



FCC CFR47 PART 15 SUBPART C

**BLUETOOTH LOW ENERGY
C2PC CERTIFICATION TEST REPORT**

FOR

GSM/CDMA/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n/ac and NFC

MODEL NUMBER: LGLS990, LG-LS990, LS990

FCC ID: ZNFLS990

REPORT NUMBER: 14U17849-3

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Prepared for
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	6/3/14	Initial Issue	P. Kim

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1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: GSM/CDMA/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n/ac and NFC.

MODEL: LGLS990, LG-LS990, LS990

SERIAL NUMBER: 17QZC (Radiated)

DATE TESTED: MAY 20 – JUNE 3, 2014

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

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

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

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2. TEST METHODOLOGY

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

3. FACILITIES AND ACCREDITATION

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

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

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

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 18000 MHz	4.94 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a GSM/CDMA/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n/ac and NFC.

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)
2402-2480	BLE	4.88	3.08

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -4dBi.

5.4. WORST-CASE CONFIGURATION AND MODE

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

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X orientation.

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	LG	MCS-04WT2	TA350000050	N/A
Earphone	LG	N/A	N/A	N/A
WPC Cover	LG	N/A	N/A	N/A
WPC Charger	LG	WPC-300	304HYBF00069	BEJWCP300

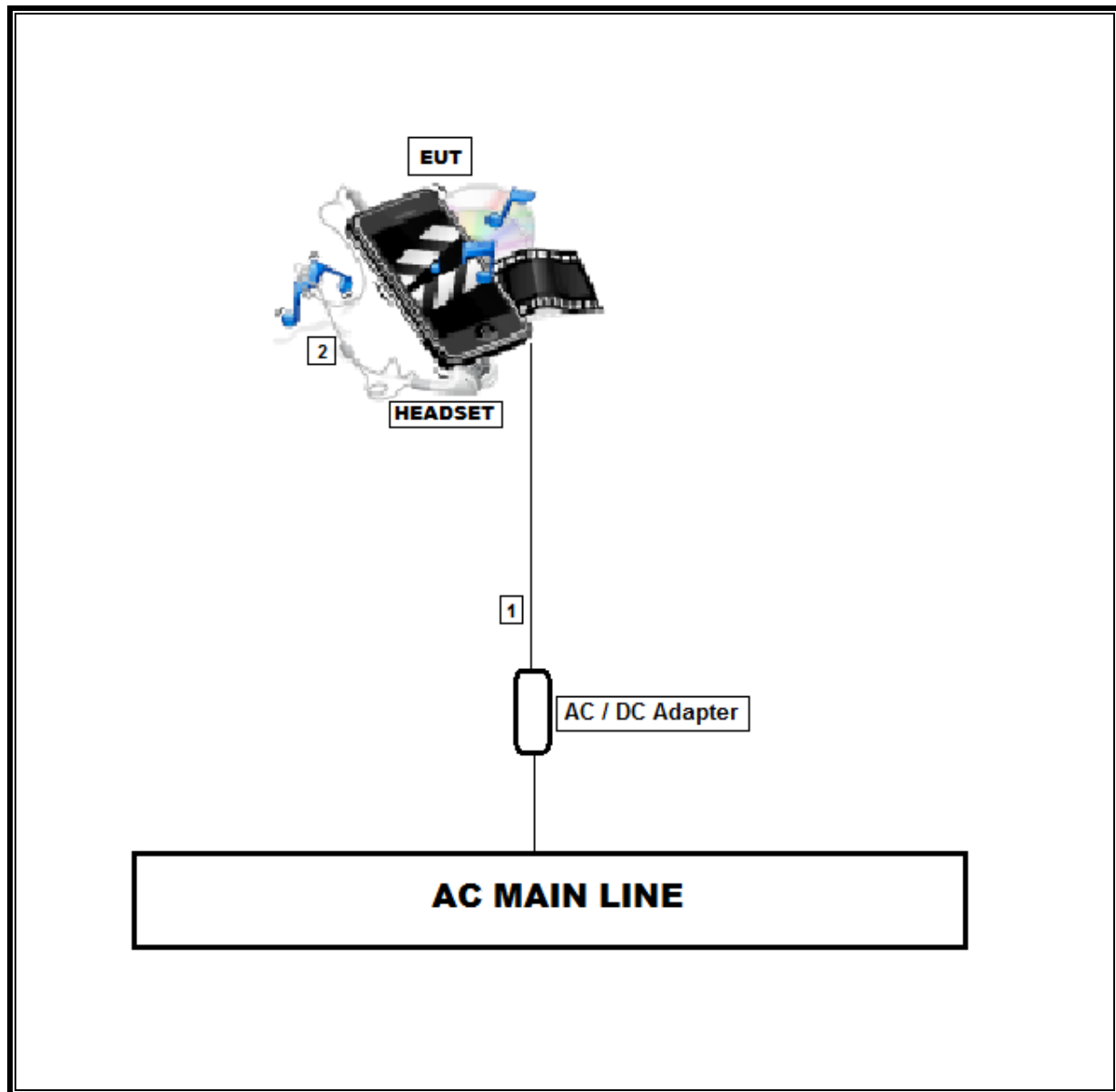
I/O CABLES

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

TEST SETUP

EUT was set in the Hidden menu mode to enable BLE communications.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	Manufacturer	Model	Asset	Cal Due
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/14
Spectrum Analyzer, 9KHz-40GHz	HP	8564E	C00986	04/01/15
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	1000741	08/13/14
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/18/14
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/14
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/14
Antenna, Horn, 1-18 GHz	ETS	3117	C01022	02/21/15
Antenna, Horn, 18- 26 GHz	ARA	MWH-1826/B	C00946	11/12/14
Antenna, Horn, 26-40 GHz	ARA	MWH-2640	C00891	06/28/14
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	T243	03/06/15
RF Preamplifier, 100KHz -> 1300MHz	HP	TBD	C00825	06/01/14
RF Preamplifier, 1GHz - 18GHz	Miteq	NSP4000-SP2	924343	03/23/15
RF Preamplifier, 1GHz - 26.5GHz	HP	8449B	F00351	06/27/14
AC Power Supply, 2,500VA 45-500Hz	Elgar-Ametek	CW2501M	F00013	CNR
RF Preamplifier, 1GHz - 40GHz	Miteq	NSP4000-SP2	C00990	08/20/14
Attenuator / Switch driver	HP	11713A	F00204	CNR
Low Pass Filter 3GHz	Micro-Tronics	LPS17541	F00219	05/23/15
High Pass Filter 5GHz	Micro-Tronics	HPS17542	F00222	05/22/15
High Pass Filter 6GHz	Micro-Tronics	HPM17543	F00224	05/22/15

7. SUMMARY

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.247 (a)(2)	RSS-210 A8.2(a)	Occupied Band width (6dB)	>500KHz	Conducted	Pass	see original
2.1051, 15.247 (d)	RSS-210 A8.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	see original
15.247	RSS-210 A8.4	TX conducted output power	<30dBm		Pass	see original
15.247	RSS-210 A8.2	PSD	<8dBm		Pass	see original
15.207 (a)	RSS-GEN 7.2.2	AC Power Line conducted emissions	Section 10	Radiated	Pass	see original
15.205, 15.209	RSS-210 Clause 2.6, RSS-210 Clause 6	Radiated Spurious Emission	< 54dBuV/m		Pass	41.03dBuV/m

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 - 2009. 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 add duty cycle factor for average measurements. Duty cycle factor = $10 \log(1/x)$. For this sample: DCF = $10 \log(1/x) = 2.1 \text{ dB}$

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.

