FCC 47 CFR PART 15 SUBPART C
INDUSTRY CANADA RSS-210 ISSUE 8

CERTIFICATION TEST REPORT

FOR

CELLULAR PHONE WITH BLUETOOTH AND WLAN RADIOS

MODEL NUMBER: A1634, A1687, A1690, A1699

FCC ID:BCG-E2944A
IC: 579C-E2944A

REPORT NUMBER: 15U20162-E3, REVISION A

ISSUE DATE: JULY 27, 2015

Prepared for
APPLE, INC.
1 INFINITE LOOP
CUPERTINO, CA 95014, U.S.A.

Prepared by
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	07/23/2015	Initial Issue	N. Garcia
A	07/27/2015	Address TCB's questions on page 8, 9 & 26/65	C. Pang

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1. ATTESTATION OF TEST RESULTS

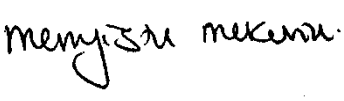
COMPANY NAME:	APPLE, INC. 1 INFINITE LOOP CUPERTINO, CA 95014, U.S.A.
EUT DESCRIPTION:	CELLULAR PHONE WITH BLUETOOTH AND WLAN RADIOS
MODEL:	A1634, A1687, A1690, A1699
SERIAL NUMBER:	A1634: C39PL02MGLK0, C39PM04JGN2F A1687: C39PL01LGLJQ, C39PL02MGLK0
DATE TESTED:	MAY 10 TO JULY 22, 2015

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 15 SUBPART C	Pass
INDUSTRY CANADA RSS-210 Issue 8, Annex 2	Pass
INDUSTRY CANADA RSS-GEN Issue 4	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.

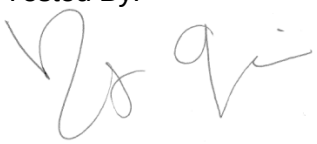
Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. 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:



MENGISTU MEKURIA
SENIOR ENGINEER
UL VERIFICATION SERVICES INC.

Tested By:



NANCY GARCIA
EMC ENGINEER
UL VERIFICATION SERVICES INC

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-GEN Issue 4, and RSS-210 Issue 8.

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
	☐ Chamber G
	☒ Chamber H

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers A through H are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-8, respectively

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 1000 MHz	± 4.94 dB
Radiated Disturbance, 1 to 6 GHz	± 3.86 dB
Radiated Disturbance, 6 to 18 GHz	± 4.23 dB
Radiated Disturbance, 18 to 26 GHz	± 5.30 dB
Radiated Disturbance, 26 to 40 GHz	± 5.23 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a mobile phone with multimedia functions (music, application support, and video), cellular GSM/GPRS/EGPRS/WCDMA/HSPA+/DC-HSDPA/CDMA/EVDO/LTE radio, IEEE 802.11a/b/g/n/ac, NFC, Bluetooth and GPS radio. The rechargeable battery is not user accessible.

5.2. MAXIMUM OUTPUT POWER

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

(MODEL: A1634)

Frequency Range (MHz)	Mode	Data Rate	E Field at 30m Distance (dBuV/m)
13.56	Type A	106Kbps	26.20
	Type B	212Kbps	24.80

(MODEL: A1687)

Frequency Range (MHz)	Mode	Data Rate	E Field at 30m Distance (dBuV/m)
13.56	Type A	106Kbps	26.25
	Type B	106Kbps	23.73

5.3. SOFTWARE AND FIRMWARE

The test utility software used during testing was Star Link 1.9.

5.4. WORST-CASE CONFIGURATION AND MODE

The fundamental of the EUT was investigated under three orthogonal orientations X (Flatbed), Y (Landscape), and Z (Portrait). The Z (Portrait) orientation was determined to be the worst-case orientation; therefore, all final fundamental and radiated testing were performed with the EUT in Z (Portrait) orientation. Type A 106Kbps is the worst case fundamental field strength for both models

The fundamental of the EUT was investigated under three setup configurations EUT with power supply, EUT with earphones and EUT with power supply and earphones. The EUT with power supply and earphones configuration was determined to be worst-case configuration; therefore, all final fundamental, radiated testing and Line Conducted were performed with the EUT with power supply and earphones and the EUT (worst case) with laptop.

Based on the manufacturer's statement Model A1687, A1690 and A1699 are exactly same, except for marketing reasons.

Delta Items	A1634	A1687	A1690	A1699
Band 30	Yes	No	No	No

5.5. DESCRIPTION OF TEST SETUP

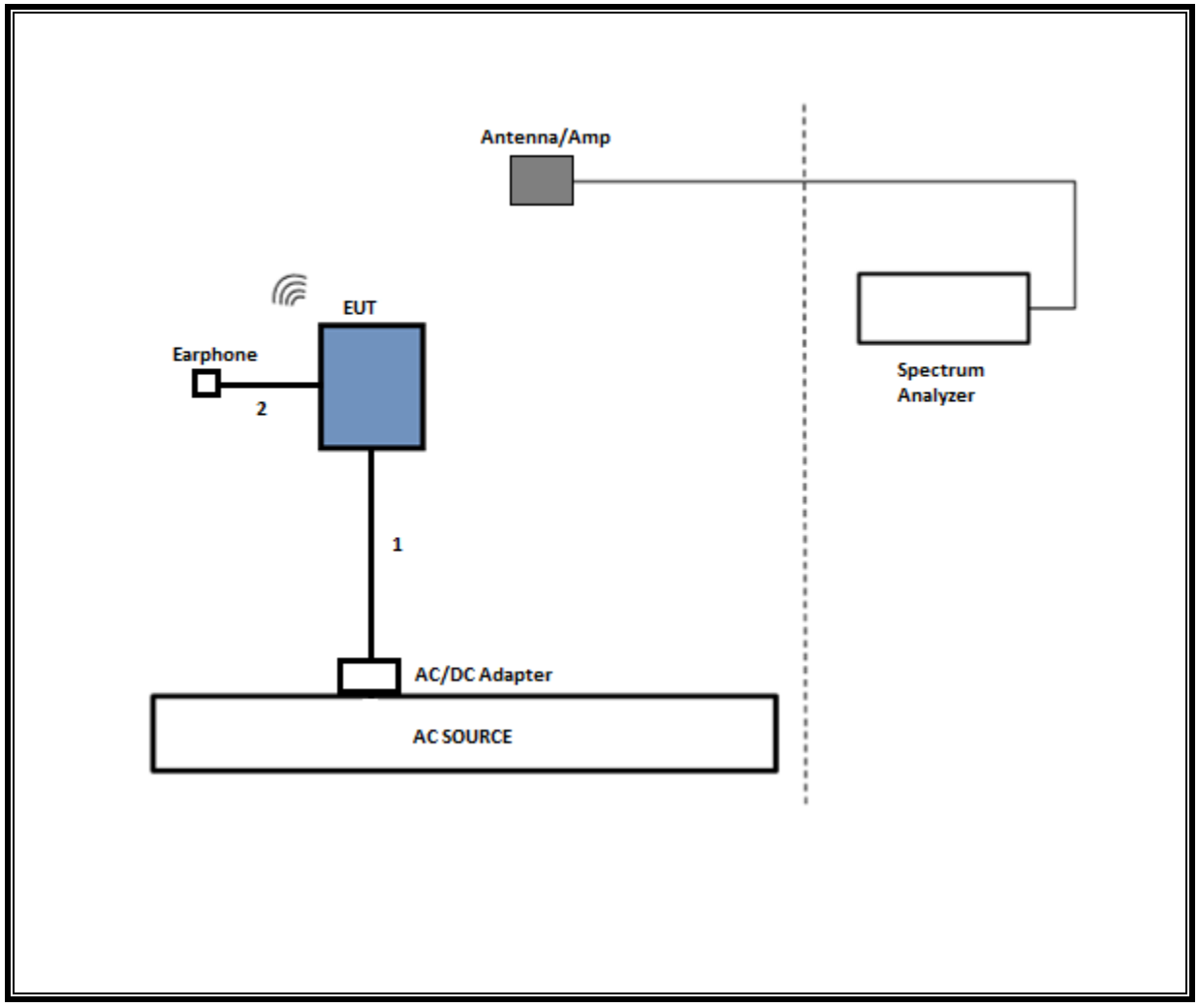
SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Laptop	Apple	Mac Book Pro	W801200UD94	n/a
Laptop AC/DC Adapter	Apple	85W MagSafe Power adapter	A122	n/a
EUT AC/DC Adapter	Apple	A1385	D292365B2FQDHLHC7	n/a
Earphones	Apple	N/a	N/a	N/a

