FCC CFR47 PART 15 SUBPART C

C2PC CERTIFICATION TEST REPORT

FOR

CDMA WATCH + Bluetooth, DTS b/g

MODEL NUMBER: LG-VC200, LGVC200, VC200, LG-VC200B, LGVC200B, VC200B

FCC ID: ZNFVC200

REPORT NUMBER: 15I21554-E4V1

ISSUE DATE: SEPTEMBER 28, 2015

Prepared for

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

Prepared by

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

NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	9/28/15	Initial Issue	

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS

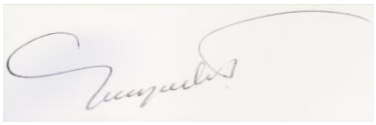
COMPANY NAME:	LG ELECTRONICS MOBILECOMM U.S.A., INC.
EUT DESCRIPTION:	CDMA WATCH + Bluetooth, DTS b/g
MODEL:	LG-VC200, LGVC200, VC200, LG-VC200B, LGVC200B, VC200B
SERIAL NUMBER:	22145, 22143
DATE TESTED:	SEPTEMBER 9-14, 2015

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

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

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

Approved & Released For
UL Verification Services Inc. By:



VIEN TRAN
CONSUMER TECHNOLOGY DIVISION
WiSE SENIOR ENGINEER
UL VERIFICATION SERVICES INC

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

Tested By:

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

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, and KDB 558074 D01 v03r03, ANSI C63.10-2009 for FCC.

ANSI C63.10-2009 Deviation

Radiated spurious emission above 1GHz EUT height is 1.5m not 0.8m.

3. FACILITIES AND ACCREDITATION

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

47173 Benicia Street	47266 Benicia Street
☐ Chamber A(IC: 2324B-1)	☐ Chamber D(IC: 2324B-4)
☐ Chamber B(IC: 2324B-2)	☐ Chamber E(IC: 2324B-5)
☒ Chamber C(IC: 2324B-3)	☐ Chamber F(IC: 2324B-6)
	☐ Chamber G(IC: 2324B-7)
	☐ Chamber H(IC: 2324B-8)

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

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 CDMA WATCH + Bluetooth, DTS b/g

5.2. MAXIMUM OUTPUT POWER

See original report for details.

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an LMA antenna, with a maximum gain of -2.12dBi.

5.4. WORST-CASE CONFIGURATION AND MODE

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

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

Based on the baseline scan, the worst-case data rates were:

802.11b mode: 1 Mbps
802.11g mode: 6 Mbps

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC Adapter	LG	STA-U17WD	DS542312055	N/A

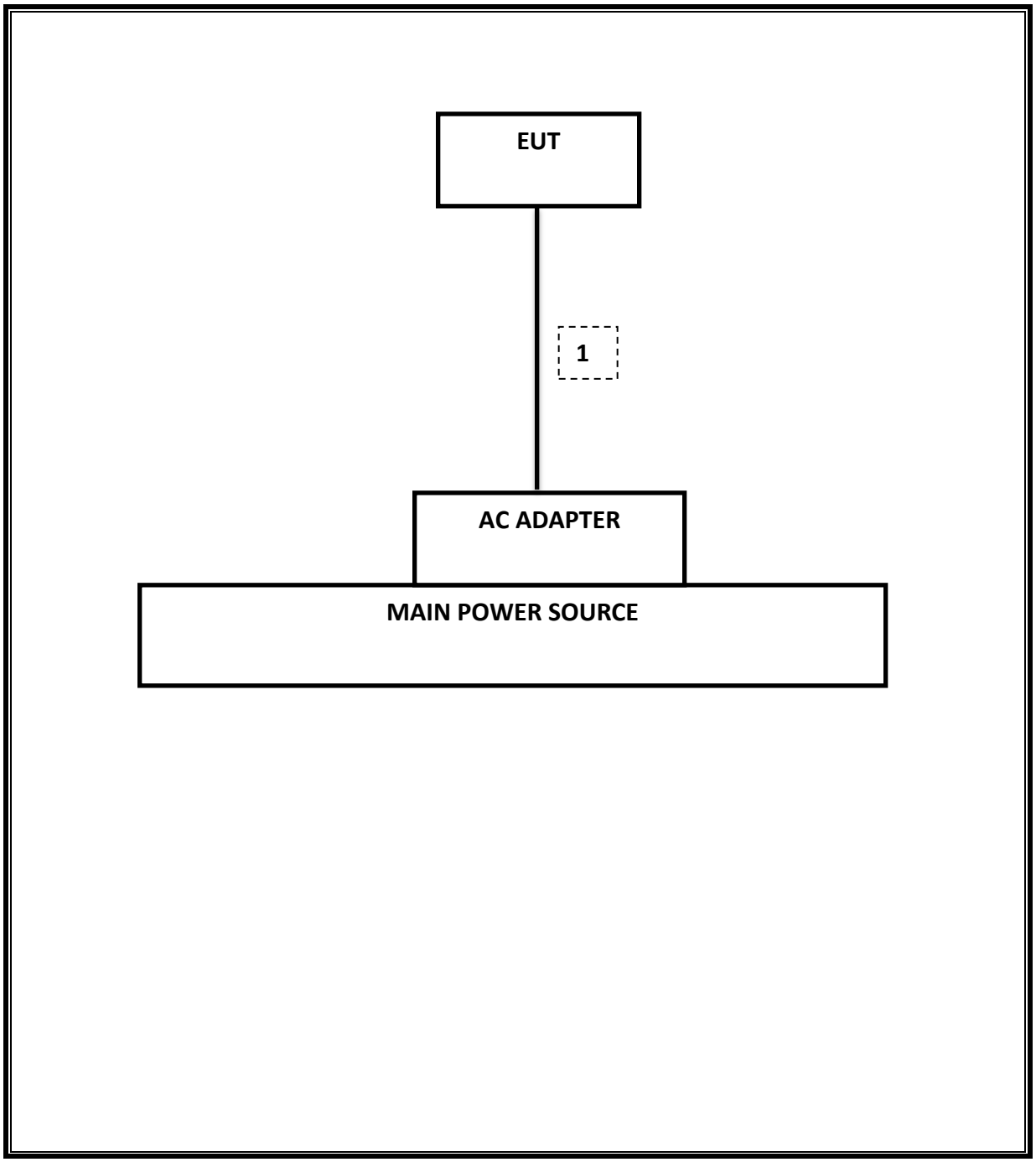
I/O CABLES

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

TEST SETUP

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

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/15
Spectrum Analyzer,9KHz-40GHz	HP	8564E	C00986	04/01/16
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15
Antenna, Horn, 1-18 GHz	ETS	3117	C01022	02/21/16
Antenna, Horn,18- 26 GHz	ARA	MWH-1826/B	C00946	11/12/15
Antenna, Horn, 26-40 GHz	ARA	MWH-2640	C00891	06/28/16
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	T243	03/06/16
RF Preamplifier, 100KHz -> 1300MHz	HP	TBD	C00825	06/01/16
RF Preamplifier, 1GHz - 18GHz	Miteq	NSP4000-SP2	924343	03/23/16
RF Preamplifier, 1GHz - 26.5GHz	HP	8449B	T404	06/29/16
AC Power Supply, 2,500VA 45-500Hz	Elgar-Ametek	CW2501M	F00013	CNR
Attenuator / Switch driver	HP	11713A	F00204	CNR
Low Pass Filter 3GHz	Micro-Tronics	LPS17541	F00219	05/23/16
High Pass Filter 5GHz	Micro-Tronics	HPS17542	F00222	05/22/16
High Pass Filter 6GHz	Micro-Tronics	HPM17543	F00224	05/22/16
Radiated Software	UL	UL EMC	Ver 9.5, Jul 22, 2014	
Conducted Software	UL	UL EMC	Ver 9.5, May 17 2012	
CLT Software	UL	UL RF	Ver 1.0, Feb 2 2015	
Antenna Port Software	UL	UL RF	Ver 2.1.1.1, Jan 20 2015	

7. MEASUREMENT METHODS

KDB 558074 D01 DTS Meas Guidance v03r03: Measurement Procedure AVGPM-G is used for power and AVGPSD-3 is used for power spectral density.

Unwanted emissions within Restricted Bands are measured using traditional radiated procedures.

Band edge emissions within Restricted Bands are measured using RMS with duty cycle factor offset method.

8. SUMMARY TABLE

C2PC Reason: Please see LG-VC200 FCC Class II change description for details.

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.247 (a)(2)	RSS-247 5.2.1	Occupied Band width (6dB)	>500KHz	Conducted	Pass	See original
2.1051, 15.247 (d)	RSS-247 5.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	See original
15.247	RSS-247 5.4.4	TX conducted output power	<30dBm		Pass	See original
15.247	RSS-247 5.2.2	PSD	<8dBm		Pass	See original
15.207 (a)	RSS-GEN 8.8	AC Power Line conducted emissions	Section 10	Radiated	Pass	See original
15.205, 15.209	RSS-GEN 8.9/7	Radiated Spurious Emission	< 54dBuV/m		Pass	43.74dBuV/m

9. RADIATED TEST RESULTS

9.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

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

TEST PROCEDURE

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

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

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor for average measurements. Duty cycle factor= 10log (1/x). For this sample b mode = 0.34dB (duty cycle >98%); g mode = 1.47dB; n mode = N/A.

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.

