



FCC 47 CFR PART 15 SUBPART C

**C2PC CERTIFICATION TEST REPORT
FOR**

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

MODEL NUMBER: LG-D725, D725, LGD725

FCC ID: ZNFD725

REPORT NUMBER: 14U18112-2

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Prepared for
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NVLAP LAB CODE 200065-0

Revision History

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: LG ELECTRONICS MOBILECOMM U.S.A., INC.
EUT DESCRIPTION: GSM/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n and NFC
MODEL: LG-D725, D725, LGD725
SERIAL NUMBER: 17T3W (Radiated)
DATE TESTED: JUNE 25 - 30, 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 C63.4-2009, 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:

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

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 18000 MHz	4.94 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n 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	Basic GFSK	12.32	17.06
2402 - 2480	Enhanced 8PSK	12.25	16.79

Note: GFSK, Pi/4-DQPSK, 8PSK average Power are all investigated, The GFSK & 8PSK Power are the worst case. Testing is based on this mode to showing compliance. For average power data please refer to section 8.6.

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a PIF antenna, with a maximum gain of -0.8 dBi.

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 Electronics	MCS-01WD	DB3Y0094683	N/A
Earphone	LG Electronics	N/A	N/A	N/A

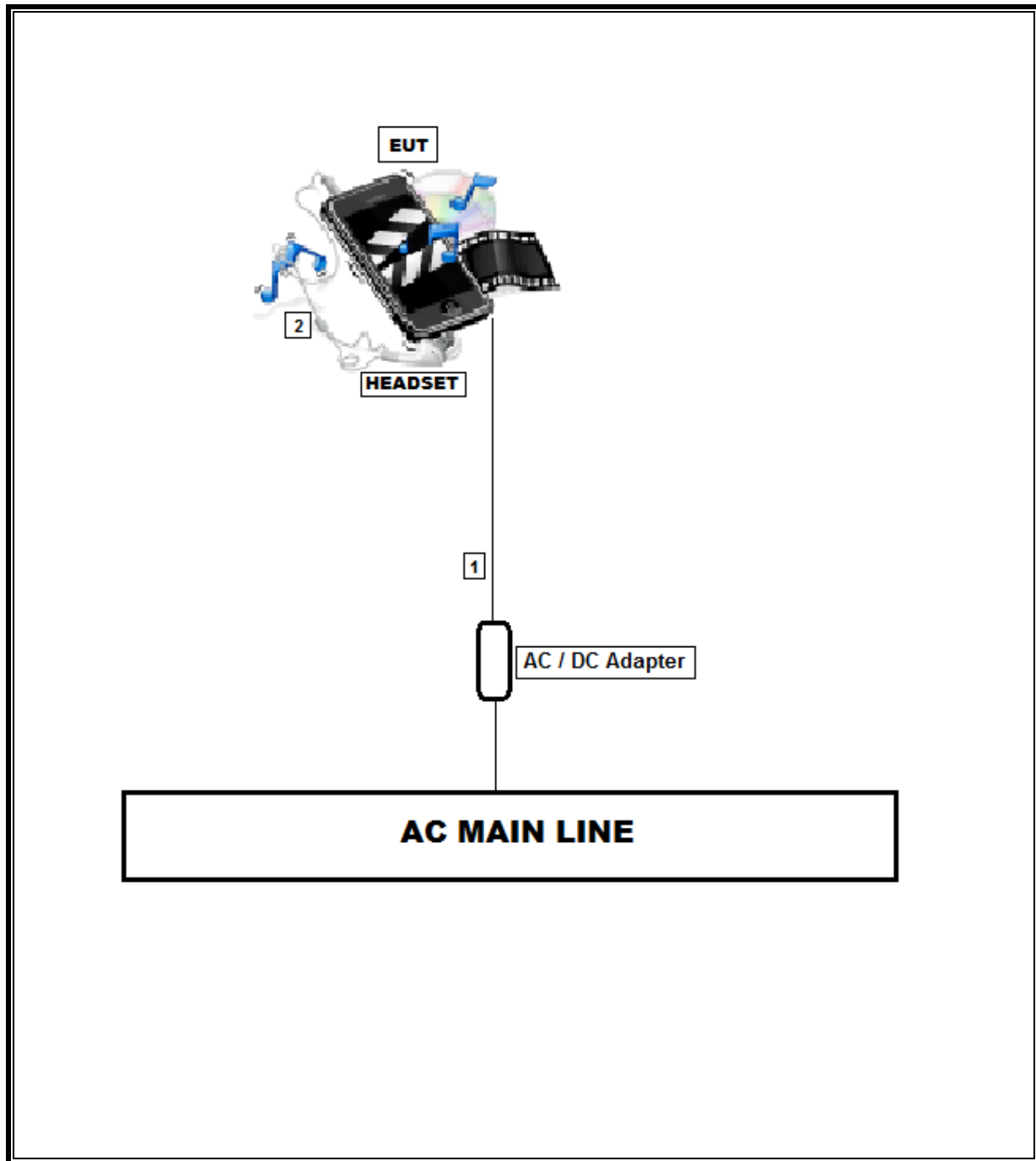
I/O CABLES

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

TEST SETUP

The EUT is continuously communicating to the Bluetooth tester during the tests. EUT was set in the Hidden menu mode to enable BT 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
Antenna, Biconolog, 30MHz-1 GHz	Sunol Sciences	JB1	C01171	02/13/15
Antenna, Horn, 18GHz	EMCO	3115	C00783	10/25/14
Antenna, Horn, 25.5 GHz	ARA	MWH-1826/B	C00980	11/14/14
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00580	01/28/15
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01052	10/22/14
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/14
CBT Bluetooth Tester	R & S	CBT	None	07/12/14
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/14
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/14
LISN, 30 MHz	FCC	50/250-25-2	C00626	01/14/15
Reject Filter, 2.4GHz	Micro-Tronics	BRM50702	N02684	CNR

7. SUMMARY TABLE

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Worst Case
2.1049	RSS-GEN 4.6	Occupied Band width (99%)	N/A	Conducted	Pass	see original
2.1051, 15.247 (d)	RSS-210 A8.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	see original
15.247 (b)(1)	RSS-210 A8.4	TX conducted output power	<21dBm		Pass	see original
15.247 (a)(1)	RSS-210 A8.1(b)	Hopping frequency separation	> 25KHz		Pass	see original
15.247 (a)(1)(iii)	RSS-210 A8.1(d)	Number of Hopping channels	More than 15 non-overlapping channels		Pass	see original
15.247 (a)(1)(iii)	RSS-210 A8.1(d)	Avg Time of Occupancy	< 0.4sec		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	50.02dBuV/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. 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 band edge 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 1/T (on time) for average measurement. $GFSK = 1/T = 1 / 0.0028S = 360Hz$.

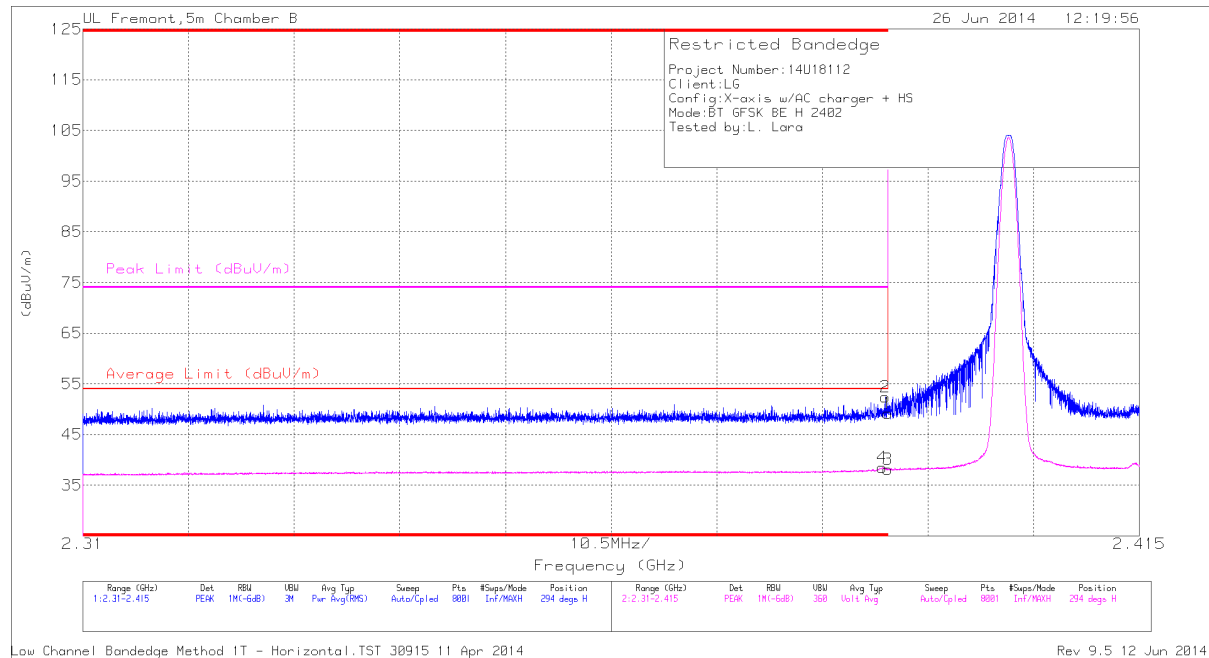
The spectrum from 1GHzHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

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. BASIC DATA RATE GFSK MODULATION

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



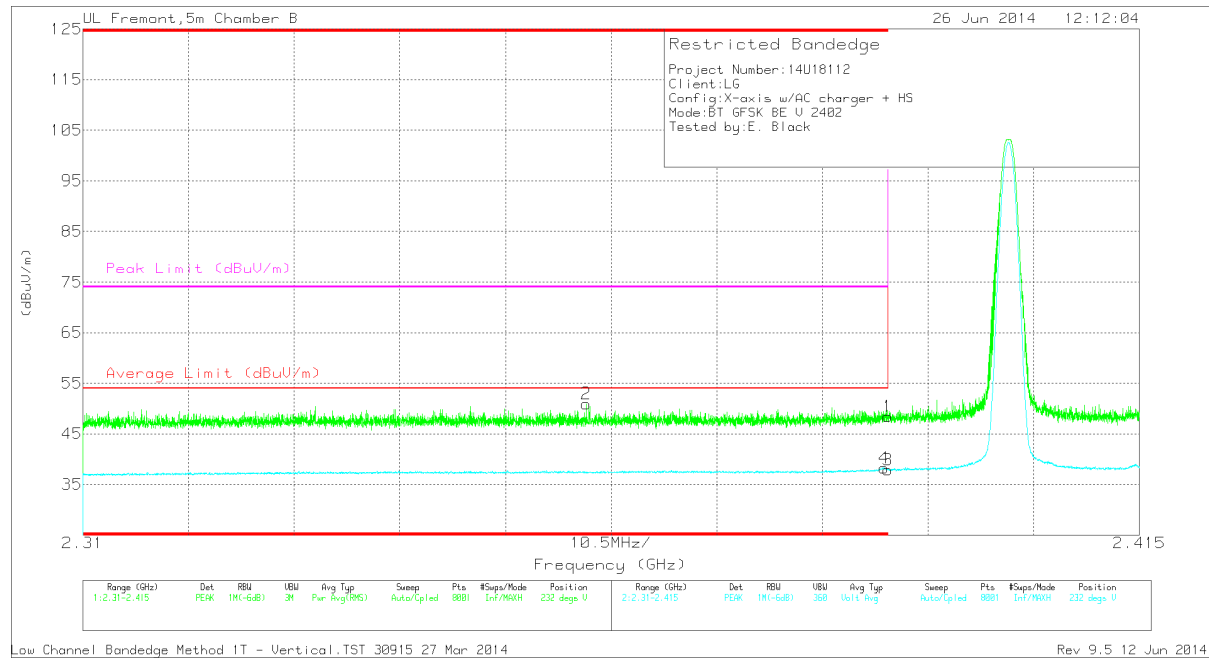
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T34S (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	39.93	PK	32.1	-22.8	0	49.23	-	-	74	-24.77	294	240	H
2	* 2.39	43.1	PK	32.1	-22.8	0	52.4	-	-	74	-21.6	294	240	H
3	* 2.39	28.86	VB1T	32.1	-22.8	0	38.16	54	-15.84	-	-	294	240	H
4	* 2.389	29.16	VB1T	32.1	-22.8	0	38.46	54	-15.54	-	-	294	240	H

