



FCC 47 CFR PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

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

MODEL NUMBER: LG-LS665, LGLS665, LS665

FCC ID: ZNFLS665

REPORT NUMBER: 15I20413-E4 REVISION A

ISSUE DATE: APRIL 28, 2015

Prepared for

**LG ELECTRONICS MOBILECOMM U.S.A., INC
1000 SYLVAN AVENUE
ENGLEWOOD CLIFFS,
NEW JERSEY, 07632, U.S.A**

Prepared by

**UL VERIFICATION SERVICES INC.
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888**



NVLAP LAB CODE 200065-0

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
--	04/27/15	Initial Issue	D. Corona
A	04/28/15	Updated test and measurement equipment page 12	D. Corona

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	5
2. TEST METHODOLOGY	6
3. FACILITIES AND ACCREDITATION	6
4. CALIBRATION AND UNCERTAINTY	6
4.1. MEASURING INSTRUMENT CALIBRATION	6
4.2. SAMPLE CALCULATION	6
4.3. MEASUREMENT UNCERTAINTY.....	7
5. EQUIPMENT UNDER TEST.....	8
5.1. DESCRIPTION OF EUT	8
5.2. MAXIMUM OUTPUT POWER.....	8
5.3. DESCRIPTION OF AVAILABLE ANTENNAS	8
5.4. WORST-CASE CONFIGURATION AND MODE.....	9
5.5. DESCRIPTION OF TEST SETUP.....	10
6. TEST AND MEASUREMENT EQUIPMENT	12
7. MEASUREMENT METHODS	13
8. SUMMARY TABLE	14
9. ANTENNA PORT TEST RESULTS	15
9.1. 6 dB BANDWIDTH.....	15
9.1.1. 802.11b MODE IN THE 2.4 GHz BAND	16
9.1.2. 802.11g MODE IN THE 2.4 GHz BAND	16
9.1.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND	16
9.1.4. 6 dB BANDWIDTH MID CH PLOTS.....	17
9.2. 99% BANDWIDTH.....	18
9.2.1. 802.11b MODE IN THE 2.4 GHz BAND	18
9.2.2. 802.11g MODE IN THE 2.4 GHz BAND	18
9.2.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND	18
9.2.4. 99% BANDWIDTH MID CH PLOTS.....	19
9.3. OUTPUT POWER.....	20
9.3.1. 802.11b MODE IN THE 2.4 GHz BAND	21
9.3.2. 802.11g MODE IN THE 2.4 GHz BAND	22
9.3.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND	23
9.4. PSD	24

9.4.1. 802.11b MODE IN THE 2.4 GHz BAND.....25
9.4.2. 802.11g MODE IN THE 2.4 GHz BAND.....25
9.4.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND25
9.4.4. PSD Chain 0 MID CH PLOTS.....26
9.5. *OUT-OF-BAND EMISSIONS*.....27
9.5.1. 802.11b MODE IN THE 2.4 GHz BAND.....28
9.5.2. 802.11g MODE IN THE 2.4 GHz BAND.....34
9.5.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND40
10. RADIATED TEST RESULTS46
10.1. *LIMITS AND PROCEDURE*.....46
10.2. *TRANSMITTER ABOVE 1 GHz*.....47
10.2.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND.....47
10.2.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND.....60
10.2.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND73
10.3. *WORST-CASE BELOW 1 GHz*.....86
11. AC POWER LINE CONDUCTED EMISSIONS88
12. SETUP PHOTOS91

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: LG ELECTRONICS MOBILECOMM U.S.A., INC
EUT DESCRIPTION: CDMA/LTE PHONE + BLUETOOTH and DTS WLAN b/g/n
MODEL: LG-LS665, LGLS665, LS665
SERIAL NUMBER: 8008BC6E (Radiated), 8065FB39 (Conducted)
DATE TESTED: MARCH 24-APRIL 14, 2015

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

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

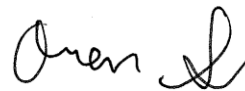
Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section.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

Approved & Released For
UL Verification Services Inc. By:



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

Tested By:



OREN STOELTING
CONSUMER TECHNOLOGY DIVISION
WISE LAB EMC TECHNICIAN
UL VERIFICATION SERVICES INC

2. TEST METHODOLOGY

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

3. FACILITIES AND ACCREDITATION

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

47173 Benicia Street	47266 Benicia Street
<input type="checkbox"/> Chamber A(IC: 2324B-1)	<input type="checkbox"/> Chamber D(IC: 2324B-4)
<input checked="" type="checkbox"/> Chamber B(IC: 2324B-2)	<input type="checkbox"/> Chamber E(IC: 2324B-5)
<input checked="" type="checkbox"/> Chamber C(IC: 2324B-3)	<input type="checkbox"/> Chamber F(IC: 2324B-6)
	<input checked="" type="checkbox"/> Chamber G(IC: 2324B-7)
	<input type="checkbox"/> Chamber H(IC: 2324B-8)

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://ts.nist.gov/standards/scopes/2000650.htm>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

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 CDMA/LTE PHONE + BLUETOOTH and DTS WLAN 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	13.80	23.99
2412 - 2462	802.11g	9.60	9.12
2412 - 2462	802.11n HT20	8.60	7.24

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of 0.46dBi.

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 HT20mode: MCS0

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	LG	MCS-04WD2	EAY62991904	NA
Earphone	LG	N/A	N/A	NA

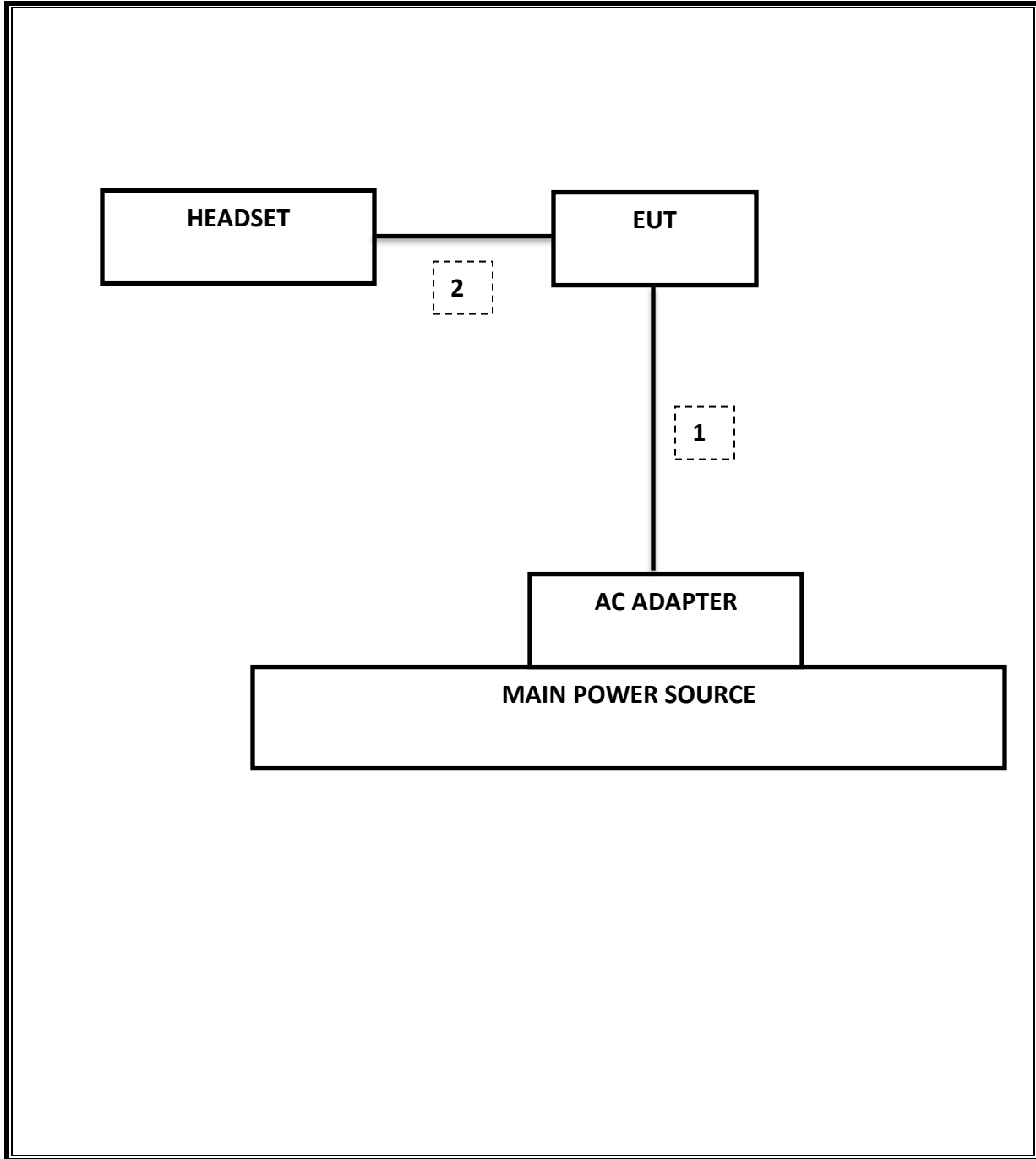
I/O CABLES

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	04/01/16
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	1000741	08/13/15
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/18/15
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15
Antenna, Horn, 1-18 GHz	ETS	3117	C01022	02/21/16
Antenna, Horn, 18- 26 GHz	ARA	MWH-1826/B	C00946	11/12/15
Antenna, Horn, 26-40 GHz	ARA	MWH-2640	C00891	06/28/15
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	T243	03/06/16
RF Preampfier, 100KHz -> 1300MHz	HP	TBD	C00825	06/01/15
RF Preampfier, 1GHz - 18GHz	Miteq	NSP4000-SP2	924343	03/23/16
RF Preampfier, 1GHz - 26.5GHz	HP	8449B	F00351	06/27/15
AC Power Supply, 2,500VA 45-500Hz	Elgar-Ametek	CW2501M	F00013	CNR
RF Preampfier, 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)	>500KHz	Conducted	Pass	17.66 MHz
2.1051, 15.247 (d)	RSS-210 A8.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	-34.67 dBm
15.247	RSS-210 A8.4	TX conducted output power	<30dBm		Pass	13.80 dBm
15.247	RSS-210 A8.2	PSD	<8dBm		Pass	-6.78 dBm
15.207 (a)	RSS-GEN 7.2.2	AC Power Line conducted emissions	Section 10	Radiated	Pass	48.02 dBuV
15.205, 15.209	RSS-210 Clause 2.6, RSS-210 Clause 6	Radiated Spurious Emission	< 54dBuV/m		Pass	49.69 dBuV/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 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	7.60	0.5
Mid	2437	7.12	0.5
High	2462	7.10	0.5
Worst		7.10	

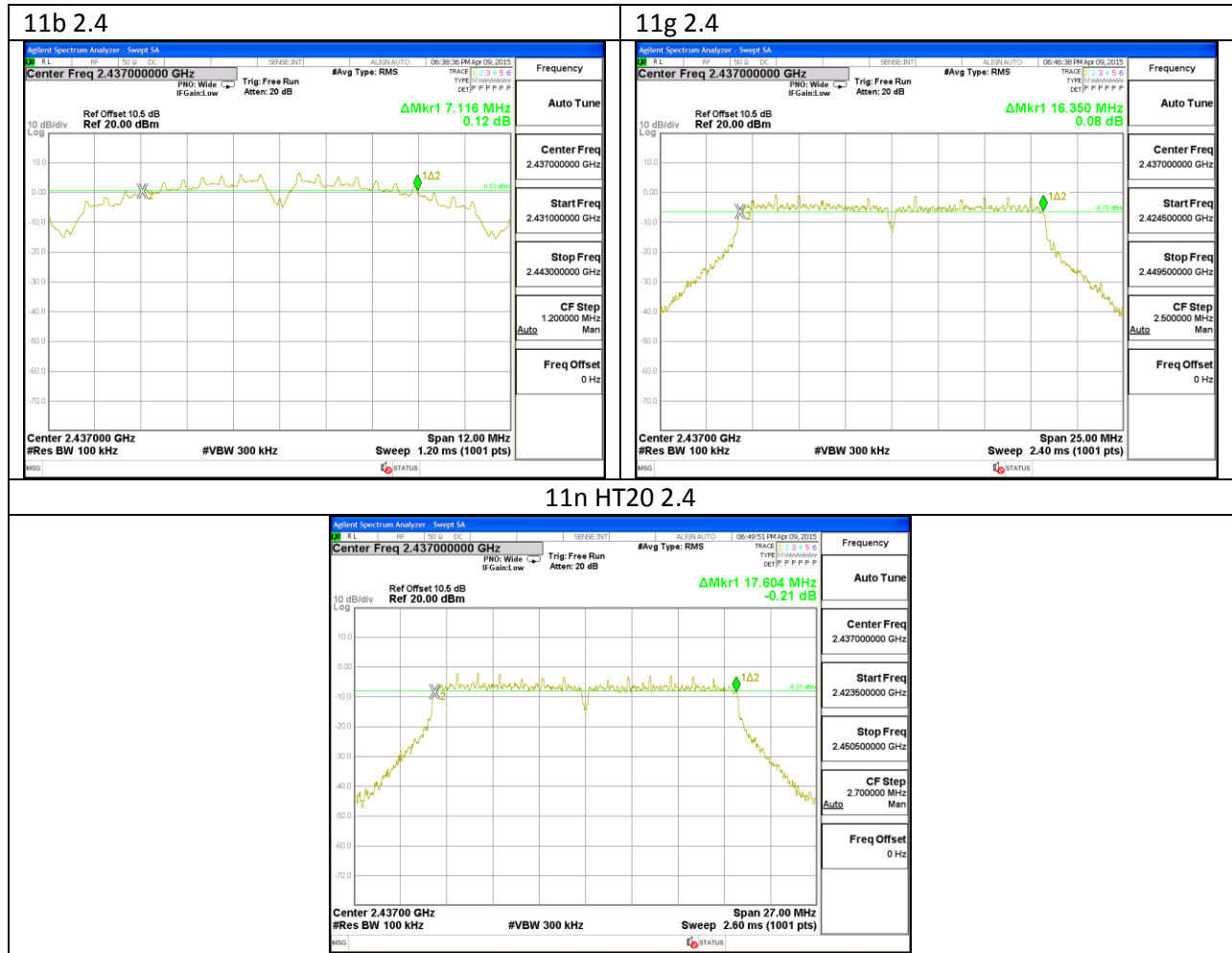
9.1.2. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	16.40	0.5
Mid	2437	16.35	0.5
High	2462	16.35	0.5
Worst		16.35	

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	17.60	0.5
High	2462	17.60	0.5
Worst		17.60	

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	12.50
Mid	2437	12.25
High	2462	12.26
Worst		12.50

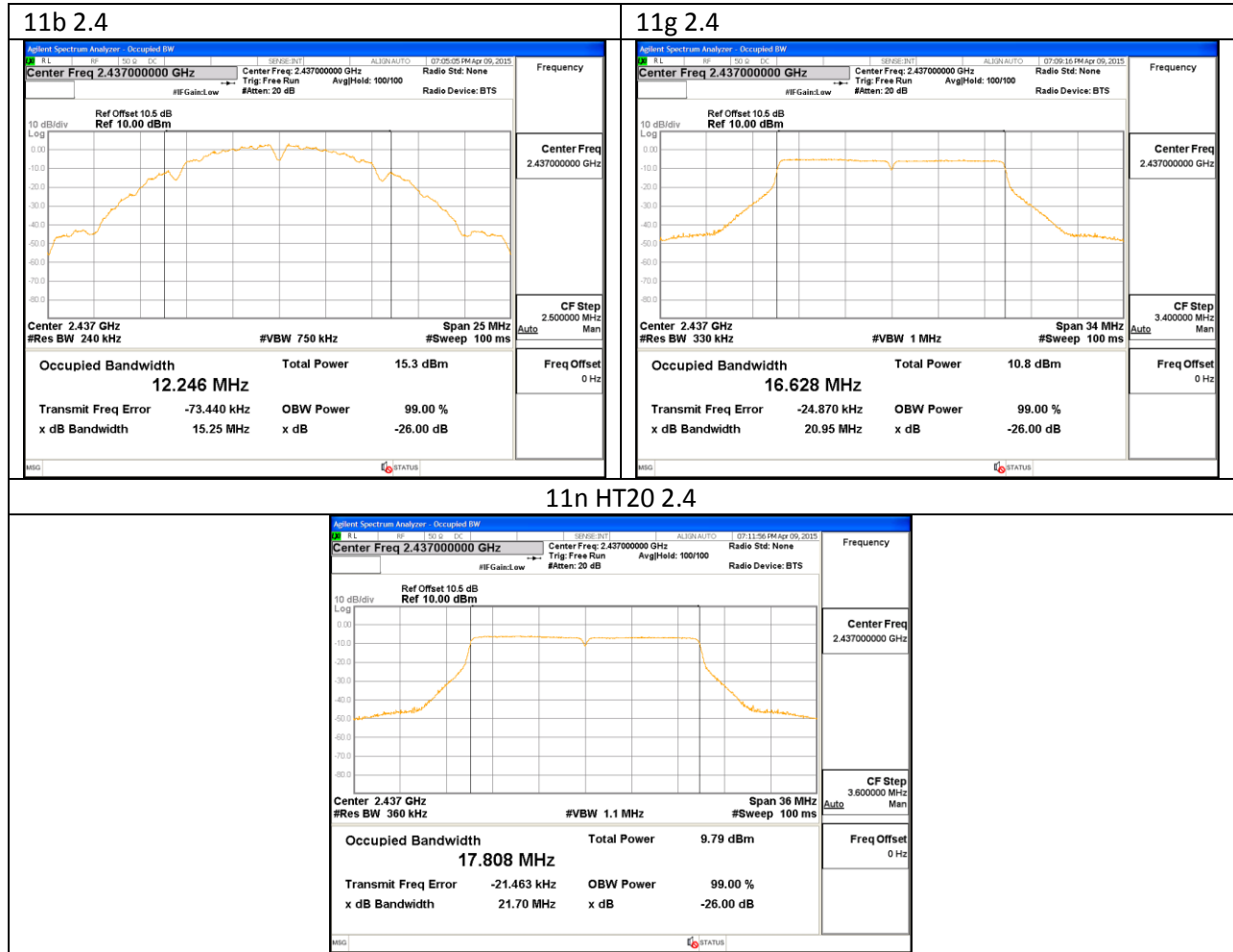
9.2.2. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.70
Mid	2437	16.63
High	2462	16.59
Worst		16.70

9.2.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.88
Mid	2437	17.81
High	2462	17.77
Worst		17.88

9.2.4. 99% BANDWIDTH MID CH PLOTS



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.

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	0.46	30.00	30	36	30.00
Mid	2437	0.46	30.00	30	36	30.00
High	2462	0.46	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	13.70	13.70	30.00	-16.30
Mid	2437	13.80	13.80	30.00	-16.20
High	2462	13.60	13.60	30.00	-16.40
Worst			13.80		

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	0.46	30.00	30	36	30.00
Mid	2437	0.46	30.00	30	36	30.00
High	2462	0.46	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	9.60	9.60	30.00	-20.40
Mid	2437	9.50	9.50	30.00	-20.50
High	2462	9.50	9.50	30.00	-20.50
Worst			9.60		

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	0.46	30.00	30	36	30.00
Mid	2437	0.46	30.00	30	36	30.00
High	2462	0.46	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	8.60	8.60	30.00	-21.40
Mid	2437	8.50	8.50	30.00	-21.50
High	2462	8.40	8.40	30.00	-21.60
Worst			8.60		

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	-6.88	8.0	-14.9
Mid	2437	-6.79	8.0	-14.8
High	2462	-6.78	8.0	-14.8

9.4.2. 802.11g MODE IN THE 2.4 GHz BAND

PSD Results

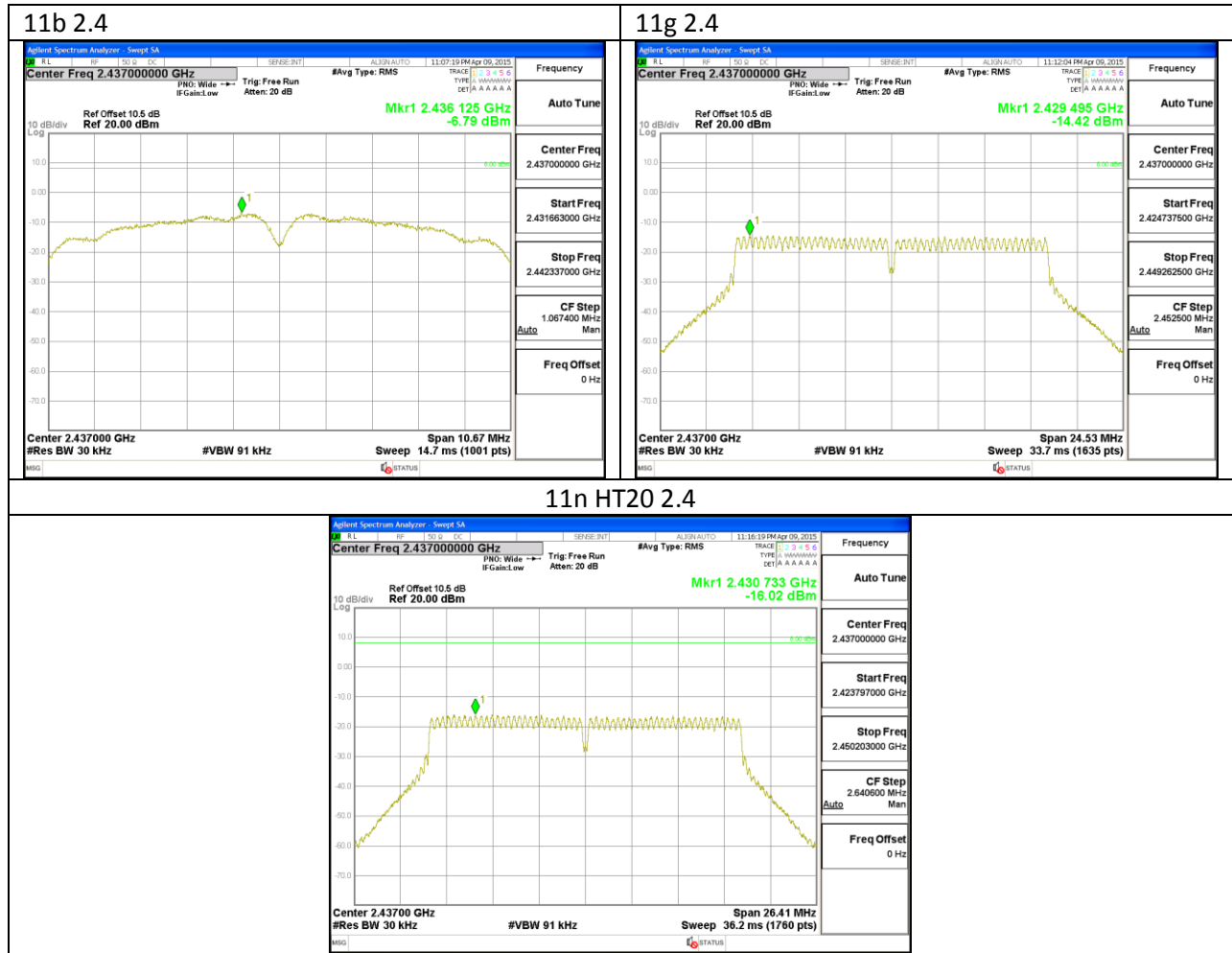
Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-13.86	8.0	-21.9
Mid	2437	-14.42	8.0	-22.4
High	2462	-14.60	8.0	-22.6

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	-14.88	8.0	-22.9
Mid	2437	-16.02	8.0	-24.0
High	2462	-15.84	8.0	-23.8

9.4.4. PSD Chain 0 MID CH PLOTS



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.