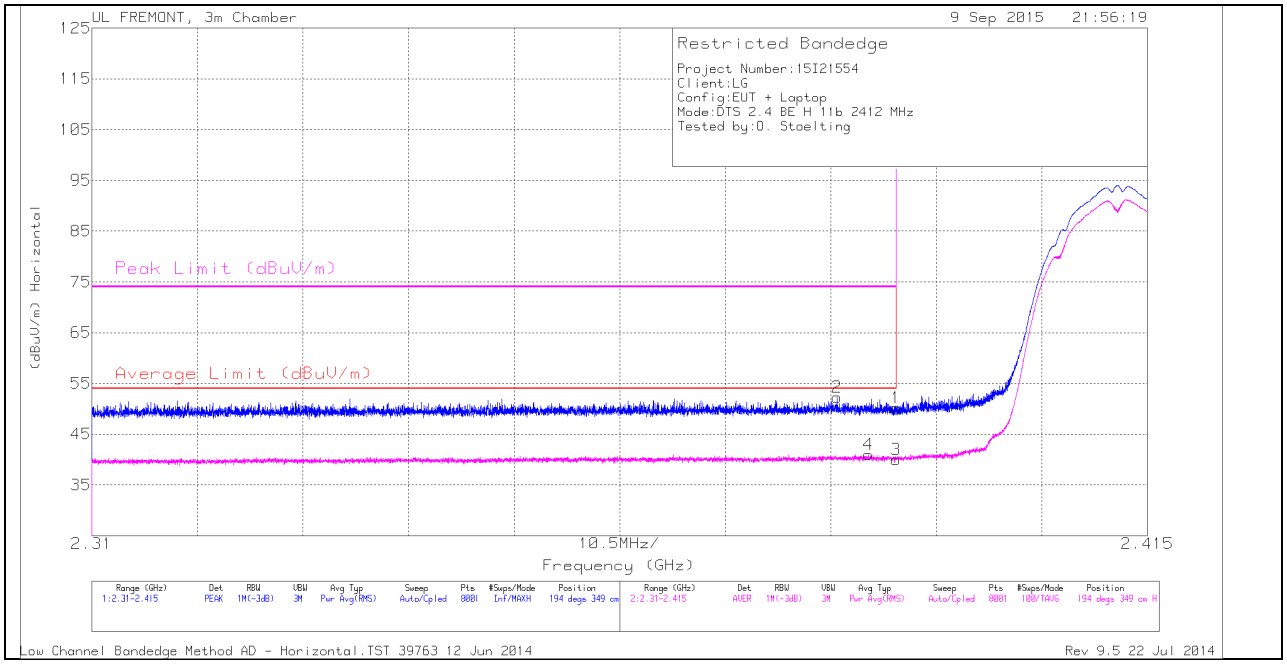
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

9.2. TRANSMITTER ABOVE 1 GHz

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

RESTRICTED BANDEDGE (LOW CHANNEL)

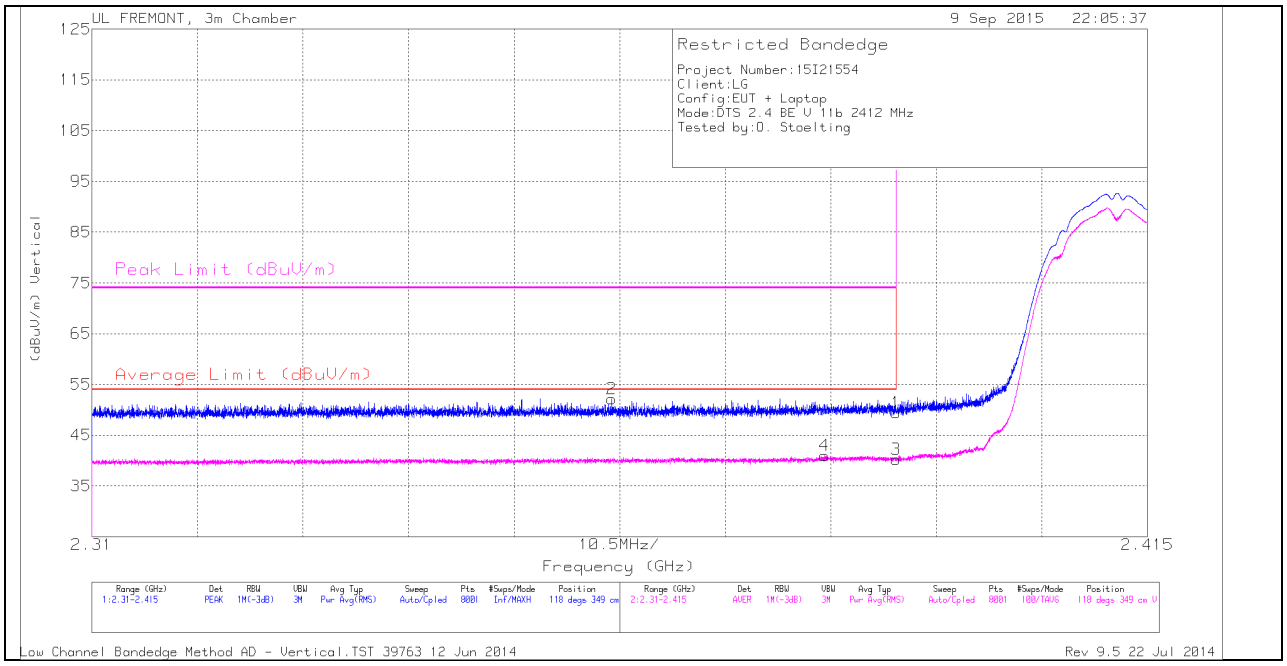
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	2.384	42.69	PK	32	-22.4	0	52.29	-	-	74	-21.71	194	349	H
4	2.387	31.03	RMS	32	-22.4	.34	40.97	54	-13.03	-	-	194	349	H
1	2.39	40.59	PK	32	-22.4	0	50.19	-	-	74	-23.81	194	349	H
3	2.39	30.08	RMS	32	-22.4	.34	40.02	54	-13.98	-	-	194	349	H

VERTICAL PEAK AND AVERAGE PLOT

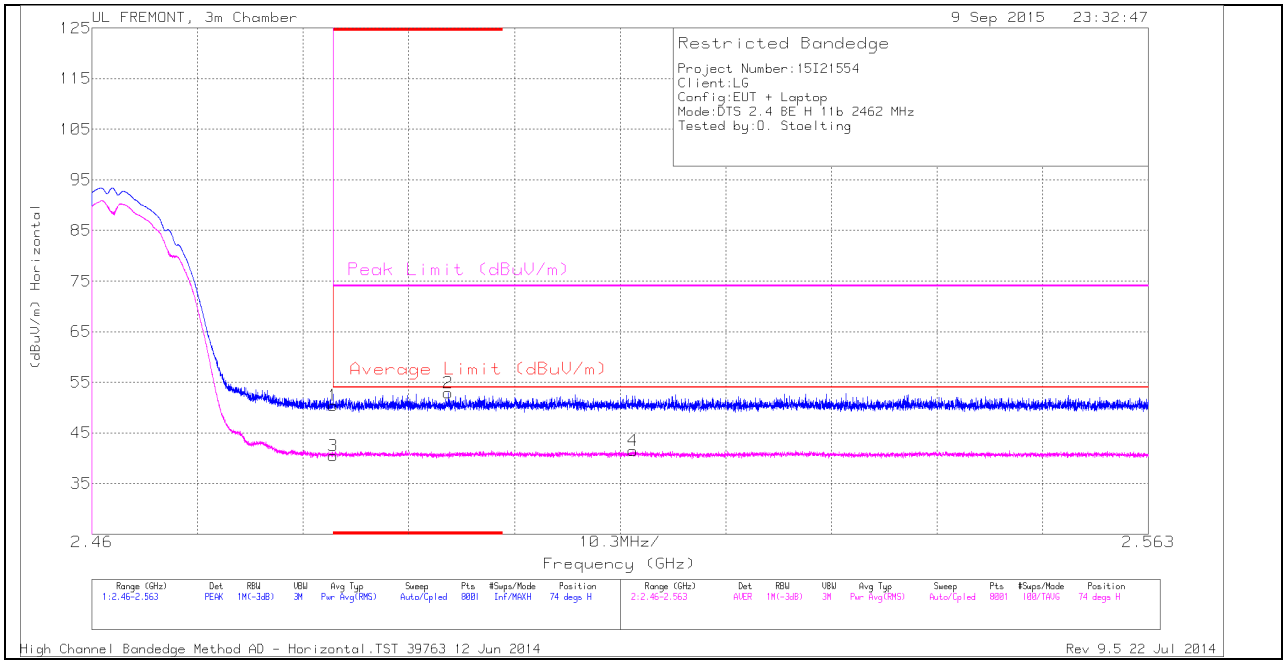


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	2.362	42.76	PK	31.9	-22.5	0	52.16	-	-	74	-21.84	118	349	V
4	2.383	31.09	RMS	32	-22.4	.34	41.03	54	-12.97	-	-	118	349	V
1	2.39	39.87	PK	32	-22.4	0	49.47	-	-	74	-24.53	118	349	V
3	2.39	30.32	RMS	32	-22.4	.34	40.26	54	-13.74	-	-	118	349	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

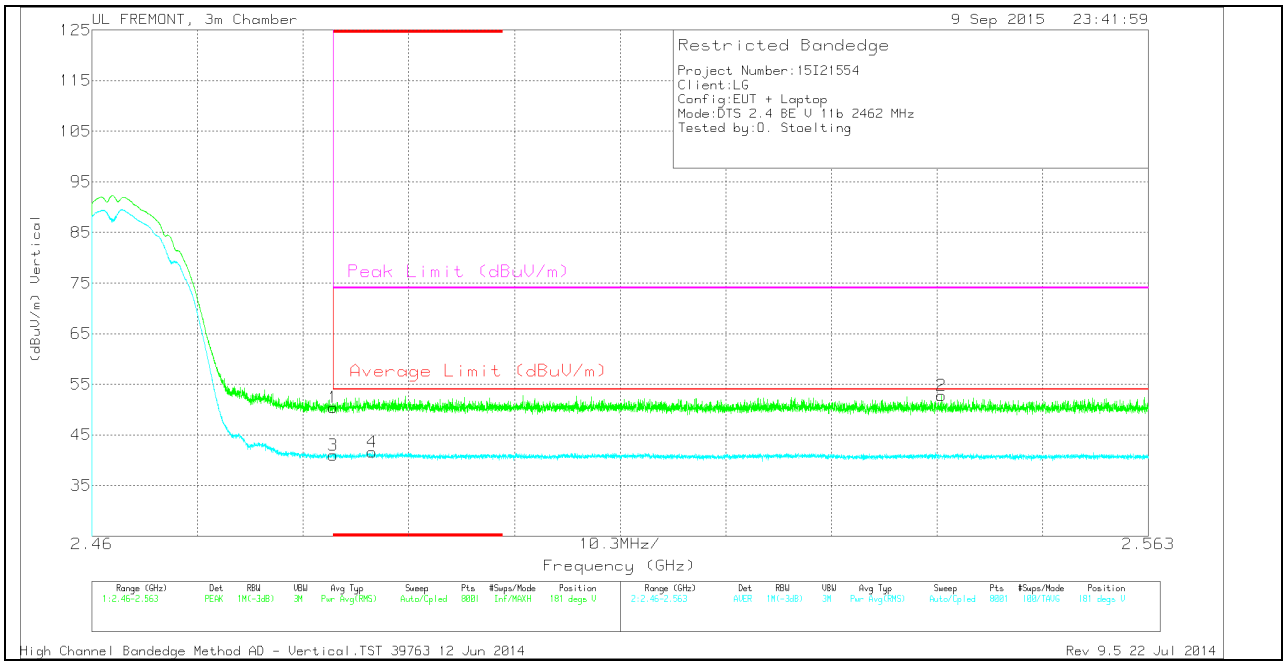
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/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	40.24	PK	32.3	-22.1	0	50.44	-	-	74	-23.56	74	347	H
2	* 2.495	42.65	PK	32.3	-22.1	0	52.85	-	-	74	-21.15	74	347	H
3	* 2.484	29.94	RMS	32.3	-22.1	.34	40.48	54	-13.52	-	-	74	347	H
4	2.513	30.89	RMS	32.3	-22	.34	41.53	54	-12.47	-	-	74	347	H