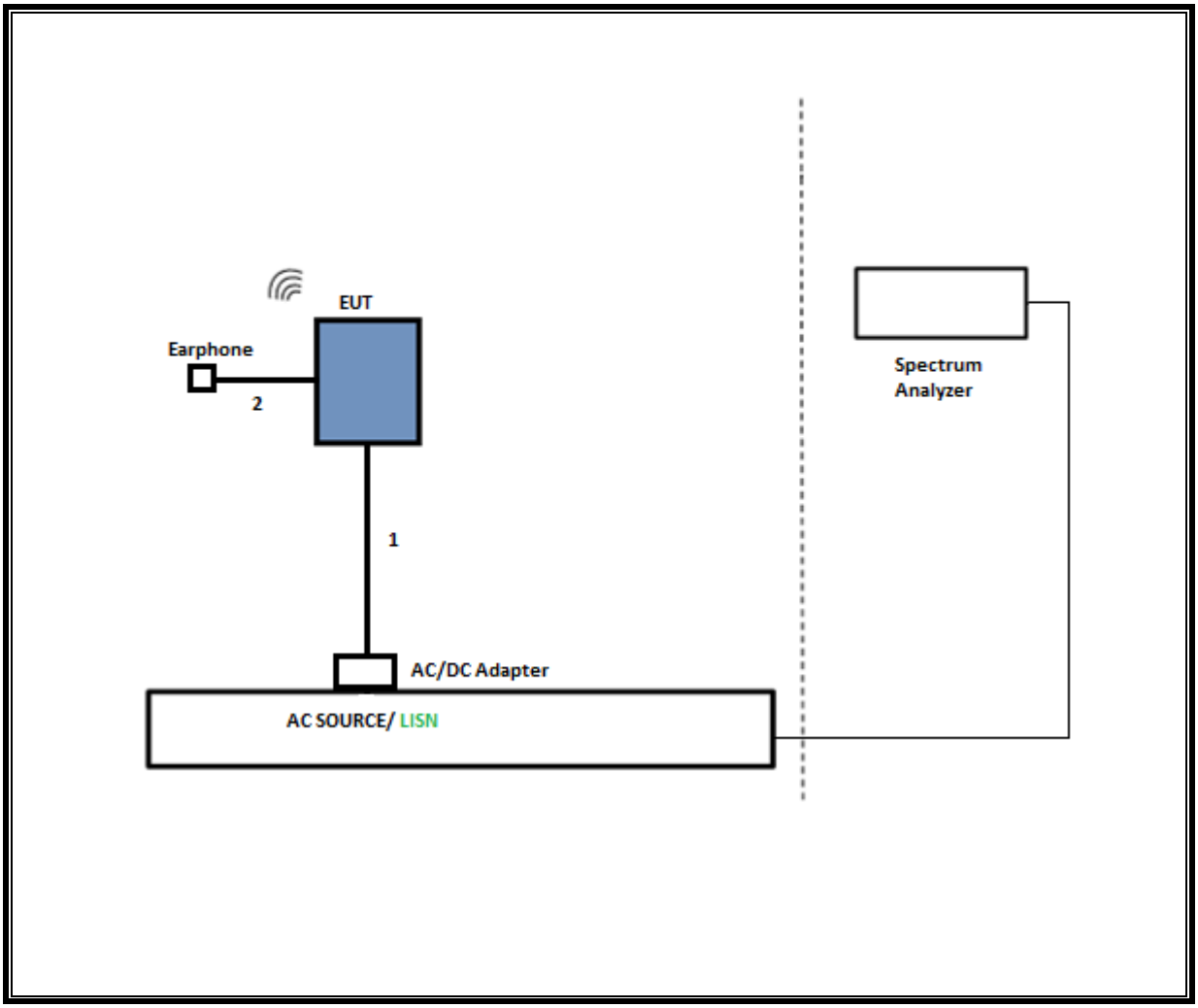
I/O CABLES

I/O Cable List						
Cable No	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	USB	1	lightning	Un-shielded	1	N/A
2	Audio	1	Jack	Un-shielded	0.5	N/A
3	DC	2	Alligator	18 AWG strand	1	Insulated cable

SETUP DIAGRAM RADIATED



SETUP DIAGRAM LINE CONDUCTED



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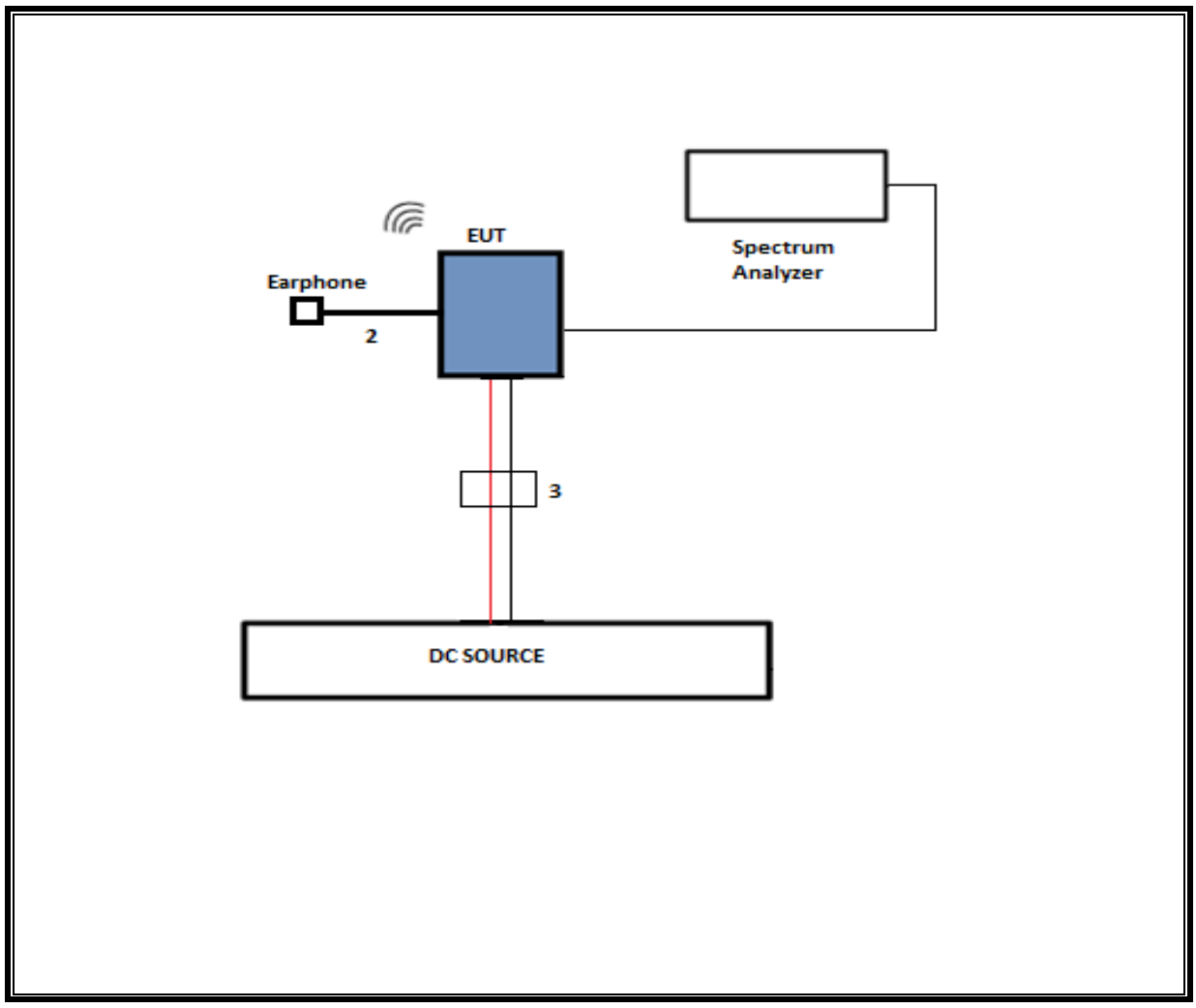


6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	**Manufacturer**	**Model**	**T No.**	**Cal Due**
Antenna, Broadband Hybrid	Sunol Sciences	JB3	900	04/10/16
Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	835	06/09/16
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	1113	12/23/15
Antenna, Loop, 30 MHz	ETS Lindgren	6502	757	10/14/15
Chamber, Environmental	Cincinnati Sub Zero	ZPHS-8-3.5-SCT/WC	1154	09/18/15
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	1222	03/27/16
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	1124	09/16/15
LISN for Conducted Emissions CISPR-16	FCC	LISN-50/250-25-2	24	01/16/16
Line conducted Power cable ANSI 63.4	UL	PG1	861	07/28/15
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	407	03/05/16
Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	300	11/01/15
UL SOFTWARE				
*Radiated Software	UL	UL EMC	Ver 9.5, July 22, 2014	
*AC Line Conducted Software	UL	UL EMC	Ver 9.5, April 3, 2015	

Note: * indicates automation software version used in the compliance certification testing

7. OCCUPIED BANDWIDTH (MODEL A:1634)

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The RBW is set to 10kHz. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

Type A

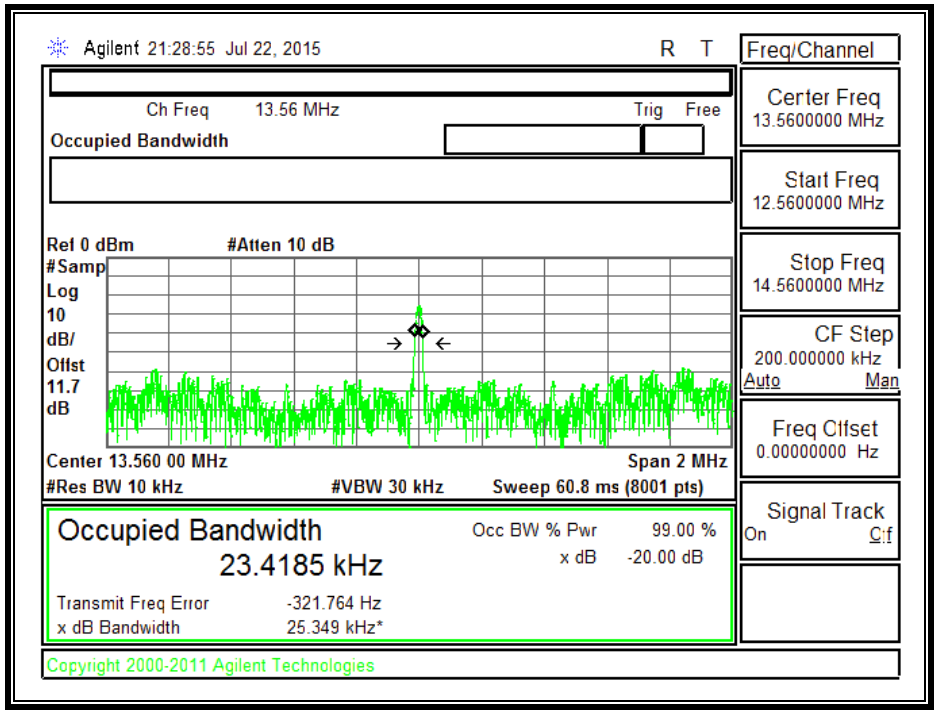
Mode Kbps	Frequency (MHz)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
424	13.56	23.419	25.349
212	13.56	23.793	25.345
106	13.56	23.307	25.592

Type B

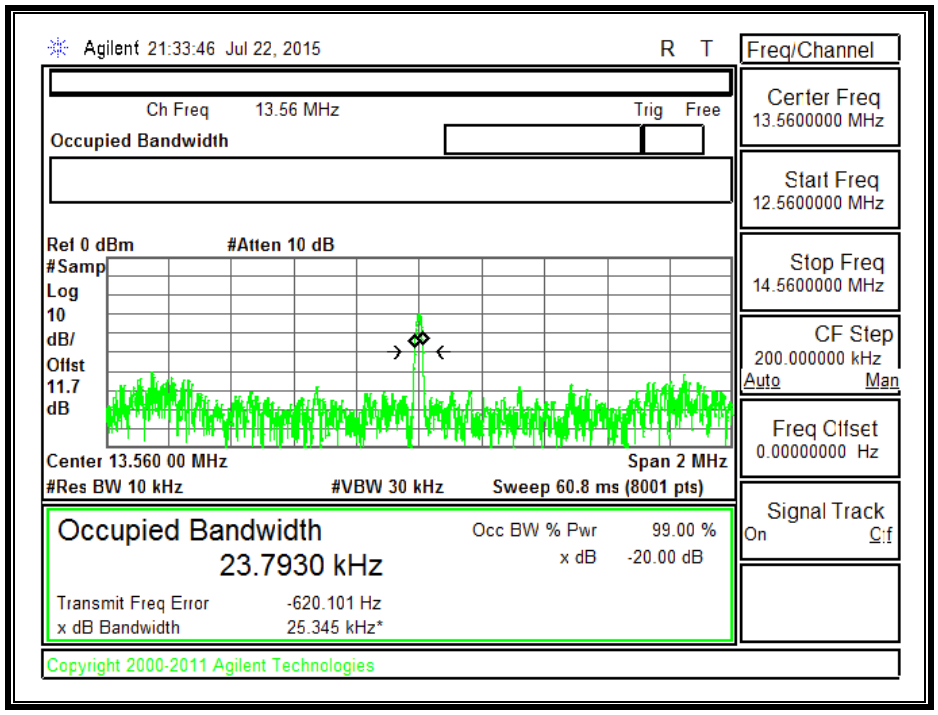
Mode Kbps	Frequency (MHz)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
424	13.56	24.019	25.397
212	13.56	24.029	25.431
106	13.56	23.049	25.318

