



FCC CFR47 PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

Cellular/PCS CDMA and GSM/WCDMA and LTE Phone with Bluetooth and WLAN

MODEL NUMBER: LG-VS920

ADDITIONAL MODEL NAME: VS920, LGVS920

FCC ID: BEJVS920

REPORT NUMBER: 11U13867-1, Revision A

ISSUE DATE: JULY 19, 2011

Prepared for

LG ELECTRONICS INC.

1000 SYLVAN AVENUE

ENGLEWOOD CLIFFS, NEW JERSEY 07632

Prepared by

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	07/07/11	Initial Issue	F. Ibrahim
A	07/19/11	Updated client address and revised Software and Firmware section	A. Zaffar

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: LG ELECTRONICS INC.
1000 SYLVAN AVENUE
ENGLEWOOD CLIFFS, NEW JERSEY 07632

EUT DESCRIPTION: Cellular/PCS CDMA and GSM/WCDMA and LTE Phone with
Bluetooth and WLAN

MODEL: LG-VS920

SERIAL NUMBER: 990000-61-000123-4

DATE TESTED: JUNE 15 TO JULY 06, 2011

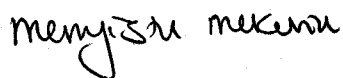
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass

Compliance Certification Services (UL CCS) 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 CCS 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 CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL CCS 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 CCS By:

Tested By:



THU CHAN
ENGINEERING MANAGER
UL CCS

MENGISTU MEKURIA
EMC ENGINEER
UL CCS

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2009, FCC CFR 47 Part 2, and FCC CFR 47 Part 15.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

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:

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

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 1000 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 Cellular/PCS CDMA and GSM/WCDMA and LTE Phone with Bluetooth and WLAN.

The radio module is manufactured by Broadcom.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2462	802.11b	20.75	118.85
2412 - 2462	802.11g	25.90	389.05
2412 - 2462	802.11n HT20 SISO	22.93	196.34

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a PIFA (Planar Inverted F Antenna) with a maximum peak gain of -1.37 dBi for both WLAN and BT.

5.4. SOFTWARE AND FIRMWARE

The EUT driver software installed during testing was VS920Z13.

The test utility software used during testing was VS920Z13.

5.5. MODIFICATIONS

An inductive charger configuration to pass radiated emissions below 1GHz test, external ferrite, manufactured by Intermark and # GRFC-9.

5.6. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 1 GHz and power line conducted emissions were performed with the EUT set to the channel with highest output power.

For the fundamental investigation, since the EUT is a portable device that has three orientations; X, Y and Z orientations have been investigated, also with AC/DC adapter, and earphone, and the worst case was found to be at X orientation with AC/USB adapter and earphone.

Worst-case data rates used based on an input from the client were as follows:

802.11b mode: 1 Mbps

802.11g mode: 6 Mbps

802.11n mode: MCS0

Worst-case spot checks on additional charger Model # STA-U13WV, such as band edge, harmonic, Tx below 1GHz, and conducted emission were performed.

5.7. DESCRIPTION OF TEST SETUP**SUPPORT EQUIPMENT****STANDARD OR INDUCTIVE COVER**

PERIPHERAL SUPPORT EQUIPMENT LIST			
Description	Manufacturer	Model	Serial Number
AC ADAPTER	LG ELECTRONICS	STA-U15WS	SA06022772
AC ADAPTER	LG ELECTRONICS	STA-U13WV	VA11020006649
HEADSET	LG ELECTRONICS	VS920	N/A

INDUCTIVE CHARGER WITH INDUCTIVE COVER

PERIPHERAL SUPPORT EQUIPMENT LIST			
Description	Manufacturer	Model	Serial Number
AC ADAPTER	LG ELECTRONICS	WCAD01WT	TA110000857
HEADSET	LG ELECTRONICS	VS920	N/A
INDUCTIVE CHARGER	LG ELECTRONICS	WCP-700	CCS-03027

I/O CABLES**STANDARD OR INDUCTIVE COVER**

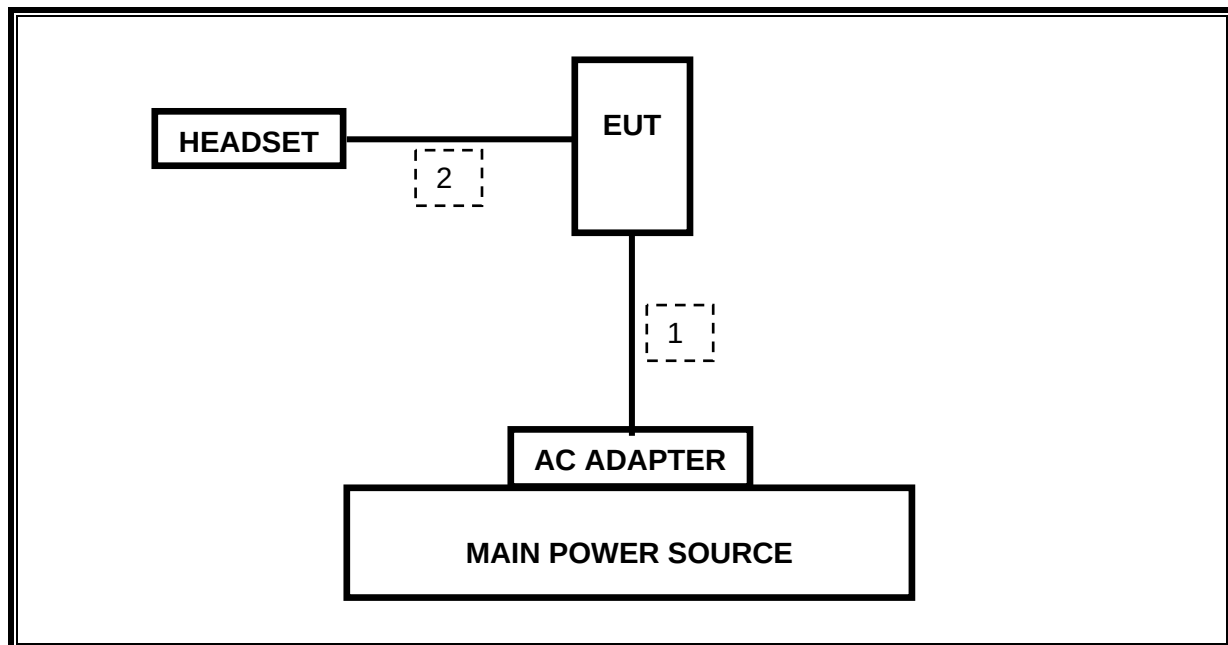
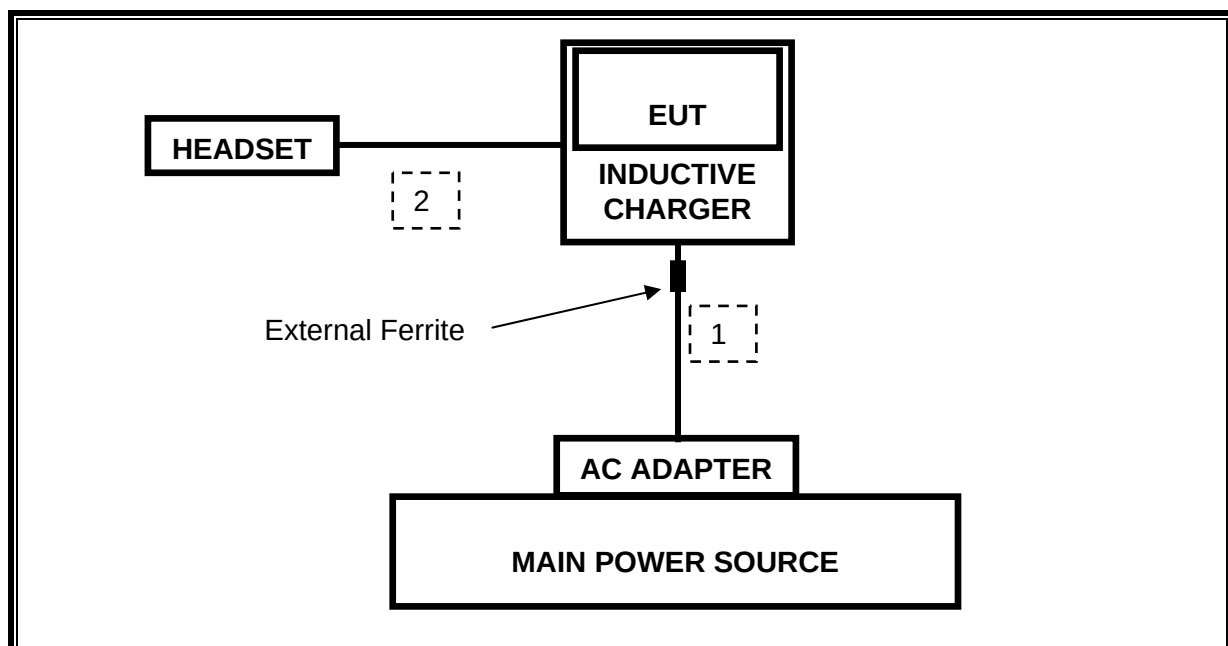
I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	DC	1	MINI USB	UN-SHELDDED	1.0m	N/A
2	AUDIO	1	MINI JACK	UN-SHELDDED	1.0m	Volume control on cable

INDUCTIVE CHARGER WITH INDUCTIVE COVER

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	DC	1	MINI USB	UN-SHELDDED	1.0m	External ferrite added
2	AUDIO	1	MINI JACK	UN-SHELDDED	1.0m	Volume control on cable

TEST SETUP

- The EUT is a stand-alone device and was tested with AC/USB adapter and earphones.
- The EUT is sat on inductive charger was tested with AC adapter and earphones.

SETUP DIAGRAM FOR TESTS**STANDARD OR INDUCTIVE COVER****INDUCTIVE CHARGER AND INDUCTIVE COVER**

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, 26.5 GHz	Agilent / HP	E4440A	C01178	08/30/11
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01063	07/14/11
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00558	01/27/12
Antenna, Horn, 18 GHz	EMCO	3115	C00783	06/29/12
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01016	07/12/11
EMI Receiver, 6.5GHz	Agilent / HP	85462A		08/19/11
Reject Filter, 2.4-2.5 GHz	Micro-Tronics	BRM50702	N02685	CNR
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01161	12/07/11
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4407B	C01098	04/30/12
Peak Power Meter	Agilent / HP	E4416A	C00963	03/22/13
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	04/13/12

7. ANTENNA PORT TEST RESULTS

7.1. 802.11b MODE IN THE 2.4 GHz BAND

7.1.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

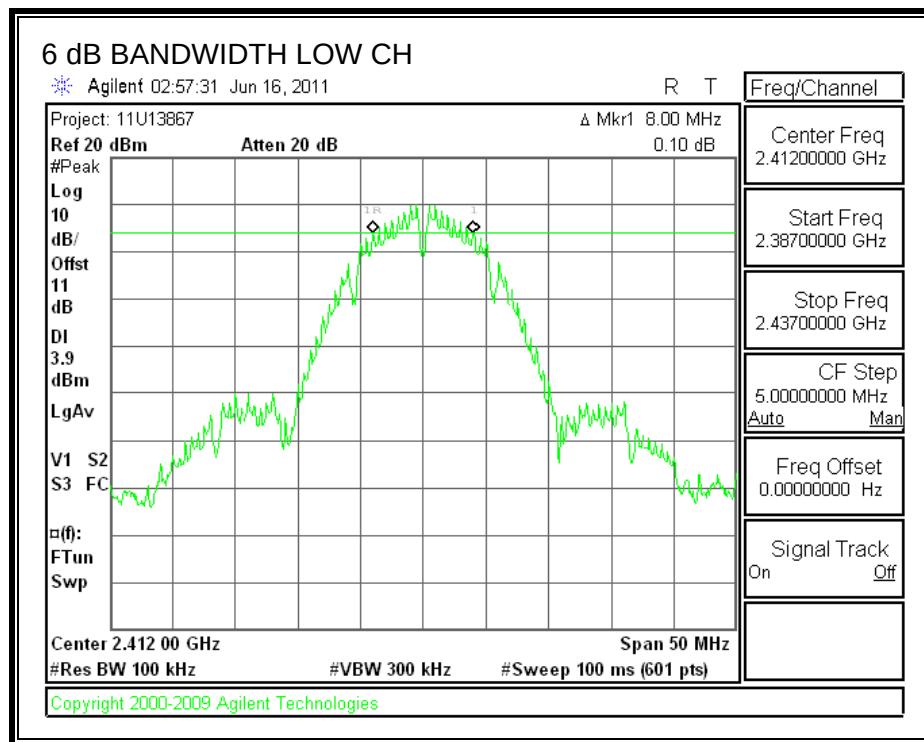
The minimum 6 dB bandwidth shall be at least 500 kHz.

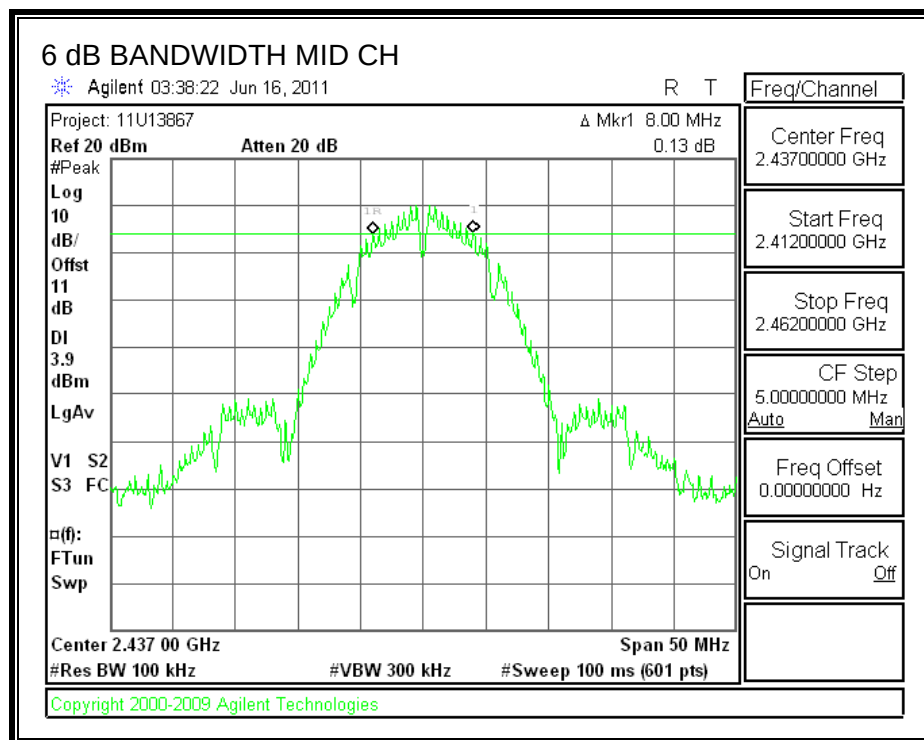
TEST PROCEDURE

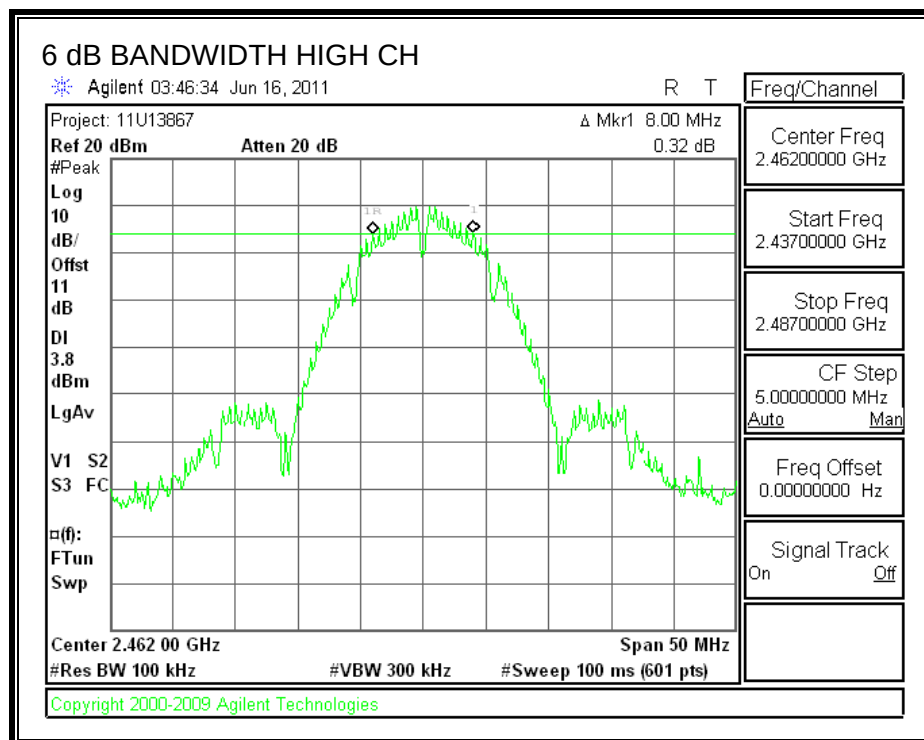
The transmitter output is connected to a spectrum analyzer. The RBW is set to 100 kHz and the VBW is set to 300 kHz. The sweep time is coupled.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	8.0	0.5
Middle	2437	8.0	0.5
High	2462	8.0	0.5

6 dB BANDWIDTH





7.1.2. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

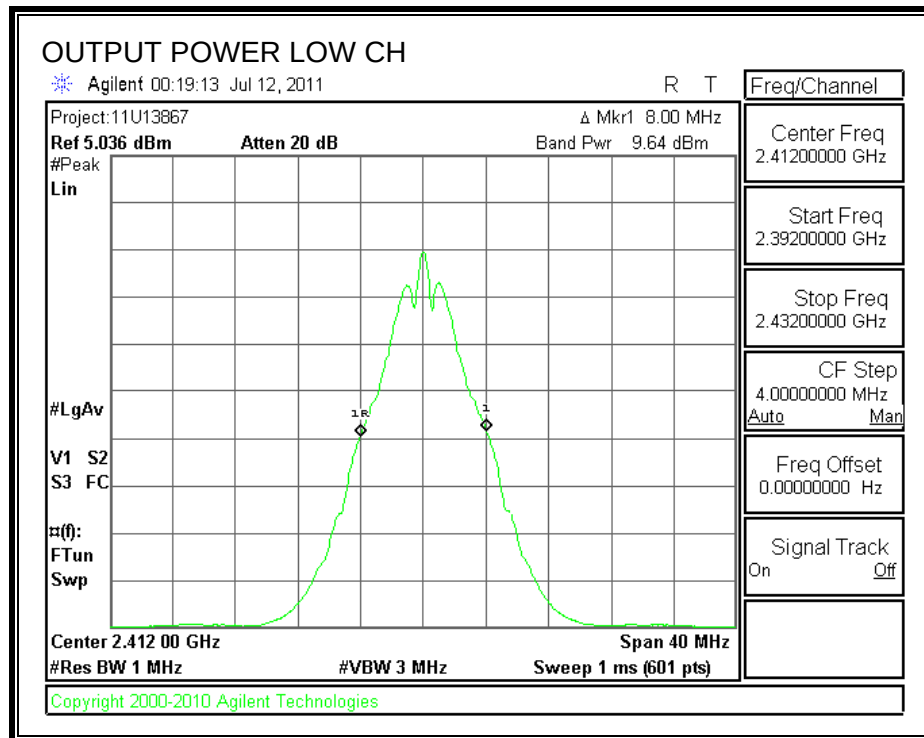
The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

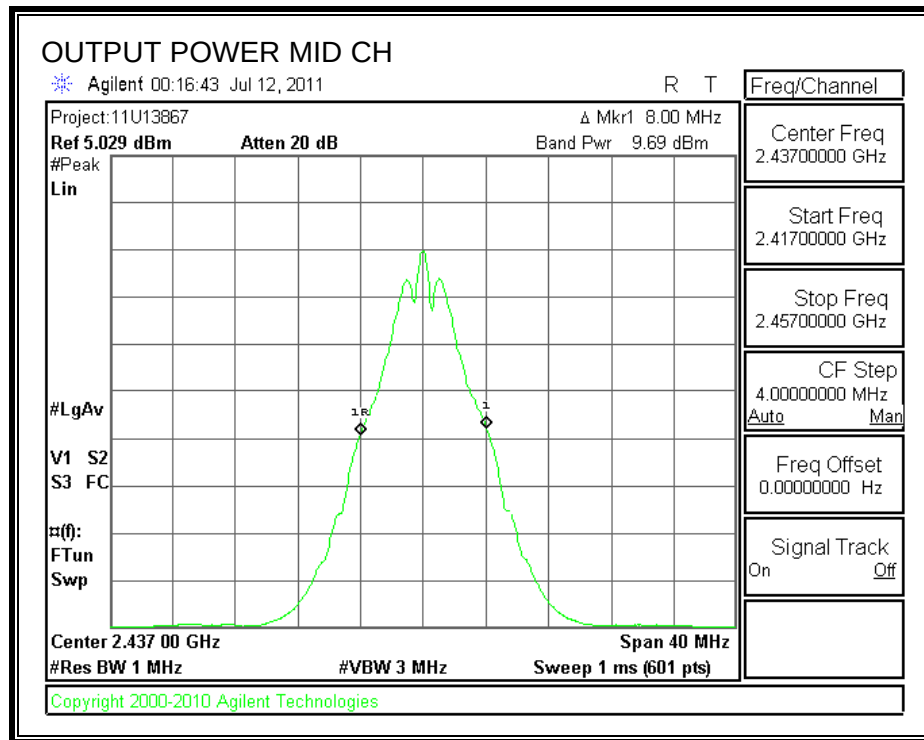
TEST PROCEDURE

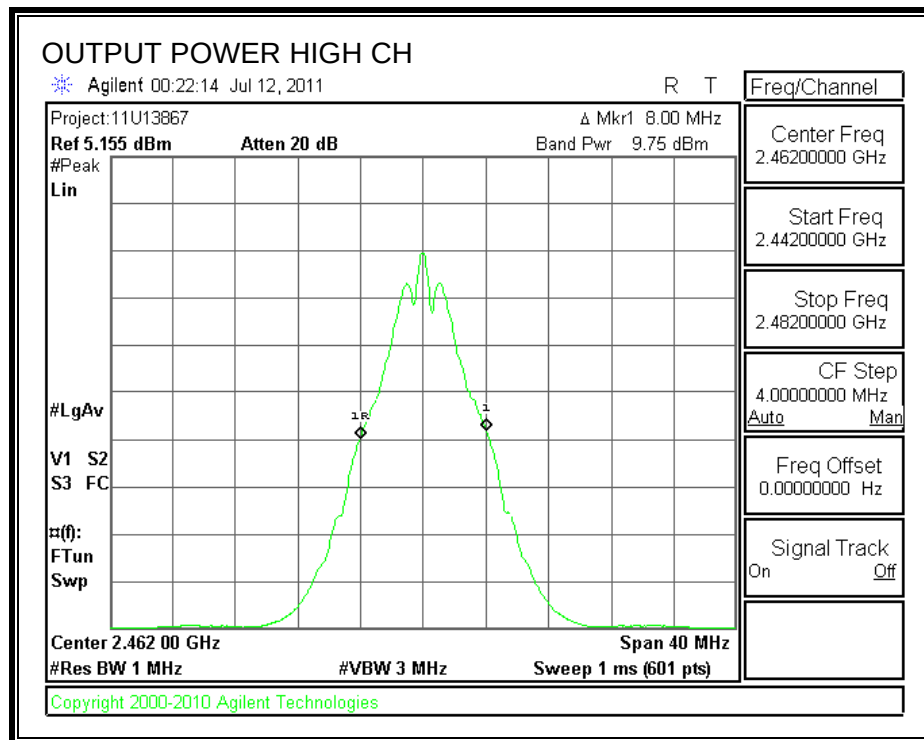
Peak power is measured using the Channel bandwidth Alternative peak output power procedure specified in "TCB Training for Devices covered under Scopes A1 - A4" by Joe Dichoso, May 2003.

RESULTS

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Attenuator and Cable Offset (dB)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2412	9.64	11	20.64	30	-9.36
Middle	2437	9.69	11	20.69	30	-9.31
High	2462	9.75	11	20.75	30	-9.25

OUTPUT POWER





7.1.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1.0 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	Power (dBm)
Low	2412	17.04
Middle	2437	17.07
High	2462	17.12

7.1.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

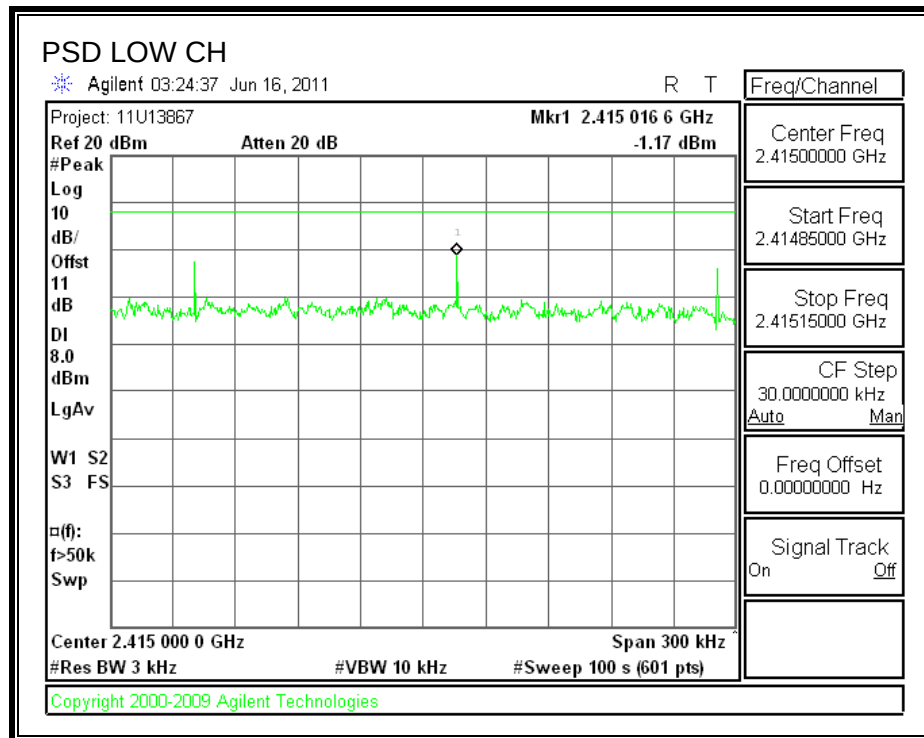
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

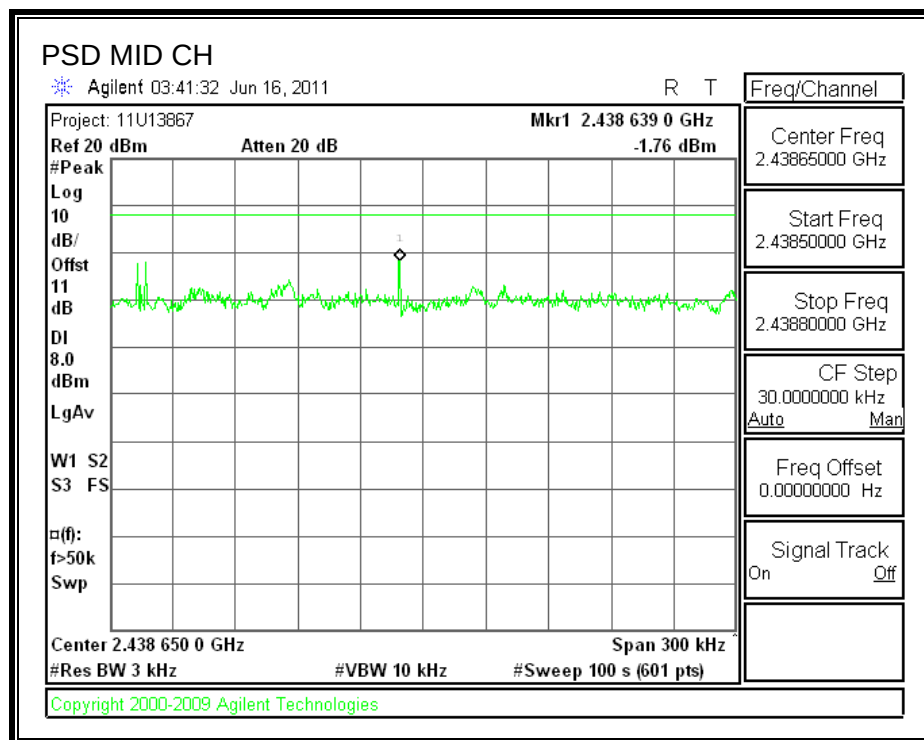
TEST PROCEDURE

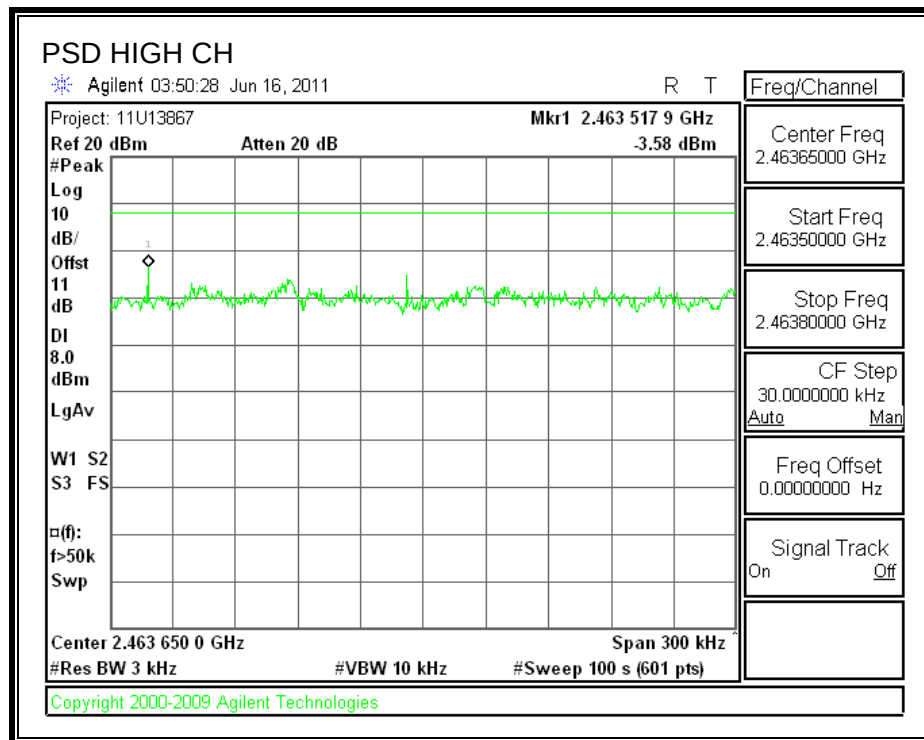
Output power was measured based on the use of a peak measurement, therefore the power spectral density was measured using PSD Option 1 in accordance with FCC document "Measurement of Digital Transmission Systems Operating under Section 15.247", March 23, 2005.

RESULTS

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-1.17	8	-9.17
Middle	2437	-1.76	8	-9.76
High	2462	-3.58	8	-11.58

POWER SPECTRAL DENSITY





7.1.5. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

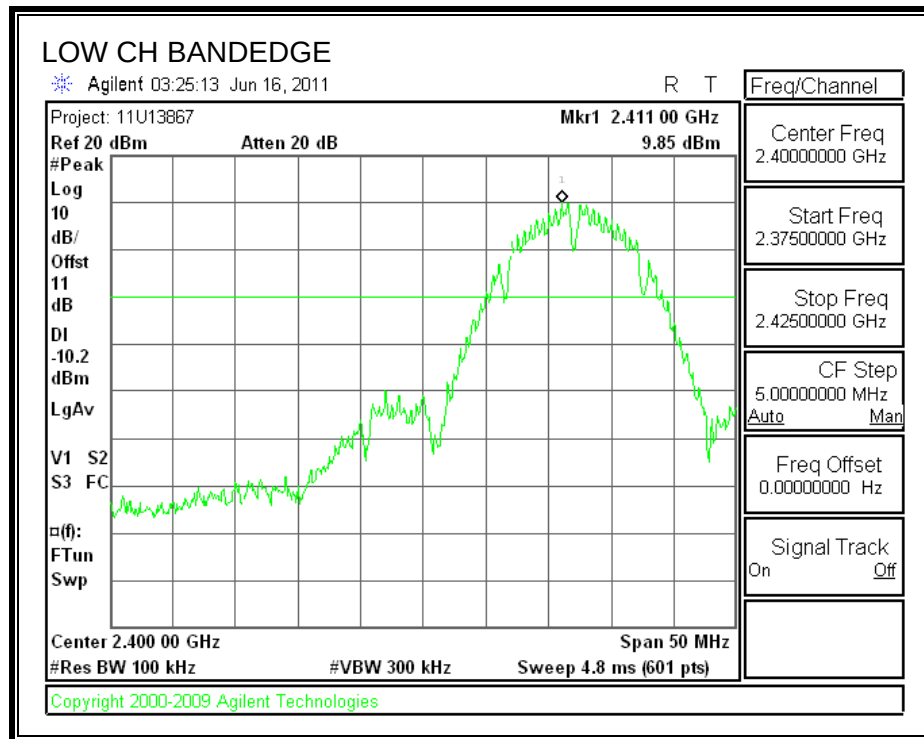
IC RSS-210 A8.5

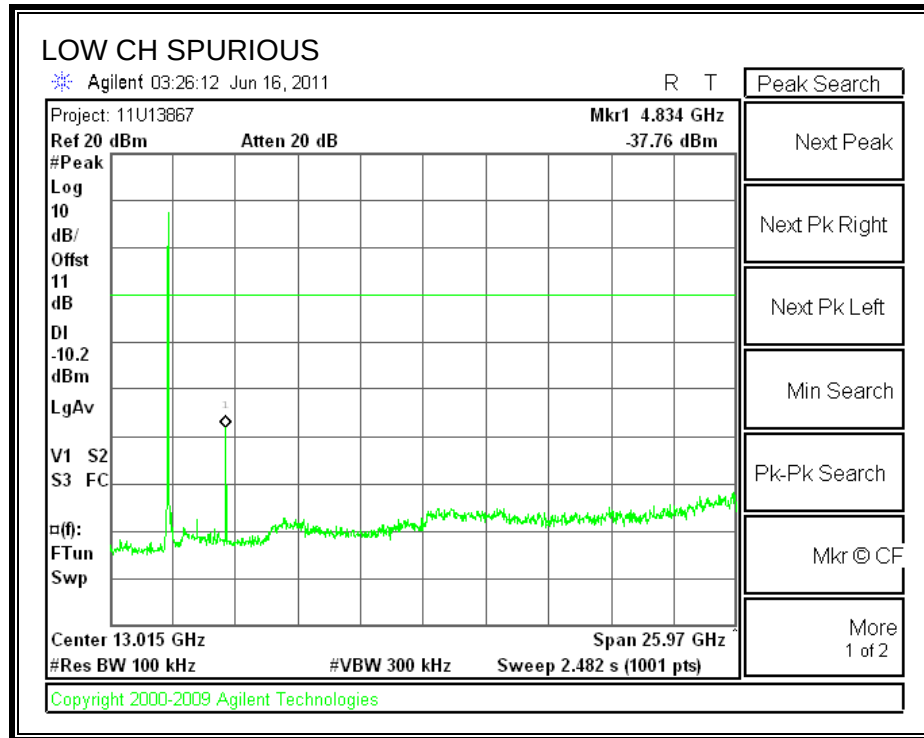
Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

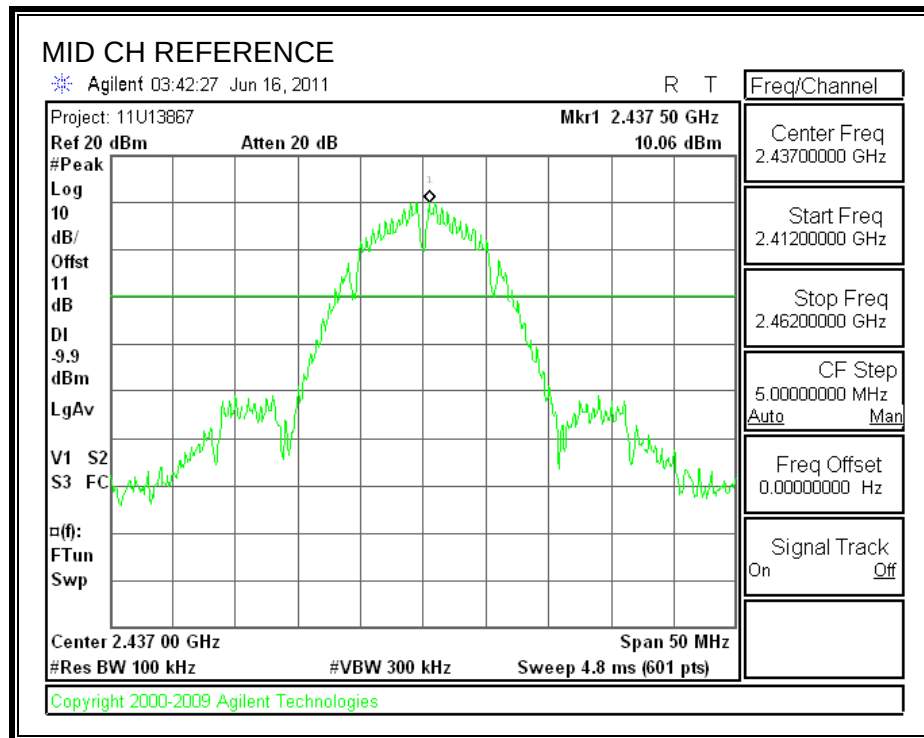
TEST PROCEDURE

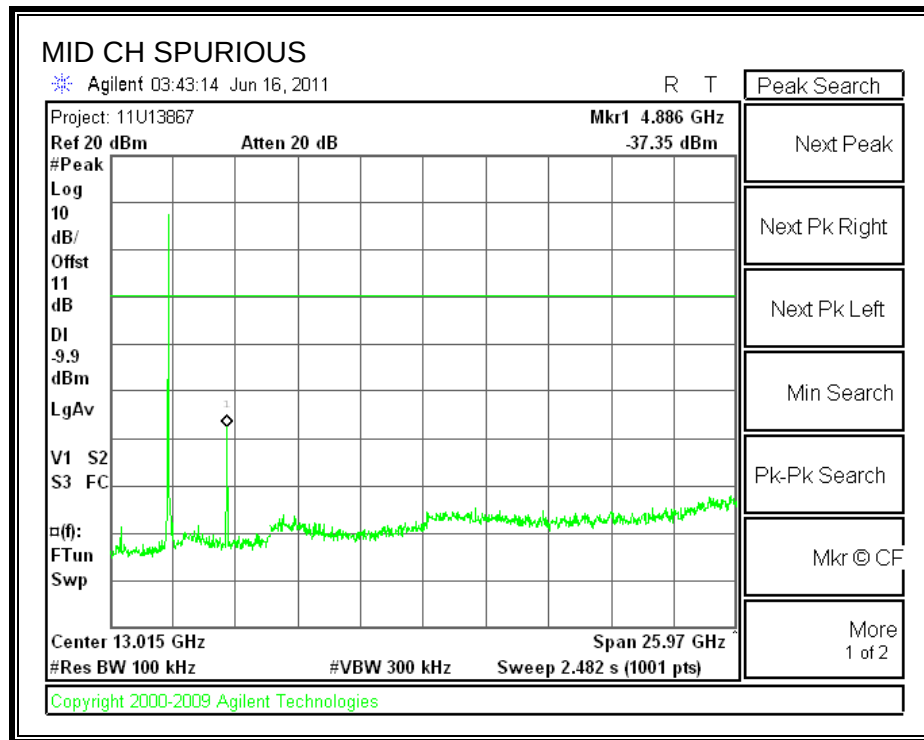
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

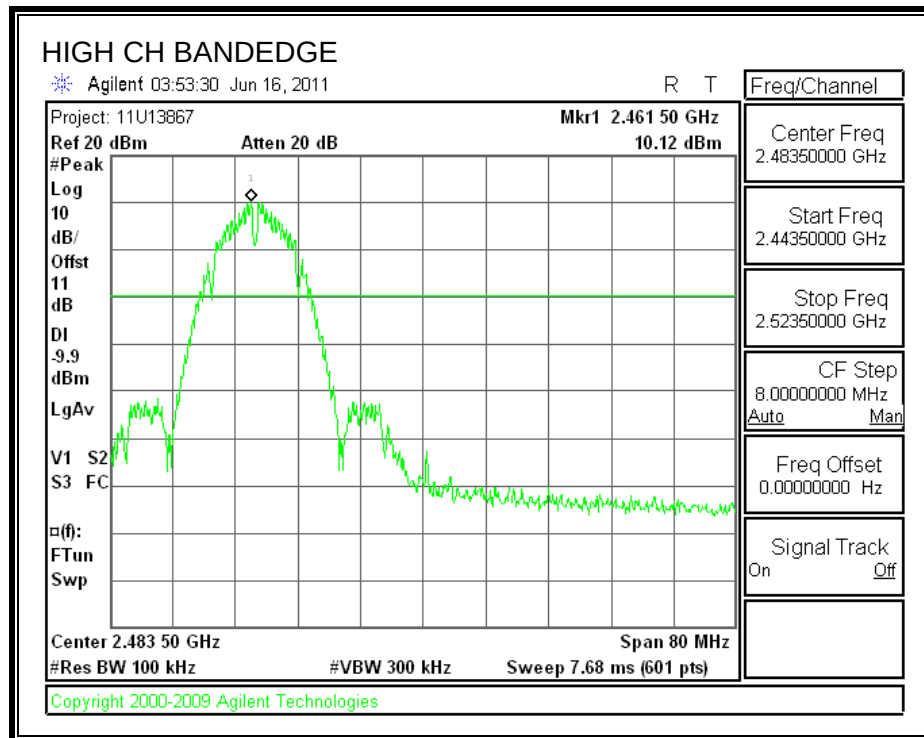
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

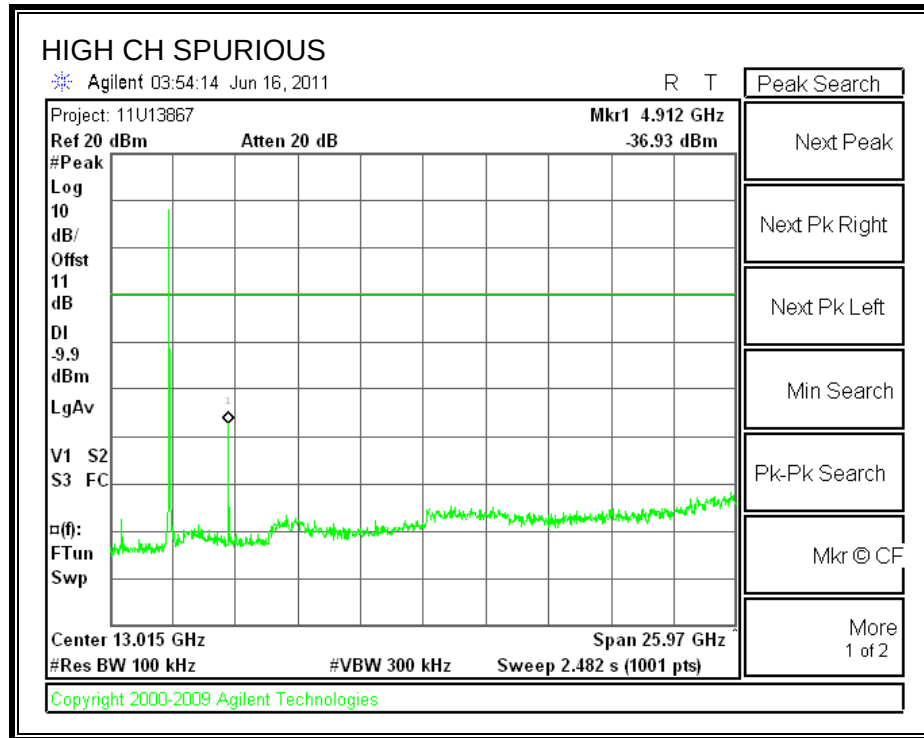
RESULTS**SPURIOUS EMISSIONS, LOW CHANNEL**



SPURIOUS EMISSIONS, MID CHANNEL



SPURIOUS EMISSIONS, HIGH CHANNEL



7.2. 802.11g MODE IN THE 2.4 GHz BAND**7.2.1. 6 dB BANDWIDTH****LIMITS**

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

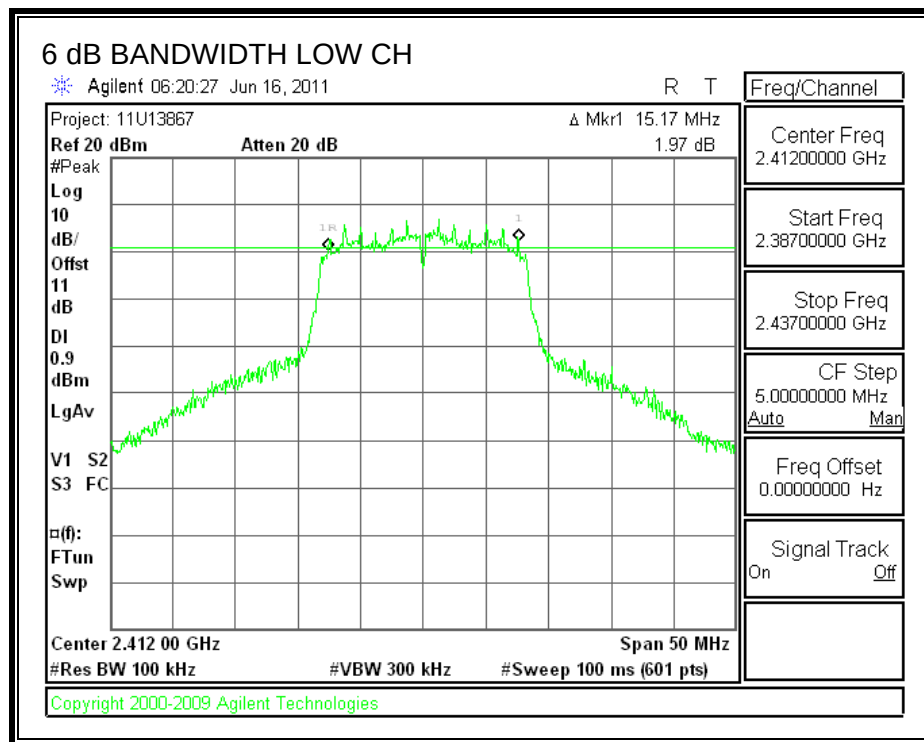
The minimum 6 dB bandwidth shall be at least 500 kHz.

