



**FCC CFR47 PART 15 SUBPART C
CLASS II PERMISSIVE CHANGE**

CERTIFICATION TEST REPORT

FOR

DUAL BAND PHONE WITH BT & WLAN

MODEL NUMBER: LG-P769, LGP769, P769

FCC ID: ZNFP769

REPORT NUMBER: 12U14595-2

ISSUE DATE: AUGUST 24, 2012

Prepared for
**LG ELECTRONICS MOBILECOMM U.S.A., INC.
1000 SYLVAN AVENUE
ENGLEWOOD CLIFFS, NJ 07632**

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NVLAP LAB CODE 200065-0

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: LG ELECTRONICS MOBLILECOMM USA, INC.
1000 SYLVAN AVENUE
ENGLEWOOD, NJ 07632, USA

EUT DESCRIPTION: DUAL BAND PHONE WITH BT & WLAN

MODEL: LG-P769, LGP769, P769

SERIAL NUMBER: 208KPTM229281 (Conducted)
205KPYR203930 (Radiated)

DATE TESTED: AUGUST 21ST TO 24TH, 2012

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

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:



TIM LEE
STAFF ENGINEER
UL CCS

STEVE AGUILAR
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, FCC CFR 47 Part 15, RSS-GEN Issue 3, and RSS-210 Issue 8.

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:

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

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 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 an 802.11a/b/g/n transceiver.

The radio module is manufactured by Broadcom with Chipset: BCM4330X.

5.2. MAXIMUM OUTPUT POWER

The measured average power values were within ± 0.5 dB of the original values. Refer to original report number 12U14516 for exact output power values and for all antenna port results.

5.3. DESCRIPTION OF CLASS II PERMISSIVE CHANGE

The change filed under this application has the following changes.

Antenna pattern shape and length changed to improve RF performance.

5.4. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a PIFA antenna, with a maximum gain of -0.45 dBi.

5.5. SOFTWARE AND FIRMWARE

The Baseband version was LGP769AT-00-V08k_310-260-JUL 9-2012+0.
The Kernel version was 3.0.21. The HW version was Rev.1.0

The firmware installed in the EUT during testing was Version 4.0.4.

The EUT software version installed during testing LGP769-V08k.

The test utility software used during testing was WLAN Test.

5.6. WORST-CASE CONFIGURATION AND MODE

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 adapter and earphone for both 2.4GHz and 5GHz band.

For Radiated Emissions below 1 GHz and Power line Conducted Emissions, the channel with the highest conducted output power was selected as a worst-case scenario.

Worst-case data rates based on base line measurement are:

For 11b mode: 1Mbps
For 11g mode: 6Mbps
For 11n HT20: MCS0
For 11a mode (5.8 GHz band): 6Mbps
For 11n HT20 (5.8 GHz band): MCS0

5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
USB Travel Adapter	LG Electronics	MCS-02WR	RA250126222	N/A
Headphones	LG Electronics	N/A	N/A	N/A

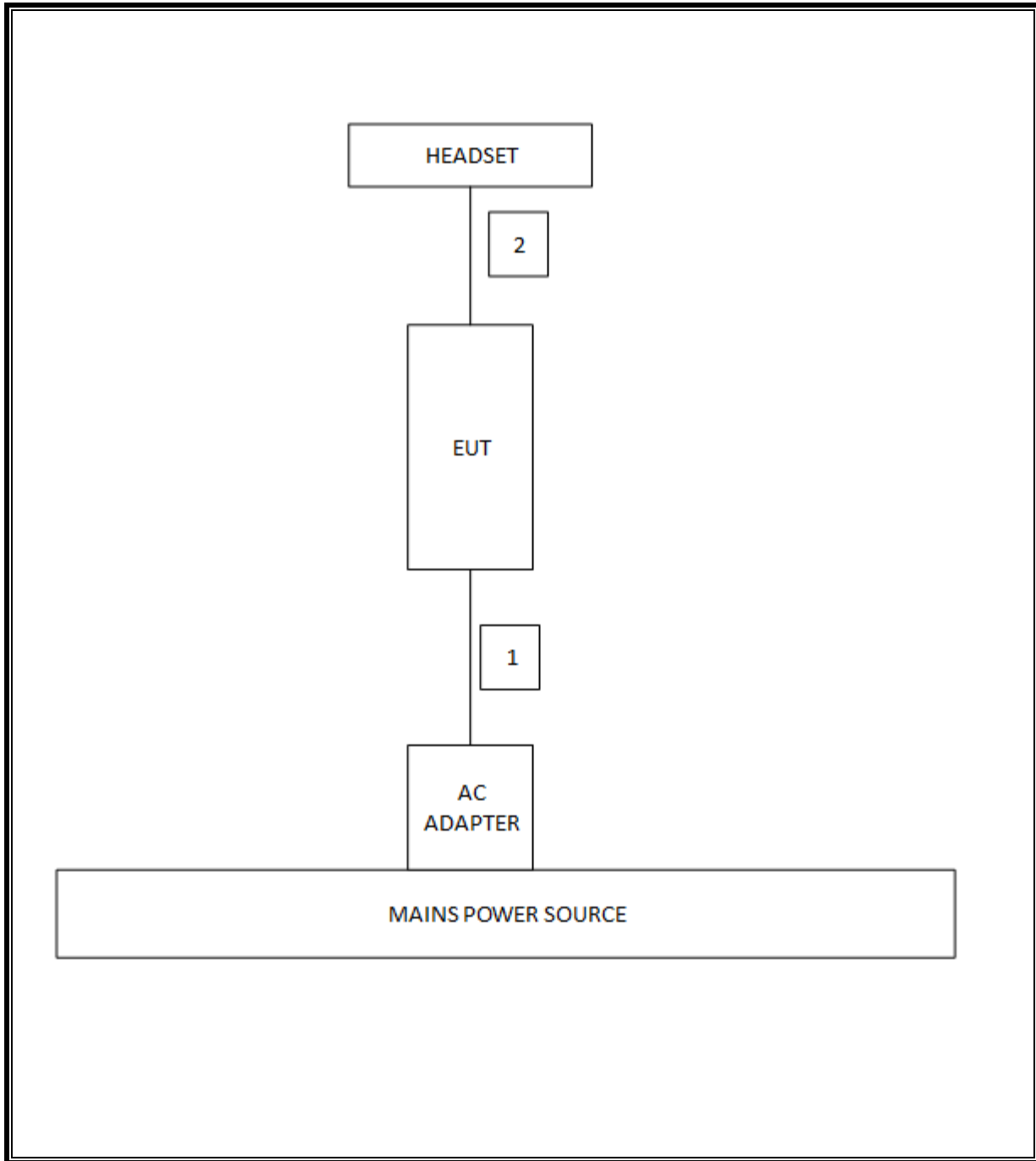
I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB	1	USB	Shielded	1.2m	None.
2	Headphone	1	Audio	Unshielded	1.15m	None.

TEST SETUP

The EUT is a stand-alone device.

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 Date	Cal Due
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01012	9/2/2011	9/2/2012
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C00986	3/22/2012	3/22/2013
Power Meter	Agilent / HP	437B	--	8/9/2012	8/9/2013
Power Sensor, 18 GHz	Agilent / HP	8481A	--	8/21/2012	8/21/2013
Antenna, Horn, 26.5 GHz	ARA	MWH-1826/B	C00589	7/28/2011	7/28/2013
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C00749	11/11/2011	11/11/2012
Antenna, Horn, 18 GHz	EMCO	3115	C00872	9/20/2011	9/20/2012
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	C01011	3/23/2012	3/23/2013
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00580	11/11/2011	11/11/2012
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	8/8/2012	8/8/2013
LISN, 30 MHz	FCC	50/250-25-2	C00626	12/13/2011	12/13/2012
Antenna, Horn, 40 GHz	ARA	MWH-2640/B	C00981	6/14/2011	6/14/2013
Preamplifier, 40 GHz	Miteq	NSP4000-SP2	C00990	8/2/2011	8/2/2013

7. RADIATED TEST RESULTS

7.1. 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.

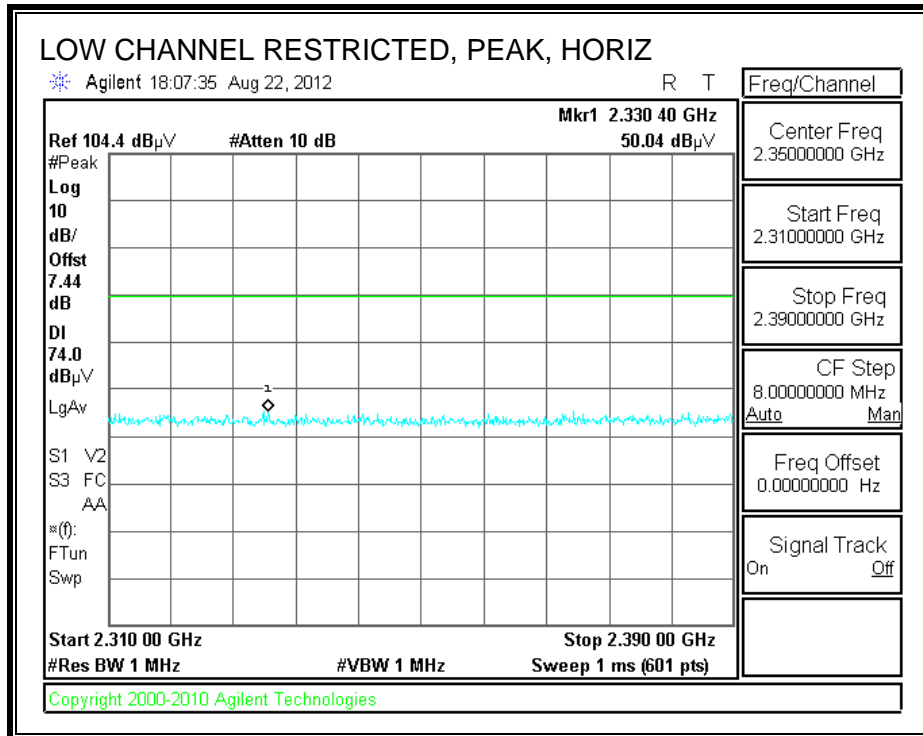
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

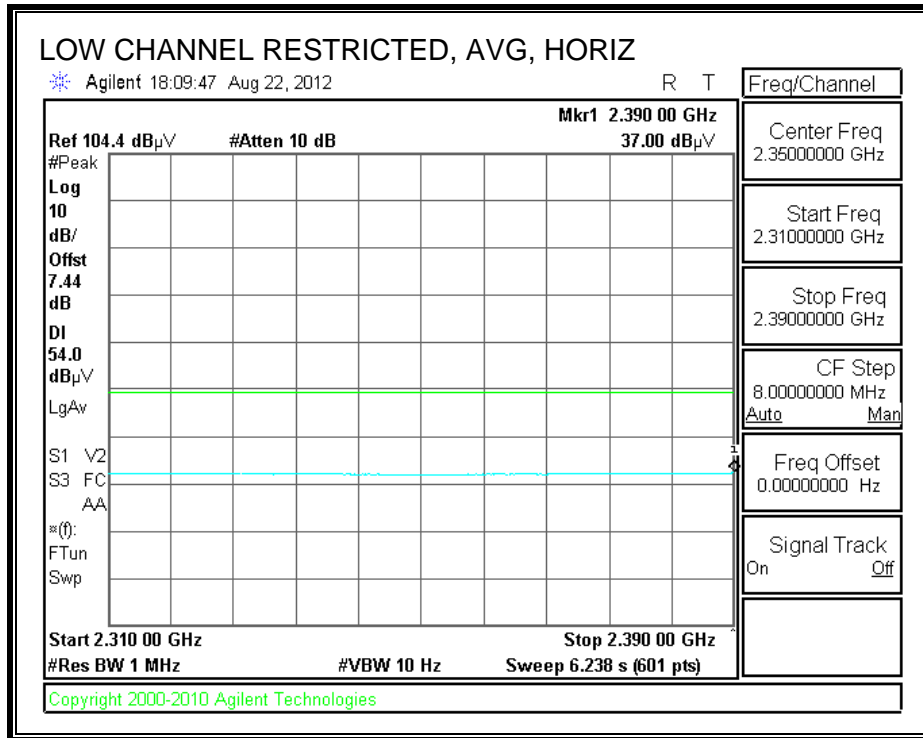
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