VERTICAL PEAK AND AVERAGE PLOT

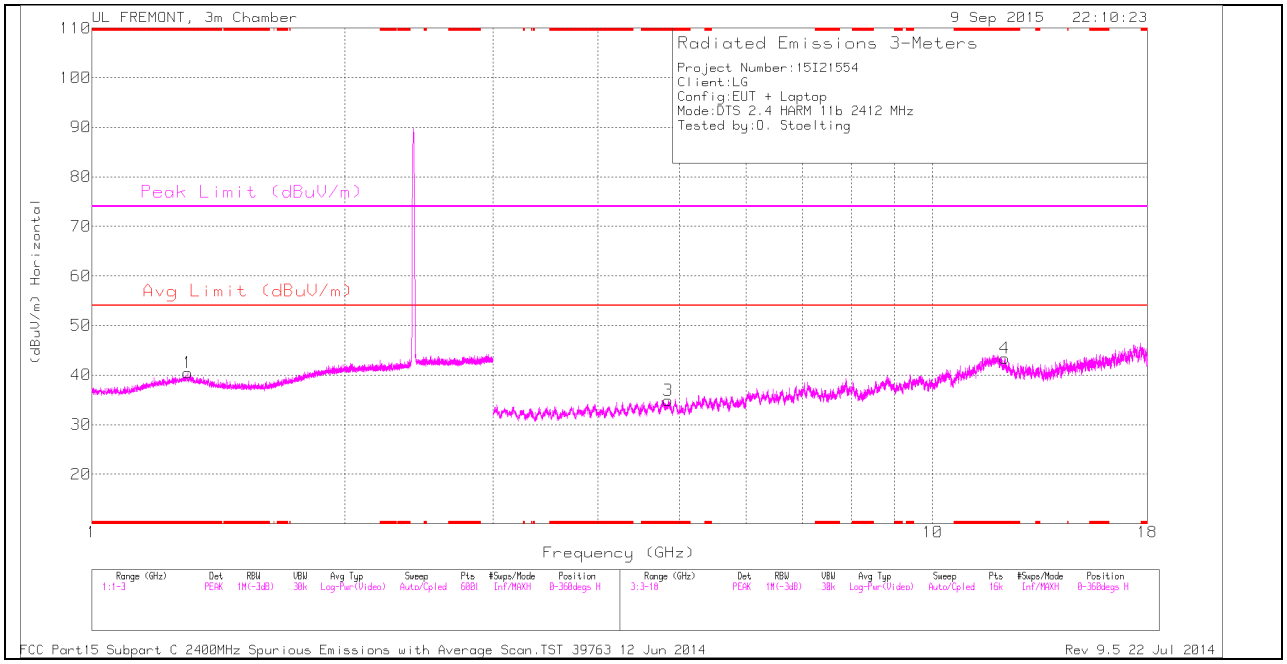


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/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	40.21	PK	32.3	-22.1	0	50.41	-	-	74	-23.59	181	333	V
3	* 2.484	30.41	RMS	32.3	-22.1	.34	40.95	54	-13.05	-	-	181	333	V
4	* 2.487	31.11	RMS	32.3	-22.2	.34	41.55	54	-12.45	-	-	181	333	V
2	2.543	42.3	PK	32.4	-21.9	0	52.8	-	-	74	-21.2	181	333	V

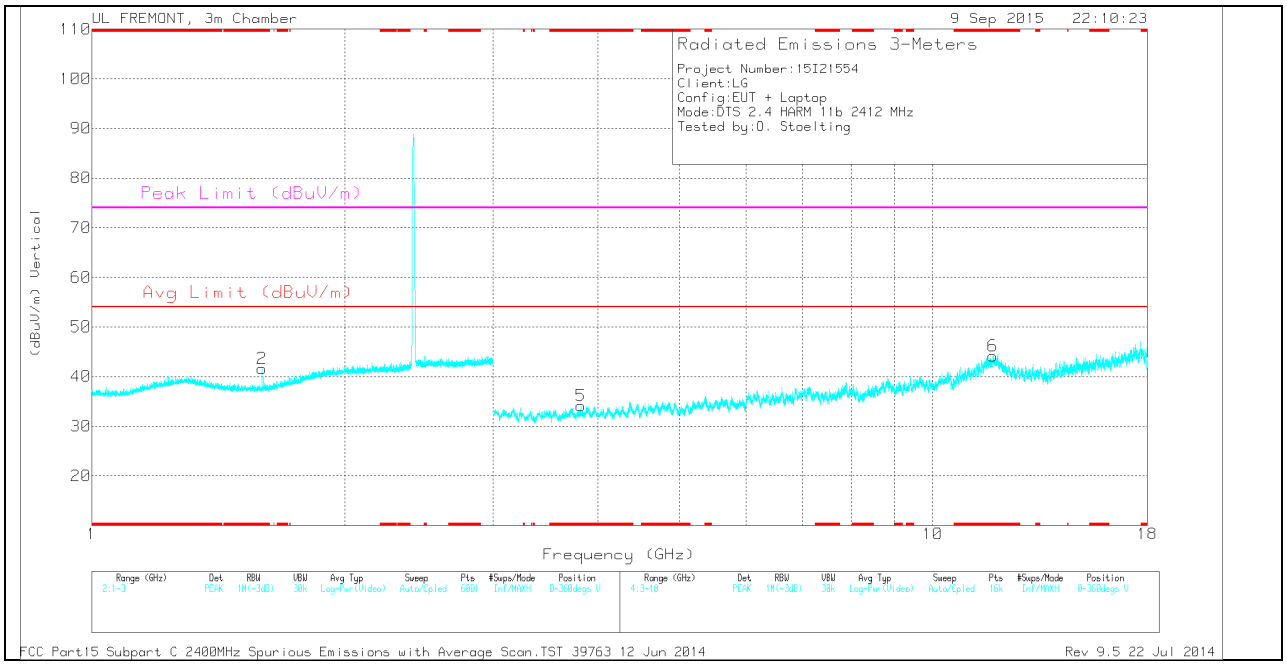
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

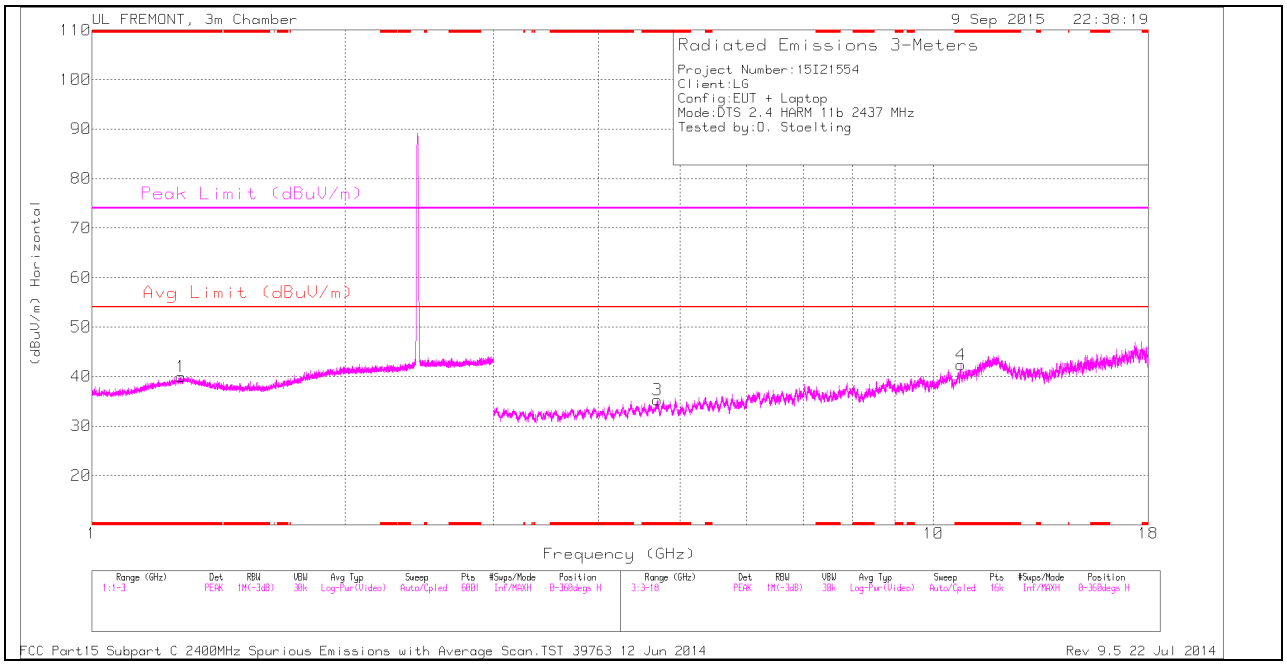
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.3	33.79	PK	29.9	-23.2	0	40.49	-	-	74	-33.51	0-360	200	H
2	* 1.594	36.36	PK	28	-22.7	0	41.66	-	-	74	-32.34	0-360	200	V
6	* 11.792	27.56	PK	39	-22.4	0	44.16	-	-	74	-29.84	0-360	200	V
4	* 12.182	28.55	PK	39	-24.1	0	43.45	-	-	74	-30.55	0-360	200	H
5	* 3.817	31.44	PK	33.1	-30.4	0	34.14	-	-	74	-39.86	0-360	200	V
3	* 4.85	30.07	PK	34	-29.2	0	34.87	-	-	74	-39.13	0-360	100	H

