FCC CFR47 PART 15 SUBPART C

INDUSTRY CANADA RSS-247 ISSUE 1

C2PC CERTIFICATION REPORT

FOR

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

MODEL NUMBER: LG-W110, W110, LGW110

FCC ID: ZNFW110
IC: 2703C-W110

REPORT NUMBER: 15I20945-E1 REVISION B

ISSUE DATE: JUNE 8, 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

Revision History

Rev.	Issue Date	Revisions	Revised By
--	6/3/15	Initial Issue	--
A	6/5/15	Added duty cycle data on page 12	D. Coronia
B	6/8/15	Added duty cycle factor in radiated spurious emission page 54, 56, 62 & 64.	D. Coronia

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: LG ELECTRONICS MOBILECOMM U.S.A., INC

EUT DESCRIPTION: SMART WATCH with 2.4 DTS b/g/n + BT and BLE

MODEL: LG-W110, W110, LGW110

SERIAL NUMBER: 04f9bd2a0224e11 (Radiated), 1HHA4 (Conducted)

DATE TESTED: MAY 29-30, 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 For
UL Verification Services Inc. By:

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

Tested By:

STEVEN TRAN
CONSUMER TECHNOLOGY DIVISION
WiSE LAB ENGINEER
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, and ANSI C63.10-2009 for FCC and ANSI C63.10-2013 for IC, RSS-GEN Issue 4, and RSS-247 Issue 1.

Deviation -Radiated spurious emission above 1GHz EUT height is 1.5m not 0.8m.

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
☒ Chamber A(IC: 2324B-1)	☐ Chamber D(IC: 2324B-4)
☐ Chamber B(IC: 2324B-2)	☐ Chamber E(IC: 2324B-5)
☒ Chamber C(IC: 2324B-3)	☐ Chamber F(IC: 2324B-6)
	☐ Chamber G(IC: 2324B-7)
	☐ 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:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 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 18000 MHz	4.94 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a SMART WATCH with 2.4 DTS + BT and BLE.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2467 - 2472	802.11b	12.8	19.05
2467 - 2472	802.11g	10.4	10.96
2467 - 2472	802.11n HT20	8.5	7.08

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a metal antenna, with a maximum gain of -1.9 dBi.

5.4. WORST-CASE CONFIGURATION AND MODE

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

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

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

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC Adapter	LG	MCS-02WR	DB390078751	N/A
Cradle	LG	SDT-330	N/A	N/A

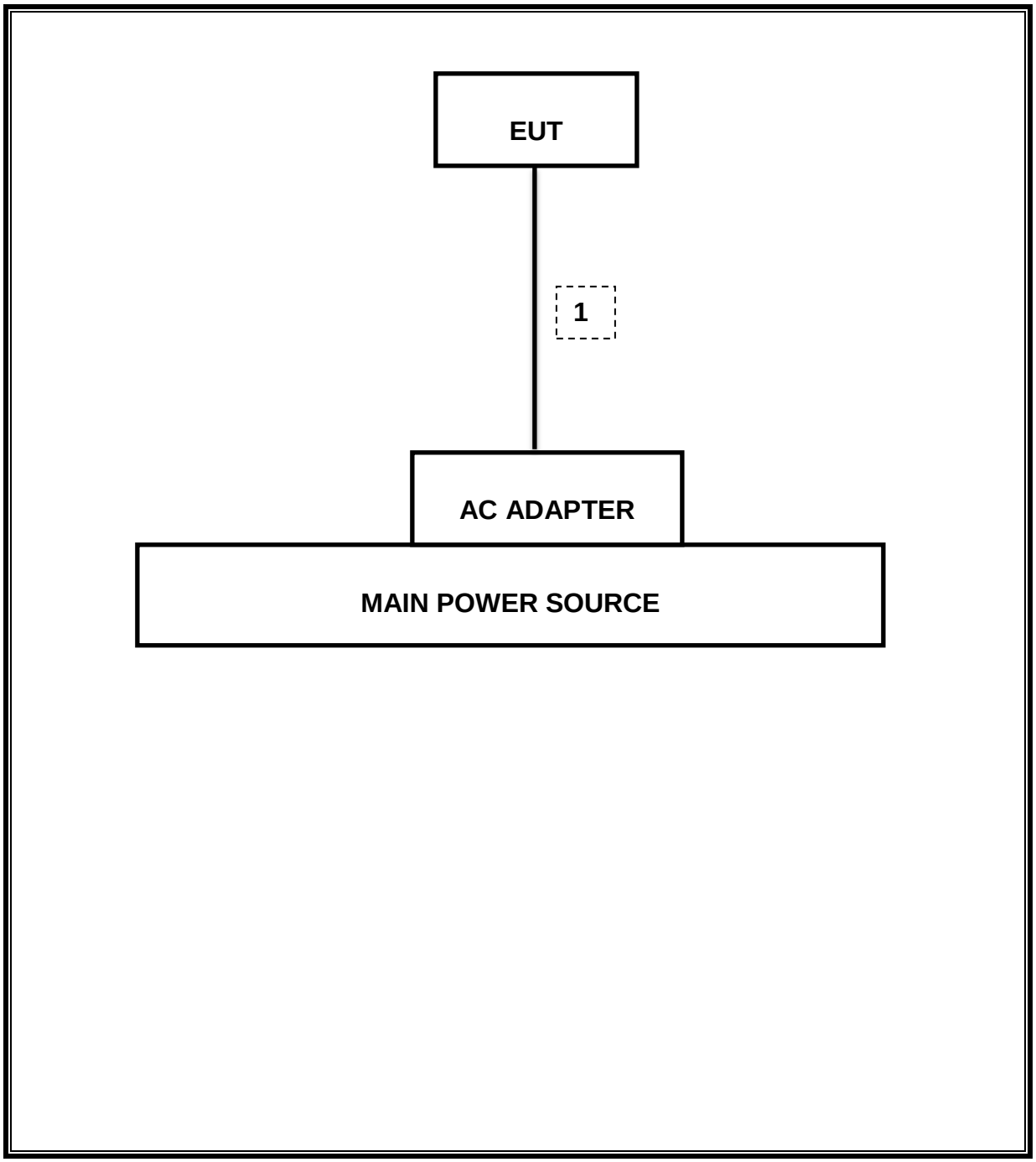
I/O CABLES

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

TEST SETUP

The EUT is continuously communicating to the Bluetooth tester during the tests.
EUT was set in the hidden menu mode to enable BT communications.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/15
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	1000741	08/13/15
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/18/15
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15
Antenna, Horn, 1-18 GHz	ETS	3117	C01022	02/21/16
Antenna, Horn,18- 26 GHz	ARA	MWH-1826/B	C00946	11/12/15
Antenna, Horn, 26-40 GHz	ARA	MWH-2640	C00891	06/28/15
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	T243	03/06/16
RF Preamplifier, 100KHz -> 1300MHz	HP	TBD	C00825	06/01/15
RF Preamplifier, 1GHz - 18GHz	Miteq	NSP4000-SP2	924343	03/23/16
RF Preamplifier, 1GHz - 26.5GHz	HP	8449B	F00351	06/27/15
AC Power Supply, 2,500VA 45-500Hz	Elgar-Ametek	CW2501M	F00013	CNR
RF Preamplifier, 1GHz - 40GHz	Miteq	NSP4000-SP2	C00990	08/20/15
Attenuator / Switch driver	HP	11713A	F00204	CNR

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 v03r02: Measurement Procedure AVGPM-G is used for power and AVGPSD-3 is used for power spectral density.

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. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

8.1. ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
802.11b	12.43	12.6	0.990	99.0%	0.00	0.010
802.11g	2.05	2.2	0.940	94.0%	0.27	0.488
802.11n HT20	1.91	2.0	0.942	94.2%	0.26	0.524

9. SUMMARY TABLE

This C2PC application is adding CH12 and 13 for DTS through software update.

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	9 MHz
2.1051, 15.247 (d)	RSS-247 5.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	- 44.2dBm
15.247	RSS-247 5.4 (4)	TX conducted output power	<30dBm		Pass	12.8 dBm
15.247	RSS-247 5.2 (2)	PSD	<8dBm		Pass	-13 dBm
15.207 (a)	RSS-GEN 8.8	AC Power Line conducted emissions	Section 10	Radiated	Pass	See Original
15.205, 15.209	RSS-GEN 8.9	Radiated Spurious Emission	< 54dBuV/m		Pass	41.38 dBuV/m

10. ANTENNA PORT TEST RESULTS

10.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-247 5.2 (1)

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

TEST PROCEDURE

Reference to KDB 558074 D01 DTS Meas Guidance v03r02: The transmitter output is connected to a spectrum analyzer with the RBW set to100KHz, the VBW >= 3 x RBW, peak detector and max hold.

RESULTS

10.1.1. 802.11b MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
12	2467	9.01	0.5
13	2472	9.00	0.5
Worst		9.00	

10.1.2. 802.11g MODE IN THE 2.4 GHz BAND

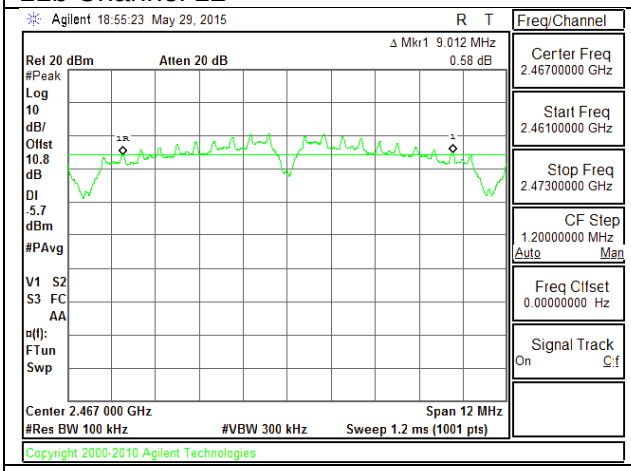
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
12	2467	15.68	0.5
13	2472	15.60	0.5
Worst		15.60	

10.1.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

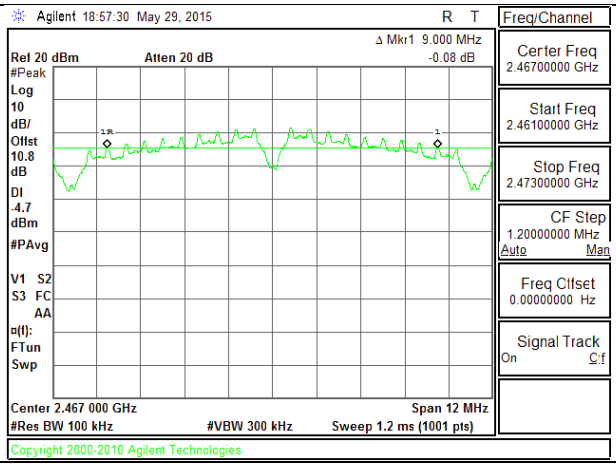
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
12	2467	15.14	0.5
13	2472	15.14	0.5
Worst		15.14	

10.1.4. dB BANDWIDTH PLOTS

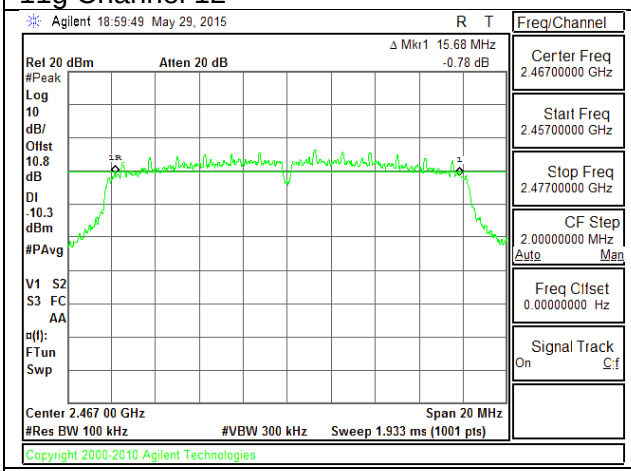
11b Channel 12



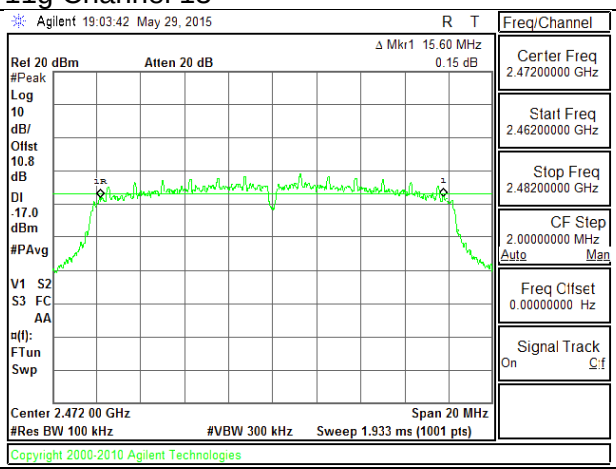
11b Channel 13



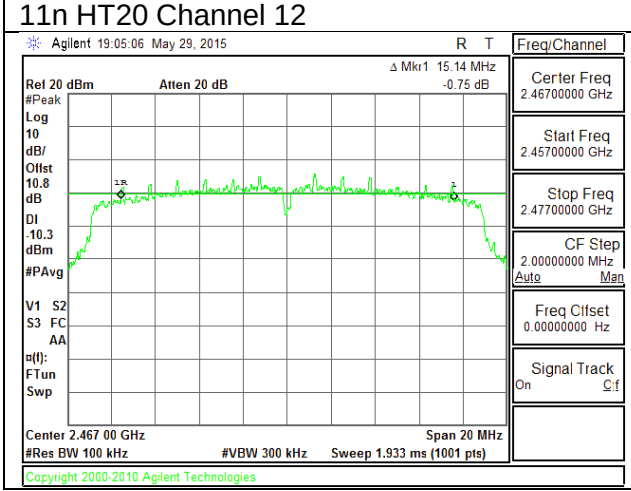
11g Channel 12



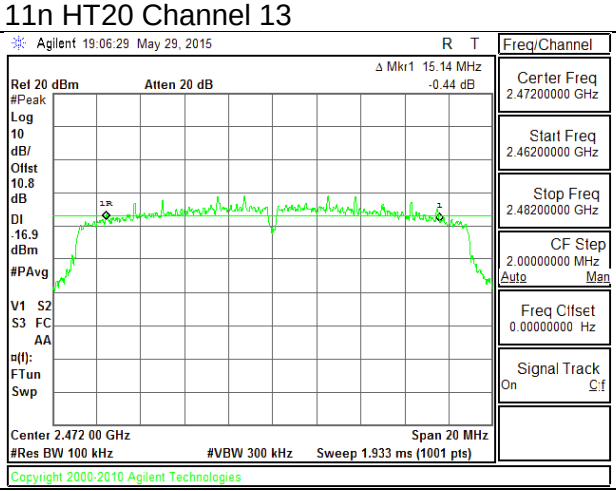
11g Channel 13



11n HT20 Channel 12



11n HT20 Channel 13



10.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

10.2.1. 802.11b MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
12	2467	14.42
13	2472	14.20
Worst		14.42

10.2.2. 802.11g MODE IN THE 2.4 GHz BAND

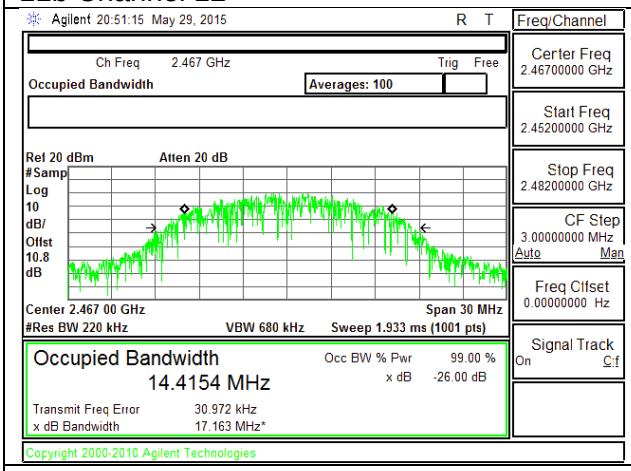
Channel	Frequency (MHz)	99% Bandwidth (MHz)
12	2467	16.51
13	2472	16.23
Worst		16.51

10.2.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

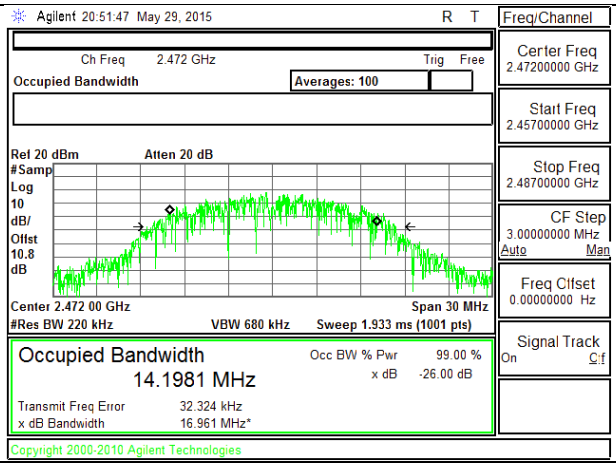
Channel	Frequency (MHz)	99% Bandwidth (MHz)
12	2467	17.56
13	2472	17.58
Worst		17.58

10.2.4. BANDWIDTH PLOTS

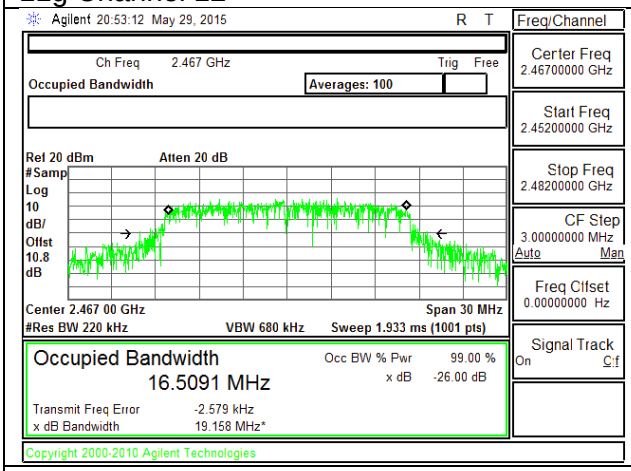
11b Channel 12



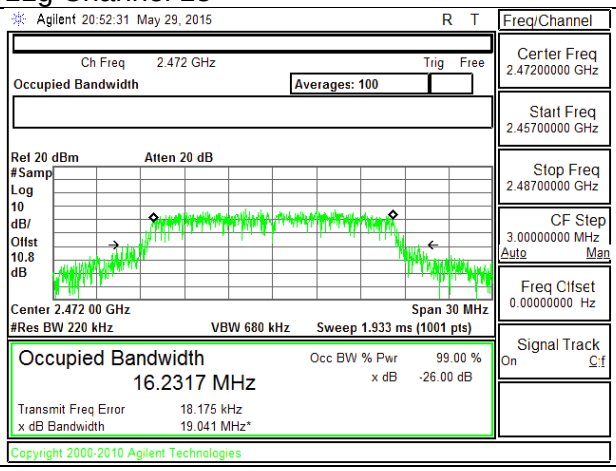
11b Channel 13



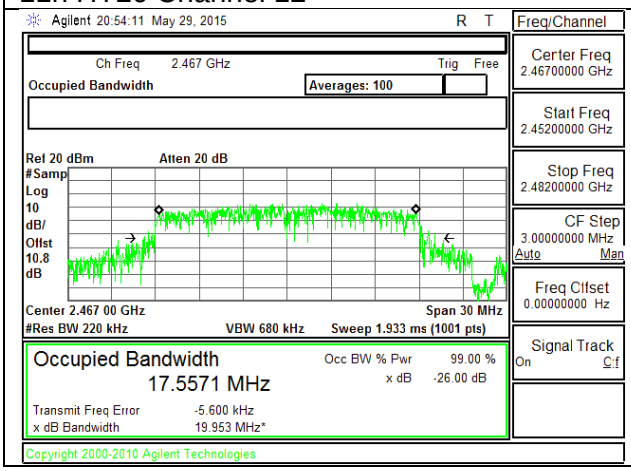
11g Channel 12



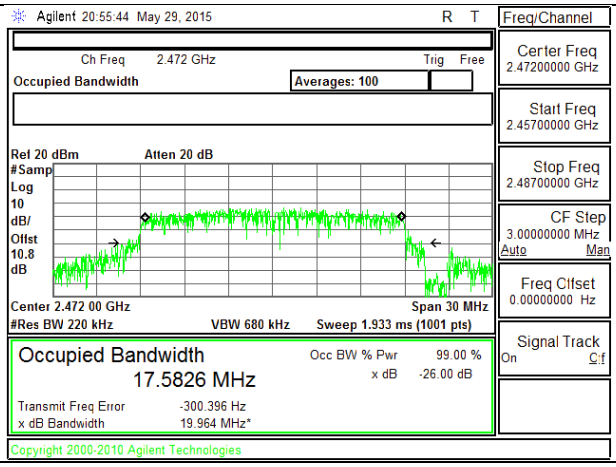
11g Channel 13



11n HT20 Channel 12



11n HT20 Channel 13



10.3. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-247 5.4 (4)

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

10.3.1. 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	2467	-1.90	30.00	30	36	30.00
Mid	2472	-1.90	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2467	12.80	12.80	30.00	-17.20
Mid	2472	11.30	11.30	30.00	-18.70
Worst			12.80		

10.3.2. 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	2467	-1.90	30.00	30	36	30.00
Mid	2472	-1.90	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2467	10.40	10.40	30.00	-19.60
Mid	2472	3.30	3.30	30.00	-26.70
Worst			10.40		

10.3.3. 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	2467	-1.90	30.00	30	36	30.00
Mid	2472	-1.90	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2467	8.50	8.50	30.00	-21.50
Mid	2472	2.80	2.80	30.00	-27.20
Worst			8.50		

