FCC CFR47 PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

CDMA/ LTE Phone + Bluetooth, and DTS b/g/n

MODEL NUMBER: LG-VS810PP, VS810PP, LGVS810PP

FCC ID: ZNFVS810PP

REPORT NUMBER: 14U18508-E4

ISSUE DATE: AUGUST 26, 2014

Prepared for
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	08/26/14	Initial Issue	D. Coronia

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1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: **CDMA/LTE Phone + Bluetooth, and DTS b/g/n.**

MODEL: **LG-LS660, LGLS660, LS660**

SERIAL NUMBER: **18 (Conducted), 22 (Radiated)**

DATE TESTED: **AUGUST 8-16, 2014**

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

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

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

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.4-2009.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
☒ Chamber A	☐ Chamber D
☐ Chamber B	☐ Chamber E
☐ Chamber C	☐ Chamber F
	☐ Chamber G
	☒ Chamber H

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 CDMA/LTE Phone + Bluetooth, DTS b/g/n.

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)
2412 - 2462	802.11b	15.1	32.36
2412 - 2462	802.11g	11.3	13.49
2412 - 2462	802.11n HT20	10.4	10.96

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of 0.12 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 Y orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Y 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	VS-810PP	RA481001374	N/A
Headset	LG	VS-810PP	N/A	N/A

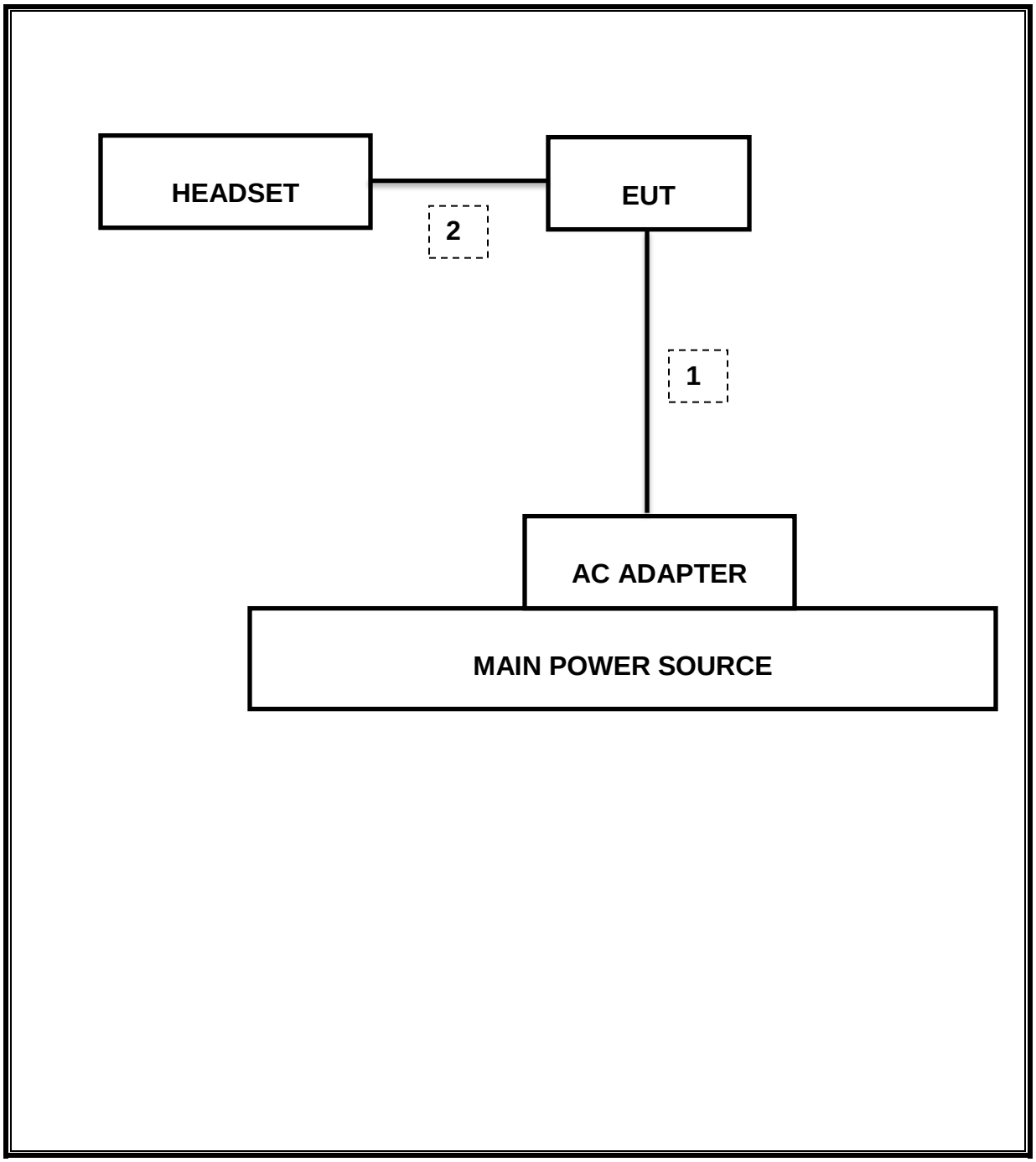
I/O CABLES

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

TEST SETUP

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

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	12/20/14
Spectrum Analyzer,9KHz-40GHz	HP	8564E	C00986	04/01/15
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	1000741	08/04/15
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/08/15
Power Meter	Agilent / HP	N1911A	C00963	12/13/14
Wide band Power Sensor	Agilent / HP	N1921A	C00964	12/13/14
Antenna, Horn, 1-18 GHz	ETS	3117	C01022	02/21/15
Antenna, Horn,18- 26 GHz	ARA	MWH-1826/B	C00946	11/12/14
Antenna, Horn, 26-40 GHz	ARA	MWH-2640	F00194	05/14/15
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	T243	03/06/15
RF Preamplifier, 100KHz -> 1300MHz	HP	TBD	C00825	06/01/15
RF Preamplifier, 1GHz - 18GHz	Miteq	NSP4000-SP2	924343	03/23/15
RF Preamplifier, 1GHz - 26.5GHz	HP	8449B	F00167	03/25/15
AC Power Supply, 2,500VA 45-500Hz	Elgar-Ametek	CW2501M	F00013	CNR
RF Preamplifier, 1GHz - 40GHz	Miteq	NSP4000-SP2	C00990	08/20/14
Attenuator / Switch driver	HP	11713A	F00204	CNR
Low Pass Filter 3GHz	Micro-Tronics	LPS17541	F00219	05/23/15
High Pass Filter 5GHz	Micro-Tronics	HPS17542	F00222	05/22/15
High Pass Filter 6GHz	Micro-Tronics	HPM17543	F00224	05/22/15

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. SUMMARY TABLE

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.247 (a)(2)	RSS-210 A8.2(a)	Occupied Band width (6dB)	>500KHz	Conducted	Pass	17.66MHz
2.1051, 15.247 (d)	RSS-210 A8.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	-55.65dBm
15.247	RSS-210 A8.4	TX conducted output power	<30dBm		Pass	15.10dBm
15.247	RSS-210 A8.2	PSD	<8dBm		Pass	-14.64dBm
15.207 (a)	RSS-GEN 7.2.2	AC Power Line conducted emissions	Section 10	Radiated	Pass	41.77dBuV
15.205, 15.209	RSS-210 Clause 2.6, RSS-210 Clause 6	Radiated Spurious Emission	< 54dBuV/m		Pass	48.96dBuV/m

9. ANTENNA PORT TEST RESULTS

9.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

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

TEST PROCEDURE

Reference to KDB 558074 D01 DTS Meas Guidance v03r01: 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

9.1.1. 802.11b MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	7.60	0.5
Mid	2437	8.02	0.5
High	2462	8.04	0.5
Worst		7.60	

9.1.2. 802.11g MODE IN THE 2.4 GHz BAND

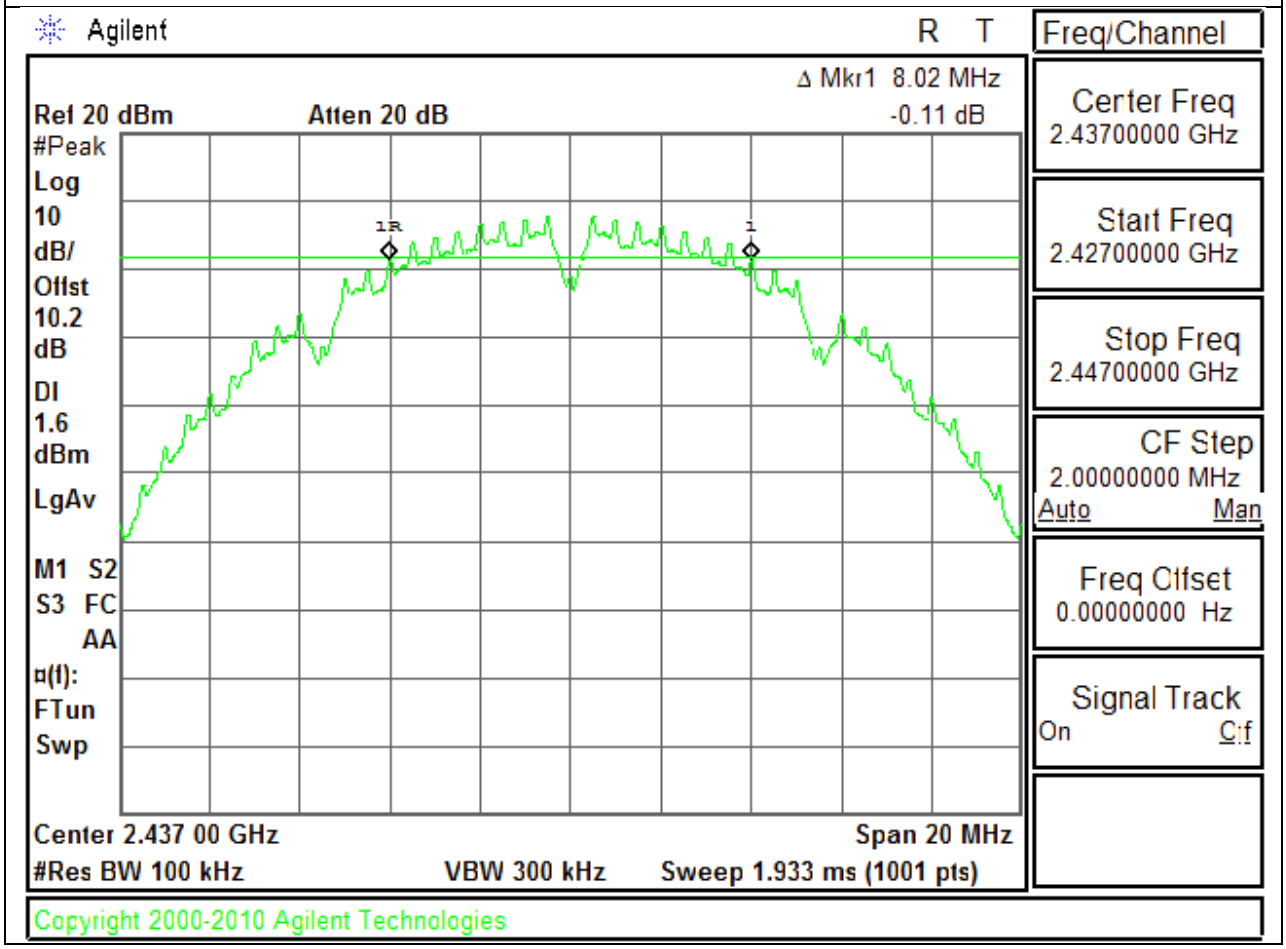
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	16.50	0.5
Mid	2437	16.46	0.5
High	2462	16.51	0.5
Worst		16.46	

9.1.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	17.66	0.5
Mid	2437	17.75	0.5
High	2462	17.66	0.5
Worst		17.66	

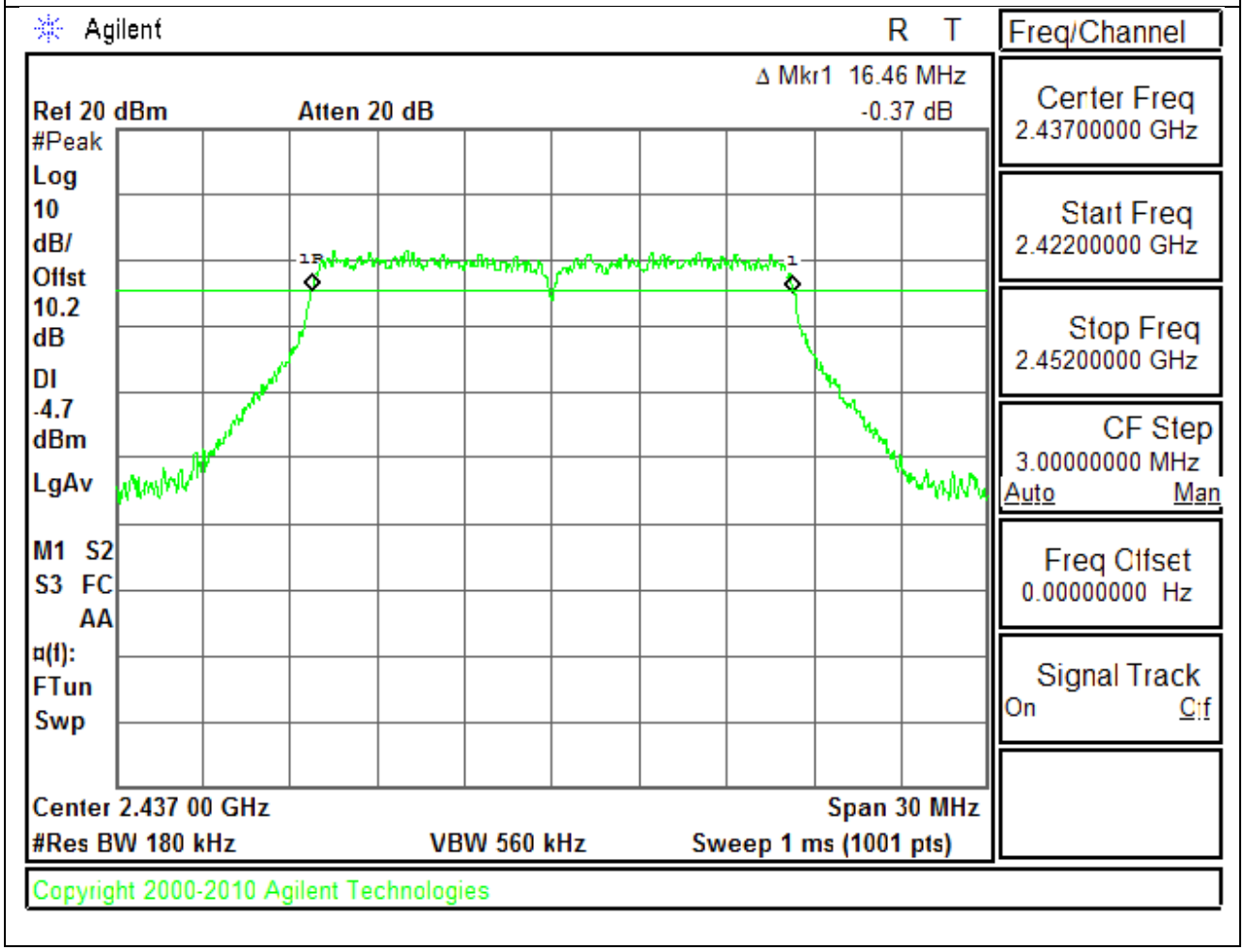
802.11b 6 dB BANDWIDTH

6 dB BANDWIDTH MID CH



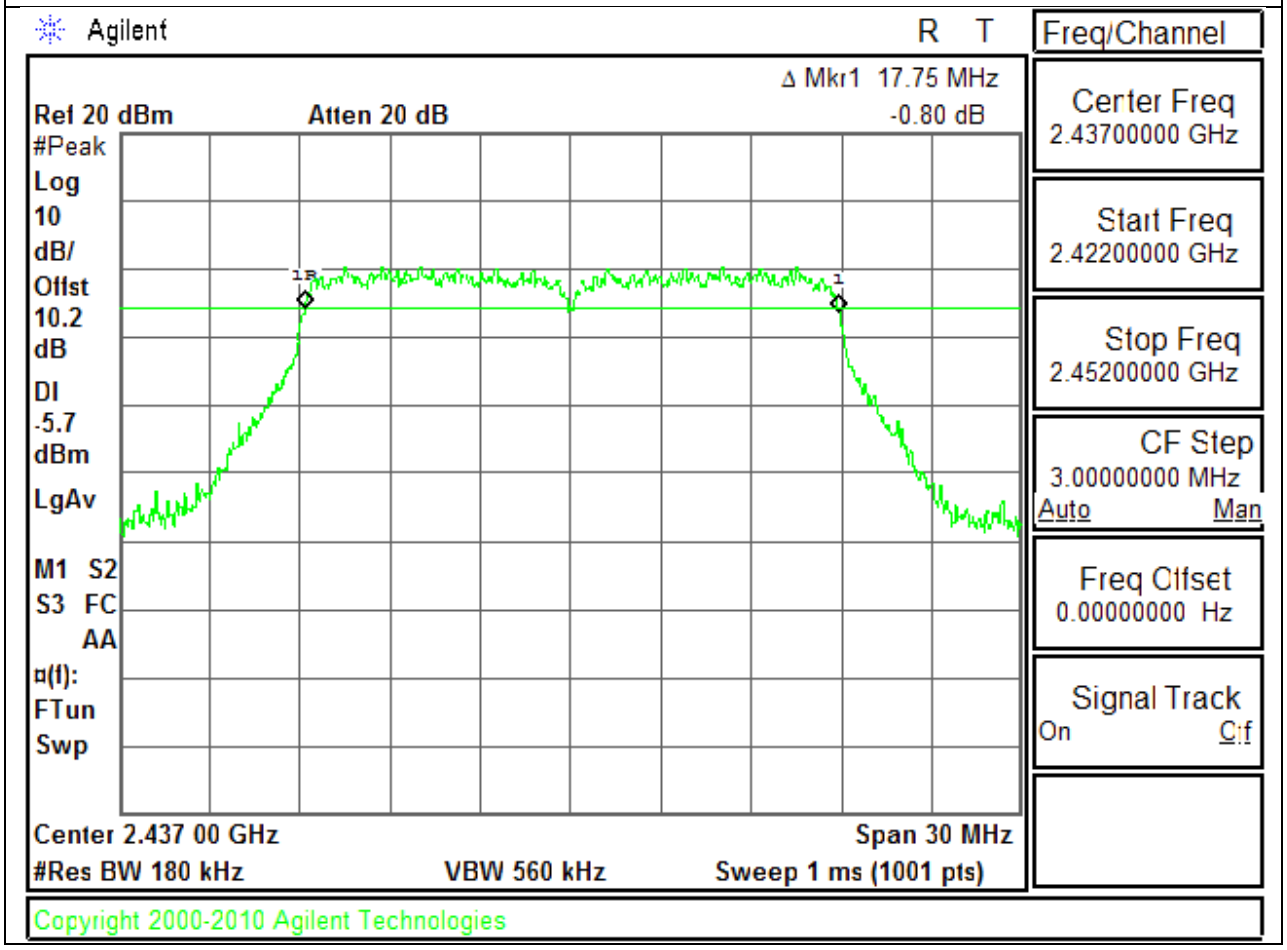
802.11g 6 dB BANDWIDTH

6 dB BANDWIDTH MID CH



802.11n 6 dB BANDWIDTH

6 dB BANDWIDTH MID CH



9.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

9.2.1. 802.11b MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	12.30
Mid	2437	12.22
High	2462	12.28
Worst		12.30

9.2.2. 802.11g MODE IN THE 2.4 GHz BAND

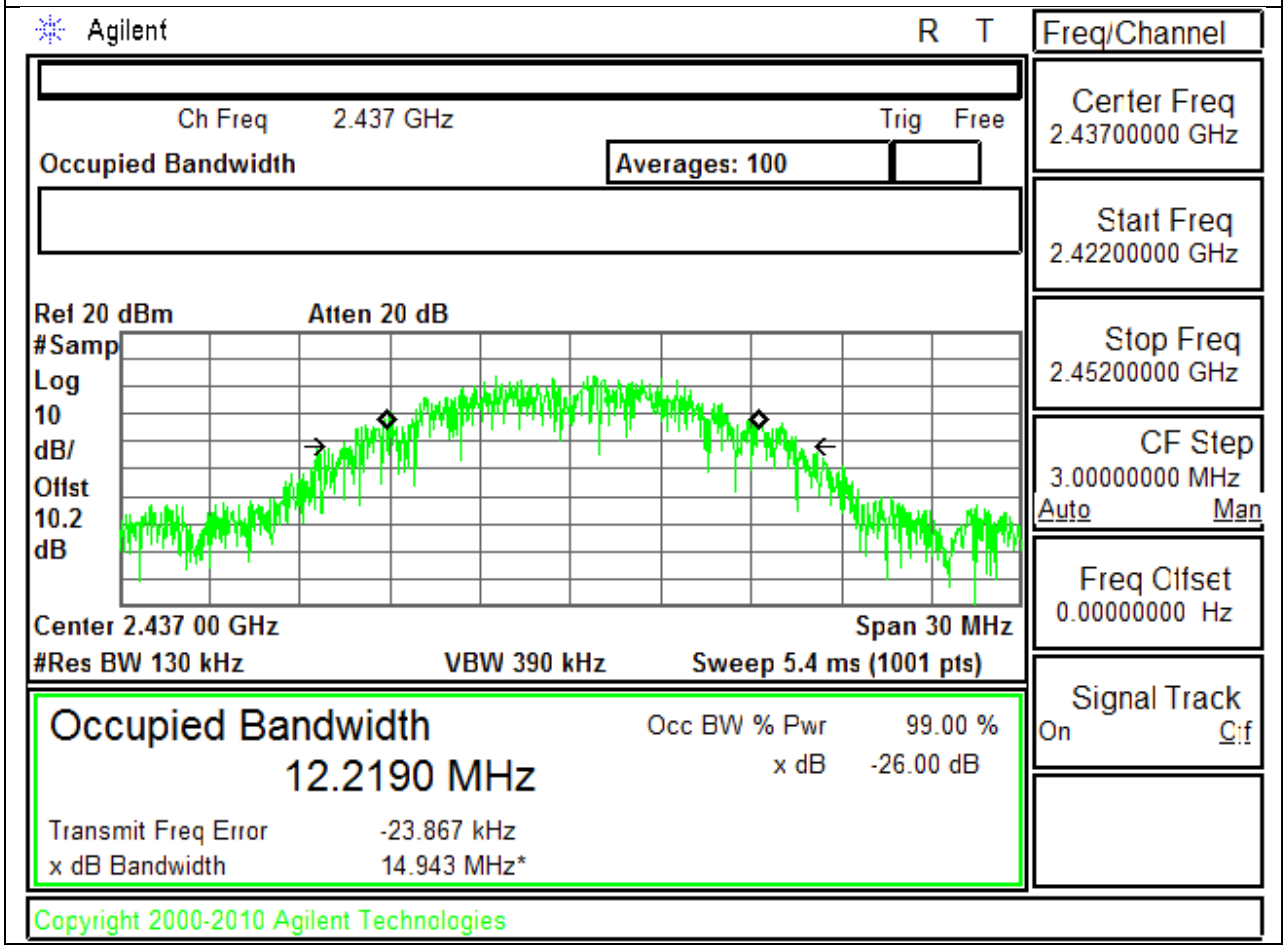
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.40
Mid	2437	16.38
High	2462	16.43
Worst		16.43

9.2.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.60
Mid	2437	17.60
High	2462	17.56
Worst		17.60