7.2. TRANSMITTER ABOVE 1 GHz

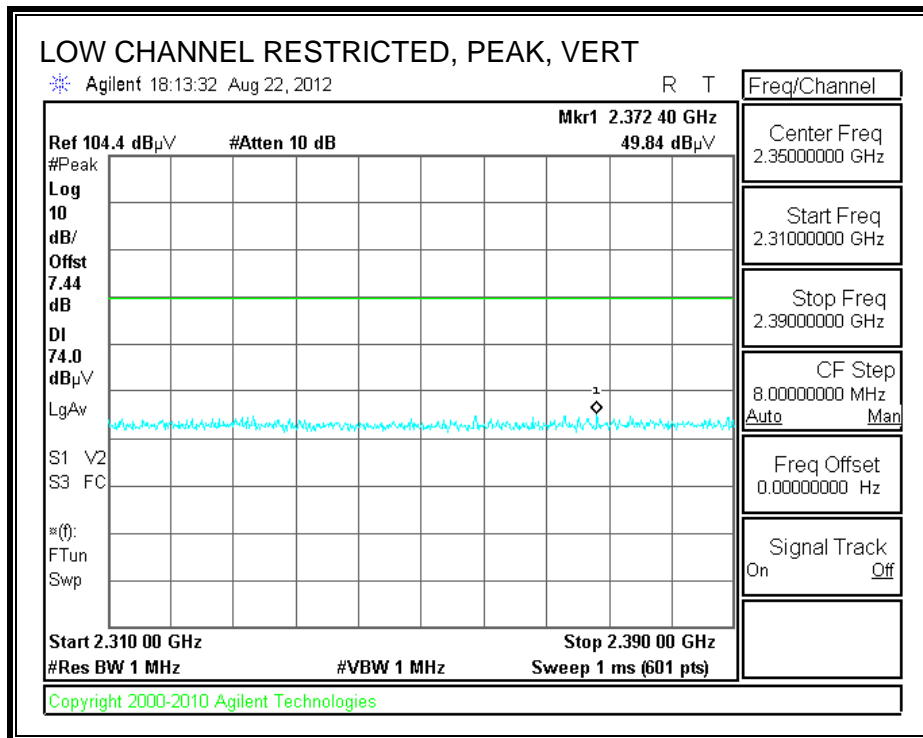
7.2.1. TX ABOVE 1 GHz FOR 802.11b 1TX MODE IN THE 2.4 GHz BAND

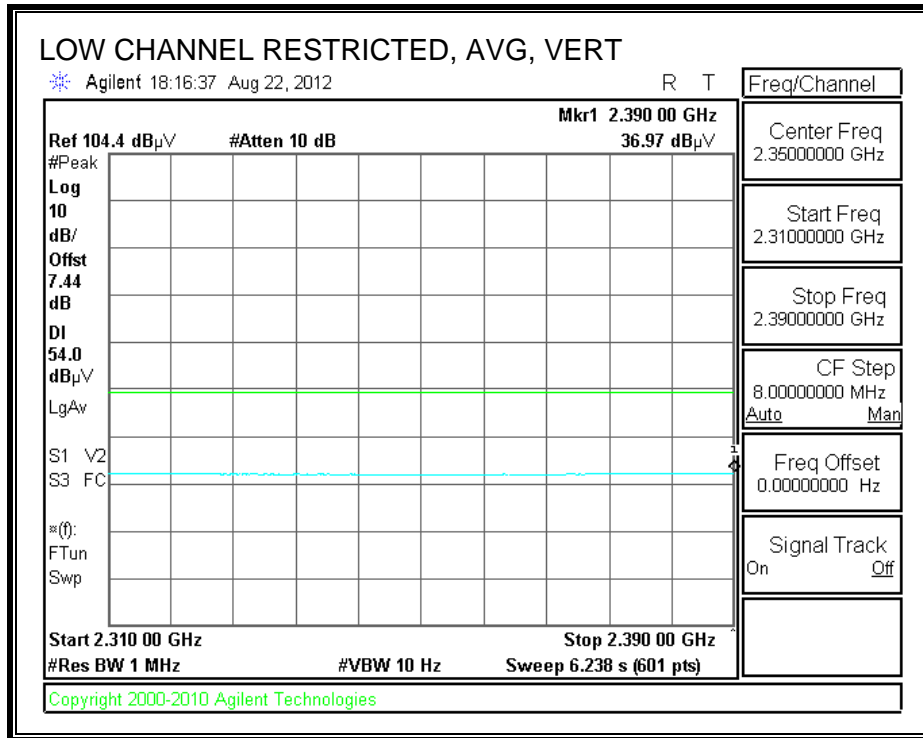
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



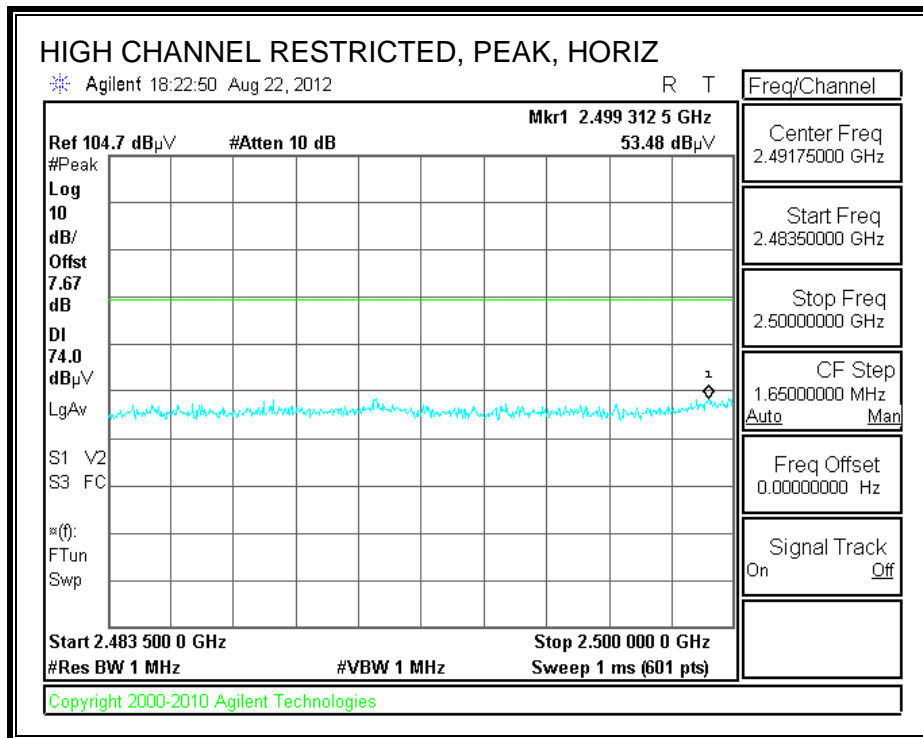


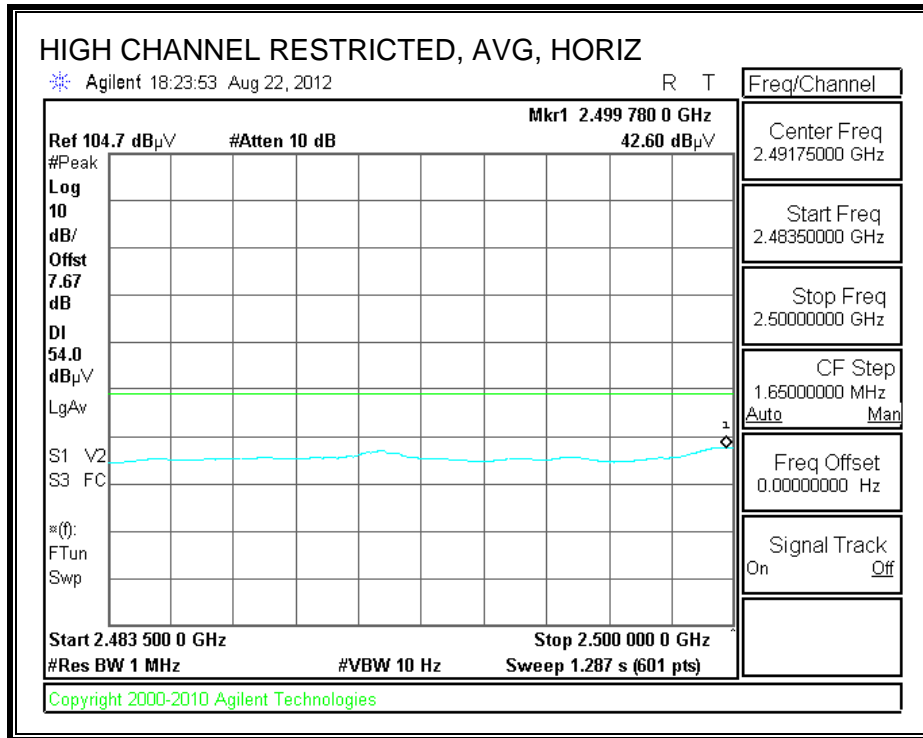
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



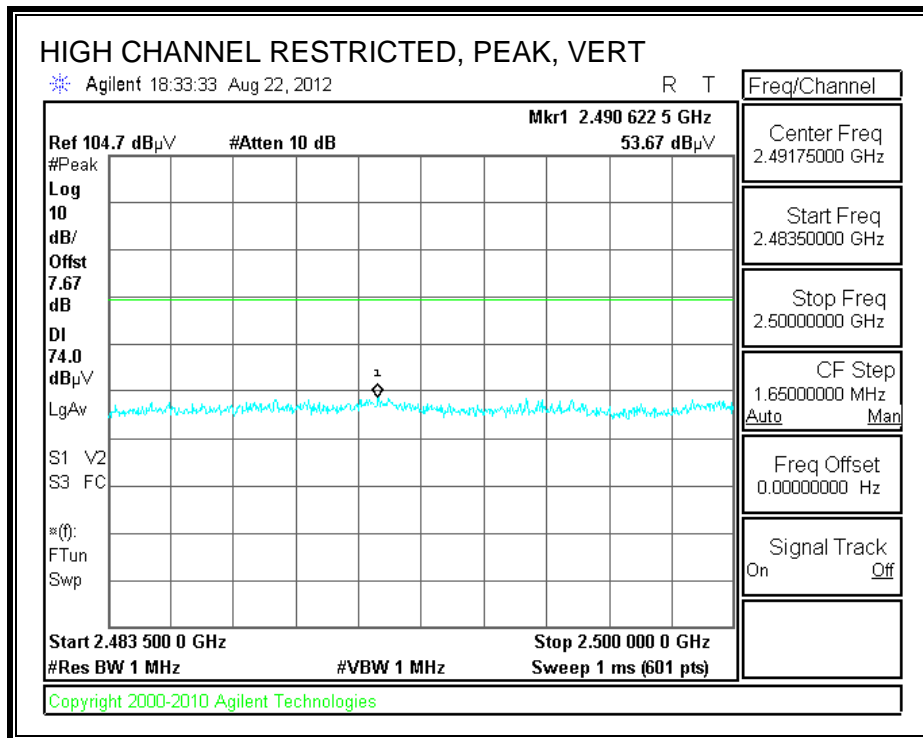


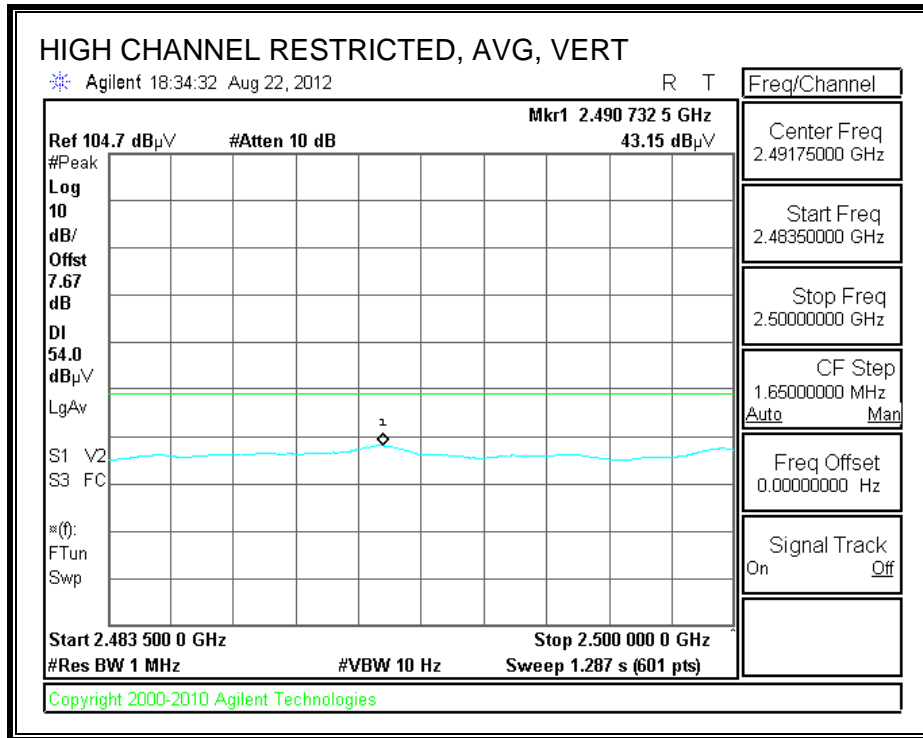
RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)





RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)





HARMONICS AND SPURIOUS EMISSIONS

High Frequency Measurement

Compliance Certification Services, Fremont 3m Chamber

Company: LG
 Project #: 12U14595
 Date: 8/22/2012
 Test Engineer: S.Aguilar
 Configuration: Worst Case. Adapter + Headphone
 Mode: 11B Mode. 1Mbsp

Test Equipment:

Horn 1-18GHz	Pre-amplifier 1-26GHz	Pre-amplifier 26-40GHz	Horn > 18GHz	Limit
T60; S/N: 2238 @3m	T34 HP 8449B			FCC 15.205

Hi Frequency Cables

3' cable 22807700	12' cable 22807600	20' cable 22807500	HPF	Reject Filter	Peak Measurements RBW/VBW=1MHz/3MHz Average Measurements RBW=1MHz ; VBW=10Hz
3' cable 22807700	12' cable 22807600	20' cable 22807500		R_001	