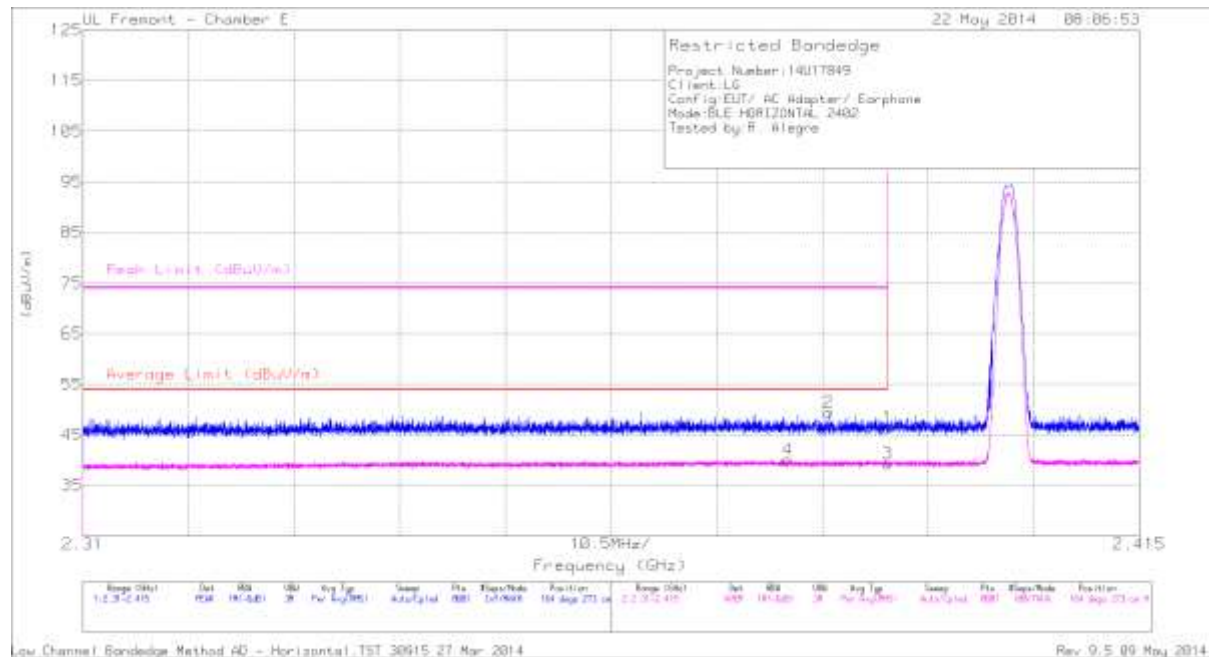
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

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.

8.2. TRANSMITTER ABOVE 1 GHz

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

LOW CHANNEL RESTRICTED, PEAK & AVERAGE, HORIZ



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	39.11	PK	32	-24.7	0	46.41	-	-	74	-27.59	164	273	H
2	* 2.384	42.1	PK	31.9	-24.6	0	49.4	-	-	74	-24.6	164	273	H
3	* 2.39	29.95	RMS	32	-24.7	2.1	39.35	54	-14.65	-	-	164	273	H
4	* 2.38	30.71	RMS	31.9	-24.6	2.1	40.11	54	-13.89	-	-	164	273	H

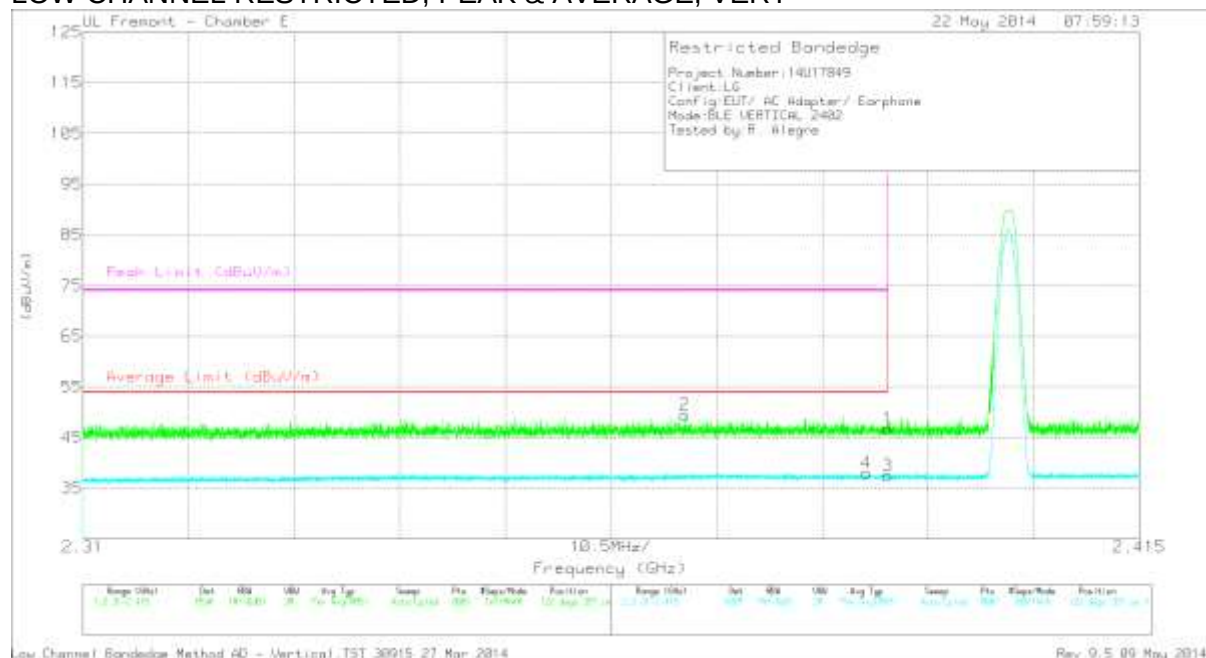
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

LOW CHANNEL RESTRICTED, PEAK & AVERAGE, VERT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	39.49	PK	32	-24.7	0	46.79	-	-	74	-27.21	122	357	V
2	* 2.37	42.18	PK	31.9	-24.6	0	49.48	-	-	74	-24.52	122	357	V
3	* 2.39	30.21	RMS	32	-24.7	2.1	39.61	54	-14.39	-	-	122	357	V
4	* 2.388	30.71	RMS	32	-24.7	2.1	40.11	54	-13.89	-	-	122	357	V

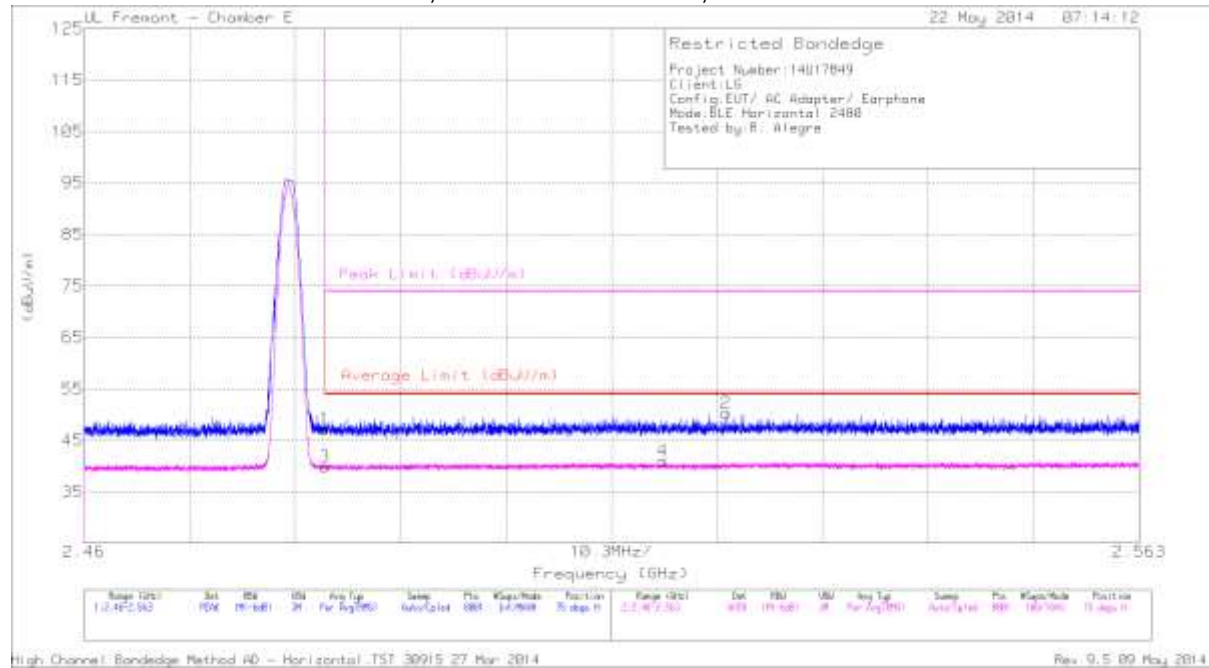
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

