



FCC CFR47 PART 15 SUBPART C

INDUSTRY CANADA RSS-210 ISSUE 8

CERTIFICATION TEST REPORT

FOR

SMART WATCH WITH 2.4 DTS b/g/n + BT & BLE

MODEL NUMBER: LG-W150, W150, LGW150

FCC ID: ZNFW150

IC: 2703C-W150

REPORT NUMBER: 15I20081-E3

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Prepared for

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NVLAP LAB CODE 200065-0

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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 & BLE
MODEL: LG-W150, W150, LGW150
SERIAL NUMBER: 1PRQQ (Radiated), 1PRH3 (Conducted)
DATE TESTED: FEBRUARY 15-19, 2015

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-210 ISSUE 8 Annex 8	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.

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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, RSS-GEN Issue 4, and RSS-210 Issue 8.

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:

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

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 18000 MHz	4.94 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a SMART WATCH WITH 2.4 DTS b/g/n + BT & 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)
2412 - 2462	802.11b	17.00	50.12
2412 - 2462	802.11g	14.00	25.12
2412 - 2462	802.11n HT20	13.00	19.95

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes metal antenna (using metal frame (Front) around the W150), with a maximum gain of -2.8 dBi.

5.4. WORST-CASE CONFIGURATION AND MODE

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

The fundamental of the EUT was investigated in three orthogonal orientations X, Y, Z it was determined that 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 HT20 mode: MCS0

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	LG	MCS-02WD	N/A	N/A
Charger	LG	SDT-330	N/A	N/A

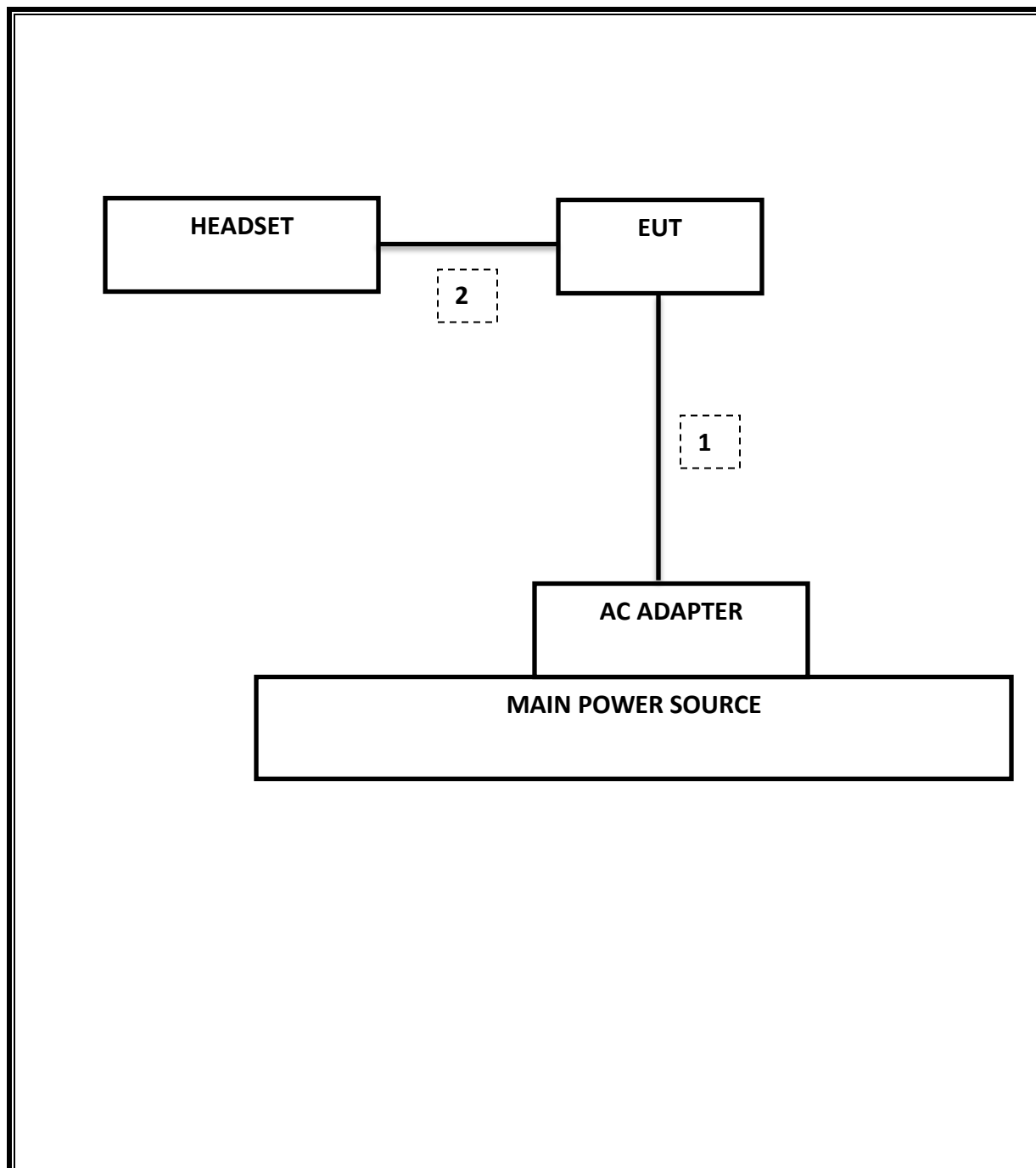
I/O CABLES

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

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	Manufacturer	Model	Asset	Cal Due
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/15
Spectrum Analyzer, 9KHz-40GHz	HP	8564E	C00986	04/01/15
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	02/21/15
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	03/06/15
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	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
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

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. 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) & 99%	>500KHz	Conducted	Pass	9.59 MHz
2.1051, 15.247 (d)	RSS-210 A8.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	-29.7 dBm
15.247	RSS-210 A8.4	TX conducted output power	<30dBm		Pass	17 dBm
15.247	RSS-210 A8.2	PSD	<8dBm		Pass	-4.2 dBm
15.207 (a)	RSS-GEN 8.8	AC Power Line conducted emissions	Section 10	Radiated	Pass	38.74 dBuV (AV)
15.205, 15.209	RSS-GEN 8.9	Radiated Spurious Emission	< 54dBuV/m		Pass	48.71 dBuV/m

9. ANTENNA PORT TEST RESULTS

9.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

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 to 100KHz, the VBW $\geq 3 \times$ 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	10.08	0.5
Mid	2437	9.59	0.5
High	2462	10.10	0.5
Worst		9.59	

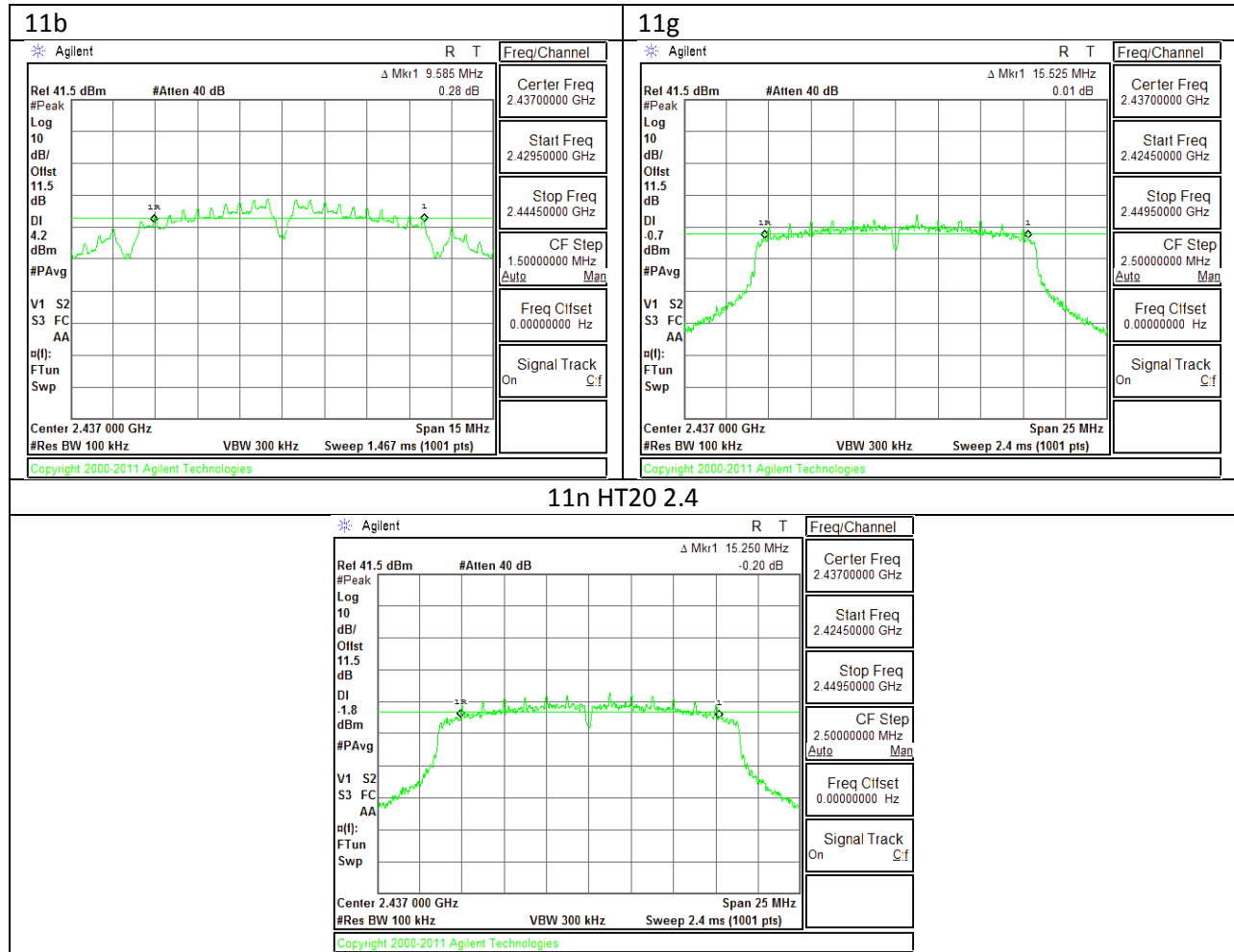
9.1.2. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	15.40	0.5
Mid	2437	15.53	0.5
High	2462	15.50	0.5
Worst		15.40	

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	15.45	0.5
Mid	2437	15.25	0.5
High	2462	15.45	0.5
Worst		15.25	

9.1.4. 6 dB BANDWIDTH MID CH PLOTS



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	13.73
Mid	2437	14.16
High	2462	14.16
Worst		14.16

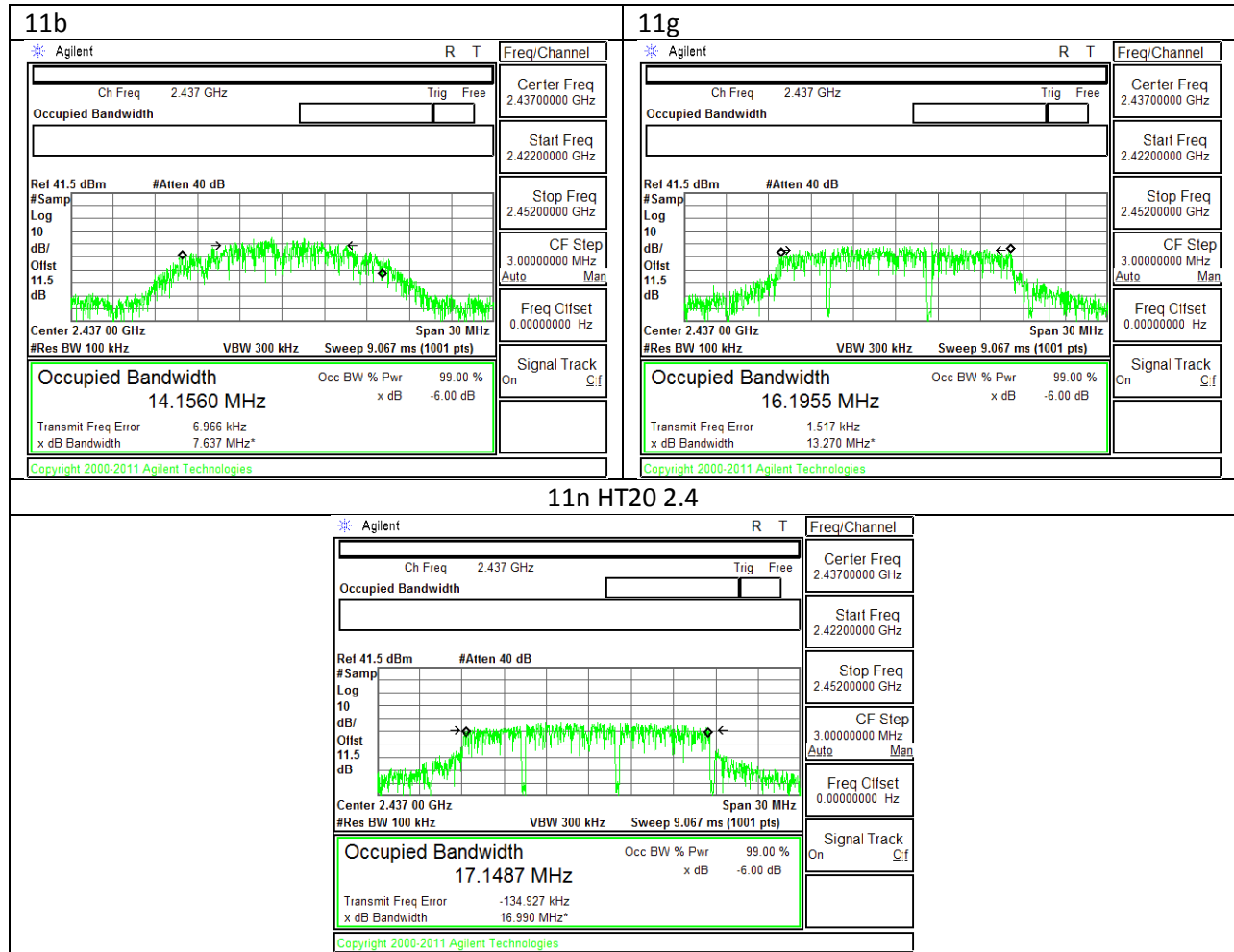
9.2.2. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.34
Mid	2437	16.20
High	2462	16.16
Worst		16.34

9.2.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.46
Mid	2437	17.15
High	2462	17.51
Worst		17.51

9.2.4. 99% BANDWIDTH MID CH PLOTS



9.3. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-210 A8.4

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

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	-2.80	30.00	30	36	30.00
Mid	2437	-2.80	30.00	30	36	30.00
High	2462	-2.80	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	2412	16.90	16.90	30.00	-13.10
Mid	2437	17.00	17.00	30.00	-13.00
High	2462	17.00	17.00	30.00	-13.00
Worst			17.00		

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	-2.80	30.00	30	36	30.00
Mid	2437	-2.80	30.00	30	36	30.00
High	2462	-2.80	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	2412	13.90	13.90	30.00	-16.10
Mid	2437	14.00	14.00	30.00	-16.00
High	2462	14.00	14.00	30.00	-16.00
Worst			14.00		

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	-2.80	30.00	30	36	30.00
Mid	2437	-2.80	30.00	30	36	30.00
High	2462	-2.80	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	2412	12.90	12.90	30.00	-17.10
Mid	2437	13.00	13.00	30.00	-17.00
High	2462	13.00	13.00	30.00	-17.00
Worst			13.00		

9.4. PSD

LIMITS

FCC §15.247

IC RSS-210 A8.2

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

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	-4.17	8.0	-12.2
Mid	2437	-12.38	8.0	-20.4
High	2462	-12.28	8.0	-20.3

9.4.2. 802.11g MODE IN THE 2.4 GHz BAND

PSD Results

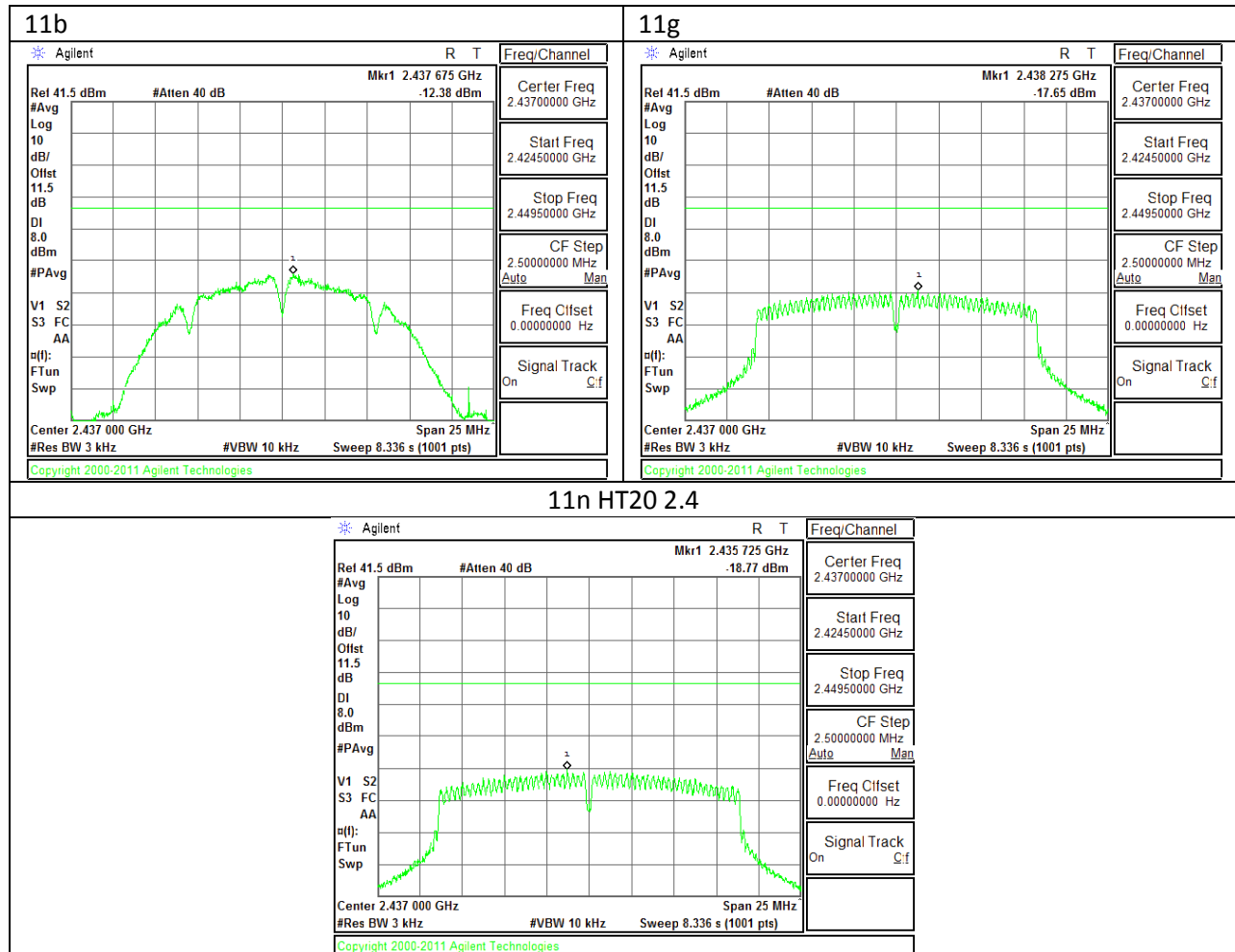
Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-18.08	8.0	-26.1
Mid	2437	-17.65	8.0	-25.7
High	2462	-17.88	8.0	-25.9

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	-19.36	8.0	-27.4
Mid	2437	-18.77	8.0	-26.8
High	2462	-19.04	8.0	-27.0

9.4.4. PSD Chain 0 MID CH PLOTS



9.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

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.

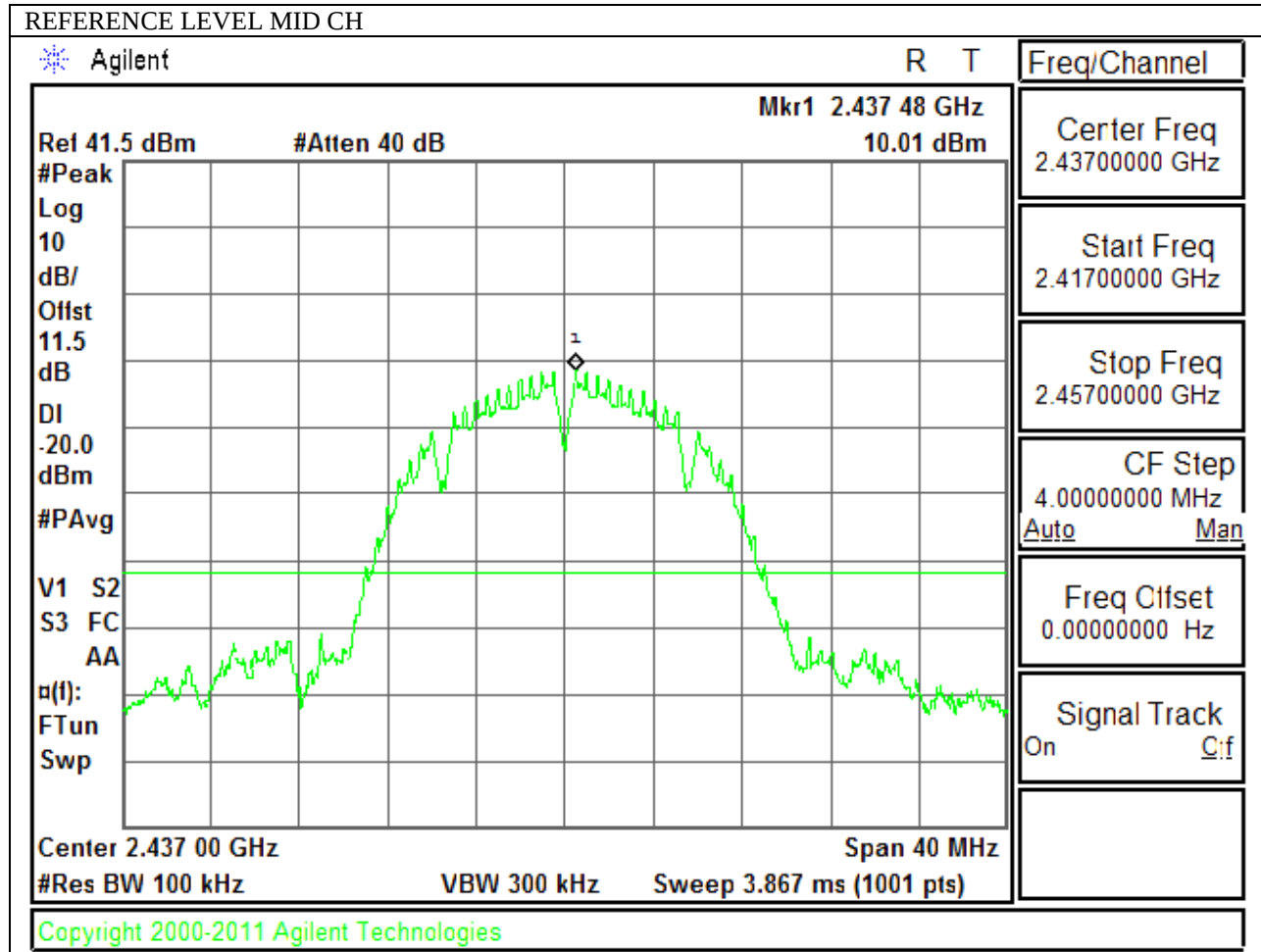
TEST PROCEDURE

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.

