



**FCC CFR47 PART 15 SUBPART C  
INDUSTRY CANADA RSS-247 ISSUE 1**

**C2PC CERTIFICATION TEST REPORT**

**FOR**

**DOLPHIN CT50 HEALTHCARE**

**MODEL NUMBER: CT50L0N**

**FCC ID: HD5-CT50L0N**

**IC ID: 1693B-CT50L0N**

**REPORT NUMBER: 15U21901-E3V3**

**ISSUE DATE: JANUARY 12, 2016**

*Prepared for*  
**HONEYWELL INTERNATIONAL INC  
HONEYWELL SENSING AND PRODUCTIVITY SOLUTIONS  
9680 OLD BAILES ROAD  
FORT MILL, SOUTH CAROLINA 29715, USA**

*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**

Revision History

Rev.	Date	Revisions	Revised By
V1	12/21/2015	Initial Issue	C.S.OOI
V2	01/05/2016	Added Section 5.5	C.S.OOI
V3	01/12/2016	Updated Section KDB Version	C.S.OOI

## TABLE OF CONTENTS

<b>1. ATTESTATION OF TEST RESULTS .....</b>	<b>4</b>
<b>2. TEST METHODOLOGY .....</b>	<b>5</b>
<b>3. FACILITIES AND ACCREDITATION .....</b>	<b>5</b>
<b>4. CALIBRATION AND UNCERTAINTY .....</b>	<b>6</b>
4.1. <i>MEASURING INSTRUMENT CALIBRATION .....</i>	<i>6</i>
4.2. <i>SAMPLE CALCULATION .....</i>	<i>6</i>
4.3. <i>MEASUREMENT UNCERTAINTY.....</i>	<i>6</i>
<b>5. EQUIPMENT UNDER TEST.....</b>	<b>7</b>
5.1. <i>DESCRIPTION OF EUT .....</i>	<i>7</i>
5.2. <i>MAXIMUM OUTPUT POWER.....</i>	<i>7</i>
5.3. <i>DESCRIPTION OF AVAILABLE ANTENNAS .....</i>	<i>7</i>
5.4. <i>SOFTWARE AND FIRMWARE.....</i>	<i>7</i>
5.5. <i>WORST-CASE CONFIGURATION AND MODE.....</i>	<i>8</i>
5.6. <i>DESCRIPTION OF TEST SETUP.....</i>	<i>9</i>
<b>6. TEST AND MEASUREMENT EQUIPMENT .....</b>	<b>11</b>
<b>7. MEASUREMENT METHODS .....</b>	<b>12</b>
<b>8. SUMMARY TABLE .....</b>	<b>13</b>
<b>9. RADIATED TEST RESULTS.....</b>	<b>14</b>
9.1. <i>LIMITS AND PROCEDURE .....</i>	<i>14</i>
9.2. <i>TRANSMITTER ABOVE 1 GHz .....</i>	<i>15</i>
9.2.1. <i>TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND .....</i>	<i>15</i>
9.2.2. <i>TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND .....</i>	<i>25</i>
9.2.3. <i>TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND.....</i>	<i>35</i>
9.3. <i>WORST-CASE BELOW 1 GHz.....</i>	<i>45</i>
<b>10. SETUP PHOTOS .....</b>	<b>47</b>

# 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** HONEYWELL INTERNATIONAL INC  
HONEYWELL SENSING AND PRODUCTIVITY SOLUTIONS

**EUT DESCRIPTION:** DOLPHIN CT50 HEALTHCARE

**MODEL:** CT50L0N

**SERIAL NUMBER:** 152884063F (Radiated)

**DATE TESTED:** NOVEMBER 17 – 30, 2015

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-247 Issue 1	Pass
INDUSTRY CANADA RSS-GEN Issue 4	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  
UL Verification Services Inc. By:



CHOON OOI  
CONSUMER TECHNOLOGY DIVISION  
PROJECT LEAD  
UL Verification Services Inc.

Tested By:



JUDE SEMANA  
CONSUMER TECHNOLOGY DIVISION  
WISE LAB TECHNICIAN  
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, KDB 558074 D01 v03r04, ANSI C63.10-2013, RSS-GEN Issue 4, and RSS-247 Issue 1.

## 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:

$$\text{Field Strength (dBuV/m)} = \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} - \text{Preamp Gain (dB)}$$

$$36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$$

### 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 1000 MHz	± 4.94 dB
Radiated Disturbance, 1 to 6 GHz	± 3.86 dB
Radiated Disturbance, 6 to 18 GHz	± 4.23 dB
Radiated Disturbance, 18 to 26 GHz	± 5.30 dB
Radiated Disturbance, 26 to 40 GHz	± 5.23 dB

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

## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

The EUT is a Dolphin CT50 Healthcare with BT, BLE, DTS & UNII a/b/g/n/ac and NFC.

Reason for C2PC:

Enclosure plastic material changed compound. Enclosure is the same shape and size as what was filed but will be produce with no hand strap. All other electronic components are the same as what was filed.

### 5.2. MAXIMUM OUTPUT POWER

Refer to the original report, 15U20259-E10B for detail.

### 5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of 1.7 dBi.

### 5.4. SOFTWARE AND FIRMWARE

The EUT driver software installed in the equipment during testing was Android Helsinki-eng 4.4.4 KTU84P 59.02.02.0013E dev-keys.

The test utility software used during testing was FTM Tool, Ver. 1.6.

### 5.5. REASON FOR C2PC

Enclosure plastic material changed compound. Enclosure is the same shape and size as what was filed but will be produce with no hand strap. All other electronic components are the same as what was filed. Only radiated emissions tests were performed in this filing. Results of other tests performed in the original filing would not be affected by this change

## 5.6. 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

802.11a mode: 6 Mbps

802.11n HT20mode: MCS0

## 5.7. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	PHIHONG	PSA10F-050Q	N/A	N/A
USB CUP Adapter	Honeywell	N/A	N/A	N/A

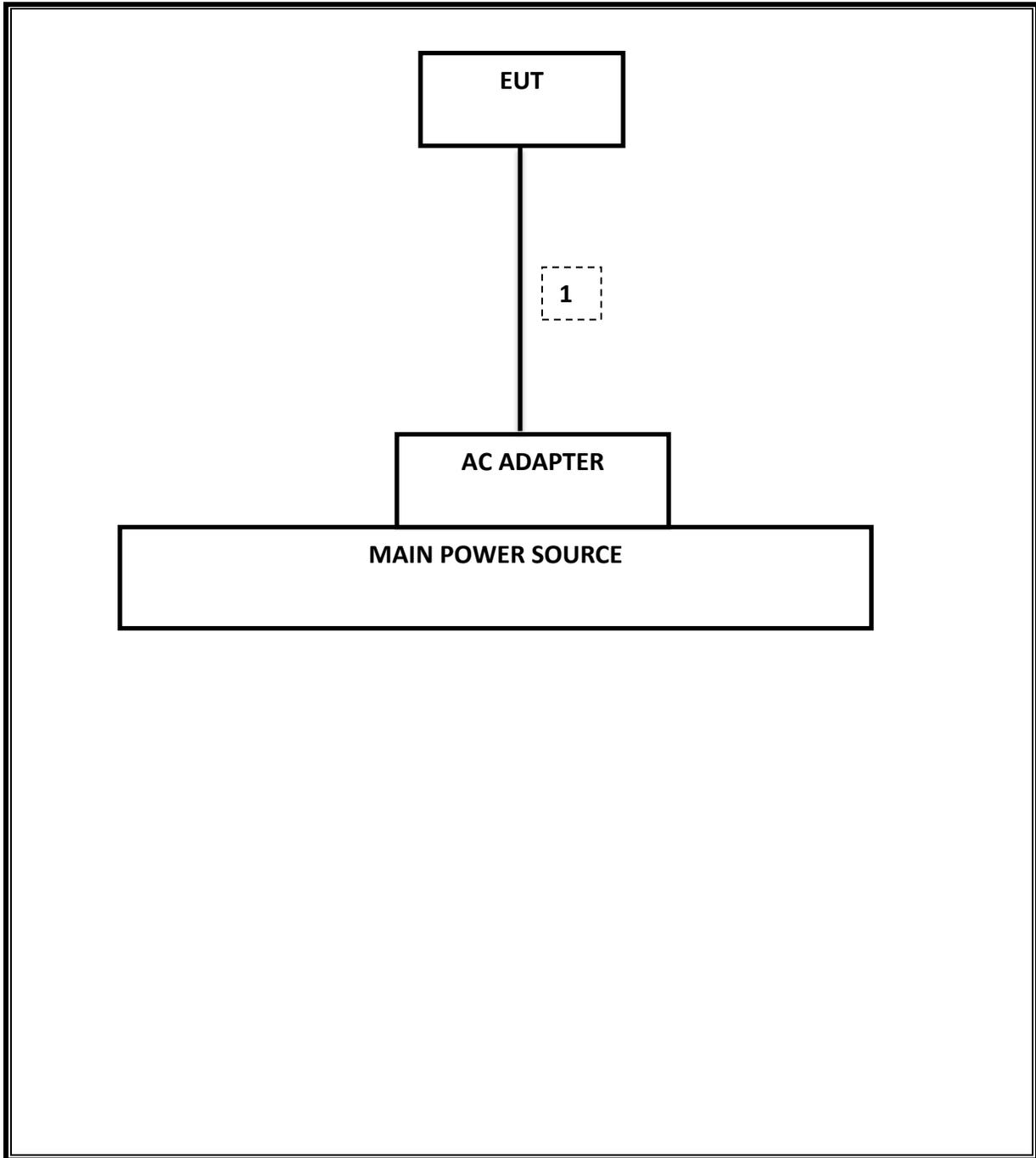
### I/O CABLES

N/A

### TEST SETUP

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

**SETUP DIAGRAM FOR TESTS**



## 6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	Manufacturer	Model	Asset	Cal Due
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/15
Spectrum Analyzer,9KHz-40GHz	HP	8564E	C00986	04/01/16
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	1000741	08/13/16
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/18/16
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15
Antenna, Horn, 1-18 GHz	ETS	3117	C01022	02/21/16
Antenna, Horn,18- 26 GHz	ARA	MWH-1826/B	C00946	11/12/16
Antenna, Horn, 26-40 GHz	ARA	MWH-2640	C00891	06/28/16
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	T243	03/06/16
RF Preamplifier, 100KHz -> 1300MHz	HP	8447D	T10	01/06/16
RF Preamplifier, 1GHz - 18GHz	Miteq	NSP4000-SP2	924343	03/23/16
RF Preamplifier, 1GHz - 26.5GHz	HP	8449B	F00351	06/27/16
AC Power Supply, 2,500VA 45-500Hz	Elgar-Ametek	CW2501M	F00013	CNR
RF Preamplifier, 1GHz - 40GHz	Miteq	NSP4000-SP2	C00990	08/20/16
Attenuator / Switch driver	HP	11713A	F00204	CNR
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	T420	04/29/16
High Pass Filter 3GHz	Micro-Tronics	HPS17543	T426	04/29/16
High Pass Filter 6GHz	Micro-Tronics	HPS17542	T424	04/29/16

Test Software List			
Description	Manufacturer	Model	Version
Radiated Software	UL	UL EMC	Version 9.5, 07/22/14
Conducted Software	UL	UL EMC	Version 9.5, 05/17/14
CLT Software	UL	UL RF	Version 1.0, 02/02/15
Antenna Port Software	UL	UL RF	Version 2.1.1.1, 1/20/15

## 7. MEASUREMENT METHODS

KDB 558074 D01 DTS Meas Guidance v03r04:

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

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

## 8. SUMMARY TABLE

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.247 (a)(2)	RSS-247 5.2.1	Occupied Band width (6dB)	>500KHz	Conducted	Pass	Refer to 15U20259-E10B
2.1051, 15.247 (d)	RSS-247 5.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	Refer to 15U20259-E10B
15.247	RSS-247 5.4.4	TX conducted output power	<30dBm		Pass	Refer to 15U20259-E10B
15.247	RSS-247 5.2.2	PSD	<8dBm		Pass	Refer to 15U20259-E10B
15.207 (a)	RSS-GEN 8.8	AC Power Line conducted emissions	Section 10	Radiated	Pass	Refer to 15U20259-E10B
15.205, 15.209	RSS-GEN 8.9/7	Radiated Spurious Emission	< 54dBuV/m		Pass	50.39dBuV/m

## 9. RADIATED TEST RESULTS

### 9.1. LIMITS AND PROCEDURE

#### LIMITS

FCC §15.205 and §15.209

IC RSS-GEN Clause 8.9 (Transmitter)

IC RSS-GEN Clause 7 (Receiver)

Frequency Range (MHz)	Field Strength Limit ( $\mu\text{V/m}$ ) at 3 m	Field Strength Limit (dB $\mu\text{V/m}$ ) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

#### TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters.

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

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor for average measurements. Duty cycle factor =  $10 \log(1/x)$  For this sample B mode = 0dB (duty cycle >98%); G mode = 0.21dB; N mode = 0.19dB.

The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

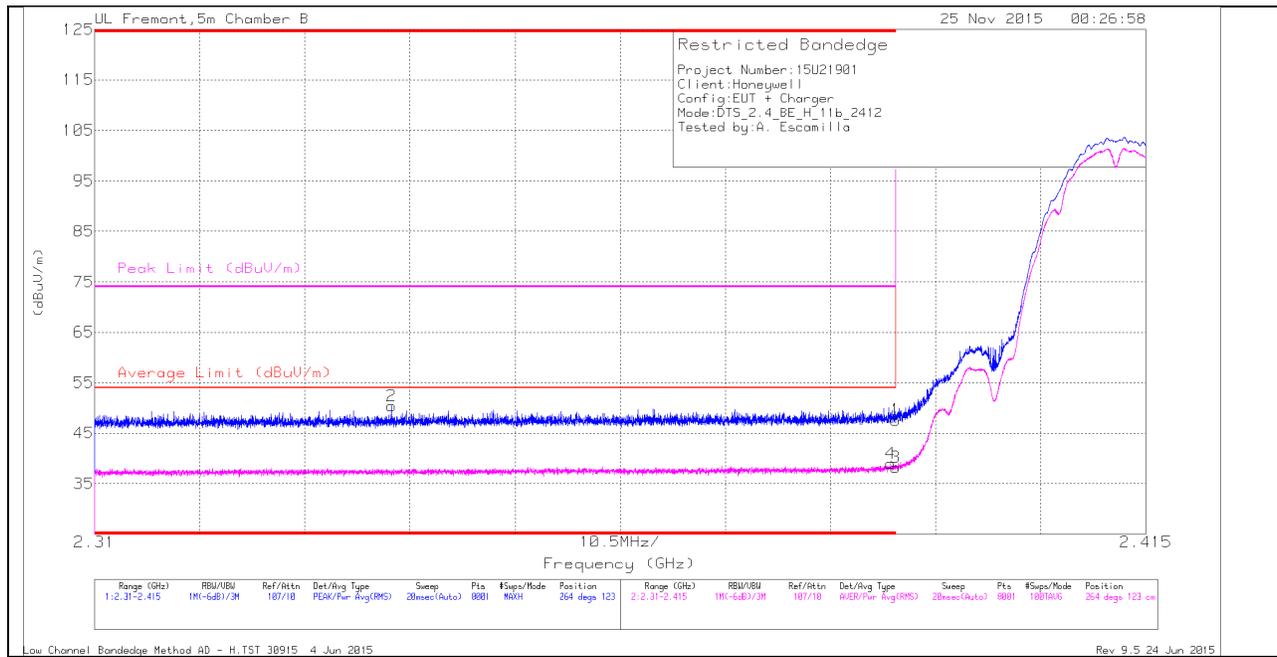
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