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

PK - Peak detector

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



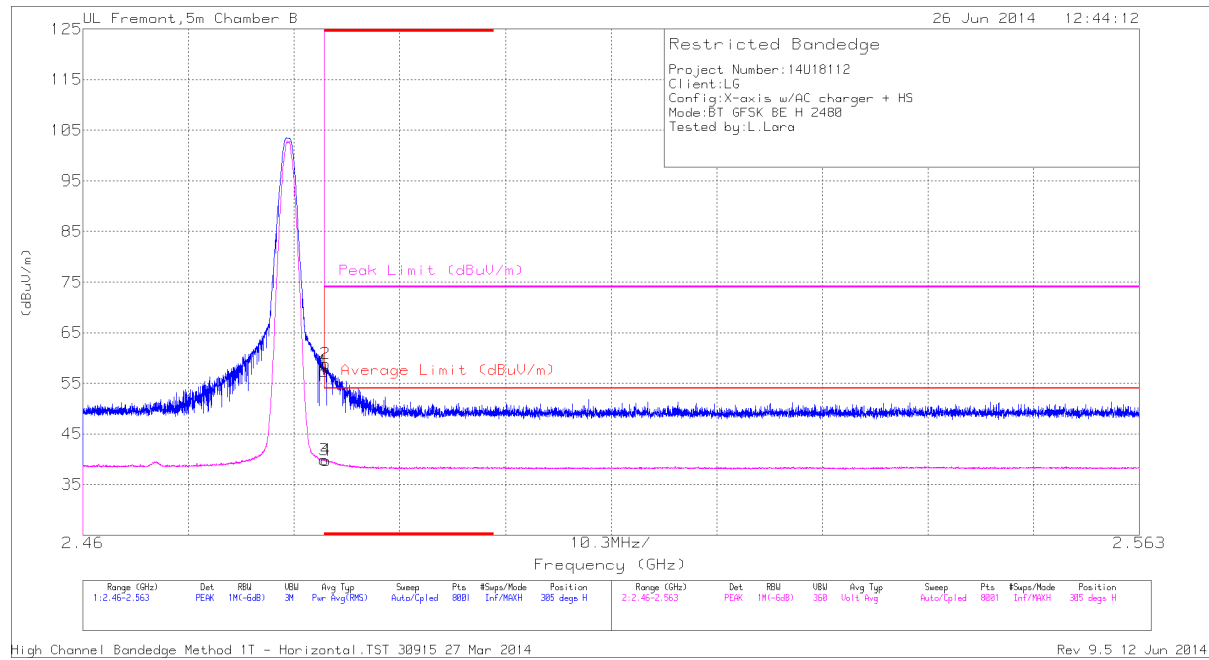
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	39.12	PK	32.1	-22.8	0	48.42	-	-	74	-25.58	232	244	V
2	* 2.36	41.87	PK	31.9	-22.8	0	50.97	-	-	74	-23.03	232	244	V
3	* 2.39	28.58	VB1T	32.1	-22.8	0	37.88	54	-16.12	-	-	232	244	V
4	* 2.39	29	VB1T	32.1	-22.8	0	38.3	54	-15.7	-	-	232	244	V

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

PK - Peak detector

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



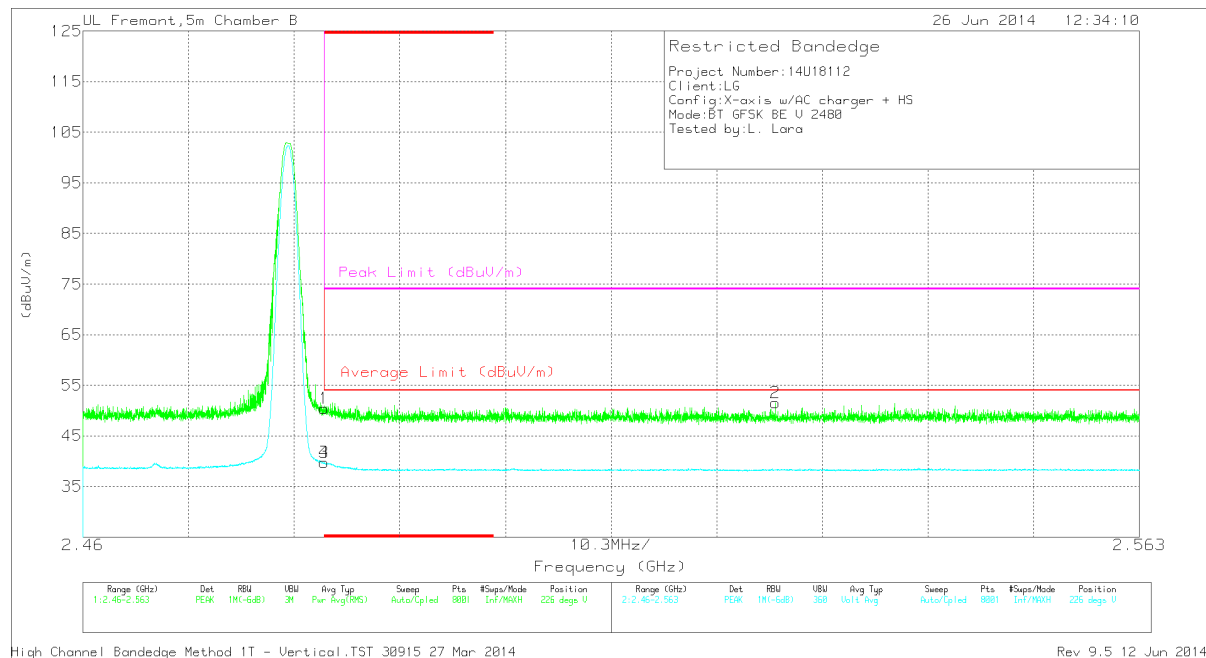
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	47.64	PK	32.4	-22.7	0	57.34	-	-	74	-16.66	305	226	H
2	* 2.484	49.11	PK	32.4	-22.7	0	58.81	-	-	74	-15.19	305	226	H
3	* 2.484	30.12	VB1T	32.4	-22.7	0	39.82	54	-14.18	-	-	305	226	H
4	* 2.484	30.1	VB1T	32.4	-22.7	0	39.8	54	-14.2	-	-	305	226	H

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

PK - Peak detector

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/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	40.77	PK	32.4	-22.7	0	50.47	-	-	74	-23.53	226	230	V
3	* 2.484	30.06	VB1T	32.4	-22.7	0	39.76	54	-14.24	-	-	226	230	V
4	* 2.484	30.08	VB1T	32.4	-22.7	0	39.78	54	-14.22	-	-	226	230	V
2	2.528	41.67	PK	32.5	-22.6	0	51.57	-	-	74	-22.43	226	230	V

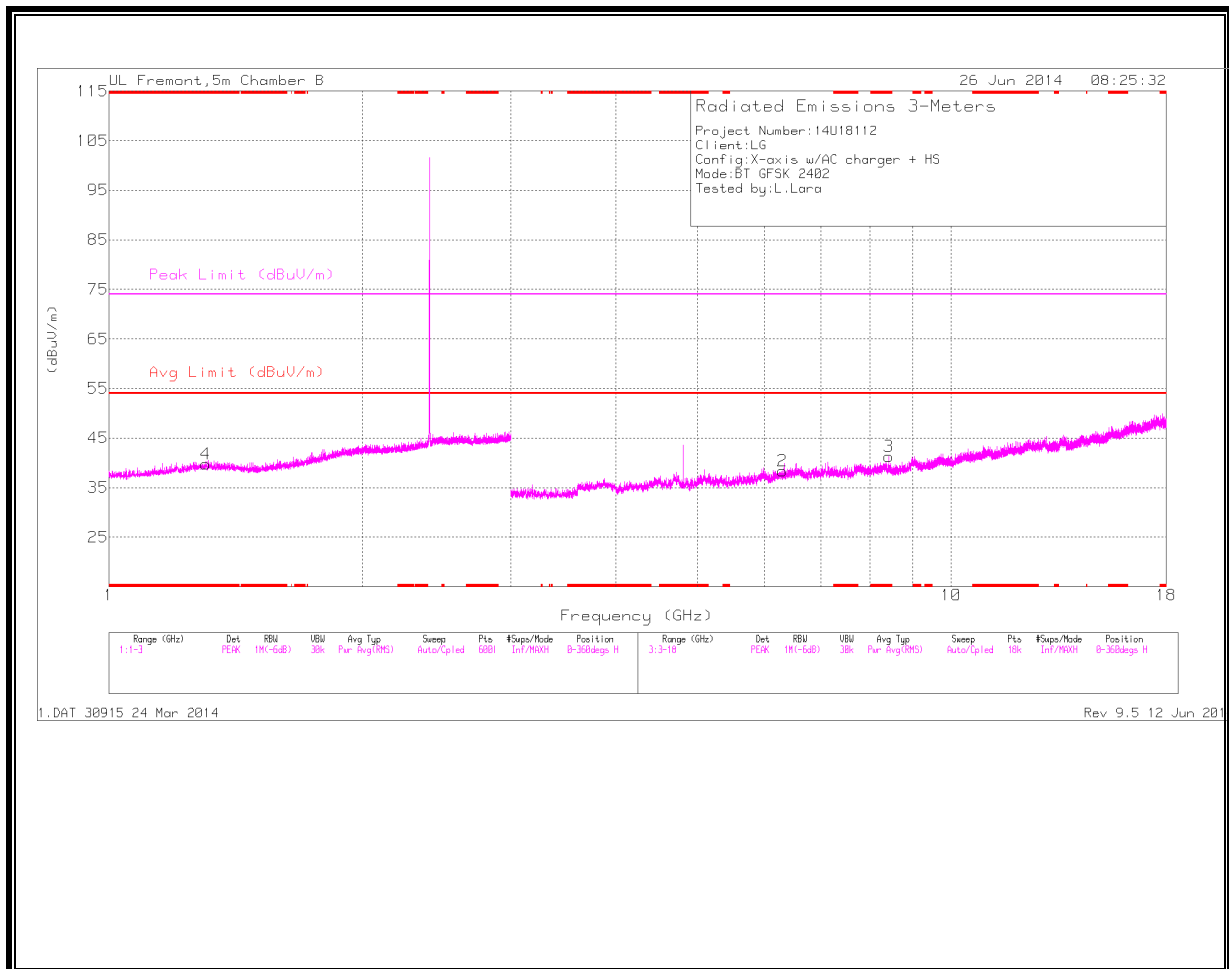
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