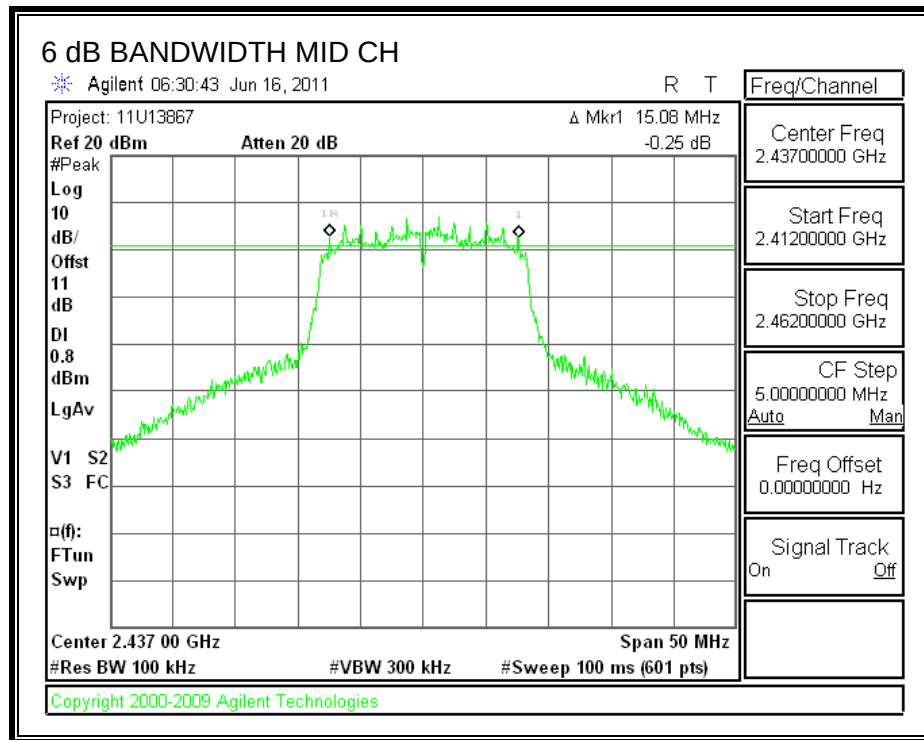
TEST PROCEDURE

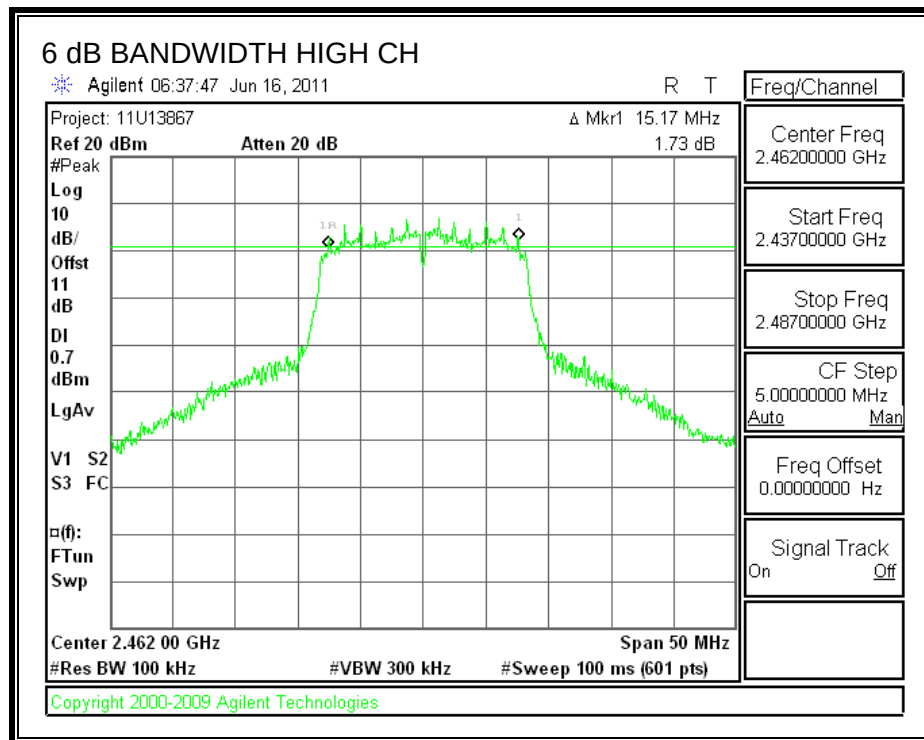
The transmitter output is connected to a spectrum analyzer. The RBW is set to 100 kHz and the VBW is set to 300 kHz. The sweep time is coupled.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	15.17	0.5
Middle	2437	15.08	0.5
High	2462	15.17	0.5

6 dB BANDWIDTH





7.2.2. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

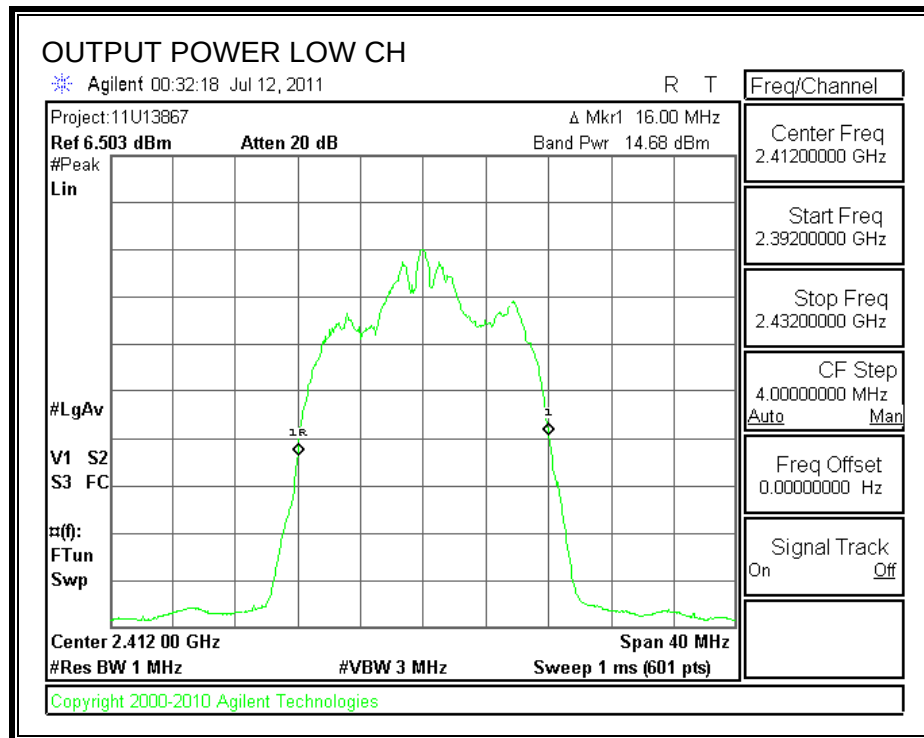
The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

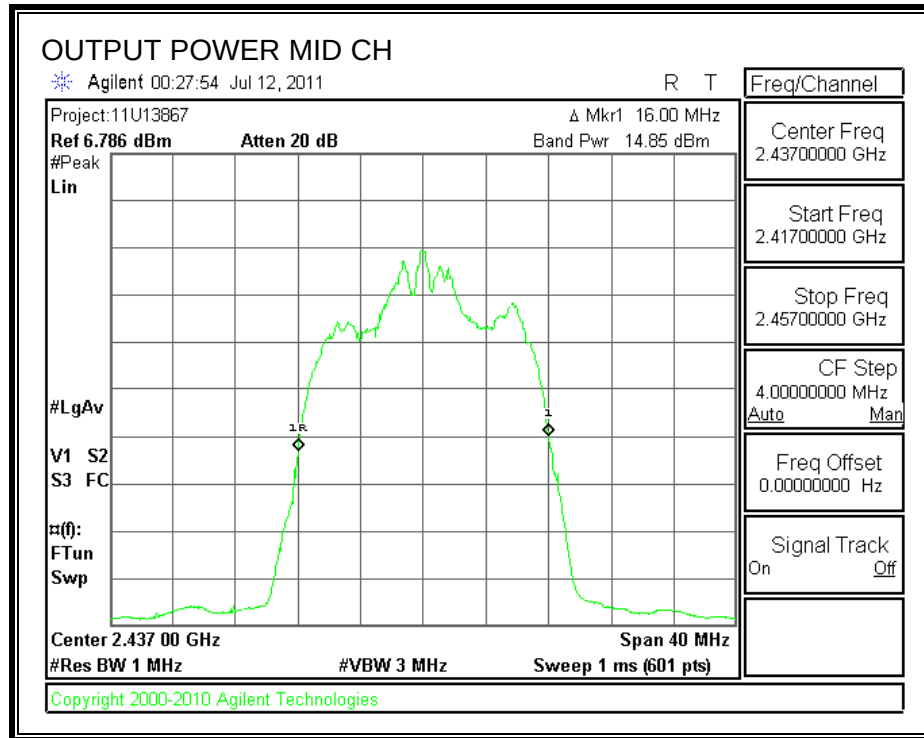
TEST PROCEDURE

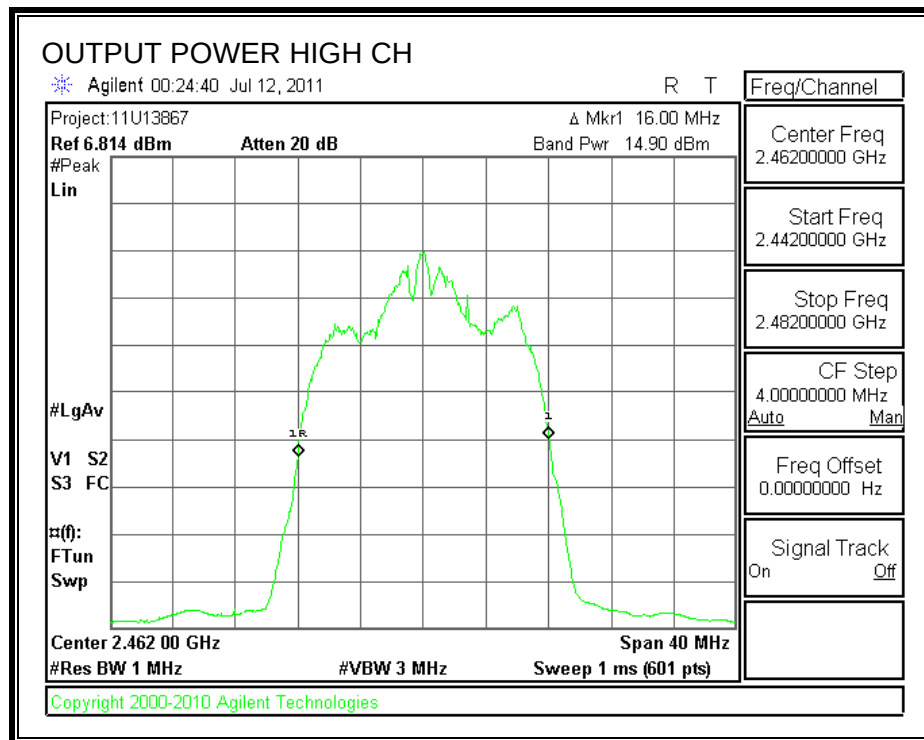
Peak power is measured using the Channel bandwidth Alternative peak output power procedure specified in "TCB Training for Devices covered under Scopes A1 - A4" by Joe Dichoso, May 2003.

RESULTS

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Attenuator and Cable Offset (dB)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2412	14.68	11	25.68	30	-4.32
Middle	2437	14.85	11	25.85	30	-4.15
High	2462	14.90	11	25.90	30	-4.10

OUTPUT POWER





7.2.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1.0 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	Power (dBm)
Low	2412	16.80
Middle	2437	16.68
High	2462	16.73

7.2.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

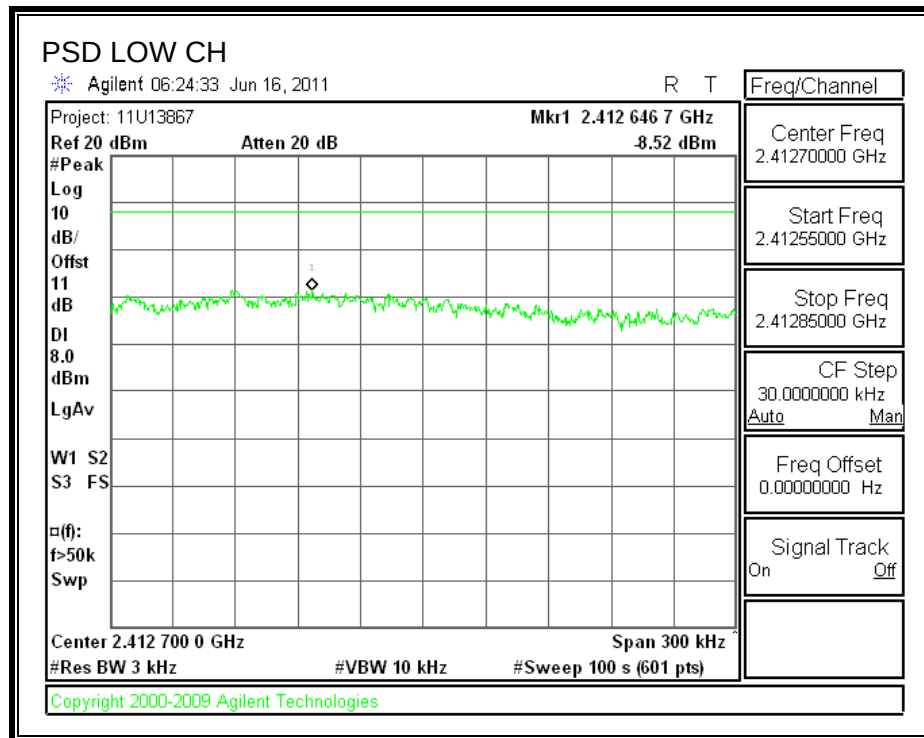
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

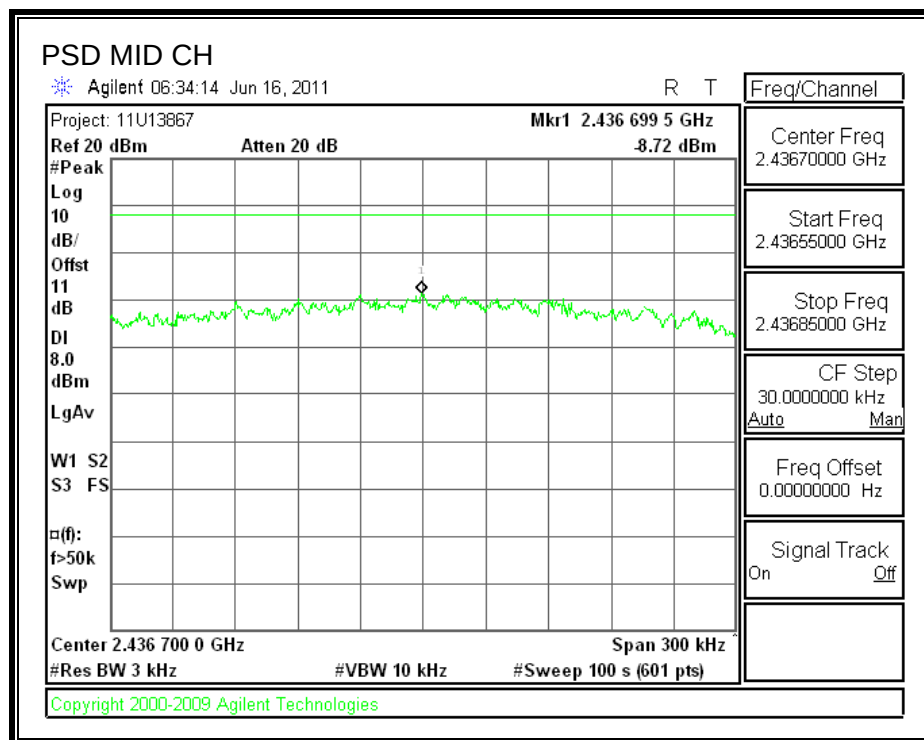
TEST PROCEDURE

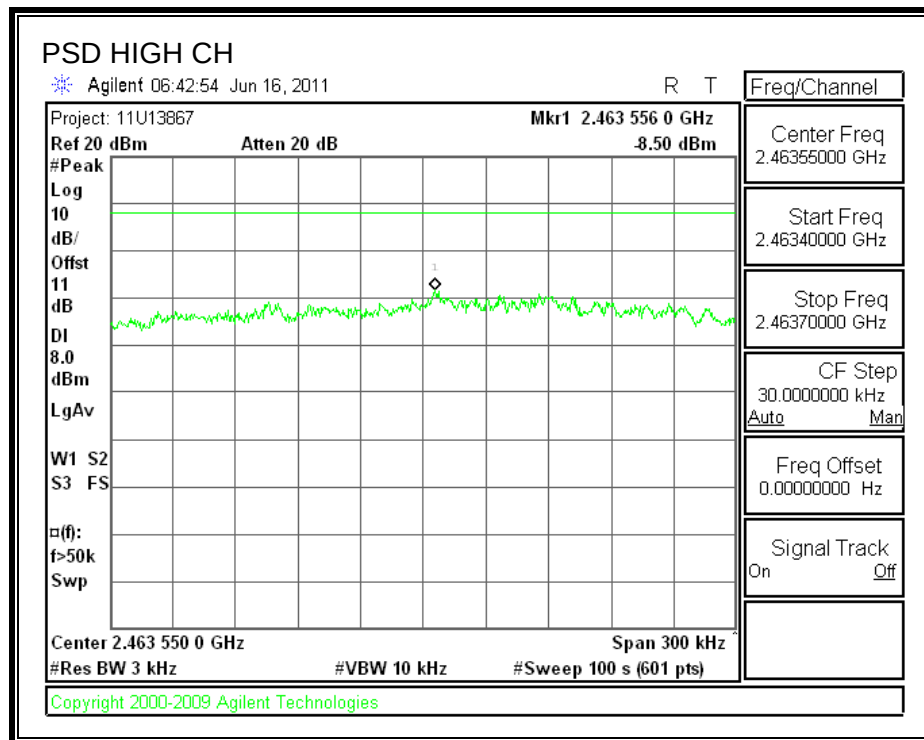
Output power was measured based on the use of a peak measurement, therefore the power spectral density was measured using PSD Option 1 in accordance with FCC document "Measurement of Digital Transmission Systems Operating under Section 15.247", March 23, 2005.

RESULTS

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-8.52	8	-16.52
Middle	2437	-8.72	8	-16.72
High	2462	-8.50	8	-16.50

POWER SPECTRAL DENSITY





7.2.5. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

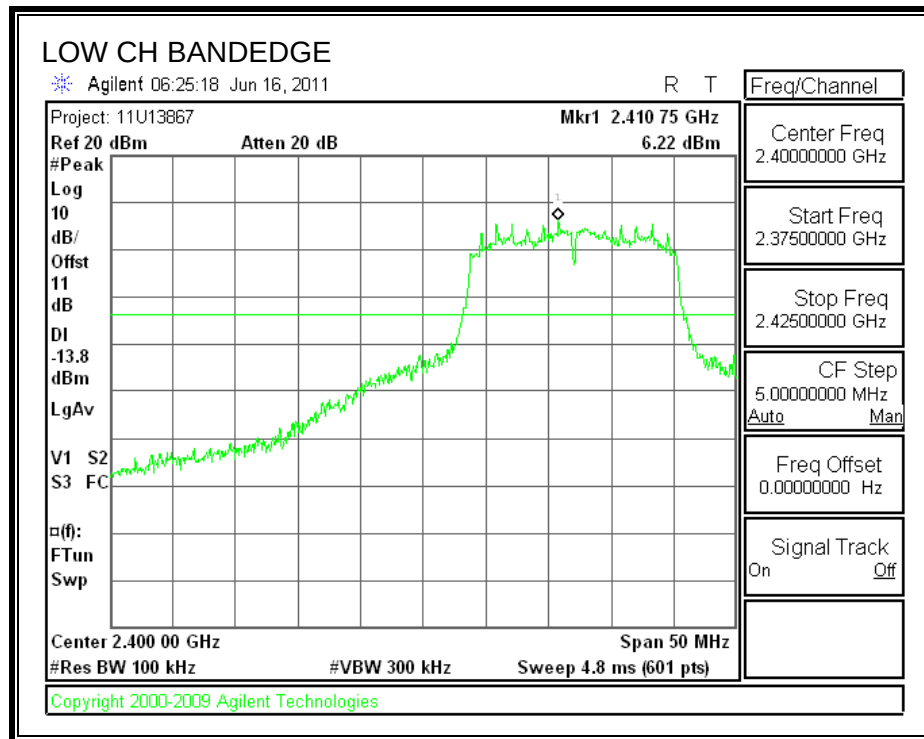
IC RSS-210 A8.5

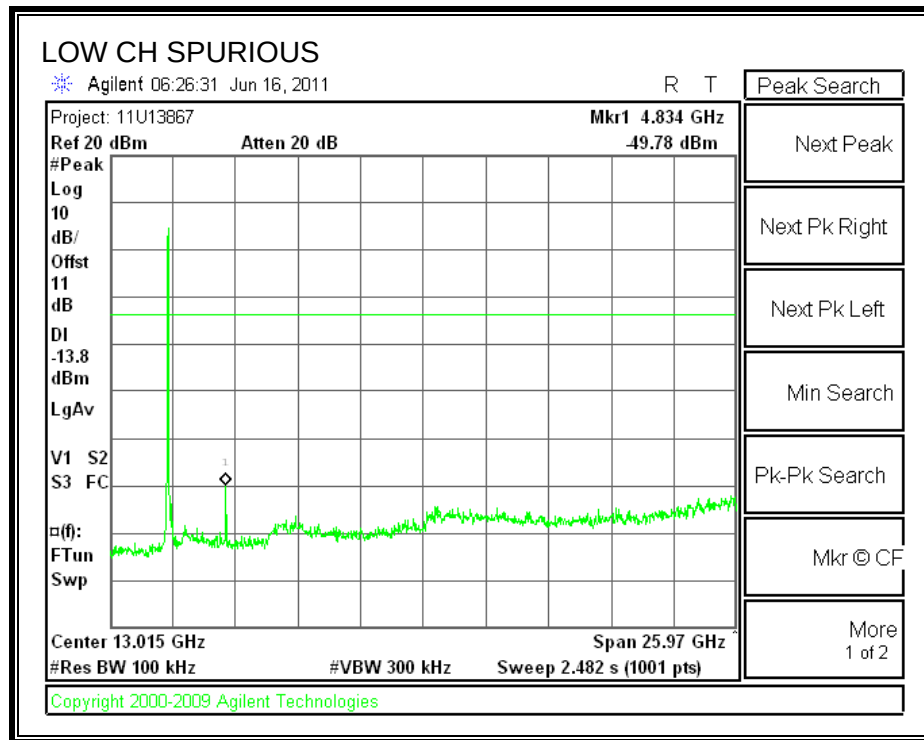
Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

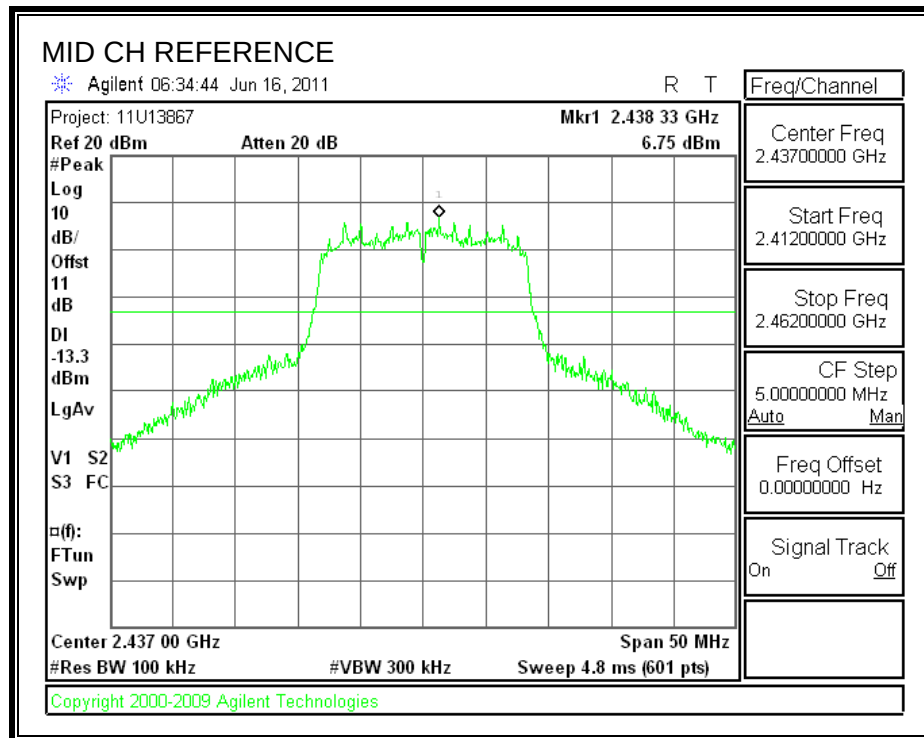
TEST PROCEDURE

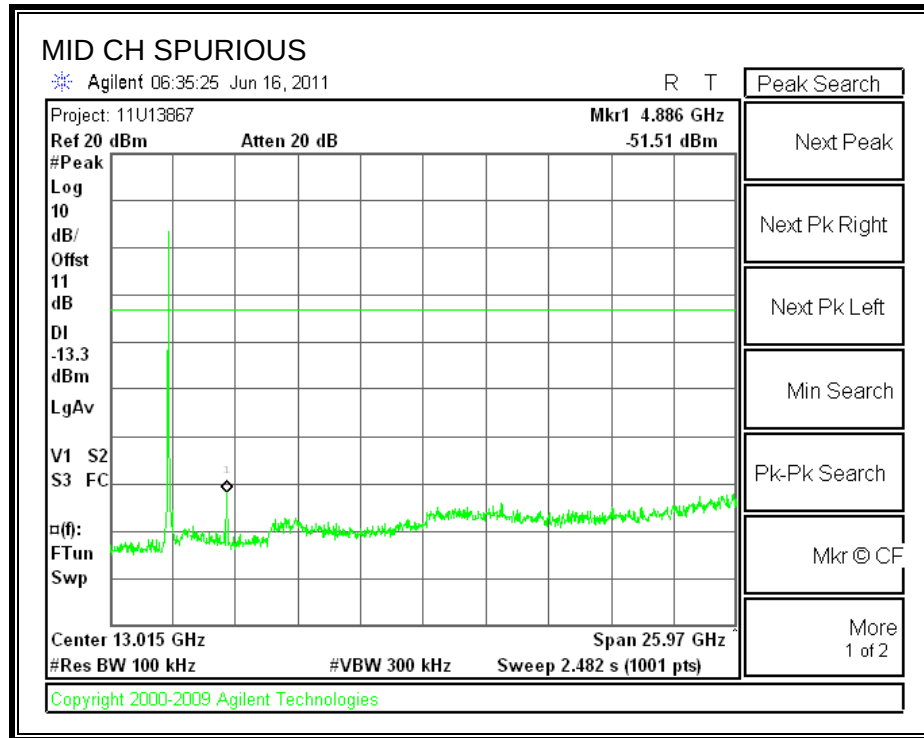
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

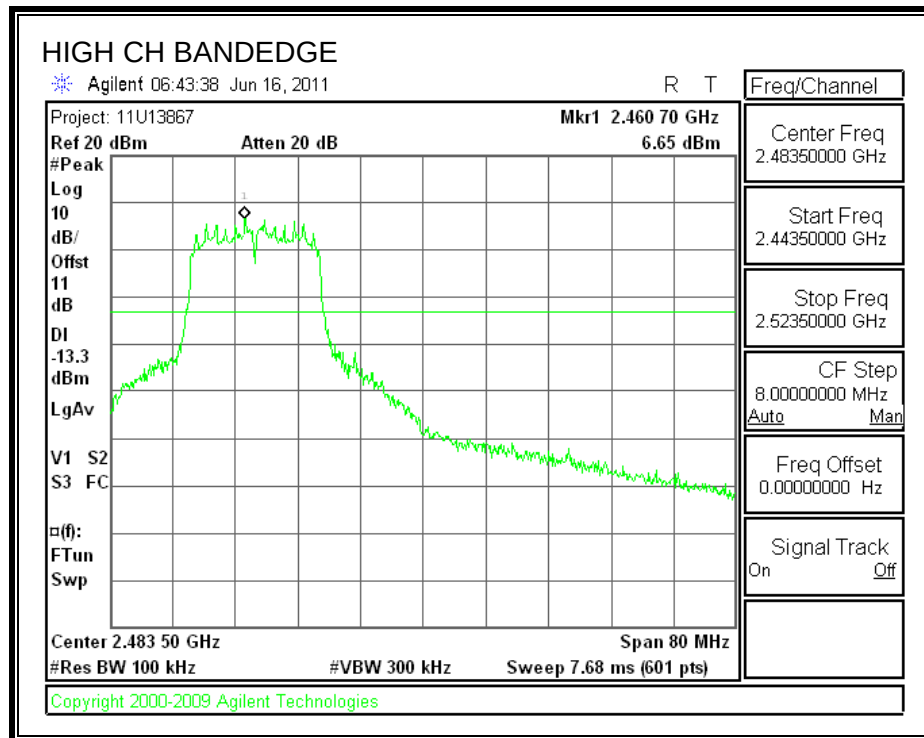
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

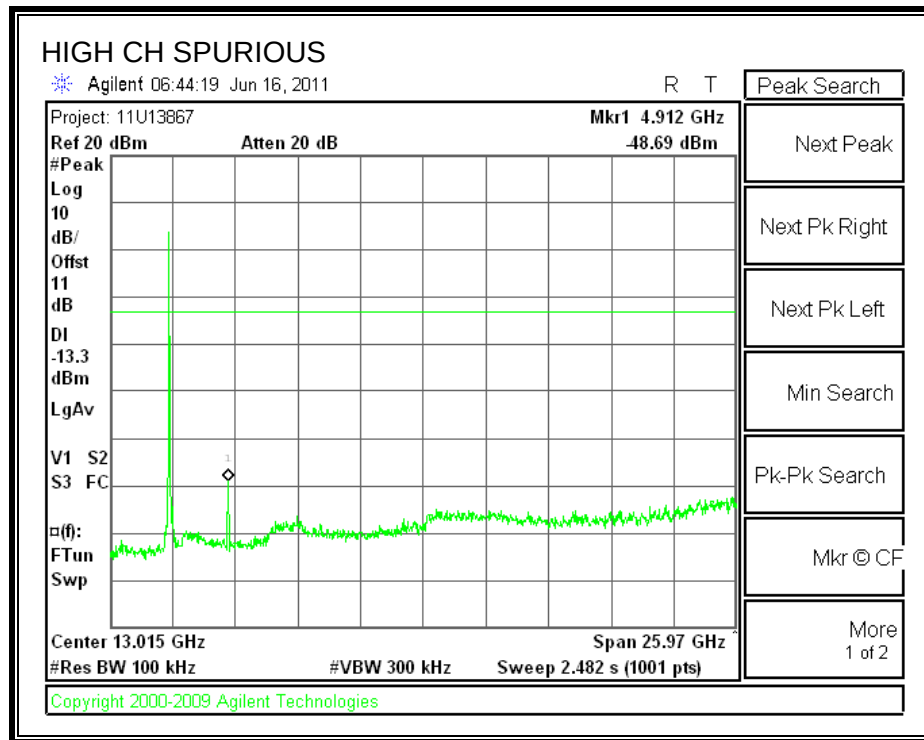
RESULTS**SPURIOUS EMISSIONS, LOW CHANNEL**



SPURIOUS EMISSIONS, MID CHANNEL



SPURIOUS EMISSIONS, HIGH CHANNEL



7.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND**7.3.1. 6 dB BANDWIDTH****LIMITS**

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

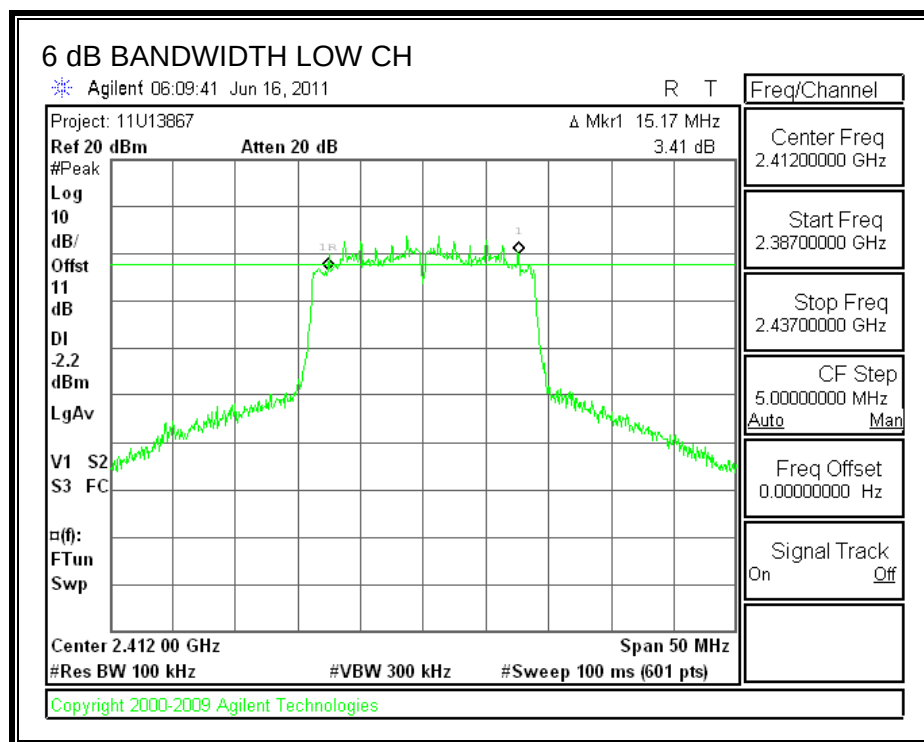
The minimum 6 dB bandwidth shall be at least 500 kHz.

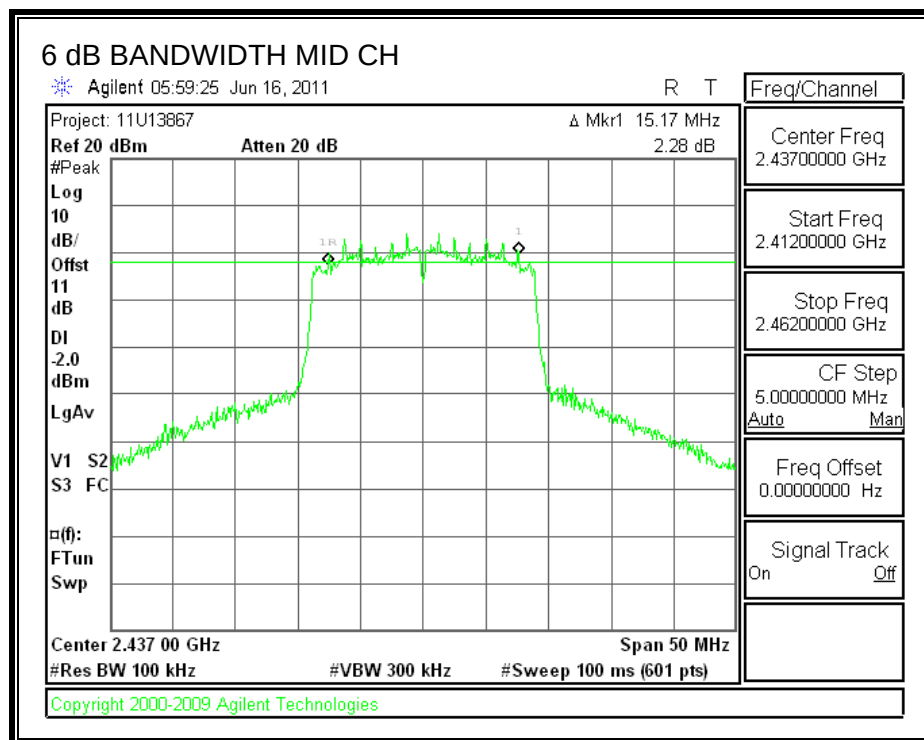
TEST PROCEDURE

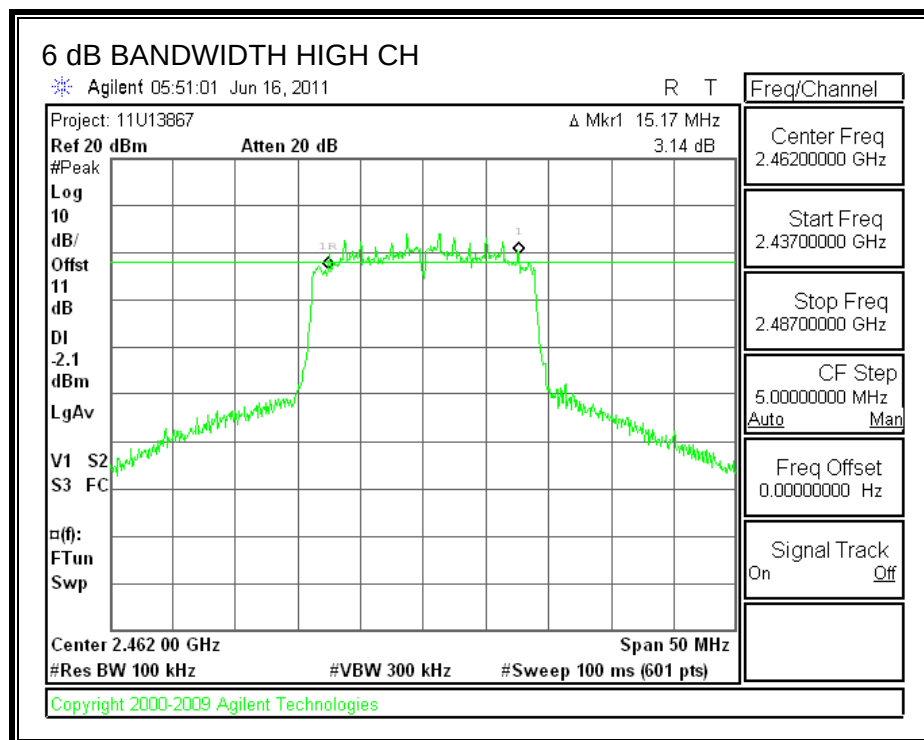
The transmitter output is connected to a spectrum analyzer. The RBW is set to 100 kHz and the VBW is set to 300 kHz. The sweep time is coupled.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	15.17	0.5
Middle	2437	15.17	0.5
High	2462	15.17	0.5

6 dB BANDWIDTH





7.3.2. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

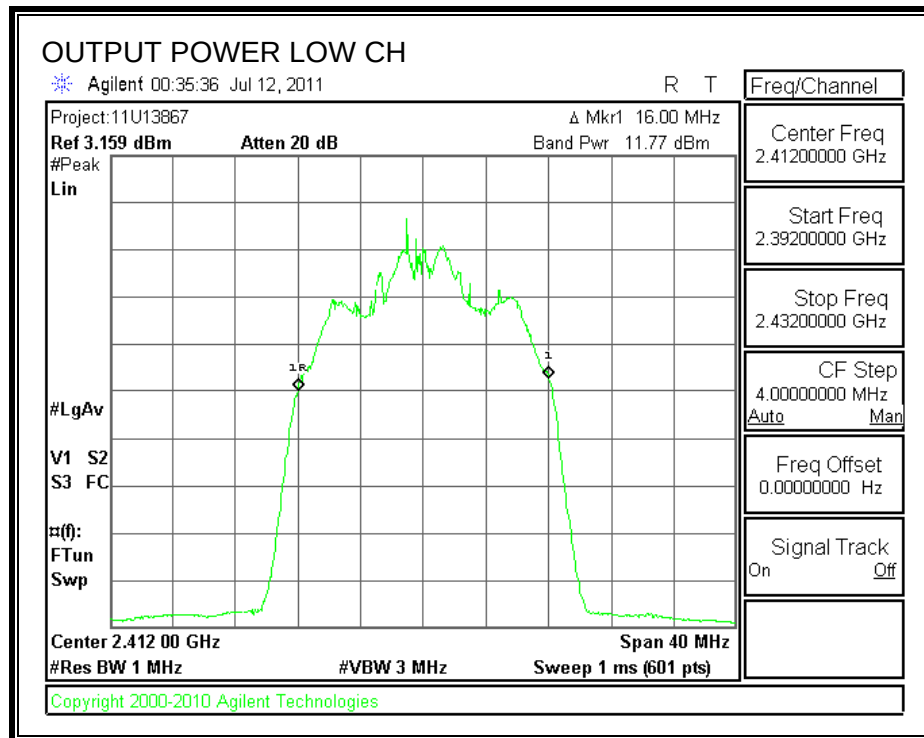
The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

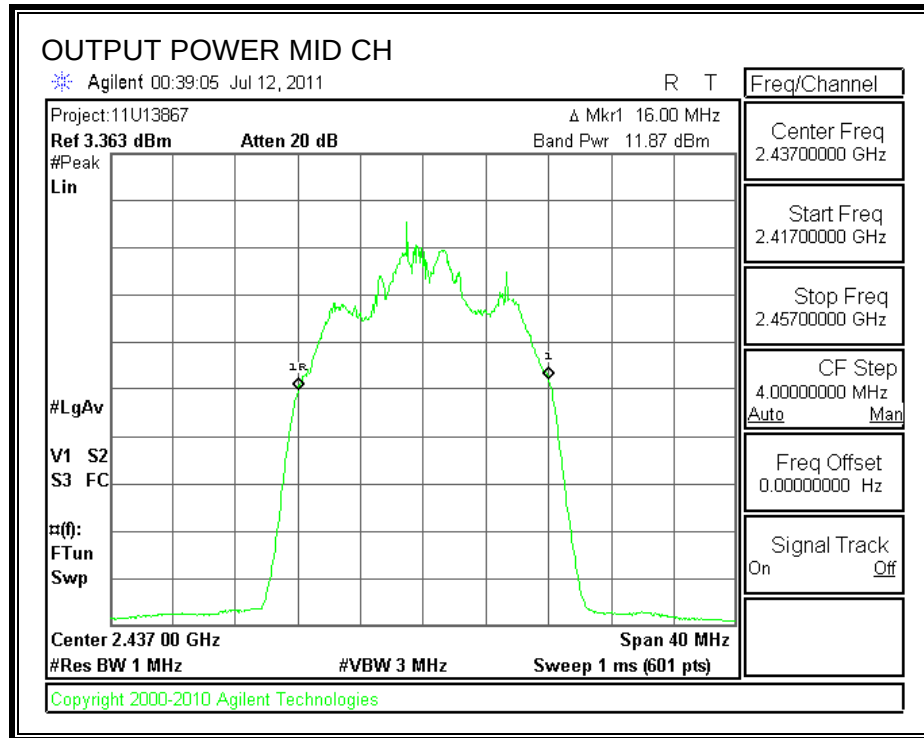
TEST PROCEDURE

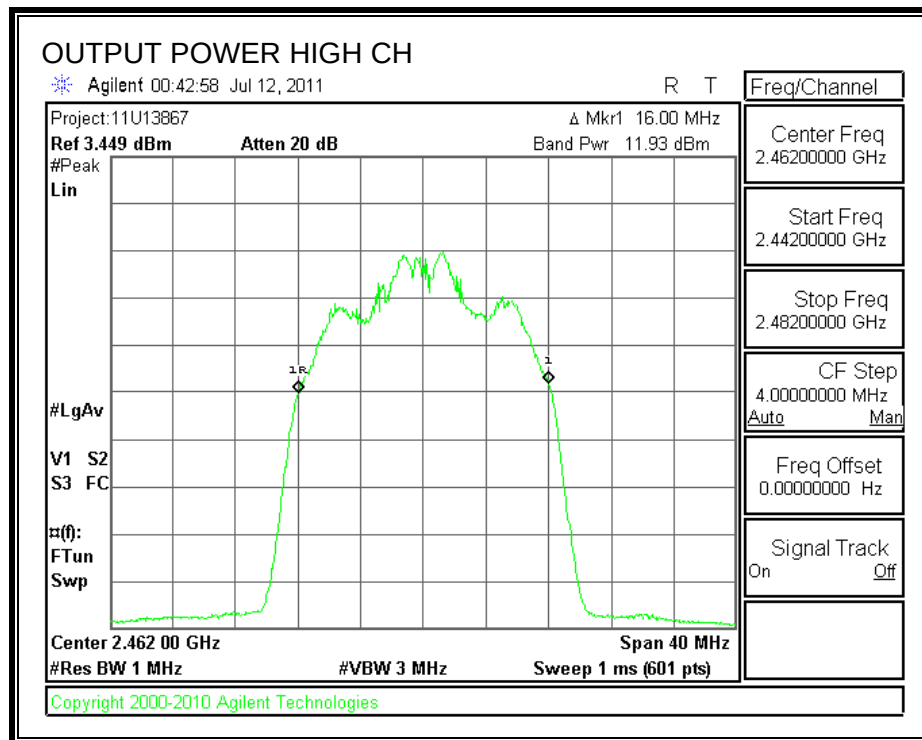
Peak power is measured using the Channel bandwidth Alternative peak output power procedure specified in "TCB Training for Devices covered under Scopes A1 - A4" by Joe Dichoso, May 2003.

RESULTS

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Attenuator and Cable Offset (dB)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2412	11.77	11	22.77	30	-7.23
Middle	2437	11.87	11	22.87	30	-7.13
High	2462	11.93	11	22.93	30	-7.07

OUTPUT POWER





7.3.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1.0 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	Power (dBm)
Low	2412	13.71
Middle	2437	13.82
High	2462	13.83

7.3.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

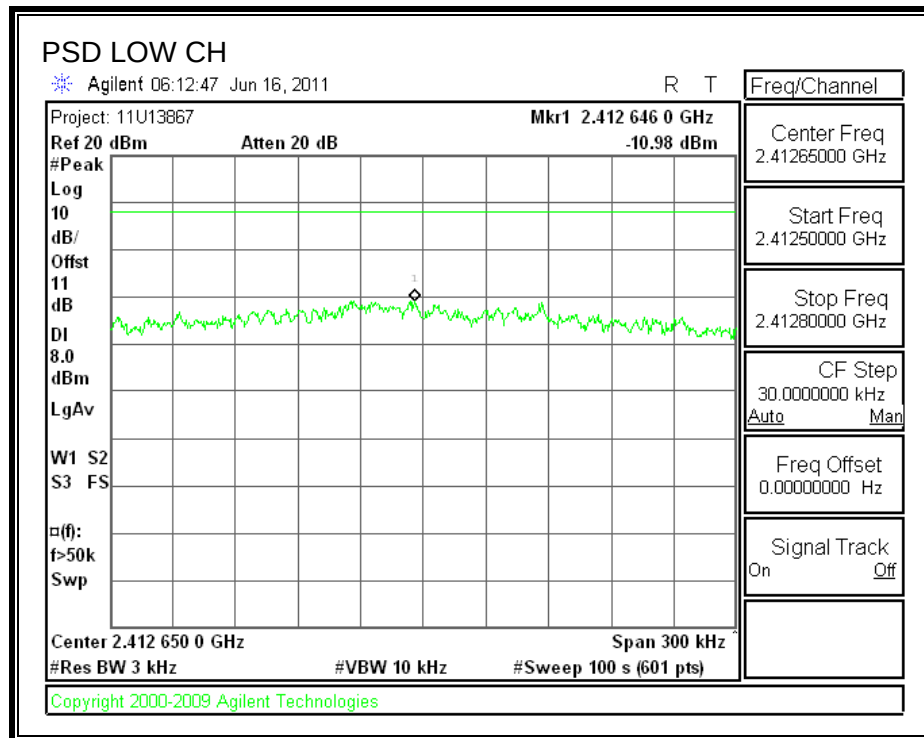
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

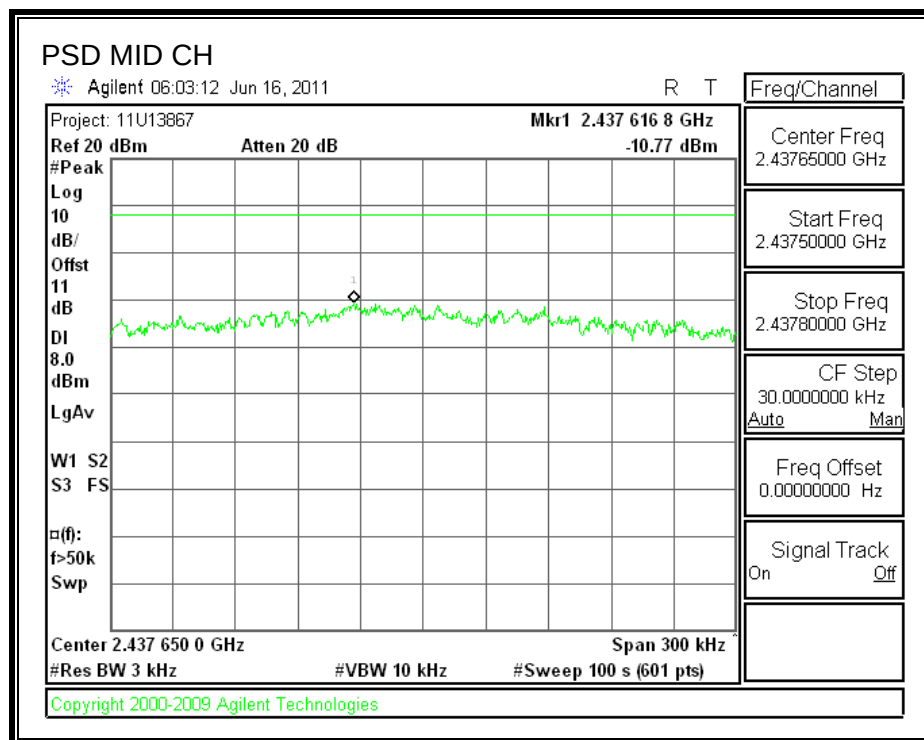
TEST PROCEDURE

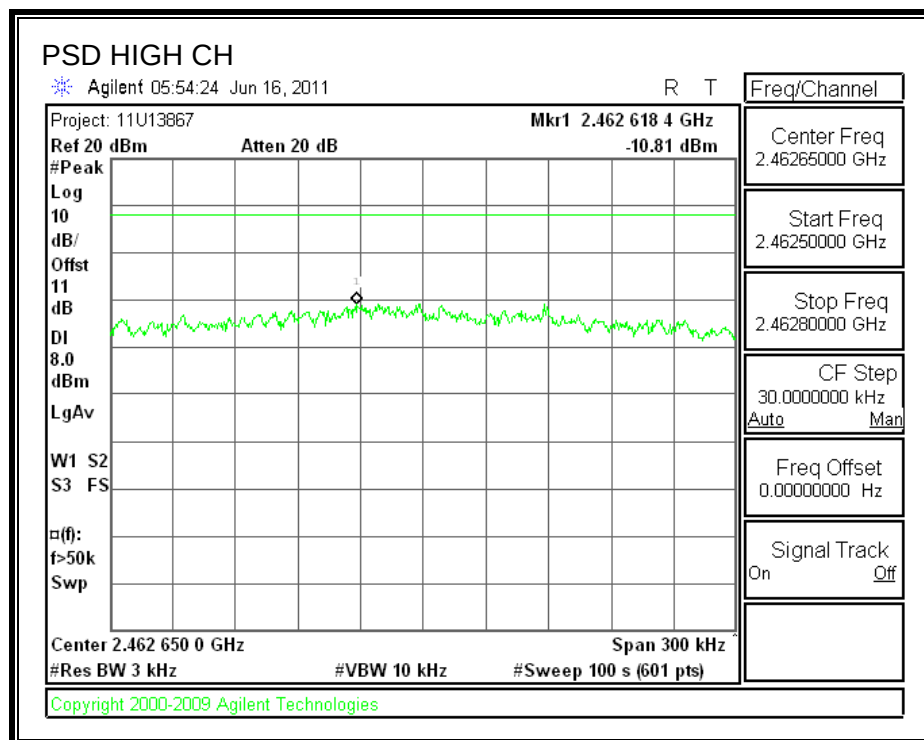
Output power was measured based on the use of a peak measurement, therefore the power spectral density was measured using PSD Option 1 in accordance with FCC document "Measurement of Digital Transmission Systems Operating under Section 15.247", March 23, 2005.