## 9.2. TRANSMITTER ABOVE 1 GHz

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

#### RESTRICTED BANDEDGE (LOW CHANNEL)

#### HORIZONTAL PEAK AND AVERAGE PLOT



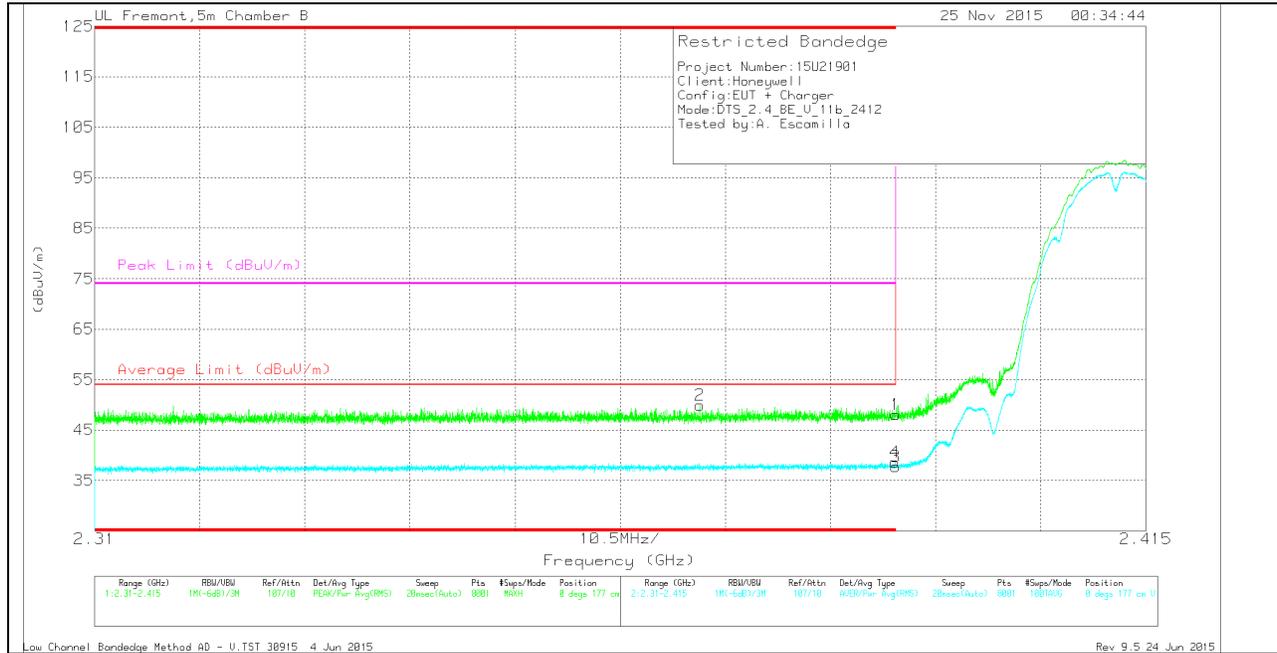
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	39.72	Pk	32	-24.1	0	47.62	-	-	74	-26.38	264	123	H
2	* 2.34	42.93	PK	31.7	-24.2	0	50.43	-	-	74	-23.57	264	123	H
3	* 2.39	30.36	RMS	32	-24.1	0	38.26	54	-15.74	-	-	264	123	H
4	* 2.389	31.14	RMS	32	-24.1	0	39.04	54	-14.96	-	-	264	123	H

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

PK - Peak detector

RMS - RMS detection

**VERTICAL PEAK AND AVERAGE PLOT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.37	42.27	Pk	31.9	-24.2	49.97	-	-	74	-24.03	0	177	V
1	* 2.39	40.13	Pk	32	-24.1	48.03	-	-	74	-25.97	0	177	V
3	* 2.39	29.89	RMS	32	-24.1	37.79	54	-16.21	-	-	0	177	V
4	* 2.39	30.69	RMS	32	-24.1	38.59	54	-15.41	-	-	0	177	V

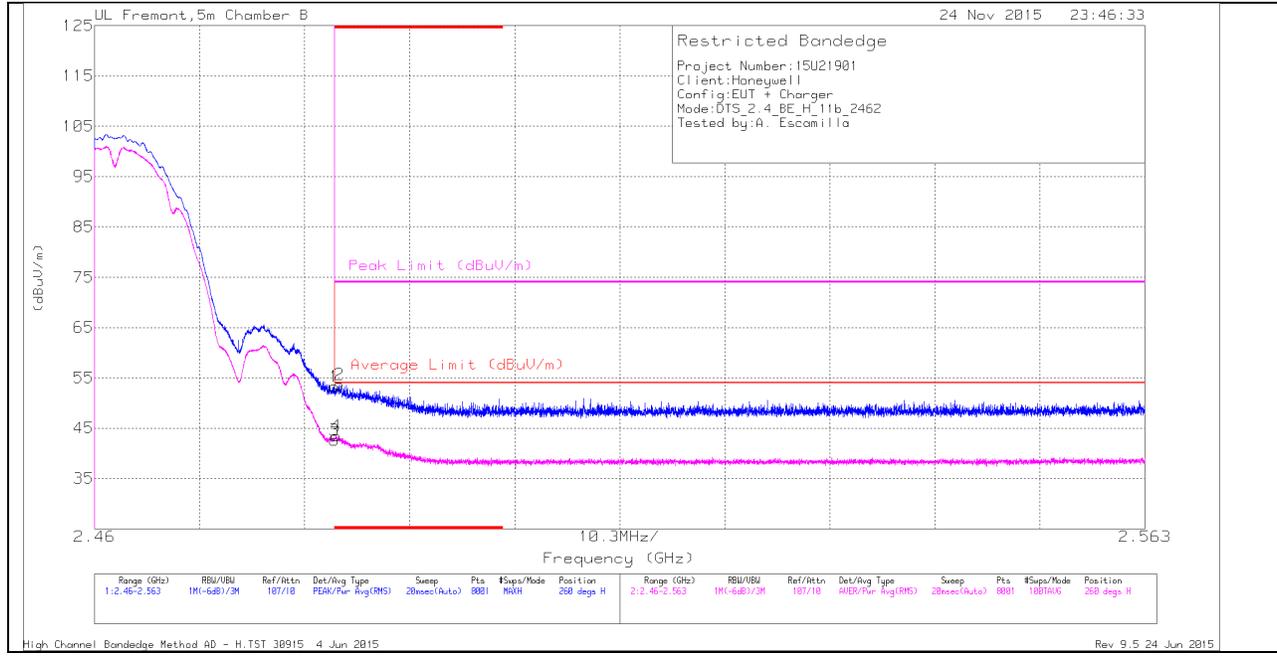
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

### AUTHORIZED BANDEDGE (HIGH CHANNEL)

#### HORIZONTAL PEAK AND AVERAGE PLOT



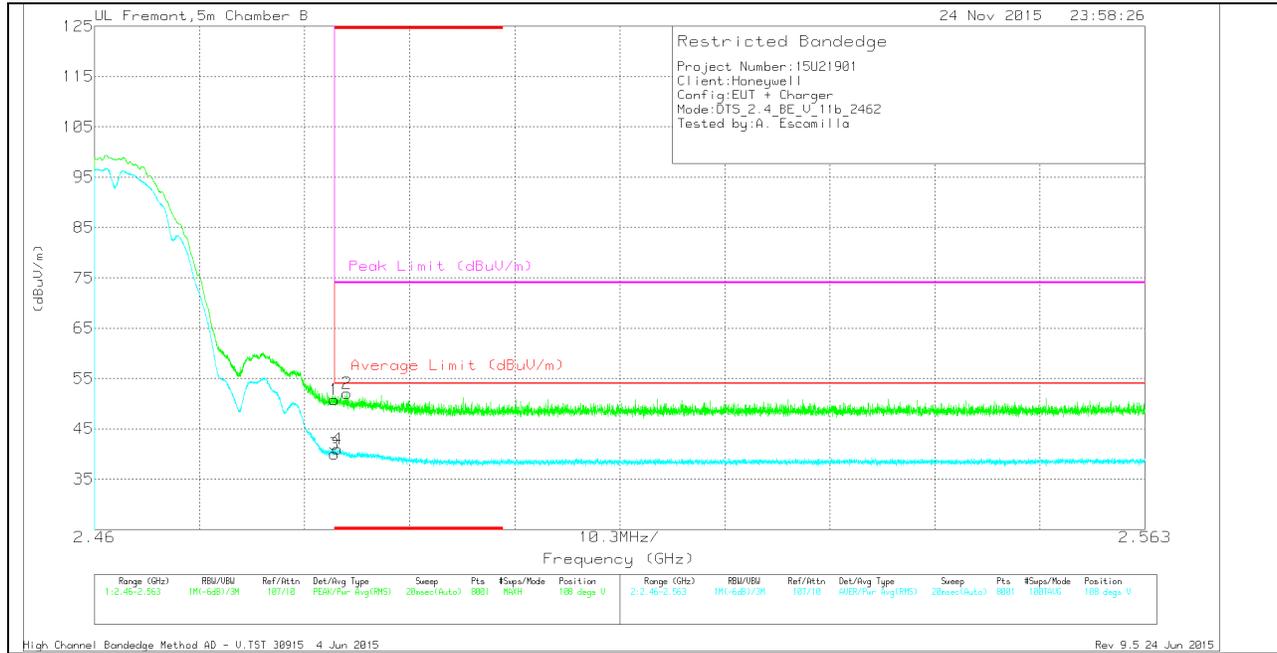
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	44.77	Pk	32.5	-24	0	53.27	-	-	74	-20.73	260	114	H
2	* 2.484	45.17	Pk	32.5	-24	0	53.67	-	-	74	-20.33	260	114	H
3	* 2.484	34.11	RMS	32.5	-24	0	42.61	54	-11.39	-	-	260	114	H
4	* 2.484	34.99	RMS	32.5	-24	0	43.49	54	-10.51	-	-	260	114	H

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

Pk - Peak detector

RMS - RMS detection

**VERTICAL PEAK AND AVERAGE PLOT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	42.32	Pk	32.5	-24	0	50.82	-	-	74	-23.18	108	111	V
3	* 2.484	31.45	RMS	32.5	-24	0	39.95	54	-14.05	-	-	108	111	V
4	* 2.484	32.53	RMS	32.5	-24	0	41.03	54	-12.97	-	-	108	111	V
2	* 2.485	43.53	Pk	32.5	-24	0	52.03	-	-	74	-21.97	108	111	V

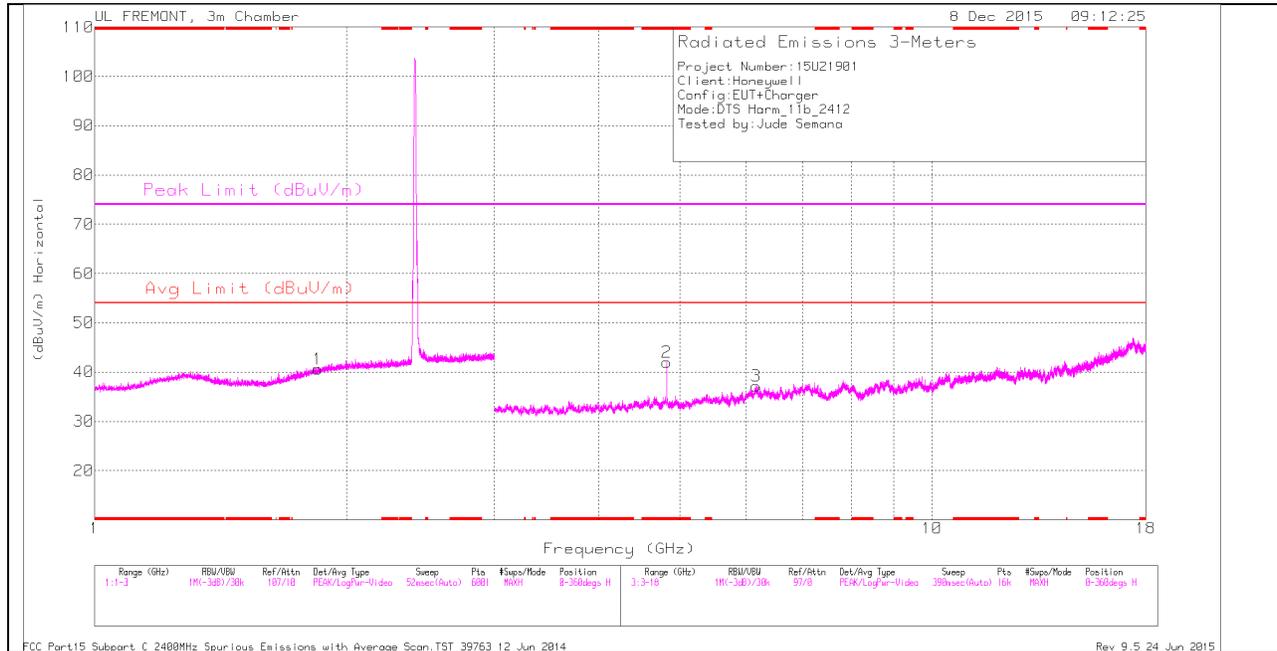
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

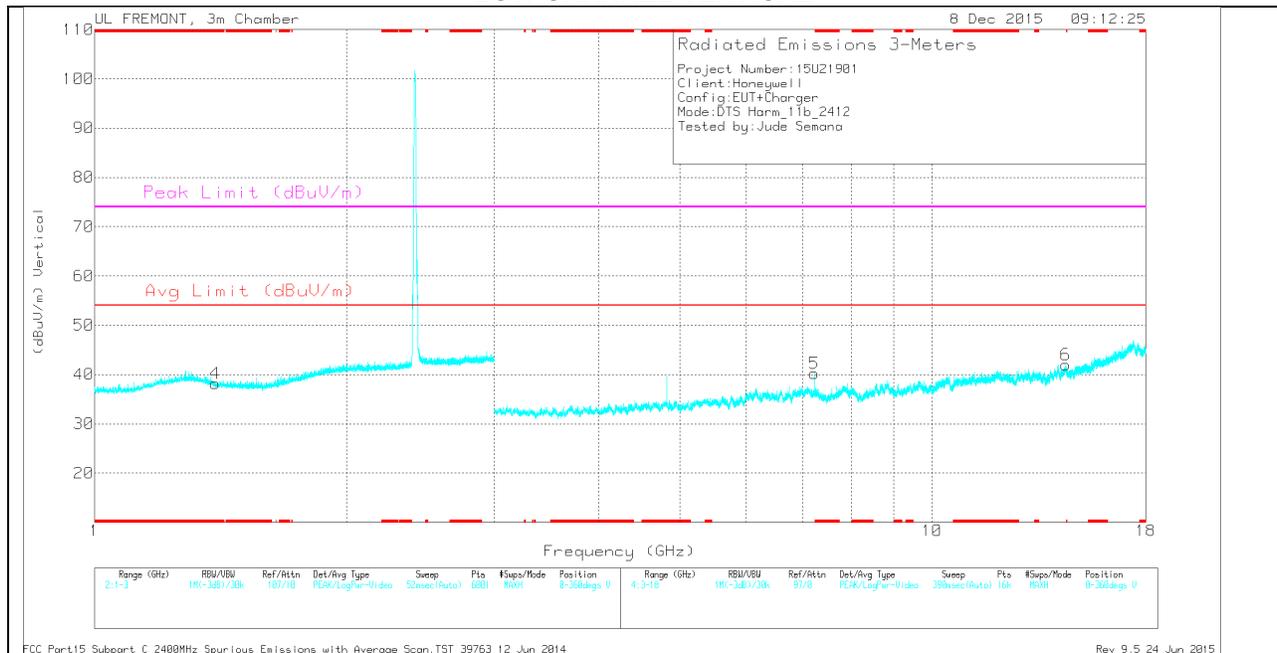
## HARMONICS AND SPURIOUS EMISSIONS

### LOW CHANNEL HORIZONTAL



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

### LOW CHANNEL VERTICAL



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

**LOW CHANNEL DATA**

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/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	* 1.394	32.64	Avg	28.7	-23.1	0	38.24	54	-15.76	-	-	0-360	100	V
2	* 4.824	37.16	Avg	34	-29.2	0	41.96	54	-12.04	-	-	0-360	100	H
1	1.846	32.62	Avg	30.6	-22.6	0	40.62	54	-13.38	-	-	0-360	100	H
3	6.162	30.32	Avg	35.3	-28.4	0	37.22	54	-16.78	-	-	0-360	100	H
5	7.234	32.73	Avg	35.6	-28.1	0	40.23	54	-13.77	-	-	0-360	200	V
6	14.452	25.66	Avg	39.6	-23.3	0	41.96	54	-12.04	-	-	0-360	100	V

