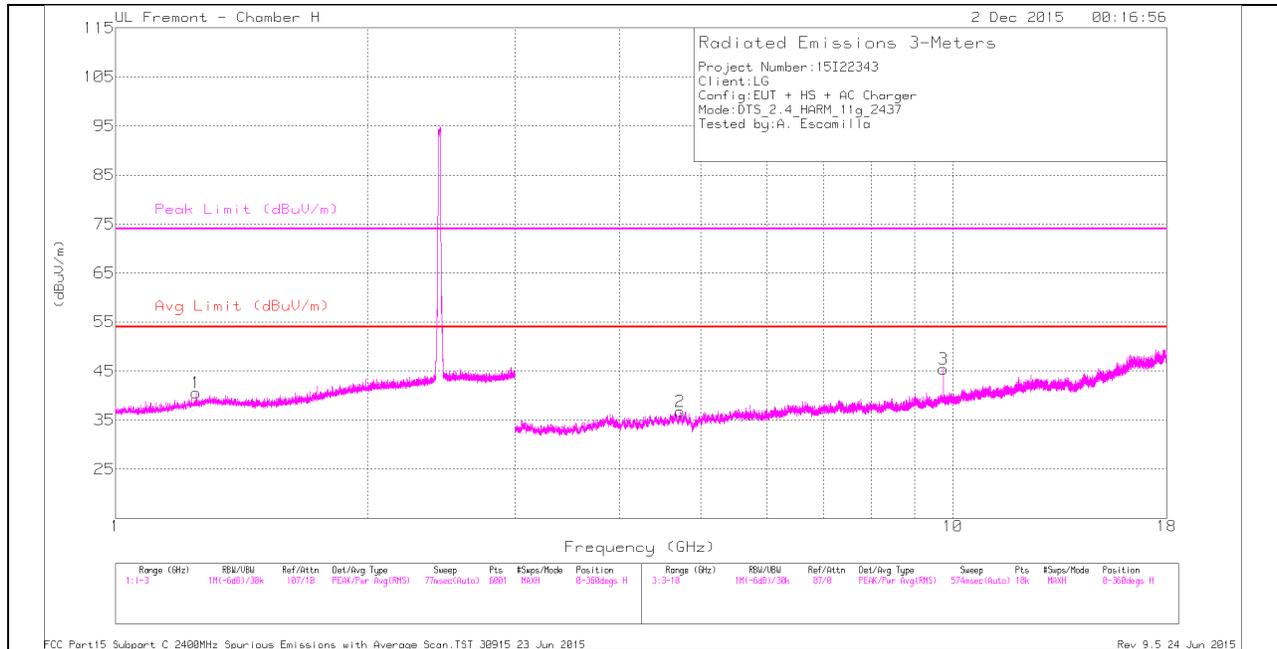
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.978	40.23	PK2	34.3	-30.5	0	44.03	-	-	74	-29.97	44	114	H
* 4.979	29.29	MAv1	34.3	-30.5	.2	33.29	54	-20.71	-	-	44	114	H
* 7.69	37.88	PK2	35.9	-27.7	0	46.08	-	-	74	-27.92	175	103	H
* 7.691	27.08	MAv1	35.9	-27.6	.2	35.58	54	-18.42	-	-	175	103	H
* 4.661	41.31	PK2	34.1	-30.4	0	45.01	-	-	74	-28.99	315	109	V
* 4.658	29.9	MAv1	34.1	-30.5	.2	33.7	54	-20.3	-	-	315	109	V
* 11.98	35.78	PK2	38.7	-23.4	0	51.08	-	-	74	-22.92	202	119	V
* 11.978	24.34	MAv1	38.7	-23.5	.2	39.74	54	-14.26	-	-	202	119	V
9.648	39.75	PK2	36.7	-25.1	0	51.35	-	-	74	-22.65	348	103	H
9.648	43.13	PK2	36.7	-25.1	0	54.73	-	-	74	-19.27	179	103	V

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

PK2 - KDB558074 Method: Maximum Peak

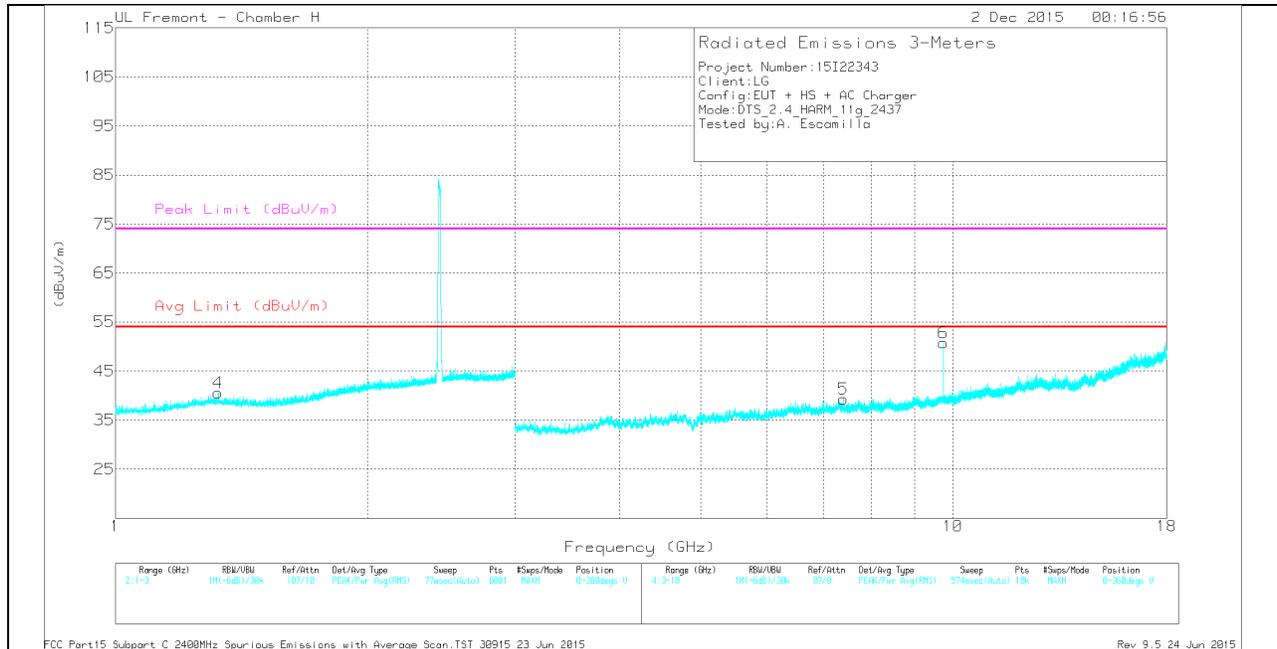
MAv1 - KDB558074 Option 1 Maximum RMS Average

**MID CHANNEL HORIZONTAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.249	37.01	Pk	28.5	-24.9	0	40.61	-	-	74	-33.39	0-360	202	H
4	* 1.328	36.44	Pk	28.8	-24.7	0	40.54	-	-	74	-33.46	0-360	100	V
2	* 4.724	32.9	Pk	34.2	-30.3	0	36.8	-	-	74	-37.2	0-360	100	H
5	* 7.396	31.23	Pk	36	-27.9	0	39.33	-	-	74	-34.67	0-360	100	V
3	9.747	34.19	Pk	36.7	-25.5	0	45.39	-	-	74	-28.61	0-360	100	H
6	9.748	39.6	Pk	36.7	-25.5	0	50.8	-	-	74	-23.2	0-360	100	V