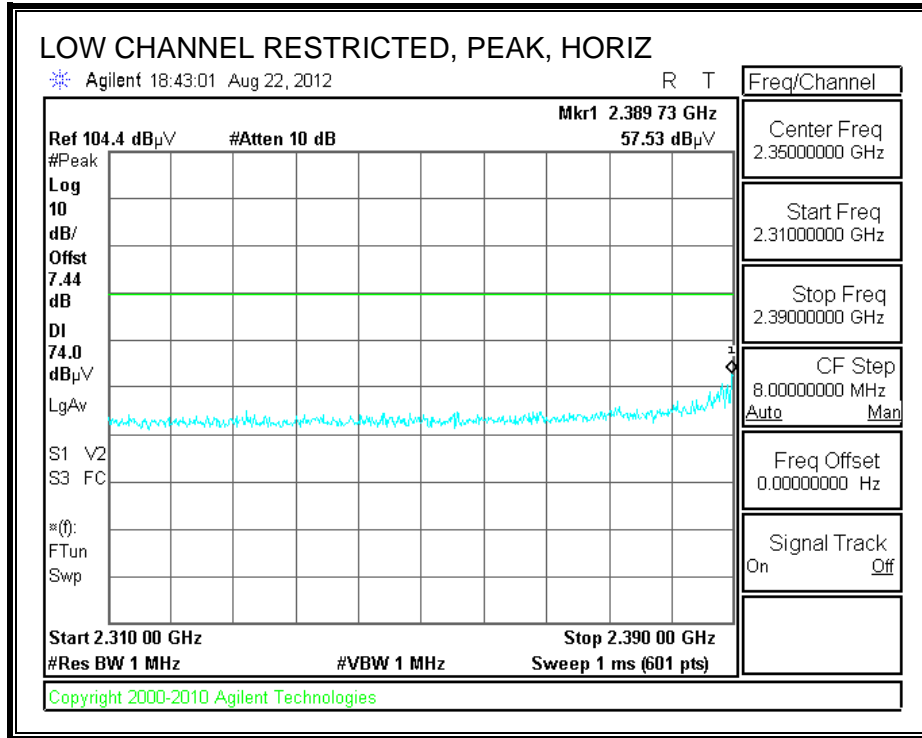
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
Low Channel (2412MHz)															
4.824	3.0	37.37	29.31	33.1	6.8	-34.1	0.0	0.0	43.2	35.2	74	54	-30.8	-18.8	H
4.824	3.0	39.12	32.01	33.1	6.8	-34.1	0.0	0.0	45.0	37.9	74	54	-29.0	-16.1	V
Mid Channel (2437MHz)															
4.874	3.0	38.60	29.93	33.2	6.8	-34.0	0.0	0.0	44.5	35.9	74	54	-29.5	-18.1	H
4.874	3.0	39.04	33.02	33.2	6.8	-34.0	0.0	0.0	45.0	38.9	74	54	-29.0	-15.1	V
High Channel (2462MHz)															
4.924	3.0	38.04	30.20	33.2	6.8	-34.0	0.0	0.0	44.1	36.2	74	54	-29.9	-17.8	H
4.924	3.0	37.02	27.73	33.2	6.8	-34.0	0.0	0.0	43.0	33.7	74	54	-31.0	-20.3	V

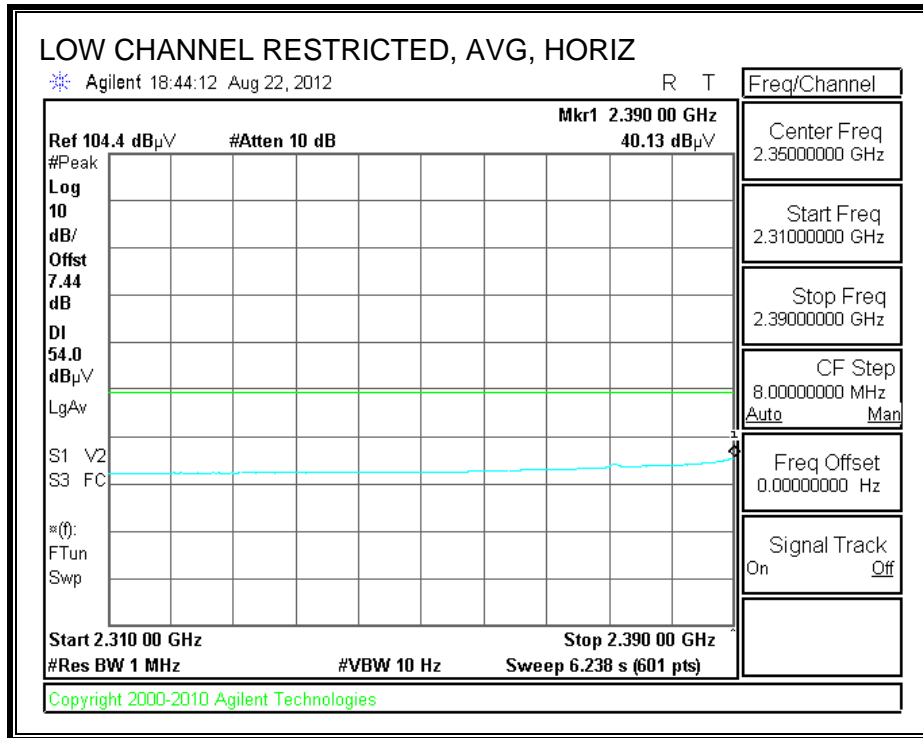
Rev. 11.10.11 Note: No other emissions were detected above the system noise floor.

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		

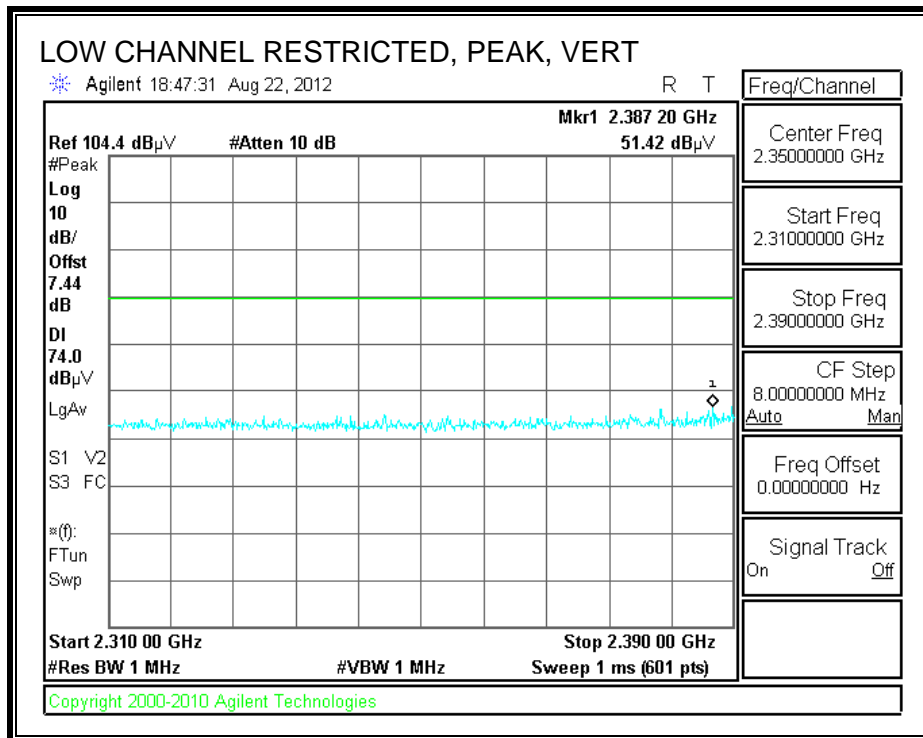
7.2.2. TX ABOVE 1 GHz FOR 802.11g 1TX MODE IN THE 2.4 GHz BAND

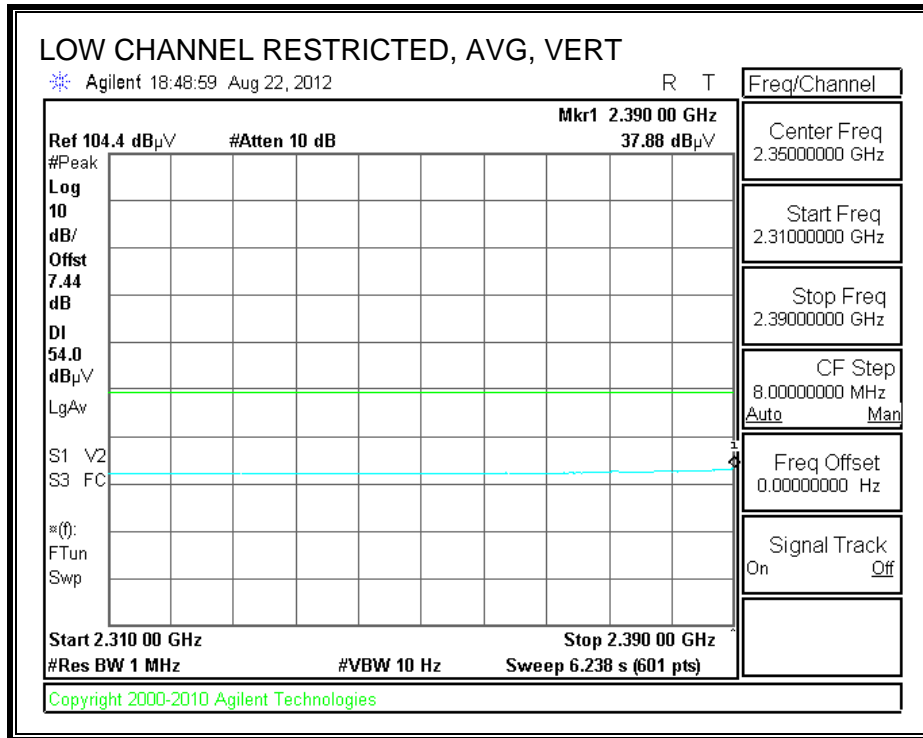
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



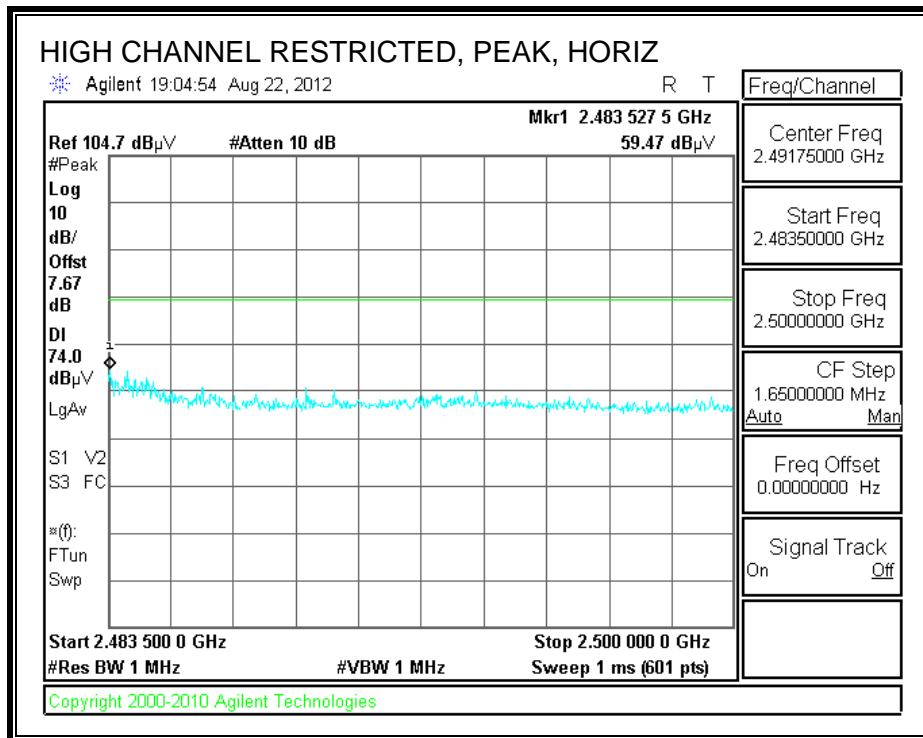


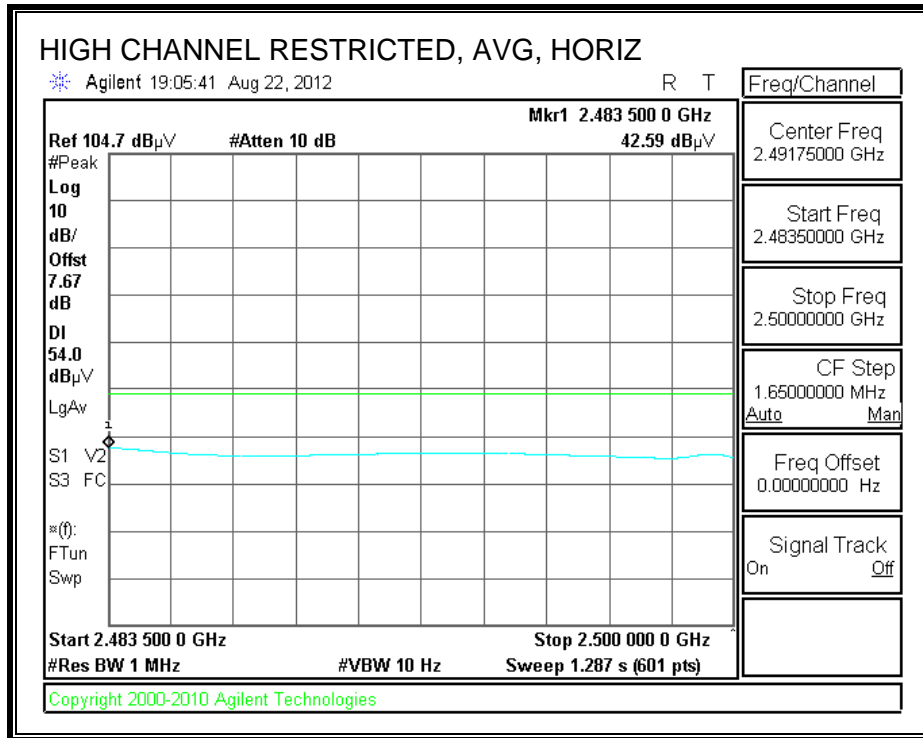
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