7.1. TYPE A

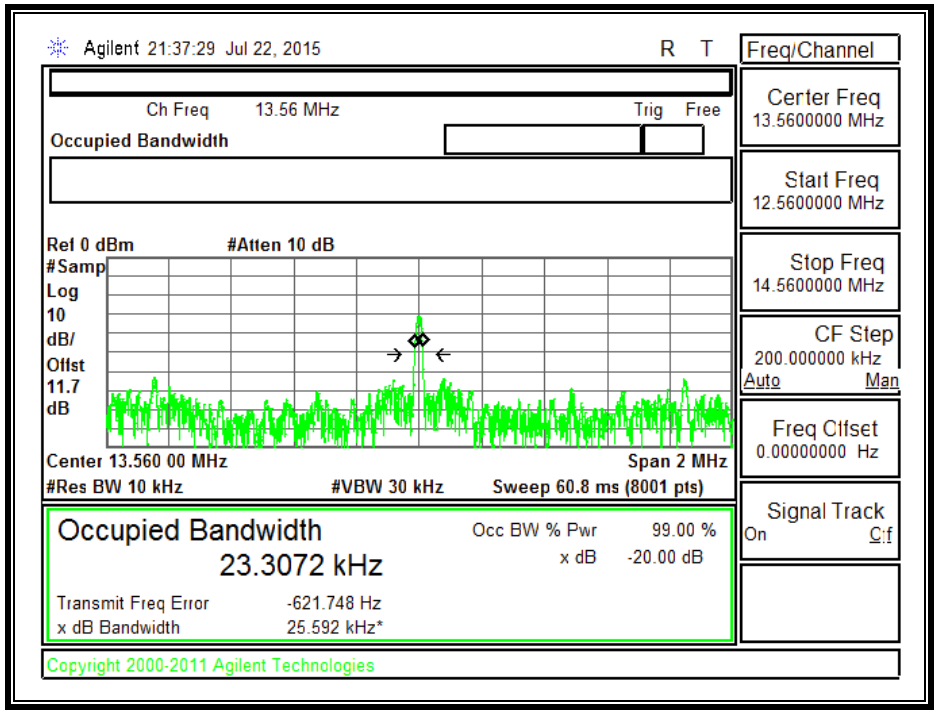
424Kbps



212Kbps

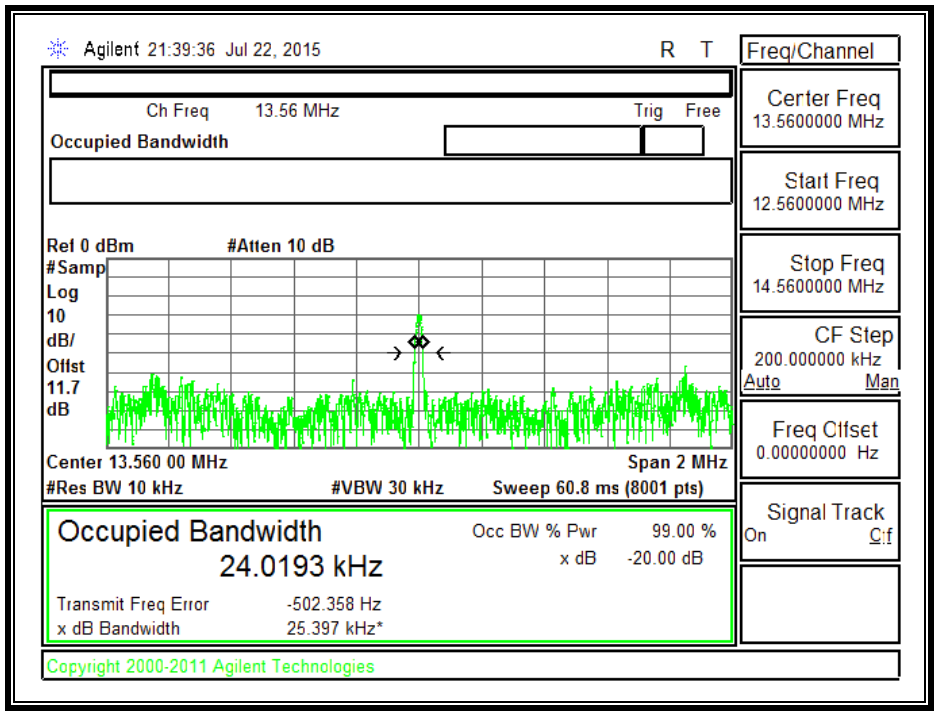


106Kbps

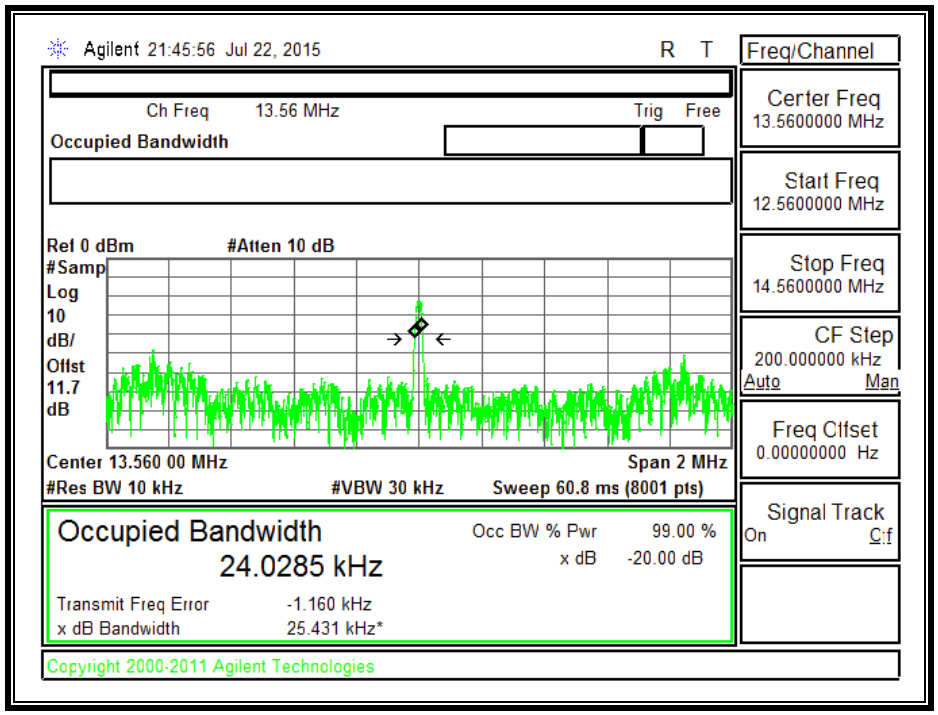


7.2. TYPE B

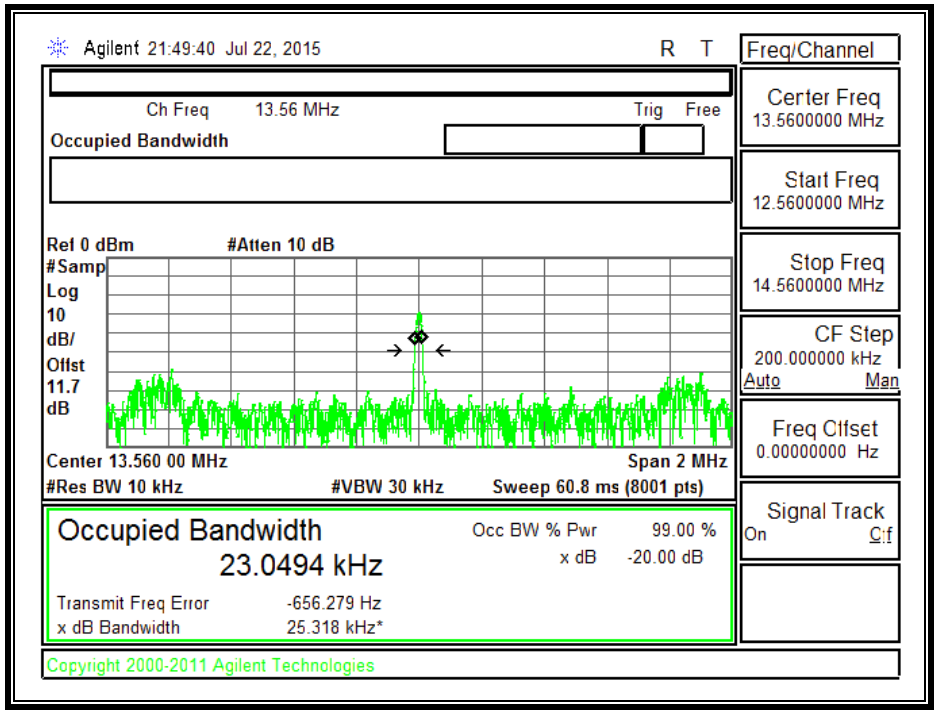
424Kbps



212Kbps



106Kbps



8. OCCUPIED BANDWIDTH (MODEL A:1687)

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The RBW is set to 10kHz. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

Type A

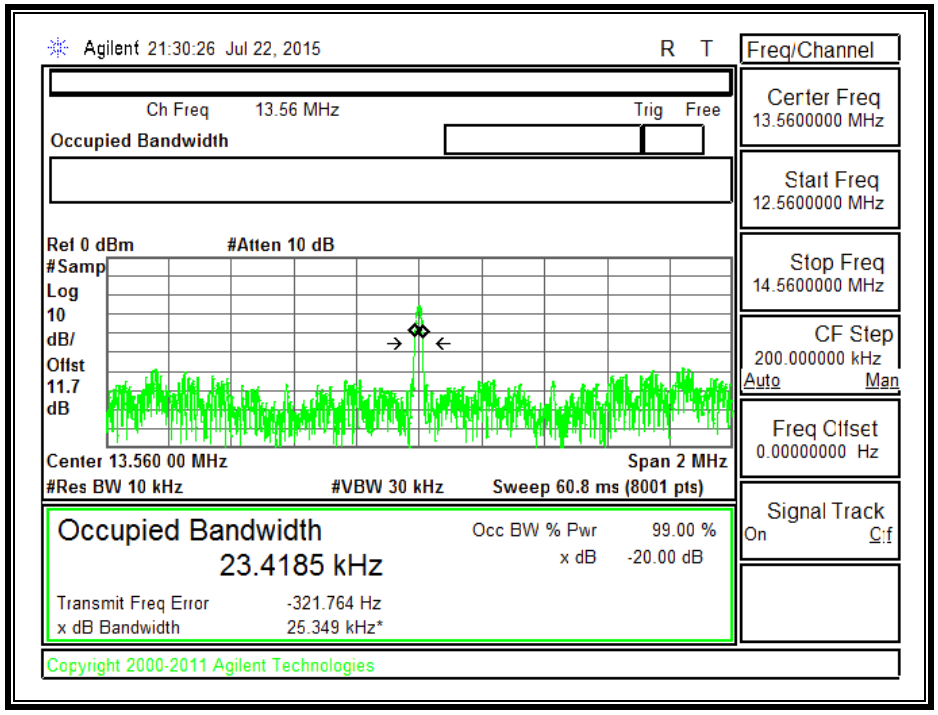
Mode Kbps	Frequency (MHz)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
424	13.56	23.419	25.349
212	13.56	24.131	26.158
106	13.56	22.891	25.497