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

Pk - Peak detector

RADIATED EMISSIONS

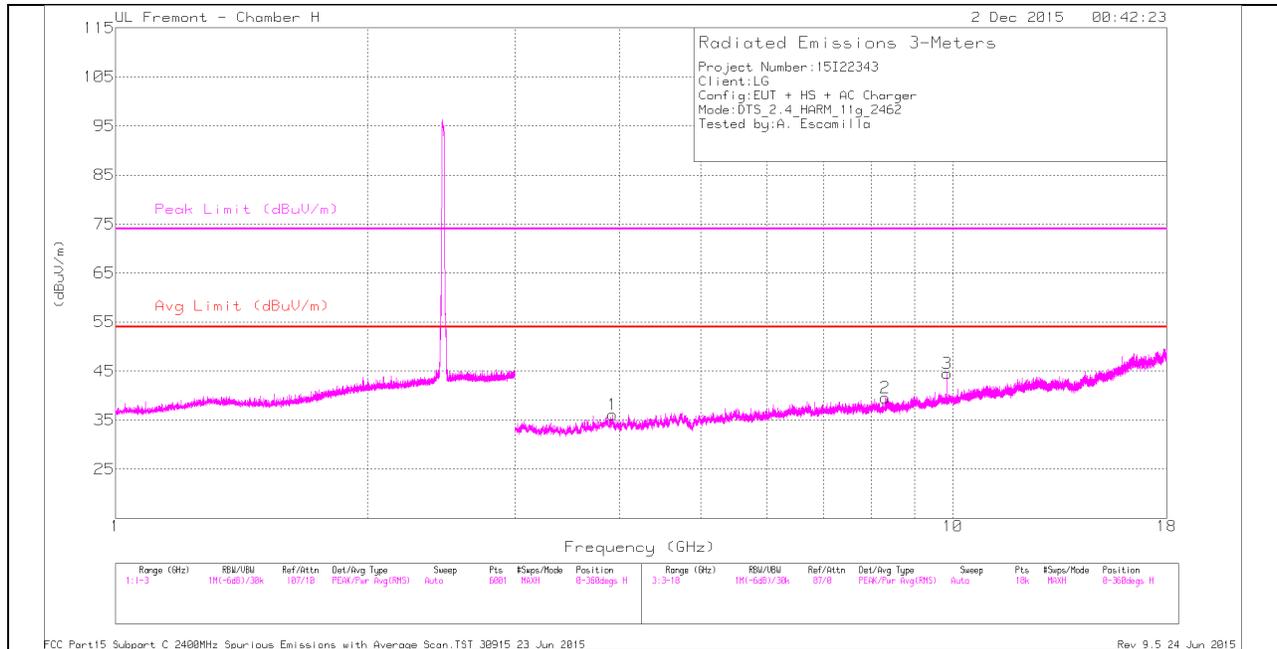
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/ Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.25	43.5	PK2	28.5	-24.9	0	47.1	-	-	74	-26.9	329	119	H
* 1.248	32.2	MAv1	28.5	-24.9	.2	36	54	-18	-	-	329	119	H
* 1.328	43.69	PK2	28.8	-24.7	0	47.79	-	-	74	-26.21	175	162	V
* 1.328	31.81	MAv1	28.8	-24.7	.2	36.11	54	-17.89	-	-	175	162	V
* 4.724	40.74	PK2	34.2	-30.3	0	44.64	-	-	74	-29.36	59	113	H
* 4.726	29.93	MAv1	34.2	-30.4	.2	33.93	54	-20.07	-	-	59	113	H
* 7.396	38.35	PK2	36	-27.9	0	46.45	-	-	74	-27.55	301	119	V
* 7.397	27.11	MAv1	36	-27.9	.2	35.41	54	-18.59	-	-	301	119	V
9.748	39.93	PK2	36.7	-25.5	0	51.13	-	-	74	-22.87	353	100	H
9.748	42.93	PK2	36.7	-25.5	0	54.13	-	-	74	-19.87	169	100	V

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

PK2 - KDB558074 Method: Maximum Peak

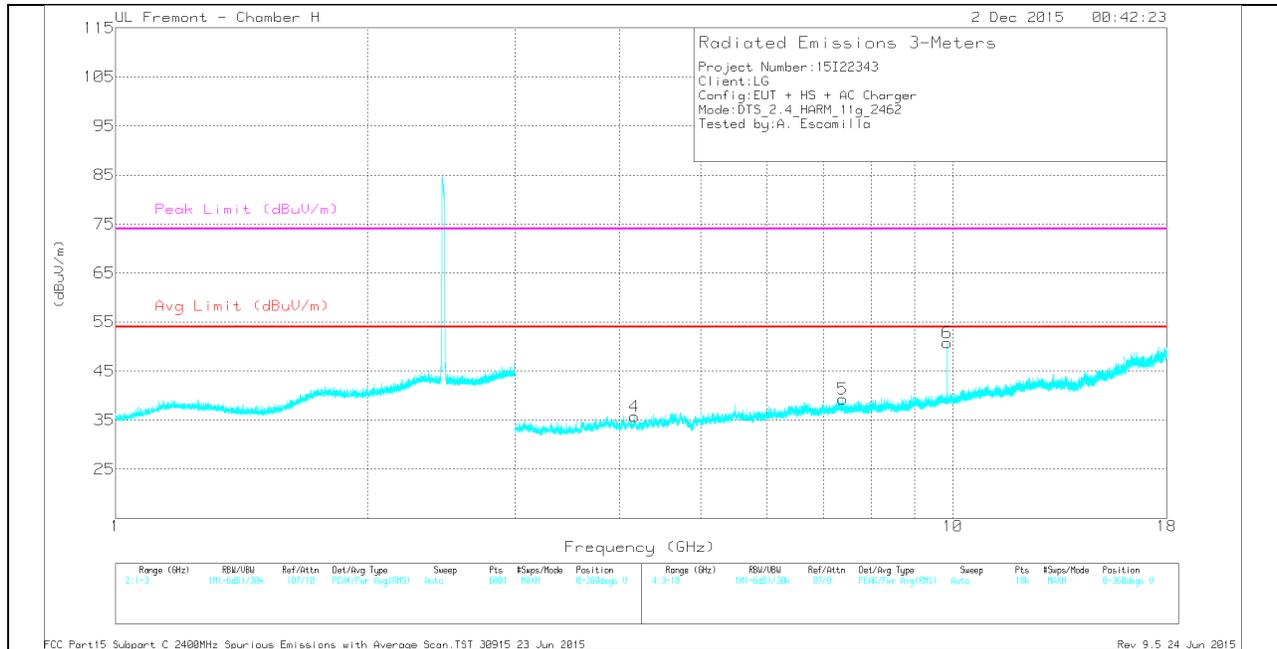
MAv1 - KDB558074 Option 1 Maximum RMS Average

**HIGH CHANNEL HORIZONTAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**HIGH CHANNEL VERTICAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**HIGH CHANNEL DATA**

**TRACE MARKERS**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.921	34.23	Pk	33.6	-31.7	0	36.13	-	-	74	-37.87	0-360	200	H
2	* 8.307	30.71	Pk	35.9	-27	0	39.61	-	-	74	-34.39	0-360	200	H
4	* 4.165	33.35	Pk	33.4	-31	0	35.75	-	-	74	-38.25	0-360	100	V
5	* 7.386	31.24	Pk	36	-27.9	0	39.34	-	-	74	-34.66	0-360	100	V
3	9.848	33.6	Pk	36.8	-25.9	0	44.5	-	-	74	-29.5	0-360	100	H
6	9.848	39.83	Pk	36.8	-25.9	0	50.73	-	-	74	-23.27	0-360	100	V

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

Pk - Peak detector

**RADIATED EMISSIONS**

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.919	41.87	PK2	33.6	-31.7	0	43.77	-	-	74	-30.23	47	113	H
* 3.922	30.55	MAv1	33.6	-31.7	.2	32.65	54	-21.35	-	-	47	113	H
* 8.307	38.27	PK2	35.9	-27	0	47.17	-	-	74	-26.83	131	133	H
* 8.309	26.39	MAv1	35.9	-27	.2	35.49	54	-18.51	-	-	131	133	H
* 4.167	40.95	PK2	33.4	-31	0	43.35	-	-	74	-30.65	294	109	V
* 4.167	29.76	MAv1	33.4	-31	.2	32.36	54	-21.64	-	-	294	109	V
* 7.388	38.19	PK2	36	-27.8	0	46.39	-	-	74	-27.61	186	105	V
* 7.384	27.43	MAv1	36	-27.8	.2	35.83	54	-18.17	-	-	186	105	V
9.848	37.95	PK2	36.8	-25.9	0	48.85	-	-	74	-25.15	354	112	H
9.848	44.4	PK2	36.8	-25.9	0	55.3	-	-	74	-18.7	178	102	V