10.4. PSD

LIMITS

FCC §15.247

IC RSS-247 5.2 (2)

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

RESULTS

10.4.1. 802.11b MODE IN THE 2.4 GHz BAND

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2467	-12.95	8.0	-20.9
Mid	2472	-14.97	8.0	-23.0

10.4.2. 802.11g MODE IN THE 2.4 GHz BAND

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2467	-18.19	8.0	-26.2
Mid	2472	-25.53	8.0	-33.5

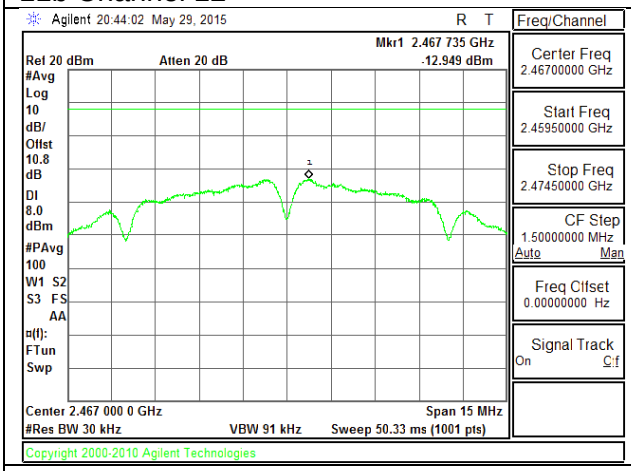
10.4.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

PSD Results

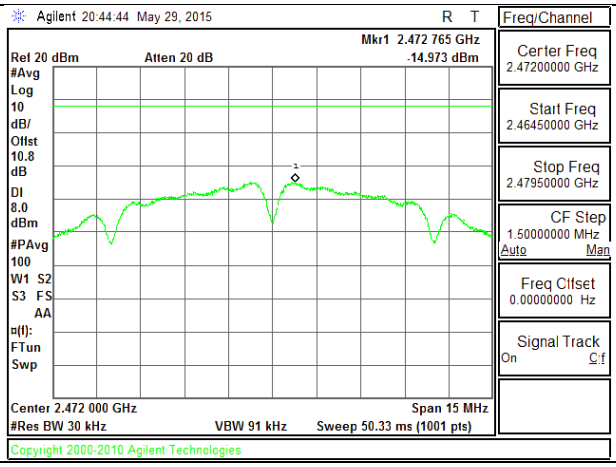
Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2467	-19.29	8.0	-27.3
Mid	2472	-25.39	8.0	-33.4

10.4.4. PSD Chain 0 MID CH PLOTS

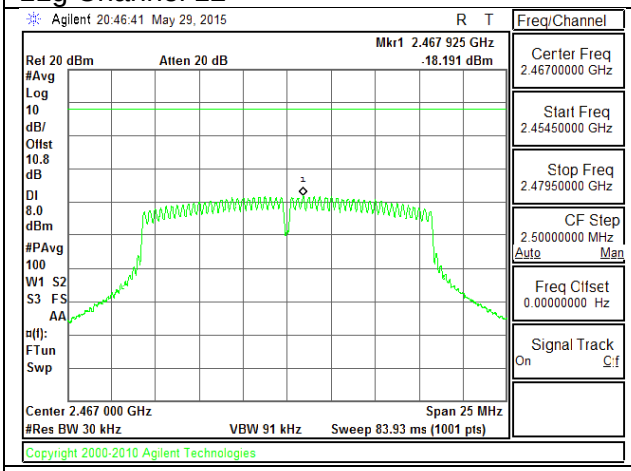
11b Channel 12



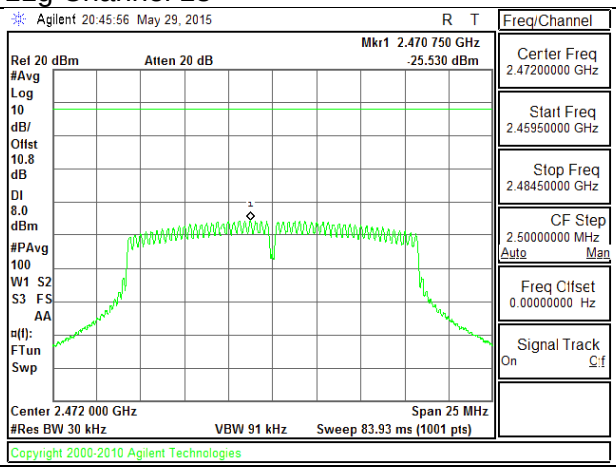
11b Channel 13



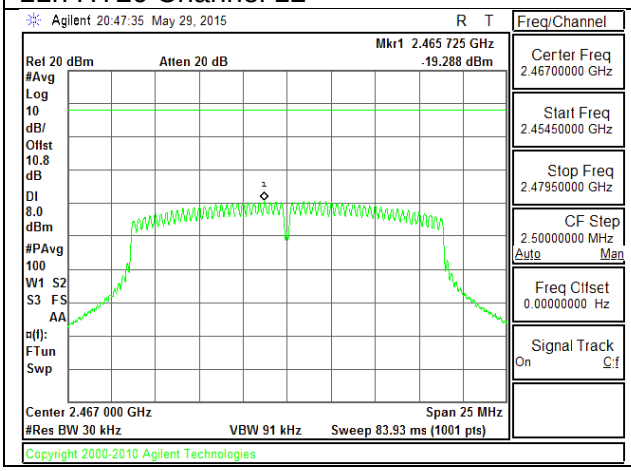
11g Channel 12



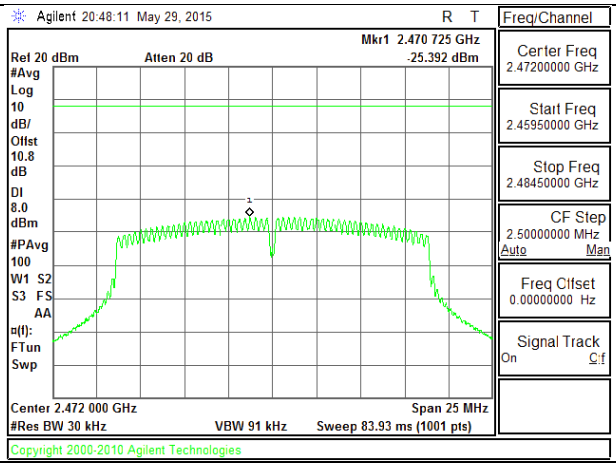
11g Channel 13



11n HT20 Channel 12



11n HT20 Channel 13



10.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-247 5.5

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

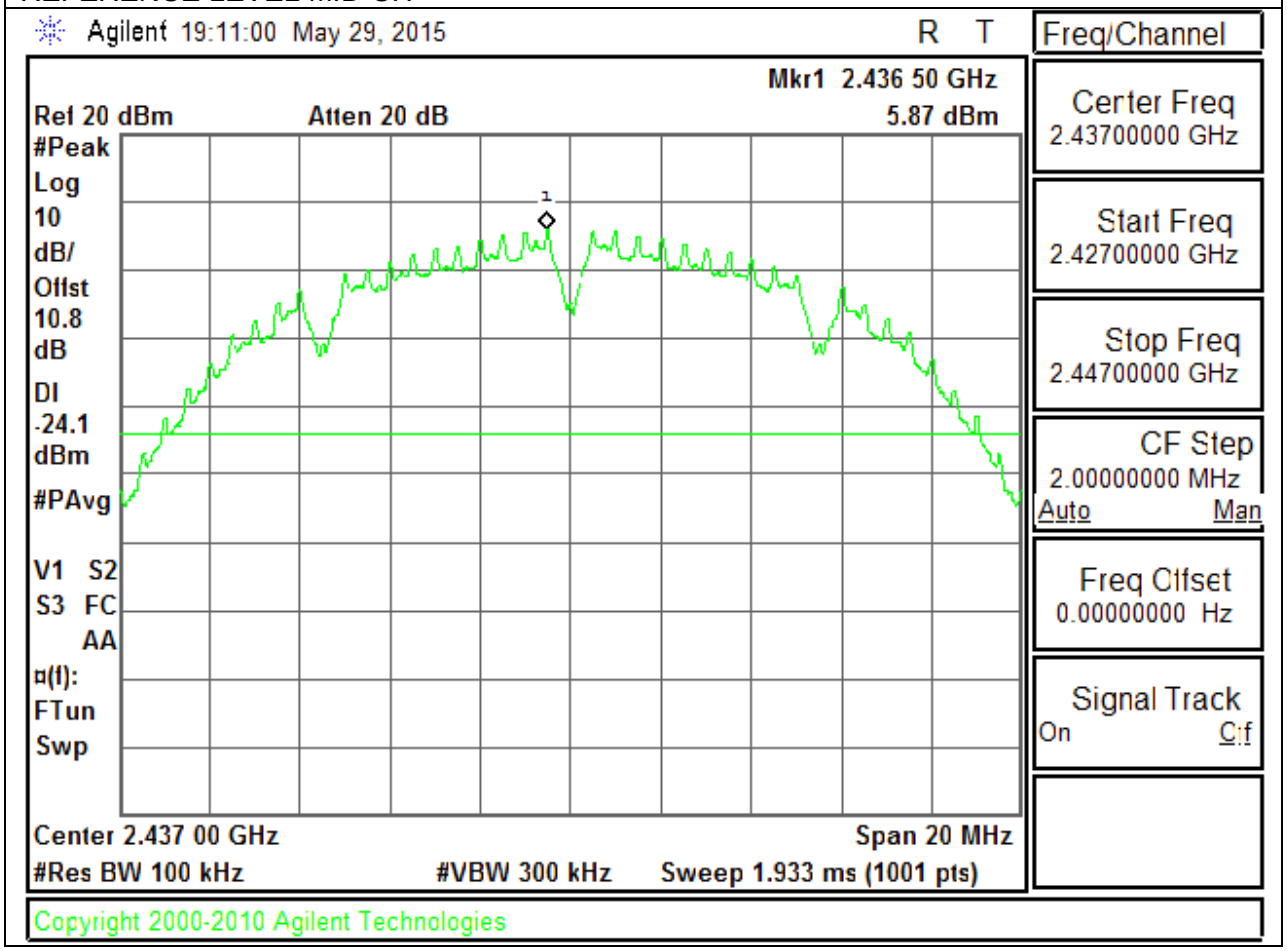
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS

10.5.1. 802.11b MODE IN THE 2.4 GHz BAND

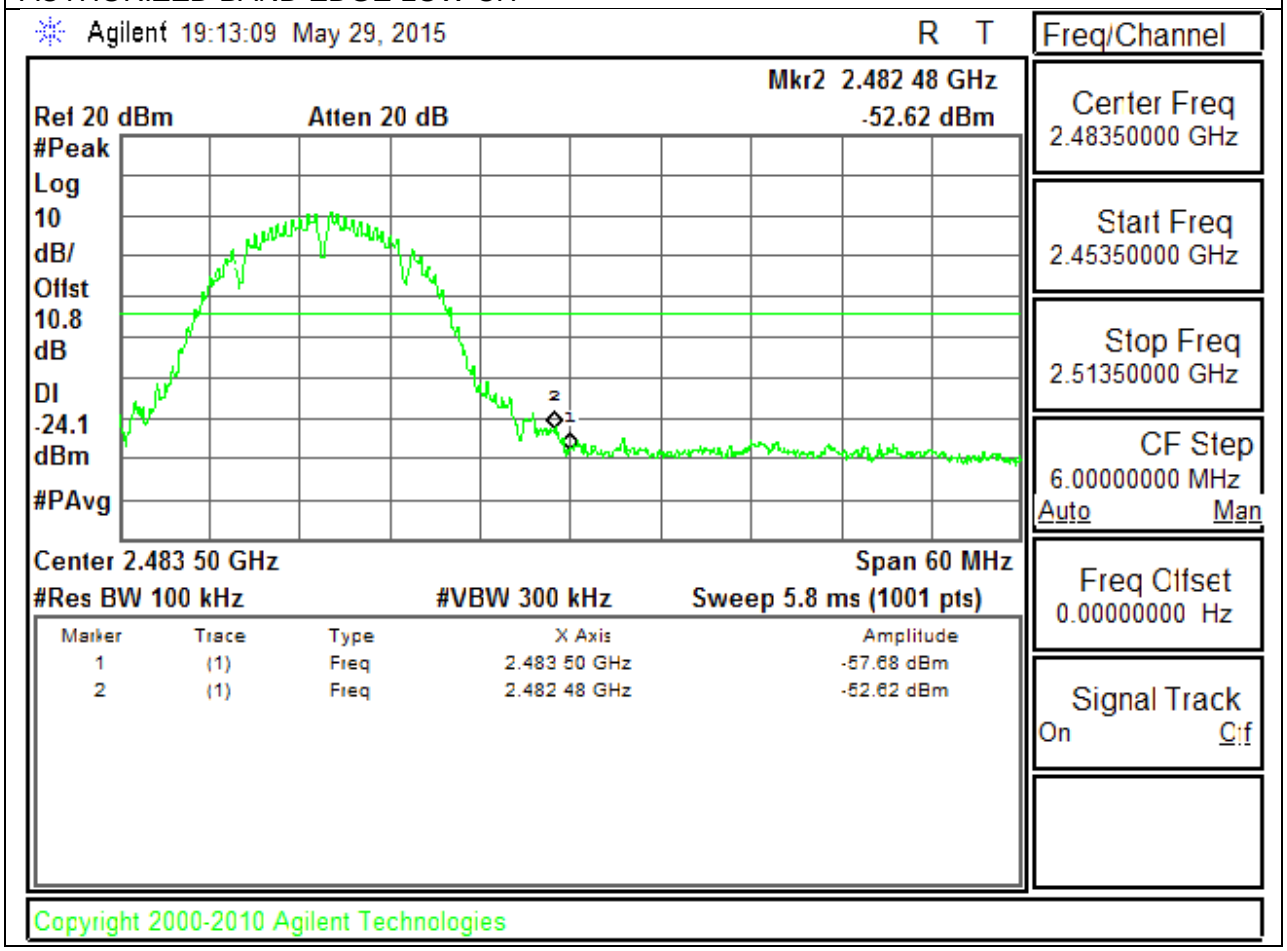
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



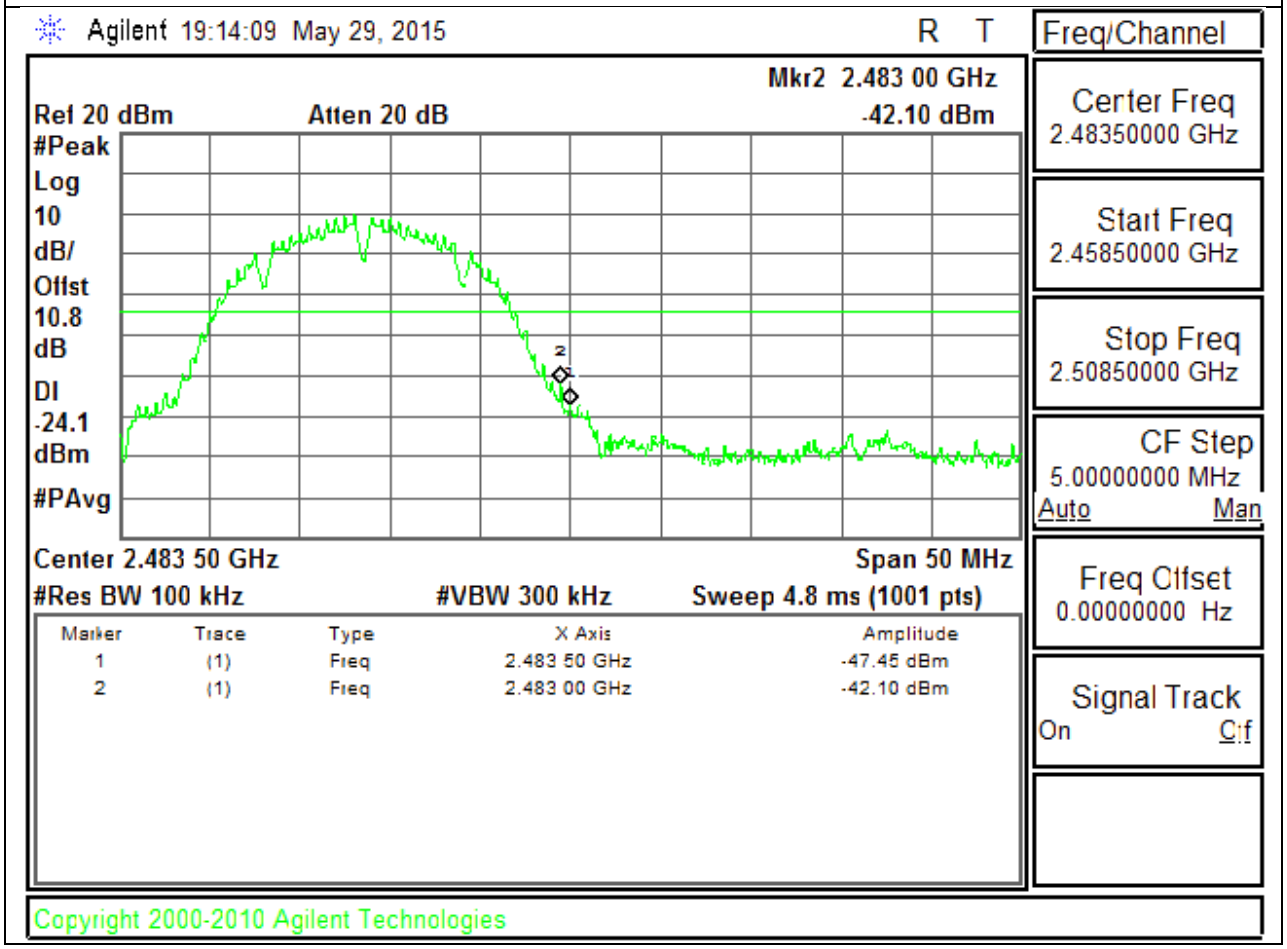
CHANNEL 12 BANDEDGE

AUTHORIZED BAND EDGE LOW CH



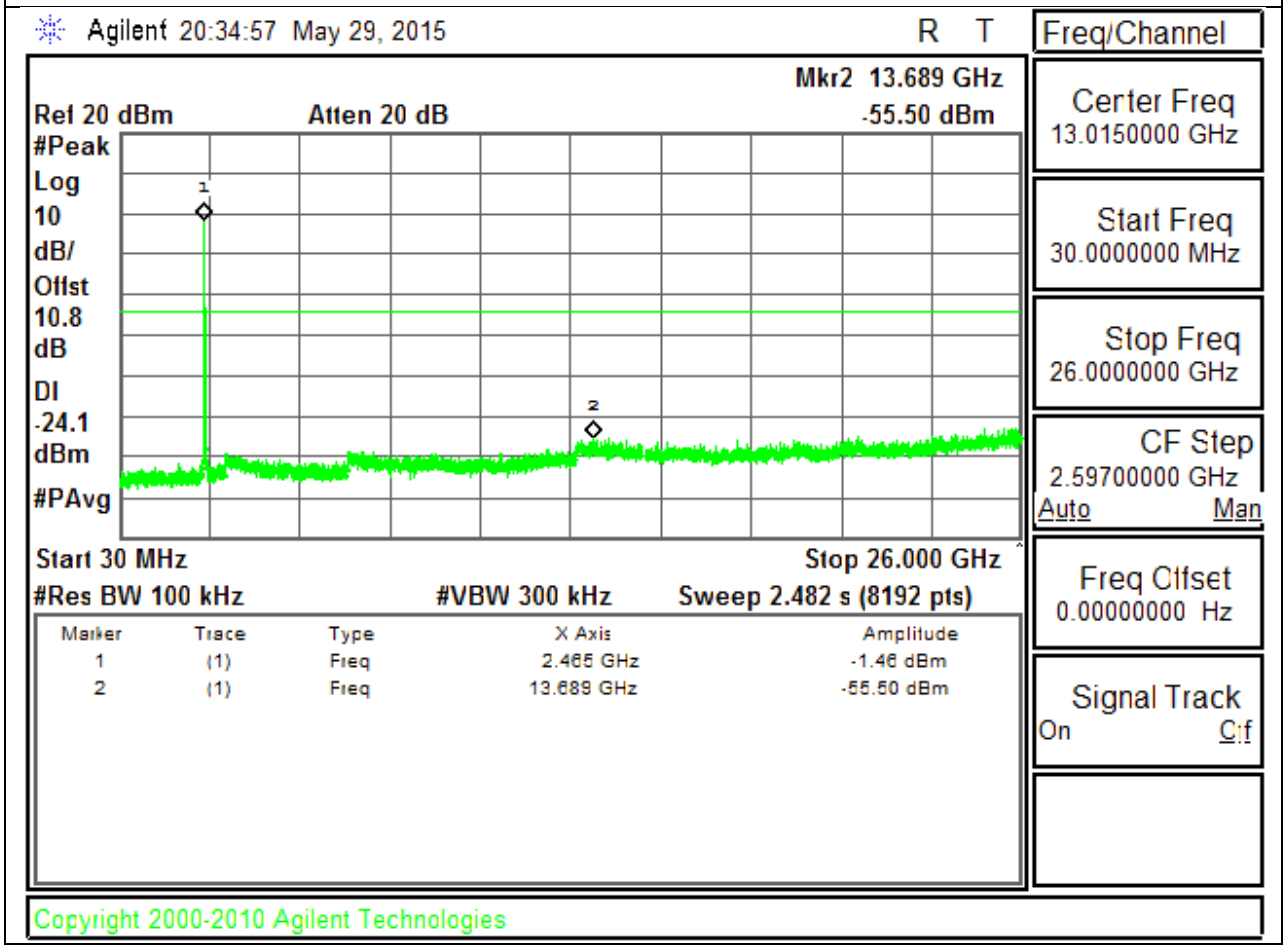
CHANNEL 13 BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