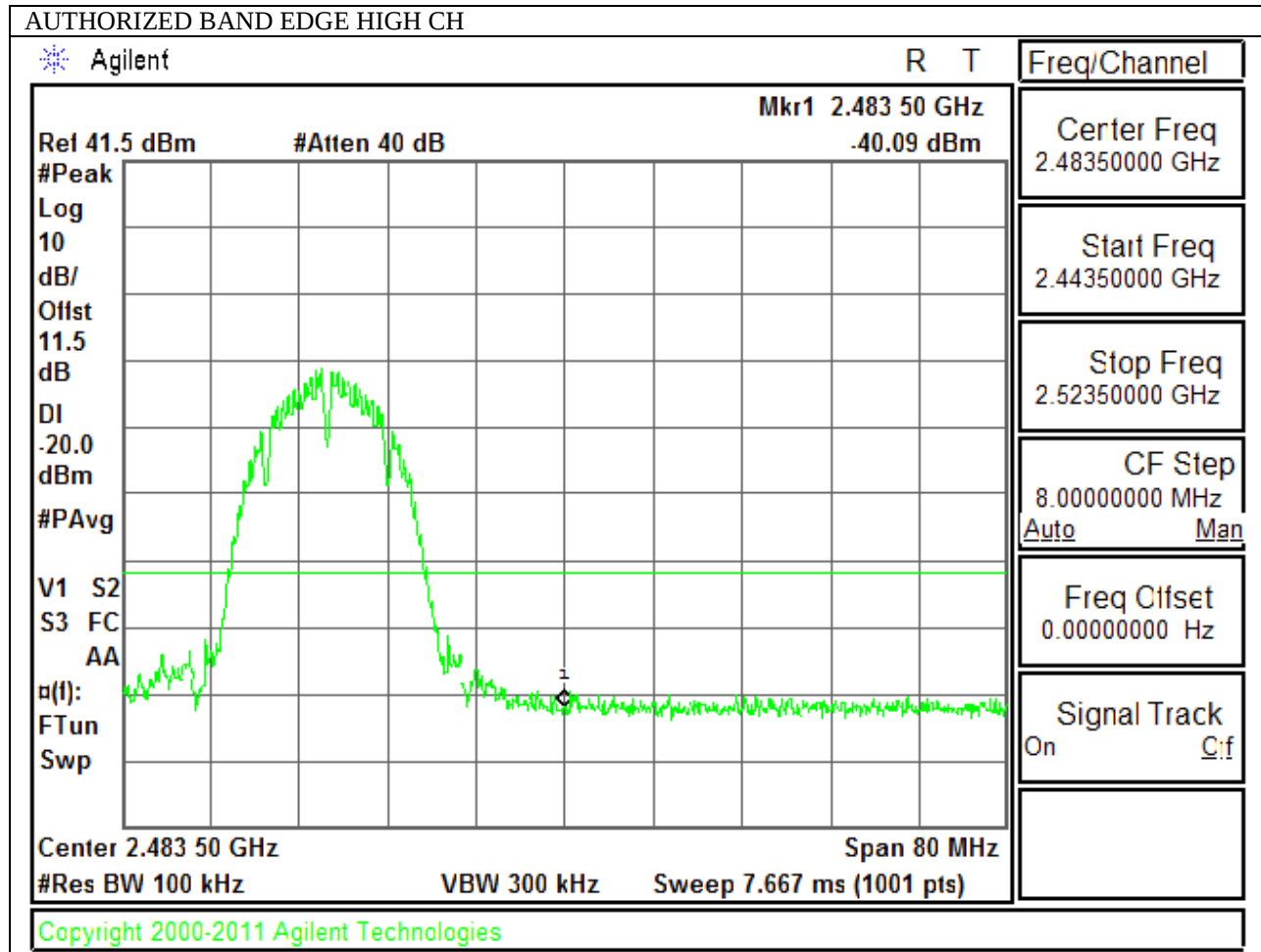
RESULTS

9.5.1. 802.11b MODE IN THE 2.4 GHz BAND

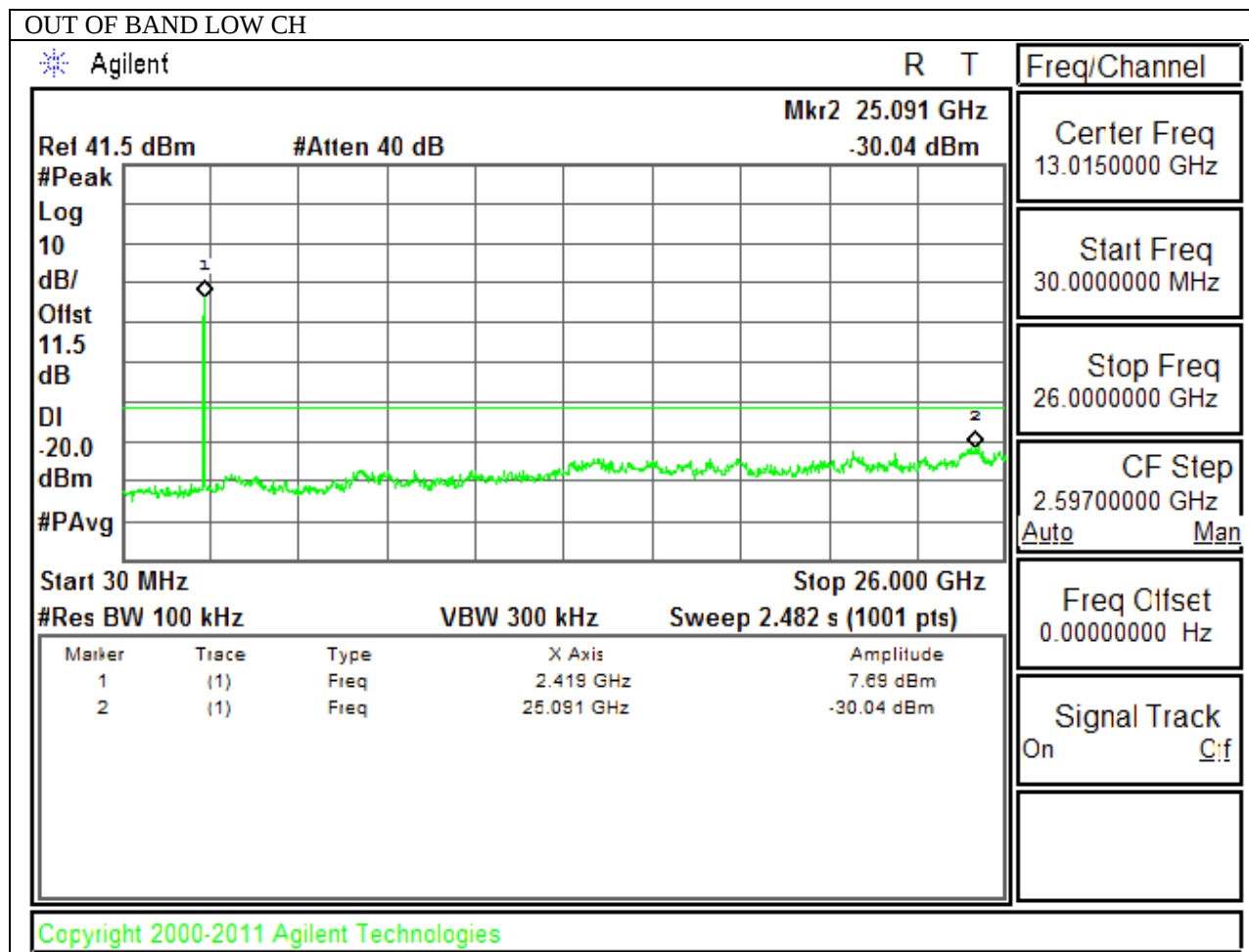
IN-BAND REFERENCE LEVEL

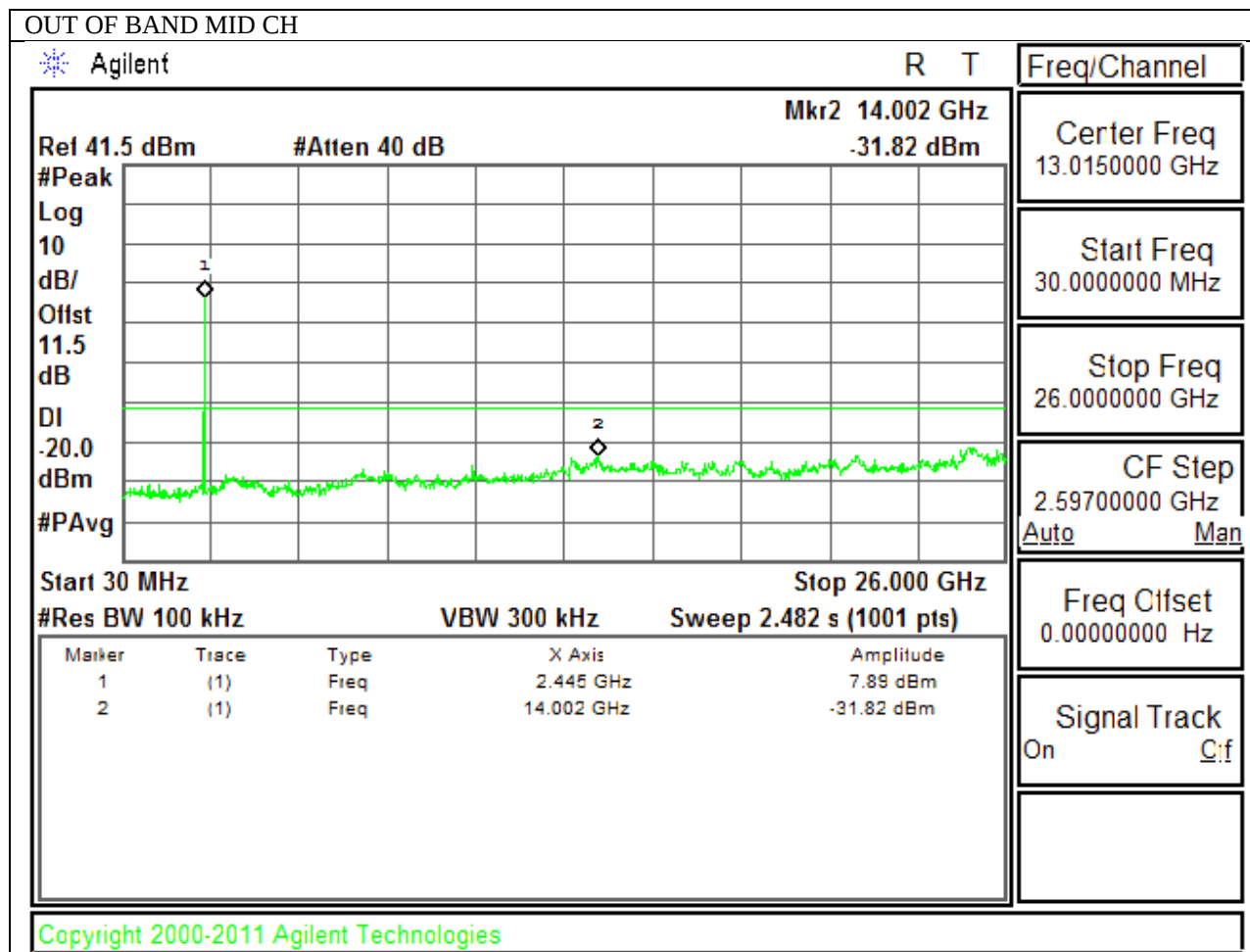


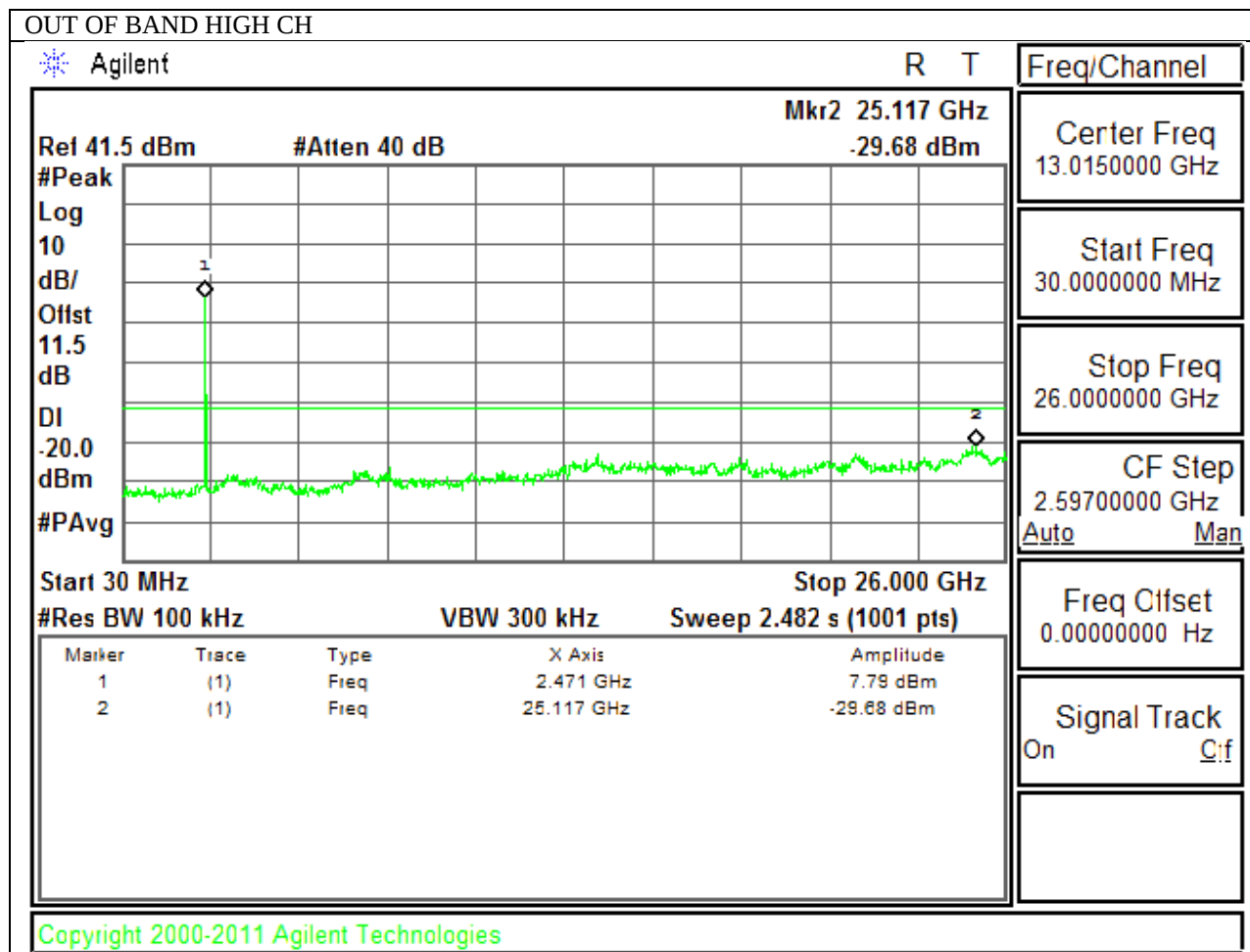
HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS