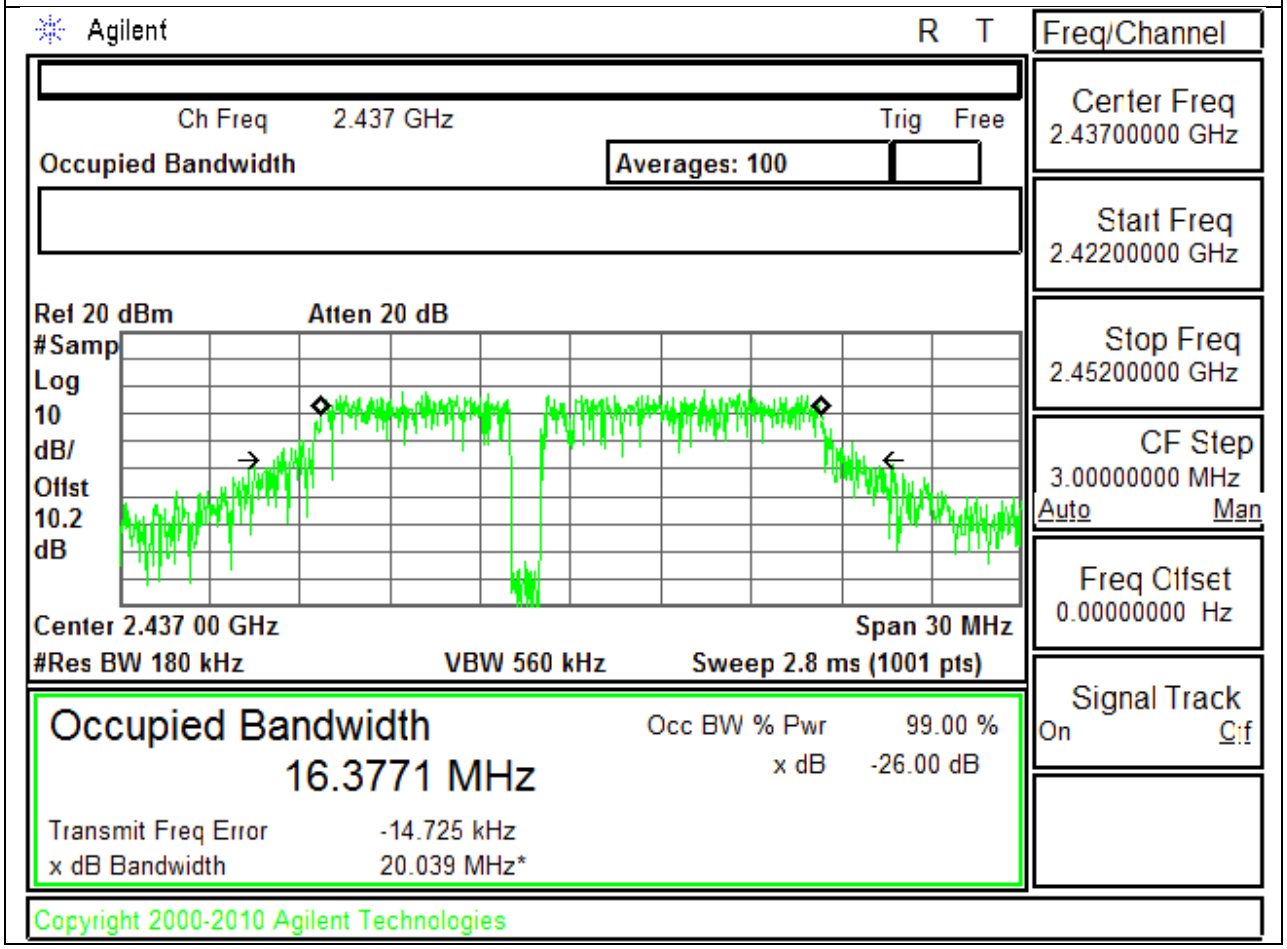
802.11b 99% BANDWIDTH

99% BANDWIDTH MID CH



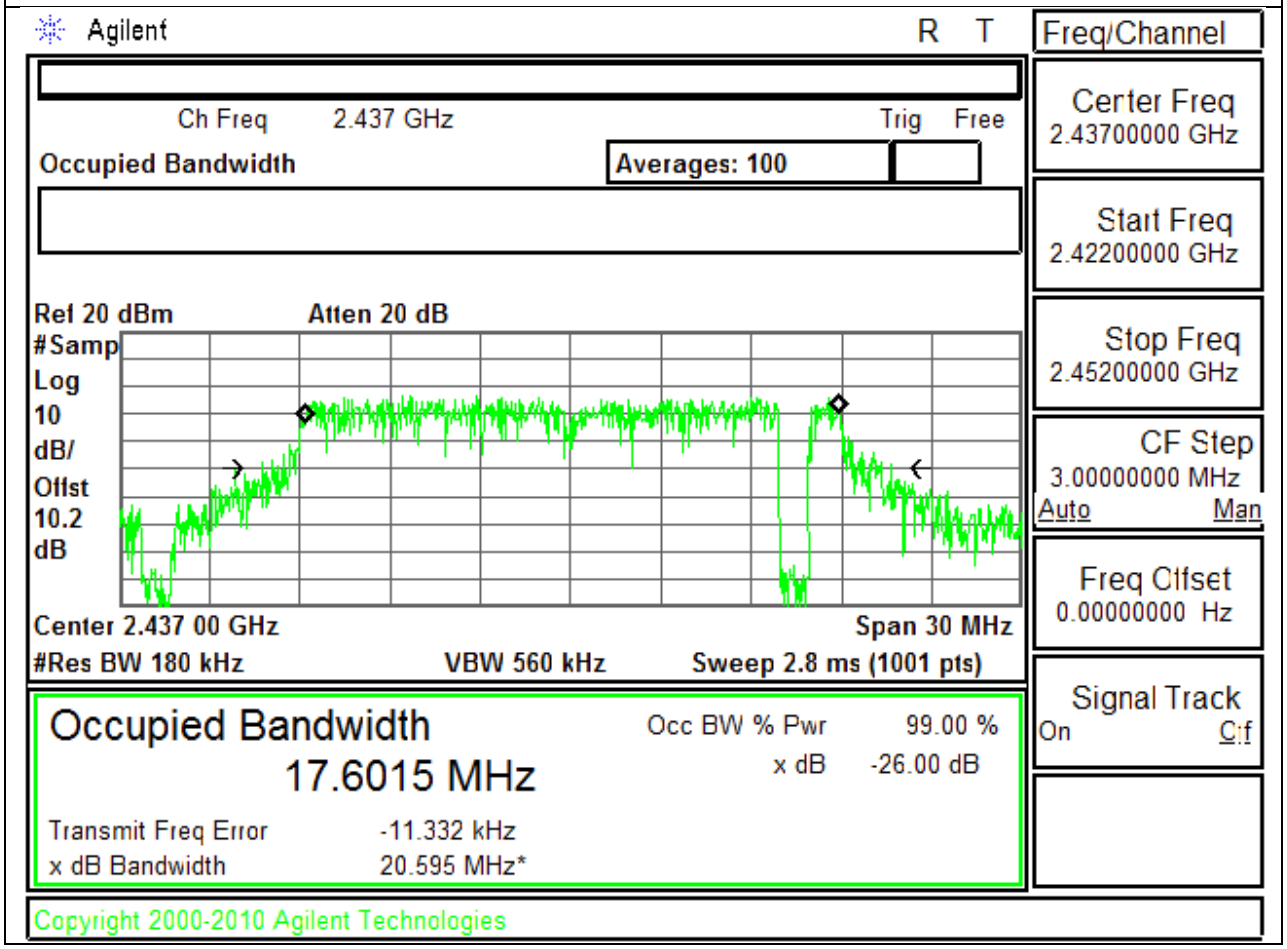
802.11g 99% BANDWIDTH

99% BANDWIDTH MID CH



802.11n 99% BANDWIDTH

99% BANDWIDTH MID CH



9.3. OUTPUT POWER

LIMITS

FCC §15.247

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

DIRECTIONAL ANTENNA GAIN

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

TEST PROCEDURE

KDB 558074 D01 DTS Meas Guidance v03r02: Measurement Procedure AVGPM-G is used for power.

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 0.2 dB (including 10 dB pad and 0.2 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

9.3.1. 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	2412	0.12	30.00	30	36	30.00
Mid	2437	0.12	30.00	30	36	30.00
High	2462	0.12	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	14.90	14.90	30.00	-15.10
Mid	2437	14.80	14.80	30.00	-15.20
High	2462	15.10	15.10	30.00	-14.90
Worst			15.10		

9.3.2. 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	2412	0.12	30.00	30	36	30.00
Mid	2437	0.12	30.00	30	36	30.00
High	2462	0.12	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	11.30	11.30	30.00	-18.70
Mid	2437	11.20	11.20	30.00	-18.80
High	2462	11.30	11.30	30.00	-18.70
Worst			11.30		

9.3.3. 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	2412	0.12	30.00	30	36	30.00
Mid	2437	0.12	30.00	30	36	30.00
High	2462	0.12	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	10.10	10.10	30.00	-19.90
Mid	2437	10.40	10.40	30.00	-19.60
High	2462	10.40	10.40	30.00	-19.60
Worst			10.40		

9.4. PSD

LIMITS

FCC §15.247

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

RESULTS

9.4.1. 802.11b MODE IN THE 2.4 GHz BAND

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-14.64	8.0	-22.6
Mid	2437	-14.68	8.0	-22.7
High	2462	-14.69	8.0	-22.7

9.4.2. 802.11g MODE IN THE 2.4 GHz BAND

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-21.59	8.0	-29.6
Mid	2437	-21.81	8.0	-29.8
High	2462	-21.44	8.0	-29.4

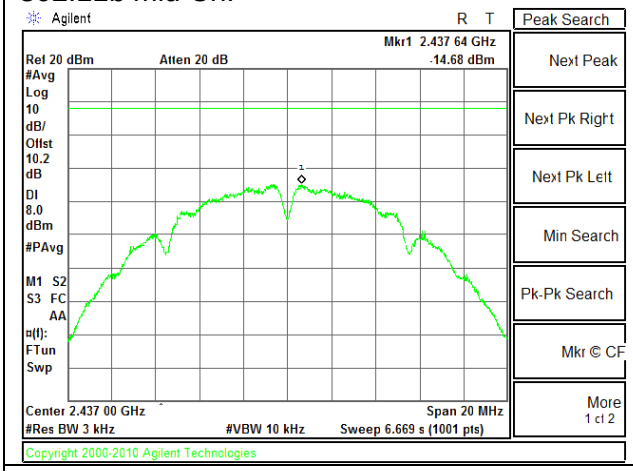
9.4.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

PSD Results

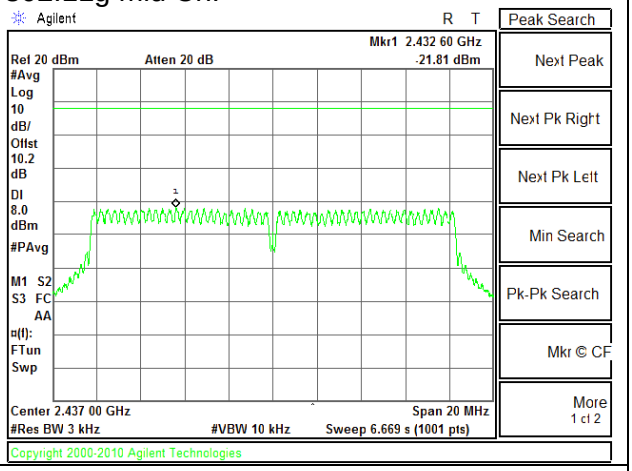
Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-23.05	8.0	-31.1
Mid	2437	-22.83	8.0	-30.8
High	2462	-22.53	8.0	-30.5

802.11b PSD

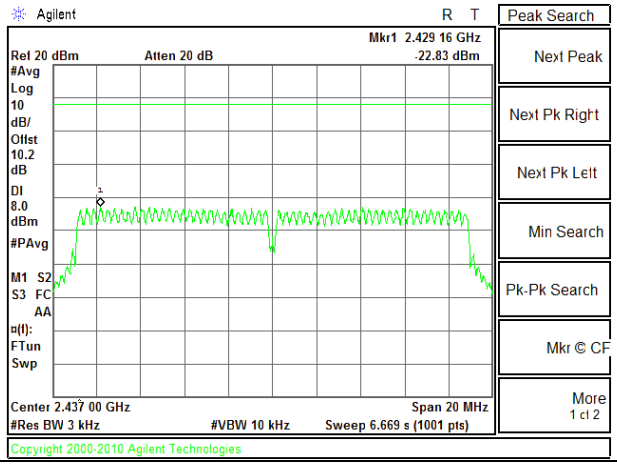
802.11b mid Ch.



802.11g mid Ch.



802.11n HT20 mid Ch.



9.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

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

TEST PROCEDURE

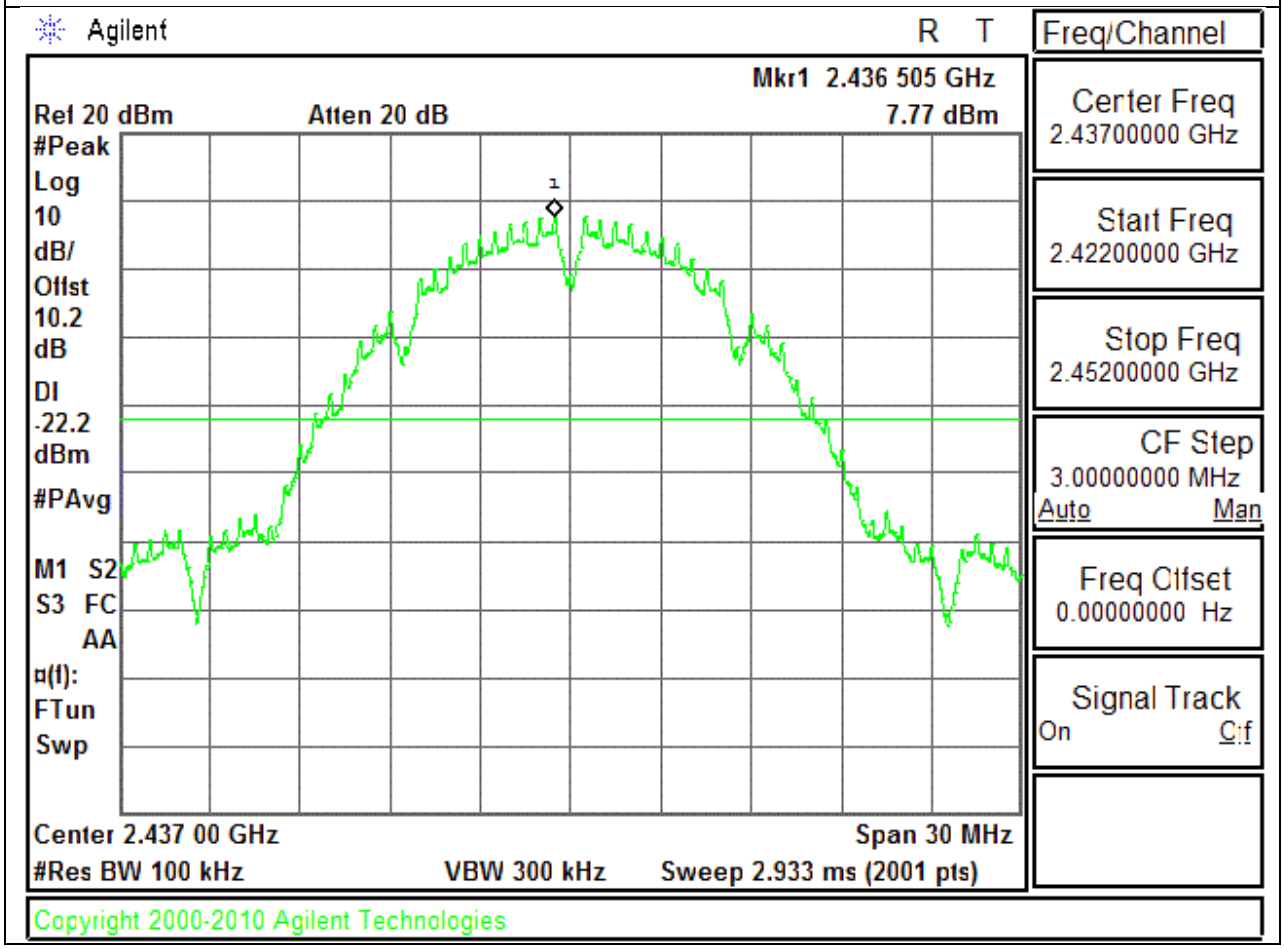
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS

9.5.1. 802.11b MODE IN THE 2.4 GHz BAND

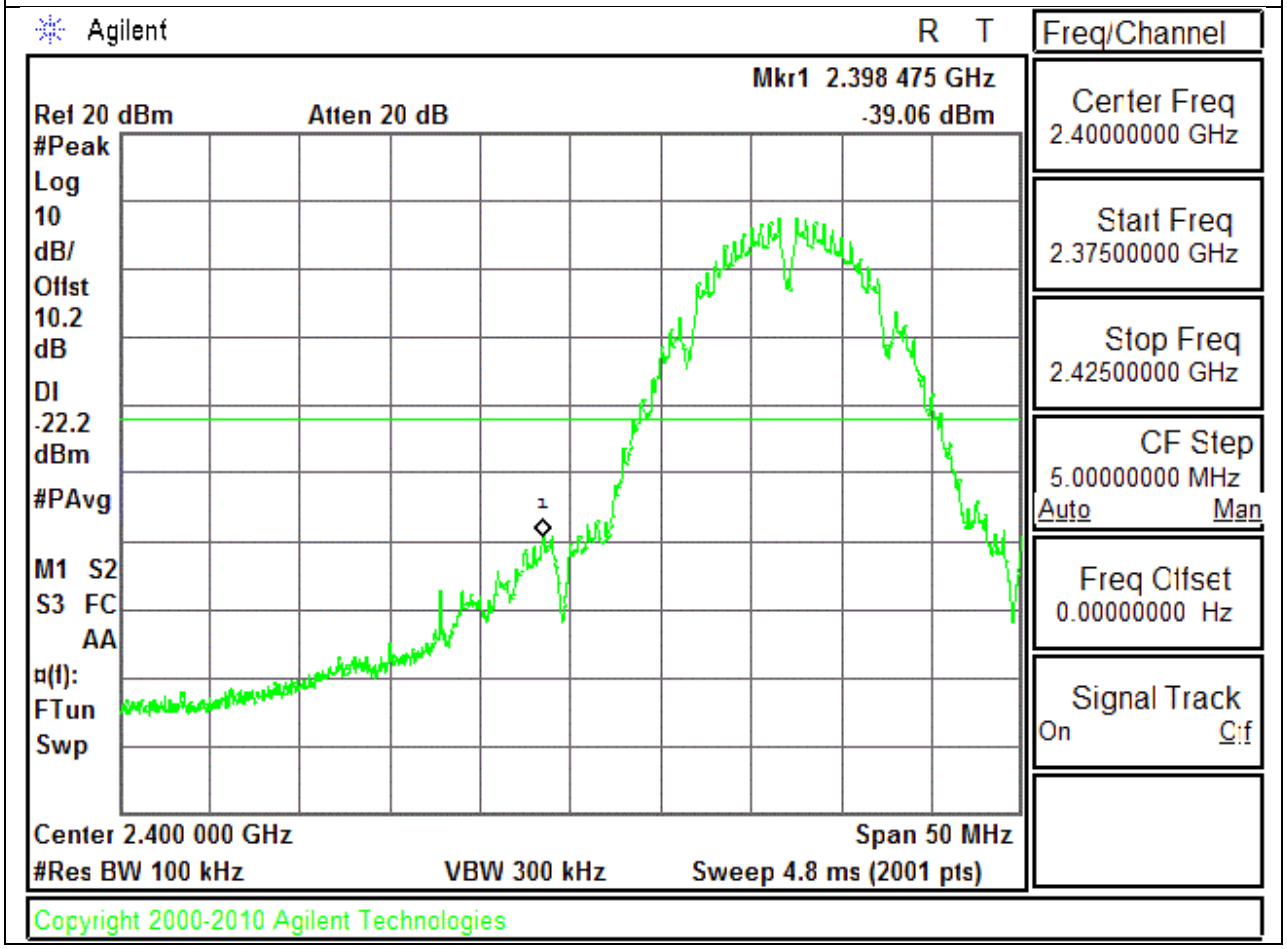
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



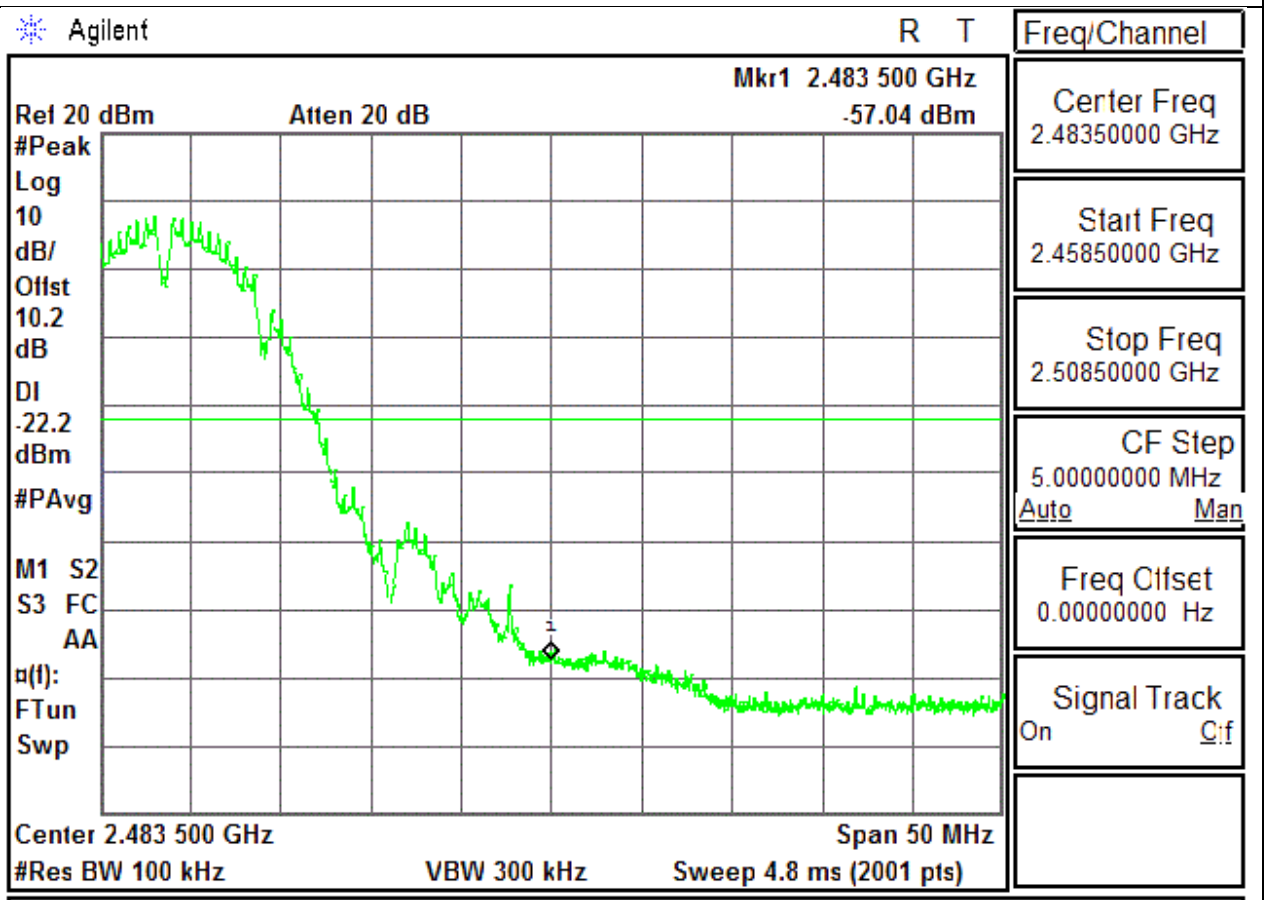
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



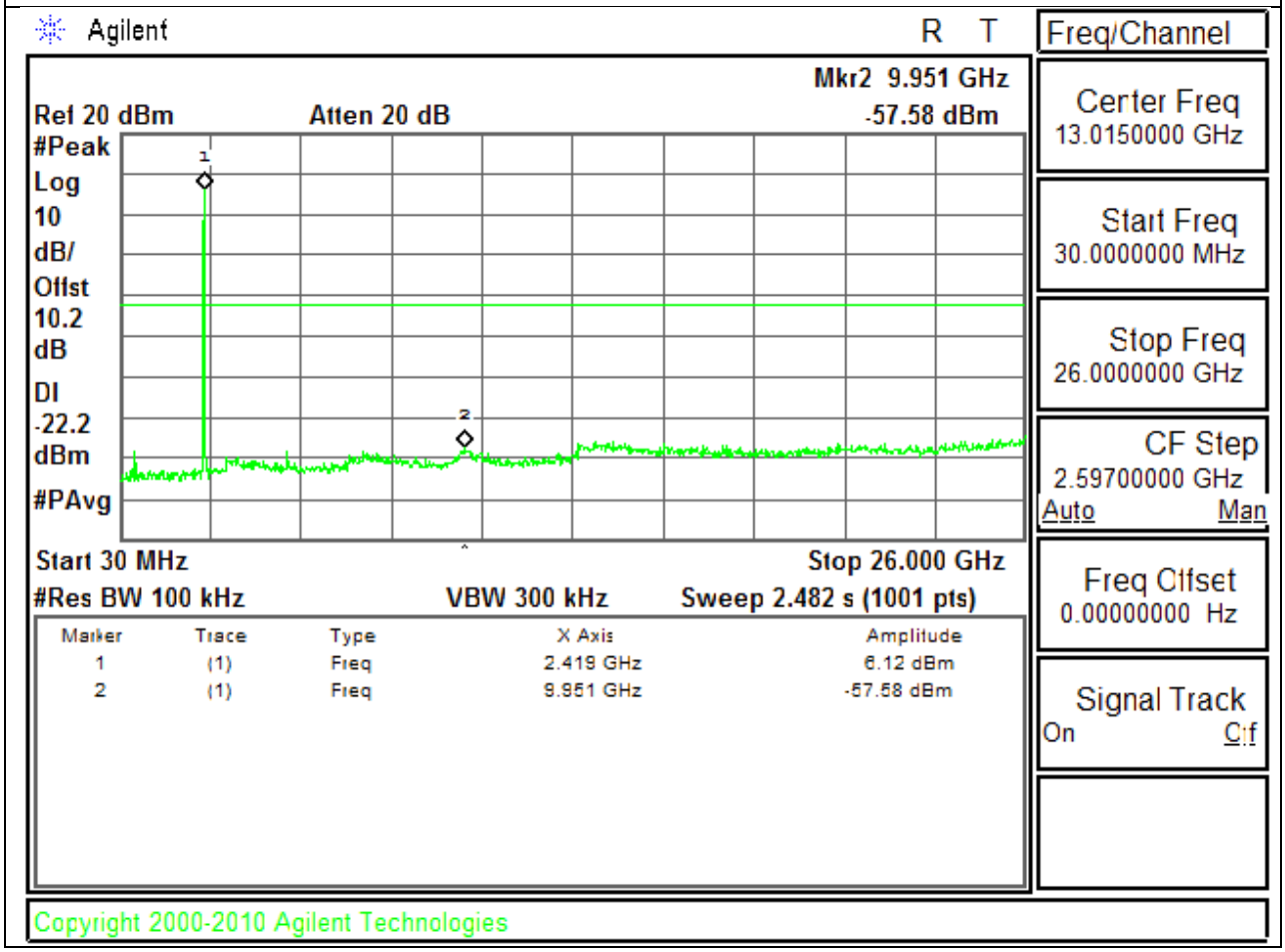
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