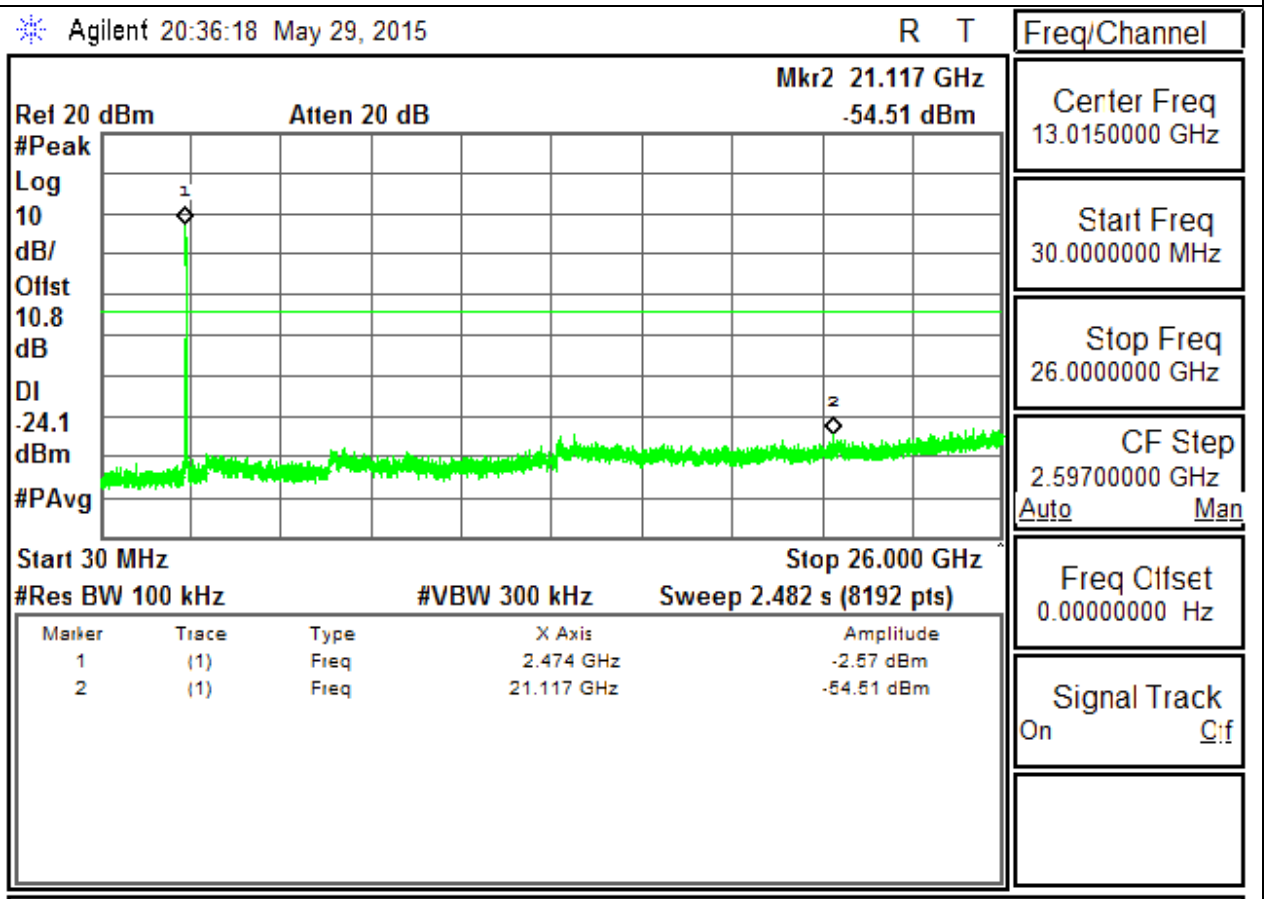


OUT-OF-BAND EMISSIONS

OUT OF BAND CH 12



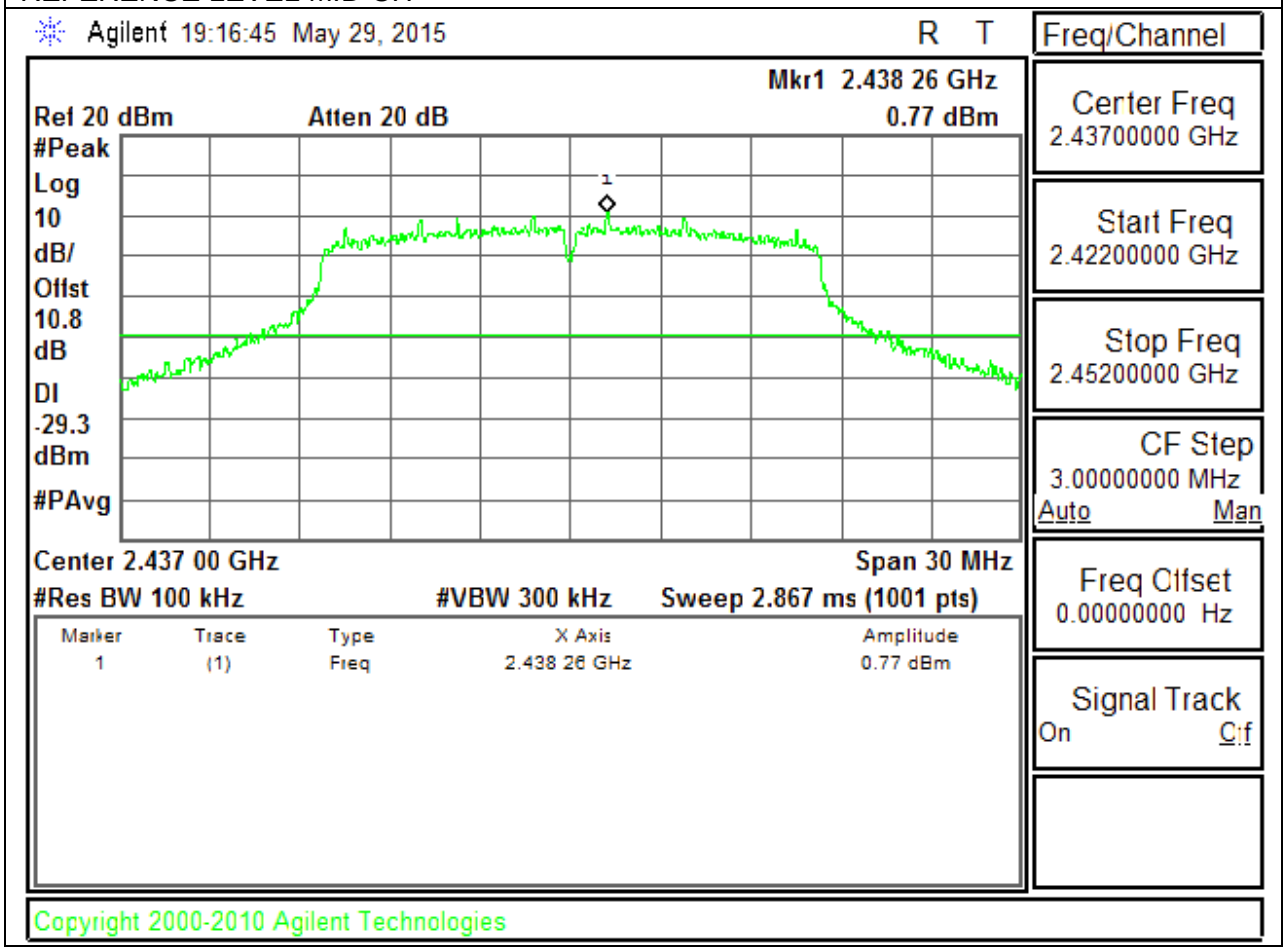
OUT OF BAND CH 13



10.5.2. 802.11g MODE IN THE 2.4 GHz BAND

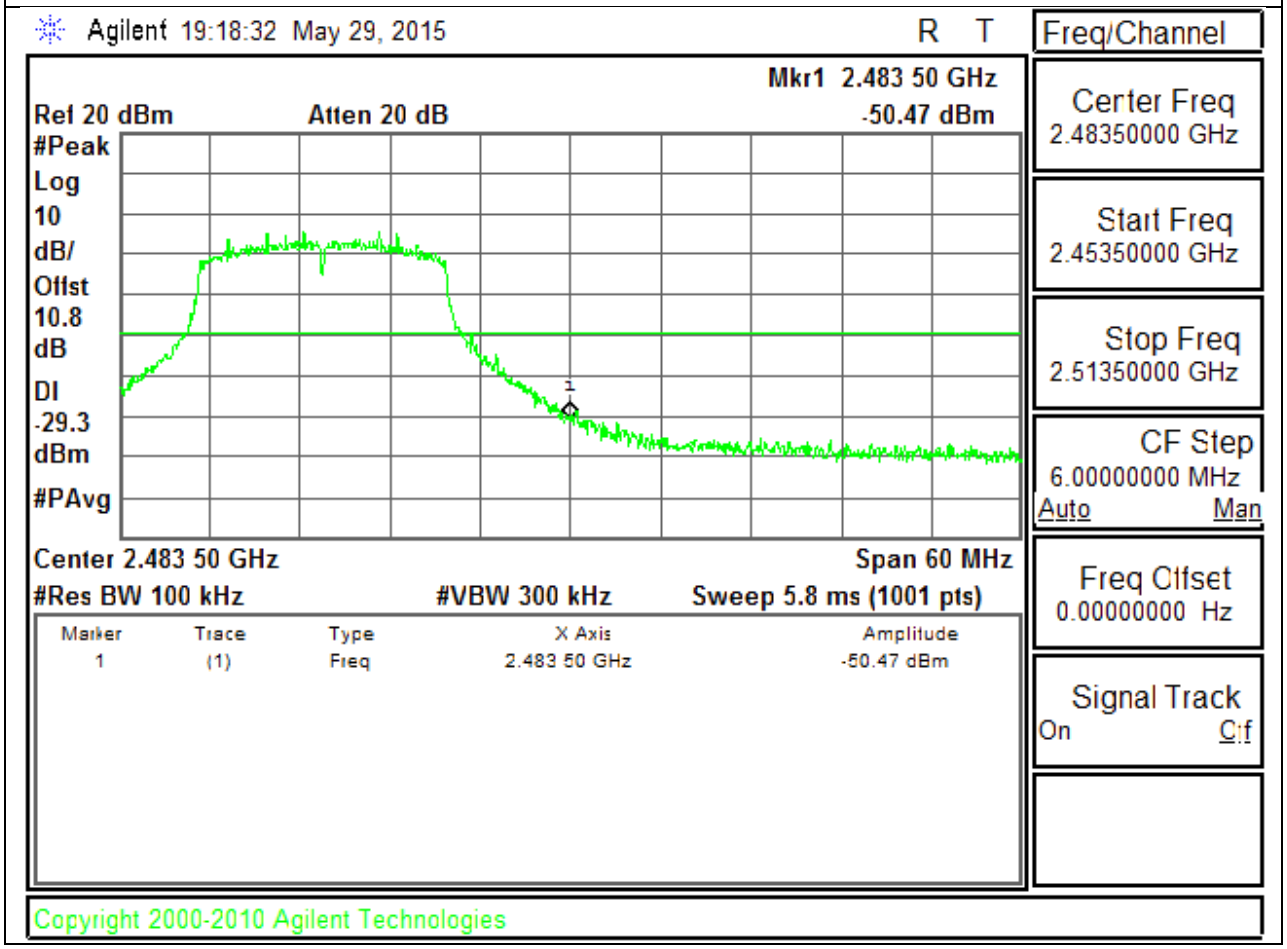
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



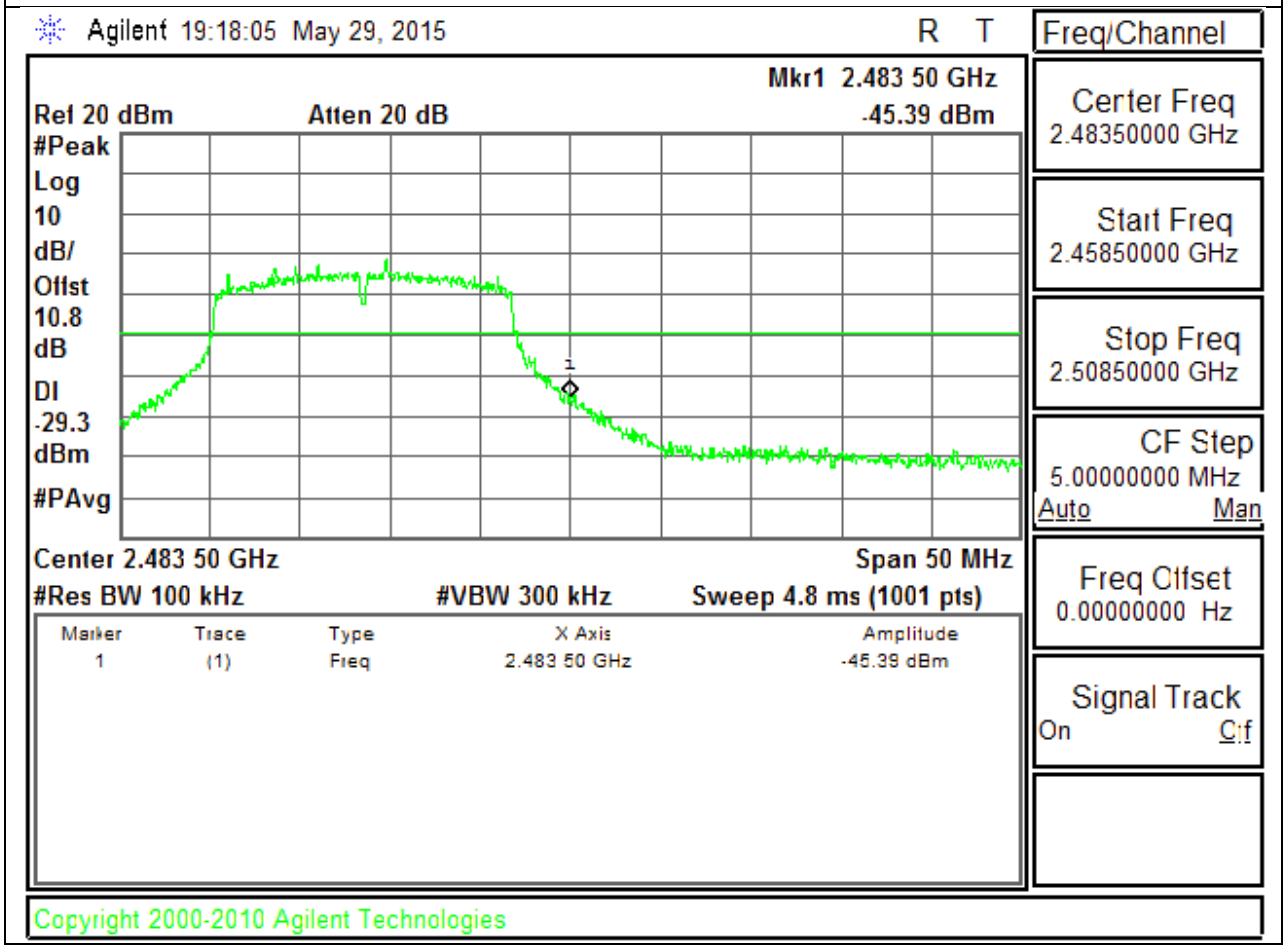
CHANNEL 12 BANDEDGE

AUTHORIZED BAND EDGE LOW CH



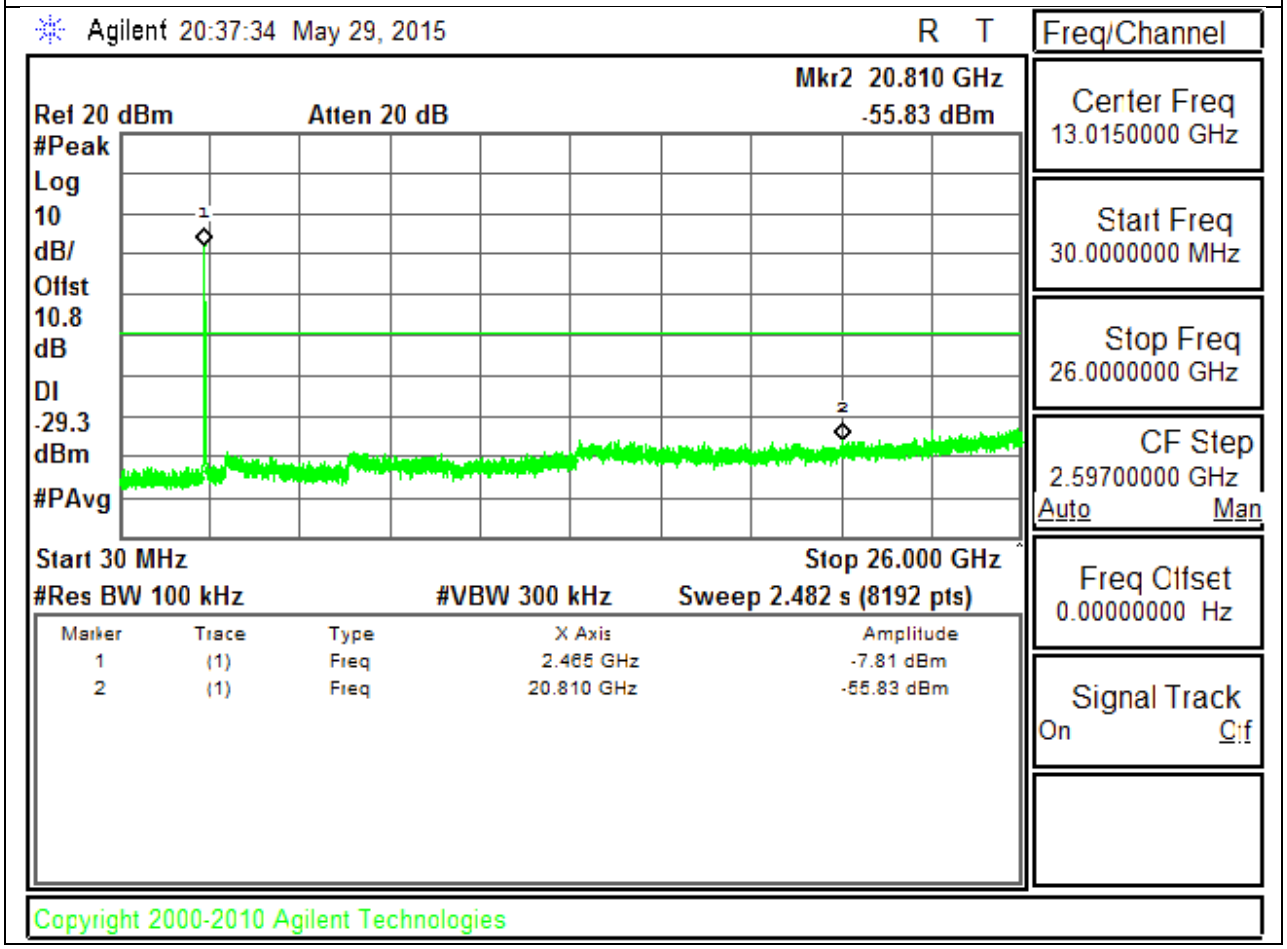
CHANNEL 13 BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