HIGH CHANNEL RESTRICTED, PEAK & AVERAGE, HORIZ



Trace Markers

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	39.26	PK	32.3	-24.3	0	47.26	-	-	74	-26.74	75	323	H
3	* 2.484	29.81	RMS	32.3	-24.3	2.1	39.91	54	-14.09	-	-	75	323	H
4	2.517	30.69	RMS	32.4	-24.2	2.1	40.99	54	-13.01	-	-	75	323	H
2	2.523	42	PK	32.4	-24.1	0	50.3	-	-	74	-23.7	75	323	H

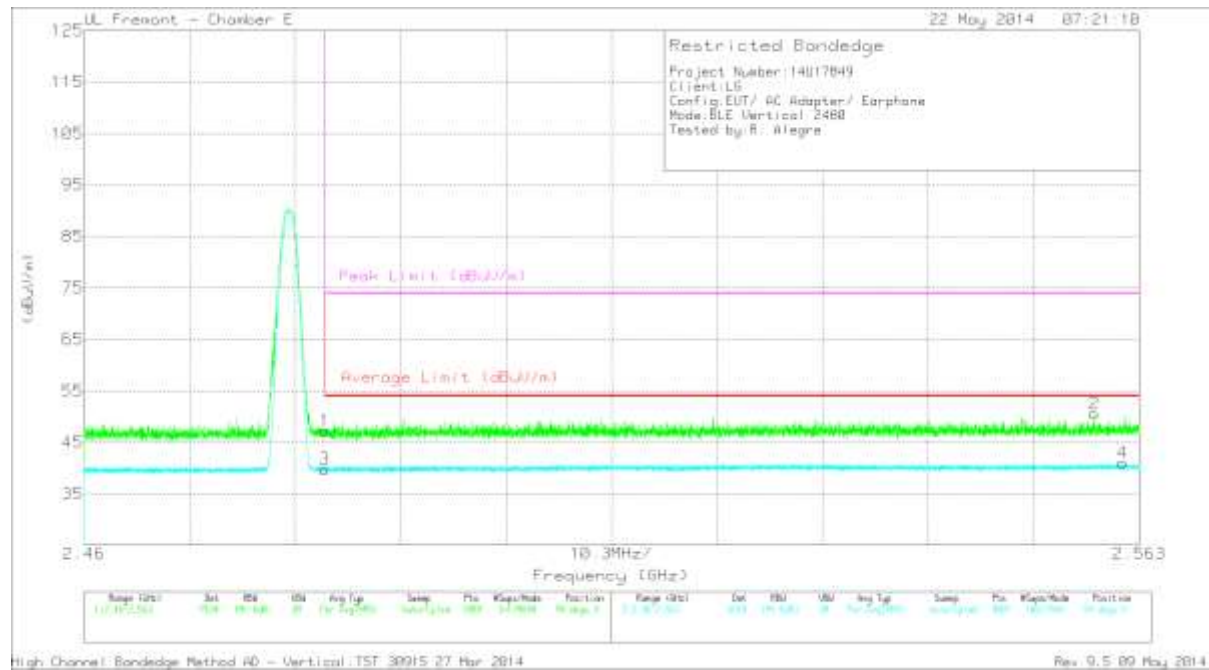
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

HIGH CHANNEL RESTRICTED, PEAK & AVERAGE, VERT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	39.25	PK	32.3	-24.3	0	47.25	-	-	74	-26.75	94	328	V
3	* 2.484	29.66	RMS	32.3	-24.3	2.1	39.76	54	-14.24	-	-	94	328	V
2	2.559	42.18	PK	32.5	-24.1	0	50.58	-	-	74	-23.42	94	328	V
4	2.561	30.53	RMS	32.5	-24.1	2.1	41.03	54	-12.97	-	-	94	328	V

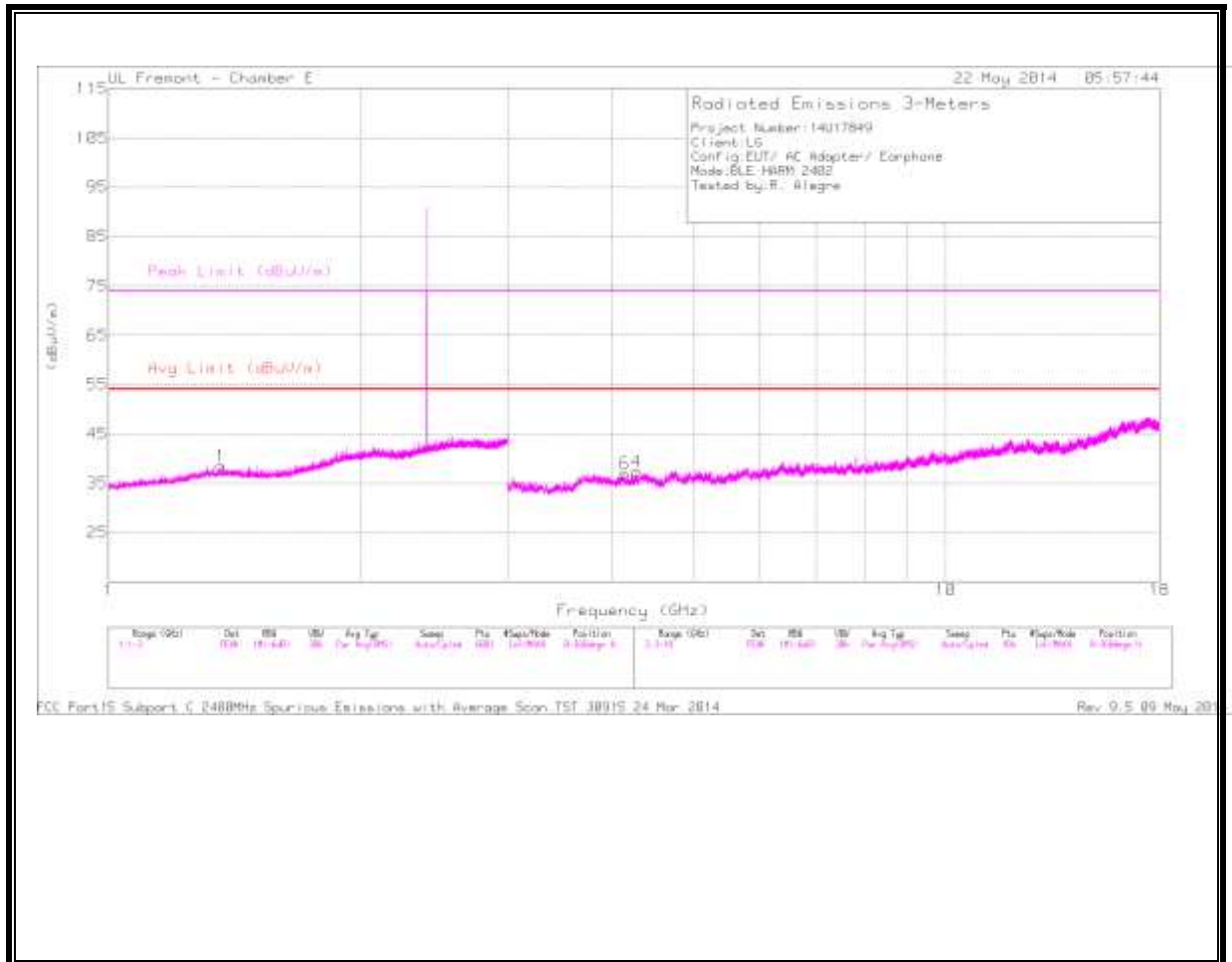
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