Type B

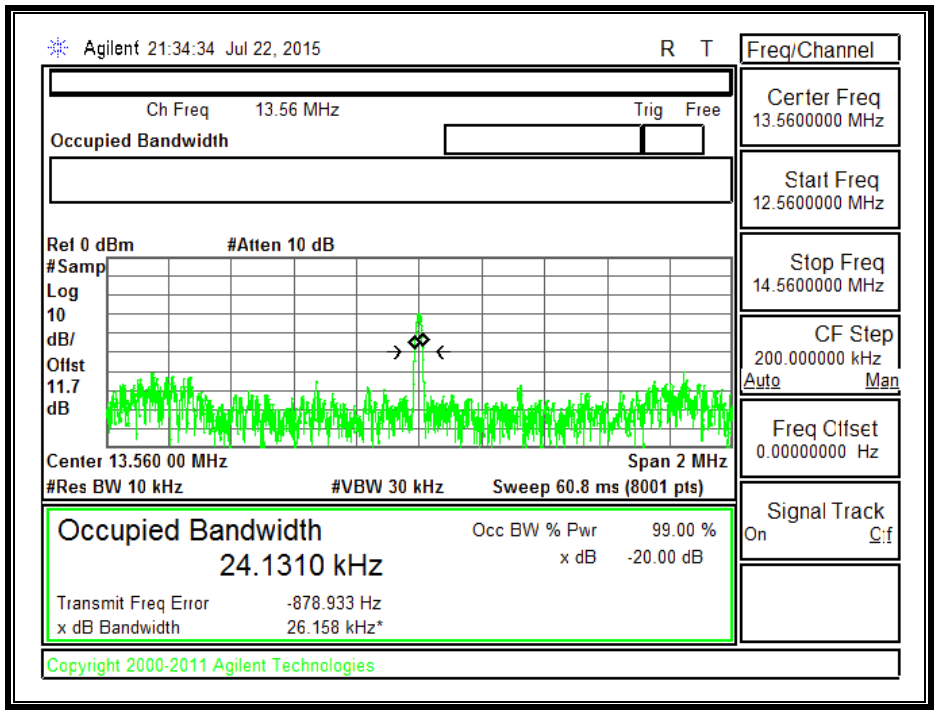
Mode Kbps	Frequency (MHz)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
424	13.56	24.019	25.397
212	13.56	23.816	25.411
106	13.56	23.049	25.318

8.1. TYPE A

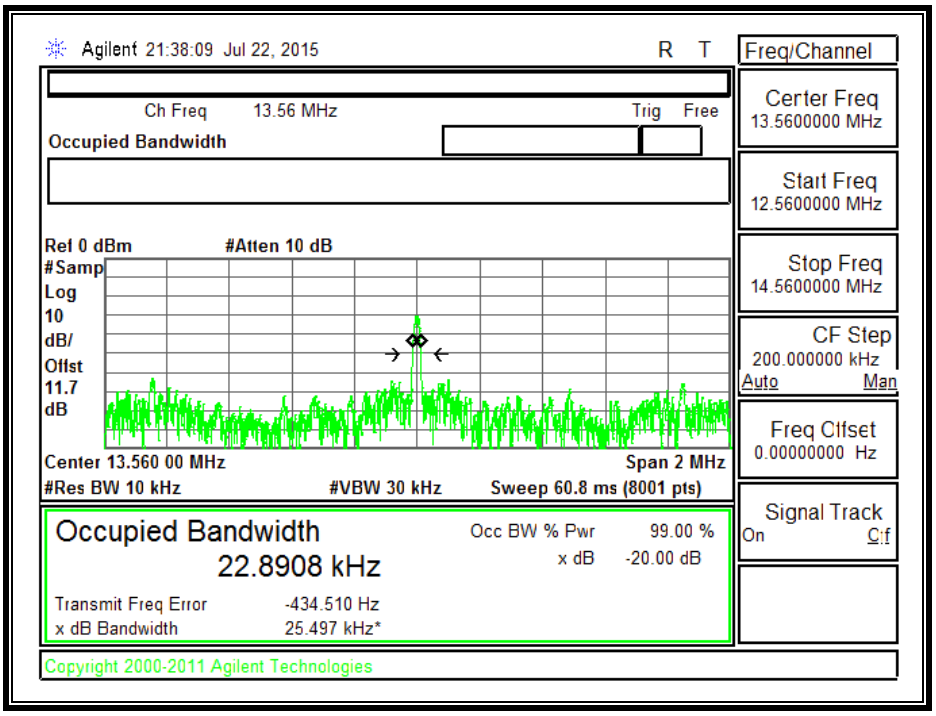
424Kbps



212Kbps

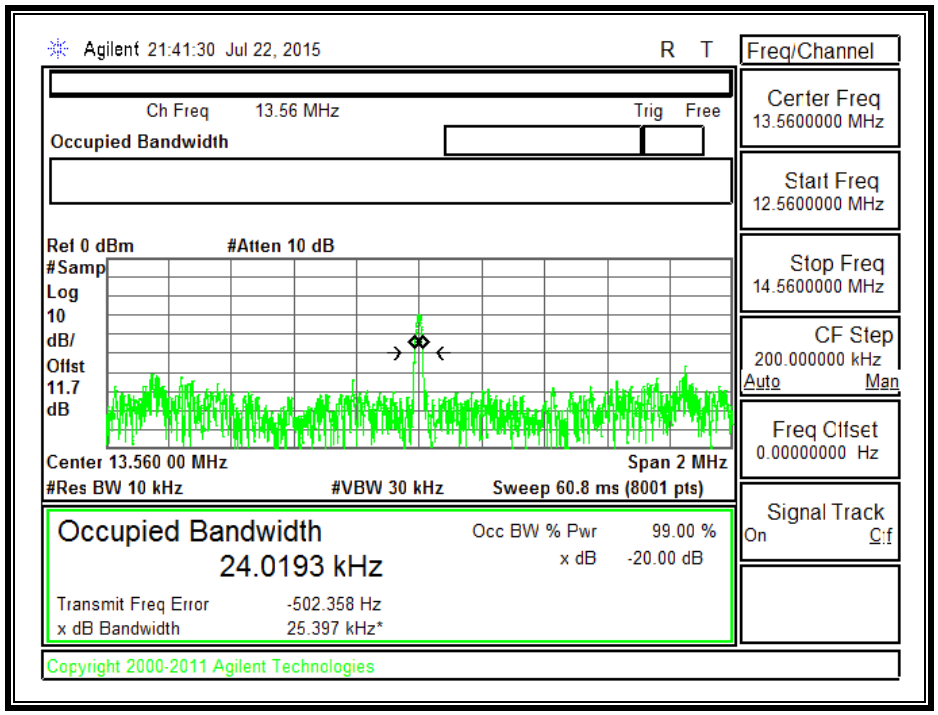


106Kbps

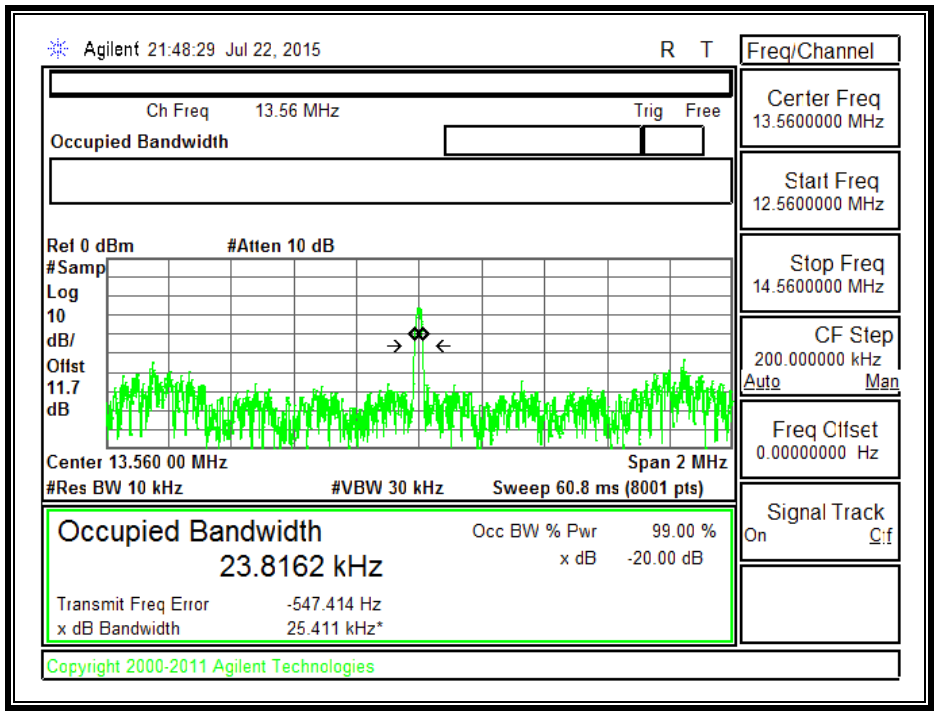


8.2. TYPE B

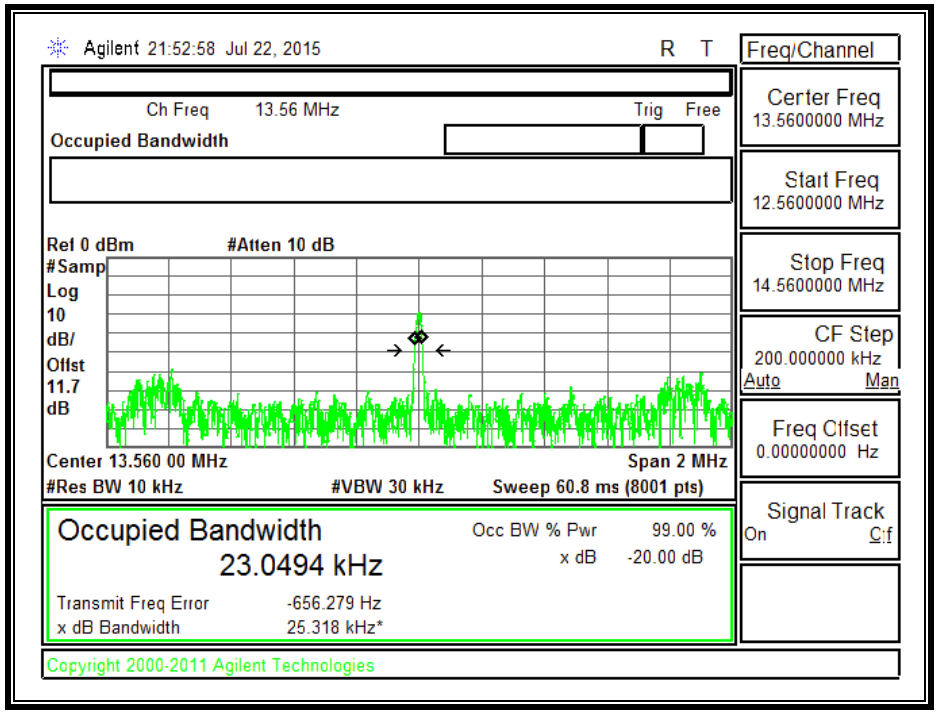
424Kbps



212Kbps



106Kbps



9. RADIATED EMISSION TEST RESULTS (MODEL A:1634)

9.1. LIMITS AND PROCEDURE

LIMIT

§15.225
IC RSS-210, A2.6
IC RSS-GEN, Section 8.9 (Transmitter)
IC RSS-GEN, Section 7.1.2 (Receiver)

(a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/ meter at 30 meters.