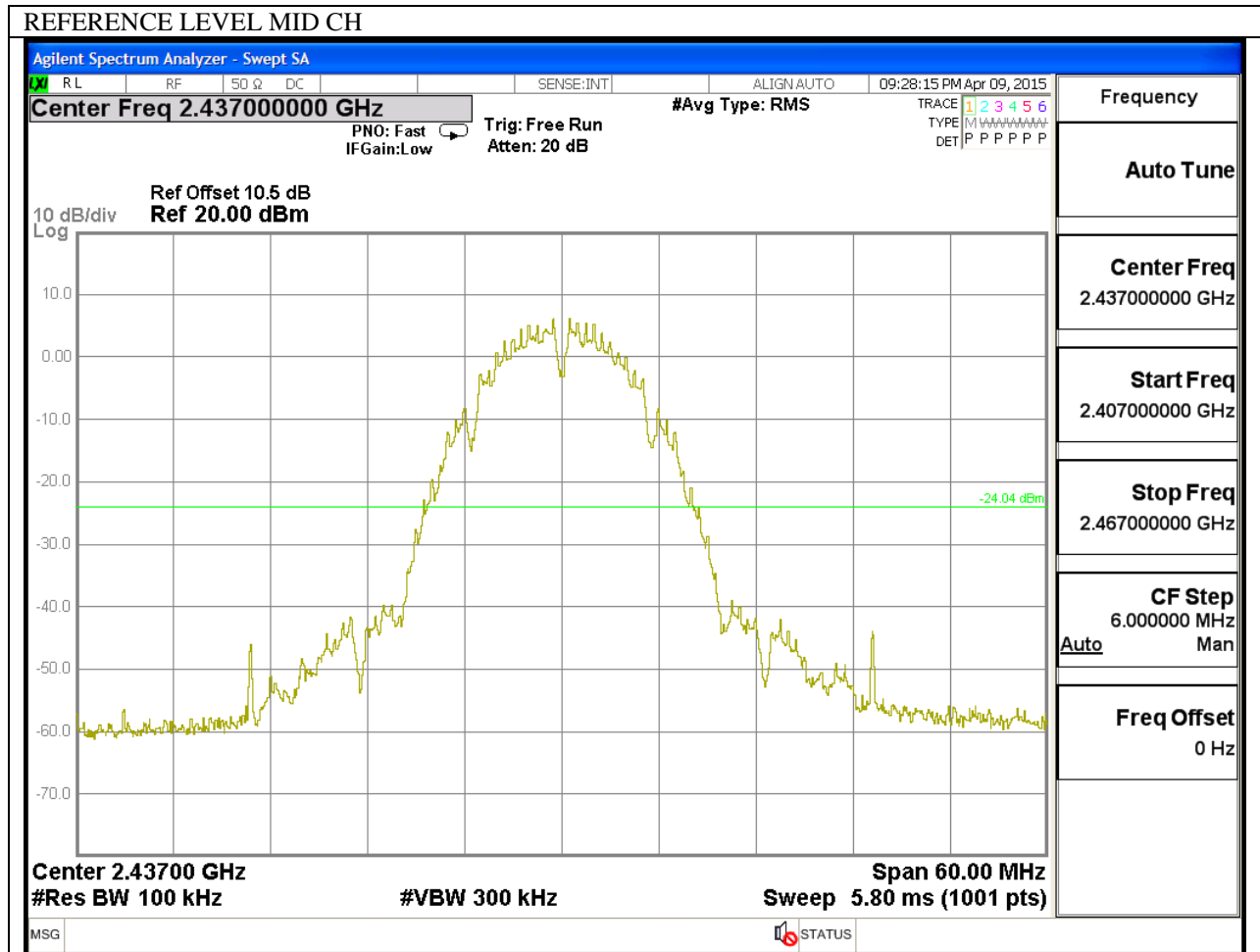
TEST PROCEDURE

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.