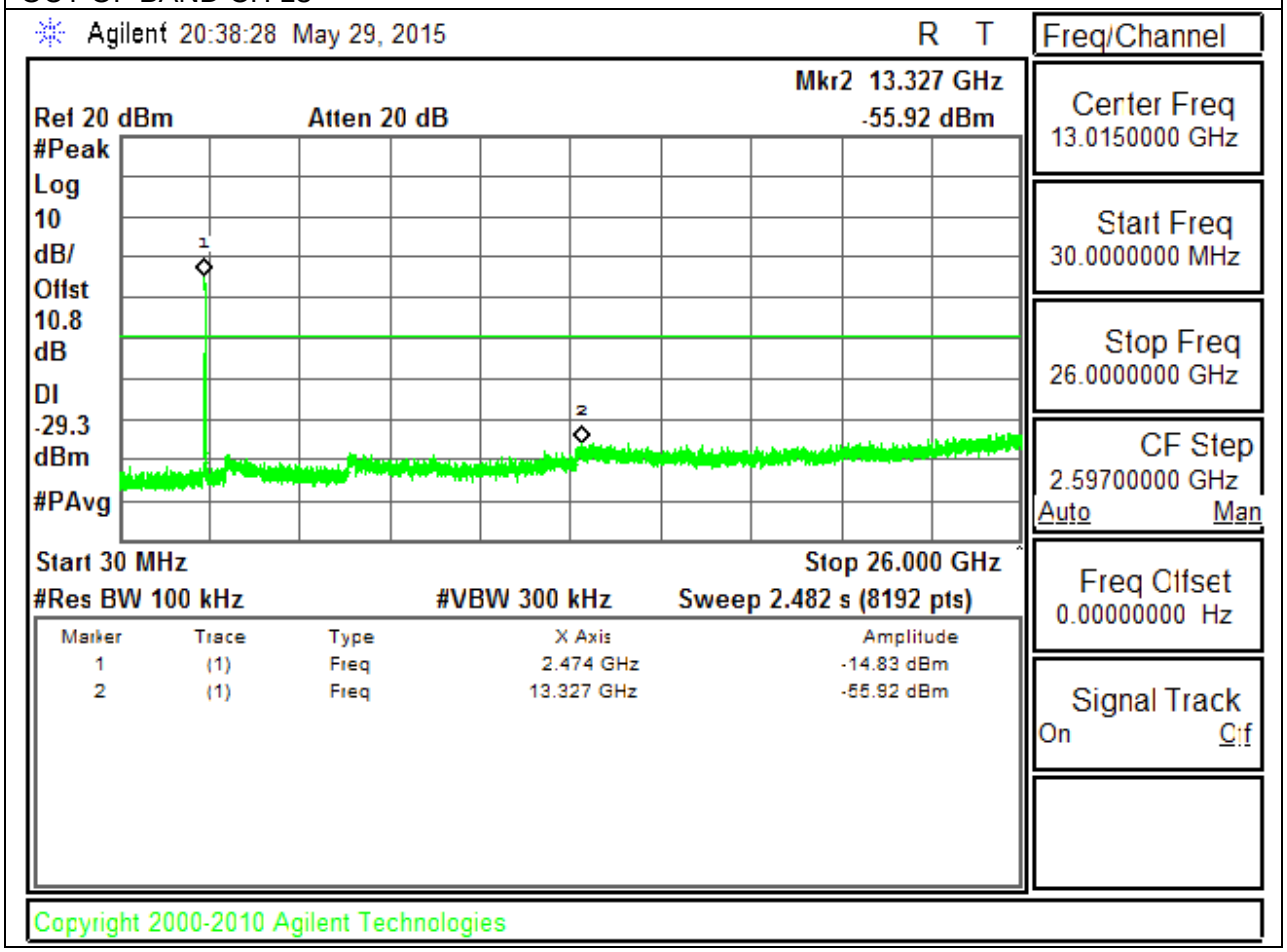


OUT-OF-BAND EMISSIONS

OUT OF BAND CH 12



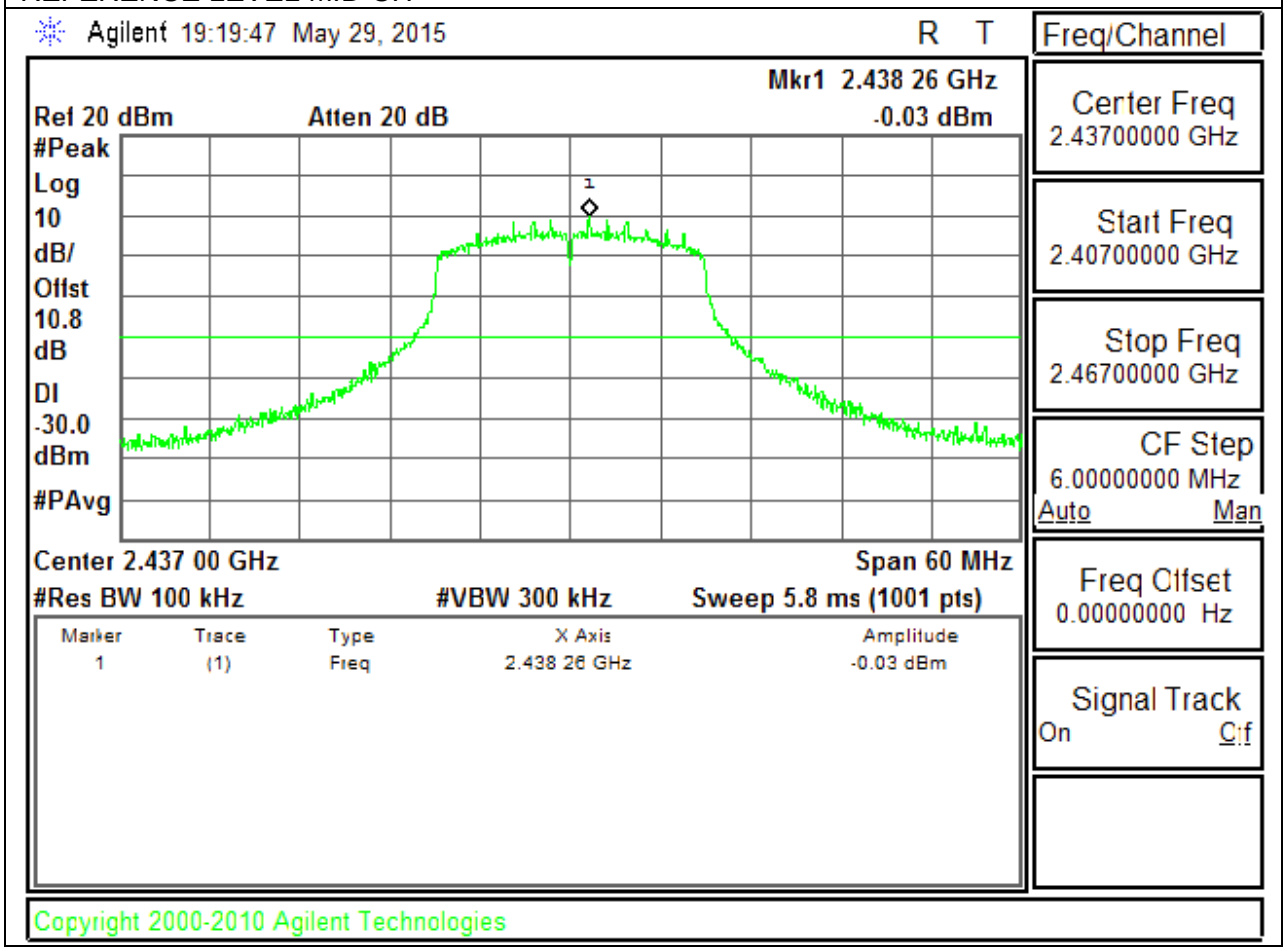
OUT OF BAND CH 13



10.5.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

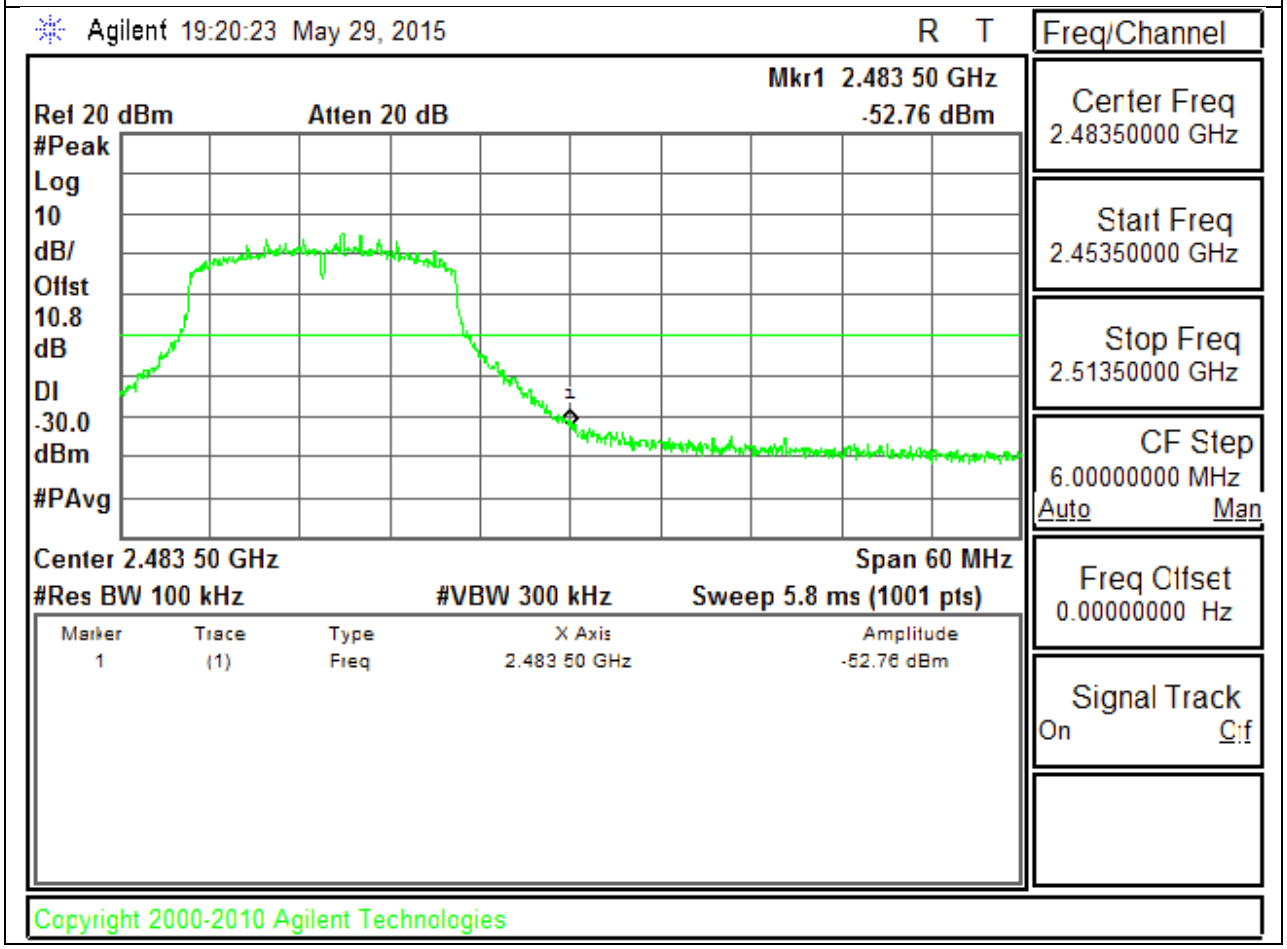
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



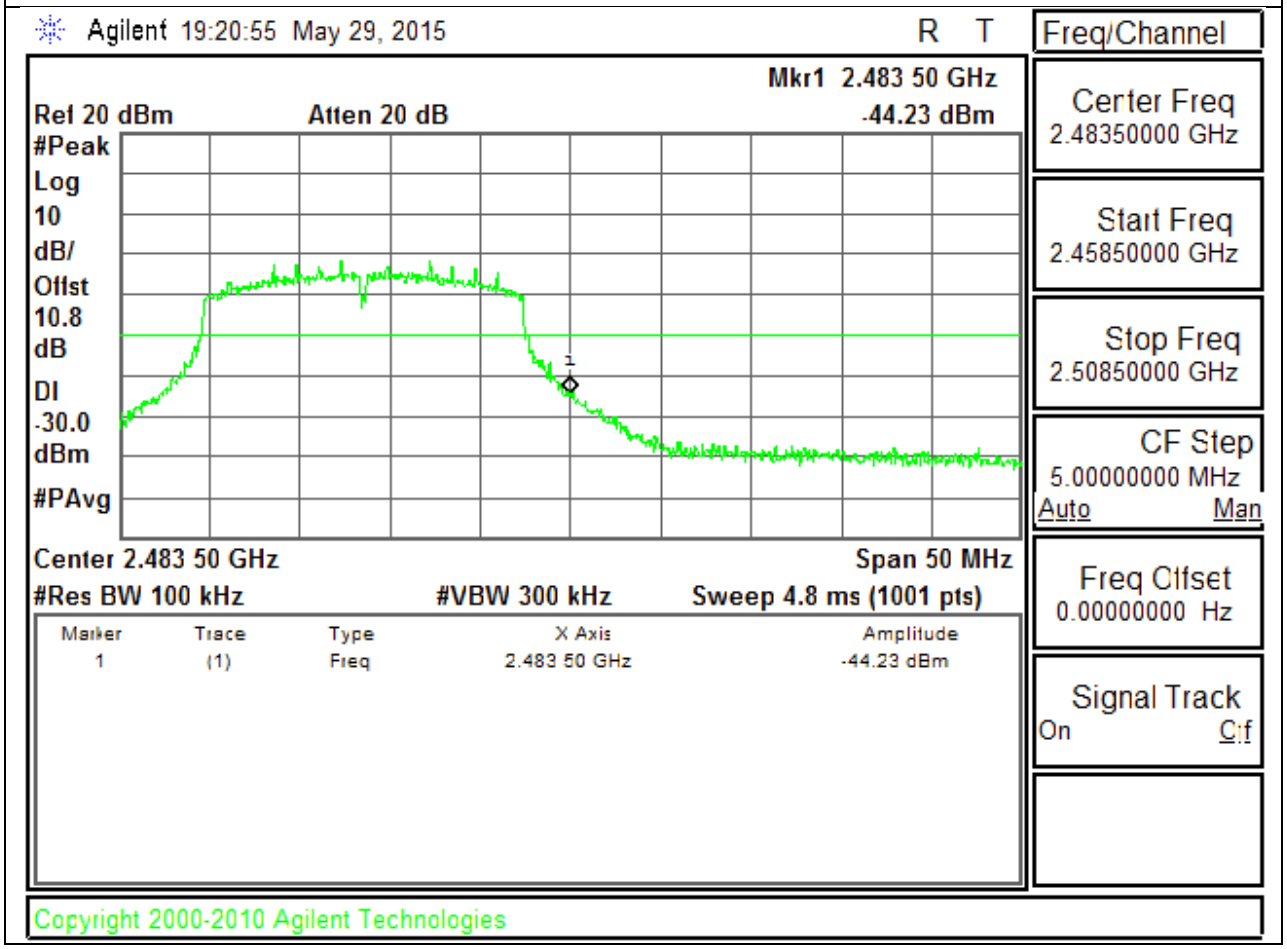
CHANNEL 12 BANDEDGE

AUTHORIZED BAND EDGE LOW CH



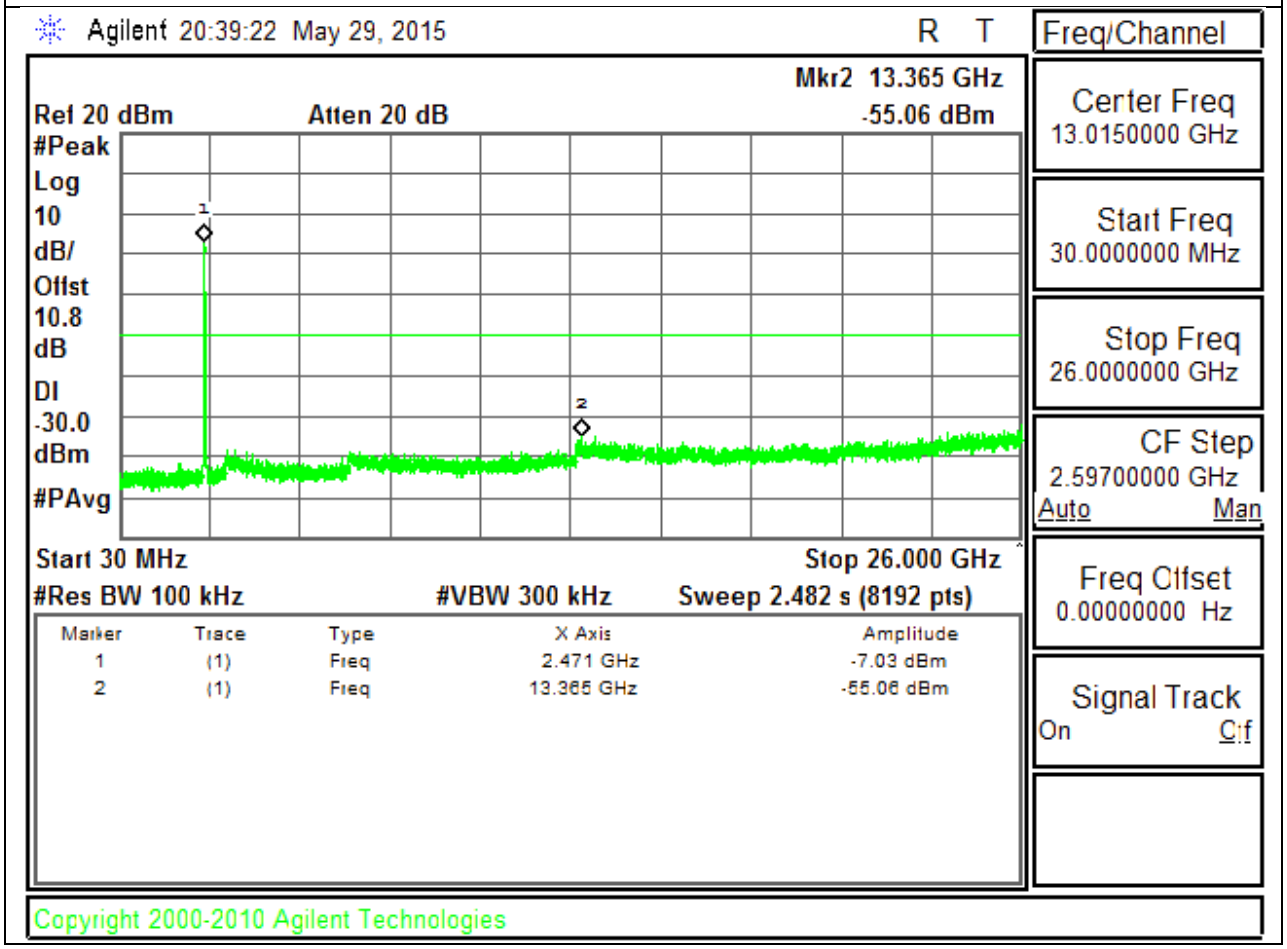
CHANNEL 13 BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

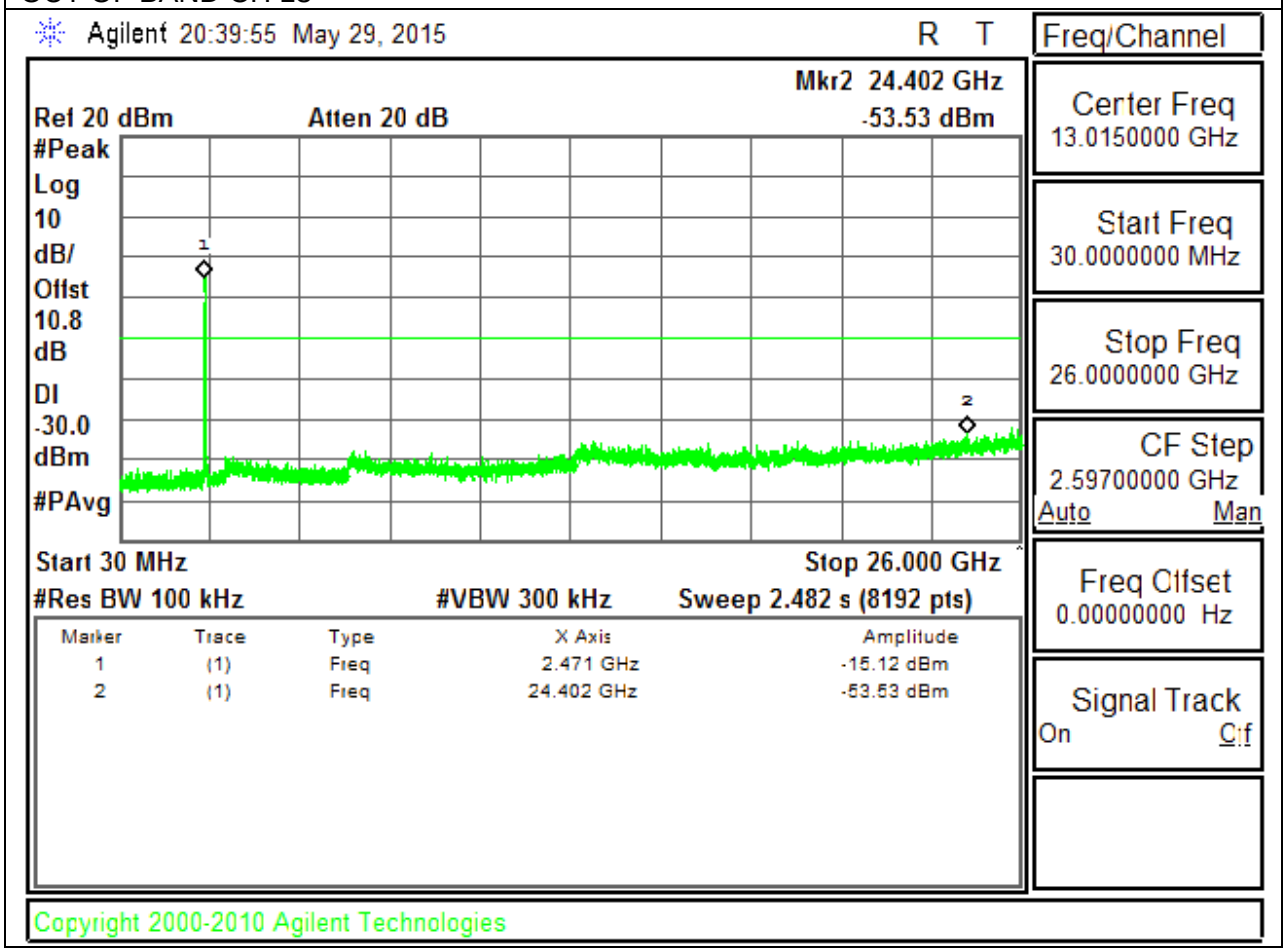


OUT-OF-BAND EMISSIONS

OUT OF BAND CH 12



OUT OF BAND CH 13



11. RADIATED TEST RESULTS

11.1. 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 (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; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor for average measurements. Duty cycle factor= 10log (1/x) for this sample B mode = 0dB (duty cycle >98%); G mode = 0.27dB; N mode = 0.26dB.

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.