RESULTS

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-10.98	8	-18.98
Middle	2437	-10.77	8	-18.77
High	2462	-10.81	8	-18.81

POWER SPECTRAL DENSITY





7.3.5. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

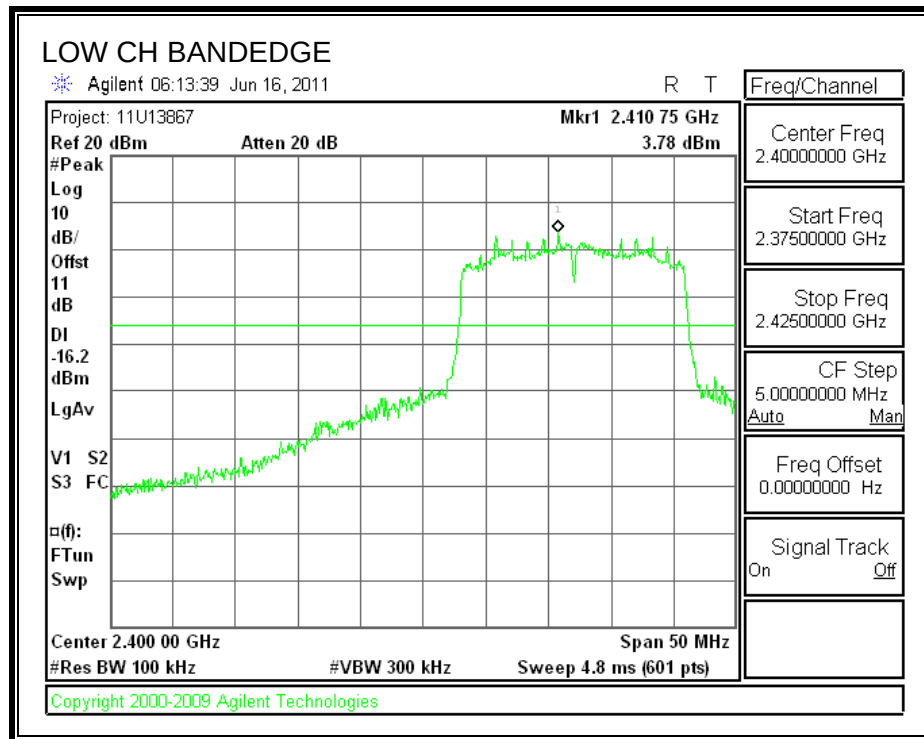
IC RSS-210 A8.5

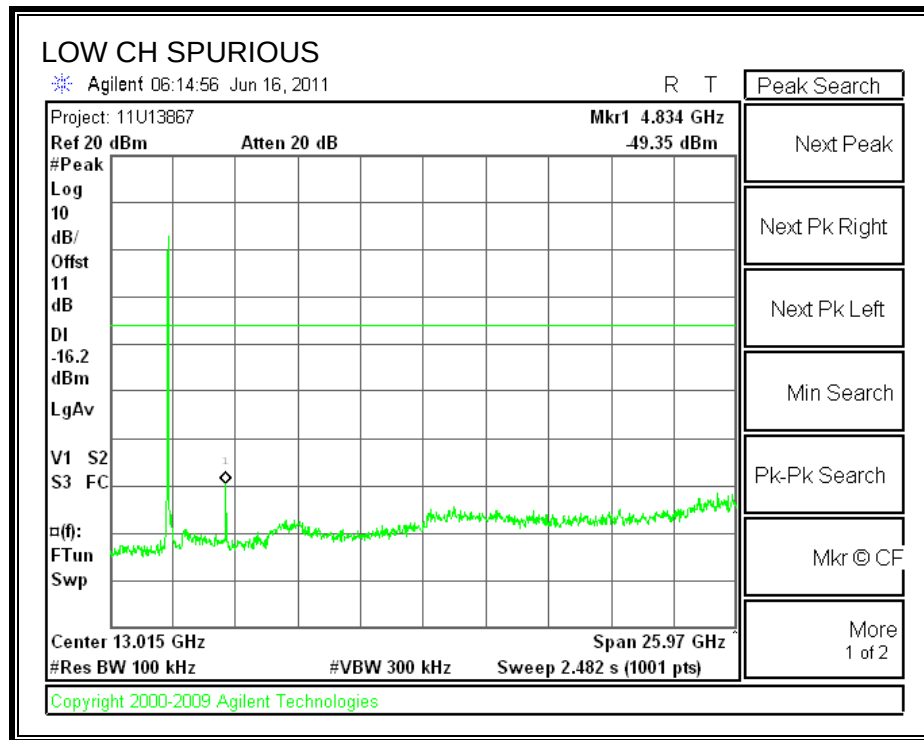
Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

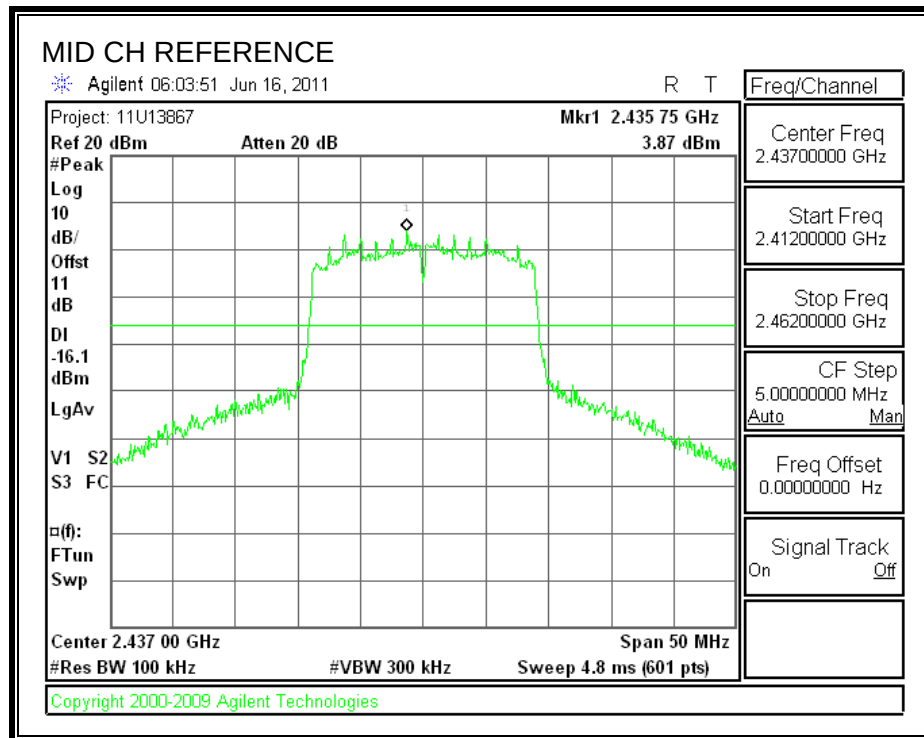
TEST PROCEDURE

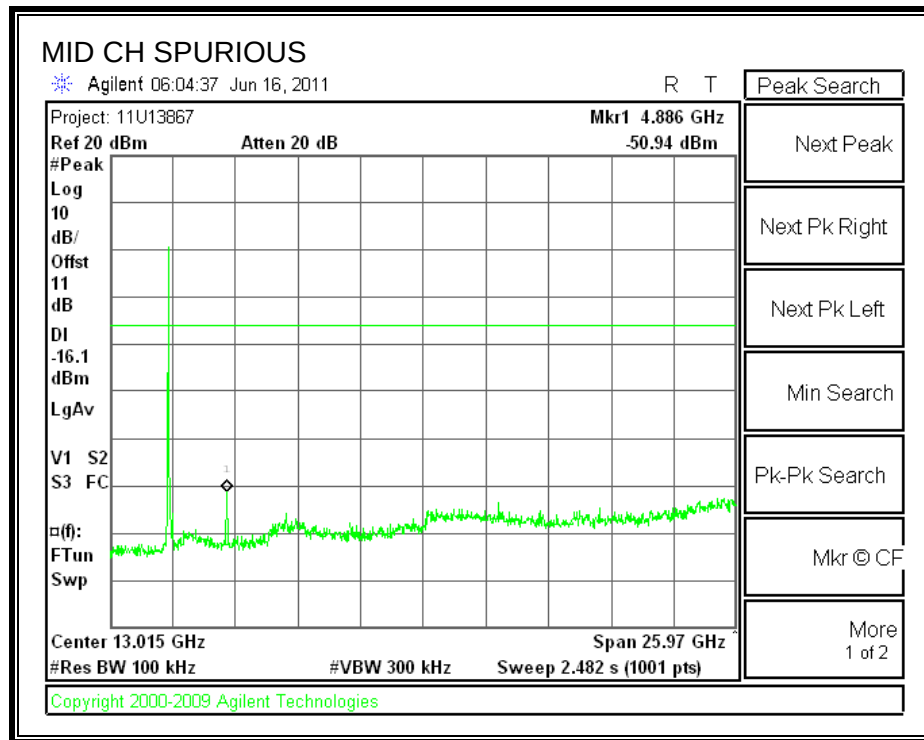
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

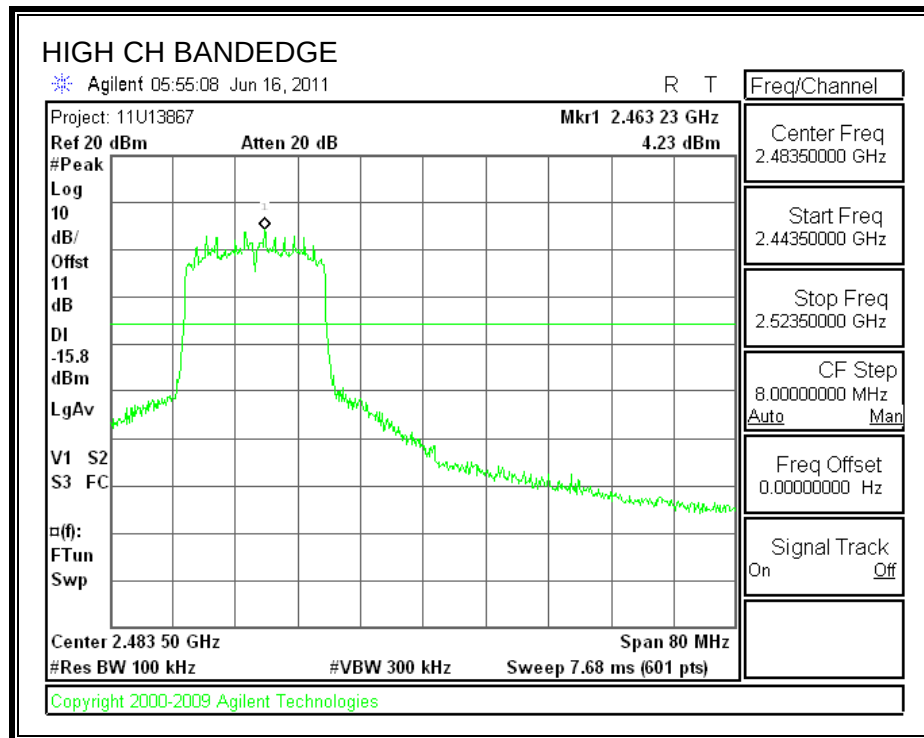
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

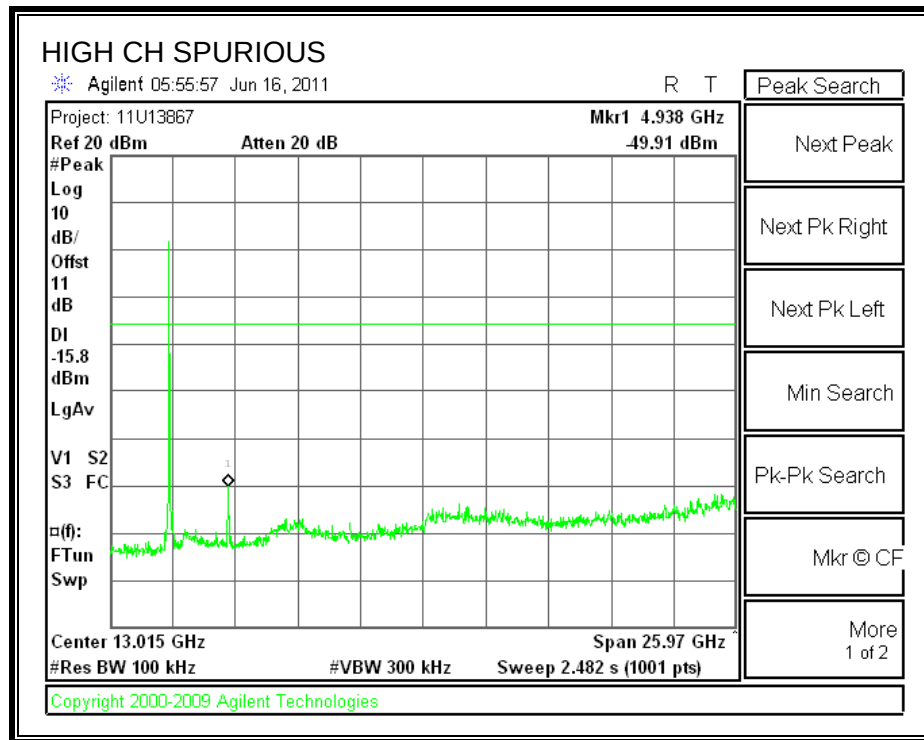
RESULTS**SPURIOUS EMISSIONS, LOW CHANNEL**



SPURIOUS EMISSIONS, MID CHANNEL



SPURIOUS EMISSIONS, HIGH CHANNEL



8. RADIATED TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-210 Clause 2.6 (Transmitter)

IC RSS-GEN Clause 6 (Receiver)

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

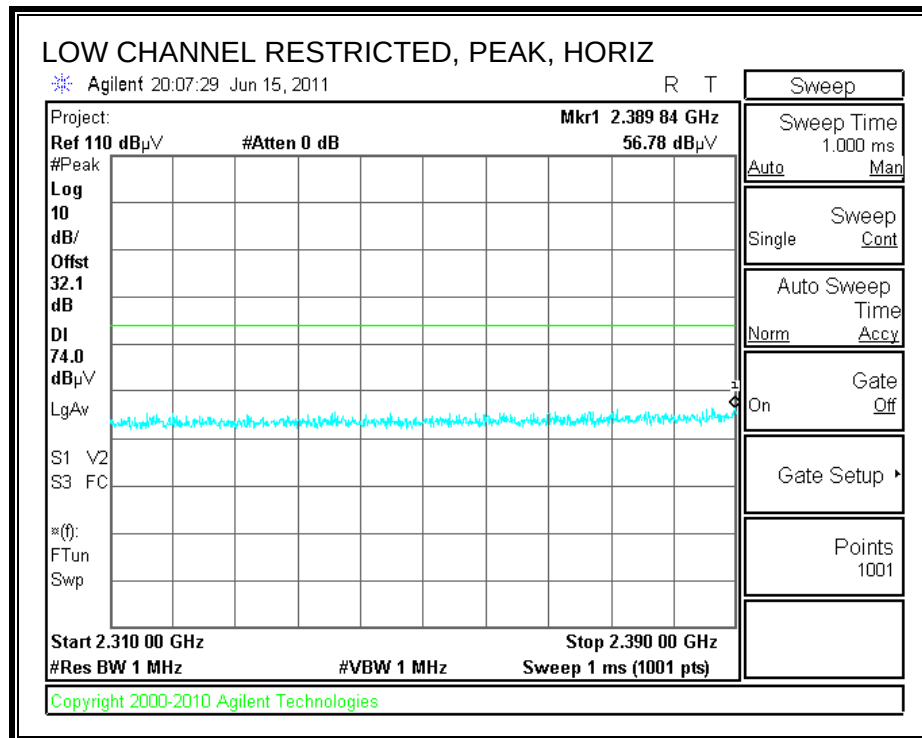
The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.4. The EUT is set to transmit in a continuous mode.

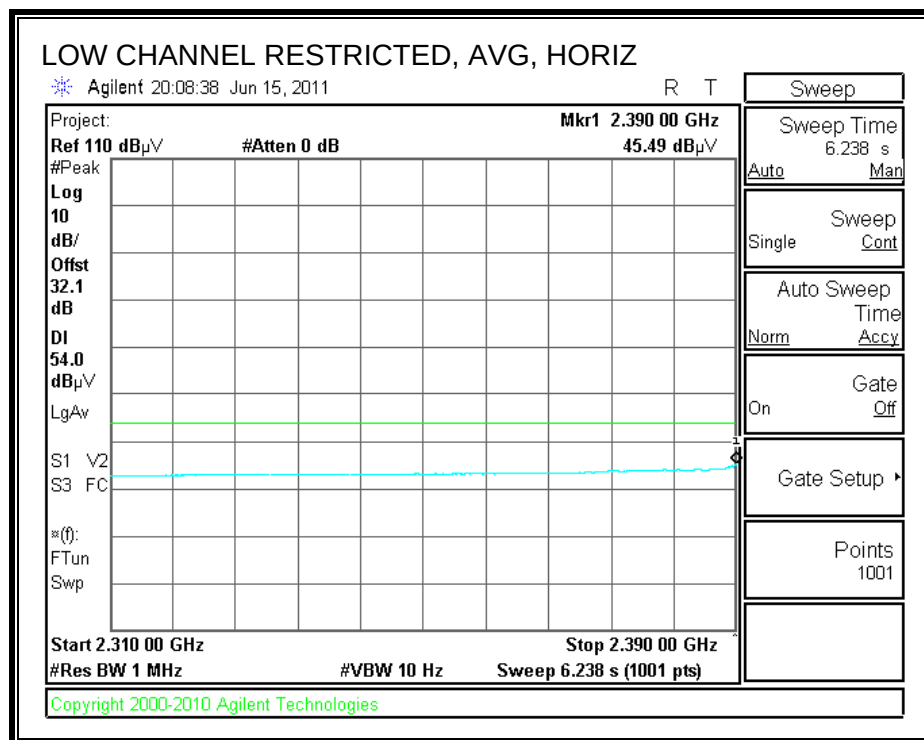
For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

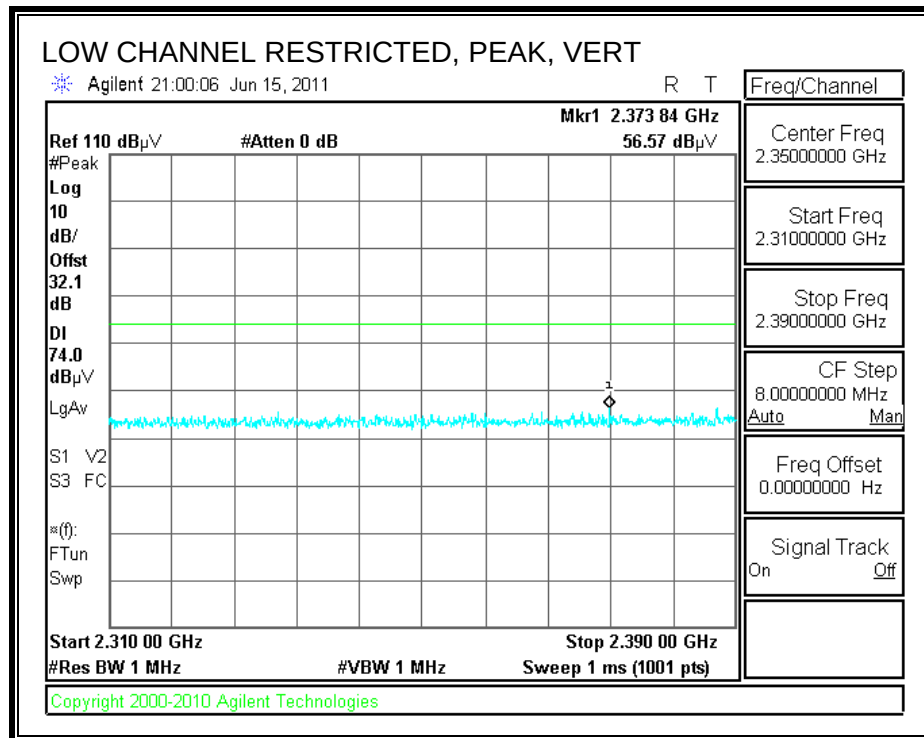
For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

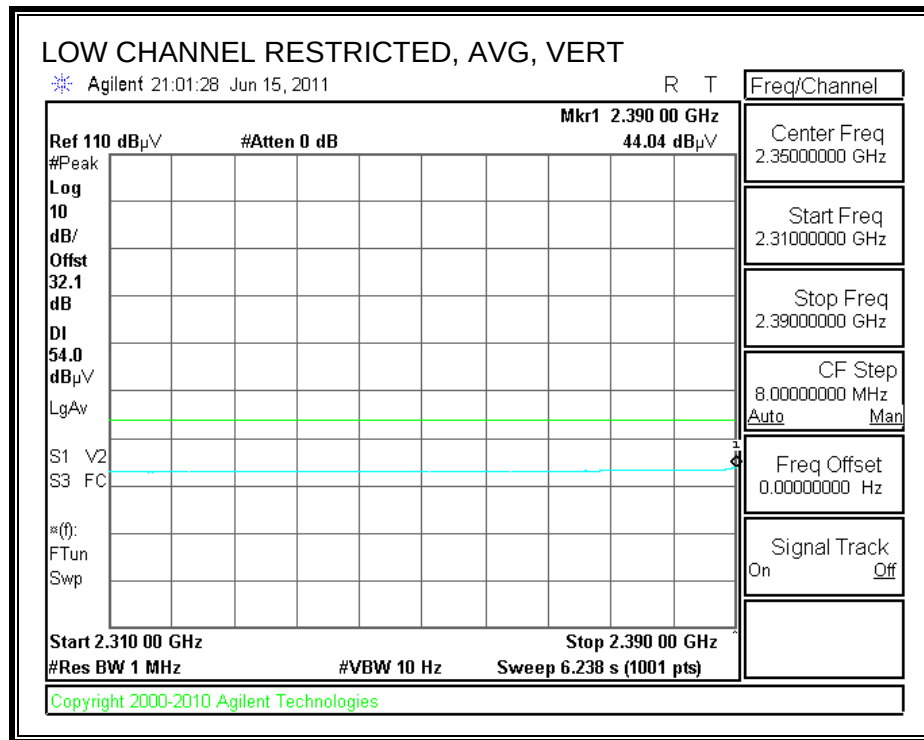
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

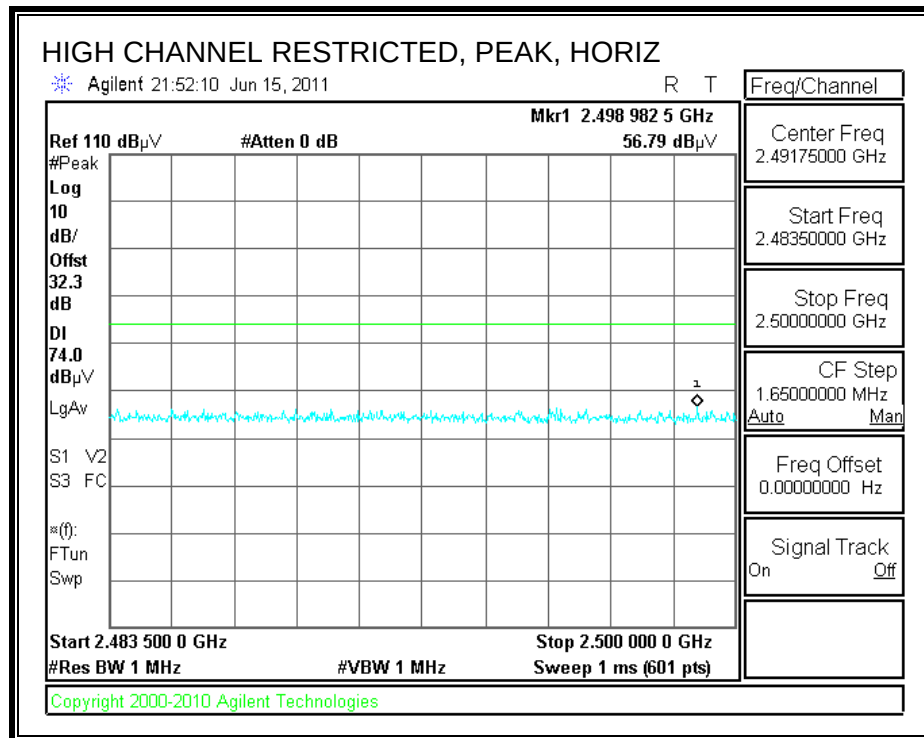
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

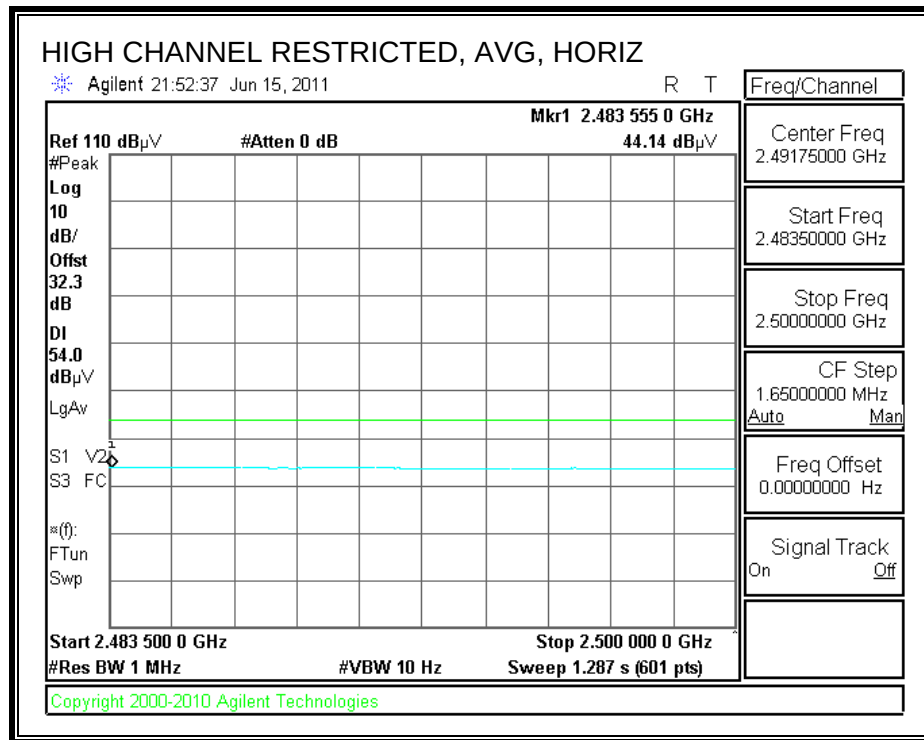
8.2. TRANSMITTER ABOVE 1 GHz**8.2.1. 802.11b MODE IN THE 2.4 GHz BAND****STANDARD COVER****RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)**

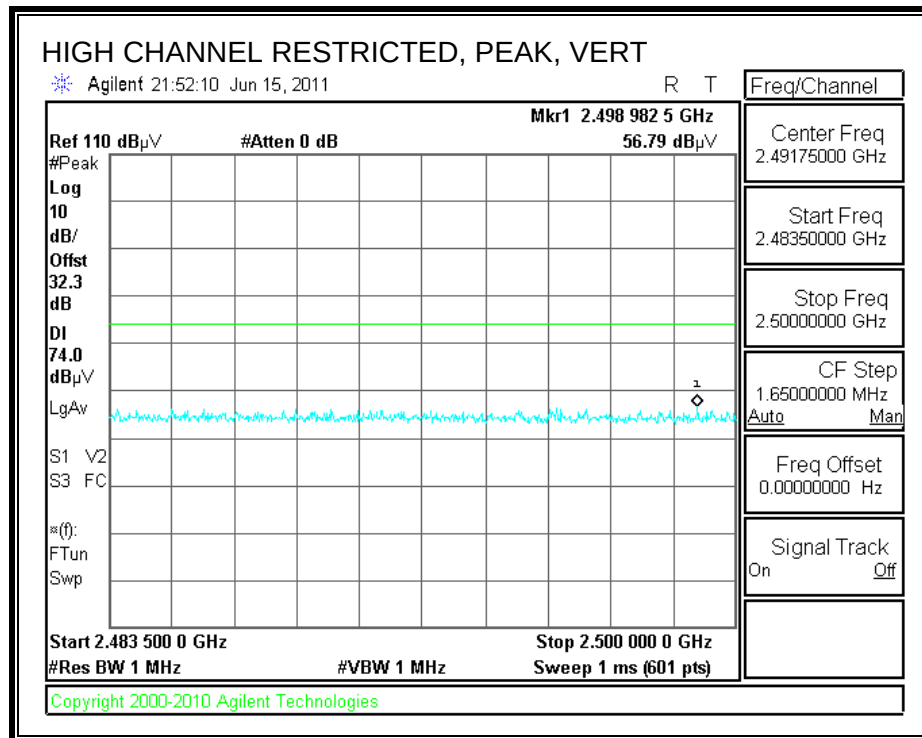


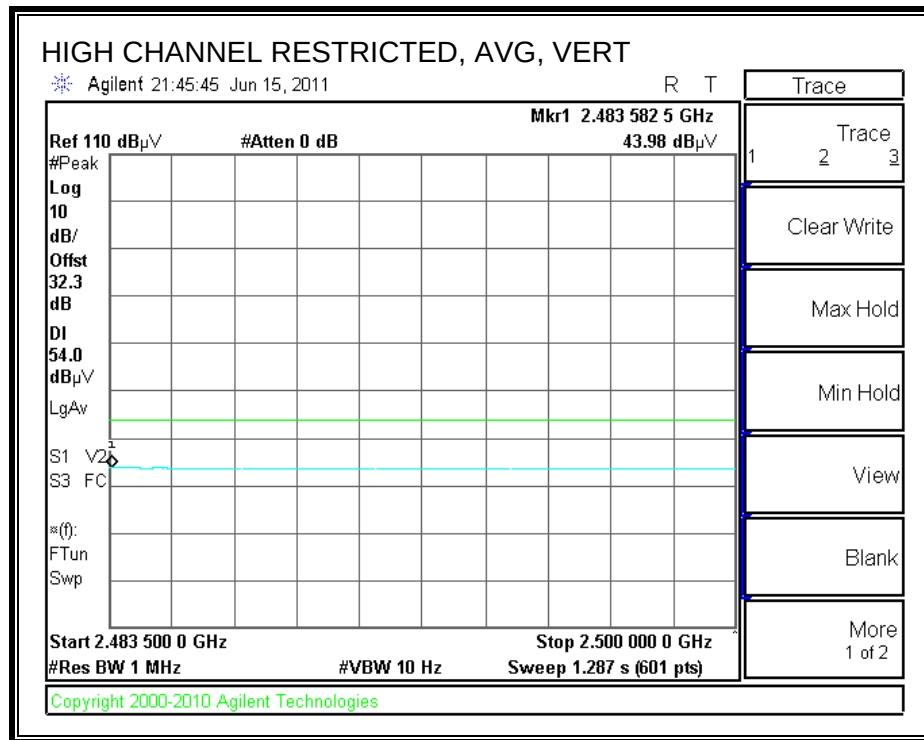
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

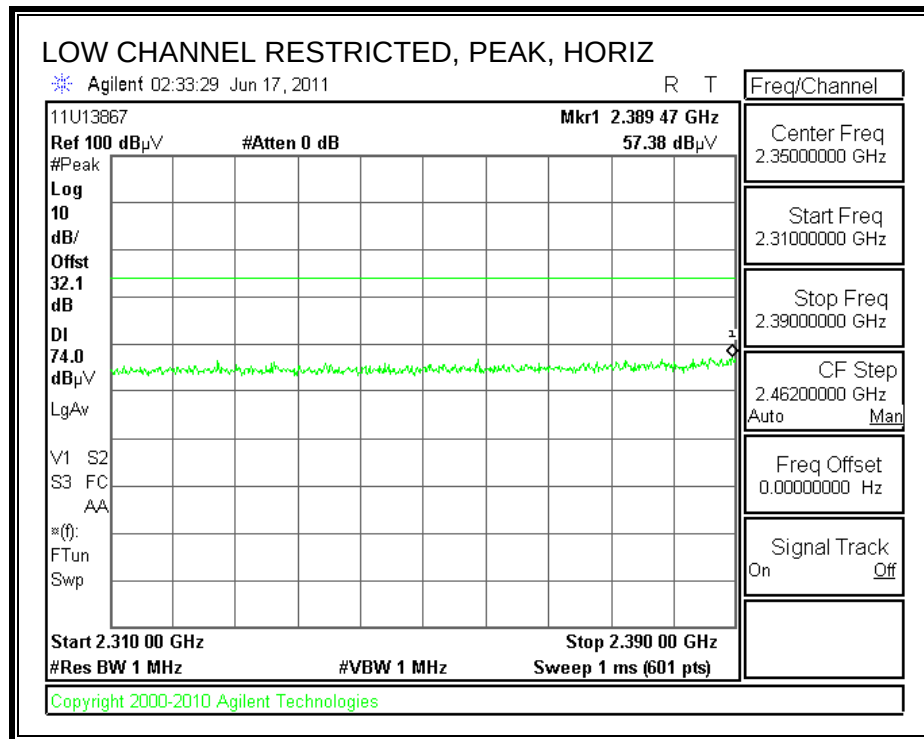


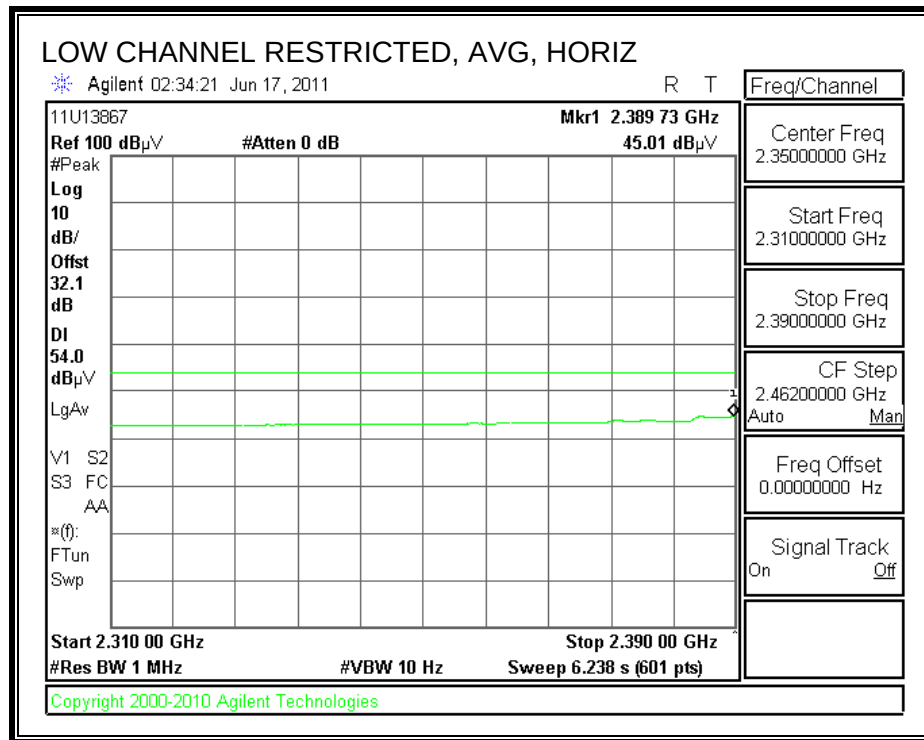
RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

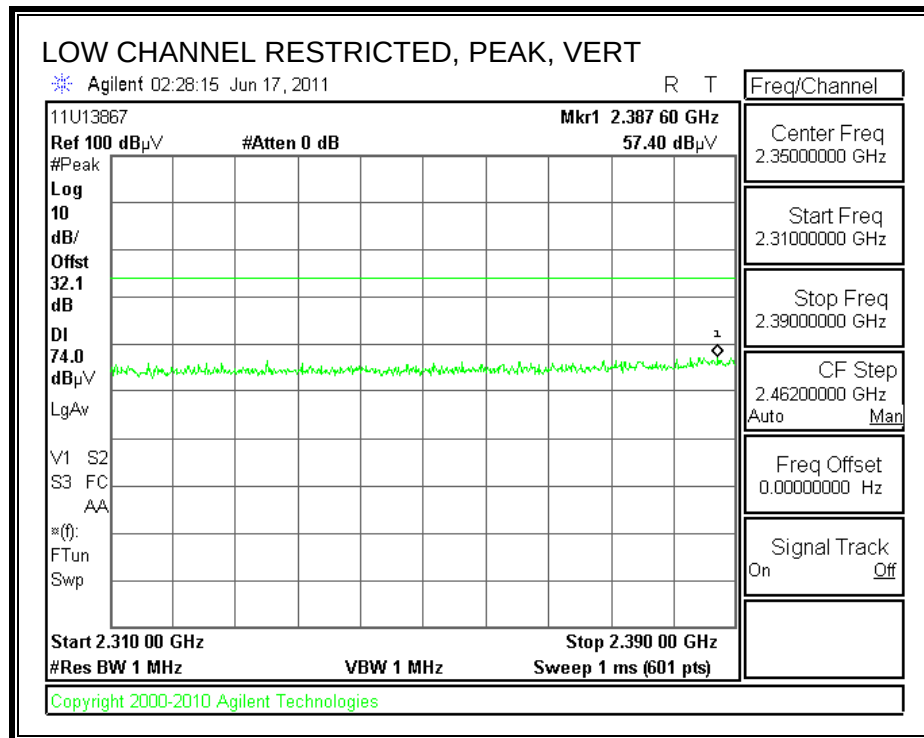


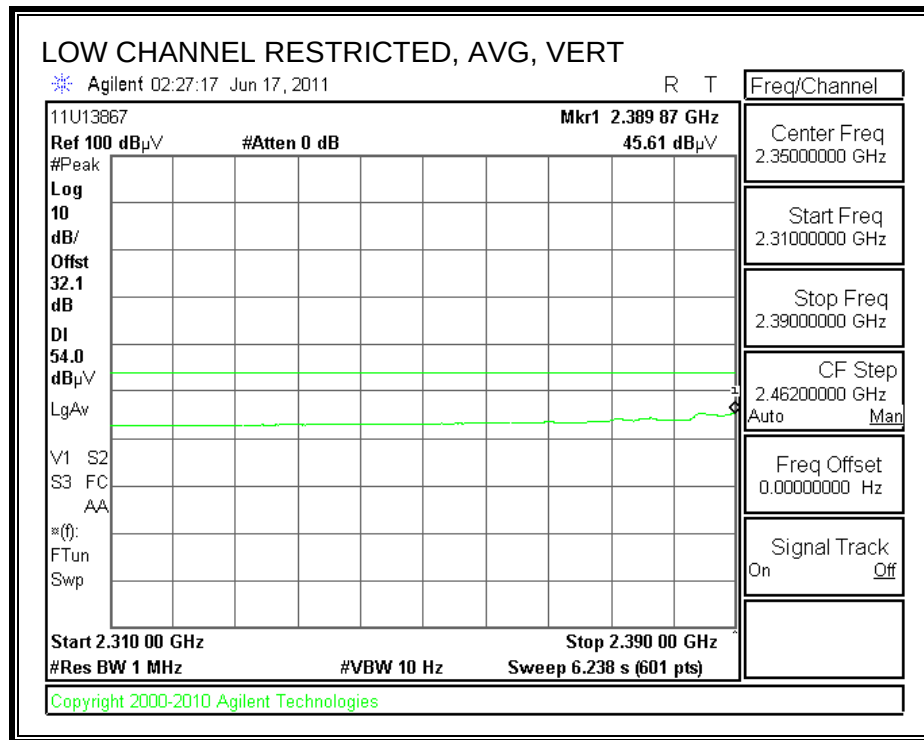
HARMONICS AND SPURIOUS EMISSIONS

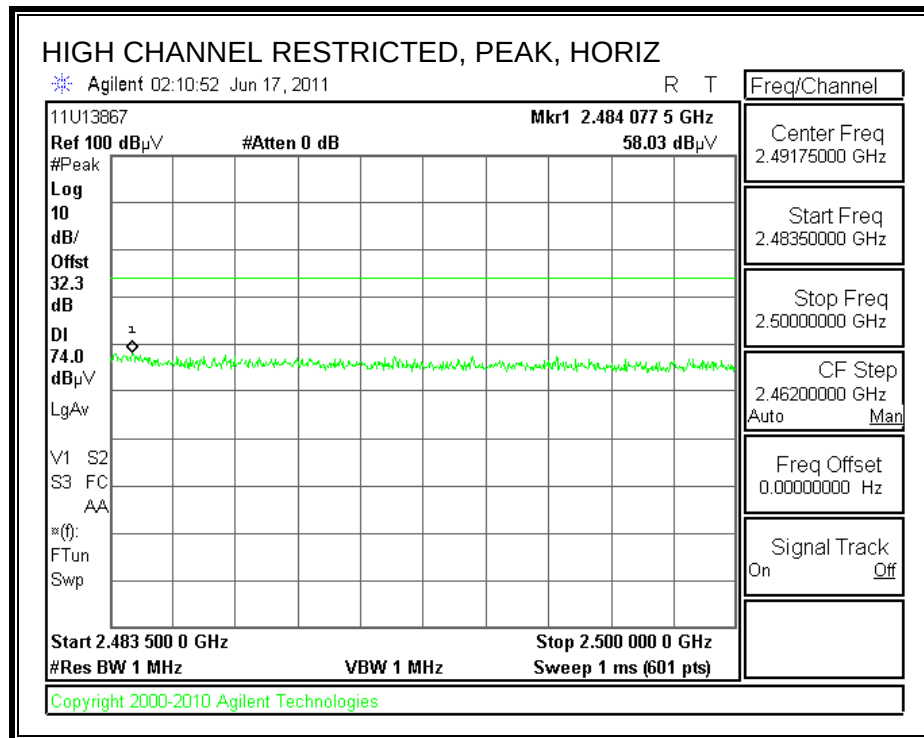
High Frequency Measurement															
Compliance Certification Services, Fremont 5m Chamber															
Company:		LG													
Project #:		11U13867													
Date:		6/16/2011													
Test Engineer:		Gerard Paul													
Configuration:		Plain Cover, AC Power, Headphones													
Mode:		TX b MODE													
Test Equipment:															
Horn 1-18GHz		Pre-amplifier 1-26GHz		Pre-amplifier 26-40GHz		Horn > 18GHz		Limit							
T59; S/N: 3245 @3m		T145 Agilent 3008A0056						FCC 15.205							
Hi Frequency Cables															
3' cable 22807700		12' cable 22807600		20' cable 22807500		HPF		Reject Filter		Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz ; VBW=10Hz					
3' cable 22807700		12' cable 22807600		20' cable 22807500				R_001							
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
LOW CHANNEL, 2412MHz															
4.824	3.0	46.3	42.3	32.8	5.8	-34.8	0.0	0.0	50.0	46.0	74	54	-24.0	-8.0	V
4.824	3.0	41.6	34.5	32.8	5.8	-34.8	0.0	0.0	45.3	38.2	74	54	-28.7	-15.8	H
MID CHANNEL, 2437MHz															
4.874	3.0	44.2	40.1	32.8	5.8	-34.9	0.0	0.0	48.0	43.8	74	54	-26.0	-10.2	V
7.311	3.0	48.5	39.7	35.2	7.3	-34.7	0.0	0.0	56.3	47.5	74	54	-17.7	-6.5	V
4.874	3.0	43.5	39.1	32.8	5.8	-34.9	0.0	0.0	47.3	42.9	74	54	-26.7	-11.1	H
7.311	3.0	41.3	32.3	35.2	7.3	-34.7	0.0	0.0	49.1	40.1	74	54	-24.9	-13.9	H
HIGH CHANNEL, 2462MHz															
4.924	3.0	44.6	42.0	32.8	5.9	-34.9	0.0	0.0	48.5	45.9	74	54	-25.5	-8.1	V
7.386	3.0	45.7	39.6	35.3	7.3	-34.6	0.0	0.0	53.7	47.6	74	54	-20.3	-6.4	V
4.924	3.0	43.3	38.5	32.8	5.9	-34.9	0.0	0.0	47.2	42.4	74	54	-26.8	-11.6	H
7.386	3.0	40.4	31.5	35.3	7.3	-34.6	0.0	0.0	48.4	39.5	74	54	-25.6	-14.5	H
Rev. 07.22.09															
f	Measurement Frequency			Amp	Preamp Gain			Avg Lim	Average Field Strength Limit						
Dist	Distance to Antenna			D Corr	Distance Correct to 3 meters			Pk Lim	Peak Field Strength Limit						
Read	Analyzer Reading			Avg	Average Field Strength @ 3 m			Avg Mar	Margin vs. Average Limit						
AF	Antenna Factor			Peak	Calculated Peak Field Strength			Pk Mar	Margin vs. Peak Limit						
CL	Cable Loss			HPF	High Pass Filter										

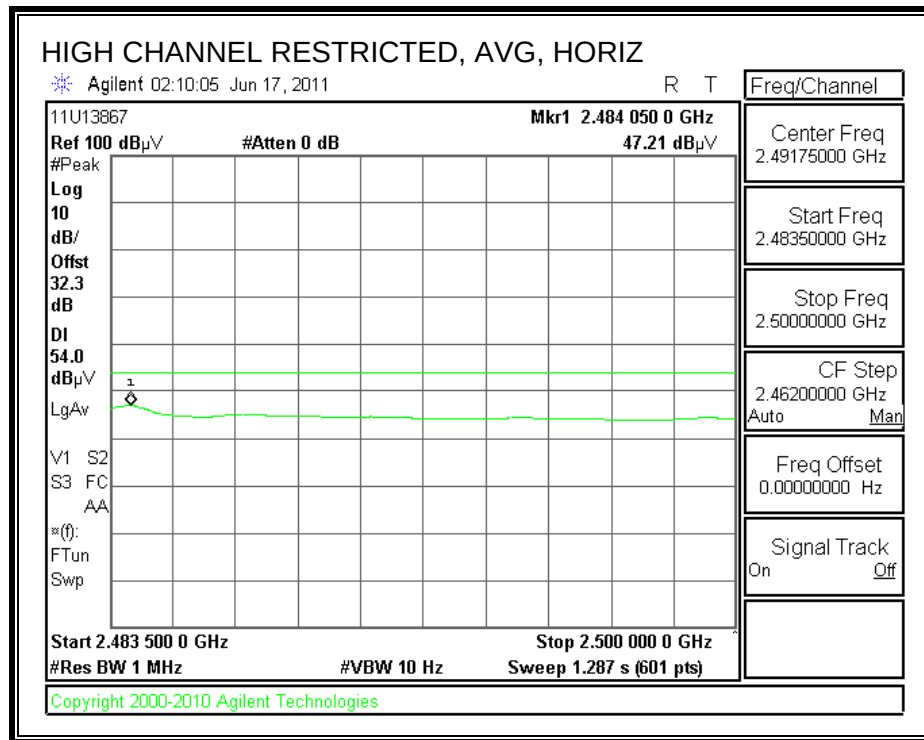
INDUCTIVE COVER**RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)**