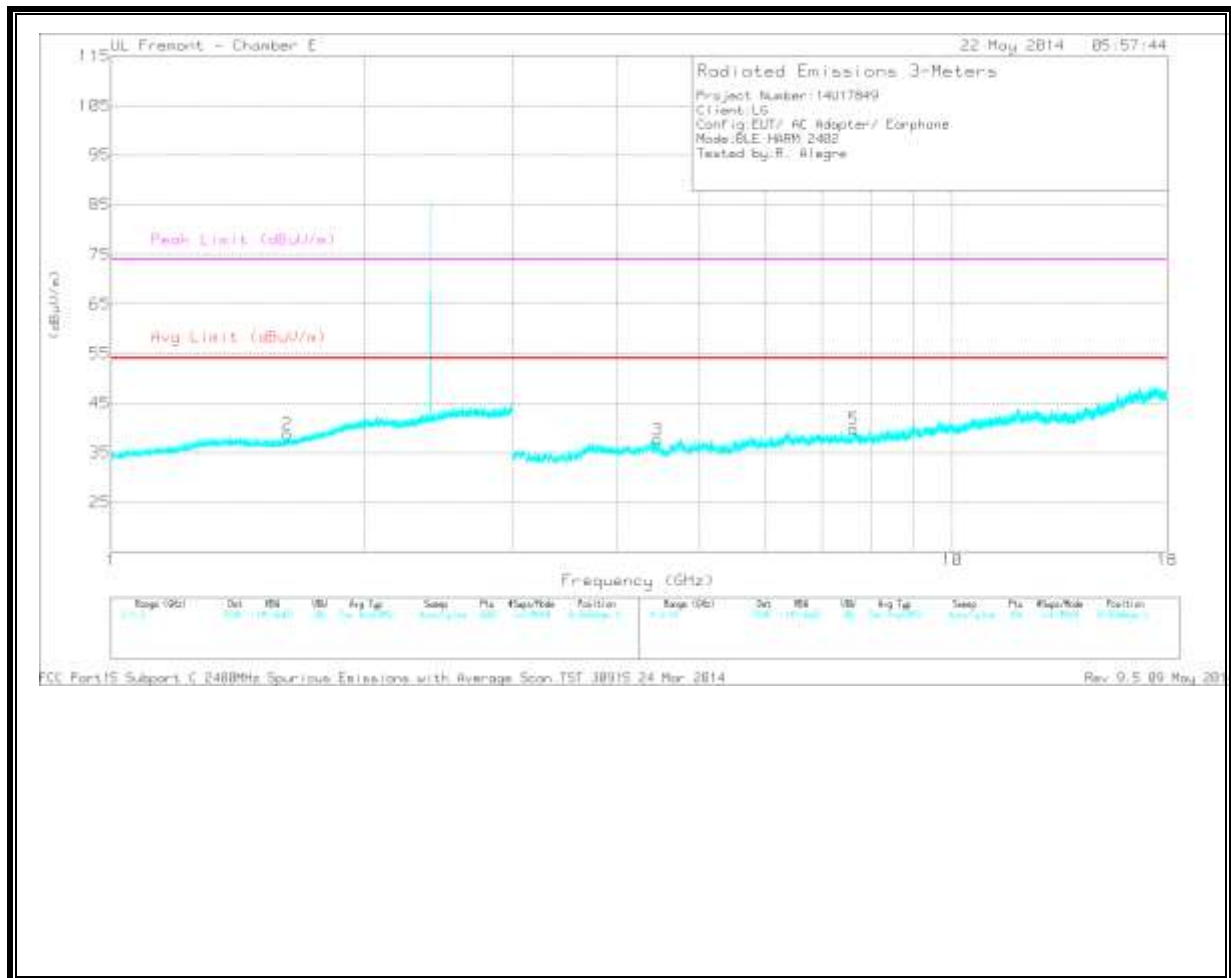
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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

VERTICAL



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

LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.363	36.16	PK	28.9	-26.6	0	38.46	-	-	74	-35.54	0-360	200	H
2	* 1.62	36.41	PK	28.6	-26.3	0	38.71	-	-	74	-35.29	0-360	200	V
4	* 4.275	34.8	PK	33.5	-30.9	0	37.4	-	-	74	-36.6	0-360	199	H
6	* 4.137	34.73	PK	33.4	-31.1	0	37.03	-	-	74	-36.97	0-360	101	H
5	* 7.636	30.85	PK	35.8	-26.9	0	39.75	-	-	74	-34.25	0-360	101	V
3	4.465	34.86	PK	33.9	-31.2	0	37.56	-	-	-	-	0-360	200	V

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

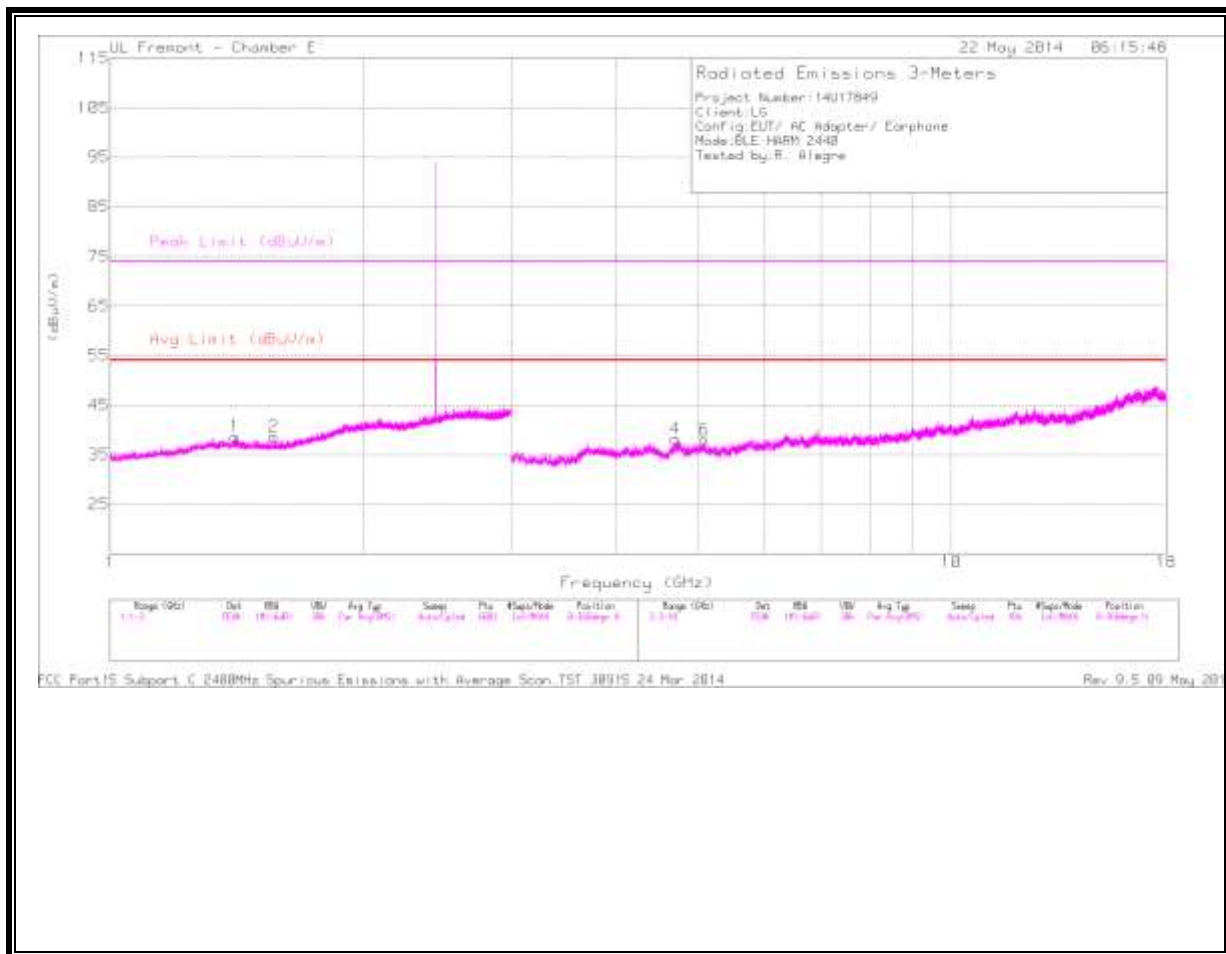
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.363	43.98	PK2	28.9	-26.6	0	46.28	-	-	74	-27.72	0	199	H
* 1.62	45.13	PK2	28.6	-26.3	0	47.43	-	-	74	-26.57	0	199	V
* 4.138	42.22	PK2	33.4	-31.1	0	44.52	-	-	74	-29.48	0	102	H
* 4.276	41.48	PK2	33.5	-30.9	0	44.08	-	-	74	-29.92	0	199	H
* 7.635	39.33	PK2	35.8	-26.9	0	48.23	-	-	74	-25.77	0	102	V
* 7.635	27.29	MAV1	35.8	-26.9	2.1	38.29	54	-15.71	-	-	0	102	V
4.466	41.35	PK2	33.9	-31.2	0	44.05	-	-	-	-	0	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK2 - KDB558074 Method: Maximum Peak