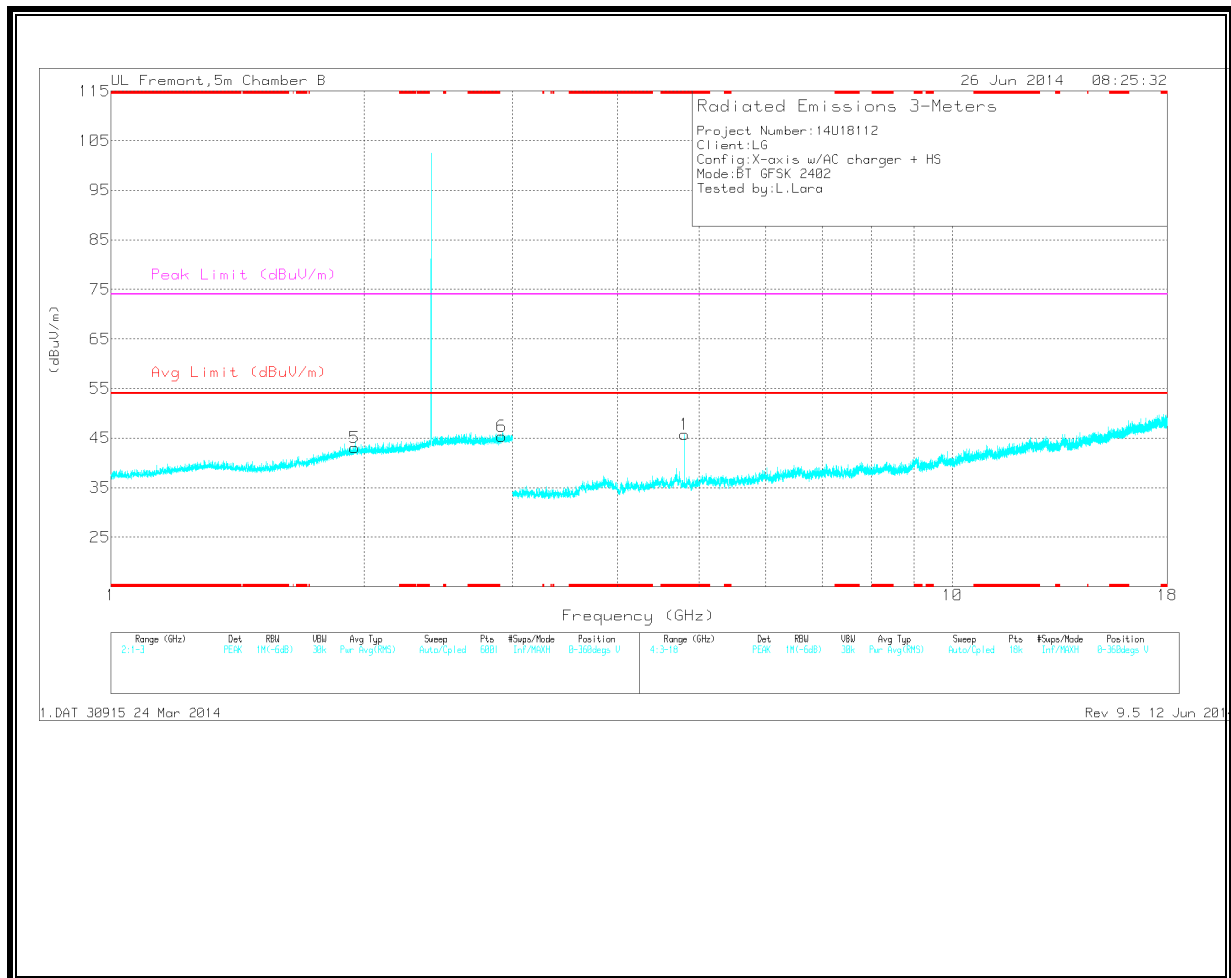
VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

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.



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LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 1.303	35.44	PK	28.8	-24.5	0	39.74	-	-	74	-34.26	0-360	99	H
3	* 8.433	30.34	PK	35.8	-24.9	0	41.24	-	-	74	-32.76	0-360	99	H
1	* 4.804	40.98	PK	34.2	-29.4	0	45.78	-	-	74	-28.22	0-360	99	V
5	1.947	35.31	PK	31.2	-23.5	0	43.01	-	-	-	-	0-360	99	V
6	2.913	35.09	PK	32.6	-22.3	0	45.39	-	-	-	-	0-360	99	V
2	6.306	31.52	PK	35.5	-28.7	0	38.32	-	-	-	-	0-360	99	H

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

PK - Peak detector

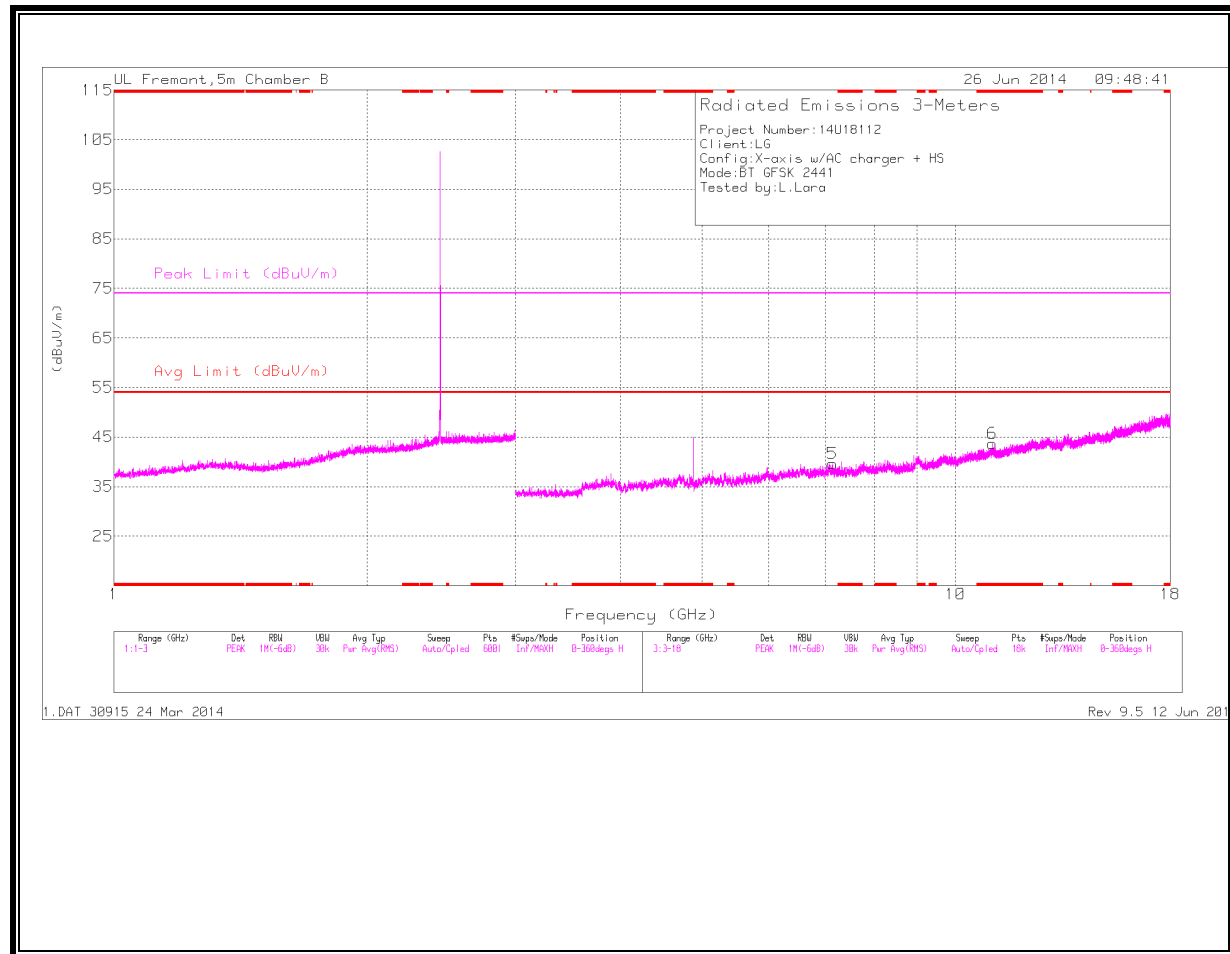
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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
* 1.305	44.19	PK3	28.8	-24.5	0	48.49	-	-	74	-25.51	161	101	H
* 8.433	36.51	PK3	35.8	-24.9	0	47.41	-	-	74	-26.59	161	101	H
* 4.804	47.01	PK3	34.2	-29.4	0	51.81	-	-	74	-22.19	161	219	V
* 4.804	42.95	VB1T	34.2	-29.4	0	47.75	54	-6.25	-	-	161	219	V
1.948	43.59	PK3	31.2	-23.5	0	51.29	-	-	-	-	161	101	V
2.912	42.61	PK3	32.6	-22.3	0	52.91	-	-	-	-	161	101	V
6.305	40.14	PK3	35.5	-28.7	0	46.94	-	-	-	-	161	101	H

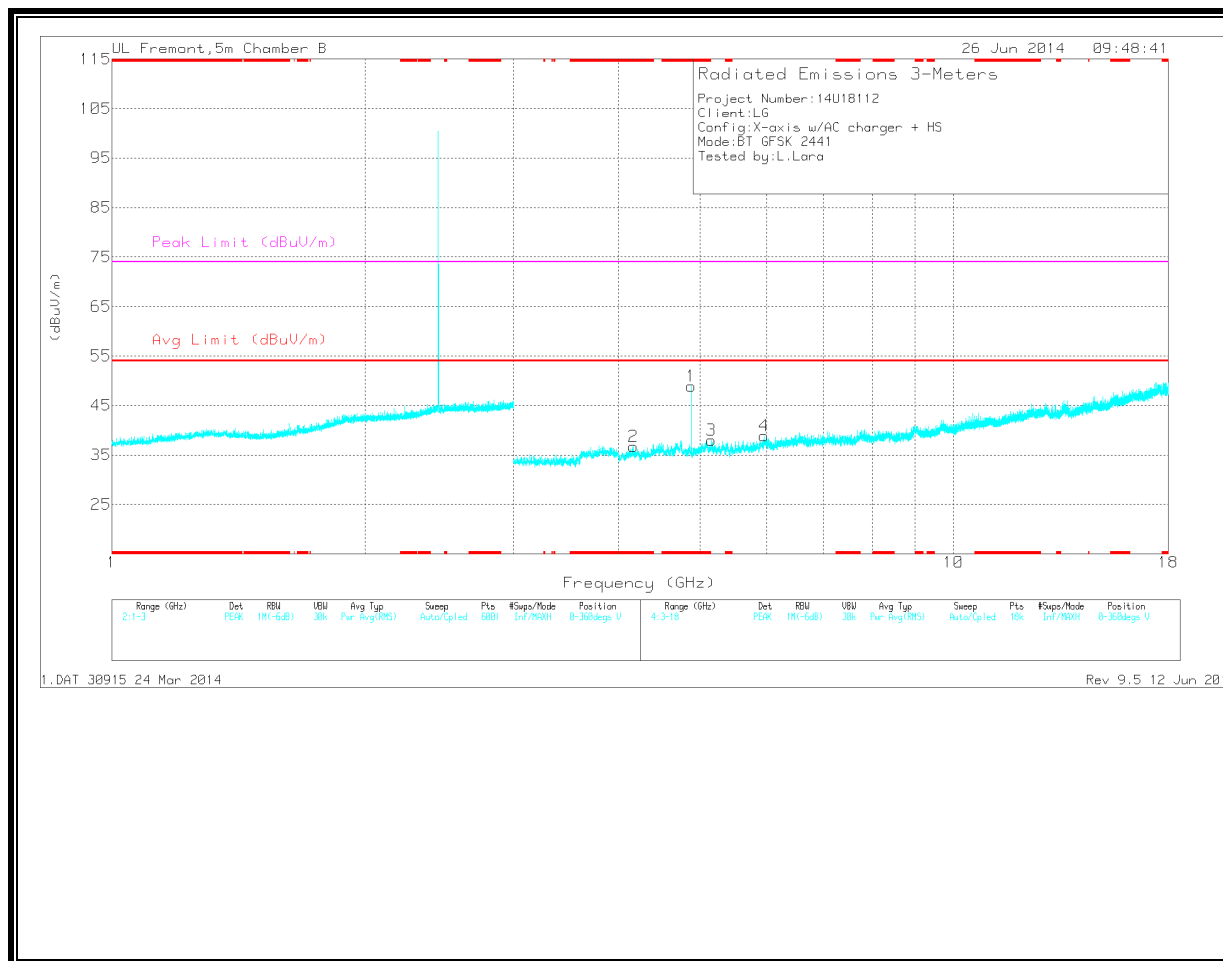
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - FHSS Method: Maximum Peak