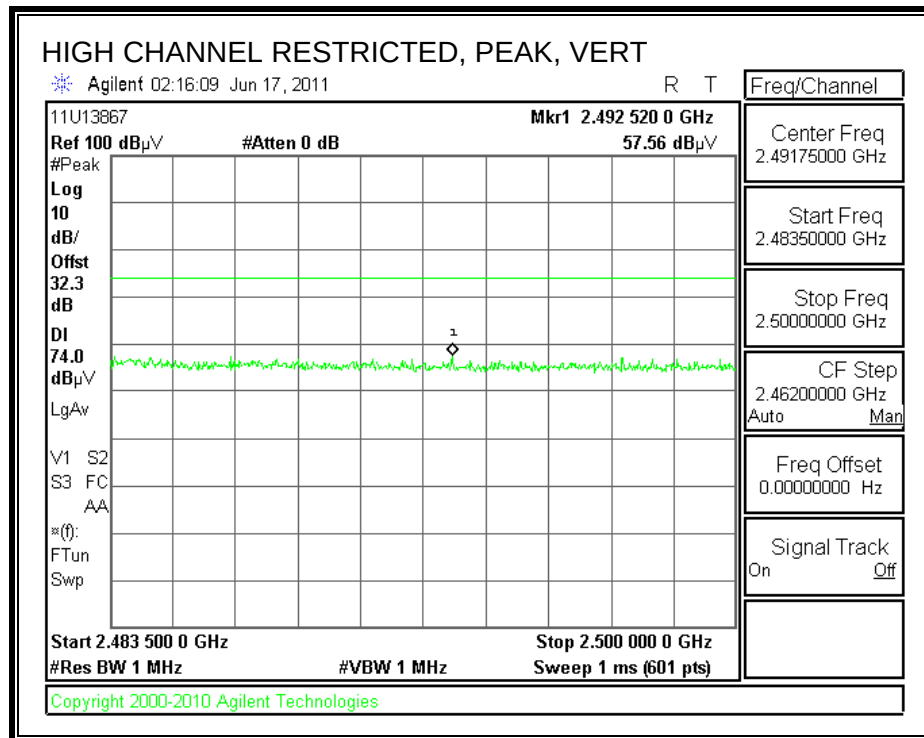


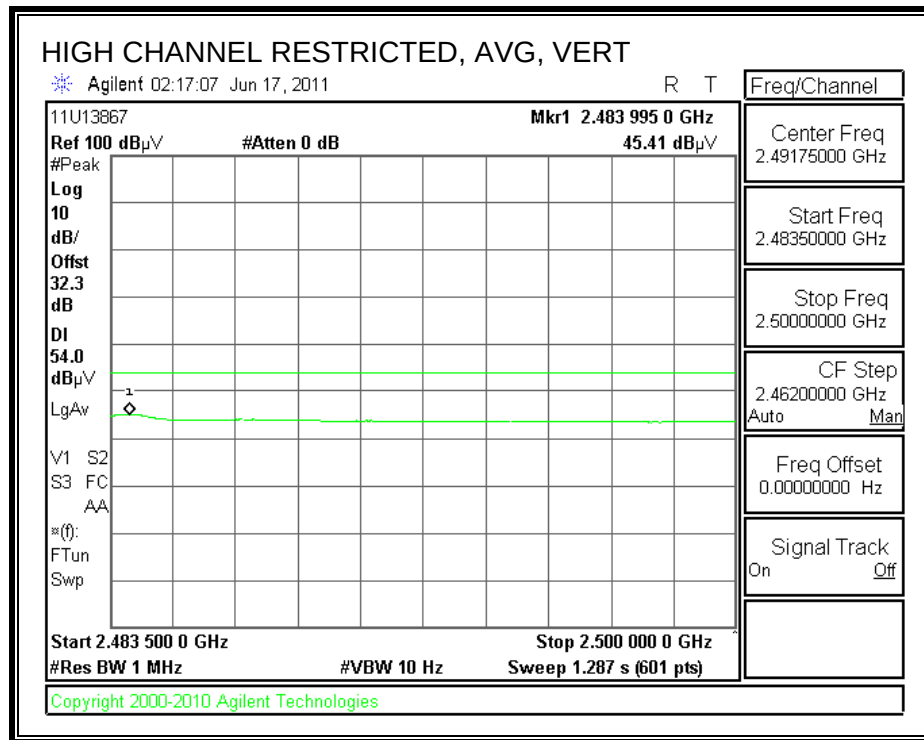
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

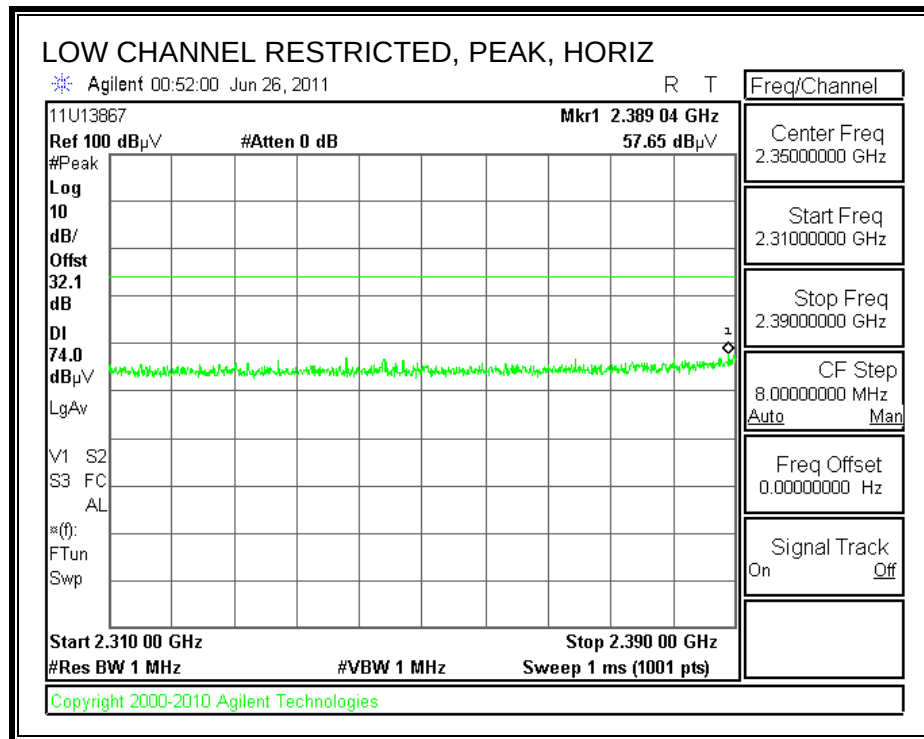


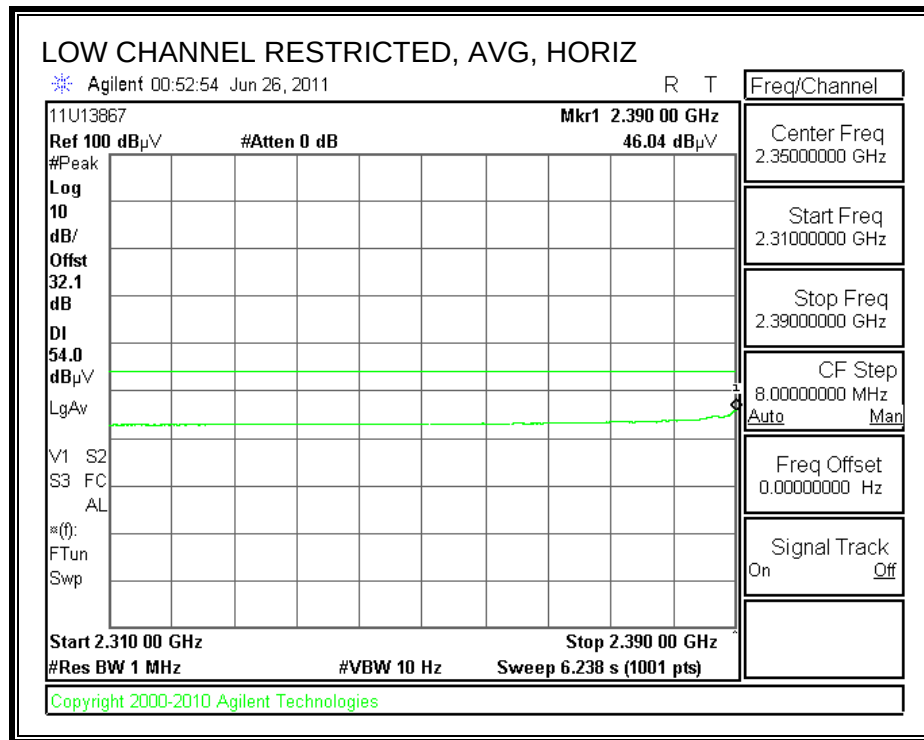
RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

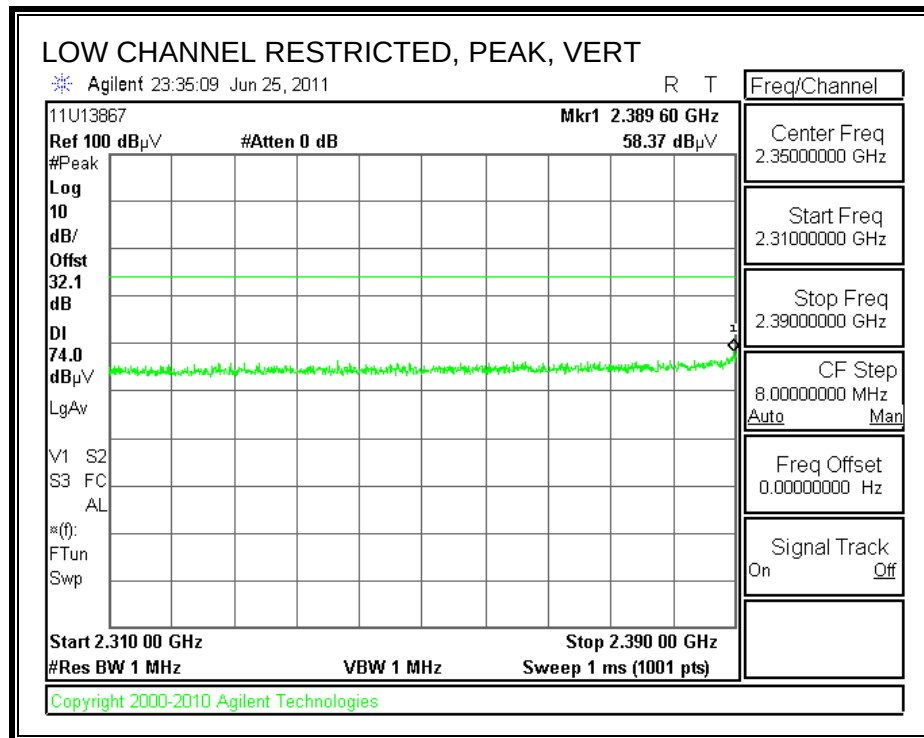


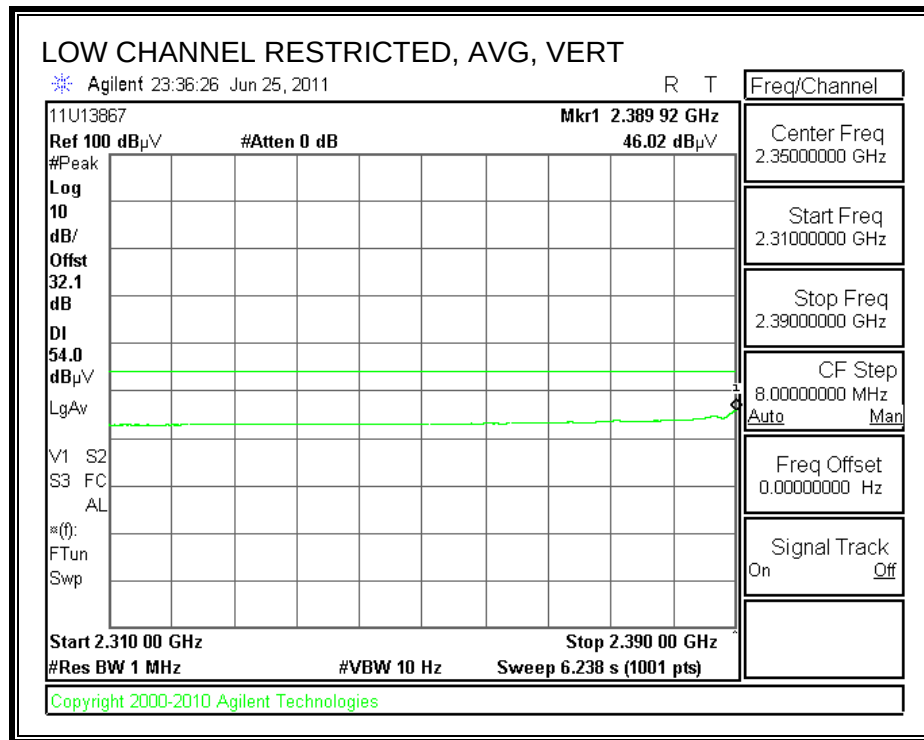
HARMONICS AND SPURIOUS EMISSIONS

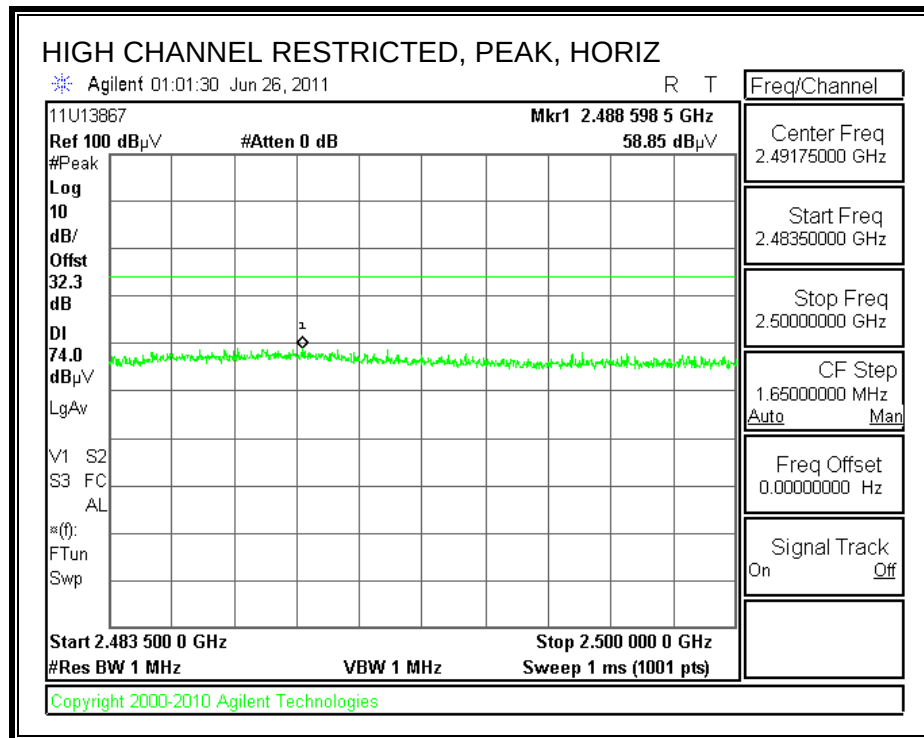
High Frequency Measurement																			
Compliance Certification Services, Fremont 5m Chamber																			
Company:		LG																	
Project #:		11U13867																	
Date:		6/16/2011																	
Test Engineer:		Gerard Paul																	
Configuration:		Inductive Cover, AC Power, Headphones																	
Mode:		TX b MODE																	
Test Equipment:																			
Horn 1-18GHz				Pre-amplifier 1-26GHz				Pre-amplifier 26-40GHz				Horn > 18GHz				Limit			
T59; S/N: 3245 @3m				T145 Agilent 3008A005c												FCC 15.205			
Hi Frequency Cables																			
3' cable 22807700				12' cable 22807600				20' cable 22807500				HPF				Reject Filter			
3' cable 22807700				12' cable 22807600				20' cable 22807500								R_001			
Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz, VBW=10Hz																			
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filt dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)				
LOW CHANNEL, 2412MHz																			
4.824	3.0	45.2	40.1	32.8	5.8	-34.8	0.0	0.0	48.9	43.9	74	54	-25.1	-10.1	V				
4.824	3.0	43.6	37.7	32.8	5.8	-34.8	0.0	0.0	47.3	41.4	74	54	-26.7	-12.6	H				
MID CHANNEL, 2437MHz																			
4.874	3.0	44.2	40.2	32.8	5.8	-34.9	0.0	0.0	48.0	44.0	74	54	-26.0	-10.0	V				
4.874	3.0	43.6	36.3	32.8	5.8	-34.9	0.0	0.0	47.4	40.1	74	54	-26.6	-13.9	H				
7.311	3.0	47.4	41.6	35.2	7.3	-34.7	0.0	0.0	55.2	49.4	74	54	-18.8	-4.6	V				
7.311	3.0	44.1	36.6	35.2	7.3	-34.7	0.0	0.0	51.9	44.4	74	54	-22.1	-9.6	H				
HIGH CHANNEL, 2462MHz																			
4.924	3.0	44.4	39.2	32.8	5.9	-34.9	0.0	0.0	48.3	43.1	74	54	-25.7	-10.9	V				
4.924	3.0	42.9	37.4	32.8	5.9	-34.9	0.0	0.0	46.7	41.2	74	54	-27.3	-12.8	H				
7.386	3.0	47.8	41.9	35.3	7.3	-34.6	0.0	0.0	55.8	49.9	74	54	-18.2	-4.1	H				
7.386	3.0	43.6	34.9	35.3	7.3	-34.6	0.0	0.0	51.6	42.8	74	54	-22.4	-11.2	H				
Rev. 07.22.09																			
f	Measurement Frequency		Amp	Preamp Gain		Avg Lim	Average Field Strength Limit												
Dist	Distance to Antenna		D Corr	Distance Correct to 3 meters		Pk Lim	Peak Field Strength Limit												
Read	Analyzer Reading		Avg	Average Field Strength @ 3 m		Avg Mar	Margin vs. Average Limit												
AF	Antenna Factor		Peak	Calculated Peak Field Strength		Pk Mar	Margin vs. Peak Limit												
CL	Cable Loss		HPF	High Pass Filter															

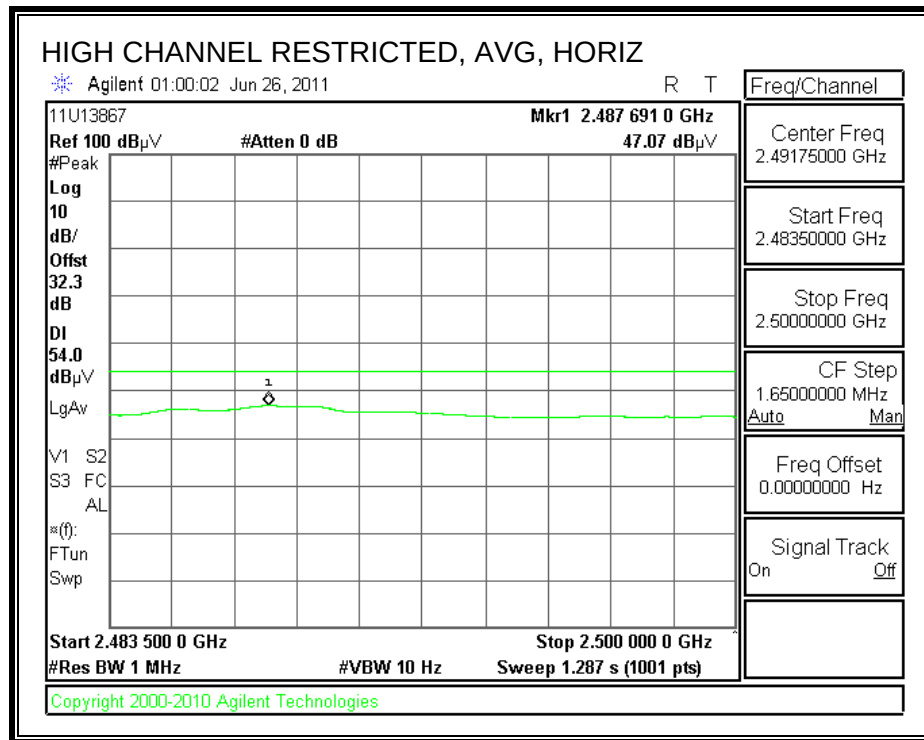
INDUCTIVE CHARGER WITH INDUCTIVE COVER**RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)**

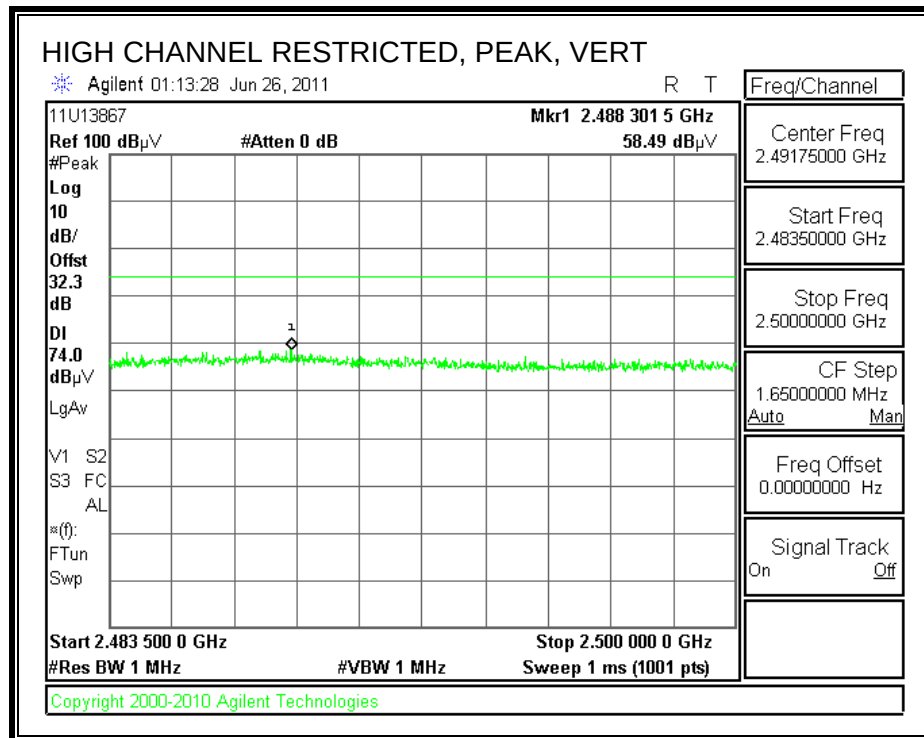


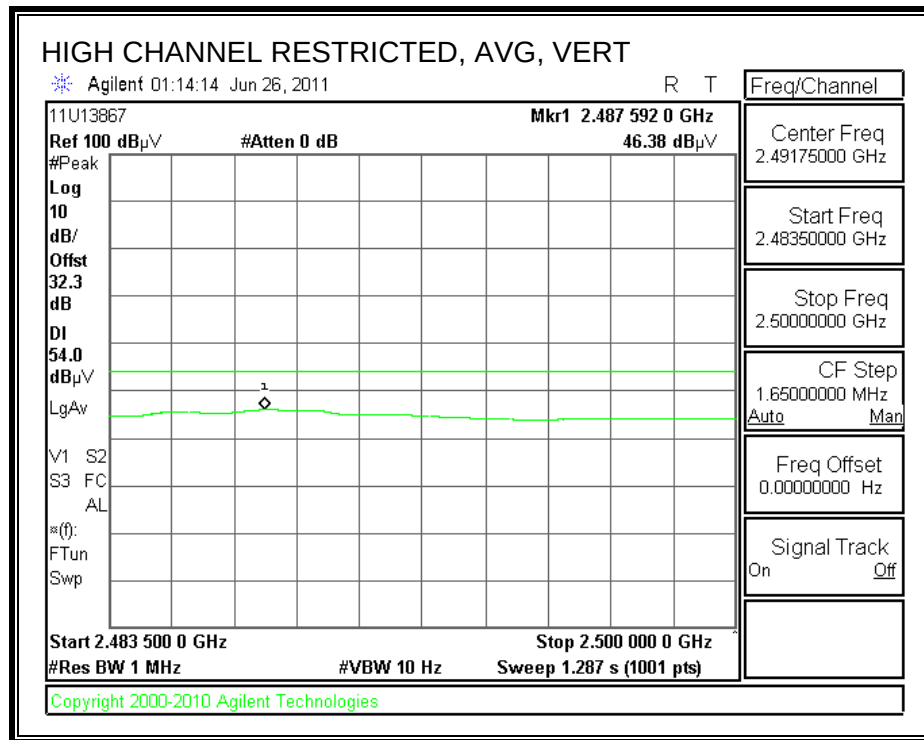
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



HARMONICS AND SPURIOUS EMISSIONS

High Frequency Measurement Compliance Certification Services, Fremont 5m Chamber																	
Company:		LG Electronics Inc.															
Project #:		11U13867															
Date:		06/25/11															
Test Engineer:		Mengistu Mekuria															
Configuration:		Inductive Cover With Charger, AC Power, Headphones															
Mode:		TX b MODE															
Test Equipment:																	
Horn 1-18GHz				Pre-amplifier 1-26GHz				Pre-amplifier 26-40GHz				Horn > 18GHz				Limit	
T73; S/N: 6717 @3m				T144 Miteq 3008A00931												FCC 15.205	
Hi Frequency Cables																	
3' cable 22807700				12' cable 22807600				20' cable 22807500				Reject Filter				Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz ; VBW=10Hz	
3' cable 22807700				12' cable 22807600				20' cable 22807500								R_001	
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)		
LOW CHANNEL, 2412MHz																	
4.824	3.0	41.8	41.6	33.0	5.8	-36.5	0.0	0.0	44.1	44.0	74	54	-29.9	-10.0	V		
4.824	3.0	38.9	39.2	33.0	5.8	-36.5	0.0	0.0	41.2	41.6	74	54	-32.8	-12.4	H		
MID CHANNEL, 2437MHz																	
4.874	3.0	42.1	41.7	33.1	5.8	-36.5	0.0	0.0	44.6	44.2	74	54	-29.4	-9.8	V		
7.311	3.0	48.3	43.4	35.3	7.3	-36.2	0.0	0.0	54.6	49.7	74	54	-19.4	-4.3	V		
4.874	3.0	39.3	37.8	33.1	5.8	-36.5	0.0	0.0	41.8	40.3	74	54	-32.2	-13.7	H		
7.311	3.0	42.3	38.1	35.3	7.3	-36.2	0.0	0.0	48.6	44.4	74	54	-25.4	-9.6	H		
HIGH CHANNEL, 2462MHz																	
4.924	3.0	43.0	40.1	33.1	5.9	-36.5	0.0	0.0	45.5	42.7	74	54	-28.5	-11.3	V		
7.386	3.0	48.8	42.7	35.4	7.3	-36.2	0.0	0.0	55.3	49.2	74	54	-18.7	-4.8	V		
4.924	3.0	39.8	38.9	33.1	5.9	-36.5	0.0	0.0	42.3	41.5	74	54	-31.7	-12.5	H		
7.386	3.0	42.6	36.1	35.4	7.3	-36.2	0.0	0.0	49.1	42.6	74	54	-24.9	-11.4	H		
Rev. 07.22.09																	
f	Measurement Frequency			Amp	Preamp Gain			Avg Lim	Average Field Strength Limit								
Dist	Distance to Antenna			D Corr	Distance Correct to 3 meters			Pk Lim	Peak Field Strength Limit								
Read	Analyzer Reading			Avg	Average Field Strength @ 3 m			Avg Mar	Margin vs. Average Limit								
AF	Antenna Factor			Peak	Calculated Peak Field Strength			Pk Mar	Margin vs. Peak Limit								
CL	Cable Loss			HPF	High Pass Filter												

CHARGER STA-U13WV**HARMONICS AND SPURIOUS EMISSIONS****Worst-Case Spot Check; 11b High Channel (2462MHz) with Inductive Cover****High Frequency Measurement
Compliance Certification Services, Fremont 5m Chamber**

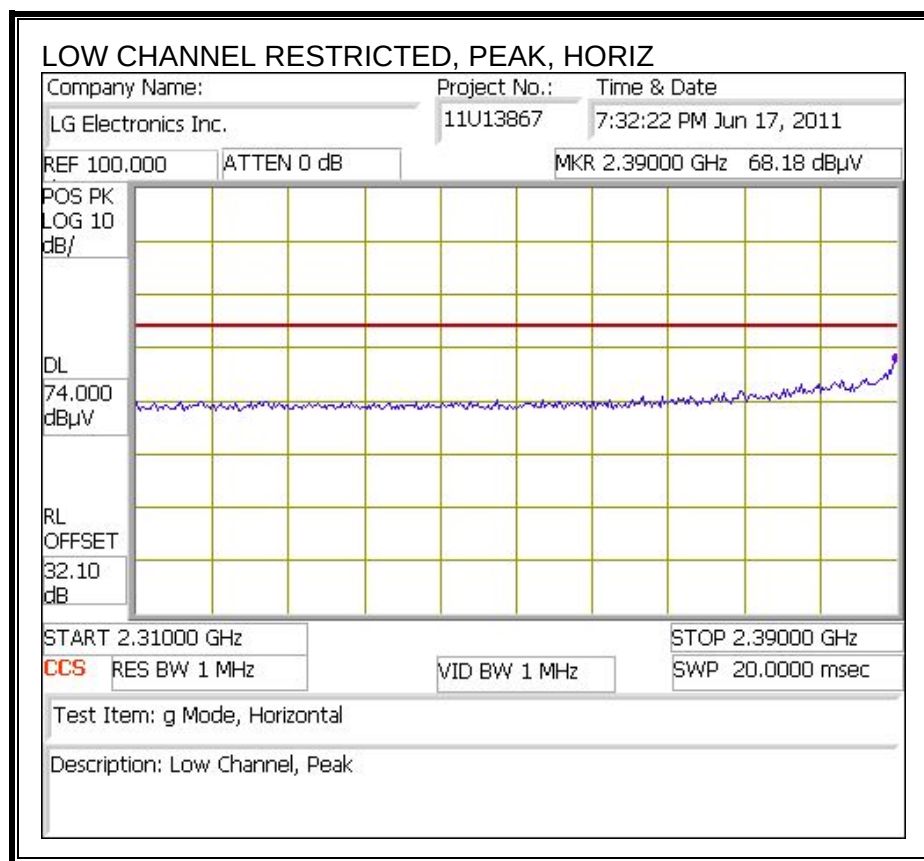
Test Engr: Vien Tran
 Date: 07/11/11
 Project #: 11U13867
 Company: LG
 Test Target: FCC Class B
 Mode Oper: Tx 11b High Channel_With Charger Model # STA-U13WV & Inductive Cover

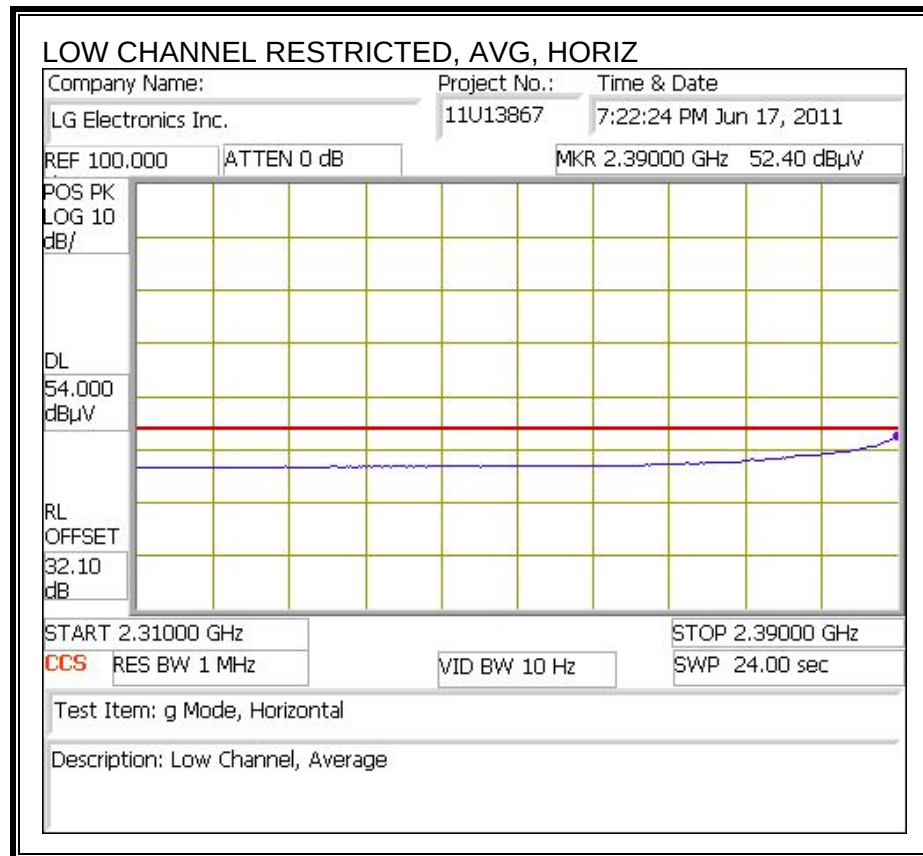
f	Measurement Frequency	Amp	Preamp Gain	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter	

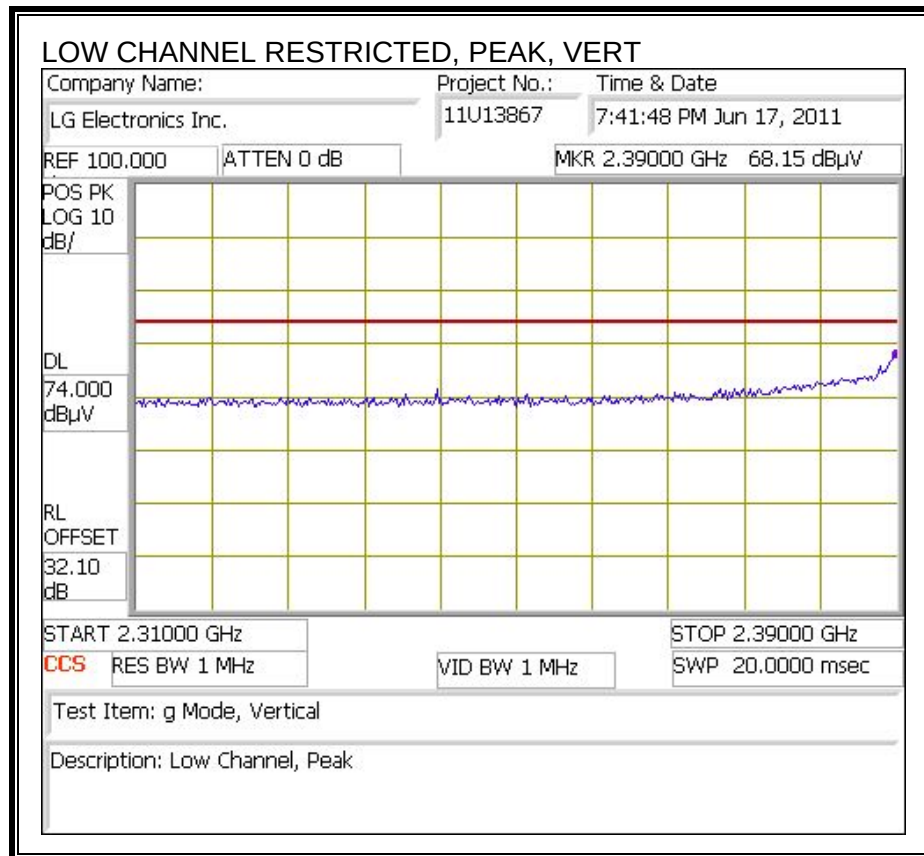
f GHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Ant.High cm	Table Angle Degree	Notes
4.924	3.0	44.8	32.8	5.9	-34.9	0.0	0.0	48.7	74.0	-25.3	V	P	100.0	288.4	
4.924	3.0	40.2	32.8	5.9	-34.9	0.0	0.0	44.0	54.0	-10.0	V	A	100.0	288.4	
7.386	3.0	47.1	35.3	7.3	-34.6	0.0	0.0	55.1	74.0	-18.9	V	P	117.5	251.6	
7.386	3.0	42.0	35.3	7.3	-34.6	0.0	0.0	50.0	54.0	-4.0	V	A	117.5	251.6	
4.924	3.0	42.8	32.8	5.9	-34.9	0.0	0.0	46.7	74.0	-27.3	H	P	100.2	158.4	
4.924	3.0	37.9	32.8	5.9	-34.9	0.0	0.0	41.7	54.0	-12.3	H	A	100.2	158.4	
7.386	3.0	41.0	35.3	7.3	-34.6	0.0	0.0	49.0	74.0	-25.0	H	P	100.8	195.0	
7.386	3.0	33.5	35.3	7.3	-34.6	0.0	0.0	41.5	54.0	-12.5	H	A	100.8	195.0	

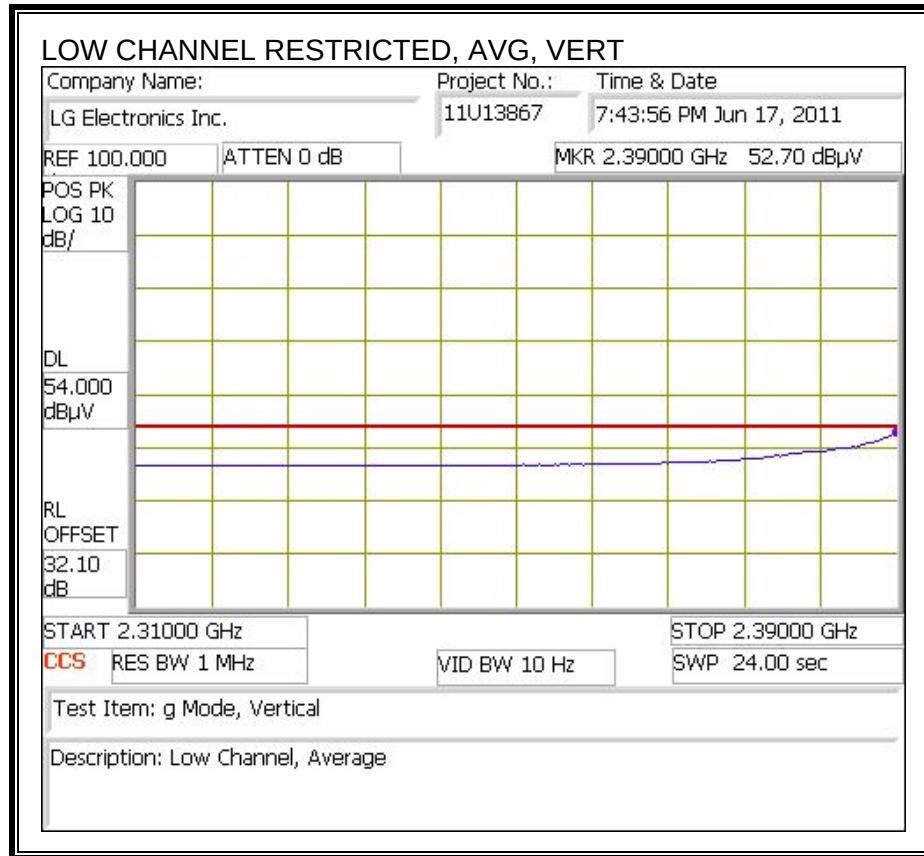
Rev. 4.1.2.7

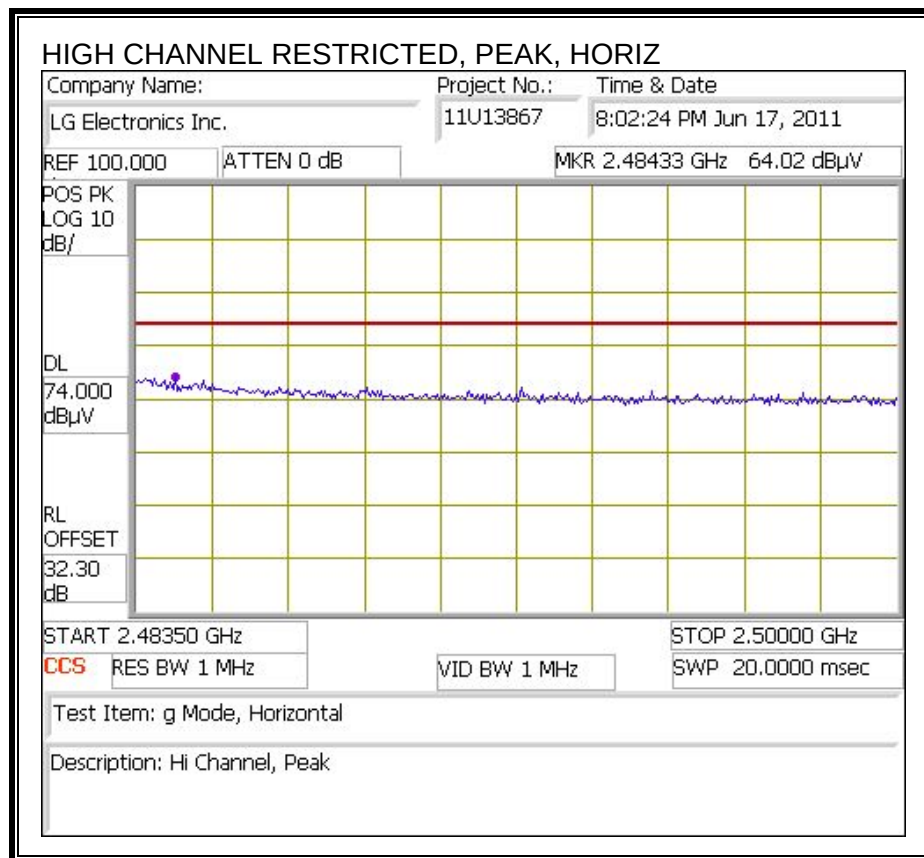
Note: No other emissions were detected above the system noise floor.

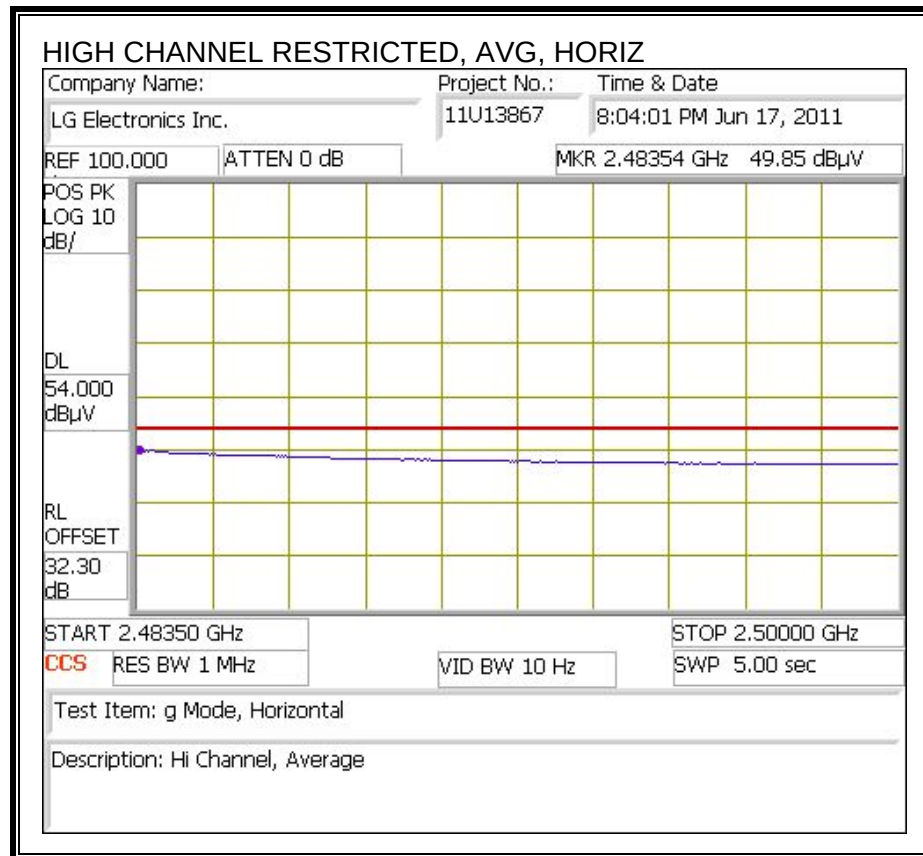
8.2.2. 802.11g MODE IN THE 2.4 GHz BAND**STANDARD COVER****RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)**

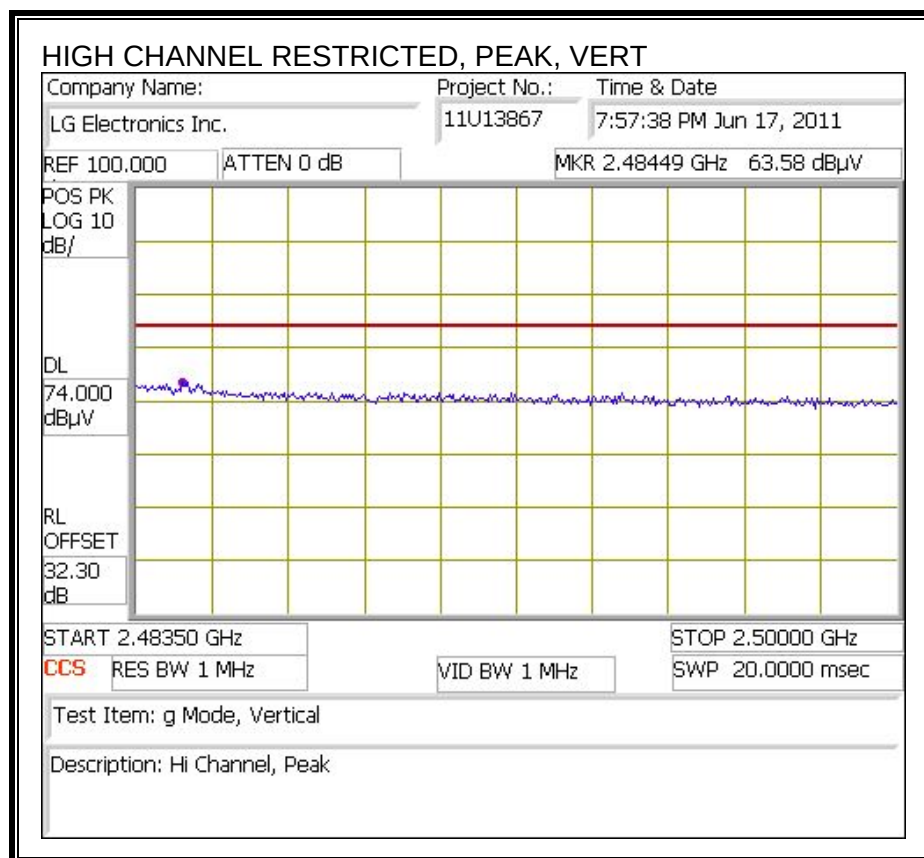


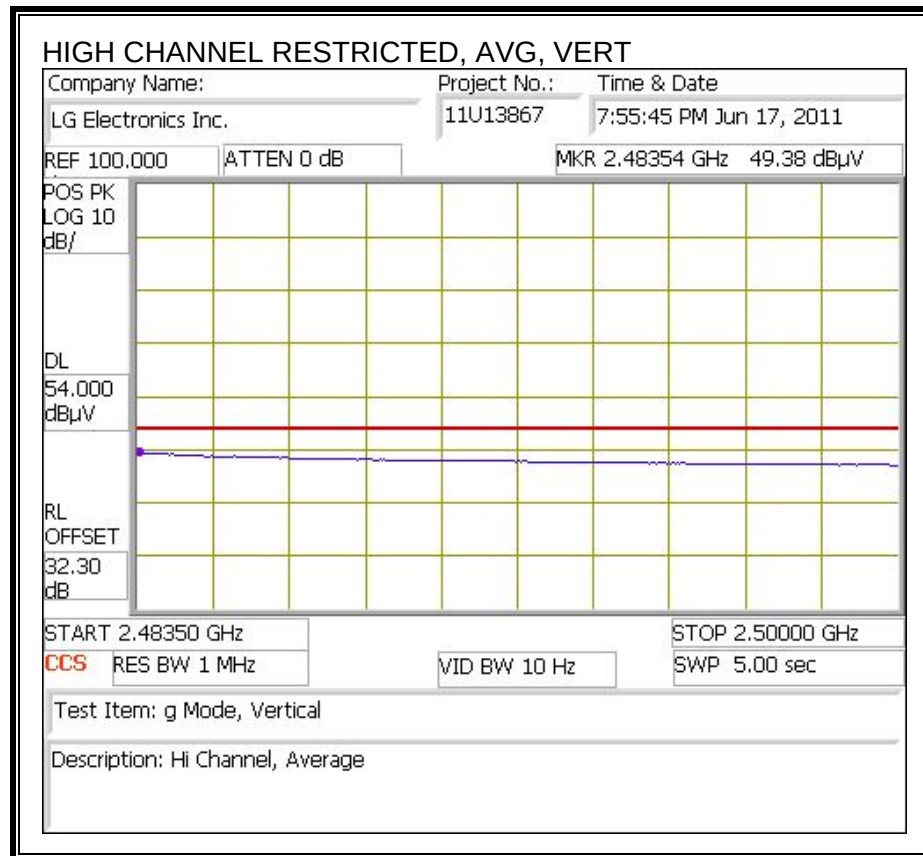
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