MID CHANNEL

HORIZONTAL



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

VERTICAL



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

MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.408	36.28	PK	28.8	-26.4	0	38.68	-	-	74	-35.32	0-360	101	H
2	* 1.566	36.65	PK	28.4	-26.4	0	38.65	-	-	74	-35.35	0-360	101	H
3	* 1.679	35.91	PK	29	-26.3	0	38.61	-	-	74	-35.39	0-360	199	V
4	* 4.702	34.44	PK	34.2	-30.4	0	38.24	-	-	74	-35.76	0-360	200	H
6	* 5.085	34.73	PK	34.1	-30.8	0	38.03	-	-	74	-35.97	0-360	101	H
5	* 4.955	34.04	PK	34.1	-30.2	0	37.94	-	-	74	-36.06	0-360	200	V

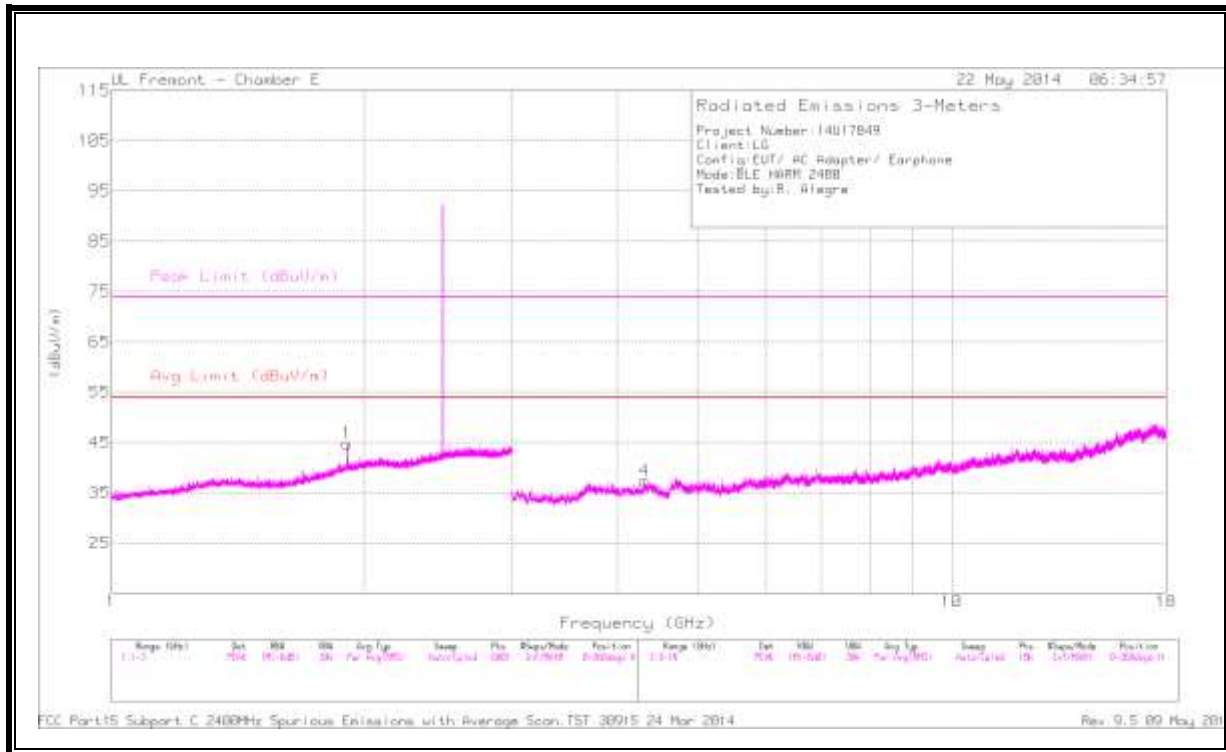
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.566	44.19	PK2	28.4	-26.4	0	46.19	-	-	74	-27.81	0	102	H
* 1.408	44.3	PK2	28.8	-26.4	0	46.7	-	-	74	-27.3	0	102	H
* 1.677	44.21	PK2	29	-26.3	0	46.91	-	-	74	-27.09	0	200	V
* 4.701	41.2	PK2	34.2	-30.3	0	45.1	-	-	74	-28.9	0	200	H
* 4.701	30.42	MAV1	34.2	-30.3	2.1	36.42	54	-17.58	-	-	0	200	H
* 5.086	41.36	PK2	34.1	-30.8	0	44.66	-	-	74	-29.34	0	102	H
* 4.955	40.72	PK2	34.1	-30.2	0	44.62	-	-	74	-29.38	0	200	V

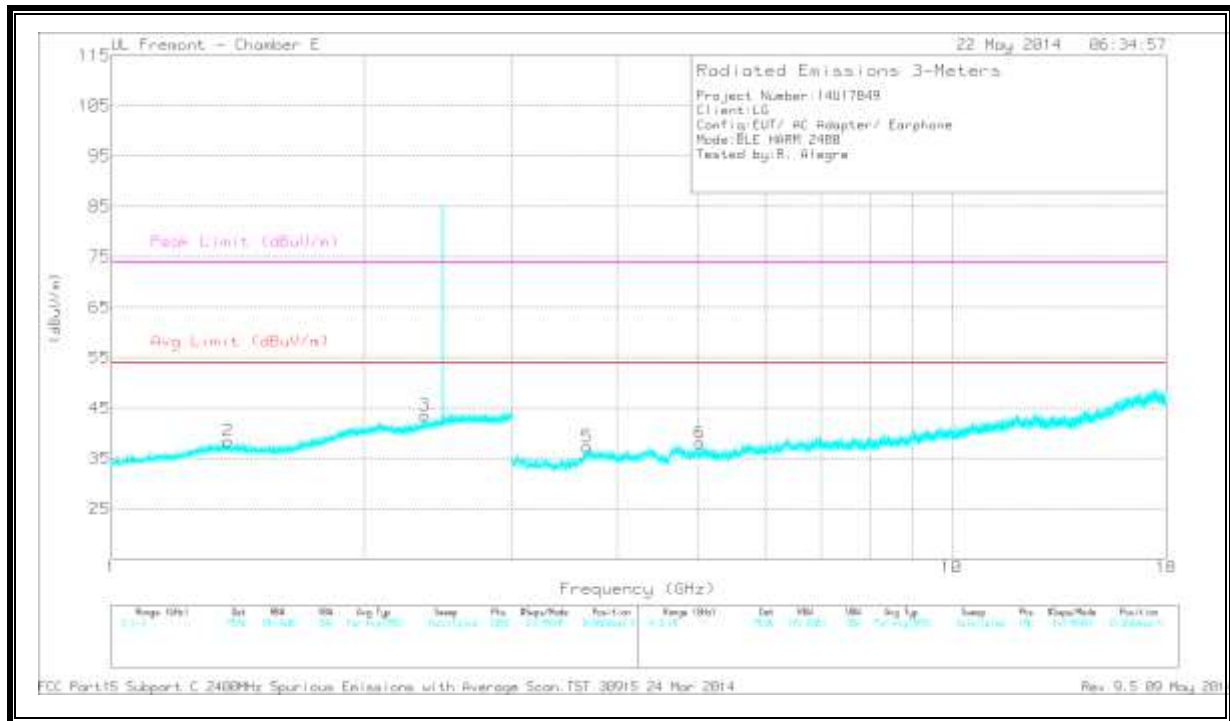
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK2 - KDB558074 Method: Maximum Peak