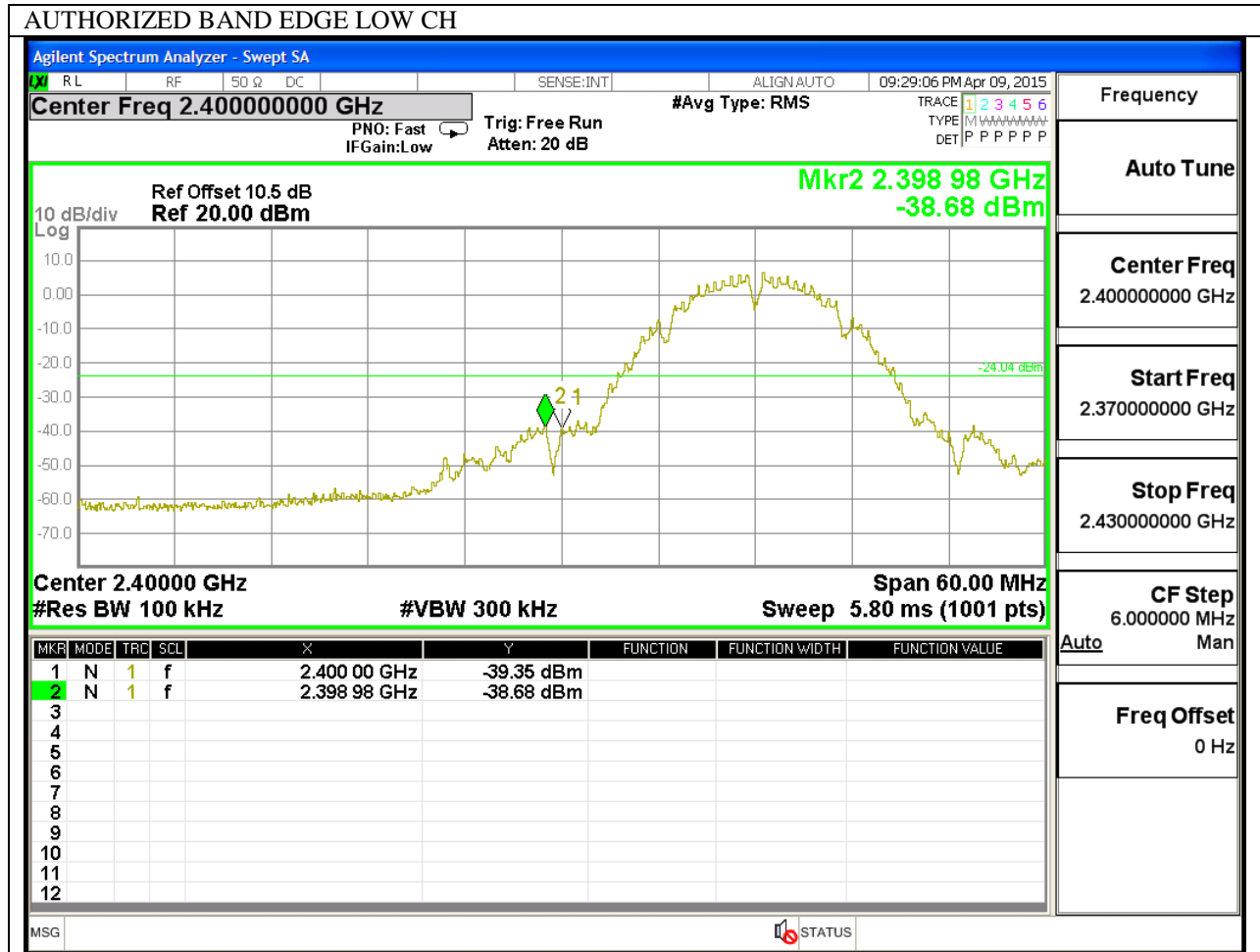
RESULTS

9.5.1. 802.11b MODE IN THE 2.4 GHz BAND

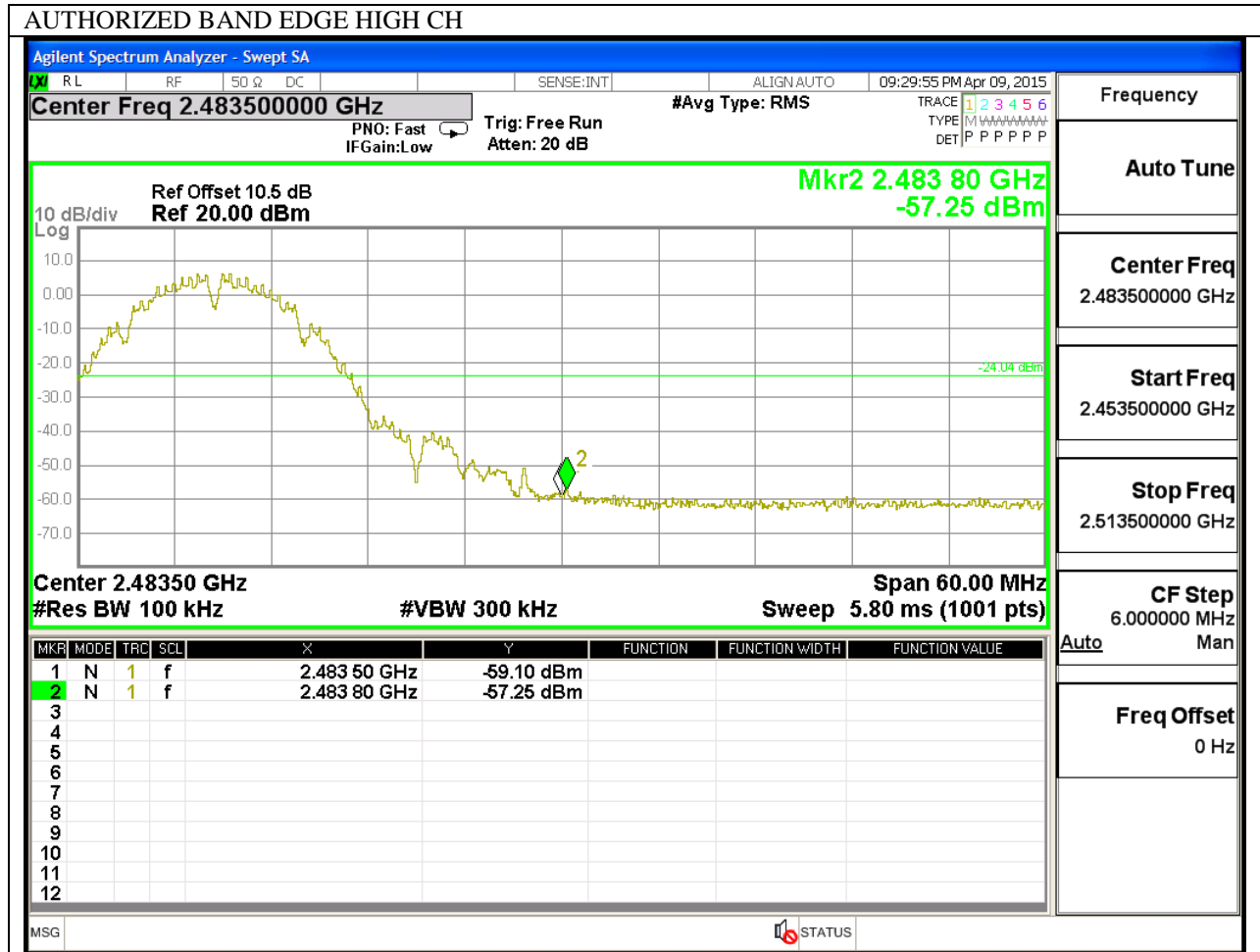
IN-BAND REFERENCE LEVEL



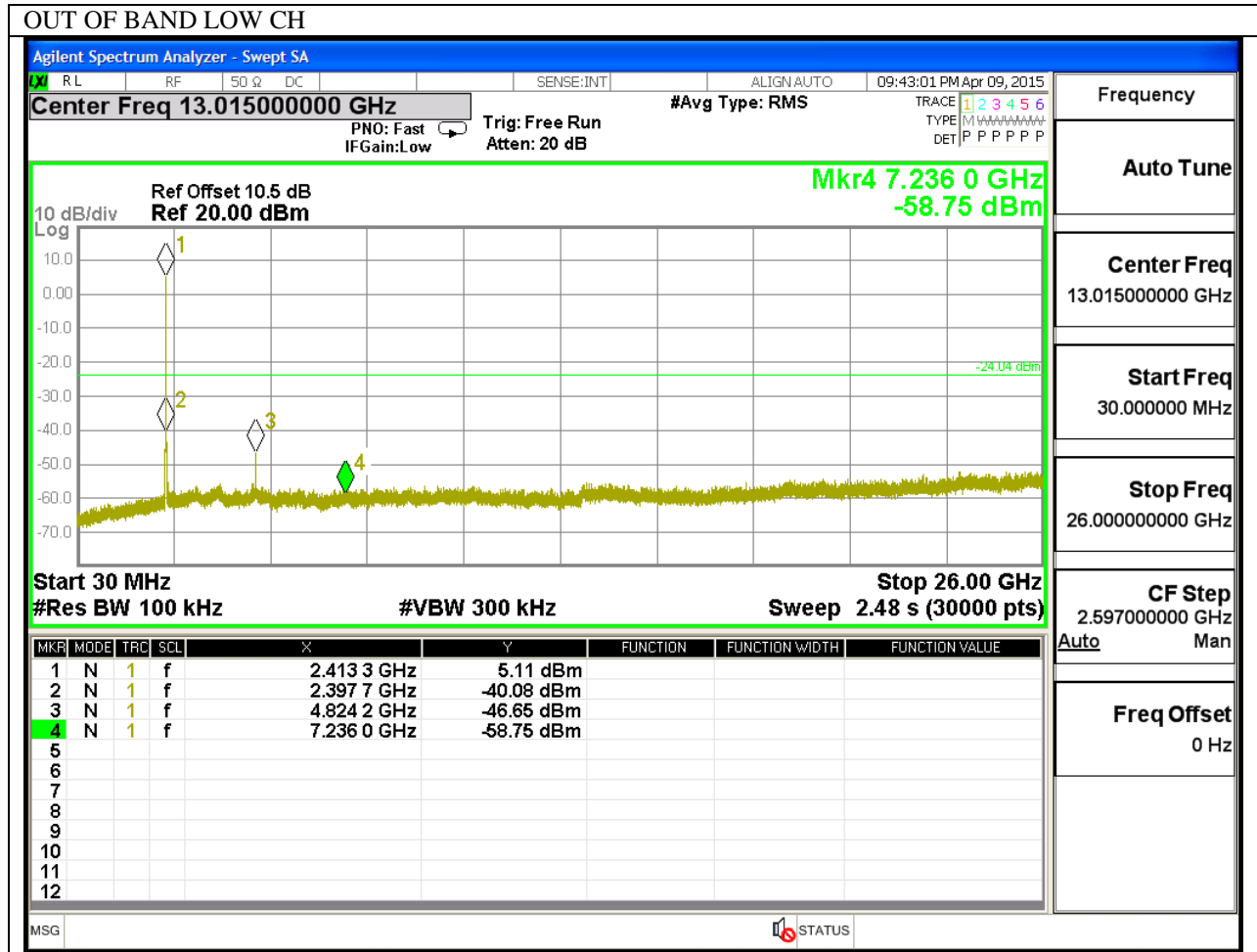
LOW CHANNEL BANDEDGE

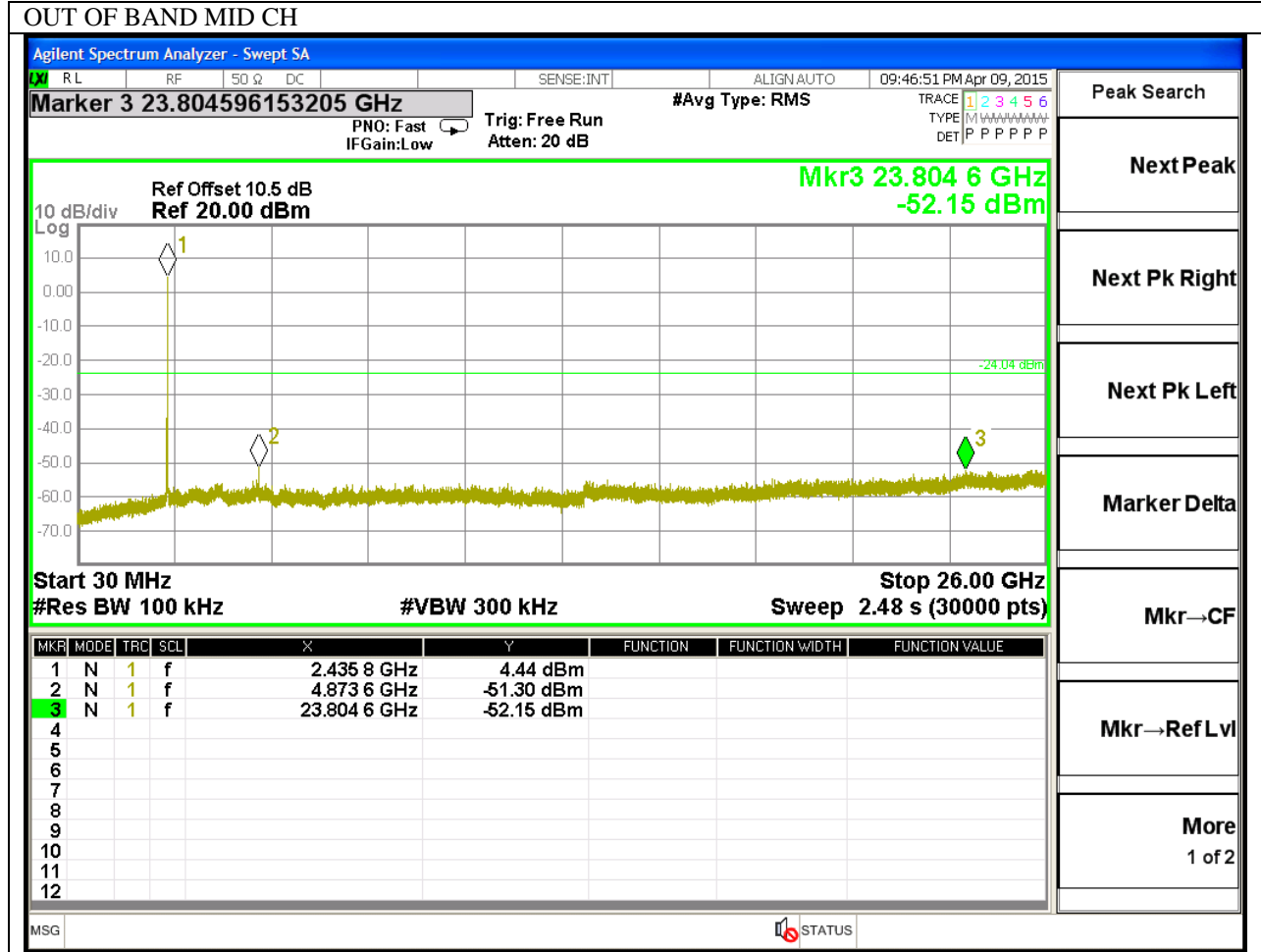


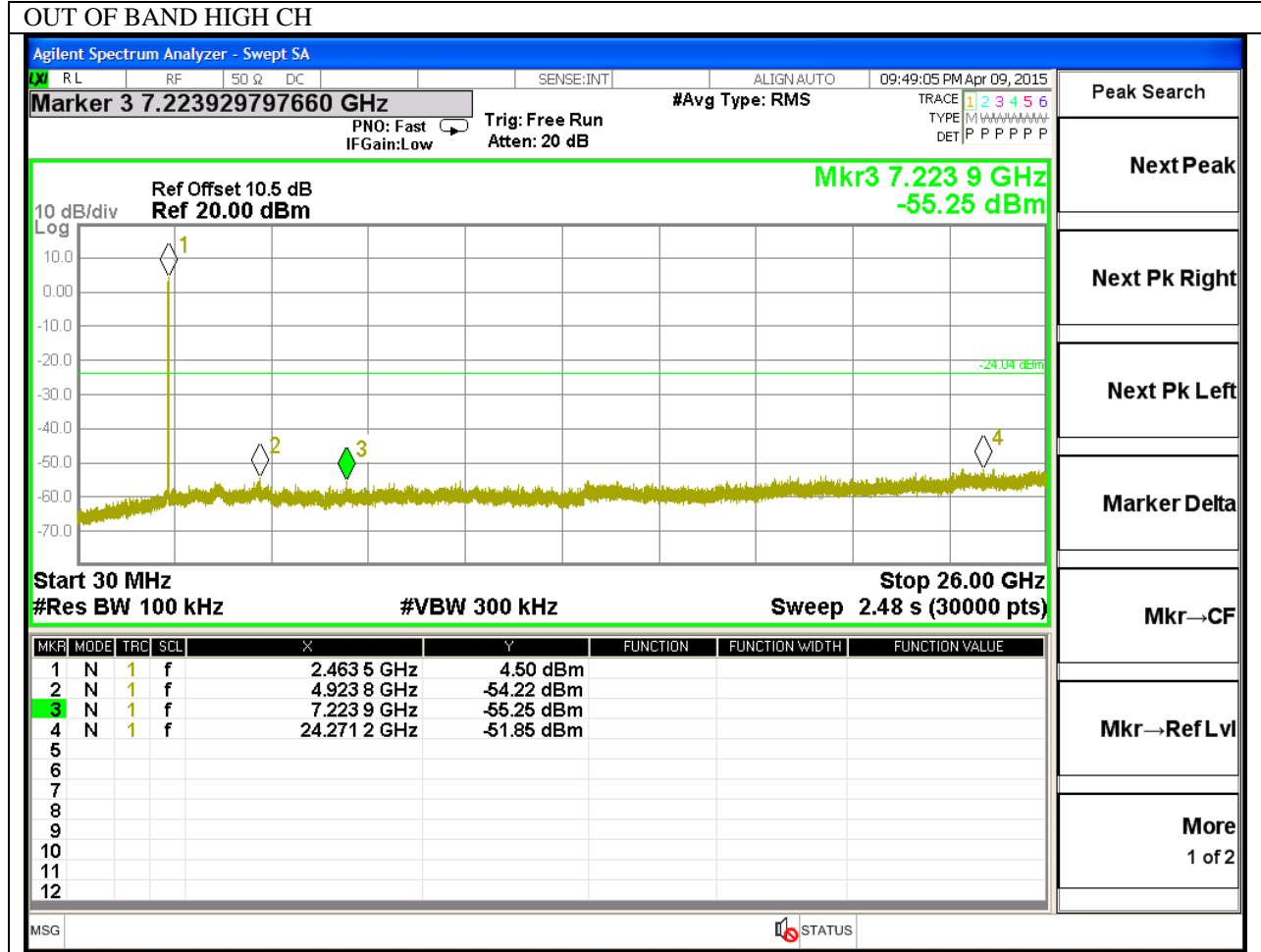
HIGH CHANNEL BANDEDGE



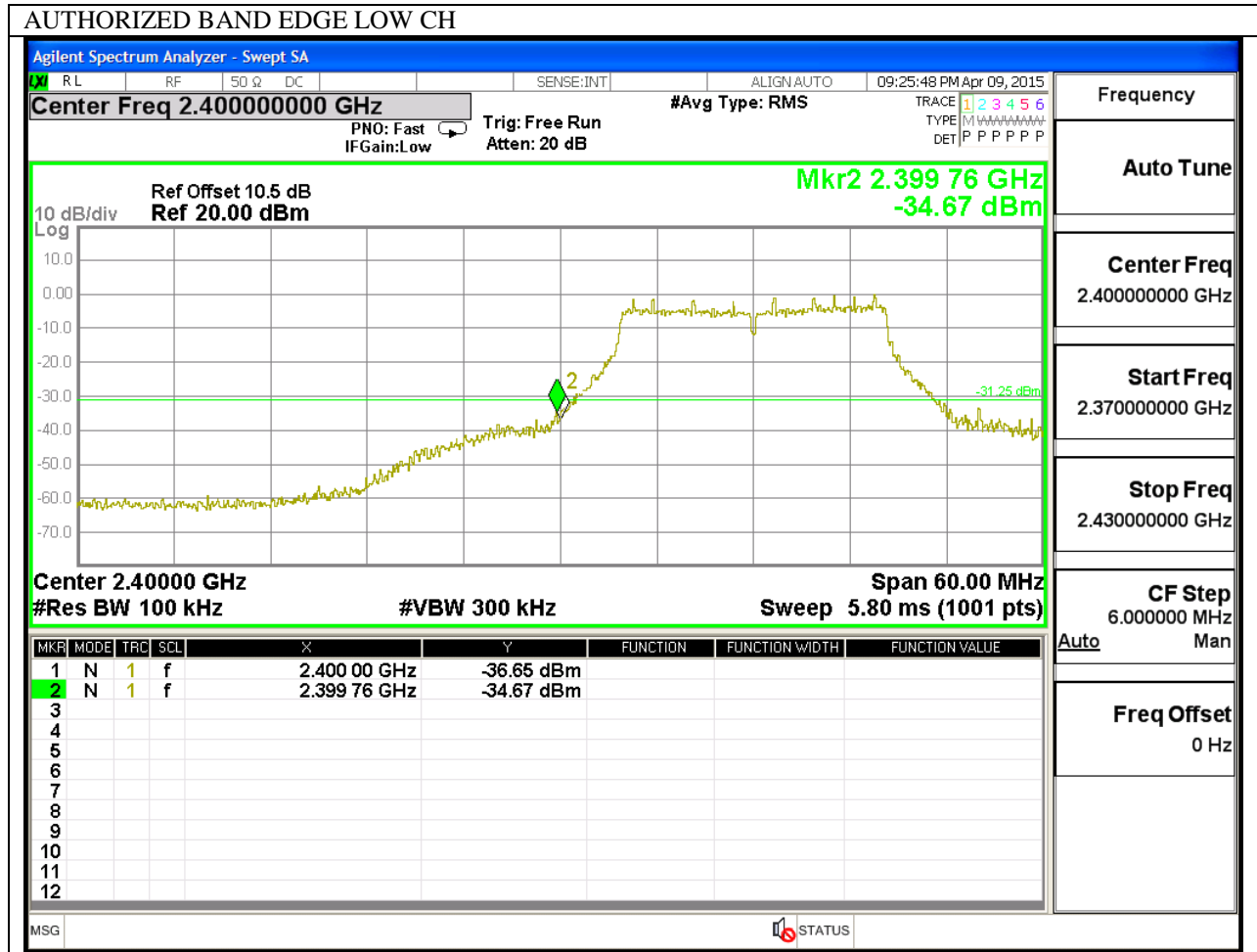
OUT-OF-BAND EMISSIONS



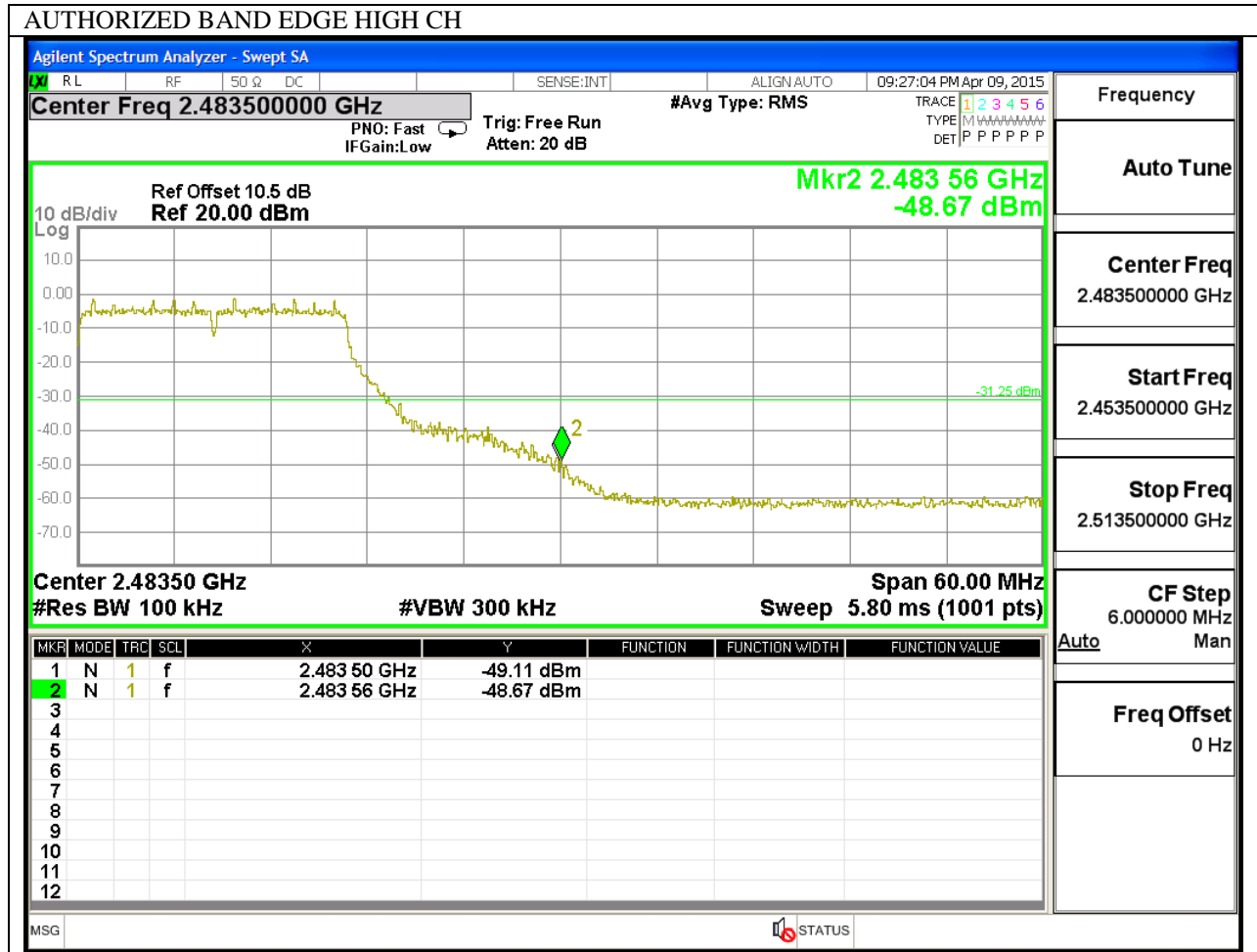




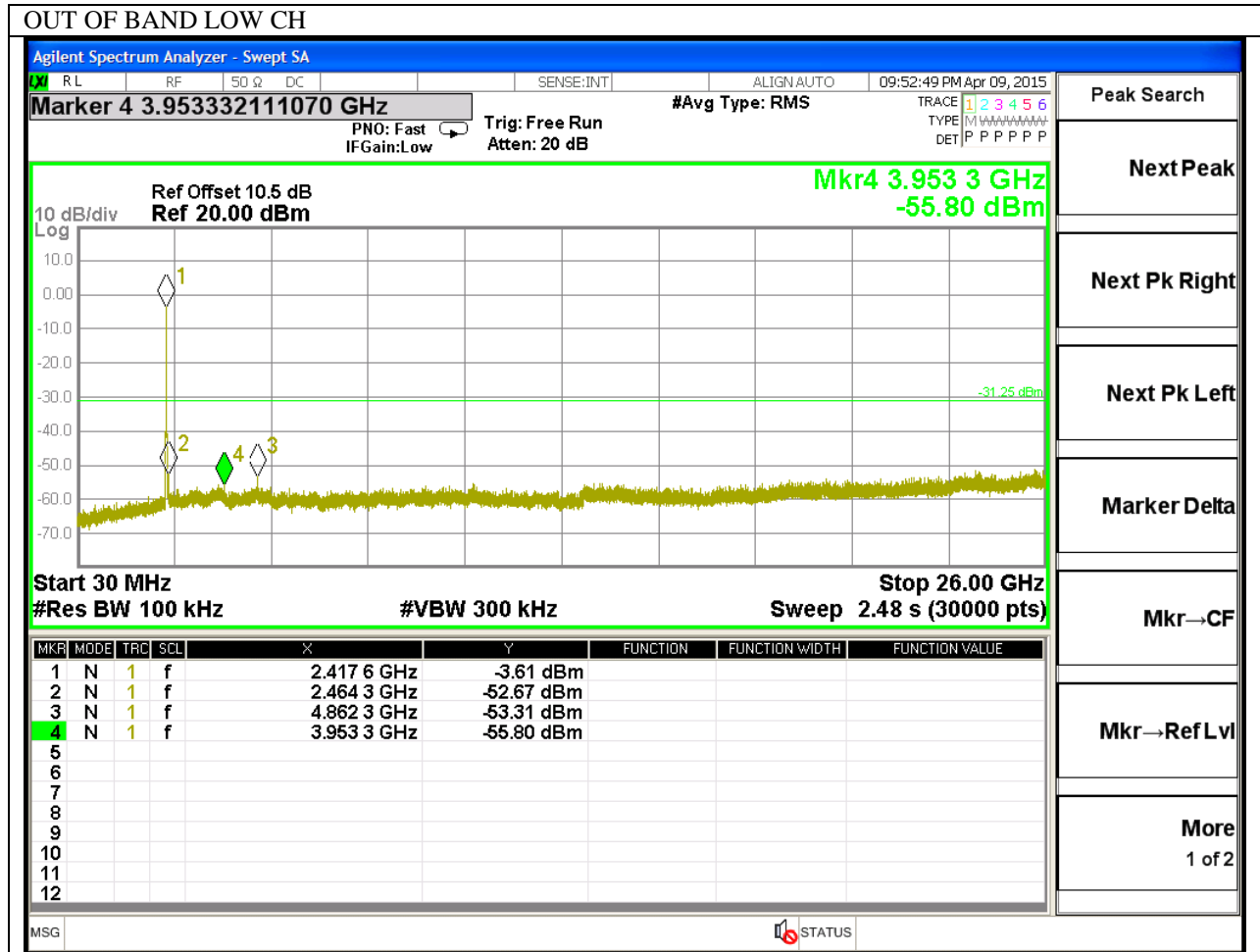
LOW CHANNEL BANDEDGE

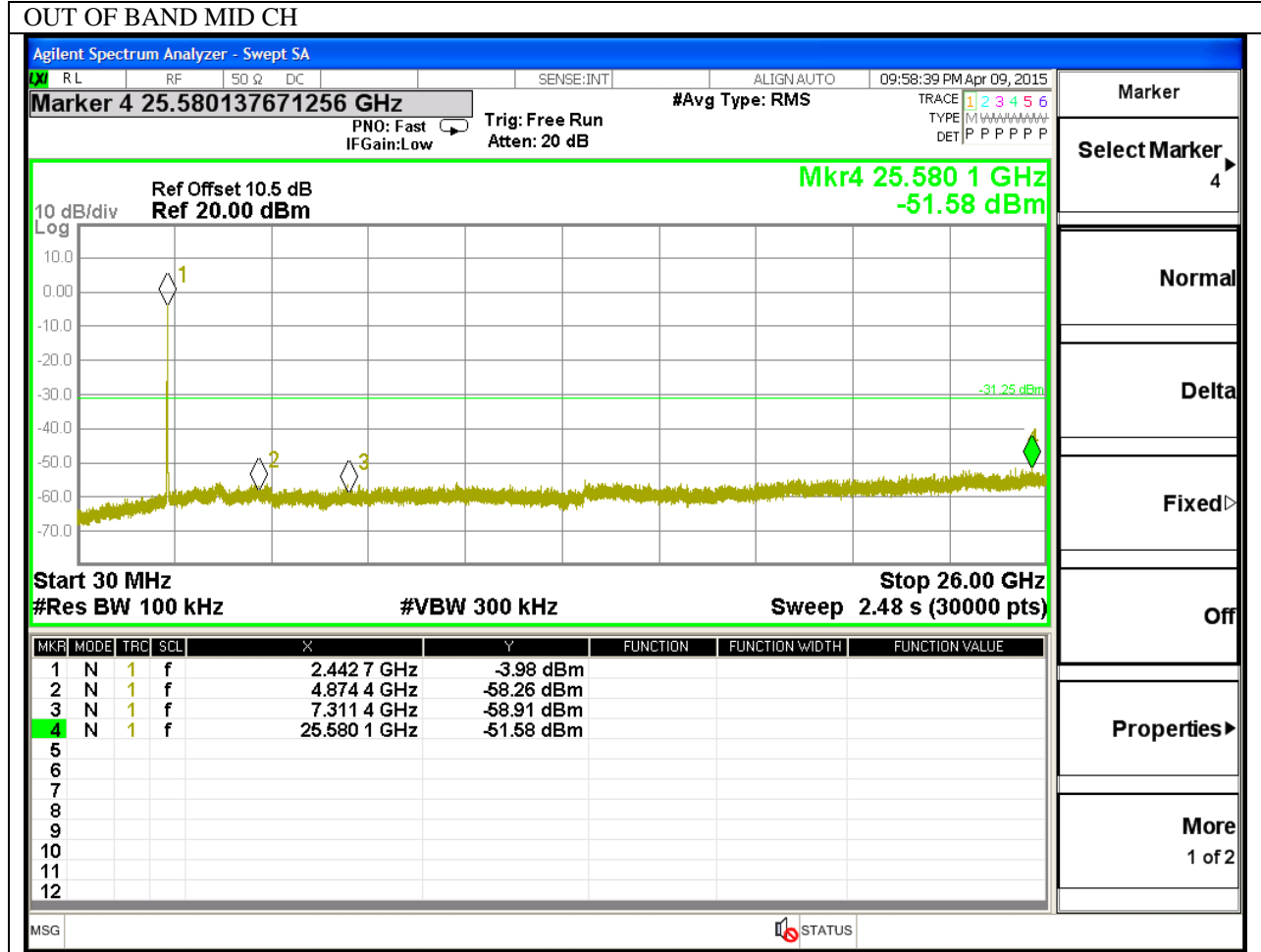


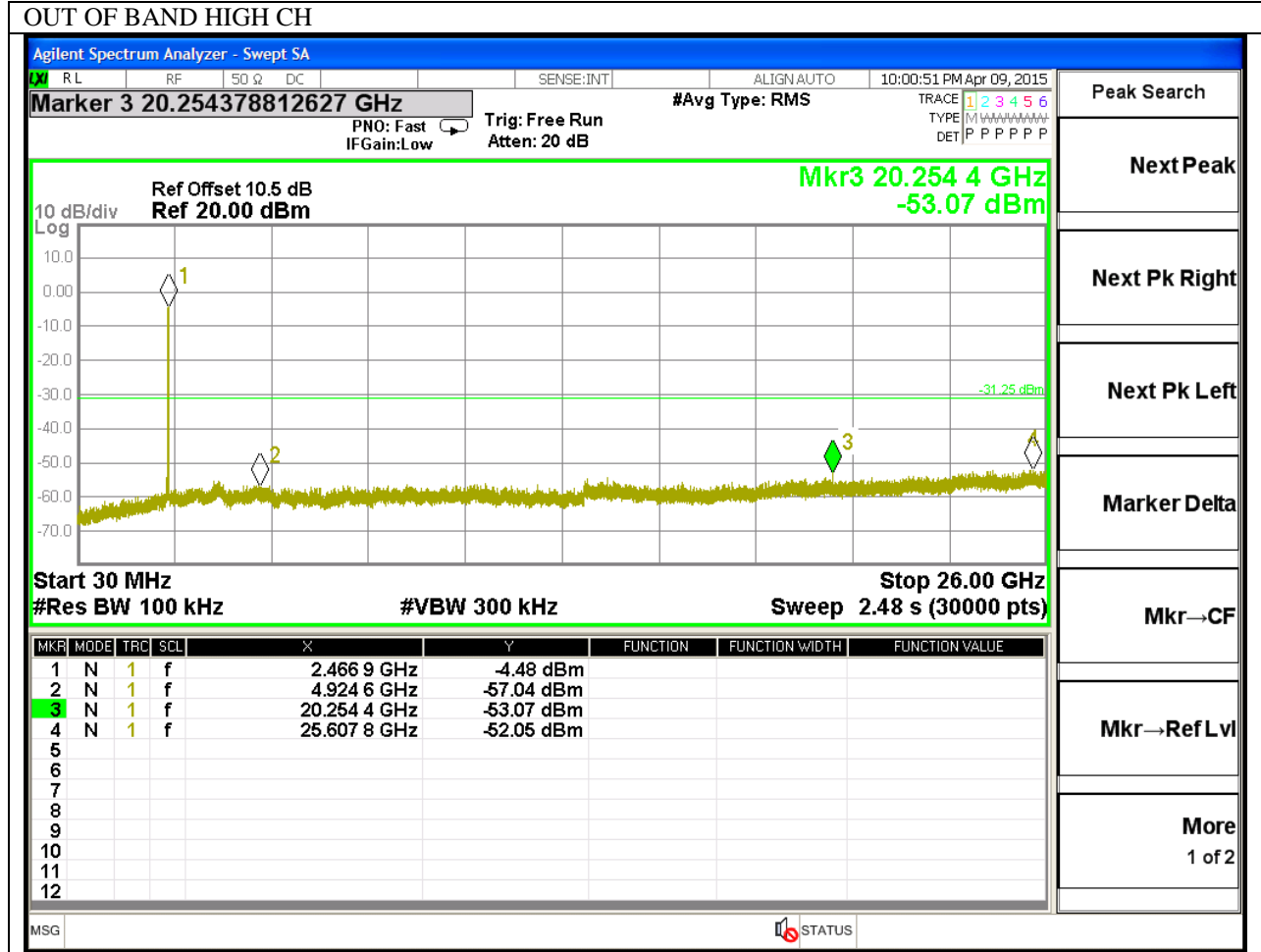
HIGH CHANNEL BANDEDGE



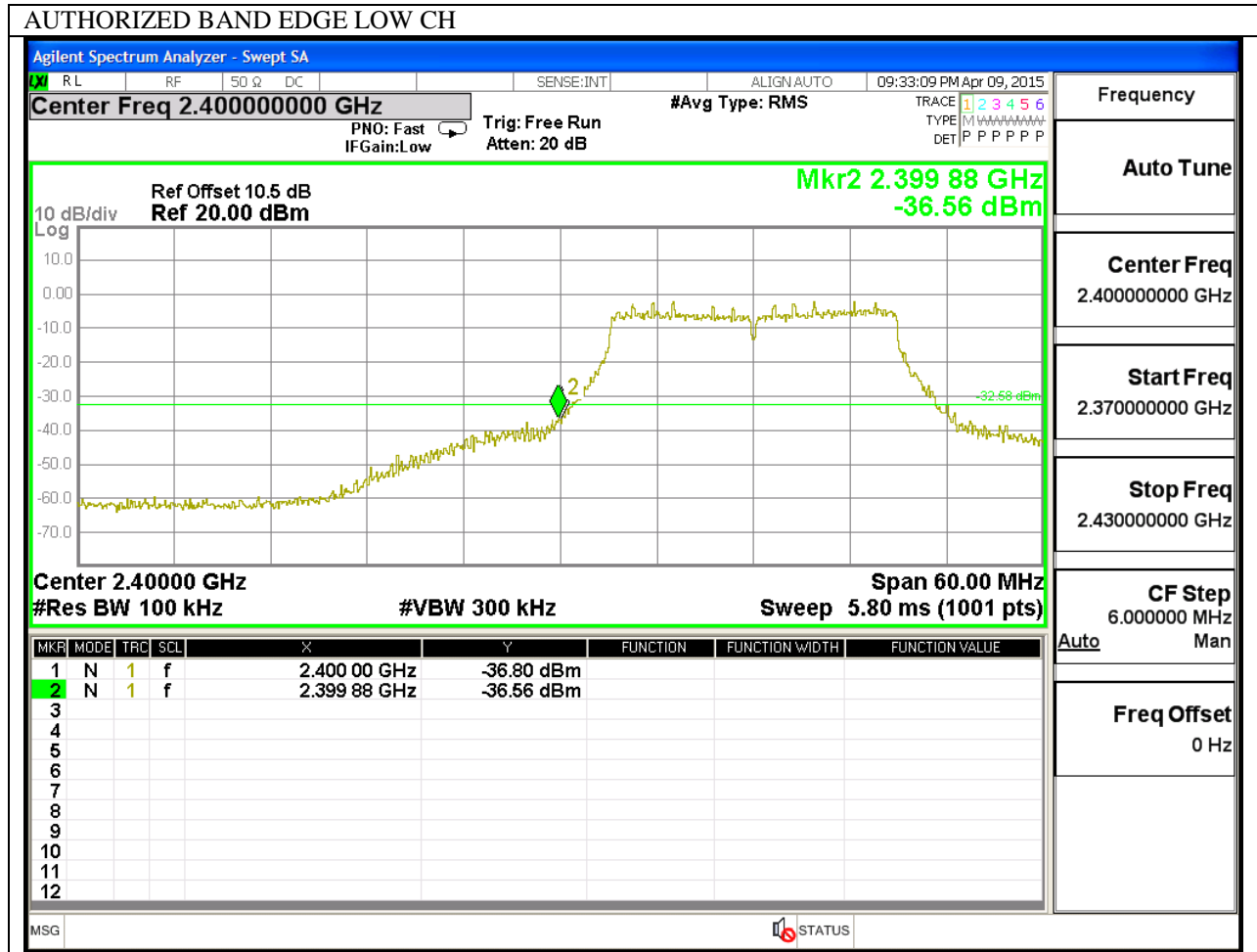
OUT-OF-BAND EMISSIONS



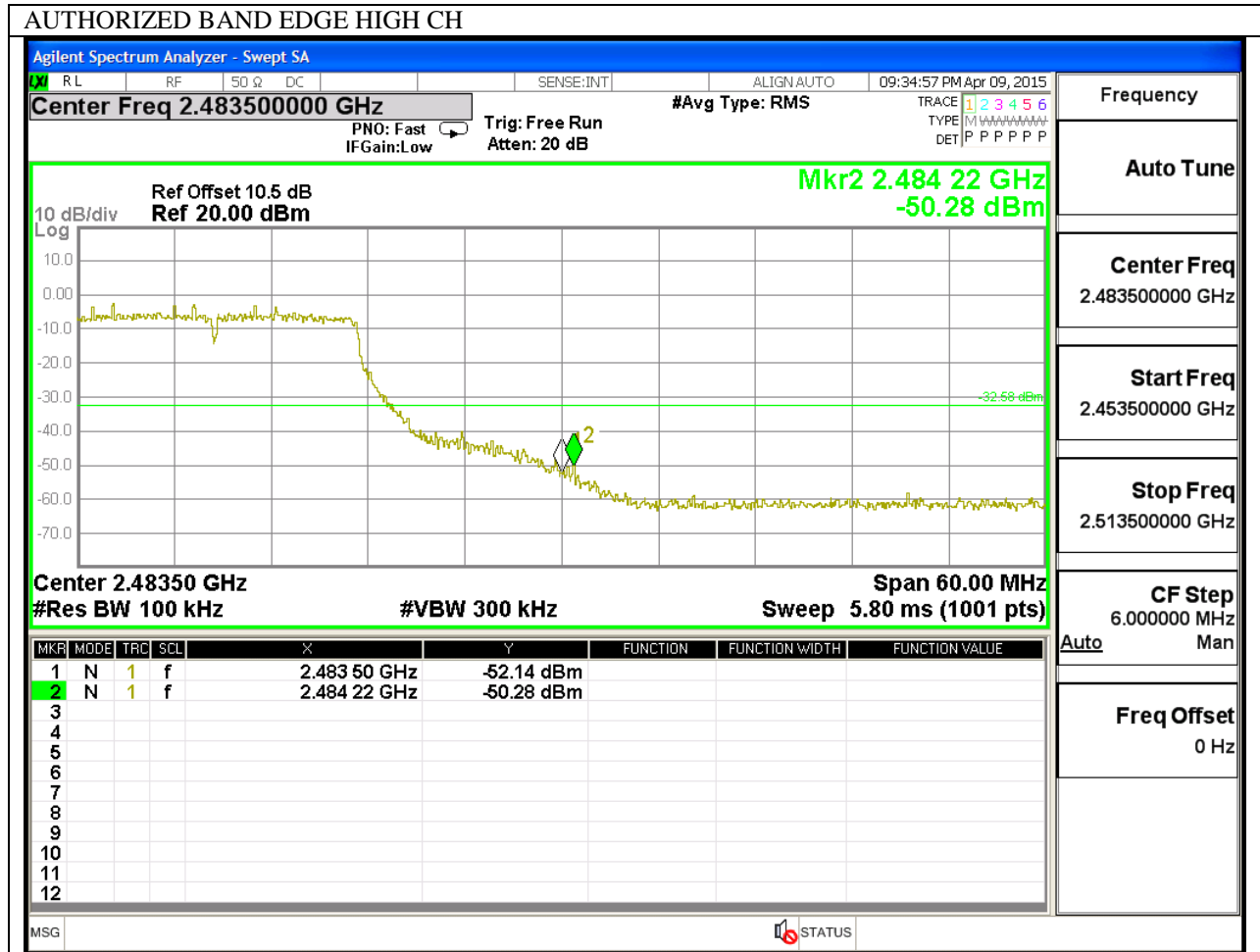




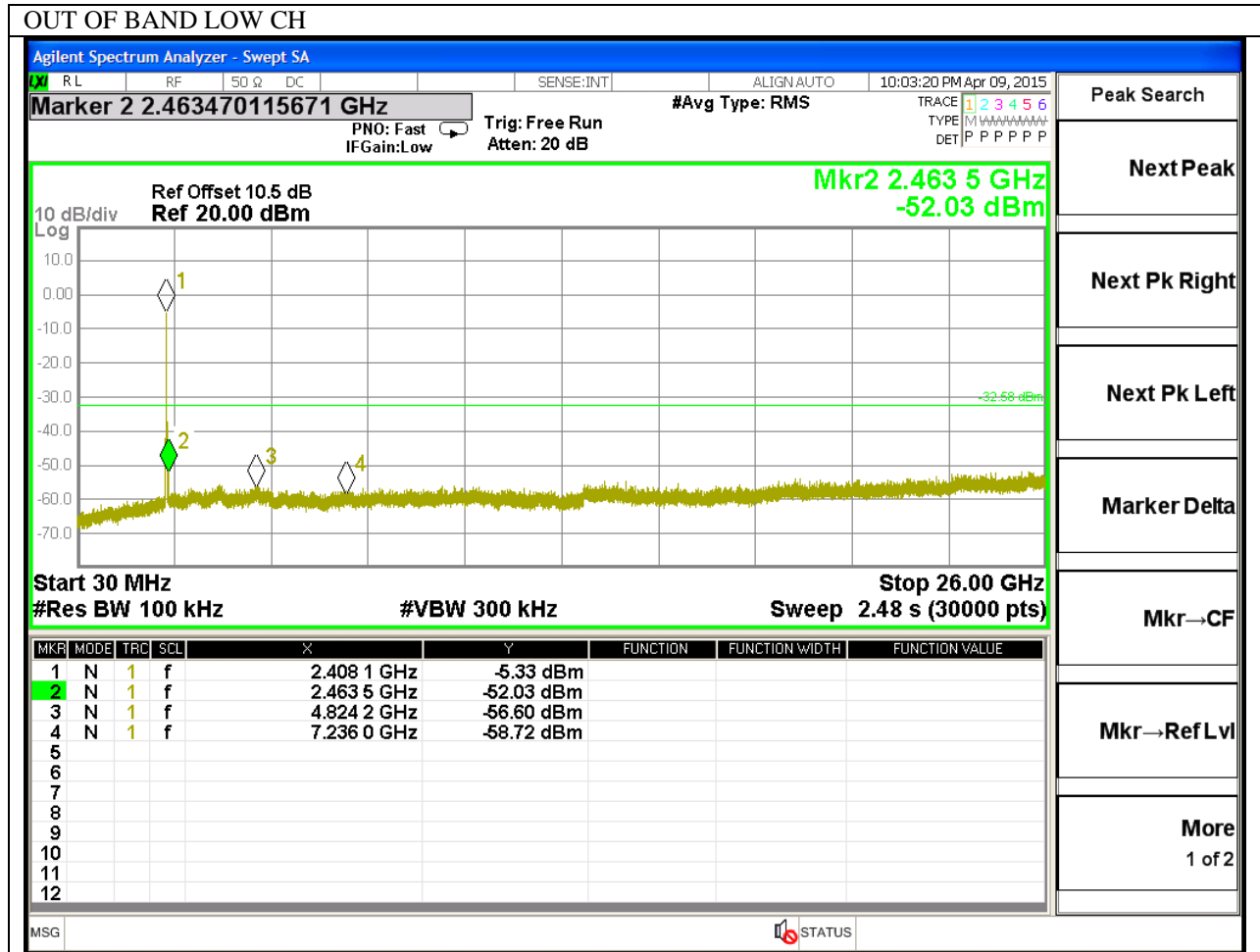
LOW CHANNEL BANDEDGE

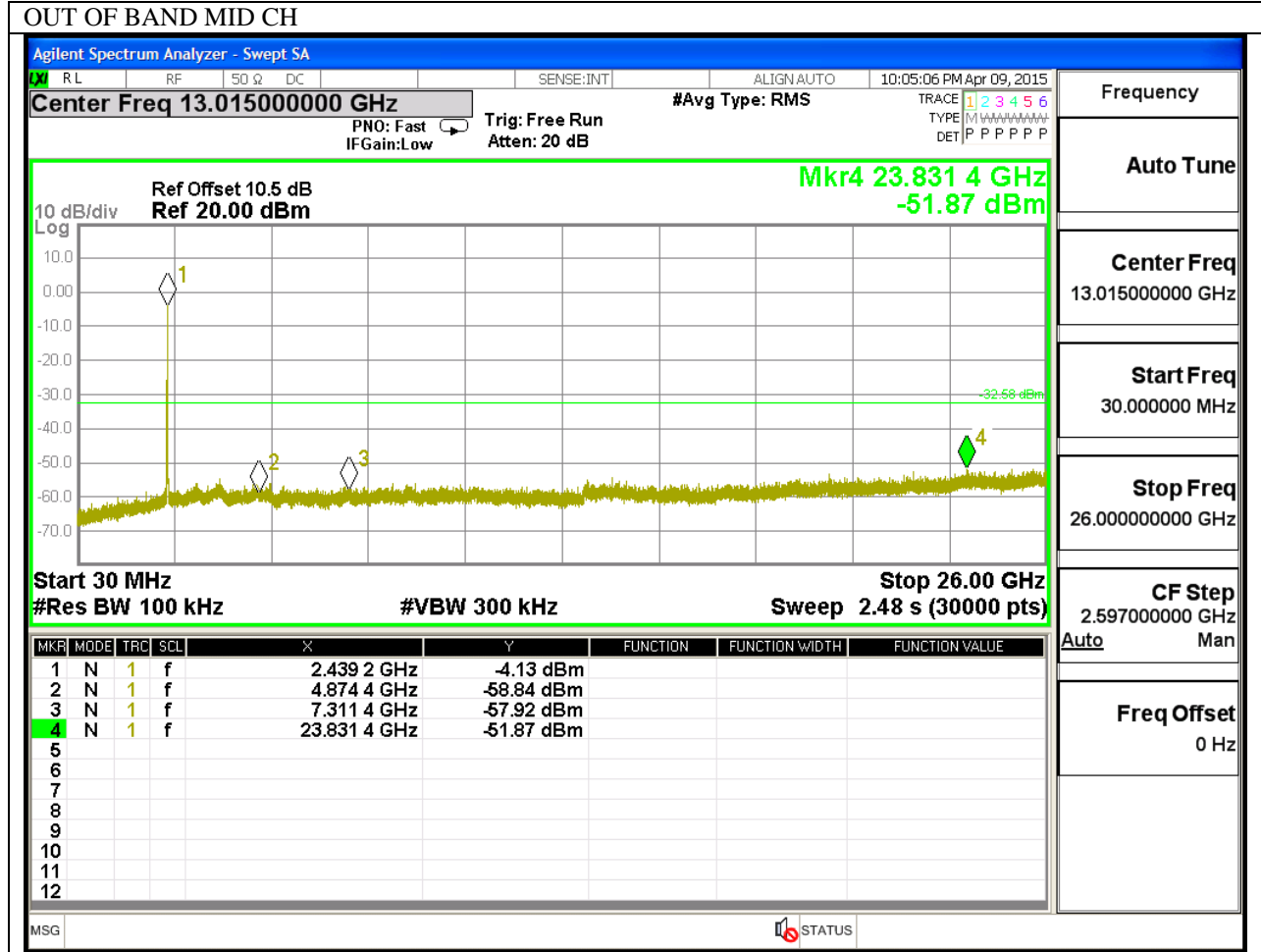


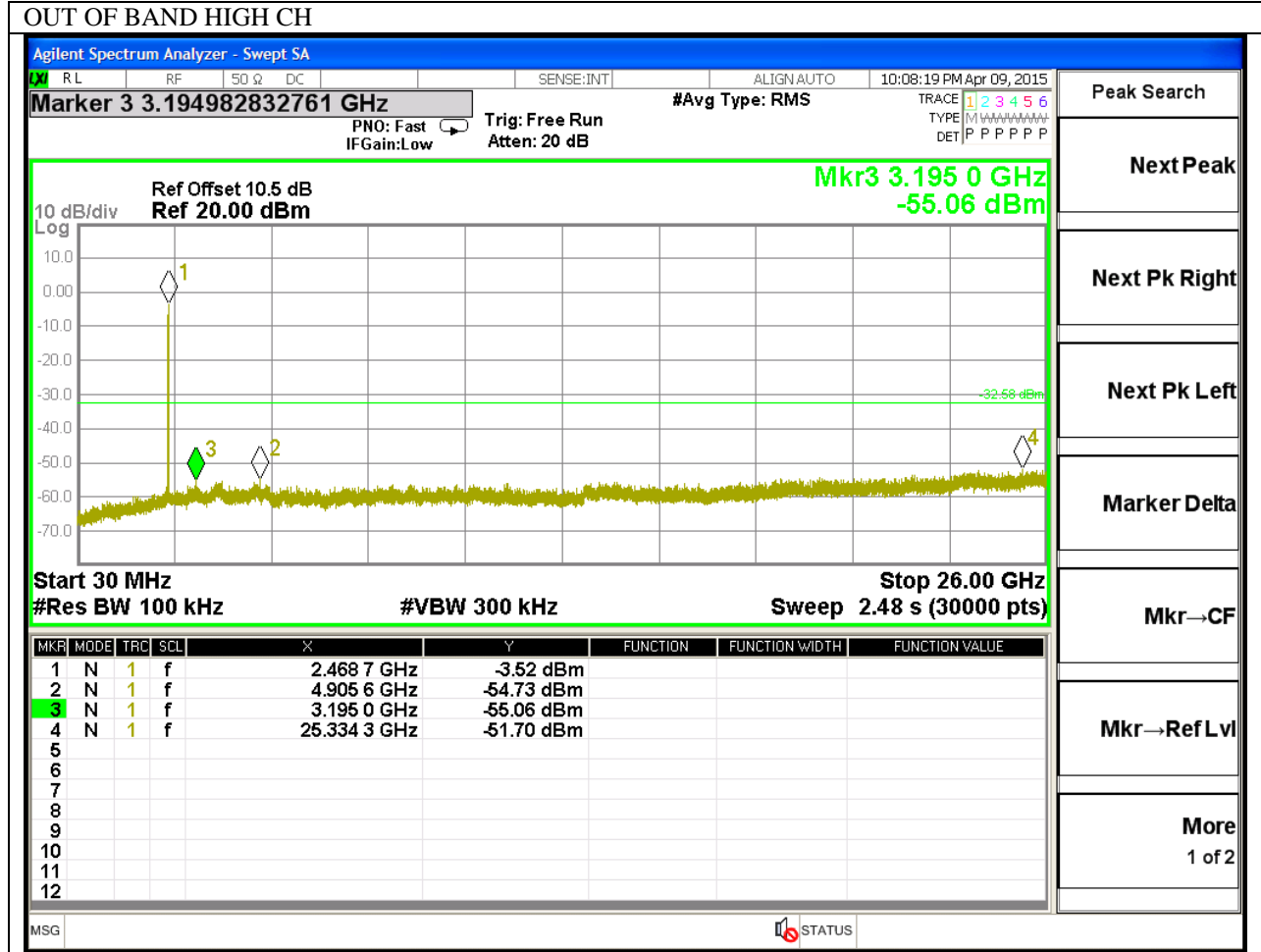
HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS







10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

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 = $10\log(1/x)$ For this sample B mode = 0dB (duty cycle >98%); G mode = 0.21dB; N mode = 0.21dB.

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.

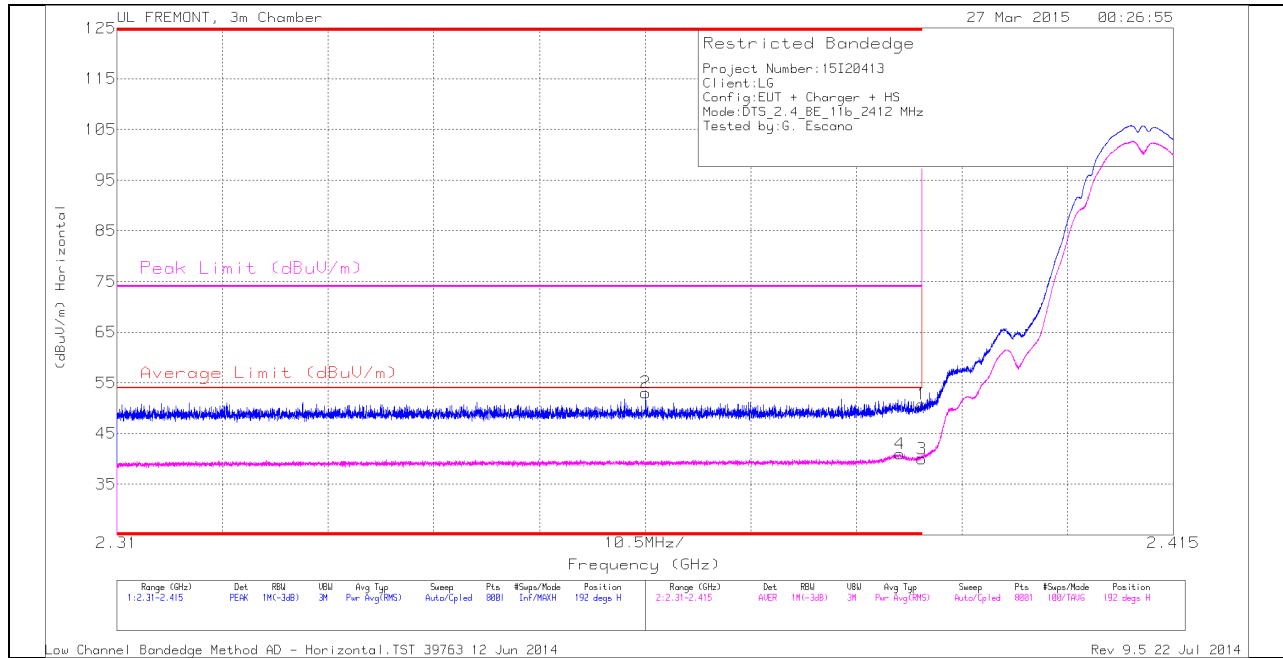
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