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

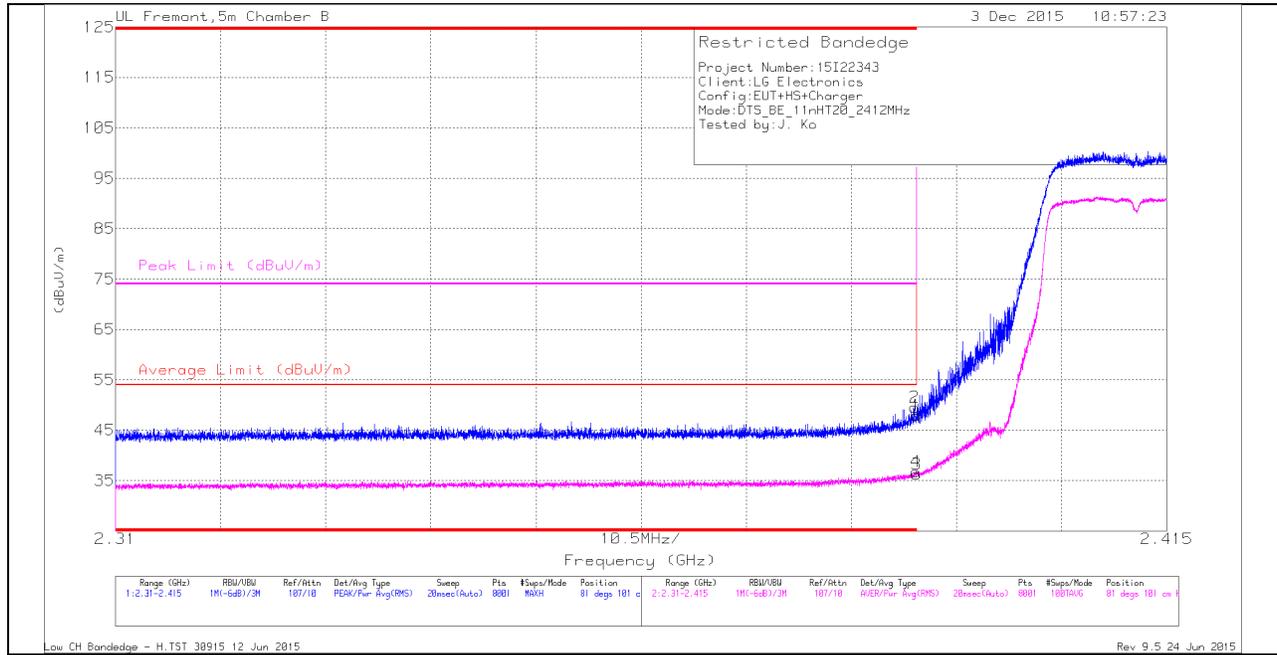
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

### 9.1.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND

#### RESTRICTED BANDEDGE (LOW CHANNEL)

##### HORIZONTAL PEAK AND AVERAGE PLOT



#### HORIZONTAL DATA

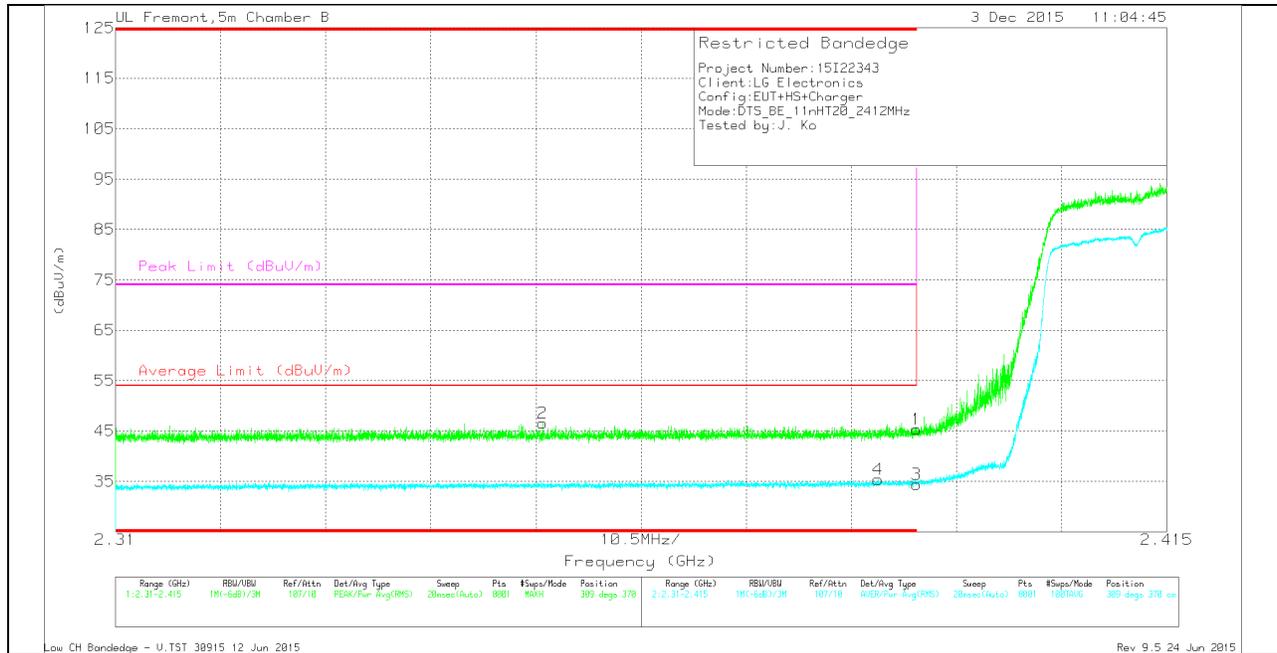
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	37.88	Pk	32	-21.9	0	47.98	-	-	74	-26.02	81	101	H
2	* 2.39	39.48	Pk	32	-21.9	0	49.58	-	-	74	-24.42	81	101	H
3	* 2.39	25.94	RMS	32	-21.9	.22	36.26	54	-17.74	-	-	81	101	H
4	* 2.39	26.46	RMS	32	-21.9	.22	36.78	54	-17.22	-	-	81	101	H

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

Pk - Peak detector

RMS - RMS detection

**VERTICAL PEAK AND AVERAGE PLOT**



**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	35.25	Pk	32	-21.9	0	45.35	-	-	74	-28.65	309	370	V
2	* 2.353	36.67	Pk	31.8	-21.9	0	46.57	-	-	74	-27.43	309	370	V
3	* 2.39	24.07	RMS	32	-21.9	.22	34.39	54	-19.61	-	-	309	370	V
4	* 2.386	25.09	RMS	32	-21.9	.22	35.41	54	-18.59	-	-	309	370	V

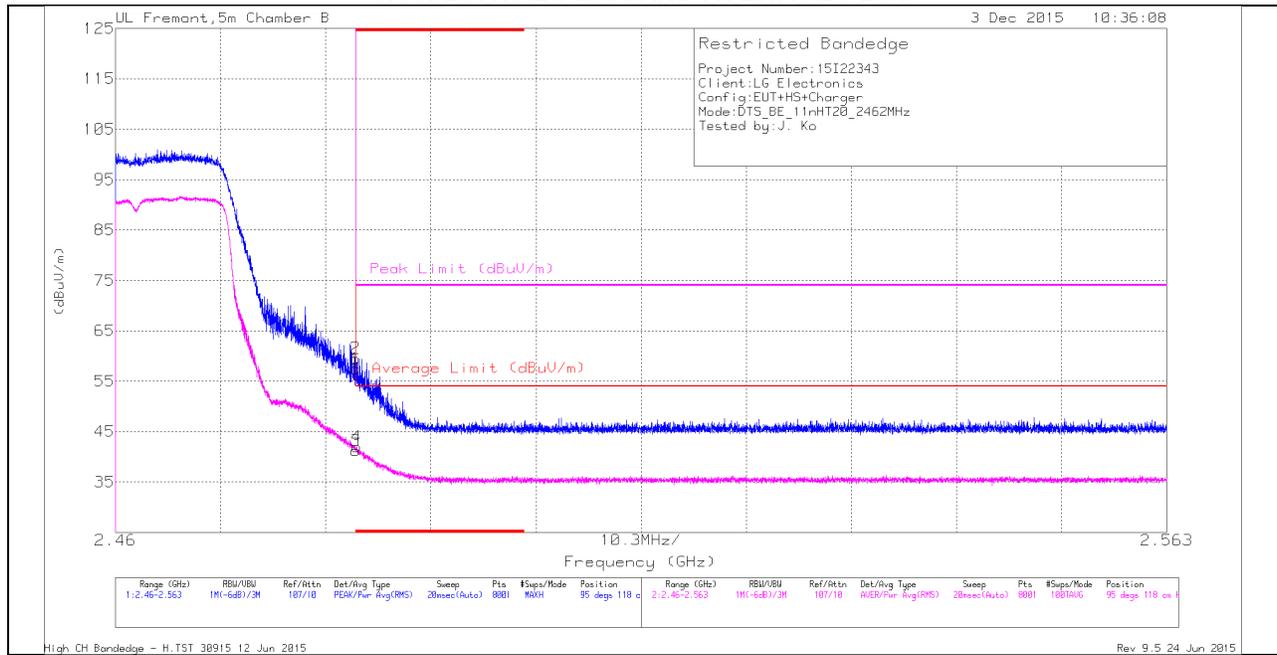
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