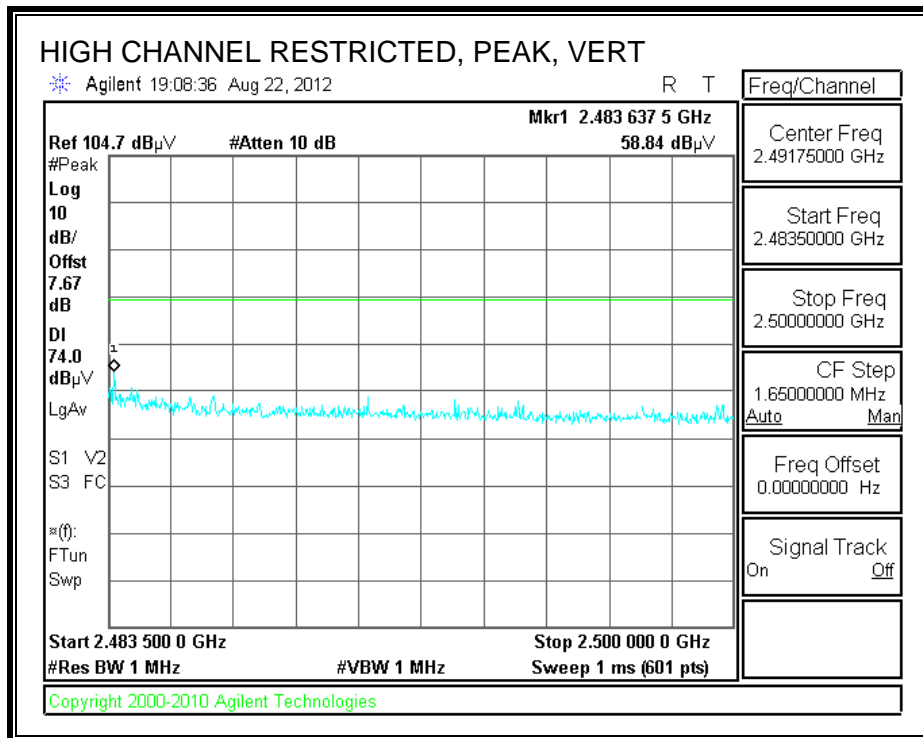


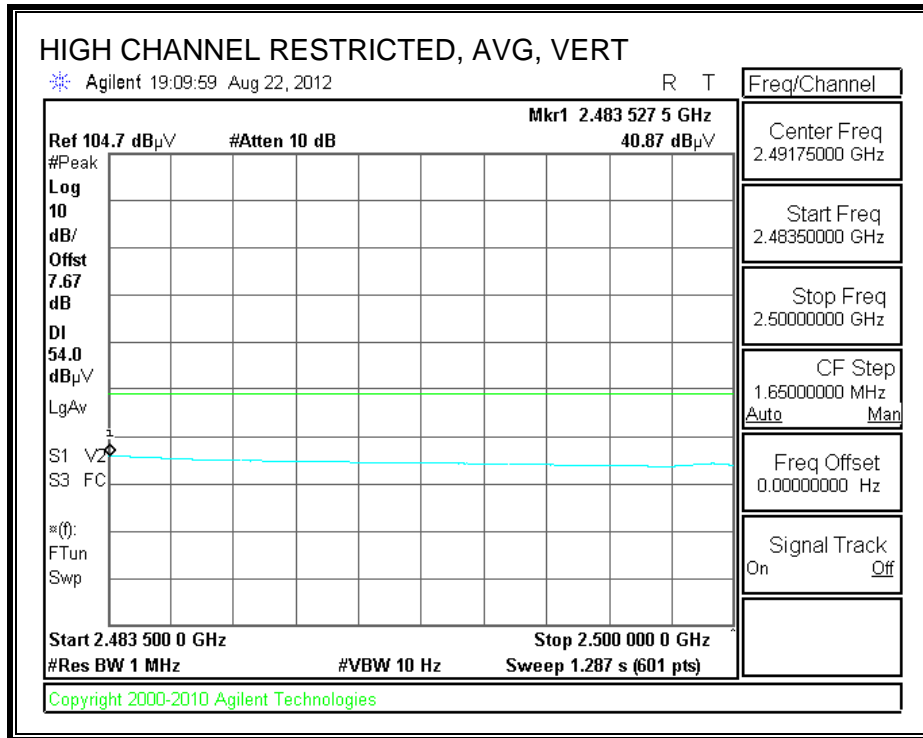
RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)





RESTRICTED BANEDGE (HIGH CHANNEL, VERTICAL)





HARMONICS AND SPURIOUS EMISSIONS

High Frequency Measurement

Compliance Certification Services, Fremont 3m Chamber

Company: LG
 Project #: 12U14595
 Date: 8/22/2012
 Test Engineer: S.Aguilar
 Configuration: Worst Case. Adapter + Headphone
 Mode: 11GMode. 6Mbps

Test Equipment:

Horn 1-18GHz	Pre-amplifier 1-26GHz	Pre-amplifier 26-40GHz	Horn > 18GHz	Limit
T60; S/N: 2238 @3m	T34 HP 8449B			FCC 15.205

Hi Frequency Cables

3' cable 22807700	12' cable 22807600	20' cable 22807500	HPF	Reject Filter	Peak Measurements RBW/VBW=1MHz/3MHz Average Measurements RBW=1MHz ; VBW=10Hz
3' cable 22807700	12' cable 22807600	20' cable 22807500		R_001	

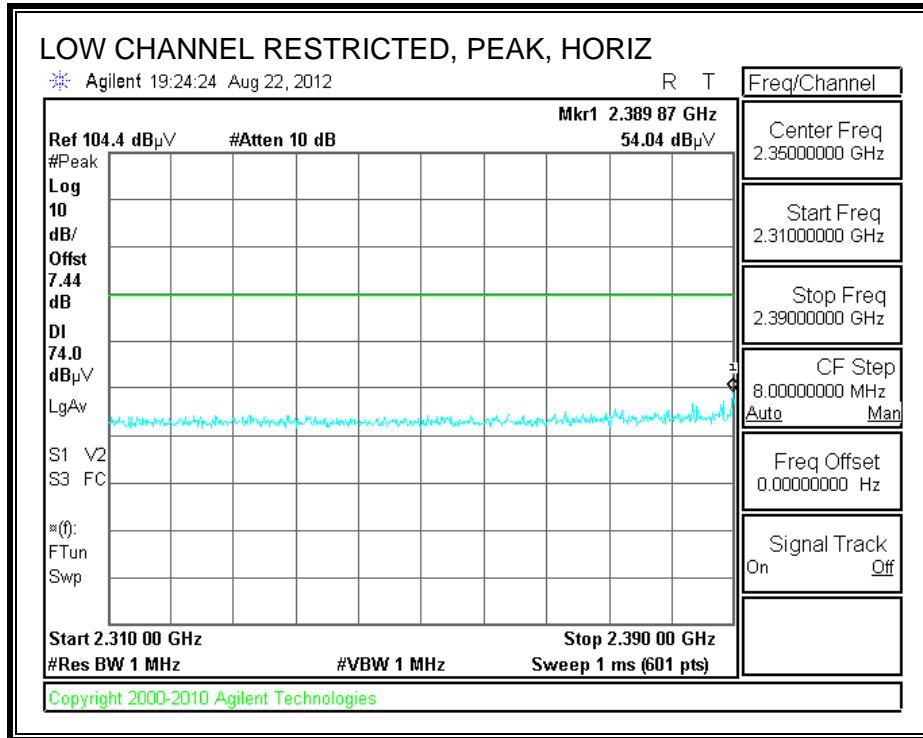
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
Low Channel (2412MHz)															
4.824	3.0	39.15	26.13	33.1	6.8	-34.1	0.0	0.0	45.0	32.0	74	54	-29.0	-22.0	H
4.824	3.0	37.60	24.90	33.1	6.8	-34.1	0.0	0.0	43.4	30.7	74	54	-30.6	-23.3	V
Mid Channel (2437MHz)															
4.874	3.0	36.97	24.61	33.2	6.8	-34.0	0.0	0.0	42.9	30.5	74	54	-31.1	-23.5	H
4.874	3.0	39.15	25.71	33.2	6.8	-34.0	0.0	0.0	45.1	31.6	74	54	-28.9	-22.4	V
High Channel (2462MHz)															
4.924	3.0	36.03	23.69	33.2	6.8	-34.0	0.0	0.0	42.0	29.7	74	54	-32.0	-24.3	H
4.924	3.0	37.12	24.22	33.2	6.8	-34.0	0.0	0.0	43.1	30.2	74	54	-30.9	-23.8	V

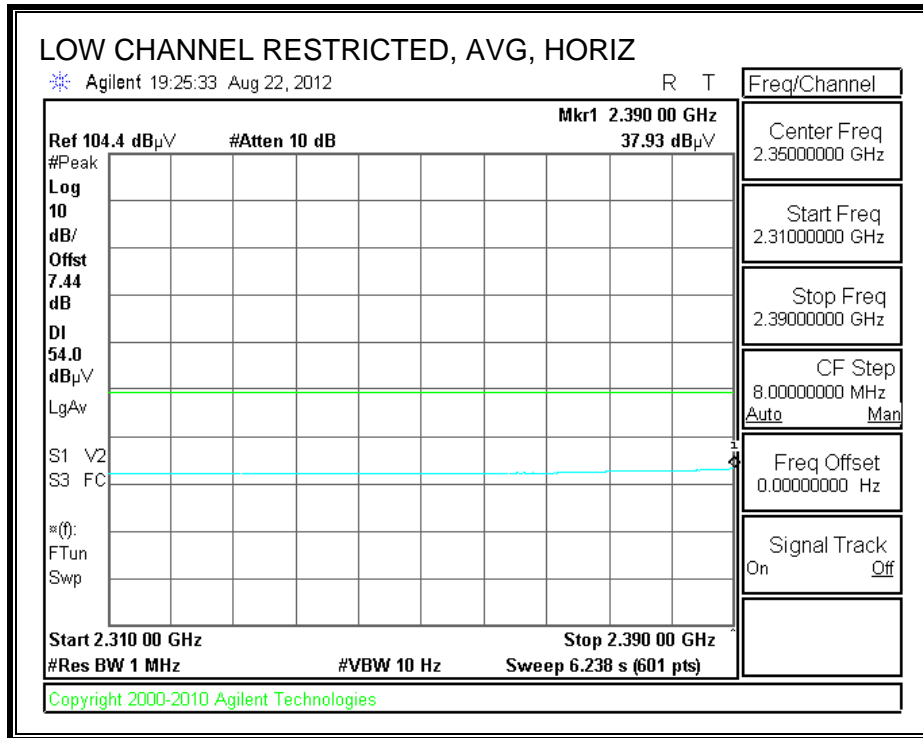
Rev. 11.10.11 Note: No other emissions were detected above the system noise floor.