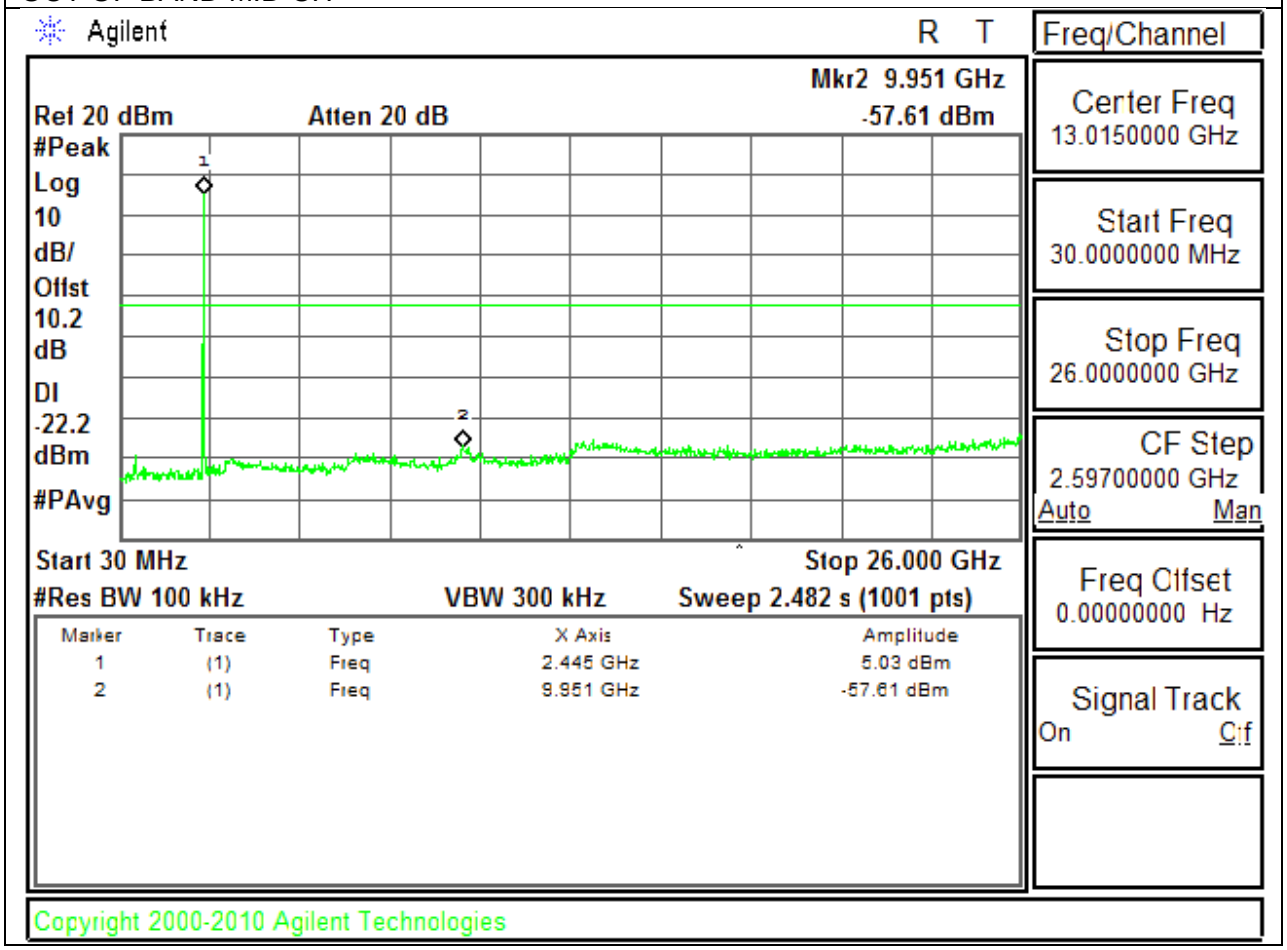


OUT-OF-BAND EMISSIONS

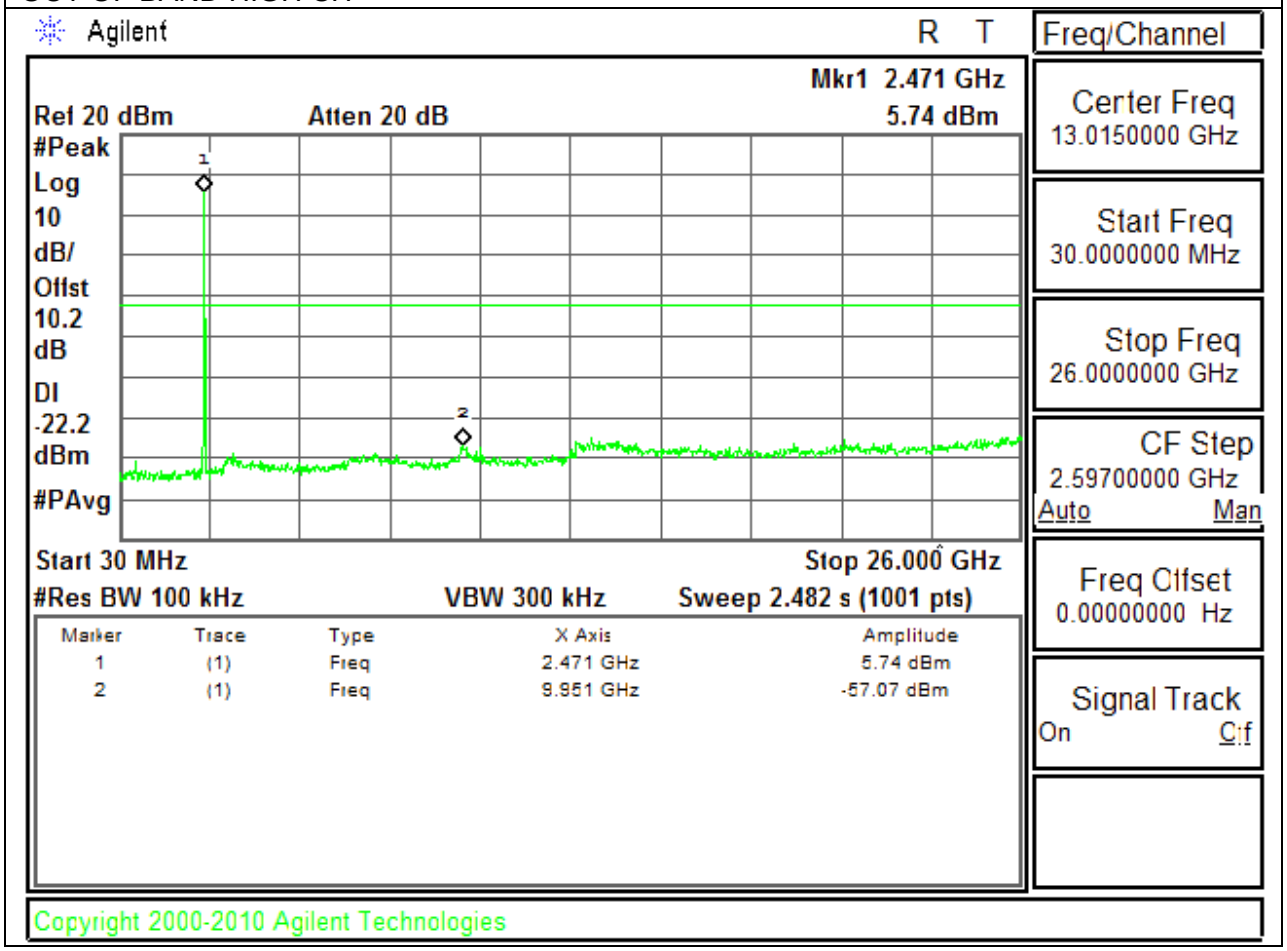
OUT OF BAND LOW CH



OUT OF BAND MID CH



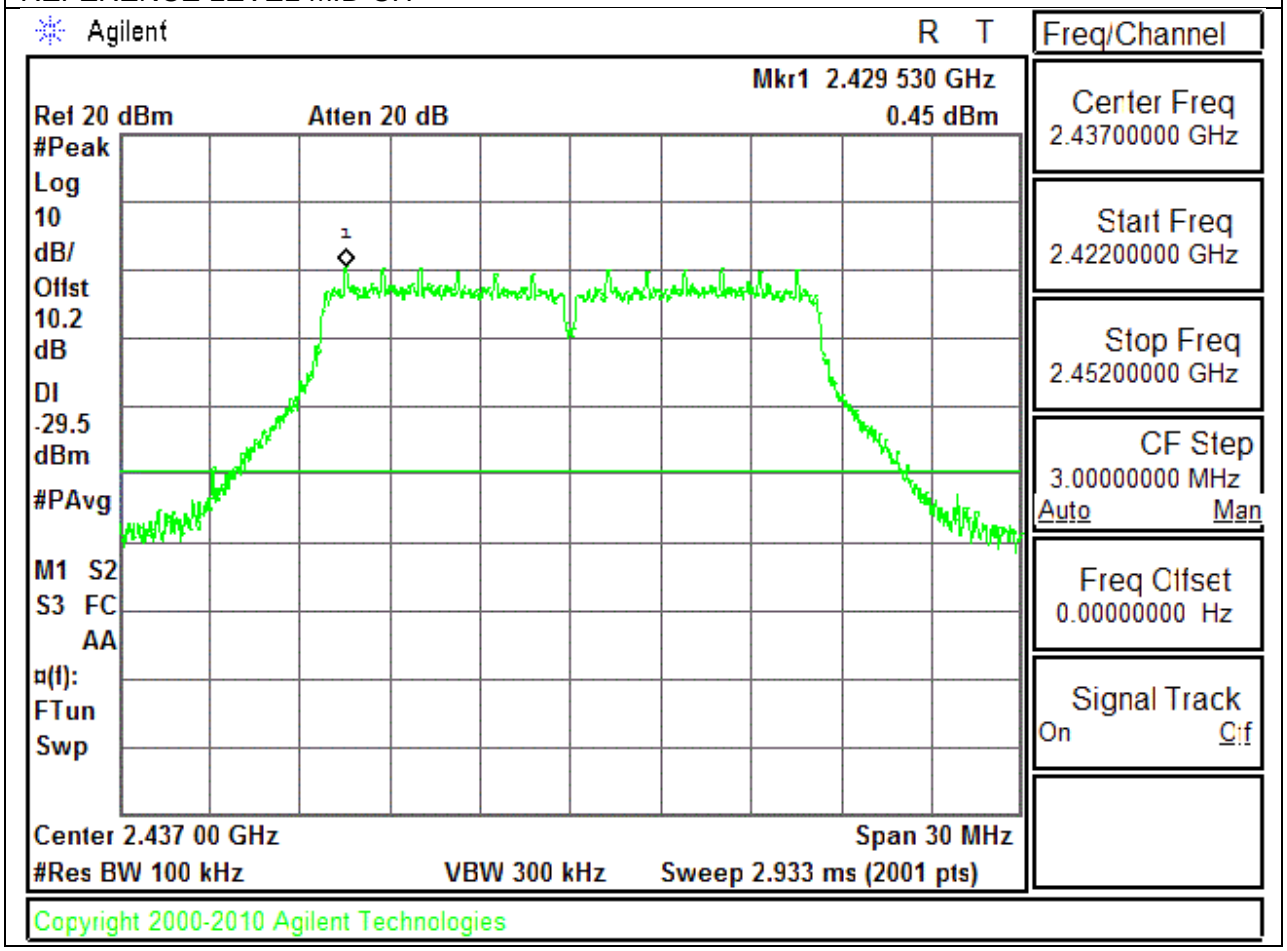
OUT OF BAND HIGH CH



9.5.2. 802.11g MODE IN THE 2.4 GHz BAND

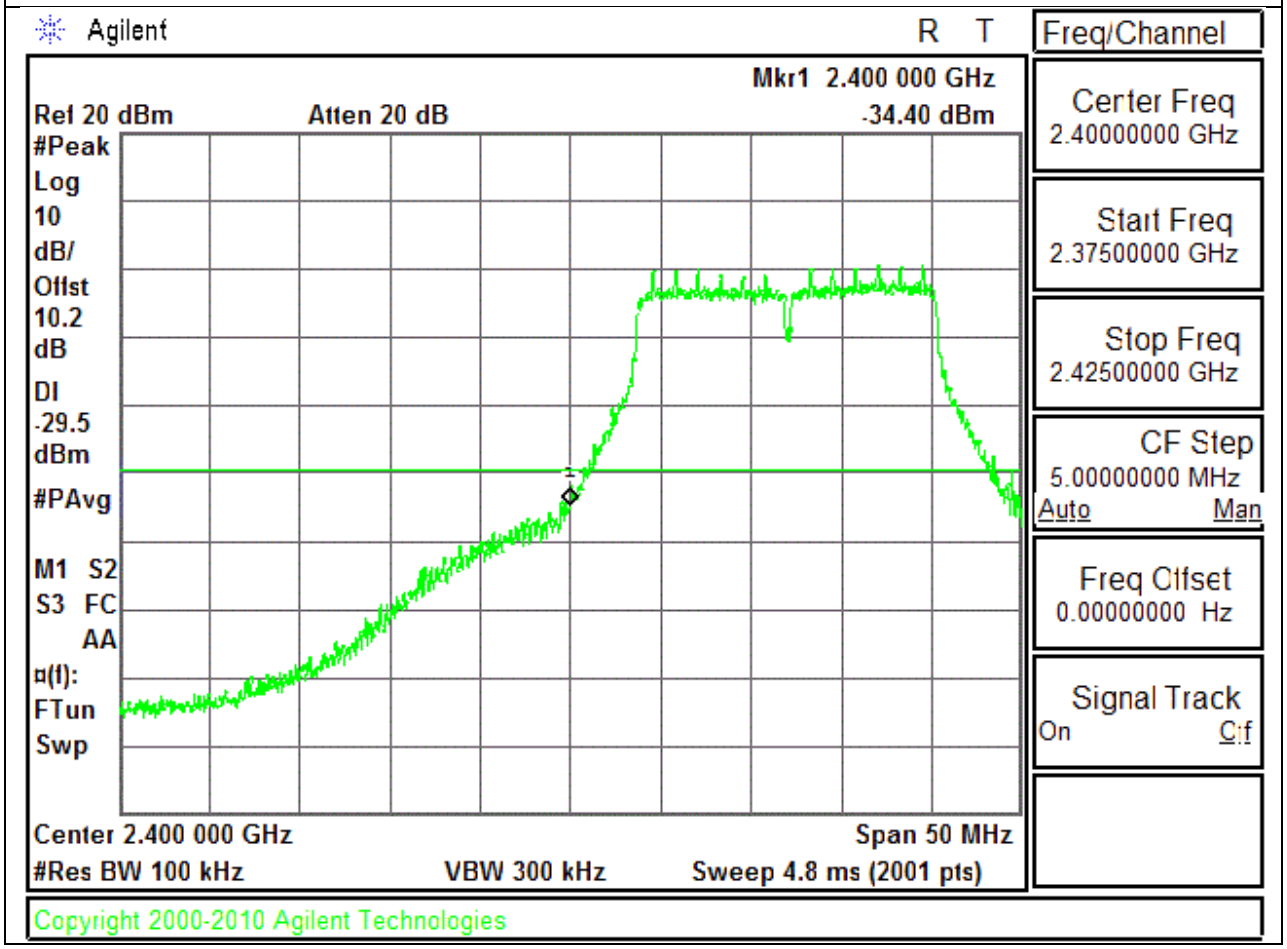
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



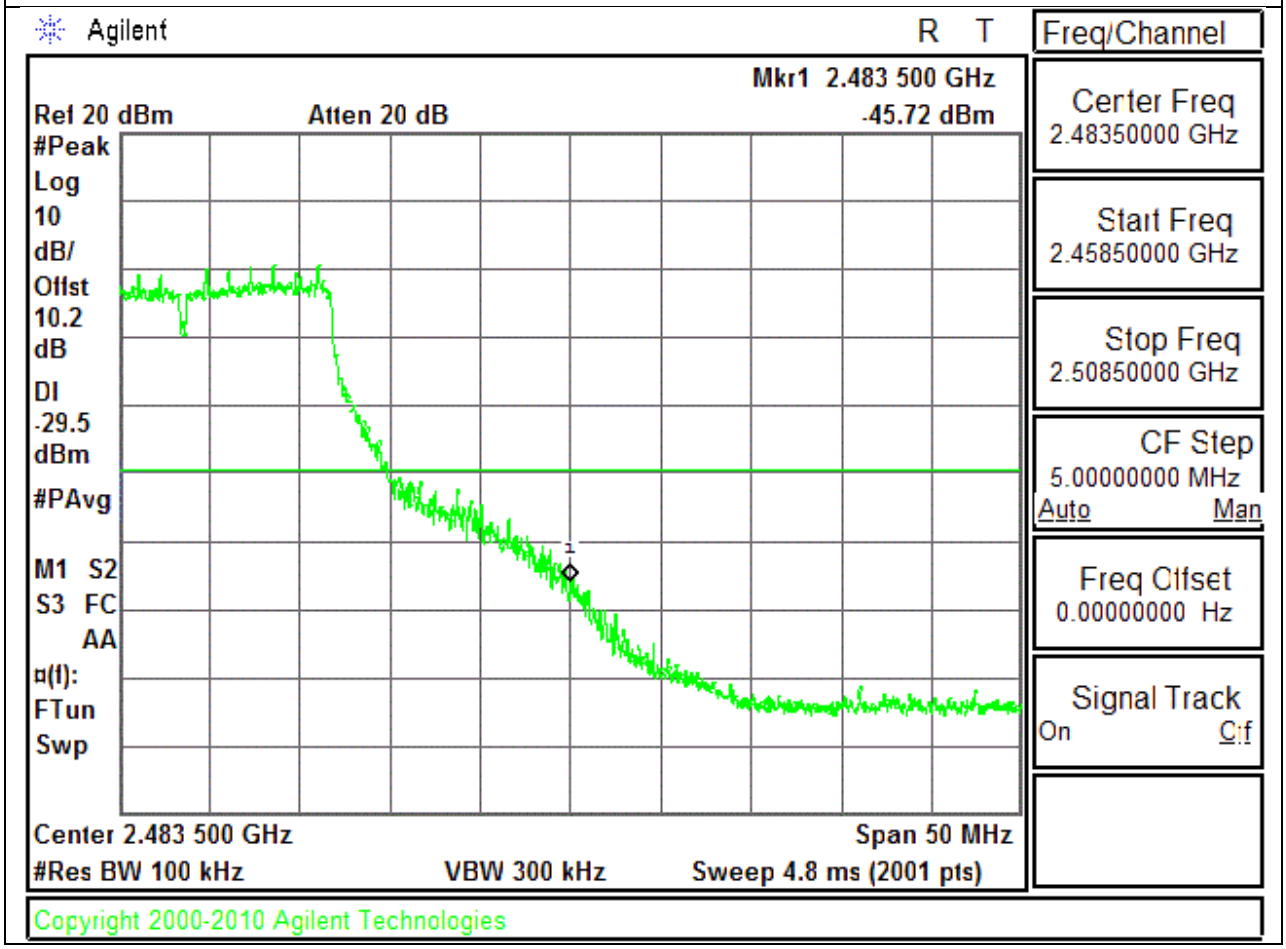
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



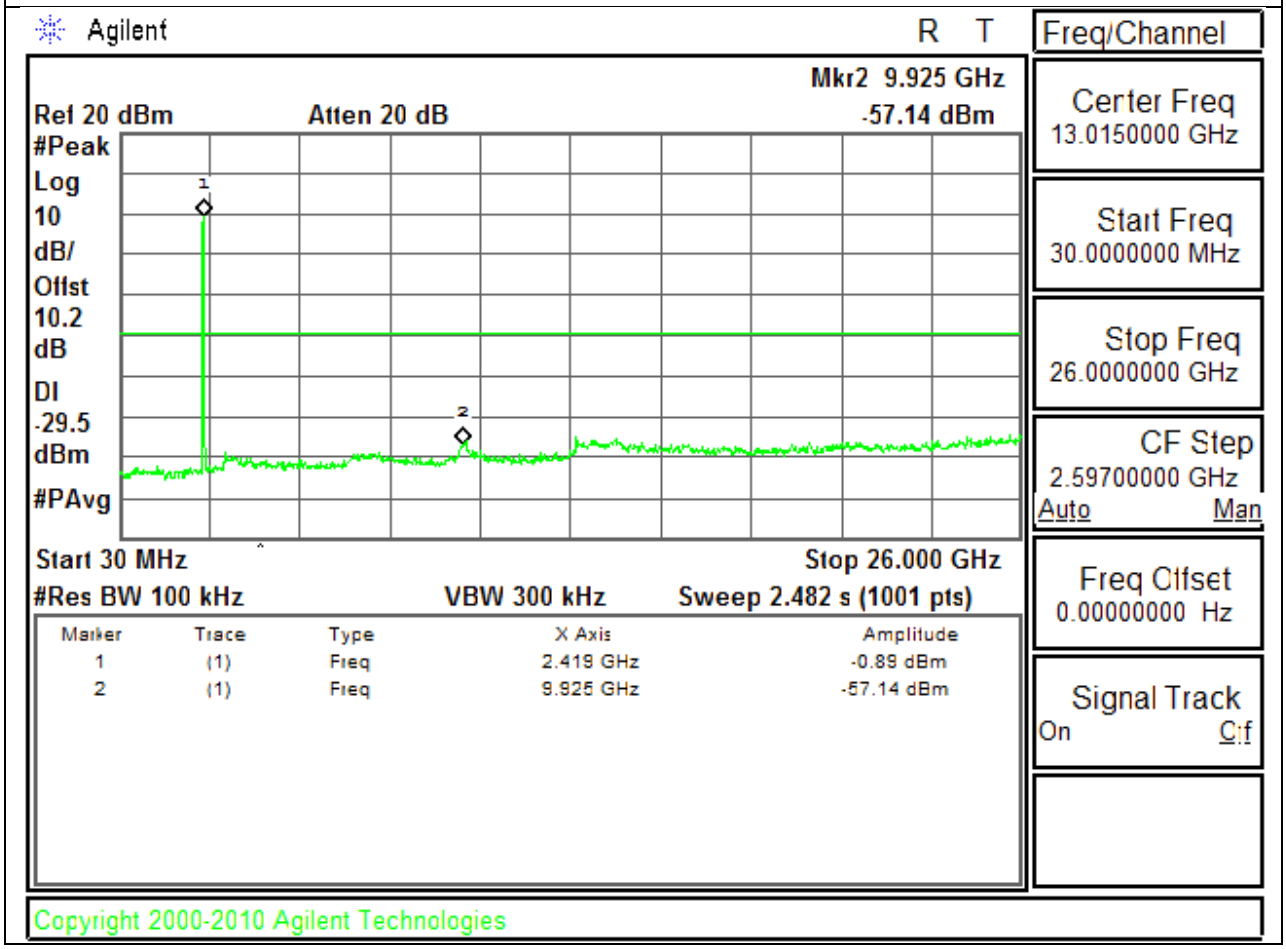
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