(b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

(c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

(d) The field strength of any emissions appearing outside of the 13.110– 14.010 MHz and shall not exceed the general radiated emission limits in § 15.209 as follows:
§15.209 (a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Limits for radiated disturbance of an intentional radiator		
Frequency range (MHz)	Limits (µV/m)	Measurement Distance (m)
0.009 – 0.490	2400 / F (kHz)	300
0.490 – 1.705	24000 / F (kHz)	30
1.705 – 30.0	30	30
30 – 88	100**	3
88 - 216	150**	3
216 – 960	200**	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g. §§ 15.231 and 15.241.
§15.209 (b) In the emission table above, the tighter limit applies at the band edges.

Formula for converting the filed strength from uV/m to dBuV/m is:
Limit (dBuV/m) = 20 log limit (uV/m)

In addition:

§15.209 (d) The emission limits shown the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

§15.209 (d) The provisions in §§ 15.225, measuring emissions at distances other than the distances specified in the above table, determining the frequency range over which radiated emissions are to be measured, and limiting peak emissions apply to all devices operated under this part.

TEST PROCEDURE

ANSI C63.10:2013

The EUT is an intentional radiator that incorporates a digital device, the highest fundamental frequency generated or used in the device is 13.56 MHz; therefore, the frequency range was investigated from 0.15 MHz to the 10th harmonic of the highest fundamental frequency, or 1000 MHz, whichever is greater.

RESULTS

9.2. FUNDAMENTAL AND SPURIOUS EMISSIONS (0.15 – 30 MHz)

9.2.1. TYPE A

FUNDAMENTAL 424Kbps

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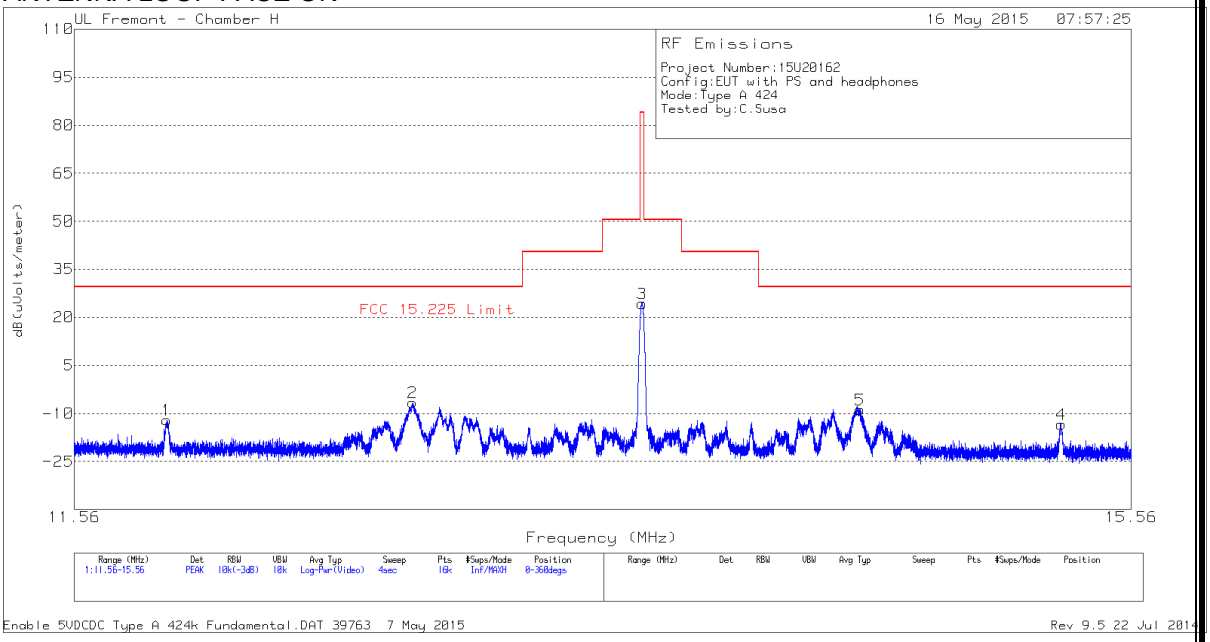

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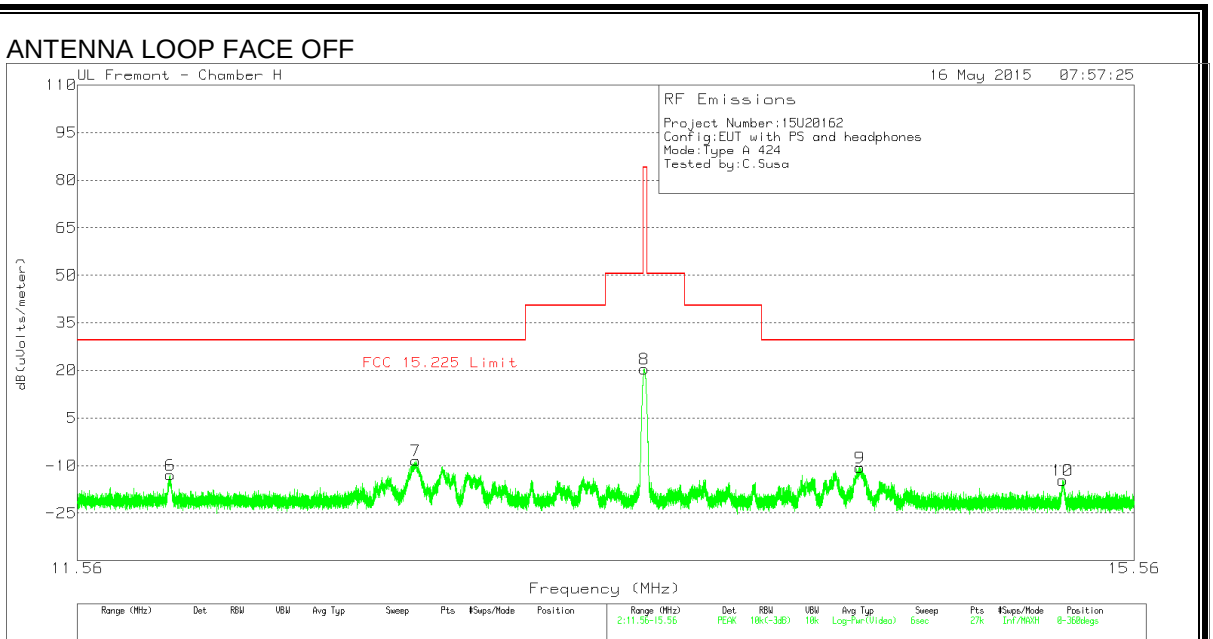

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	11.86425	16.48	PK	10.9	.5	-40	-12.12	29.54	-41.66	0-360
2	12.71325	21.93	PK	10.9	.6	-40	-6.57	29.54	-36.11	0-360
3	13.56125	52.8	PK	10.9	.6	-40	24.3	84	-59.7	0-360
4	15.25625	15.21	PK	10.8	.6	-40	-13.39	29.54	-42.93	0-360
5	14.416	19.9	PK	10.8	.5	-40	-8.8	29.54	-38.34	0-360
6	11.86547	15.62	PK	10.9	.5	-40	-12.98	29.54	-42.52	0-360
7	12.7141	20.06	PK	10.9	.6	-40	-8.44	29.54	-37.98	0-360
8	13.55667	48.93	PK	10.9	.6	-40	20.43	84	-63.57	0-360
9	14.40382	18.06	PK	10.8	.5	-40	-10.64	29.54	-40.18	0-360
10	15.24949	13.95	PK	10.8	.6	-40	-14.65	29.54	-44.19	0-360

PK - Peak detector

SPURIOUS EMISSIONS 424kbps

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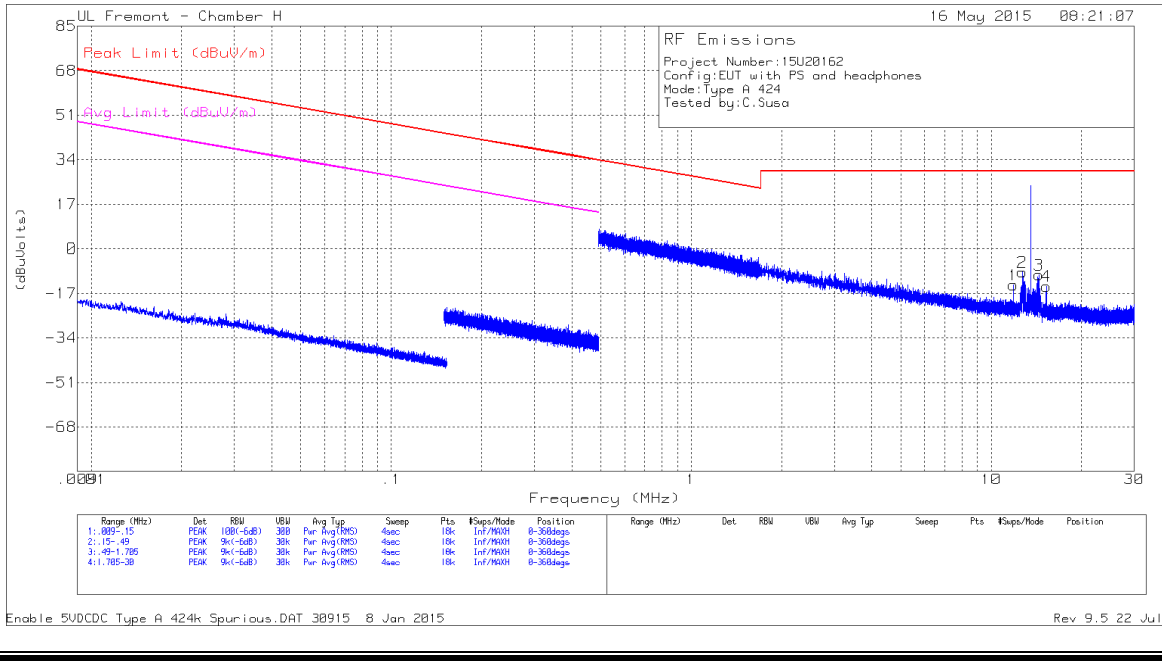