PK - Peak detector

RADIATED EMISSIONS

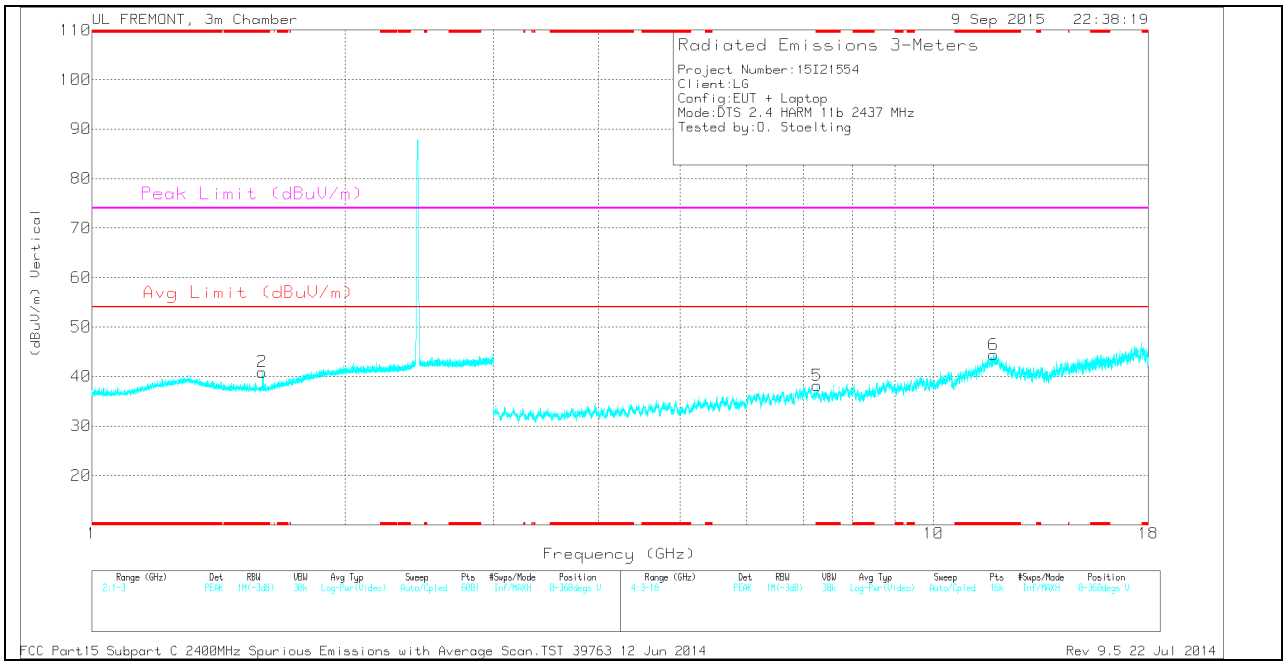
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.299	43.12	PK2	29.9	-23.2	0	49.82	-	-	74	-24.18	3	200	H
* 1.3	31.18	MAv1	29.9	-23.2	.34	38.22	54	-15.78	-	-	3	200	H
* 1.595	47.58	PK2	28	-22.7	0	52.88	-	-	74	-21.12	3	200	V
* 1.594	31.51	MAv1	28	-22.7	.34	37.15	54	-16.85	-	-	3	200	V
* 4.85	40.59	PK2	34	-29.2	0	45.39	-	-	74	-28.61	3	100	H
* 4.851	28.28	MAv1	34	-29.3	.34	33.32	54	-20.68	-	-	3	100	H
* 12.184	37.28	PK2	39	-24.1	0	52.18	-	-	74	-21.82	3	200	H
* 12.183	25.57	MAv1	39	-24.1	.34	40.81	54	-13.19	-	-	3	200	H
* 3.816	51.04	PK2	33.1	-30.5	0	53.64	-	-	74	-20.36	3	200	V
* 3.817	28.57	MAv1	33.1	-30.5	.34	31.51	54	-22.49	-	-	3	200	V
* 11.793	36.95	PK2	39	-22.4	0	53.55	-	-	74	-20.45	207	311	V
* 11.79	25.02	MAv1	39	-22.4	.34	41.96	54	-12.04	-	-	207	311	V

MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

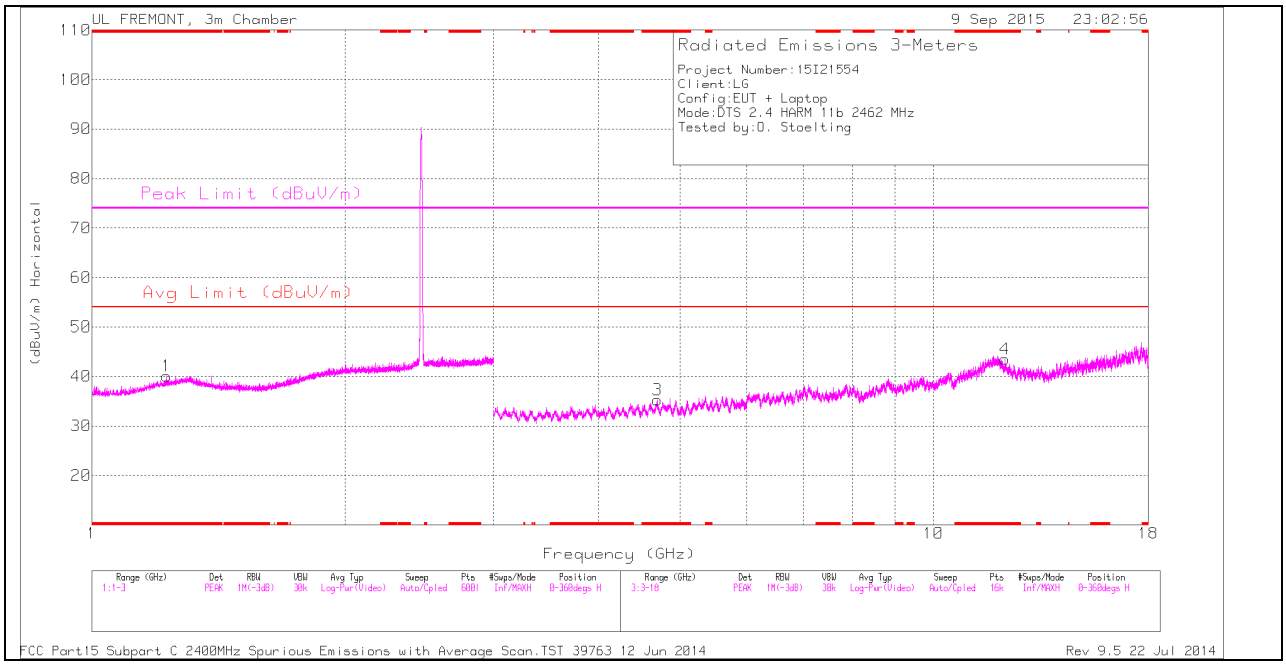
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.277	33.39	PK	29.7	-23.1	0	39.99	-	-	74	-34.01	0-360	200	H
2	* 1.593	35.72	PK	28	-22.8	0	40.92	-	-	74	-33.08	0-360	200	V
3	* 4.697	31.42	PK	34	-30.1	0	35.32	-	-	74	-38.68	0-360	200	H
4	* 10.776	27.88	PK	37.9	-23.4	0	42.38	-	-	74	-31.62	0-360	200	H
5	* 7.272	30.98	PK	35.6	-28.4	0	38.18	-	-	74	-35.82	0-360	100	V
6	* 11.794	27.86	PK	39	-22.4	0	44.46	-	-	74	-29.54	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

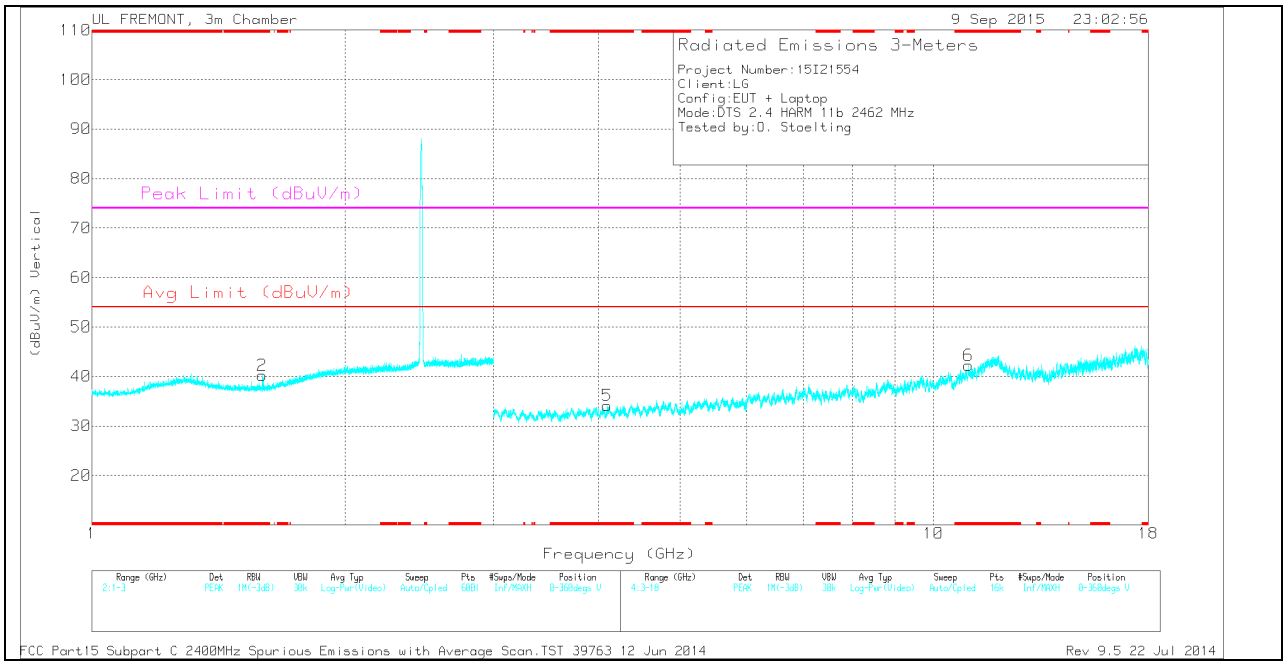
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.277	43.42	PK2	29.7	-23.1	0	50.02	-	-	74	-23.98	360	200	H
* 1.275	31.04	MAv1	29.7	-23.1	.34	37.98	54	-16.02	-	-	360	200	H
* 1.594	47.45	PK2	28	-22.7	0	52.75	-	-	74	-21.25	360	200	V
* 1.593	31.8	MAv1	28	-22.8	.34	37.34	54	-16.66	-	-	360	200	V
* 4.699	40.09	PK2	34.1	-30.1	0	44.09	-	-	74	-29.91	360	200	H
* 4.695	28.8	MAv1	34	-30.1	.34	33.04	54	-20.96	-	-	360	200	H
* 10.777	36.56	PK2	37.9	-23.4	0	51.06	-	-	74	-22.94	360	200	H
* 10.778	25.17	MAv1	37.9	-23.5	.34	39.91	54	-14.09	-	-	360	200	H
* 7.272	39.1	PK2	35.6	-28.4	0	46.3	-	-	74	-27.7	360	100	V
* 7.273	27.82	MAv1	35.6	-28.4	.34	35.36	54	-18.64	-	-	360	100	V
* 11.794	36.99	PK2	39	-22.4	0	53.59	-	-	74	-20.41	0	393	V
* 11.793	25.4	MAv1	39	-22.4	.34	42.34	54	-11.66	-	-	0	393	V

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr /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	* 1.226	34.04	PK	29.2	-23.2	0	40.04	-	-	74	-33.96	0-360	200	H
2	* 1.594	34.9	PK	28	-22.7	0	40.2	-	-	74	-33.8	0-360	200	V
3	* 4.695	31.44	PK	34	-30.2	0	35.24	-	-	74	-38.76	0-360	200	H
4	* 12.156	28.63	PK	39	-24.1	0	43.53	-	-	74	-30.47	0-360	100	H
5	* 4.095	31.3	PK	33.3	-30.5	0	34.1	-	-	74	-39.9	0-360	200	V
6	* 11.004	27.4	PK	37.9	-23	0	42.3	-	-	74	-31.7	0-360	200	V