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

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

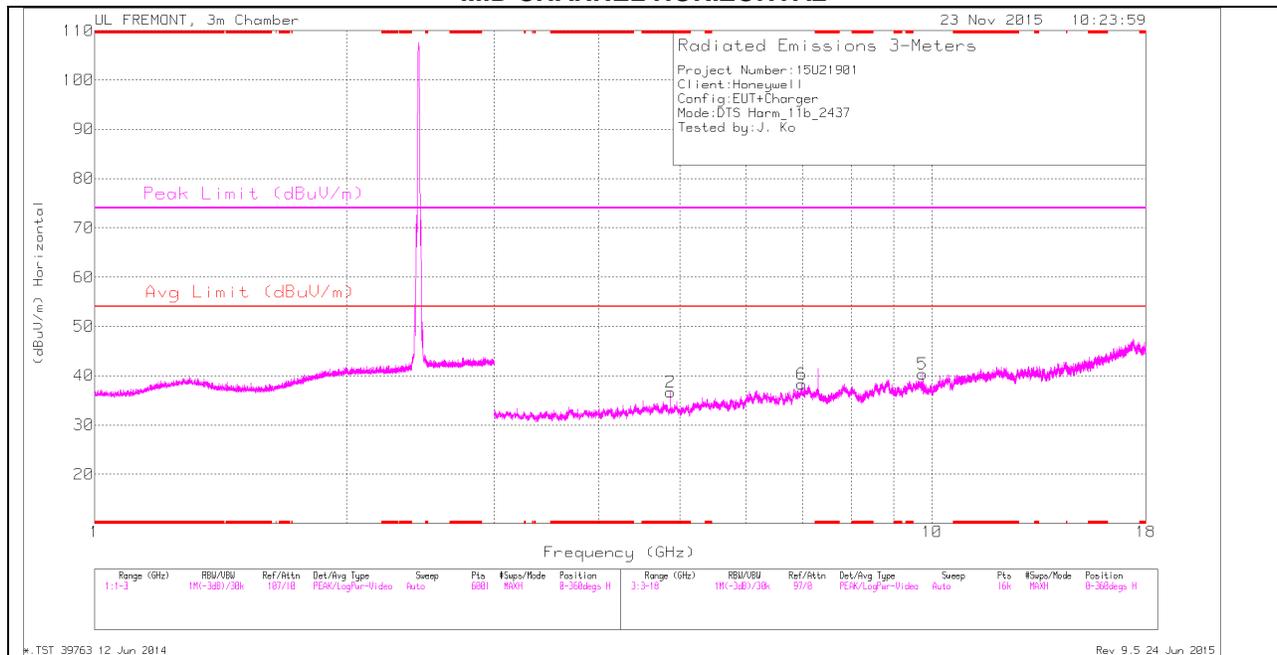
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.396	42.98	PK2	28.7	-23.1	0	48.58	-	-	74	-25.42	307	192	V
* 1.393	30.62	MAV1	28.7	-23.1	0	36.22	54	-17.78	-	-	307	192	V
* 4.824	44.25	PK2	34	-29.2	0	49.05	-	-	74	-24.95	307	239	H
* 4.824	37.92	MAV1	34	-29.2	0	42.72	54	-11.28	-	-	307	239	H
1.845	42.35	PK2	30.6	-22.6	0	50.35	-	-	74	-23.65	268	148	H
1.846	30.31	MAV1	30.6	-22.6	0	38.31	54	-15.69	-	-	268	148	H
6.164	40.16	PK2	35.3	-28.5	0	46.96	-	-	74	-27.04	125	376	H
6.164	27.64	MAV1	35.3	-28.5	0	34.44	54	-19.56	-	-	125	376	H
7.234	40.93	PK2	35.6	-28.1	0	48.43	-	-	74	-25.57	0	157	V
7.235	30.67	MAV1	35.6	-28.1	0	38.17	54	-15.83	-	-	0	157	V
14.453	36.62	PK2	39.6	-23.3	0	52.92	-	-	74	-21.08	124	322	V
14.454	24.05	MAV1	39.6	-23.3	0	40.35	54	-13.65	-	-	124	322	V

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

PK2 - KDB558074 Method: Maximum Peak

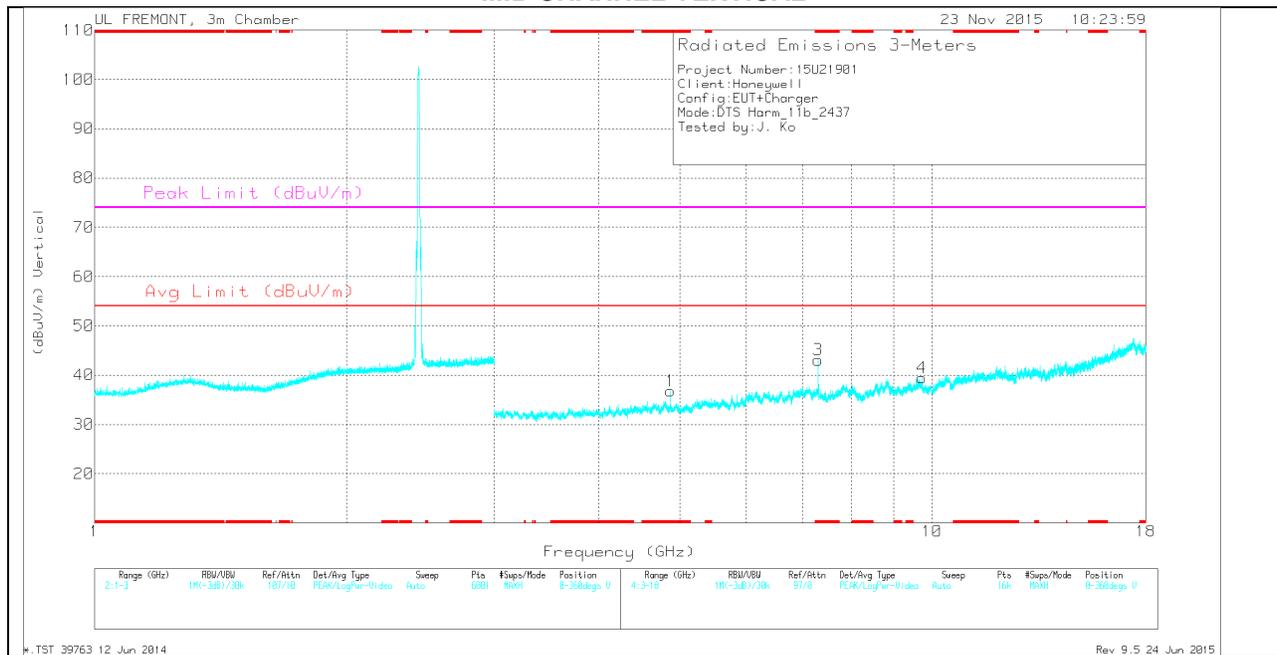
MAV1 - KDB558074 Option 1 Maximum RMS Average

**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 T119 (dB/m)	Amp/Cbl/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
2	* 4.874	31.42	Avg	34	-28.7	0	36.72	54	-17.28	-	-	0-360	100	H
1	* 4.874	31.46	Avg	34	-28.7	0	36.76	54	-17.24	-	-	0-360	100	V
3	* 7.31	34.18	Avg	35.6	-26.7	0	43.08	54	-10.92	-	-	0-360	100	V
6	6.984	30.61	Avg	35.6	-27.9	0	38.31	54	-15.69	-	-	0-360	100	H
4	9.721	26.33	Avg	36.8	-23.7	0	39.43	54	-14.57	-	-	0-360	100	V
5	9.748	27.35	Avg	36.9	-23.9	0	40.35	54	-13.65	-	-	0-360	100	H

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

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

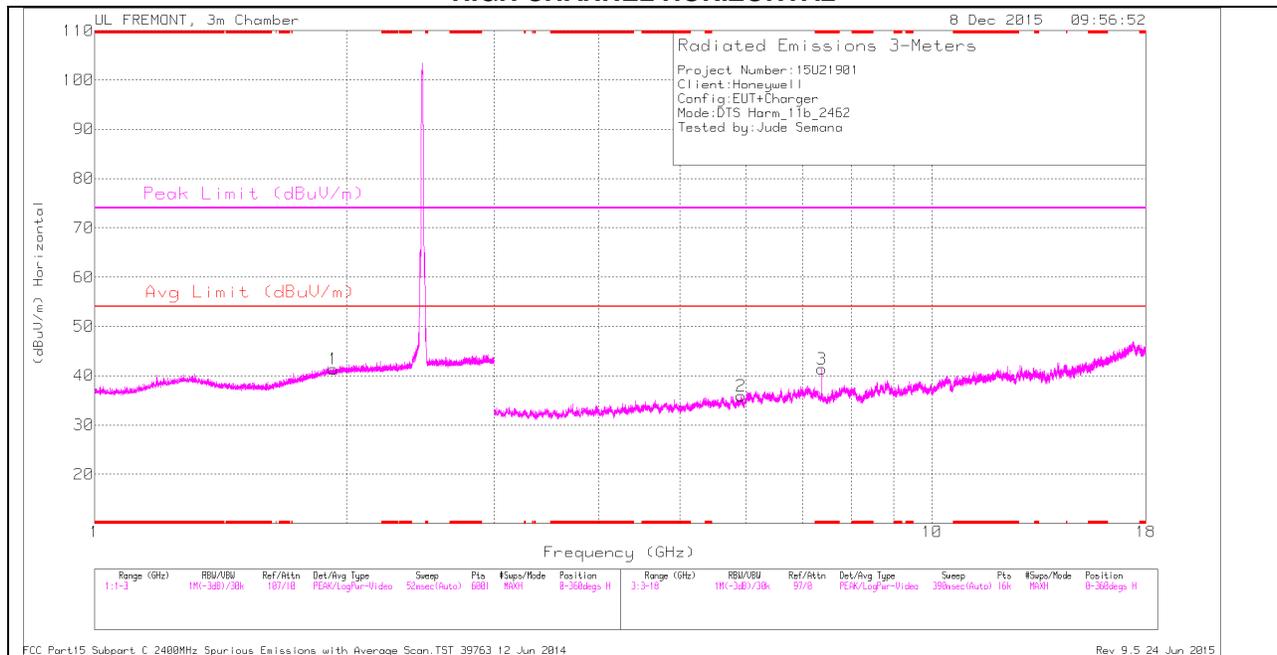
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.874	40.4	PK2	34	-28.7	0	45.7	-	-	74	-28.3	81	104	H
* 4.874	30.87	MAV1	34	-28.7	0	36.17	54	-17.83	-	-	81	104	H
* 4.874	40.68	PK2	34	-28.7	0	45.98	-	-	74	-28.02	235	139	V
* 4.874	31.19	MAV1	34	-28.7	0	36.49	54	-17.51	-	-	235	139	V
* 7.31	42.86	PK2	35.6	-26.7	0	51.76	-	-	74	-22.24	93	275	V
* 7.312	34.98	MAV1	35.6	-26.6	0	43.98	54	-10.02	-	-	93	275	V
6.985	38.84	PK2	35.6	-27.9	0	46.54	-	-	74	-27.46	81	100	H
6.986	27.59	MAV1	35.6	-27.9	0	35.29	54	-18.71	-	-	81	100	H
9.723	35.11	PK2	36.8	-23.7	0	48.21	-	-	74	-25.79	93	100	V
9.723	23.86	MAV1	36.8	-23.7	0	36.96	54	-17.04	-	-	93	100	V
9.748	35.67	PK2	36.9	-23.9	0	48.67	-	-	74	-25.33	81	100	H
9.748	24.04	MAV1	36.9	-23.9	0	37.04	54	-16.96	-	-	81	100	H

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

PK2 - KDB558074 Method: Maximum Peak

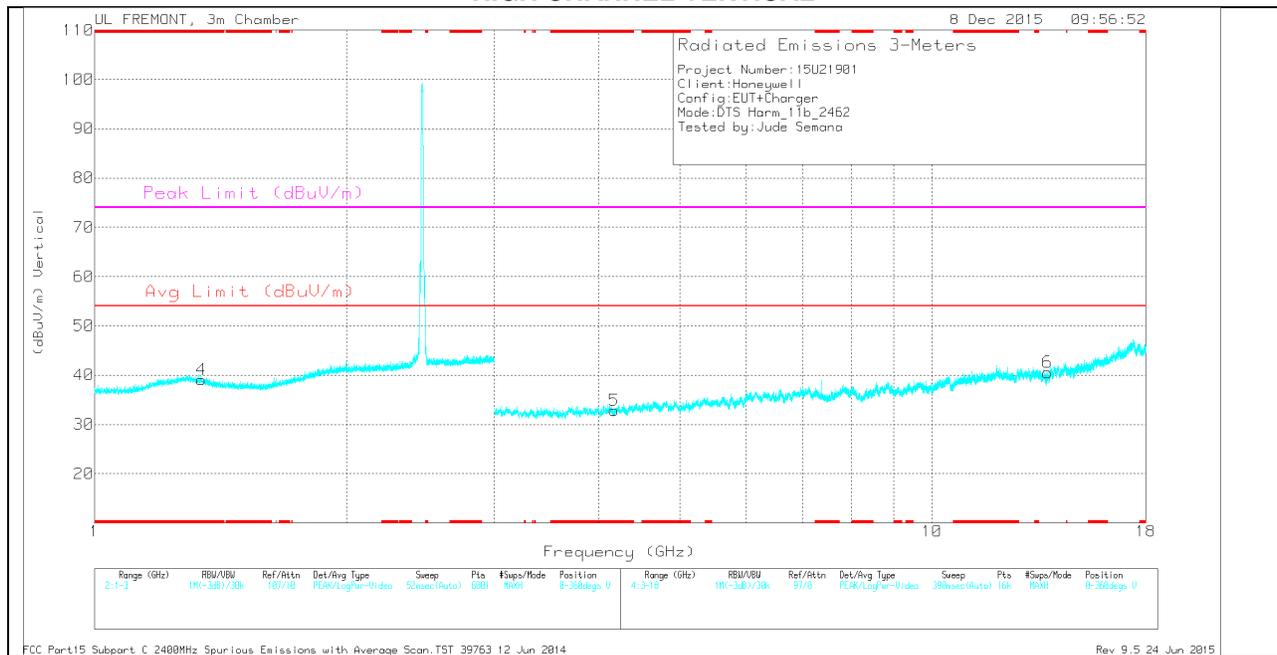
MAV1 - KDB558074 Option 1 Maximum RMS Average

### 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 T119 (dB/m)	Amp/Cbl/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	* 1.342	32.8	Avg	29.4	-23.1	0	39.1	54	-14.9	-	-	0-360	100	V
3	* 7.386	32.45	Avg	35.6	-26.7	0	41.35	54	-12.65	-	-	0-360	200	H
5	* 4.173	29.09	Avg	33.3	-29.5	0	32.89	54	-21.11	-	-	0-360	100	V
1	1.928	32.55	Avg	31.2	-22.4	0	41.35	54	-12.65	-	-	0-360	200	H
2	5.913	29.76	Avg	35	-28.9	0	35.86	54	-18.14	-	-	0-360	100	H
6	13.742	26.64	Avg	38.6	-24.7	0	40.54	54	-13.46	-	-	0-360	100	V