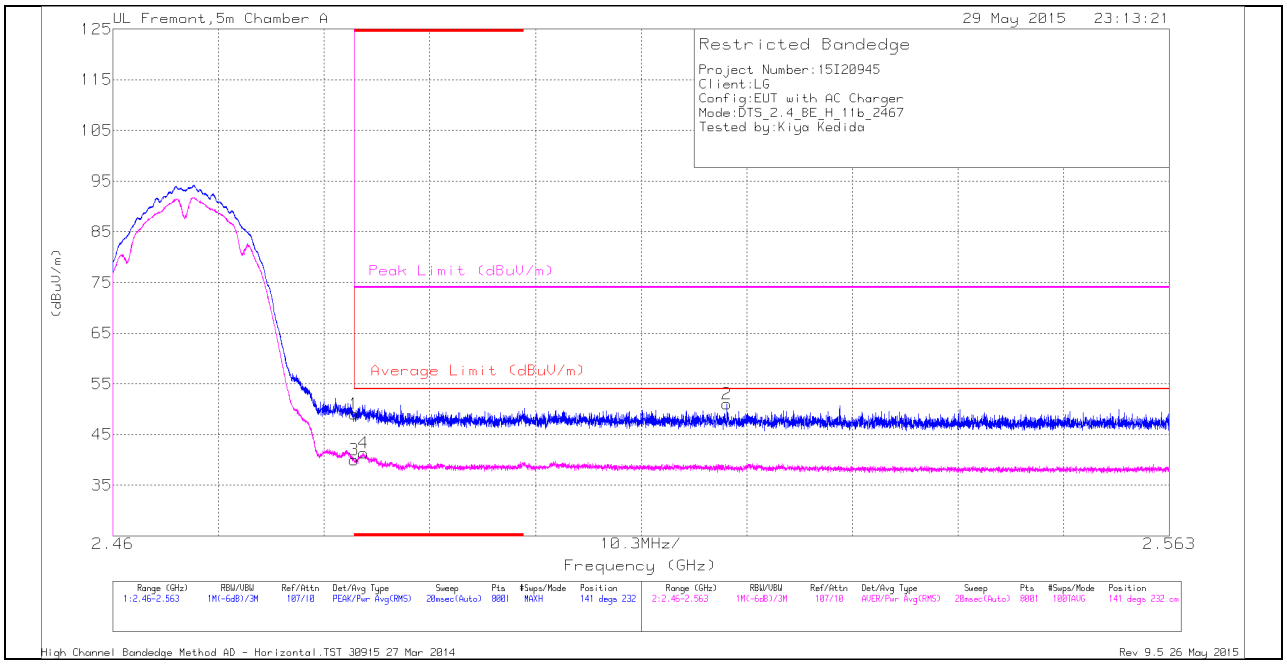
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

11.2. TRANSMITTER ABOVE 1 GHz

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

AUTHORIZED BANDEDGE (CHANNEL 12)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

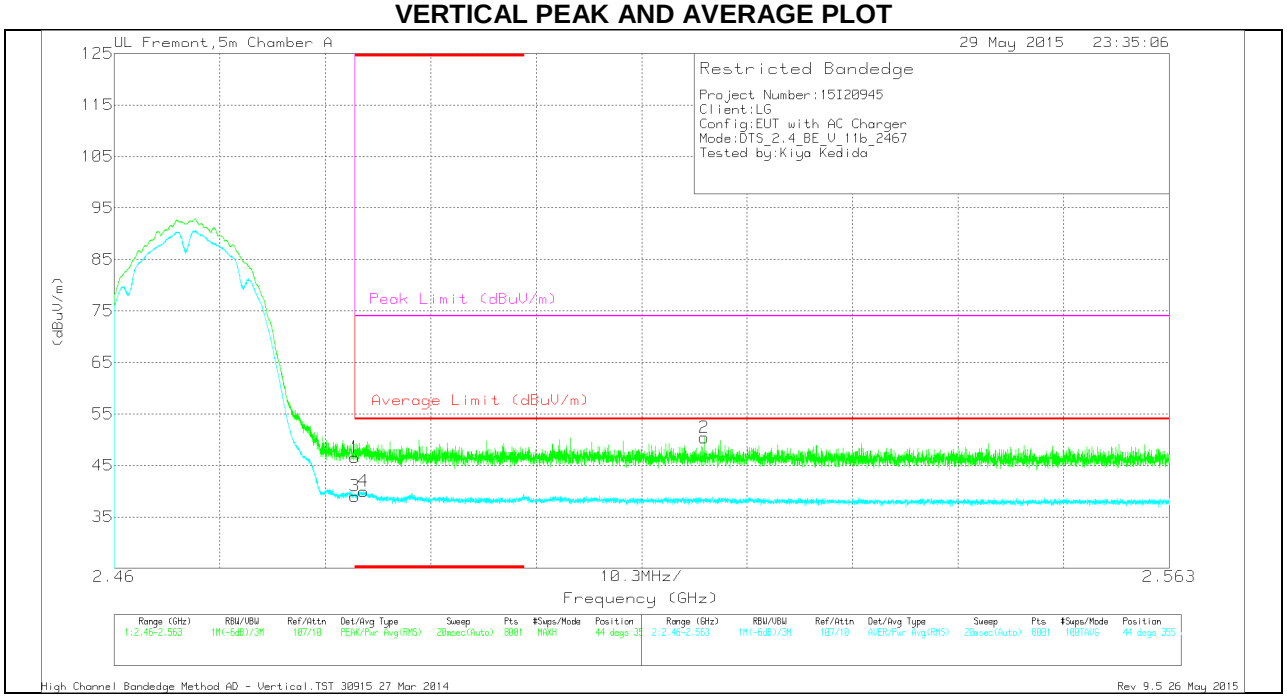
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	41.74	Pk	32.1	-24.8	49.04	-	-	74	-24.96	141	232	H
3	* 2.484	32.65	RMS	32.1	-24.8	39.95	54	-14.05	-	-	141	232	H
4	* 2.484	34.06	RMS	32.1	-24.8	41.36	54	-12.64	-	-	141	232	H
2	2.52	43.66	Pk	32.1	-24.7	51.06	-	-	74	-22.94	141	232	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT

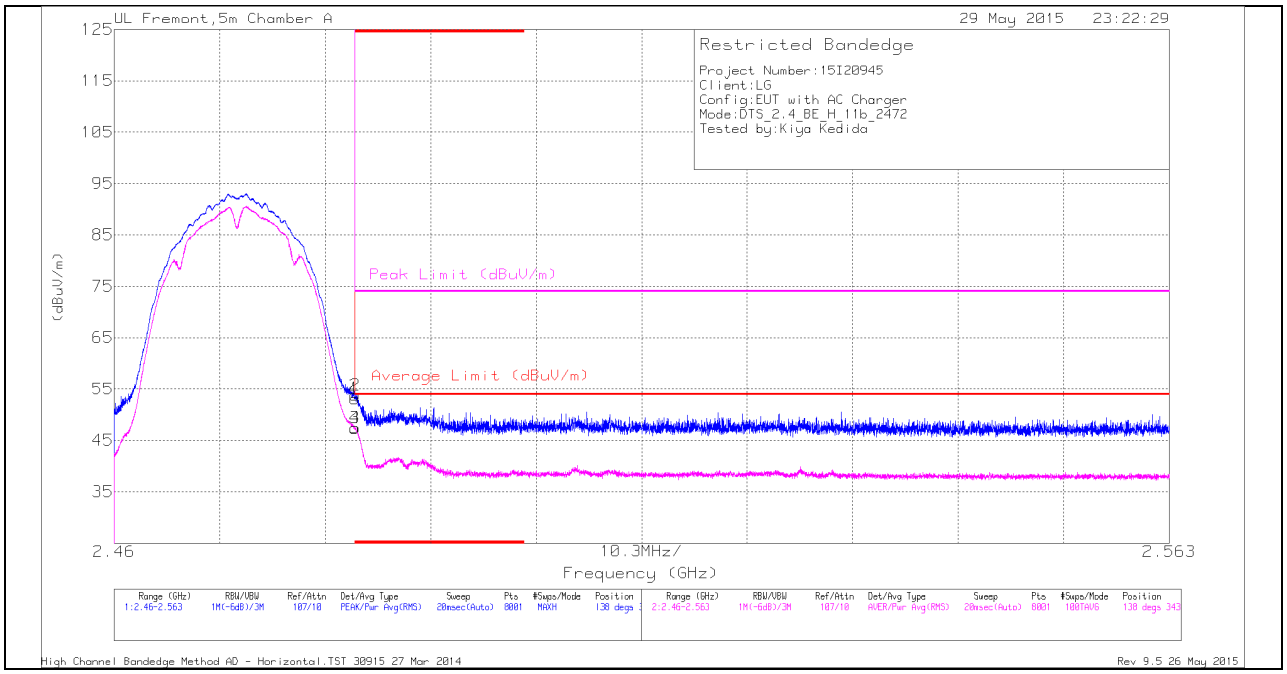


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (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	39.26	Pk	32.1	-24.8	46.56	-	-	74	-27.44	44	355	V
3	* 2.484	31.73	RMS	32.1	-24.8	39.03	54	-14.97	-	-	44	355	V
4	* 2.484	32.69	RMS	32.1	-24.8	39.99	54	-14.01	-	-	44	355	V
2	2.518	43.01	Pk	32.1	-24.7	50.41	-	-	74	-23.59	44	355	V

AUTHORIZED BANDEDGE (CHANNEL 13)

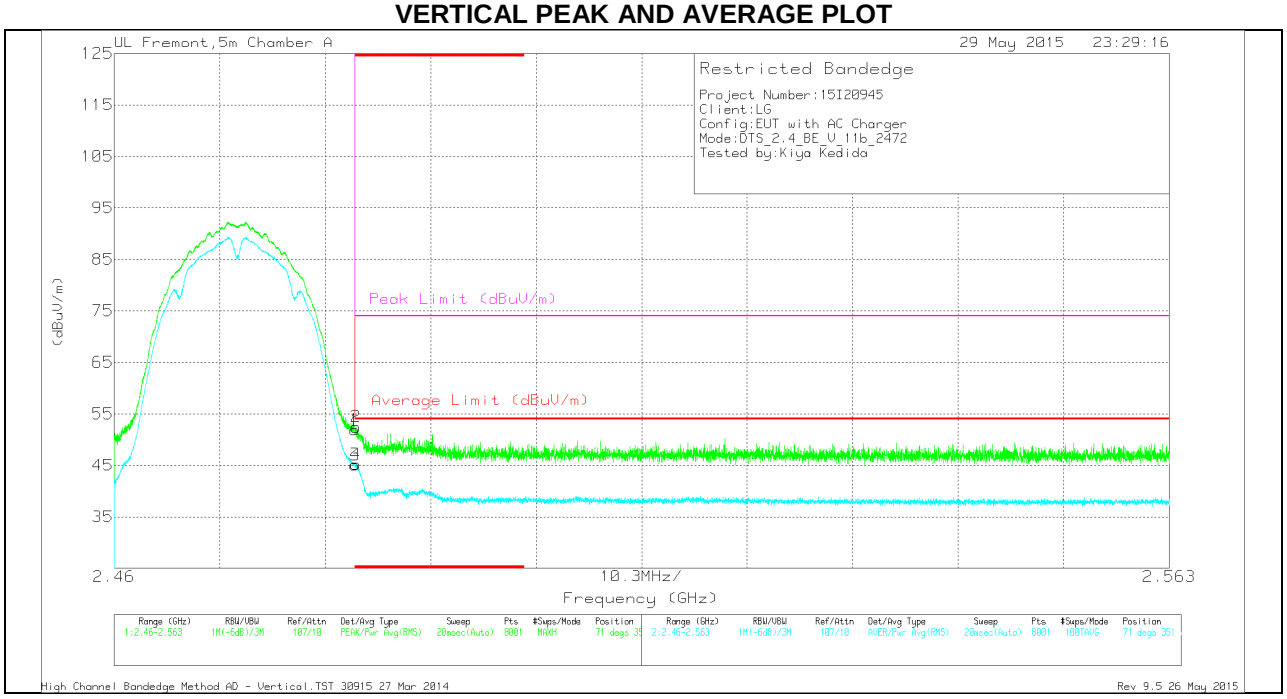
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (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	45.82	Pk	32.1	-24.8	53.12	-	-	74	-20.88	138	343	H
2	* 2.484	46.52	Pk	32.1	-24.8	53.82	-	-	74	-20.18	138	343	H
3	* 2.484	40.11	RMS	32.1	-24.8	47.41	54	-6.59	-	-	138	343	H
4	* 2.484	40.14	RMS	32.1	-24.8	47.44	54	-6.56	-	-	138	343	H

VERTICAL PEAK AND AVERAGE PLOT

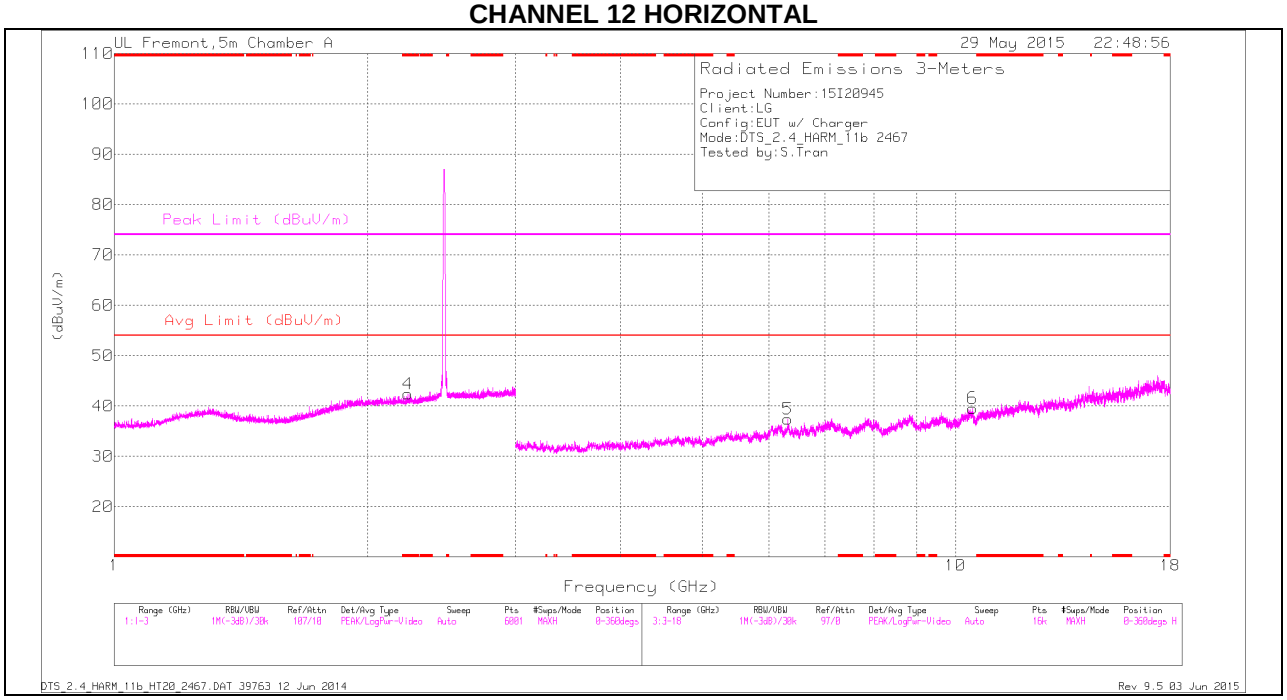


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (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	44.59	Pk	32.1	-24.8	51.89	-	-	74	-22.11	71	351	V
2	* 2.484	45.17	Pk	32.1	-24.8	52.47	-	-	74	-21.53	71	351	V
3	* 2.484	37.81	RMS	32.1	-24.8	45.11	54	-8.89	-	-	71	351	V
4	* 2.484	37.89	RMS	32.1	-24.8	45.19	54	-8.81	-	-	71	351	V

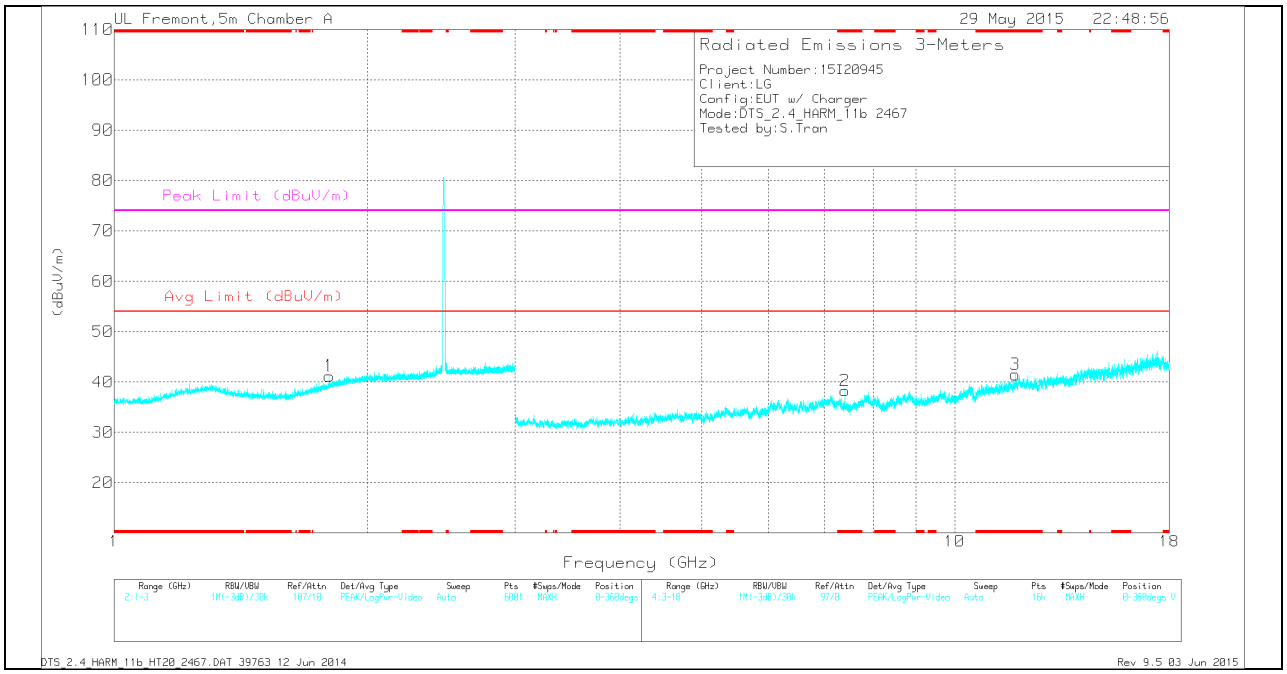
HARMONICS AND SPURIOUS EMISSIONS

CHANNEL 12 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.

CHANNEL 12 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.

CHANNEL 12 DATA

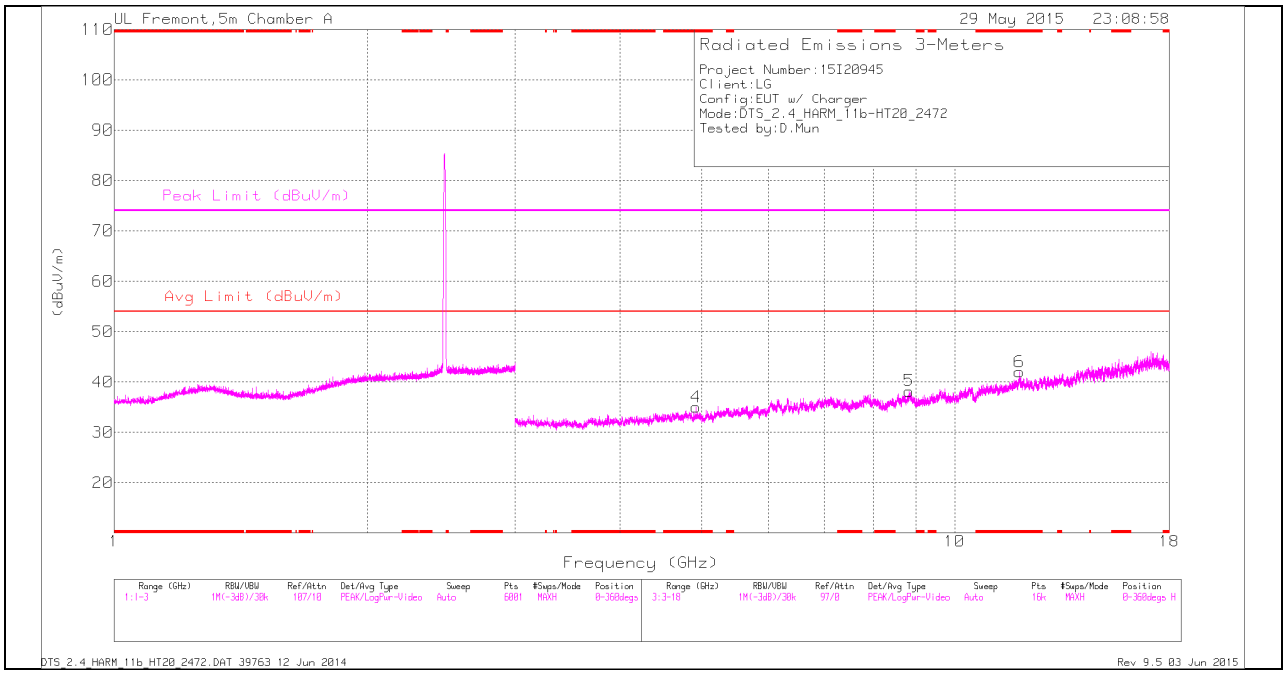
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.236	44.63	PK2	31.5	-23	53.13	-	-	74	-20.87	360	103	H
* 2.233	32.88	MAv1	31.5	-23	41.38	54	-12.62	-	-	360	103	H
* 7.401	37.53	PK2	35.6	-28.5	44.63	-	-	74	-29.37	360	100	V
* 7.4	26.83	MAv1	35.6	-28.4	34.03	54	-19.97	-	-	360	100	V
* 11.796	34.02	PK2	39	-26.1	46.92	-	-	74	-27.08	360	100	V
* 11.795	22.97	MAv1	39	-26.1	35.87	54	-18.13	-	-	360	100	V
1.802	44.37	PK2	30.2	-23.4	51.17	-	-	74	-22.83	360	100	V
1.805	32.98	MAv1	30.3	-23.4	39.88	54	-14.12	-	-	360	100	V
6.323	38.62	PK2	35.4	-29.3	44.72	-	-	74	-29.28	360	201	H
6.324	27.32	MAv1	35.4	-29.2	33.52	54	-20.48	-	-	360	201	H
10.486	34.52	PK2	37.4	-25.4	46.52	-	-	74	-27.48	360	100	H
10.487	23.76	MAv1	37.4	-25.4	35.76	54	-18.24	-	-	360	100	H

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

PK2 - KDB558074 Method: Maximum Peak

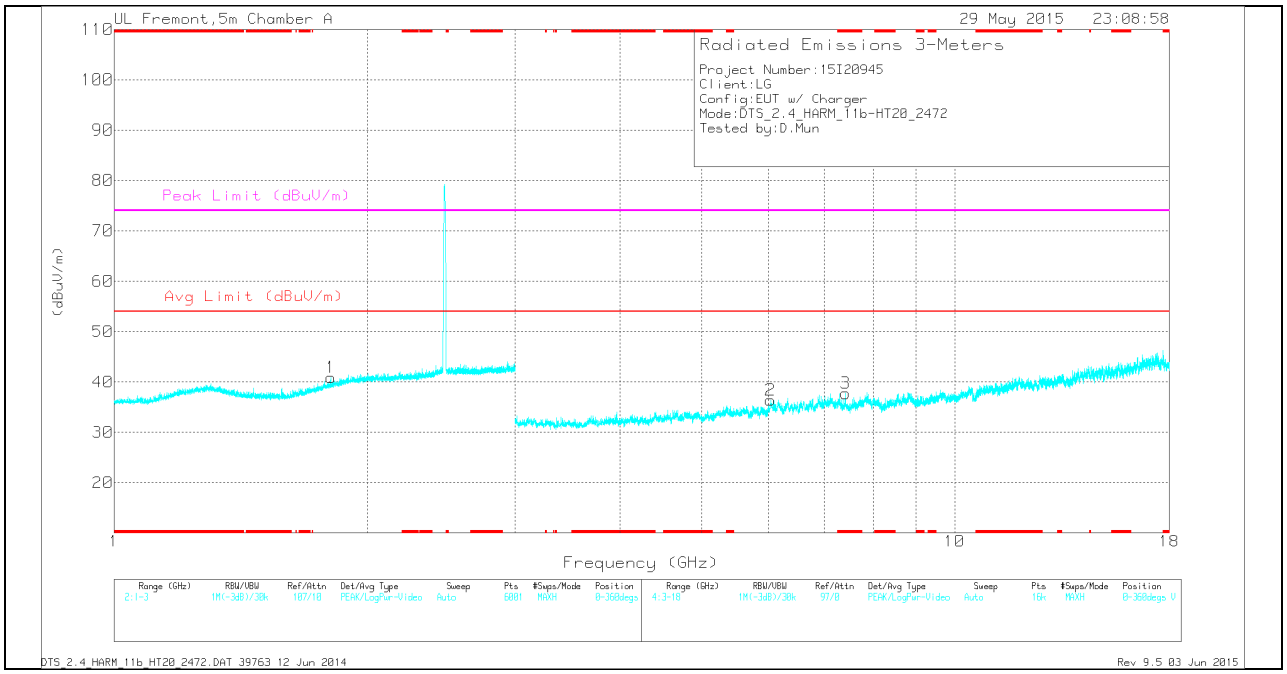
MAv1 - KDB558074 Option 1 Maximum RMS Average

CHANNEL 13 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.