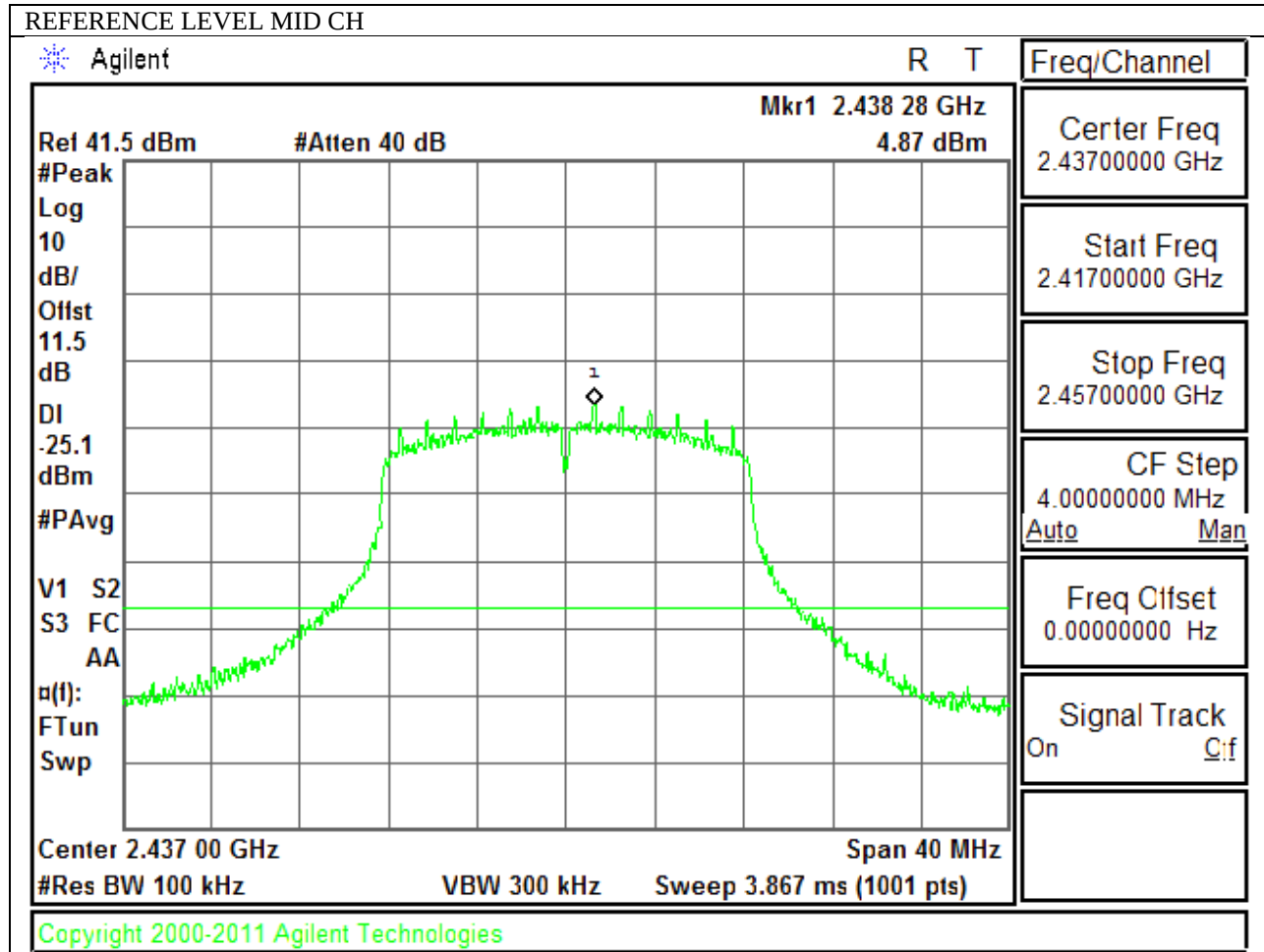




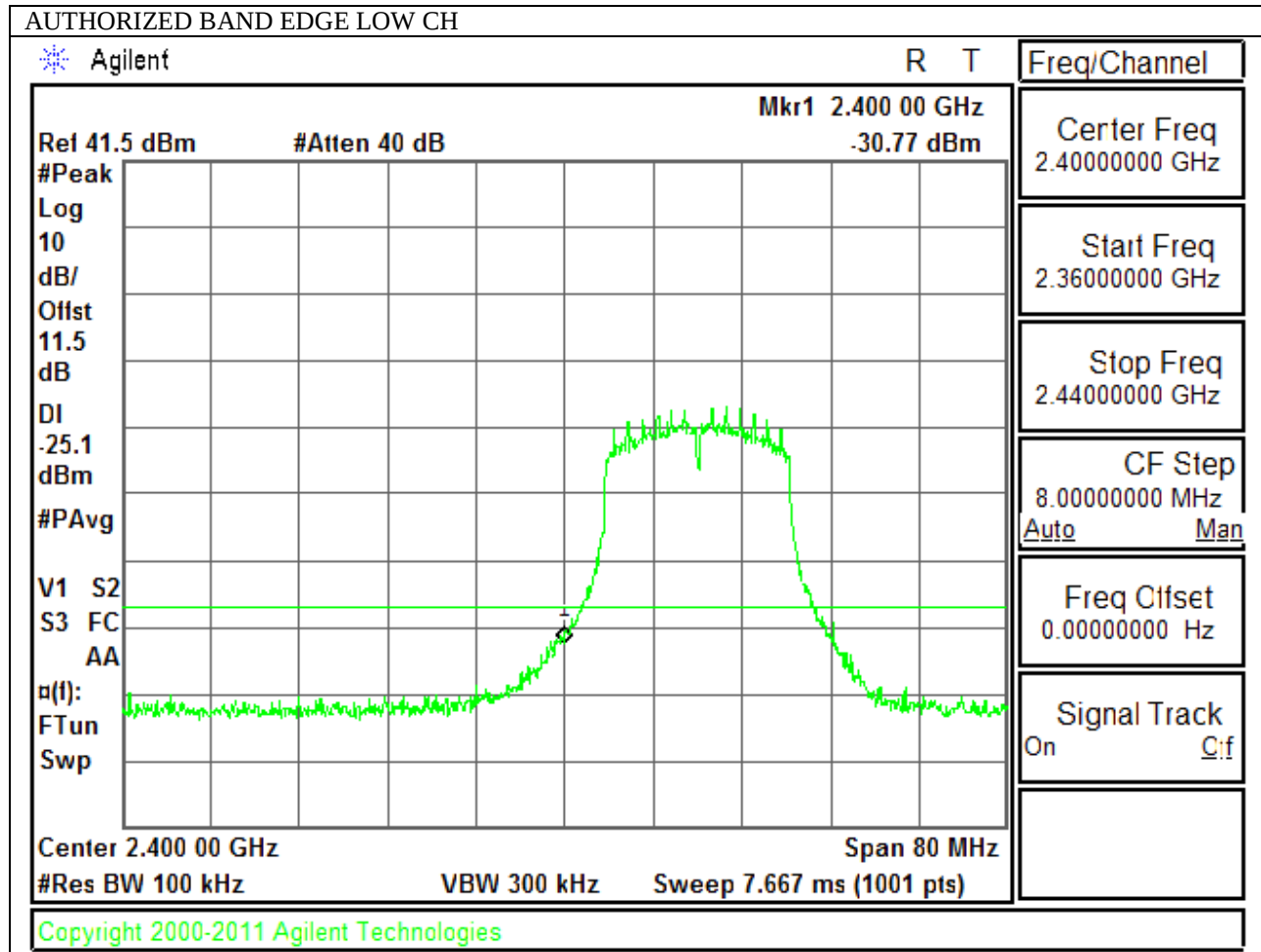


9.5.2. 802.11g MODE IN THE 2.4 GHz BAND

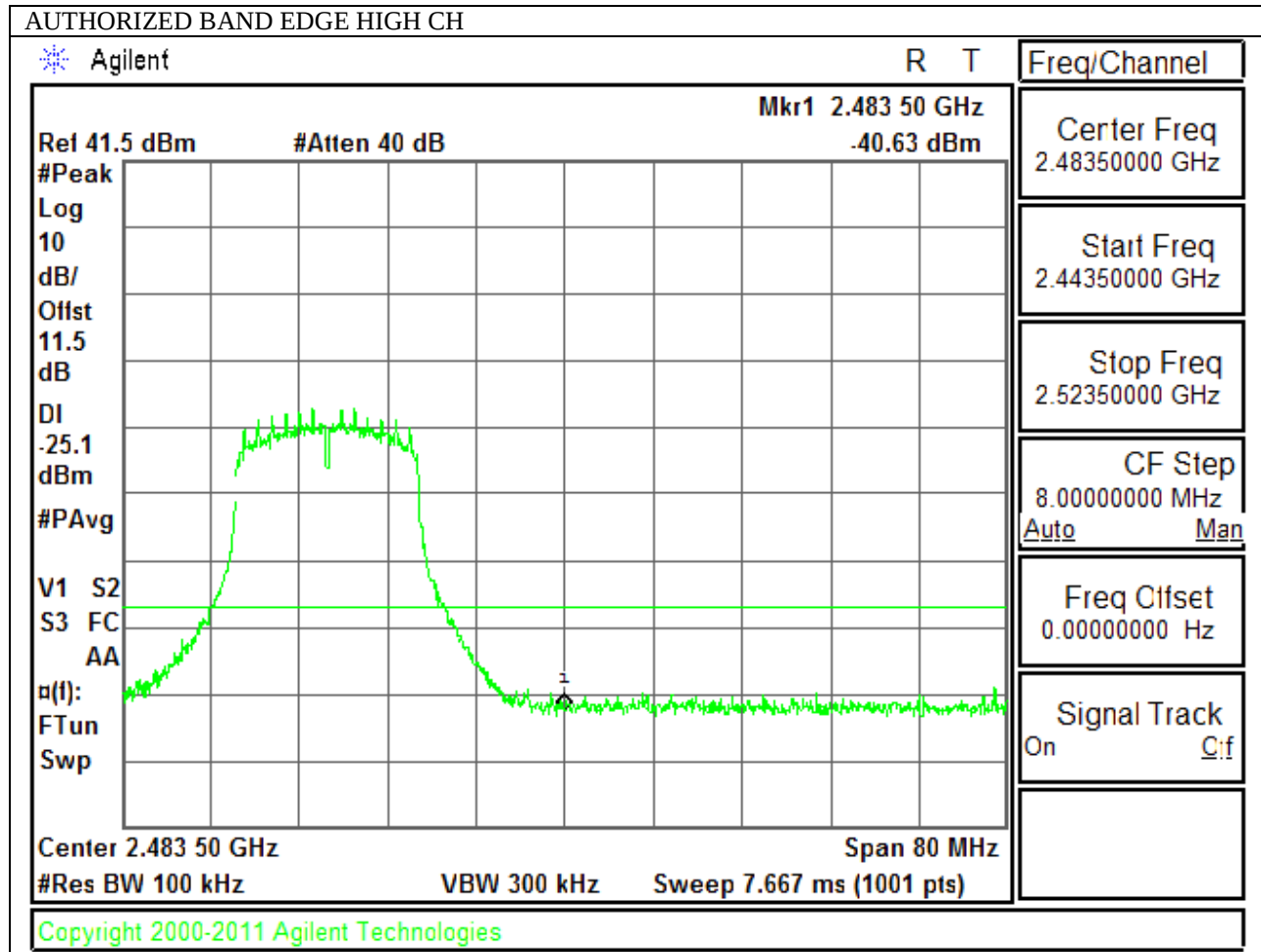
IN-BAND REFERENCE LEVEL



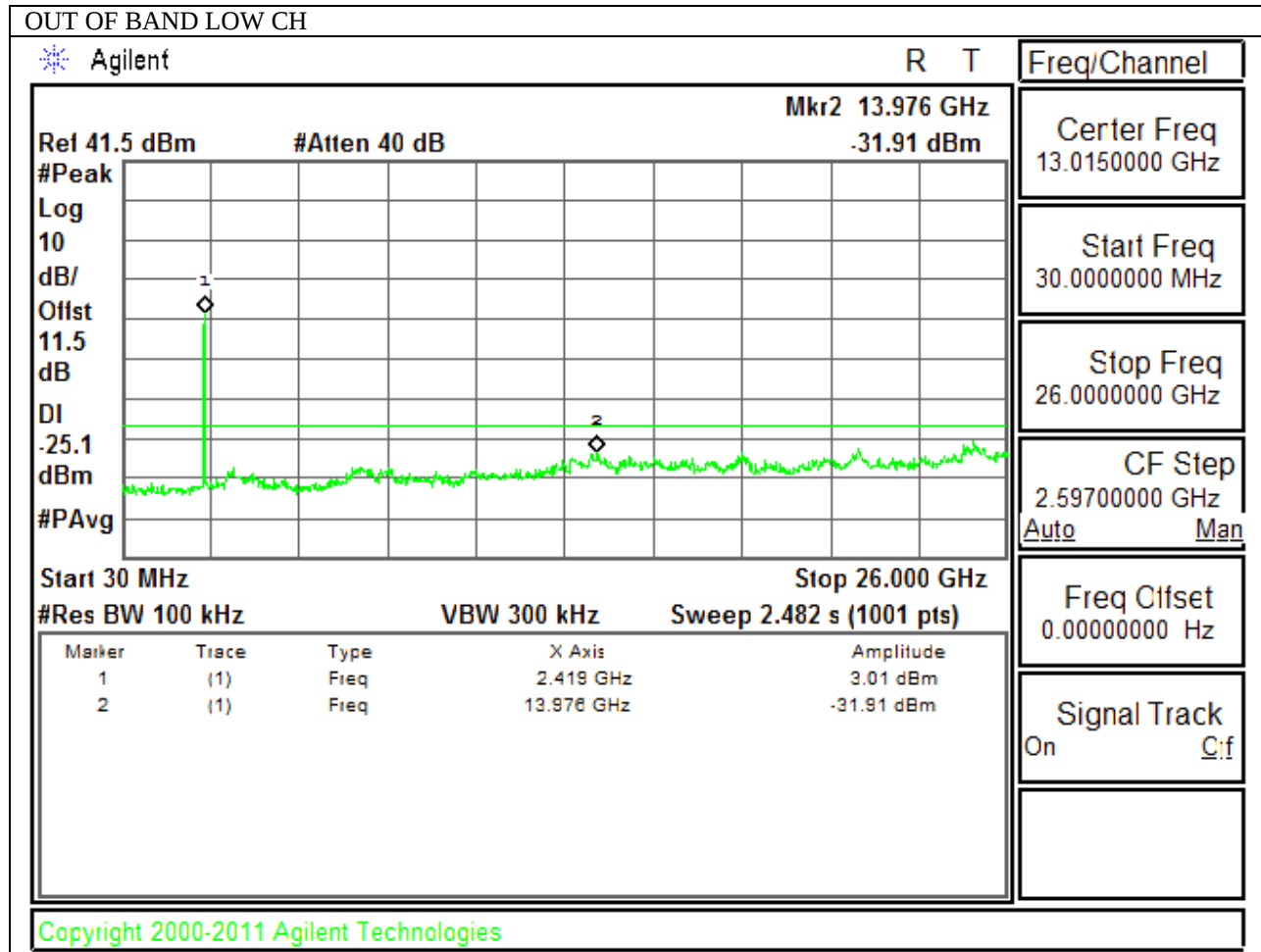
LOW CHANNEL BANDEDGE

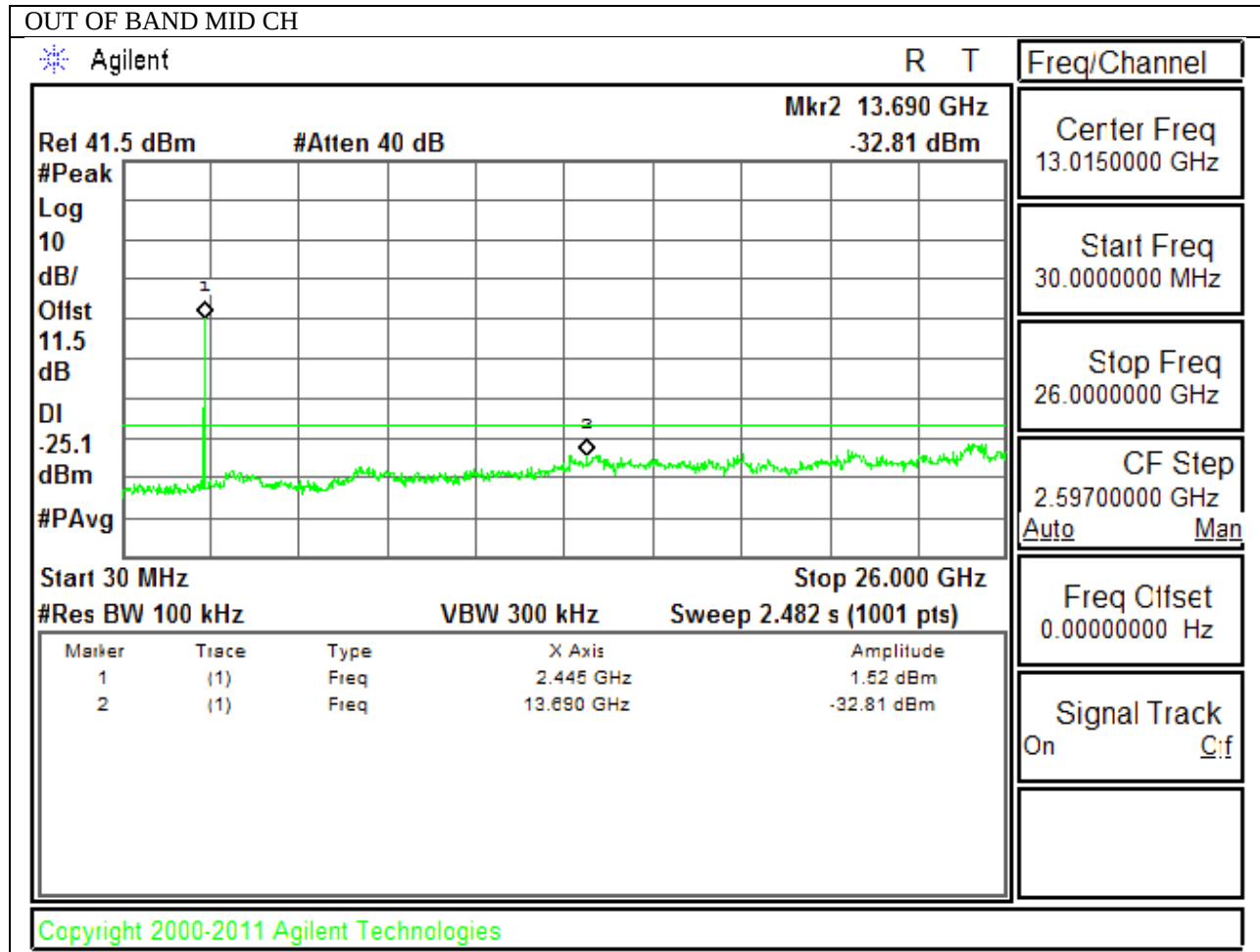


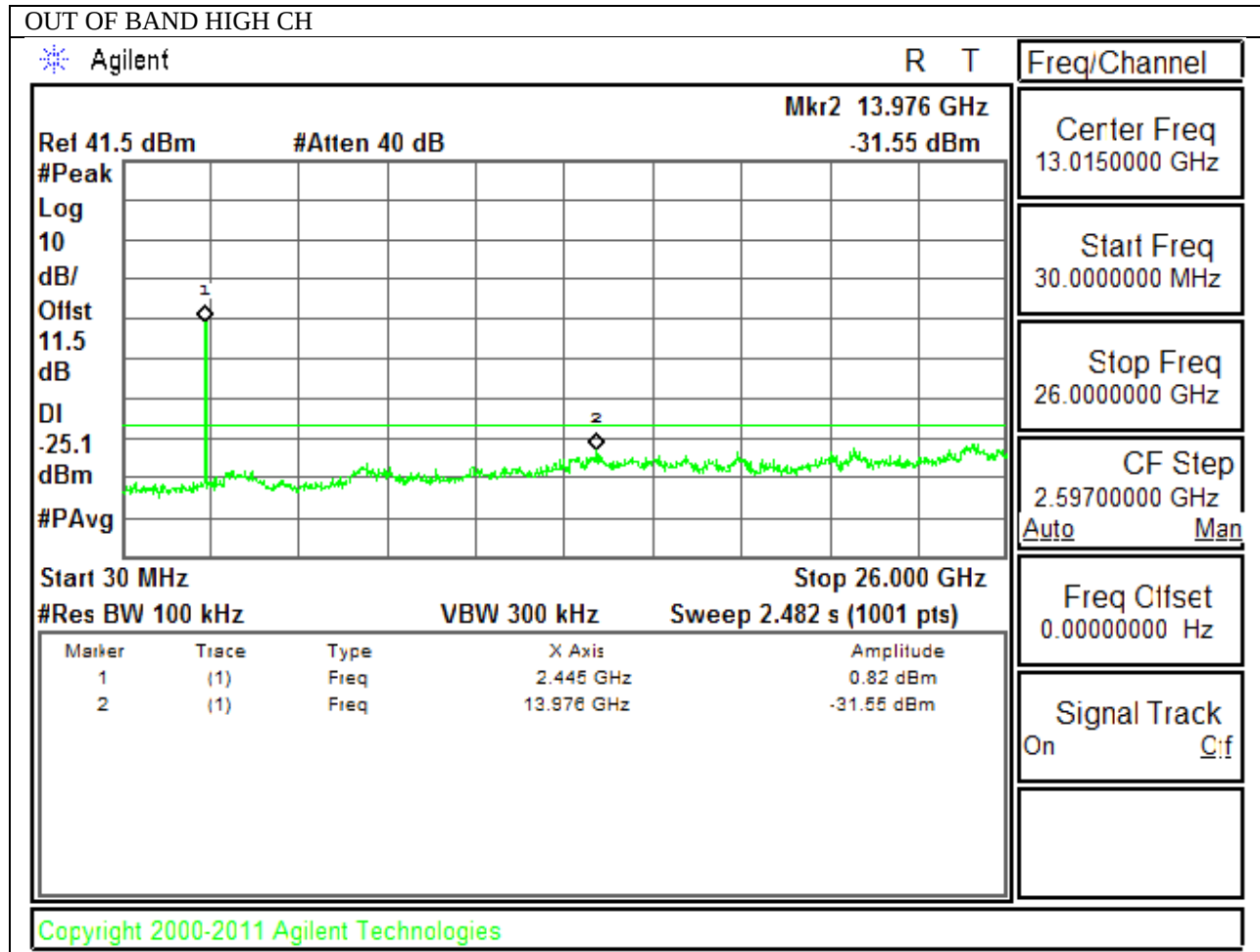
HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS