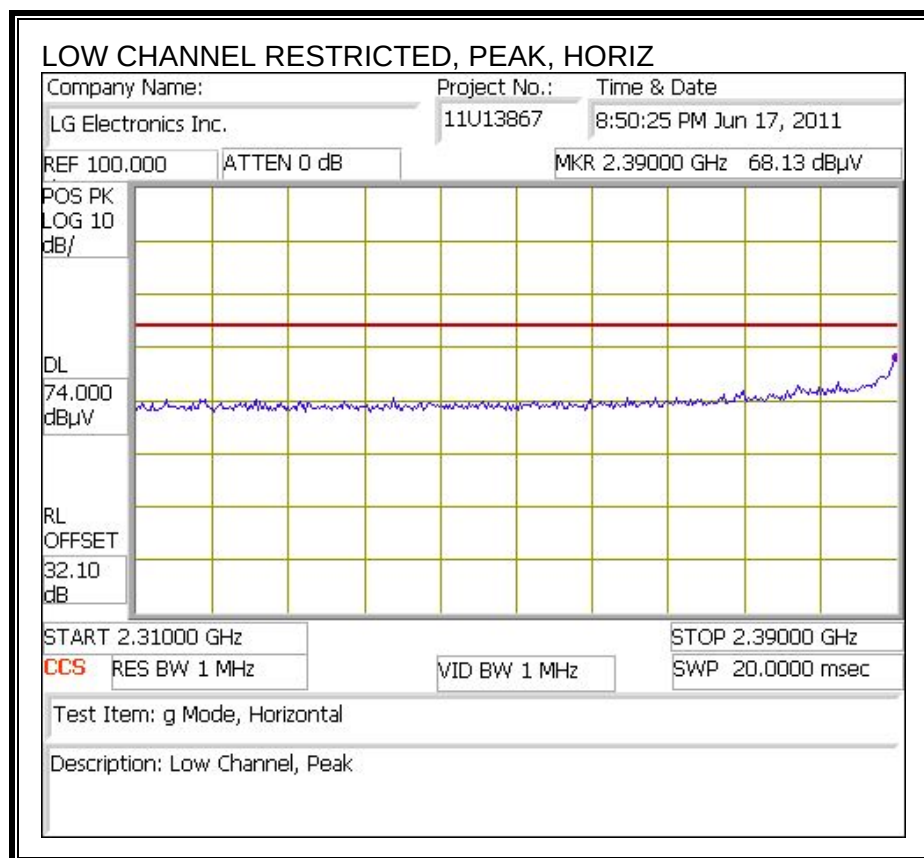


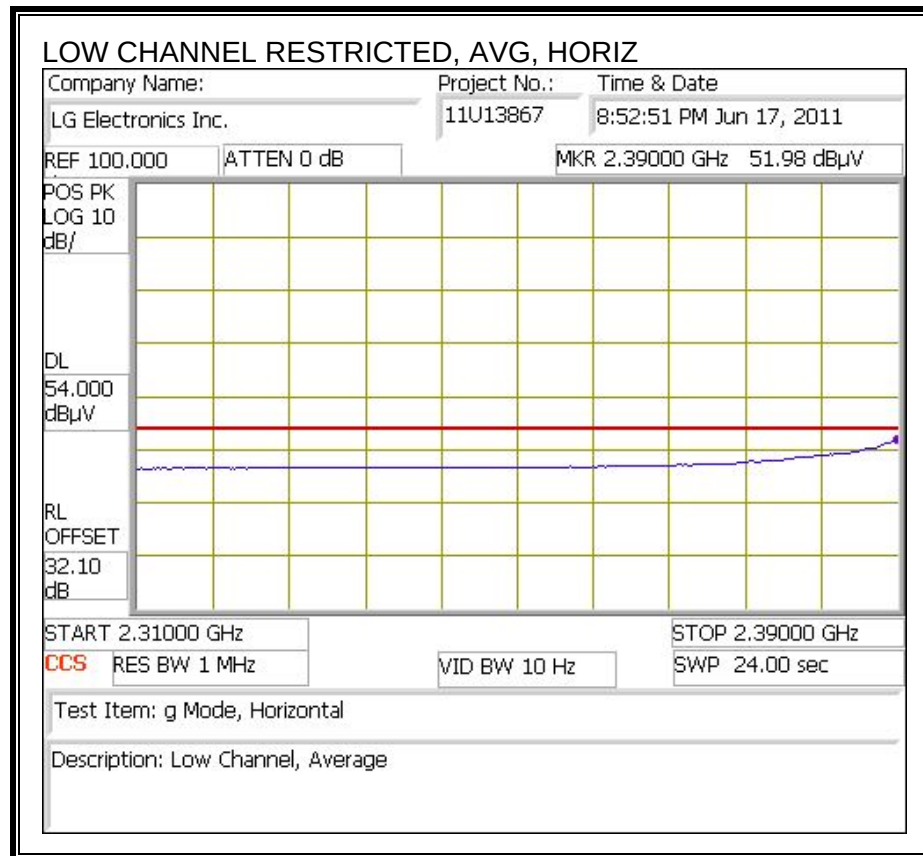
RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

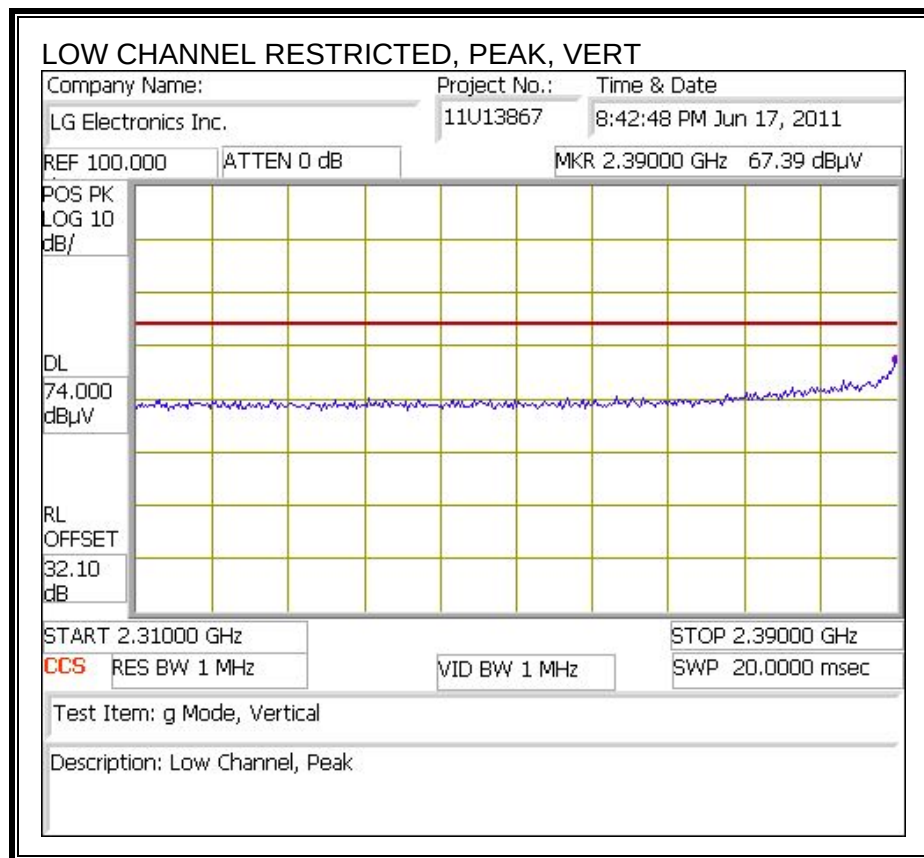


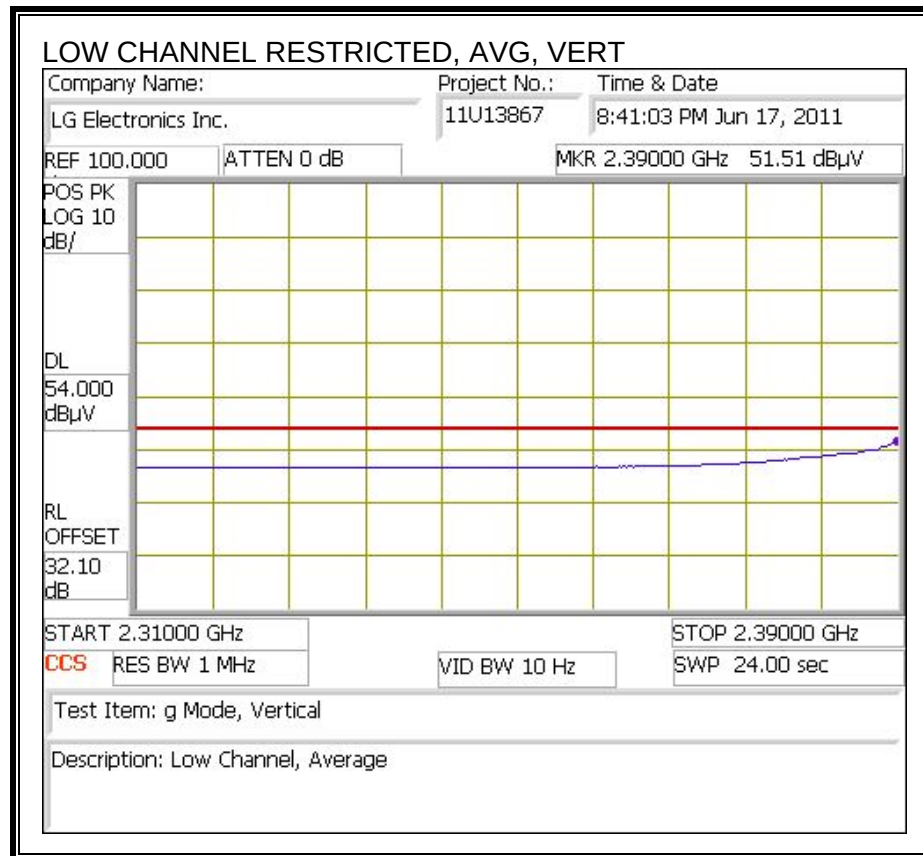
HARMONICS AND SPURIOUS EMISSIONS

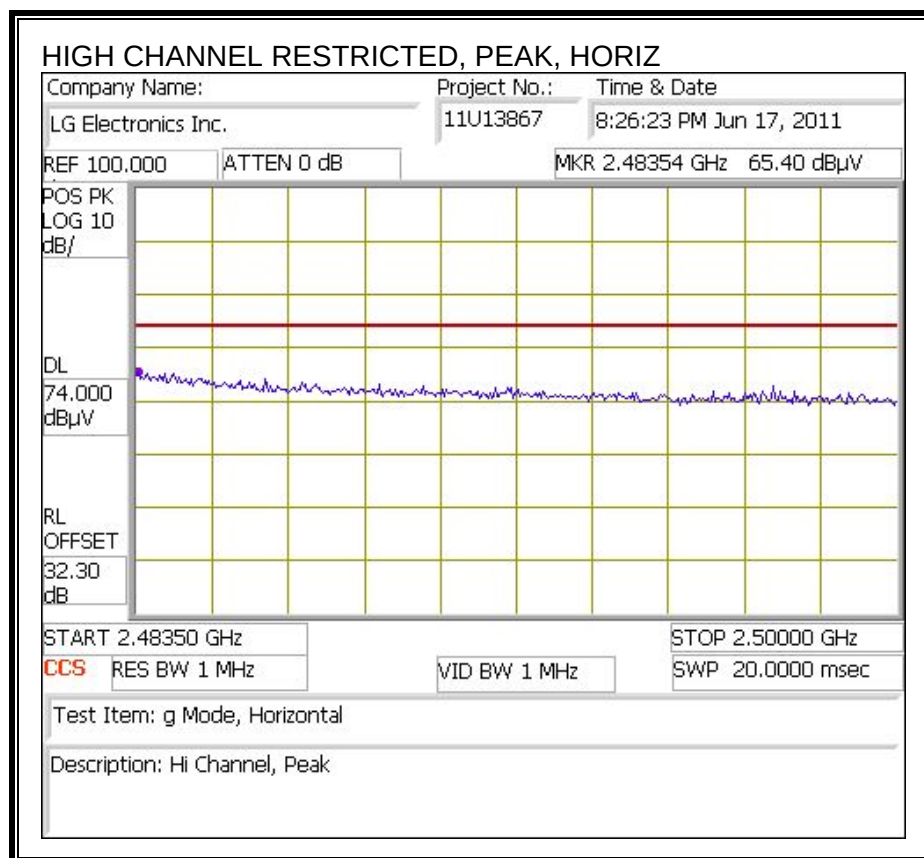
High Frequency Measurement Compliance Certification Services, Fremont 5m Chamber															
Company: LG Electronics Inc. Project #: 11U13867 Date: 17/6/2011 Test Engineer: Mengistu Mekuria Configuration: Plain Cover, AC Power, Headphones Mode: TX g MODE															
Test Equipment:															
Horn 1-18GHz T59; S/N: 3245 @3m		Pre-amplifier 1-26GHz T145 Agilent 3008A0056		Pre-amplifier 26-40GHz		Horn > 18GHz				Limit FCC 15.205					
Hi Frequency Cables															
3' cable 22807700 3' cable 22807700		12' cable 22807600 12' cable 22807600		20' cable 22807500 20' cable 22807500		HPF		Reject Filter R_001		Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz ; VBW=10Hz					
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
LOW CHANNEL, 2412MHz															
4.822	3.0	42.5	29.5	32.8	5.8	-34.8	0.0	0.0	46.2	33.2	74	54	-27.8	-20.8	V
12.060	3.0	36.8	26.6	38.5	9.8	-32.4	0.0	0.0	52.7	42.5	74	54	-21.3	-11.5	V
4.824	3.0	37.6	27.0	32.8	5.8	-34.8	0.0	0.0	41.3	30.7	74	54	-32.7	-23.3	H
12.064	3.0	40.0	26.6	38.5	9.8	-32.4	0.0	0.0	55.9	42.5	74	54	-18.1	-11.5	H
MID CHANNEL, 2437MHz															
4.877	3.0	37.9	29.5	32.8	5.8	-34.9	0.0	0.0	41.7	33.3	74	54	-32.3	-20.7	V
7.315	3.0	48.6	34.8	35.2	7.3	-34.7	0.0	0.0	56.4	42.6	74	54	-17.6	-11.4	V
12.188	3.0	35.5	26.4	38.6	9.8	-32.4	0.0	0.0	51.5	42.4	74	54	-22.5	-11.6	V
4.876	3.0	36.5	27.2	32.8	5.8	-34.9	0.0	0.0	40.3	31.0	74	54	-33.7	-23.0	H
7.313	3.0	40.8	28.8	35.2	7.3	-34.7	0.0	0.0	48.6	36.6	74	54	-25.4	-17.4	H
12.187	3.0	37.4	26.2	38.6	9.8	-32.4	0.0	0.0	53.4	42.2	74	54	-20.6	-11.8	H
HIGH CHANNEL, 2462MHz															
4.924	3.0	40.2	29.2	32.8	5.9	-34.9	0.0	0.0	44.1	33.0	74	54	-29.9	-21.0	V
7.390	3.0	43.4	32.4	35.3	7.3	-34.6	0.0	0.0	51.4	40.3	74	54	-22.6	-13.7	V
4.928	3.0	37.4	28.0	32.8	5.9	-34.9	0.0	0.0	41.3	31.9	74	54	-32.7	-22.1	H
7.386	3.0	41.2	29.7	35.3	7.3	-34.6	0.0	0.0	49.2	37.6	74	54	-24.8	-16.4	H
Rev. 07.22.09															
f	Measurement Frequency		Amp	Preamp Gain		Avg Lim	Average Field Strength Limit								
Dist	Distance to Antenna		D Corr	Distance Correct to 3 meters		Pk Lim	Peak Field Strength Limit								
Read	Analyzer Reading		Avg	Average Field Strength @ 3 m		Avg Mar	Margin vs. Average Limit								
AF	Antenna Factor		Peak	Calculated Peak Field Strength		Pk Mar	Margin vs. Peak Limit								
CL	Cable Loss		HPF	High Pass Filter											

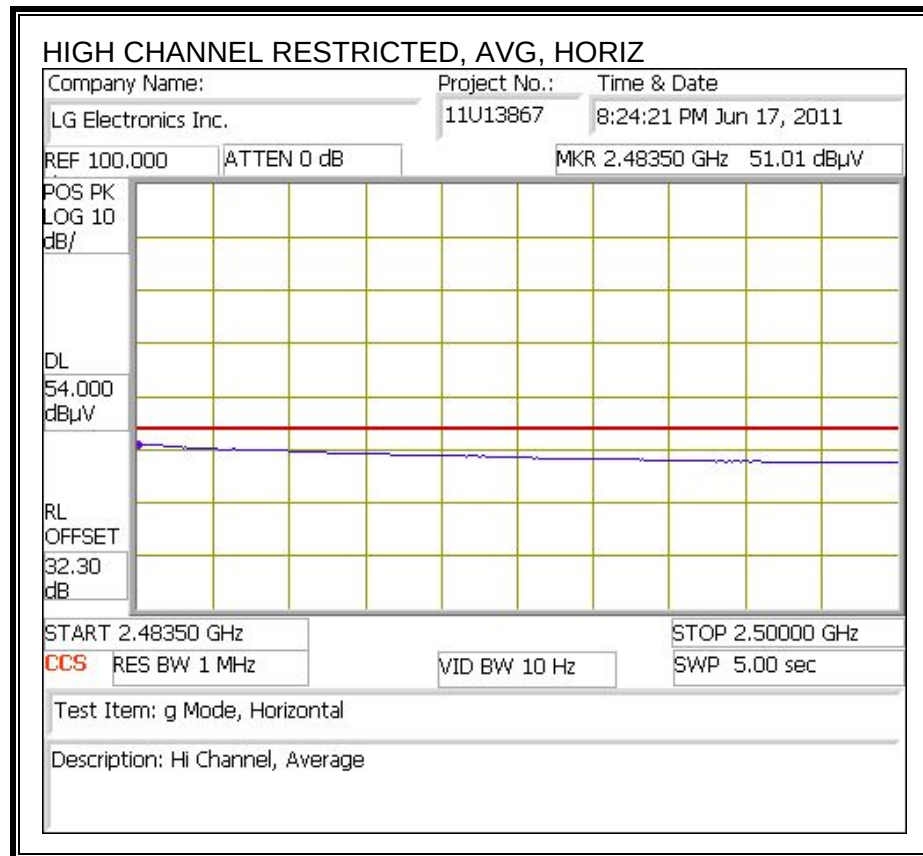
INDUCTIVE COVER**RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)**

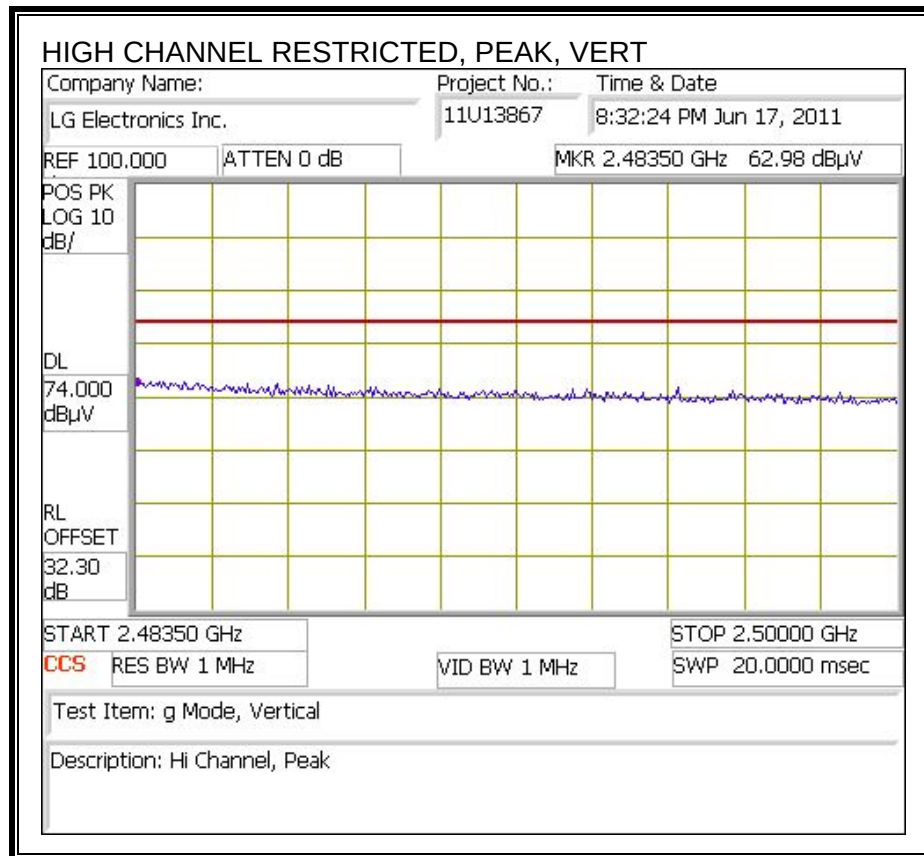


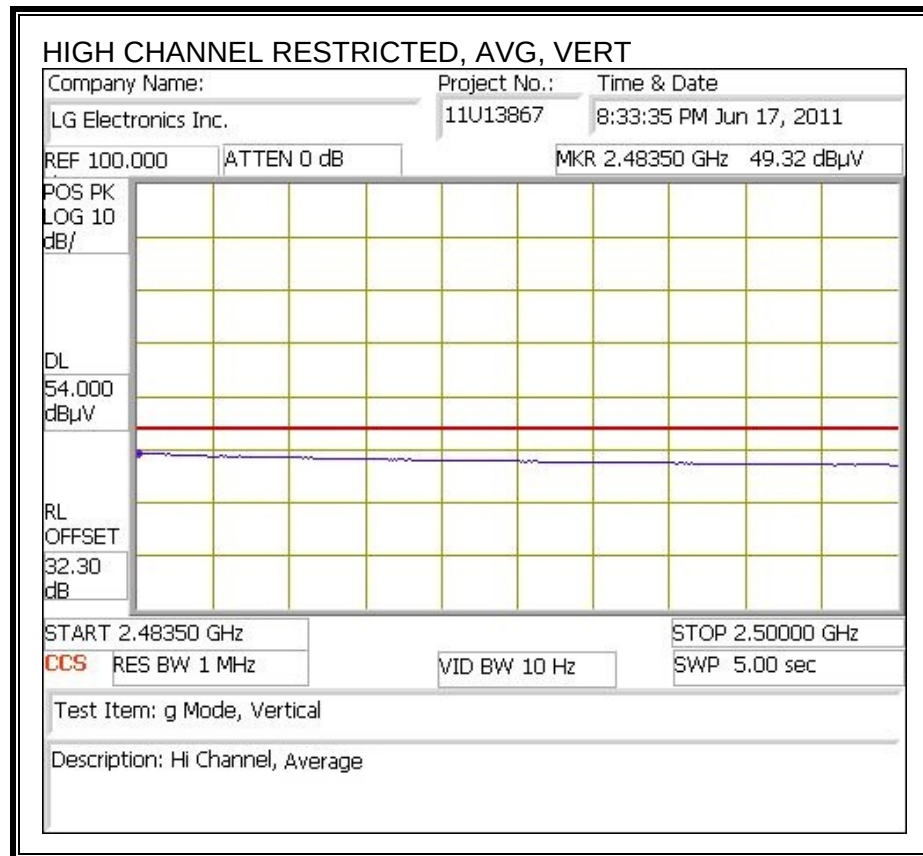
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

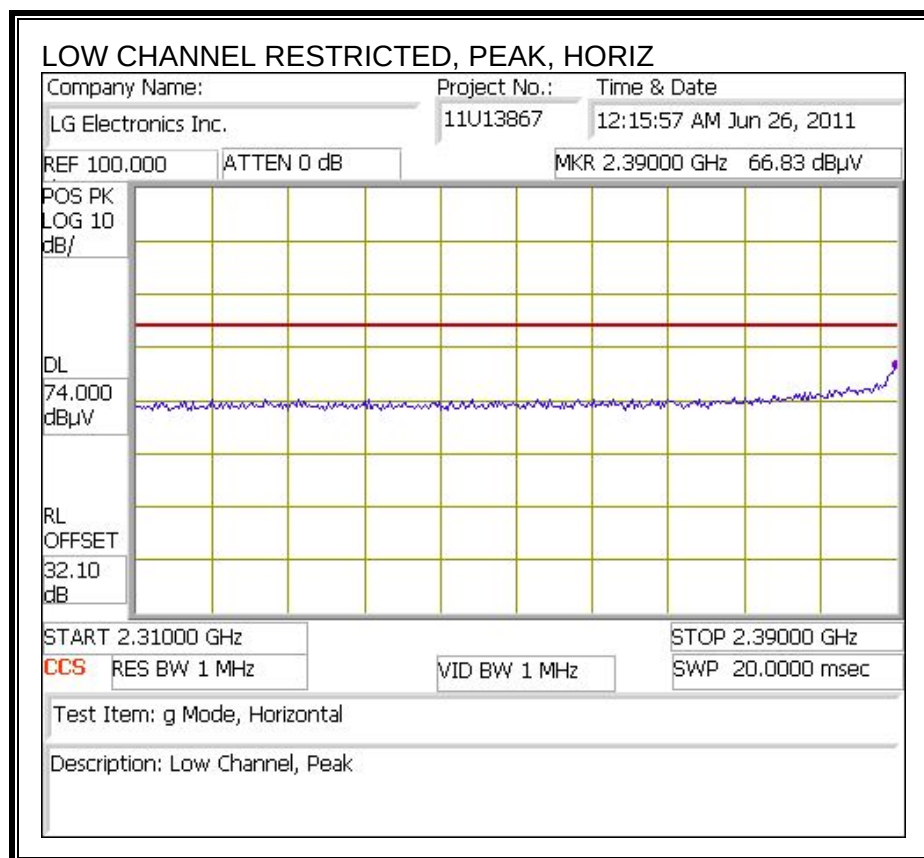


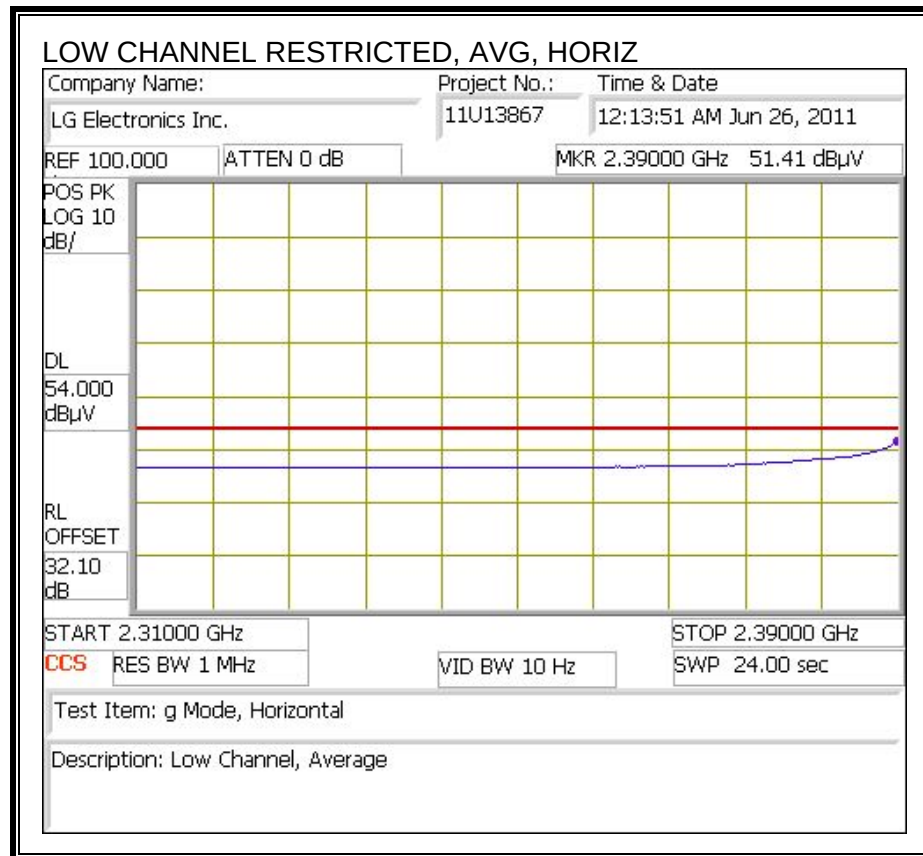
RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

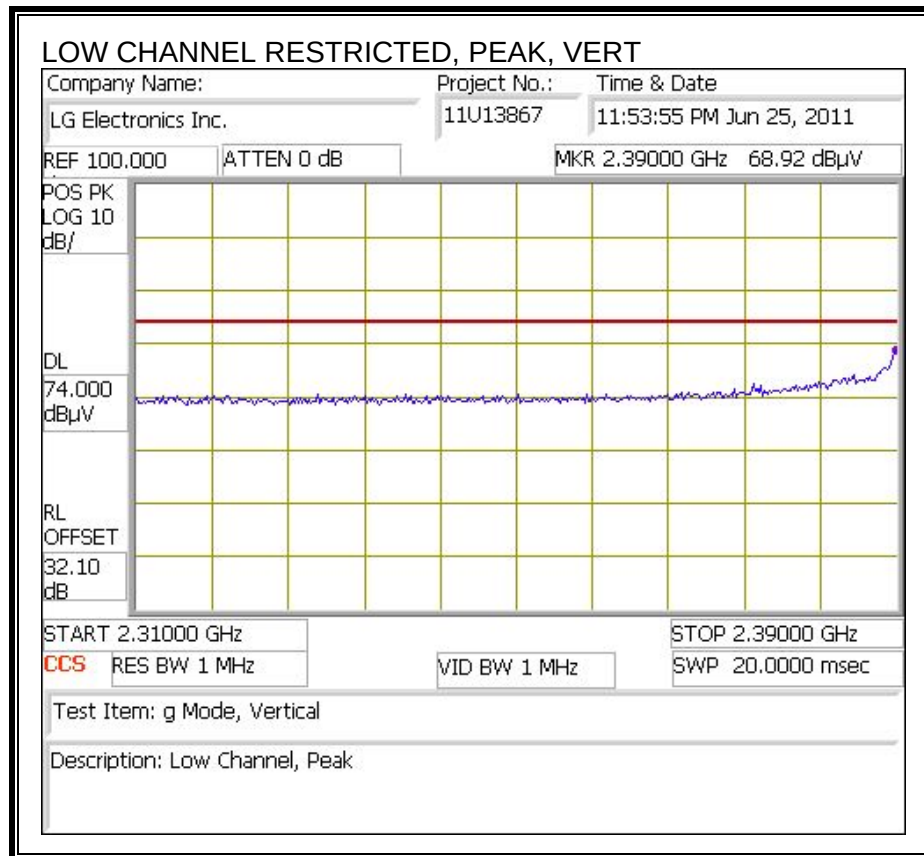


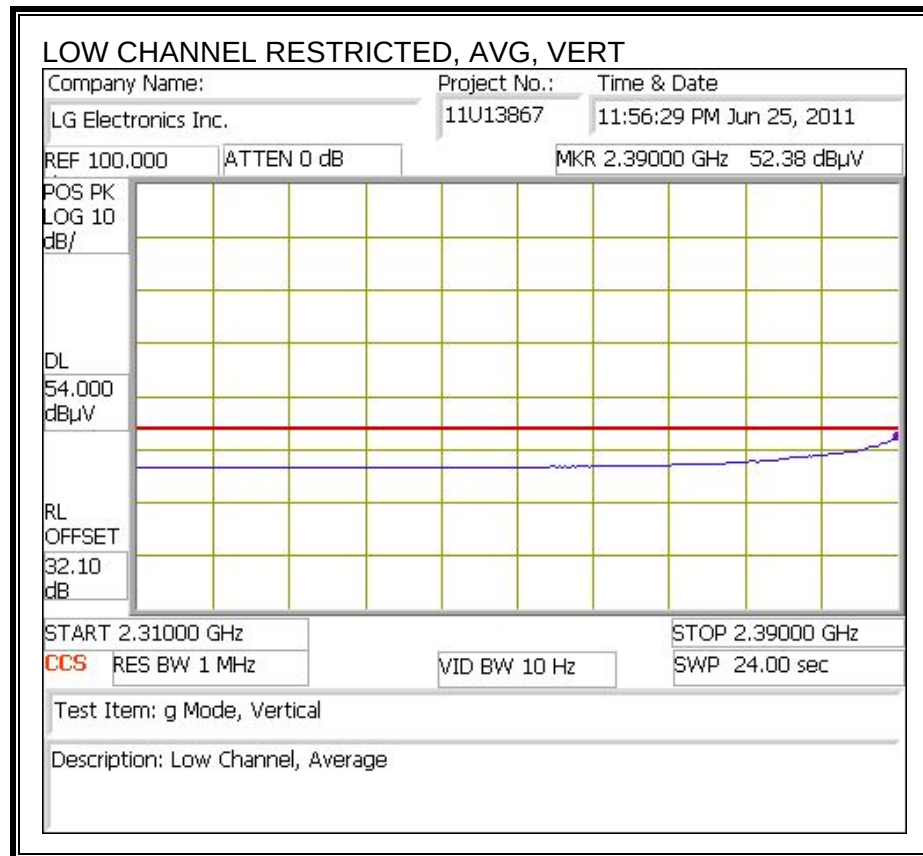
HARMONICS AND SPURIOUS EMISSIONS

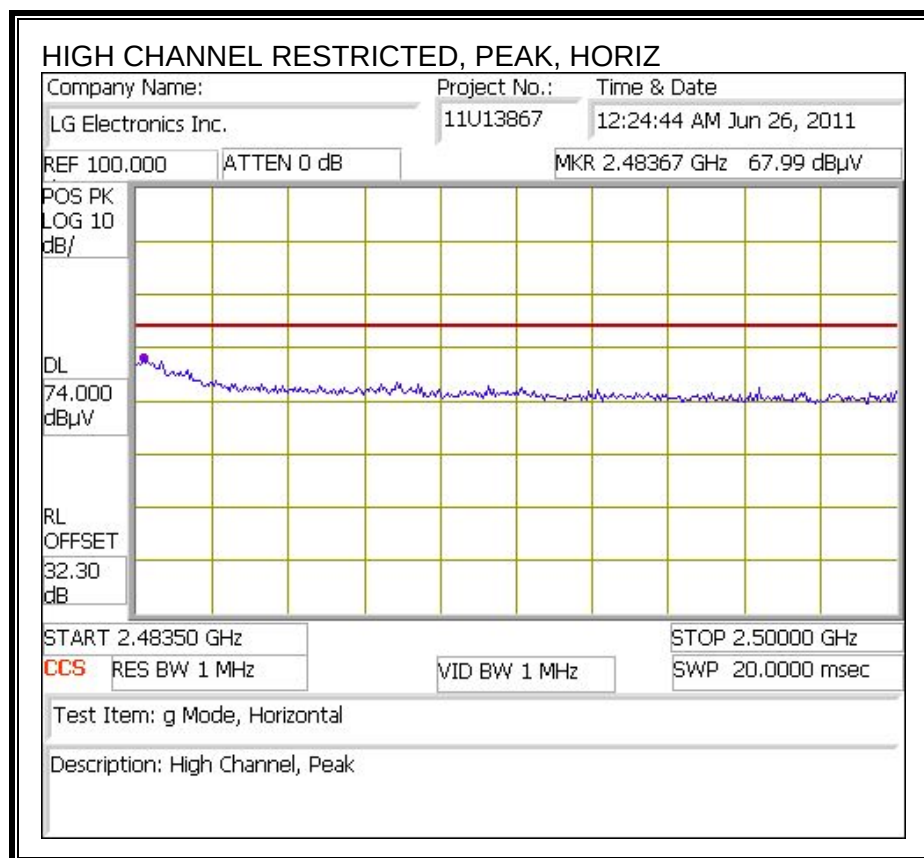
High Frequency Measurement Compliance Certification Services, Fremont 5m Chamber																	
Company:		LG Electronics Inc.															
Project #:		11U13867															
Date:		17/6/2011															
Test Engineer:		Mengistu Mekuria															
Configuration:		Inductive Cover, AC Power, Headphones															
Mode:		TX g MODE															
Test Equipment:																	
Horn 1-18GHz				Pre-amplifier 1-26GHz				Pre-amplifier 26-40GHz				Horn > 18GHz				Limit	
T59; S/N: 3245 @3m				T145 Agilent 3008A0056												FCC 15.205	
Hi Frequency Cables																	
3' cable 22807700				12' cable 22807600				20' cable 22807500				HPF				Reject Filter	
3' cable 22807700				12' cable 22807600				20' cable 22807500								R_001	
Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz ; VBW=10Hz																	
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)		
LOW CHANNEL, 2412MHz																	
4.824	3.0	40.7	28.3	32.8	5.8	-34.8	0.0	0.0	44.4	32.1	74	54	-29.6	-21.9	V		
4.824	3.0	39.2	26.5	32.8	5.8	-34.8	0.0	0.0	42.9	30.2	74	54	-31.1	-23.8	H		
MID CHANNEL, 2437MHz																	
4.874	3.0	41.6	29.4	32.8	5.8	-34.9	0.0	0.0	45.4	33.2	74	54	-28.6	-20.8	V		
7.311	3.0	45.2	32.6	35.2	7.3	-34.7	0.0	0.0	53.0	40.4	74	54	-21.0	-13.6	V		
4.874	3.0	40.1	27.6	32.8	5.8	-34.9	0.0	0.0	43.8	31.3	74	54	-30.2	-22.7	H		
7.311	3.0	43.1	30.6	35.2	7.3	-34.7	0.0	0.0	50.9	38.4	74	54	-23.1	-15.6	H		
HIGH CHANNEL, 2462MHz																	
4.924	3.0	40.6	28.6	32.8	5.9	-34.9	0.0	0.0	44.4	32.5	74	54	-29.6	-21.5	V		
7.386	3.0	46.8	33.4	35.3	7.3	-34.6	0.0	0.0	54.8	41.4	74	54	-19.2	-12.6	V		
4.924	3.0	49.4	27.1	32.8	5.9	-34.9	0.0	0.0	53.2	31.0	74	54	-20.8	-23.0	H		
7.386	3.0	42.4	29.7	35.3	7.3	-34.6	0.0	0.0	50.4	37.6	74	54	-23.6	-16.4	H		
Rev. 07.22.09																	
f	Measurement Frequency					Amp	Preamp Gain					Avg Lim	Average Field Strength Limit				
Dist	Distance to Antenna					D Corr	Distance Correct to 3 meters					Pk Lim	Peak Field Strength Limit				
Read	Analyzer Reading					Avg	Average Field Strength @ 3 m					Avg Mar	Margin vs. Average Limit				
AF	Antenna Factor					Peak	Calculated Peak Field Strength					Pk Mar	Margin vs. Peak Limit				
CL	Cable Loss					HPF	High Pass Filter										

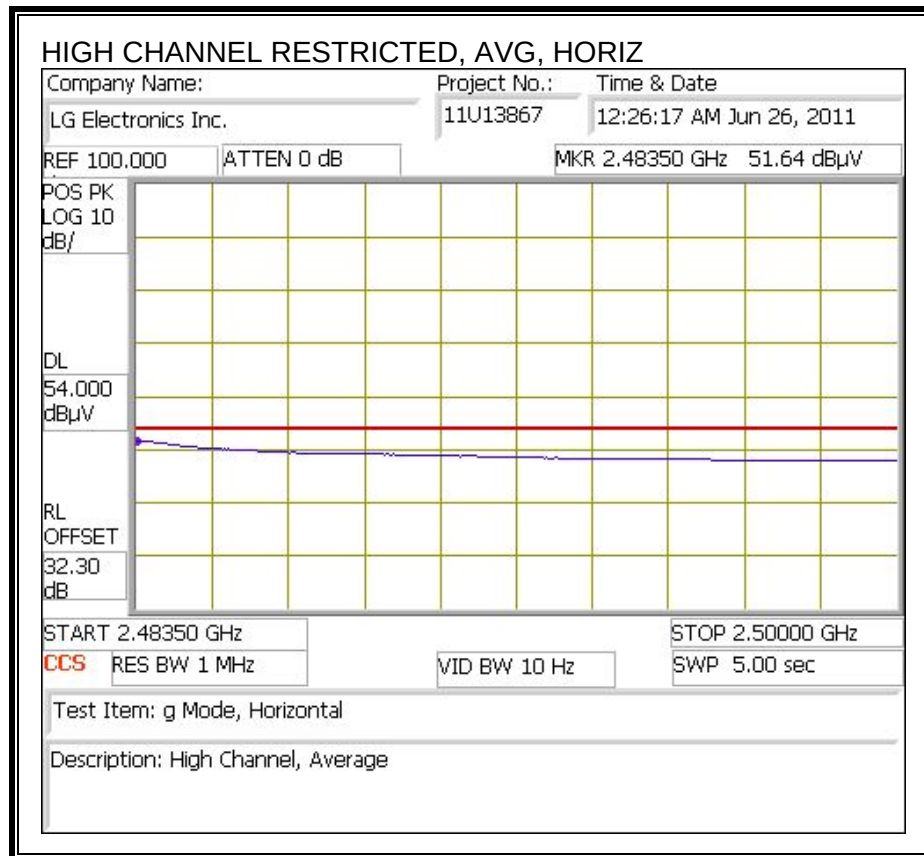
INDUCTIVE CHARGER WITH INDUCTIVE COVER**RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)**

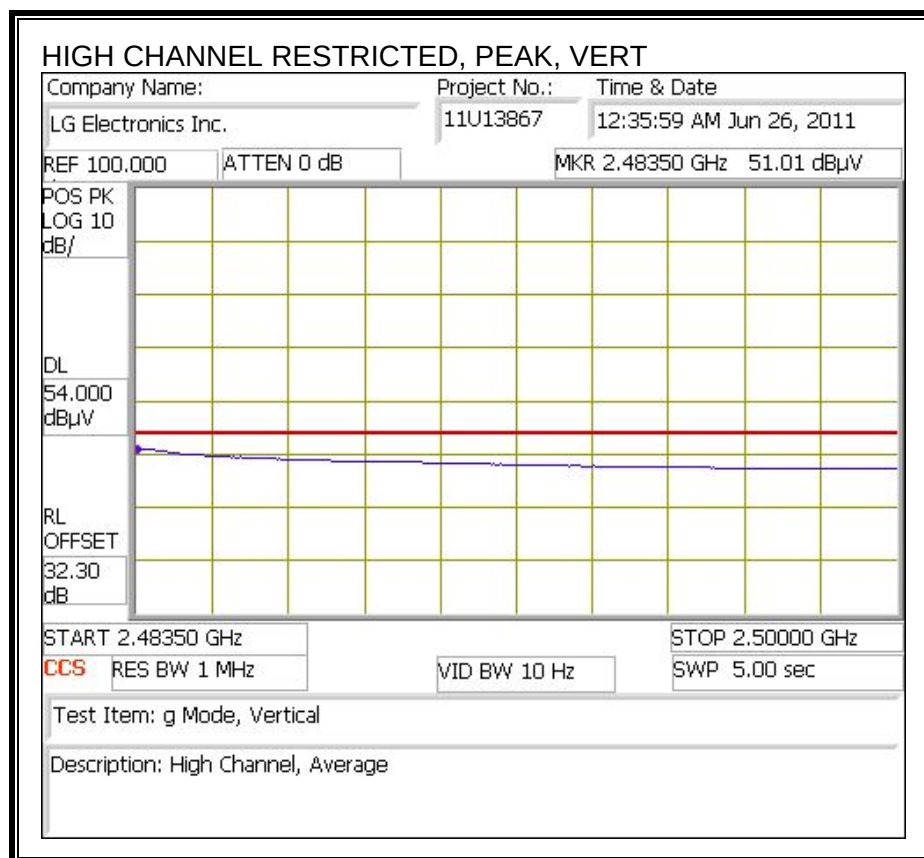


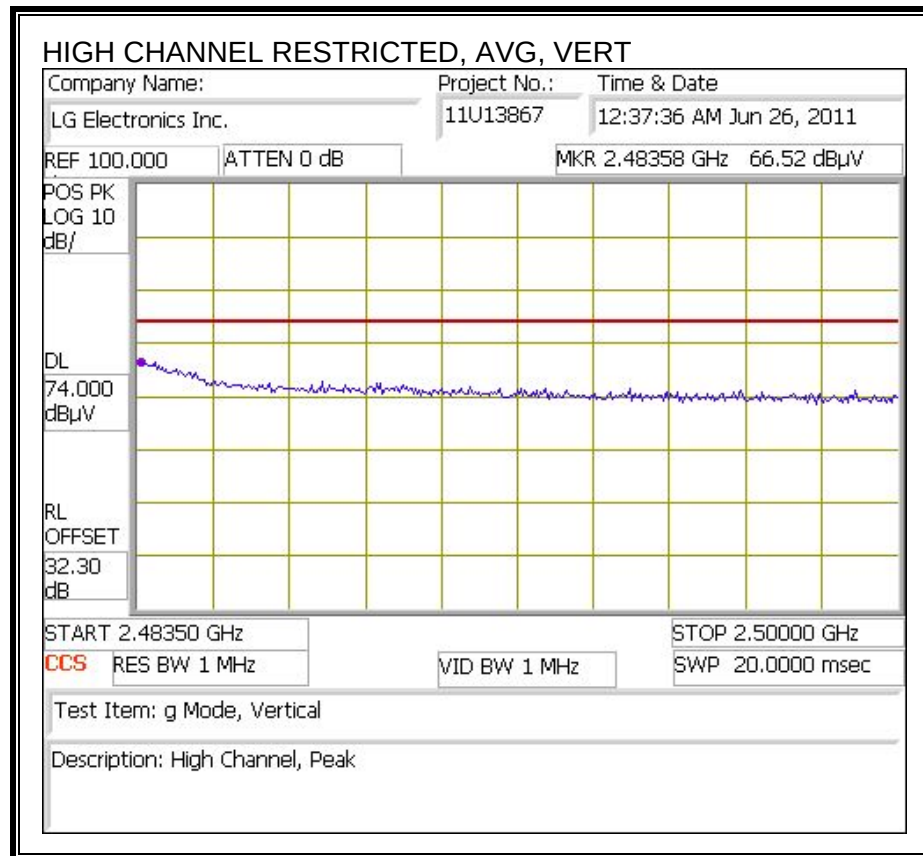
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

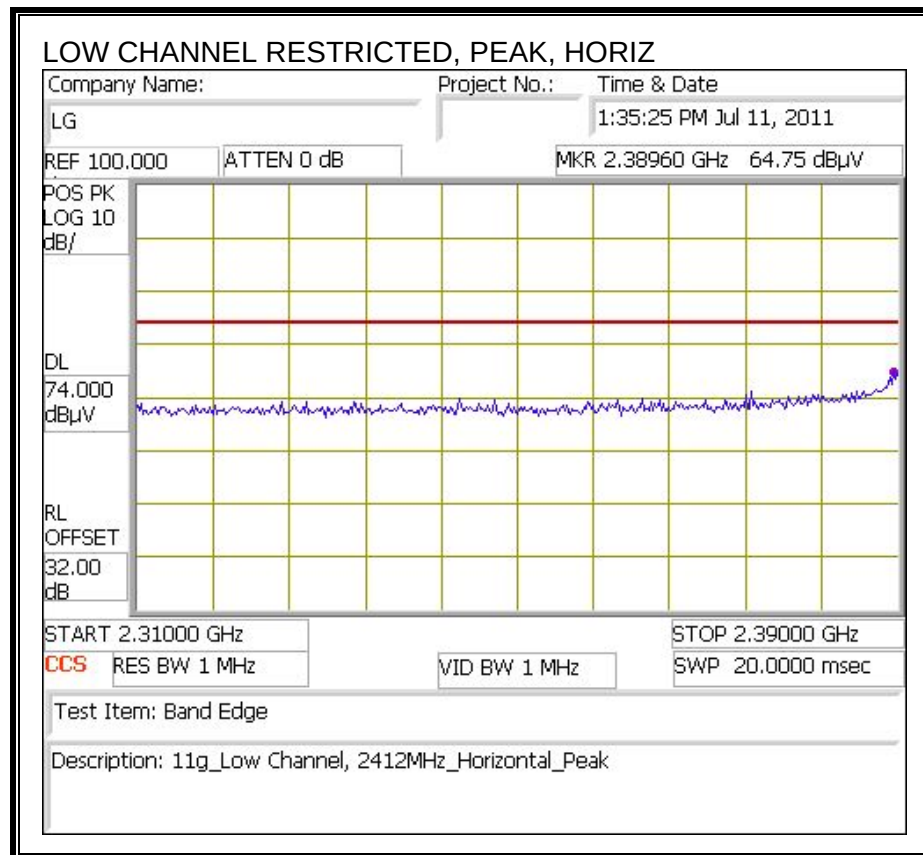


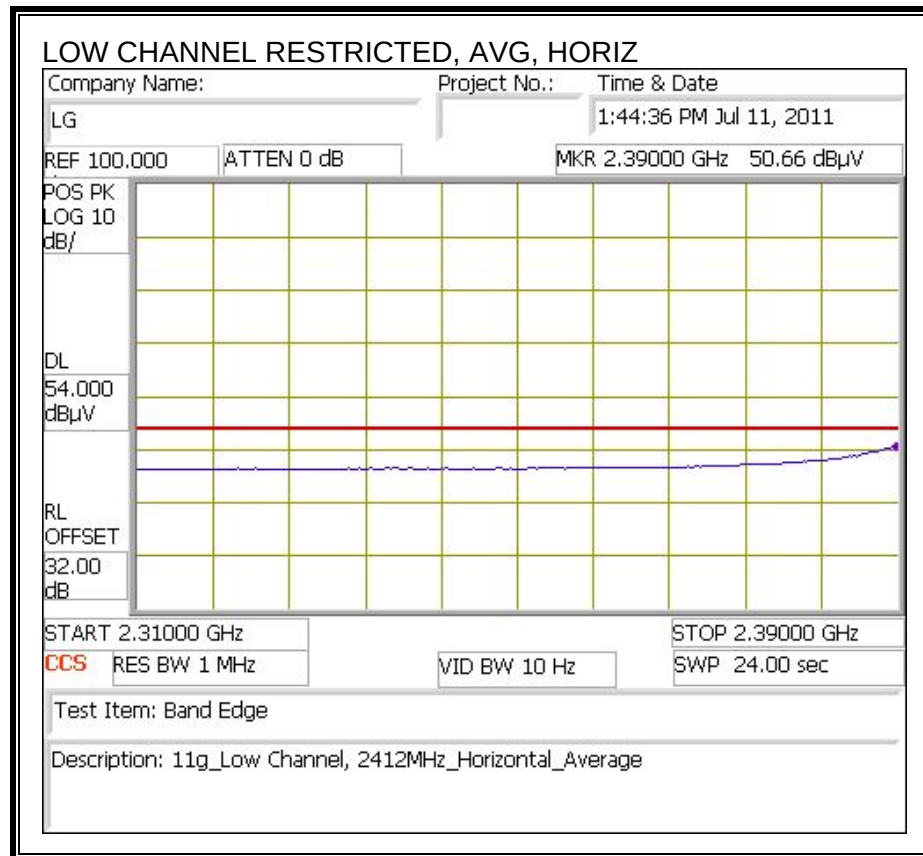
RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