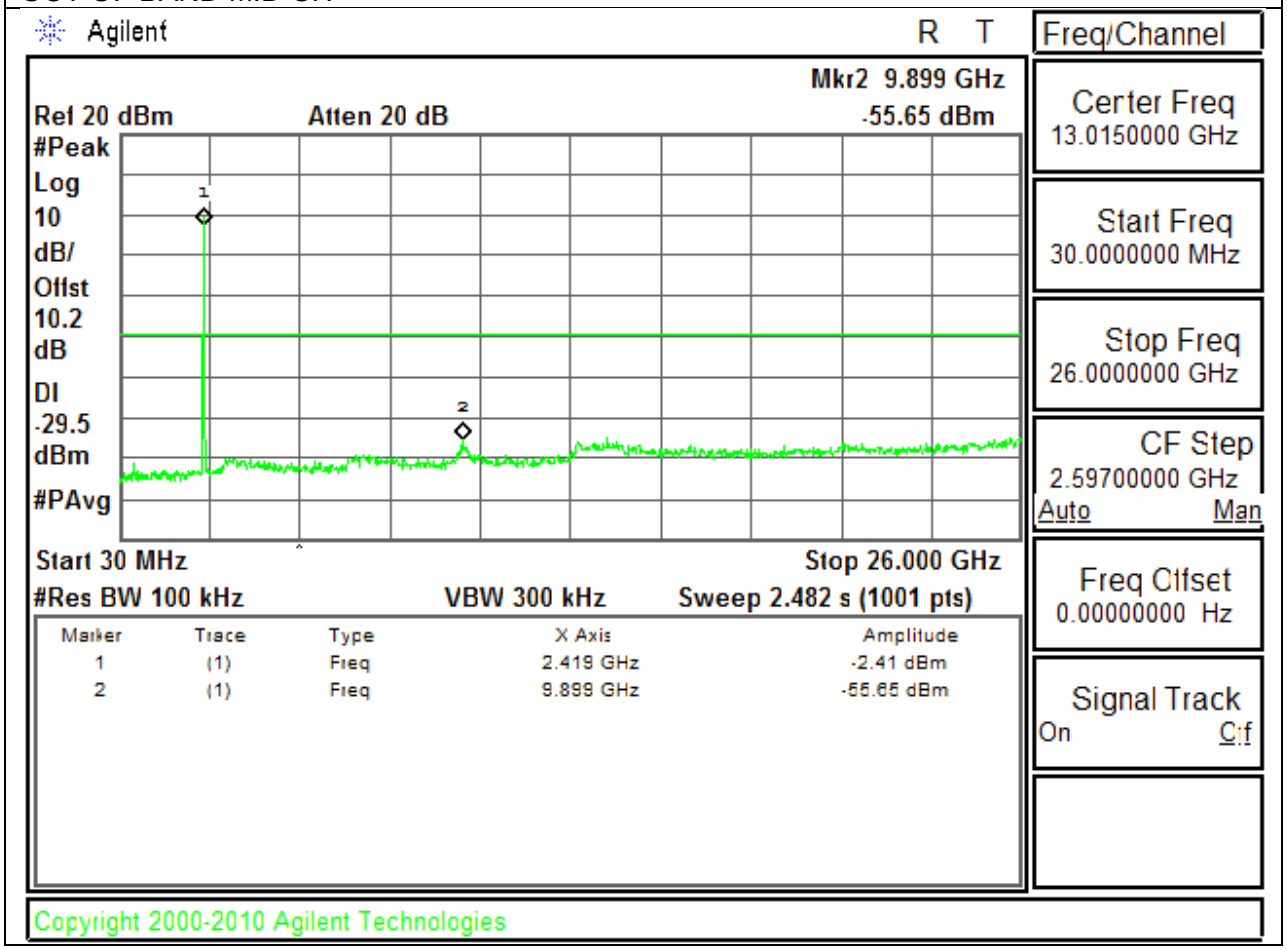


OUT-OF-BAND EMISSIONS

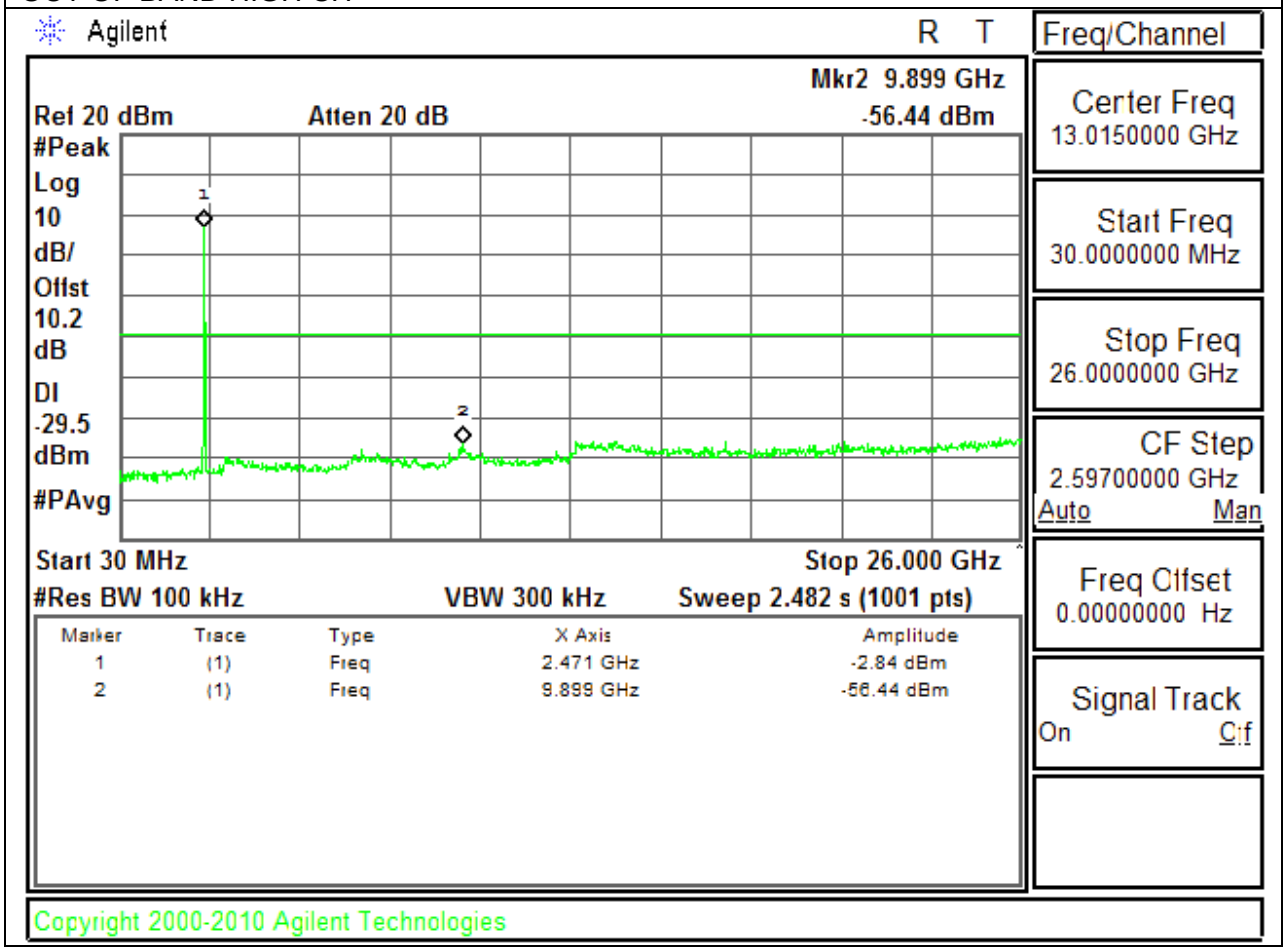
OUT OF BAND LOW CH



OUT OF BAND MID CH



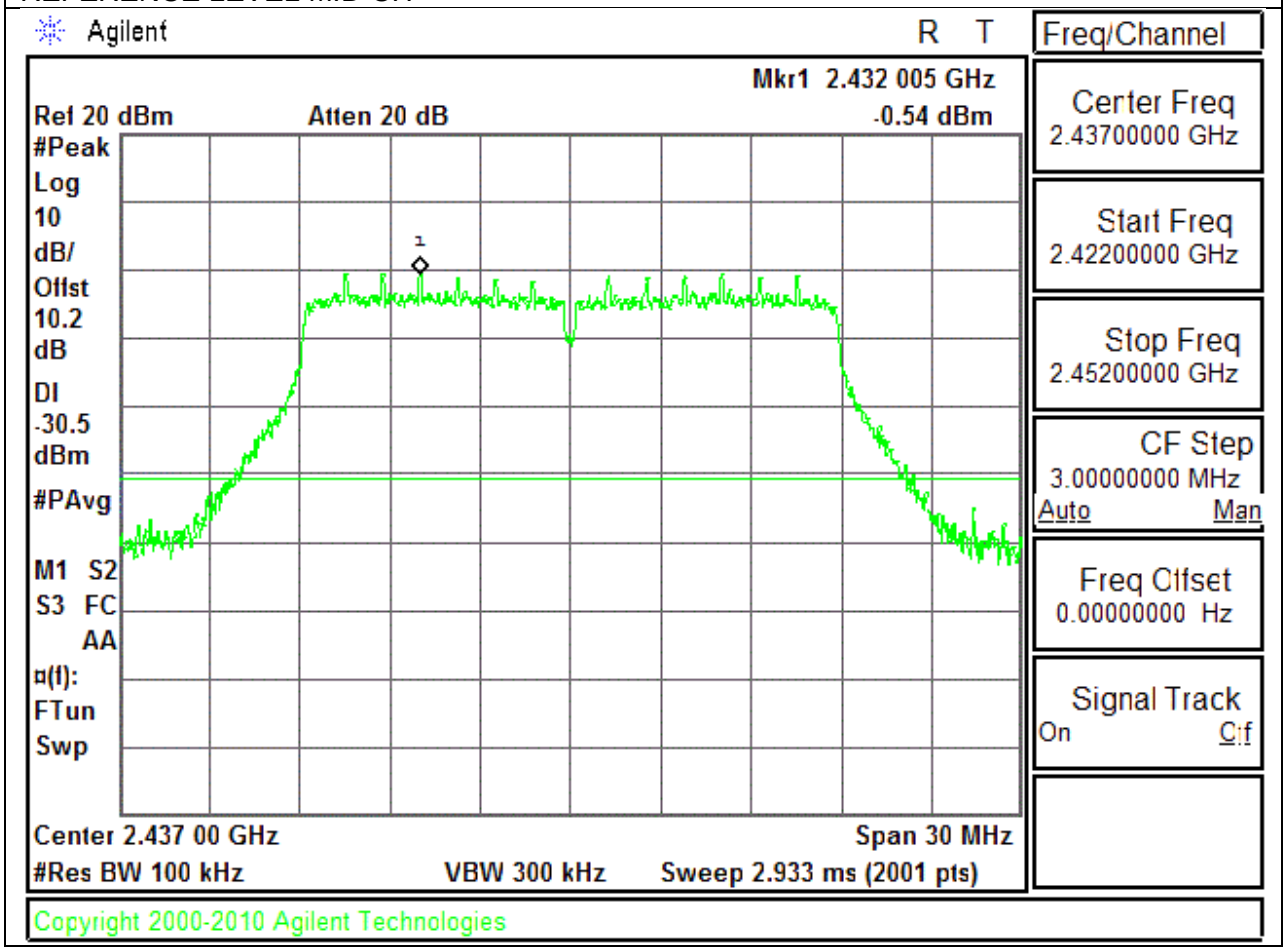
OUT OF BAND HIGH CH



9.5.3. 802.11n MODE IN THE 2.4 GHz BAND

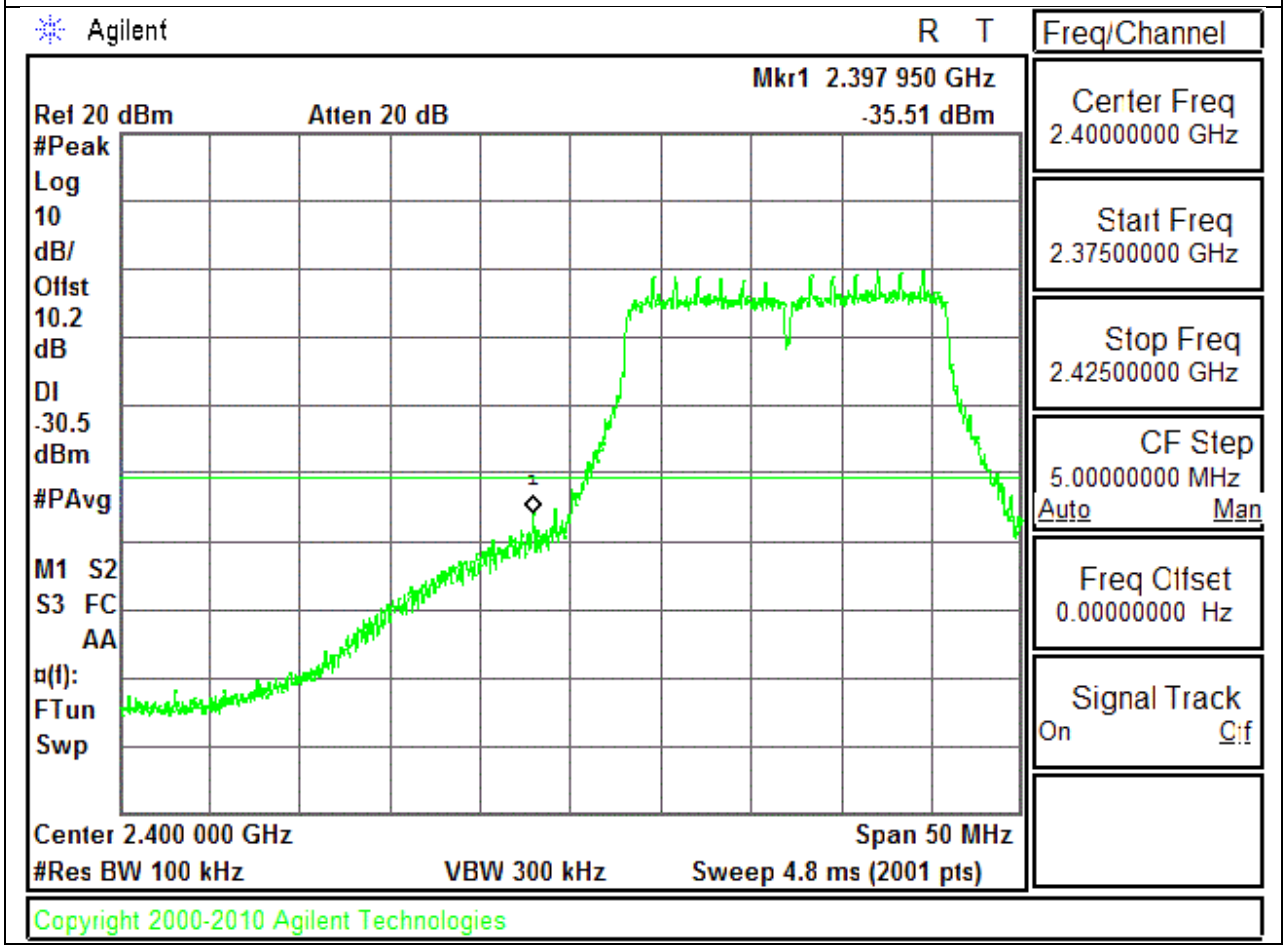
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



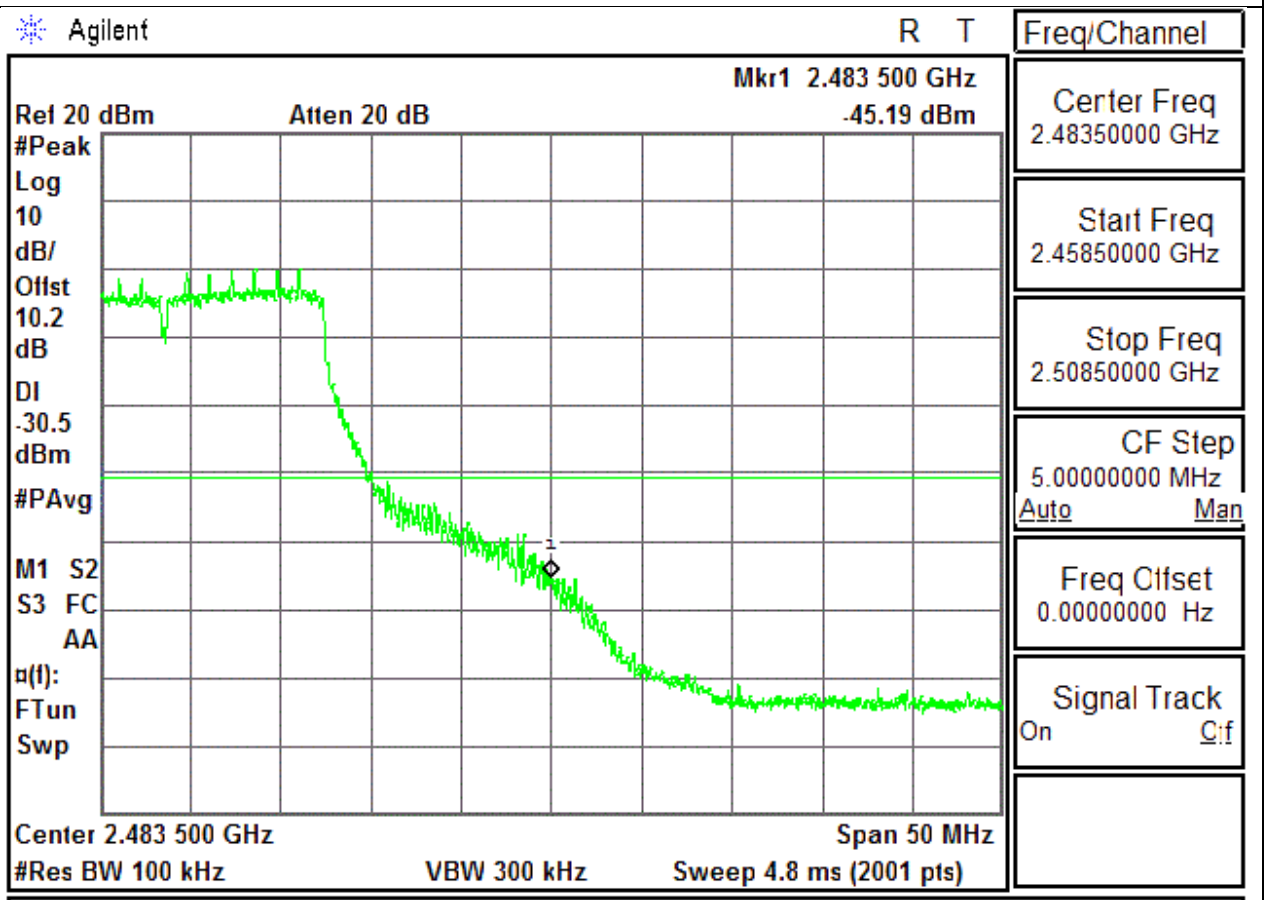
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



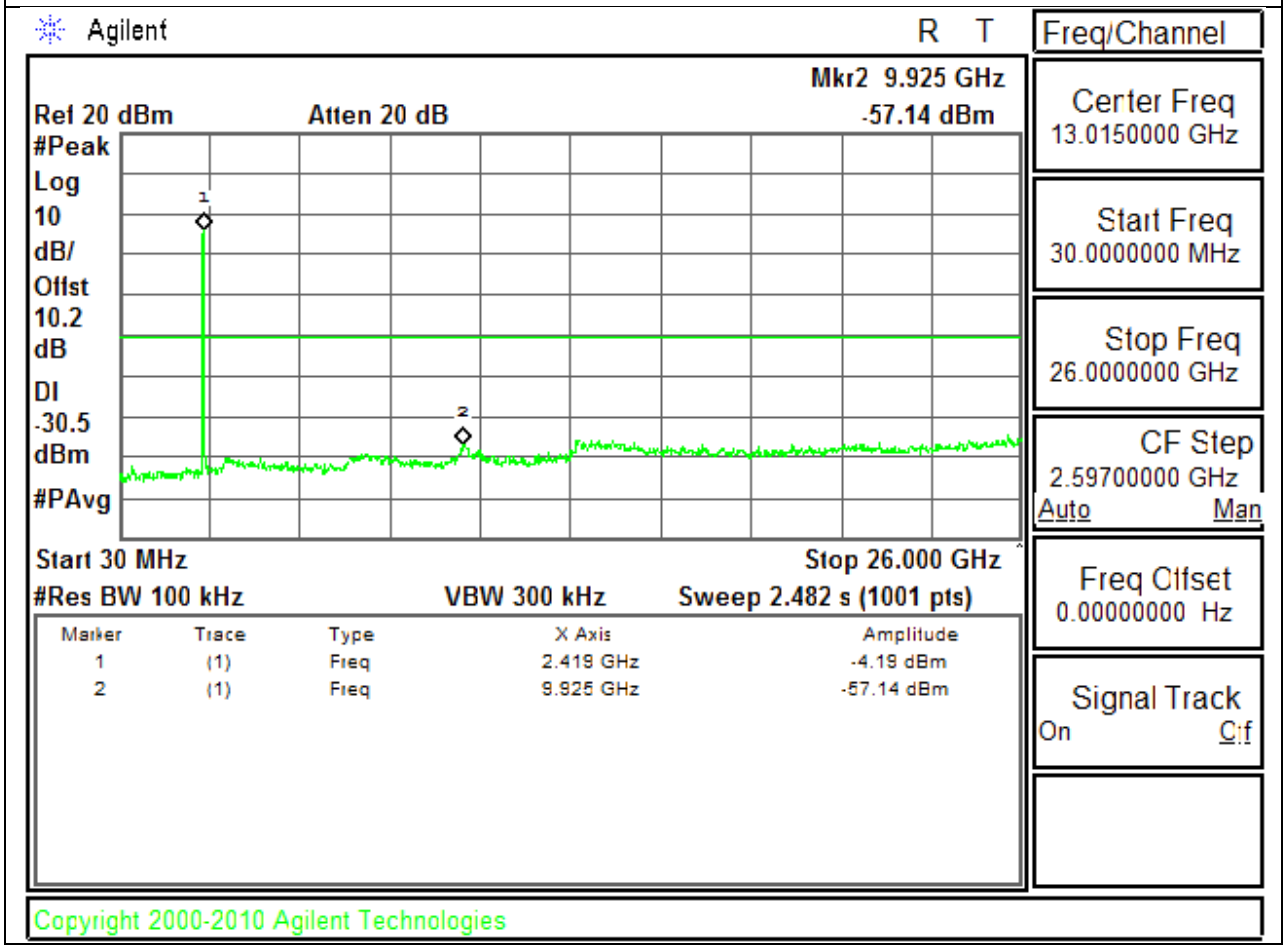
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

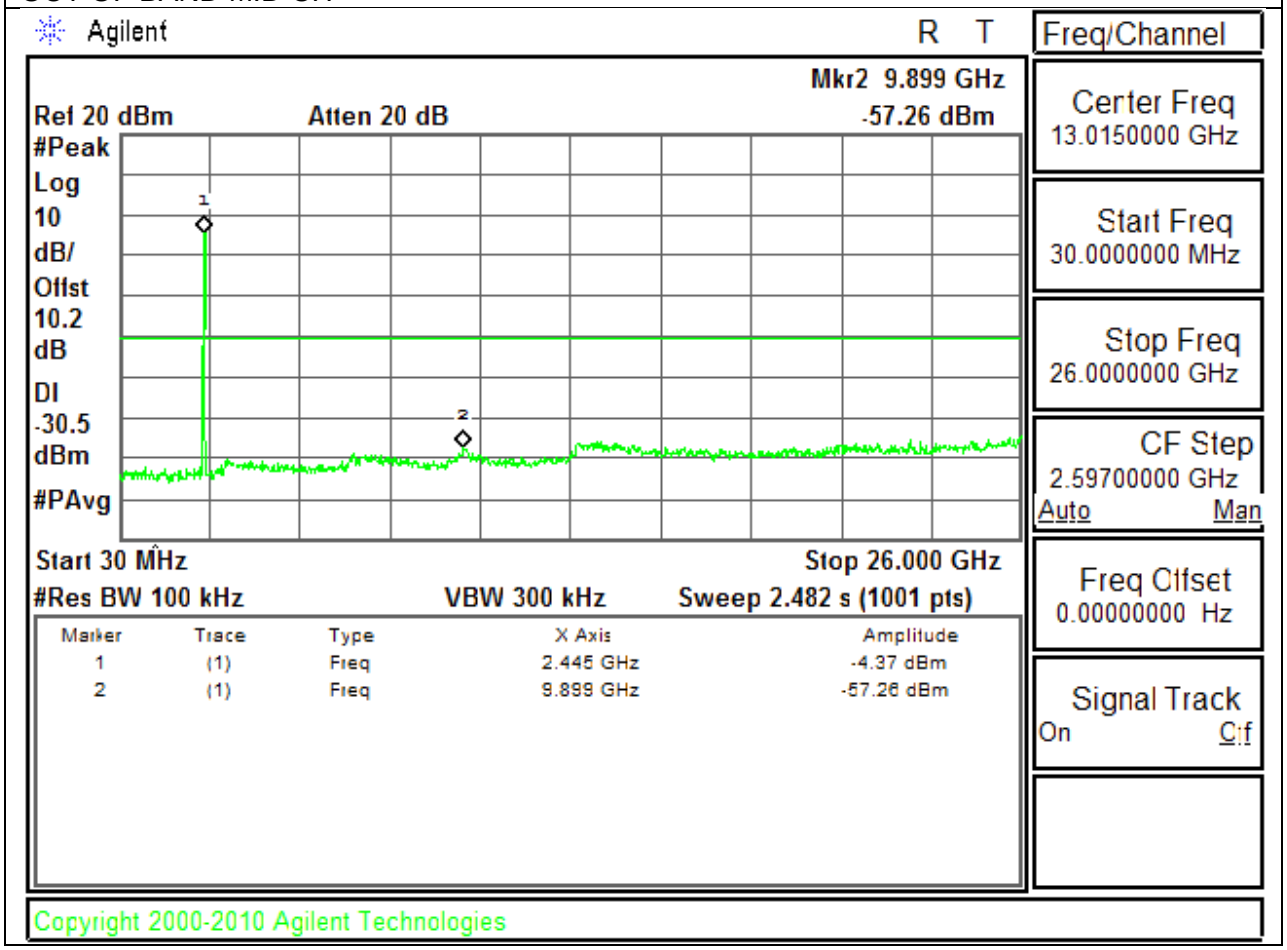


OUT-OF-BAND EMISSIONS

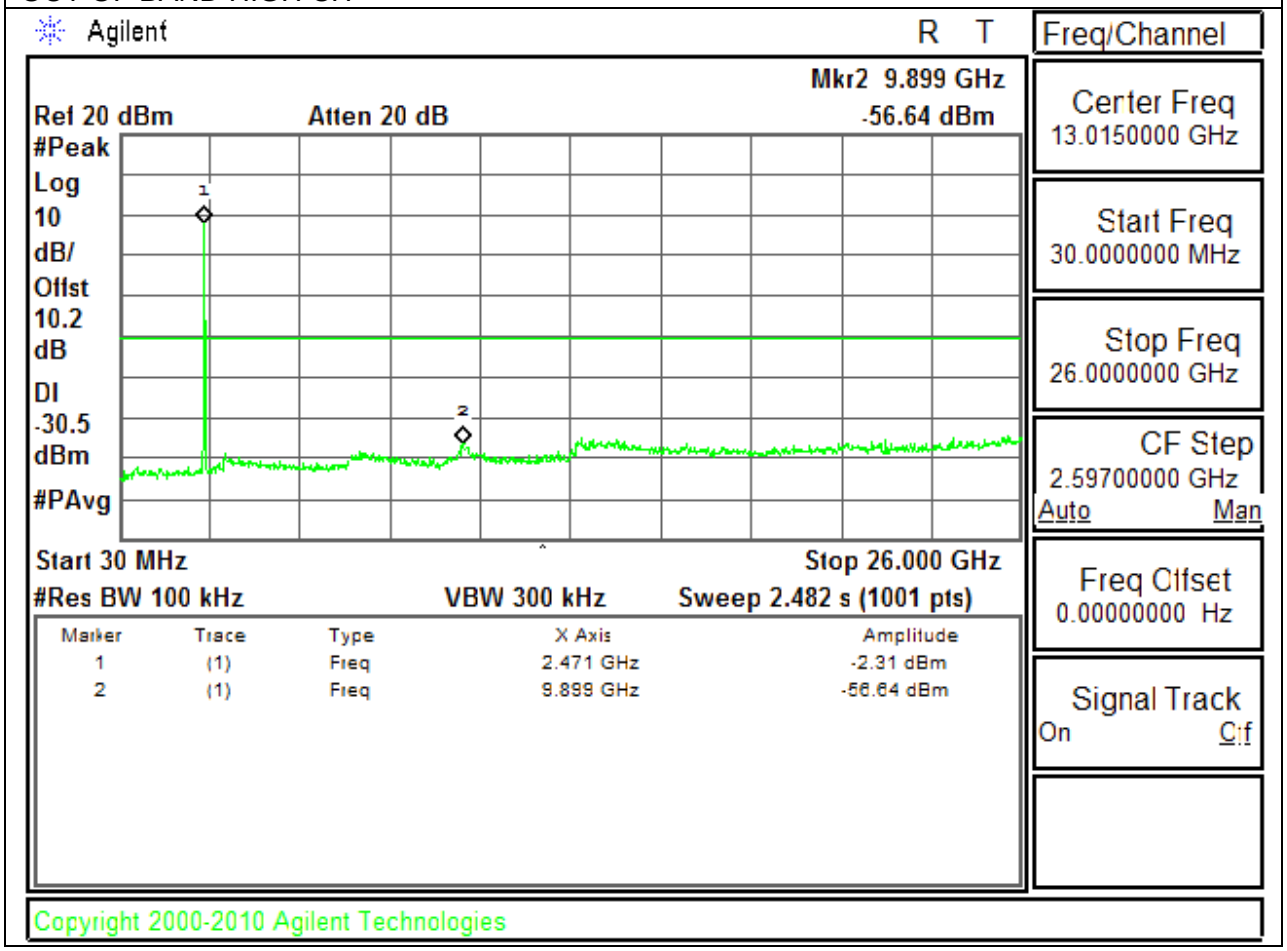
OUT OF BAND LOW CH



OUT OF BAND MID CH



OUT OF BAND HIGH CH



10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-210 Clause 2.6 (Transmitter)

IC RSS-GEN Clause 6 (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. 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.

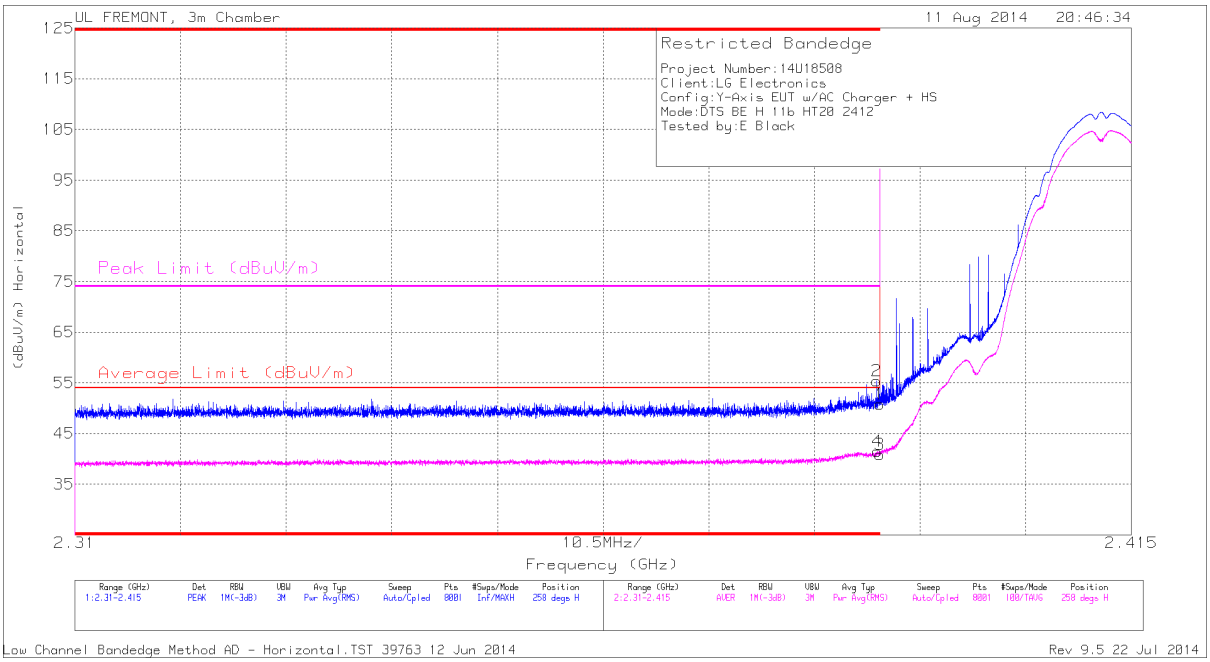
For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor for average measurements. Duty cycle factor= 10log (1/x) For this sample B mode = 0dB (duty cycle >98%); G mode = 0.21dB; N mode = 0.22dB.