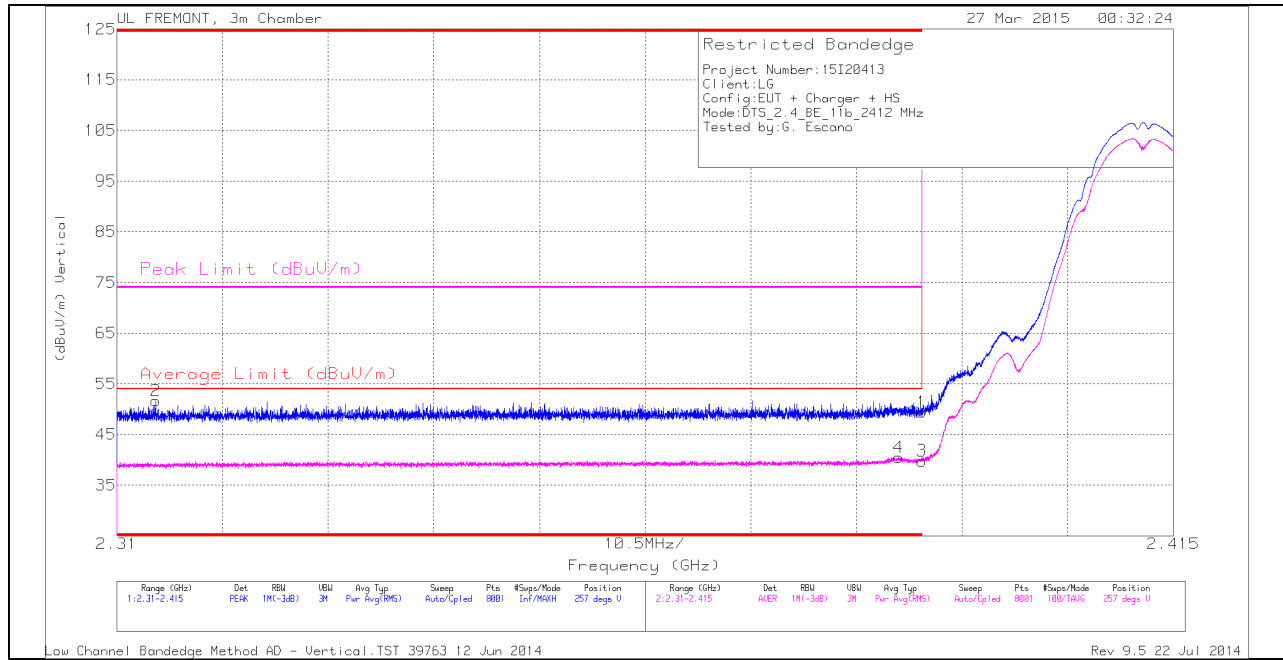
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cb/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.363	44.28	PK	31.9	-23.1	0	53.08	-	-	74	-20.92	192	308	H
4	* 2.388	32.08	RMS	32	-23.1	0	40.98	54	-13.02	-	-	192	308	H
1	* 2.39	41.88	PK	32	-23.1	0	50.78	-	-	74	-23.22	192	308	H
3	* 2.39	31.11	RMS	32	-23.1	0	40.01	54	-13.99	-	-	192	308	H

VERTICAL PEAK AND AVERAGE PLOT

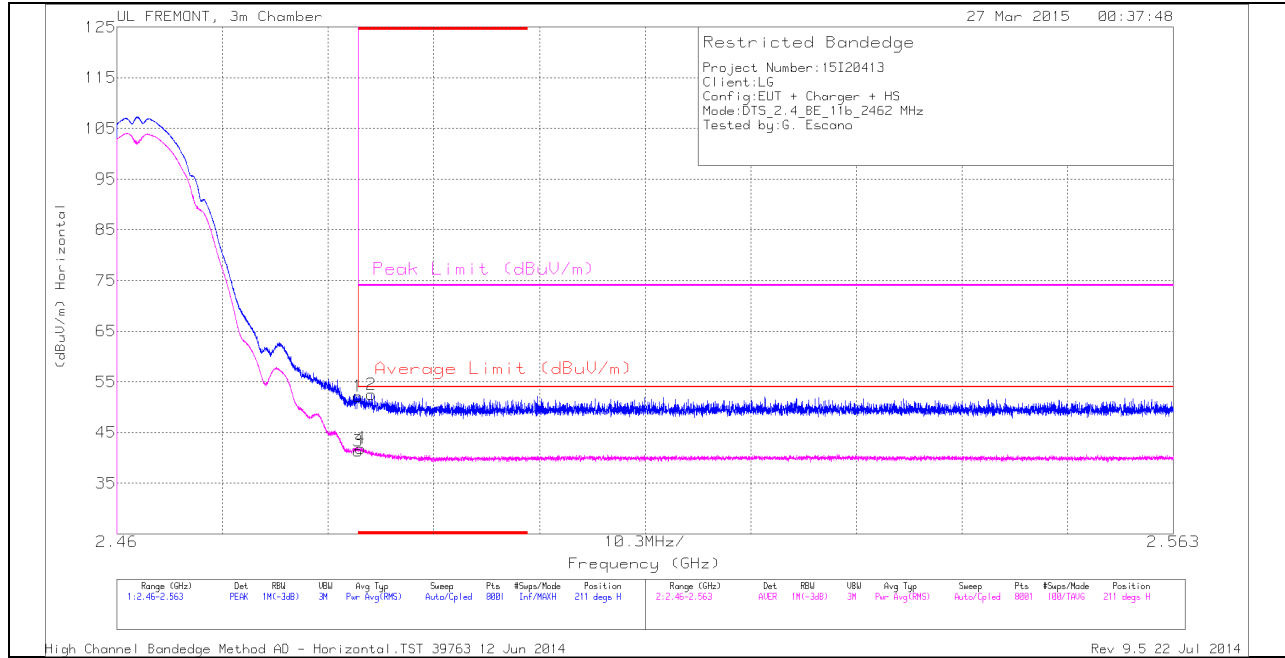


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cb/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.314	43.09	PK	31.7	-23.1	0	51.69	-	-	74	-22.31	257	376	V
4	* 2.388	31.54	RMS	32	-23.1	0	40.44	54	-13.56	-	-	257	376	V
1	* 2.39	40.54	PK	32	-23.1	0	49.44	-	-	74	-24.56	257	376	V
3	* 2.39	30.9	RMS	32	-23.1	0	39.8	54	-14.2	-	-	257	376	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

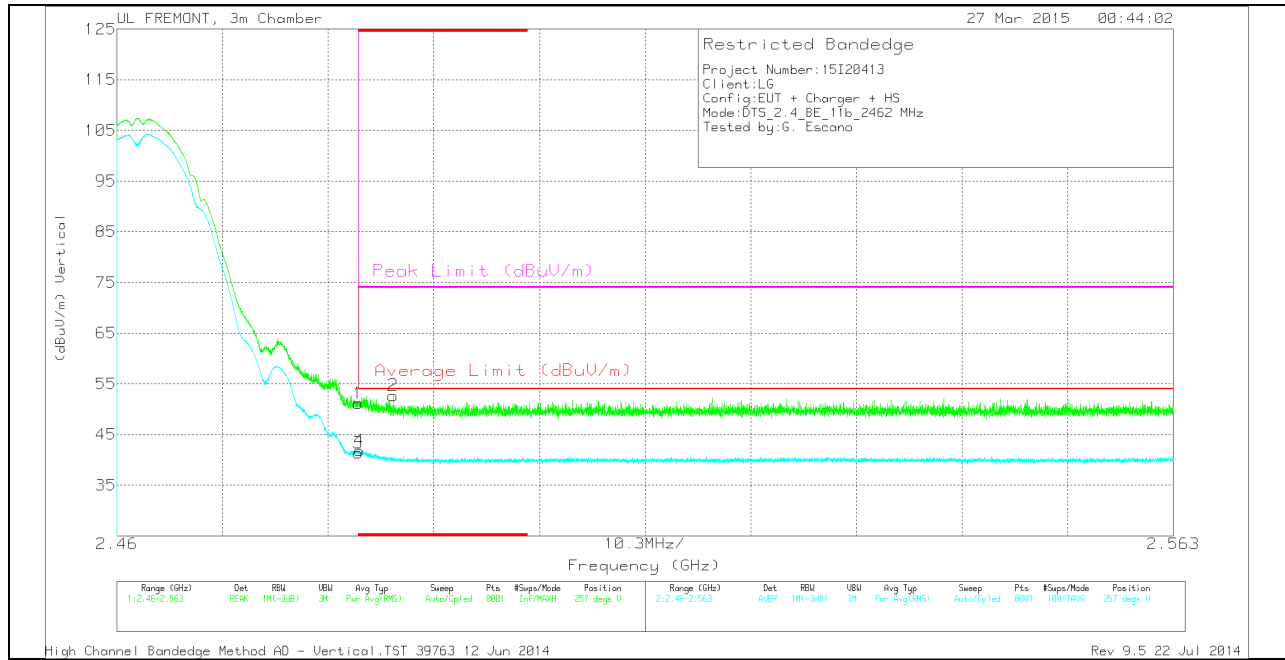
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cb/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	42.67	PK	32.3	-22.8	0	52.17	-	-	74	-21.83	211	359	H
3	* 2.484	31.9	RMS	32.3	-22.8	0	41.4	54	-12.6	-	-	211	359	H
4	* 2.484	32.41	RMS	32.3	-22.8	0	41.91	54	-12.09	-	-	211	359	H
2	* 2.485	43.08	PK	32.3	-22.8	0	52.58	-	-	74	-21.42	211	359	H