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
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AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

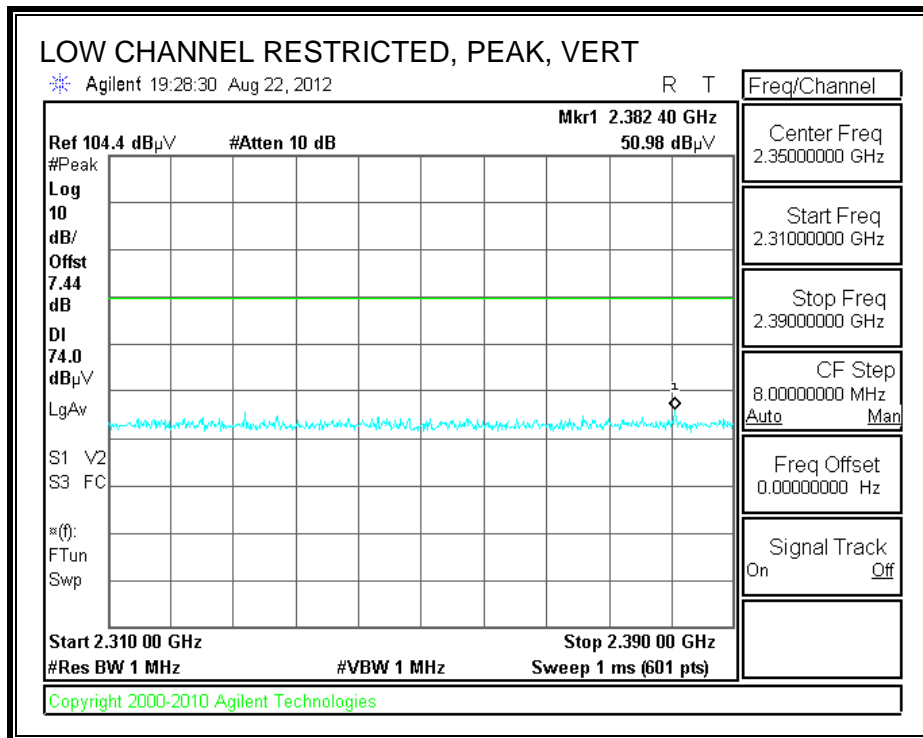
7.2.3. TX ABOVE 1 GHz FOR 802.11n HT20 1TX MODE IN THE 2.4 GHz BAND

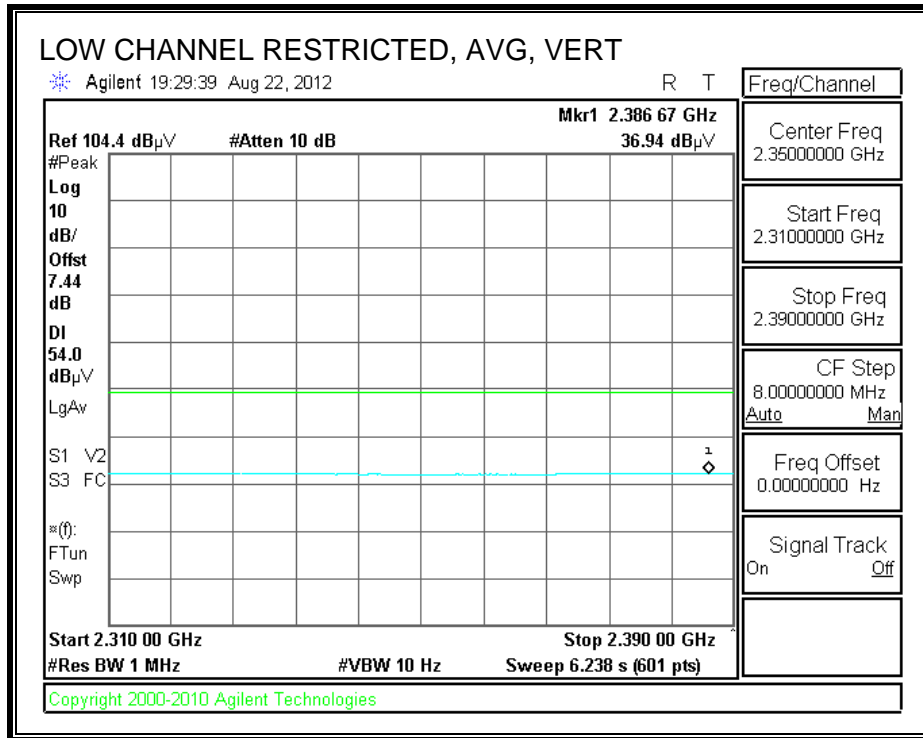
RESTRICTED BANEDGE (LOW CHANNEL, HORIZONTAL)



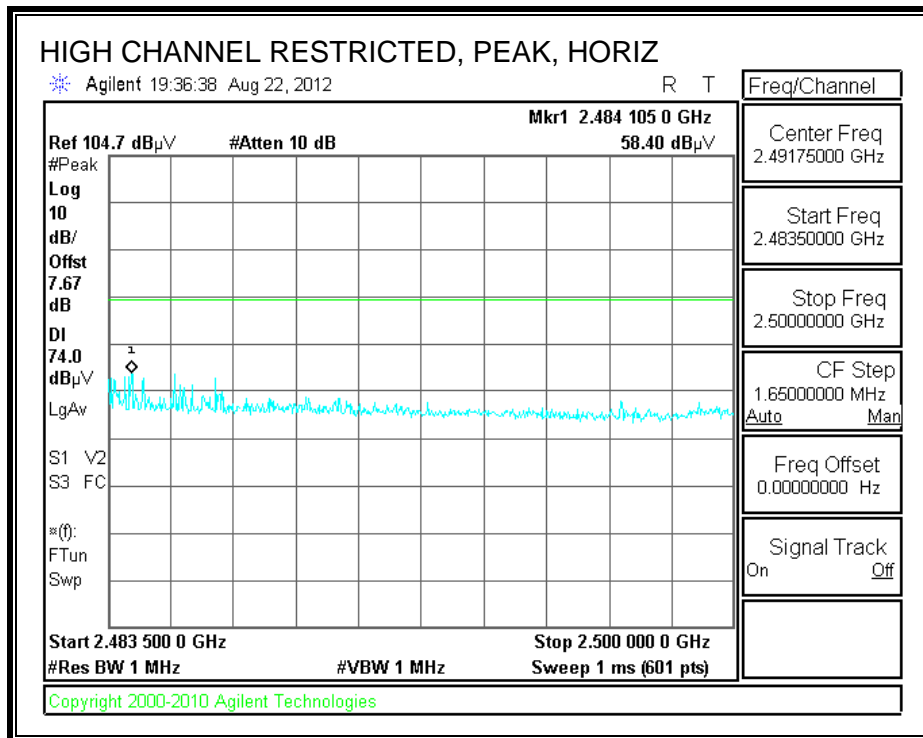


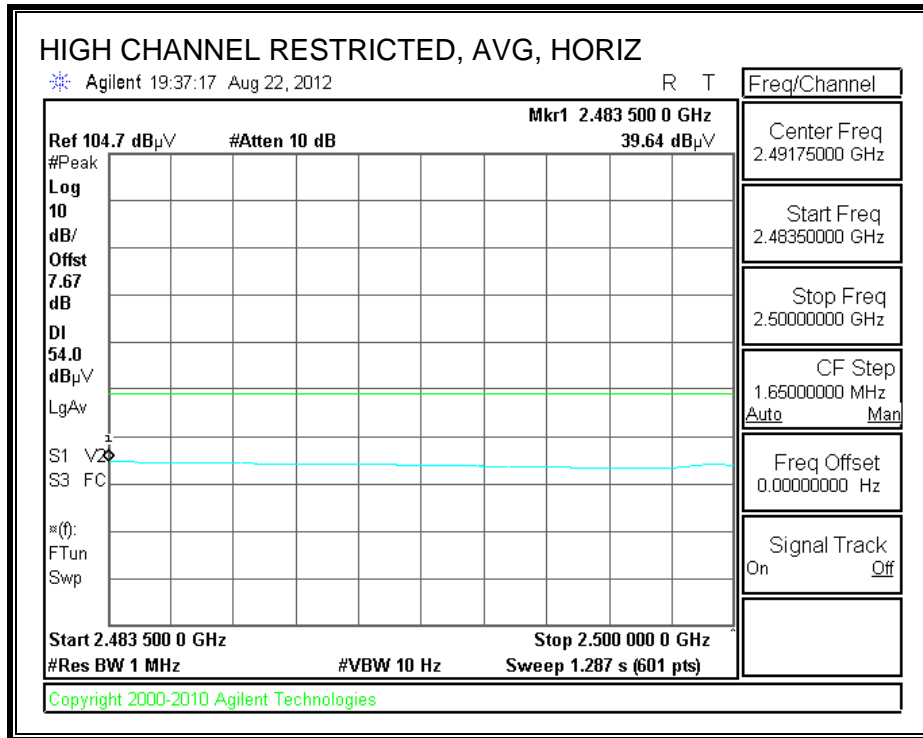
RESTRICTED BANEDGE (LOW CHANNEL, VERTICAL)



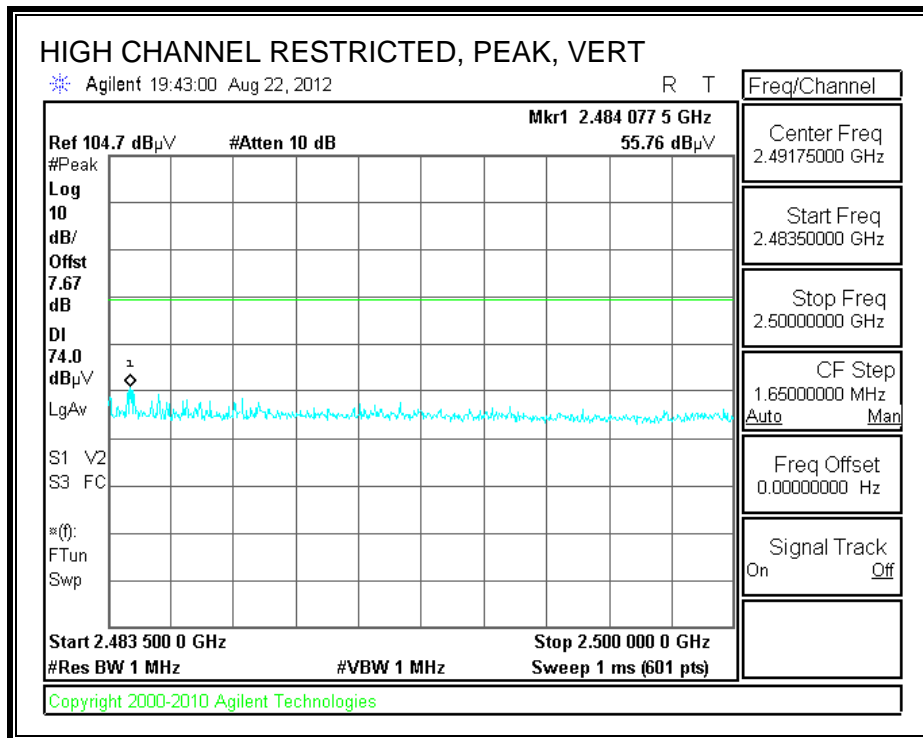


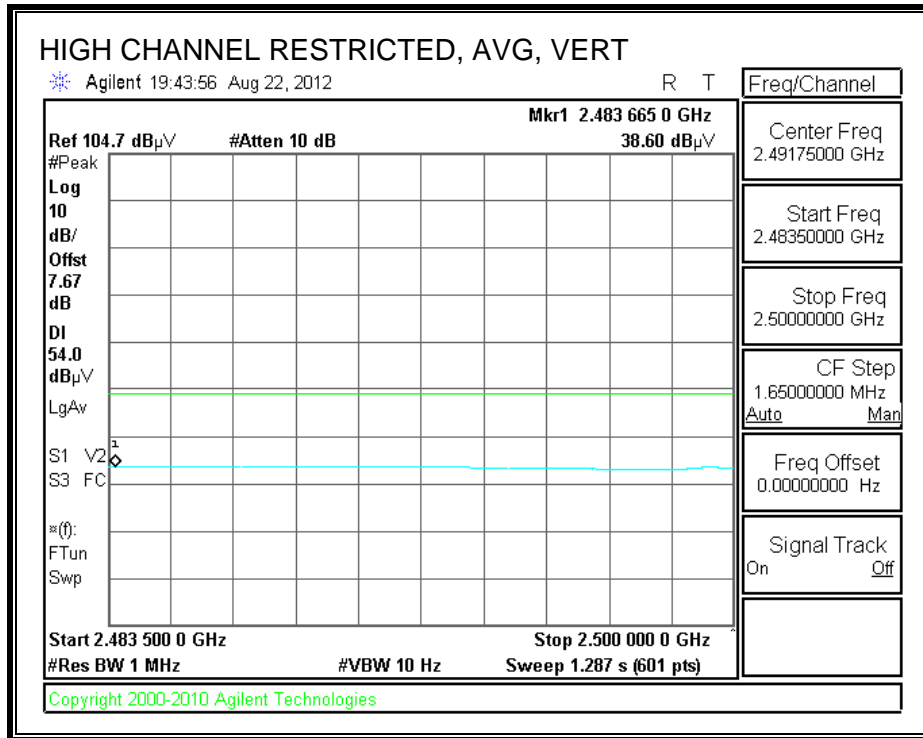
RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)





RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)





HARMONICS AND SPURIOUS EMISSIONS

High Frequency Measurement
 Compliance Certification Services, Fremont 3m Chamber

Company: LG
 Project #: 12U14595
 Date: 8/22/2012
 Test Engineer: S.Aguilar
 Configuration: Worst Case. Adapter + Headphone
 Mode: 11N Mode. 6.5Mbps

Test Equipment:

Horn 1-18GHz	Pre-amplifier 1-26GHz	Pre-amplifier 26-40GHz	Horn > 18GHz	Limit
T60; S/N: 2238 @3m	T34 HP 8449B			FCC 15.205

Hi Frequency Cables

3' cable 22807700	12' cable 22807600	20' cable 22807500	HPF	Reject Filter	Peak Measurements RBW/VBW=1MHz/3MHz 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	36.52	24.25	33.1	6.8	-34.1	0.0	0.0	42.4	30.1	74	54	-31.6	-23.9	H
4.824	3.0	36.85	24.44	33.1	6.8	-34.1	0.0	0.0	42.7	30.3	74	54	-31.3	-23.7	V
Mid Channel (2437MHz)															
4.874	3.0	36.66	24.41	33.2	6.8	-34.0	0.0	0.0	42.6	30.3	74	54	-31.4	-23.7	H
4.874	3.0	36.76	24.34	33.2	6.8	-34.0	0.0	0.0	42.7	30.3	74	54	-31.3	-23.7	V
High Channel (2462MHz)															
4.924	3.0	35.96	23.73	33.2	6.8	-34.0	0.0	0.0	42.0	29.7	74	54	-32.0	-24.3	H
4.924	3.0	36.04	23.76	33.2	6.8	-34.0	0.0	0.0	42.1	29.8	74	54	-31.9	-24.2	V

Rev. 11.10.11 Note: No other emissions were detected above the system noise floor.