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.

10.2. TRANSMITTER ABOVE 1 GHz

10.2.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)



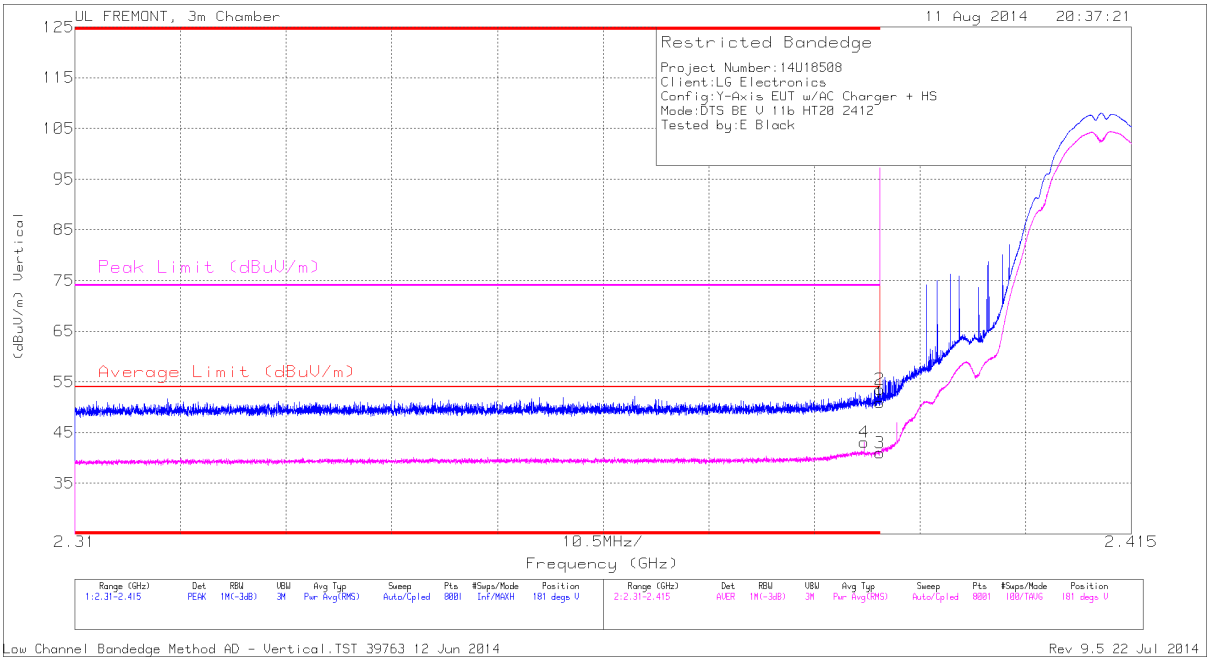
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	41.82	PK	32.1	-23.1	0	50.82	-	-	74	-23.18	258	261	H
2	* 2.39	46.42	PK	32.1	-23.1	0	55.42	-	-	74	-18.58	258	261	H
3	* 2.39	31.75	RMS	32.1	-23.1	.05	40.8	54	-13.2	-	-	258	261	H
4	* 2.39	32.41	RMS	32.1	-23.1	.05	41.46	54	-12.54	-	-	258	261	H

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

PK - Peak detector

RMS - RMS detection

VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
4	* 2.388	34.07	RMS	32.1	-23.1	.05	43.12	54	-10.88	-	-	181	260	V
1	* 2.39	41.88	PK	32.1	-23.1	0	50.88	-	-	74	-23.12	181	260	V
2	* 2.39	44.47	PK	32.1	-23.1	0	53.47	-	-	74	-20.53	181	260	V
3	* 2.39	31.96	RMS	32.1	-23.1	.05	41.01	54	-12.99	-	-	181	260	V

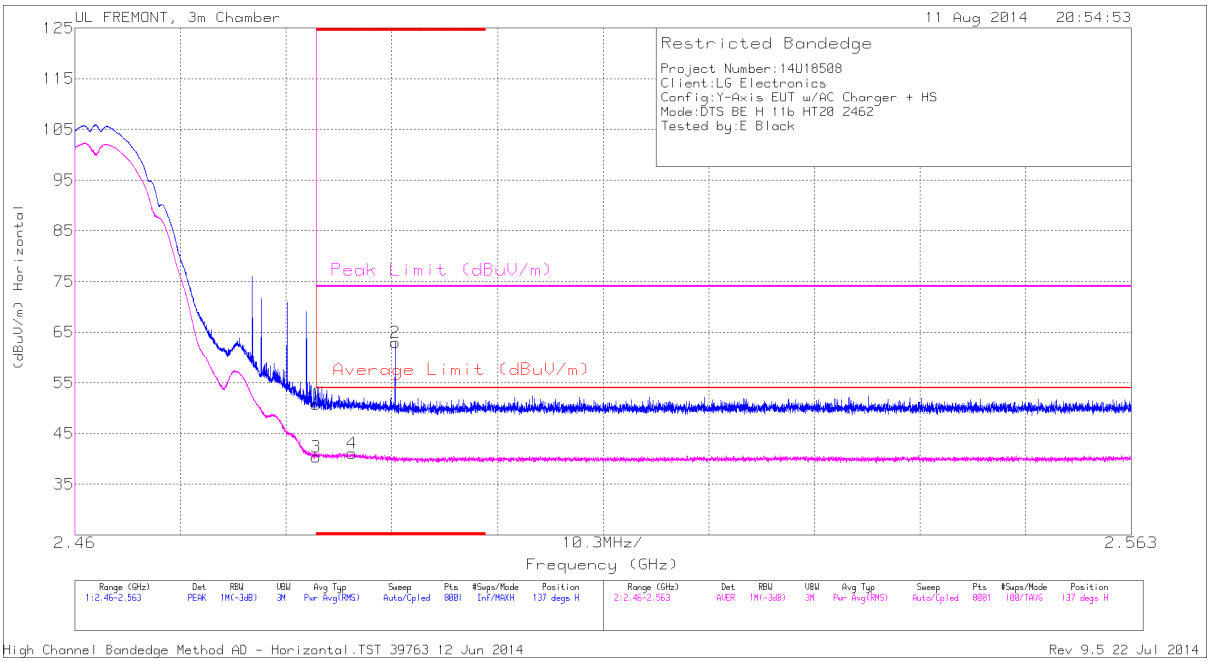
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL



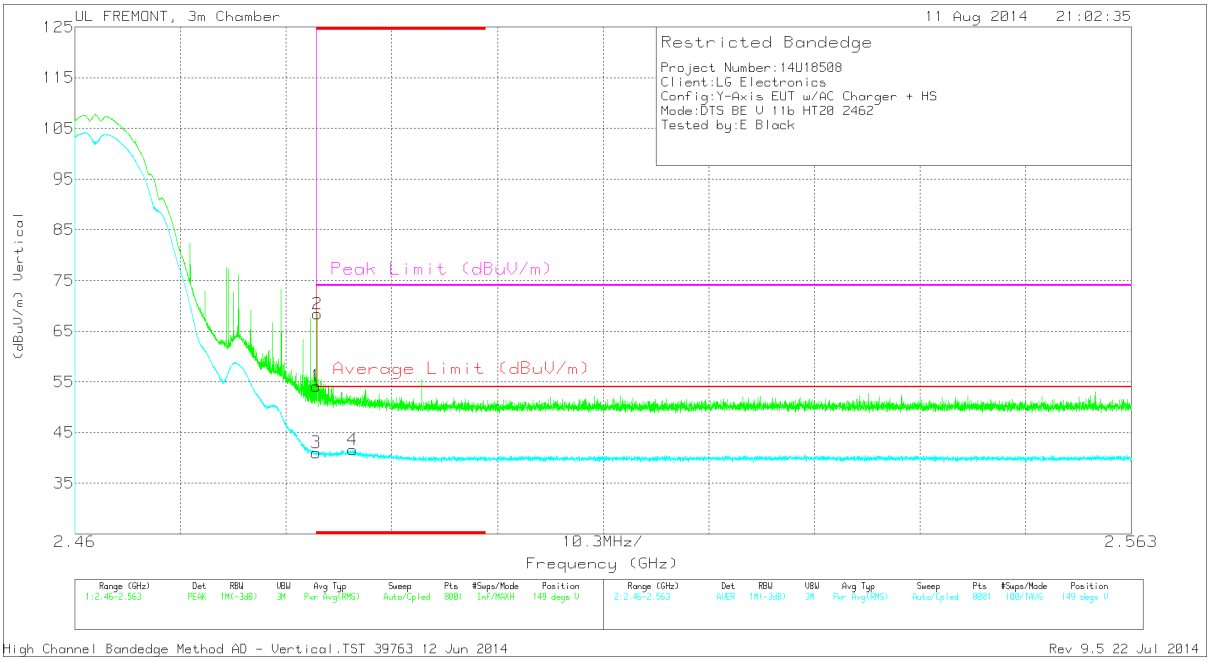
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	41.29	PK	32.3	-22.8	0	50.79	-	-	74	-23.21	137	276	H
2	* 2.491	53.4	PK	32.3	-22.8	0	62.9	-	-	74	-11.1	137	276	H
3	* 2.484	30.77	RMS	32.3	-22.8	.05	40.32	54	-13.68	-	-	137	276	H
4	* 2.487	31.57	RMS	32.3	-22.8	.05	41.12	54	-12.88	-	-	137	276	H

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

PK - Peak detector

RMS - RMS detection

VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	44.7	PK	32.3	-22.8	54.2	-	-	74	-19.8	149	281	V
2	* 2.484	58.91	PK	32.3	-22.8	68.41	-	-	74	-5.59	149	281	V
3	* 2.484	31.54	RMS	32.3	-22.8	41.04	54	-12.96	-	-	149	281	V
4	* 2.487	32.05	RMS	32.3	-22.8	41.55	54	-12.45	-	-	149	281	V

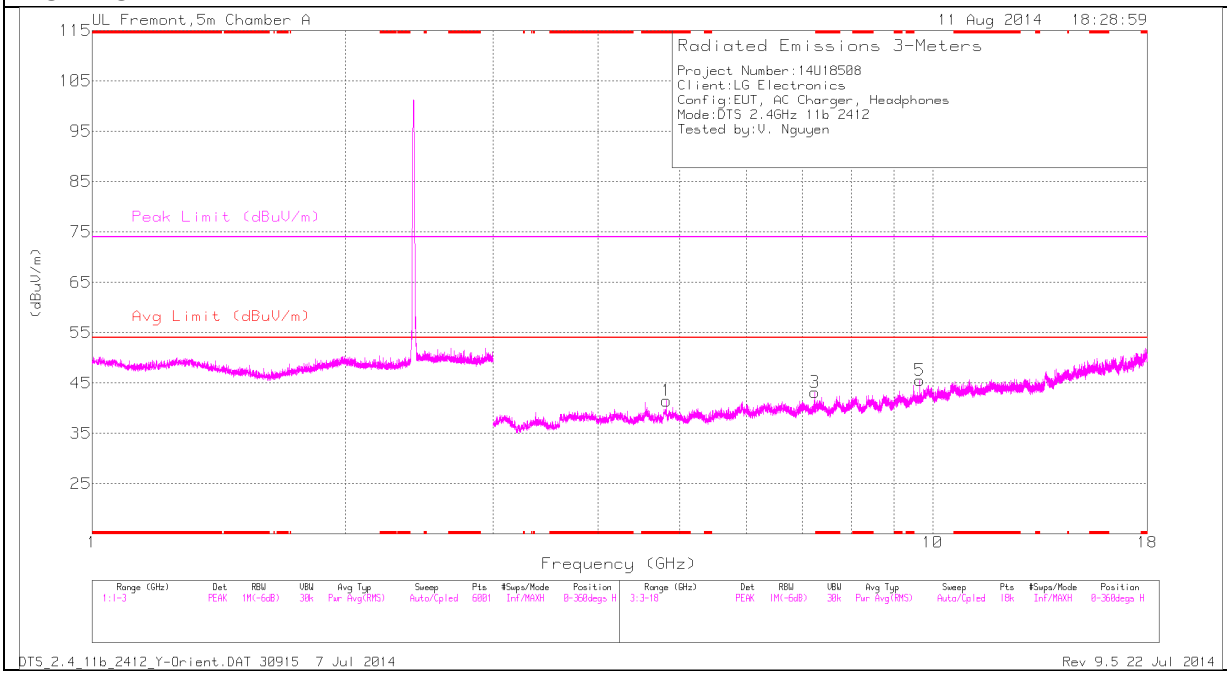
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

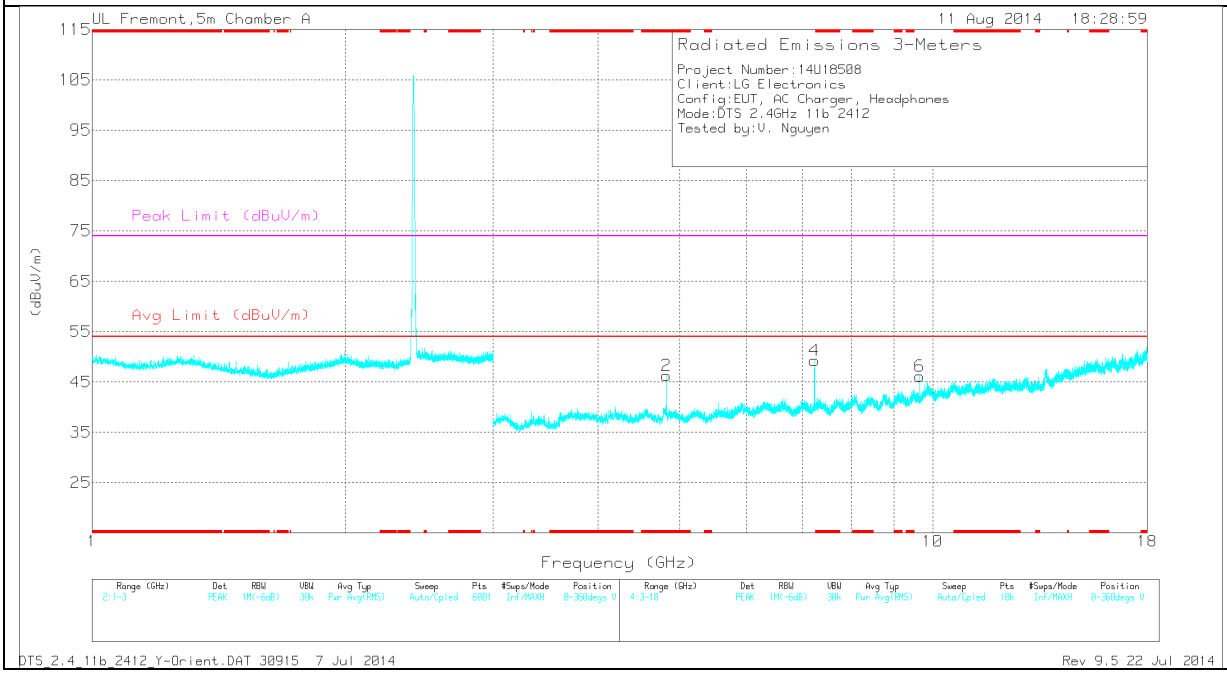
HARMONICS AND SPURIOUS EMISSIONS

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

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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	* 4.824	32.08	PK	34	-24.6	0	41.48	-	-	74	-32.52	0-360	201	H
2	* 4.824	36.88	PK	34	-24.6	0	46.28	-	-	74	-27.72	0-360	100	V
4	7.235	36.74	PK	35.2	-22.7	0	49.24	-	-	-	-	0-360	201	V
3	7.236	30.69	PK	35.2	-22.7	0	43.19	-	-	-	-	0-360	201	H
5	9.647	30.04	PK	36.8	-21.3	0	45.54	-	-	-	-	0-360	201	H
6	9.648	30.63	PK	36.8	-21.3	0	46.13	-	-	-	-	0-360	201	V

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

PK - Peak detector

Radiated Emissions

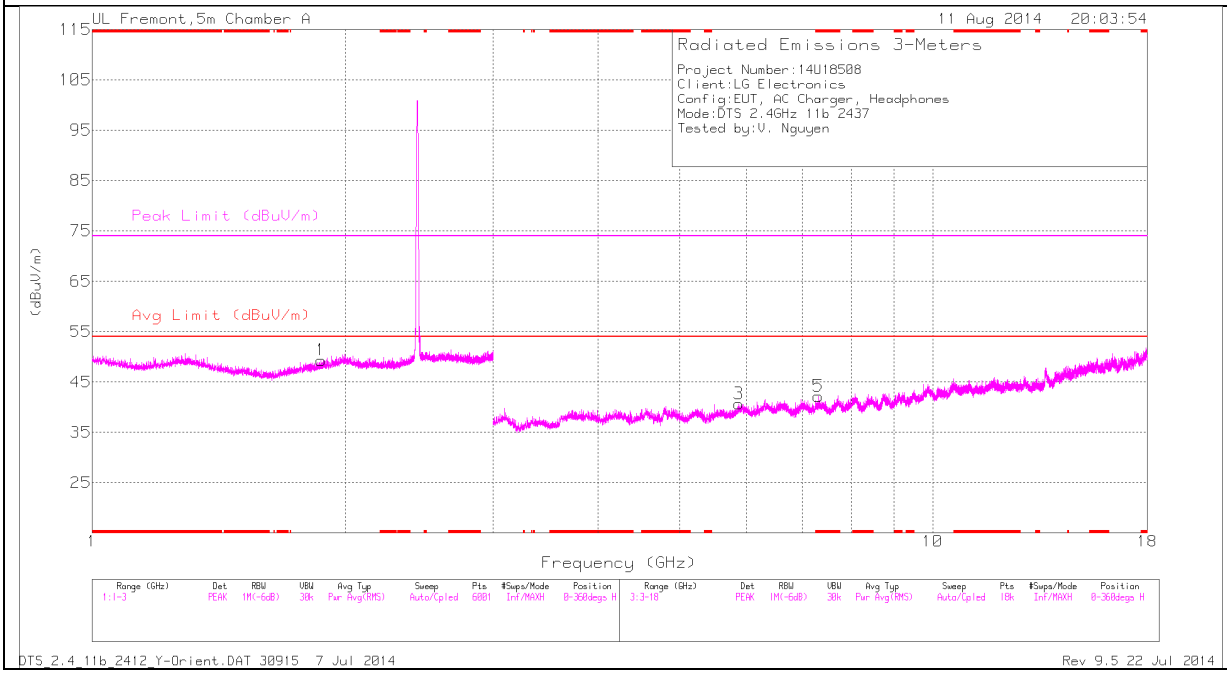
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.824	40.29	PK2	34	-24.7	0	49.59	-	-	74	-24.41	230	183	H
* 4.824	31.55	MAv1	34	-24.7	0	40.85	54	-13.15	-	-	230	183	H
* 4.824	40.91	PK2	34	-24.7	0	50.21	-	-	74	-23.79	261	129	V
* 4.824	33.94	MAv1	34	-24.6	0	43.34	54	-10.66	-	-	261	129	V

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

PK2 - KDB558074 Method: Maximum Peak

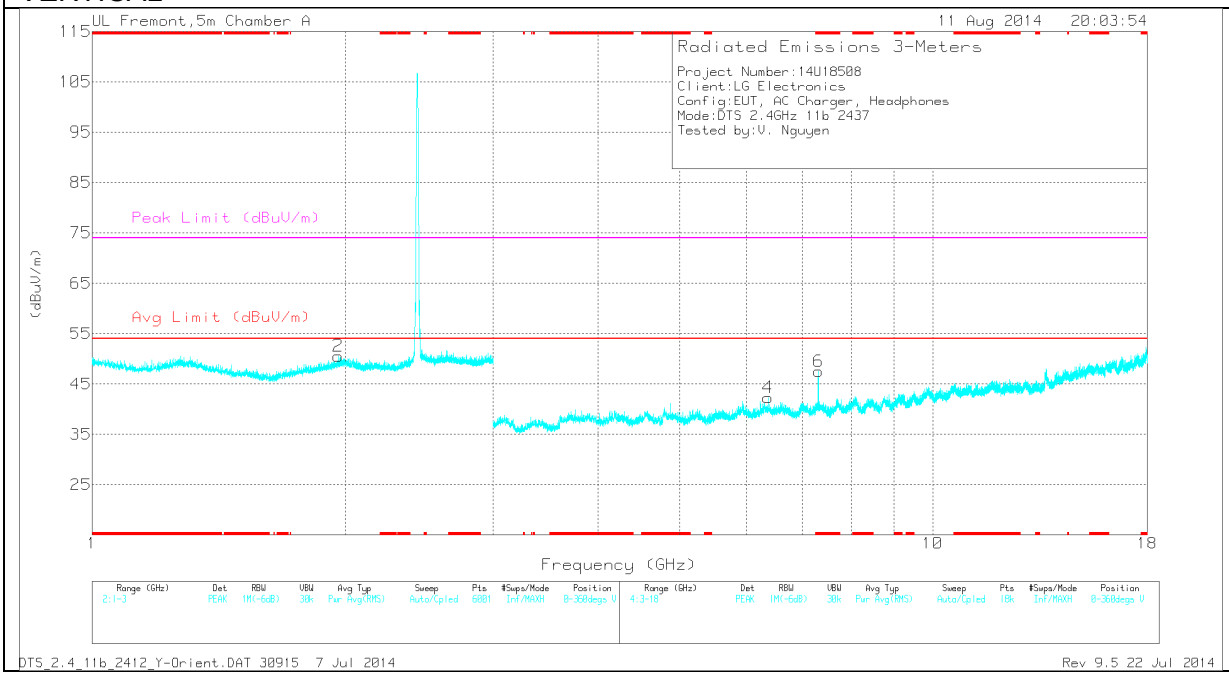
MAv1 - KDB558074 Option 1 Maximum RMS Average

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

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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	* 7.31	29.1	PK	35.2	-22.1	0	42.2	-	-	74	-31.8	0-360	201	H
6	* 7.311	34.4	PK	35.2	-22.1	0	47.5	-	-	74	-26.5	0-360	201	V
1	1.873	35.53	PK	31.4	-17.6	0	49.33	-	-	-	-	0-360	201	H
2	1.962	35.96	PK	31.9	-17.3	0	50.56	-	-	-	-	0-360	201	V
3	5.882	28.89	PK	35	-23.2	0	40.69	-	-	-	-	0-360	201	H
4	6.37	30.61	PK	35.5	-23.8	0	42.31	-	-	-	-	0-360	100	V

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

PK - Peak detector

Radiated Emissions

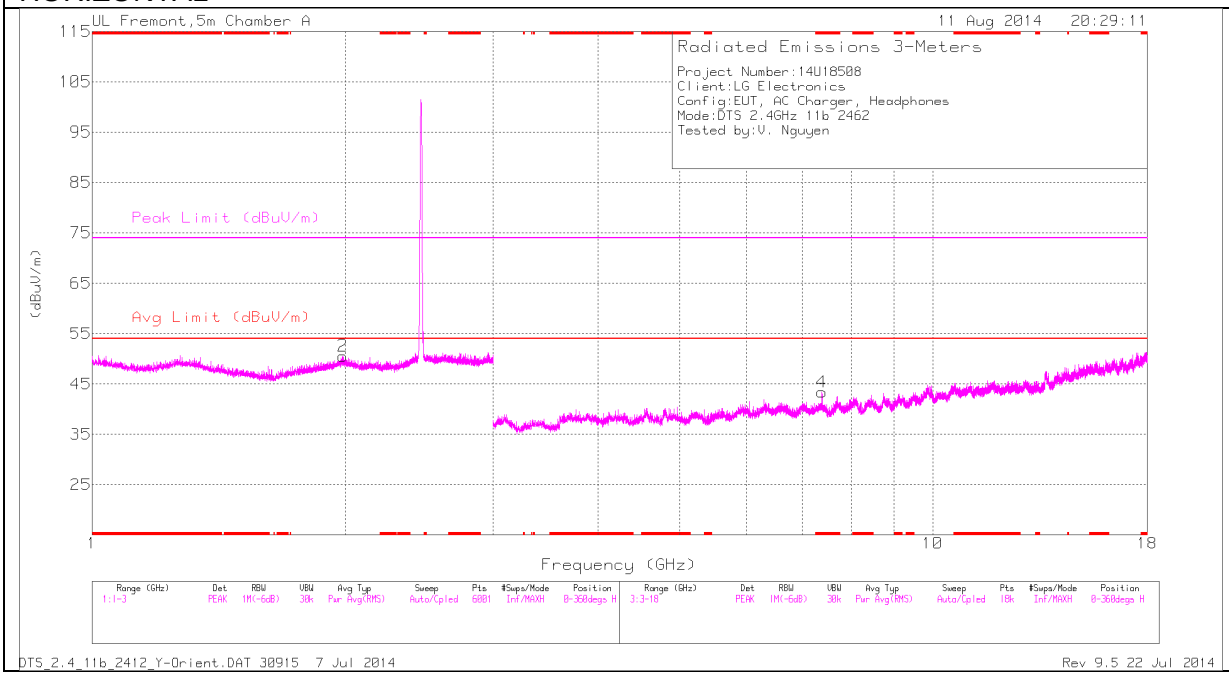
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 7.311	41.81	PK2	35.2	-22.1	0	54.91	-	-	74	-19.09	275	381	H
* 7.31	30.12	MAv1	35.2	-22.1	0	43.22	54	-10.78	-	-	275	381	H
* 7.31	43.91	PK2	35.2	-22.1	0	57.01	-	-	74	-16.99	276	147	V
* 7.31	34.65	MAv1	35.2	-22.1	0	47.75	54	-6.25	-	-	276	147	V

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

PK2 - KDB558074 Method: Maximum Peak

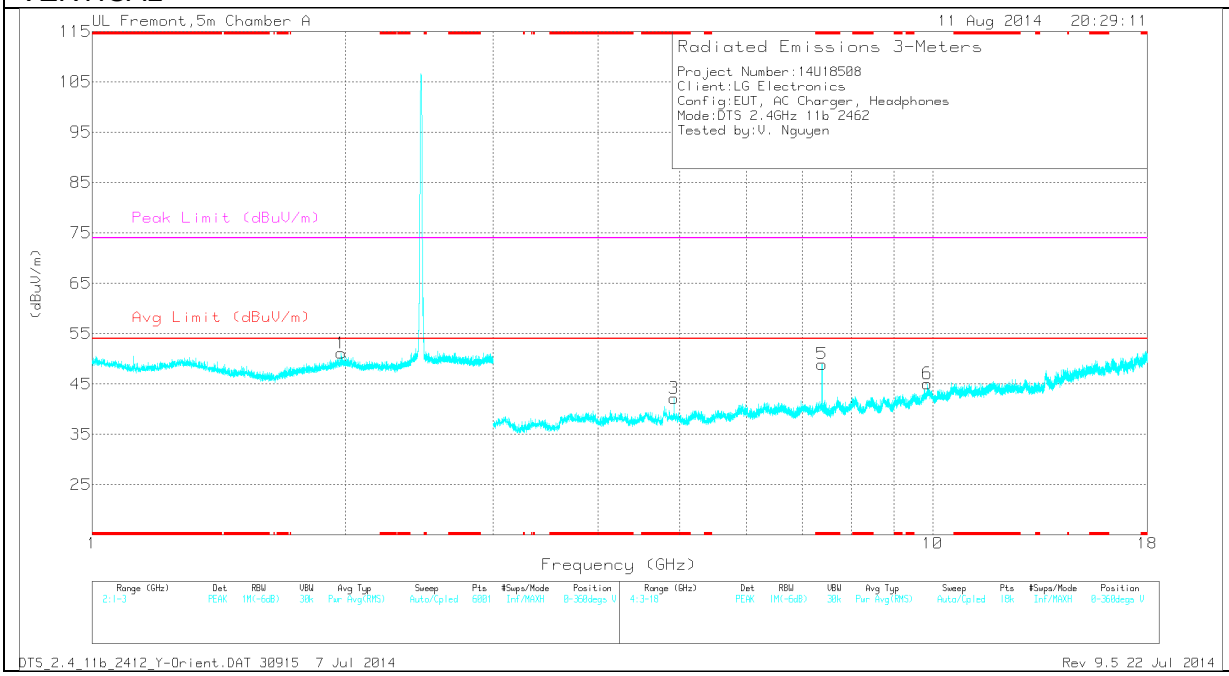
MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL
HORIZONTAL