## AUTHORIZED BANDEDGE (HIGH CHANNEL)

### HORIZONTAL PEAK AND AVERAGE PLOT



### HORIZONTAL DATA

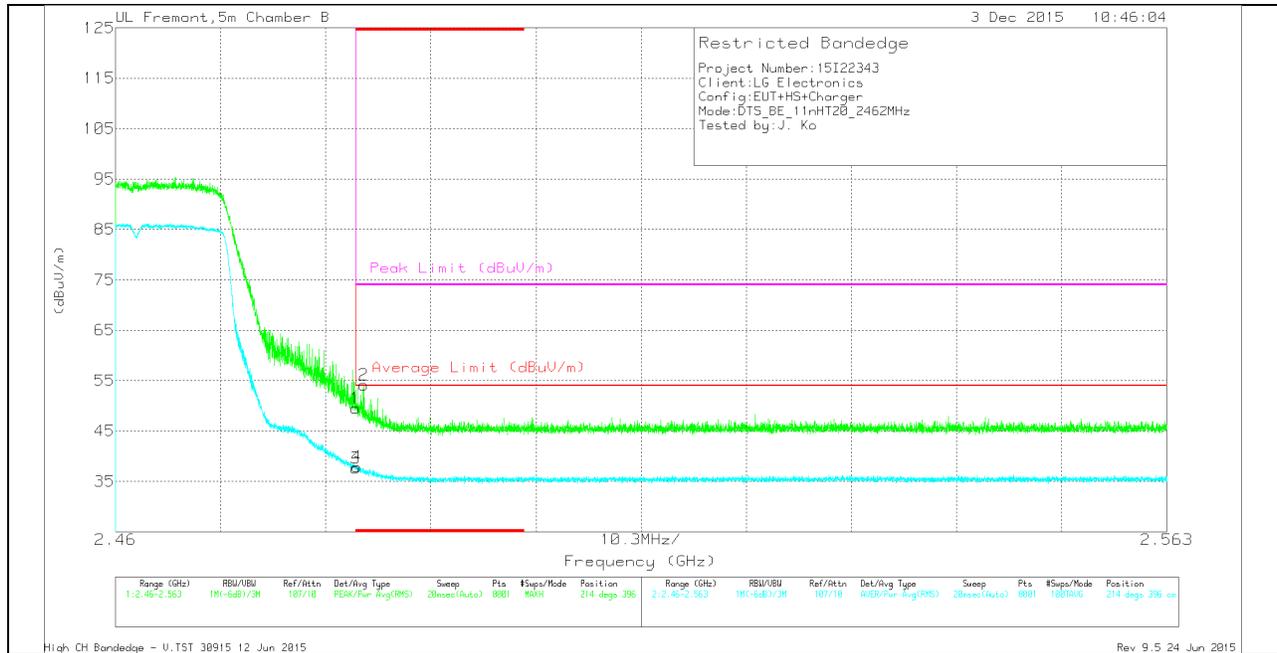
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	46.76	Pk	32.5	-21.8	0	57.46	-	-	74	-16.54	95	118	H
2	* 2.484	48.84	Pk	32.5	-21.8	0	59.54	-	-	74	-14.46	95	118	H
3	* 2.484	30.31	RMS	32.5	-21.8	.22	41.23	54	-12.77	-	-	95	118	H
4	* 2.484	31.07	RMS	32.5	-21.8	.22	41.99	54	-12.01	-	-	95	118	H

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

Pk - Peak detector

RMS - RMS detection

**VERTICAL PEAK AND AVERAGE PLOT**



**VERTICAL DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	38.8	Pk	32.5	-21.8	0	49.5	-	-	74	-24.5	214	396	V
2	* 2.484	43.51	Pk	32.5	-21.9	0	54.11	-	-	74	-19.89	214	396	V
3	* 2.484	26.71	RMS	32.5	-21.8	.22	37.63	54	-16.37	-	-	214	396	V
4	* 2.484	27.01	RMS	32.5	-21.8	.22	37.93	54	-16.07	-	-	214	396	V

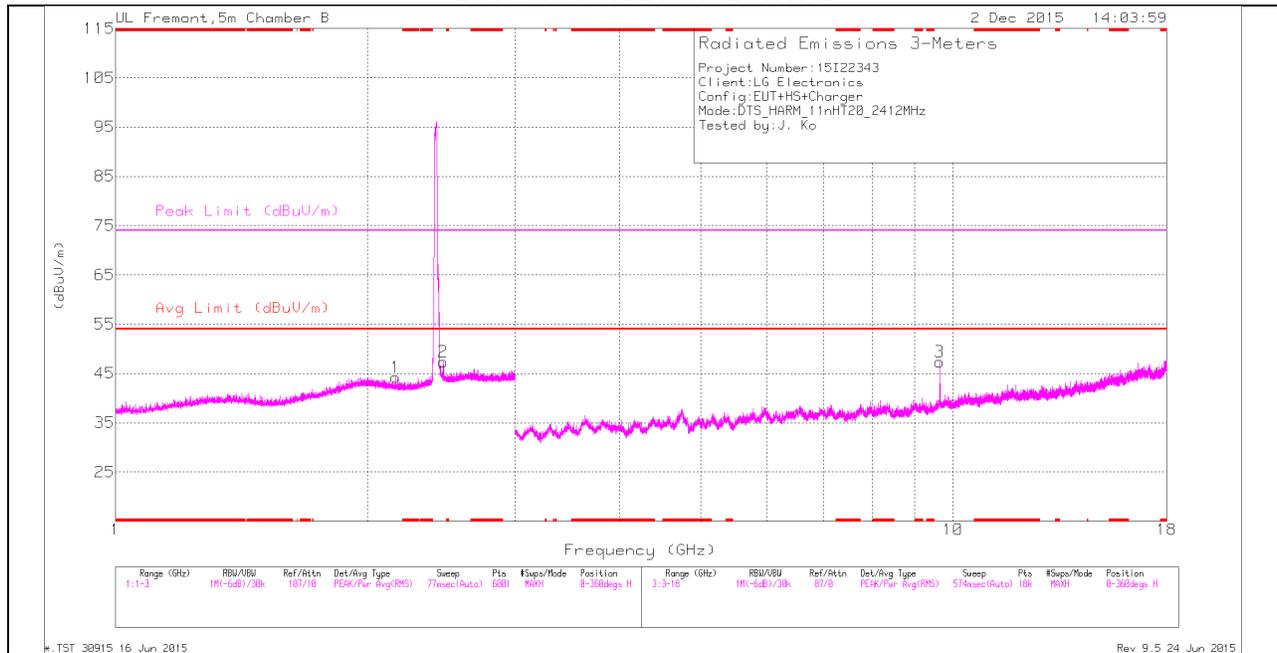
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