VERTICAL PEAK AND AVERAGE PLOT

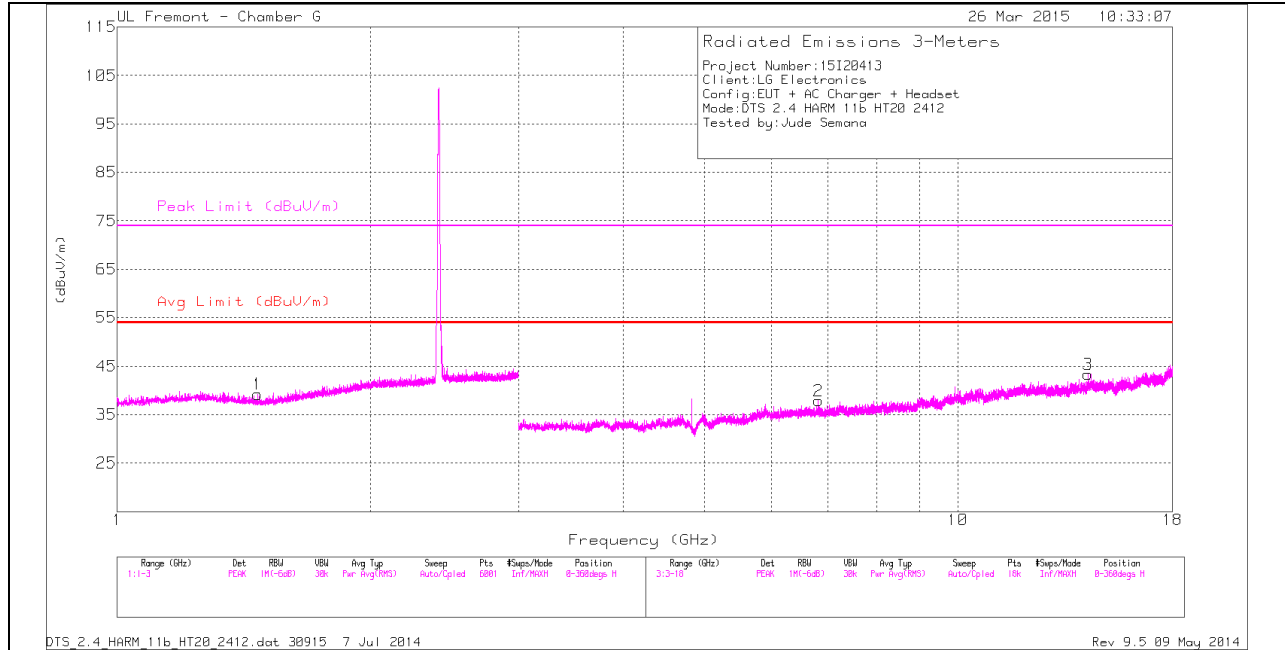


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cb/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	41.65	PK	32.3	-22.8	0	51.15	-	-	74	-22.85	257	372	V
3	* 2.484	31.9	RMS	32.3	-22.8	0	41.4	54	-12.6	-	-	257	372	V
4	* 2.484	32.33	RMS	32.3	-22.8	0	41.83	54	-12.17	-	-	257	372	V
2	* 2.487	43.21	PK	32.3	-22.8	0	52.71	-	-	74	-21.29	257	372	V

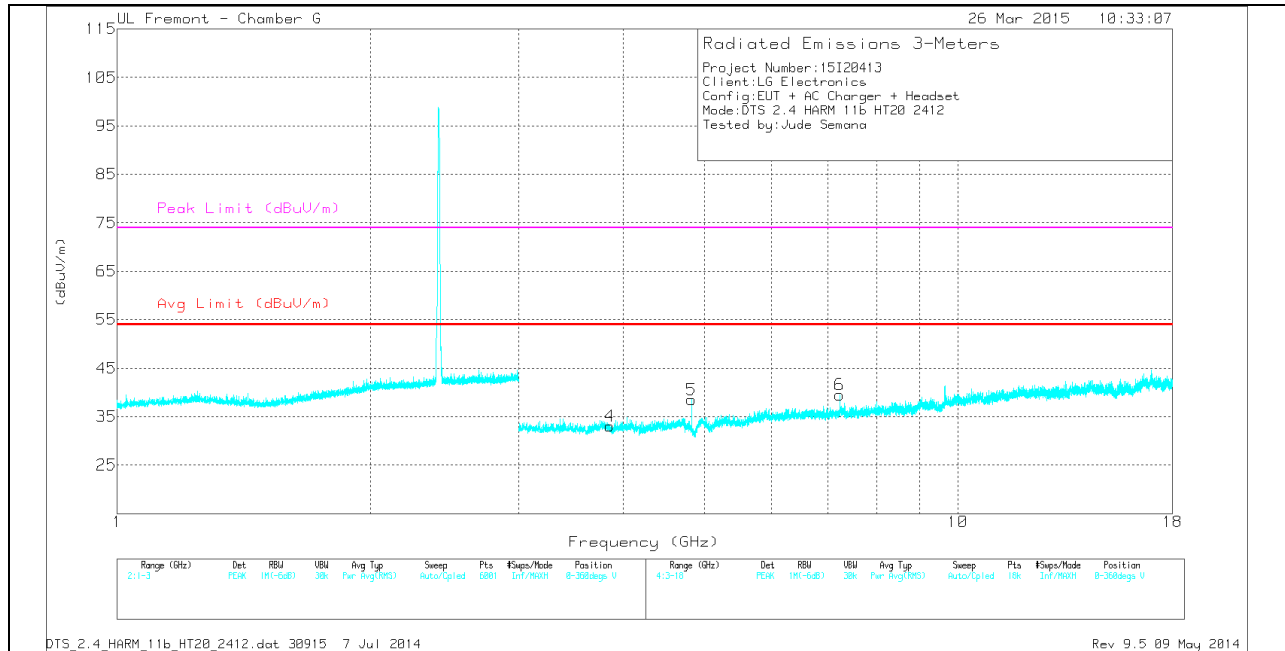
HARMONICS AND SPURIOUS EMISSIONS

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

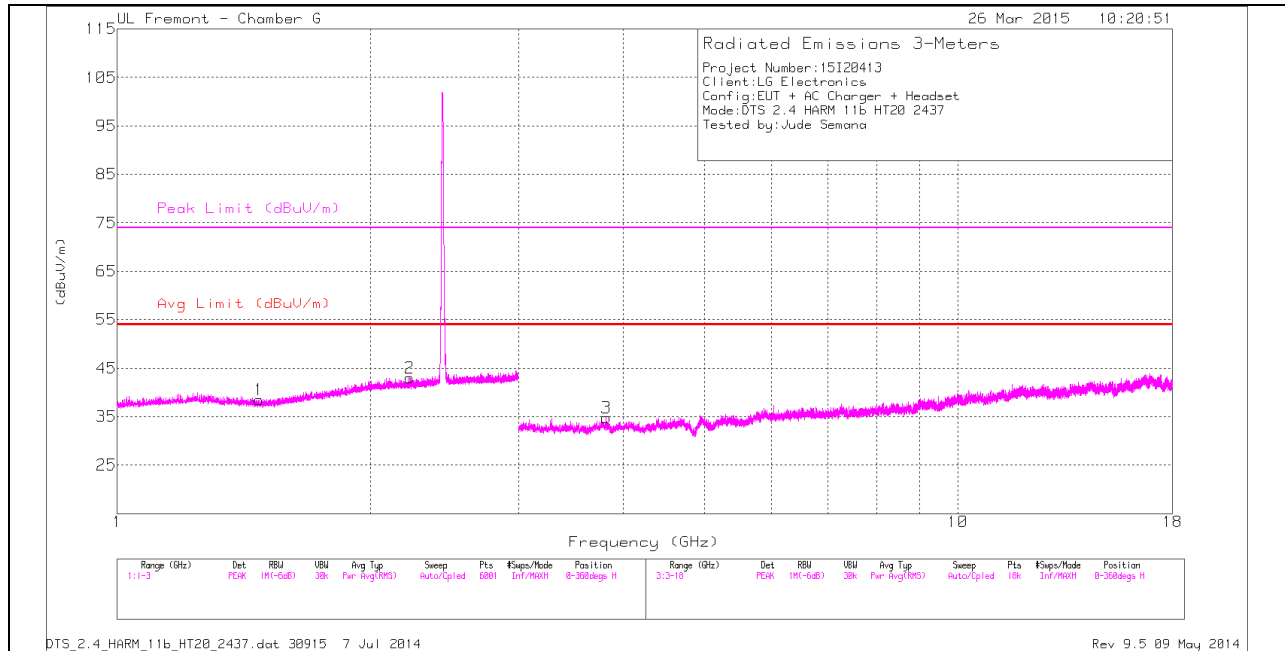
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.469	36.68	PK	28.1	-25.6	0	39.18	-	-	74	-34.82	0-360	201	H
4	* 3.854	33.76	PK	33.1	-33.8	0	33.06	-	-	74	-40.94	0-360	201	V
5	* 4.824	37.41	PK	34.1	-33	0	38.51	-	-	74	-35.49	0-360	101	V
3	14.284	30.92	PK	39.8	-27.4	0	43.32	-	-	-	-	0-360	201	H
2	6.825	34.17	PK	35.6	-31.9	0	37.87	-	-	-	-	0-360	201	H
6	7.235	34.81	PK	35.6	-30.9	0	39.51	-	-	-	-	0-360	101	V

PK - Peak detector

RADIATED EMISSIONS

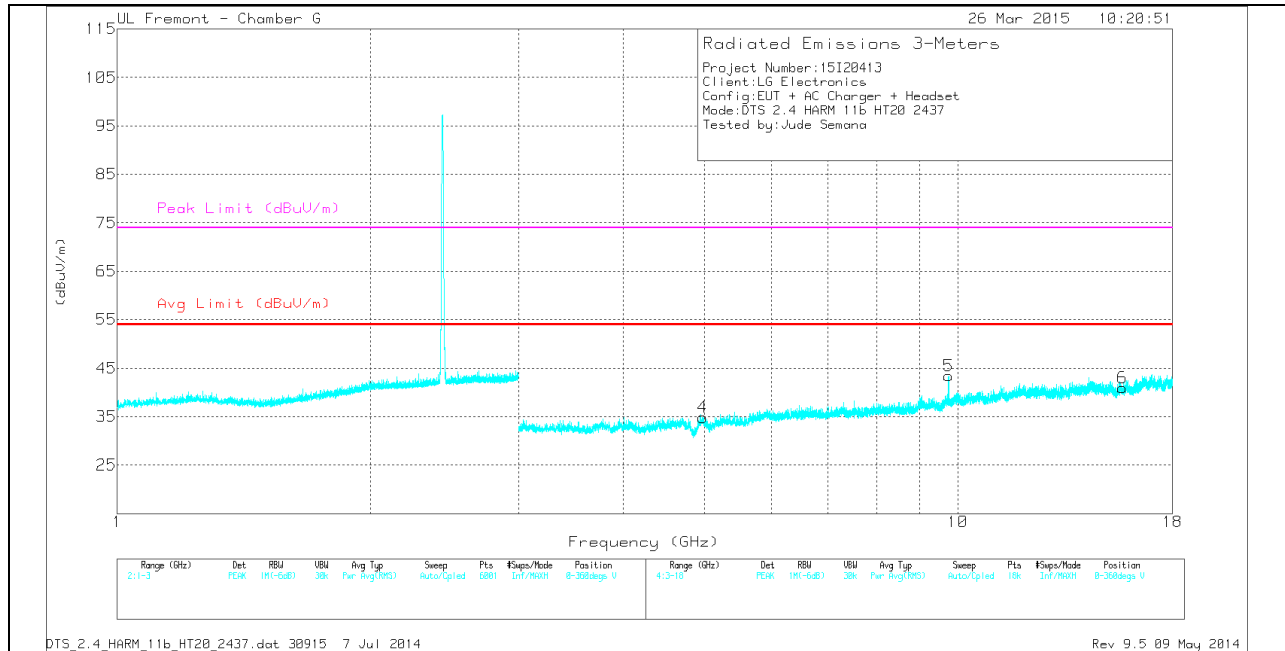
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.824	44	PK2	34.1	-33	0	45.1	-	-	74	-28.9	11	283	V
* 4.824	38.42	MAV1	34.1	-33	0	39.52	54	-14.48	-	-	11	283	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.

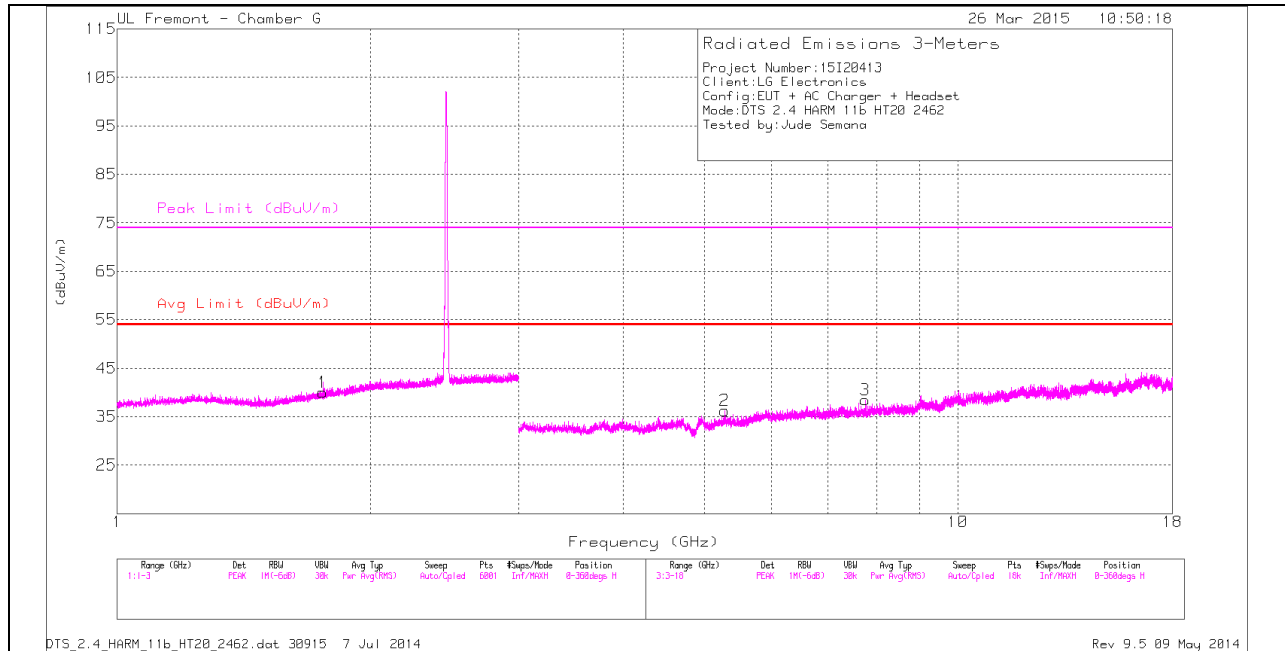
MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cb/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.475	36.08	PK	28	-25.6	0	38.48	-	-	74	-35.52	0-360	201	H
6	* 15.696	28.53	PK	40.1	-27.7	0	40.93	-	-	74	-33.07	0-360	201	V
2	* 2.228	36.63	PK	31.5	-25.1	0	43.03	-	-	74	-30.97	0-360	101	H
3	* 3.815	35.07	PK	33	-33.3	0	34.77	-	-	74	-39.23	0-360	201	H
4	* 4.97	33.74	PK	34.1	-33	0	34.84	-	-	74	-39.16	0-360	201	V
5	9.748	34.21	PK	37	-27.8	0	43.41	-	-	-	-	0-360	201	V

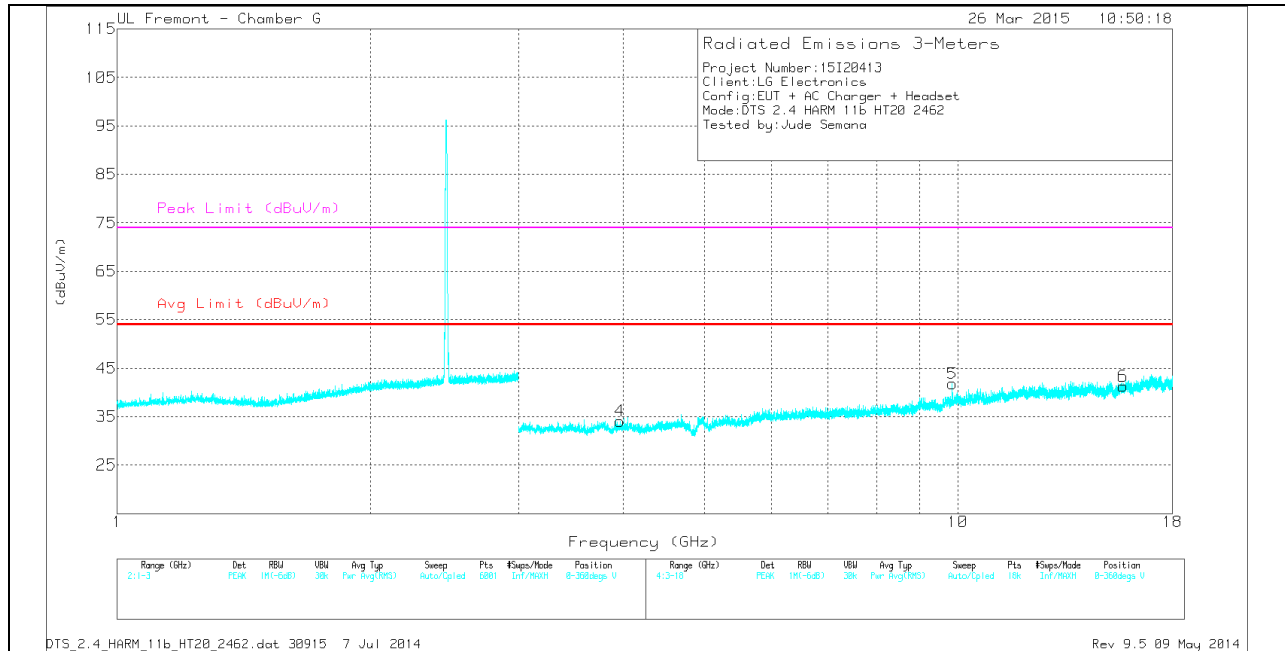
PK - Peak detector

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

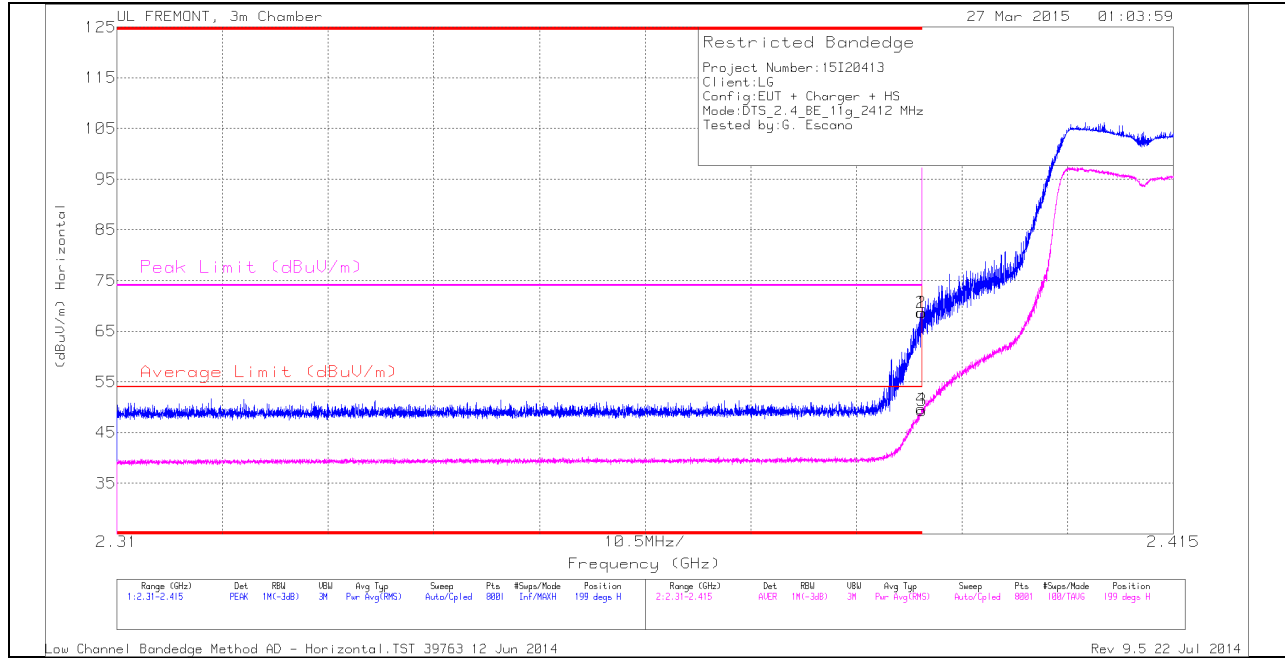
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cb/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 3.962	33.87	PK	33.3	-33.1	0	34.07	-	-	74	-39.93	0-360	101	V
6	* 15.713	28.73	PK	40.2	-27.6	0	41.33	-	-	74	-32.67	0-360	201	V
1	1.755	35.79	PK	29.6	-25.4	0	39.99	-	-	-	-	0-360	101	H
2	5.282	34.84	PK	34.5	-33.1	0	36.24	-	-	-	-	0-360	201	H
3	7.759	33.34	PK	35.7	-30.6	0	38.44	-	-	-	-	0-360	101	H
5	9.848	33.41	PK	37.2	-28.8	0	41.81	-	-	-	-	0-360	201	V

PK - Peak detector

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

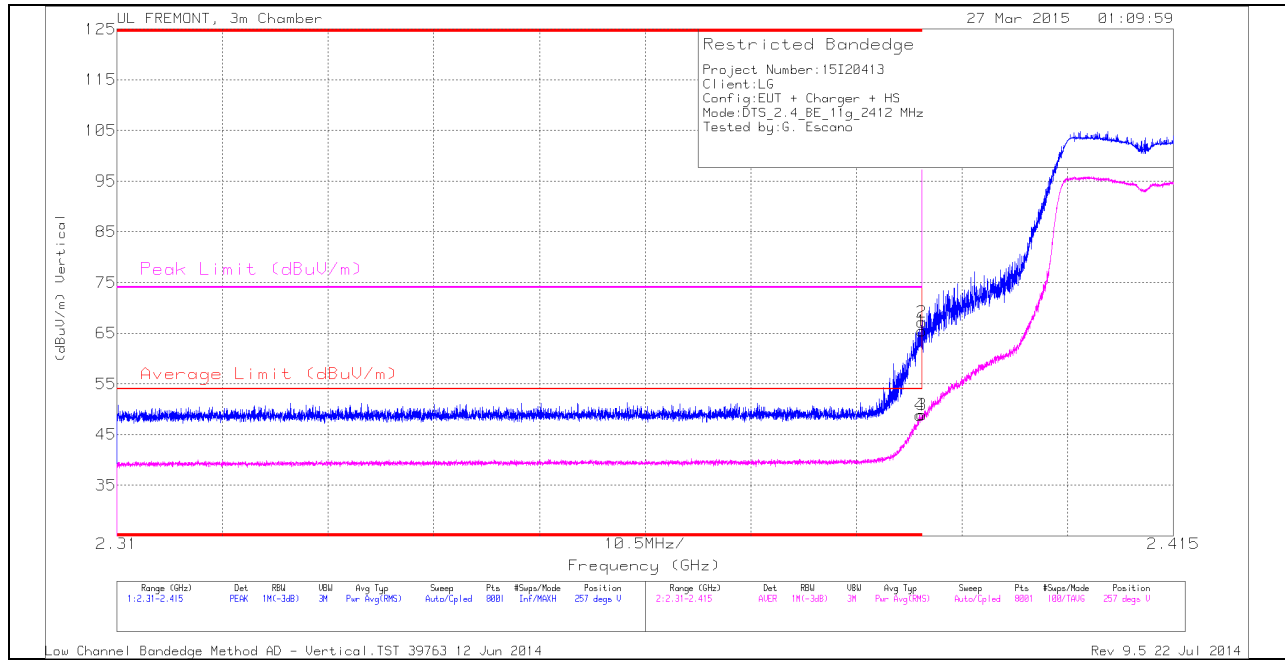
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	59.78	PK	32	-23.1	0	68.68	-	-	74	-5.32	199	310	H
2	* 2.39	59.76	PK	32	-23.1	0	68.66	-	-	74	-5.34	199	310	H
3	* 2.39	40.25	RMS	32	-23.1	.21	49.36	54	-4.64	-	-	199	310	H
4	* 2.39	40.58	RMS	32	-23.1	.21	49.69	54	-4.31	-	-	199	310	H