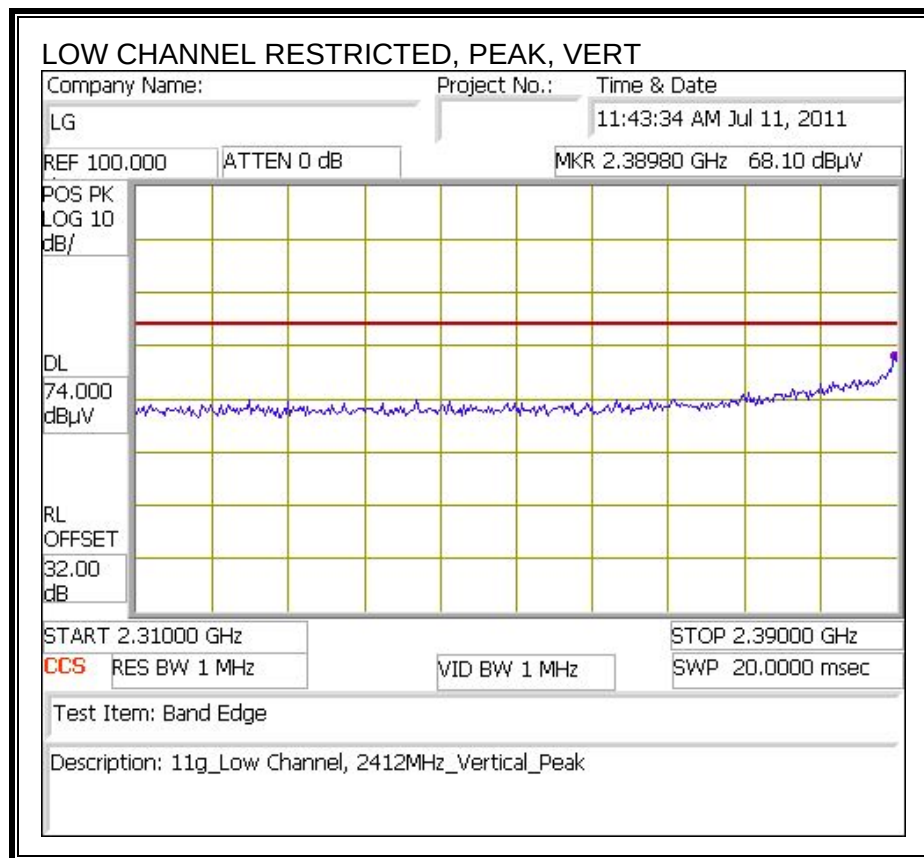


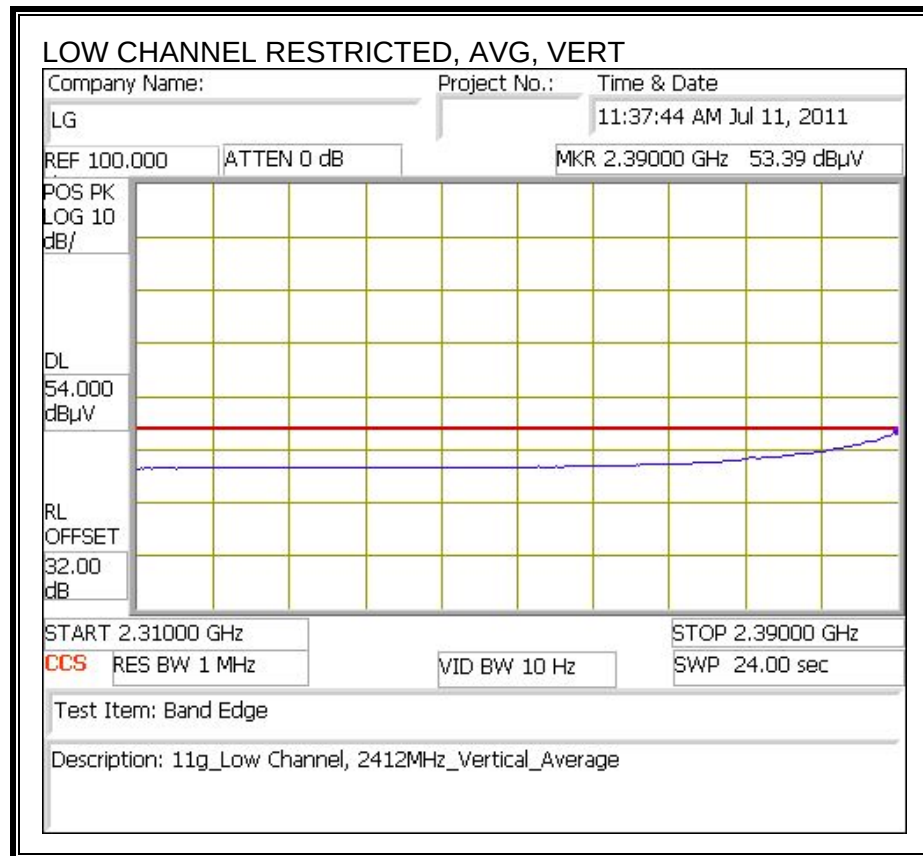
HARMONICS AND SPURIOUS EMISSIONS

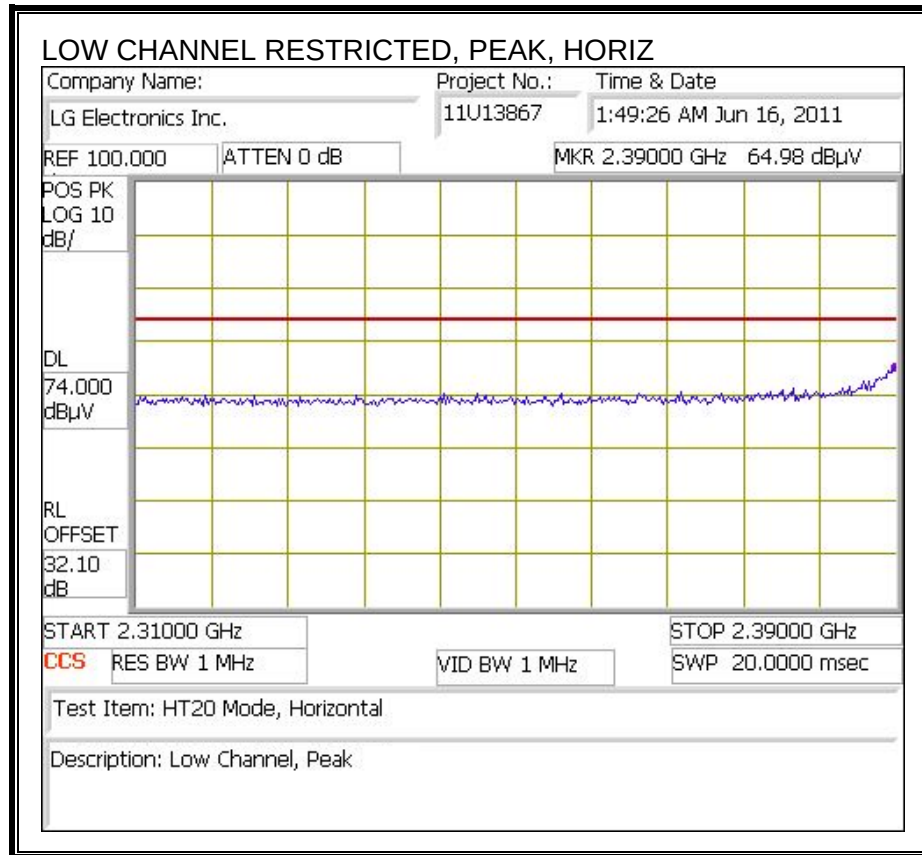
High Frequency Measurement Compliance Certification Services, Fremont 5m Chamber																											
Company:		LG Electronics Inc.																									
Project #:		11U13867																									
Date:		25/6/2011																									
Test Engineer:		Mengistu Mekuria																									
Configuration:		Inductive Cover With Charger, AC Power, Headphones																									
Mode:		TX g MODE																									
Test Equipment:																											
Horn 1-18GHz		Pre-amplifier 1-26GHz		Pre-amplifier 26-40GHz		Horn > 18GHz				Limit																	
T73; S/N: 6717 @3m		T144 Miteq 3008A00931								FCC 15.205																	
Hi Frequency Cables <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; padding: 2px; background-color: #e0f7fa;">3' cable 22807700</td> <td style="width: 33%; padding: 2px; background-color: #e0f7fa;">12' cable 22807600</td> <td style="width: 33%; padding: 2px; background-color: #e0f7fa;">20' cable 22807500</td> <td style="width: 16%; padding: 2px; background-color: #e0f7fa;">HPF</td> <td style="width: 16%; padding: 2px; background-color: #e0f7fa;">Reject Filter</td> <td style="width: 33%; padding: 2px;"> Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz ; VBW=10Hz </td> </tr> <tr> <td style="padding: 2px;">3' cable 22807700</td> <td style="padding: 2px;">12' cable 22807600</td> <td style="padding: 2px;">20' cable 22807500</td> <td style="padding: 2px;"></td> <td style="padding: 2px;">R_001</td> <td></td> </tr> </table>																3' cable 22807700	12' cable 22807600	20' cable 22807500	HPF	Reject Filter	Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz ; VBW=10Hz	3' cable 22807700	12' cable 22807600	20' cable 22807500		R_001	
3' cable 22807700	12' cable 22807600	20' cable 22807500	HPF	Reject Filter	Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz ; VBW=10Hz																						
3' cable 22807700	12' cable 22807600	20' cable 22807500		R_001																							
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Ftr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)												
LOW CHANNEL, 2412MHz																											
4.824	3.0	38.5	28.3	33.0	5.8	-36.5	0.0	0.0	40.8	30.7	74	54	-33.2	-23.3	V												
4.824	3.0	37.9	26.5	33.0	5.8	-36.5	0.0	0.0	40.3	28.9	74	54	-33.7	-25.1	H												
MID CHANNEL, 2437MHz																											
4.874	3.0	39.3	29.4	33.1	5.8	-36.5	0.0	0.0	41.8	31.9	74	54	-32.2	-22.1	V												
7.311	3.0	47.5	32.6	35.3	7.3	-36.2	0.0	0.0	53.9	38.9	74	54	-20.1	-15.1	V												
4.874	3.0	37.6	27.6	33.1	5.8	-36.5	0.0	0.0	40.0	30.0	74	54	-34.0	-24.0	H												
7.311	3.0	41.2	30.6	35.3	7.3	-36.2	0.0	0.0	47.6	36.9	74	54	-26.4	-17.1	H												
HIGH CHANNEL, 2462MHz																											
4.924	3.0	38.0	28.6	33.1	5.9	-36.5	0.0	0.0	40.6	31.2	74	54	-33.4	-22.8	V												
7.386	3.0	46.4	33.4	35.4	7.3	-36.2	0.0	0.0	52.9	39.9	74	54	-21.1	-14.1	V												
4.924	3.0	47.9	27.1	33.1	5.9	-36.5	0.0	0.0	50.4	29.7	74	54	-23.6	-24.3	H												
7.386	3.0	43.2	29.7	35.4	7.3	-36.2	0.0	0.0	49.7	36.2	74	54	-24.3	-17.8	H												
Rev. 07.22.09																											
f	Measurement Frequency					Amp	Preamp Gain					Avg Lim	Average Field Strength Limit														
Dist	Distance to Antenna					D Corr	Distance Correct to 3 meters					Pk Lim	Peak Field Strength Limit														
Read	Analyzer Reading					Avg	Average Field Strength @ 3 m					Avg Mar	Margin vs. Average Limit														
AF	Antenna Factor					Peak	Calculated Peak Field Strength					Pk Mar	Margin vs. Peak Limit														
CL	Cable Loss					HPF	High Pass Filter																				

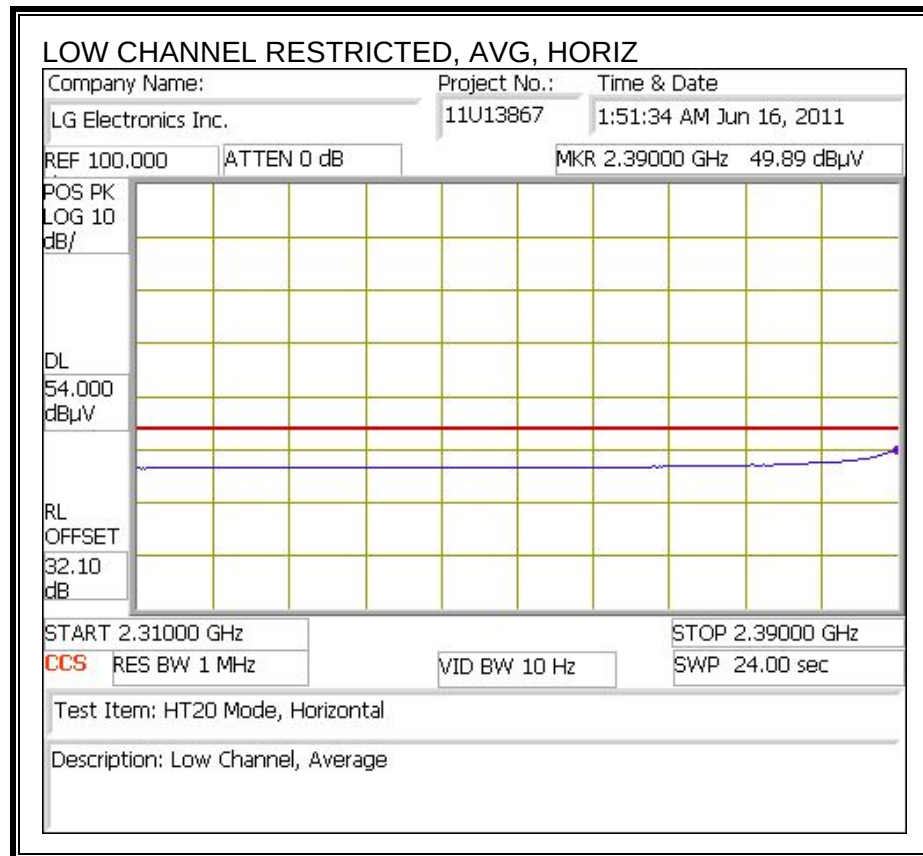
CHARGER STA-U13WV**Worst-Case Spot Check; 11g Low Channel (2412MHz) with Standard Cover****RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)**

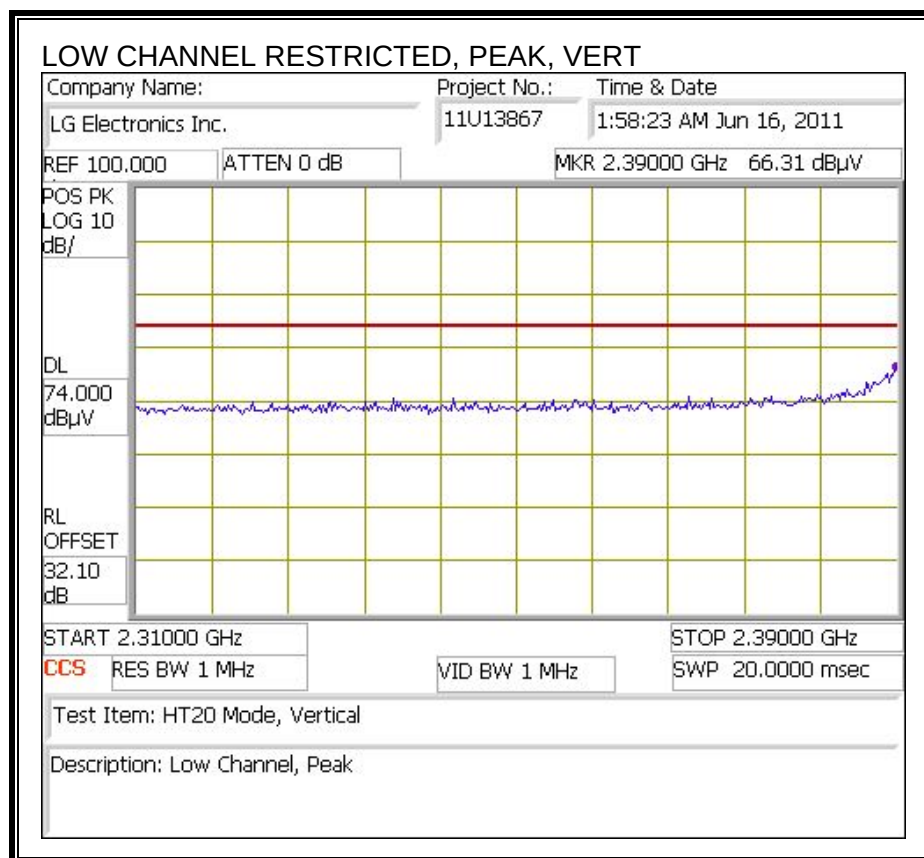


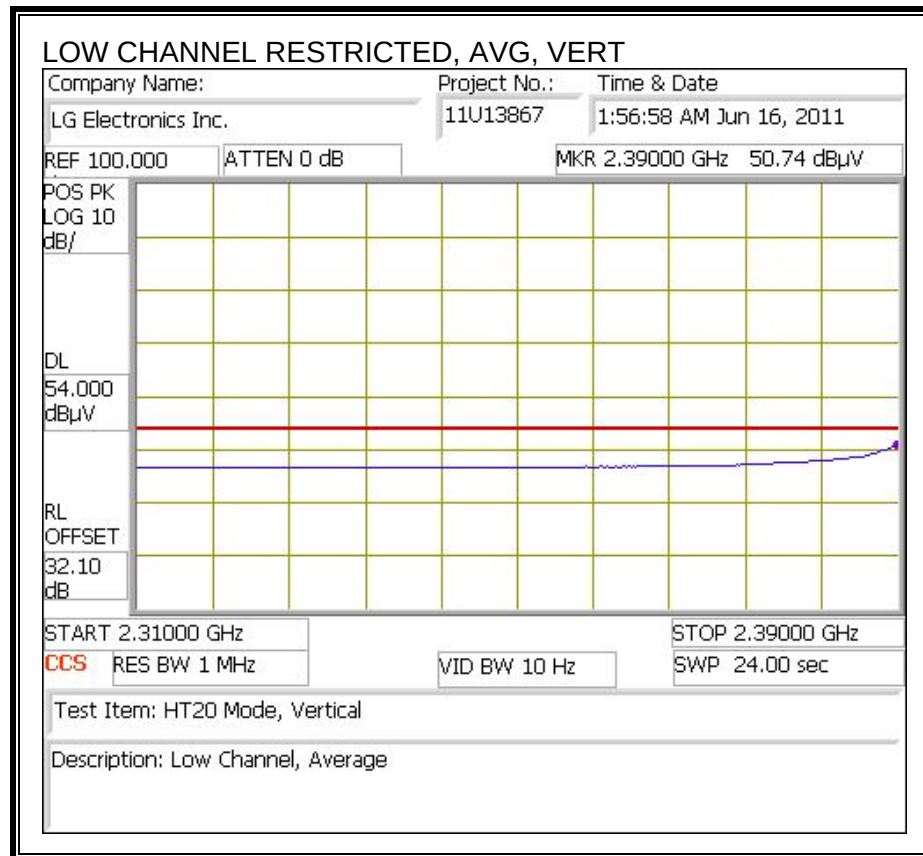
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

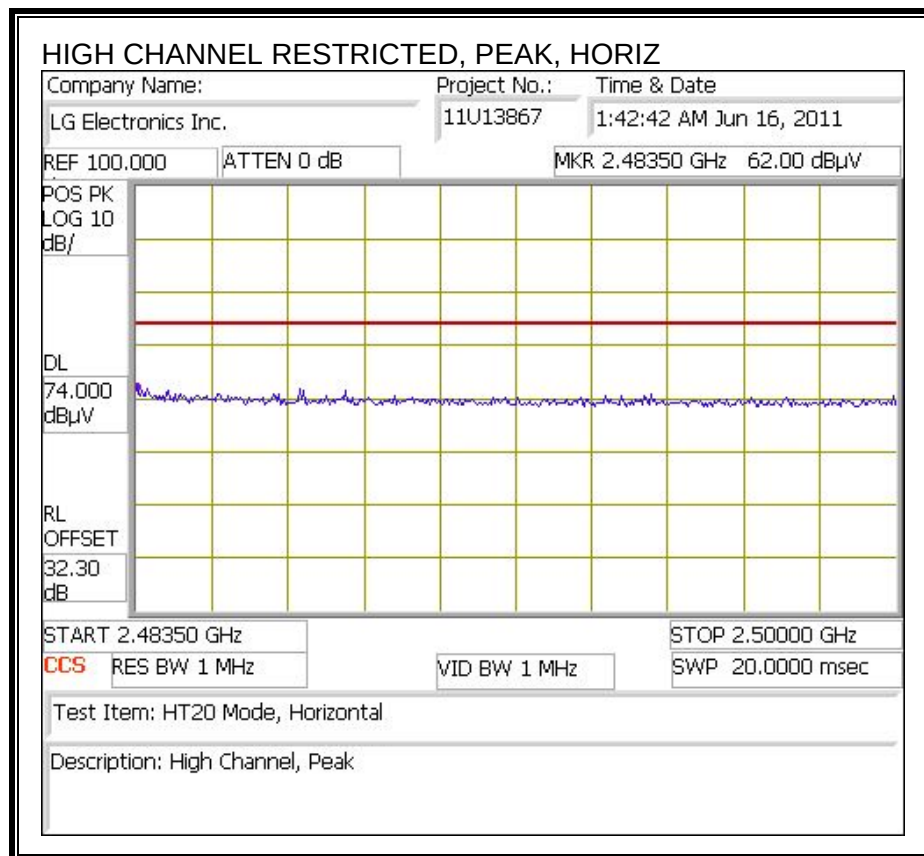


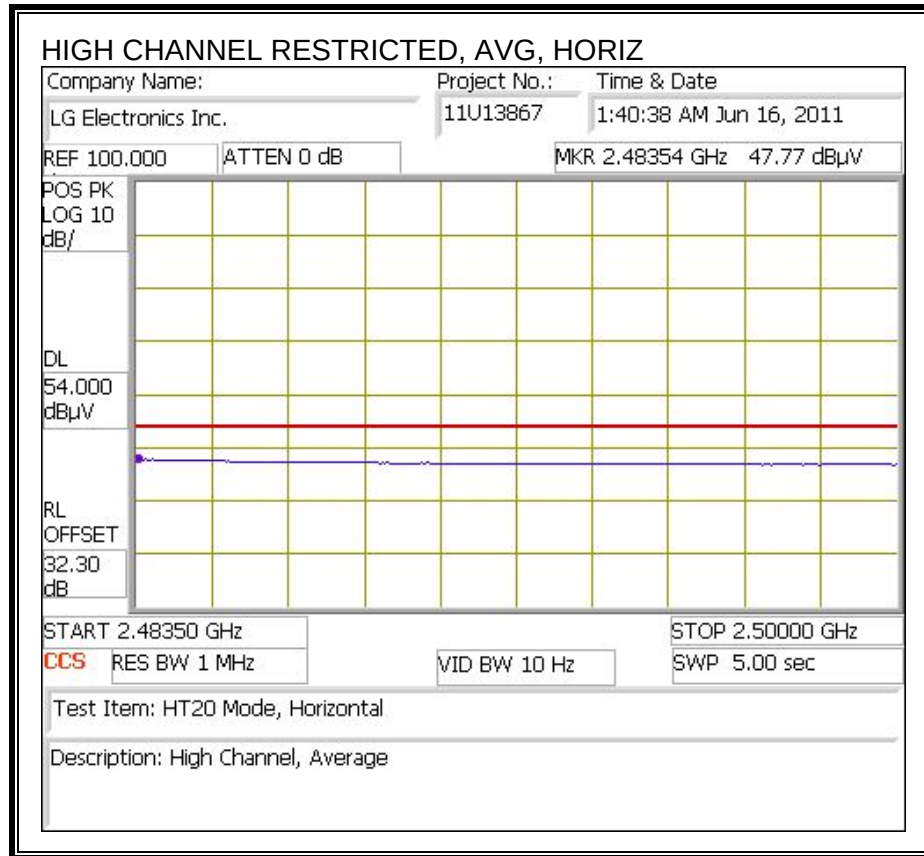
8.2.3. 802.11n HT20 SISO MODE IN THE 2.4 GHz BAND**STANDARD COVER****RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)**

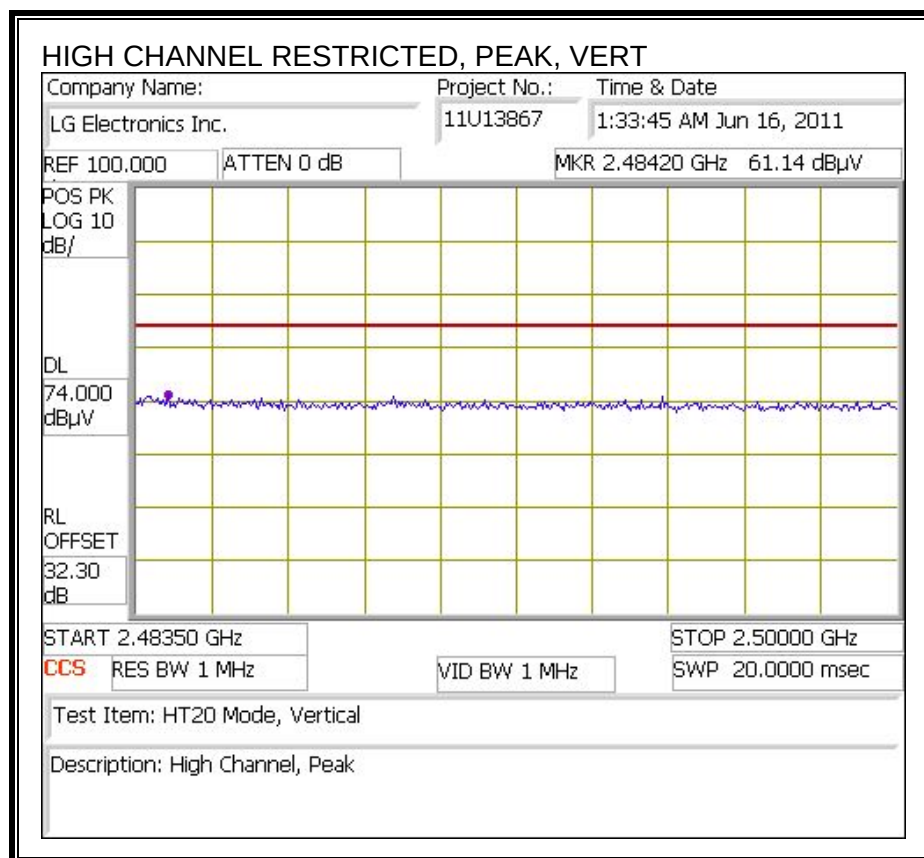


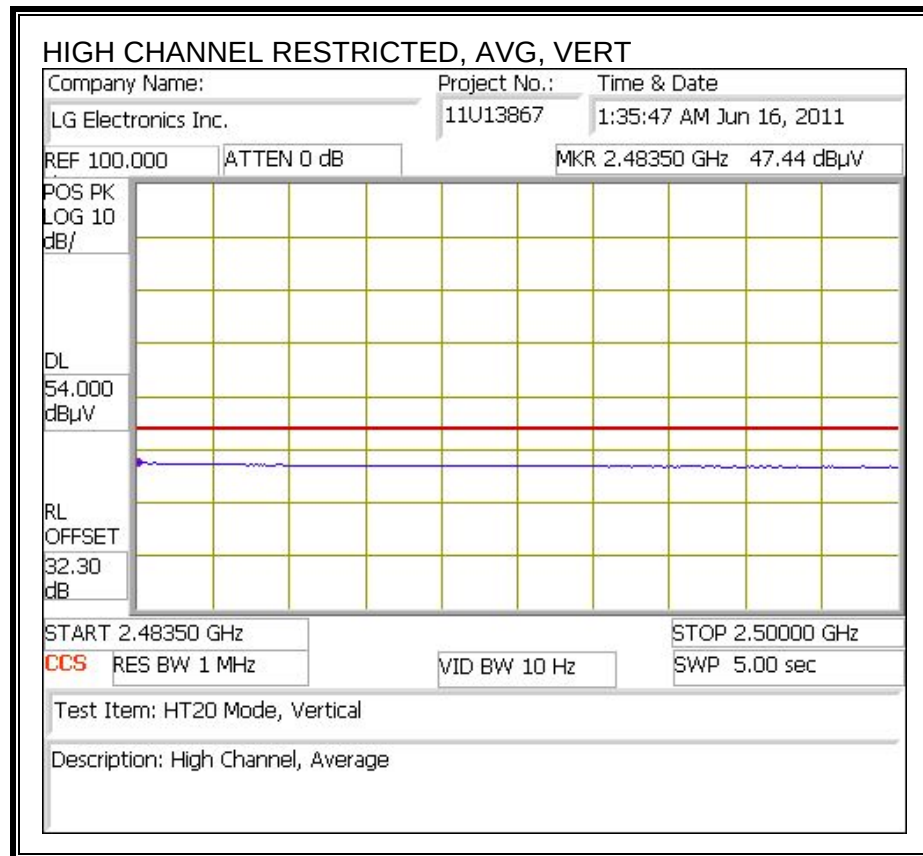
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

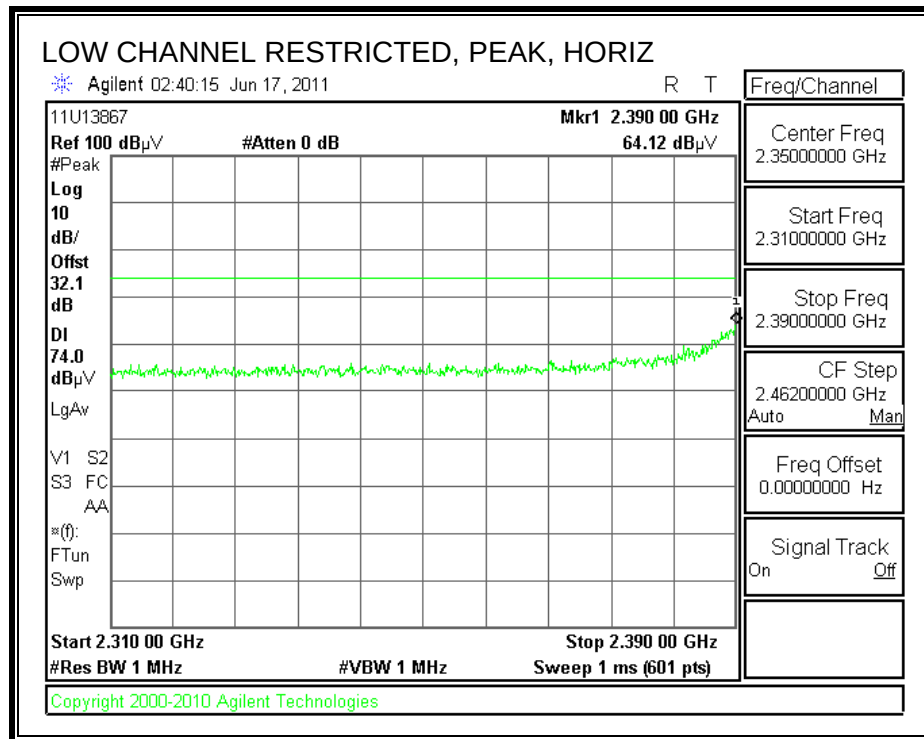


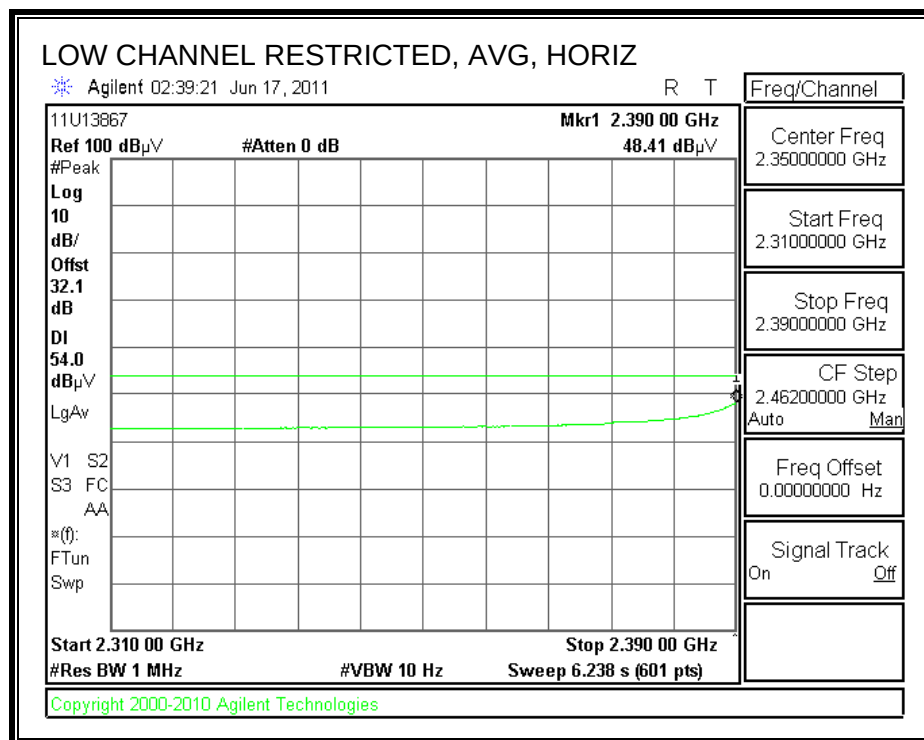
RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

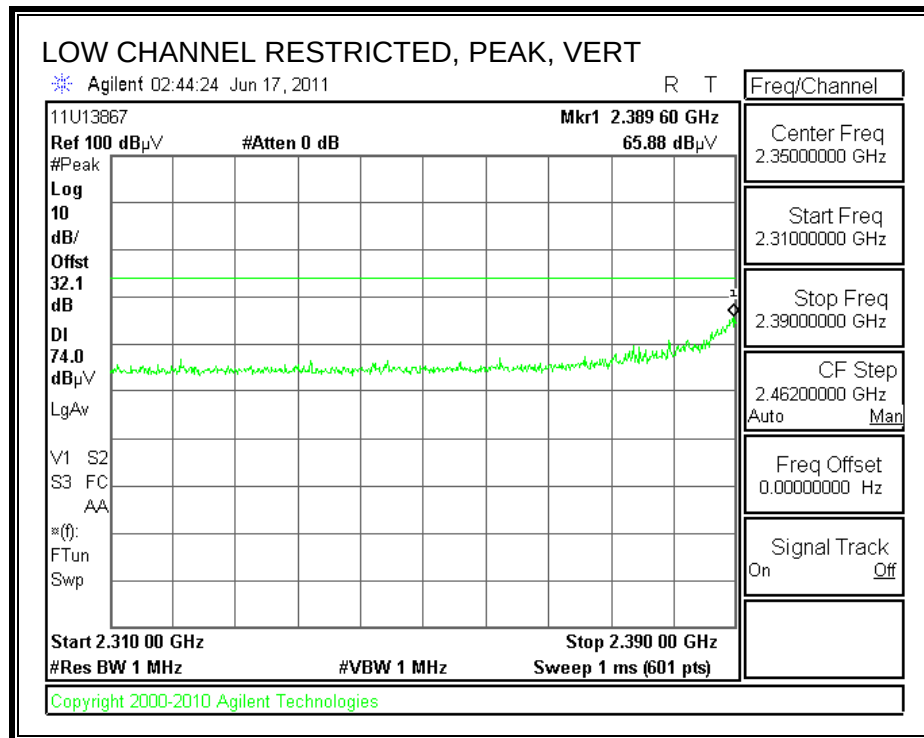


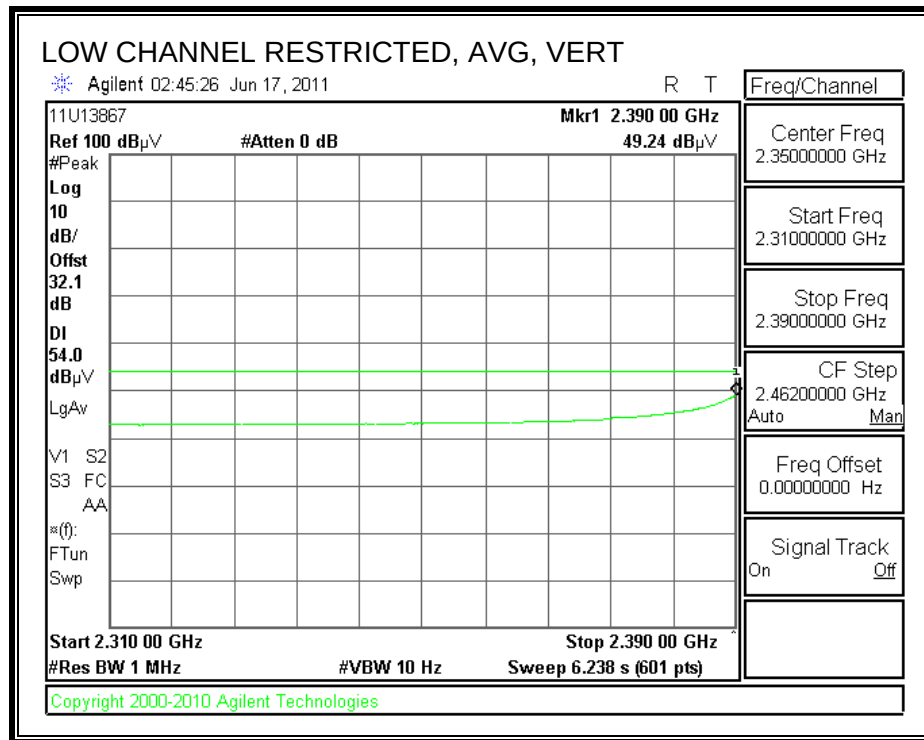
HARMONICS AND SPURIOUS EMISSIONS

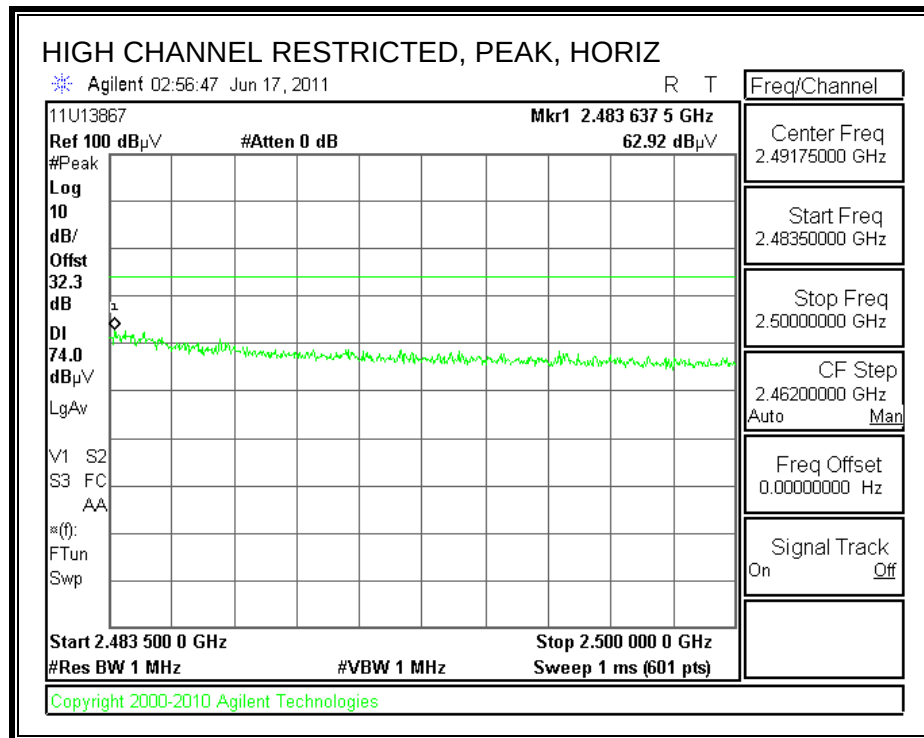
High Frequency Measurement Compliance Certification Services, Fremont 5m Chamber																			
Company:		LG																	
Project #:		11U13867																	
Date:		6/16/2011																	
Test Engineer:		Gerard Paul																	
Configuration:		Plain Cover, AC Power, Headphones																	
Mode:		TX n MODE																	
Test Equipment:																			
Horn 1-18GHz				Pre-amplifier 1-26GHz				Pre-amplifier 26-40GHz				Horn > 18GHz				Limit			
T59; S/N: 3245 @3m				T145 Agilent 3008A0056												FCC 15.205			
Hi Frequency Cables																			
3' cable 22807700				12' cable 22807600				20' cable 22807500				HPF				Reject Filter			
3' cable 22807700				12' cable 22807600				20' cable 22807500								R_001			
Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz ; VBW=10Hz																			
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)				
LOW CHANNEL, 2412MHz																			
4.824	3.0	39.6	28.8	32.8	5.8	-34.8	0.0	0.0	43.3	32.5	74	54	-30.7	-21.5	V				
MID CHANNEL, 2437MHz																			
4.874	3.0	42.6	29.1	32.8	5.8	-34.9	0.0	0.0	46.4	32.9	74	54	-27.6	-21.1	V				
7.311	3.0	42.8	29.8	35.2	7.3	-34.7	0.0	0.0	50.6	37.6	74	54	-23.4	-16.4	V				
4.874	3.0	39.7	27.3	32.8	5.8	-34.9	0.0	0.0	43.5	31.1	74	54	-30.5	-22.9	H				
HIGH CHANNEL, 2462MHz																			
4.924	3.0	42.3	29.8	32.8	5.9	-34.9	0.0	0.0	46.2	33.7	74	54	-27.8	-20.3	V				
7.386	3.0	44.8	30.7	35.3	7.3	-34.6	0.0	0.0	52.8	38.7	74	54	-21.2	-15.3	V				
Rev. 07.22.09																			
f	Measurement Frequency					Amp	Preamp Gain					Avg Lim	Average Field Strength Limit						
Dist	Distance to Antenna					D Corr	Distance Correct to 3 meters					Pk Lim	Peak Field Strength Limit						
Read	Analyzer Reading					Avg	Average Field Strength @ 3 m					Avg Mar	Margin vs. Average Limit						
AF	Antenna Factor					Peak	Calculated Peak Field Strength					Pk Mar	Margin vs. Peak Limit						
CL	Cable Loss					HPF	High Pass Filter												

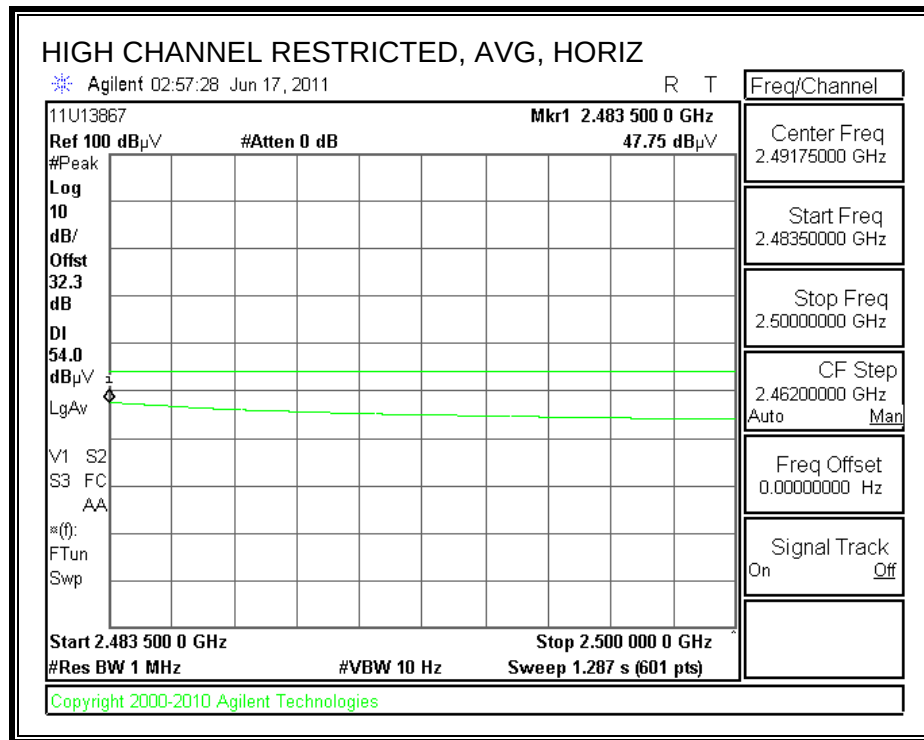
INDUCTIVE COVER**RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)**

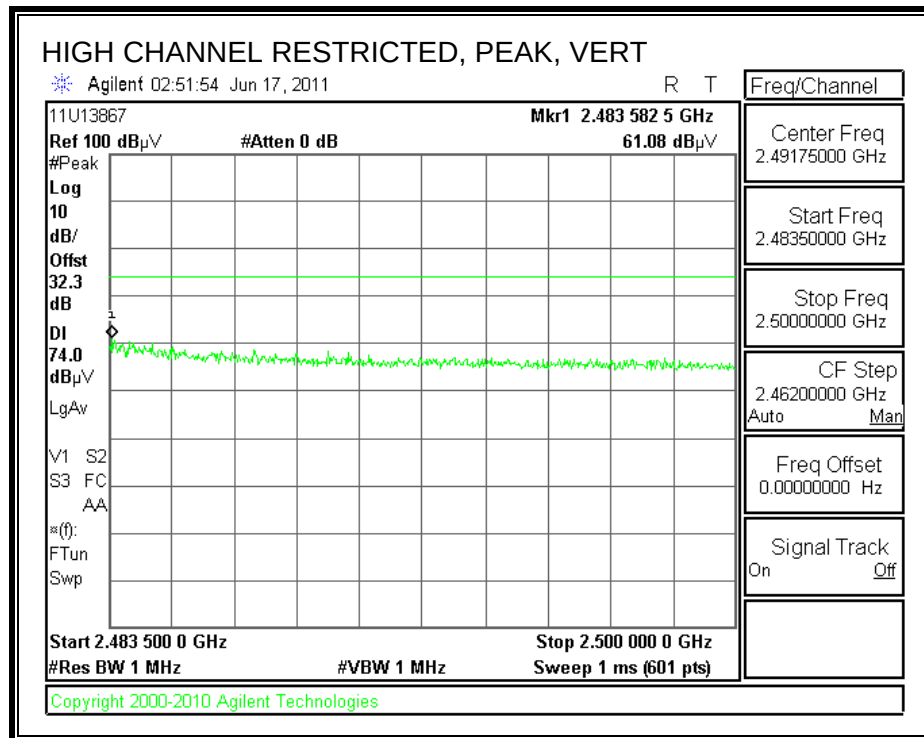


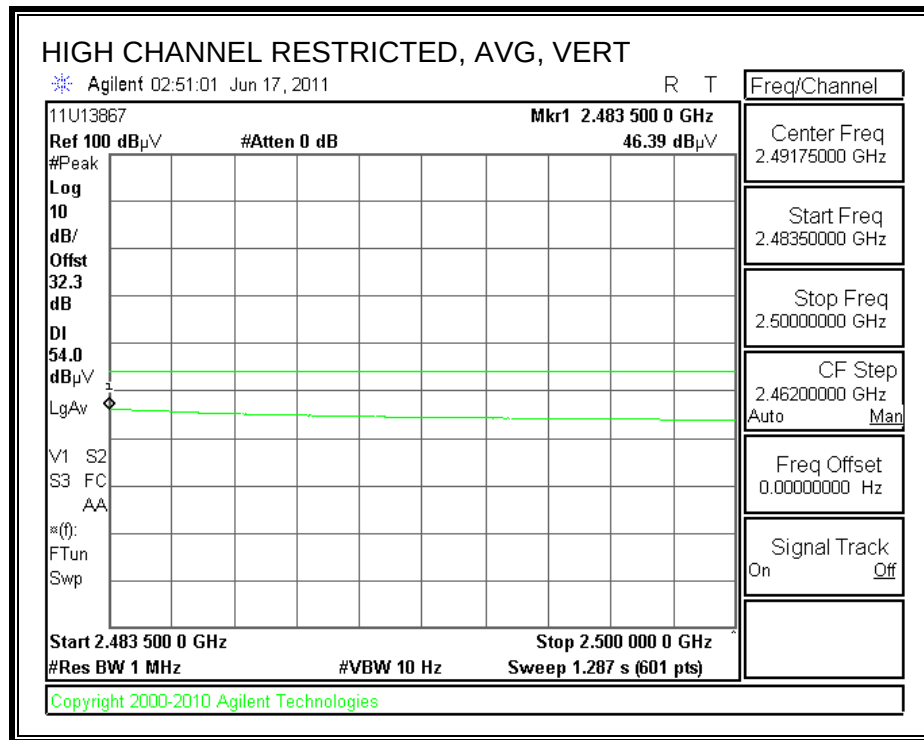
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