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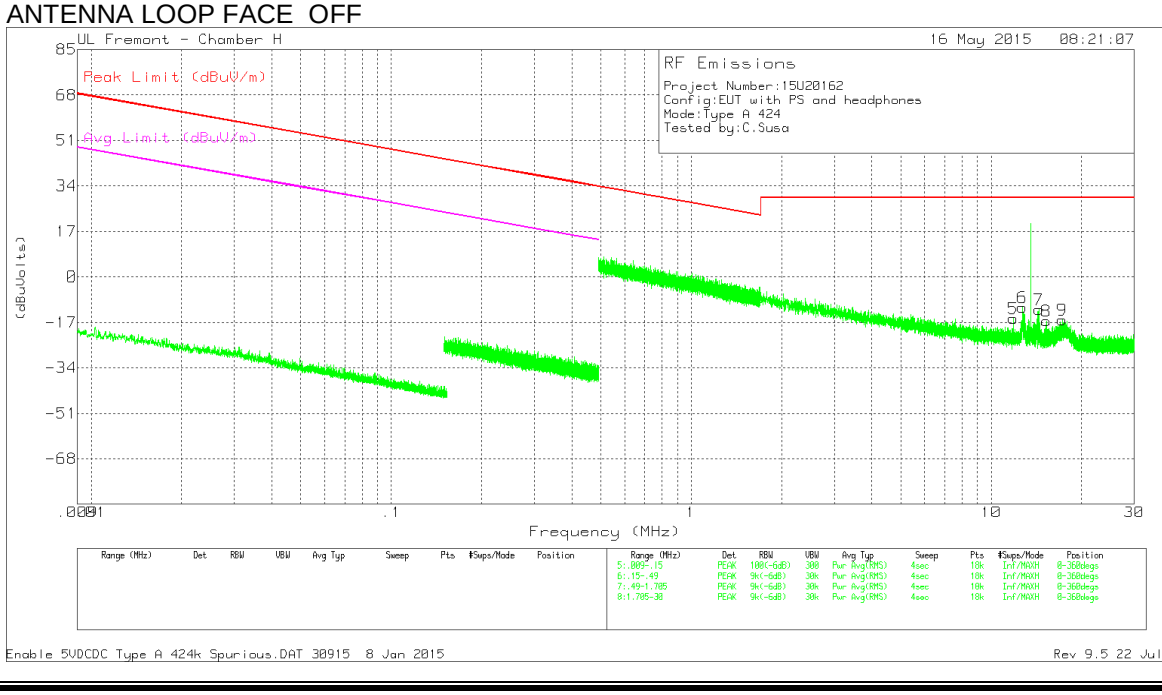

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	11.86484	14.8	PK	10.9	.5	-40	-13.8	29.54	-43.34	-	-	0-360
2	12.71372	19.66	PK	10.9	.6	-40	-8.84	29.54	-38.38	-	-	0-360
3	14.40676	18.77	PK	10.8	.5	-40	-9.93	29.54	-39.47	-	-	0-360
4	15.25407	14.31	PK	10.8	.6	-40	-14.29	29.54	-43.83	-	-	0-360
5	11.86484	13.11	PK	10.9	.5	-40	-15.49	29.54	-45.03	-	-	0-360
6	12.71372	17.16	PK	10.9	.6	-40	-11.34	29.54	-40.88	-	-	0-360
7	14.40362	16.5	PK	10.8	.5	-40	-12.2	29.54	-41.74	-	-	0-360
8	15.25643	12.12	PK	10.8	.6	-40	-16.48	29.54	-46.02	-	-	0-360
9	17.25522	12.73	PK	10.6	.6	-40	-16.07	29.54	-45.61	-	-	0-360

PK - Peak detector

FUNDAMENTAL 212Kbps

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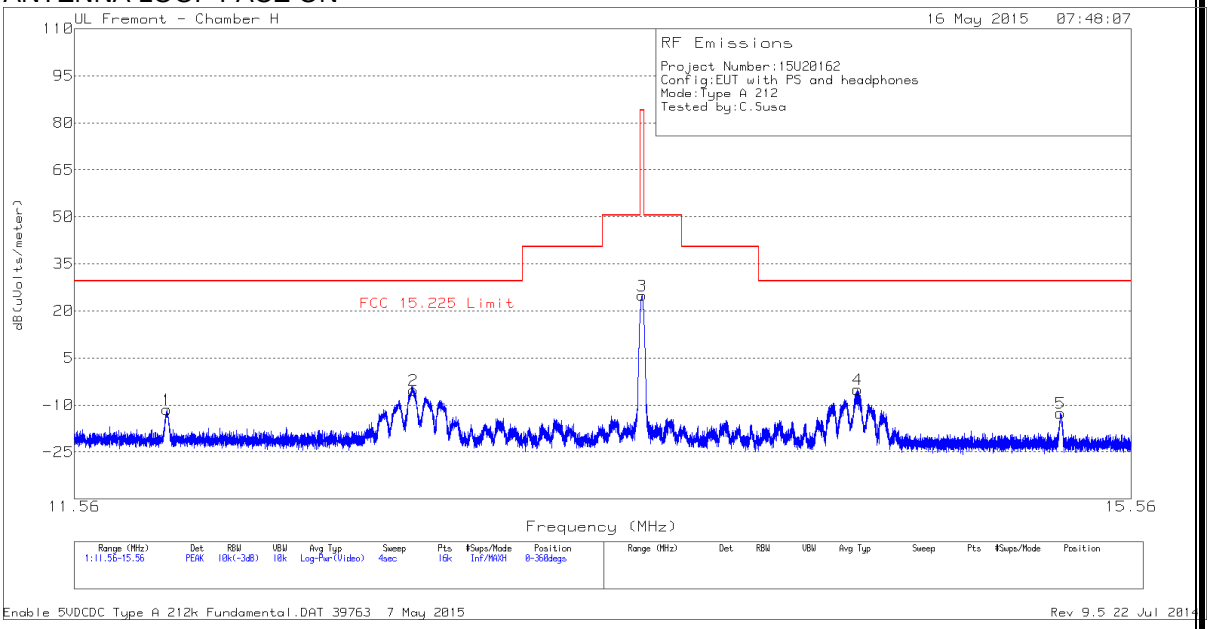
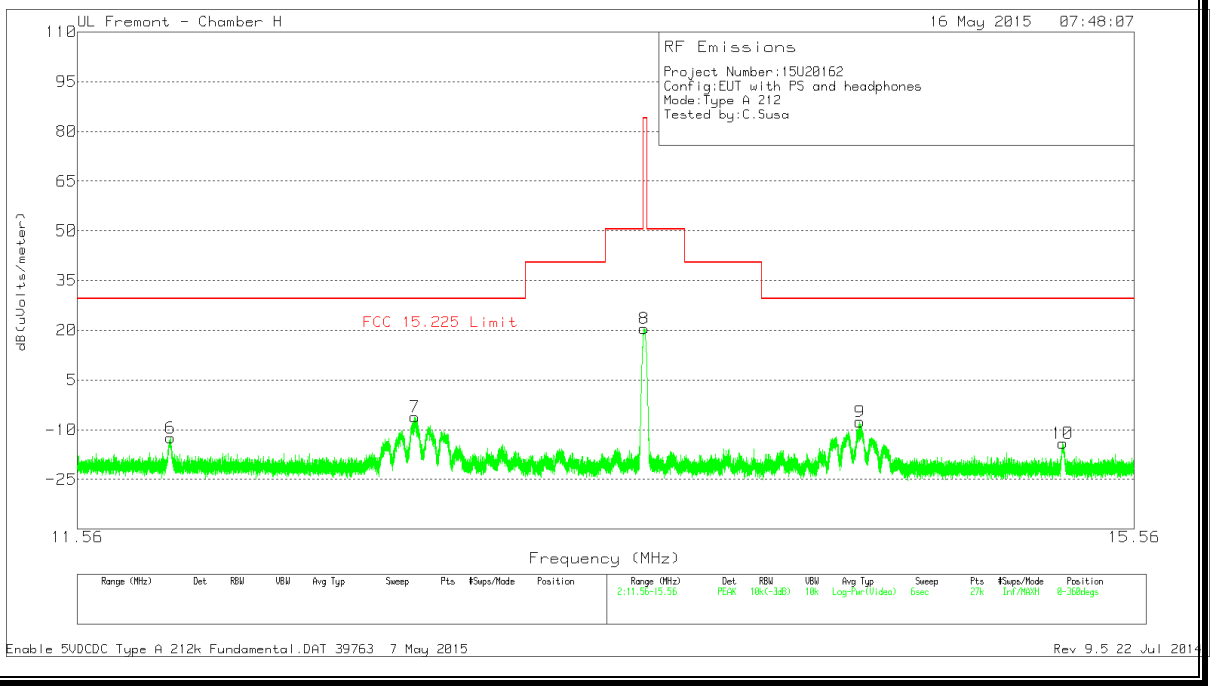