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

HIGH CHANNEL
VERTICAL



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

HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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	* 7.384	29.67	PK	35.3	-21.6	0	43.37	-	-	74	-30.63	0-360	201	H
3	* 4.924	32.67	PK	33.9	-24.4	0	42.17	-	-	74	-31.83	0-360	100	V
5	* 7.385	35.36	PK	35.3	-21.7	0	48.96	-	-	74	-25.04	0-360	201	V
1	1.979	36.36	PK	32	-17.2	0	51.16	-	-	-	-	0-360	201	V
2	1.987	35.65	PK	32	-17.1	0	50.55	-	-	-	-	0-360	100	H
6	9.847	27.18	PK	37	-19.1	0	45.08	-	-	-	-	0-360	100	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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
* 7.385	42.03	PK2	35.3	-21.7	0	55.63	-	-	74	-18.37	31	288	H
* 7.385	31.85	MAv1	35.3	-21.7	0	45.45	54	-8.55	-	-	31	288	H
* 4.924	43.5	PK2	33.9	-24.4	0	53	-	-	74	-21	279	122	V
* 4.924	33.59	MAv1	33.9	-24.4	0	43.09	54	-10.91	-	-	279	122	V
* 7.387	44.25	PK2	35.3	-21.7	0	57.85	-	-	74	-16.15	280	180	V
* 7.387	35.36	MAv1	35.3	-21.7	0	48.96	54	-5.04	-	-	280	180	V

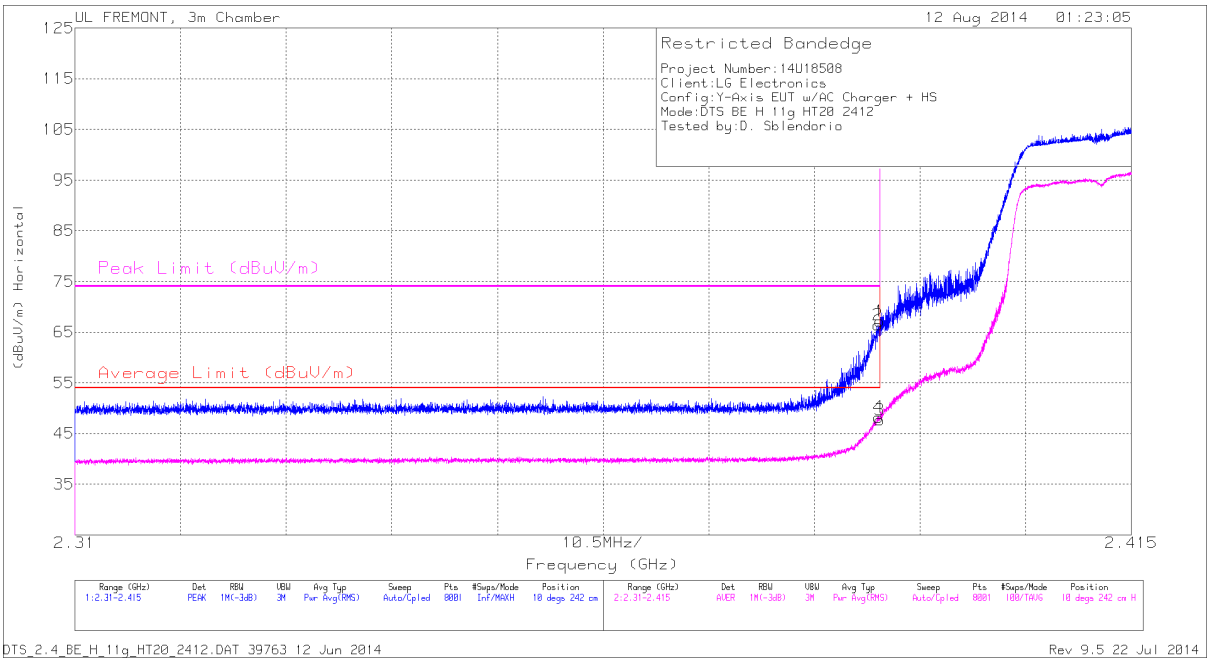
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

10.2.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL



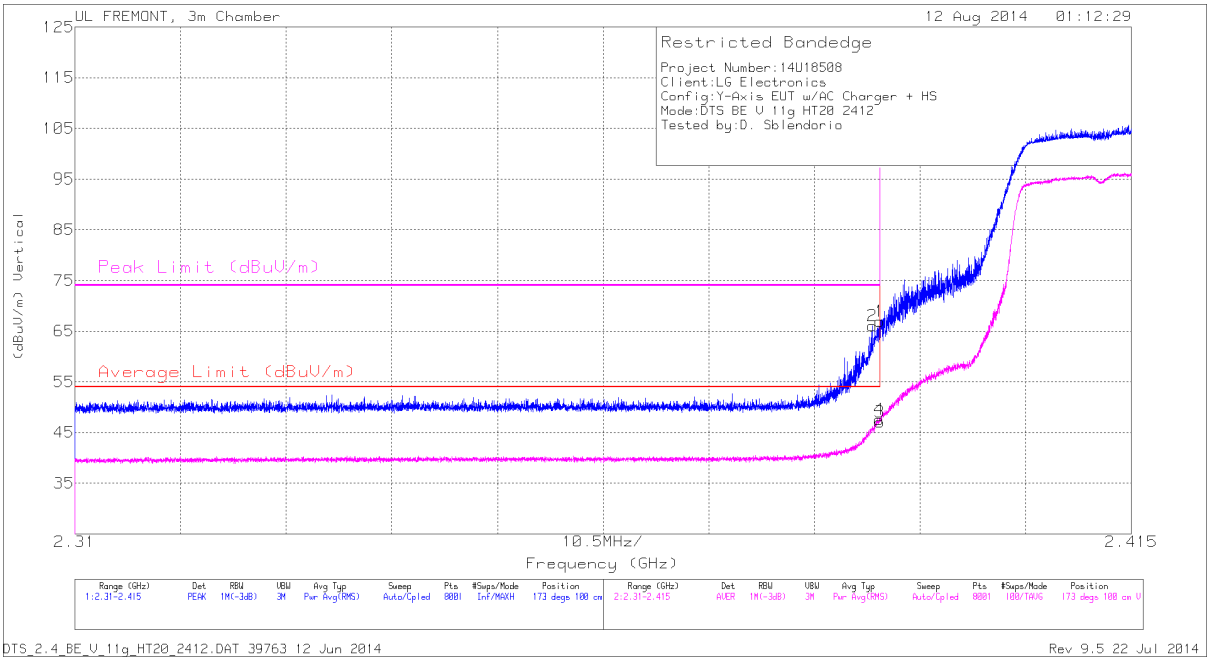
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.39	58.18	PK	32.1	-23.1	0	67.18	-	-	74	-6.82	10	242	H
2	2.39	57.48	PK	32.1	-23.1	0	66.48	-	-	74	-7.52	10	242	H
3	2.39	38.65	RMS	32.1	-23.1	.21	47.86	54	-6.14	-	-	10	242	H
4	2.39	39.24	RMS	32.1	-23.1	.21	48.45	54	-5.55	-	-	10	242	H

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

PK - Peak detector

RMS - RMS detection

VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
2	2.389	57.1	PK	32.1	-23.1	0	66.1	-	-	74	-7.9	173	100	V
1	2.39	57.92	PK	32.1	-23.1	0	66.92	-	-	74	-7.08	173	100	V
3	2.39	38.09	RMS	32.1	-23.1	.21	47.3	54	-6.7	-	-	173	100	V
4	2.39	38.56	RMS	32.1	-23.1	.21	47.77	54	-6.23	-	-	173	100	V

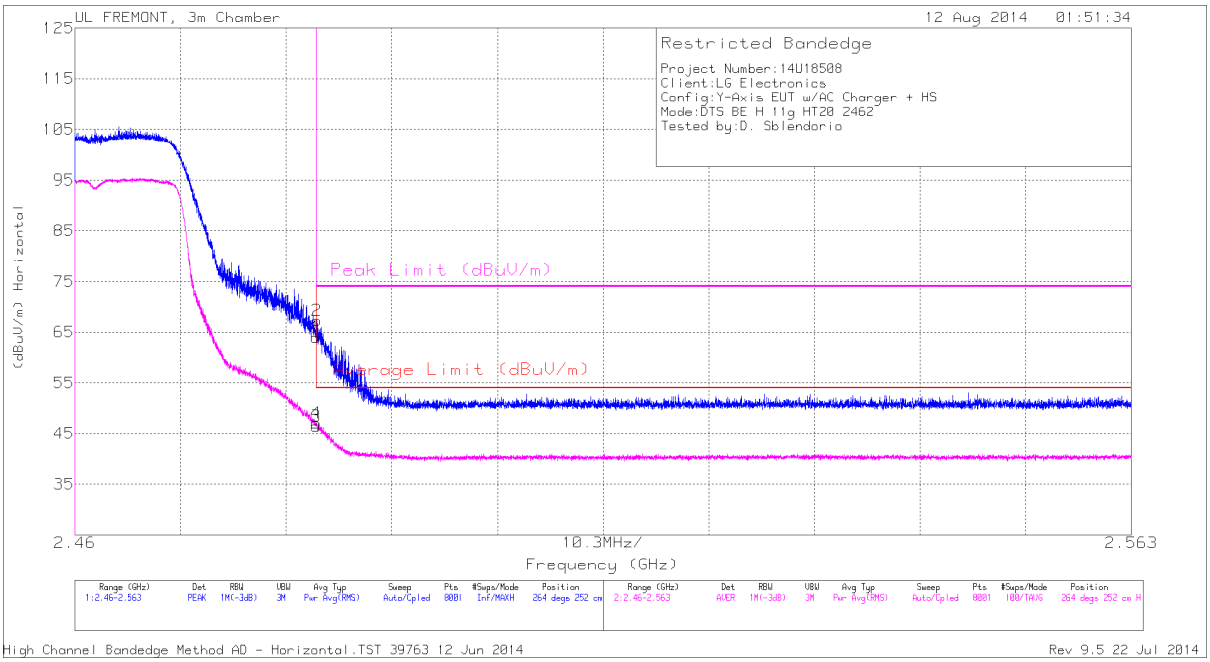
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL



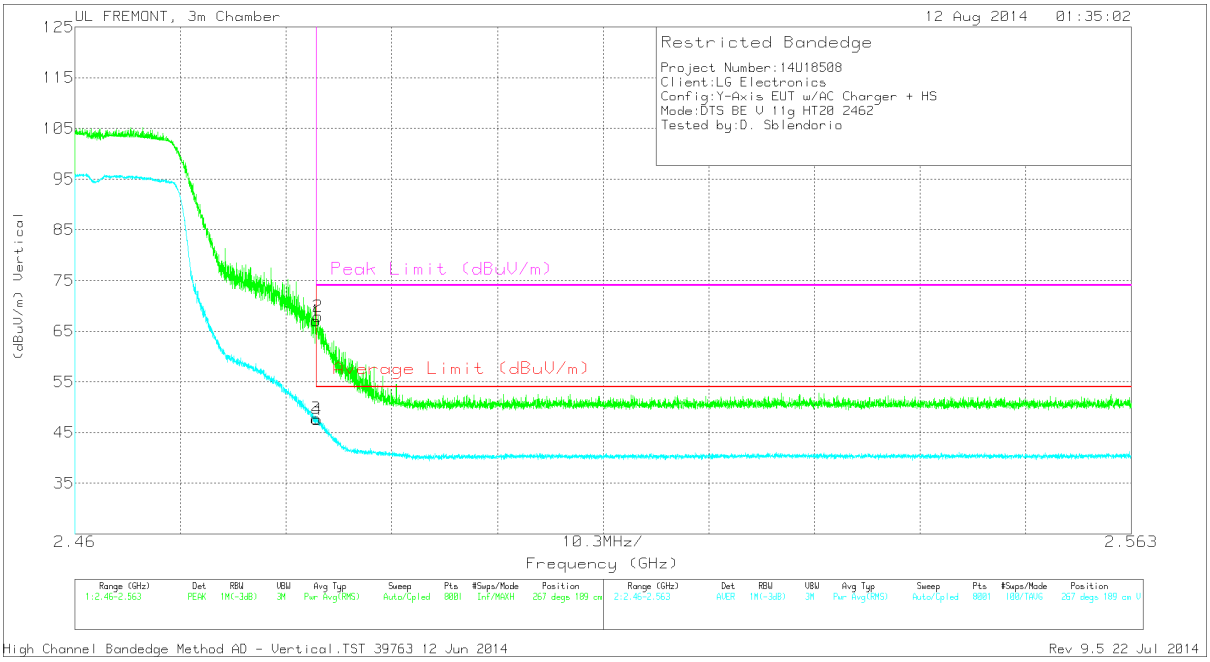
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.484	54.51	PK	32.3	-22.8	0	64.01	-	-	74	-9.99	264	252	H
2	2.484	57.85	PK	32.3	-22.8	0	67.35	-	-	74	-6.65	264	252	H
3	2.484	36.75	RMS	32.3	-22.8	.21	46.46	54	-7.54	-	-	264	252	H
4	2.484	37.33	RMS	32.3	-22.8	.21	47.04	54	-6.96	-	-	264	252	H

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

PK - Peak detector

RMS - RMS detection

VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	57.52	PK	32.3	-22.8	0	67.02	-	-	74	-6.98	267	189	V
2	2.484	58.47	PK	32.3	-22.8	0	67.97	-	-	74	-6.03	267	189	V
3	2.484	38.25	RMS	32.3	-22.8	.21	47.96	54	-6.04	-	-	267	189	V
4	2.484	38.06	RMS	32.3	-22.8	.21	47.77	54	-6.23	-	-	267	189	V

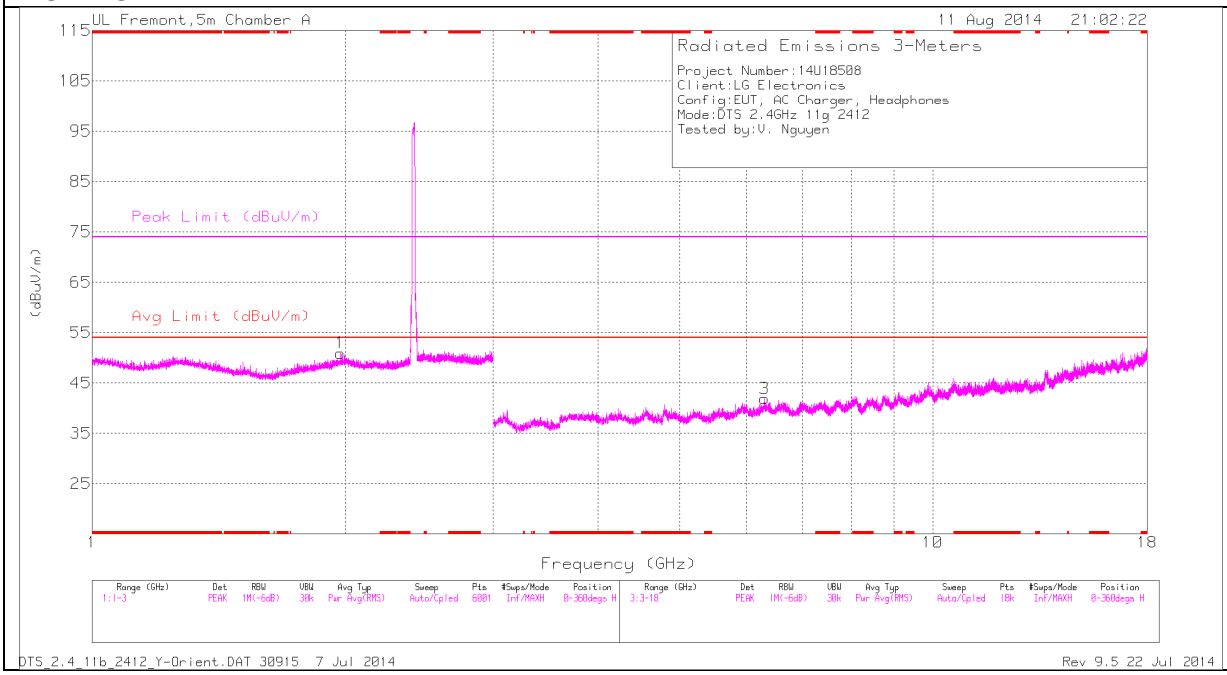
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

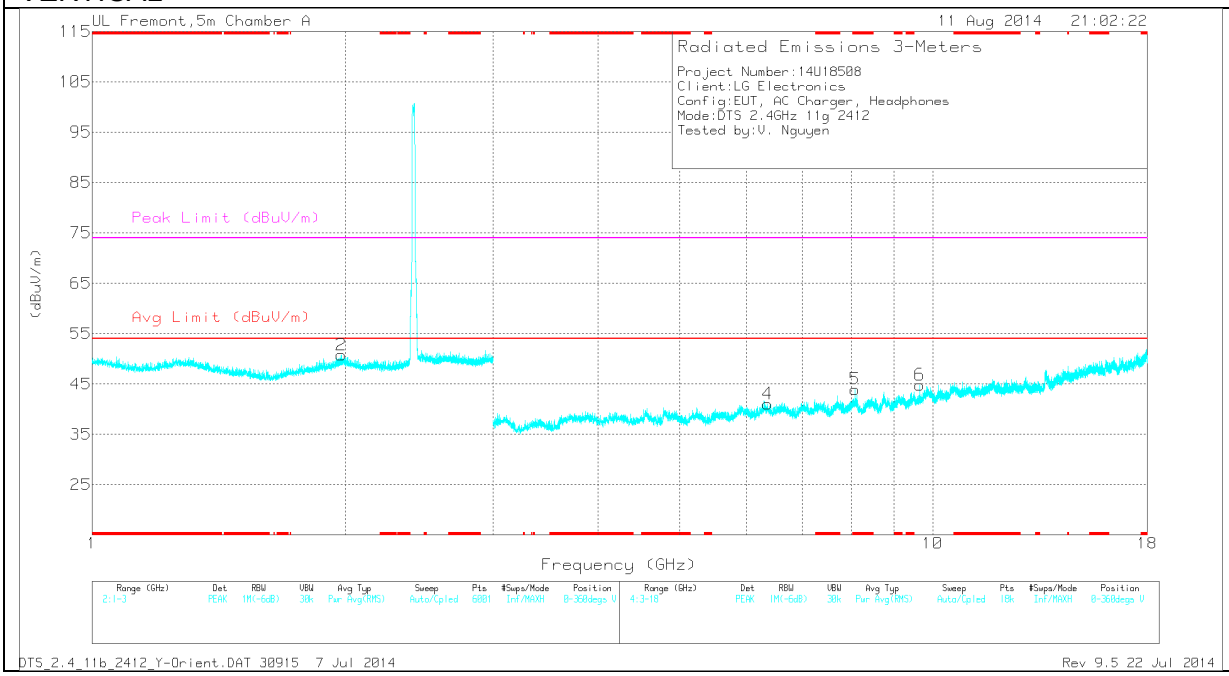
HARMONICS AND SPURIOUS EMISSIONS

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

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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	* 8.081	29.06	PK	35.5	-20.6	0	43.96	-	-	74	-30.04	0-360	201	V
1	1.973	36.16	PK	32	-17.2	0	50.96	-	-	-	-	0-360	201	H
2	1.979	35.98	PK	32	-17.2	0	50.78	-	-	-	-	0-360	201	V
3	6.306	29.08	PK	35.5	-22.7	0	41.88	-	-	-	-	0-360	100	H
4	6.366	29.36	PK	35.5	-23.8	0	41.06	-	-	-	-	0-360	100	V
6	9.648	29.32	PK	36.8	-21.3	0	44.82	-	-	-	-	0-360	100	V

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

PK - Peak detector

Radiated Emissions

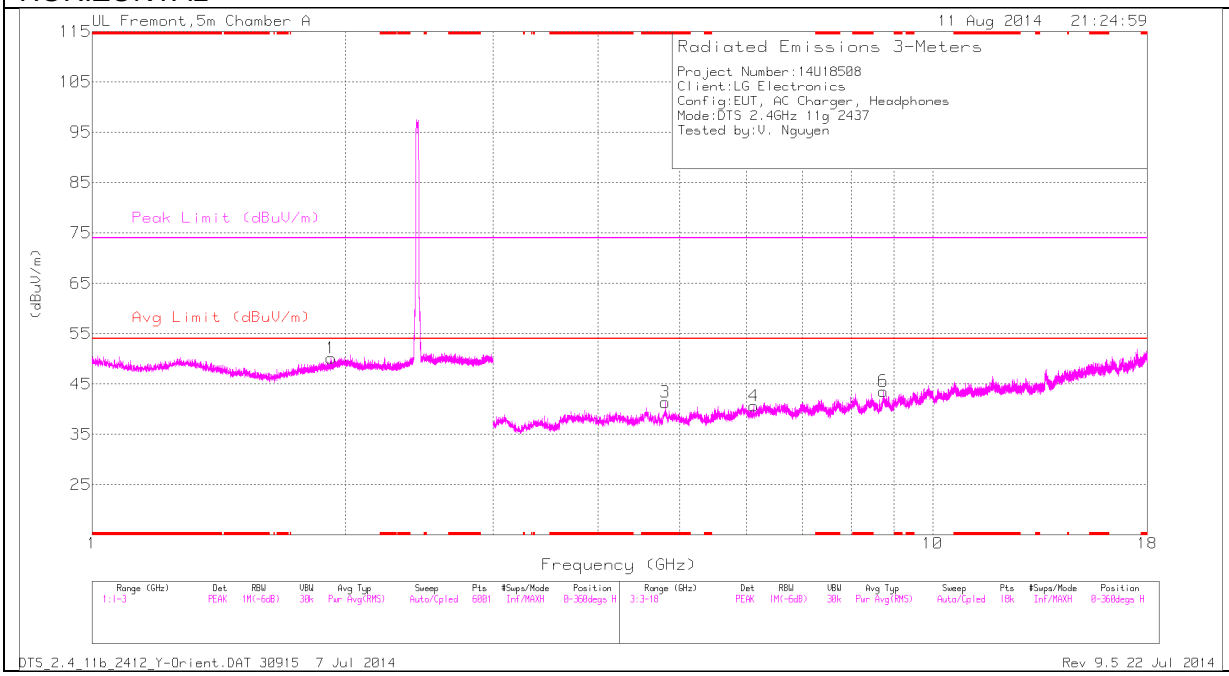
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 8.083	41.15	PK2	35.5	-20.5	0	56.15	-	-	74	-17.85	143	386	V
* 8.083	29.95	MAv1	35.5	-20.5	.21	45.16	54	-8.84	-	-	143	386	V

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

PK2 - KDB558074 Method: Maximum Peak

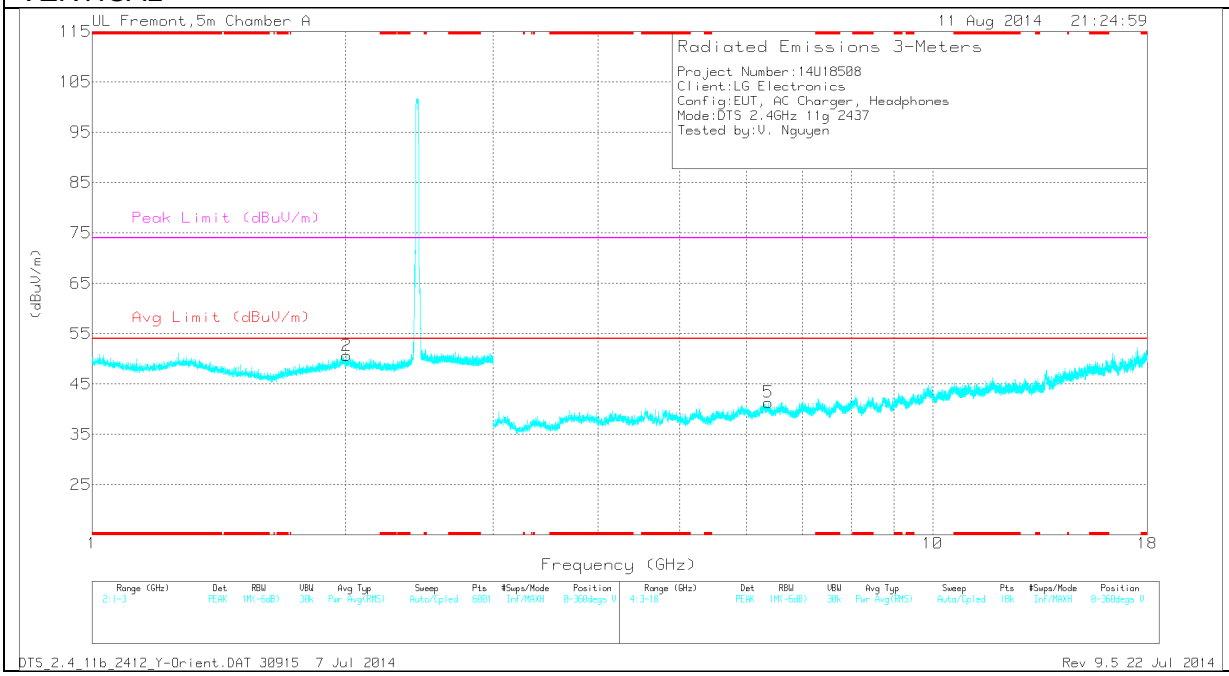
MAv1 - KDB558074 Option 1 Maximum RMS Average

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 T136 (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	* 4.807	32.16	PK	34	-24.8	0	41.36	-	-	74	-32.64	0-360	201	H
1	1.925	36.14	PK	31.8	-17.8	0	50.14	-	-	-	-	0-360	201	H
2	2.008	35.82	PK	32.1	-17.3	0	50.62	-	-	-	-	0-360	100	V
4	6.126	29.72	PK	35.4	-24.5	0	40.62	-	-	-	-	0-360	201	H
5	6.371	29.64	PK	35.5	-23.8	0	41.34	-	-	-	-	0-360	100	V
6	8.736	27.67	PK	35.8	-19.9	0	43.57	-	-	-	-	0-360	100	H