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet



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



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MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 11.069	27.81	PK	37.8	-21.9	0	43.71	-	-	74	-30.29	0-360	199	H
1	* 4.882	45.3	PK	34.2	-30.6	0	48.9	-	-	74	-25.1	0-360	101	V
2	* 4.164	33.14	PK	33.6	-30	0	36.74	-	-	74	-37.26	0-360	101	V
3	5.156	33.54	PK	34.3	-29.9	0	37.94	-	-	-	-	0-360	101	V
4	5.952	32.25	PK	35.1	-28.5	0	38.85	-	-	-	-	0-360	199	V
5	7.141	30.72	PK	35.6	-26.7	0	39.62	-	-	-	-	0-360	199	H

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

PK - Peak detector

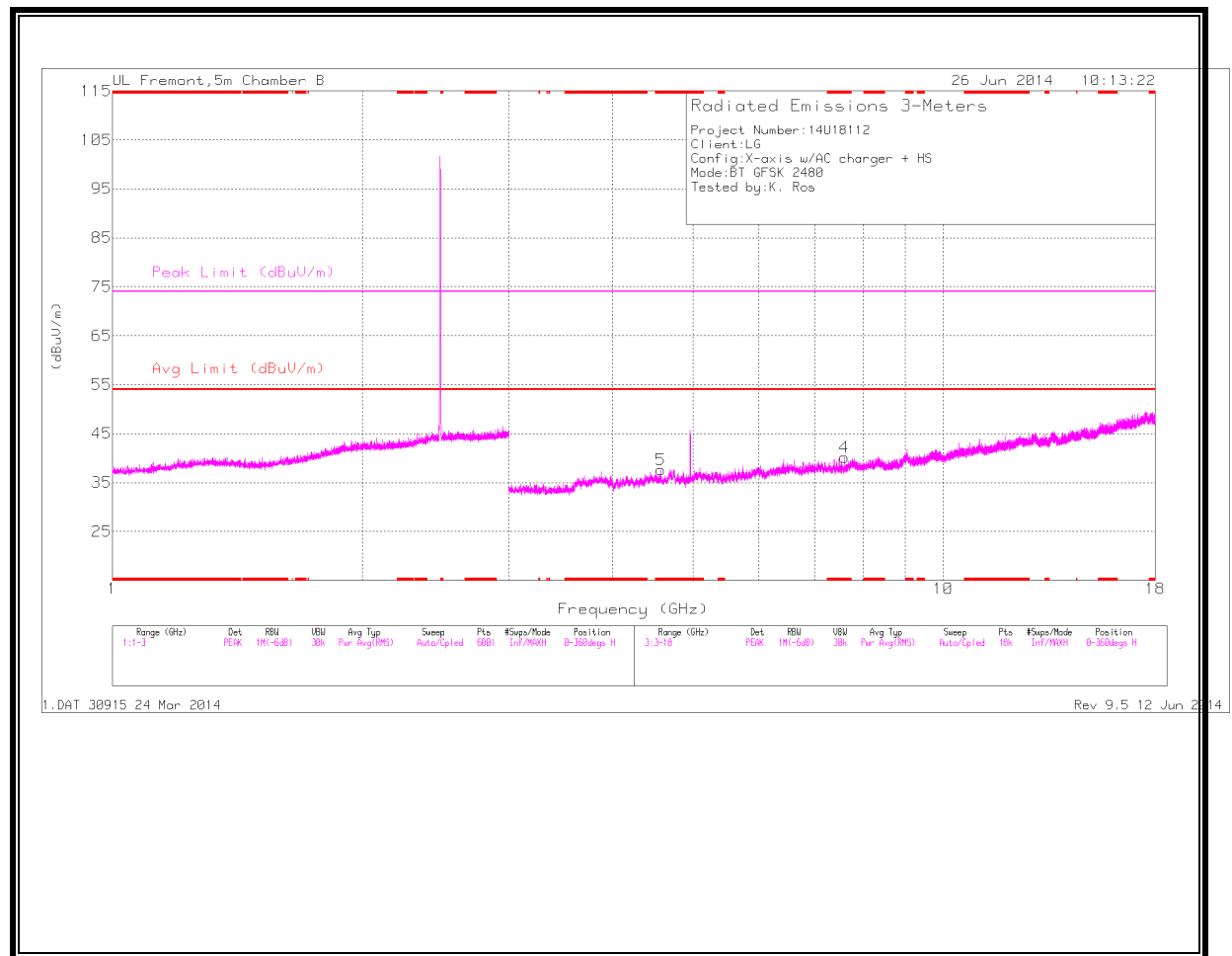
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.07	34.26	PK3	37.8	-21.9	0	50.16	-	-	74	-23.84	180	198	H
* 4.882	49.74	PK3	34.2	-30.6	0	53.34	-	-	74	-20.66	180	108	V
* 4.882	46.42	VB1T	34.2	-30.6	0	50.02	54	-3.98	-	-	180	108	V
* 4.165	40.48	PK3	33.6	-30	0	44.08	-	-	74	-29.92	180	103	V
5.156	40.98	PK3	34.3	-29.9	0	45.38	-	-	-	-	180	103	V
5.953	39.46	PK3	35.1	-28.5	0	46.06	-	-	-	-	180	198	V
7.14	37.81	PK3	35.6	-26.8	0	46.61	-	-	-	-	180	198	H

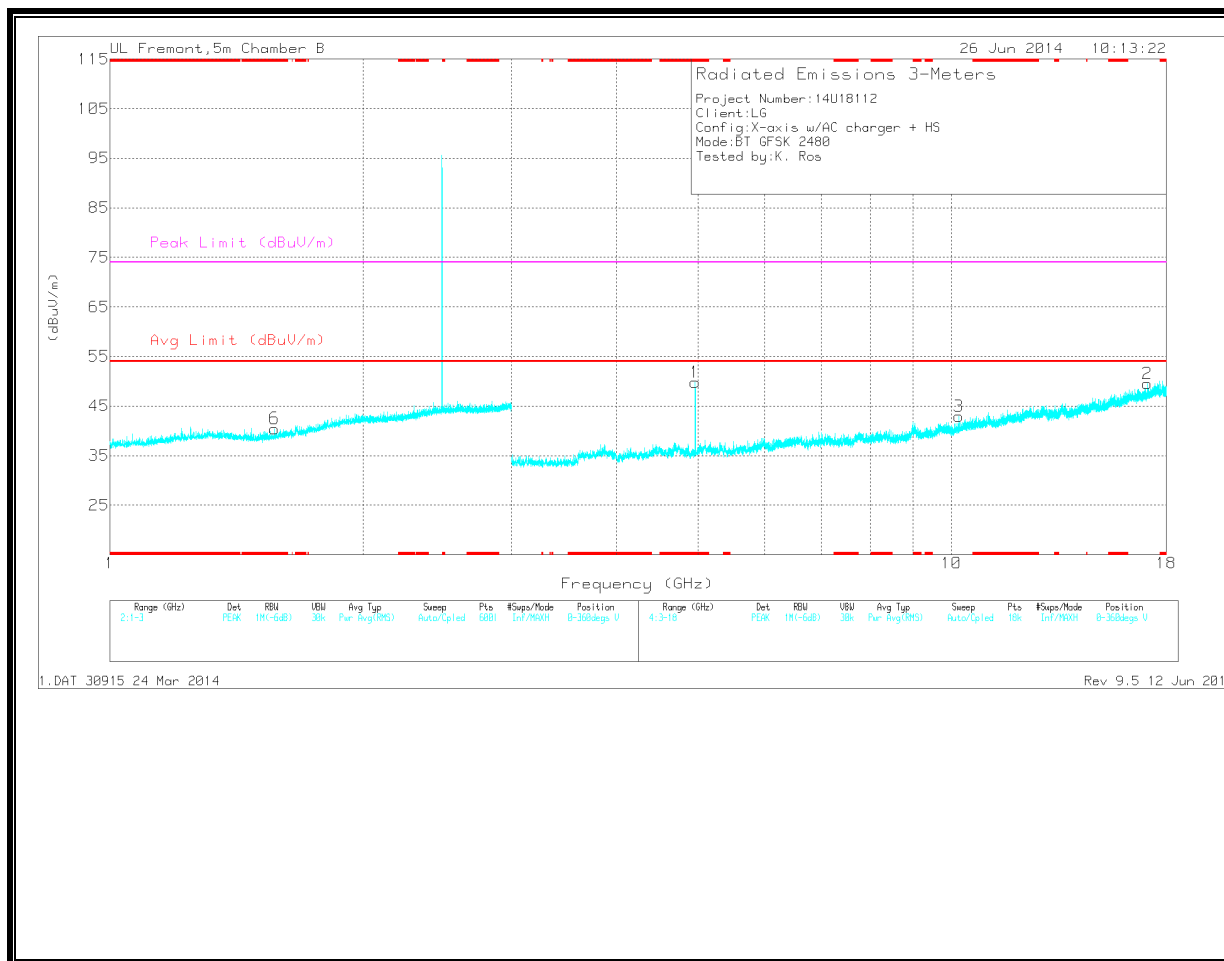
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - FHSS Method: Maximum Peak

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet



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



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HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 1.57	36.16	PK	28.3	-24	0	40.46	-	-	74	-33.54	0-360	101	V
4	* 7.605	31.88	PK	35.7	-27.4	0	40.18	-	-	74	-33.82	0-360	101	H
5	* 4.57	34.15	PK	34.1	-30.6	0	37.65	-	-	74	-36.35	0-360	101	H
1	* 4.96	46.03	PK	34.2	-30.4	0	49.83	-	-	74	-24.17	0-360	101	V
3	10.21	29.12	PK	37.1	-23.3	0	42.92	-	-	-	-	0-360	101	V
2	17.103	27.26	PK	41.5	-19.2	0	49.56	-	-	-	-	0-360	199	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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
* 1.569	43.67	PK3	28.3	-24	0	47.97	-	-	74	-26.03	179	102	V
* 7.604	38.18	PK3	35.7	-27.4	0	46.48	-	-	74	-27.52	179	102	H
* 4.572	40.72	PK3	34.1	-30.7	0	44.12	-	-	74	-29.88	179	102	H
* 4.96	49.72	PK3	34.2	-30.4	0	53.52	-	-	74	-20.48	179	258	V
* 4.96	45.82	VB1T	34.2	-30.4	0	49.62	54	-4.38	-	-	179	258	V
10.212	35.47	PK3	37.1	-23.3	0	49.27	-	-	-	-	179	102	V
17.102	33.67	PK3	41.5	-19.2	0	55.97	-	-	-	-	179	201	V