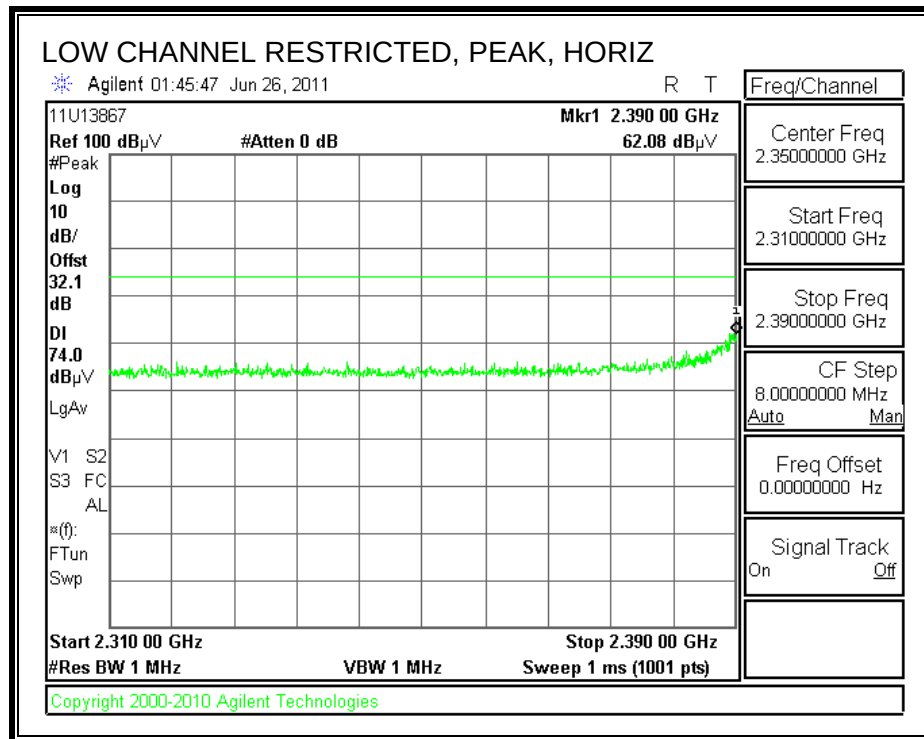


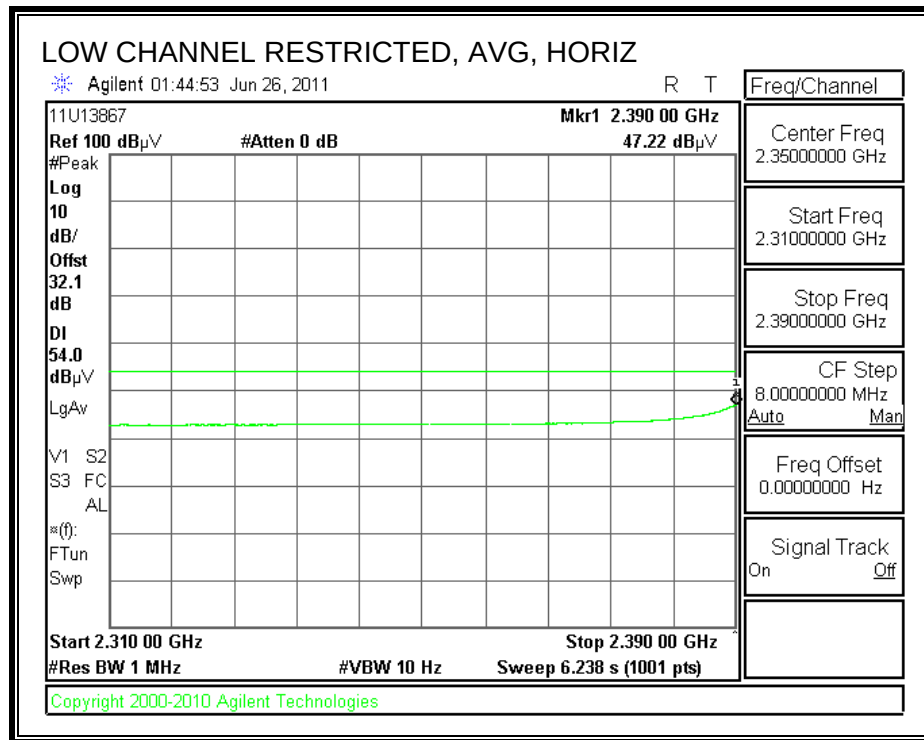
RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

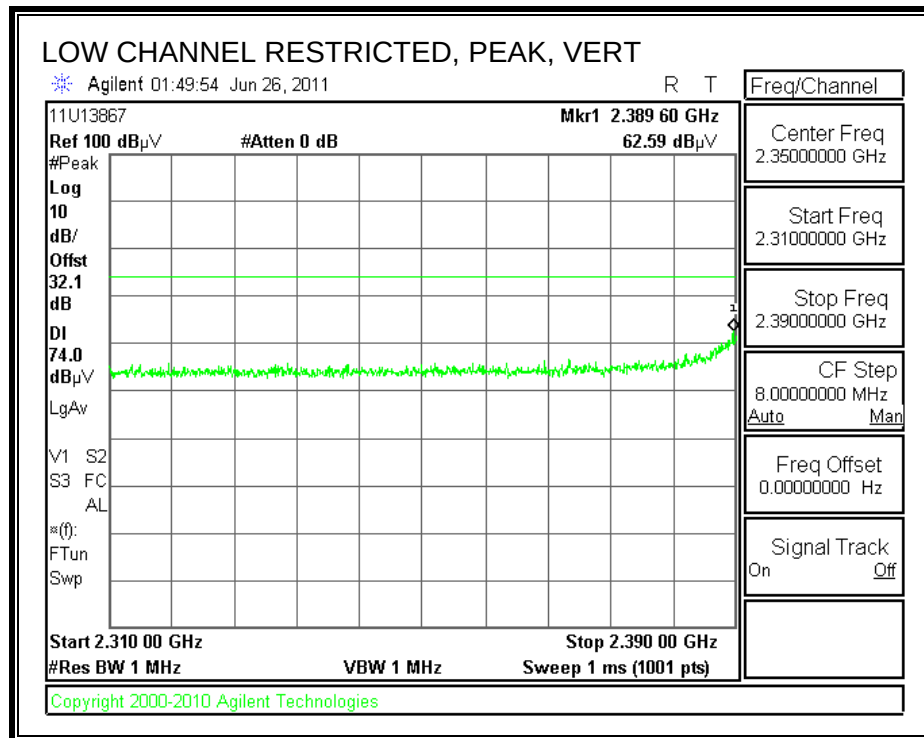


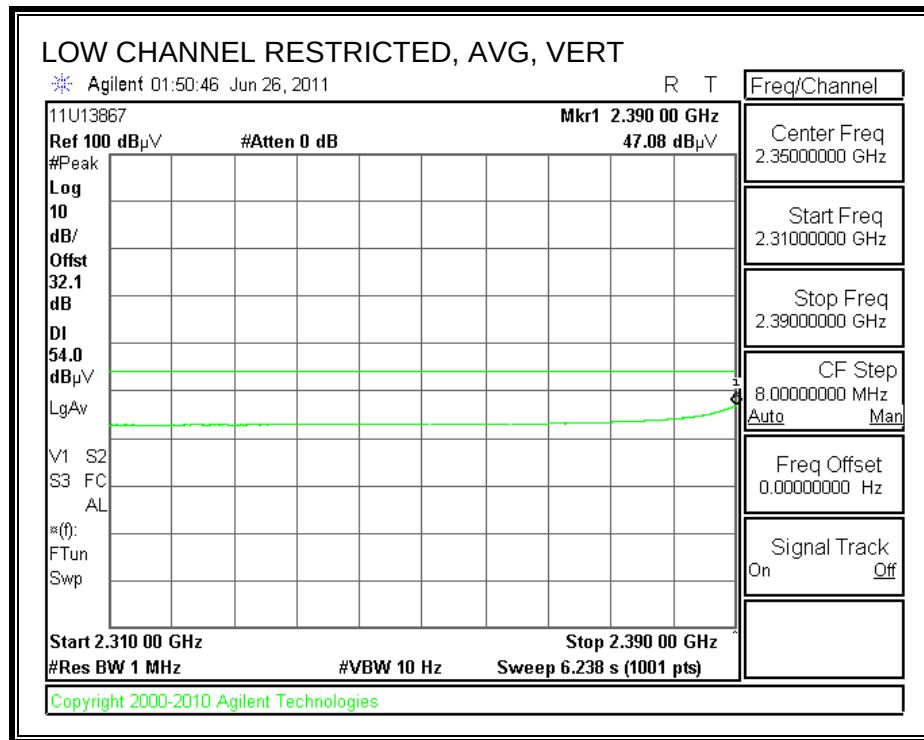
HARMONICS AND SPURIOUS EMISSIONS

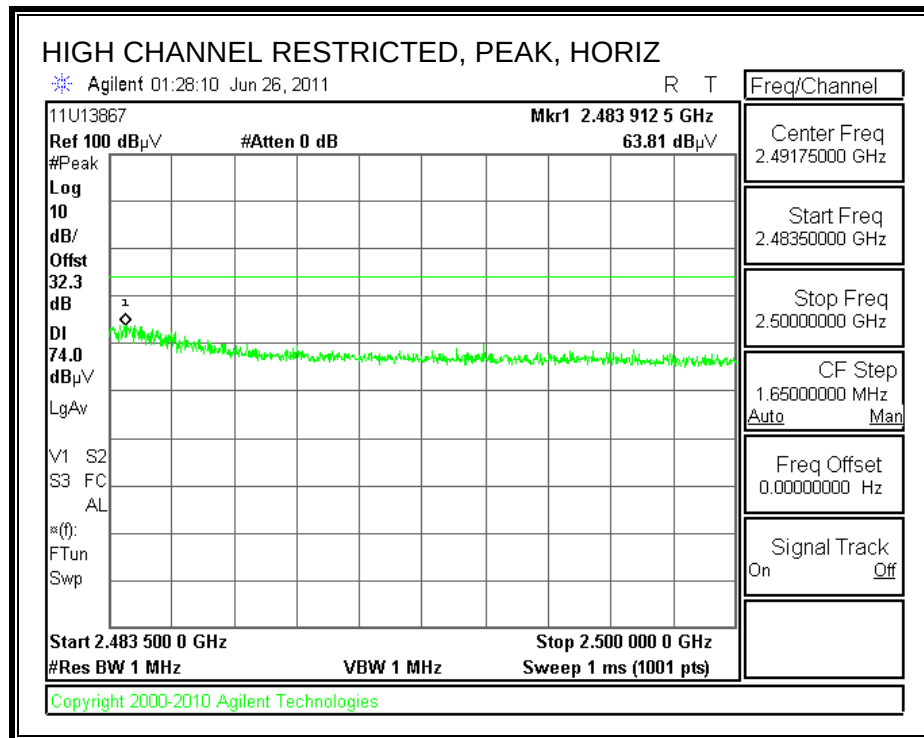
High Frequency Measurement																
Compliance Certification Services, Fremont 5m Chamber																
Company:		LG														
Project #:		11U13867														
Date:		6/17/2011														
Test Engineer:		Gerard Paul														
Configuration:		Inductive Cover, AC Power, Headphones														
Mode:		TX n MODE														
Test Equipment:																
Horn 1-18GHz			Pre-amplifier 1-26GHz			Pre-amplifier 26-40GHz			Horn > 18GHz			Limit				
T59; S/N: 3245 @3m			T145 Agilent 3008A005c									FCC 15.205				
Hi Frequency Cables																
3' cable 22807700			12' cable 22807600			20' cable 22807500			HPF			Reject Filter			Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz; VBW=10Hz	
3' cable 22807700			12' cable 22807600			20' cable 22807500						R_001				
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)	
LOW CHANNEL, 2412MHz																
4.824	3.0	40.2	28.7	32.8	5.8	-34.8	0.0	0.0	43.9	32.4	74	54	-30.1	-21.6	V	
MID CHANNEL, 2437MHz																
4.874	3.0	41.4	28.2	32.8	5.8	-34.9	0.0	0.0	45.2	32.0	74	54	-28.8	-22.0	V	
7.311	3.0	47.6	31.6	35.2	7.3	-34.7	0.0	0.0	55.4	39.4	74	54	-18.6	-14.6	V	
HIGH CHANNEL, 2462MHz																
4.924	3.0	40.8	28.1	32.8	5.9	-34.9	0.0	0.0	44.6	32.0	74	54	-29.4	-22.0	V	
7.386	3.0	44.8	30.9	35.3	7.3	-34.6	0.0	0.0	52.7	38.8	74	54	-21.3	-15.2	V	
Rev. 07.22.09																
f	Measurement Frequency					Amp	Preamp Gain					Avg Lim	Average Field Strength Limit			
Dist	Distance to Antenna					D Corr	Distance Correct to 3 meters					Pk Lim	Peak Field Strength Limit			
Read	Analyzer Reading					Avg	Average Field Strength @ 3 m					Avg Mar	Margin vs. Average Limit			
AF	Antenna Factor					Peak	Calculated Peak Field Strength					Pk Mar	Margin vs. Peak Limit			
CL	Cable Loss					HPF	High Pass Filter									

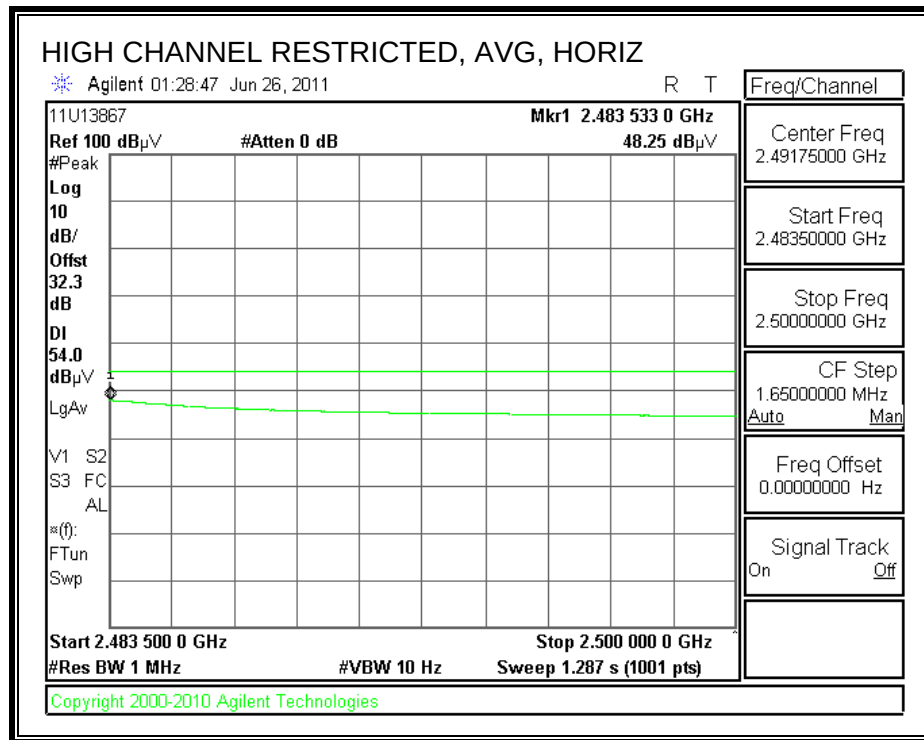
INDUCTIVE CHARGER WITH INDUCTIVE COVER**RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)**

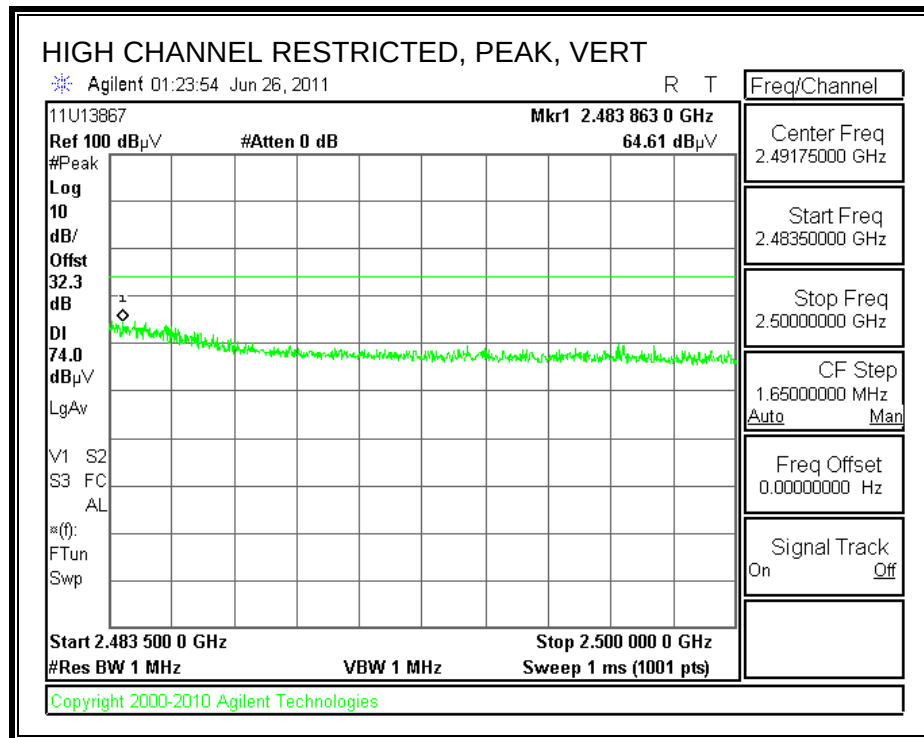


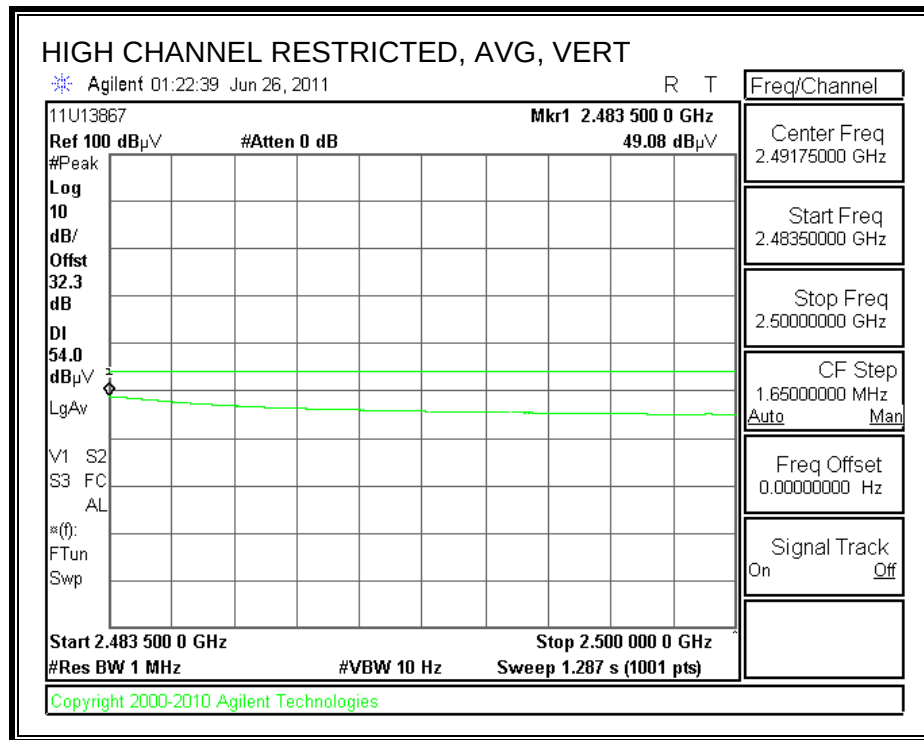
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

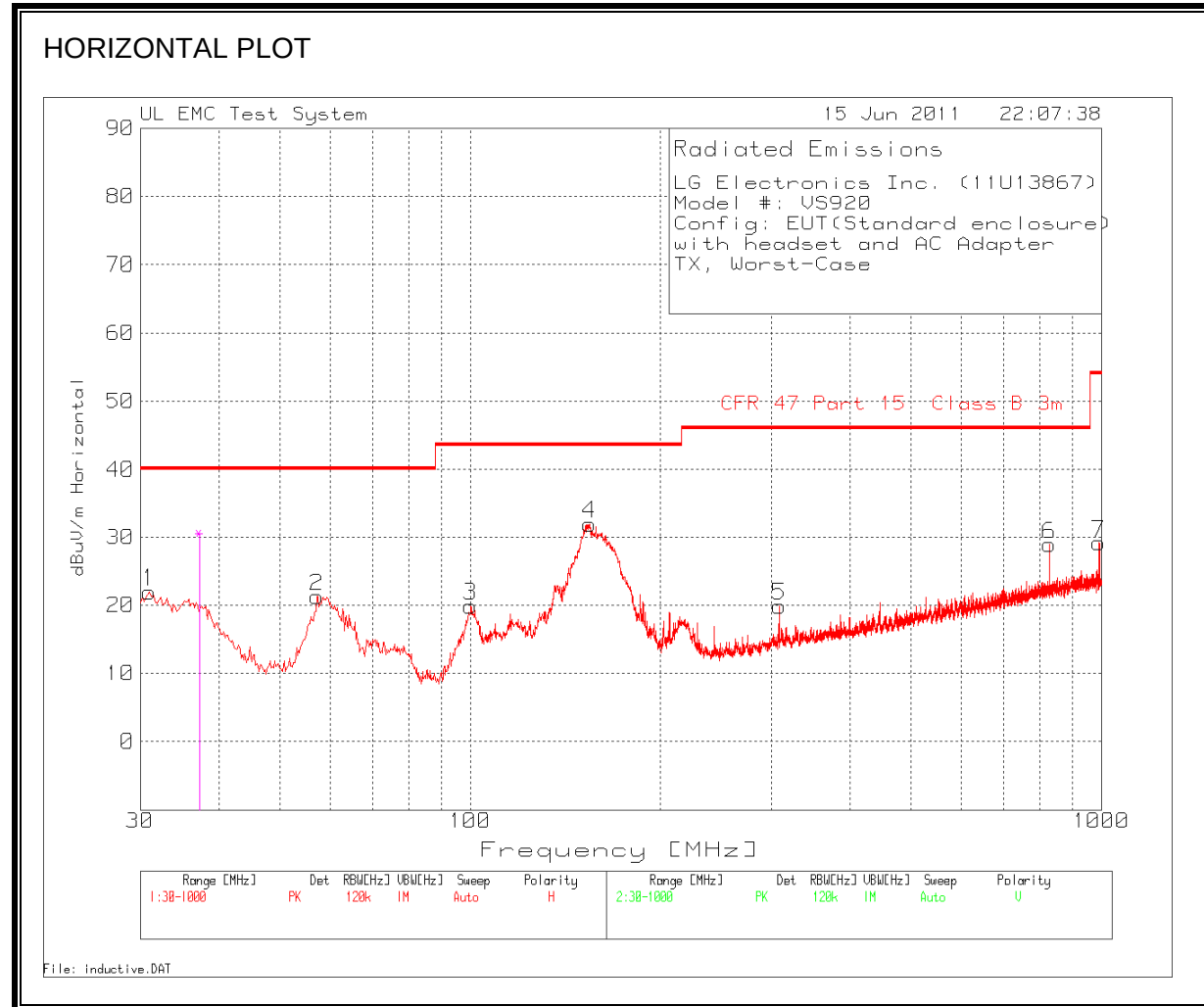


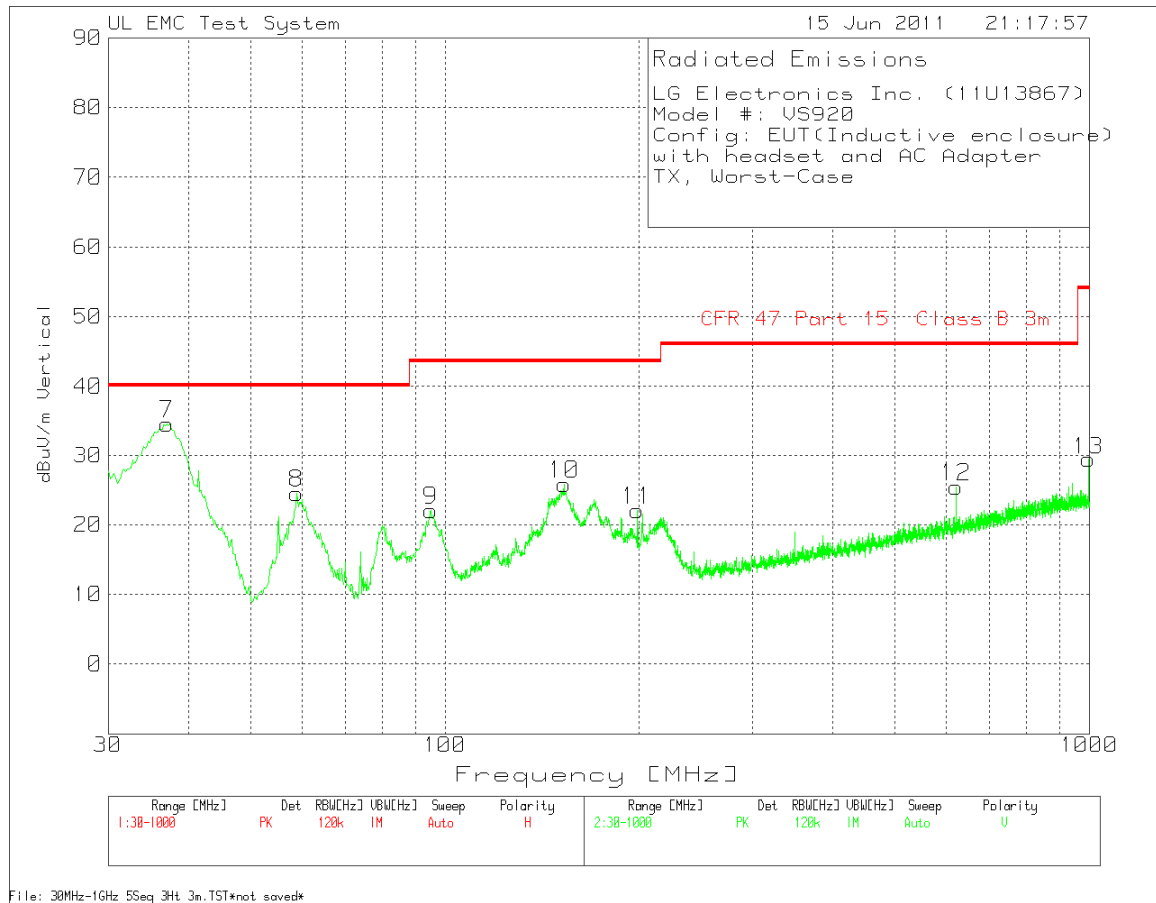
RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



HARMONICS AND SPURIOUS EMISSIONS

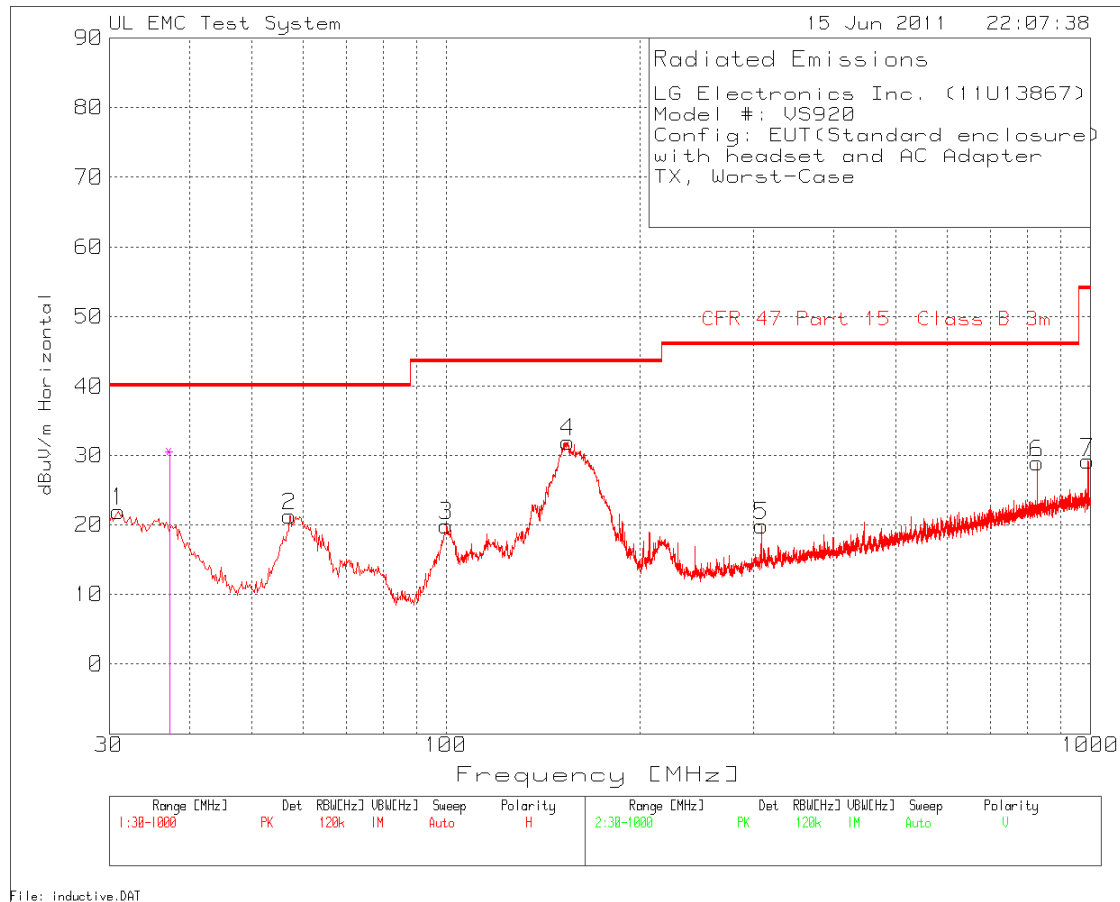
High Frequency Measurement															
Compliance Certification Services, Fremont 5m Chamber															
Company:		LG Electronics Inc.													
Project #:		11U13867													
Date:		06/25/11													
Test Engineer:		Mengistu Mekuria													
Configuration:		Inductive Cover With Charger, AC Power, Headphones													
Mode:		TX 802.11n MODE													
Test Equipment:															
Horn 1-18GHz		Pre-amplifier 1-26GHz		Pre-amplifier 26-40GHz		Horn > 18GHz				Limit					
T59; S/N: 3245 @3m		T145 Agilent 3008A0056								FCC 15.205					
Hi Frequency Cables															
3' cable 22807700		12' cable 22807600		20' cable 22807500		HPF		Reject Filter		Peak Measurement RBW=VBW=1MHz Average Measurement RBW=1MHz ; VBW=1MHz					
3' cable 22807700		12' cable 22807600		20' cable 22807500				R_001							
f GHz	Dist (m)	Read Pk dBuV	Read Avg dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fitr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
LOW CHANNEL, 2412MHz															
4.824	3.0	40.1	27.6	32.8	5.8	-34.8	0.0	0.0	43.8	31.4	74	54	-30.2	-22.6	V
4.824	3.0	38.6	26.2	32.8	5.8	-34.8	0.0	0.0	42.3	29.9	74	54	-31.7	-24.1	H
MID CHANNEL, 2437MHz															
4.874	3.0	37.6		32.8	5.8	-34.9	0.0	0.0	41.4	3.8	74	54	-32.6	-50.2	V
7.311	3.0	46.1	28.2	35.2	7.3	-34.7	0.0	0.0	53.9	36.0	74	54	-20.1	-18.0	V
4.874	3.0	37.2	31.6	32.8	5.8	-34.9	0.0	0.0	41.0	35.3	74	54	-33.0	-18.7	H
7.311	3.0	39.6	27.6	35.2	7.3	-34.7	0.0	0.0	47.4	35.4	74	54	-26.6	-18.6	H
			25.6												
HIGH CHANNEL, 2462MHz															
4.924	3.0	38.7		32.8	5.9	-34.9	0.0	0.0	42.6	3.9	74	54	-31.4	-50.1	V
7.386	3.0	41.5	28.1	35.3	7.3	-34.6	0.0	0.0	49.5	36.1	74	54	-24.5	-17.9	V
4.924	3.0	37.8	30.9	32.8	5.9	-34.9	0.0	0.0	41.6	34.7	74	54	-32.4	-19.3	H
7.386	3.0	39.1	27.9	35.3	7.3	-34.6	0.0	0.0	47.0	35.8	74	54	-27.0	-18.2	H
Rev. 07.22.09															
f	Measurement Frequency			Amp	Preamp Gain			Avg Lim	Average Field Strength Limit						
Dist	Distance to Antenna			D Corr	Distance Correct to 3 meters			Pk Lim	Peak Field Strength Limit						
Read	Analyzer Reading			Avg	Average Field Strength @ 3 m			Avg Mar	Margin vs. Average Limit						
AF	Antenna Factor			Peak	Calculated Peak Field Strength			Pk Mar	Margin vs. Peak Limit						
CL	Cable Loss			HPF	High Pass Filter										

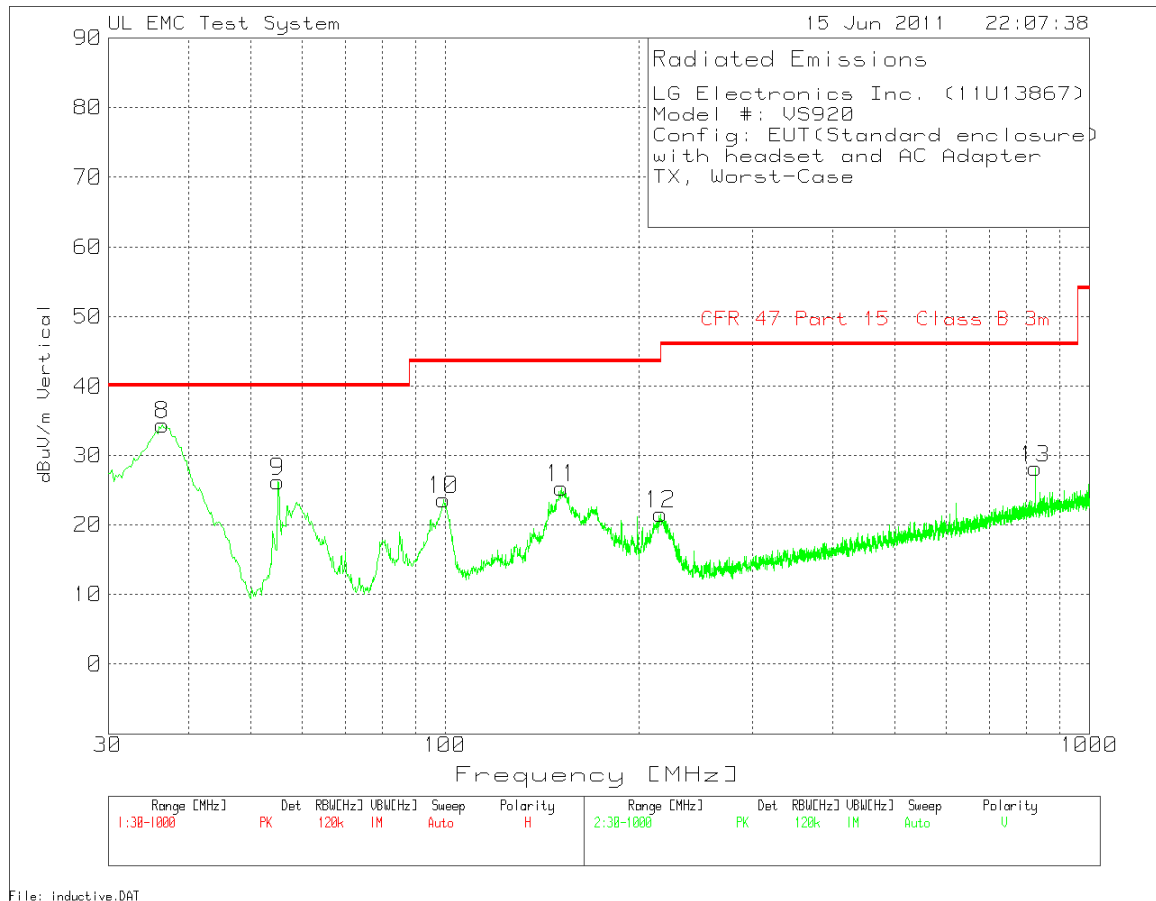
8.3. WORST-CASE BELOW 1 GHz**STANDARD COVER****SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)**

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

HORIZONTAL AND VERTICAL DATA

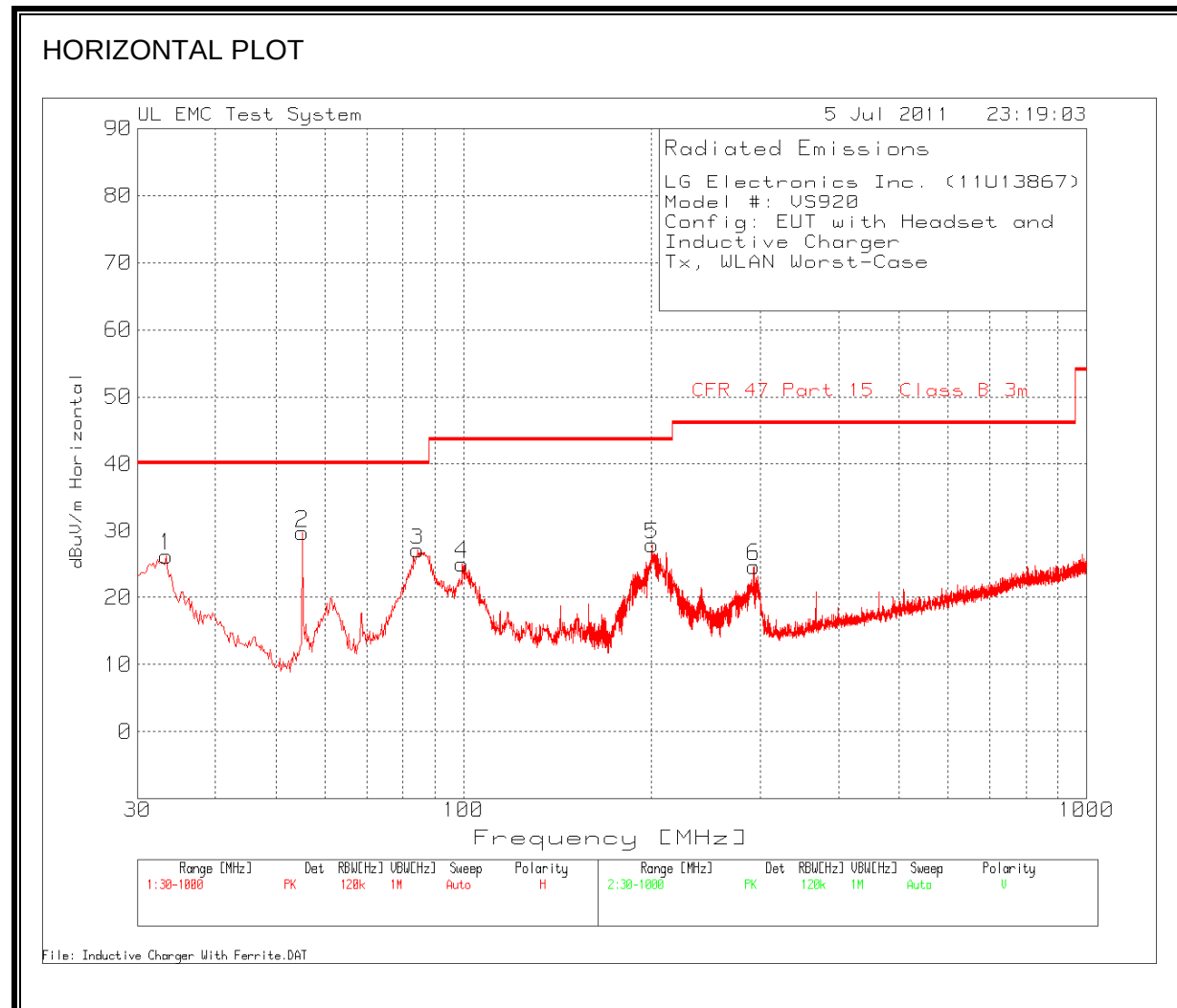
LG Electronics Inc. (11U13867)										
Model #: VS920										
Config: EUT(Standard Cover)										
with headset and AC Adapter										
TX, Worst-Case										
Range 1 30 - 1000MHz										
Test Frequency	Meter Reading	Detector	Cable below 1GHz.	PreAmp [dB]	Bilog below 1GHz. [dB]	dBuV/m	Class B 3m	Margin	Height [cm]	Polarity
30.9692	29.94	PK	0.6	-28.3	19.7	21.94	40	-18.06	200	Horz
57.2352	40.71	PK	0.8	-28.3	8	21.21	40	-18.79	300	Horz
100.1719	36.96	PK	1.1	-28.2	10	19.86	43.5	-23.64	300	Horz
154.8361	46.57	PK	1.3	-28.1	12.2	31.97	43.5	-11.53	200	Horz
308.5552	32.48	PK	1.9	-28	13.5	19.88	46	-26.12	91	Horz
828.2534	31.77	PK	3.2	-27.3	21.2	28.87	46	-17.13	91	Horz
992.8277	31.02	PK	3.5	-27.7	22.4	29.22	54	-24.78	91	Horz
Range 2 30 - 1000MHz										
Test Frequency	Meter Reading	Detector	Cable below 1GHz.	PreAmp [dB]	Bilog below 1GHz. [dB]	dBuV/m	Class B 3m	Margin	Height [cm]	Polarity
36.3969	45.27	PK	0.7	-28.3	16.8	34.47	40	-5.53	100	Vert
55.006	45.59	PK	0.8	-28.3	8.1	26.19	40	-13.81	300	Vert
99.5903	40.87	PK	1.1	-28.2	9.8	23.57	43.5	-19.93	100	Vert
151.5408	39.62	PK	1.3	-28.1	12.5	25.32	43.5	-18.18	100	Vert
216.285	36.14	PK	1.6	-28.1	11.9	21.54	46	-24.46	100	Vert
825.5396	31.02	PK	3.2	-27.3	21.2	28.12	46	-17.88	100	Vert

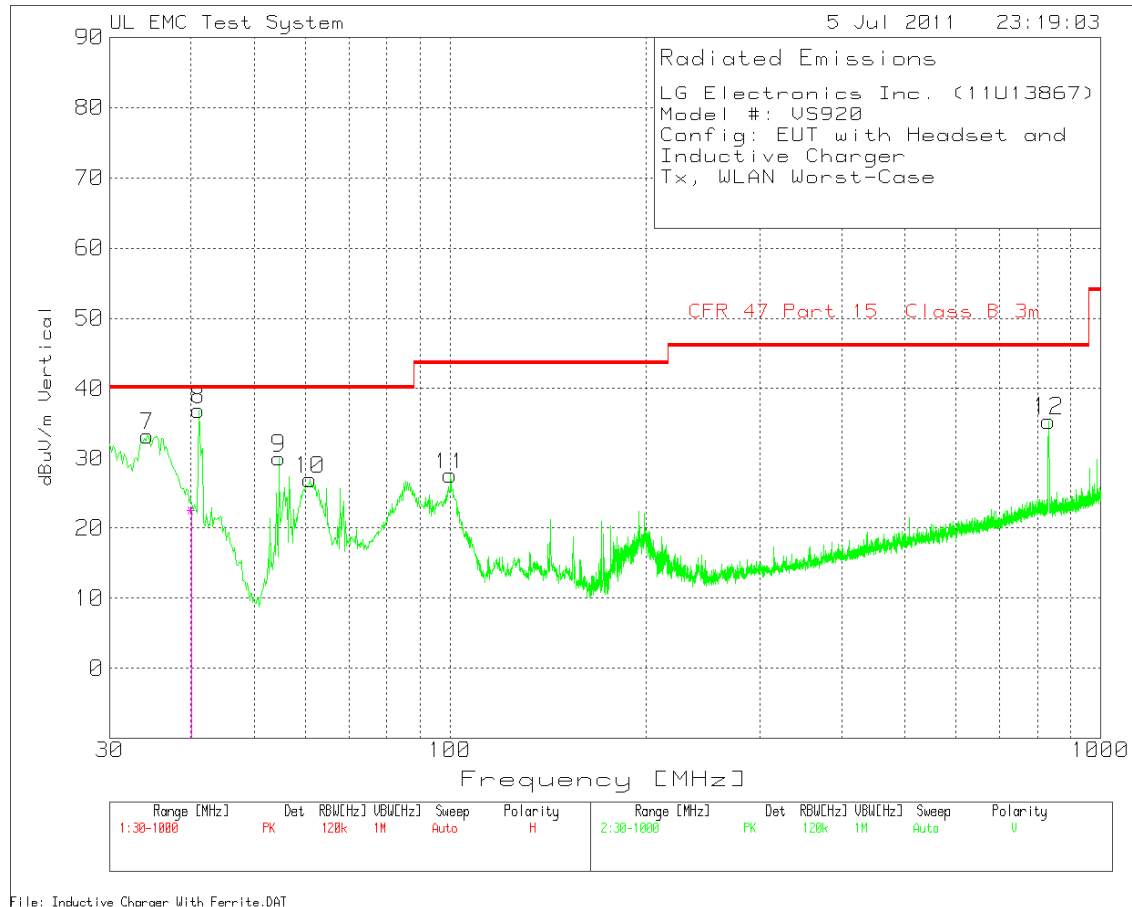
INDUCTIVE COVER**SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)****HORIZONTAL PLOT**

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

HORIZONTAL AND VERTICAL DATA

LG Electronics Inc. (11U13867)										
Model #: VS920										
Config: EUT(Inductive Cover)										
with headset and AC Adapter										
TX, Worst-Case										
Range 1 30 - 1000MHz										
Test Frequency	Meter Reading	Detector	Cable below 1GHz.	PreAmp [dB]	Bilog below 1GHz. [dB]	dBuV/m	Class B 3m	Margin	Height [cm]	Polarity
36.3969	31.48	PK	0.7	-28.3	16.8	20.68	40	-19.32	200	Horz
59.0767	39.79	PK	0.8	-28.3	7.9	20.19	40	-19.81	300	Horz
99.7842	38.26	PK	1.1	-28.2	9.9	21.06	43.5	-22.44	300	Horz
154.0608	46.12	PK	1.3	-28.1	12.2	31.52	43.5	-11.98	200	Horz
984.2986	34.7	PK	3.5	-27.6	22.4	33	54	-21	200	Horz
36.3969	31.48	PK	0.7	-28.3	16.8	20.68	40	-19.32	200	Horz
Range 2 30 - 1000MHz										
Test Frequency	Meter Reading	Detector	Cable below 1GHz.	PreAmp [dB]	Bilog below 1GHz. [dB]	dBuV/m	Class B 3m	Margin	Height [cm]	Polarity
36.9784	45.92	PK	0.7	-28.3	16.3	34.62	40	-5.38	100	Vert
58.8829	44.03	PK	0.8	-28.3	8	24.53	40	-15.47	100	Vert
95.1319	40.41	PK	1	-28.2	8.8	22.01	43.5	-21.49	100	Vert
153.0915	40.34	PK	1.3	-28.1	12.3	25.84	43.5	-17.66	200	Vert
198.8389	36.74	PK	1.5	-28.1	11.9	22.04	43.5	-21.46	100	Vert
621.0332	31.23	PK	2.8	-27.3	18.7	25.43	46	-20.57	100	Vert
998.0616	31.16	PK	3.5	-27.7	22.4	29.36	54	-24.64	100	Vert