VERTICAL PEAK AND AVERAGE PLOT

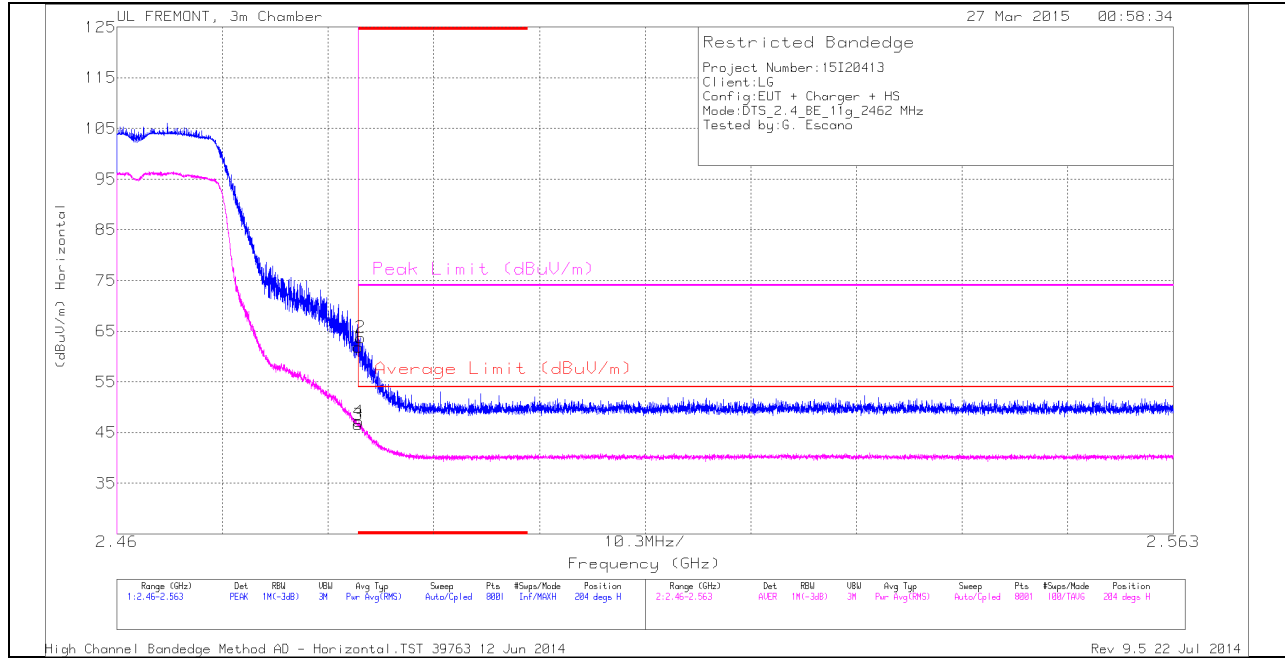


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	56.57	PK	32	-23.1	0	65.47	-	-	74	-8.53	257	310	V
2	* 2.39	58.23	PK	32	-23.1	0	67.13	-	-	74	-6.87	257	310	V
3	* 2.39	39.8	RMS	32	-23.1	.21	48.91	54	-5.09	-	-	257	310	V
4	* 2.39	39.74	RMS	32	-23.1	.21	48.85	54	-5.15	-	-	257	310	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

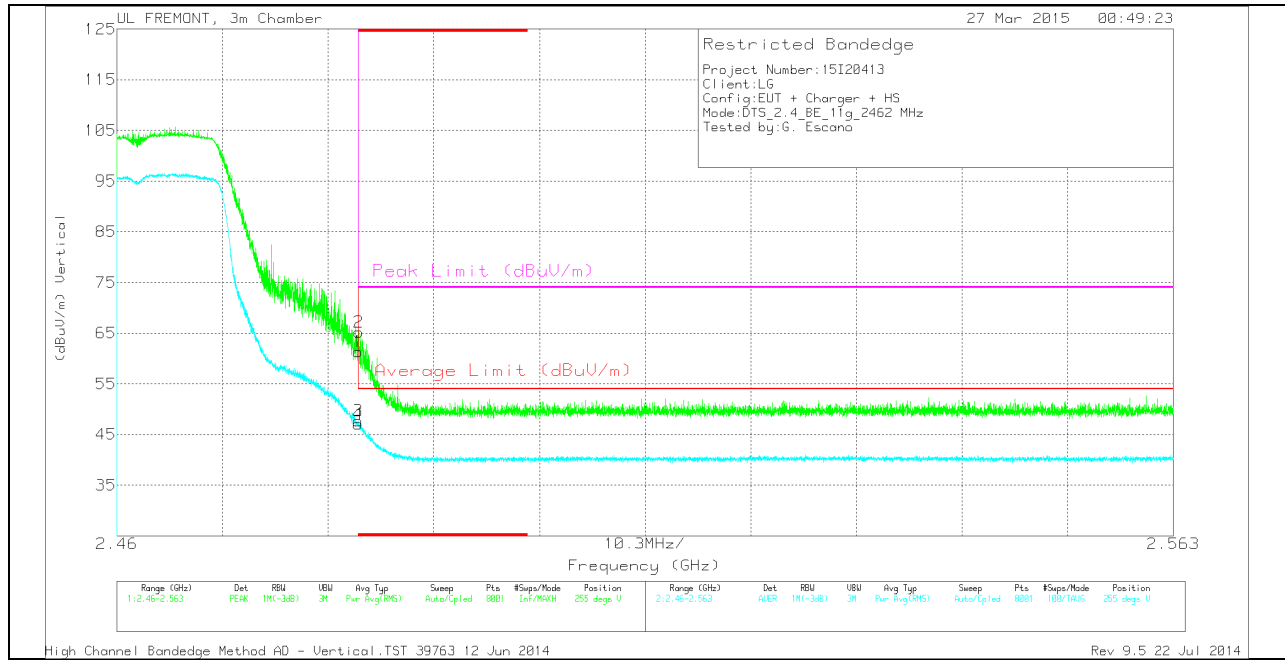
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	52.33	PK	32.3	-22.8	0	61.83	-	-	74	-12.17	204	296	H
2	* 2.484	54.26	PK	32.3	-22.8	0	63.76	-	-	74	-10.24	204	296	H
3	* 2.484	36.91	RMS	32.3	-22.8	.21	46.62	54	-7.38	-	-	204	296	H
4	* 2.484	37.46	RMS	32.3	-22.8	.21	47.17	54	-6.83	-	-	204	296	H

VERTICAL PEAK AND AVERAGE PLOT

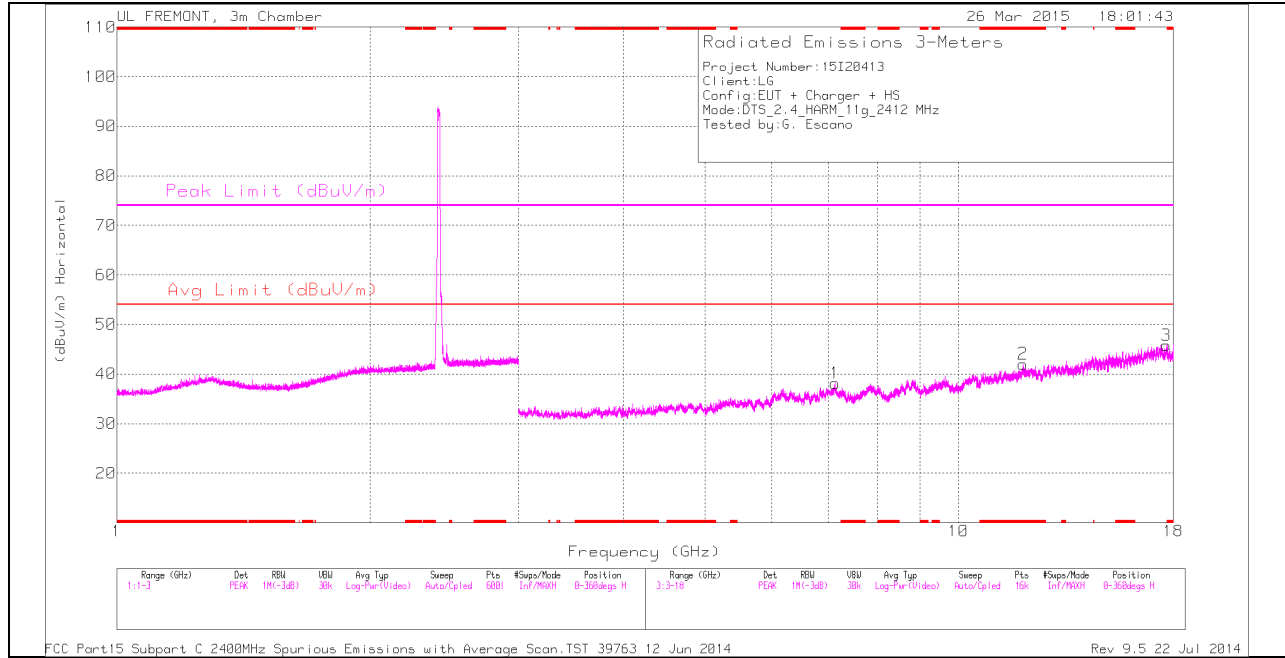


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	51.82	PK	32.3	-22.8	0	61.32	-	-	74	-12.68	255	373	V
2	* 2.484	55.65	PK	32.3	-22.8	0	65.15	-	-	74	-8.85	255	373	V
3	* 2.484	37.99	RMS	32.3	-22.8	.21	47.7	54	-6.3	-	-	255	373	V
4	* 2.484	37.41	RMS	32.3	-22.8	.21	47.12	54	-6.88	-	-	255	373	V

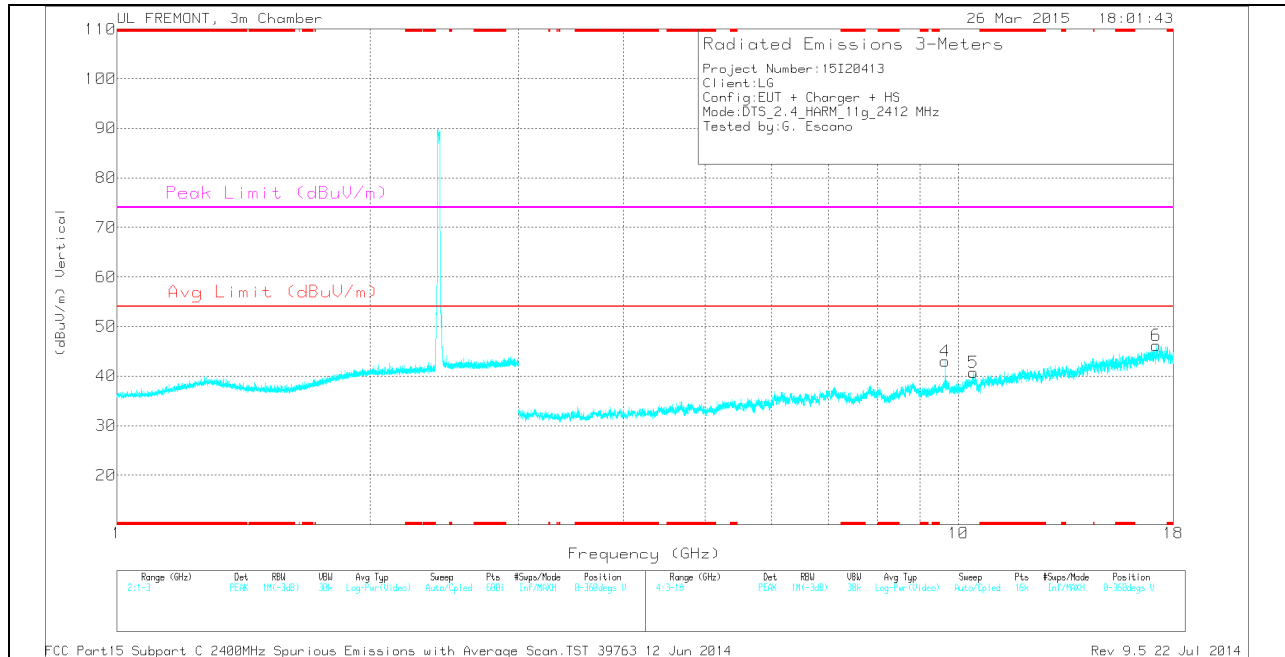
HARMONICS AND SPURIOUS EMISSIONS

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

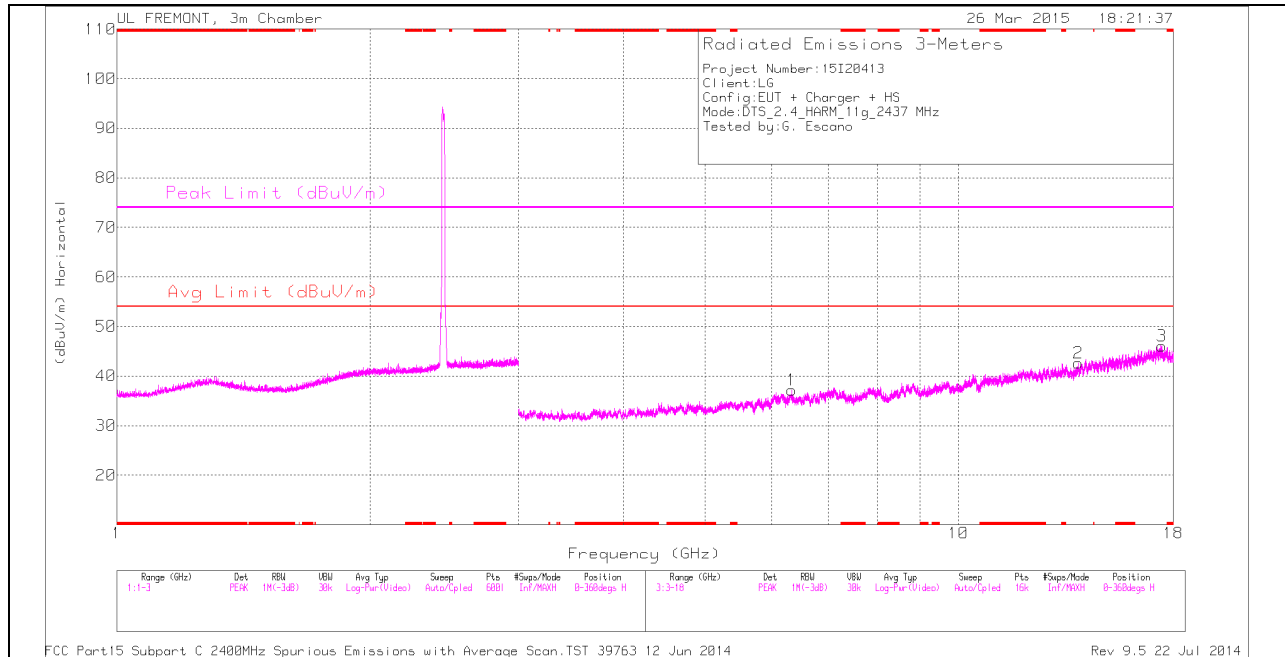
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 11.938	29.06	PK	39.1	-26.1	0	42.06	-	-	74	-31.94	0-360	100	H
1	7.131	30.53	PK	35.6	-28	0	38.13	-	-	-	-	0-360	200	H
4	9.647	31.86	PK	36.8	-25.6	0	43.06	-	-	-	-	0-360	100	V
5	10.419	28.5	PK	37.3	-25.1	0	40.7	-	-	-	-	0-360	200	V
6	17.192	27.92	PK	41.3	-23	0	46.22	-	-	-	-	0-360	100	V
3	17.668	27.35	PK	41.4	-23	0	45.75	-	-	-	-	0-360	200	H

PK - Peak detector

RADIATED EMISSIONS

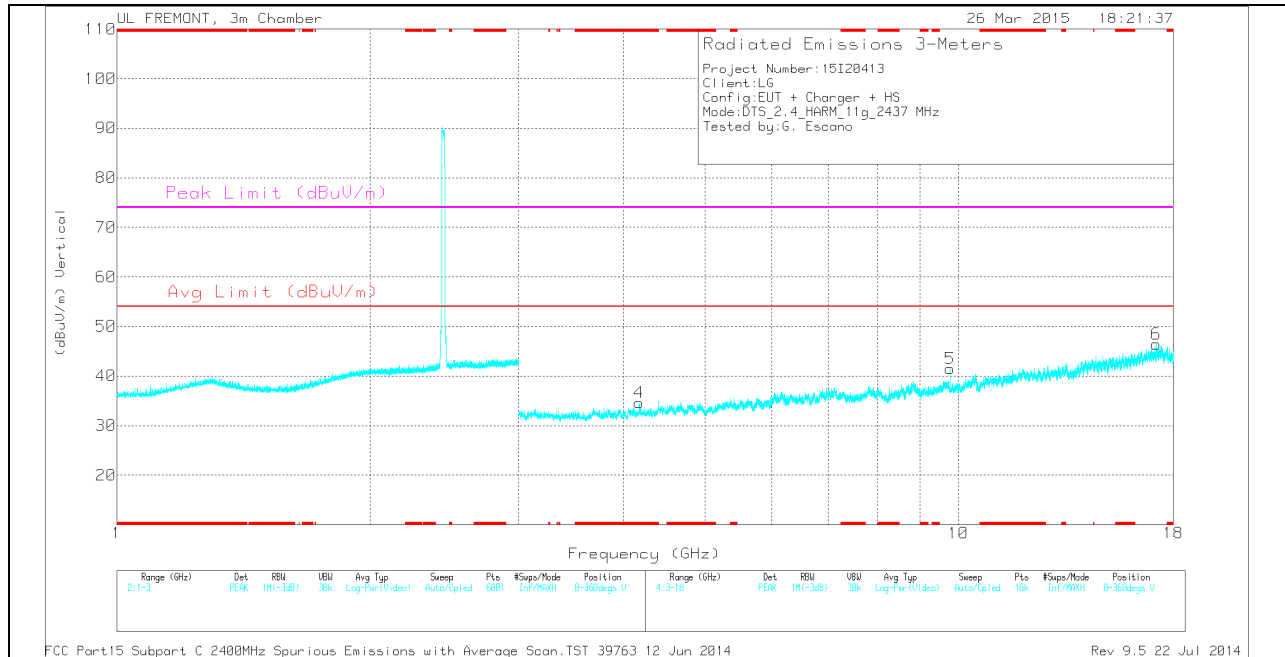
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.936	38.06	PK2	39.1	-26.1	0	51.06	-	-	74	-22.94	50	149	H
* 11.938	26.04	MAV1	39.1	-26.1	.21	39.25	54	-14.75	-	-	50	149	H

MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

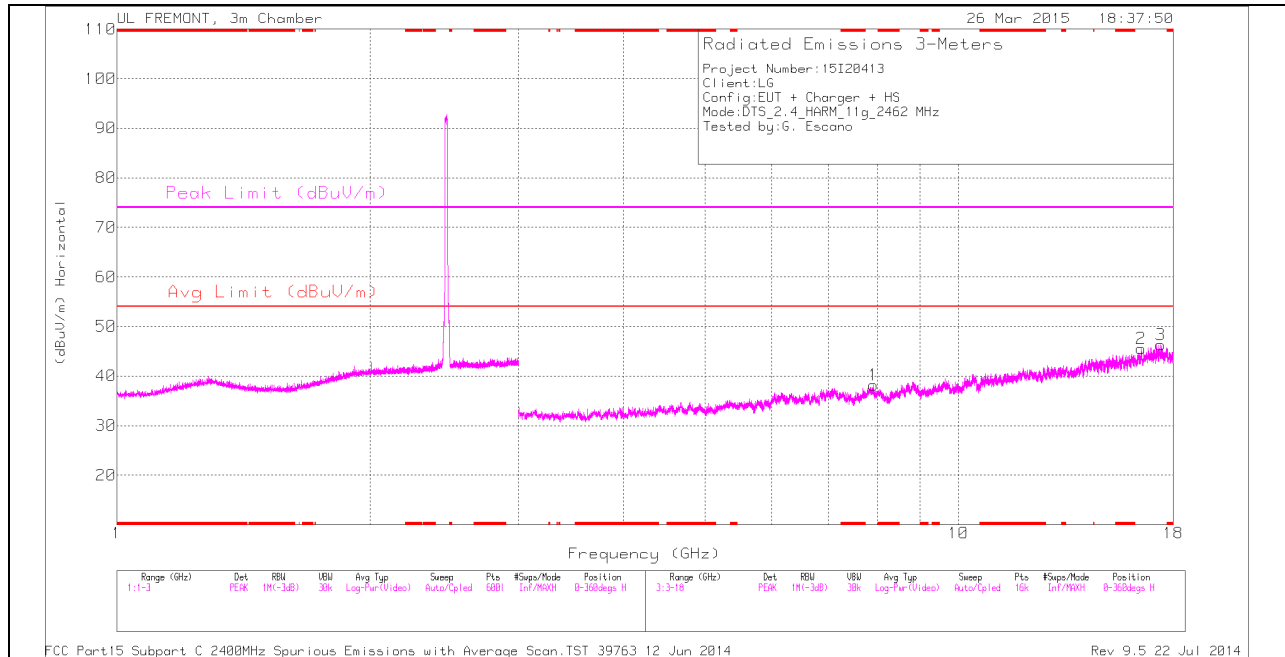
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 4.176	31.61	PK	33.3	-30.3	0	34.61	-	-	74	-39.39	0-360	200	V
1	6.334	30.87	PK	35.4	-29.1	0	37.17	-	-	-	-	0-360	100	H
5	9.768	30.62	PK	36.9	-26	0	41.52	-	-	-	-	0-360	200	V
2	13.888	30.76	PK	38.7	-26.8	0	42.66	-	-	-	-	0-360	100	H
6	17.189	28.25	PK	41.3	-23.1	0	46.45	-	-	-	-	0-360	200	V
3	17.453	28.19	PK	41.4	-23.5	0	46.09	-	-	-	-	0-360	100	H

PK - Peak detector

RADIATED EMISSIONS

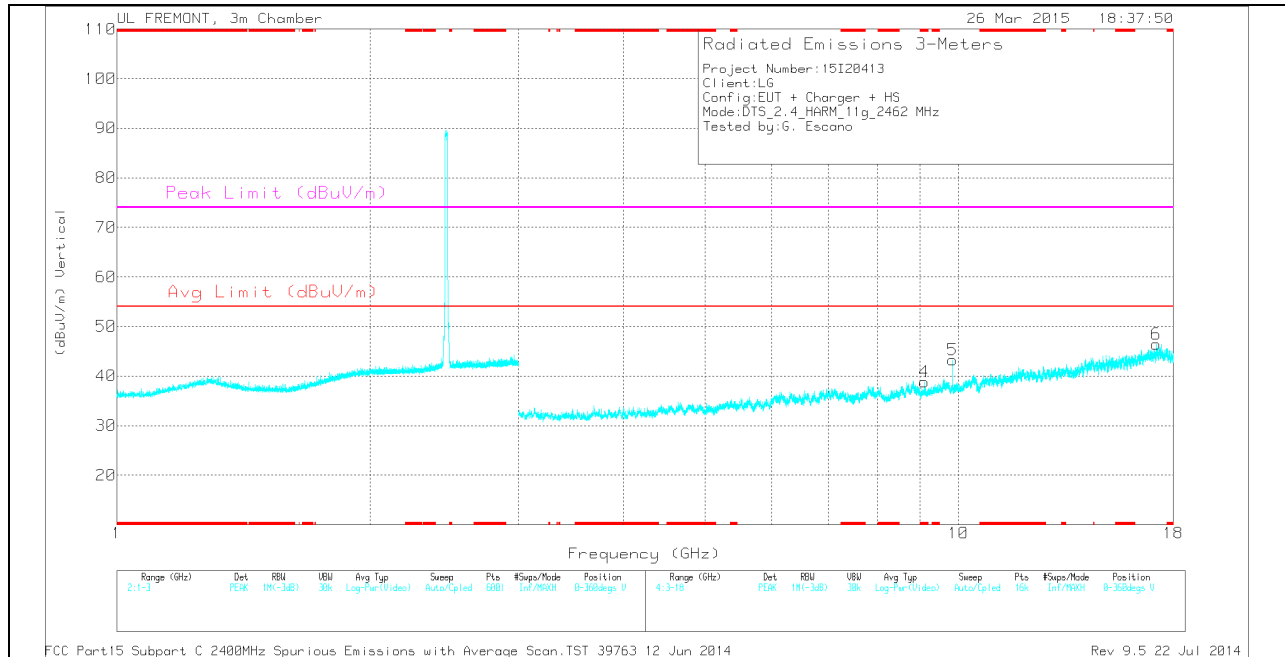
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.175	40.35	PK2	33.3	-30.3	0	43.35	-	-	74	-30.65	46	389	V
* 4.175	28.31	MAV1	33.3	-30.3	.21	31.52	54	-22.48	-	-	46	389	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 T119 (dB/m)	Amp/Cb/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	* 9.108	29.01	PK	36.1	-26.3	0	38.81	-	-	74	-35.19	0-360	200	V
1	7.924	30.14	PK	35.8	-27.8	0	38.14	-	-	-	-	0-360	200	H
5	9.848	32.22	PK	36.9	-25.9	0	43.22	-	-	-	-	0-360	200	V
2	16.49	28.69	PK	40.9	-24	0	45.59	-	-	-	-	0-360	100	H
6	17.185	28.33	PK	41.3	-23.2	0	46.43	-	-	-	-	0-360	200	V
3	17.39	27.46	PK	41.4	-22.5	0	46.36	-	-	-	-	0-360	200	H