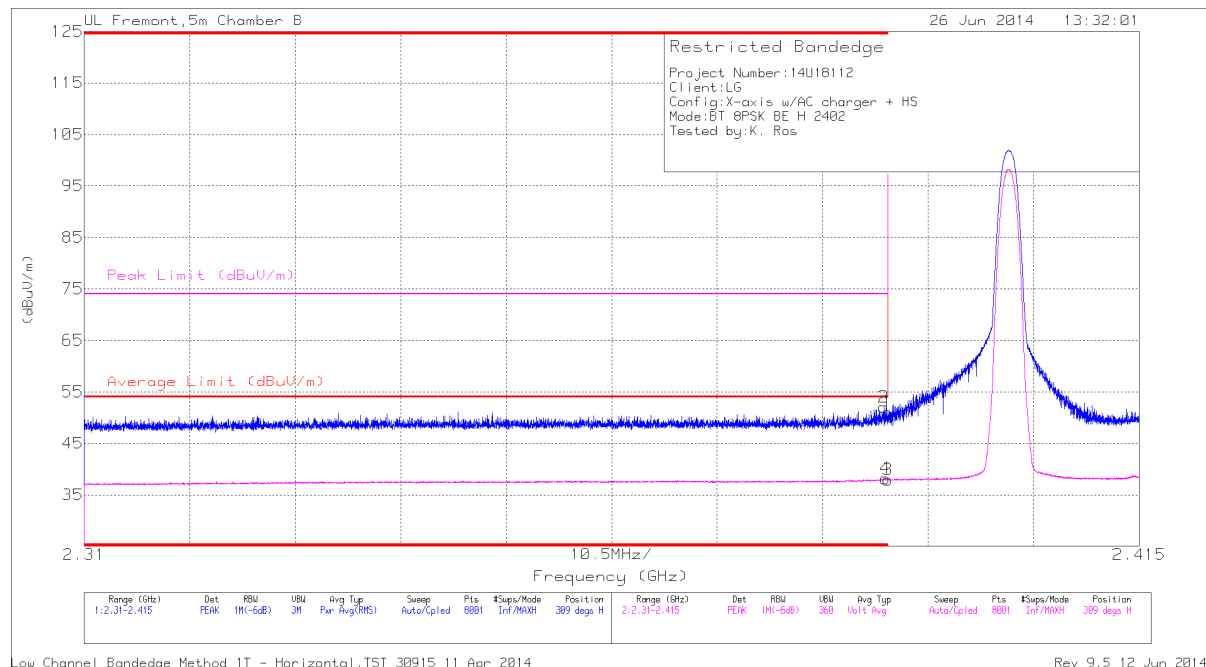
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - FHSS Method: Maximum Peak

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

8.2.2. ENHANCED DATA RATE 8PSK MODULATION

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



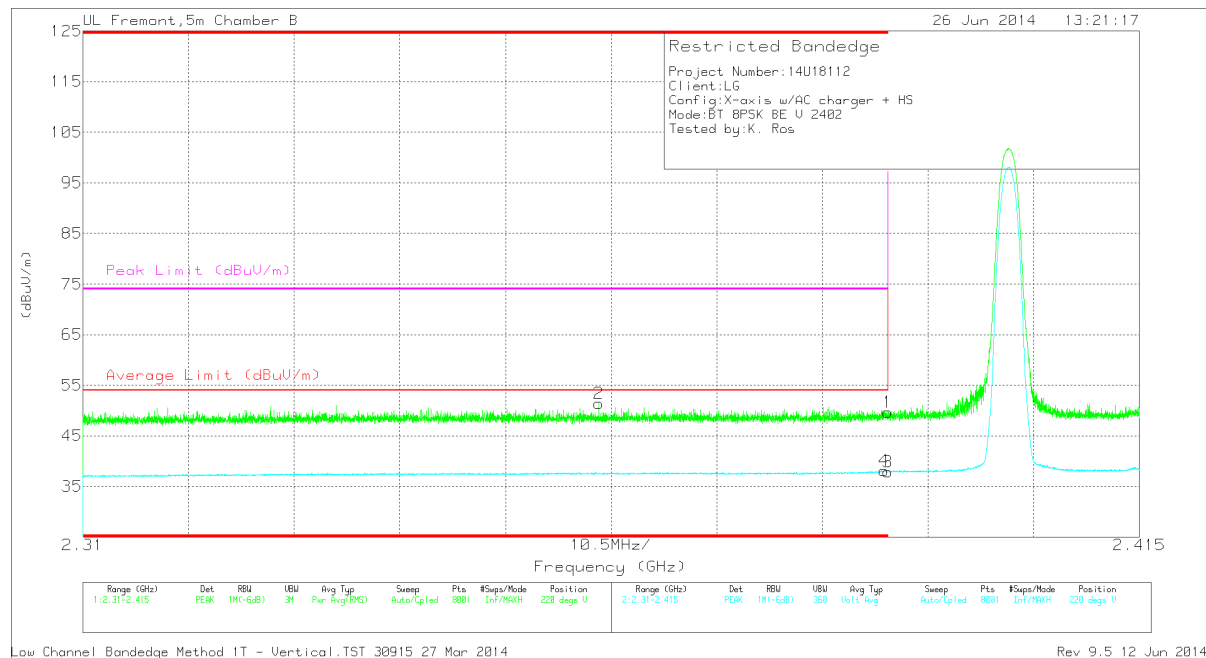
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	41.73	PK	32.1	-22.8	0	51.03	-	-	74	-22.97	309	288	H
2	* 2.39	42.72	PK	32.1	-22.8	0	52.02	-	-	74	-21.98	309	288	H
3	* 2.39	28.65	VB1T	32.1	-22.8	0	37.95	54	-16.05	-	-	309	288	H
4	* 2.39	28.88	VB1T	32.1	-22.8	0	38.18	54	-15.82	-	-	309	288	H

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

PK - Peak detector

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



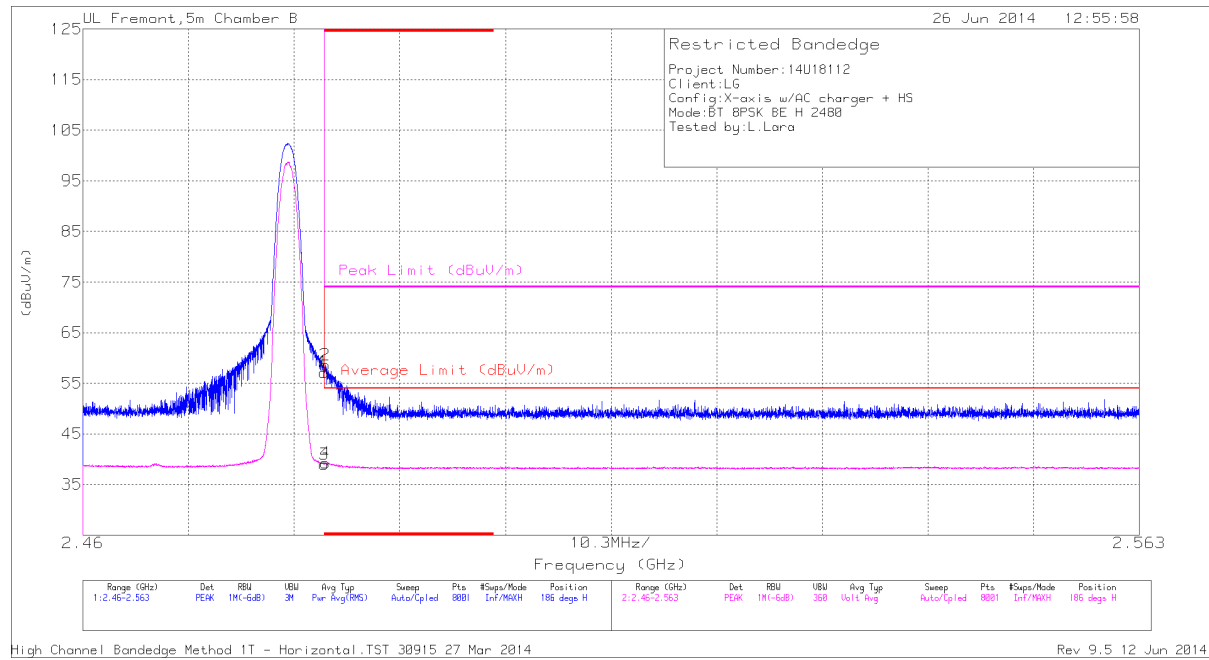
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T34S (dB/m)	Amp/Cbl/Filr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	40.38	PK	32.1	-22.8	0	49.68	-	-	74	-24.32	220	294	V
2	* 2.361	42.3	PK	31.9	-22.8	0	51.4	-	-	74	-22.6	220	294	V
3	* 2.39	28.57	VB1T	32.1	-22.8	0	37.87	54	-16.13	-	-	220	294	V
4	* 2.39	28.83	VB1T	32.1	-22.8	0	38.13	54	-15.87	-	-	220	294	V

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

PK - Peak detector

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



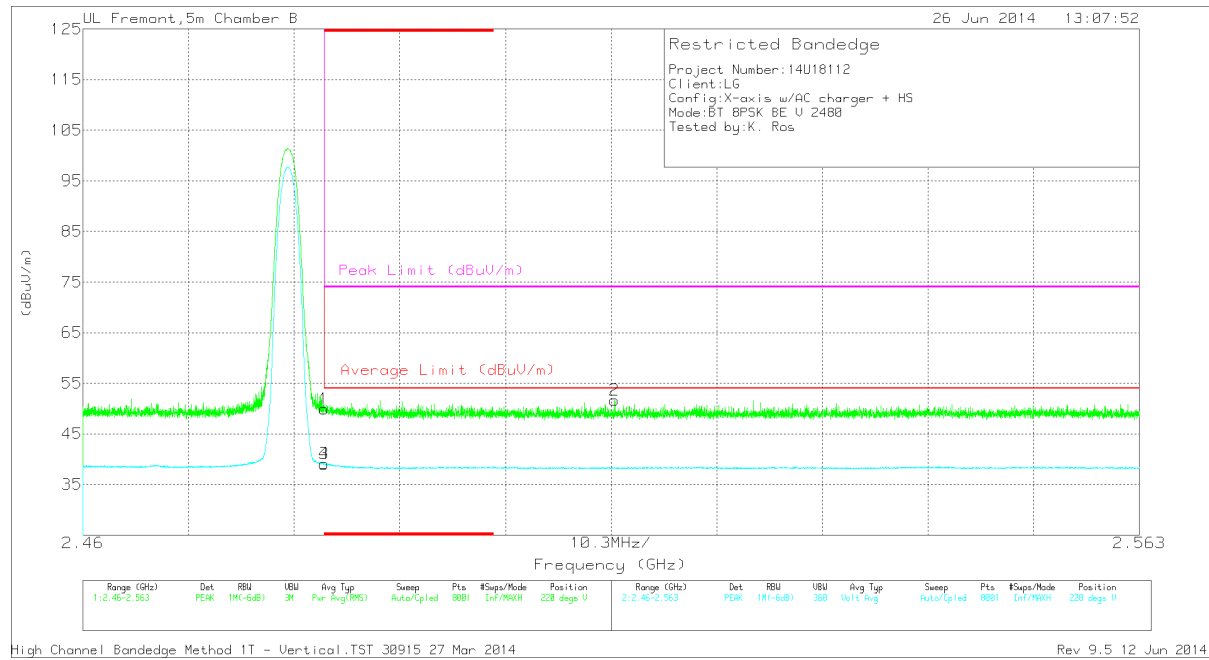
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	47.48	PK	32.4	-22.7	0	57.18	-	-	74	-16.82	186	273	H
2	* 2.484	48.9	PK	32.4	-22.7	0	58.6	-	-	74	-15.4	186	273	H
3	* 2.484	29.35	VB1T	32.4	-22.7	0	39.05	54	-14.95	-	-	186	273	H
4	* 2.484	29.52	VB1T	32.4	-22.7	0	39.22	54	-14.78	-	-	186	273	H