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

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/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
* 1.342	42.69	PK2	29.3	-23.1	0	48.89	-	-	74	-25.11	12	374	V
* 1.343	30.82	MAV1	29.3	-23.2	0	36.92	54	-17.08	-	-	12	374	V
* 7.388	41.67	PK2	35.6	-26.7	0	50.57	-	-	74	-23.43	74	272	H
* 7.387	33.6	MAV1	35.6	-26.7	0	42.5	54	-11.5	-	-	74	272	H
* 4.171	38.96	PK2	33.3	-29.5	0	42.76	-	-	74	-31.24	192	254	V
* 4.171	26.83	MAV1	33.3	-29.5	0	30.63	54	-23.37	-	-	192	254	V
1.928	30.54	MAV1	31.2	-22.4	0	39.34	54	-14.66	-	-	0	200	H
1.93	42.48	PK2	31.2	-22.4	0	51.28	-	-	74	-22.72	0	200	H
5.912	39.87	PK2	35	-28.9	0	45.97	-	-	74	-28.03	12	100	H
5.912	27.9	MAV1	35	-28.9	0	34	54	-20	-	-	12	100	H
13.741	35.6	PK2	38.6	-24.7	0	49.5	-	-	74	-24.5	192	100	V
13.743	24.29	MAV1	38.6	-24.7	0	38.19	54	-15.81	-	-	192	100	V

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

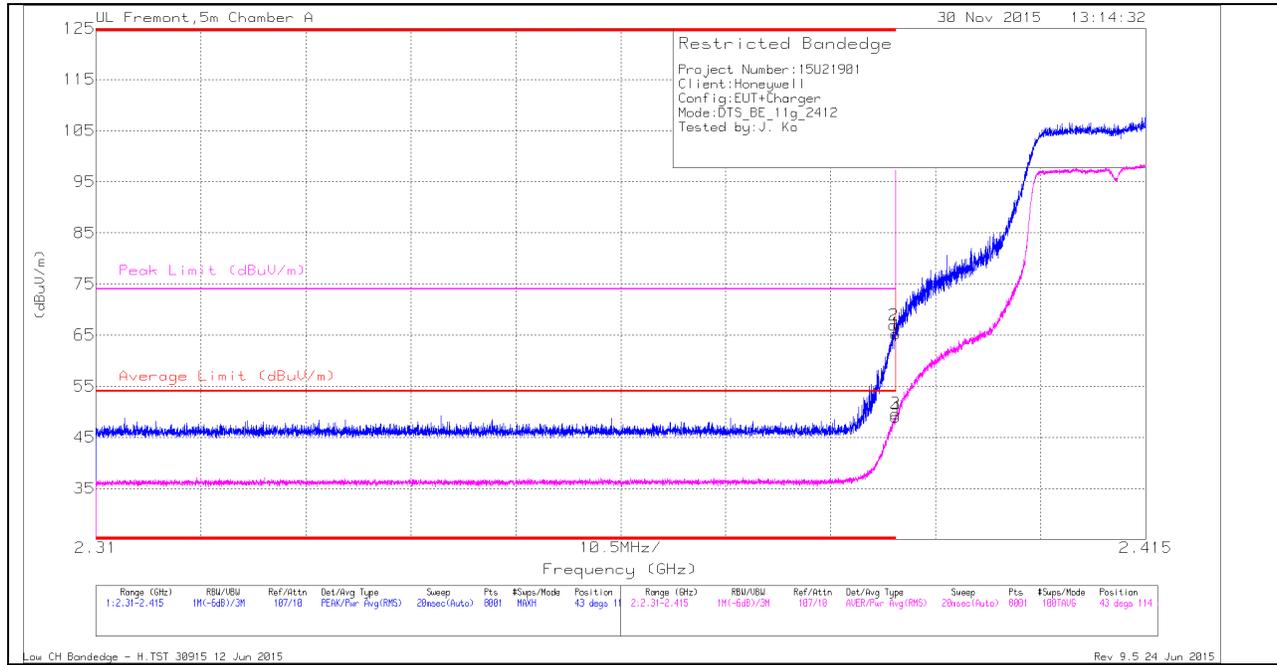
PK2 - KDB558074 Method: Maximum Peak

MAV1 - KDB558074 Option 1 Maximum RMS Average

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

## RESTRICTED BANDEDGE (LOW CHANNEL)

### HORIZONTAL PEAK AND AVERAGE PLOT



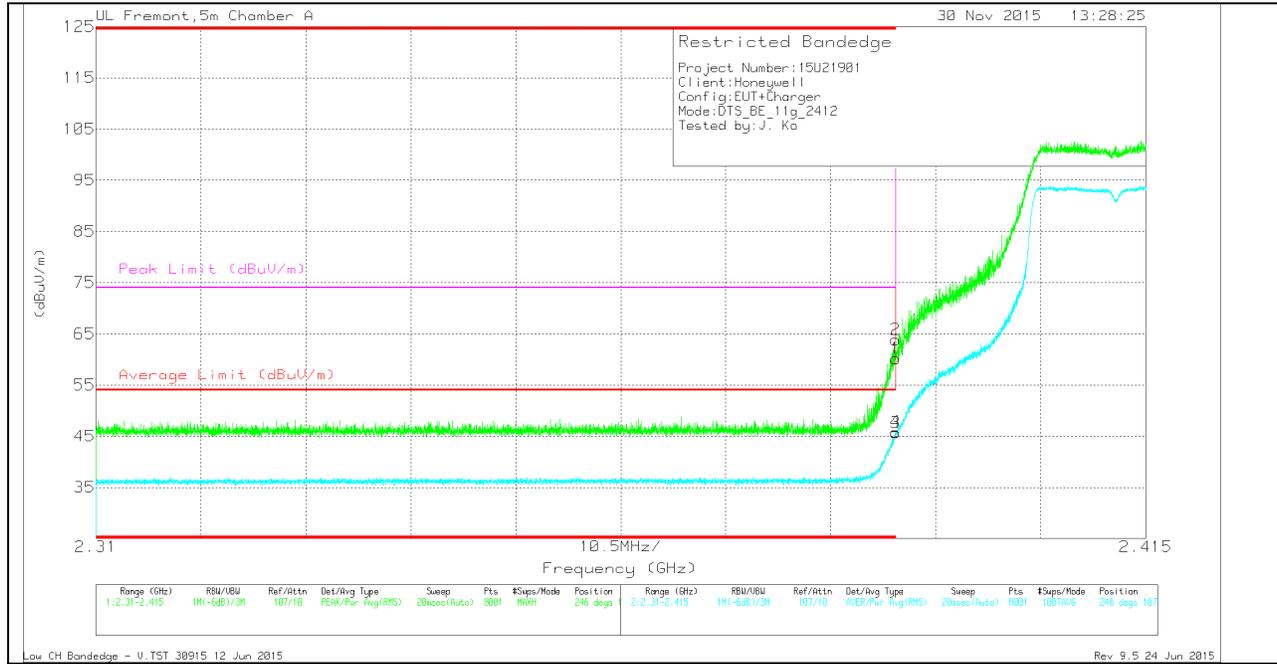
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	53.16	Pk	32	-19.9	0	65.26	-	-	74	-8.74	43	114	H
2	* 2.39	54.84	Pk	32	-19.9	0	66.94	-	-	74	-7.06	43	114	H
3	* 2.39	37.3	RMS	32	-19.9	.21	49.61	54	-4.39	-	-	43	114	H
4	* 2.39	36.68	RMS	32	-19.9	.21	48.99	54	-5.01	-	-	43	114	H

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

Pk - Peak detector

RMS - RMS detection

**VERTICAL PEAK AND AVERAGE PLOT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	48.08	Pk	32	-19.9	0	60.18	-	-	74	-13.82	246	107	V
2	* 2.39	51.74	Pk	32	-19.9	0	63.84	-	-	74	-10.16	246	107	V
3	* 2.39	33.37	RMS	32	-19.9	.21	45.68	54	-8.32	-	-	246	107	V
4	* 2.39	33.52	RMS	32	-19.9	.21	45.83	54	-8.17	-	-	246	107	V

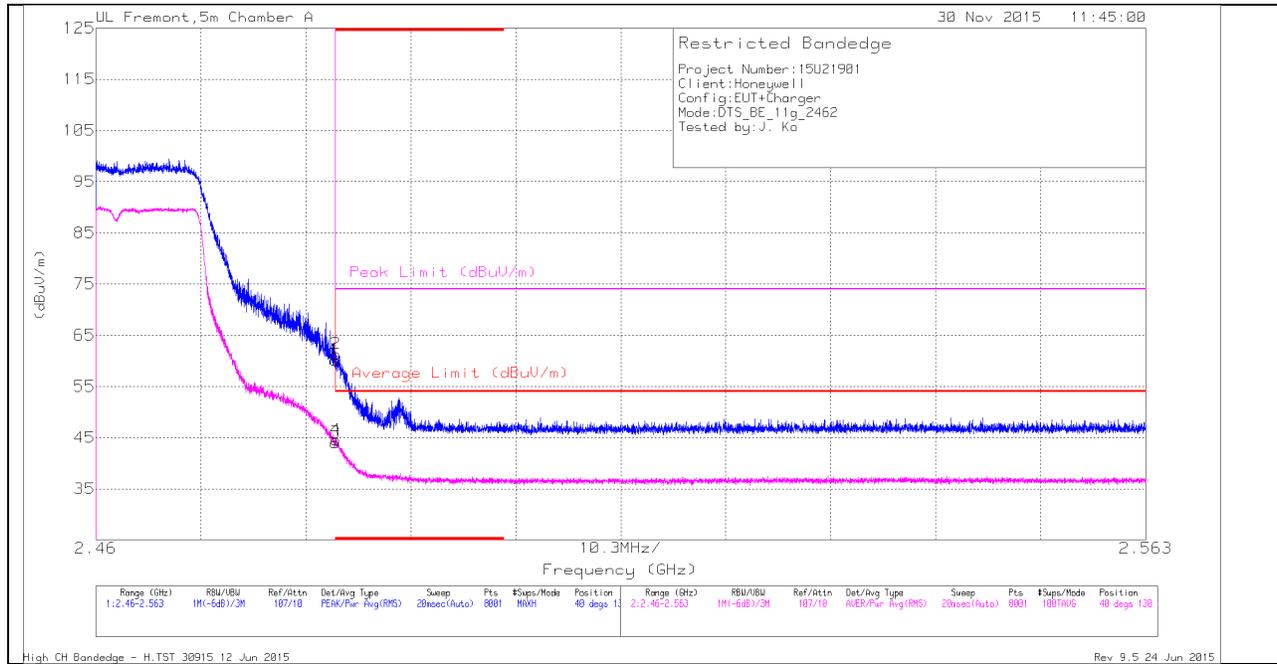
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

### AUTHORIZED BANDEDGE (HIGH CHANNEL)

#### HORIZONTAL PEAK AND AVERAGE PLOT



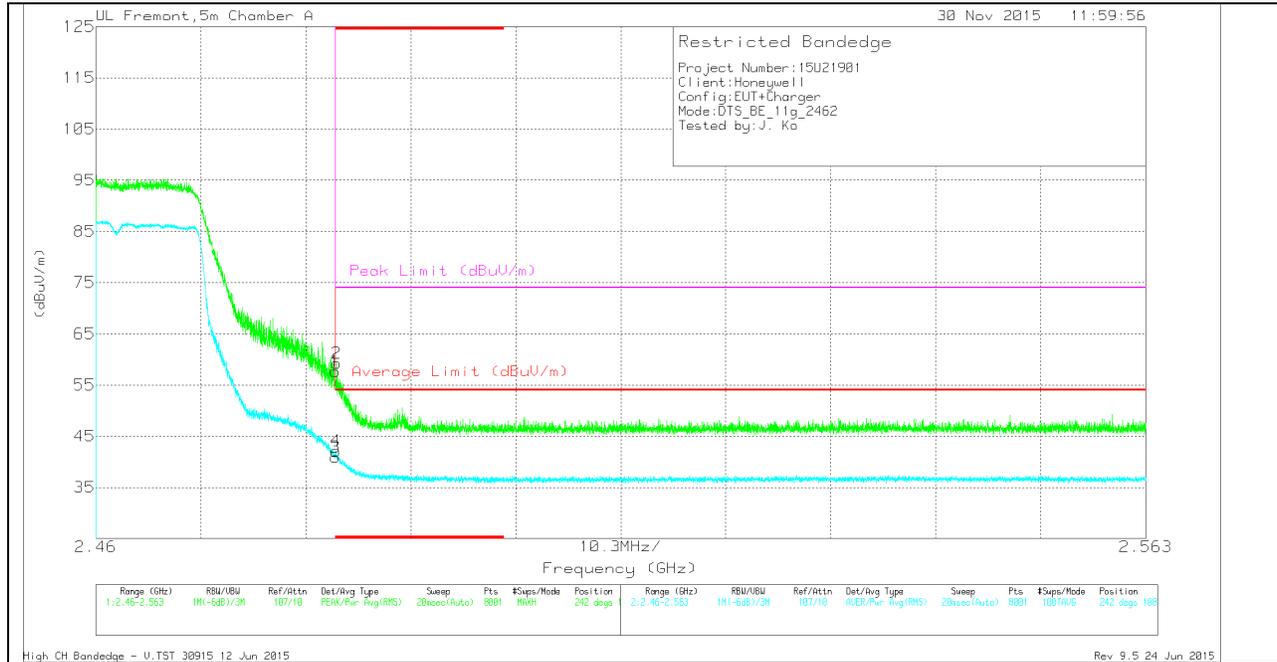
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	47.99	Pk	32.1	-20	0	60.09	-	-	74	-13.91	40	130	H
2	* 2.484	49.28	Pk	32.1	-20	0	61.38	-	-	74	-12.62	40	130	H
3	* 2.484	31.7	RMS	32.1	-20	.21	44.01	54	-9.99	-	-	40	130	H
4	* 2.484	32.26	RMS	32.1	-20	.21	44.57	54	-9.43	-	-	40	130	H

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

Pk - Peak detector

RMS - RMS detection

**VERTICAL PEAK AND AVERAGE PLOT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	45.54	Pk	32.1	-20	0	57.64	-	-	74	-16.36	242	108	V
2	* 2.484	47.14	Pk	32.1	-20	0	59.24	-	-	74	-14.76	242	108	V
3	* 2.484	28.61	RMS	32.1	-20	.21	40.92	54	-13.08	-	-	242	108	V
4	* 2.484	29.79	RMS	32.1	-20	.21	42.1	54	-11.9	-	-	242	108	V

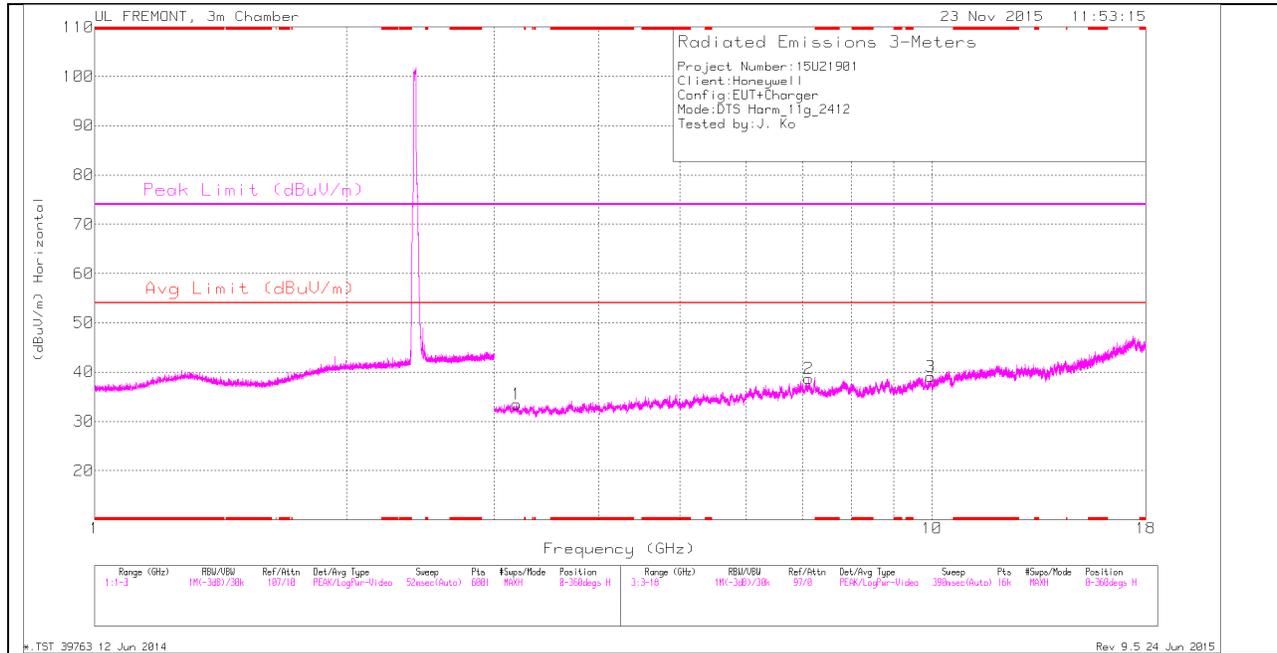
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