PK - Peak detector

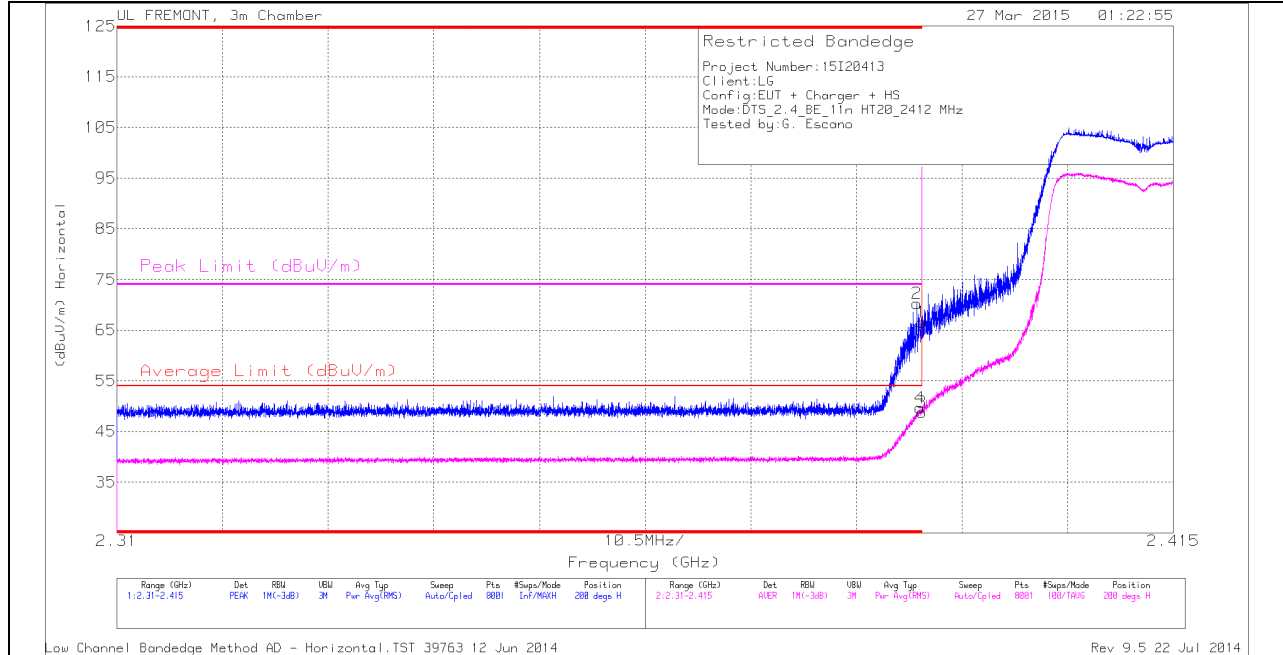
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cb/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
* 9.109	37.78	PK2	36.1	-26.3	0	47.58	-	-	74	-26.42	341	100	V
* 9.107	25.81	MAV1	36.1	-26.3	.21	35.82	54	-18.18	-	-	341	100	V

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

RESTRICTED BANDEDGE (LOW CHANNEL)

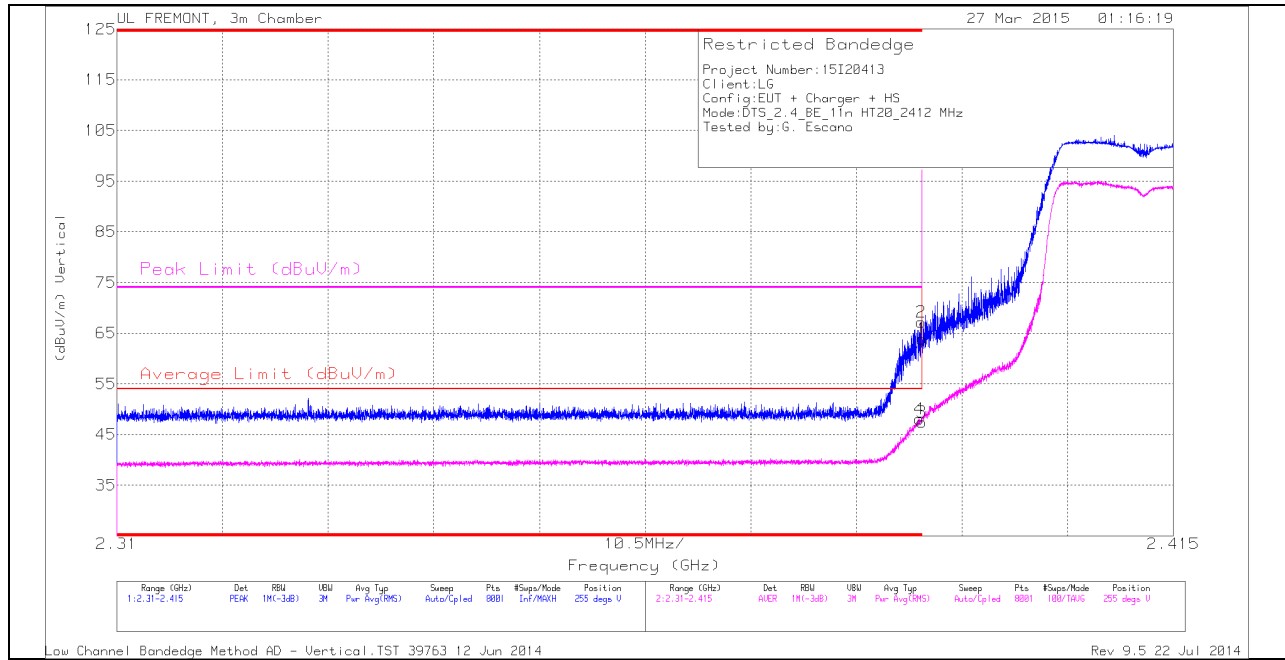
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
2	* 2.389	61.4	PK	32	-23.1	0	70.3	-	-	74	-3.7	200	310	H
1	* 2.39	57.64	PK	32	-23.1	0	66.54	-	-	74	-7.46	200	310	H
3	* 2.39	39.68	RMS	32	-23.1	.23	48.81	54	-5.19	-	-	200	310	H
4	* 2.39	40.52	RMS	32	-23.1	.23	49.65	54	-4.35	-	-	200	310	H

VERTICAL PEAK AND AVERAGE PLOT

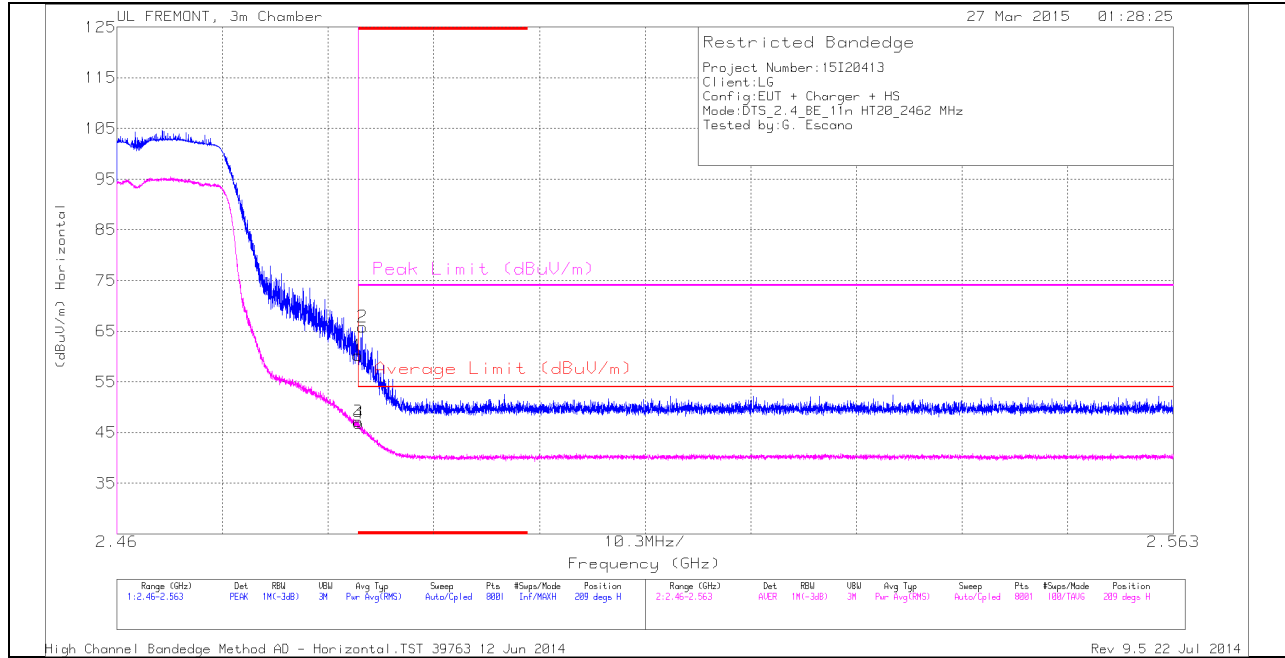


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	54.97	PK	32	-23.1	0	63.87	-	-	74	-10.13	255	313	V
2	* 2.39	58.27	PK	32	-23.1	0	67.17	-	-	74	-6.83	255	313	V
3	* 2.39	38.33	RMS	32	-23.1	.23	47.46	54	-6.54	-	-	255	313	V
4	* 2.39	38.87	RMS	32	-23.1	.23	48	54	-6	-	-	255	313	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

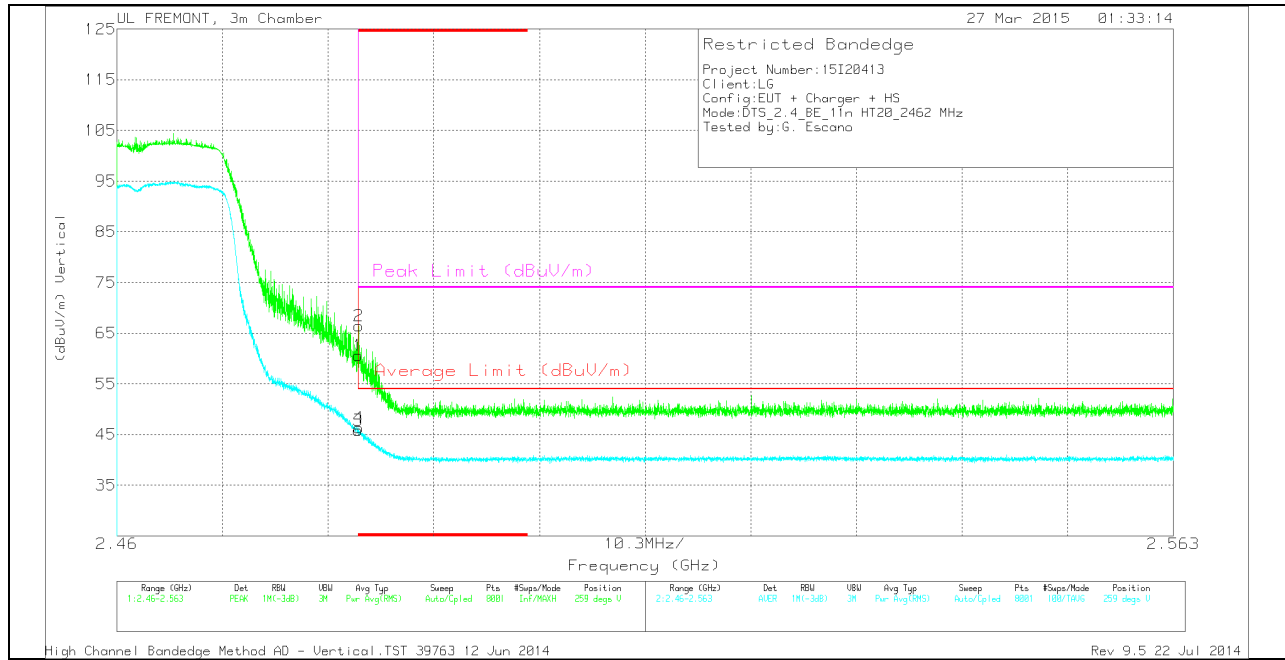
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	50.76	PK	32.3	-22.8	0	60.26	-	-	74	-13.74	209	297	H
2	* 2.484	56.37	PK	32.3	-22.8	0	65.87	-	-	74	-8.13	209	297	H
3	* 2.484	37.48	RMS	32.3	-22.8	.23	47.21	54	-6.79	-	-	209	297	H
4	* 2.484	37.14	RMS	32.3	-22.8	.23	46.87	54	-7.13	-	-	209	297	H

VERTICAL PEAK AND AVERAGE PLOT

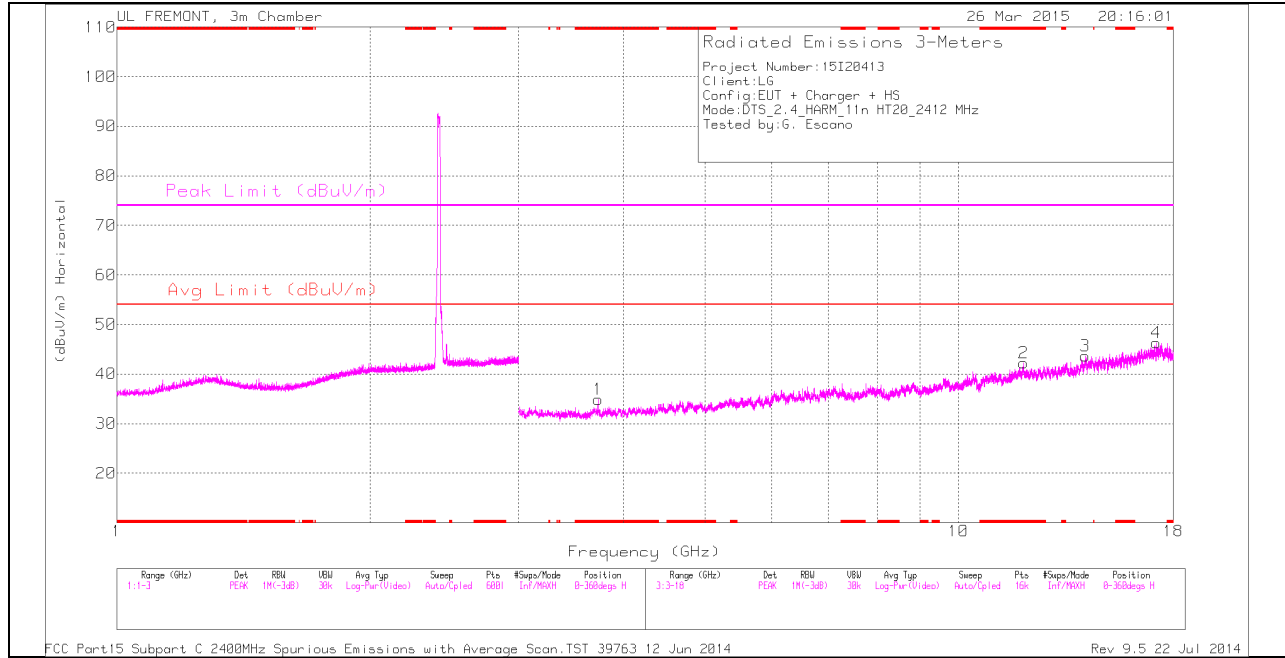


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	51.14	PK	32.3	-22.8	0	60.64	-	-	74	-13.36	259	371	V
2	* 2.484	56.96	PK	32.3	-22.8	0	66.46	-	-	74	-7.54	259	371	V
3	* 2.484	36.11	RMS	32.3	-22.8	.23	45.84	54	-8.16	-	-	259	371	V
4	* 2.484	36.63	RMS	32.3	-22.8	.23	46.36	54	-7.64	-	-	259	371	V

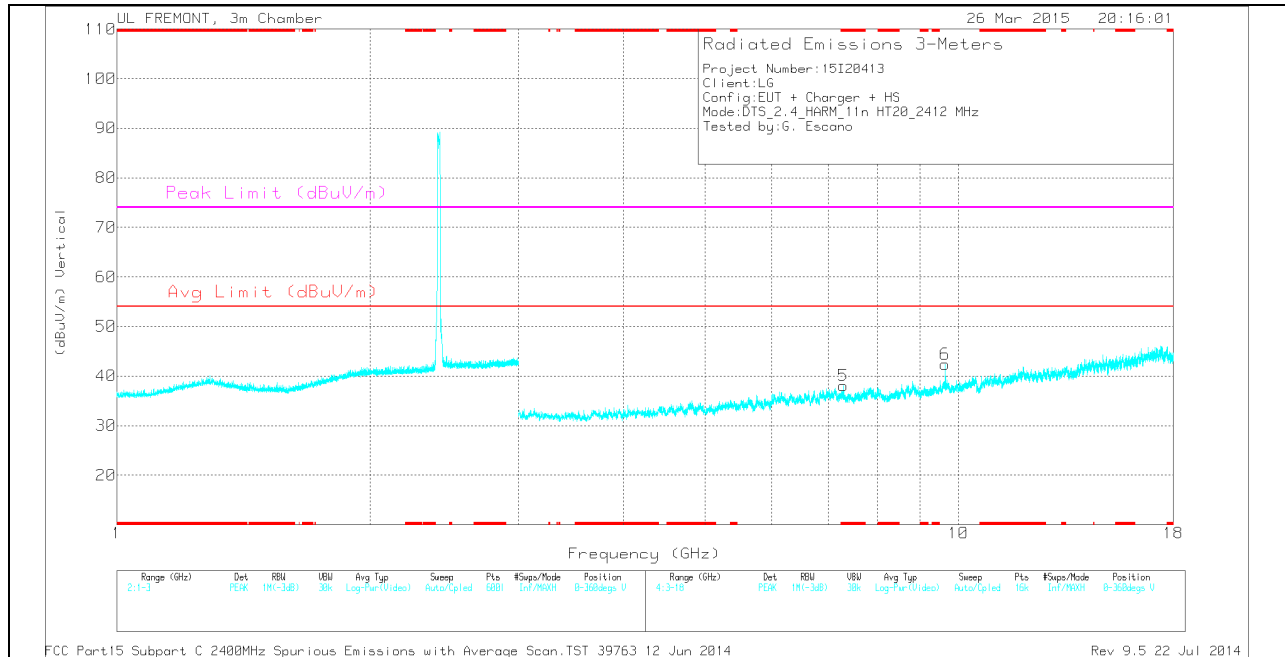
HARMONICS AND SPURIOUS EMISSIONS

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

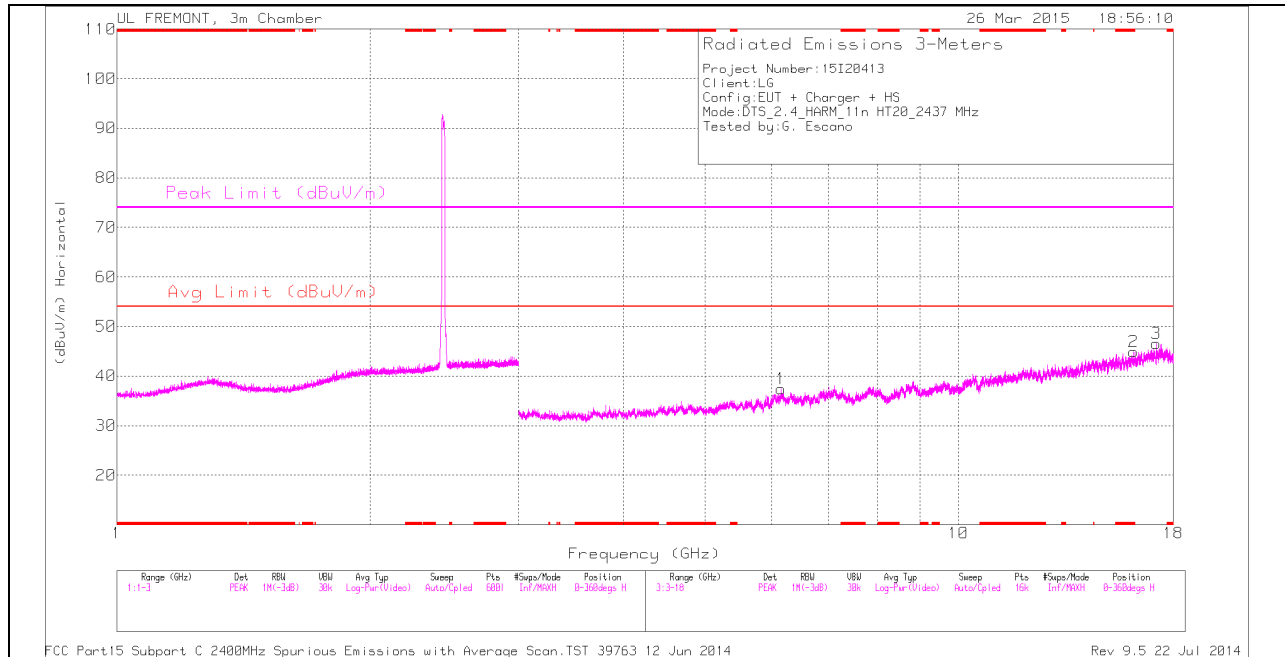
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cb/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.729	32.81	PK	33	-30.9	0	34.91	-	-	74	-39.09	0-360	100	H
2	* 11.951	29.22	PK	39.1	-26.1	0	42.22	-	-	74	-31.78	0-360	100	H
5	* 7.302	31.16	PK	35.6	-28.7	0	38.06	-	-	74	-35.94	0-360	200	V
6	9.647	31.18	PK	36.8	-25.6	0	42.38	-	-	-	-	0-360	200	V
3	14.155	31.59	PK	39	-26.9	0	43.69	-	-	-	-	0-360	100	H
4	17.19	28.11	PK	41.3	-23.1	0	46.31	-	-	-	-	0-360	100	H