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

PK - Peak detector

Radiated Emissions

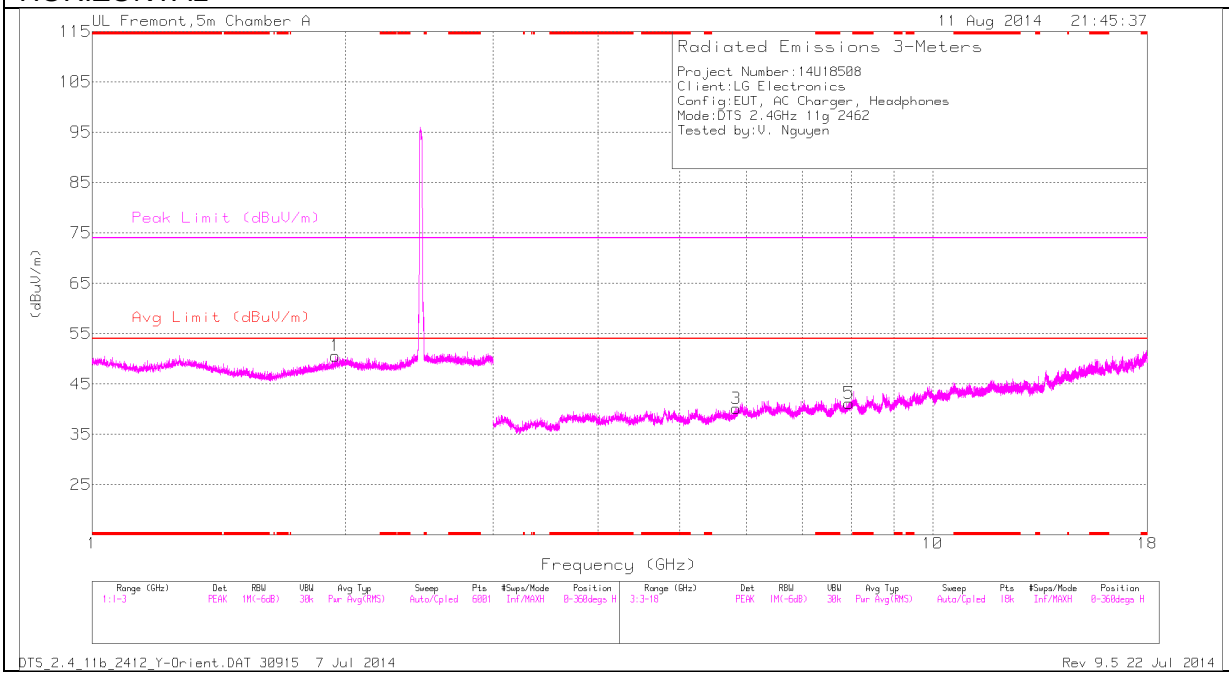
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.809	43.25	PK2	34	-24.8	0	52.45	-	-	74	-21.55	269	230	H
* 4.807	31.75	MAv 1	34	-24.8	.21	41.16	54	-12.84	-	-	269	230	H

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

PK2 - KDB558074 Method: Maximum Peak

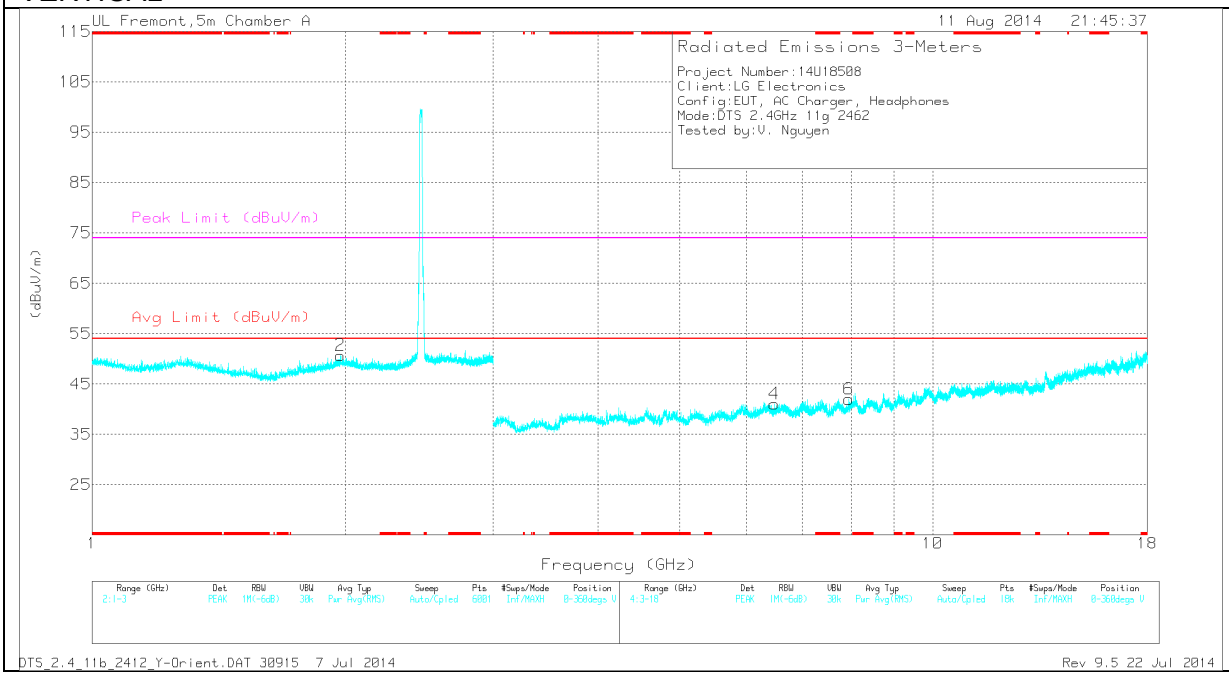
MAv1 - KDB558074 Option 1 Maximum RMS Average

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

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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	1.947	36.09	PK	31.9	-17.4	0	50.59	-	-	-	-	0-360	201	H
2	1.973	35.88	PK	32	-17.2	0	50.68	-	-	-	-	0-360	201	V
3	5.836	29.65	PK	34.8	-24.3	0	40.15	-	-	-	-	0-360	100	H
4	6.481	29.85	PK	35.5	-24.3	0	41.05	-	-	-	-	0-360	201	V
6	7.945	29.28	PK	35.5	-22.8	0	41.98	-	-	-	-	0-360	201	V
5	7.953	28.09	PK	35.5	-22.4	0	41.19	-	-	-	-	0-360	100	H

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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
1.973	42.96	PK2	32	-17.2	0	57.76	-	-	-	-	331	123	V
1.973	31.06	MAv1	32	-17.2	.21	46.07	-	-	-	-	331	123	V

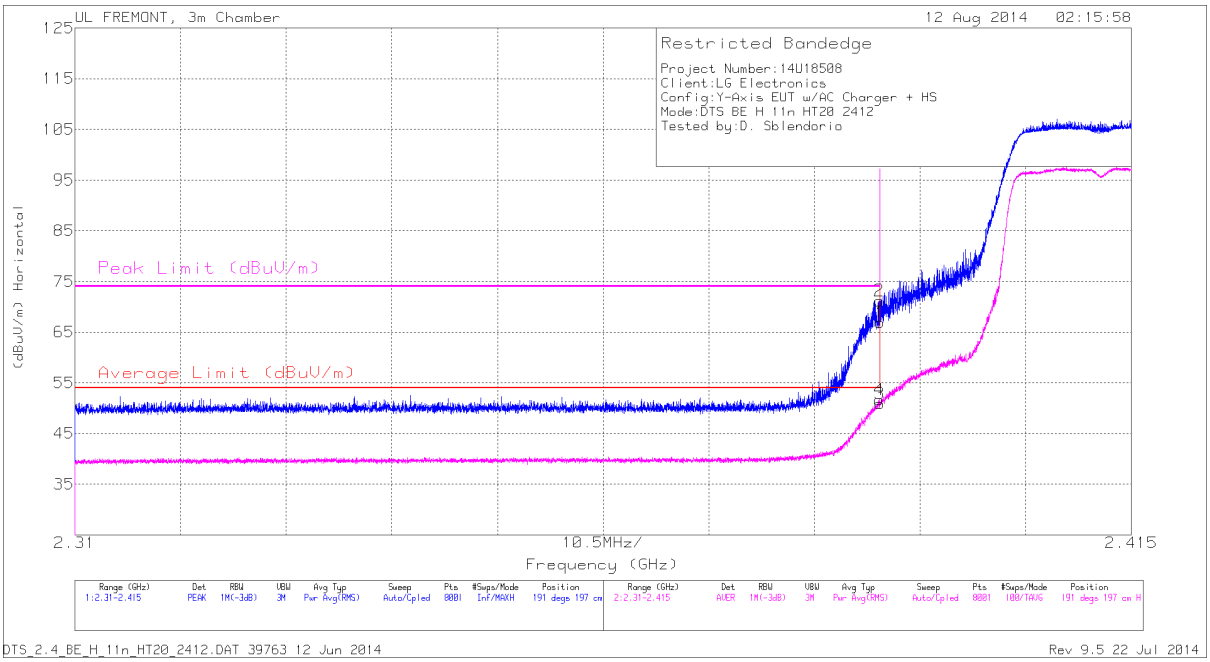
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

10.2.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL



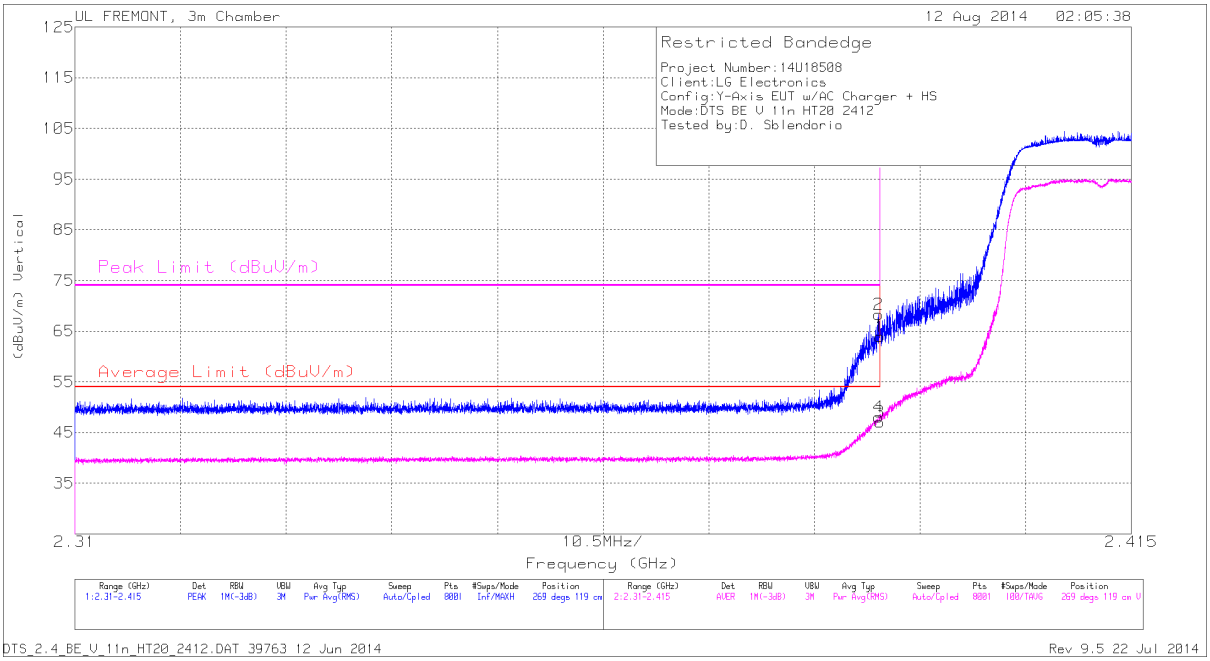
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.39	57.95	PK	32.1	-23.1	0	66.95	-	-	74	-7.05	191	197	H
2	2.39	62.21	PK	32.1	-23.1	0	71.21	-	-	74	-2.79	191	197	H
3	2.39	41.95	RMS	32.1	-23.1	.22	51.17	54	-2.83	-	-	191	197	H
4	2.39	42.69	RMS	32.1	-23.1	.22	51.91	54	-2.09	-	-	191	197	H

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

PK - Peak detector

RMS - RMS detection

VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	2.39	54.91	PK	32.1	-23.1	0	63.91	-	-	74	-10.09	269	119	V
2	2.39	59.27	PK	32.1	-23.1	0	68.27	-	-	74	-5.73	269	119	V
3	2.39	38.08	RMS	32.1	-23.1	.22	47.3	54	-6.7	-	-	269	119	V
4	2.39	39.06	RMS	32.1	-23.1	.22	48.28	54	-5.72	-	-	269	119	V

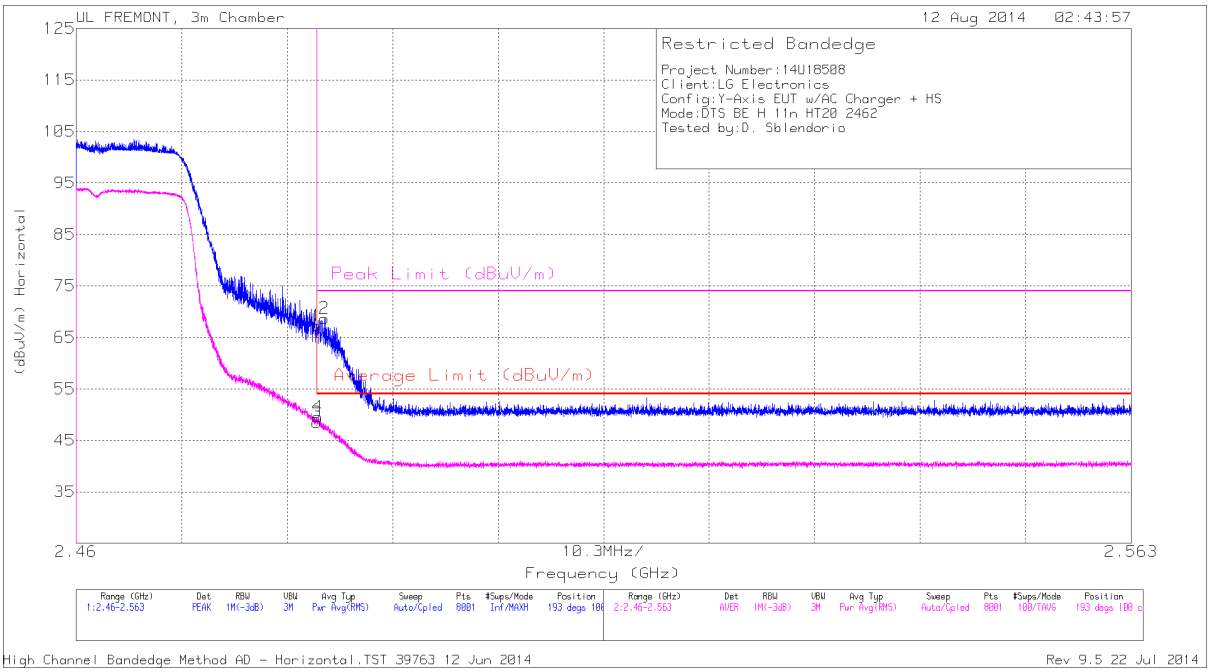
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL



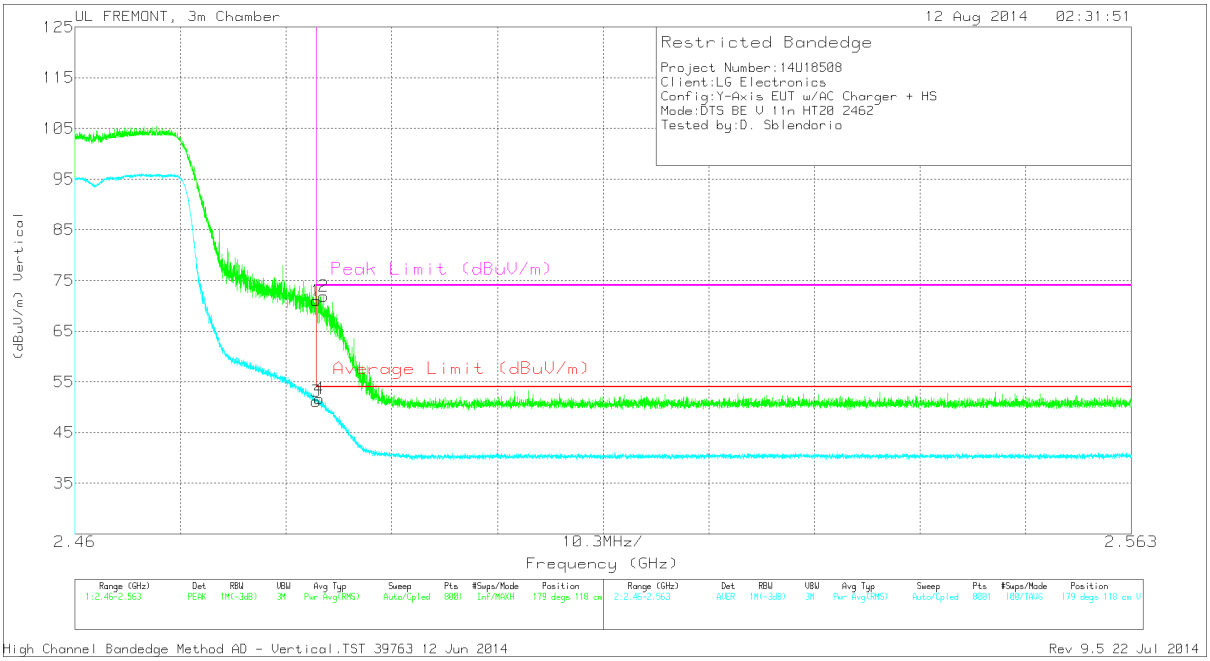
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.484	57.79	PK	32.3	-22.8	0	67.29	-	-	74	-6.71	193	100	H
2	2.484	59.18	PK	32.3	-22.8	0	68.68	-	-	74	-5.32	193	100	H
3	2.484	38.76	RMS	32.3	-22.8	.22	48.48	54	-5.52	-	-	193	100	H
4	2.484	39.84	RMS	32.3	-22.8	.22	49.56	54	-4.44	-	-	193	100	H

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

PK - Peak detector

RMS - RMS detection

VERTICAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	61.55	PK	32.3	-22.8	0	71.05	-	-	74	-2.95	179	118	V
2	2.484	62.44	PK	32.3	-22.8	0	71.94	-	-	74	-2.06	179	118	V
3	2.484	41.44	RMS	32.3	-22.8	.22	51.16	54	-2.84	-	-	179	118	V
4	2.484	41.93	RMS	32.3	-22.8	.22	51.65	54	-2.35	-	-	179	118	V

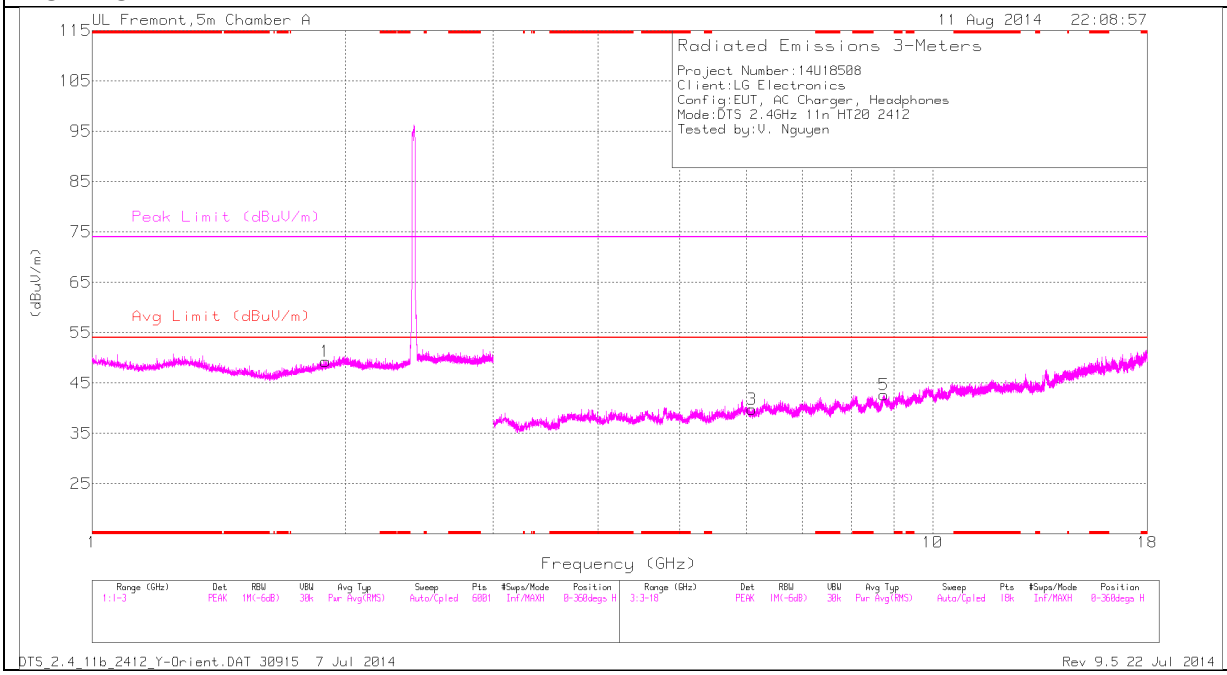
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

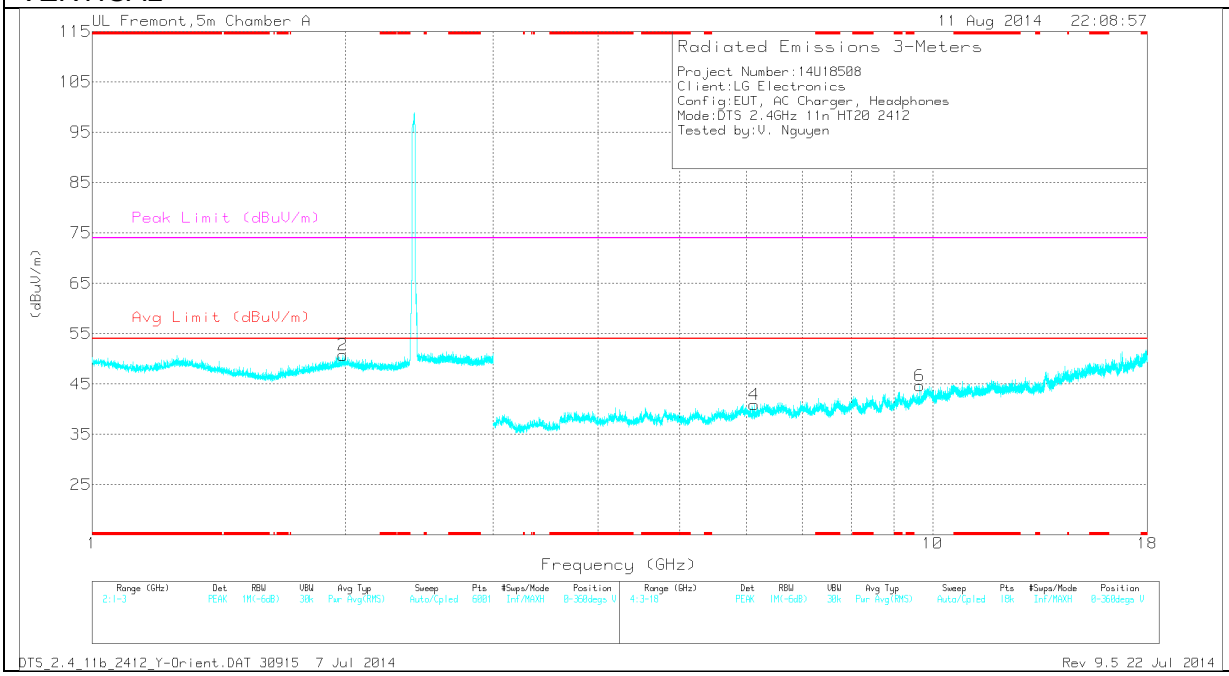
HARMONICS AND SPURIOUS EMISSIONS

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

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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	1.896	35.38	PK	31.6	-17.7	0	49.28	-	-	-	-	0-360	201	H
2	1.988	35.83	PK	32	-17.1	0	50.73	-	-	-	-	0-360	100	V
3	6.093	28.85	PK	35.4	-24.5	0	39.75	-	-	-	-	0-360	201	H
4	6.132	29.99	PK	35.4	-24.5	0	40.89	-	-	-	-	0-360	201	V
5	8.752	26.82	PK	35.8	-20	0	42.62	-	-	-	-	0-360	100	H
6	9.648	29.16	PK	36.8	-21.3	0	44.66	-	-	-	-	0-360	100	V

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

PK - Peak detector

Radiated Emissions

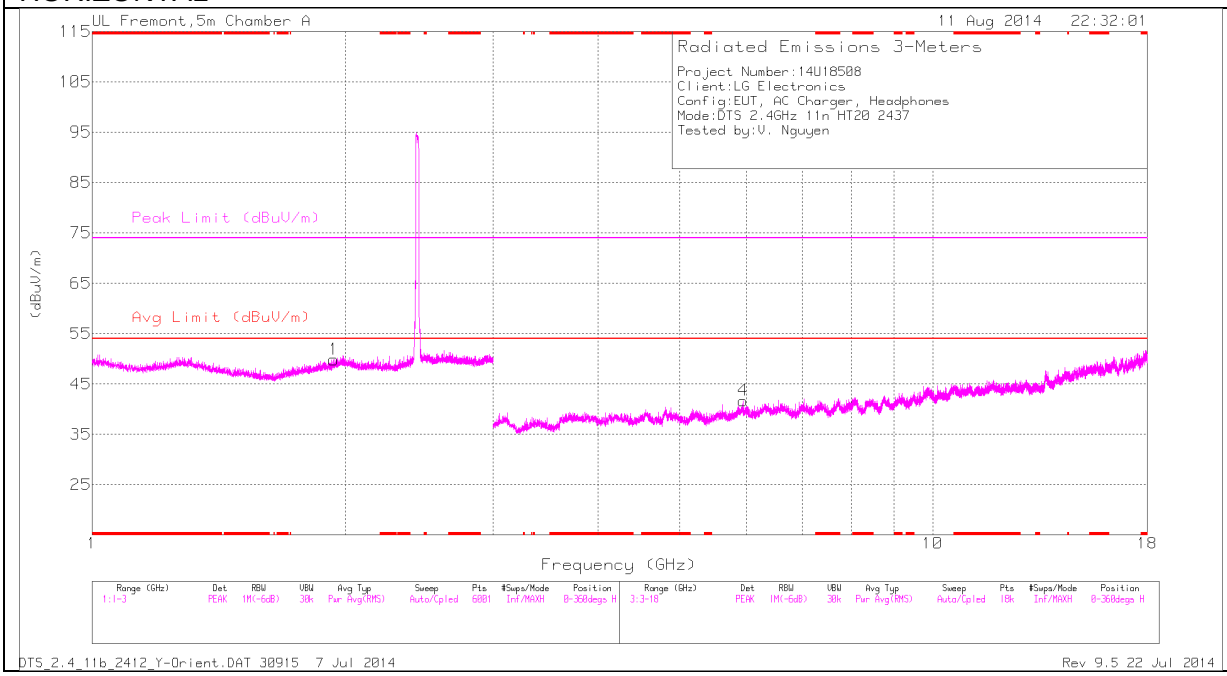
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.988	42.52	PK2	32	-17.1	0	57.42	-	-	-	-	109	349	V
1.989	31.05	MAv1	32	-17.1	.22	46.17	-	-	-	-	109	349	V