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		

7.2.4. TX ABOVE 1 GHz FOR 802.11a MODE IN THE 5.8 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS

High Frequency Measurement																
Compliance Certification Services, Fremont 3m Chamber																
Company:		LG														
Project #:		12U14595														
Date:		8/22/2012														
Test Engineer:		S.Aguilar														
Configuration:		Worst Case. Adapter + Headphone														
Mode:		11A Mode. 6Mbps														
Test Equipment:																
Horn 1-18GHz			Pre-amplifier 1-26GHz			Pre-amplifier 26-40GHz			Horn > 18GHz			Limit				
T60; S/N: 2238 @3m			T34 HP 8449B						T39-T88 ARA 18-40GHz & Mixer > 40GHz			FCC 15.205				
Hi Frequency Cables																
3' cable 22807700			12' cable 22807600			20' cable 22807500			HPF		Reject Filter		Peak Measurements			
3' cable 22807700			12' cable 22807600			20' cable 22807500					R_001		RBW/VBW=1MHz/3MHz			
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 (5745 MHz)																
11.490	3.0	33.89	21.05	38.9	11.2	-32.4	0.0	0.0	51.6	38.7	74	54	-22.4	-15.3	H	
11.490	3.0	33.69	21.02	38.9	11.2	-32.4	0.0	0.0	51.4	38.7	74	54	-22.6	-15.3	V	
Mid Channel (5785MHz)																
11.570	3.0	33.54	21.08	38.9	11.3	-32.4	0.0	0.0	51.4	39.0	74	54	-22.6	-15.0	H	
11.570	3.0	33.17	21.13	38.9	11.3	-32.4	0.0	0.0	51.1	39.0	74	54	-22.9	-15.0	V	
High Channel (5825MHz)																
11.650	3.0	34.02	21.63	39.0	11.4	-32.4	0.0	0.0	52.1	39.7	74	54	-21.9	-14.3	H	
11.650	3.0	33.76	21.61	39.0	11.4	-32.4	0.0	0.0	51.8	39.7	74	54	-22.2	-14.3	V	
Rev. 11.10.11																
Note: No other emissions were detected above the system noise floor.																
f	Measurement Frequency		Amp	Preamp Gain		Avg Lim	Average Field Strength Limit		Pk Lim	Peak Field Strength Limit		Avg Mar	Margin vs. Average Limit		Pk Mar	Margin vs. Peak Limit
Dist	Distance to Antenna		D Corr	Distance Correct to 3 meters												
Read	Analyzer Reading		Avg	Average Field Strength @ 3 m												
AF	Antenna Factor		Peak	Calculated Peak Field Strength												
CL	Cable Loss		HPF	High Pass Filter												

7.2.5. TX ABOVE 1 GHz FOR 802.11n HT20 MODE IN THE 5.8 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS

High Frequency Measurement
 Compliance Certification Services, Fremont 3m Chamber

Company: LG
 Project #: 12U14595
 Date: 8/22/2012
 Test Engineer: S.Aguilar
 Configuration: Worst Case. Adapter + Headphone
 Mode: 11N Mode. 6.5Mbps

Test Equipment:

Horn 1-18GHz	Pre-amplifier 1-26GHz	Pre-amplifier 26-40GHz	Horn > 18GHz	Limit
T60; S/N: 2238 @3m	T34 HP 8449B	T88 Miteq 26-40GHz	T39 ARA 18-26GHz & Mixer > 26GHz	FCC 15.205

Hi Frequency Cables

3' cable 22807700	12' cable 22807600	20' cable 22807500	HPF	Reject Filter	Peak Measurements RBW/VBW=1MHz/3MHz
3' cable 22807700	12' cable 22807600	20' cable 22807500		R_001	Average Measurements RBW=1MHz ; VBW=10Hz

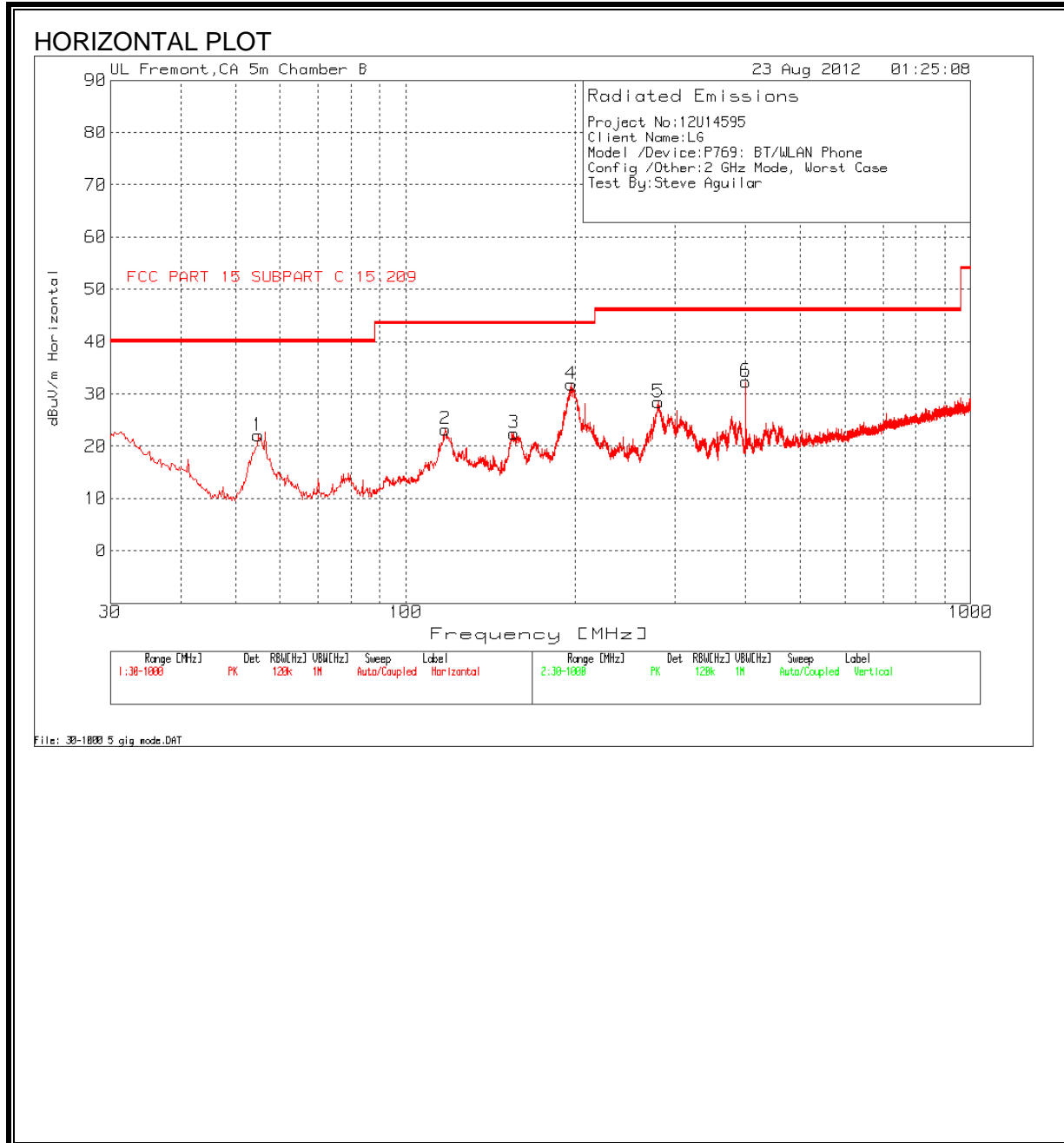
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
Low Channel (5745 MHz)															
11.490	3.0	34.24	21.18	38.9	11.2	-32.4	0.0	0.0	51.9	38.9	74	54	-22.1	-15.1	H
11.490	3.0	33.17	21.08	38.9	11.2	-32.4	0.0	0.0	50.8	38.8	74	54	-23.2	-15.2	V
Mid Channel (5785MHz)															
11.570	3.0	33.50	21.23	38.9	11.3	-32.4	0.0	0.0	51.4	39.1	74	54	-22.6	-14.9	H
11.570	3.0	33.43	21.26	38.9	11.3	-32.4	0.0	0.0	51.3	39.1	74	54	-22.7	-14.9	V
High Channel (5825MHz)															
11.650	3.0	33.71	21.42	39.0	11.4	-32.4	0.0	0.0	51.8	39.5	74	54	-22.2	-14.5	H
11.650	3.0	33.84	21.58	39.0	11.4	-32.4	0.0	0.0	51.9	39.7	74	54	-22.1	-14.3	V

Rev. 11.10.11 Note: No other emissions were detected above the system noise floor.

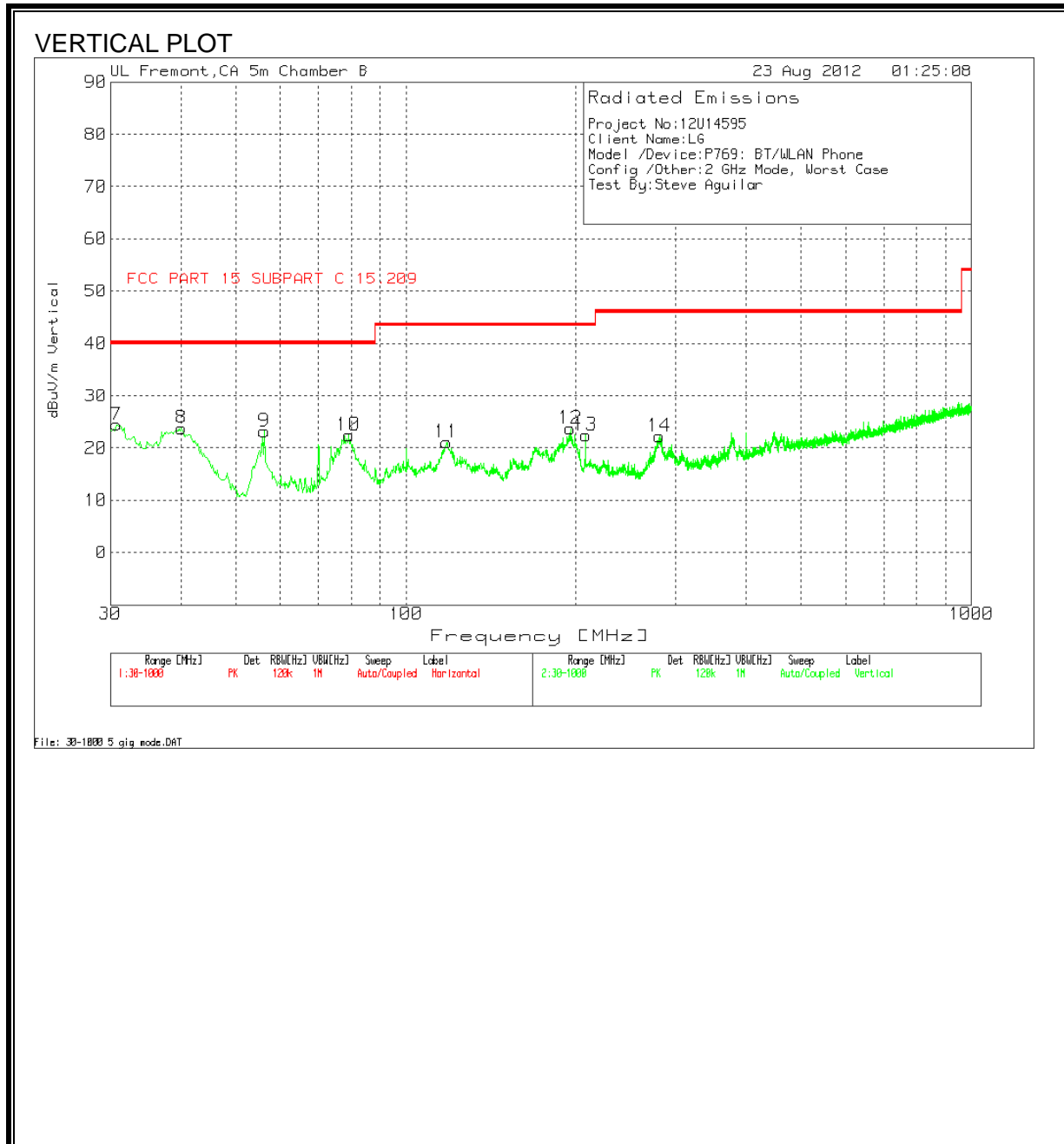
f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field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

7.3. 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)