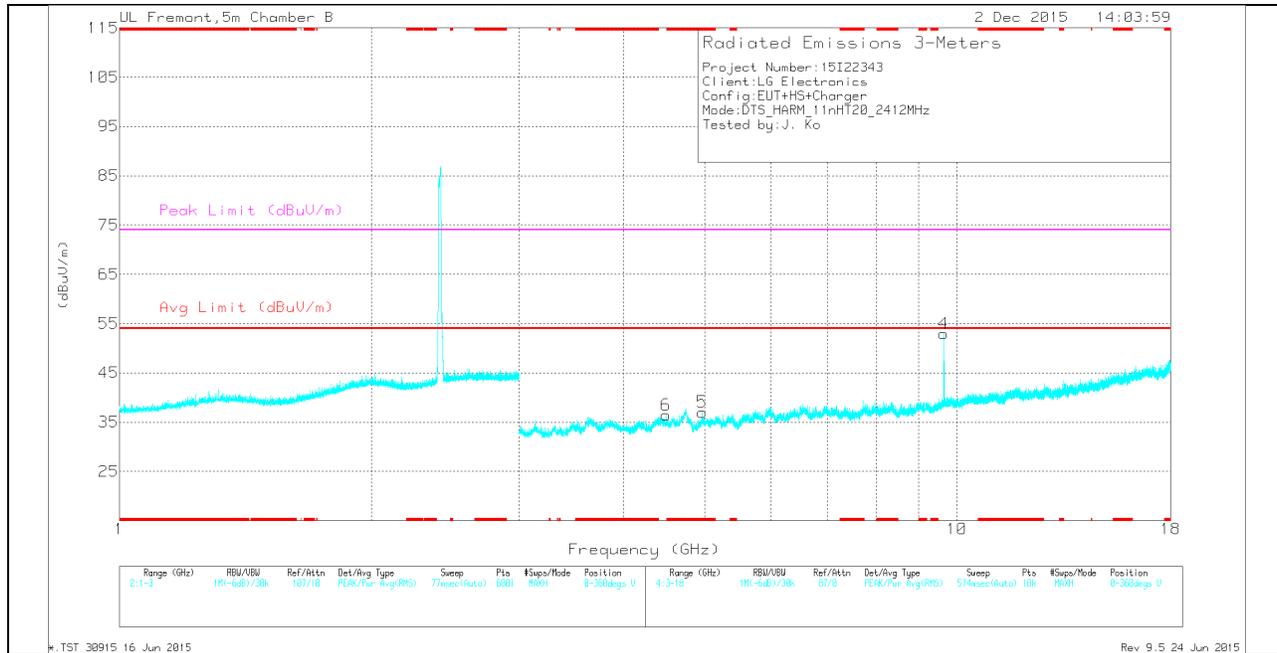
## HARMONICS AND SPURIOUS EMISSIONS

### LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL VERTICAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**LOW CHANNEL DATA**

**TRACE MARKERS**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fitr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 4.965	34.73	Pk	34.1	-31.8	0	37.03	-	-	74	-36.97	0-360	199	V
1	2.16	37.24	Pk	31.4	-24.4	0	44.24	-	-	-	-	0-360	200	H
2	2.463	39.02	Pk	32.4	-24	0	47.42	-	-	-	-	0-360	102	H
6	4.492	33.46	Pk	34	-31	0	36.46	-	-	-	-	0-360	102	V
3	9.648	37.15	Pk	36.7	-26.5	0	47.35	-	-	-	-	0-360	101	H
4	9.648	42.77	Pk	36.7	-26.5	0	52.97	-	-	-	-	0-360	102	V

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

Pk - Peak detector

**RADIATED EMISSIONS**

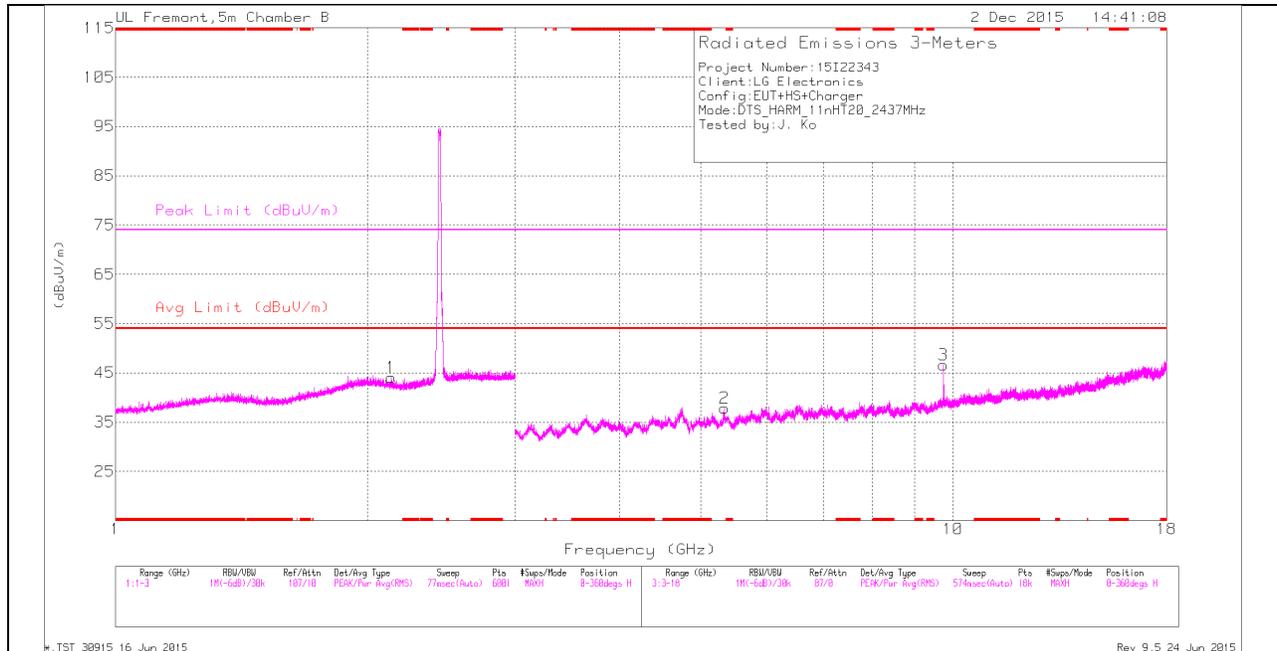
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/ Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.964	41.83	PK2	34.1	-31.8	0	44.13	-	-	74	-29.87	198	301	V
* 4.963	30.14	MAv1	34.1	-31.9	.22	32.56	54	-21.44	-	-	198	301	V
2.161	44.43	PK2	31.4	-24.4	0	51.43	-	-	74	-22.57	1	199	H
2.464	44.73	PK2	32.4	-24	0	53.13	-	-	74	-20.87	1	103	H
4.492	40.32	PK2	34	-31	0	43.32	-	-	74	-30.68	198	103	V
9.648	41.86	PK2	36.7	-26.5	0	52.06	-	-	74	-21.94	160	115	H
9.648	45.78	PK2	36.7	-26.5	0	55.98	-	-	74	-18.02	77	107	V

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

PK2 - KDB558074 Method: Maximum Peak

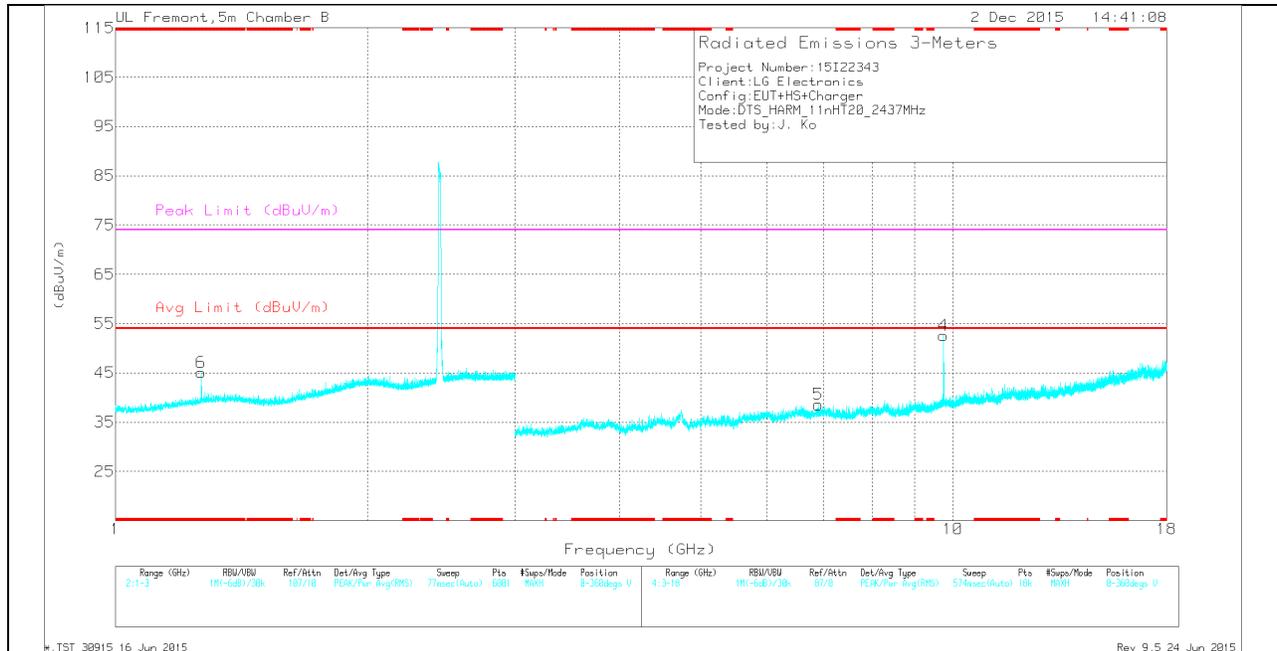
MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL VERTICAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**MID CHANNEL DATA**