PK - Peak detector

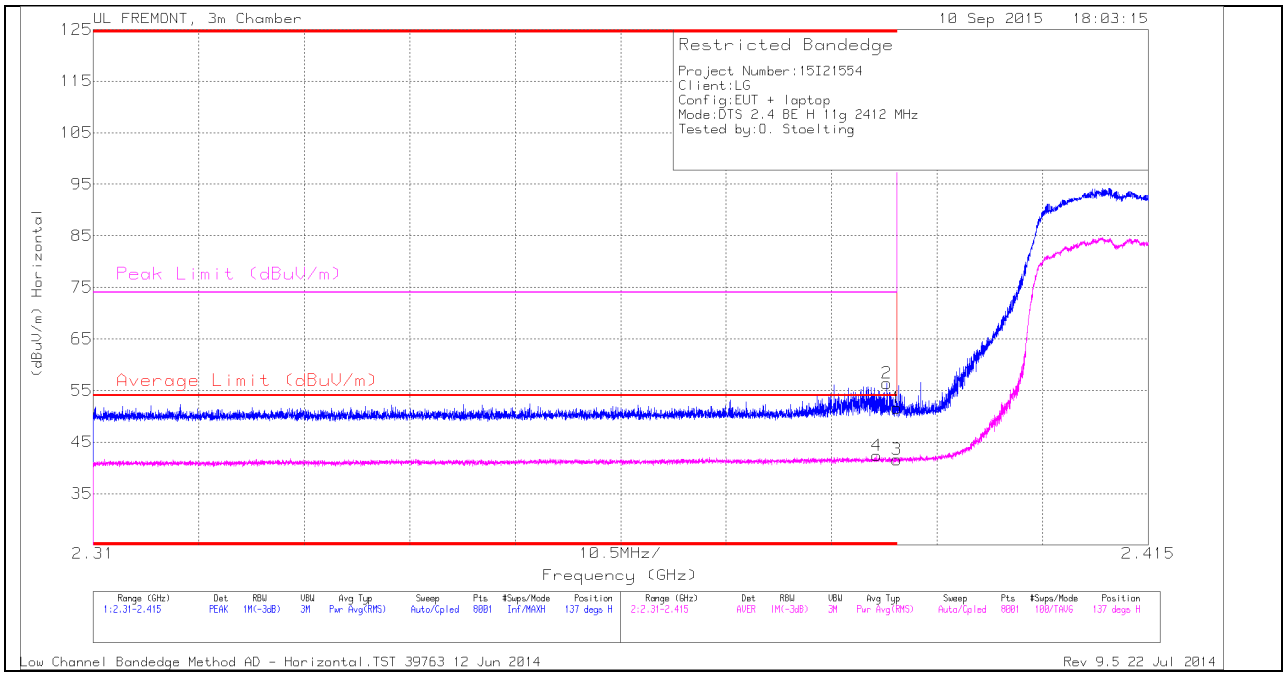
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/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
* 1.225	42.72	PK2	29.2	-23.2	0	48.72	-	-	74	-25.28	0	200	H
* 1.224	30.97	MAv1	29.2	-23.2	.34	37.31	54	-16.69	-	-	0	200	H
* 1.595	47.2	PK2	28	-22.7	0	52.5	-	-	74	-21.5	188	192	V
* 1.593	30.6	MAv1	28	-22.8	.34	36.14	54	-17.86	-	-	188	192	V
* 4.696	40.86	PK2	34	-30.1	0	44.76	-	-	74	-29.24	188	200	H
* 4.694	29	MAv1	34	-30.2	.34	33.14	54	-20.86	-	-	188	200	H
* 12.156	37.42	PK2	39	-24.1	0	52.32	-	-	74	-21.68	188	100	H
* 12.158	25.53	MAv1	39	-24.1	.34	40.77	54	-13.23	-	-	188	100	H
* 4.095	39.97	PK2	33.3	-30.5	0	42.77	-	-	74	-31.23	188	200	V
* 4.093	28.55	MAv1	33.3	-30.6	.34	31.59	54	-22.41	-	-	188	200	V
* 11.002	36.79	PK2	37.9	-22.9	0	51.79	-	-	74	-22.21	144	242	V
* 11.003	24.27	MAv1	37.9	-23	.34	39.51	54	-14.49	-	-	144	242	V

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

RESTRICTED BANDEDGE (LOW CHANNEL)

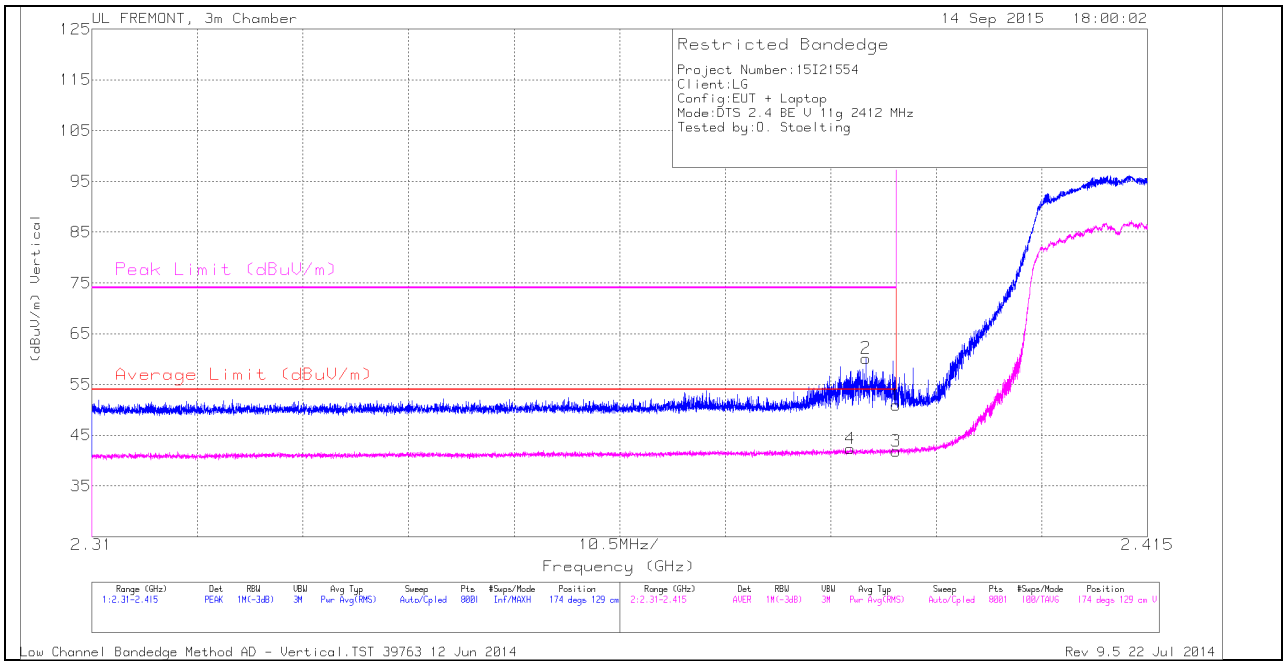
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	42.03	PK	32	-22.4	0	51.63	-	-	74	-22.37	137	147	H
2	* 2.389	46.79	PK	32	-22.4	0	56.39	-	-	74	-17.61	137	147	H
3	* 2.39	30.53	RMS	32	-22.4	1.47	41.6	54	-12.4	-	-	137	147	H
4	* 2.388	31.31	RMS	32	-22.4	1.47	42.38	54	-11.62	-	-	137	147	H

VERTICAL PEAK AND AVERAGE PLOT

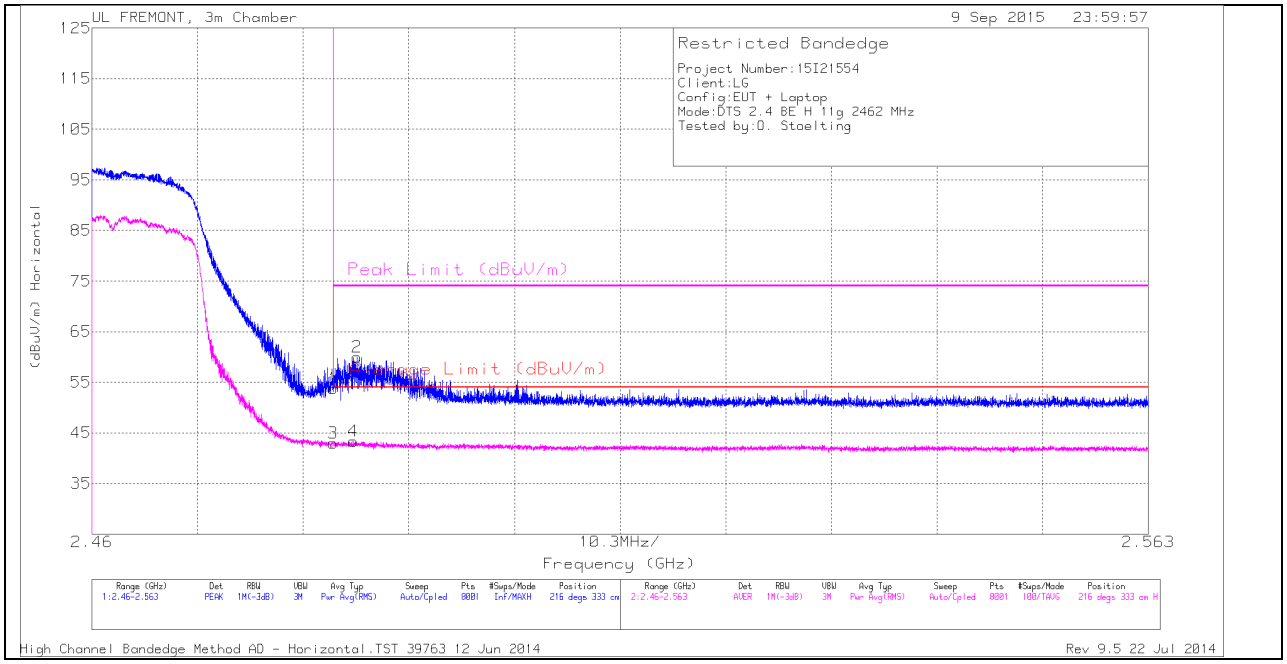


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/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
4	2.385	31.28	RMS	32	-22.4	1.47	42.35	54	-11.65	-	-	174	129	V
2	2.387	50.56	PK	32	-22.4	0	60.16	-	-	74	-13.84	174	129	V
1	2.39	41.37	PK	32	-22.4	0	50.97	-	-	74	-23.03	174	129	V
3	2.39	30.75	RMS	32	-22.4	1.47	41.82	54	-12.18	-	-	174	129	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