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

PK - Peak detector

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/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	40.19	PK	32.4	-22.7	0	49.89	-	-	74	-24.11	220	337	V
3	* 2.484	29.36	VB1T	32.4	-22.7	0	39.06	54	-14.94	-	-	220	337	V
4	* 2.484	29.46	VB1T	32.4	-22.7	0	39.16	54	-14.84	-	-	220	337	V
2	2.512	41.84	PK	32.5	-22.7	0	51.64	-	-	74	-22.36	220	337	V

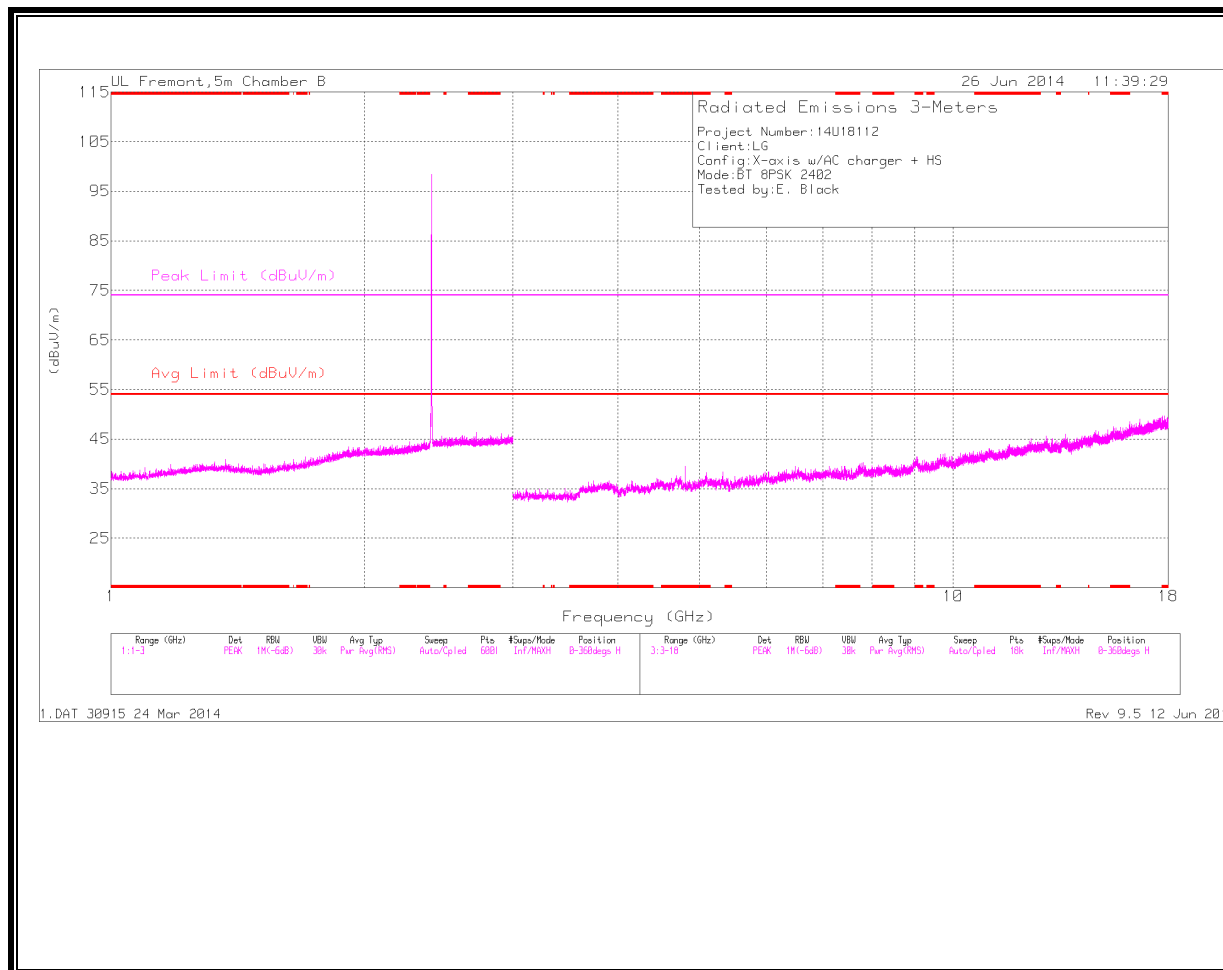
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

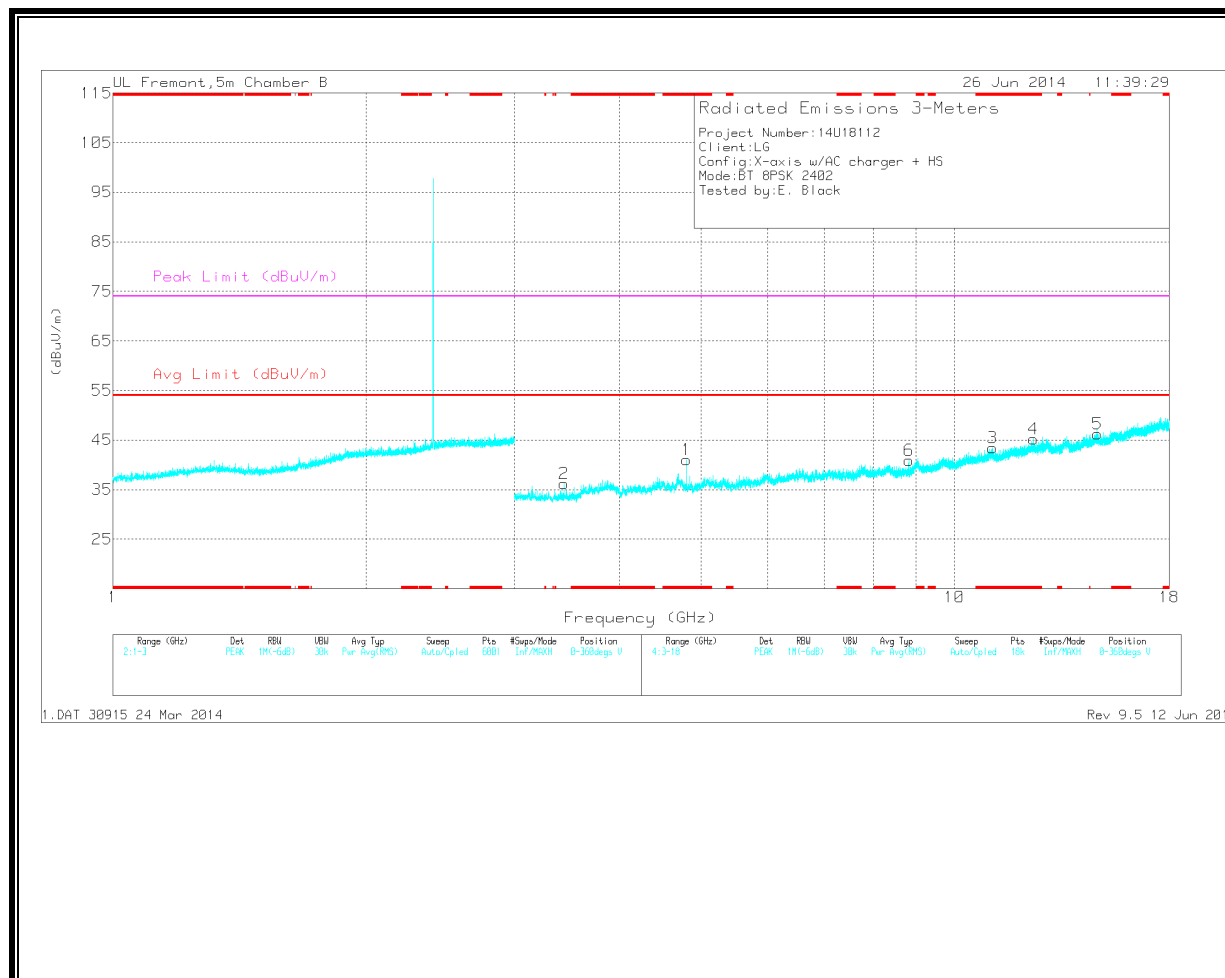
VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

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.



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

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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	* 4.804	36.24	PK	34.2	-29.4	0	41.04	-	-	74	-32.96	0-360	100	V
3	* 11.095	27.73	PK	37.8	-22.1	0	43.43	-	-	74	-30.57	0-360	100	V
4	* 12.423	27.42	PK	39	-21.2	0	45.22	-	-	74	-28.78	0-360	200	V
2	3.434	34.37	PK	32.8	-31	0	36.17	-	-	-	-	0-360	200	V
6	8.826	30.45	PK	36	-25.6	0	40.85	-	-	-	-	0-360	200	V
5	14.781	26.58	PK	39.4	-19.8	0	46.18	-	-	-	-	0-360	200	V

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

PK - Peak detector

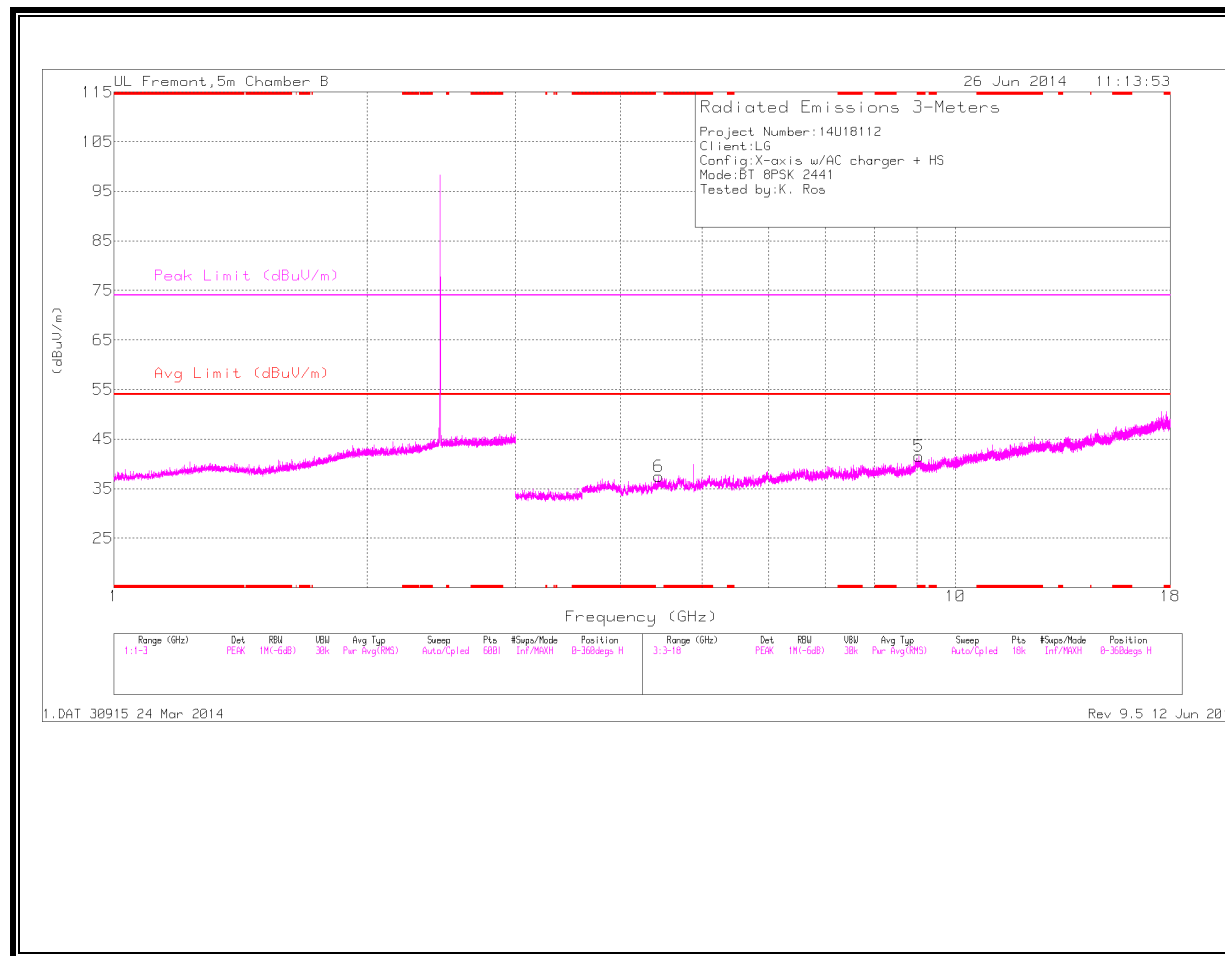
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.804	45.29	PK3	34.2	-29.4	0	50.09	-	-	74	-23.91	160	216	V
* 4.804	37.18	VB1T	34.2	-29.4	0	41.98	54	-12.02	-	-	160	216	V
* 11.093	34.65	PK3	37.8	-22.1	0	50.35	-	-	74	-23.65	160	102	V
* 12.424	34.34	PK3	39	-21.2	0	52.14	-	-	74	-21.86	160	199	V
3.434	40.55	PK3	32.8	-31	0	42.35	-	-	-	-	160	201	V
8.827	36.35	PK3	36	-25.6	0	46.75	-	-	-	-	160	199	V
14.781	33.4	PK3	39.4	-19.8	0	53	-	-	-	-	160	199	V