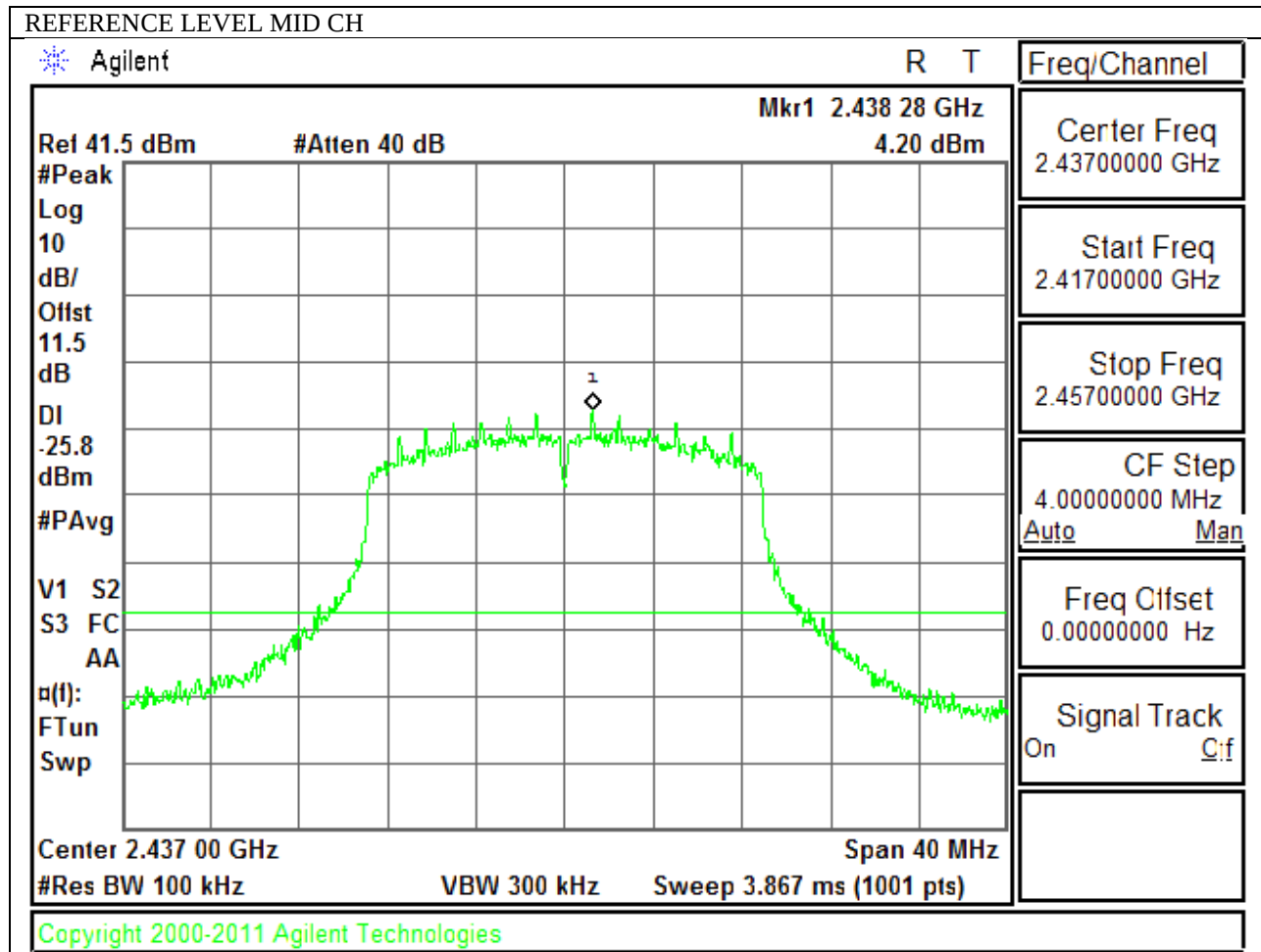




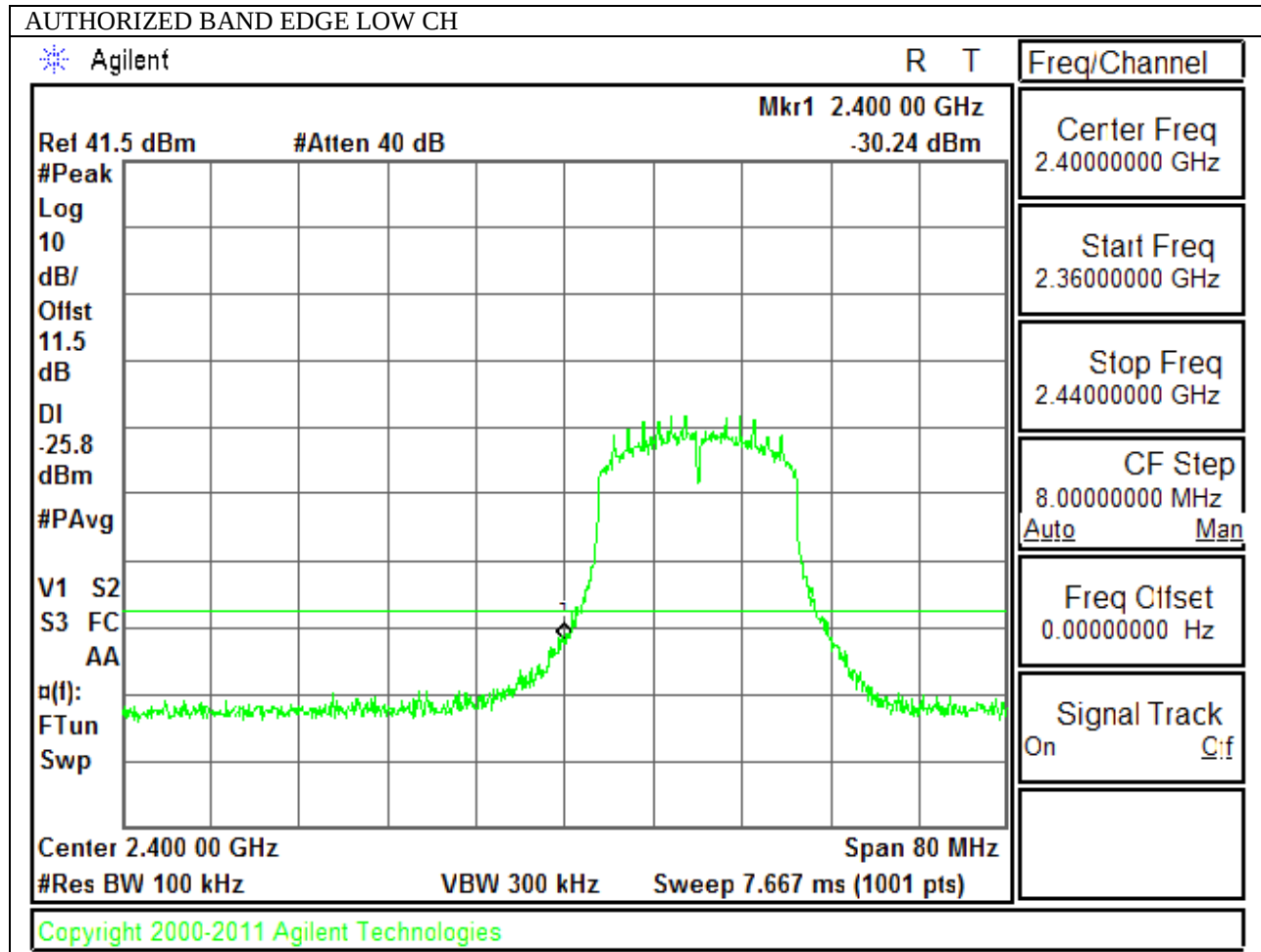


9.5.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

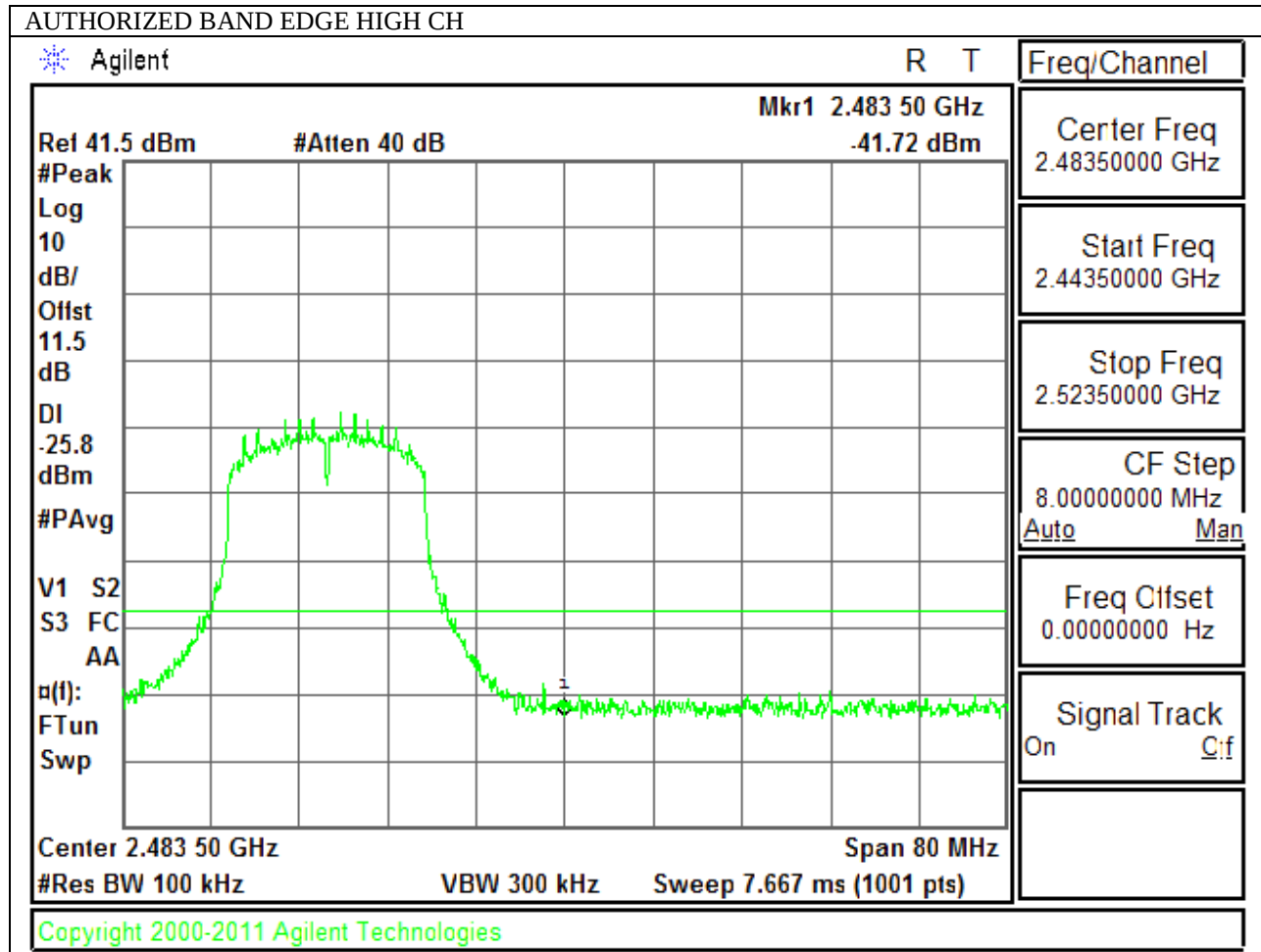
IN-BAND REFERENCE LEVEL



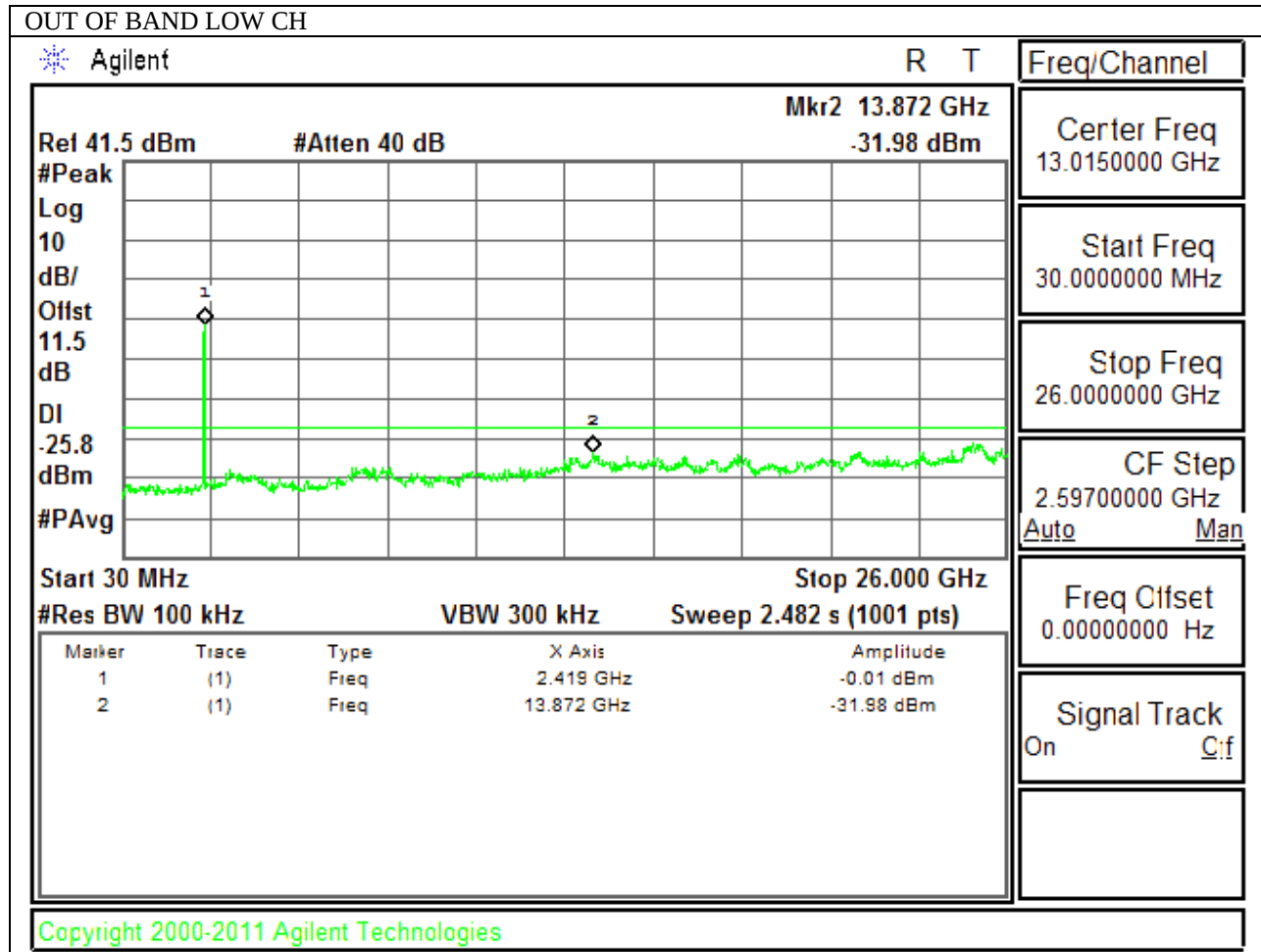
LOW CHANNEL BANDEDGE

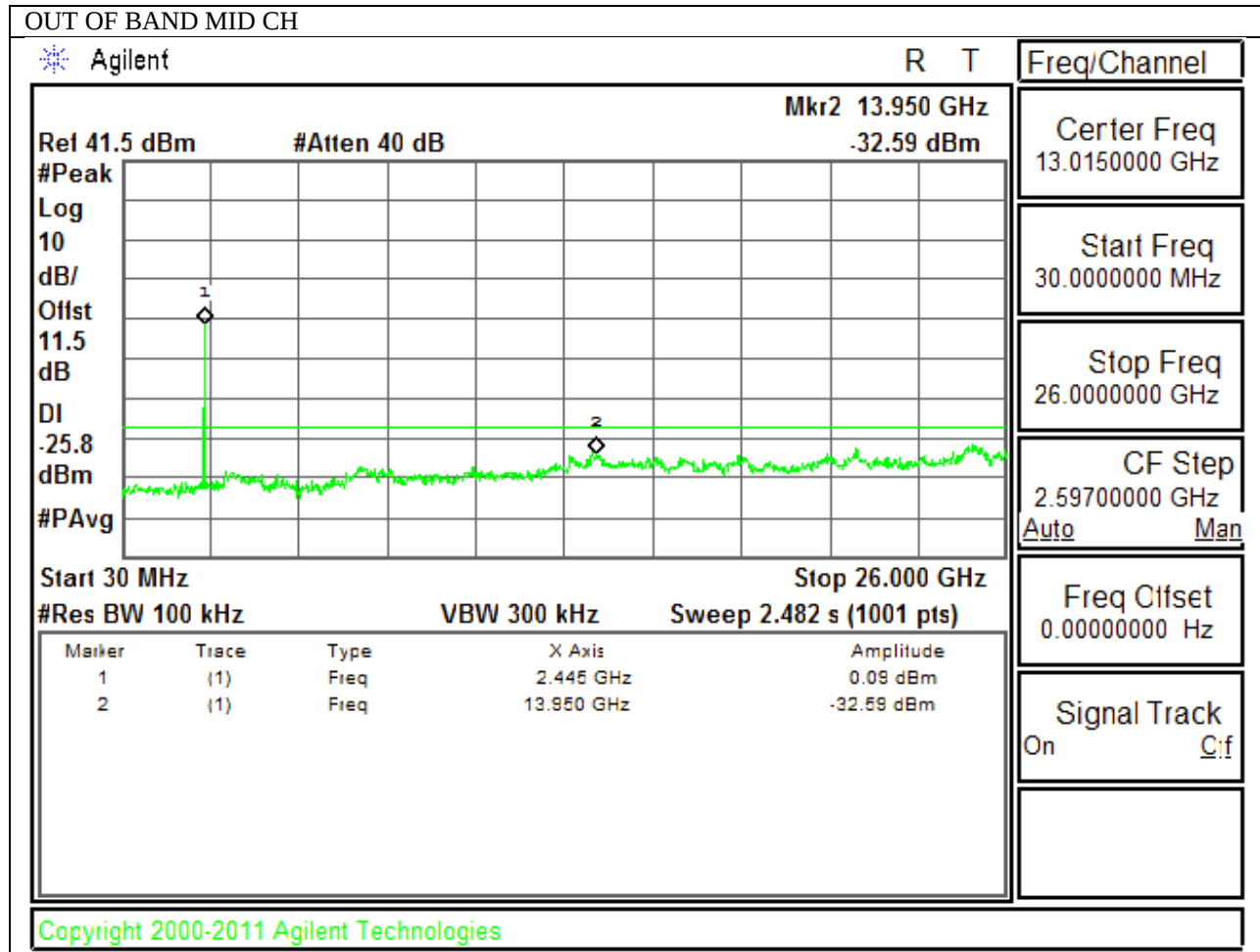


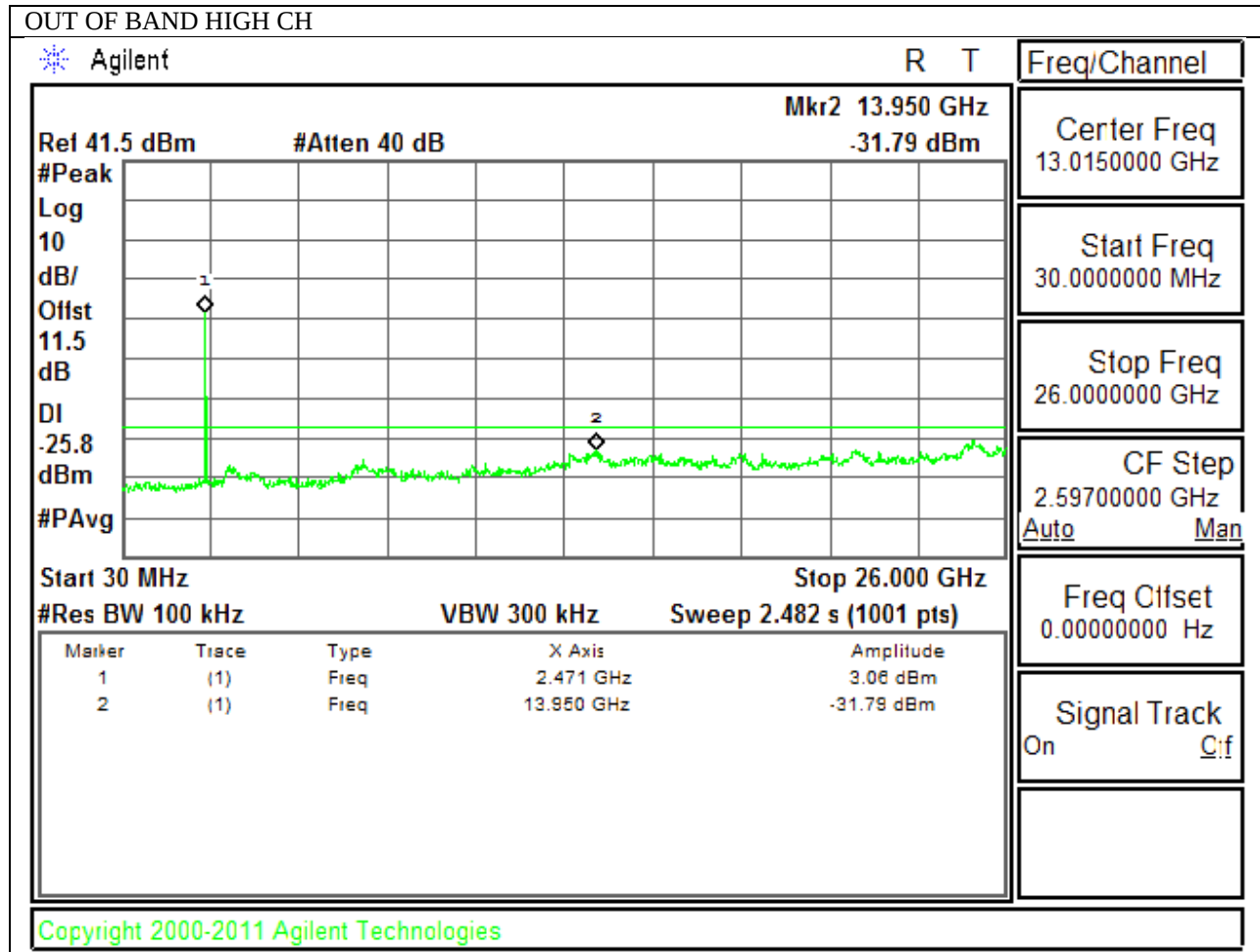
HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS







10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-GEN Clause 8.9 (Transmitter)

IC RSS-GEN Clause 7 (Receiver)

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

TEST PROCEDURE

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

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

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor for average measurements. Duty cycle factor = $10\log(1/x)$ For this sample B mode = 0dB (duty cycle >98%); G mode = 0.21dB; N mode = 0.23dB.

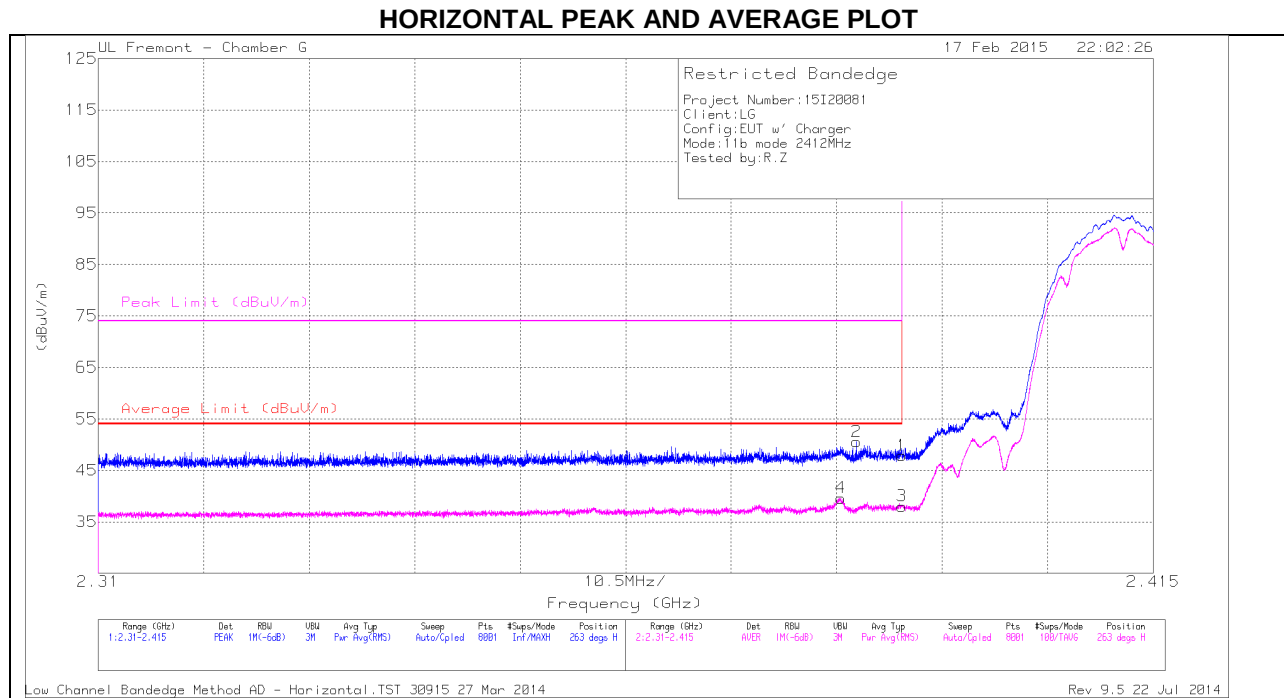
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

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

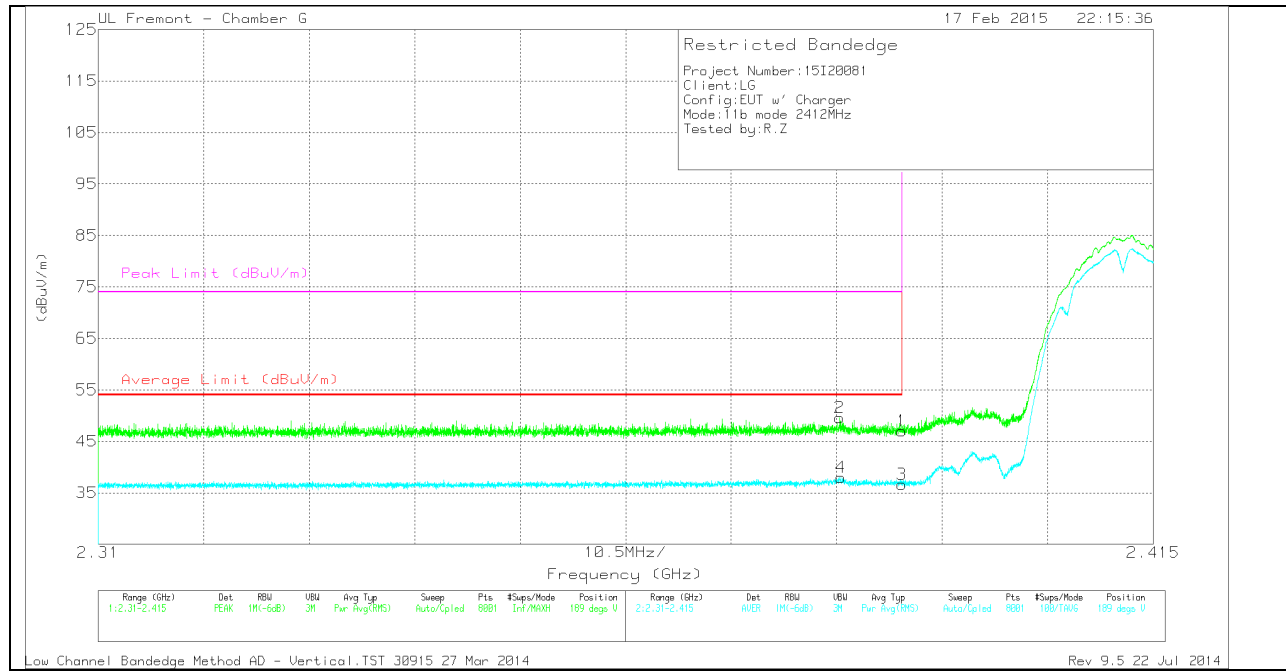
RESTRICTED BANDEDGE (LOW CHANNEL)



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	* 2.39	40.96	PK	31.8	-24.9	47.86	-	-	74	-26.14	263	185	H
2	* 2.385	43.65	PK	31.8	-24.9	50.55	-	-	74	-23.45	263	185	H
3	* 2.39	31.14	RMS	31.8	-24.9	38.04	54	-15.96	-	-	263	185	H
4	* 2.384	32.74	RMS	31.8	-24.9	39.64	54	-14.36	-	-	263	185	H

VERTICAL PEAK AND AVERAGE PLOT

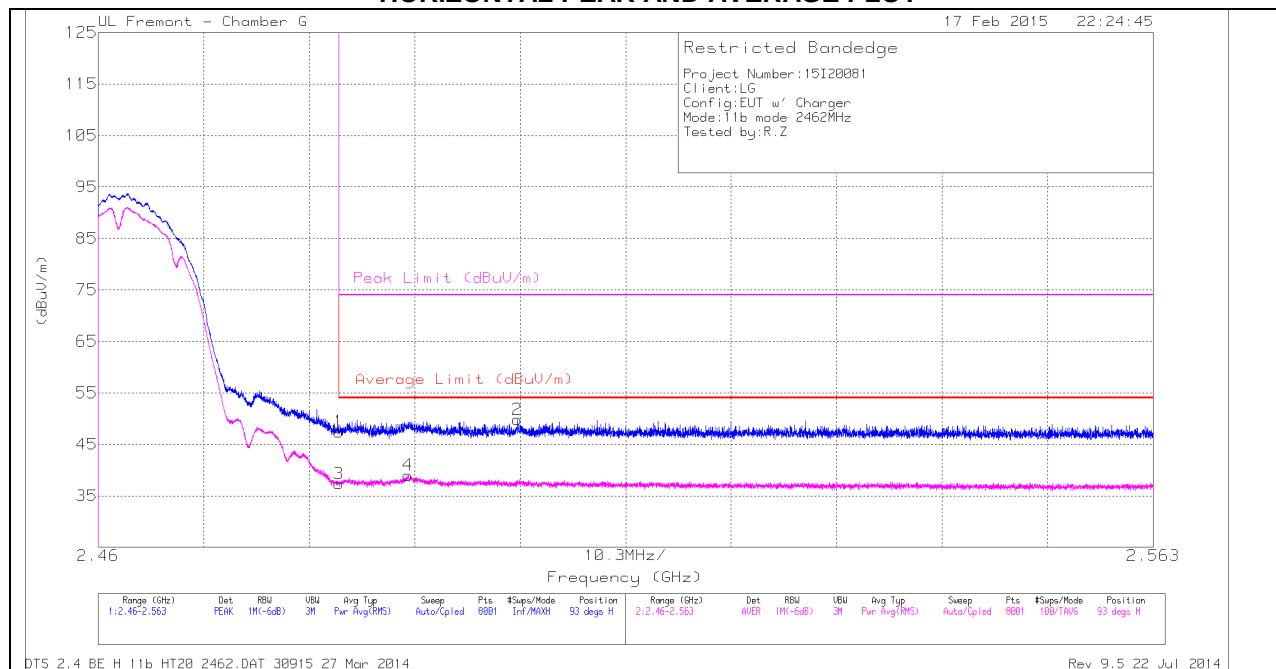


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	40.11	PK	31.8	-24.9	47.01	-	-	74	-26.99	189	379	V
2	* 2.384	42.7	PK	31.8	-24.9	49.6	-	-	74	-24.4	189	379	V
3	* 2.39	29.74	RMS	31.8	-24.9	36.64	54	-17.36	-	-	189	379	V
4	* 2.384	31.08	RMS	31.8	-24.9	37.98	54	-16.02	-	-	189	379	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

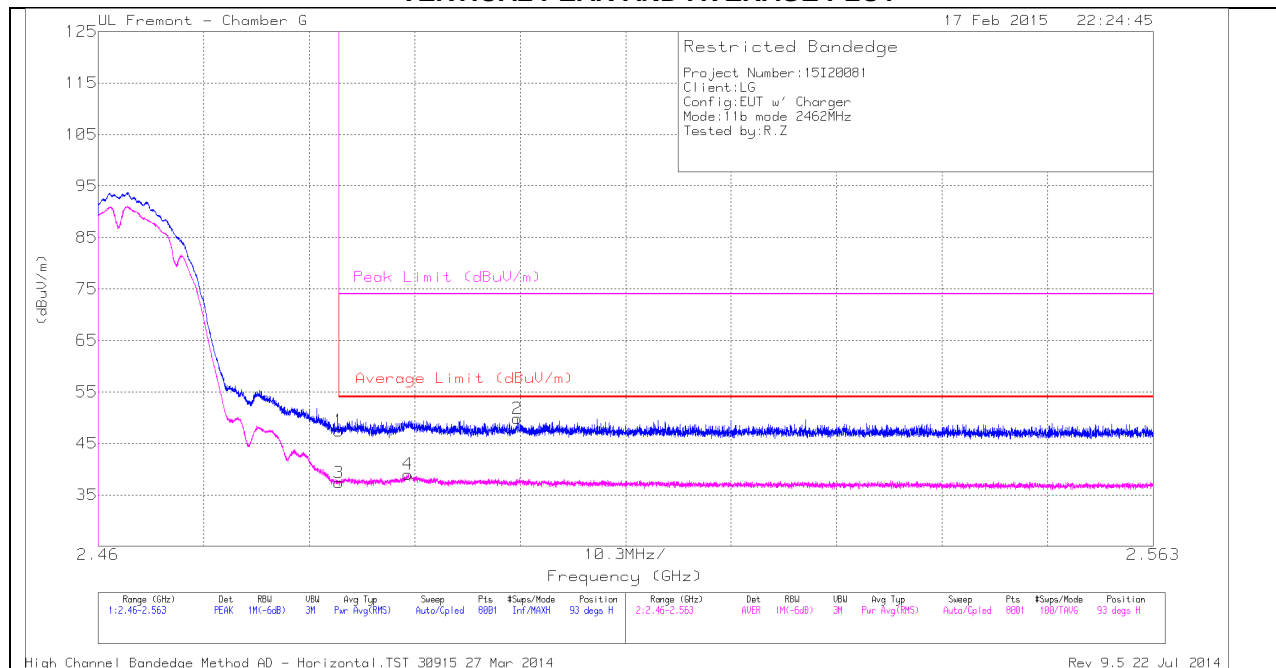
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	40.35	PK	32	-24.9	47.45	-	-	74	-26.55	93	365	H
3	* 2.484	30.25	RMS	32	-24.9	37.35	54	-16.65	-	-	93	365	H
4	* 2.49	31.91	RMS	32	-24.9	39.01	54	-14.99	-	-	93	365	H
2	2.501	42.74	PK	32	-24.9	49.84	-	-	74	-24.16	93	365	H