**TRACE MARKERS**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fitr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 1.266	41.42	Pk	29.1	-25.4	0	45.12	-	-	74	-28.88	0-360	199	V
1	2.134	36.99	Pk	31.5	-24.4	0	44.09	-	-	-	-	0-360	101	H
2	5.333	34.24	Pk	34.4	-30.8	0	37.84	-	-	-	-	0-360	199	H
5	6.901	33.16	Pk	36.1	-30.7	0	38.56	-	-	-	-	0-360	199	V
4	9.747	42.03	Pk	36.9	-26.3	0	52.63	-	-	-	-	0-360	101	V
3	9.748	36.02	Pk	36.9	-26.3	0	46.62	-	-	-	-	0-360	102	H

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

Pk - Peak detector

**RADIATED EMISSIONS**

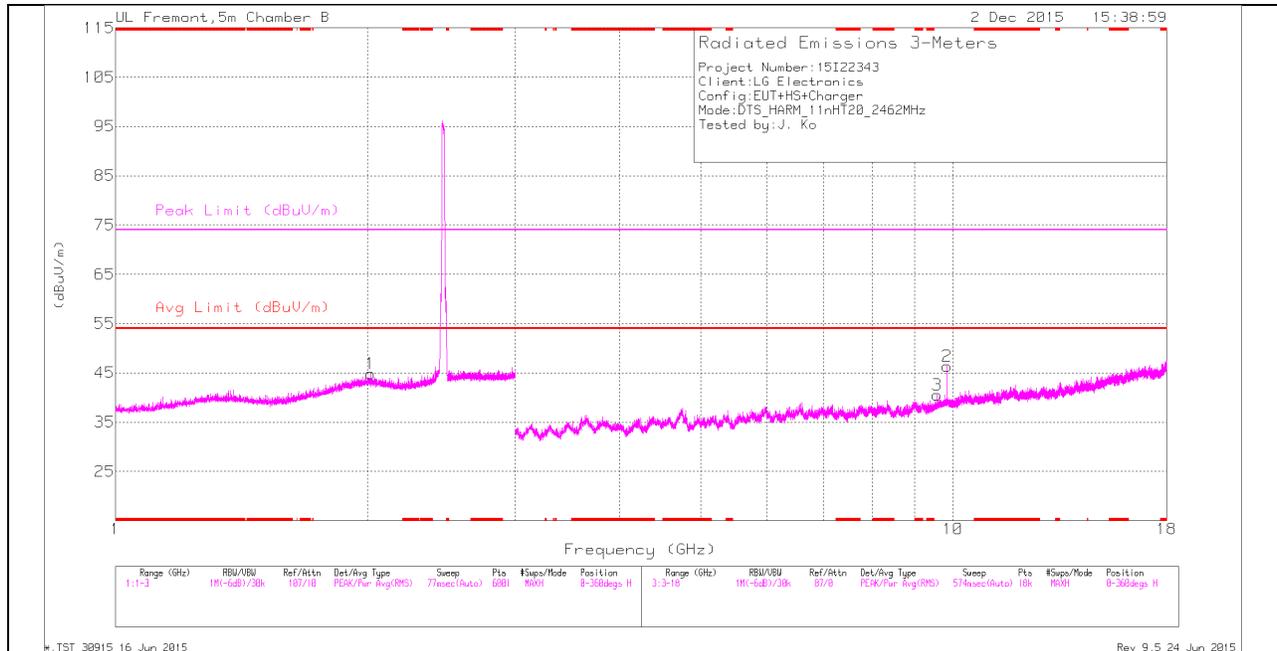
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Fitr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.264	44.94	PK2	29.1	-25.4	0	48.64	-	-	74	-25.36	160	154	V
* 1.264	32.43	MAv1	29.1	-25.4	.22	36.35	54	-17.65	-	-	160	154	V
2.133	44.23	PK2	31.6	-24.4	0	51.43	-	-	74	-22.57	360	101	H
5.333	40.31	PK2	34.4	-30.8	0	43.91	-	-	74	-30.09	160	199	H
6.903	40.21	PK2	36.1	-30.7	0	45.61	-	-	74	-28.39	122	199	V
9.748	41.64	PK2	36.9	-26.3	0	52.24	-	-	74	-21.76	167	106	H
9.748	45.04	PK2	36.9	-26.3	0	55.64	-	-	74	-18.36	122	106	V

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

PK2 - KDB558074 Method: Maximum Peak

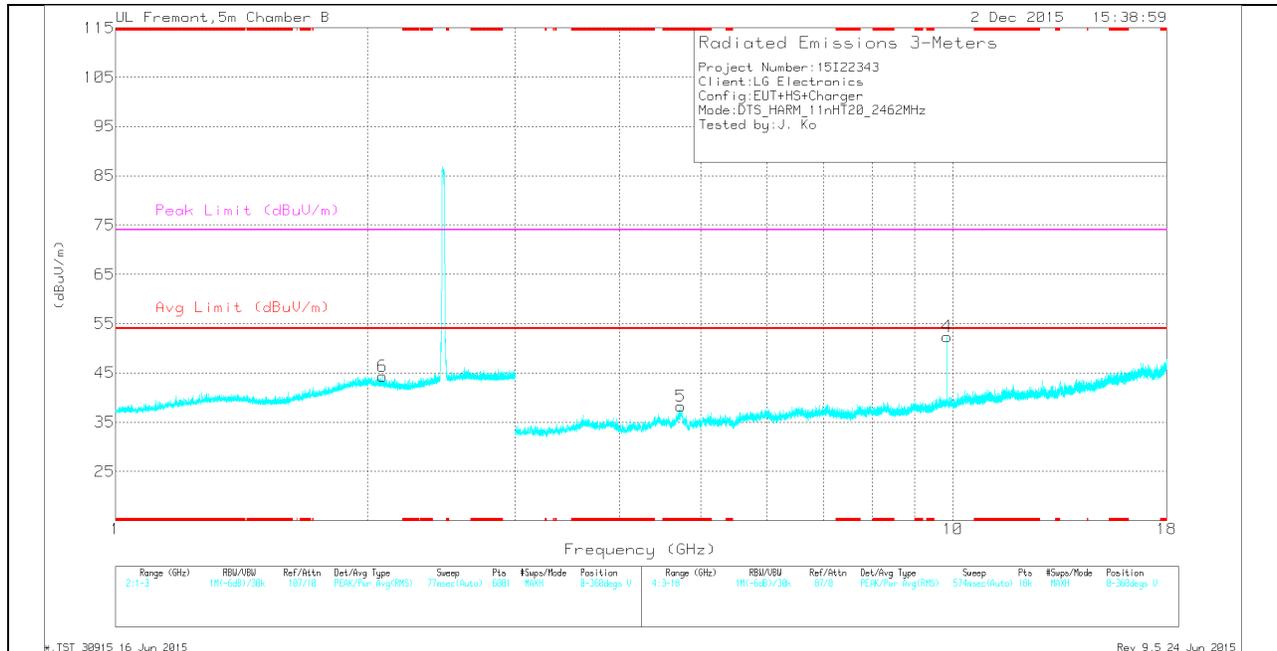
MAv1 - KDB558074 Option 1 Maximum RMS Average