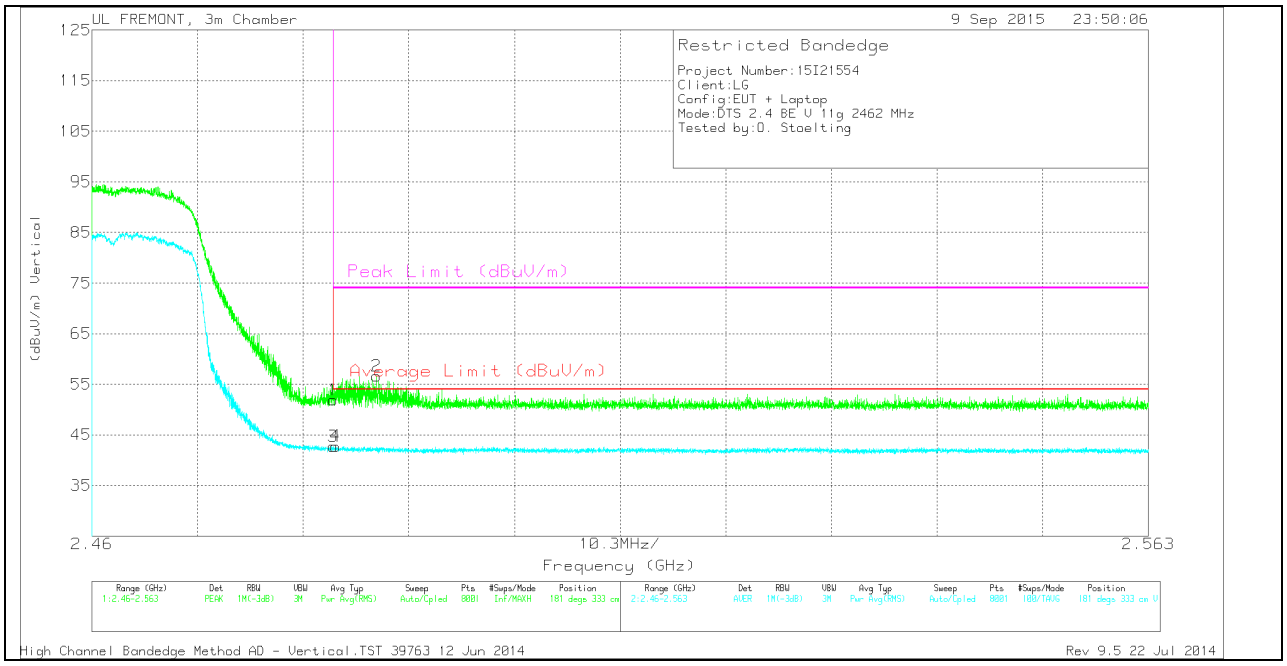
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.484	43.61	PK	32.3	-22.1	0	53.81	-	-	74	-20.19	216	333	H
3	2.484	31.29	RMS	32.3	-22.1	1.47	42.96	54	-11.04	-	-	216	333	H
2	2.486	49.73	PK	32.3	-22.1	0	59.93	-	-	74	-14.07	216	333	H
4	2.486	31.71	RMS	32.3	-22.1	1.47	43.38	54	-10.62	-	-	216	333	H

VERTICAL PEAK AND AVERAGE PLOT

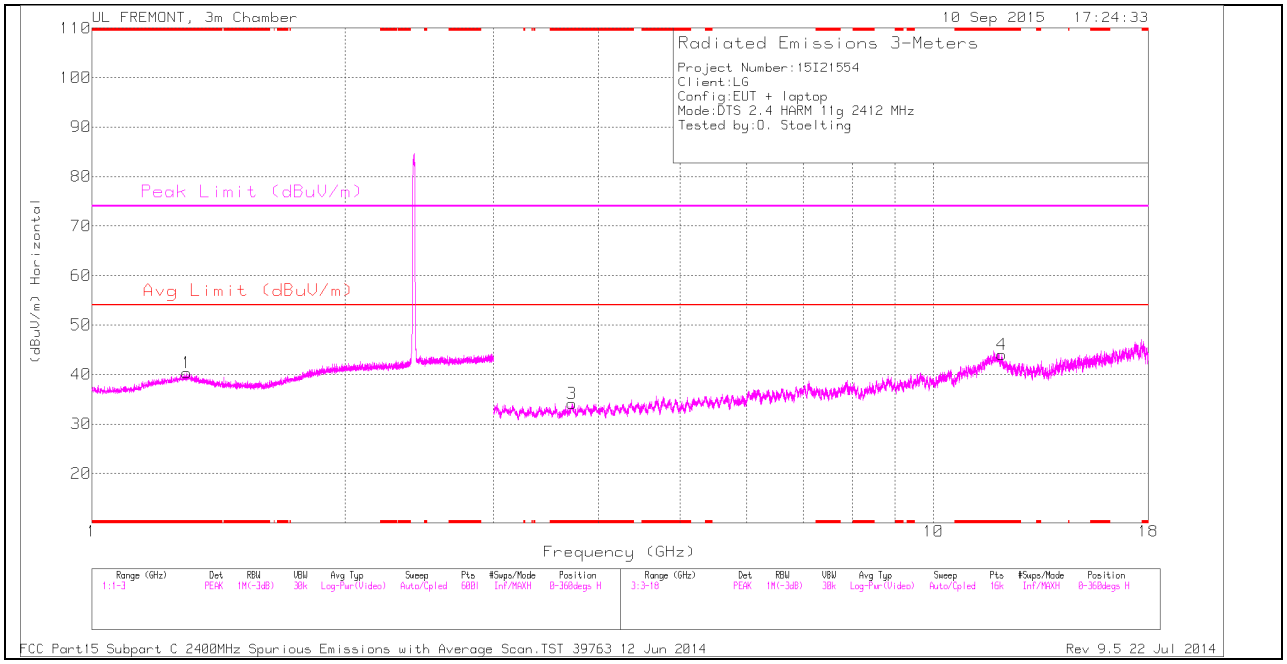


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.484	41.67	PK	32.3	-22.1	0	51.87	-	-	74	-22.13	181	333	V
3	2.484	31	RMS	32.3	-22.1	1.47	42.67	54	-11.33	-	-	181	333	V
4	2.484	31.11	RMS	32.3	-22.1	1.47	42.78	54	-11.22	-	-	181	333	V
2	2.488	46.58	PK	32.3	-22.2	0	56.68	-	-	74	-17.32	181	333	V

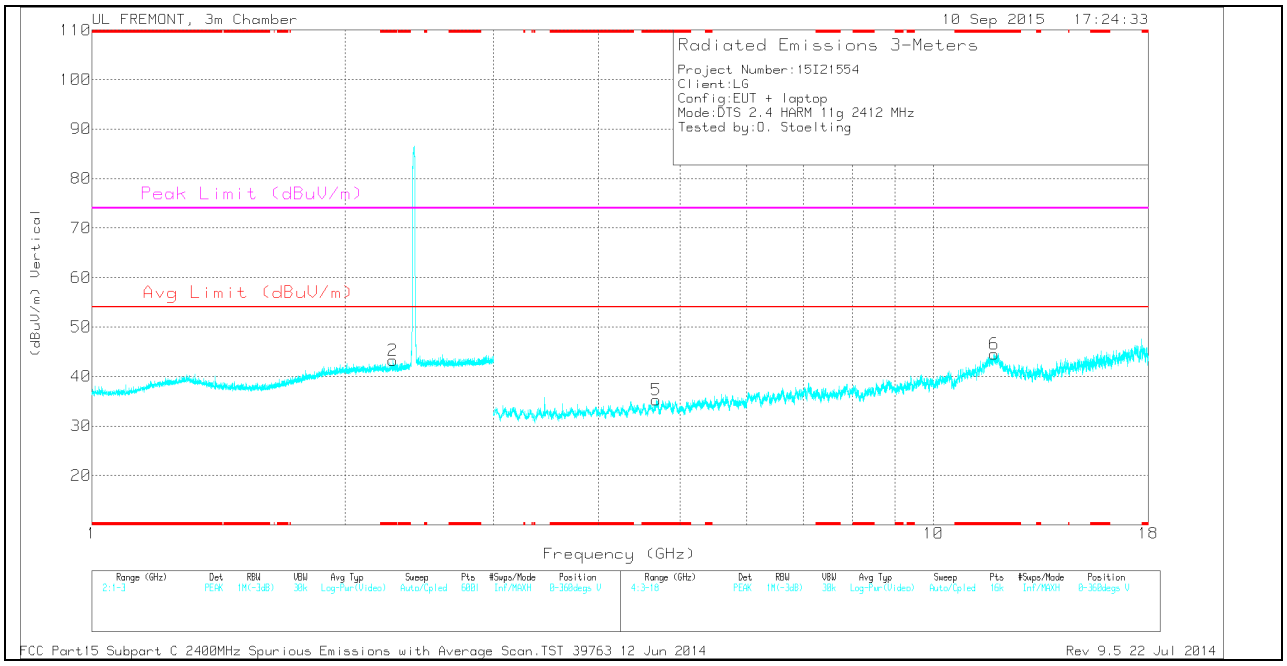
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

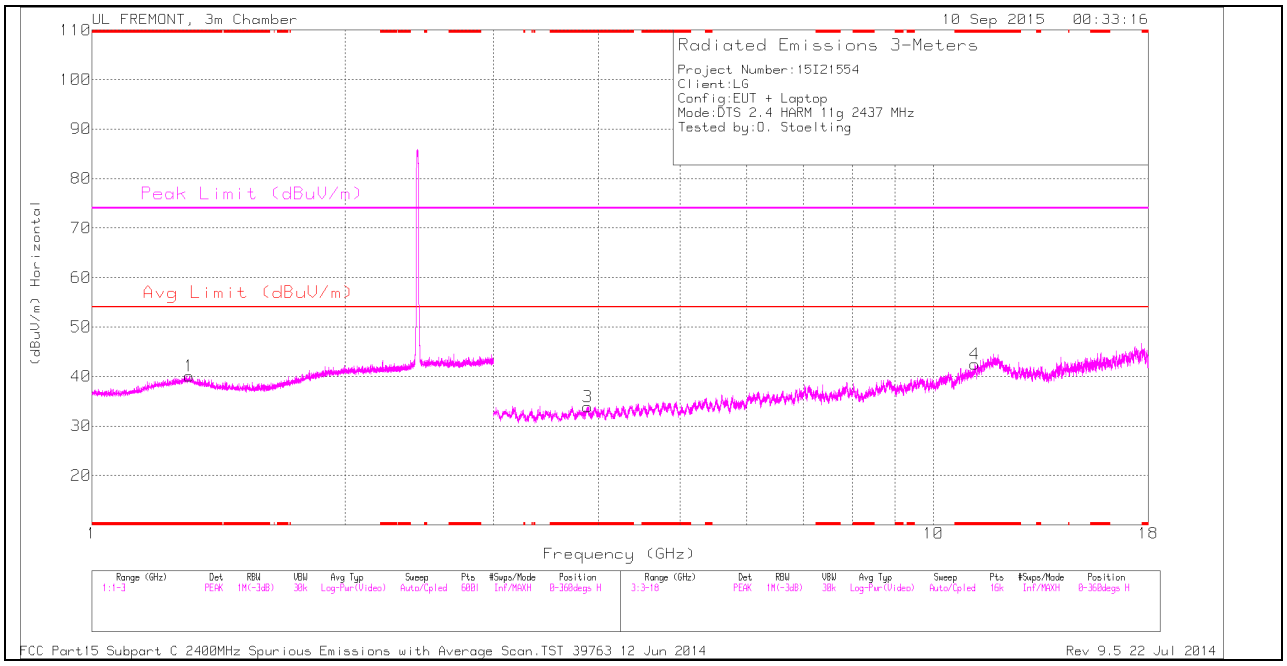
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.296	33.65	PK	29.9	-23.2	0	40.35	-	-	74	-33.65	0-360	200	H
2	* 2.279	34.09	PK	31.6	-22.4	0	43.29	-	-	74	-30.71	0-360	100	V
3	* 3.721	31	PK	33	-29.9	0	34.1	-	-	74	-39.9	0-360	200	H
4	* 12.049	28.09	PK	39.1	-23.2	0	43.99	-	-	74	-30.01	0-360	100	H
5	* 4.683	31.45	PK	34	-30.2	0	35.25	-	-	74	-38.75	0-360	100	V
6	* 11.803	27.98	PK	39	-22.5	0	44.48	-	-	74	-29.52	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