VERTICAL PEAK AND AVERAGE PLOT

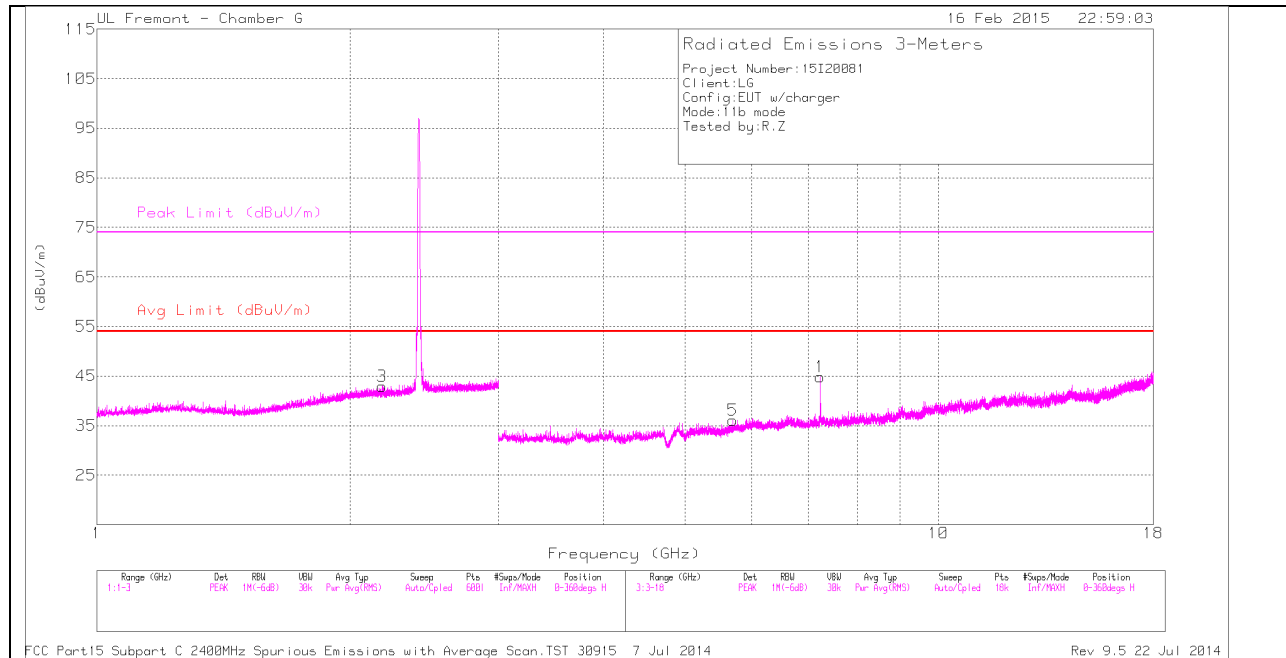


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/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	40.35	PK	32	-24.9	47.45	-	-	74	-26.55	93	365	H
3	* 2.484	30.25	RMS	32	-24.9	37.35	54	-16.65	-	-	93	365	H
4	* 2.49	31.91	RMS	32	-24.9	39.01	54	-14.99	-	-	93	365	H
2	2.501	42.74	PK	32	-24.9	49.84	-	-	74	-24.16	93	365	H

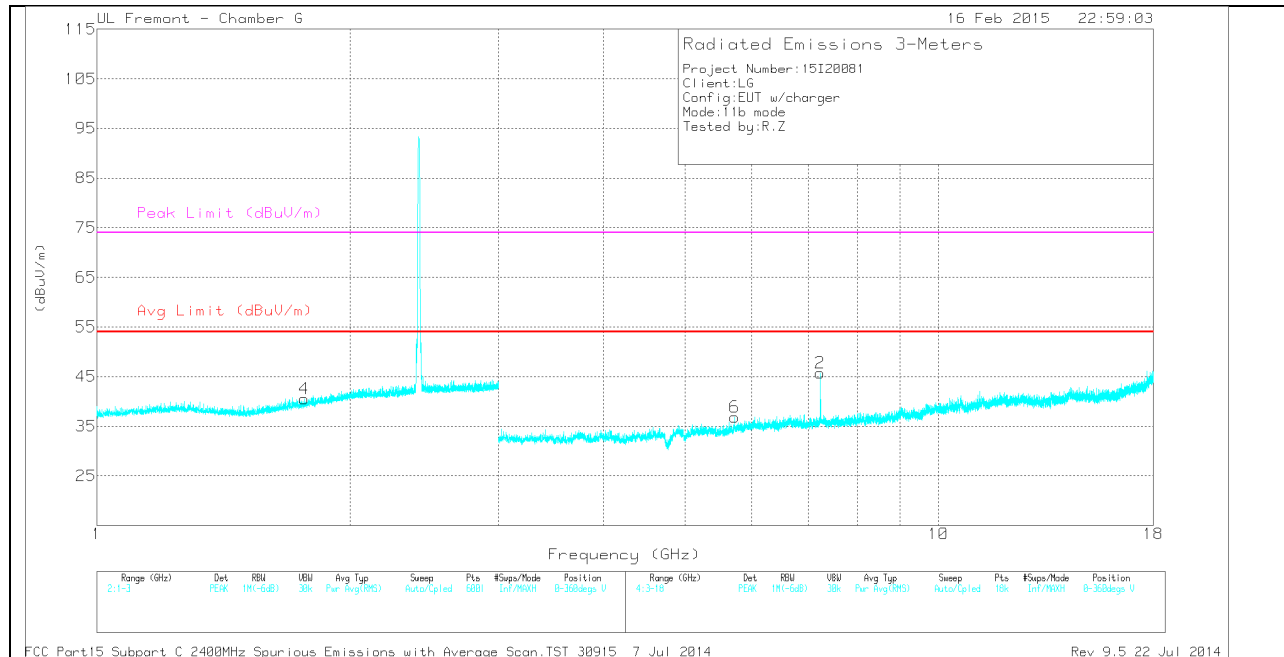
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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

LOW CHANNEL VERTICAL



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

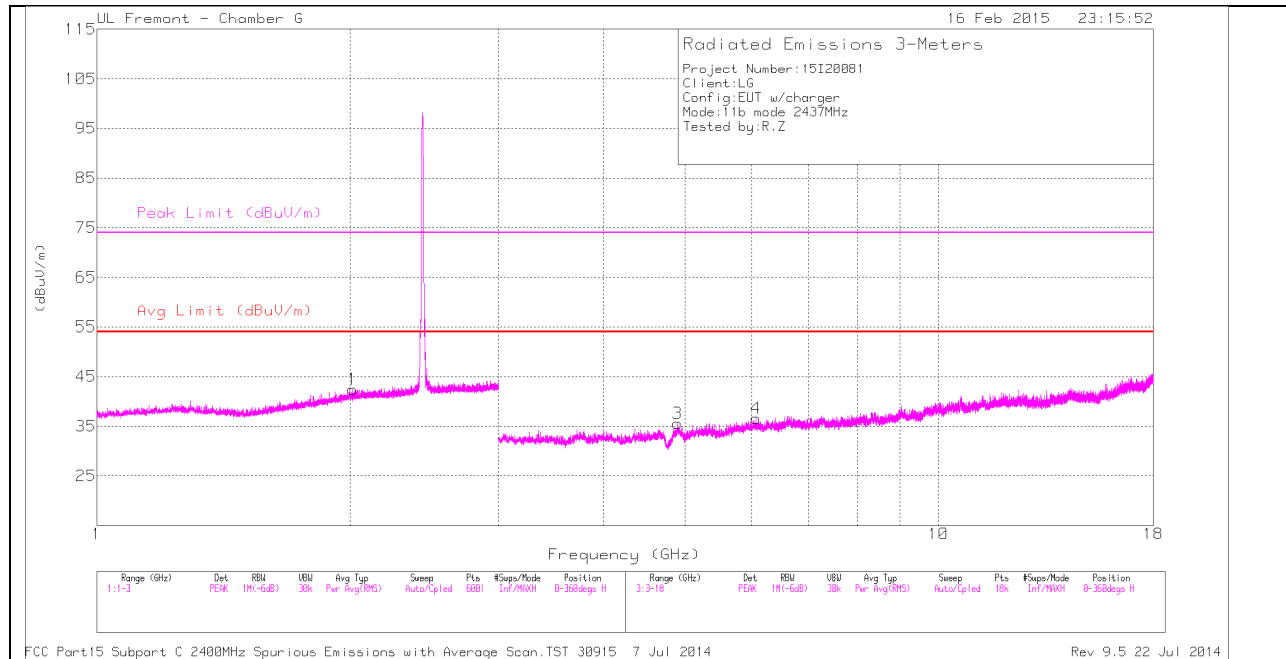
LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/F ltr/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	1.764	36.17	PK	29.7	-25.4	40.47	-	-	-	-	0-360	201	V
3	2.182	36.6	PK	31.4	-25.1	42.9	-	-	-	-	0-360	101	H
5	5.696	33.44	PK	34.8	-32.2	36.04	-	-	-	-	0-360	101	H
6	5.725	34.28	PK	34.8	-32.2	36.88	-	-	-	-	0-360	201	V
1	7.236	40.14	PK	35.6	-30.9	44.84	-	-	-	-	0-360	201	H
2	7.236	41.04	PK	35.6	-30.9	45.74	-	-	-	-	0-360	101	V

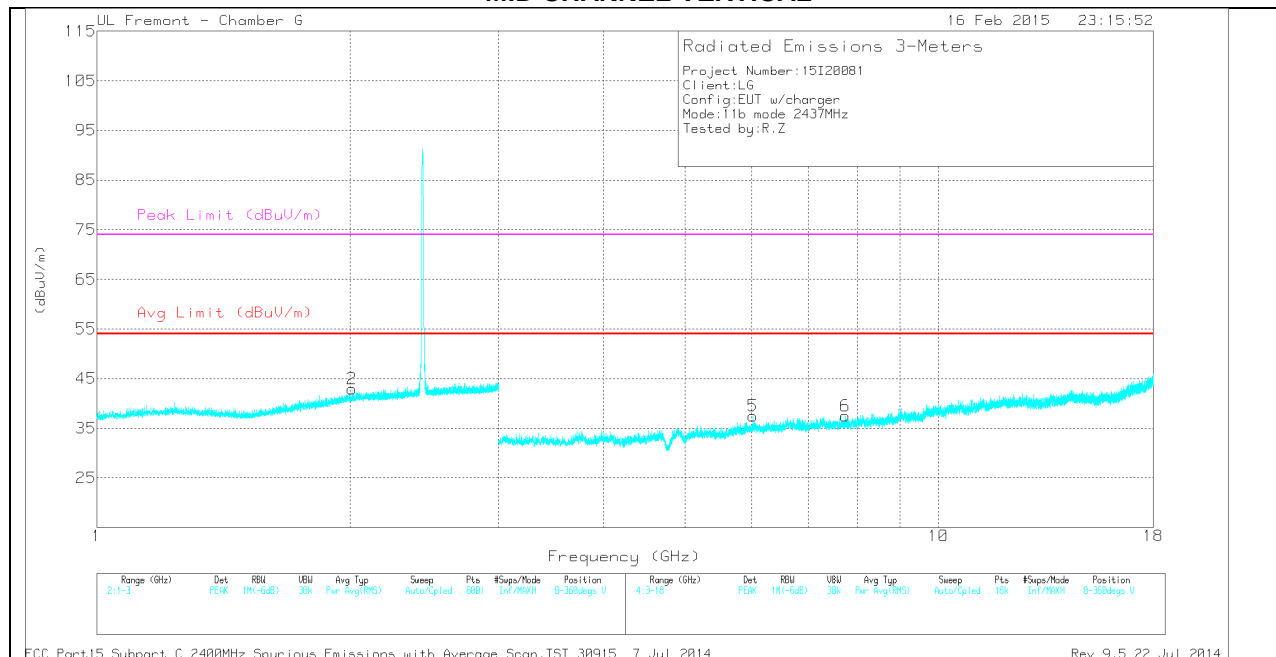
PK - Peak detector

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

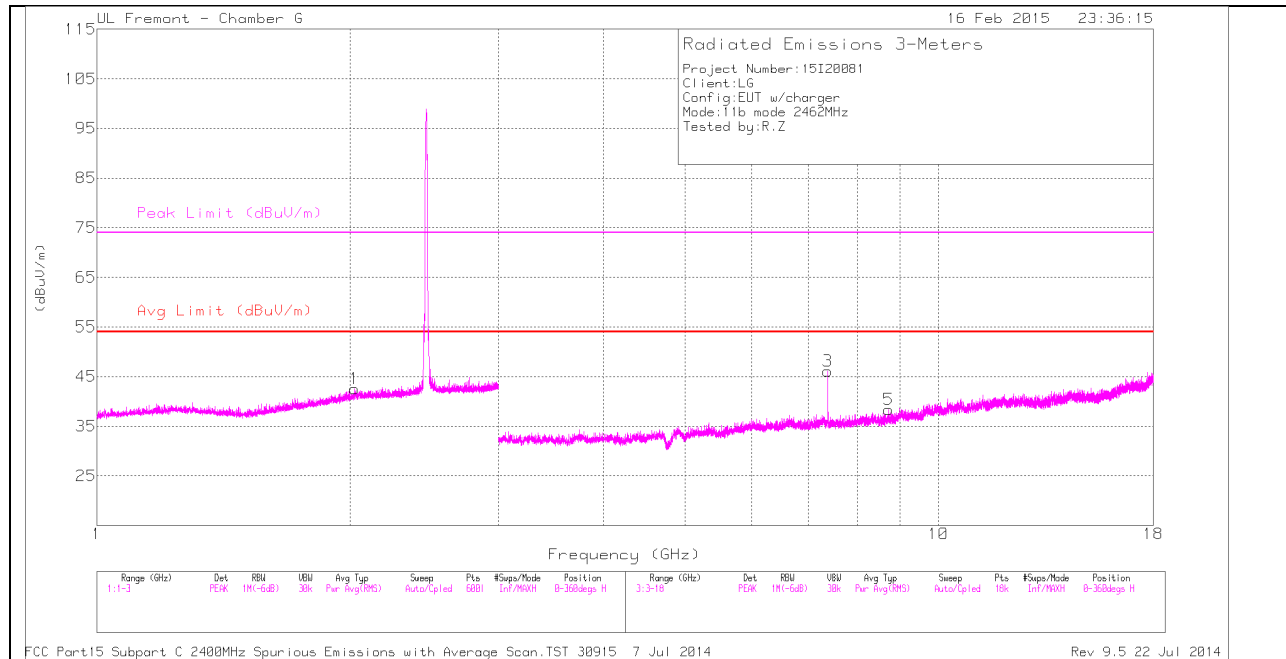
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 4.899	34.57	PK	34.1	-33.1	35.57	-	-	74	-38.43	0-360	101	H
6	* 7.743	32.43	PK	35.7	-30.6	37.53	-	-	74	-36.47	0-360	201	V
2	2.009	36.9	PK	31.3	-25.3	42.9	-	-	-	-	0-360	201	V
1	2.014	36.44	PK	31.3	-25.3	42.44	-	-	-	-	0-360	101	H
5	6.017	34.24	PK	35.2	-32	37.44	-	-	-	-	0-360	201	V
4	6.075	33.77	PK	35.3	-32.5	36.57	-	-	-	-	0-360	101	H

PK - Peak detector

RADIATED EMISSIONS

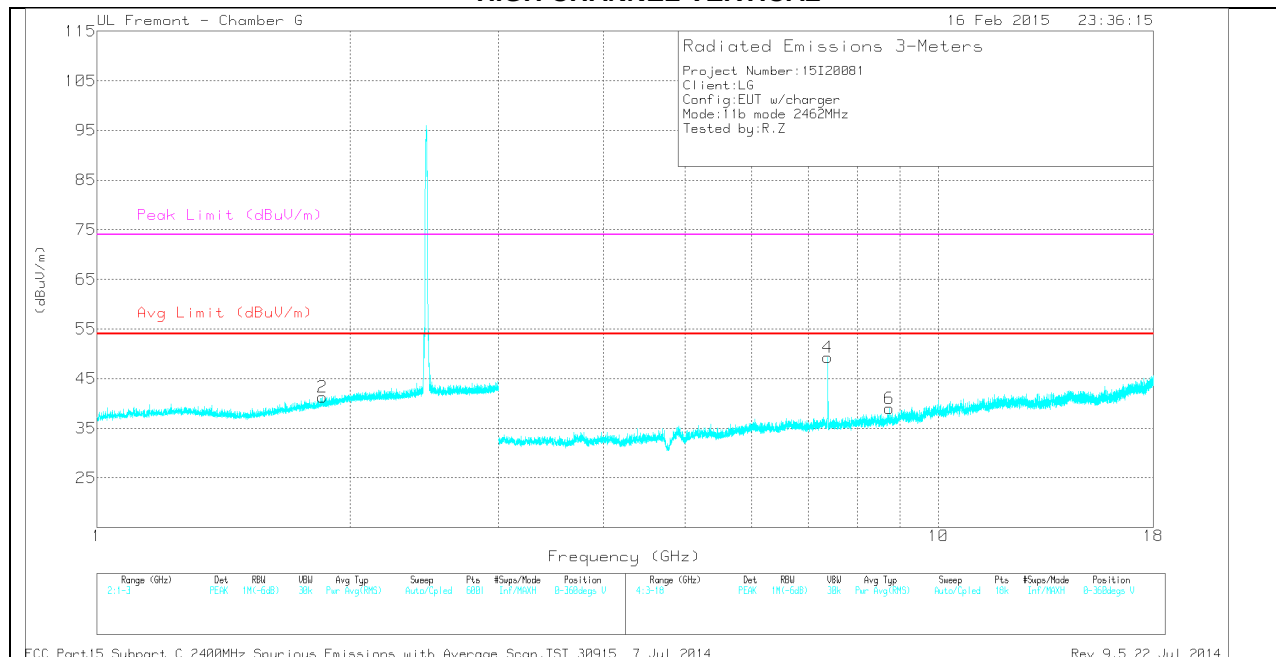
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.899	41.4	PK2	34.1	-33.1	42.4	-	-	74	-31.6	360	101	H
* 4.899	30.79	MAV1	34.1	-33.1	31.79	54	-22.21	-	-	360	101	H

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 7.386	42.18	PK	35.6	-31.7	46.08	-	-	74	-27.92	0-360	101	H
4	* 7.386	45.36	PK	35.6	-31.7	49.26	-	-	74	-24.74	0-360	201	V
2	1.855	36.47	PK	30.3	-25.5	41.27	-	-	-	-	0-360	201	V
1	2.023	36.54	PK	31.3	-25.3	42.54	-	-	-	-	0-360	101	H
5	8.725	31.56	PK	36	-29.2	38.36	-	-	-	-	0-360	101	H
6	8.736	32.43	PK	36	-29.4	39.03	-	-	-	-	0-360	101	V

PK - Peak detector

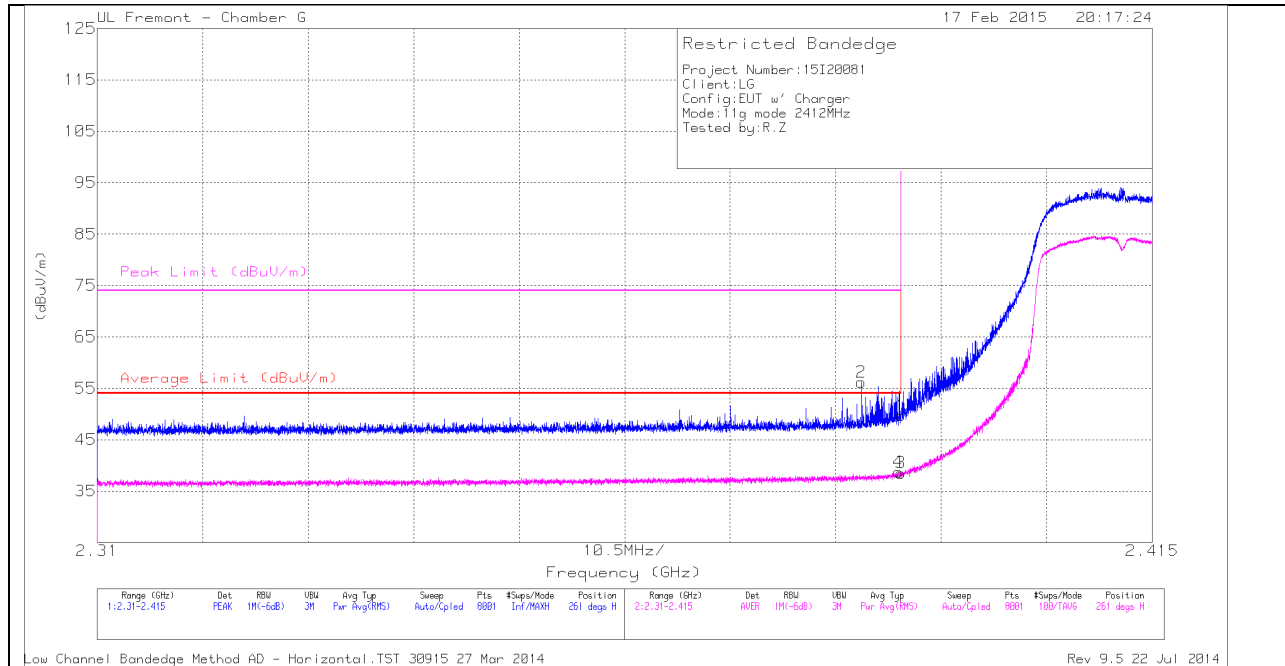
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/Pad (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	44.48	PK2	35.6	-31.7	48.38	-	-	74	-25.62	360	101	H
* 7.387	37.02	MAV1	35.6	-31.7	40.92	54	-13.08	-	-	360	101	H
* 7.386	50.23	PK2	35.6	-31.7	54.13	-	-	74	-19.87	360	202	V
* 7.387	44.81	MAV1	35.6	-31.7	48.71	54	-5.29	-	-	360	202	V

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

RESTRICTED BANDEDGE (LOW CHANNEL)

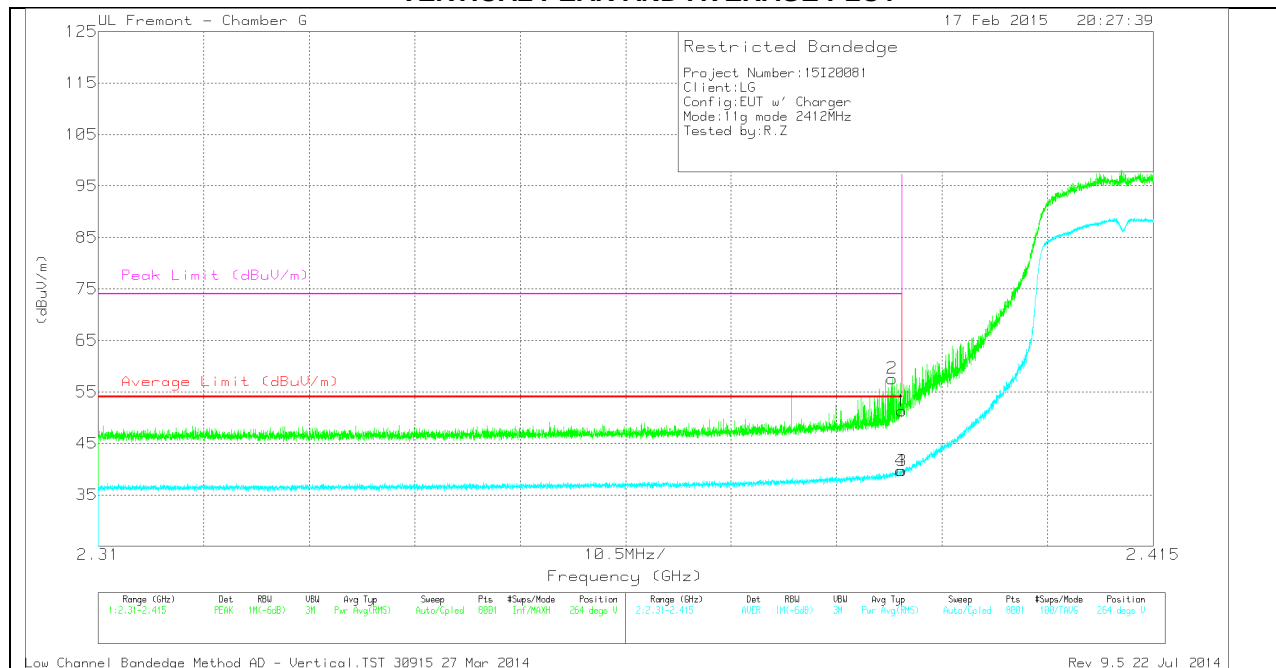
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	42.88	PK	31.8	-24.9	0	49.78	-	-	74	-24.22	261	112	H
2	* 2.386	49.3	PK	31.8	-24.9	0	56.2	-	-	74	-17.8	261	112	H
3	* 2.39	31.42	RMS	31.8	-24.9	.21	38.53	54	-15.47	-	-	261	112	H
4	* 2.39	31.61	RMS	31.8	-24.9	.21	38.72	54	-15.28	-	-	261	112	H