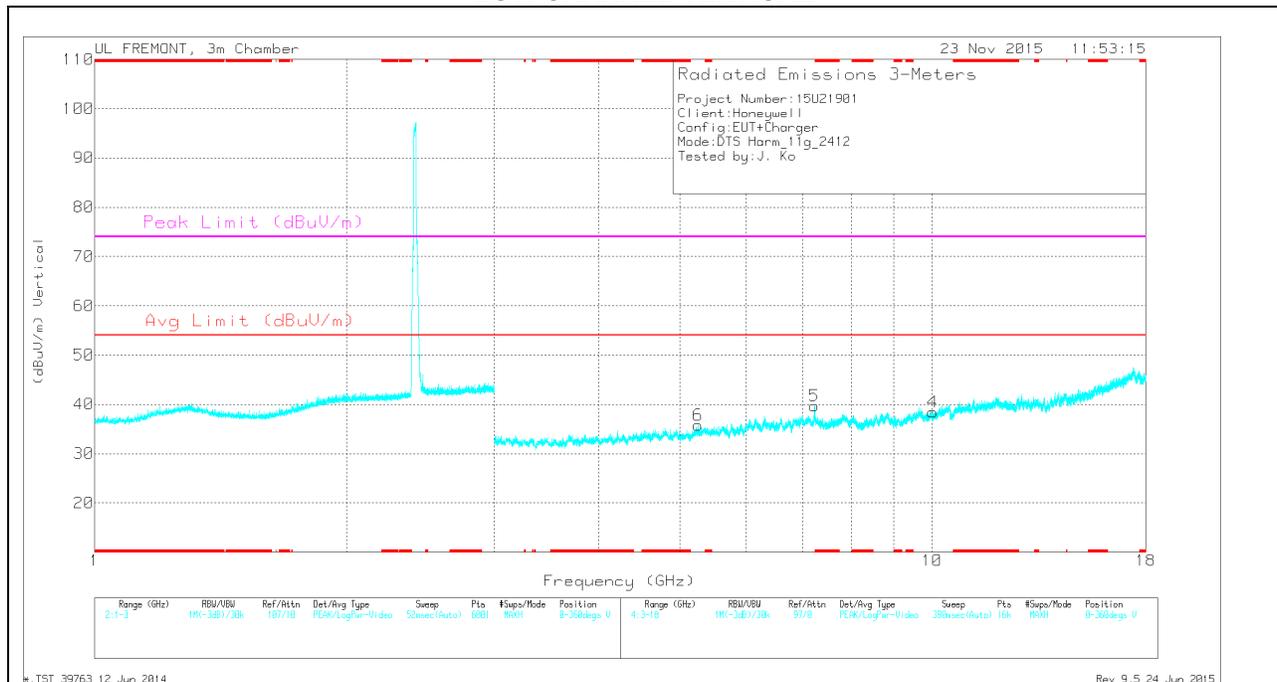
## HARMONICS AND SPURIOUS EMISSIONS

### LOW CHANNEL HORIZONTAL



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

### LOW CHANNEL VERTICAL



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

**LOW CHANNEL DATA**

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/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	3.189	31.03	Avg	32.6	-30.1	0	33.53	54	-20.47	-	-	0-360	100	H
6	5.255	30.78	Avg	34.4	-29.4	0	35.78	54	-18.22	-	-	0-360	100	V
2	7.127	29.76	Avg	35.6	-26.7	0	38.66	54	-15.34	-	-	0-360	100	H
5	7.231	32.24	Avg	35.6	-28.1	0	39.74	54	-14.26	-	-	0-360	100	V
3	9.967	25.35	Avg	36.9	-23.2	0	39.05	54	-14.95	-	-	0-360	100	H
4	10.02	25.19	Avg	36.9	-23.7	0	38.39	54	-15.61	-	-	0-360	100	V

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/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
3.188	40.66	PK2	32.6	-30.1	0	43.16	-	-	74	-30.84	360	100	H
3.188	28.94	MAV1	32.6	-30.1	.21	31.65	54	-22.35	-	-	360	100	H
5.254	28.4	MAV1	34.4	-29.4	.21	33.61	54	-20.39	-	-	360	100	V
5.255	39.54	PK2	34.4	-29.4	0	44.54	-	-	74	-29.46	360	100	V
7.125	37.74	PK2	35.6	-26.7	0	46.64	-	-	74	-27.36	360	100	H
7.128	26.2	MAV1	35.6	-26.8	.21	35.21	54	-18.79	-	-	360	100	H
7.231	39.28	PK2	35.6	-28.1	0	46.78	-	-	74	-27.22	360	100	V
7.233	27.57	MAV1	35.6	-28.1	.21	35.28	54	-18.72	-	-	360	100	V
9.967	23.6	MAV1	36.9	-23.2	.21	37.51	54	-16.49	-	-	360	100	H
9.968	35.32	PK2	36.9	-23.3	0	48.92	-	-	74	-25.08	360	100	H
10.019	35.12	PK2	36.9	-23.8	0	48.22	-	-	74	-25.78	360	100	V
10.019	23.42	MAV1	36.9	-23.8	.21	36.73	54	-17.27	-	-	360	100	V

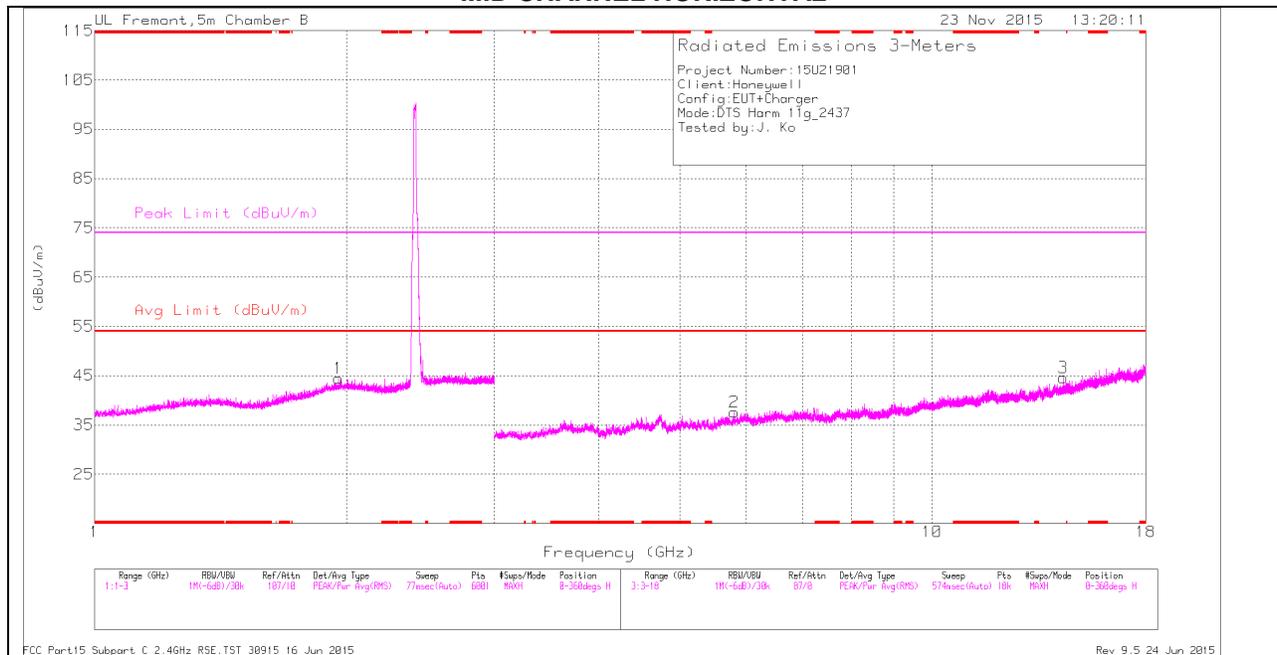
PK2 - KDB558074 Method: Maximum Peak

MAV1 - KDB558074 Option 1 Maximum RMS Average

\*.TST 39763 12 Jun 2014

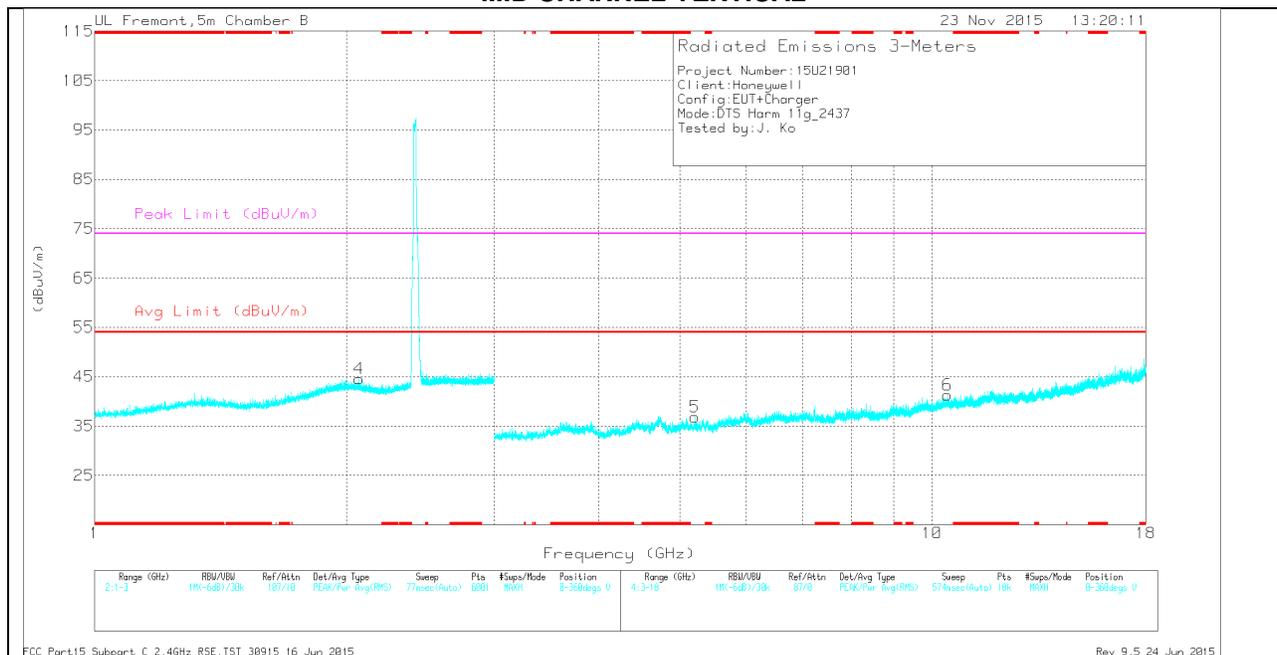
Rev 9.5 24 Jun 2015

**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/Cbl/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	1.955	36.89	Pk	32.1	-24.5	0	44.49	-	-	-	-	0-360	199	H
4	2.07	37.01	Pk	32	-24.4	0	44.61	-	-	-	-	0-360	199	V
5	5.207	34.78	Pk	34.3	-32.2	0	36.88	-	-	-	-	0-360	101	V
2	5.805	34.33	Pk	35.2	-31.9	0	37.63	-	-	-	-	0-360	101	H
6	10.43	29.3	Pk	37.4	-25.4	0	41.3	-	-	-	-	0-360	101	V
3	14.346	28.54	Pk	39.5	-23.5	0	44.54	-	-	-	-	0-360	101	H

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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
1.953	43.94	PK2	32.1	-24.5	0	51.54	-	-	74	-22.46	1	198	H
1.955	32.28	MAv1	32.1	-24.5	.21	40.09	54	-13.91	-	-	1	198	H
2.068	44.19	PK2	32	-24.4	0	51.79	-	-	74	-22.21	1	198	V
2.069	32.37	MAv1	32	-24.4	.21	40.18	54	-13.82	-	-	1	198	V
5.207	30.98	MAv1	34.3	-32.2	.21	33.29	54	-20.71	-	-	1	102	V
5.208	42.66	PK2	34.3	-32.2	0	44.76	-	-	74	-29.24	1	102	V
5.805	30.42	MAv1	35.2	-31.9	.21	33.93	54	-20.07	-	-	1	102	H
5.807	41.22	PK2	35.2	-31.9	0	44.52	-	-	74	-29.48	1	102	H
10.429	36.71	PK2	37.4	-25.5	0	48.61	-	-	74	-25.39	1	102	V
10.431	25.11	MAv1	37.4	-25.4	.21	37.32	54	-16.68	-	-	1	102	V
14.348	34.73	PK2	39.5	-23.5	0	50.73	-	-	74	-23.27	1	102	H
14.348	23.51	MAv1	39.5	-23.5	.21	39.72	54	-14.28	-	-	1	102	H

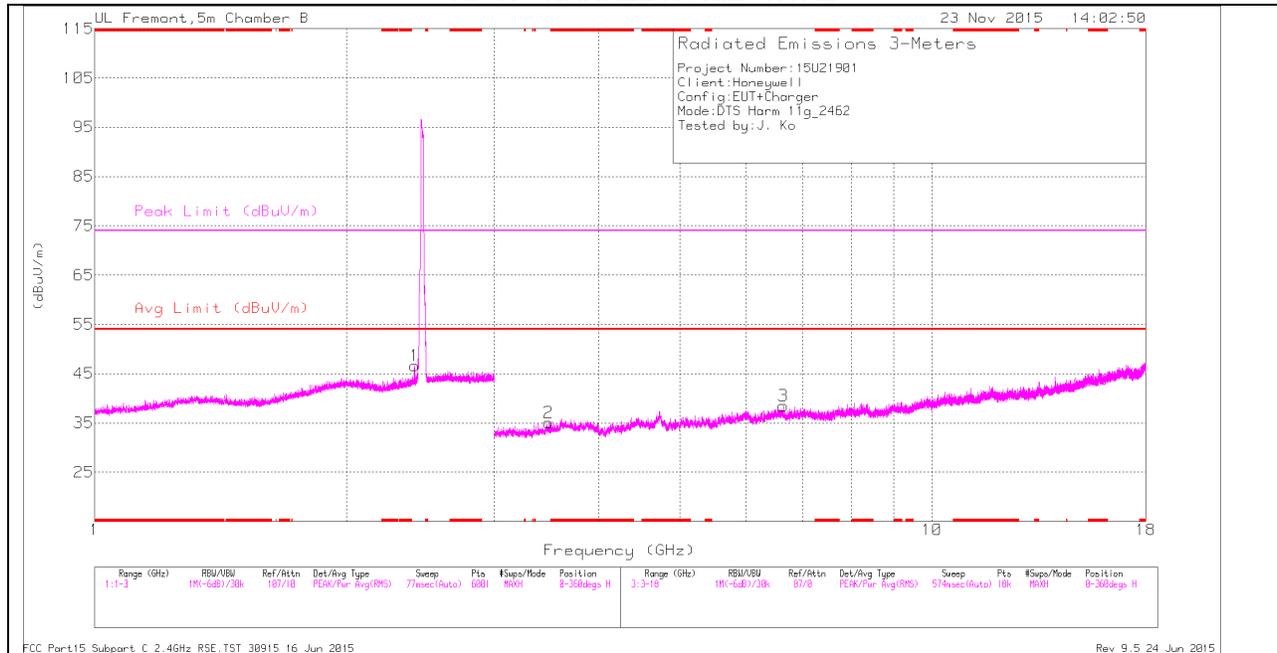
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