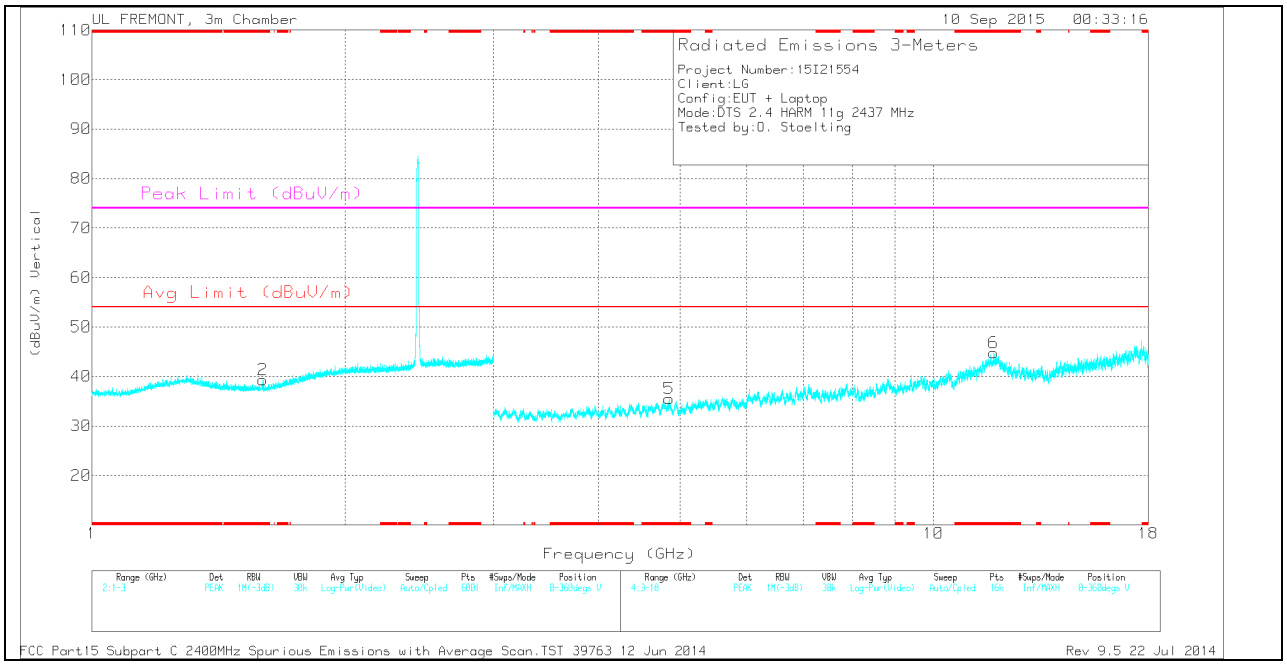
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.296	42.59	PK2	29.9	-23.2	0	49.29	-	-	74	-24.71	0	200	H
* 1.295	31.32	MAv1	29.8	-23.2	1.47	39.39	54	-14.61	-	-	0	200	H
* 2.279	42.23	PK2	31.6	-22.4	0	51.43	-	-	74	-22.57	0	100	V
* 2.277	30.83	MAv1	31.6	-22.4	1.47	41.5	54	-12.5	-	-	0	100	V
* 3.72	40.44	PK2	33	-29.9	0	43.54	-	-	74	-30.46	0	200	H
* 3.72	29.05	MAv1	33	-29.9	1.47	33.62	54	-20.38	-	-	0	200	H
* 12.051	37.42	PK2	39.1	-23.2	0	53.32	-	-	74	-20.68	0	100	H
* 12.05	25.65	MAv1	39.1	-23.2	1.47	43.02	54	-10.98	-	-	0	100	H
* 4.681	40.78	PK2	34	-30.3	0	44.48	-	-	74	-29.52	0	100	V
* 4.684	29.27	MAv1	34	-30.1	1.47	34.64	54	-19.36	-	-	0	100	V
* 11.801	37.44	PK2	39	-22.5	0	53.94	-	-	74	-20.06	221	146	V
* 11.801	25.77	MAv1	39	-22.5	1.47	43.74	54	-10.26	-	-	221	146	V

MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

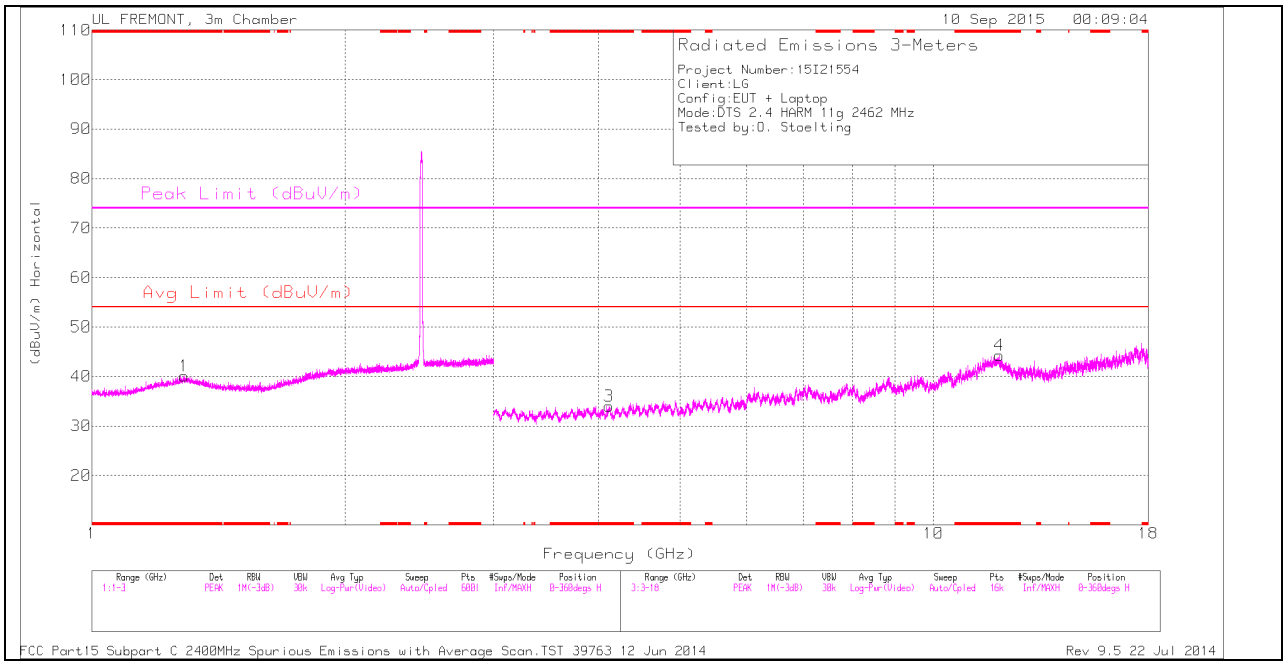
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.305	33.44	PK	29.8	-23.1	0	40.14	-	-	74	-33.86	0-360	200	H
2	* 1.596	34	PK	28	-22.7	0	39.3	-	-	74	-34.7	0-360	200	V
3	* 3.884	30.92	PK	33.2	-30.2	0	33.92	-	-	74	-40.08	0-360	200	H
4	* 11.201	27.62	PK	37.9	-23	0	42.52	-	-	74	-31.48	0-360	200	H
5	* 4.851	30.71	PK	34	-29.2	0	35.51	-	-	74	-38.49	0-360	200	V
6	* 11.793	28.19	PK	39	-22.4	0	44.79	-	-	74	-29.21	0-360	100	V

PK - Peak detector

RADIATED EMISSIONS

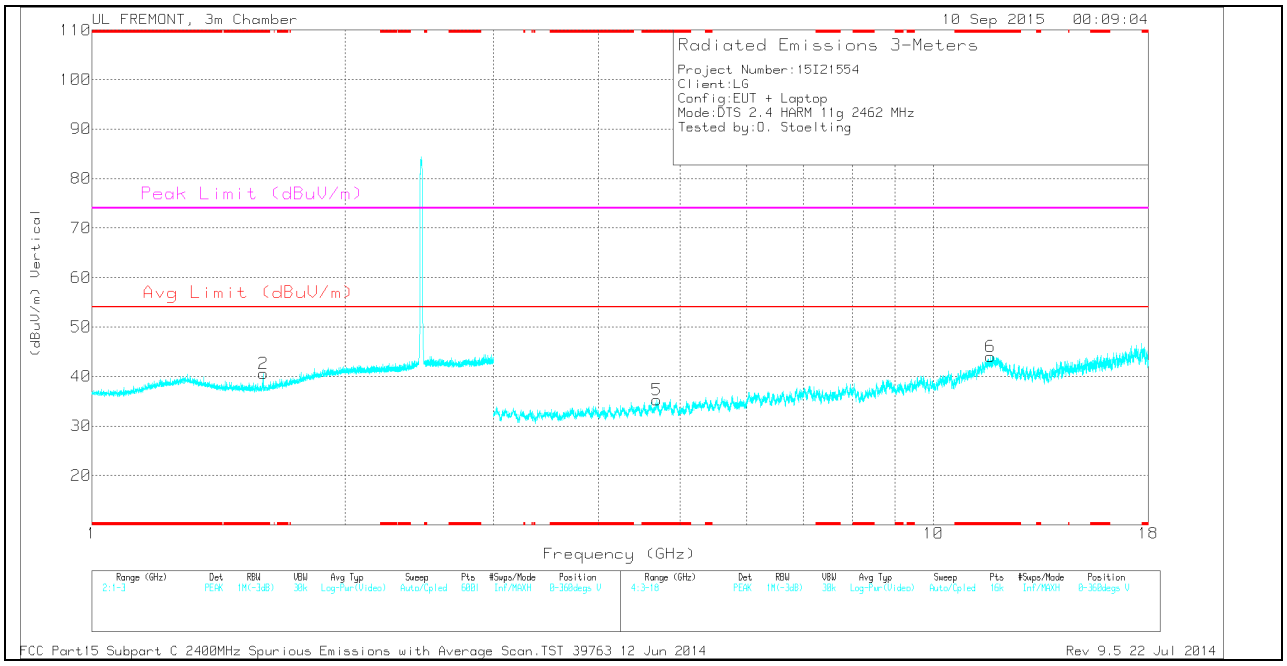
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.306	42.44	PK2	29.8	-23.1	0	49.14	-	-	74	-24.86	360	200	H
* 1.303	31.06	MAv1	29.8	-23.2	1.47	39.13	54	-14.87	-	-	360	200	H
* 1.596	46.81	PK2	28	-22.7	0	52.11	-	-	74	-21.89	360	200	V
* 1.594	31.5	MAv1	28	-22.7	1.47	38.27	54	-15.73	-	-	360	200	V
* 3.885	40.86	PK2	33.2	-30.2	0	43.86	-	-	74	-30.14	360	200	H
* 3.886	29.23	MAv1	33.2	-30.3	1.47	33.6	54	-20.4	-	-	360	200	H
* 4.849	40.09	PK2	34	-29.2	0	44.89	-	-	74	-29.11	360	200	V
* 4.852	28.36	MAv1	34	-29.2	1.47	34.63	54	-19.37	-	-	360	200	V
* 11.791	37.84	PK2	39	-22.4	0	54.44	-	-	74	-19.56	195	104	V
* 11.792	25.37	MAv1	39	-22.4	1.47	43.44	54	-10.56	-	-	195	104	V