**HIGH CHANNEL HORIZONTAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**HIGH CHANNEL VERTICAL**



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

**HIGH CHANNEL DATA**

**TRACE MARKERS**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 4.73	34.68	Pk	34.3	-30.7	0	38.28	-	-	74	-35.72	0-360	101	V
1	2.016	36.9	Pk	32.3	-24.4	0	44.8	-	-	-	-	0-360	102	H
6	2.083	36.82	Pk	31.9	-24.4	0	44.32	-	-	-	-	0-360	199	V
3	9.576	30.26	Pk	36.6	-26.3	0	40.56	-	-	-	-	0-360	199	H
2	9.848	35.11	Pk	37	-25.8	0	46.31	-	-	-	-	0-360	101	H
4	9.848	41.19	Pk	37	-25.8	0	52.39	-	-	-	-	0-360	101	V

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

Pk - Peak detector

**RADIATED EMISSIONS**

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.729	42.17	PK2	34.3	-30.7	0	45.77	-	-	74	-28.23	61	193	V
* 4.728	30.08	MAv1	34.3	-30.8	.22	33.8	54	-20.2	-	-	61	193	V
2.016	43.98	PK2	32.3	-24.4	0	51.88	-	-	74	-22.12	359	101	H
2.084	44.26	PK2	31.9	-24.4	0	51.76	-	-	74	-22.24	359	198	V
9.575	36.73	PK2	36.6	-26.3	0	47.03	-	-	74	-26.97	156	198	H
9.848	39.87	PK2	37	-25.8	0	51.07	-	-	74	-22.93	156	127	H
9.848	43.99	PK2	37	-25.8	0	55.19	-	-	74	-18.81	102	107	V

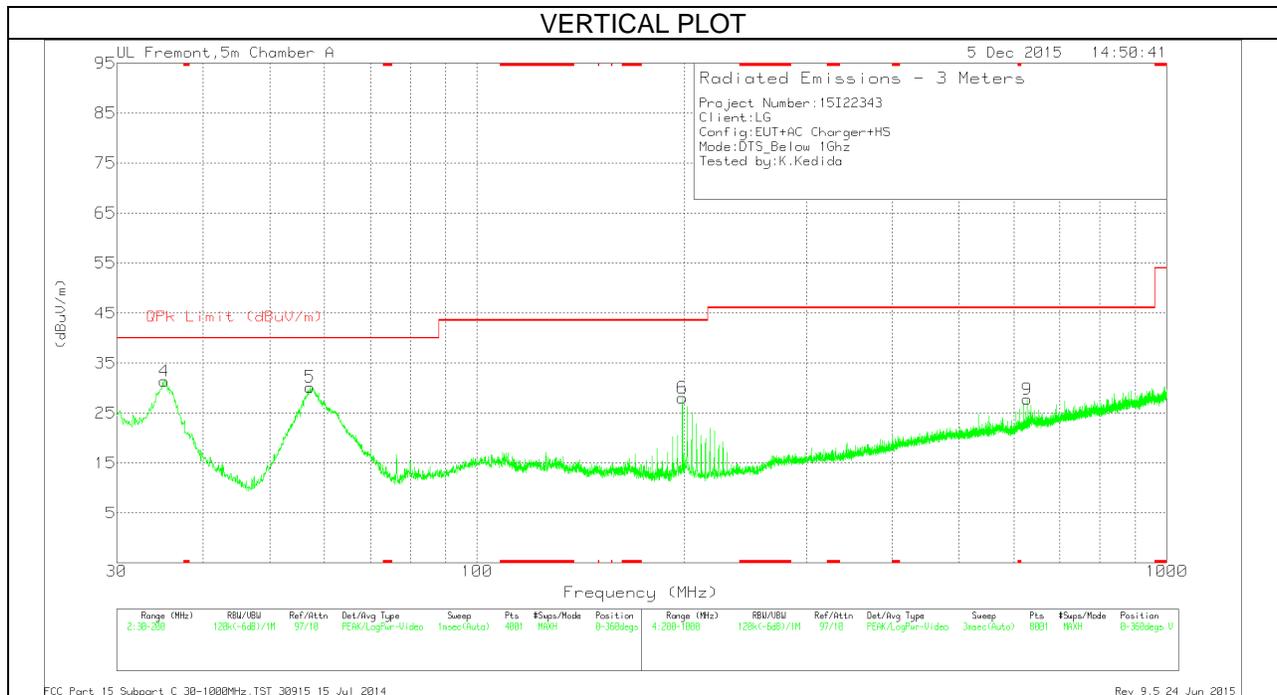
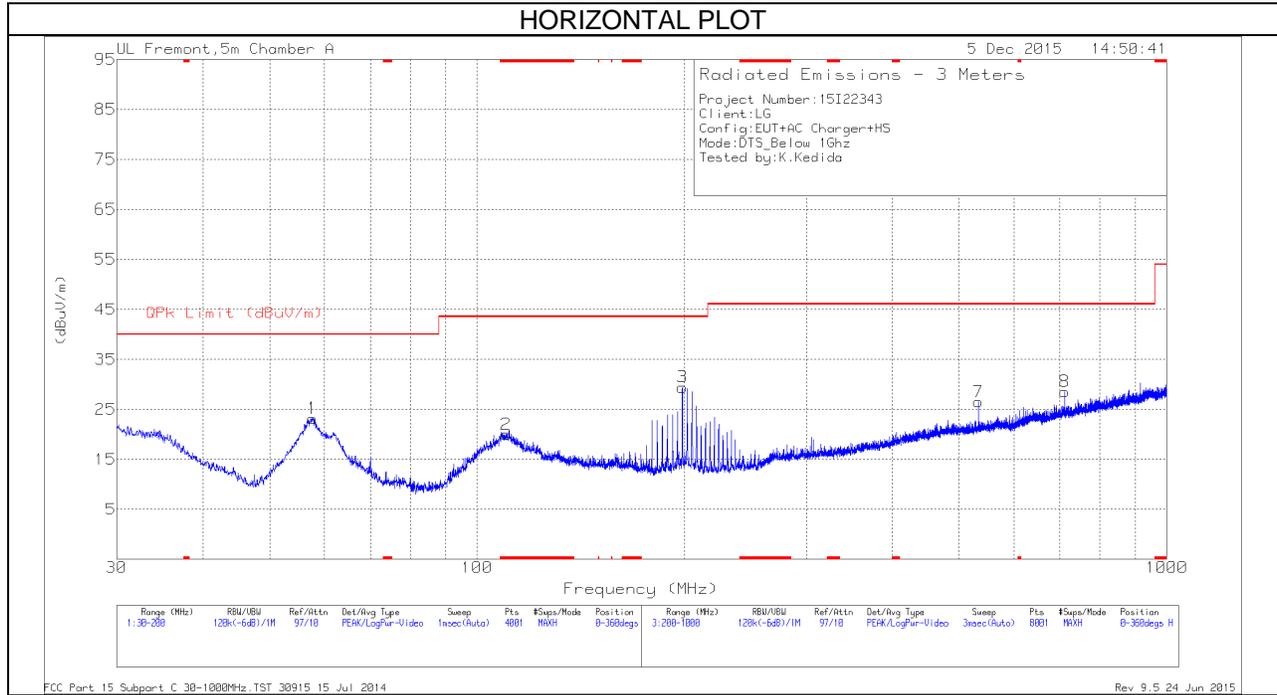
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

## 9.2. WORST-CASE BELOW 1 GHz

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



**Below 1G Data**

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T477 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 110.1125	33.93	Pk	16.6	-30.5	20.03	43.52	-23.49	0-360	299	H
4	35.185	41.19	Pk	21.4	-31.2	31.39	40	-8.61	0-360	101	V
5	57.2	50	Pk	11.1	-30.9	30.2	40	-9.8	0-360	101	V
1	57.71	42.99	Pk	11.1	-30.9	23.19	40	-16.81	0-360	399	H
3	198.385	43.16	Pk	16.3	-30	29.46	43.52	-14.06	0-360	100	H
6	198.385	41.75	Pk	16.3	-30	28.05	43.52	-15.47	0-360	101	V
7	533.3	33.1	Pk	22	-28.6	26.5	46.02	-19.52	0-360	199	H
9	628	32.84	Pk	23.4	-28.5	27.74	46.02	-18.28	0-360	199	V
8	711.1	32.45	Pk	24.4	-28.3	28.55	46.02	-17.47	0-360	199	H

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

Pk - Peak detector

## 10. AC POWER LINE CONDUCTED EMISSIONS

### LIMITS

FCC §15.207 (a)