FCC Part15 Subpart C 2.4GHz RSE.TST 30915 16 Jun 2015

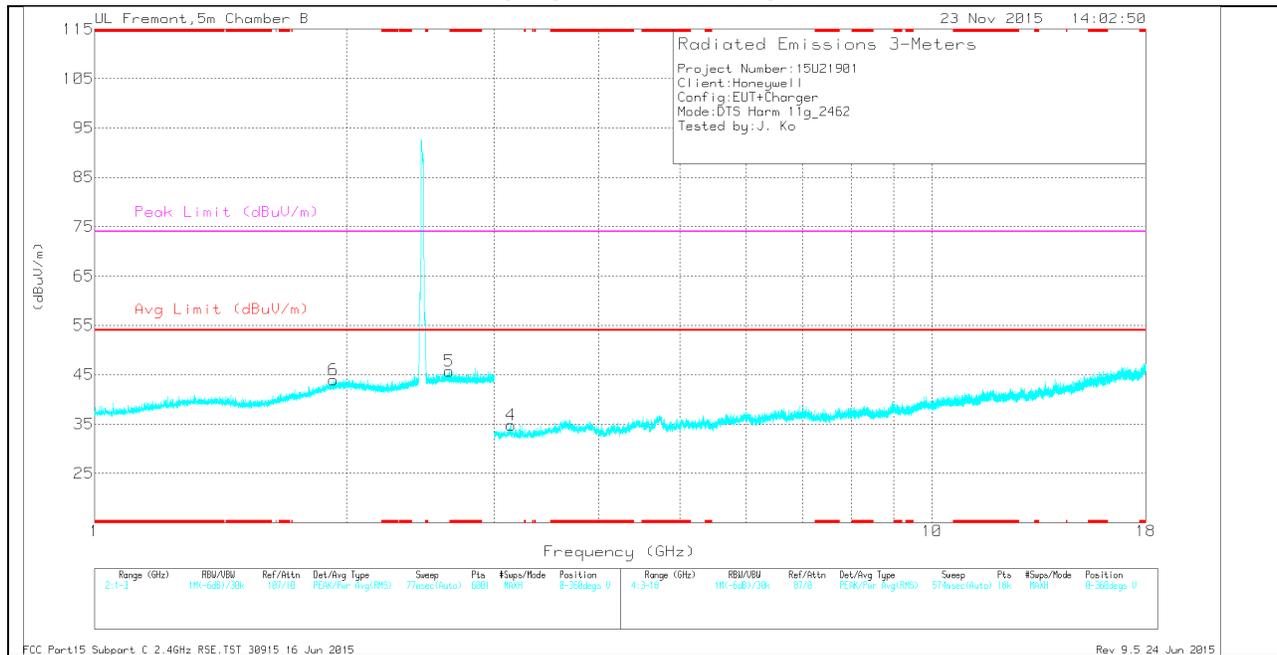
Rev 9.5 24 Jun 2015

### 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/Cbl/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
6	1.927	36.48	Pk	32	-24.5	0	43.98	-	-	-	-	0-360	101	V
1	2.409	38.64	Pk	32.1	-24.1	0	46.64	-	-	-	-	0-360	102	H
5	2.648	36.8	Pk	32.7	-23.8	0	45.7	-	-	-	-	0-360	101	V
4	3.14	34.52	Pk	32.6	-32.3	0	34.82	-	-	-	-	0-360	101	V
2	3.483	34.27	Pk	33.5	-32.7	0	35.07	-	-	-	-	0-360	199	H
3	6.644	33.48	Pk	35.9	-30.9	0	38.48	-	-	-	-	0-360	101	H

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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
1.927	43.96	PK2	31.9	-24.5	0	51.36	-	-	74	-22.64	1	101	V
1.928	32.31	MAv1	32	-24.5	.21	40.02	54	-13.98	-	-	1	101	V
2.41	47.04	PK2	32.1	-24.1	0	55.04	-	-	74	-18.96	1	101	H
2.41	36.65	MAv1	32.1	-24.1	.21	44.86	54	-9.14	-	-	1	101	H
2.647	44.46	PK2	32.7	-23.8	0	53.36	-	-	74	-20.64	1	101	V
2.65	32.21	MAv1	32.7	-23.8	.21	41.32	54	-12.68	-	-	1	101	V
3.138	41.54	PK2	32.6	-32.3	0	41.84	-	-	74	-32.16	1	102	V
3.14	30.55	MAv1	32.6	-32.3	.21	31.06	54	-22.94	-	-	1	102	V
3.484	31.09	MAv1	33.5	-32.7	.21	32.1	54	-21.9	-	-	1	198	H
3.485	42.65	PK2	33.5	-32.7	0	43.45	-	-	74	-30.55	1	198	H
6.645	40.86	PK2	35.9	-30.9	0	45.86	-	-	74	-28.14	1	102	H
6.645	29.2	MAv1	35.9	-30.9	.21	34.41	54	-19.59	-	-	1	102	H

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

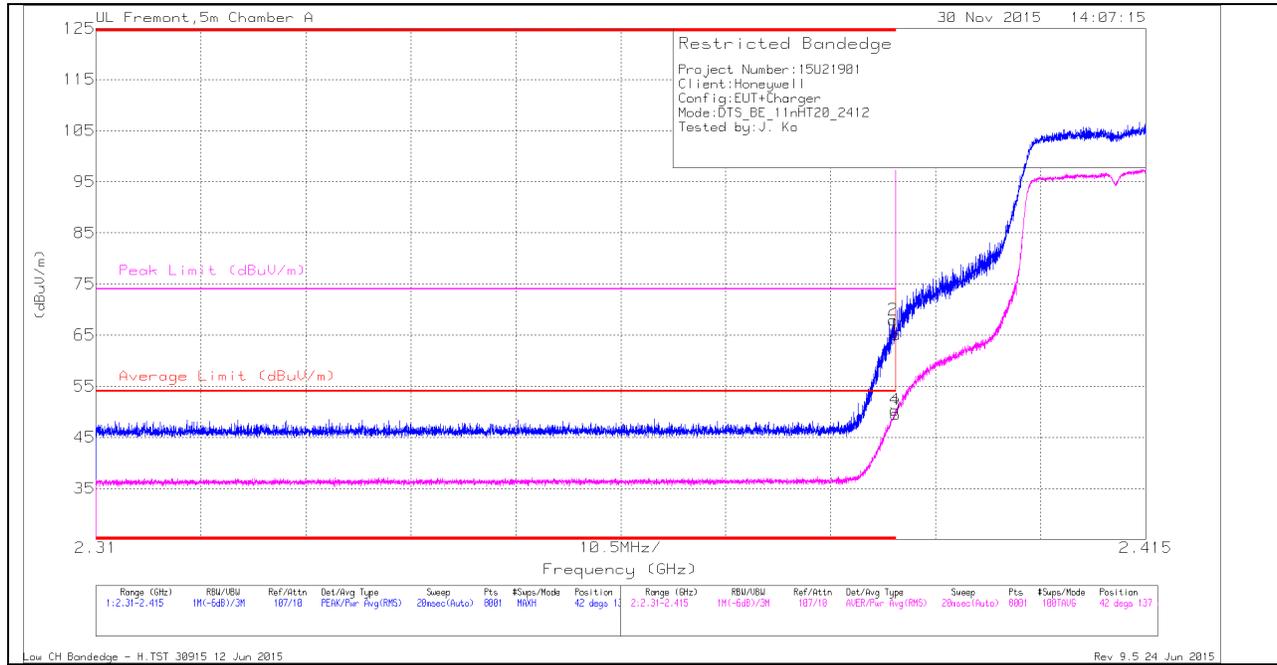
FCC Part15 Subpart C 2.4GHz RSE.TST 30915 16 Jun 2015

Rev 9.5 24 Jun 2015

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

## RESTRICTED BANDEDGE (LOW CHANNEL)

### HORIZONTAL PEAK AND AVERAGE PLOT



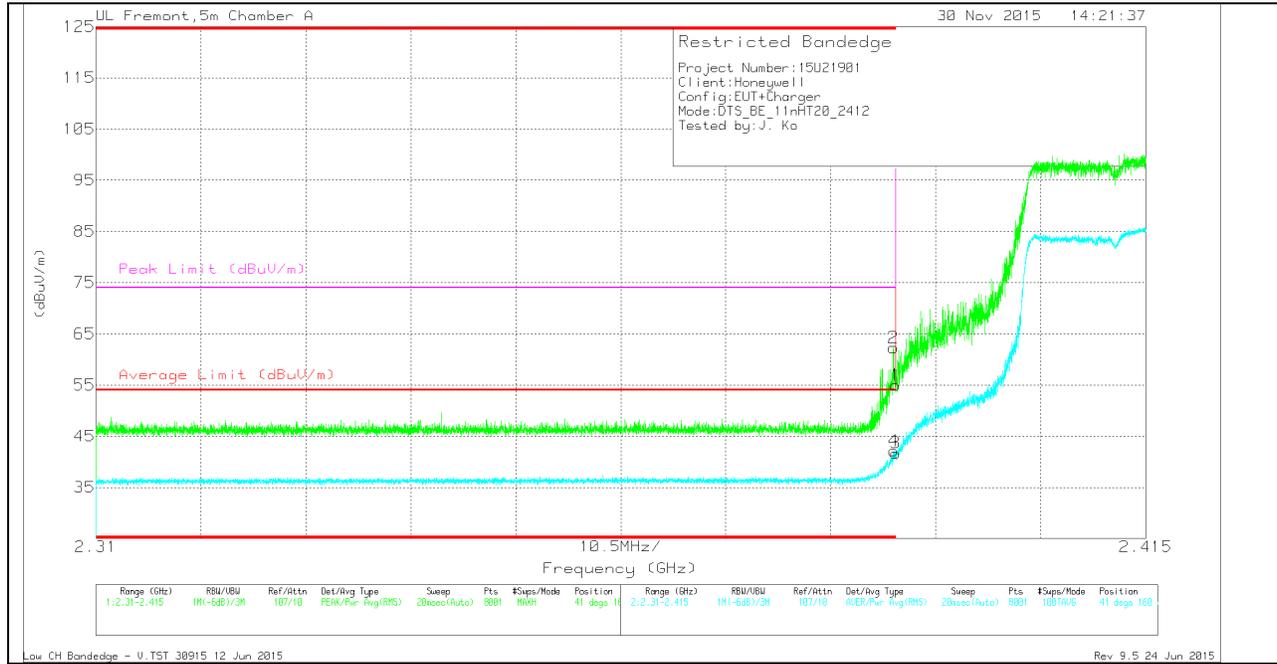
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	52.98	Pk	32	-19.9	0	65.08	-	-	74	-8.92	42	137	H
2	* 2.39	55.87	Pk	32	-19.9	0	67.97	-	-	74	-6.03	42	137	H
3	* 2.39	37.25	RMS	32	-19.9	.19	49.54	54	-4.46	-	-	42	137	H
4	* 2.39	38.1	RMS	32	-19.9	.19	50.39	54	-3.61	-	-	42	137	H

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

Pk - Peak detector

RMS - RMS detection

**VERTICAL PEAK AND AVERAGE PLOT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	42.89	Pk	32	-19.9	0	54.99	-	-	74	-19.01	41	160	V
2	* 2.39	50.19	Pk	32	-19.9	0	62.29	-	-	74	-11.71	41	160	V
3	* 2.39	29.42	RMS	32	-19.9	.19	41.71	54	-12.29	-	-	41	160	V
4	* 2.39	29.82	RMS	32	-19.9	.19	42.11	54	-11.89	-	-	41	160	V

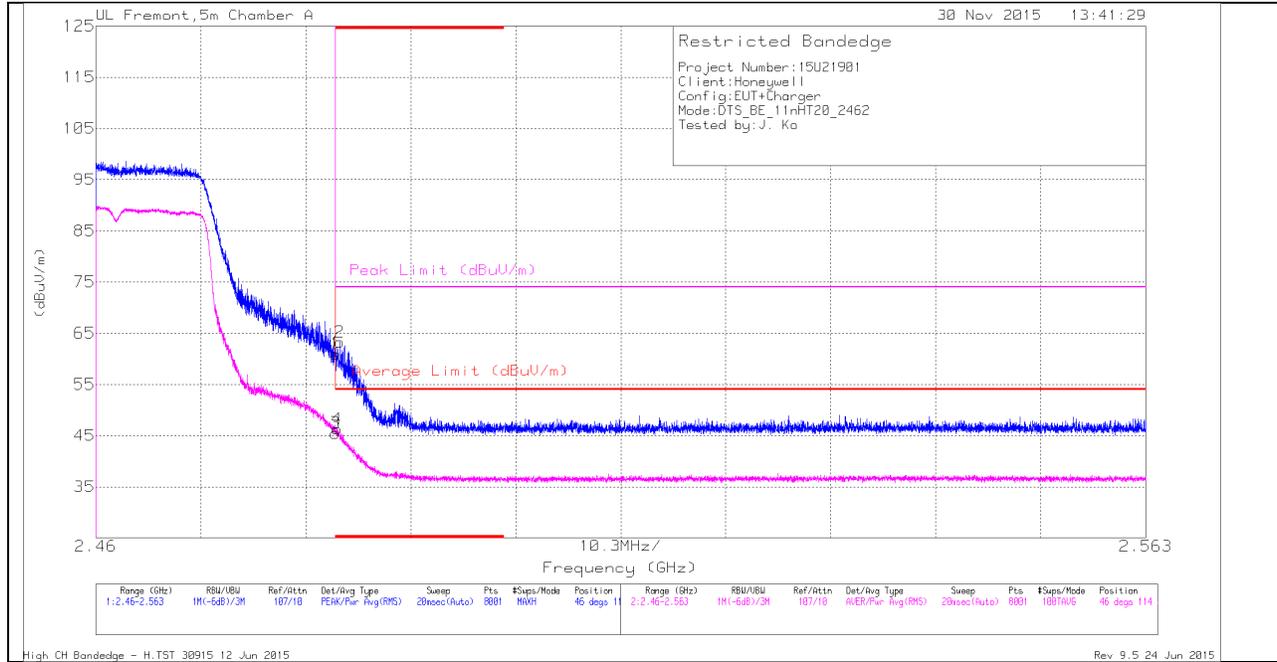
\* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