CHANNEL 13 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.

CHANNEL 13 DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.922	39.67	PK2	34	-30.4	43.27	-	-	74	-30.73	360	201	H
* 4.921	28.83	MAv1	34	-30.4	32.43	54	-21.57	-	-	360	201	H
* 11.939	33.92	PK2	39.1	-26	47.02	-	-	74	-26.98	360	201	H
* 11.939	23.37	MAv1	39.1	-26	36.47	54	-17.53	-	-	360	201	H
* 7.416	37.72	PK2	35.6	-28.6	44.72	-	-	74	-29.28	360	100	V
* 7.415	26.43	MAv1	35.6	-28.6	33.43	54	-20.57	-	-	360	100	V
* 7.418	37.25	PK2	35.6	-28.6	44.25	-	-	74	-29.75	360	100	V
* 7.416	26.47	MAv1	35.6	-28.6	33.47	54	-20.53	-	-	360	100	V
1.81	44.36	PK2	30.3	-23.3	51.36	-	-	74	-22.64	360	100	V
1.812	32.93	MAv1	30.3	-23.4	39.83	54	-14.17	-	-	360	100	V
6.037	27.99	MAv1	35.2	-29.5	33.69	54	-20.31	-	-	360	100	V
6.039	39.07	PK2	35.2	-29.3	44.97	-	-	74	-29.03	360	100	V
8.826	24.74	MAv1	35.9	-26.5	34.14	54	-19.86	-	-	360	100	H
8.827	35.86	PK2	35.9	-26.5	45.26	-	-	74	-28.74	360	100	H

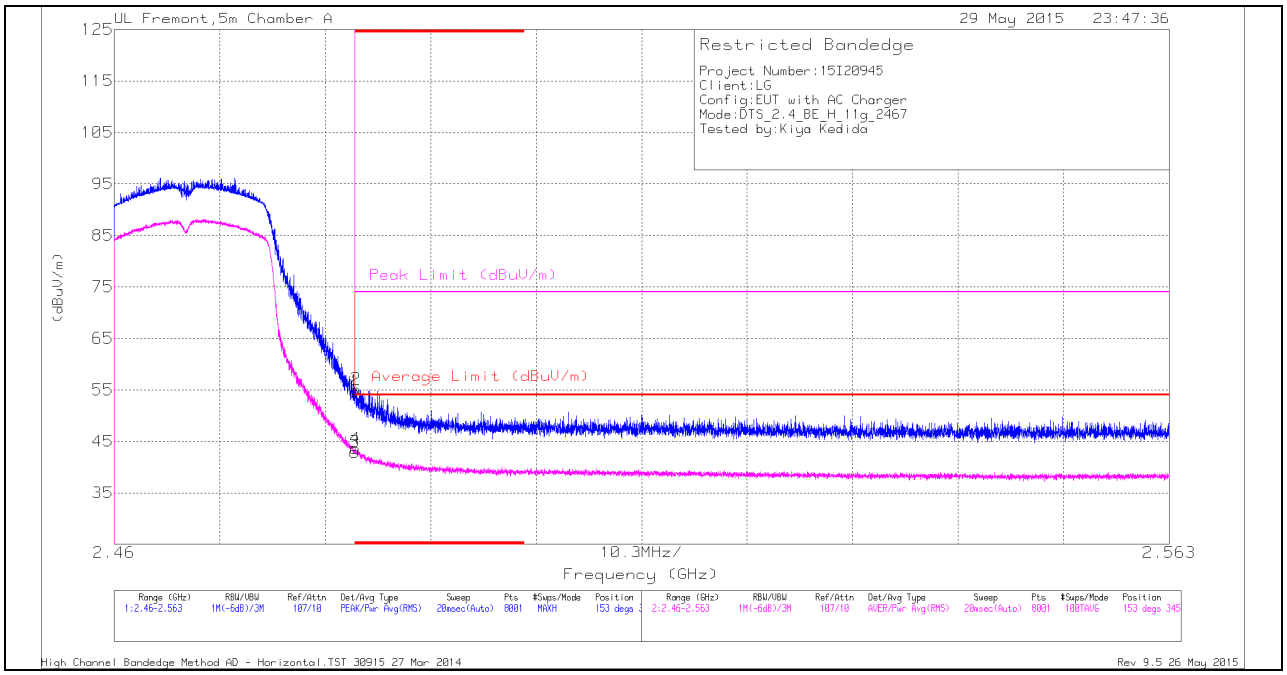
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

11.2.1. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND AUTHORIZED BANDEDGE (CHANNEL 12)

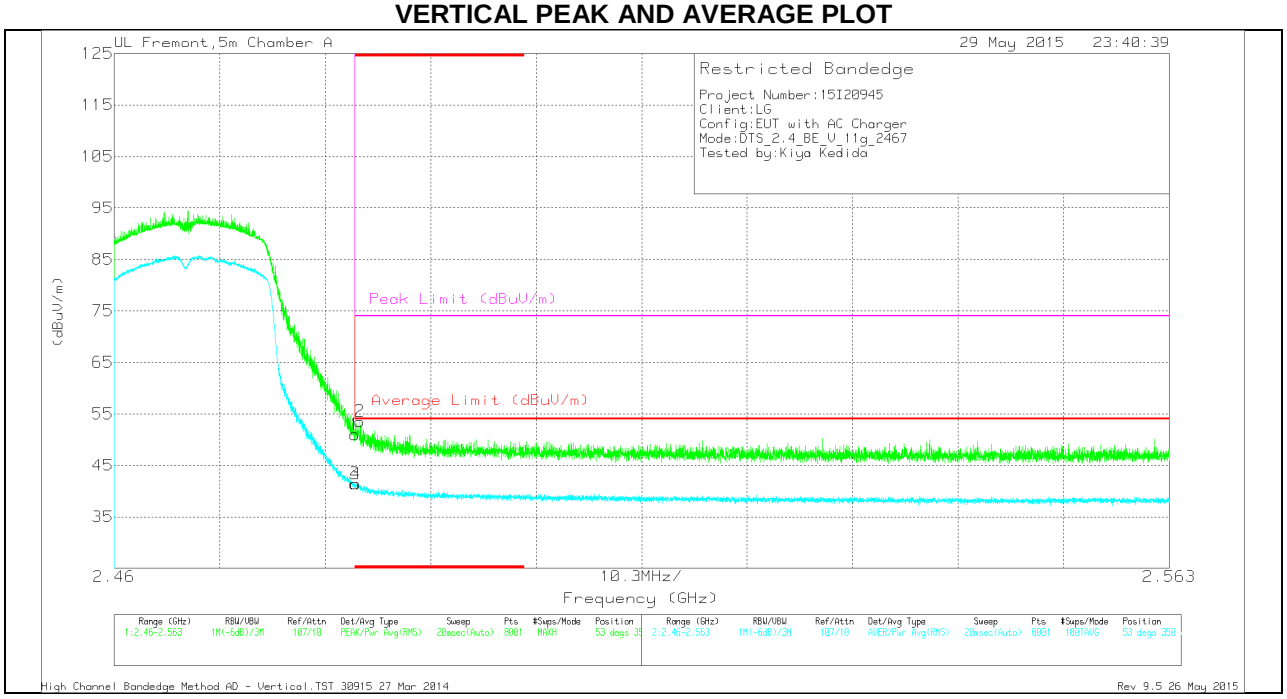
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/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	47.44	Pk	32.1	-24.8	0	54.74	-	-	74	-19.26	153	345	H
2	* 2.484	47.81	Pk	32.1	-24.8	0	55.11	-	-	74	-18.89	153	345	H
3	* 2.484	35.38	RMS	32.1	-24.8	.27	42.95	54	-11.05	-	-	153	345	H
4	* 2.484	36.05	RMS	32.1	-24.8	.27	43.62	54	-10.38	-	-	153	345	H

VERTICAL PEAK AND AVERAGE PLOT

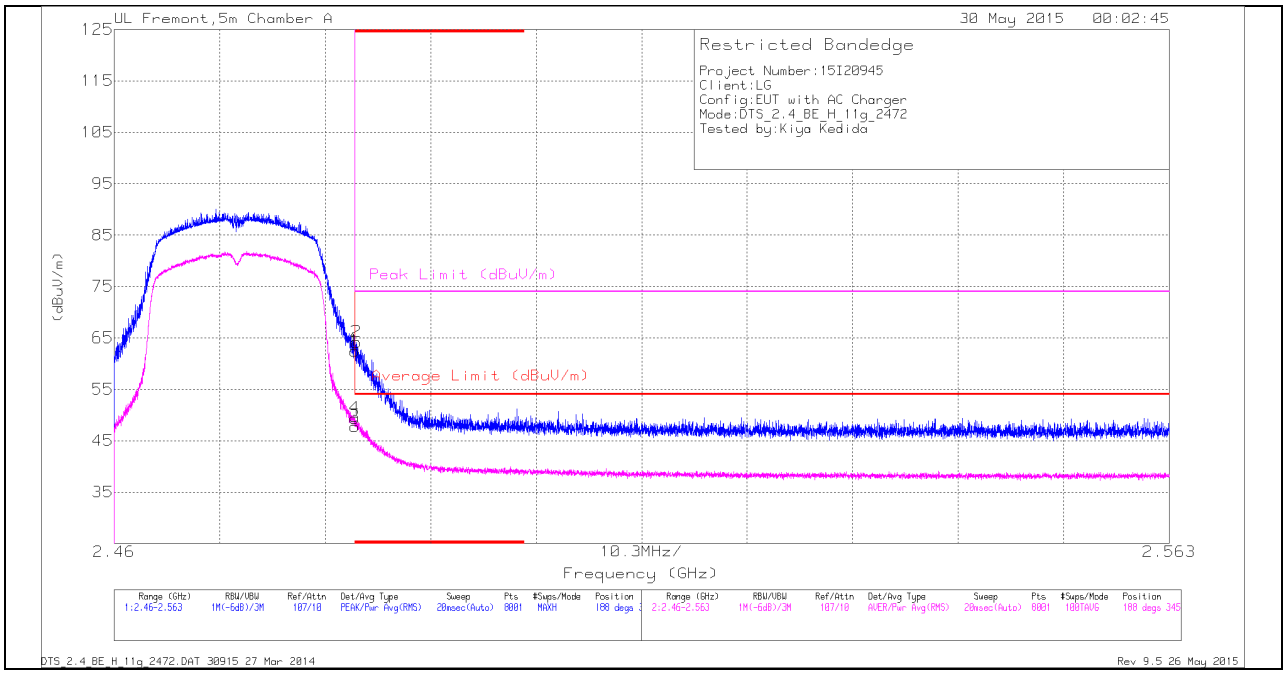


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	43.71	Pk	32.1	-24.8	0	51.01	-	-	74	-22.99	53	350	V
2	* 2.484	46.24	Pk	32.1	-24.8	0	53.54	-	-	74	-20.46	53	350	V
3	* 2.484	33.88	RMS	32.1	-24.8	.27	41.45	54	-12.55	-	-	53	350	V
4	* 2.484	33.84	RMS	32.1	-24.8	.27	41.41	54	-12.59	-	-	53	350	V

AUTHORIZED BANDEDGE (CHANNEL 13)

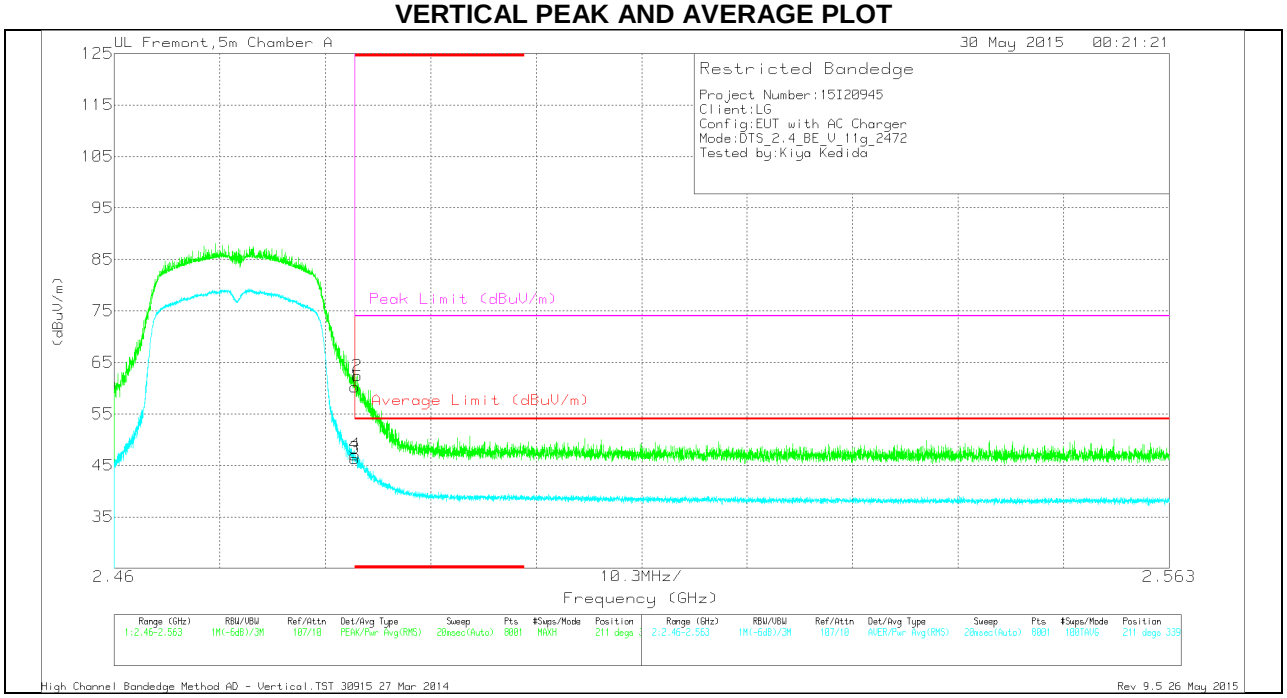
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	55.19	Pk	32.1	-24.8	0	62.49	-	-	74	-11.51	188	345	H
2	* 2.484	56.9	Pk	32.1	-24.8	0	64.2	-	-	74	-9.8	188	345	H
3	* 2.484	40.22	RMS	32.1	-24.8	.27	47.79	54	-6.21	-	-	188	345	H
4	* 2.484	41.82	RMS	32.1	-24.8	.27	49.39	54	-4.61	-	-	188	345	H

VERTICAL PEAK AND AVERAGE PLOT

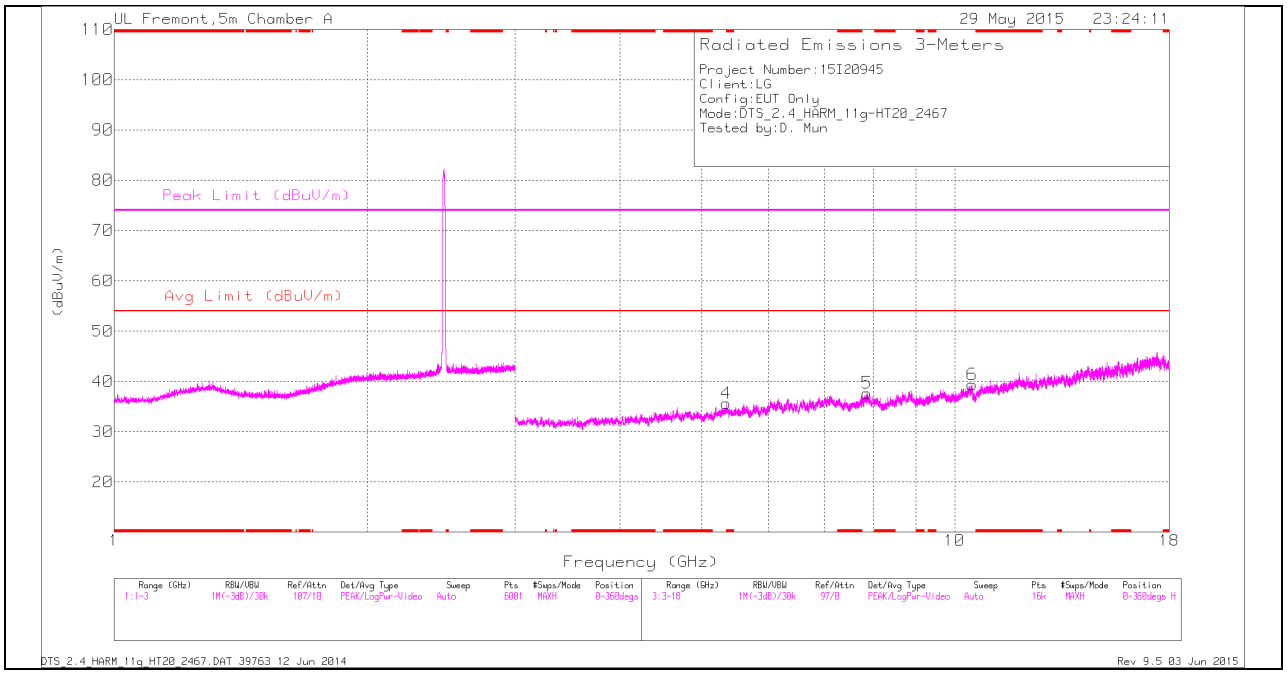


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	52.95	Pk	32.1	-24.8	0	60.25	-	-	74	-13.75	211	339	V
2	* 2.484	55.11	Pk	32.1	-24.8	0	62.41	-	-	74	-11.59	211	339	V
3	* 2.484	38.78	RMS	32.1	-24.8	.27	46.35	54	-7.65	-	-	211	339	V
4	* 2.484	39.5	RMS	32.1	-24.8	.27	47.07	54	-6.93	-	-	211	339	V

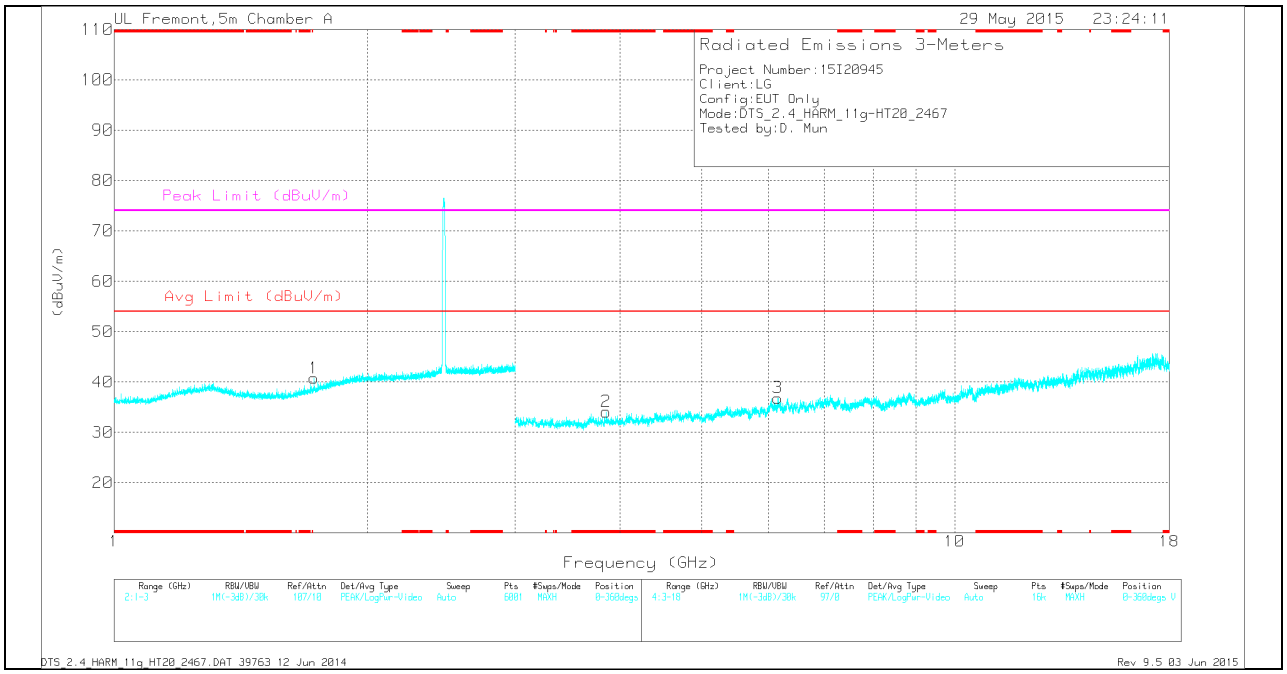
HARMONICS AND SPURIOUS EMISSIONS

CHANNEL 12 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.