ANTENNA LOOP FACE OFF



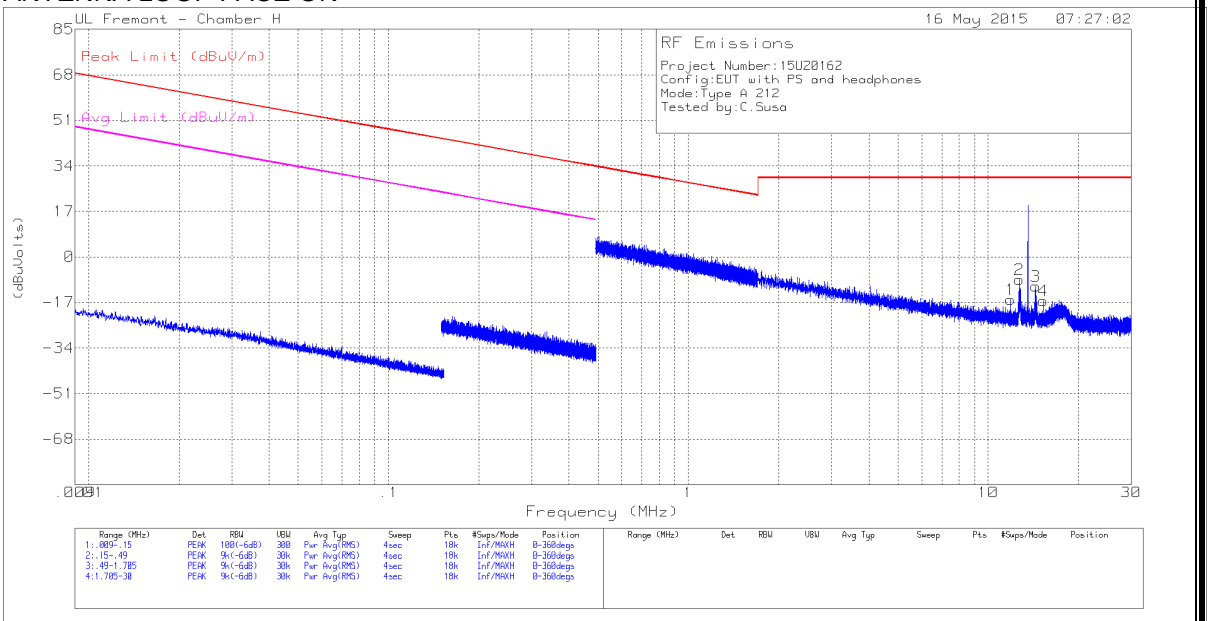
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	11.865	17.14	PK	10.9	.5	-40	-11.46	29.54	-41	0-360
2	12.71625	24.51	PK	10.7	.6	-40	-4.19	29.54	-33.73	0-360
3	13.56	53.44	PK	10.9	.6	-40	24.94	84	-59.06	0-360
4	14.40725	23.64	PK	10.8	.5	-40	-5.06	29.54	-34.6	0-360
5	15.25325	16.01	PK	10.8	.6	-40	-12.59	29.54	-42.13	0-360
6	11.8668	16.13	PK	10.9	.5	-40	-12.47	29.54	-42.01	0-360
7	12.70981	22.37	PK	10.9	.6	-40	-6.13	29.54	-35.67	0-360
8	13.55652	49.03	PK	10.9	.6	-40	20.53	84	-63.47	0-360
9	14.40382	21.08	PK	10.8	.5	-40	-7.62	29.54	-37.16	0-360
10	15.24949	14.55	PK	10.8	.6	-40	-14.05	29.54	-43.59	0-360

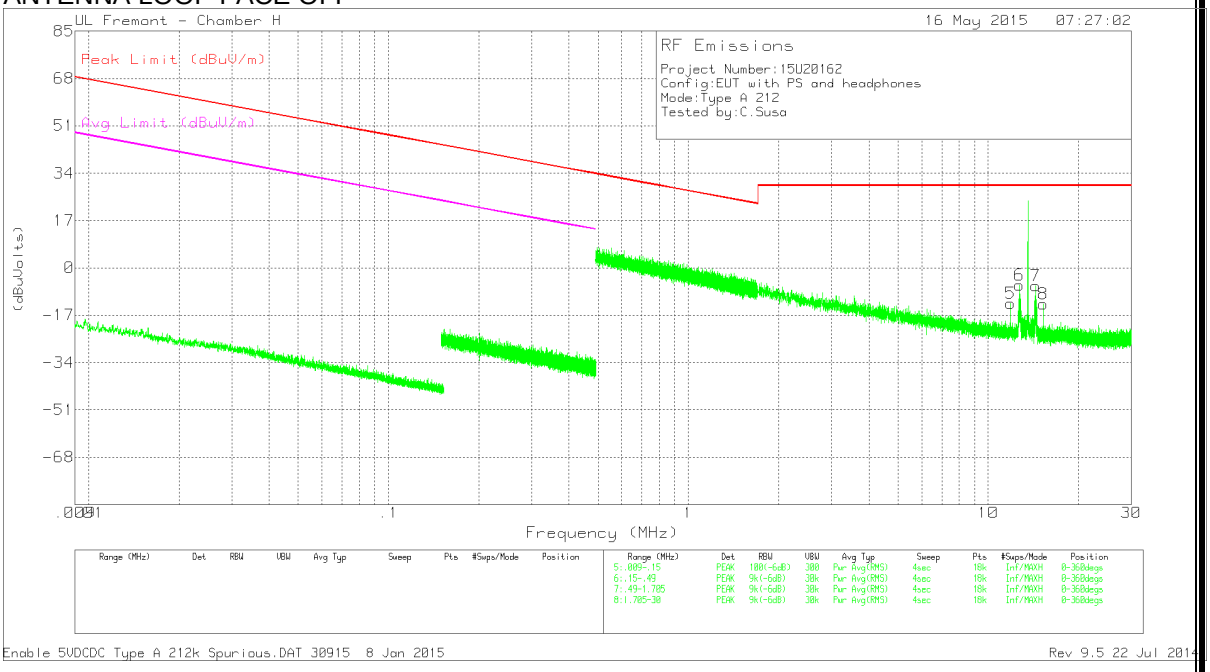
PK - Peak detector

SPURIOUS EMISSIONS 212kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



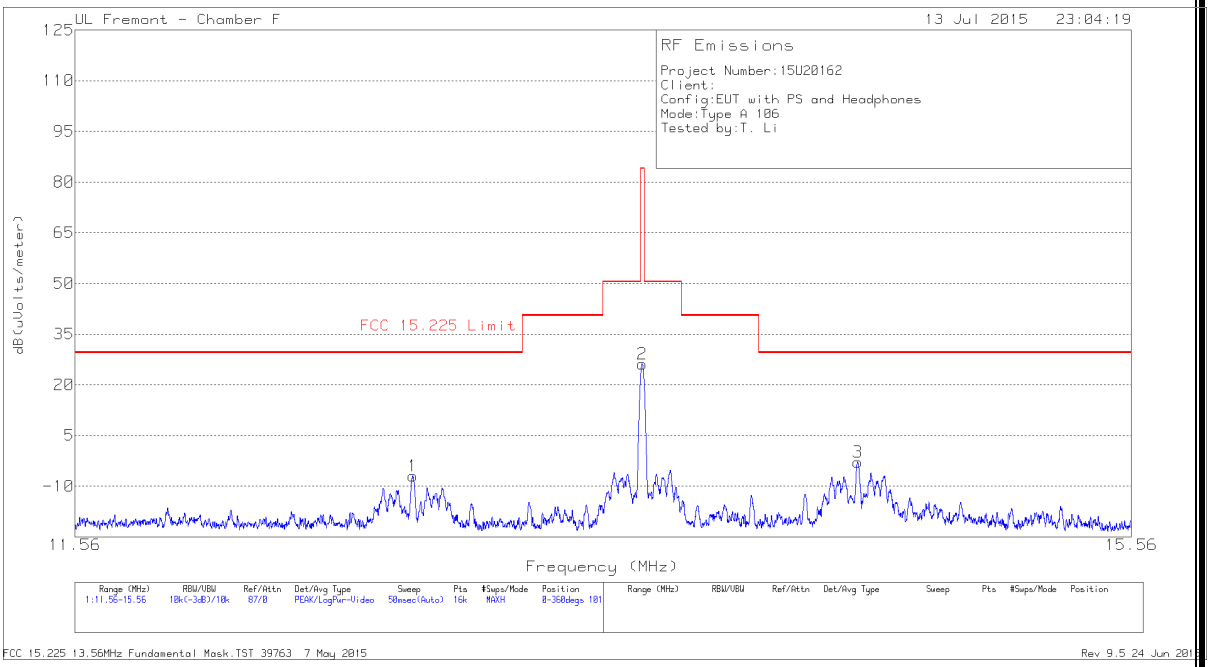
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	11.86326	12.63	PK	10.9	.5	-40	-15.97	29.54	-45.51	-	-	0-360
2	12.71372	20.13	PK	10.9	.6	-40	-8.37	29.54	-37.91	-	-	0-360
3	14.40833	17.81	PK	10.8	.5	-40	-10.89	29.54	-40.43	-	-	0-360
4	15.25721	12.24	PK	10.8	.6	-40	-16.36	29.54	-45.9	-	-	0-360
5	11.86484	15.94	PK	10.9	.5	-40	-12.66	29.54	-42.2	-	-	0-360
6	12.71214	22.72	PK	10.7	.6	-40	-5.98	29.54	-35.52	-	-	0-360
7	14.40676	22.18	PK	10.8	.5	-40	-6.52	29.54	-36.06	-	-	0-360
8	15.25407	15.52	PK	10.8	.6	-40	-13.08	29.54	-42.62	-	-	0-360

PK - Peak detector

FUNDAMENTAL 106Kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF

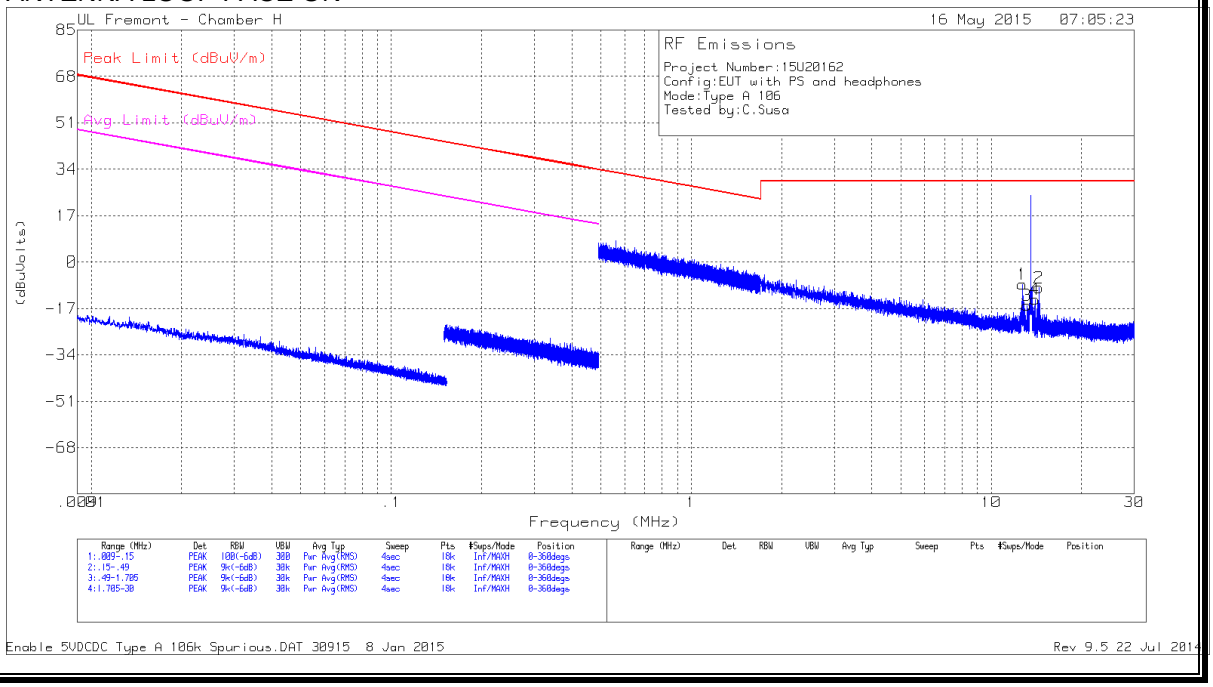
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	12.71238	22.15	Pk	10.4	.4	-40	-7.05	29.54	-36.59	0-360
2	13.56025	55.4	Pk	10.4	.4	-40	26.2	84	-57.8	0-360
3	14.40763	26.38	Pk	10.3	.4	-40	-2.92	29.54	-32.46	0-360
4	12.71033	19.56	Pk	10.4	.4	-40	-9.64	29.54	-39.18	0-360
5	13.55793	51.5	Pk	10.4	.4	-40	22.3	84	-61.7	0-360
6	14.40463	23.38	Pk	10.3	.4	-40	-5.92	29.54	-35.46	0-360