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

PK2 - KDB558074 Method: Maximum Peak

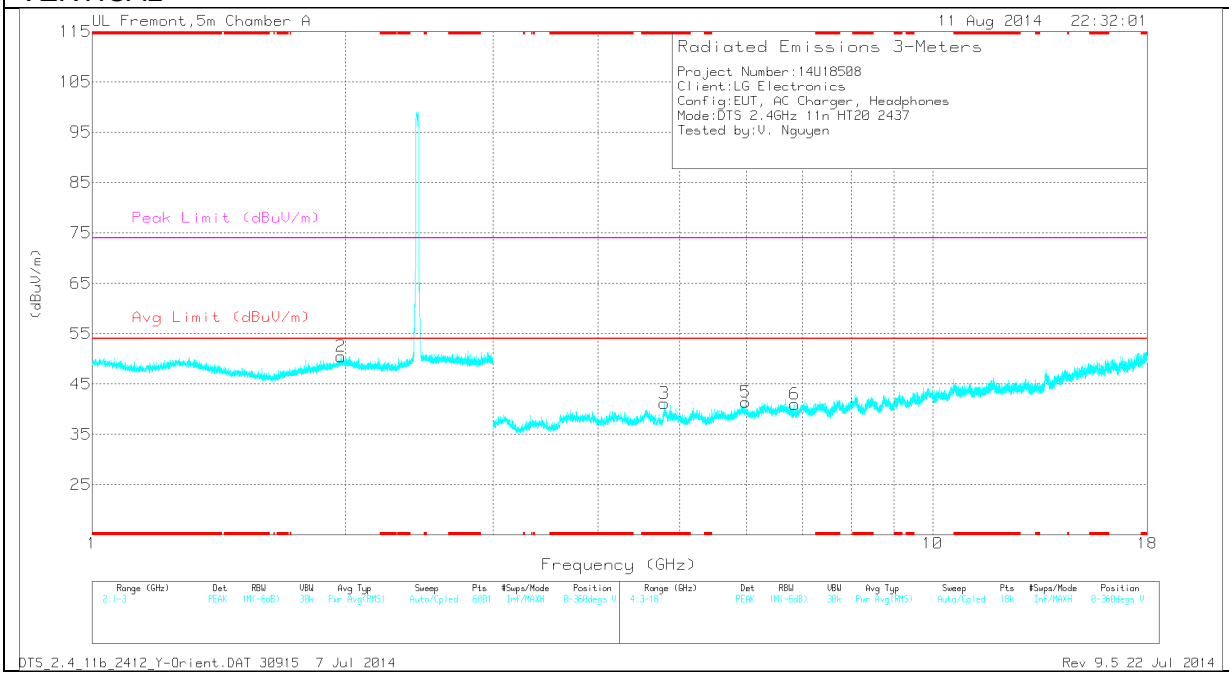
MAv1 - KDB558074 Option 1 Maximum RMS Average

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

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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	* 4.795	32.07	PK	34	-24.9	0	41.17	-	-	74	-32.83	0-360	201	V
1	1.939	35.55	PK	31.8	-17.5	0	49.85	-	-	-	-	0-360	201	H
2	1.979	35.68	PK	32	-17.2	0	50.48	-	-	-	-	0-360	100	V
4	5.947	29.92	PK	35.1	-23.3	0	41.72	-	-	-	-	0-360	201	H
5	5.992	29.71	PK	35.3	-23.6	0	41.41	-	-	-	-	0-360	201	V
6	6.849	29.48	PK	35.3	-23.8	0	40.98	-	-	-	-	0-360	201	V

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

PK - Peak detector

Radiated Emissions

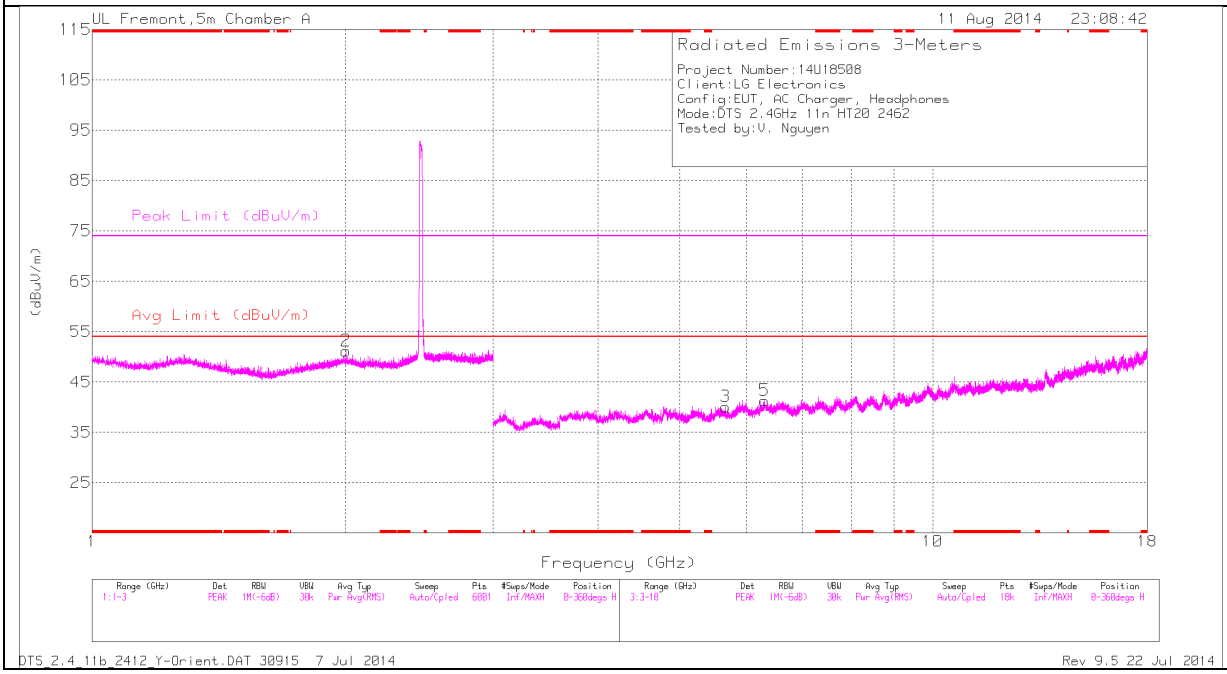
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.797	42.69	PK2	34	-24.8	0	51.89	-	-	74	-22.11	84	197	V
* 4.795	31.61	MAv 1	34	-24.9	.22	40.93	54	-13.07	-	-	84	197	V

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

PK2 - KDB558074 Method: Maximum Peak

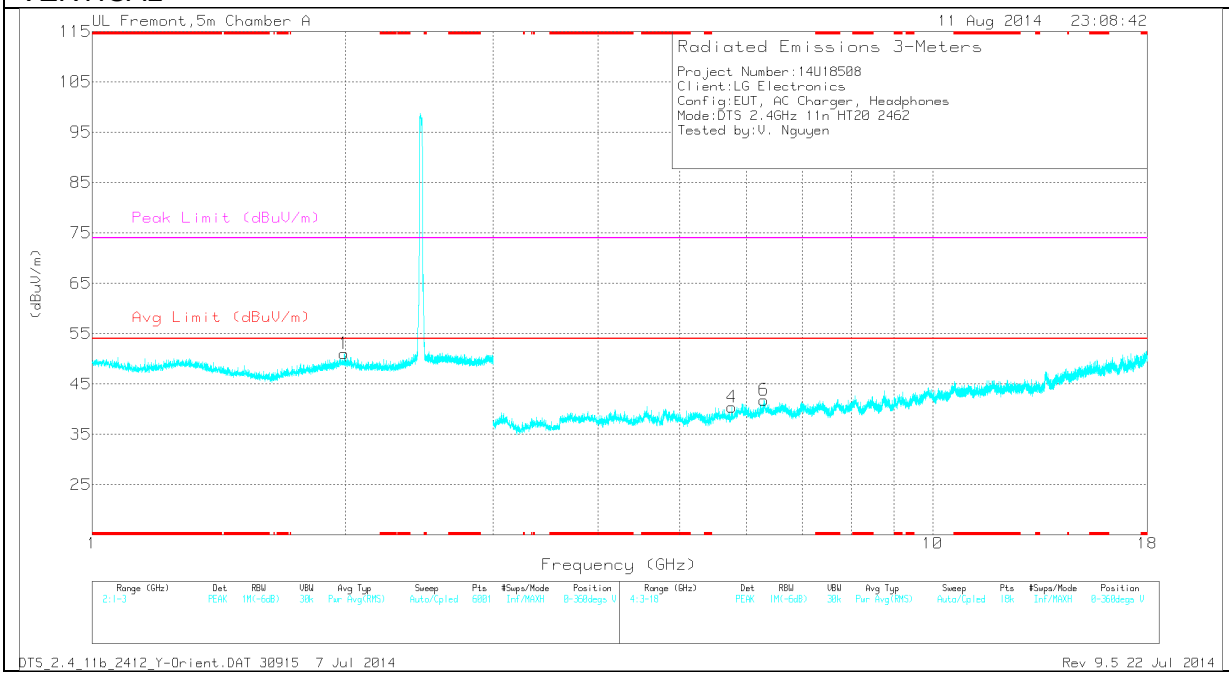
MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL
HORIZONTAL



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

HIGH CHANNEL
VERTICAL



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

HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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	1.996	36.15	PK	32.1	-17.2	0	51.05	-	-	-	-	0-360	100	V
2	2.005	36.38	PK	32.1	-17.3	0	51.18	-	-	-	-	0-360	100	H
3	5.667	30.09	PK	34.5	-24.5	0	40.09	-	-	-	-	0-360	201	H
4	5.77	31.22	PK	34.7	-25.5	0	40.42	-	-	-	-	0-360	100	V
6	6.302	28.93	PK	35.5	-22.6	0	41.83	-	-	-	-	0-360	100	V
5	6.313	28.42	PK	35.5	-22.6	0	41.32	-	-	-	-	0-360	100	H

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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
2.004	31.09	MAv1	32.1	-17.3	.22	46.11	-	-	-	-	112	185	H
2.005	42.68	PK2	32.1	-17.3	0	57.48	-	-	-	-	112	185	H

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

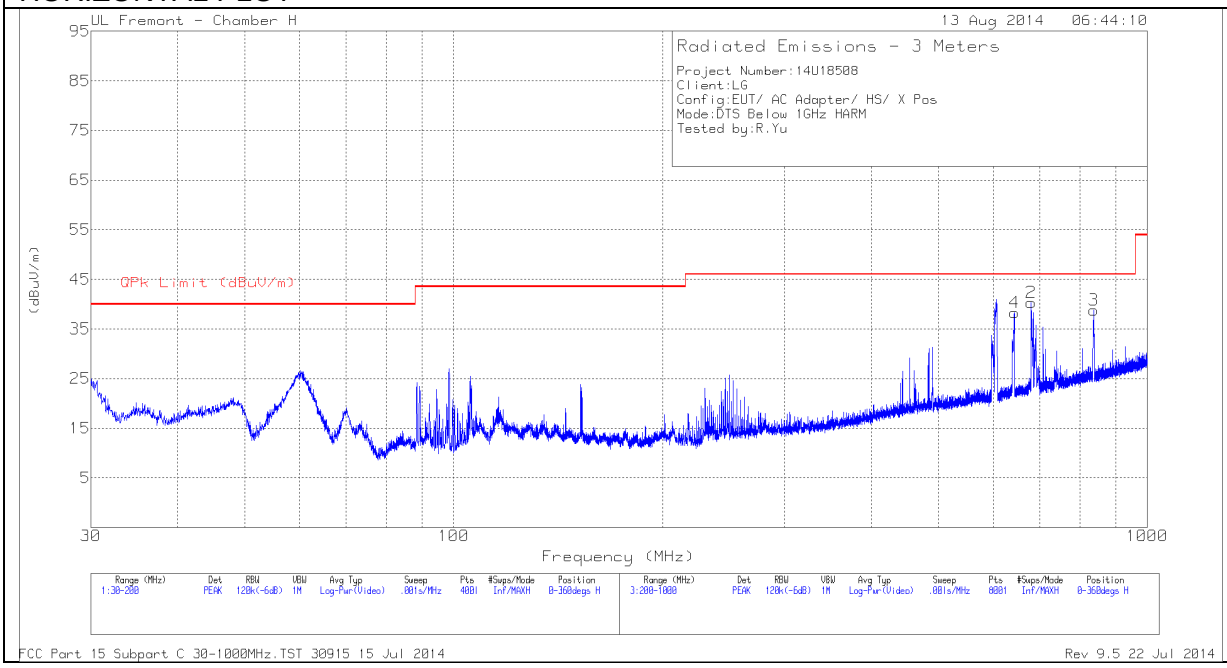
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

10.3. WORST-CASE BELOW 1 GHz

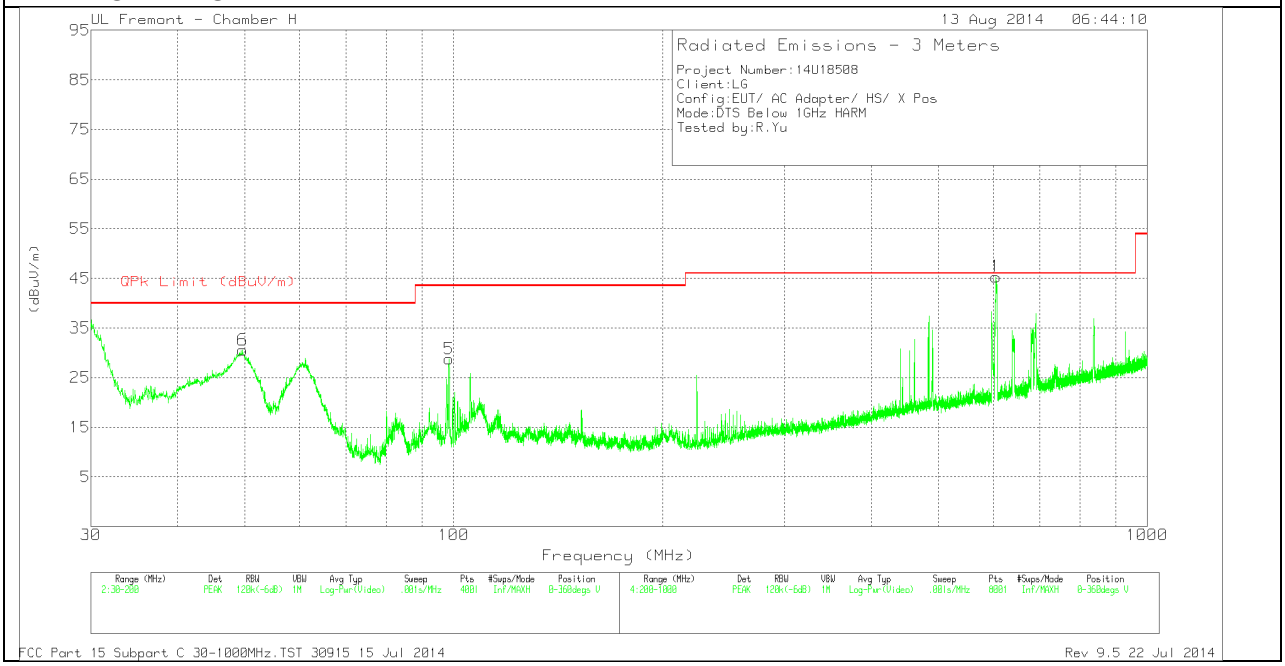
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

HORIZONTAL PLOT



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

VERTICAL PLOT



Below 1G Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	SS JB3 SN A051314-1	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	49.635	50.4	PK	10.8	-30.7	30.5	40	-9.5	0-360	100	V
5	98.4675	46.63	PK	12.2	-30.1	28.73	43.52	-14.79	0-360	100	V
1	605.3	50.94	PK	21.6	-27.2	45.34	46.02	-.68	0-360	201	V
4	643.1	42.85	PK	22.5	-27	38.35	46.02	-7.67	0-360	100	H
2	680.3	44.27	PK	22.8	-26.8	40.27	46.02	-5.75	0-360	401	H
3	836.5	40.12	PK	24.6	-25.9	38.82	46.02	-7.2	0-360	401	H

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

PK - Peak detector

Frequency (MHz)	Meter Reading (dBuV)	Det	SS JB3 SN A051314-1	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
605.5467	45.65	QP	21.6	-27.2	40.05	46.02	-5.97	360	202	V

11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

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 C63.4 2009.

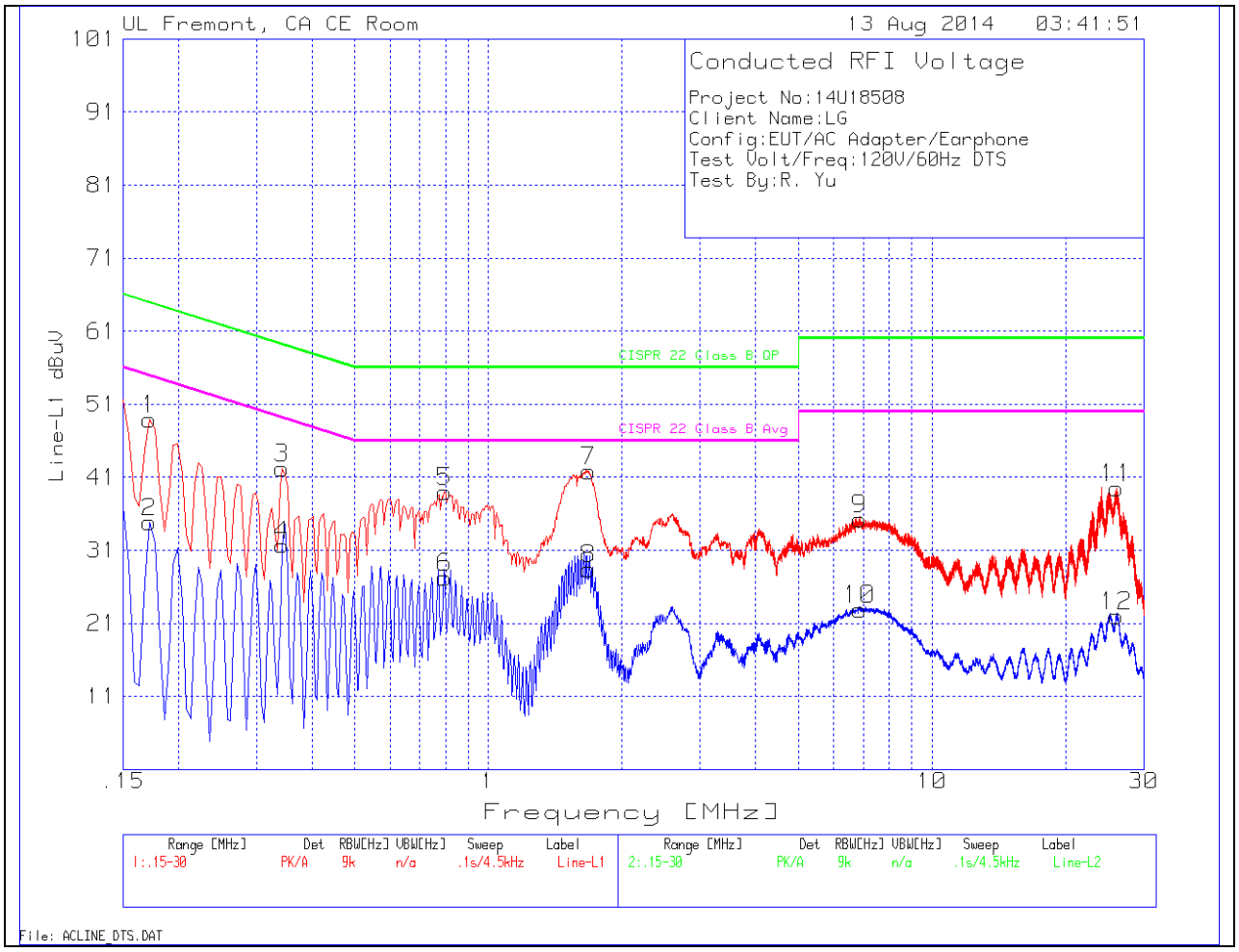
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT



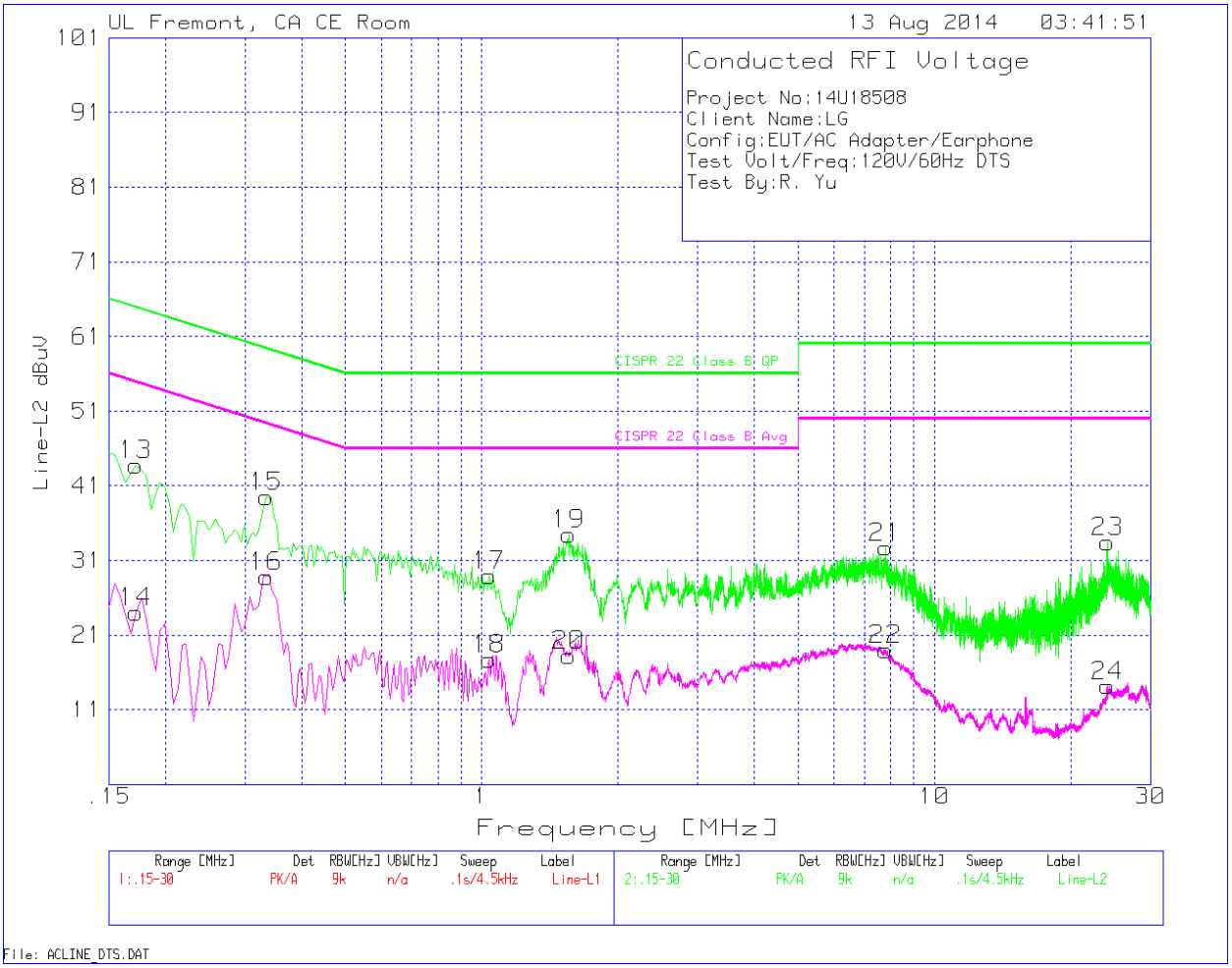
LINE 1 RESULTS

Line-L1 .15 - 30MHz

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1 (dB)	LC Cables 1&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
1	.1725	47.67	PK	1.2	0	48.87	64.8	-15.93	-	-
2	.1725	33.6	Av	1.2	0	34.8	-	-	54.8	-20
3	.3435	41.69	PK	.5	0	42.19	59.1	-16.91	-	-
4	.3435	31.2	Av	.5	0	31.7	-	-	49.1	-17.4
5	.798	38.7	PK	.3	0	39	56	-17	-	-
6	.798	26.91	Av	.3	0	27.21	-	-	46	-18.79
7	1.6845	41.47	PK	.2	.1	41.77	56	-14.23	-	-
8	1.6845	28.08	Av	.2	.1	28.38	-	-	46	-17.62
9	6.8775	34.9	PK	.2	.1	35.2	60	-24.8	-	-
10	6.8775	22.61	Av	.2	.1	22.91	-	-	50	-27.09
11	26.025	38.93	PK	.3	.3	39.53	60	-20.47	-	-
12	26.025	21.4	Av	.3	.3	22	-	-	50	-28

LINE 2 PLOT



LINE 2 RESULTS

Line-L2 .15 - 30MHz

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2 (dB)	LC Cables 2&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
13	.1725	42.51	PK	1.2	0	43.71	64.8	-21.09	-	-
14	.1725	22.81	Av	1.2	0	24.01	-	-	54.8	-30.79
15	.3345	38.95	PK	.5	0	39.45	59.3	-19.85	-	-
16	.3345	28.31	Av	.5	0	28.81	-	-	49.3	-20.49
17	1.0365	28.59	PK	.3	0	28.89	56	-27.11	-	-
18	1.0365	17.43	Av	.3	0	17.73	-	-	46	-28.27
19	1.554	34.15	PK	.2	.1	34.45	56	-21.55	-	-
20	1.554	17.92	Av	.2	.1	18.22	-	-	46	-27.78
21	7.7955	32.43	PK	.2	.1	32.73	60	-27.27	-	-
22	7.7955	18.68	Av	.2	.1	18.98	-	-	50	-31.02
23	24.144	32.94	PK	.3	.2	33.44	60	-26.56	-	-
24	24.144	13.67	Av	.3	.2	14.17	-	-	50	-35.83