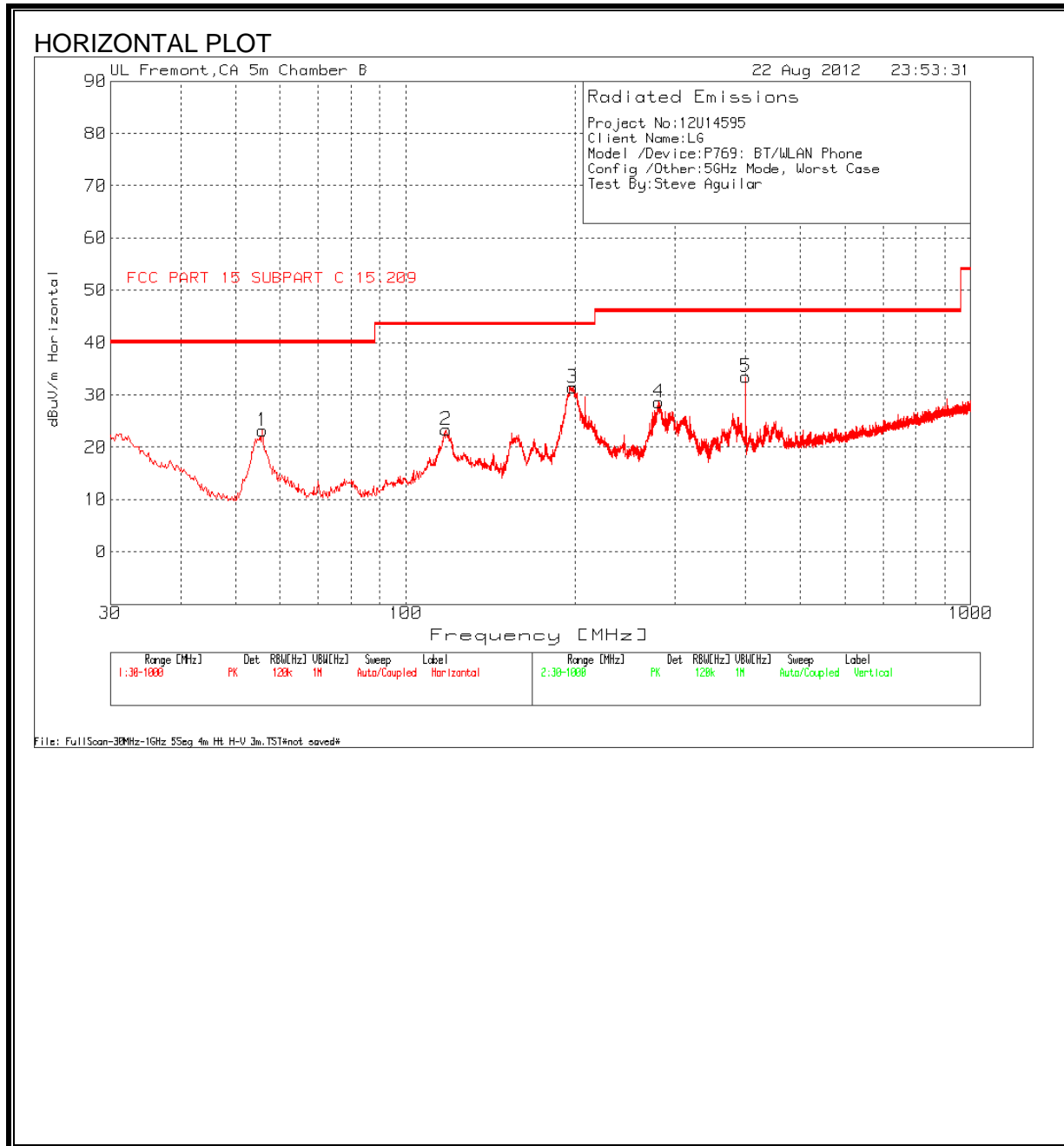
HORIZONTAL AND VERTICAL DATA

Company Name: LG
Project: 12U14595
Date: 8/23/2012
Configuraiton: EUT + Adapter + Headset
Mode: 2 GHz , Worst Case
Tested by: S.Aguilar

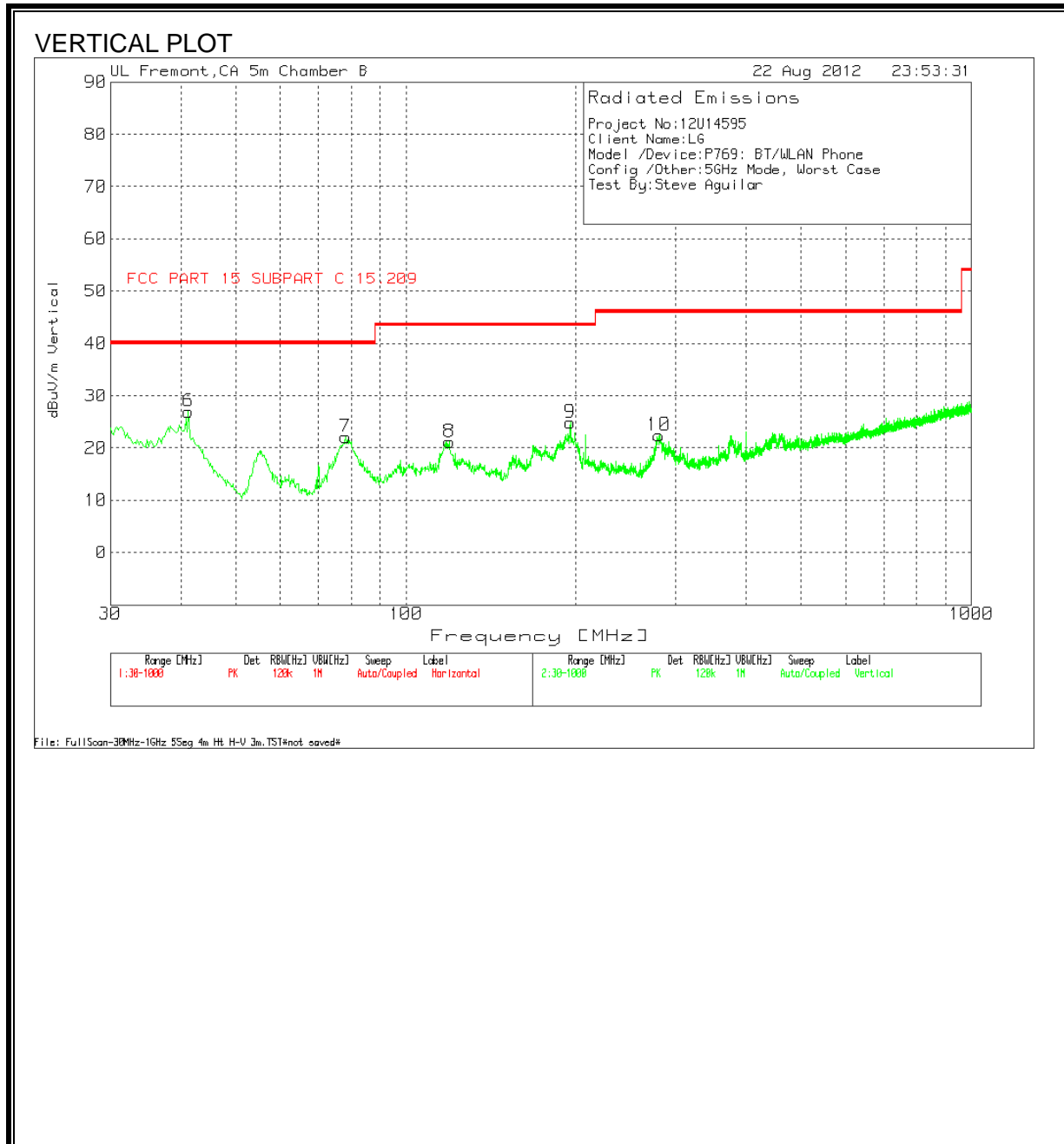
Test Frequency [MHz]	Meter Reading [dB(μV)]	Detector	Pre Amp Factor [dB]	Antenna Factor [dB/m]	Corrected [dB(μV/m)]	Class C PK limit [dB(μV/m)]	QP Margin [dB]	Height [cm]	Polarity
Range 1 30 - 1000MHz									
54.8122	43.78	PK	7.3	-29	22.08	40	-17.92	400	Horz
117.6179	37.85	PK	13.8	-28.4	23.25	43.5	-20.25	300	Horz
155.4177	38.02	PK	12.5	-28	22.52	43.5	-20.98	200	Horz
196.3189	47.25	PK	12.2	-27.6	31.85	43.5	-11.65	200	Horz
280.2538	42.03	PK	13.3	-26.9	28.43	46	-17.57	100	Horz
399.8561	43.84	PK	15.5	-27	32.34	46	-13.66	100	Horz
Range 2 30 - 1000MHz									
30.7754	32.81	PK	20.9	-29.3	24.41	40	-15.59	100	Vert
40.0799	39.32	PK	13.7	-29.2	23.82	40	-16.18	100	Vert
56.1691	44.97	PK	7.2	-29	23.17	40	-16.83	100	Vert
79.2366	43.36	PK	7.9	-28.8	22.46	40	-17.54	100	Vert
118.0056	35.47	PK	13.9	-28.3	21.07	43.5	-22.43	100	Vert
195.3497	39.3	PK	12	-27.6	23.7	43.5	-19.8	200	Vert
207.9496	39.33	PK	10.6	-27.5	22.43	43.5	-21.07	200	Vert
280.8353	35.83	PK	13.3	-26.9	22.23	46	-23.77	200	Vert

PK - Peak detector
 QP - Quasi-peak detector

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



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



HORIZONTAL AND VERTICAL DATA

Company Name: LG
Project: 12U14595
Date: 8/23/2012
Configuraiton: EUT + Adapter + Headset
Mode: 5 GHz , Worst Case
Tested by: S.Aguilar

Test Frequency [MHz]	Meter Reading [dB(μV)]	Detector	Pre Amp Factor [dB]	Antenna Factor [dB/m]	Corrected [dB(μV/m)]	Class C PK limit [dB(μV/m)]	QP Margin [dB]	Height [cm]	Polarity
Range 1 30 - 1000MHz									
55.7814	45.01	PK	7.2	-29	23.21	40	-16.79	400	Horz
118.0056	37.73	PK	13.9	-28.3	23.33	43.5	-20.17	200	Horz
197.6759	46.56	PK	12.4	-27.6	31.36	43.5	-12.14	100	Horz
280.4476	42.25	PK	13.3	-26.9	28.65	46	-17.35	100	Horz
399.8561	44.92	PK	15.5	-27	33.42	46	-12.58	100	Horz
Range 2 30 - 1000MHz									
41.243	43.39	PK	12.8	-29.2	26.99	40	-13.01	200	Vert
78.2674	42.92	PK	8	-28.8	22.12	40	-17.88	100	Vert
119.3625	35.47	PK	14	-28.3	21.17	43.5	-22.33	100	Vert
195.3497	40.45	PK	12	-27.6	24.85	43.5	-18.65	100	Vert
280.2538	36	PK	13.3	-26.9	22.4	46	-23.6	200	Vert

PK - Peak detector
 QP - Quasi-peak detector

8. 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

6 WORST EMISSIONS

Company Name: LG
 Project: 12U14595
 Date: 8/24/2012
 Configuration: 120VAC / 60Hz
 Mode: 2GHz TX mode Worst Case
 Tested by: S. Aguilar