VERTICAL PEAK AND AVERAGE PLOT

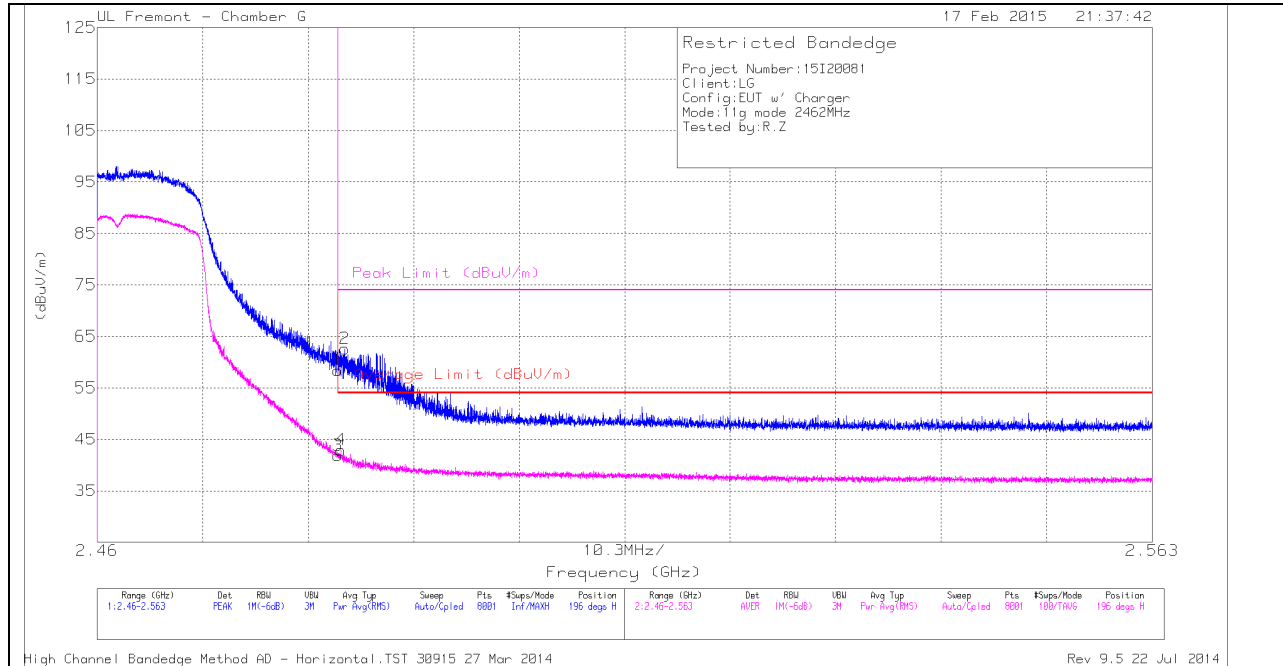


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.389	50.7	PK	31.8	-24.9	0	57.6	-	-	74	-16.4	264	154	V
1	* 2.39	44.4	PK	31.8	-24.9	0	51.3	-	-	74	-22.7	264	154	V
3	* 2.39	32.6	RMS	31.8	-24.9	.21	39.71	54	-14.29	-	-	264	154	V
4	* 2.39	32.57	RMS	31.8	-24.9	.21	39.68	54	-14.32	-	-	264	154	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

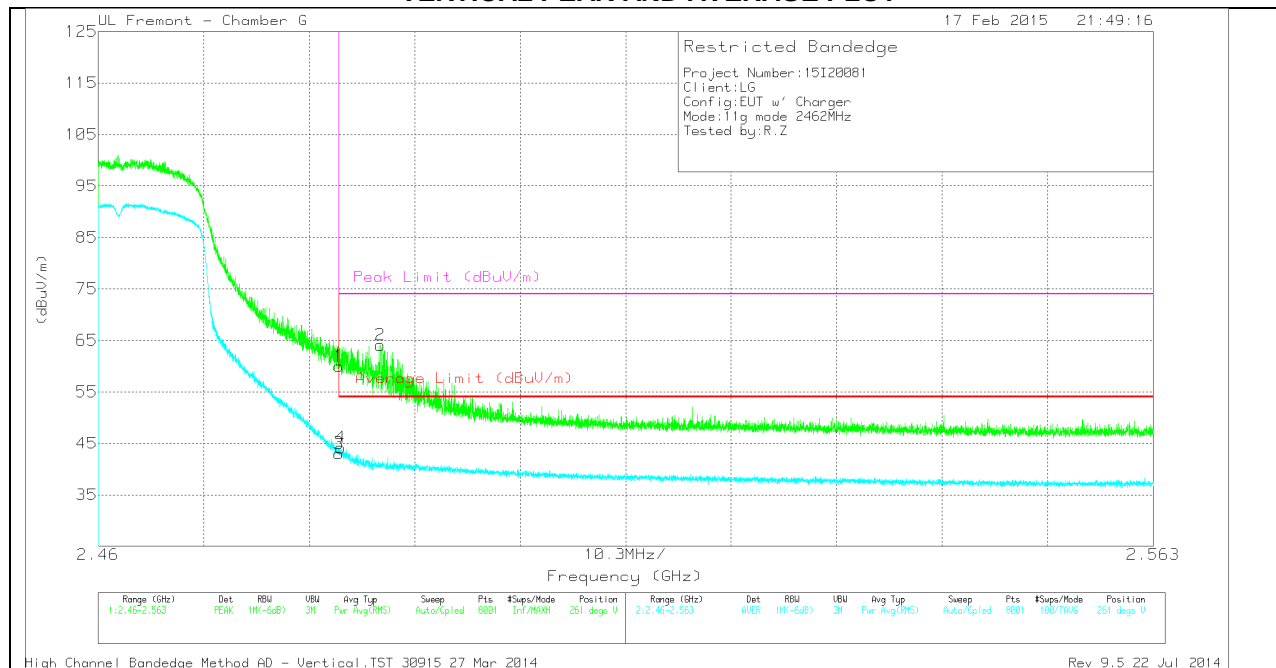
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	51.27	PK	32	-24.9	0	58.37	-	-	74	-15.63	196	105	H
2	* 2.484	55.51	PK	32	-24.9	0	62.61	-	-	74	-11.39	196	105	H
3	* 2.484	34.59	RMS	32	-24.9	.21	41.9	54	-12.1	-	-	196	105	H
4	* 2.484	35.63	RMS	32	-24.9	.21	42.94	54	-11.06	-	-	196	105	H

VERTICAL PEAK AND AVERAGE PLOT

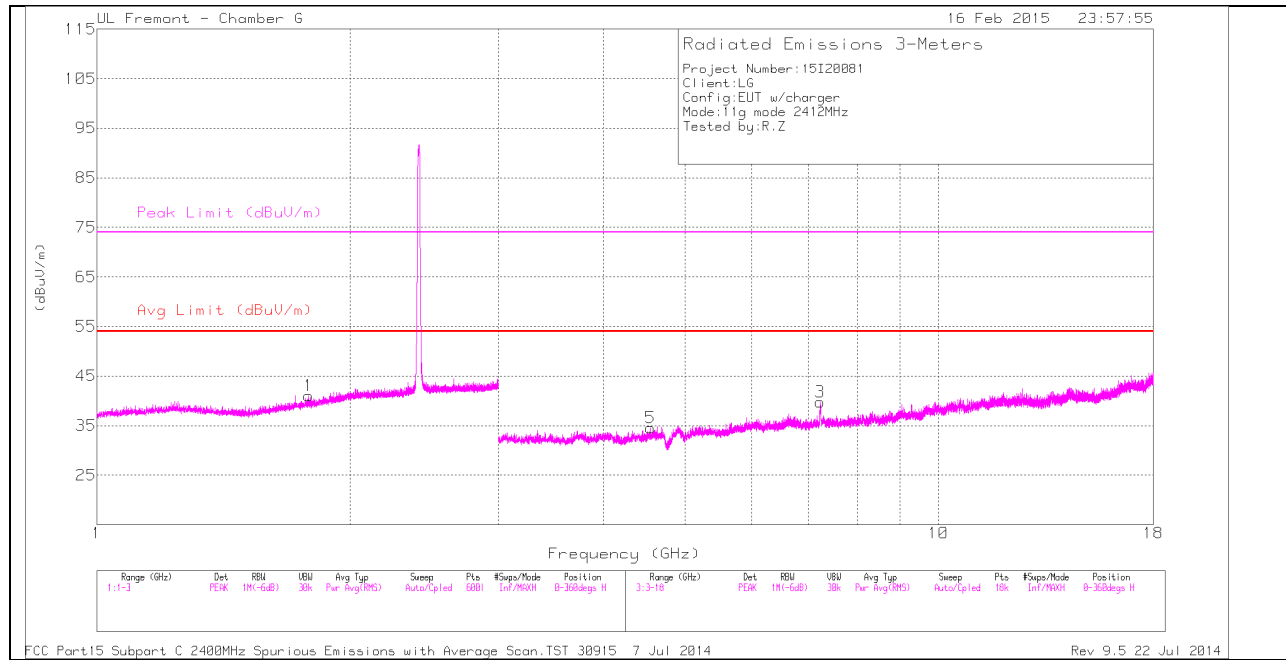


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	52.91	PK	32	-24.9	0	60.01	-	-	74	-13.99	261	109	V
2	* 2.488	56.99	PK	32	-24.9	0	64.09	-	-	74	-9.91	261	109	V
3	* 2.484	35.72	RMS	32	-24.9	.21	43.03	54	-10.97	-	-	261	109	V
4	* 2.484	36.87	RMS	32	-24.9	.21	44.18	54	-9.82	-	-	261	109	V

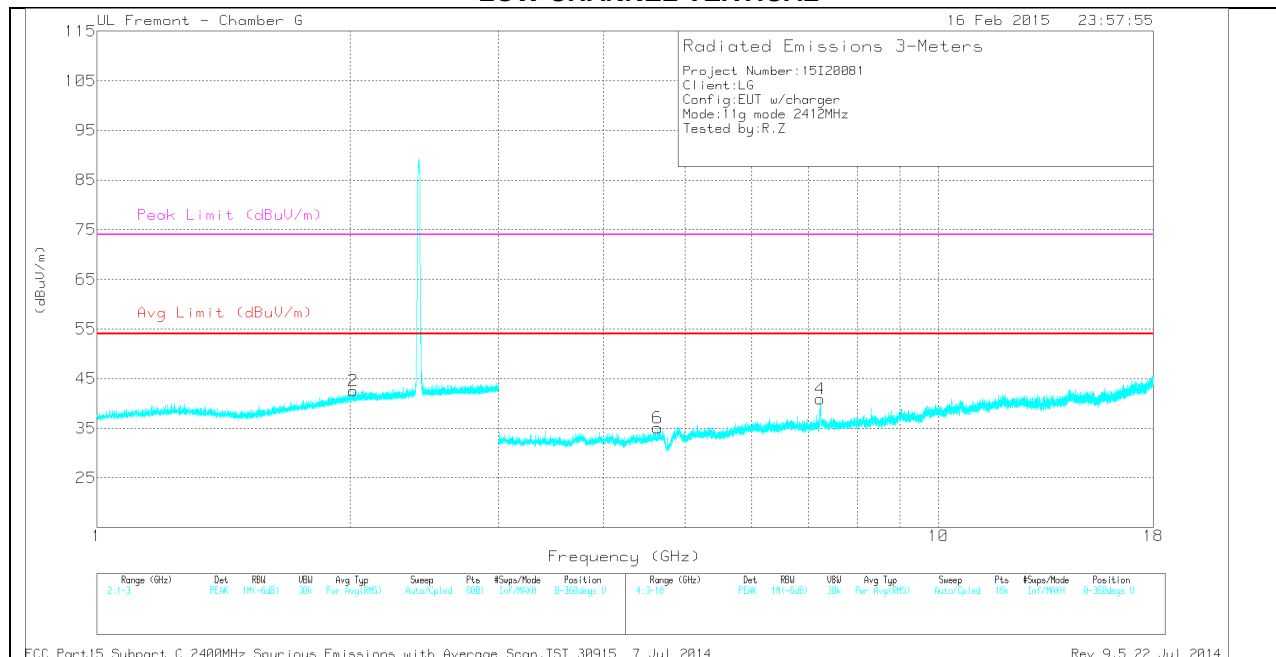
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

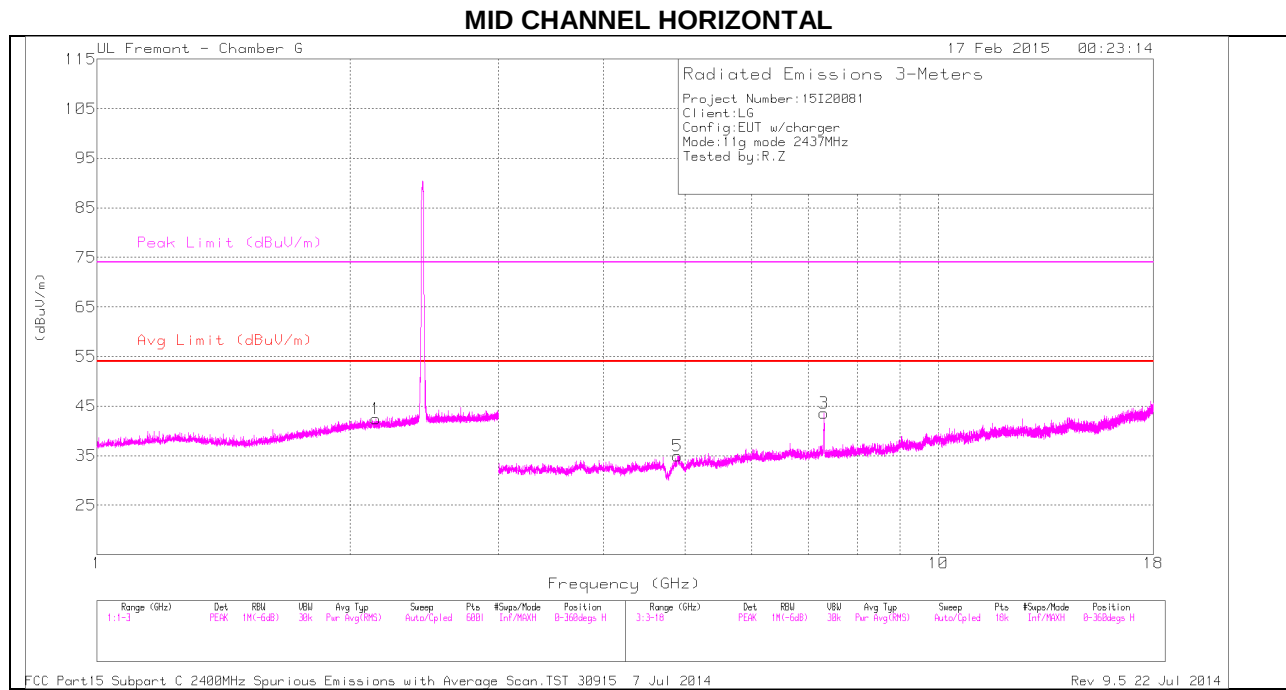
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Ftr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 4.548	34	PK	33.8	-33.3	0	34.5	-	-	74	-39.5	0-360	100	H
6	* 4.638	34.21	PK	33.9	-33	0	35.11	-	-	74	-38.89	0-360	101	V
1	1.786	36.66	PK	29.8	-25.4	0	41.06	-	-	-	-	0-360	101	H
2	2.017	36.52	PK	31.3	-25.3	0	42.52	-	-	-	-	0-360	201	V
4	7.236	36.17	PK	35.6	-30.9	0	40.87	-	-	-	-	0-360	101	V
3	7.239	35.12	PK	35.6	-31	0	39.72	-	-	-	-	0-360	201	H

PK - Peak detector

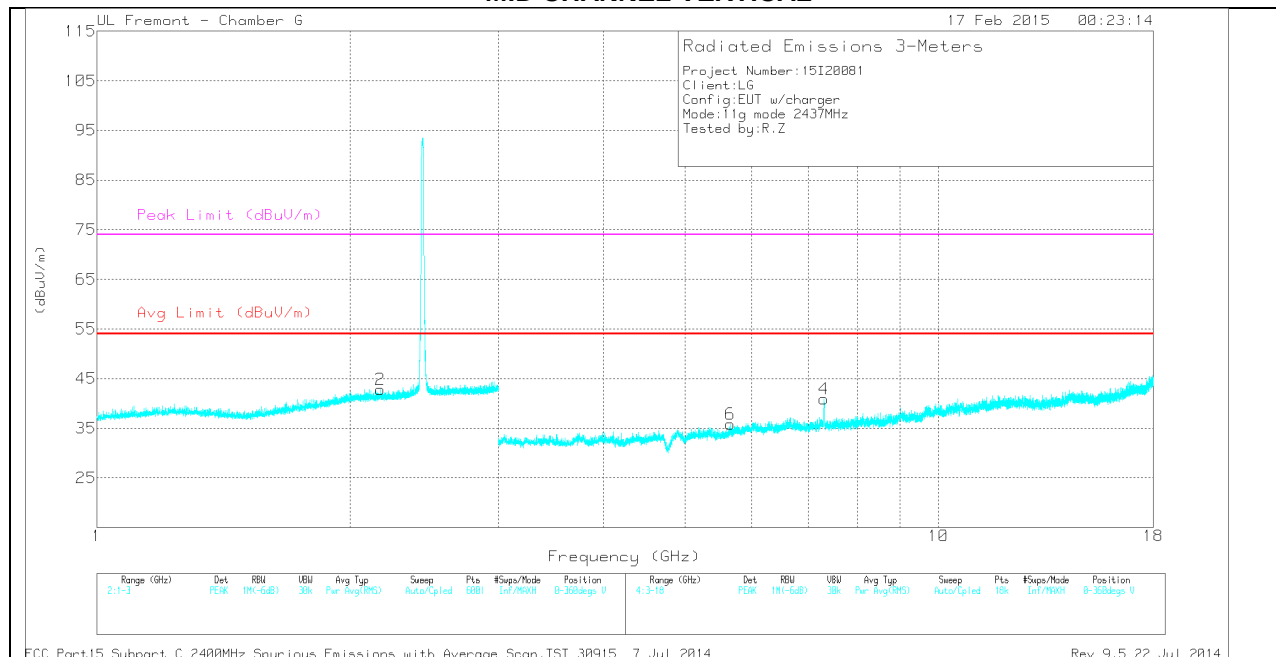
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Ftr /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
* 4.55	41.03	PK2	33.8	-33.3	0	41.53	-	-	74	-32.47	360	101	H
* 4.547	30.06	MAV1	33.8	-33.3	.21	30.77	54	-23.23	-	-	360	101	H
* 4.639	41.61	PK2	33.9	-33	0	42.51	-	-	74	-31.49	360	101	V
* 4.64	30.13	MAV1	33.9	-33	.21	31.24	54	-22.76	-	-	360	101	V



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

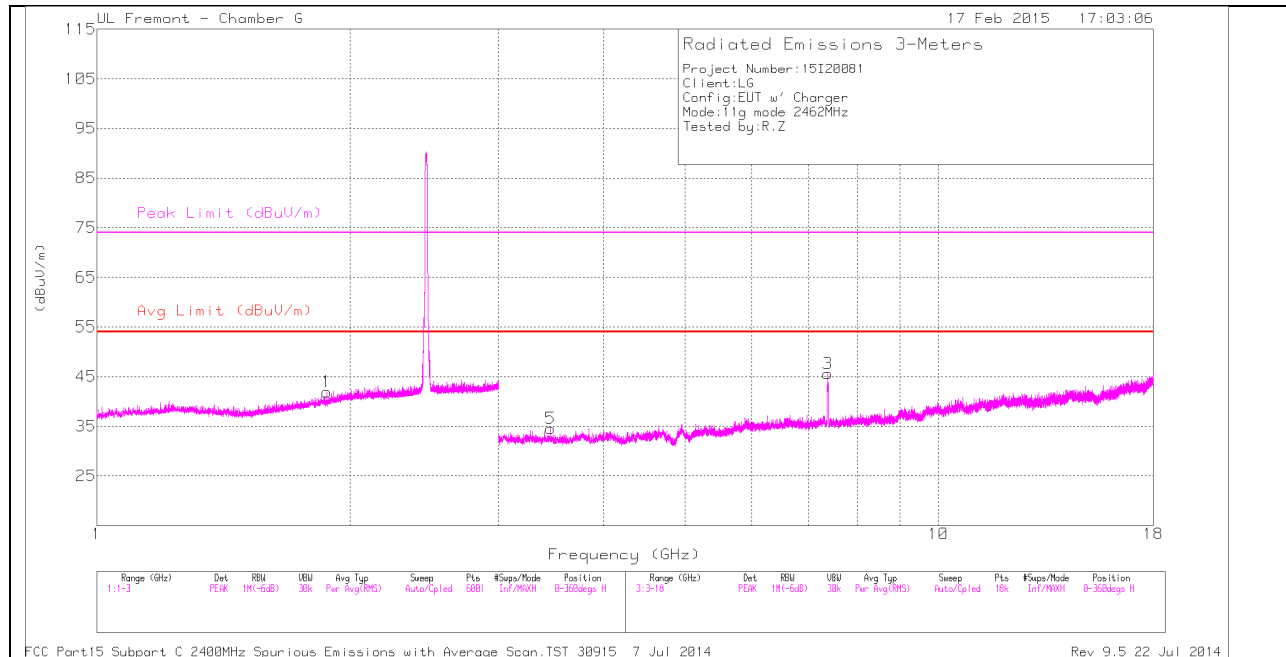
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Ftr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 7.311	39.05	PK	35.6	-31.1	0	43.55	-	-	74	-30.45	0-360	101	H
5	* 4.897	33.94	PK	34.1	-33.1	0	34.94	-	-	74	-39.06	0-360	101	H
4	* 7.31	36.27	PK	35.6	-31	0	40.87	-	-	74	-33.13	0-360	101	V
1	2.146	36.18	PK	31.4	-25.1	0	42.48	-	-	-	-	0-360	201	H
2	2.171	36.49	PK	31.4	-25.1	0	42.79	-	-	-	-	0-360	101	V
6	5.657	33.08	PK	34.8	-32.1	0	35.78	-	-	-	-	0-360	101	V

PK - Peak detector

RADIATED EMISSIONS

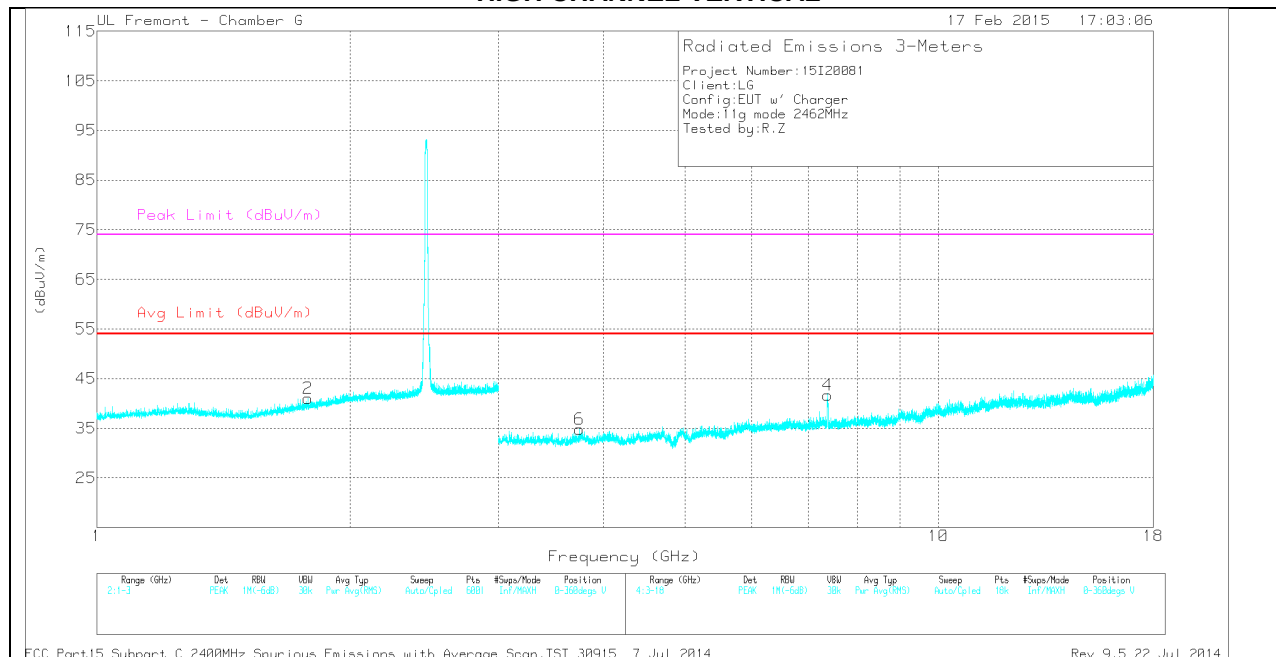
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Ftr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 7.311	44.19	PK2	35.6	-31.1	0	48.69	-	-	74	-25.31	360	101	H
* 7.311	31.58	MAV1	35.6	-31.1	.21	36.29	54	-17.71	-	-	360	101	H
* 4.895	41.01	PK2	34.1	-33.1	0	42.01	-	-	74	-31.99	360	101	H
* 4.897	30.47	MAV1	34.1	-33.1	.21	31.68	54	-22.32	-	-	360	101	H
* 7.311	42.16	PK2	35.6	-31.1	0	46.66	-	-	74	-27.34	360	101	V
* 7.311	30.73	MAV1	35.6	-31.1	.21	35.44	54	-18.56	-	-	360	101	V