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

### TEST PROCEDURE

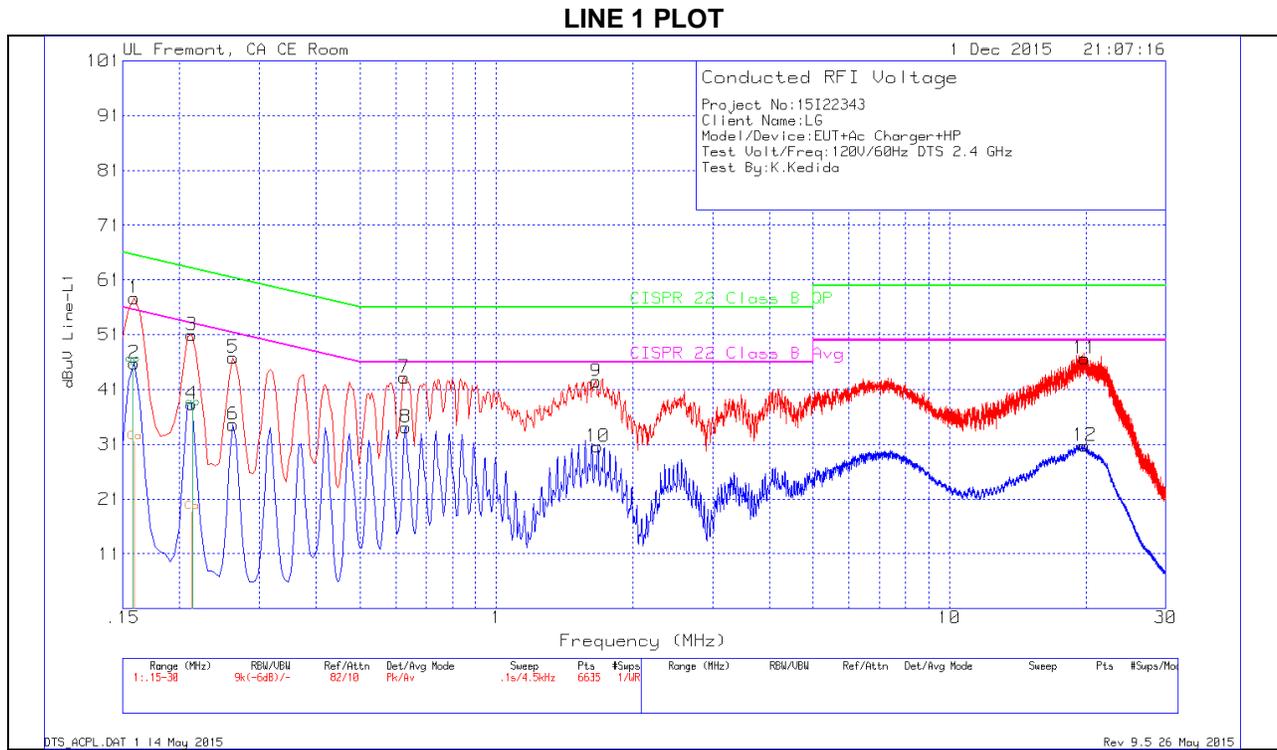
The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

### RESULTS

**6 WORST EMISSIONS**



**LINE 1 RESULTS**

Range 1: Line-L1 .15 - 30MHz

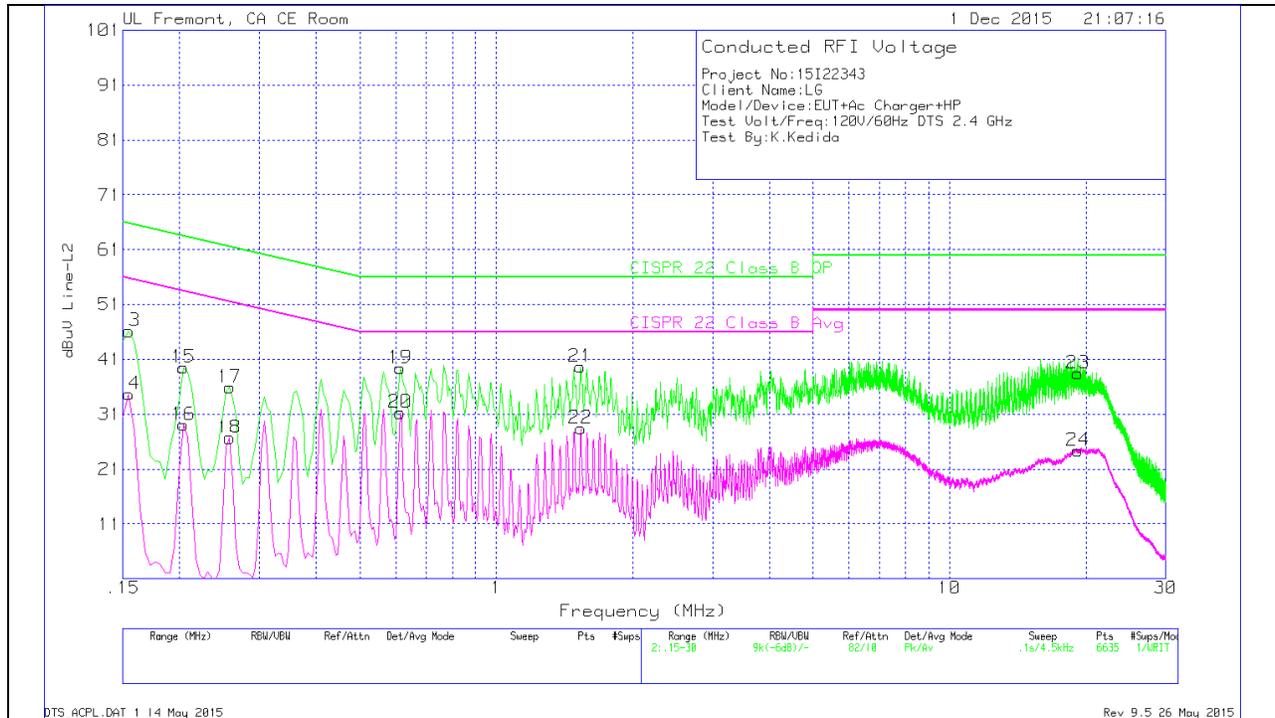
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.15788	44.25	Qp	1.3	0	45.55	65.57	-20.02	-	-
2	.159	44.51	Av	1.3	0	45.81	-	-	55.52	-9.71
3	.213	50.08	Pk	.9	0	50.98	63.09	-12.11	53.09	-
4	.213	37.43	Av	.9	0	38.33	-	-	53.09	-14.76
5	.2625	46.11	Pk	.7	0	46.81	61.35	-14.54	51.35	--
6	.2625	33.9	Av	.7	0	34.6	-	-	51.35	-16.75
7	.627	42.91	Pk	.3	0	43.21	56	-12.79	46	-
8	.6315	33.81	Av	.3	0	34.11	-	-	46	-11.89
9	1.662	42.2	Pk	.2	.1	42.5	56	-13.5	46	-
10	1.6755	30.28	Av	.2	.1	30.58	-	-	46	-15.42
11	19.86	46.22	Pk	.3	.2	46.72	60	-13.28	50	-
12	19.86	30.26	Av	.3	.2	30.76	-	-	50	-19.24

Pk - Peak detector

Av - Average detection

Qp - Quasi-Peak detector

**LINE 2 PLOT**



**LINE 2 RESULTS**

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
13	.1545	44.76	Pk	1.4	0	46.16	65.75	-19.59	55.75	-
14	.1545	33.26	Av	1.4	0	34.66	-	-	55.75	-21.09
15	.204	38.5	Pk	1	0	39.5	63.45	-23.95	53.45	-
16	.204	28.07	Av	1	0	29.07	-	-	53.45	-24.38
17	.258	35.24	Pk	.7	0	35.94	61.5	-25.56	51.5	-
18	.258	25.99	Av	.7	0	26.69	-	-	51.5	-24.81
19	.6135	39.14	Pk	.3	0	39.44	56	-16.56	46	-
20	.6135	30.96	Av	.3	0	31.26	-	-	46	-14.74
21	1.5315	39.35	Pk	.2	.1	39.65	56	-16.35	46	-
22	1.536	28.1	Av	.2	.1	28.4	-	-	46	-17.6
23	19.212	37.95	Pk	.3	.2	38.45	60	-21.55	50	-
24	19.2075	23.87	Av	.3	.2	24.37	-	-	50	-25.63

Pk - Peak detector

Av - Average detection