INDUCTIVE CHARGER WITH INDUCTIVE COVER**SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)**

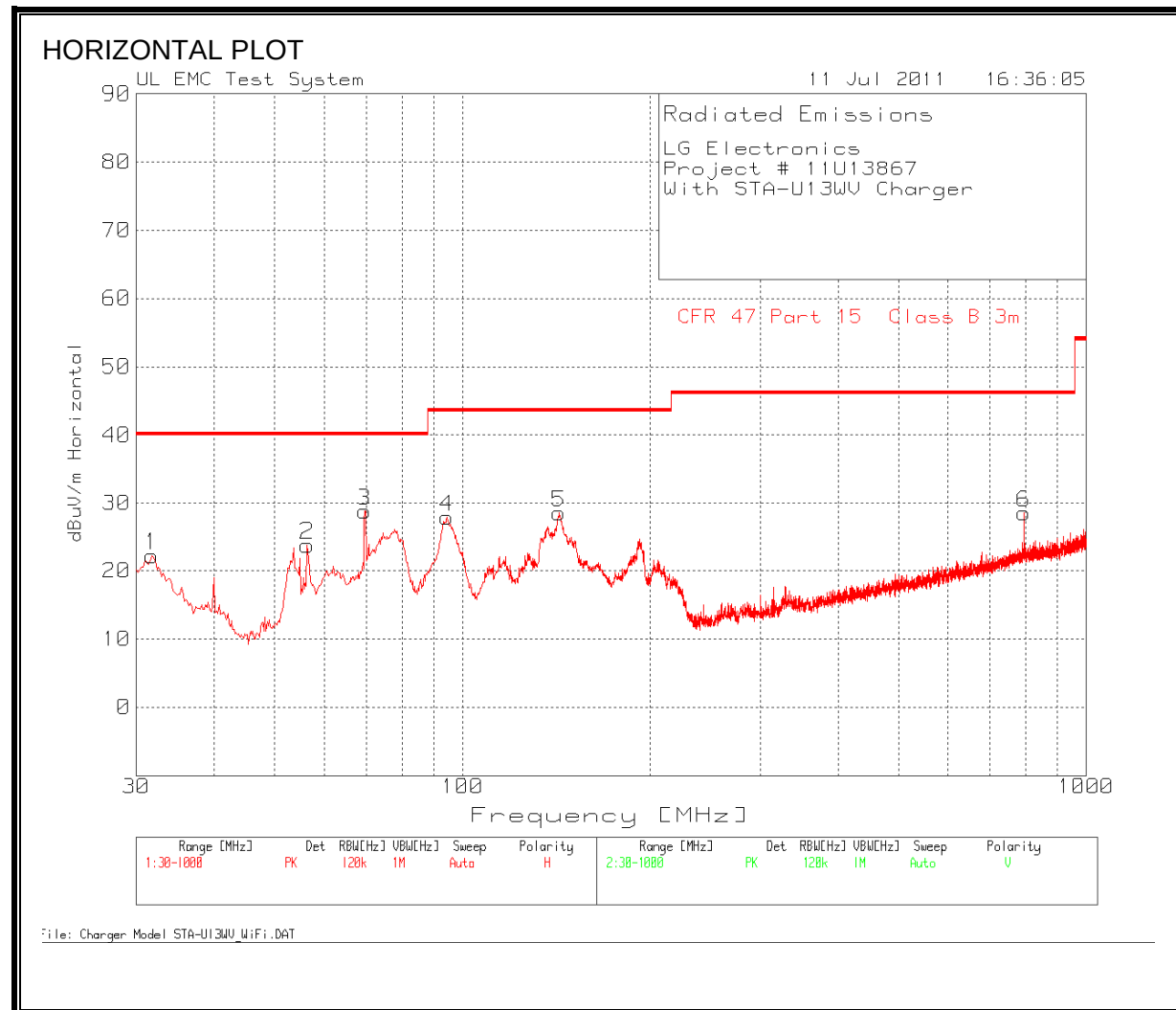
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)**VERTICAL PLOT**

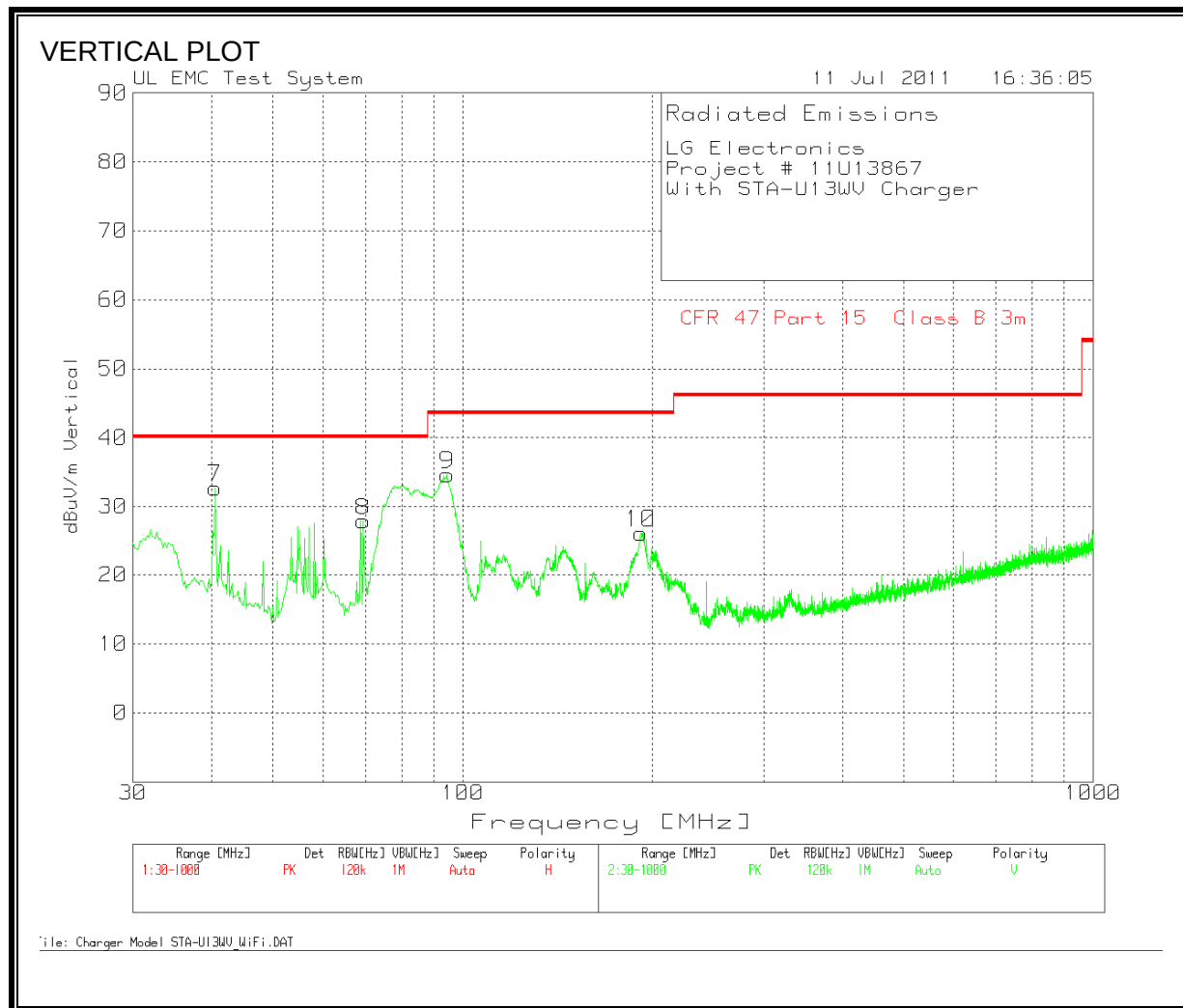
HORIZONTAL AND VERTICAL DATA

LG Electronics Inc. (11U13867)											
Model #: VS920											
Config: EUT with Headset and											
Inductive Charger											
Tx, WLAN Worst-Case											
Range 1 30 - 1000MHz											
Test Frequency	Meter Reading	Detector	Cable below 1GHz.	PreAmp [dB]	Bilog below 1GHz. [dB]	dBuV/m	Class B 3m	Margin	Height [cm]	Polarity	
33.2954	35.97	PK	0.9	-29.5	18.8	26.17	40	-13.83	200	Horz	
55.1998	50.07	PK	1.1	-29.4	7.9	29.67	40	-10.33	400	Horz	
84.4704	47.62	PK	1.3	-29.4	7.5	27.02	40	-12.98	200	Horz	
99.5903	42.86	PK	1.4	-29.3	10	24.96	43.5	-18.54	300	Horz	
200.9712	42.72	PK	2	-28.9	12	27.82	43.5	-15.68	200	Horz	
292.466	37.71	PK	2.4	-28.6	13.1	24.61	46	-21.39	100	Horz	
Range 2 30 - 1000MHz											
Test Frequency	Meter Reading	Detector	Cable below 1GHz.	PreAmp [dB]	Bilog below 1GHz. [dB]	dBuV/m	Class B 3m	Margin	Height [cm]	Polarity	
34.2646	43.46	PK	0.9	-29.5	18.4	33.26	40	-6.74	100	Vert	
41.0492	52.05	PK	0.9	-29.4	13.4	36.95	40	-3.05	100	Vert	
54.6183	50.5	PK	1.1	-29.4	7.9	30.1	40	-9.9	200	Vert	
61.0152	47.29	PK	1.2	-29.4	7.9	26.99	40	-13.01	100	Vert	
100.1719	45.23	PK	1.5	-29.3	10.1	27.53	43.5	-15.97	100	Vert	
833.0995	39.01	PK	4	-28.8	21.2	35.41	46	-10.59	400	Vert	
Test Frequency	Meter Reading	Detector	Cable below 1GHz.	PreAmp [dB]	Bilog below 1GHz. [dB]	dBuV/m	Class B 3m	Margin	Azimuth [Degs]	Height [cm]	Polarity
40.0842	37.02	QP	0.9	-29.4	14	22.52	40	-17.48	206	100	Vert

CHARGER STA-U13WV

Worst-Case with Inductive Cover

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

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

HORIZONTAL AND VERTICAL DATA

LG Electronics						Test Engineer: Vien Tran				
Project # 11U13867						Date: 07/11/2011				
With STA-U13WV Charger										
WiFi										
30 - 1000MHz - HORIZONTAL										
Test Frequency	Meter Reading	Detector	5m B Cable below 1GHz.TX T [dB]	5m B T10 PreAmp below 1GHz.TX T [dB]	5m B T122 Bilog below 1GHz.TX T [dB]	dBuV/m	CFR 47 Part 15 Class B 3m	Margin	Height [cm]	Polarity
31.7446	31.28	PK	0.9	-29.5	19.50	22.18	40.0	-17.82	91	Horz
56.3629	44.14	PK	1.1	-29.4	7.90	23.74	40.0	-16.26	200	Horz
69.7382	48.62	PK	1.2	-29.4	8.30	28.72	40.0	-11.28	200	Horz
94.3565	47.19	PK	1.4	-29.3	8.60	27.89	43.5	-15.61	200	Horz
143.0116	42.94	PK	1.7	-29.2	13.00	28.44	43.5	-15.06	200	Horz
794.9121	32.63	PK	3.9	-28.9	20.90	28.53	46.0	-17.47	91	Horz
30 - 1000MHz - VERTICAL										
Test Frequency	Meter Reading	Detector	5m B Cable below 1GHz.TX T [dB]	5m B T10 PreAmp below 1GHz.TX T [dB]	5m B T122 Bilog below 1GHz.TX T [dB]	dBuV/m	CFR 47 Part 15 Class B 3m	Margin	Height [cm]	Polarity
40.4676	47.43	PK	0.9	-29.4	13.8	32.73	40.0	-7.27	109	Vert
69.5444	47.75	PK	1.2	-29.4	8.3	27.85	40.0	-12.15	200	Vert
94.5504	53.85	PK	1.4	-29.3	8.7	34.65	43.5	-8.85	109	Vert
191.6667	41.88	PK	1.9	-29.0	11.3	26.08	43.5	-17.42	109	Vert
PK - Peak detector										
QP - Quasi-Peak detector										
LnAv - Linear Average detector										
LgAv - Log Average detector										
Av - Average detector										
CAV - CISPR Average detector										
RMS - RMS detection										
CRMS - CISPR RMS detection										
Text File: Below 1GHz_WiFi.TXT										
File: Charger Model STA-U13WV_WiFi.DAT										

9. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

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

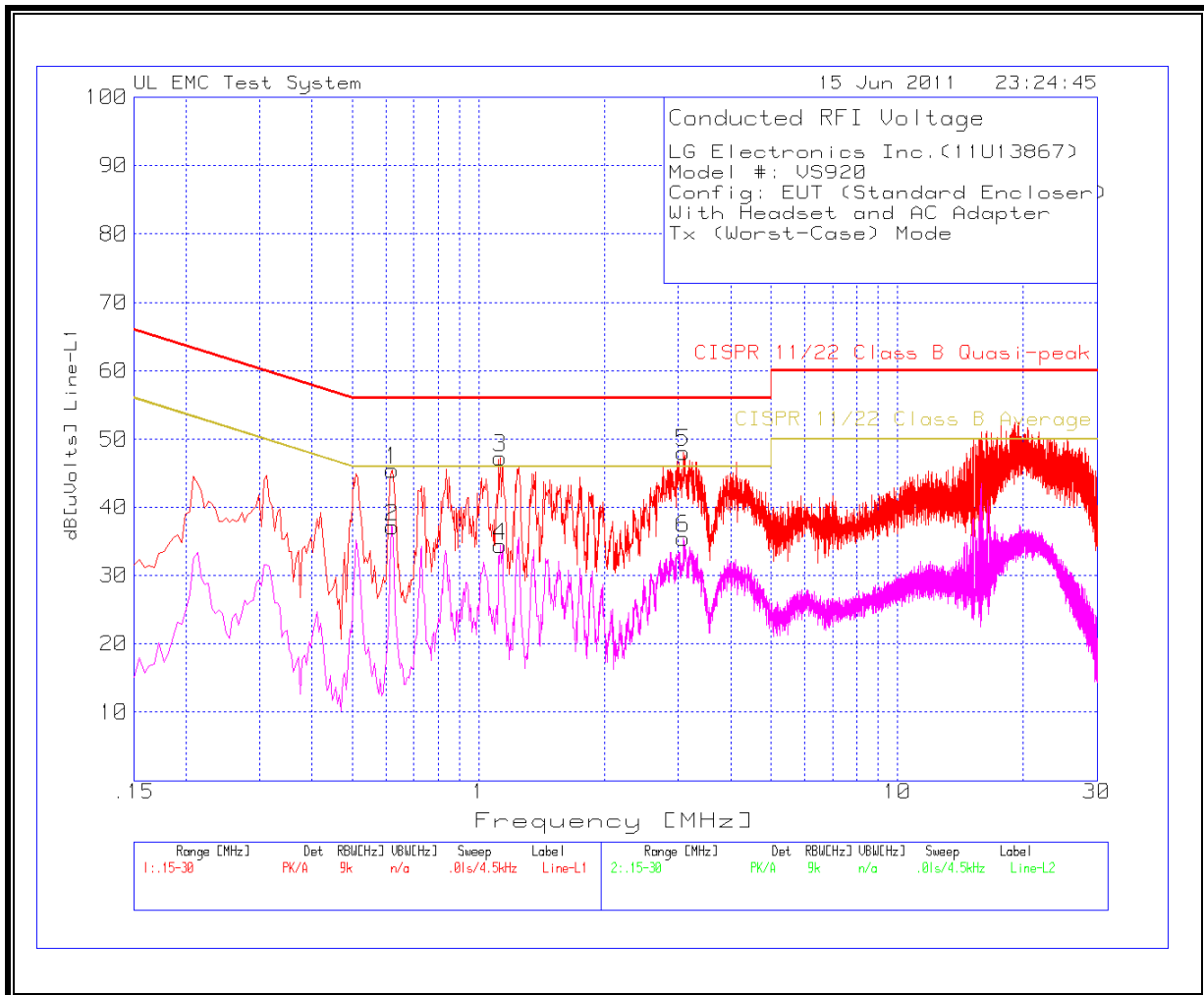
^{*} Decreases with the logarithm of the frequency.

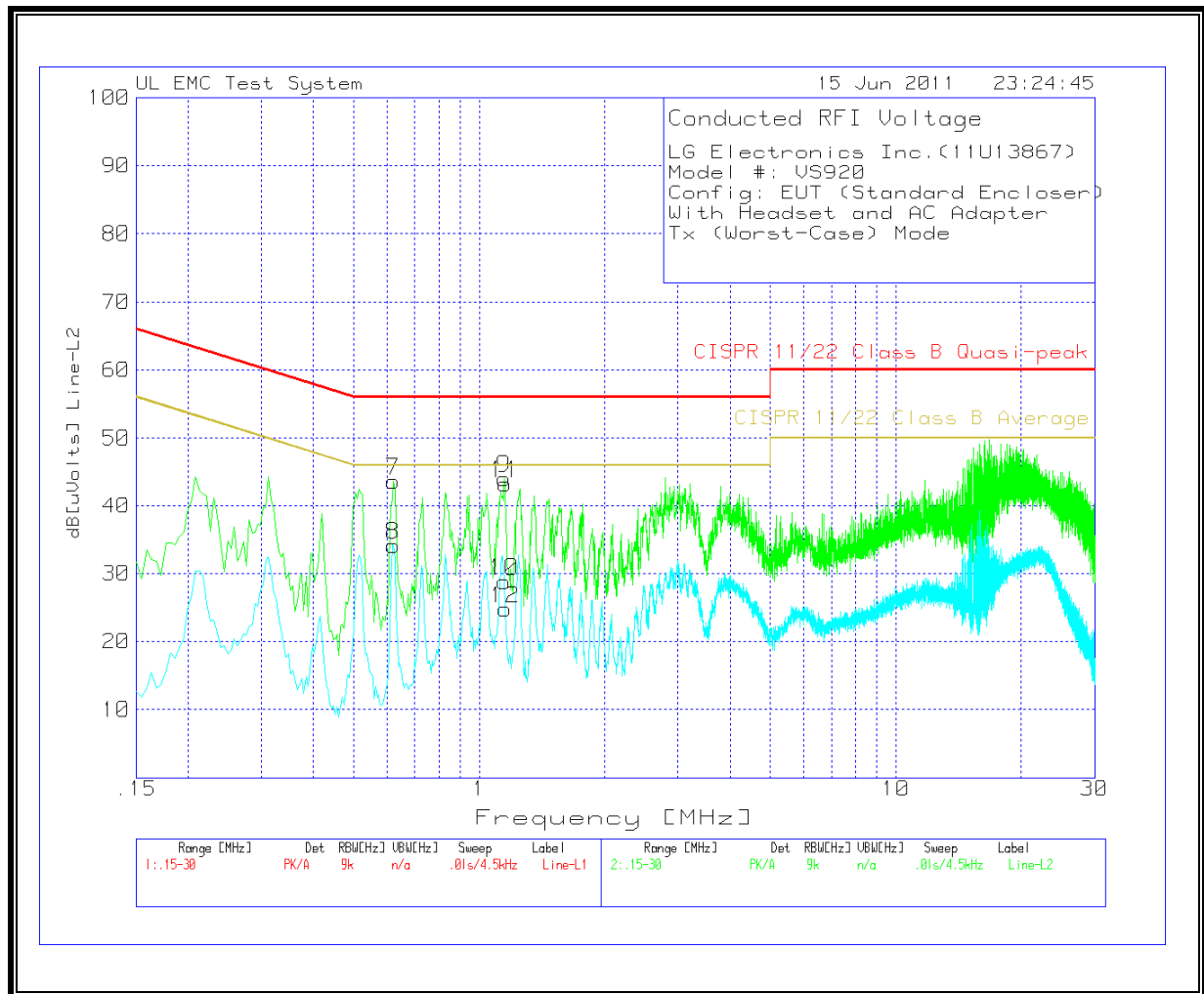
TEST PROCEDURE

ANSI C63.4

RESULTS**STANDARD COVER****6 WORST EMISSIONS**

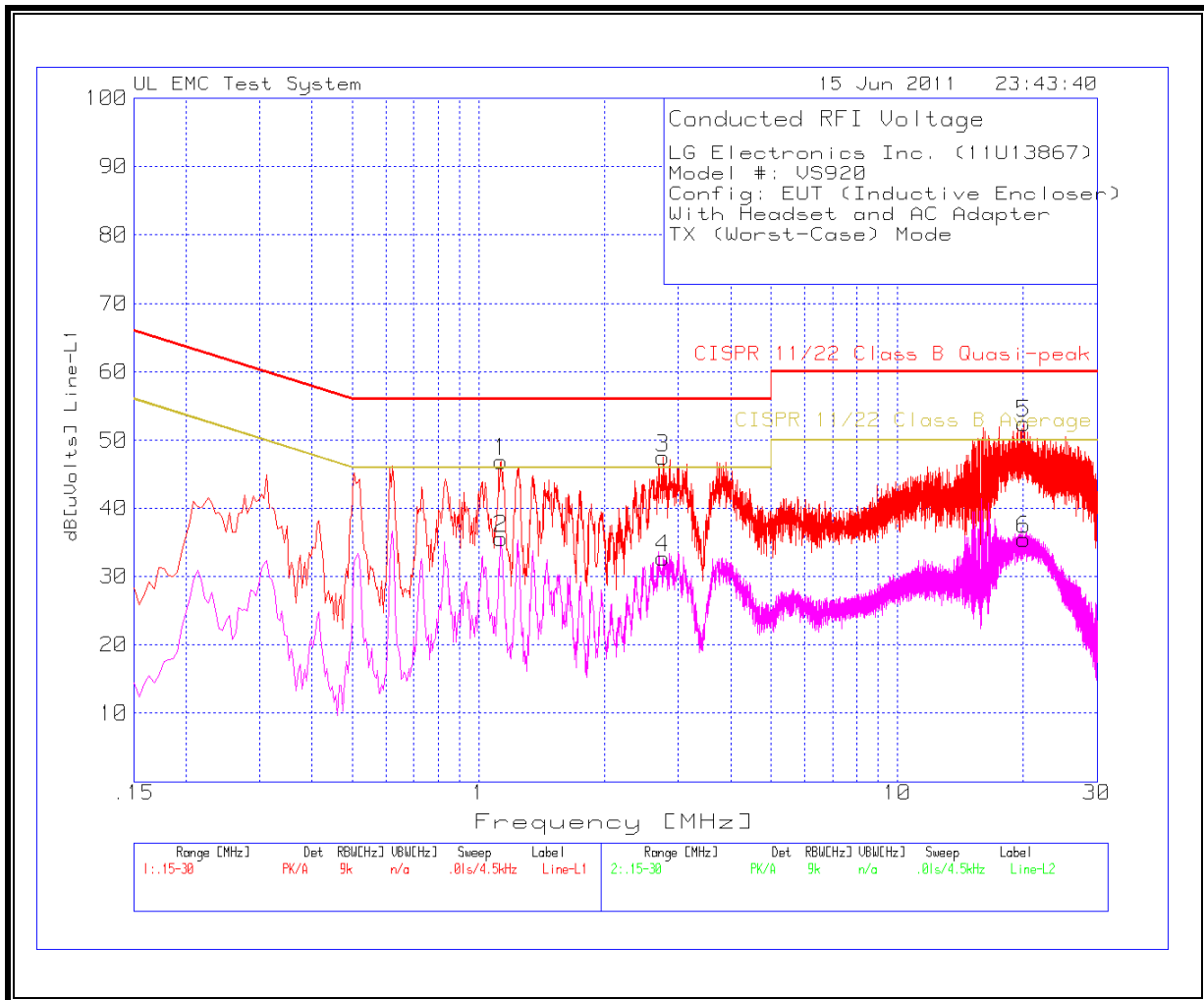
LG Electronics Inc.(11U13867)									
Model #: VS920									
Config: EUT (Standard Encloser)									
With Headset and AC Adapter									
Tx (Worst-Case) Mode									
Line-L1 .15 - 30MHz									
Test Frequency	Meter Reading	Detector	LISN [dB]	Emission Cable [dB]	dB[uVolts]	Class B Quasi-peak	Margin	Class B Average	Margin
0.6225	45.45	PK	0	0	45.45	56	-10.55	46	-0.55
0.6225	37.05	Av	0	0	37.05	-	-	46	-8.95
1.1265	47.28	PK	0	0	47.28	56	-8.72	46	1.28
1.1265	34.31	Av	0	0	34.31	-	-	46	-11.69
3.0885	48.1	PK	0	0	48.1	56	-7.9	46	2.1
3.0885	35.39	Av	0	0	35.39	-	-	46	-10.61
Line-L2 .15 - 30MHz									
Test Frequency	Meter Reading	Detector	LISN [dB]	Emission Cable [dB]	dB[uVolts]	Class B Quasi-peak	Margin	Class B Average	Margin
0.6225	43.74	PK	0	0	43.74	56	-12.26	46	-2.26
0.6225	34.12	Av	0	0	34.12	-	-	46	-11.88
1.149	44.06	PK	0	0	44.06	56	-11.94	46	-1.94
1.149	28.8	Av	0	0	28.8	-	-	46	-17.2
1.1535	43.32	PK	0	0	43.32	56	-12.68	46	-2.68
1.1535	24.74	Av	0	0	24.74	-	-	46	-21.26

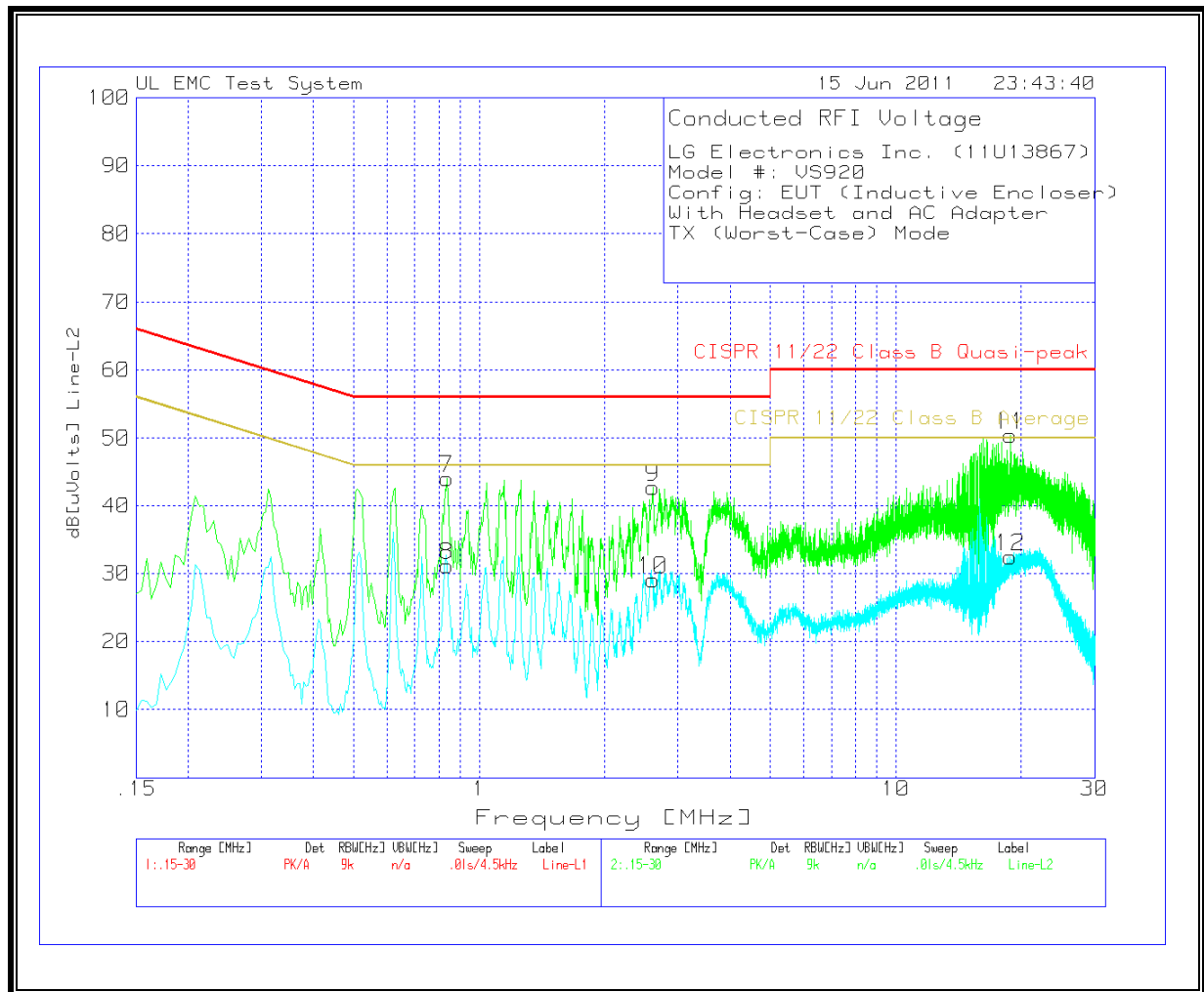
LINE 1 RESULTS

LINE 2 RESULTS

INDUCTIVE COVER**6 WORST EMISSIONS**

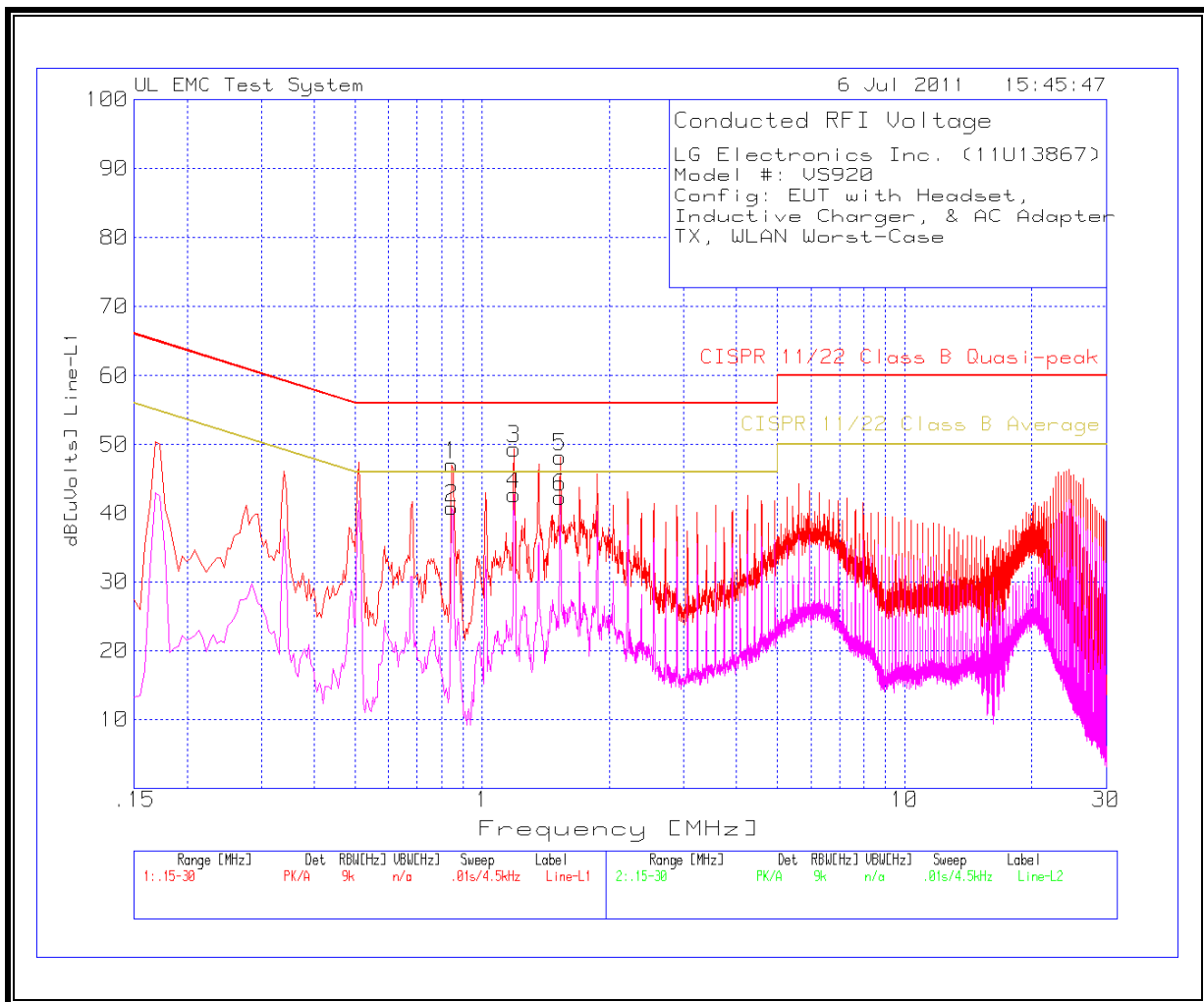
LG Electronics Inc. (11U13867)									
Model #: VS920									
Config: EUT (Inductive Cover)									
With Headset and AC Adapter									
TX (Worst-Case) Mode									
Line-L1 .15 - 30MHz									
Test Frequency	Meter Reading	Detector	LISN [dB]	Emission Cable [dB]	dB[uVolts]	Class B Quasi-peak	Margin	Class B Average	Margin
1.131	46.89	PK	0	0	46.89	56	-9.11	46	0.89
1.131	35.5	Av	0	0	35.5	-	-	46	-10.5
2.76	47.51	PK	0	0	47.51	56	-8.49	46	1.51
2.76	32.73	Av	0	0	32.73	-	-	46	-13.27
20.0175	52.55	PK	0	0	52.55	60	-7.45	50	2.55
20.0175	35.47	Av	0	0	35.47	-	-	50	-14.53
Line-L2 .15 - 30MHz									
Test Frequency	Meter Reading	Detector	LISN [dB]	Emission Cable [dB]	dB[uVolts]	Class B Quasi-peak	Margin	Class B Average	Margin
0.8385	44.03	PK	0	0	44.03	56	-11.97	46	-1.97
0.8385	31.15	Av	0	0	31.15	-	-	46	-14.85
2.607	42.74	PK	0	0	42.74	56	-13.26	46	-3.26
2.607	29.1	Av	0	0	29.1	-	-	46	-16.9
18.852	50.38	PK	0	0	50.38	60	-9.62	50	0.38
18.852	32.4	Av	0	0	32.4	-	-	50	-17.6

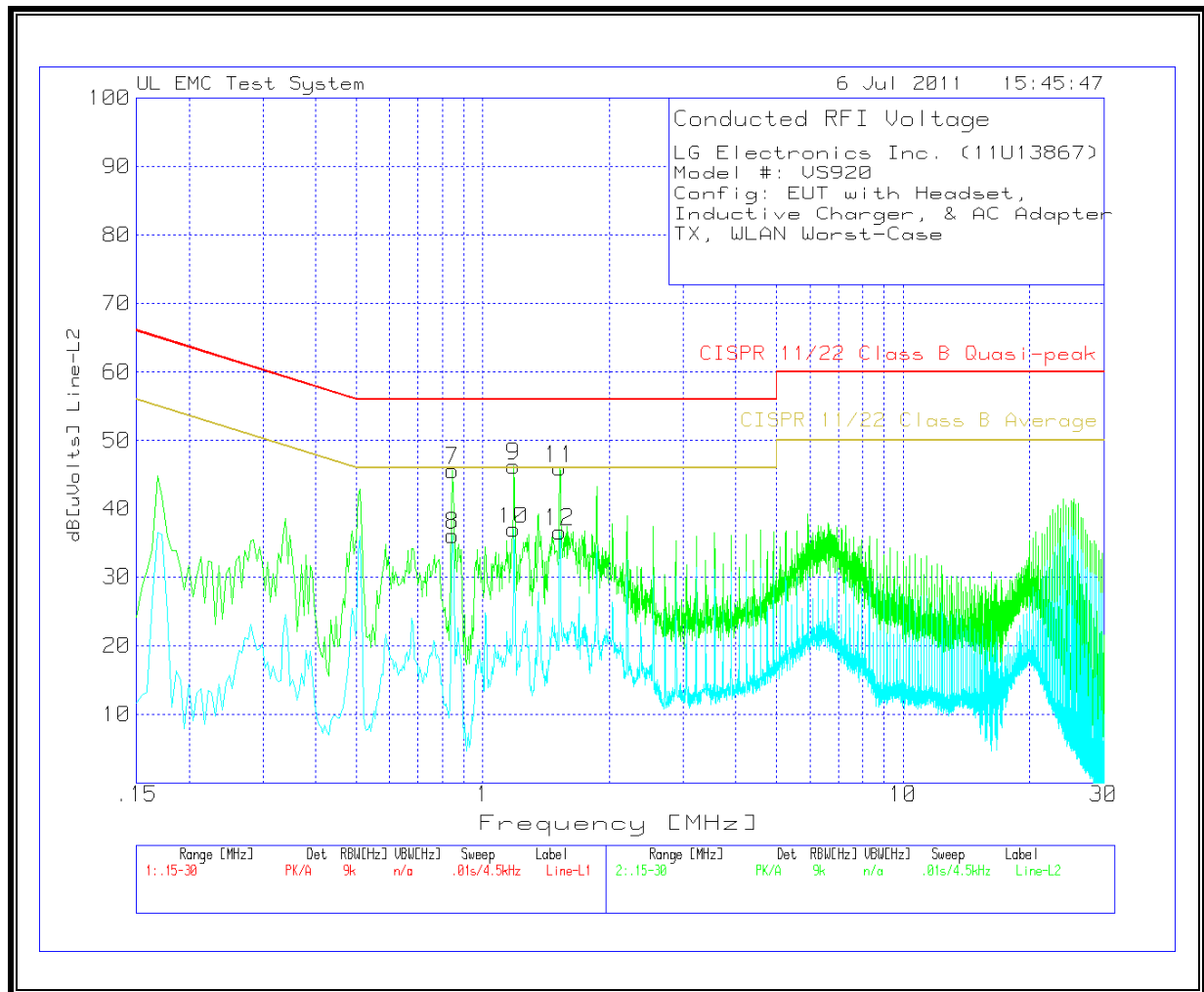
LINE 1 RESULTS

LINE 2 RESULTS

INDUCTIVE CHARGER WITH INDUCTIVE COVER**6 WORST EMISSIONS**

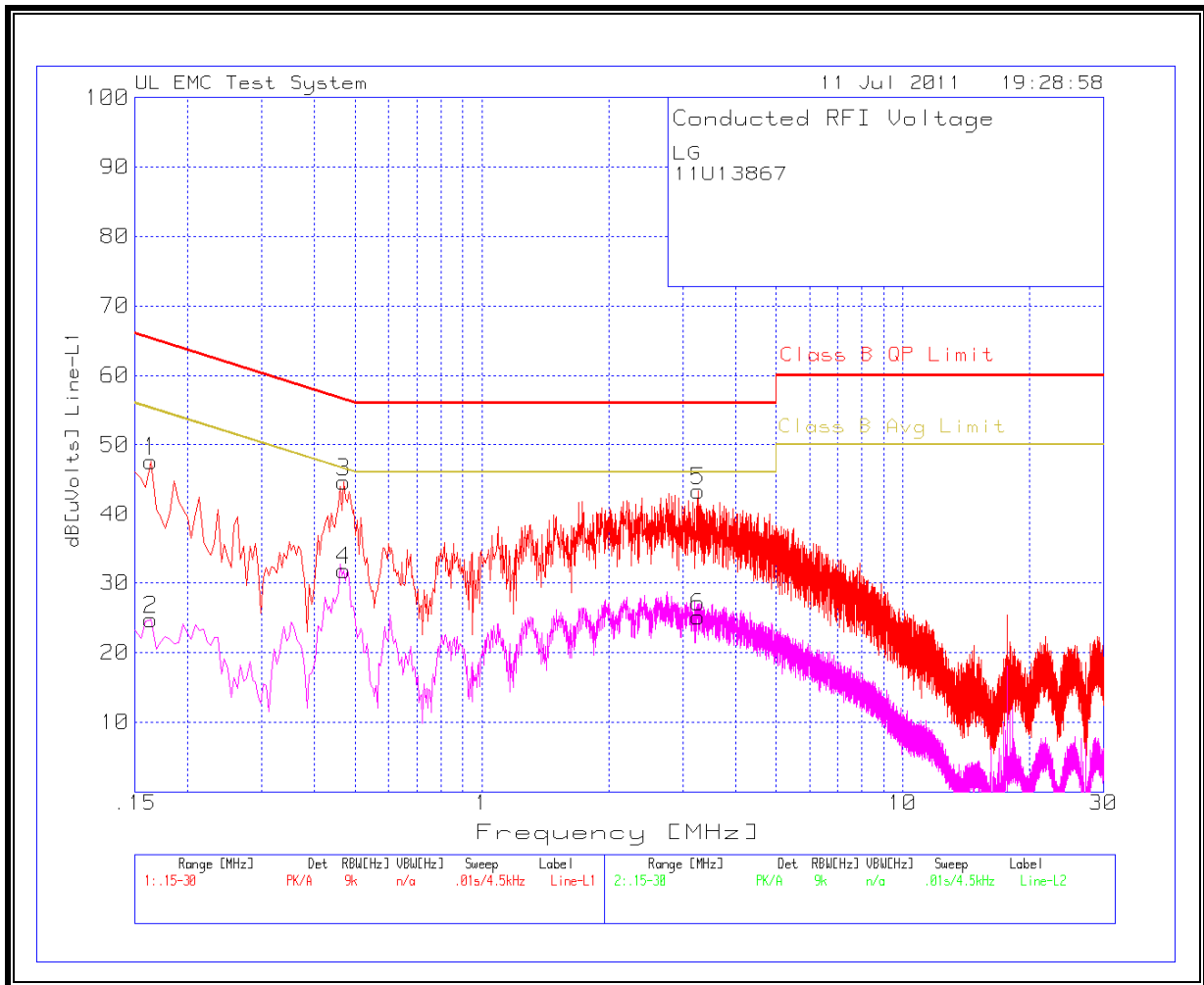
LG Electronics Inc. (11U13867)										
Model #: VS920										
Config: EUT with Headset, Inductive Charger, & AC Adapter										
TX, WLAN Worst-Case										
Line-L1 .15 - 30MHz										
Test Frequency	Meter Reading	Detector	LISN [dB]	Emission Cable [dB]	dB[uVolts]	Class B Quasi-peak	Margin	Class B Average	Margin	
0.8475	47.05	PK	0	0	47.05	56	-8.95	46	1.05	
0.8475	40.84	Av	0	0	40.84	-	-	46	-5.16	
1.1895	49.41	PK	0	0	49.41	56	-6.59	46	3.41	
1.1895	42.79	Av	0	0	42.79	-	-	46	-3.21	
1.527	48.24	PK	0	0	48.24	56	-7.76	46	2.24	
1.527	42.35	Av	0	0	42.35	-	-	46	-3.65	
Line-L2 .15 - 30MHz										
Test Frequency	Meter Reading	Detector	LISN [dB]	Emission Cable [dB]	dB[uVolts]	Class B Quasi-peak	Margin	Class B Average	Margin	
0.8475	45.63	PK	0	0	45.63	56	-10.37	46	-0.37	
0.8475	36.02	Av	0	0	36.02	-	-	46	-9.98	
1.185	46.3	PK	0	0	46.3	56	-9.7	46	0.3	
1.185	36.9	Av	0	0	36.9	-	-	46	-9.1	
1.5225	45.96	PK	0	0	45.96	56	-10.04	46	-0.04	
1.5225	36.6	Av	0	0	36.6	-	-	46	-9.4	

LINE 1 RESULTS

LINE 2 RESULTS

CHARGER STA-U13WV

Worst-Case with Inductive Cover

6 WORST EMISSIONS

LINE 1 & 2 RESULTS

LG							
11U13867							
WiFi							
Line-L1 .15 - 30MHz							
Test Frequency	Meter Reading	Detector	dB[uVolts]	Class B QP Limit	Margin	Class B Avg Limit	Margin
0.1635	47.66	PK	47.66	65.30	-17.64	55.30	-7.64
0.1635	24.77	Av	24.77	65.30	-40.53	55.30	-30.53
0.4695	44.67	PK	44.67	56.50	-11.83	46.50	-1.83
0.4695	31.80	Av	31.80	56.50	-24.70	46.50	-14.70
3.2595	43.35	PK	43.35	56.00	-12.65	46.00	-2.65
3.2595	25.14	Av	25.14	56.00	-30.86	46.00	-20.86
Line-L2 .15 - 30MHz							
Test Frequency	Meter Reading	Detector	dB[uVolts]	Class B QP Limit	Margin	Class B Avg Limit	Margin
0.1905	46.50	PK	46.50	64.00	-17.50	54.00	-7.50
0.1905	24.11	Av	24.11	64.00	-39.89	54.00	-29.89
0.465	40.16	PK	40.16	56.60	-16.44	46.60	-6.44
0.465	24.23	Av	24.23	56.60	-32.37	46.60	-22.37
2.7735	38.12	PK	38.12	56.00	-17.88	46.00	-7.88
2.7735	19.44	Av	19.44	56.00	-36.56	46.00	-26.56
0.1905	46.50	PK	46.50	64.00	-17.50	54.00	-7.50
0.1905	24.11	Av	24.11	64.00	-39.89	54.00	-29.89
PK - Peak detector							
QP - Quasi-Peak detector							
LnAv - Linear Average detector							
LgAv - Log Average detector							
Av - Average detector							
CAV - CISPR Average detector							
RMS - RMS detection							
CRMS - CISPR RMS detection							
Text File: STA.TXT							

10. MAXIMUM PERMISSIBLE EXPOSURE

FCC RULES

§1.1310 The criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of §2.1093 of this chapter.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500			f/300	6
1500–100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f ²)	30

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)—Continued

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
30–300	27.5	0.073	0.2	30
300–1500			f/1500	30
1500–100,000			1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

IC RULES

IC Safety Code 6, Section 2.2.1 (a) A person other than an RF and microwave exposed worker shall not be exposed to electromagnetic radiation in a frequency band listed in Column 1 of Table 5, if the field strength exceeds the value given in Column 2 or 3 of Table 5, when averaged spatially and over time, or if the power density exceeds the value given in Column 4 of Table 5, when averaged spatially and over time.

Table 5**Exposure Limits for Persons Not Classed As RF and Microwave Exposed Workers (Including the General Public)**

1 Frequency (MHz)	2 Electric Field Strength; rms (V/m)	3 Magnetic Field Strength; rms (A/m)	4 Power Density (W/m ²)	5 Averaging Time (min)
0.003–1	280	2.19		6
1–10	280/ f	2.19/ f		6
10–30	28	2.19/ f		6
30–300	28	0.073	2*	6
300–1 500	1.585 $f^{0.5}$	0.0042 $f^{0.5}$	$f/150$	6
1 500–15 000	61.4	0.163	10	6
15 000–150 000	61.4	0.163	10	616 000 / $f^{1.2}$
150 000–300 000	0.158 $f^{0.5}$	4.21 x 10 ⁻⁴ $f^{0.5}$	6.67 x 10 ⁻⁵ f	616 000 / $f^{1.2}$

* Power density limit is applicable at frequencies greater than 100 MHz.

- Notes:**
1. Frequency, f , is in MHz.
 2. A power density of 10 W/m² is equivalent to 1 mW/cm².
 3. A magnetic field strength of 1 A/m corresponds to 1.257 microtesla (μT) or 12.57 milligauss (mG).

EQUATIONS

Power density is given by:

$$S = \text{EIRP} / (4 * \pi * D^2)$$

where

S = Power density in W/m²

EIRP = Equivalent Isotropic Radiated Power in W

D = Separation distance in m

Power density in units of W/m² is converted to units of mW/cm² by dividing by 10.

Distance is given by:

$$D = \text{SQRT} (\text{EIRP} / (4 * \pi * S))$$

where

D = Separation distance in m

EIRP = Equivalent Isotropic Radiated Power in W

S = Power density in W/m²

For multiple colocated transmitters operating simultaneously in frequency bands where the limit is identical, the total power density is calculated using the total EIRP obtained by summing the Power * Gain product (in linear units) of each transmitter.

$$\text{Total EIRP} = (P_1 * G_1) + (P_2 * G_2) + \dots + (P_n * G_n)$$

where

P_x = Power of transmitter x

G_x = Numeric gain of antenna x

In the table(s) below, Power and Gain are entered in units of dBm and dBi respectively and conversions to linear forms are used for the calculations.

LIMITS

From FCC §1.1310 Table 1 (B), the maximum value of S = 1.0 mW/cm²

From IC Safety Code 6, Section 2.2 Table 5 Column 4, S = 10 W/m²

RESULTS

Band	Mode	IC Limit (W/m ²)	FCC Limit (mW/cm ²)	Output Power (dBm)	Antenna Gain (dBi)	Separation Distance (m)
2.4 GHz	WLAN	10.00	1.000	24.04	-1.30	0.04