CHANNEL 12 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.

CHANNEL 12 DATA

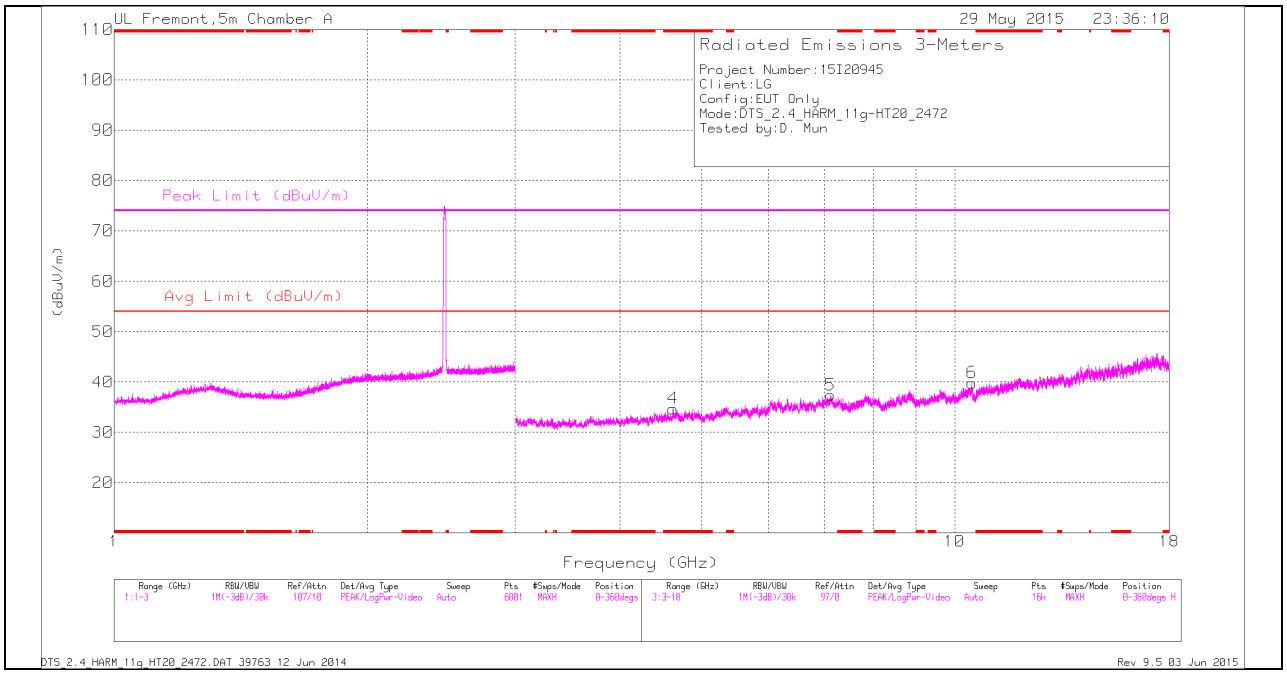
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 5.352	40.95	PK2	34.5	-29.9	0	45.55	-	-	74	-28.45	360	100	H
* 5.35	29.14	MAv1	34.5	-29.9	.27	34.01	54	-19.99	-	-	360	100	H
* 3.852	42.52	PK2	33.1	-30.9	0	44.72	-	-	74	-29.28	360	100	V
* 3.854	31.12	MAv1	33.1	-31	.27	33.49	54	-20.51	-	-	360	100	V
1.811	45.28	PK2	30.3	-23.4	0	52.18	-	-	74	-21.82	360	100	V
1.813	32.96	MAv1	30.3	-23.4	.27	40.13	54	-13.87	-	-	360	100	V
6.158	28.03	MAv1	35.3	-29.7	.27	33.9	54	-	-	-	360	201	V
6.159	39.41	PK2	35.3	-29.7	0	45.01	-	-	74	-28.99	360	201	V
7.865	37.26	PK2	35.8	-27.1	0	45.96	-	-	74	-28.04	360	100	H
7.865	25.89	MAv1	35.8	-27.1	.27	34.86	54	-19.14	-	-	360	100	H
10.492	34.57	PK2	37.5	-25.5	0	46.57	-	-	74	-27.43	360	100	H
10.493	23.67	MAv1	37.5	-25.6	.27	35.84	54	-18.16	-	-	360	100	H

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

PK2 - KDB558074 Method: Maximum Peak

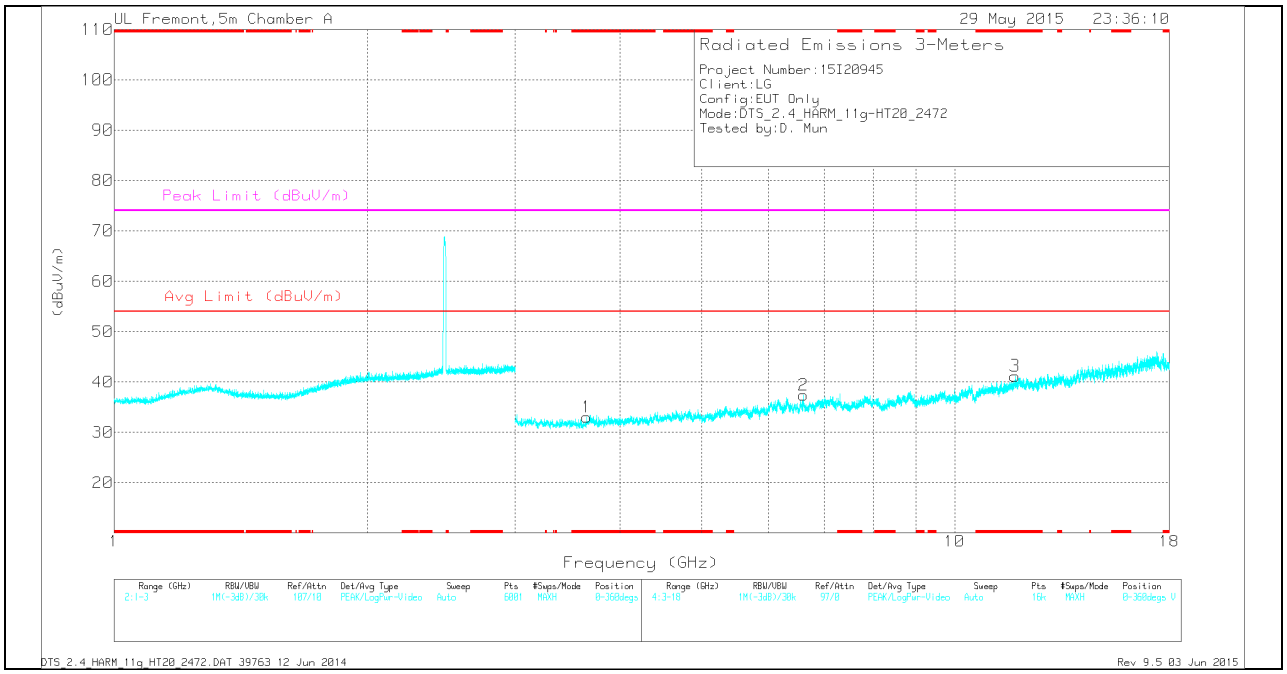
MAv1 - KDB558074 Option 1 Maximum RMS Average

CHANNEL 13 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.

CHANNEL 13 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.

CHANNEL 13 DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/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
* 4.626	40.78	PK2	33.9	-30.6	0	44.08	-	-	74	-29.92	360	100	H
* 4.625	29.61	MAv1	33.9	-30.6	.27	33.18	54	-20.82	-	-	360	100	H
* 3.65	42.38	PK2	32.9	-31.2	0	44.08	-	-	74	-29.92	360	201	V
* 3.647	31.21	MAv1	32.9	-31.3	.27	33.08	54	-20.92	-	-	360	201	V
* 11.795	34.13	PK2	39	-26.1	0	47.03	-	-	74	-26.97	360	201	V
* 11.794	23.21	MAv1	39	-26.1	.27	36.38	54	-17.62	-	-	360	201	V
6.61	38.11	PK2	35.6	-28.6	0	45.11	-	-	74	-28.89	360	100	V
6.61	27.01	MAv1	35.6	-28.6	.27	34.28	54	-19.72	-	-	360	100	V
7.12	26.73	MAv1	35.6	-28	.27	34.6	54	-19.4	-	-	360	201	H
7.121	37.6	PK2	35.6	-28	0	45.2	-	-	74	-28.8	360	201	H
10.477	34.85	PK2	37.4	-25.1	0	47.15	-	-	74	-26.85	360	201	H
10.478	23.79	MAv1	37.4	-25.2	.27	36.26	54	-17.74	-	-	360	201	H

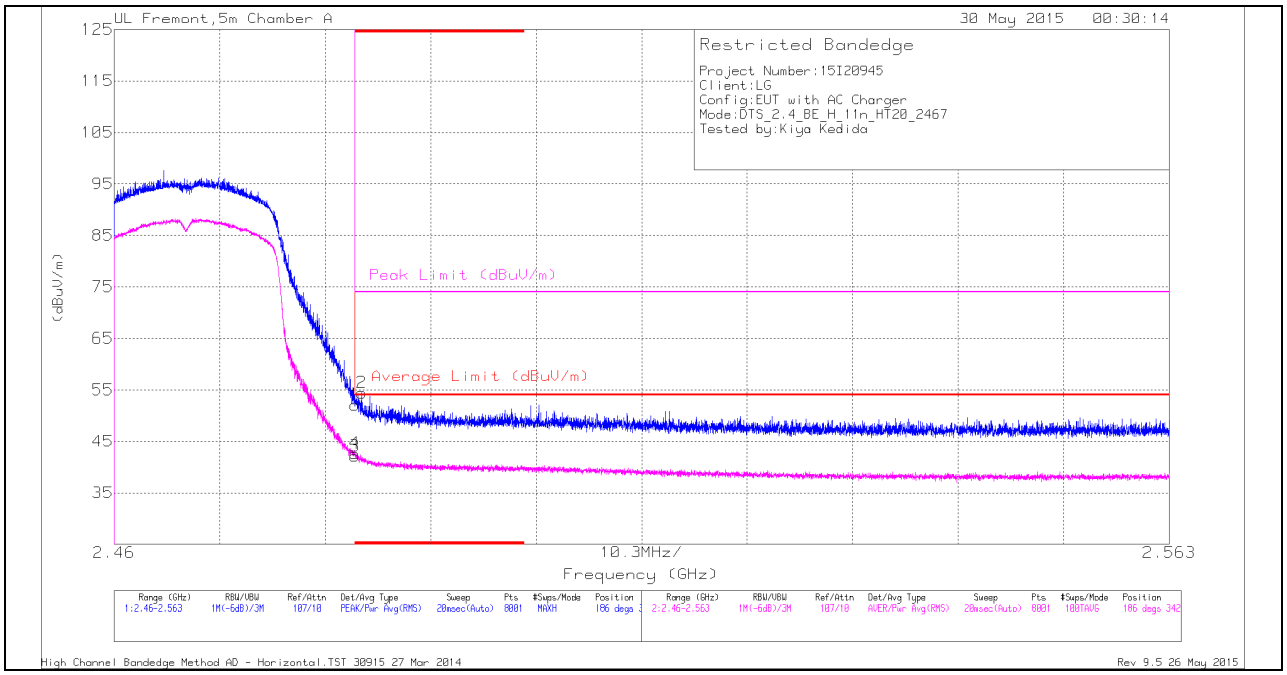
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

11.2.1. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND AUTHORIZED BANDEDGE (CHANNEL 12)

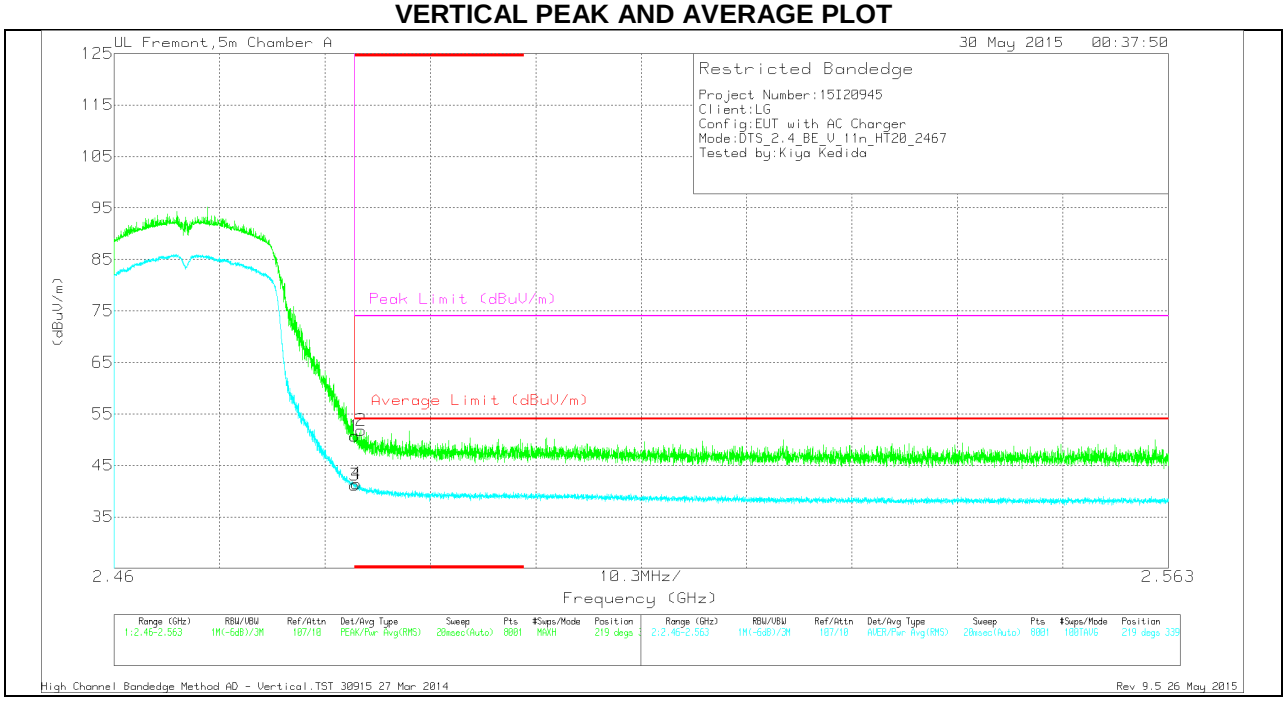
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	44.76	Pk	32.1	-24.8	0	52.06	-	-	74	-21.94	186	342	H
2	* 2.484	47.14	Pk	32.1	-24.8	0	54.44	-	-	74	-19.56	186	342	H
3	* 2.484	34.57	RMS	32.1	-24.8	.26	42.13	54	-11.87	-	-	186	342	H
4	* 2.484	35.1	RMS	32.1	-24.8	.26	42.66	54	-11.34	-	-	186	342	H

VERTICAL PEAK AND AVERAGE PLOT

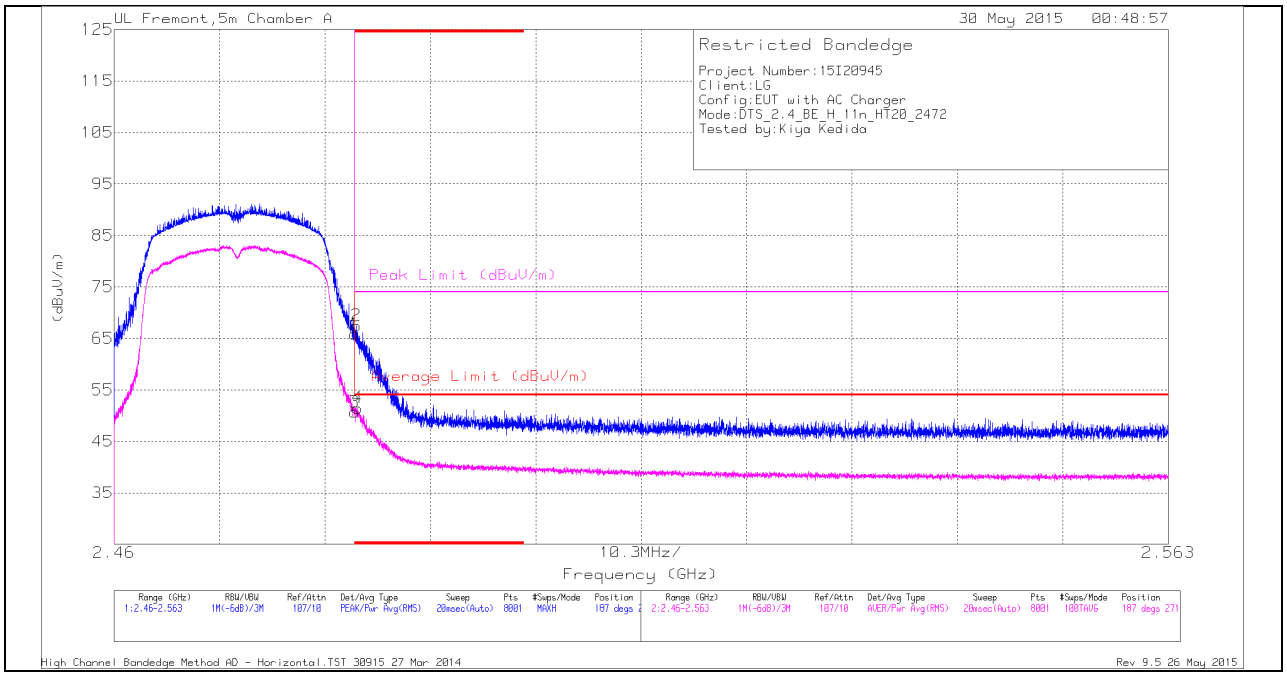


VERTICAL DATA

arker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	43.37	Pk	32.1	-24.8	0	50.67	-	-	74	-23.33	219	339	V
2	* 2.484	44.53	Pk	32.1	-24.8	0	51.83	-	-	74	-22.17	219	339	V
3	* 2.484	33.64	RMS	32.1	-24.8	.26	41.20	54	-12.78	-	-	219	339	V
4	* 2.484	33.87	RMS	32.1	-24.8	.26	41.43	54	-12.57	-	-	219	339	V

AUTHORIZED BANDEDGE (CHANNEL 13)

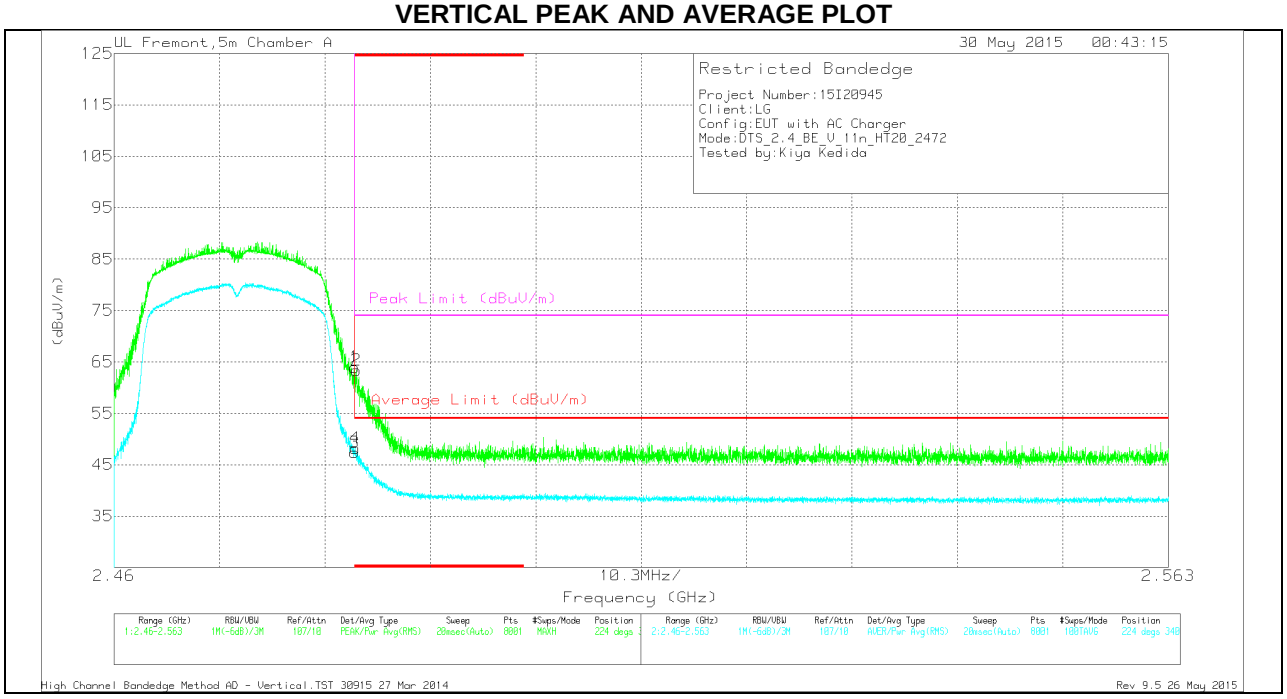
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	58.51	Pk	32.1	-24.8	0	65.81	-	-	74	-8.19	187	271	H
2	* 2.484	60.18	Pk	32.1	-24.8	0	67.48	-	-	74	-6.52	187	271	H
3	* 2.484	43.09	RMS	32.1	-24.8	.26	50.65	54	-3.35	-	-	187	271	H
4	* 2.484	43.91	RMS	32.1	-24.8	.26	51.47	54	-2.53	-	-	187	271	H