Line-L1 .15 - 30MHz

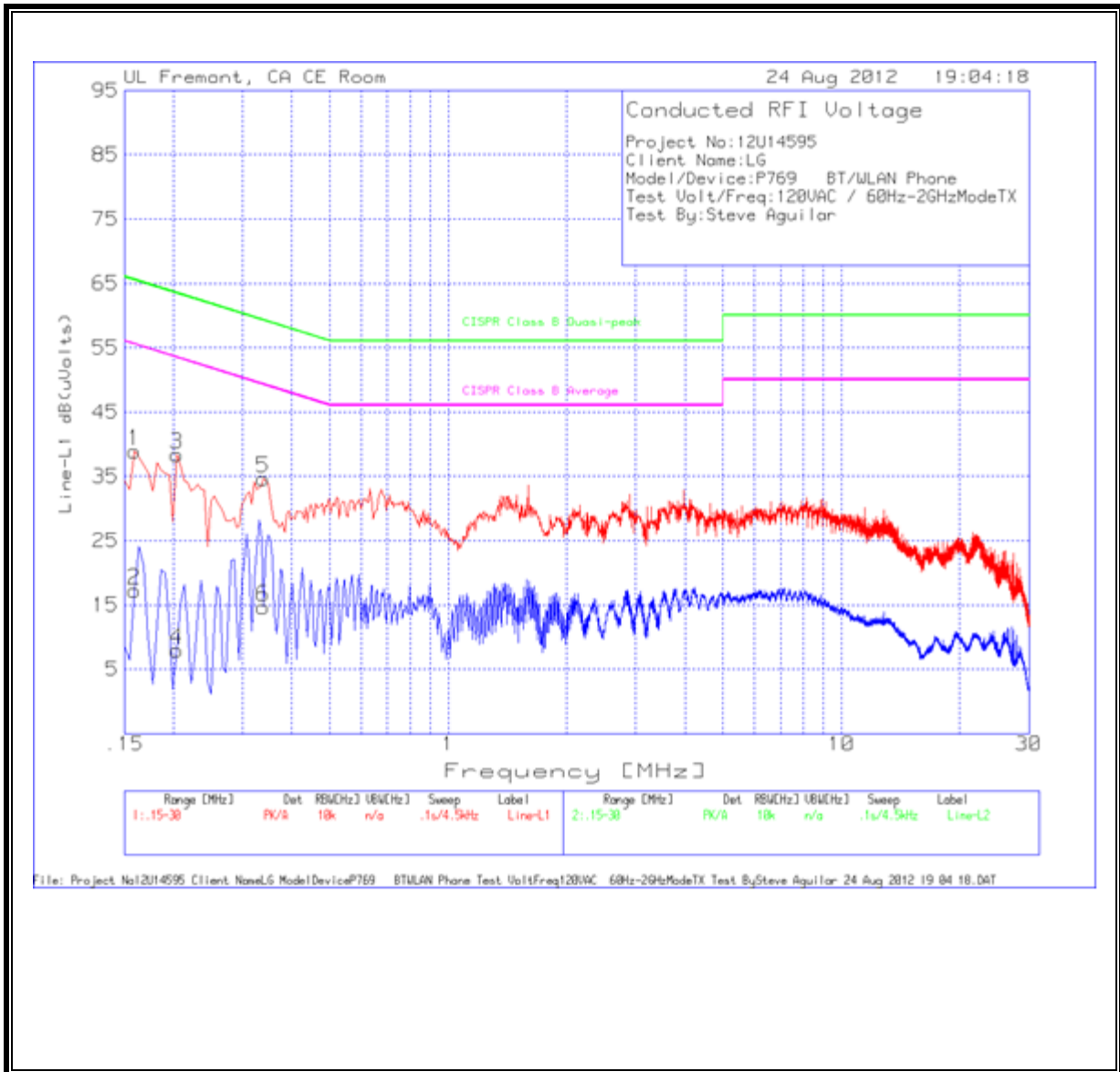
Test Frequency [MHz]	Meter Reading [dBuV]	Detector Type	LISN [dB]	Cables [dB]	Corrected [dB(uV)]	Class B QP Limit	QP Margin	Class B Av Limit [dB(uV)]	Av Margin [dB]
0.159	38.76	PK	0.1	0	38.86	65.5	-26.64	-	-
0.159	17.18	Av	0.1	0	17.28	-	-	55.5	-38.22
0.204	38.28	PK	0.1	0	38.38	63.4	-25.02	-	-
0.204	7.87	Av	0.1	0	7.97	-	-	53.4	-45.43
0.339	34.6	PK	0.1	0	34.7	59.2	-24.5	-	-
0.339	14.63	Av	0.1	0	14.73	-	-	49.2	-34.47

Line-L2 .15 - 30MHz

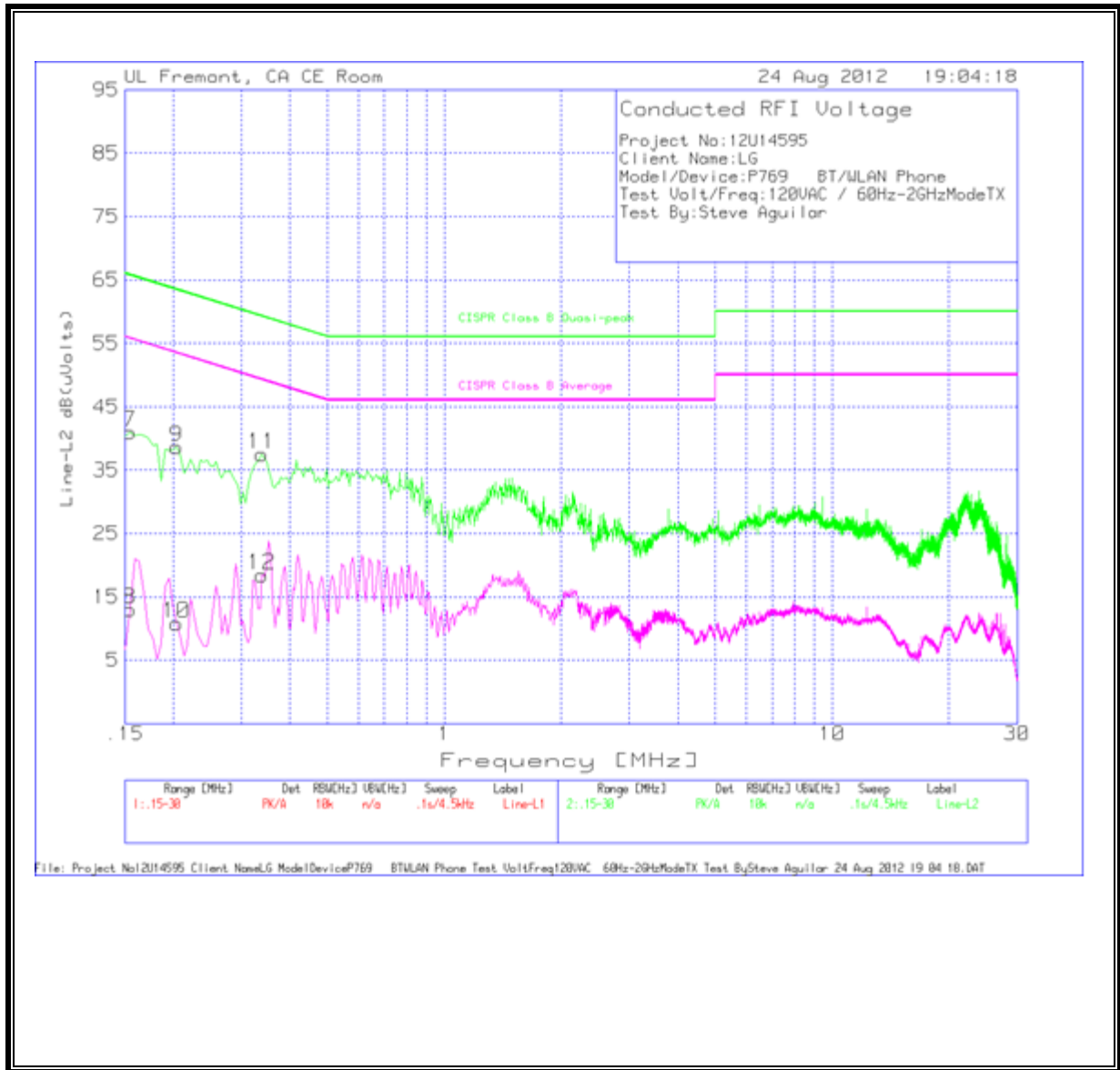
Test Frequency [MHz]	Meter Reading [dBuV]	Detector Type	LISN [dB]	Cables [dB]	Corrected [dB(uV)]	Class B QP Limit	QP Margin	Class B Av Limit [dB(uV)]	Av Margin [dB]
0.1545	40.87	PK	0.1	0	40.97	65.8	-24.83	-	-
0.1545	12.88	Av	0.1	0	12.98	-	-	55.8	-42.82
0.204	38.5	PK	0.1	0	38.6	63.4	-24.8	-	-
0.204	10.76	Av	0.1	0	10.86	-	-	53.4	-42.54
0.339	37.35	PK	0.1	0	37.45	59.2	-21.75	-	-
0.339	18.29	Av	0.1	0	18.39	-	-	49.2	-30.81

PK - Peak detector
 QP - Quasi-Peak detector
 Av - Average detector

LINE 1 RESULTS



LINE 2 RESULTS



6 WORST EMISSIONS

Company Name: LG
 Project: 12U14595
 Date: 8/24/2012
 Configuraiton: 120VAC / 60 Hz
 Mode: 5 GHz TX mode Worst Case
 Tested by: S. Aguilar

Line-L1 .15 - 30MHz

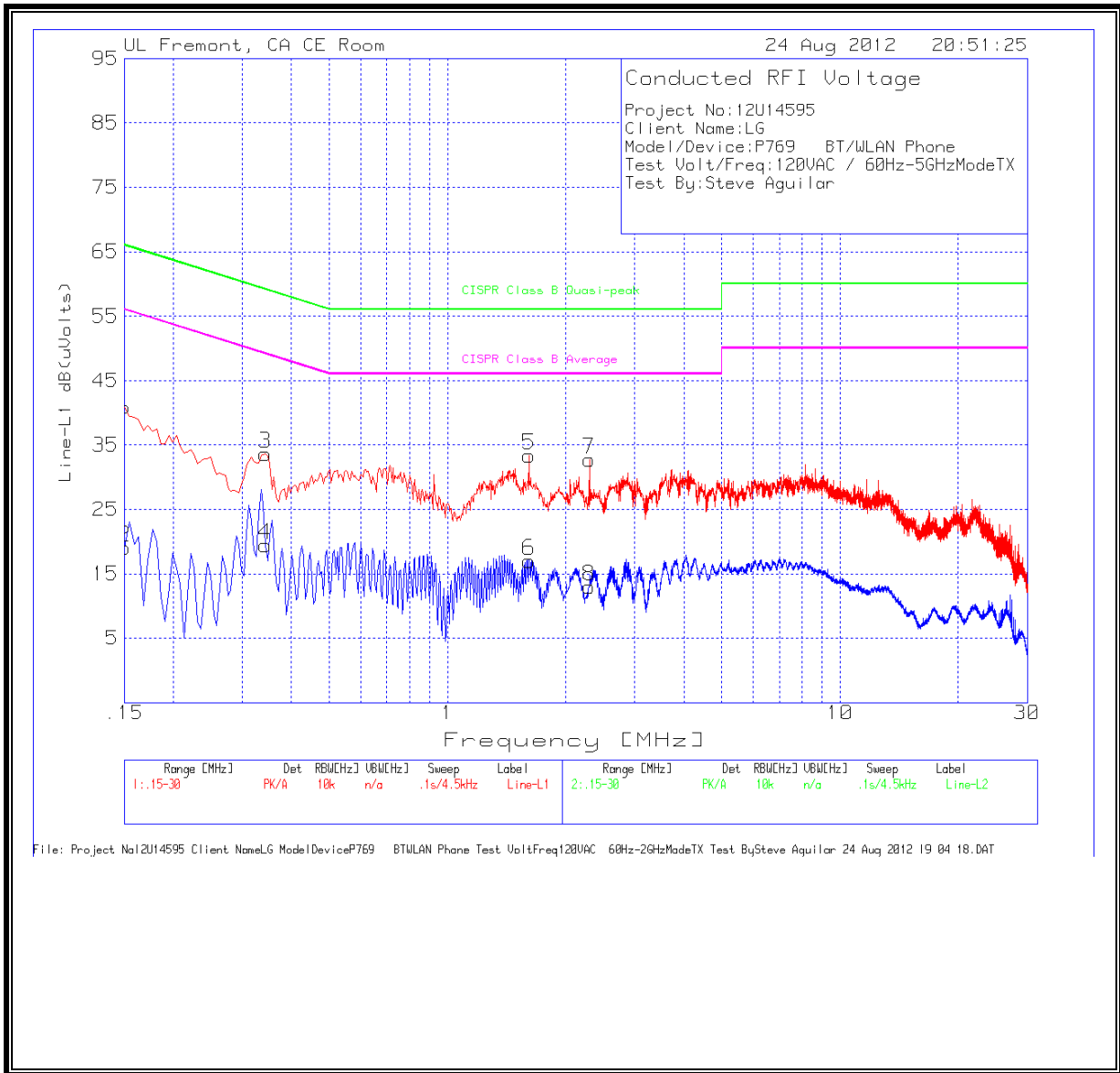
Test Frequency [MHz]	Meter Reading [dBuV]	Detector Type	LISN [dB]	Cables [dB]	Corrected [dB(uV)]	Class B QP Limit	QP Margin	Class B Av Limit [dB(uV)]	Av Margin [dB]
0.15	40.81	PK	0.1	0	40.91	66	-25.09	-	-
0.15	19.01	Av	0.1	0	19.11	-	-	56	-36.89
0.3435	33.5	PK	0.1	0	33.6	59.1	-25.5	-	-
0.3435	19.35	Av	0.1	0	19.45	-	-	49.1	-29.65
1.6125	33.19	PK	0.1	0.1	33.39	56	-22.61	-	-
1.6125	16.75	Av	0.1	0.1	16.95	-	-	46	-29.05
2.2965	32.5	PK	0.1	0.1	32.7	56	-23.3	-	-
2.2965	12.79	Av	0.1	0.1	12.99	-	-	46	-33.01

Line-L2 .15 - 30MHz

Test Frequency [MHz]	Meter Reading [dBuV]	Detector Type	LISN [dB]	Cables [dB]	Corrected [dB(uV)]	Class B QP Limit	QP Margin	Class B Av Limit [dB(uV)]	Av Margin [dB]
0.1545	36.8	PK	0.1	0	36.9	65.8	-28.9	-	-
0.1545	18.29	Av	0.1	0	18.39	-	-	55.8	-37.41
0.33	35.32	PK	0.1	0	35.42	59.5	-24.08	-	-
0.33	22.2	Av	0.1	0	22.3	-	-	49.5	-27.2
0.411	31.93	PK	0.1	0	32.03	57.6	-25.57	-	-
0.411	15.95	Av	0.1	0	16.05	-	-	47.6	-31.55
23.802	31.07	PK	0.4	0.2	31.67	60	-28.33	-	-
23.802	10.04	Av	0.4	0.2	10.64	-	-	50	-39.36

PK - Peak detector
 QP - Quasi-Peak detector
 Av - Average detector

LINE 1 RESULTS



LINE 2 RESULTS