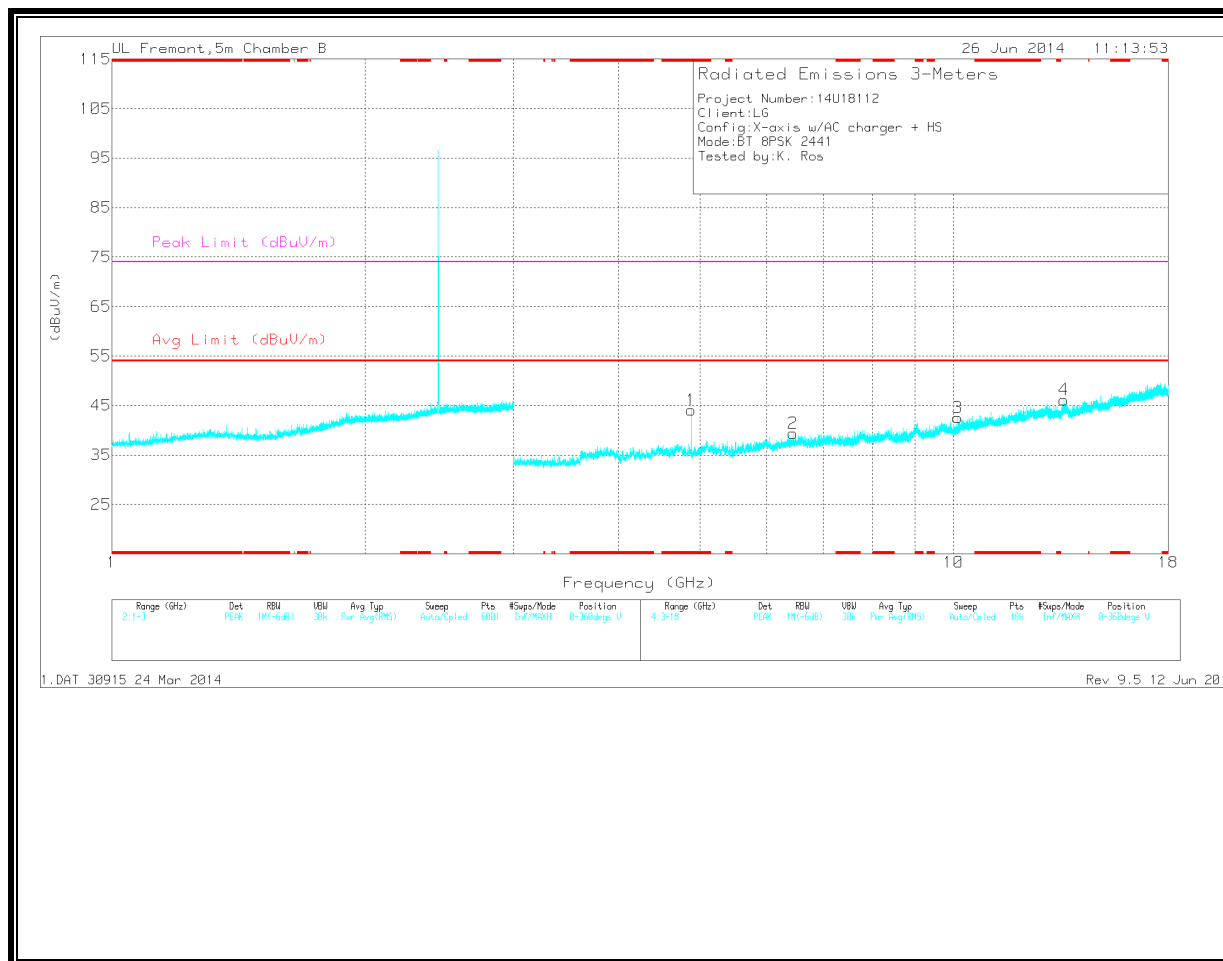
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - FHSS Method: Maximum Peak

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet



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



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

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fitr /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
5	* 9.046	28.93	PK	36.2	-23.6	0	41.53	-	-	74	-32.47	0-360	101	H
1	* 4.882	40.47	PK	34.2	-30.6	0	44.07	-	-	74	-29.93	0-360	101	V
6	4.441	32.93	PK	33.9	-29.3	0	37.53	-	-	-	-	0-360	101	H
2	6.451	32.8	PK	35.6	-29	0	39.4	-	-	-	-	0-360	101	V
3	10.109	28.88	PK	37.1	-23.4	0	42.58	-	-	-	-	0-360	101	V
4	13.531	27.27	PK	38.9	-20	0	46.17	-	-	-	-	0-360	101	V

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

PK - Peak detector

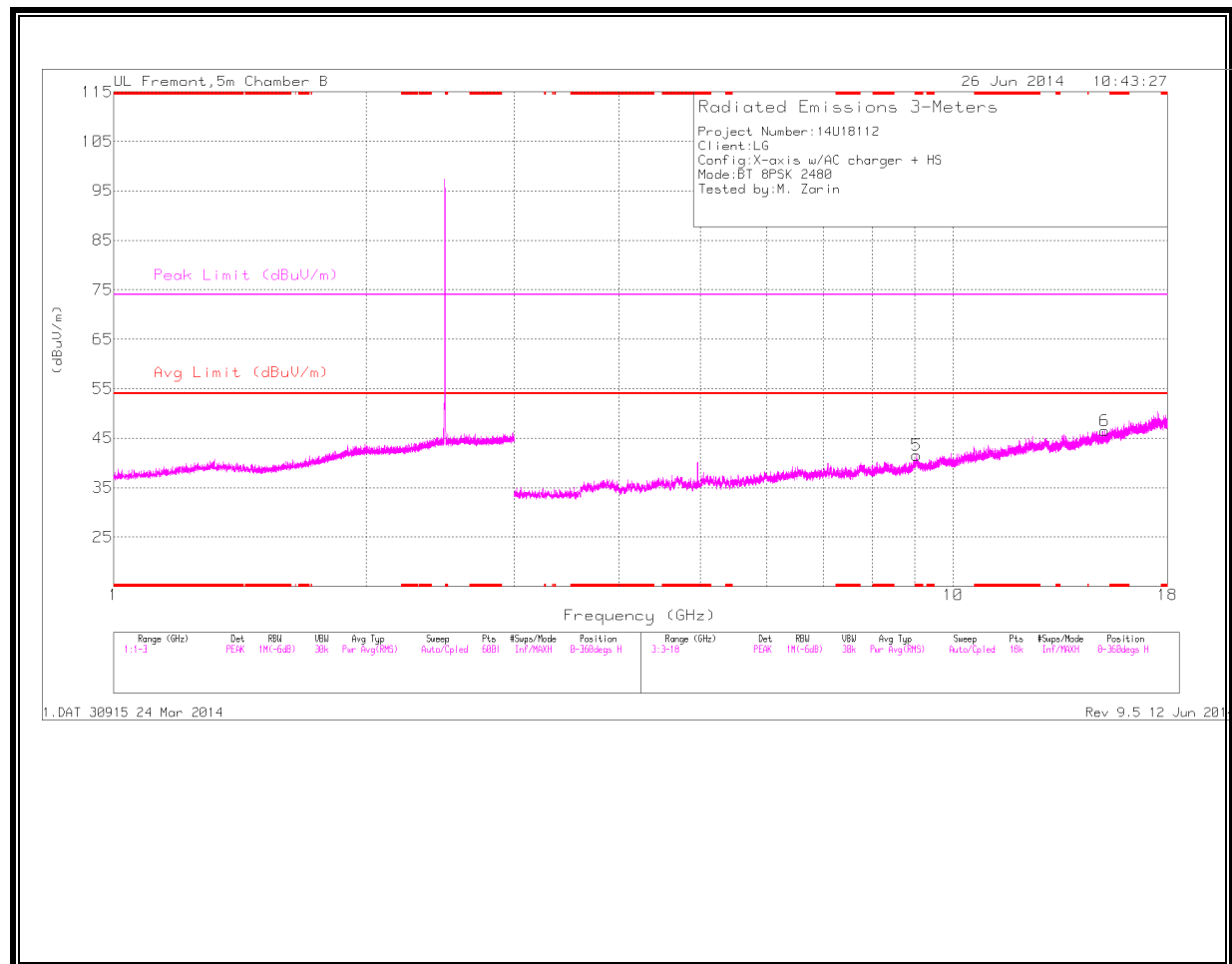
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fitr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 9.046	36.37	PK3	36.2	-23.6	0	48.97	-	-	74	-25.03	158	102	H
* 4.882	47.75	PK3	34.2	-30.6	0	51.35	-	-	74	-22.65	158	235	V
* 4.882	40.61	VB1T	34.2	-30.6	0	44.21	54	-9.79	-	-	158	235	V
4.442	39.94	PK3	33.9	-29.3	0	44.54	-	-	-	-	158	102	H
6.45	39.54	PK3	35.6	-29.1	0	46.04	-	-	-	-	158	102	V
10.107	35.48	PK3	37.1	-23.4	0	49.18	-	-	-	-	158	102	V
13.531	33.96	PK3	38.9	-20	0	52.86	-	-	-	-	158	102	V