### AUTHORIZED BANDEDGE (HIGH CHANNEL)

#### HORIZONTAL PEAK AND AVERAGE PLOT



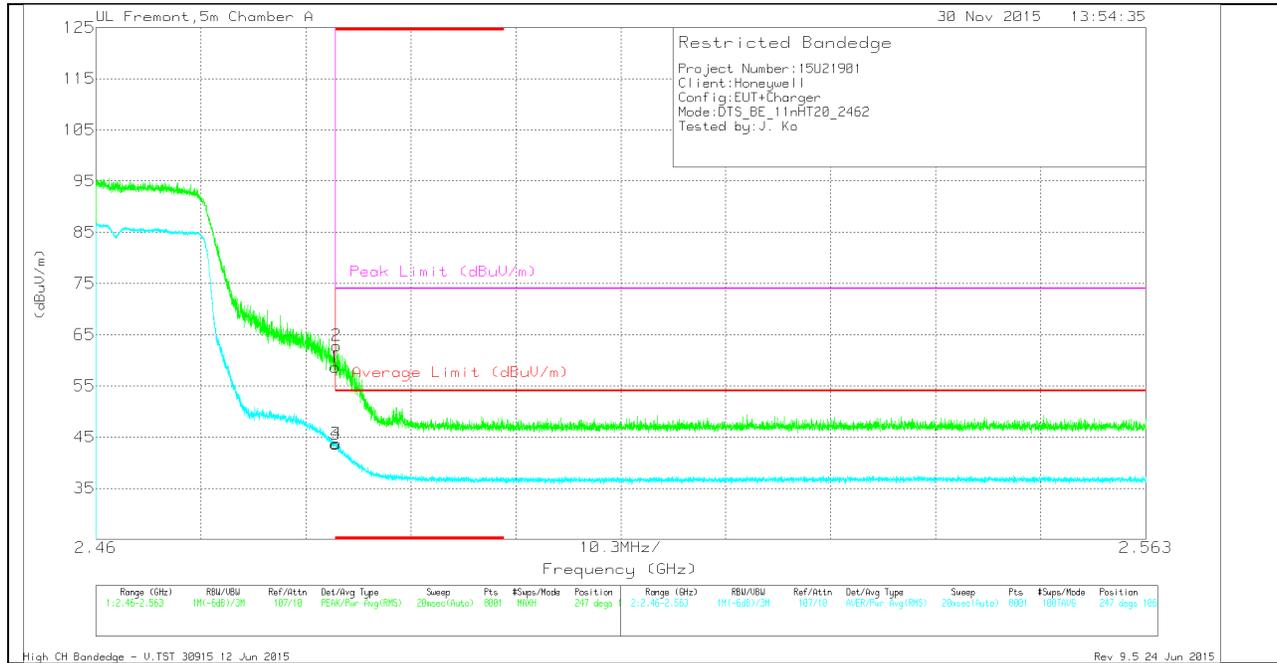
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	48.9	Pk	32.1	-20	0	61	-	-	74	-13	46	114	H
2	* 2.484	51.16	Pk	32.1	-20	0	63.26	-	-	74	-10.74	46	114	H
3	* 2.484	33.19	RMS	32.1	-20	.19	45.48	54	-8.52	-	-	46	114	H
4	* 2.484	34.01	RMS	32.1	-20	.19	46.3	54	-7.7	-	-	46	114	H

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

Pk - Peak detector

RMS - RMS detection

**VERTICAL PEAK AND AVERAGE PLOT**



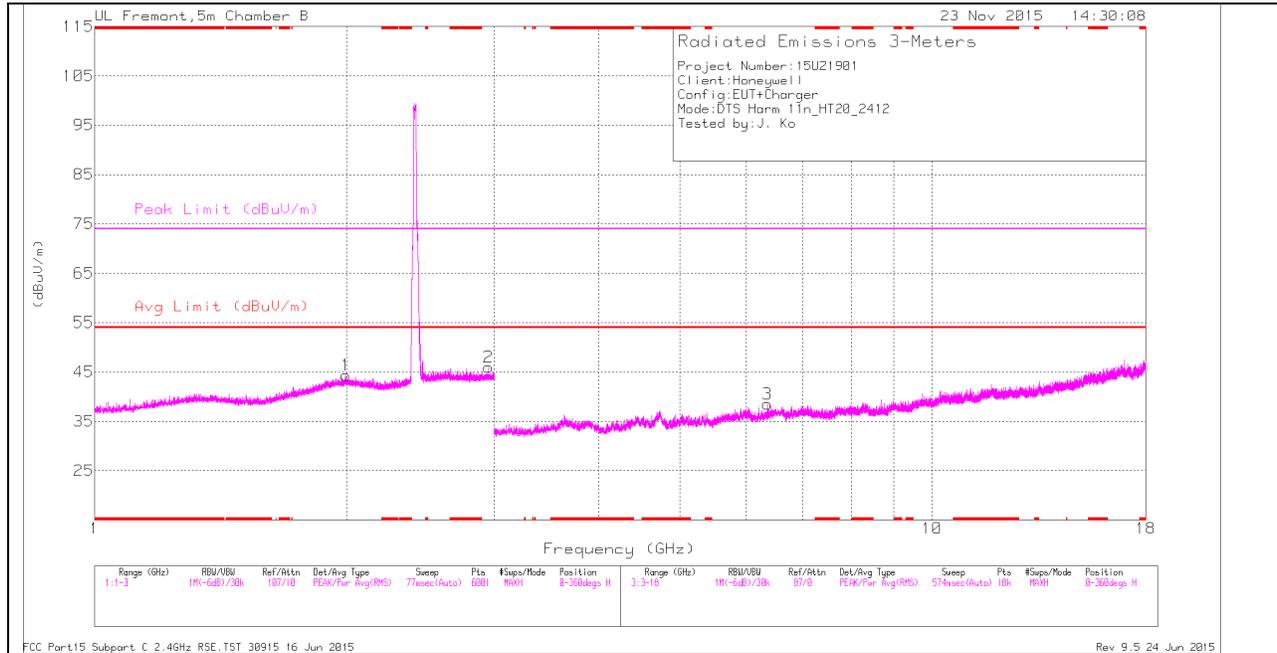
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	46.53	Pk	32.1	-20	0	58.63	-	-	74	-15.37	247	106	V
2	* 2.484	50.75	Pk	32.1	-20	0	62.85	-	-	74	-11.15	247	106	V
3	* 2.484	31.35	RMS	32.1	-20	.19	43.64	54	-10.36	-	-	247	106	V
4	* 2.484	31.43	RMS	32.1	-20	.19	43.72	54	-10.28	-	-	247	106	V

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

Pk - Peak detector

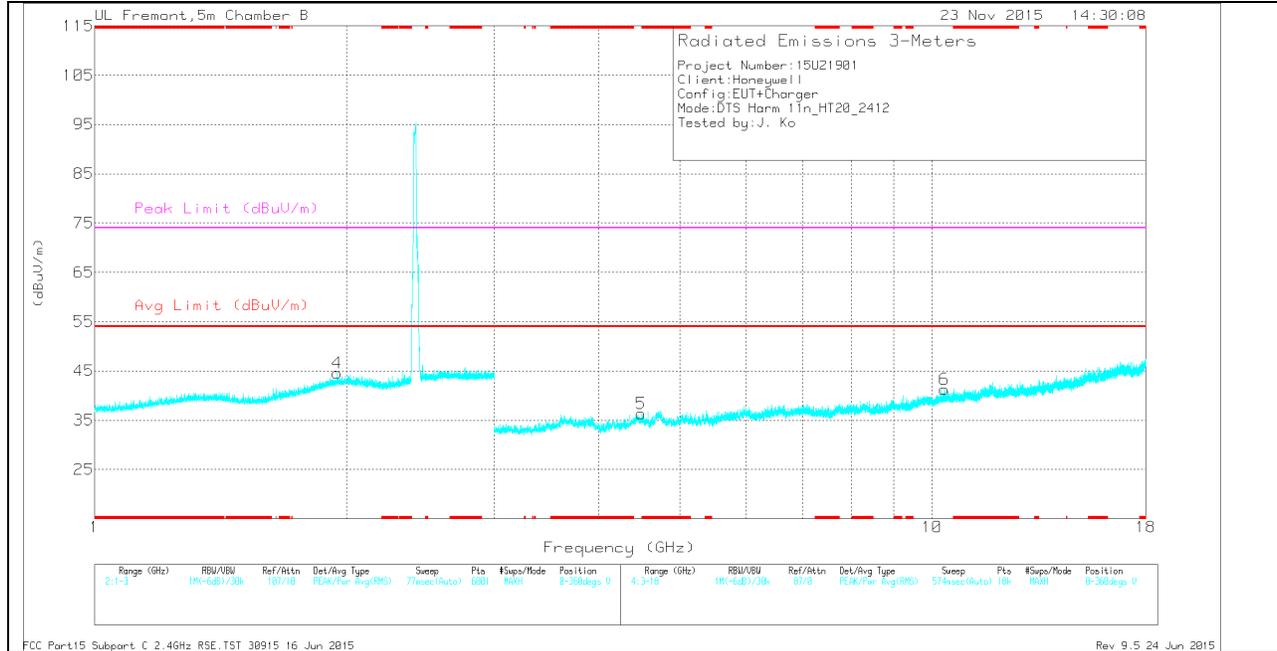
RMS - RMS detection

### 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/Cbl/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	1.948	37.03	Pk	32.1	-24.5	0	44.63	-	-	-	-	0-360	199	V
1	1.995	36.54	Pk	32.3	-24.5	0	44.34	-	-	-	-	0-360	199	H
2	2.952	36.83	Pk	32.6	-23.5	0	45.93	-	-	-	-	0-360	102	H
5	4.494	33.34	Pk	34	-31	0	36.34	-	-	-	-	0-360	101	V
3	6.36	34.32	Pk	35.6	-31.4	0	38.52	-	-	-	-	0-360	102	H
6	10.353	29.44	Pk	37.4	-25.5	0	41.34	-	-	-	-	0-360	199	V

Pk - Peak detector

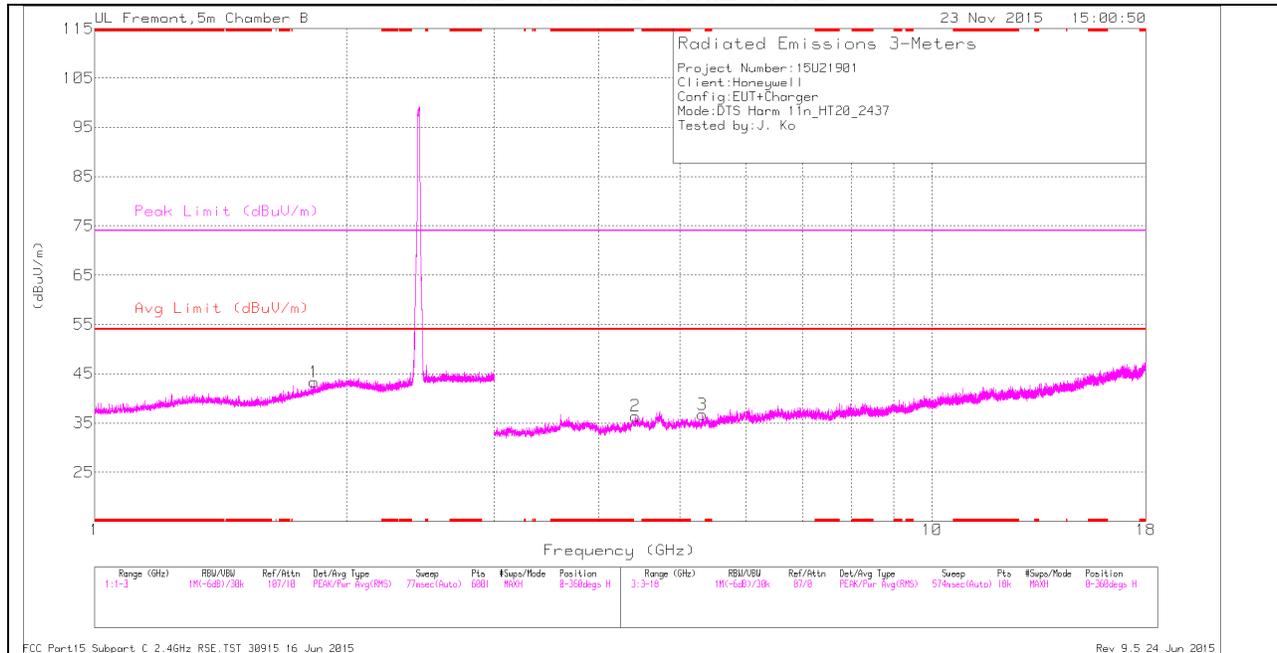
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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
1.946	32.39	MAv1	32.1	-24.5	.19	40.18	54	-33.82	-	-	1	198	V
1.948	44.04	PK2	32.1	-24.5	0	51.64	-	-	74	-22.36	1	198	V
1.993	44.39	PK2	32.3	-24.5	0	52.19	-	-	74	-21.81	1	198	H
1.995	32.22	MAv1	32.3	-24.5	.19	40.21	54	-33.79	-	-	1	198	H
2.952	32.01	MAv1	32.6	-23.5	.19	41.3	54	-32.7	-	-	1	103	H
2.954	44.47	PK2	32.6	-23.5	0	53.57	-	-	74	-20.43	1	103	H
4.495	41.91	PK2	34	-31	0	44.91	-	-	74	-29.09	1	103	V
4.496	29.76	MAv1	34	-31	.19	32.95	54	-21.05	-	-	1	103	V
6.358	29.84	MAv1	35.6	-31.4	.19	34.23	54	-19.77	-	-	1	103	H
6.36	40.76	PK2	35.6	-31.4	0	44.96	-	-	74	-29.04	1	103	H
10.352	36.08	PK2	37.4	-25.5	0	47.98	-	-	74	-26.02	1	198	V
10.355	25.12	MAv1	37.4	-25.5	.19	37.21	54	-16.79	-	-	1	198	V

PK2 - KDB558074 Method: Maximum Peak

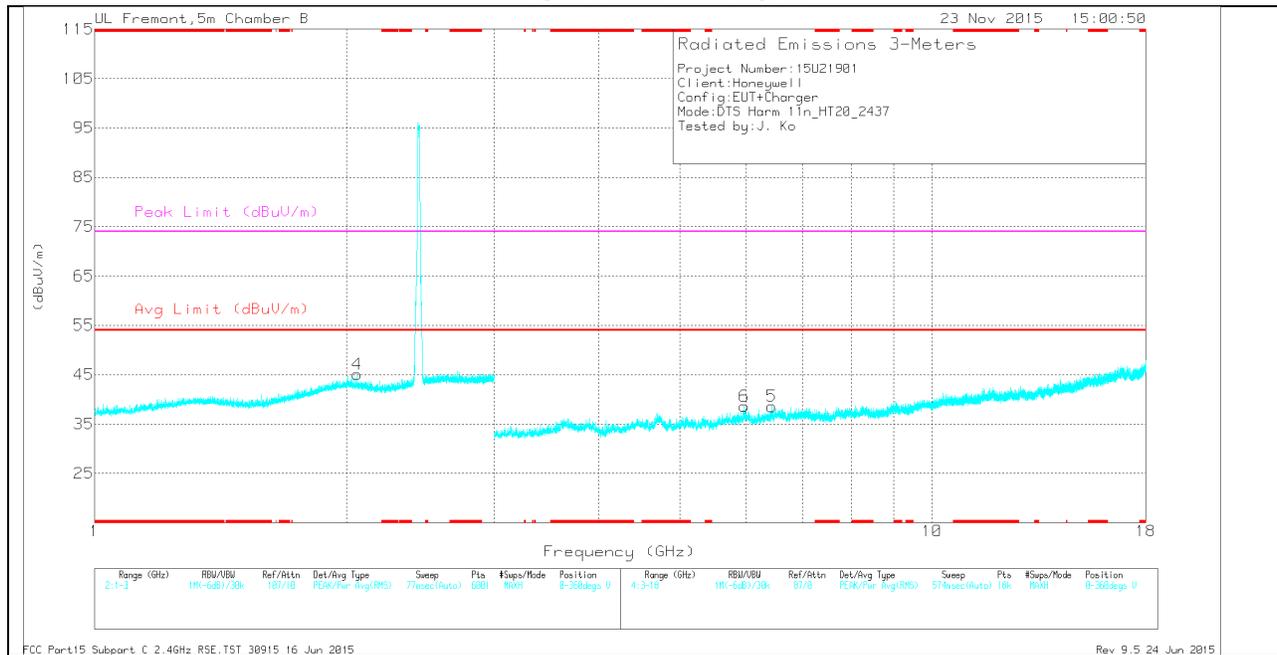
MAv1 - KDB558074 Option 1 Maximum RMS Average

**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/Cbl/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	1.829	36.88	Pk	31	-24.6	0	43.28	-	-	-	-	0-360	199	H
4	2.057	37.55	Pk	32	-24.5	0	45.05	-	-	-	-	0-360	101	V
2	4.426	33.4	Pk	33.9	-30.9	0	36.4	-	-	-	-	0-360	101	H
3	5.315	33.29	Pk	34.4	-31	0	36.69	-	-	-	-	0-360	199	H
6	5.968	33.72	Pk	35.6	-30.7	0	38.62	-	-	-	-	0-360	101	V
5	6.435	33.66	Pk	35.7	-30.8	0	38.56	-	-	-	-	0-360	199	V