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Ftr /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	* 7.39	41.69	PK	35.6	-31.7	0	45.59	-	-	74	-28.41	0-360	201	H
4	* 7.382	37.78	PK	35.6	-31.7	0	41.68	-	-	74	-32.32	0-360	101	V
6	* 3.746	34.07	PK	32.9	-32.2	0	34.77	-	-	74	-39.23	0-360	101	V
2	1.782	36.65	PK	29.8	-25.4	0	41.05	-	-	-	-	0-360	201	V
1	1.877	36.78	PK	30.5	-25.4	0	41.88	-	-	-	-	0-360	101	H
5	3.459	34.73	PK	32.8	-33	0	34.53	-	-	-	-	0-360	101	H

PK - Peak detector

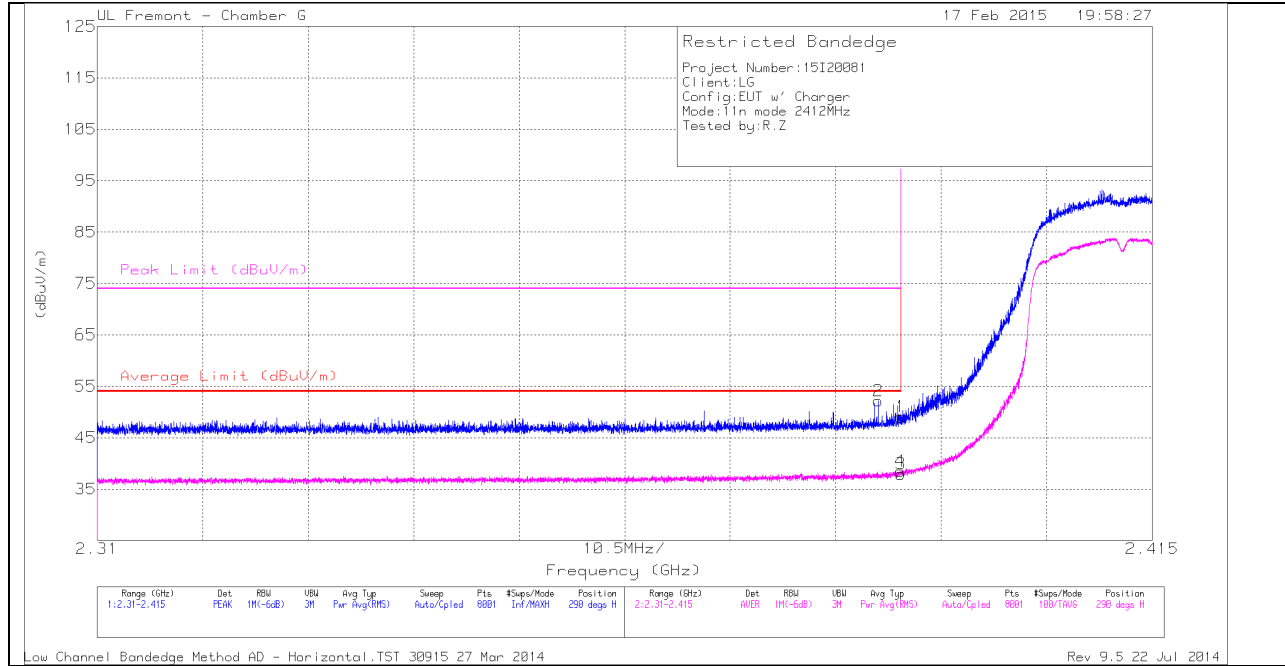
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Ftr /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
* 7.388	42.07	PK2	35.6	-31.7	0	45.97	-	-	74	-28.03	360	202	H
* 7.388	30.65	MAV1	35.6	-31.7	.21	34.76	54	-19.24	-	-	360	202	H
* 7.381	42.64	PK2	35.6	-31.7	0	46.54	-	-	74	-27.46	360	102	V
* 7.383	30.8	MAV1	35.6	-31.7	.21	34.91	54	-19.09	-	-	360	102	V

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

RESTRICTED BANDEDGE (LOW CHANNEL)

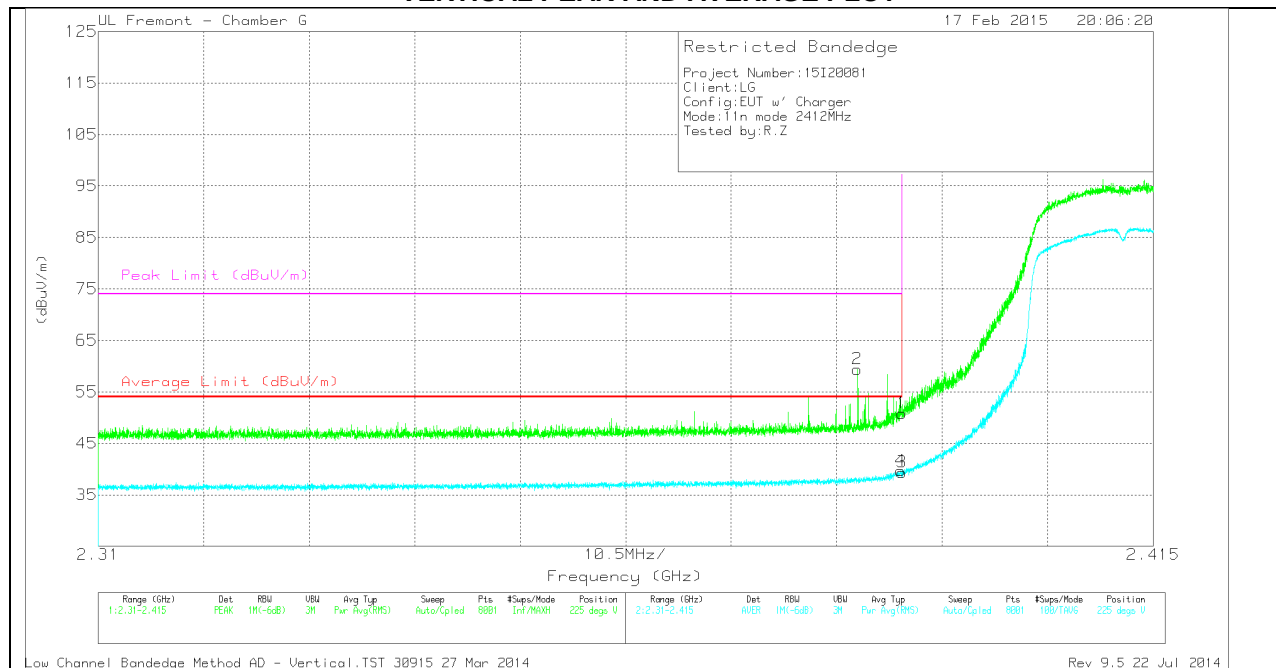
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	42.16	PK	31.8	-24.9	0	49.06	-	-	74	-24.94	290	173	H
2	* 2.388	45.23	PK	31.8	-24.9	0	52.13	-	-	74	-21.87	290	173	H
3	* 2.39	30.82	RMS	31.8	-24.9	.23	37.95	54	-16.05	-	-	290	173	H
4	* 2.39	31.34	RMS	31.8	-24.9	.23	38.47	54	-15.53	-	-	290	173	H

VERTICAL PEAK AND AVERAGE PLOT

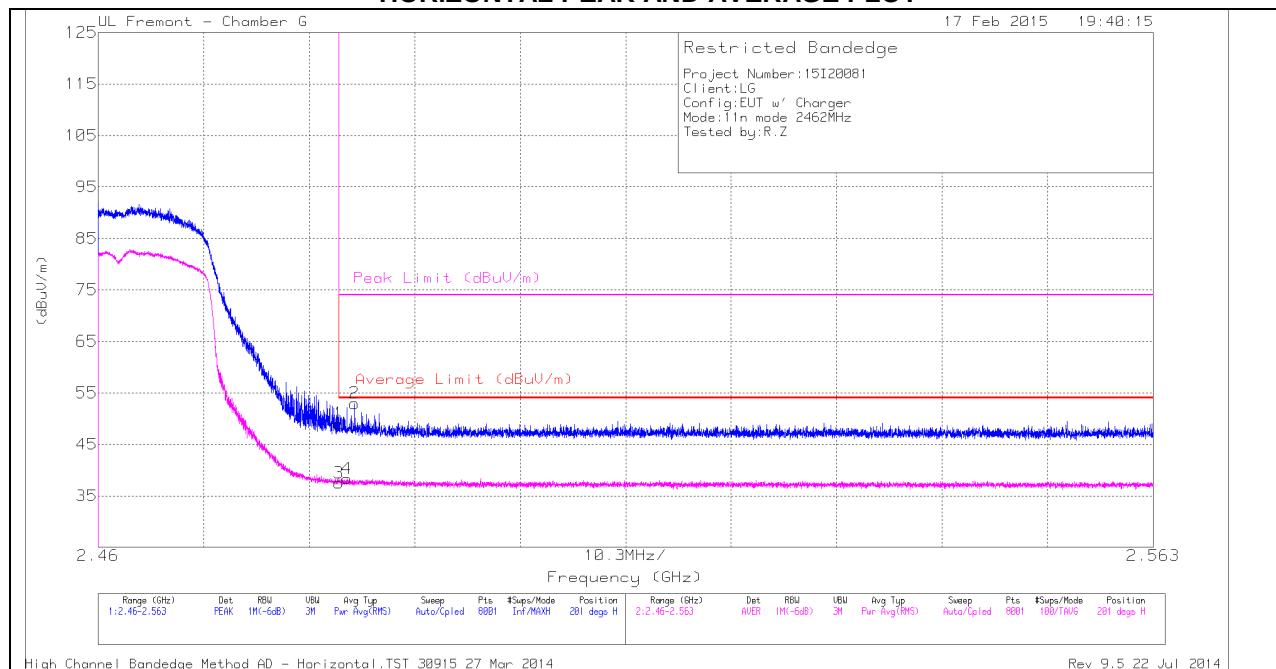


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	43.97	PK	31.8	-24.9	0	50.87	-	-	74	-23.13	225	164	V
2	* 2.386	52.53	PK	31.8	-24.9	0	59.43	-	-	74	-14.57	225	164	V
3	* 2.39	32.26	RMS	31.8	-24.9	.23	39.39	54	-14.61	-	-	225	164	V
4	* 2.39	32.54	RMS	31.8	-24.9	.23	39.67	54	-14.33	-	-	225	164	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

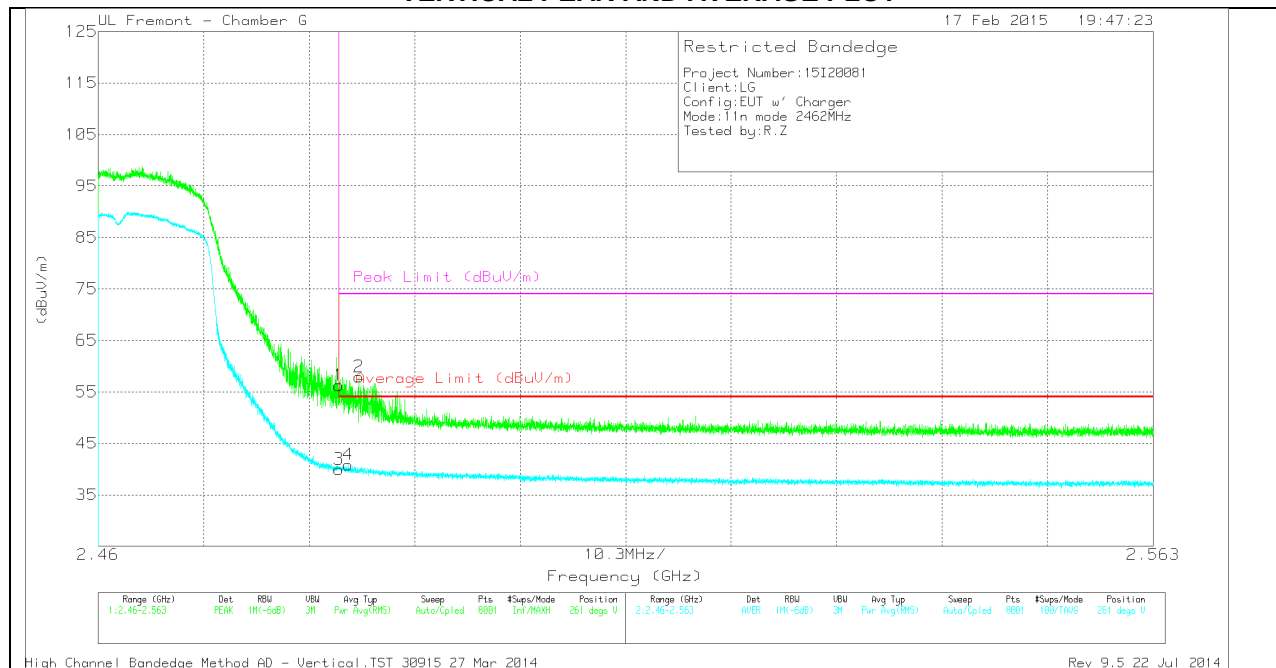
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	41.93	PK	32	-24.9	0	49.03	-	-	74	-24.97	201	102	H
2	* 2.485	45.86	PK	32	-24.9	0	52.96	-	-	74	-21.04	201	102	H
3	* 2.484	30.18	RMS	32	-24.9	.23	37.51	54	-16.49	-	-	201	102	H
4	* 2.484	31.01	RMS	32	-24.9	.23	38.34	54	-15.66	-	-	201	102	H

VERTICAL PEAK AND AVERAGE PLOT

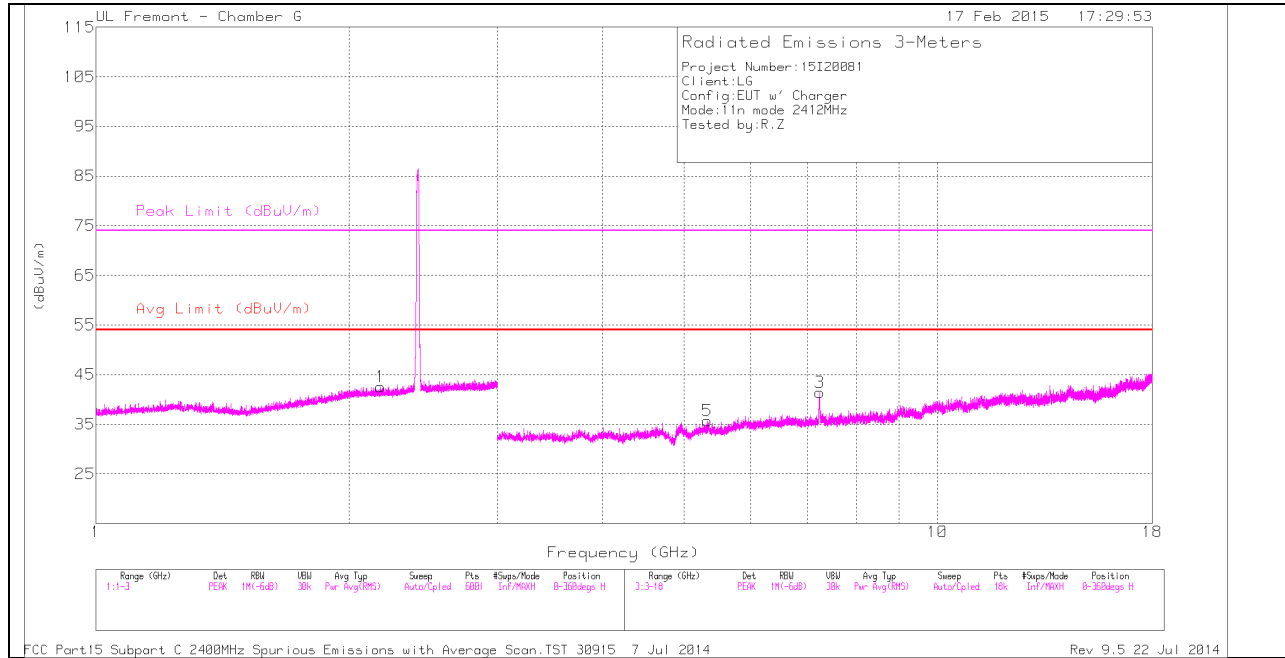


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	49.17	PK	32	-24.9	0	56.27	-	-	74	-17.73	261	182	V
2	* 2.485	50.83	PK	32	-24.9	0	57.93	-	-	74	-16.07	261	182	V
3	* 2.484	32.65	RMS	32	-24.9	.23	39.98	54	-14.02	-	-	261	182	V
4	* 2.484	33.53	RMS	32	-24.9	.23	40.86	54	-13.14	-	-	261	182	V

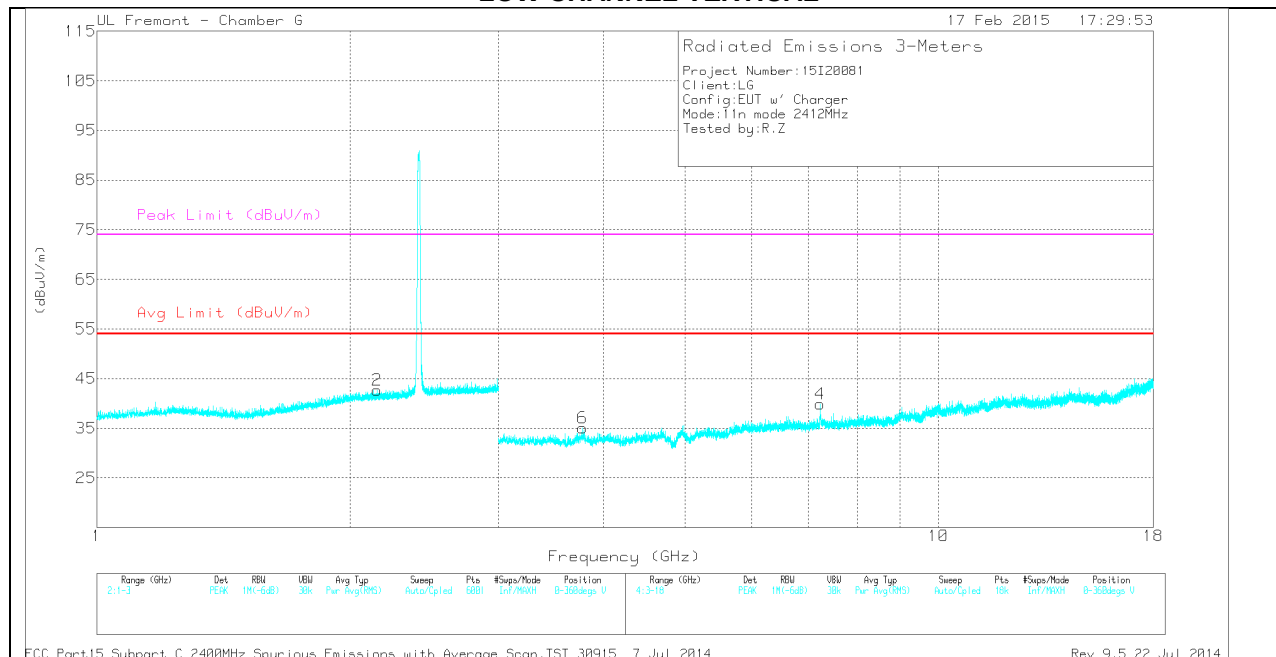
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

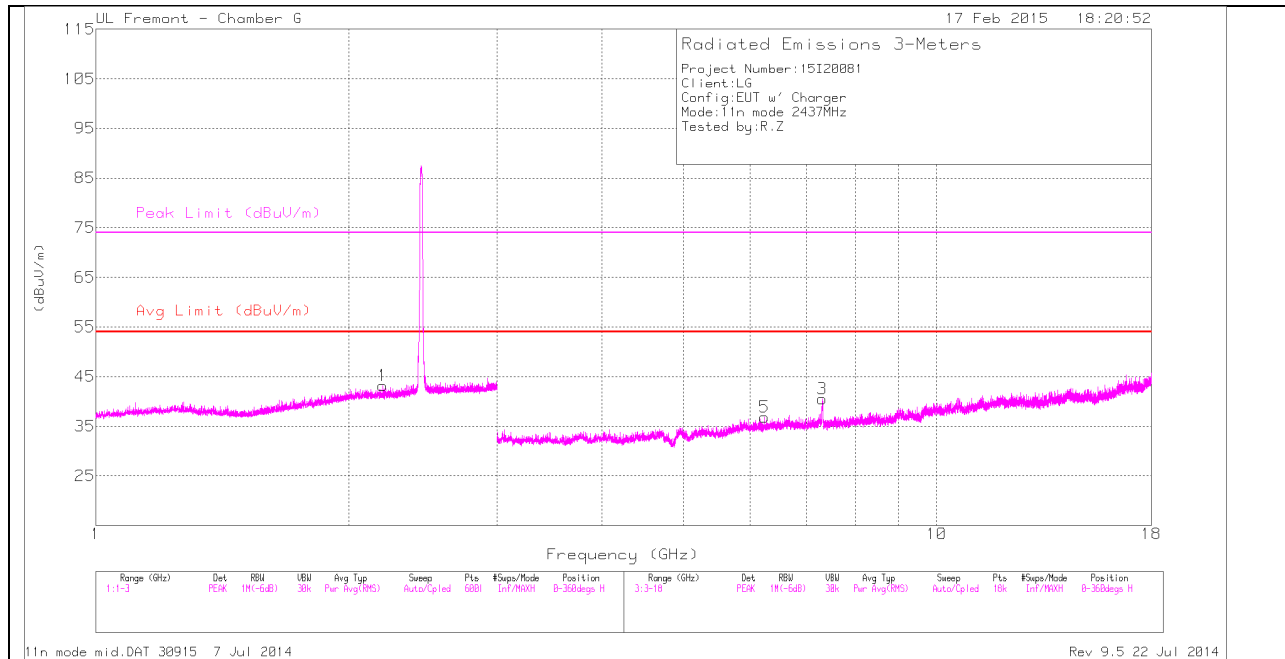
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 3.776	34.8	PK	33	-32.7	0	35.1	-	-	74	-38.9	0-360	101	V
2	2.152	36.43	PK	31.4	-25.1	0	42.73	-	-	-	-	0-360	101	V
1	2.178	36.24	PK	31.4	-25.1	0	42.54	-	-	-	-	0-360	102	H
5	5.328	33.69	PK	34.6	-32.6	0	35.69	-	-	-	-	0-360	101	H
4	7.237	35.31	PK	35.6	-31	0	39.91	-	-	-	-	0-360	101	V
3	7.241	36.78	PK	35.6	-31	0	41.38	-	-	-	-	0-360	101	H

PK - Peak detector

RADIATED EMISSIONS

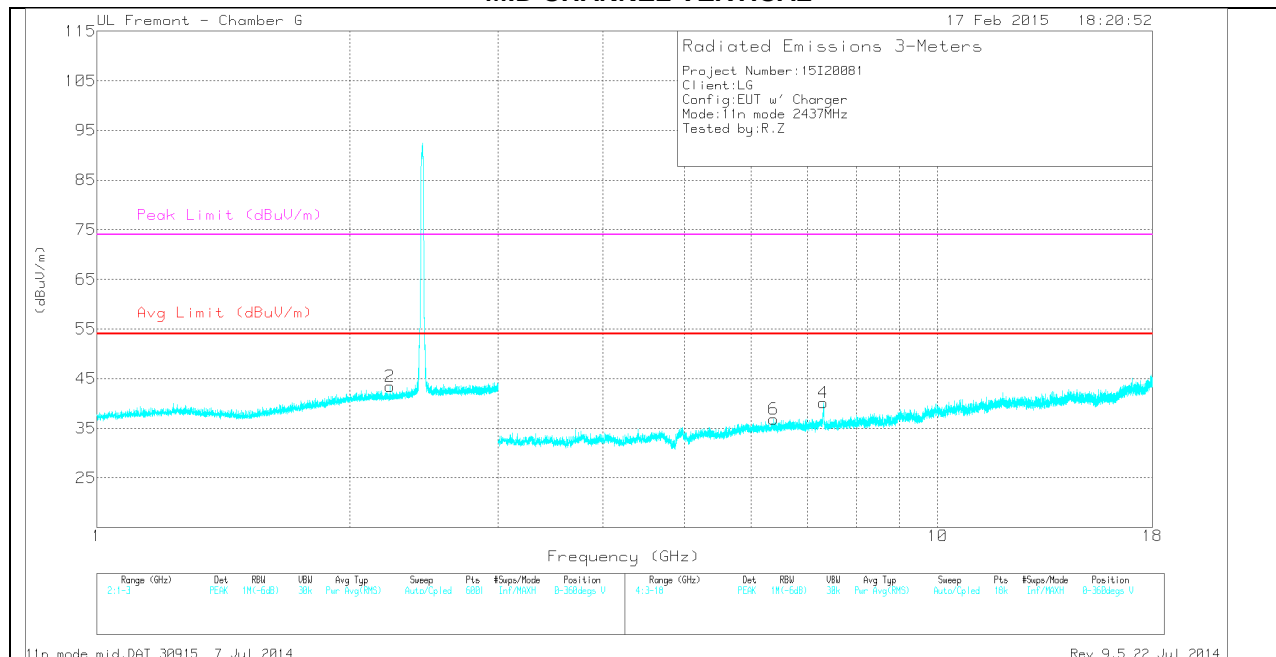
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.775	41.52	PK2	33	-32.7	0	41.82	-	-	74	-32.18	360	101	V
* 3.776	30.64	MAV1	33	-32.7	.23	31.17	54	-22.83	-	-	360	101	V