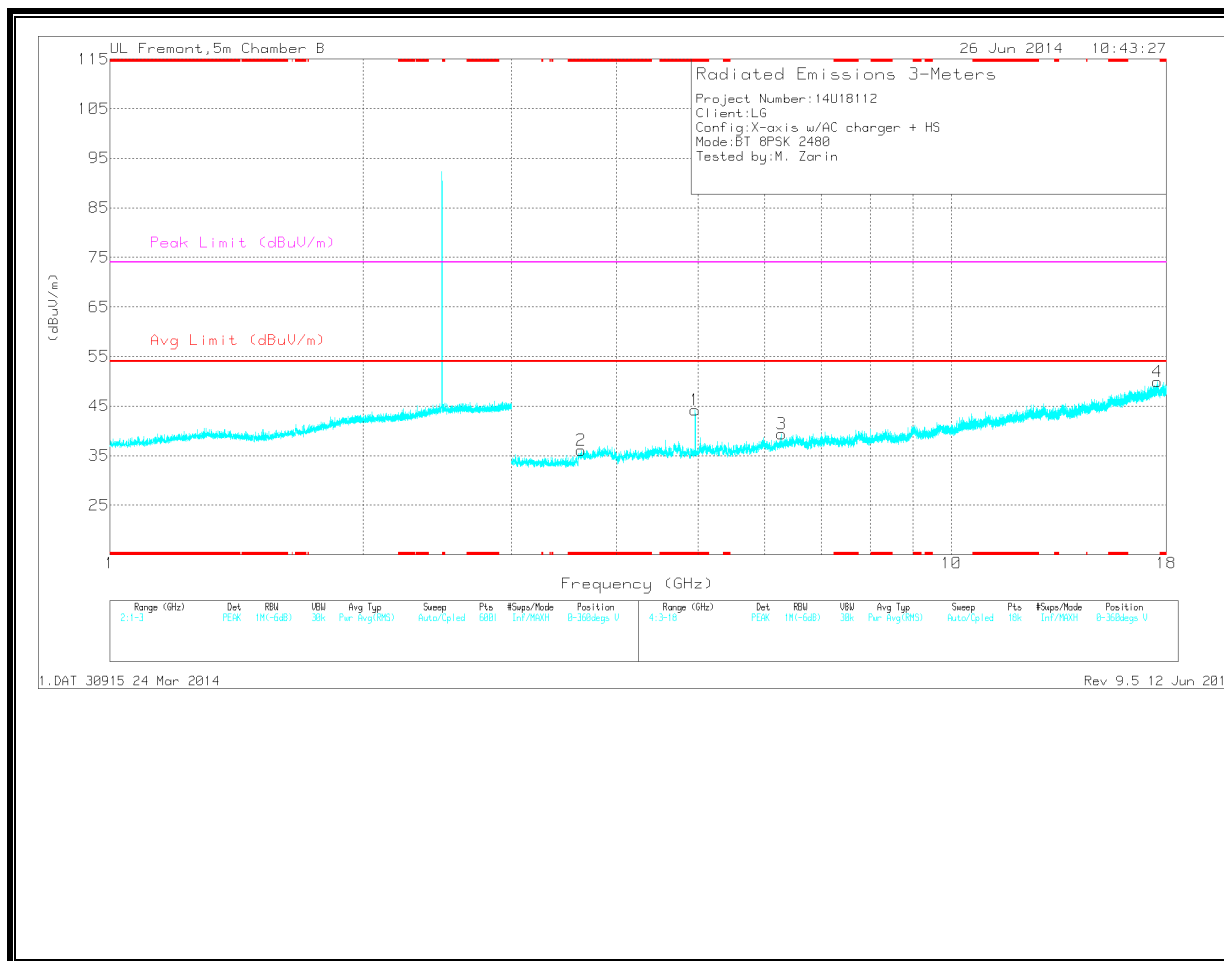
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK3 - FHSS Method: Maximum Peak

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet



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



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

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 9.046	28.93	PK	36.2	-23.6	0	41.53	-	-	74	-32.47	0-360	101	H
1	* 4.96	40.39	PK	34.2	-30.4	0	44.19	-	-	74	-29.81	0-360	200	V
2	* 3.627	33.91	PK	33.2	-31	0	36.11	-	-	74	-37.89	0-360	200	V
3	6.286	32.36	PK	35.5	-28.5	0	39.36	-	-	-	-	0-360	101	V
6	15.149	26.36	PK	39.8	-19.7	0	46.46	-	-	-	-	0-360	200	H
4	17.581	26.2	PK	41.6	-17.9	0	49.9	-	-	-	-	0-360	101	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 9.047	36.35	PK3	36.2	-23.6	0	48.95	-	-	74	-25.05	178	102	H
* 4.96	47.67	PK3	34.2	-30.4	0	51.47	-	-	74	-22.53	178	208	V
* 4.96	40.22	VB1T	34.2	-30.4	0	44.02	54	-9.98	-	-	178	208	V
* 3.629	40.89	PK3	33.2	-31	0	43.09	-	-	74	-30.91	178	201	V
6.284	38.77	PK3	35.5	-28.5	0	45.77	-	-	-	-	178	102	V
15.15	33.07	PK3	39.9	-19.7	0	53.27	-	-	-	-	178	200	H
17.582	33.06	PK3	41.6	-17.9	0	56.76	-	-	-	-	178	102	V

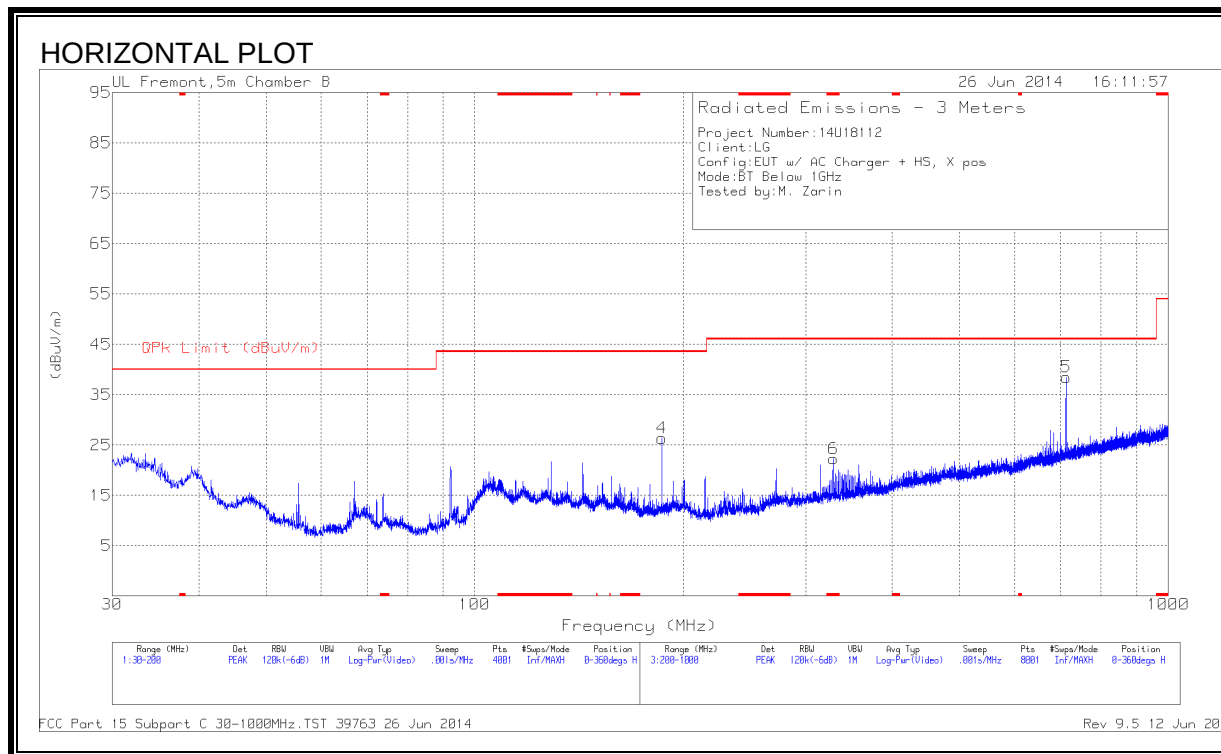
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

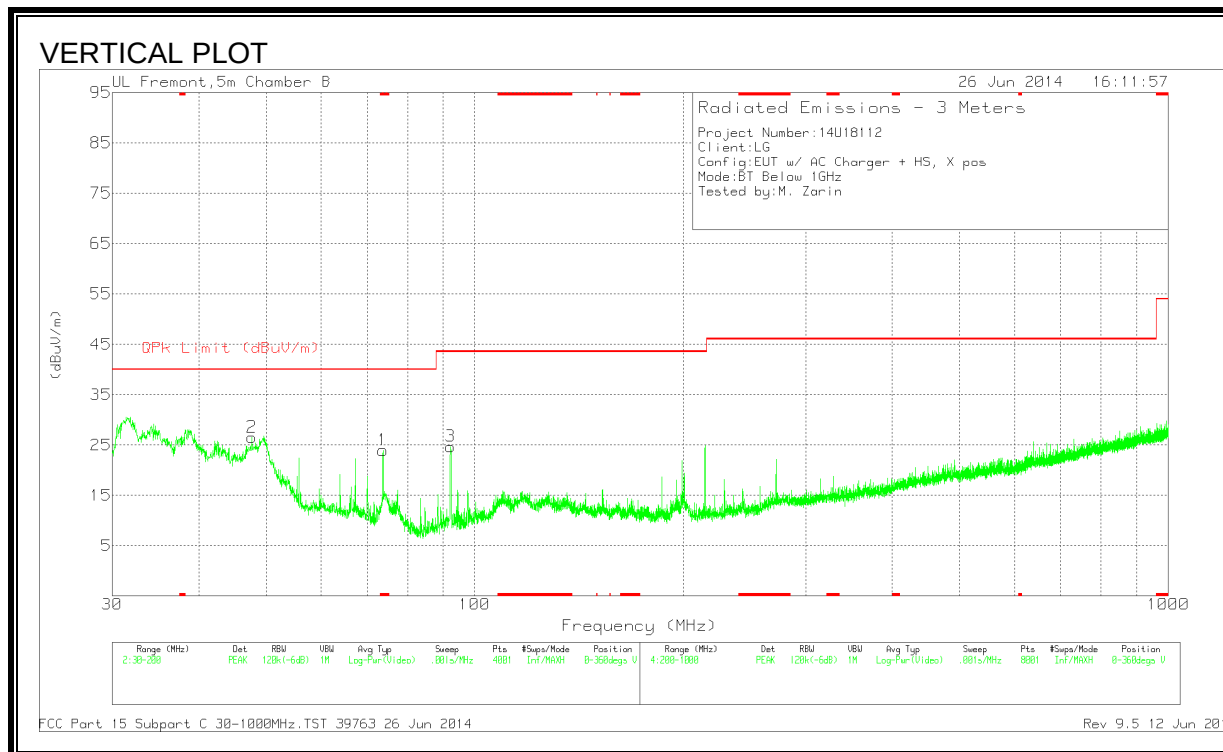
PK3 - FHSS Method: Maximum Peak

VB1T - FHSS Method: VB=1/Ton, Voltage Averaging Max Hold where: Ton is the duration of the packet

8.3. WORST-CASE BELOW 1 GHz

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





DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 73.7325	44.17	PK	8.1	-28.3	23.97	40	-16.03	0-360	101	V
6	* 329.3	34.08	PK	14	-25.8	22.28	46.02	-23.74	0-360	200	H
2	47.7225	46.25	PK	8.9	-28.6	26.55	40	-13.45	0-360	101	V
3	92.305	44.61	PK	8.2	-28.1	24.71	43.52	-18.81	0-360	101	V
4	186.145	42.46	PK	10.9	-27	26.36	43.52	-17.16	0-360	100	H
5	712.5	42.66	PK	20.3	-24.5	38.46	46.02	-7.56	0-360	400	H

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

PK - Peak detector