HIGH CHANNEL
HORIZONTAL



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

VERTICAL



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

HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Filtri/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.379	36.17	PK	28.9	-26.6	0	38.47	-	-	74	-35.53	0-360	200	V
3	* 2.36	36.56	PK	31.8	-24.8	0	43.56	-	-	74	-30.44	0-360	101	V
4	* 4.311	34.27	PK	33.6	-30.5	0	37.37	-	-	74	-36.63	0-360	199	H
5	* 3.685	34.83	PK	33.3	-30.8	0	37.33	-	-	74	-36.67	0-360	200	V
6	* 5.02	34.31	PK	34.1	-30.3	0	38.11	-	-	74	-35.89	0-360	200	V
1	1.909	39	PK	31.1	-25.3	0	44.8	-	-	-	-	0-360	102	H

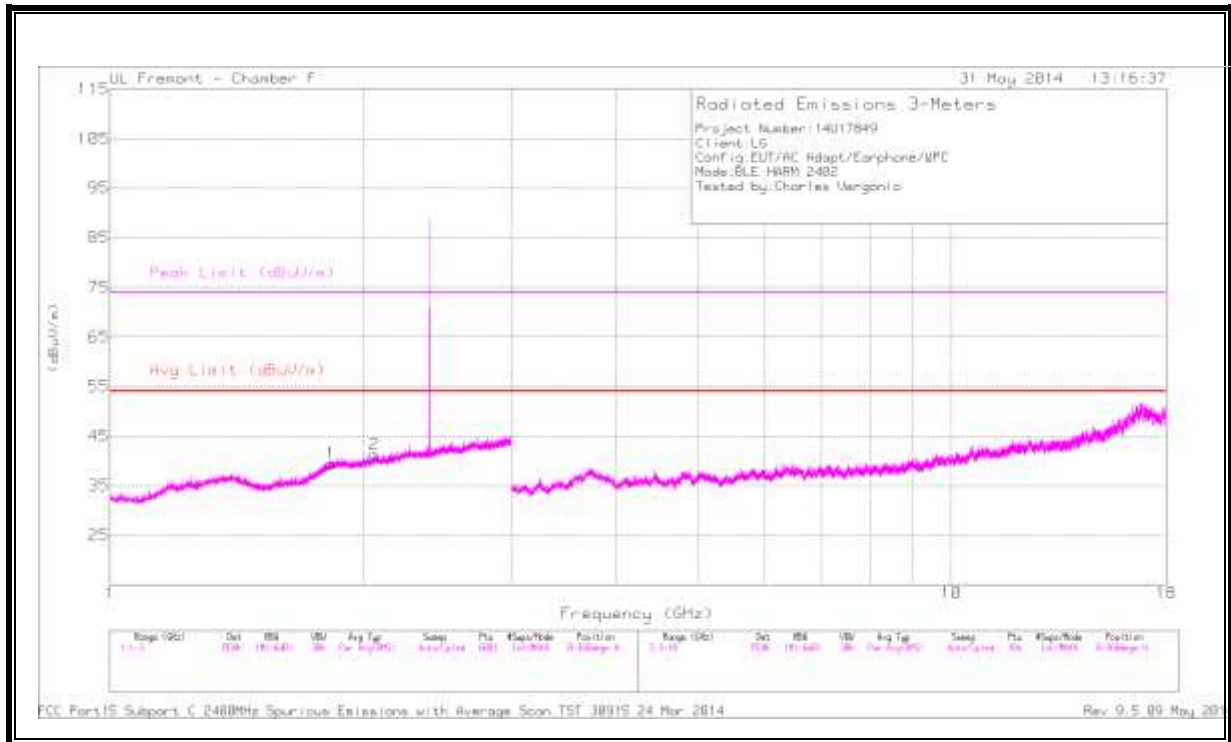
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Filtri/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.36	43.56	PK2	31.8	-24.8	0	50.56	-	-	74	-23.44	0	102	V
* 1.379	44.14	PK2	28.9	-26.6	0	46.44	-	-	74	-27.56	0	200	V
* 4.312	41.3	PK2	33.6	-30.5	0	44.4	-	-	74	-29.6	0	200	H
* 5.02	40.99	PK2	34.1	-30.3	0	44.79	-	-	74	-29.21	0	200	V
* 5.019	30.09	MAV1	34.1	-30.3	2.1	35.99	54	-18.01	-	-	0	200	V
* 3.683	41.86	PK2	33.3	-30.9	0	44.26	-	-	74	-29.74	0	200	V
* 3.687	30.67	MAV1	33.3	-30.8	2.1	35.27	54	-18.73	-	-	0	200	V
1.908	32.21	MAV1	31.1	-25.3	2.1	40.11	-	-	-	-	0	103	H
1.91	44.28	PK2	31.1	-25.3	0	50.08	-	-	-	-	0	103	H

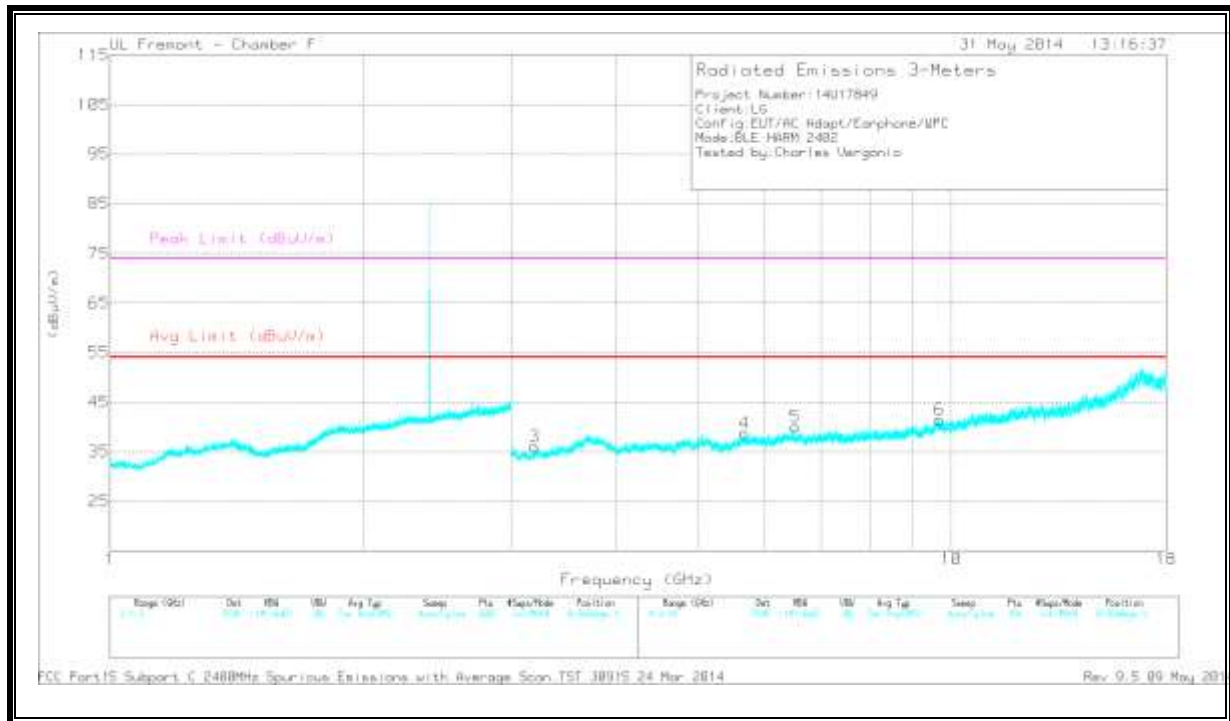
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK2 - KDB558074 Method: Maximum Peak