VERTICAL PEAK AND AVERAGE PLOT

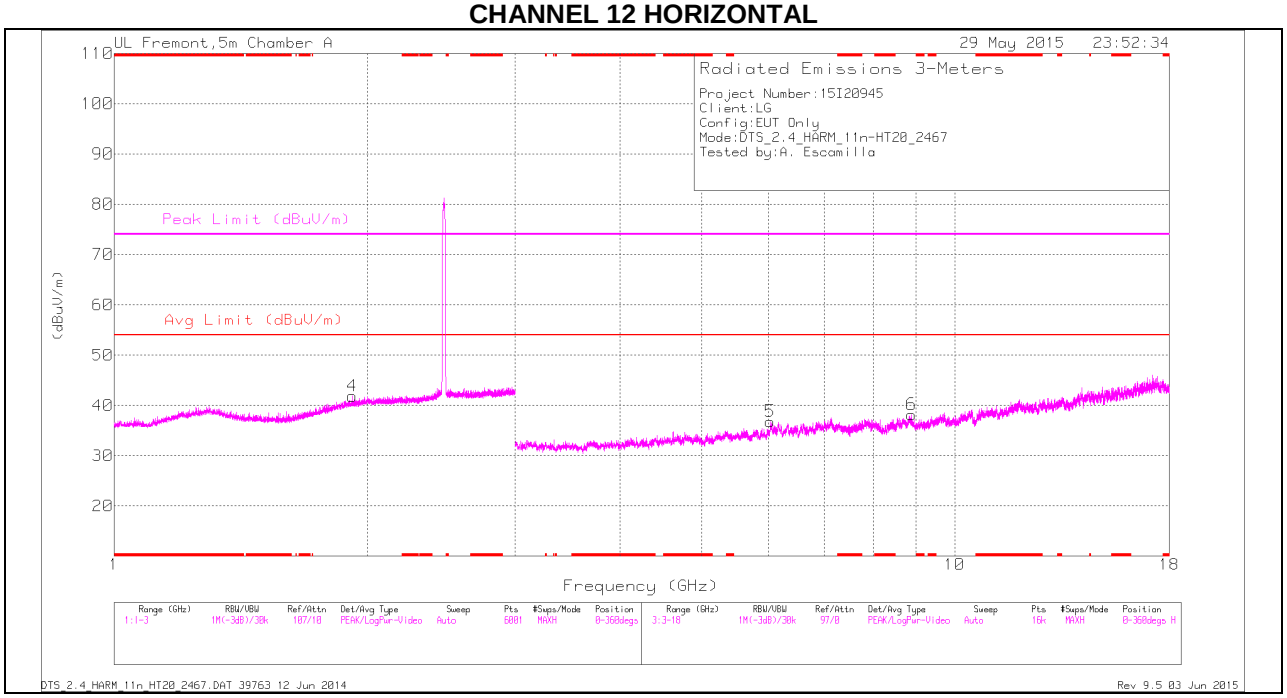


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/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	56.66	Pk	32.1	-24.8	0	63.96	-	-	74	-10.04	224	340	V
2	* 2.484	56.06	Pk	32.1	-24.8	0	63.36	-	-	74	-10.64	224	340	V
3	* 2.484	39.82	RMS	32.1	-24.8	.26	47.38	54	-6.62	-	-	224	340	V
4	* 2.484	40.63	RMS	32.1	-24.8	.26	48.19	54	-5.81	-	-	224	340	V

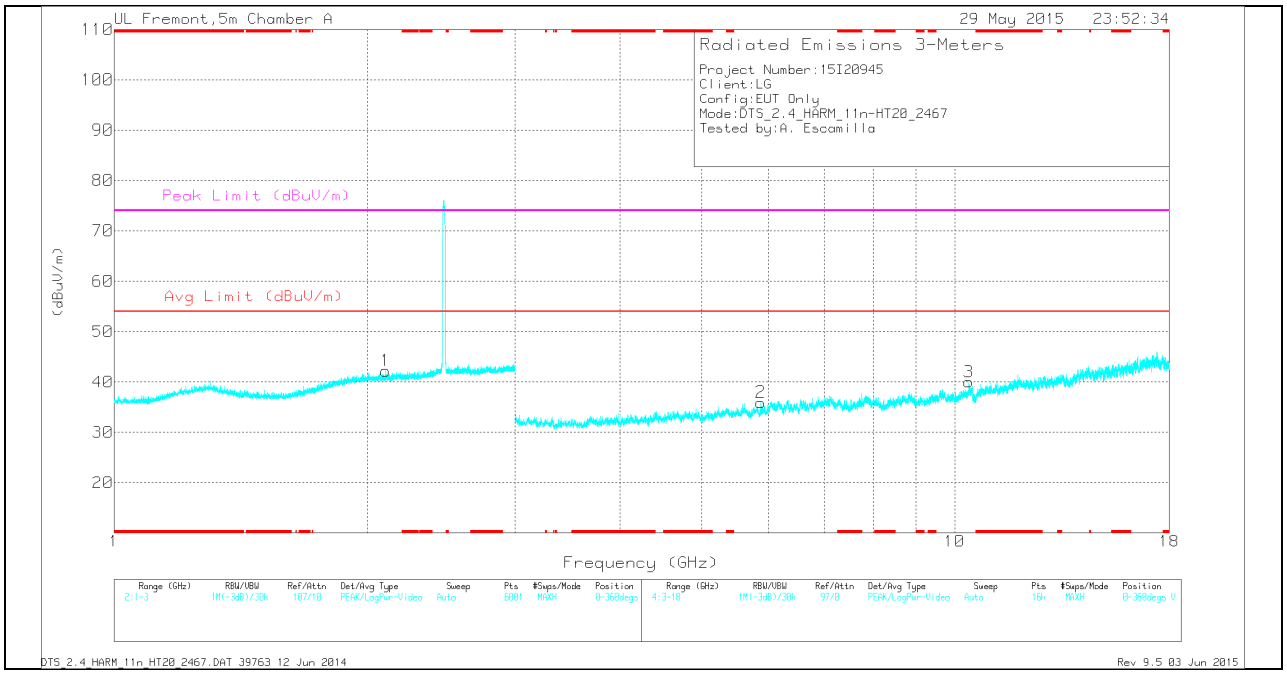
HARMONICS AND SPURIOUS EMISSIONS

CHANNEL 12 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.

CHANNEL 12 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.

CHANNEL 12 DATA

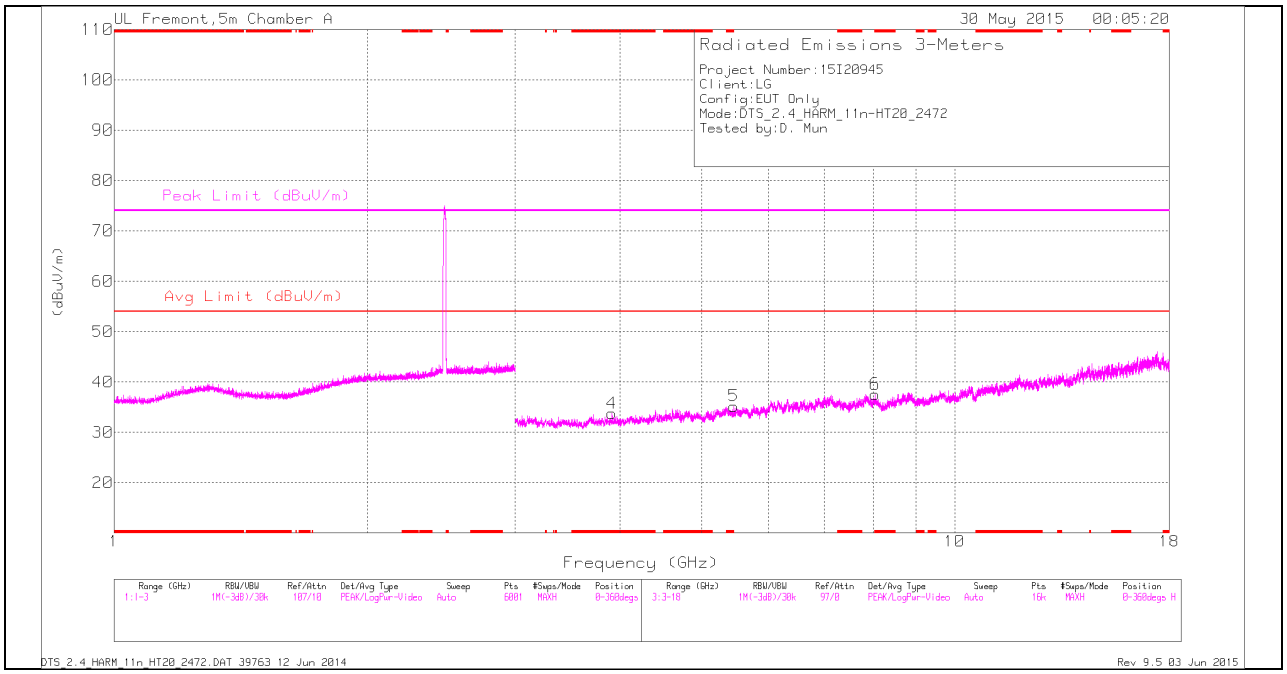
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.918	32.88	MAv1	31.2	-23.3	.26	41.04	54	-12.96	-	-	360	201	H
1.921	44.39	PK2	31.2	-23.2	0	52.39	-		74	-21.61	360	201	H
2.102	32.66	MAv1	31.5	-23	.26	41.42	54	-12.58	-	-	360	100	V
2.103	44.12	PK2	31.5	-23	0	52.62	-	-	74	-21.38	360	100	V
5.88	39.01	PK2	35	-29.8	0	44.21	-	-	74	-29.79	360	100	V
5.881	28.43	MAv1	35	-29.8	.26	33.89	54	-20.11	-	-	360	100	V
6.034	27.89	MAv1	35.2	-29.5	.26	33.85	54	-20.15	-	-	360	100	H
6.035	38.94	PK2	35.2	-29.5	0	44.64	-	-	74	-29.36	360	100	H
6.037	27.99	MAv1	35.2	-29.5	.26	33.95	54	-20.05	-	-	360	100	V
6.039	39.19	PK2	35.2	-29.3	0	45.09	-	-	74	-28.91	360	100	V
8.882	36.15	PK2	35.9	-26.4	0	45.65	-	-	74	-28.35	360	100	H
8.883	25.09	MAv1	35.9	-26.4	.26	34.85	54	-19.15	-	-	360	100	H

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

PK2 - KDB558074 Method: Maximum Peak

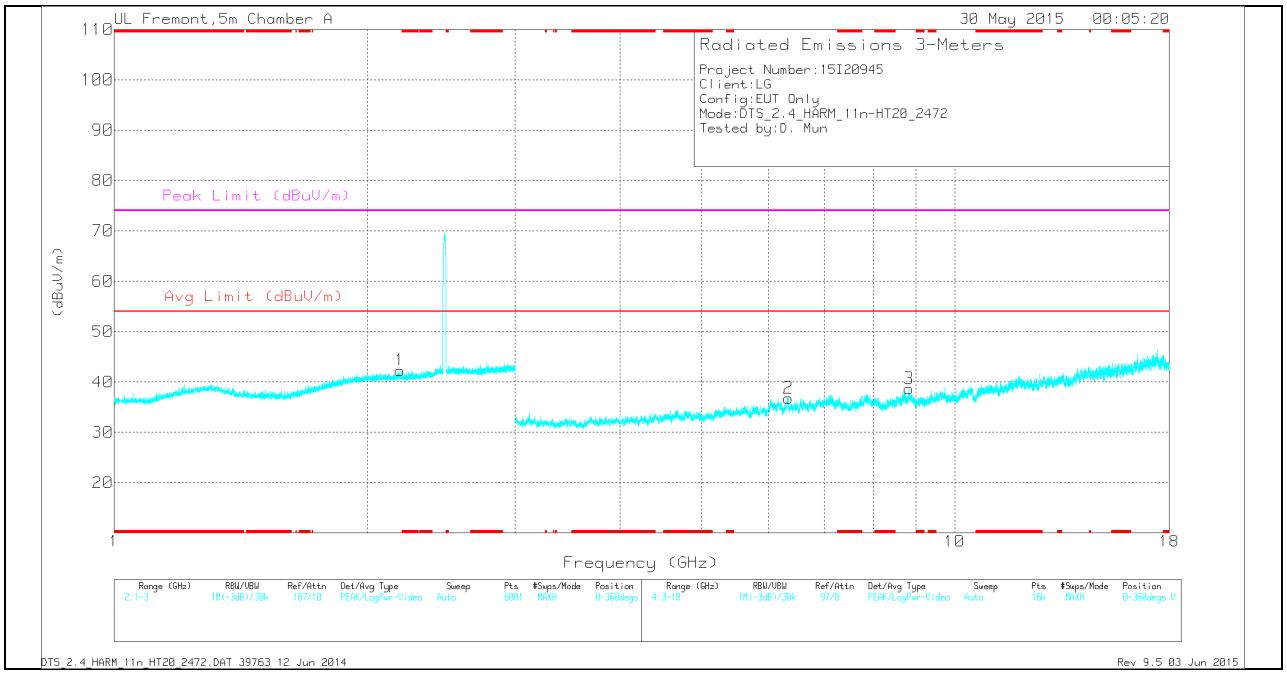
MAv1 - KDB558074 Option 1 Maximum RMS Average

CHANNEL 13 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.

CHANNEL 13 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.

CHANNEL 13 DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/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
* 3.909	42.24	PK2	33.2	-31.2	0	44.24	-	-	74	-29.76	360	100	H
* 3.911	30.9	MAv1	33.2	-31.2	0.26	33.16	54	-20.84	-	-	360	100	H
* 5.456	40.83	PK2	34.6	-31.1	0	44.33	-	0	74	-29.67	360	201	H
* 5.455	29.03	MAv1	34.6	-31.1	0.26	32.79	54	-21.21	-	-	360	201	H
* 8.04	37.22	PK2	35.7	-28.1	0	44.82	-	0	74	-29.18	360	100	H
* 8.038	25.75	MAv1	35.7	-28.1	0.26	33.61	54	-20.39	-	-	360	100	H
2.189	32.86	MAv1	31.4	-23	0.26	41.52	54	-12.48	-	-	360	201	V
2.191	44.52	PK2	31.4	-23	0	52.92	-	0	74	-21.08	360	201	V
6.037	27.99	MAv1	35.2	-29.5	0.26	33.95	54	-20.05	-	-	360	100	V
6.039	39.19	PK2	35.2	-29.3	0	45.09	-	0	74	-28.91	360	100	V
6.342	38.52	PK2	35.4	-29	0	44.92	-	0	74	-29.08	360	201	V
6.344	27.41	MAv1	35.4	-28.9	0.26	34.17	54	-19.83	-	-	360	201	V
8.827	35.35	PK2	35.9	-26.5	0	44.75	-	0	74	-29.25	360	201	V
8.829	24.46	MAv1	35.9	-26.5	0.26	34.12	54	-19.88	-	-	360	201	V

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

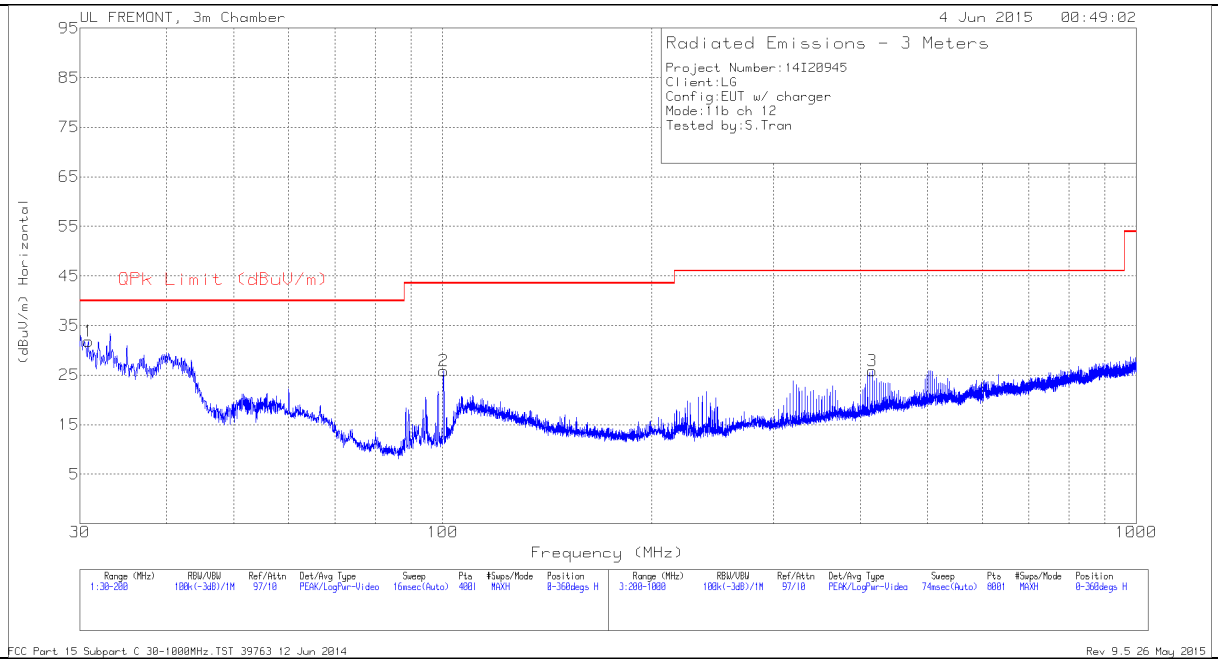
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

11.3. TRANSMITTER BELOW 1 GHz

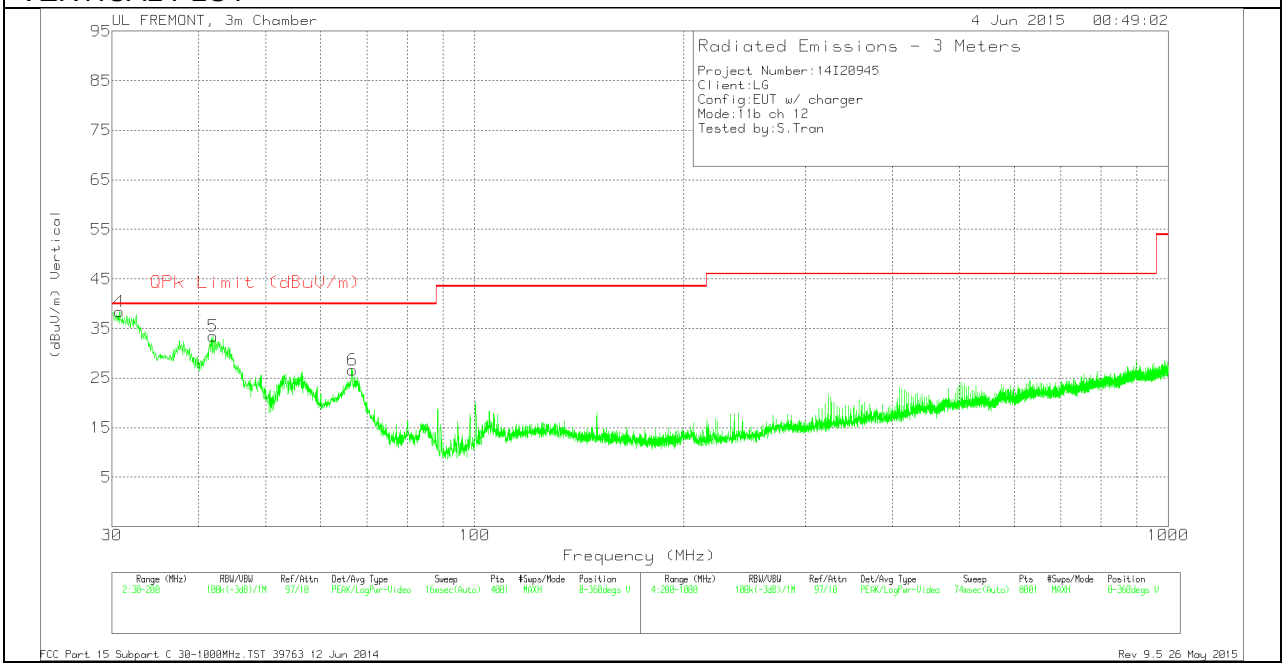
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

HORIZONTAL PLOT



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

VERTICAL PLOT



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
4	30.765	44.48	Pk	21.1	-27.2	38.38	40	-1.62	0-360	100	V
1	30.85	38.03	Pk	21	-27.2	31.83	40	-8.17	0-360	300	H
5	41.9425	47.79	Pk	12.8	-27.1	33.49	40	-6.51	0-360	100	V
6	66.635	45.22	Pk	8.1	-26.7	26.62	40	-13.38	0-360	100	V
2	100.295	42.39	Pk	9.8	-26.3	25.89	43.52	-17.63	0-360	300	H
3	416	34.92	Pk	15.7	-24.8	25.82	46.02	-20.2	0-360	200	H

Pk - Peak detector

Radiated Emissions

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
30.7871	39.57	Qp	21.1	-27.2	33.47	40	-6.53	1	100	V
30.7871	30.05	Av	21.1	-27.2	23.95	-	-	1	100	V

Qp - Quasi-Peak detector

Av - Average detection

12. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

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

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

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

Refer to original report FCC ID: ZNFW110, report number 14U18426-E2.