PK - Peak detector

RADIATED EMISSIONS

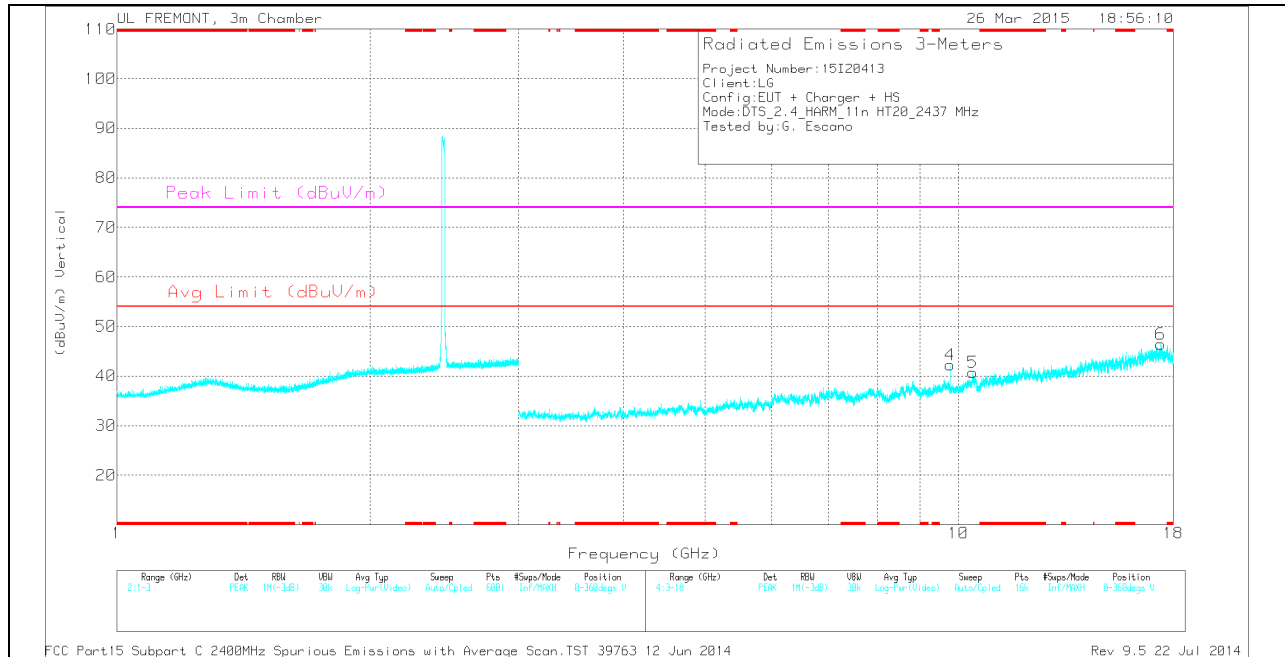
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cb/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.729	40.88	PK2	33	-30.9	0	42.98	-	-	74	-31.02	290	186	H
* 3.731	28.43	MAV1	33	-30.9	.23	30.76	54	-23.24	-	-	290	186	H
* 11.952	37.62	PK2	39.1	-26.1	0	50.62	-	-	74	-23.38	170	325	H
* 11.949	25.88	MAV1	39.1	-26.1	.23	39.11	54	-14.89	-	-	170	325	H
* 7.302	38.78	PK2	35.6	-28.7	0	45.68	-	-	74	-28.32	106	101	V
* 7.304	27.15	MAV1	35.6	-28.6	.23	34.38	54	-19.62	-	-	106	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

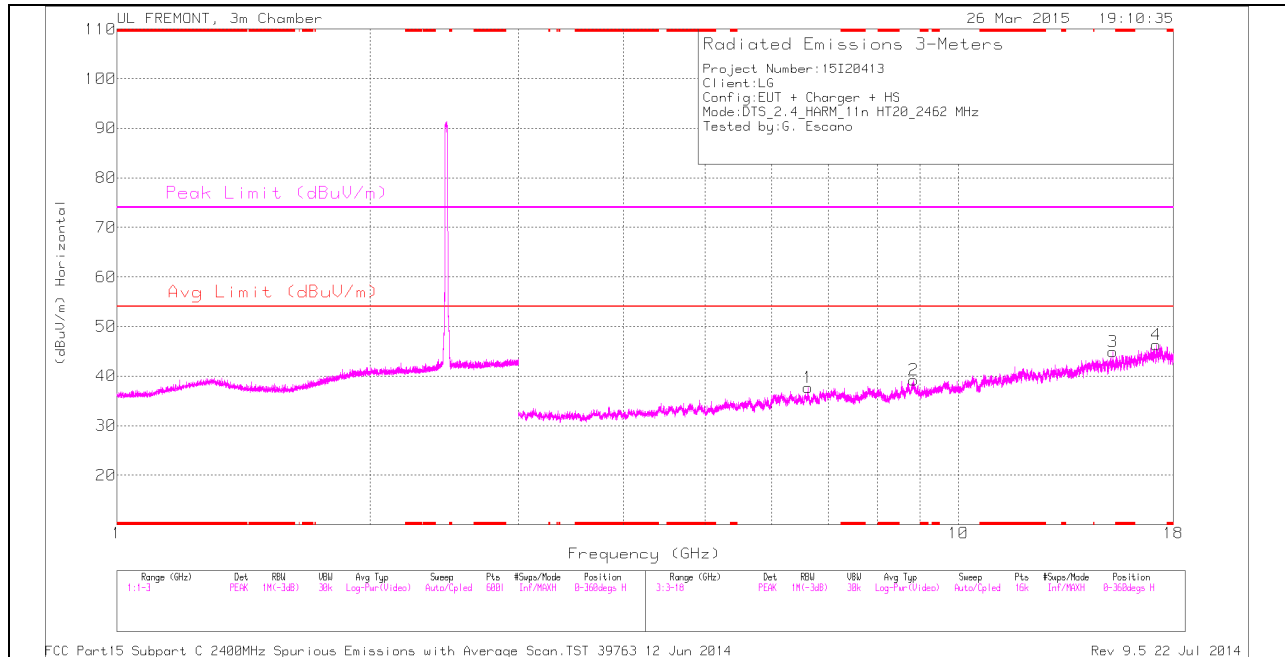
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 16.158	30.07	PK	40.4	-25.6	0	44.87	-	-	74	-29.13	0-360	100	H
1	6.155	31.7	PK	35.3	-29.6	0	37.4	-	-	-	-	0-360	200	H
4	9.767	31.4	PK	36.9	-26	0	42.3	-	-	-	-	0-360	200	V
5	10.39	29.28	PK	37.2	-25.7	0	40.78	-	-	-	-	0-360	100	V
3	17.189	28.34	PK	41.3	-23.1	0	46.54	-	-	-	-	0-360	100	H
6	17.392	27.43	PK	41.4	-22.4	0	46.43	-	-	-	-	0-360	100	V

PK - Peak detector

RADIATED EMISSIONS

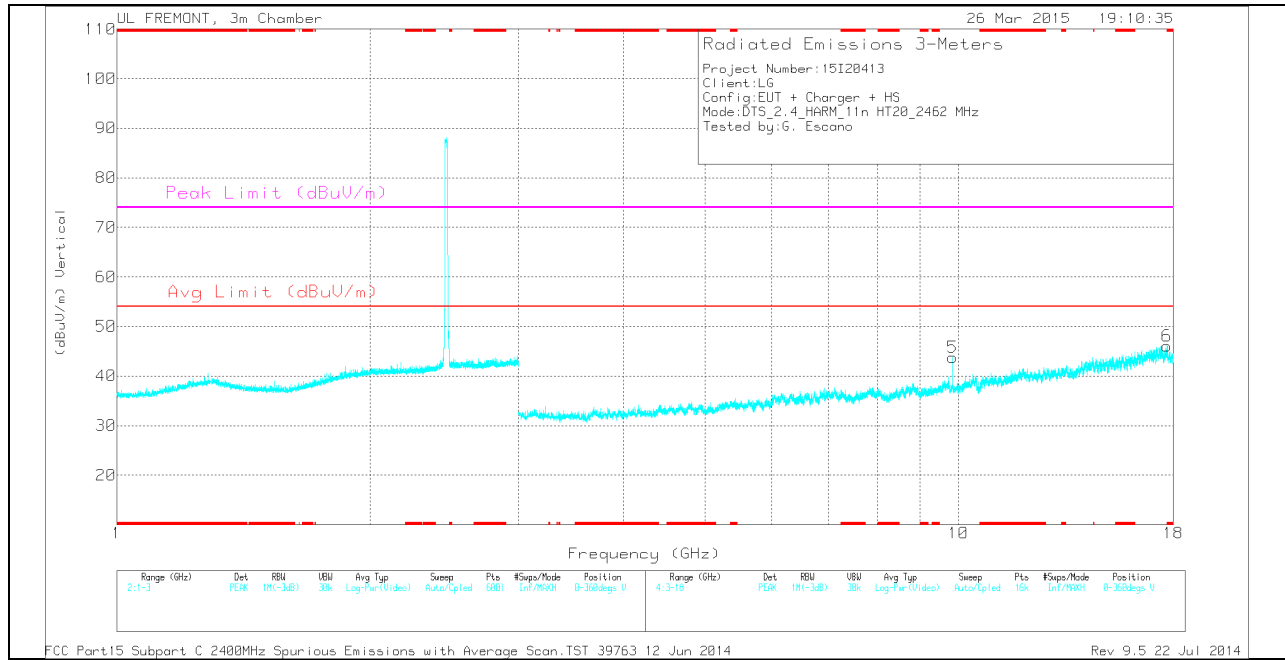
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 16.159	38.69	PK2	40.4	-25.6	0	53.49	-	-	74	-20.51	47	285	H
* 16.16	26.33	MAV1	40.4	-25.6	.23	41.36	54	-12.64	-	-	47	285	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 T119 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 17.702	26.25	PK	41.4	-21.6	0	46.05	-	-	74	-27.95	0-360	100	V
1	6.63	30.62	PK	35.6	-28.5	0	37.72	-	-	-	-	0-360	100	H
2	8.853	30.14	PK	35.9	-26.8	0	39.24	-	-	-	-	0-360	100	H
5	9.847	32.81	PK	36.9	-25.9	0	43.81	-	-	-	-	0-360	200	V
3	15.246	31.26	PK	39.9	-26.2	0	44.96	-	-	-	-	0-360	200	H
4	17.185	28.27	PK	41.3	-23.2	0	46.37	-	-	-	-	0-360	200	H

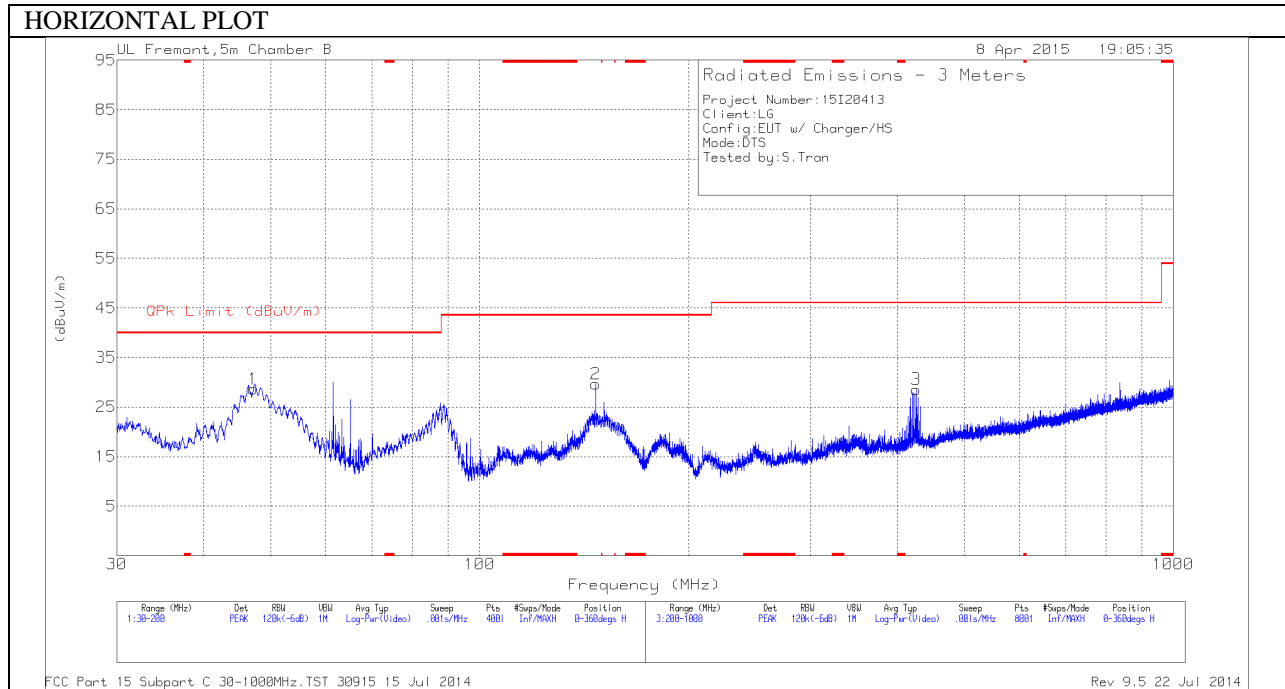
PK - Peak detector

RADIATED EMISSIONS

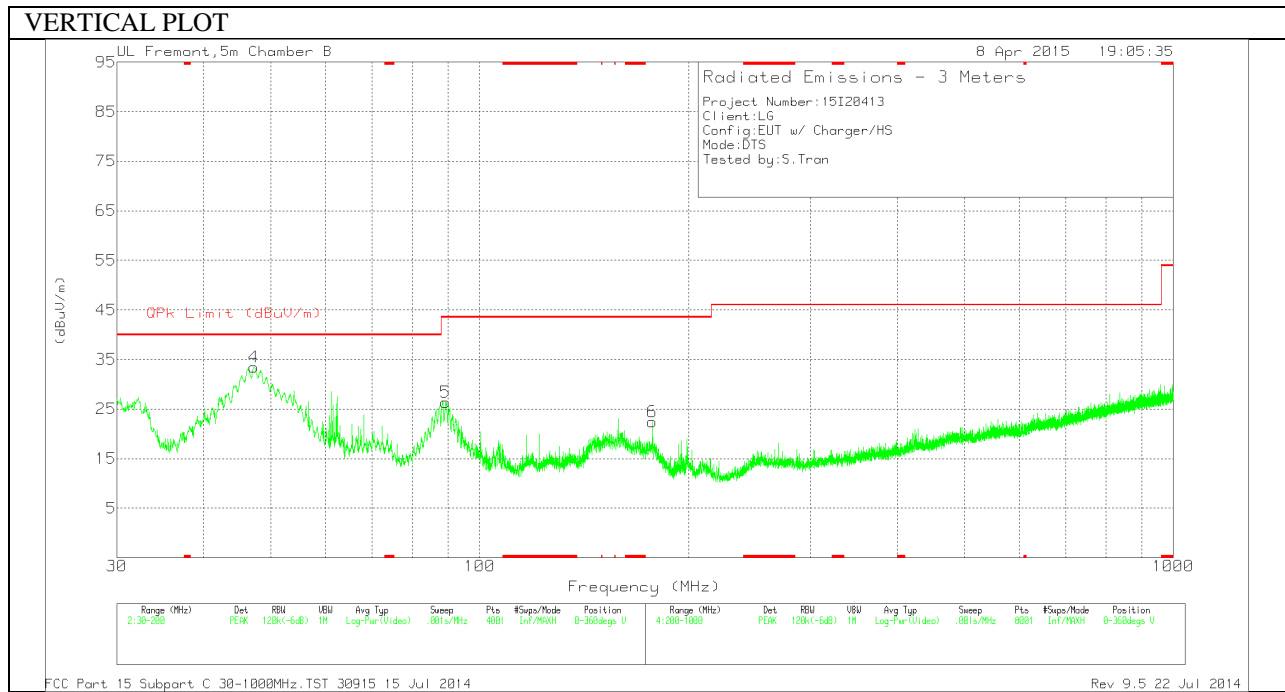
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 17.702	35.41	PK2	41.4	-21.6	0	55.21	-	-	74	-18.79	151	116	V
* 17.702	23.66	MAV1	41.4	-21.6	.23	43.69	54	-10.31	-	-	151	116	V

10.3. WORST-CASE BELOW 1 GHz

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



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



Below 1G Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	47.17	47.9	PK	9.4	-28.7	28.6	40	-11.4	0-360	400	H
4	47.2975	52.82	PK	9.3	-28.7	33.42	40	-6.58	0-360	101	V
5	89.3725	46.98	PK	7.6	-28.2	26.38	43.52	-17.14	0-360	101	V
2	147.0025	44.61	PK	12.6	-27.5	29.71	43.52	-13.81	0-360	200	H
6	177.305	38.32	PK	11.3	-27.2	22.42	43.52	-21.1	0-360	101	V
3	425.6	38.08	PK	16.4	-25.9	28.58	46.02	-17.44	0-360	101	H

11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

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

*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.

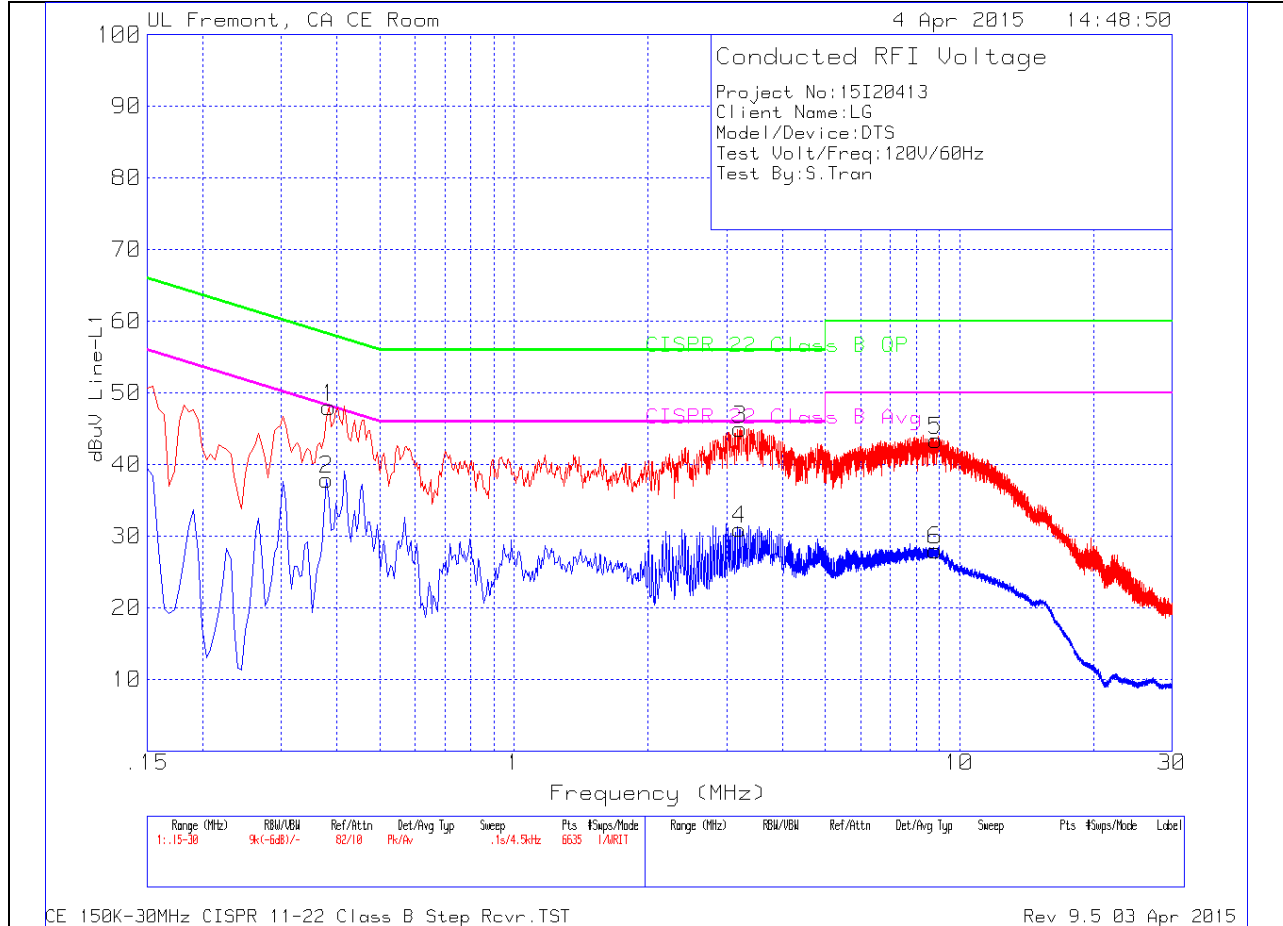
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT

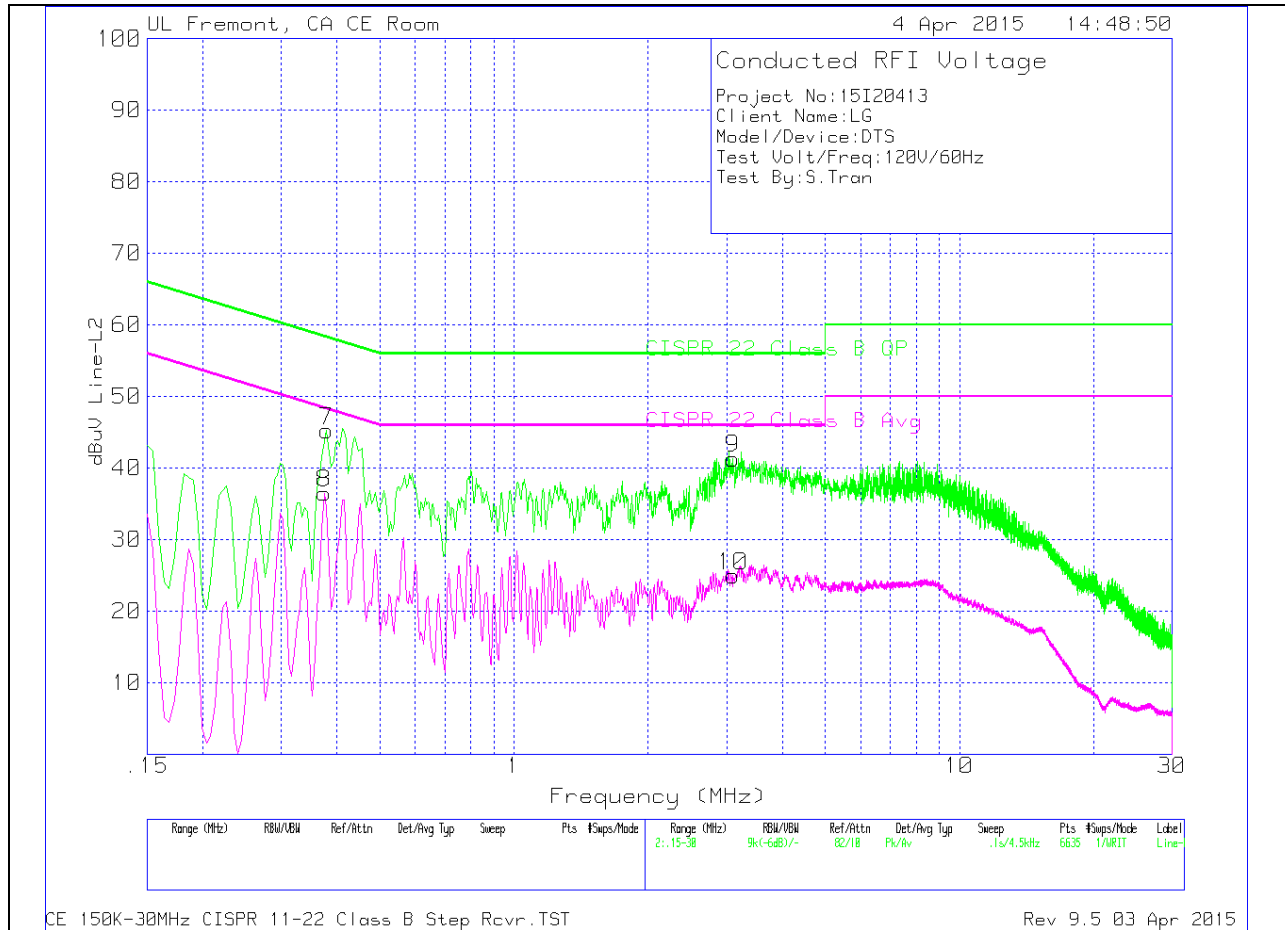


LINE 1 RESULTS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.384	47.62	Pk	.4	0	48.02	58.19	-10.17	--	--
2	.3795	37.51	Av	.4	0	37.91	--	--	48.29	-10.38
3	3.2145	44.68	Pk	.2	.1	44.98	56	-11.02	--	--
4	3.21	30.65	Av	.2	.1	30.95	--	--	46	-15.05
5	8.853	43.11	Pk	.2	.1	43.41	60	-16.59	--	--
6	8.8215	27.73	Av	.2	.1	28.03	--	--	50	-21.97

LINE 2 PLOT



LINE 2 RESULTS

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.3795	44.74	Pk	.5	0	45.24	58.29	-13.05	--	--
8	.375	36.01	Av	.5	0	36.51	--	--	48.39	-11.88
9	3.102	41.03	Pk	.2	.1	41.33	56	-14.67	--	--
10	3.102	24.66	Av	.2	.1	24.96	--	--	46	-21.04