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr /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	* 1.288	33.38	PK	29.8	-23.1	0	40.08	-	-	74	-33.92	0-360	100	H
2	* 1.599	35.41	PK	28	-22.8	0	40.61	-	-	74	-33.39	0-360	100	V
6	* 11.696	27.62	PK	38.8	-22.4	0	44.02	-	-	74	-29.98	0-360	100	V
4	* 11.969	27.94	PK	39.1	-22.8	0	44.24	-	-	74	-29.76	0-360	100	H
3	* 4.114	31.13	PK	33.3	-30.4	0	34.03	-	-	74	-39.97	0-360	200	H
5	* 4.688	31.35	PK	34	-30.1	0	35.25	-	-	74	-38.75	0-360	200	V

PK - Peak detector

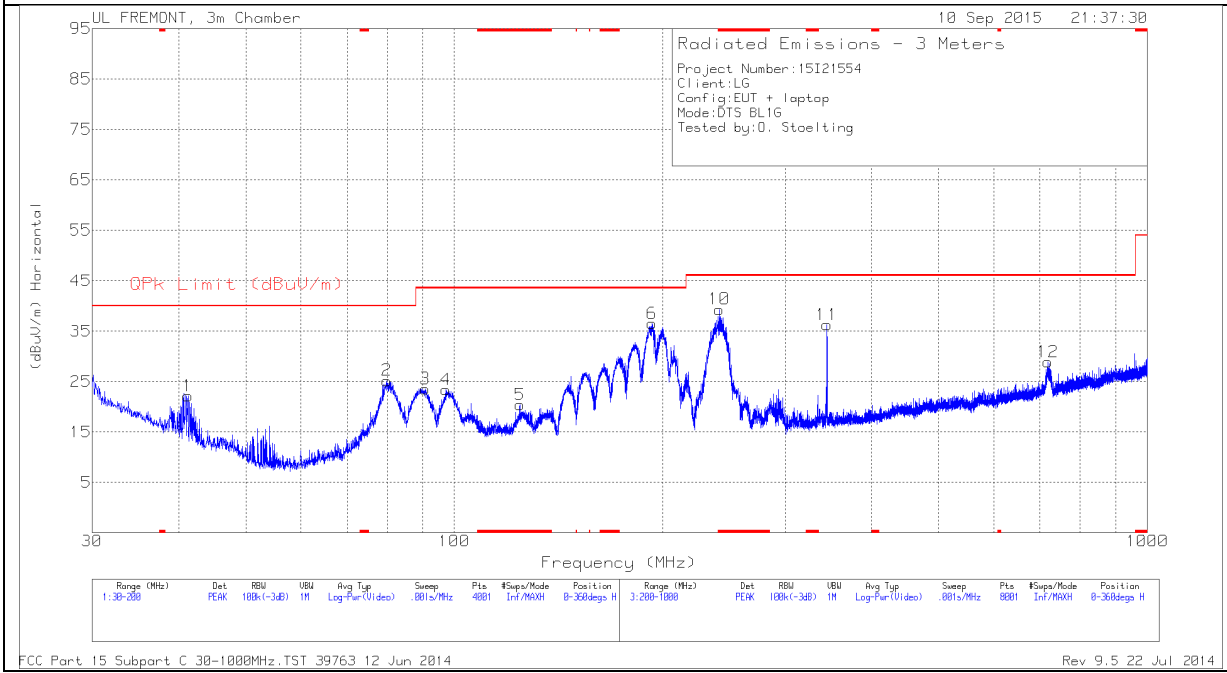
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/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
* 1.287	43.19	PK2	29.8	-23.1	0	49.89	-	-	74	-24.11	360	100	H
* 1.287	31.07	MAv1	29.8	-23.1	1.47	39.24	54	-14.76	-	-	360	100	H
* 1.598	45.5	PK2	28	-22.8	0	50.7	-	-	74	-23.3	360	100	V
* 1.599	30.95	MAv1	28	-22.8	1.47	37.62	54	-16.38	-	-	360	100	V
* 4.114	40.98	PK2	33.3	-30.4	0	43.88	-	-	74	-30.12	360	200	H
* 4.113	29.34	MAv1	33.3	-30.4	1.47	33.71	54	-20.29	-	-	360	200	H
* 11.969	36.49	PK2	39.1	-22.8	0	52.79	-	-	74	-21.21	360	100	H
* 11.969	25.2	MAv1	39.1	-22.8	1.47	42.97	54	-11.03	-	-	360	100	H
* 4.69	40.05	PK2	34	-30.1	0	43.95	-	-	74	-30.05	360	200	V
* 4.69	28.76	MAv1	34	-30.2	1.47	34.03	54	-19.97	-	-	360	200	V
* 11.695	36.61	PK2	38.8	-22.4	0	53.01	-	-	74	-20.99	193	374	V
* 11.696	24.77	MAv1	38.8	-22.4	1.47	42.64	54	-11.36	-	-	193	374	V

9.3. WORST-CASE BELOW 1 GHz

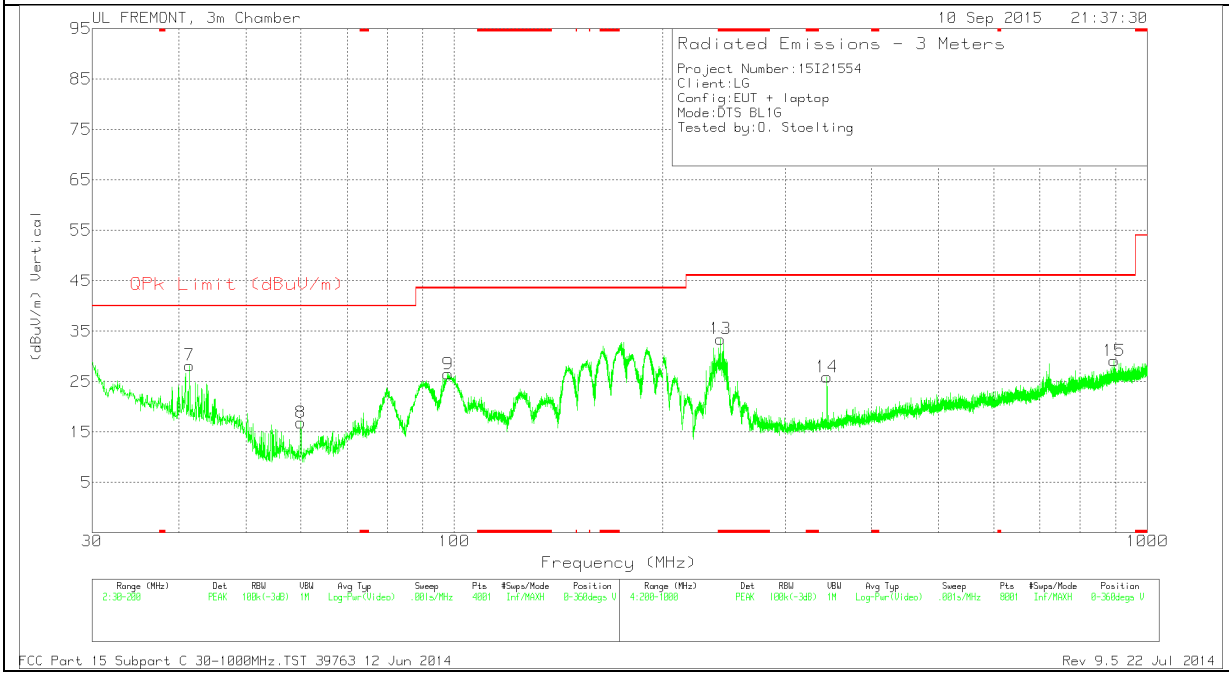
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

HORIZONTAL PLOT



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

VERTICAL PLOT



Below 1G Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T185 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 124.3075	32.4	PK	14	-26	20.4	43.52	-23.12	0-360	200	H
10	* 241.1	52.52	PK	11.5	-24.7	39.32	46.02	-6.7	0-360	100	H
13	* 242.2	46.66	PK	11.5	-24.7	33.46	46.02	-12.56	0-360	200	V
1	41.2625	35.85	PK	13.3	-27	22.15	40	-17.85	0-360	400	H
7	41.475	42.11	PK	13.2	-27.1	28.21	40	-11.79	0-360	100	V
8	60.0475	36.37	PK	7.3	-26.8	16.87	40	-23.13	0-360	100	V
2	79.8525	43.81	PK	8	-26.6	25.21	40	-14.79	0-360	300	H
3	90.69	42.15	PK	7.8	-26.4	23.55	43.52	-19.97	0-360	200	H
4	97.1925	40.6	PK	9.1	-26.3	23.4	43.52	-20.12	0-360	200	H
9	97.9575	43.53	PK	9.3	-26.3	26.53	43.52	-16.99	0-360	100	V
6	192.945	50.41	PK	11.3	-25.2	36.51	43.52	-7.01	0-360	100	H
11	345	46.58	PK	14.2	-24.5	36.28	46.02	-9.74	0-360	100	H
14	345	36.22	PK	14.2	-24.5	25.92	46.02	-20.1	0-360	100	V
12	718.8	32.6	PK	20.3	-24	28.9	46.02	-17.12	0-360	100	H
15	895.8	29.64	PK	22.2	-22.7	29.14	46.02	-16.88	0-360	100	V