WORST CASE WITH WPC CHARGER AND BACK COVER
HORIZONTAL



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

VERTICAL



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

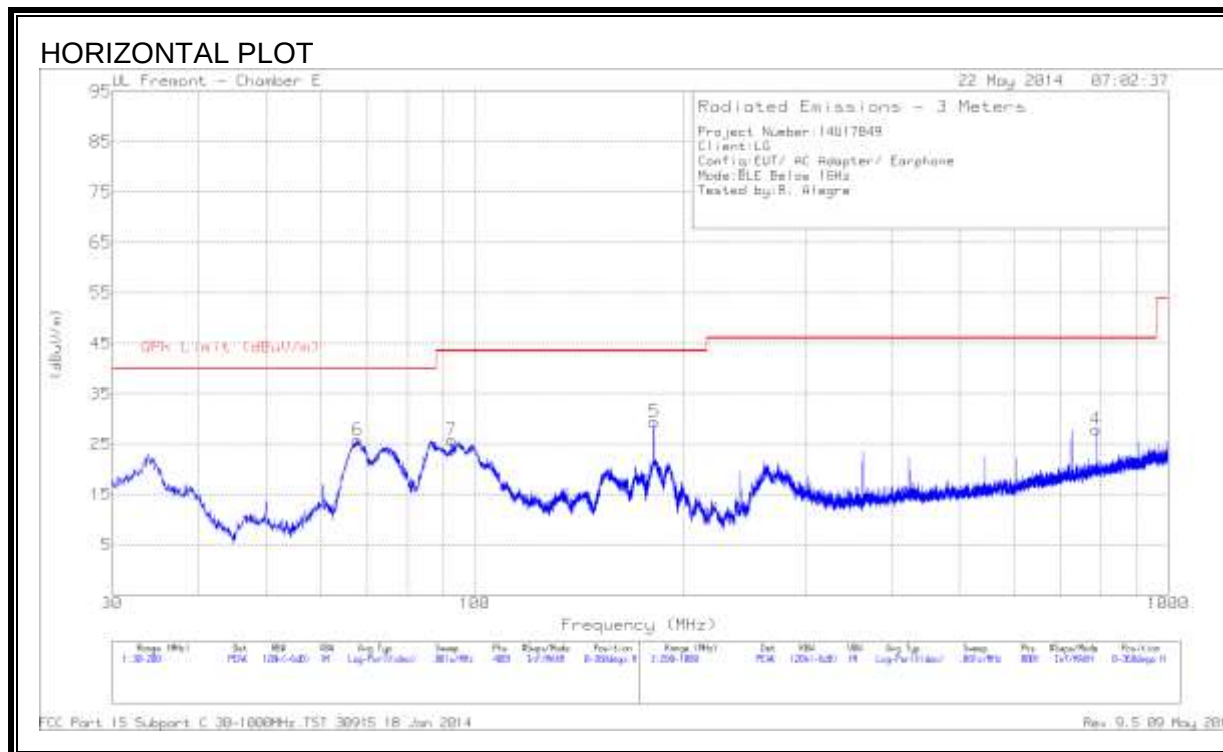
HIGH CHANNEL DATA

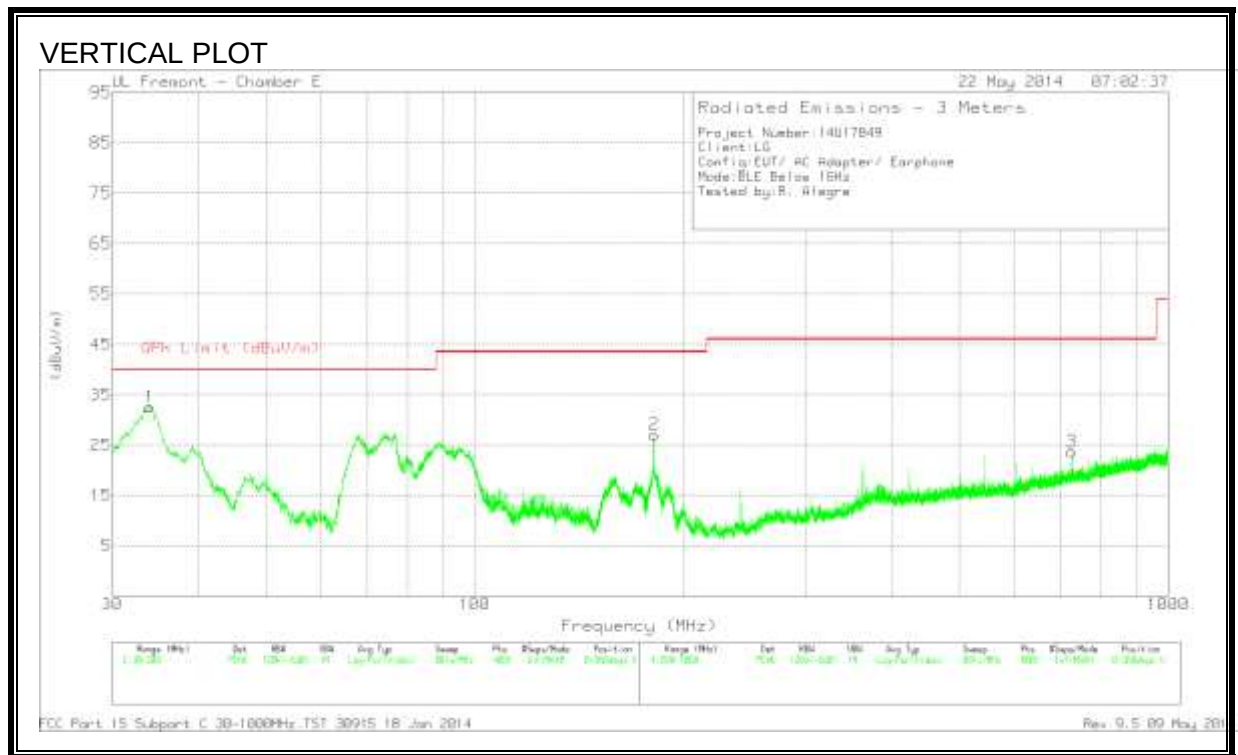
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.831	33.33	PK	30.6	-24.4	39.53	-	-	-	-	0-360	274	H
2	2.061	33.37	PK	31.8	-23.9	41.27	-	-	-	-	0-360	373	H
3	3.197	32.22	PK	33.3	-29.5	36.02	-	-	-	-	0-360	201	V
4	5.675	31.45	PK	34.7	-27.4	38.75	-	-	-	-	0-360	101	V
5	6.521	31.89	PK	35.6	-27.5	39.99	-	-	-	-	0-360	101	V
6	9.669	27.37	PK	37	-22.9	41.47	-	-	-	-	0-360	101	V