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

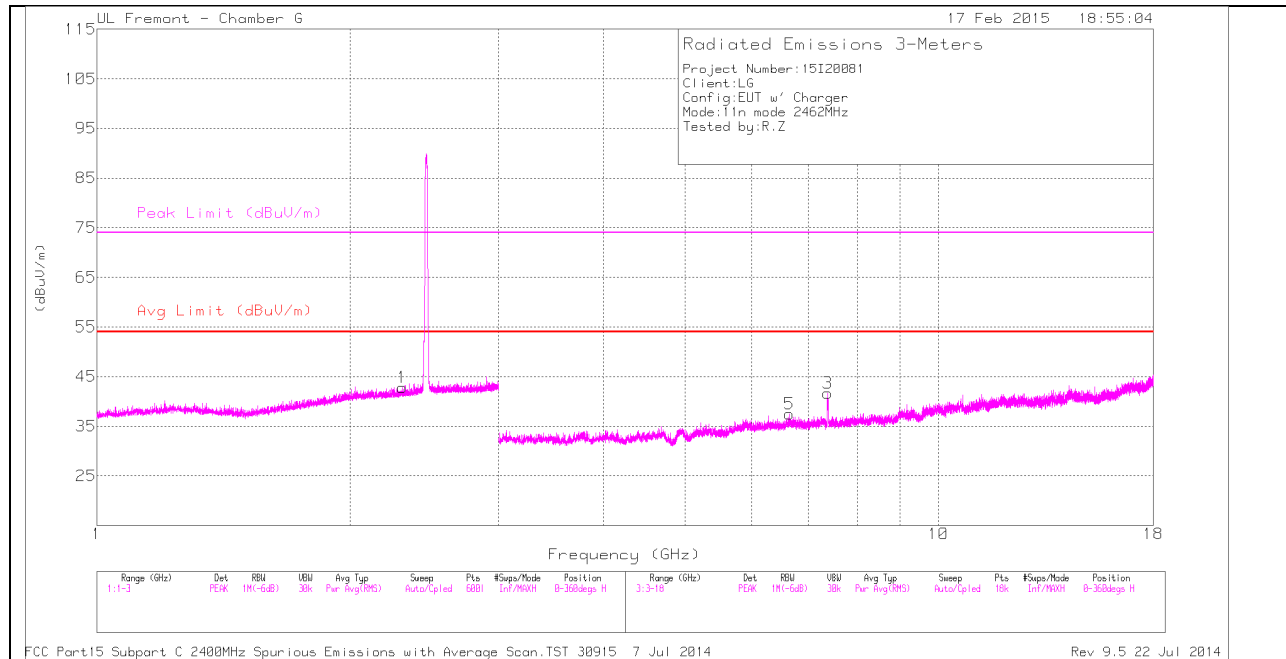
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Ftr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.232	37.1	PK	31.5	-25.1	0	43.5	-	-	74	-30.5	0-360	101	V
3	* 7.311	36.06	PK	35.6	-31.1	0	40.56	-	-	74	-33.44	0-360	201	H
4	* 7.311	35.68	PK	35.6	-31.1	0	40.18	-	-	74	-33.82	0-360	101	V
1	2.193	36.83	PK	31.5	-25.1	0	43.23	-	-	-	-	0-360	101	H
5	6.241	33.22	PK	35.7	-32.1	0	36.82	-	-	-	-	0-360	101	H
6	6.381	33.56	PK	35.6	-32.3	0	36.86	-	-	-	-	0-360	101	V

PK - Peak detector

RADIATED EMISSIONS

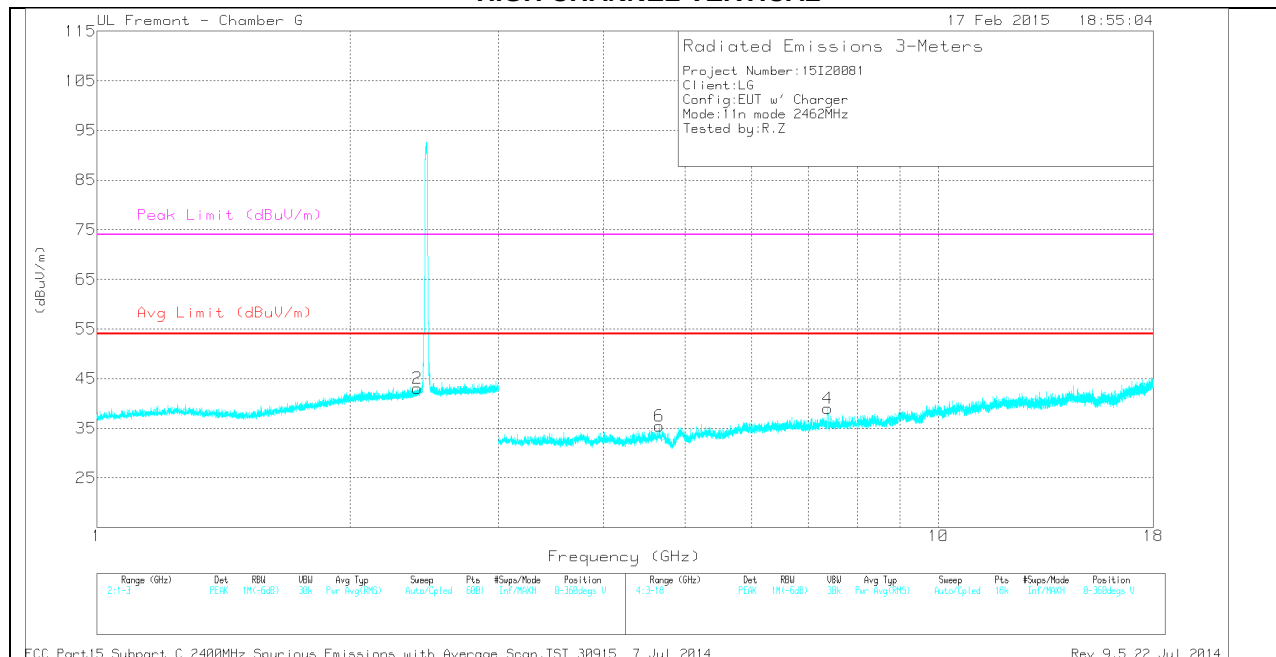
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Ftr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.231	43.87	PK2	31.5	-25.1	0	50.27	-	-	74	-23.73	296	387	V
* 2.231	31.75	MAV1	31.5	-25.1	.23	38.38	54	-15.62	-	-	296	387	V
* 7.312	40.61	PK2	35.6	-31.1	0	45.11	-	-	74	-28.89	296	202	H
* 7.311	29.81	MAV1	35.6	-31.1	.23	34.54	54	-19.46	-	-	296	202	H
* 7.311	41.92	PK2	35.6	-31.1	0	46.42	-	-	74	-27.58	296	102	V
* 7.311	30.03	MAV1	35.6	-31.1	.23	34.76	54	-19.24	-	-	296	102	V

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Ftr /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	* 7.384	37.71	PK	35.6	-31.7	0	41.61	-	-	74	-32.39	0-360	201	H
4	* 7.382	35.14	PK	35.6	-31.7	0	39.04	-	-	74	-34.96	0-360	101	V
6	* 4.662	34.53	PK	34	-33.1	0	35.43	-	-	74	-38.57	0-360	101	V
1	2.306	36.19	PK	31.6	-25	0	42.79	-	-	-	-	0-360	102	H
2	2.402	36.19	PK	31.8	-24.9	0	43.09	-	-	-	-	0-360	101	V
5	6.651	33.17	PK	35.6	-31.3	0	37.47	-	-	-	-	0-360	101	H

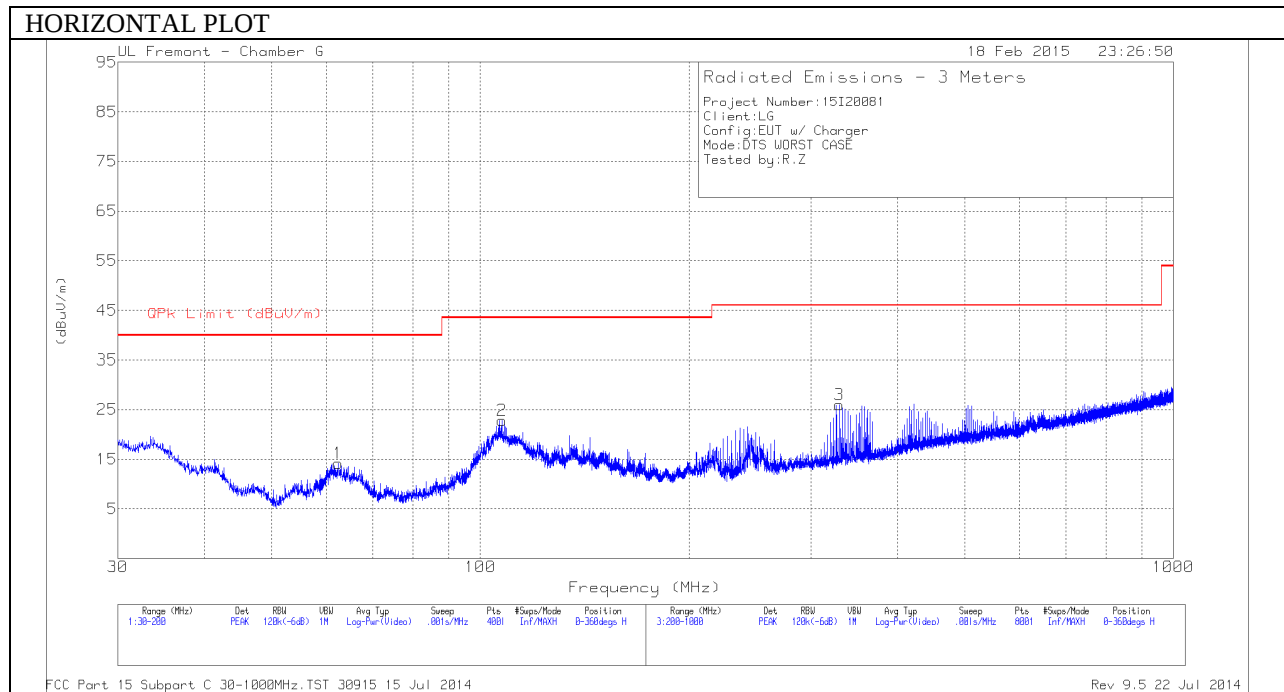
PK - Peak detector

RADIATED EMISSIONS

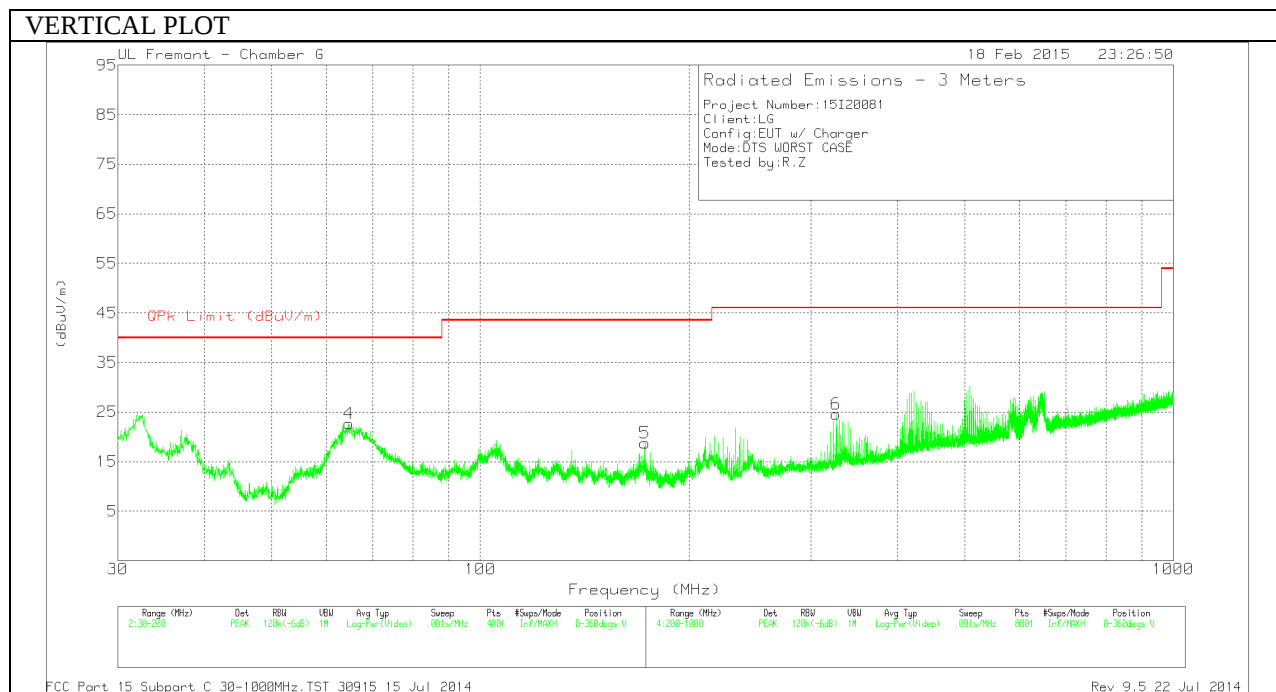
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Ftr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 7.383	40.32	PK2	35.6	-31.7	0	44.22	-	-	74	-29.78	360	202	H
* 7.384	29.43	MAV1	35.6	-31.7	.23	33.56	54	-20.44	-	-	360	202	H
* 7.384	41.3	PK2	35.6	-31.7	0	45.2	-	-	74	-28.8	360	102	V
* 7.383	30.35	MAV1	35.6	-31.7	.23	34.48	54	-19.52	-	-	360	102	V

10.2.4. WORST-CASE BELOW 1 GHz

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



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



Below 1G Data

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Hybrid	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 172.8	33.9	PK	14.8	-29.9	18.8	43.52	-24.72	0-360	100	V
3	* 329.6	37.96	PK	16.8	-28.8	25.96	46.02	-20.06	0-360	100	H
6	* 326.4	36.61	PK	16.8	-28.8	24.61	46.02	-21.41	0-360	100	V
1	62.3425	34.19	PK	10.9	-30.9	14.19	40	-25.81	0-360	301	H
4	64.595	42.26	PK	11.2	-30.8	22.66	40	-17.34	0-360	100	V
2	107.4775	38.17	PK	15	-30.4	22.77	43.52	-20.75	0-360	301	H

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

11. 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 C63.4 2009.

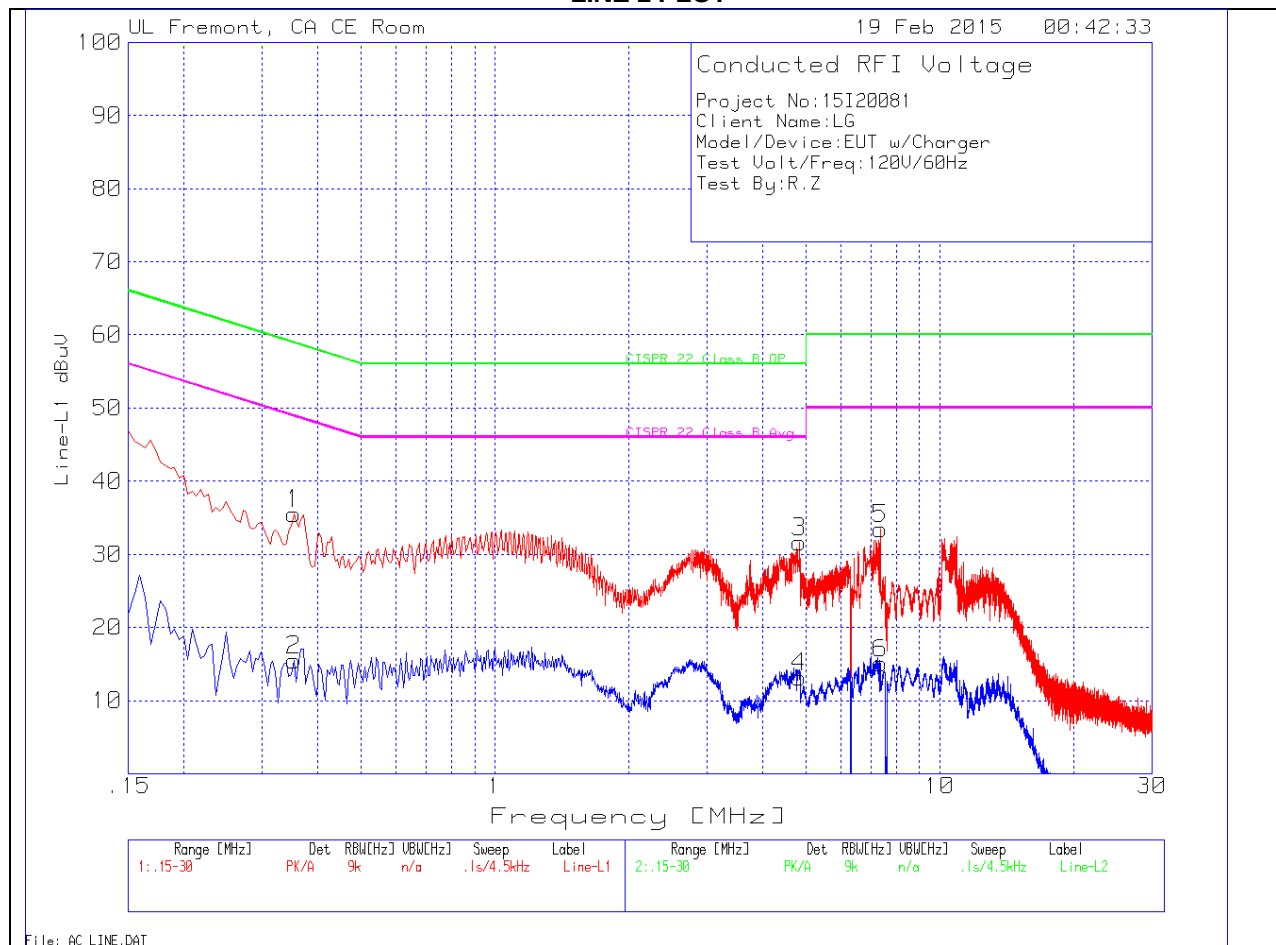
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT

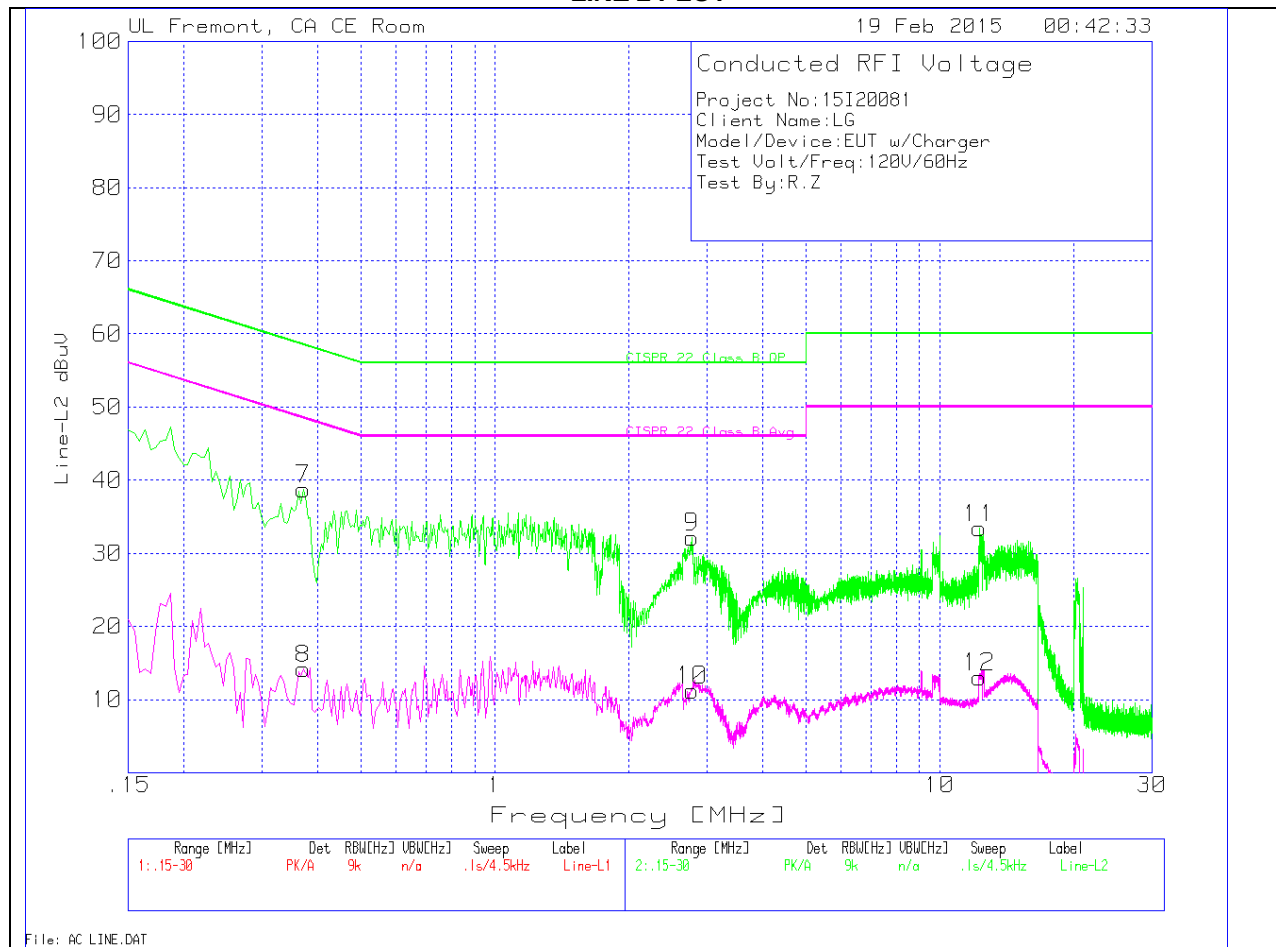


LINE 1 RESULTS

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	.3525	35.03	PK	.5	0	35.53	58.9	-23.37	-	-
2	.3525	14.95	Av	.5	0	15.45	-	-	48.9	-33.45
3	4.83	31.31	PK	.2	.1	31.61	56	-24.39	-	-
4	4.83	12.85	Av	.2	.1	13.15	-	-	46	-32.85
5	7.341	33.21	PK	.2	.1	33.51	60	-26.49	-	-
6	7.341	14.76	Av	.2	.1	15.06	-	-	50	-34.94

LINE 2 PLOT



LINE 2 RESULTS

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)
7	.3705	38.24	PK	.5	0	38.74	58.5	-19.76	-	-
8	.3705	13.65	Av	.5	0	14.15	-	-	48.5	-34.35
9	2.778	31.87	PK	.2	.1	32.17	56	-23.83	-	-
10	2.778	10.94	Av	.2	.1	11.24	-	-	46	-34.76
11	12.3045	33	PK	.2	.2	33.4	60	-26.6	-	-
12	12.3045	12.69	Av	.2	.2	13.09	-	-	50	-36.91

PK - Peak detector

Av - average detection