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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
1.829	43.61	PK2	31	-24.6	0	50.01	-	-	74	-23.99	1	199	H
1.829	32.3	MAv1	31	-24.6	.19	38.89	54	-15.11	-	-	1	199	H
2.055	43.98	PK2	32	-24.5	0	51.48	-	-	74	-22.52	1	102	V
2.056	32.35	MAv1	32	-24.5	.19	40.04	54	-13.96	-	-	1	102	V
4.427	29.81	MAv1	33.9	-30.9	.19	33	54	-21	-	-	1	102	H
4.428	40.75	PK2	33.9	-30.9	0	43.75	-	-	74	-30.25	1	102	H
5.314	29.92	MAv1	34.4	-31	.19	33.51	54	-20.49	-	-	1	198	H
5.314	29.66	MAv1	34.4	-31	.19	33.25	54	-20.75	-	-	1	198	H
5.315	40.52	PK2	34.4	-31	0	43.92	-	-	74	-30.08	1	198	H
5.315	40.85	PK2	34.4	-31	0	44.25	-	-	74	-29.75	1	198	H
5.968	41.51	PK2	35.6	-30.7	0	46.41	-	-	74	-27.59	1	102	V
5.968	30.02	MAv1	35.6	-30.7	.19	35.11	54	-18.89	-	-	1	102	V
6.434	29.32	MAv1	35.7	-30.8	.19	34.41	54	-19.59	-	-	1	198	V
6.436	40.3	PK2	35.7	-30.8	0	45.2	-	-	74	-28.8	1	198	V

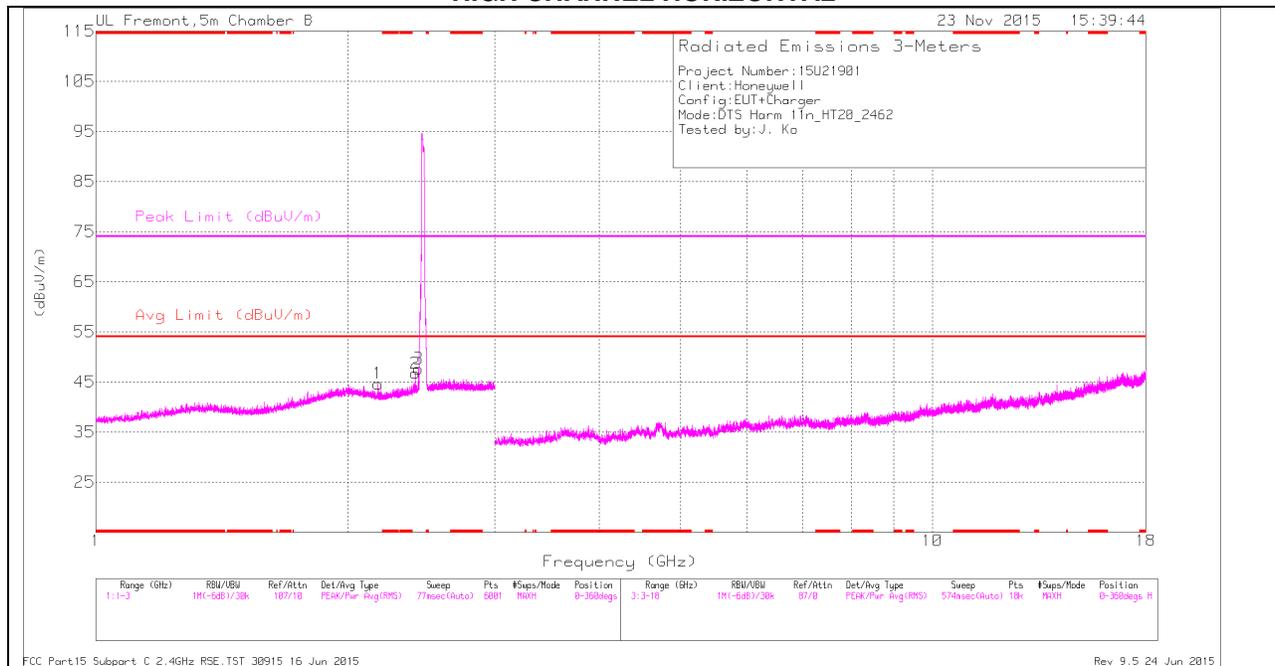
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

FCC Part15 Subpart C 2.4GHz RSE.TST 30915 16 Jun 2015

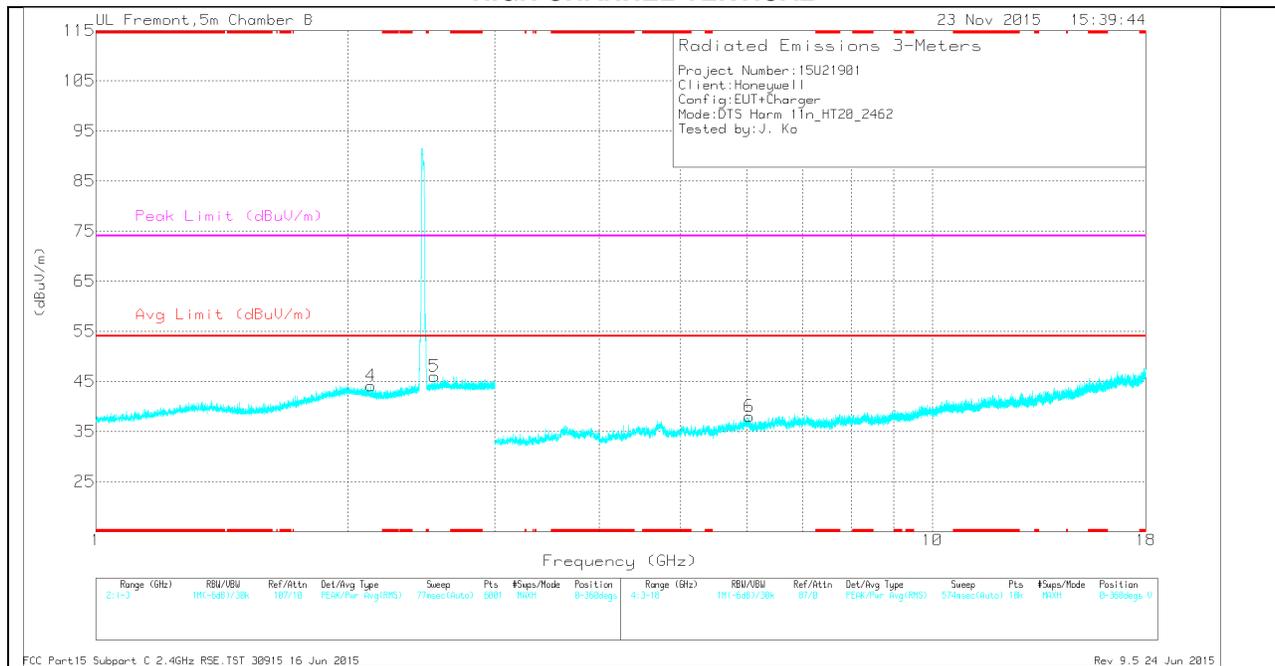
Rev 9.5 24 Jun 2015

### 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/Cbl/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	2.134	37.01	Pk	31.5	-24.4	0	44.11	-	-	-	-	0-360	101	V
1	2.176	37.85	Pk	31.2	-24.4	0	44.65	-	-	-	-	0-360	199	H
2	2.41	38.72	Pk	32.1	-24.1	0	46.72	-	-	-	-	0-360	102	H
3	2.43	39.52	Pk	32.2	-24.1	0	47.62	-	-	-	-	0-360	199	H
5	2.54	37.32	Pk	32.6	-23.9	0	46.02	-	-	-	-	0-360	199	V
6	6.045	33.89	Pk	35.6	-31.5	0	37.99	-	-	-	-	0-360	101	V

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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
2.134	44.23	PK2	31.5	-24.4	0	51.33	-	-	74	-22.67	1	102	V
2.136	32.38	MAv1	31.5	-24.4	.19	39.67	54	-14.33	-	-	1	102	V
2.174	44.1	PK2	31.3	-24.4	0	51	-	-	74	-23	1	198	H
2.175	32.38	MAv1	31.3	-24.4	.19	39.47	54	-14.53	-	-	1	198	H
2.176	43.94	PK2	31.2	-24.3	0	50.84	-	-	74	-23.16	1	198	H
2.176	32.37	MAv1	31.2	-24.3	.19	39.46	54	-14.54	-	-	1	198	H
2.41	46.28	PK2	32.1	-24.1	0	54.28	-	-	74	-19.72	1	103	H
2.41	35.79	MAv1	32.1	-24.1	.19	43.98	54	-10.02	-	-	1	103	H
2.429	32.93	MAv1	32.2	-24.1	.19	41.22	54	-12.78	-	-	1	198	H
2.43	49.51	PK2	32.2	-24.1	0	57.61	-	-	74	-16.39	1	198	H
2.541	43.84	PK2	32.6	-23.9	0	52.54	-	-	74	-21.46	1	198	V
2.541	32.16	MAv1	32.6	-23.9	.19	41.05	54	-12.95	-	-	1	198	V
6.043	41.61	PK2	35.6	-31.5	0	45.71	-	-	74	-28.29	1	102	V
6.046	29.91	MAv1	35.6	-31.5	.19	34.2	54	-19.8	-	-	1	102	V

PK2 - KDB558074 Method: Maximum Peak

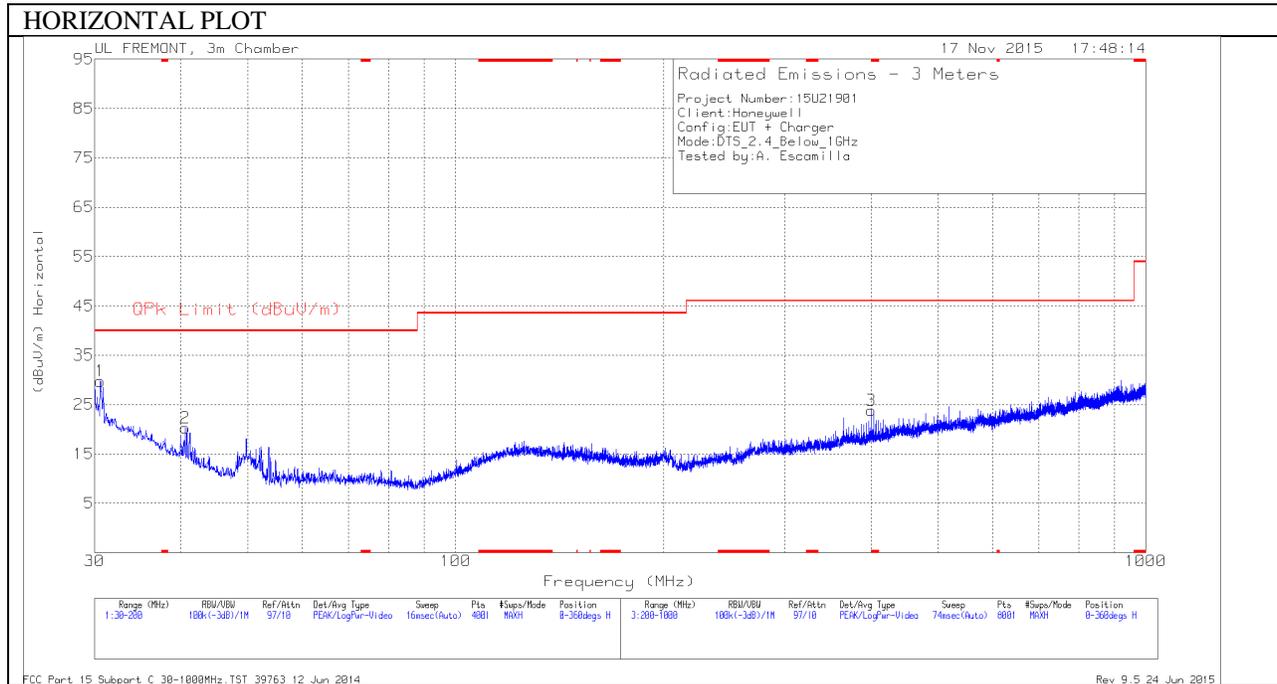
MAv1 - KDB558074 Option 1 Maximum RMS Average

FCC Part15 Subpart C 2.4GHz RSE.TST 30915 16 Jun 2015

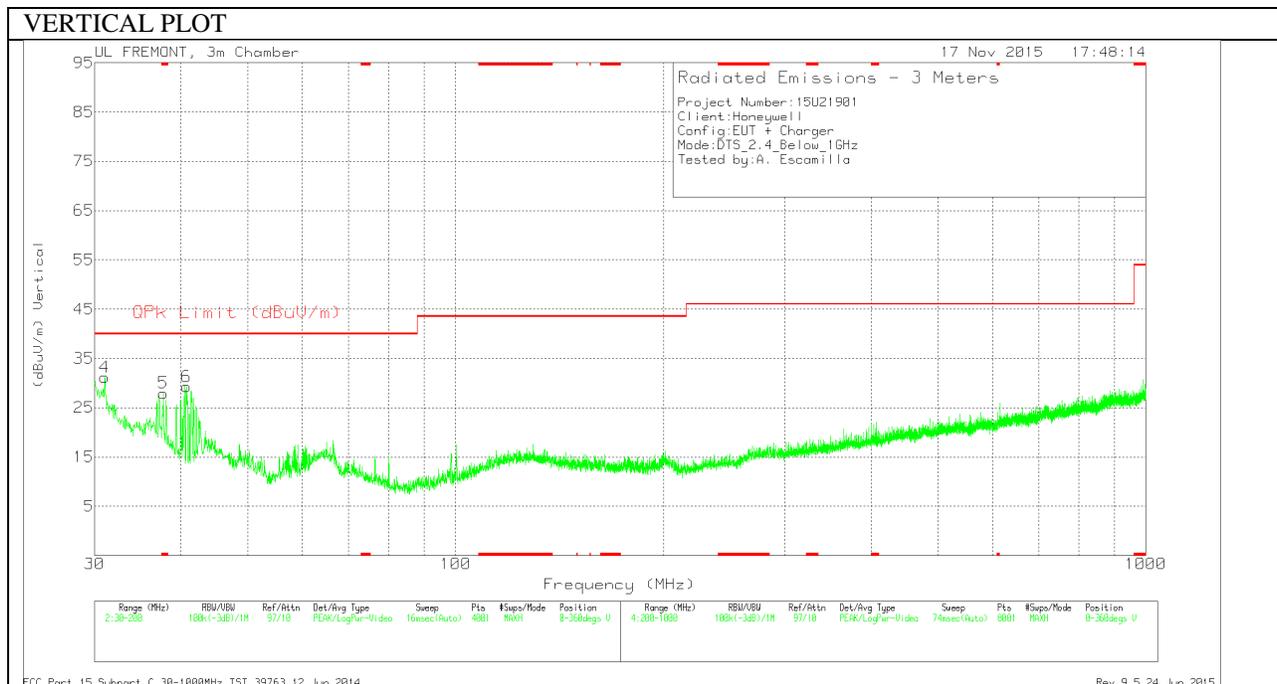
Rev 9.5 24 Jun 2015

### 9.3. WORST-CASE BELOW 1 GHz

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



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



**Below 1G Data**

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T185 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 37.6925	39.15	Pk	16	-27.2	27.95	40	-12.05	0-360	100	V
3	* 400	33.12	Pk	15.5	-24.8	23.82	46.02	-22.2	0-360	100	H
1	30.5525	35.63	Pk	21.3	-27.2	29.73	40	-10.27	0-360	100	H
4	31.02	37.51	Pk	20.9	-27.2	31.21	40	-8.79	0-360	100	V
2	40.5825	33.45	Pk	13.8	-27	20.25	40	-19.75	0-360	100	H
6	40.7525	42.62	Pk	13.7	-27	29.32	40	-10.68	0-360	100	V

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

Pk - Peak detector