PK - Peak detector

WORST-CASE BELOW 1 GHz

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





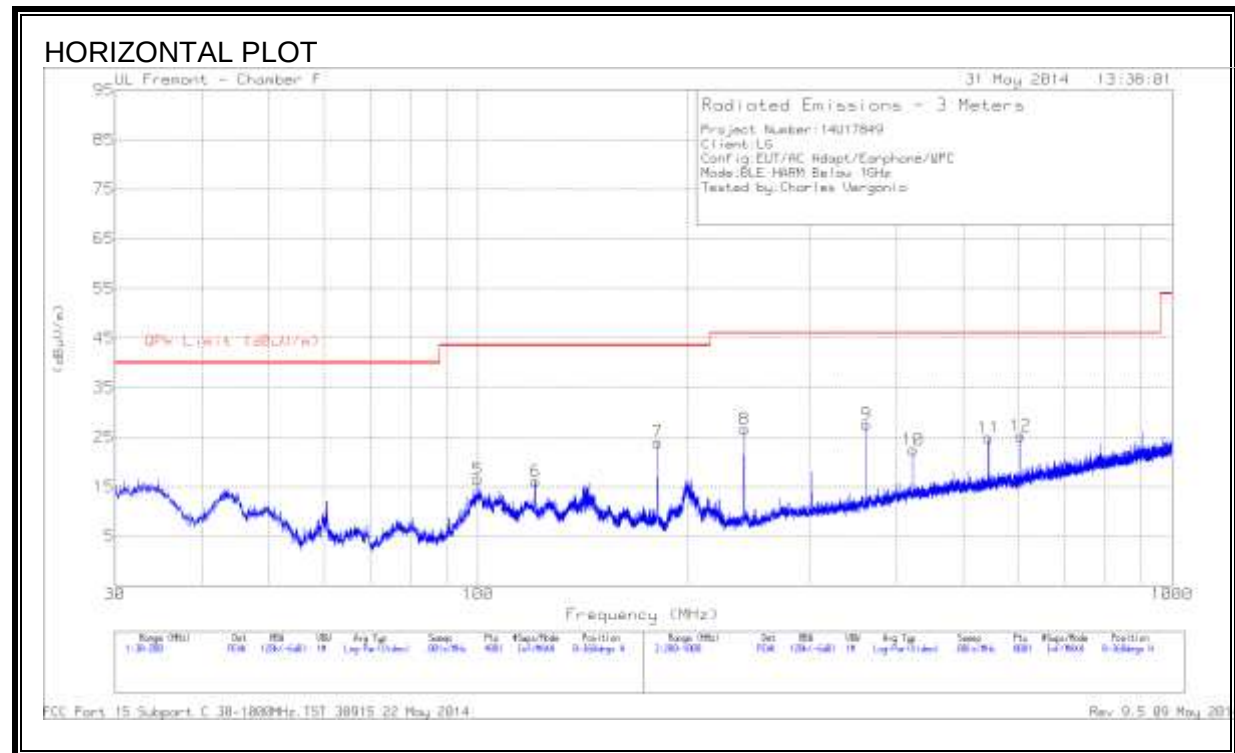
Trace Markers

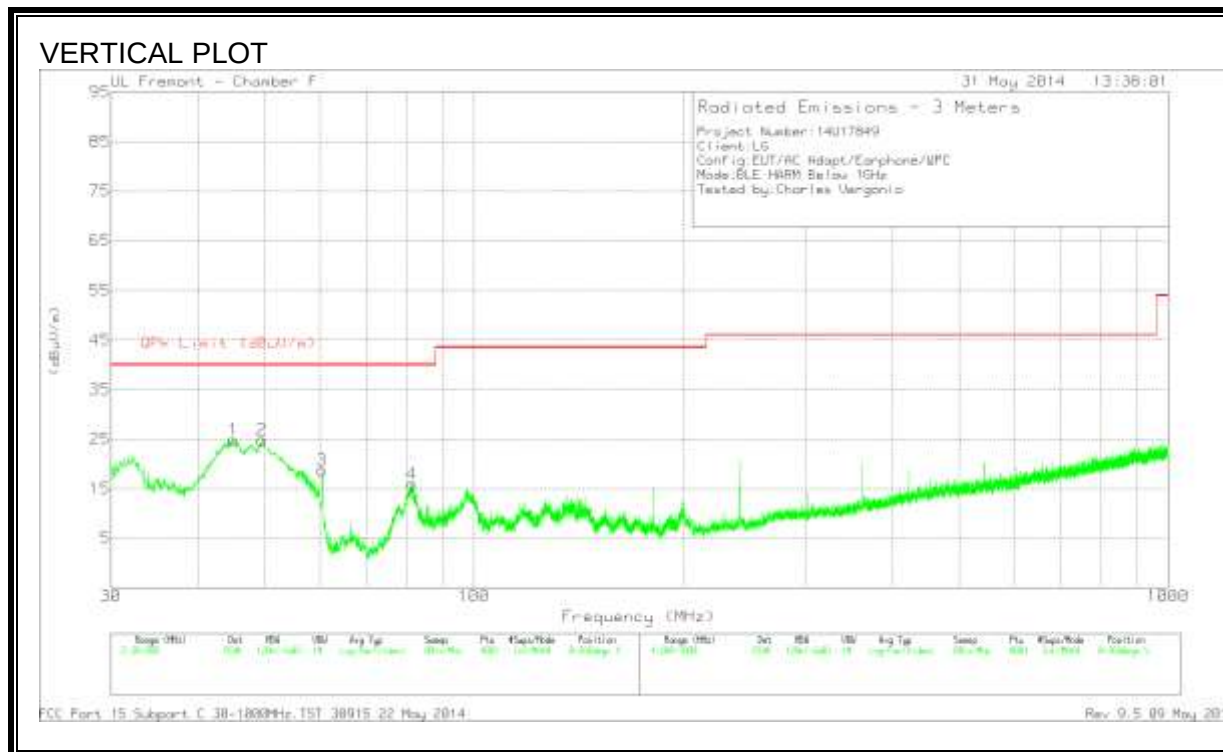
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Hybrid	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	33.995	45.77	PK	18.6	-31.8	32.57	40	-7.43	0-360	100	V
6	67.7825	49.36	PK	8.1	-31.6	25.86	40	-14.14	0-360	200	H
7	92.73	48.94	PK	8.2	-31.3	25.84	43.52	-17.68	0-360	301	H
5	181.385	49.14	PK	11.2	-30.9	29.44	43.52	-14.08	0-360	200	H
2	181.4275	46.78	PK	11.2	-30.9	27.08	43.52	-16.44	0-360	100	V
3	725.6	32.3	PK	20.4	-29	23.7	46.02	-22.32	0-360	100	V
4	786.1	35.45	PK	21.4	-28.9	27.95	46.02	-18.07	0-360	100	H

PK - Peak detector

WORST-CASE WITH WPC CHARGER AND BACK COVER BELOW 1 GHz

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





Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T122 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	99.9975	37.71	PK	10.2	-31.5	16.41	43.52	-27.11	0-360	300	H
6	* 120.9925	33.41	PK	14	-31.3	16.11	43.52	-27.41	0-360	300	H
7	181.385	44.11	PK	11.2	-31.3	24.01	43.52	-19.51	0-360	200	H
1	45.0025	45.71	PK	10.4	-31.3	24.81	40	-15.19	0-360	100	V
2	49.5075	47.58	PK	8.2	-31	24.78	40	-15.22	0-360	100	V
3	60.4725	43.33	PK	7.5	-32.1	18.73	40	-21.27	0-360	100	V
4	81.51	39.59	PK	7.5	-31.1	15.99	40	-24.01	0-360	100	V
8	* 241.9	45.75	PK	11.7	-30.8	26.65	46.02	-19.37	0-360	201	H
9	362.8	43.16	PK	14.8	-30.3	27.66	46.02	-18.36	0-360	100	H
10	423.3	36.27	PK	16.5	-30.3	22.47	46.02	-23.55	0-360	100	H
11	544.2	36.64	PK	18.2	-30	24.84	46.02	-21.18	0-360	201	H
12	604.7	36.49	PK	18.6	-29.9	25.19	46.02	-20.83	0-360	201	H

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

PK - Peak detector