Pk - Peak detector

SPURIOUS EMISSIONS 106Kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF

Trace Markers

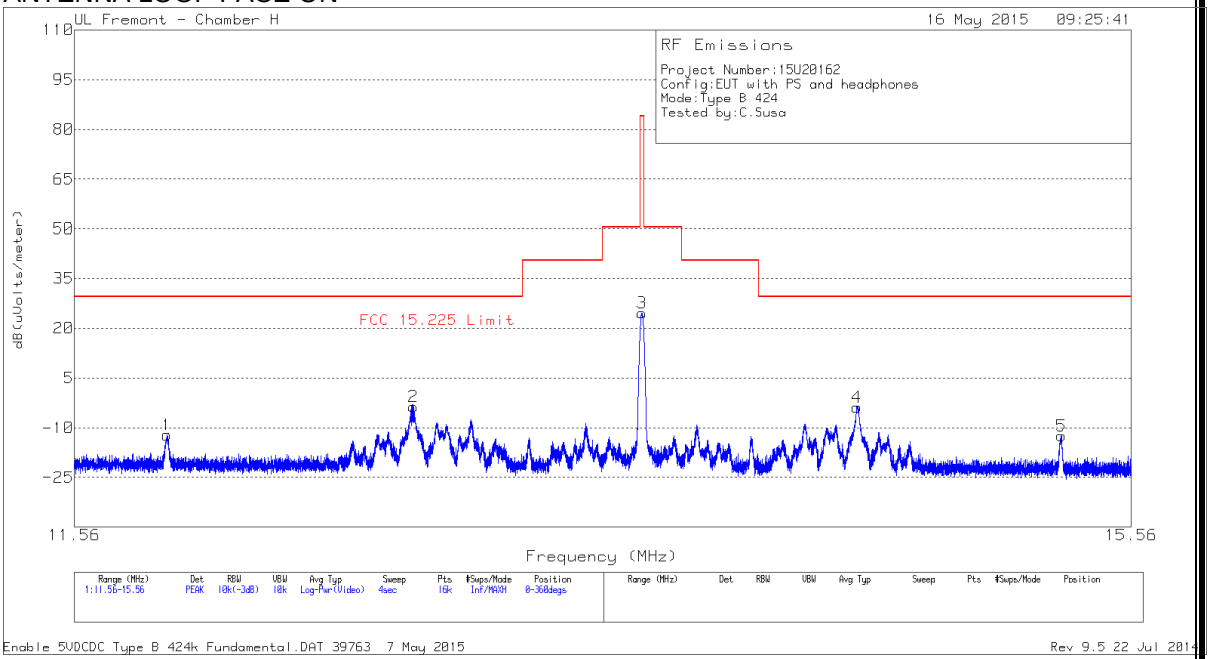
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	12.71214	20.31	PK	10.9	.6	-40	-8.19	29.54	-37.73	-	-	0-360
2	14.40833	19.32	PK	10.8	.5	-40	-9.38	29.54	-38.92	-	-	0-360
3	13.13658	12.61	PK	10.9	.6	-40	-15.89	29.54	-45.43	-	-	0-360
4	13.98389	14.98	PK	10.8	.5	-40	-13.72	29.54	-43.26	-	-	0-360
5	12.71214	18.71	PK	10.9	.6	-40	-9.79	29.54	-39.33	-	-	0-360
6	13.13973	10.13	PK	10.9	.6	-40	-18.37	29.54	-47.91	-	-	0-360
7	13.98075	9.64	PK	10.8	.5	-40	-19.06	29.54	-48.6	-	-	0-360
8	14.40676	17.35	PK	10.8	.5	-40	-11.35	29.54	-40.89	-	-	0-360
9	17.36998	12.14	PK	10.6	.6	-40	-16.66	29.54	-46.2	-	-	0-360

PK - Peak detector

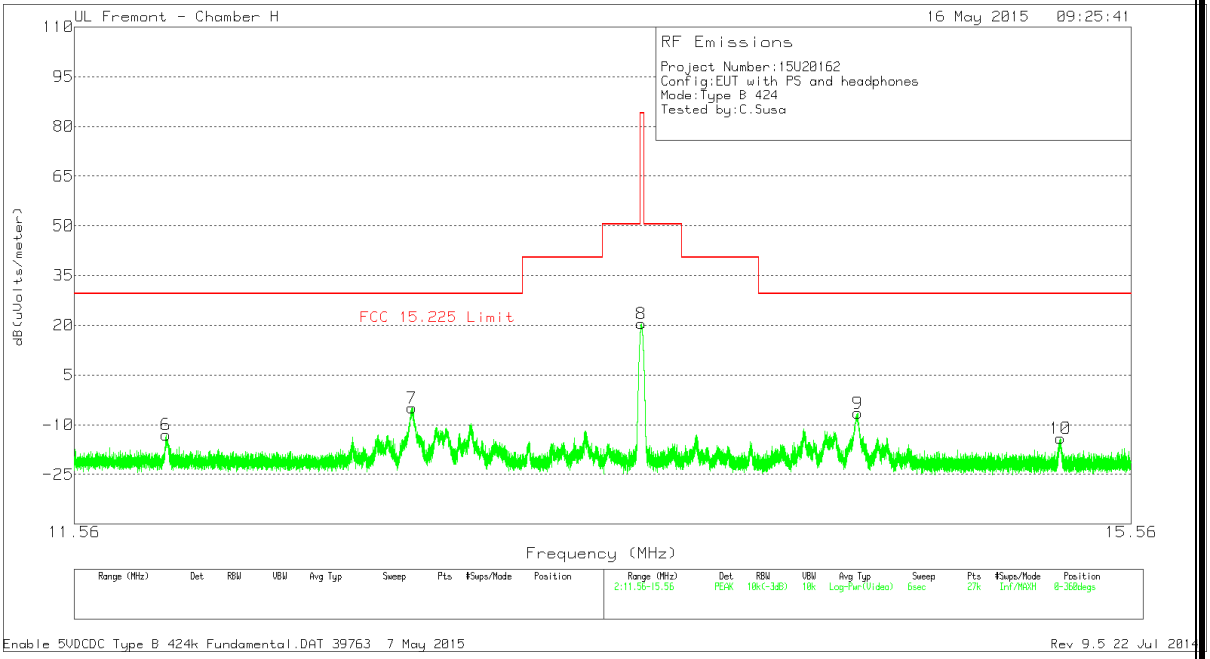
9.2.2. TYPE B

FUNDAMENTAL 424Kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



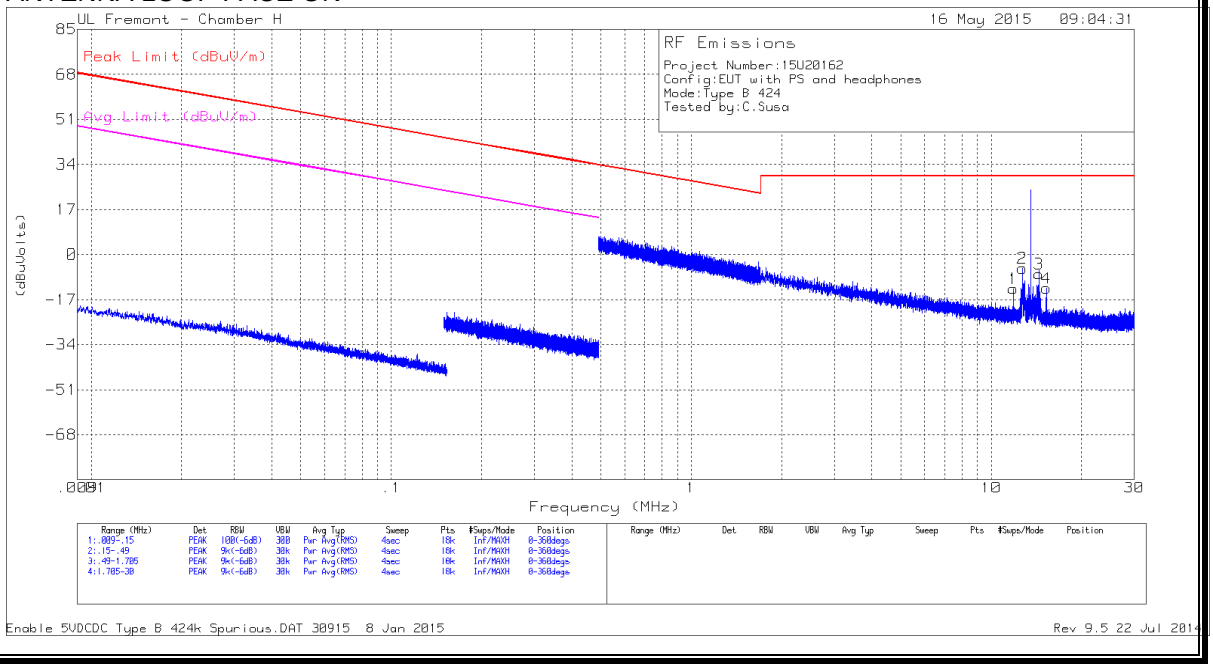
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	11.86513	16.42	PK	10.9	.5	-40	-12.18	29.54	-41.72	0-360
2	12.7155	25.87	PK	10.7	.6	-40	-2.83	29.54	-32.37	0-360
3	13.5595	53.13	PK	10.9	.6	-40	24.63	84	-59.37	0-360
4	14.40425	24.91	PK	10.8	.5	-40	-3.79	29.54	-33.33	0-360
5	15.25675	16.15	PK	10.8	.6	-40	-12.45	29.54	-41.99	0-360
6	11.86103	15.56	PK	10.9	.5	-40	-13.04	29.54	-42.58	0-360
7	12.7107	23.56	PK	10.9	.6	-40	-4.94	29.54	-34.48	0-360
8	13.55756	48.98	PK	10.9	.6	-40	20.48	84	-63.52	0-360
9	14.40767	22.21	PK	10.8	.5	-40	-6.49	29.54	-36.03	0-360
10	15.25319	14.51	PK	10.8	.6	-40	-14.09	29.54	-43.63	0-360

PK - Peak detector

SPURIOUS EMISSIONS 424Kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF

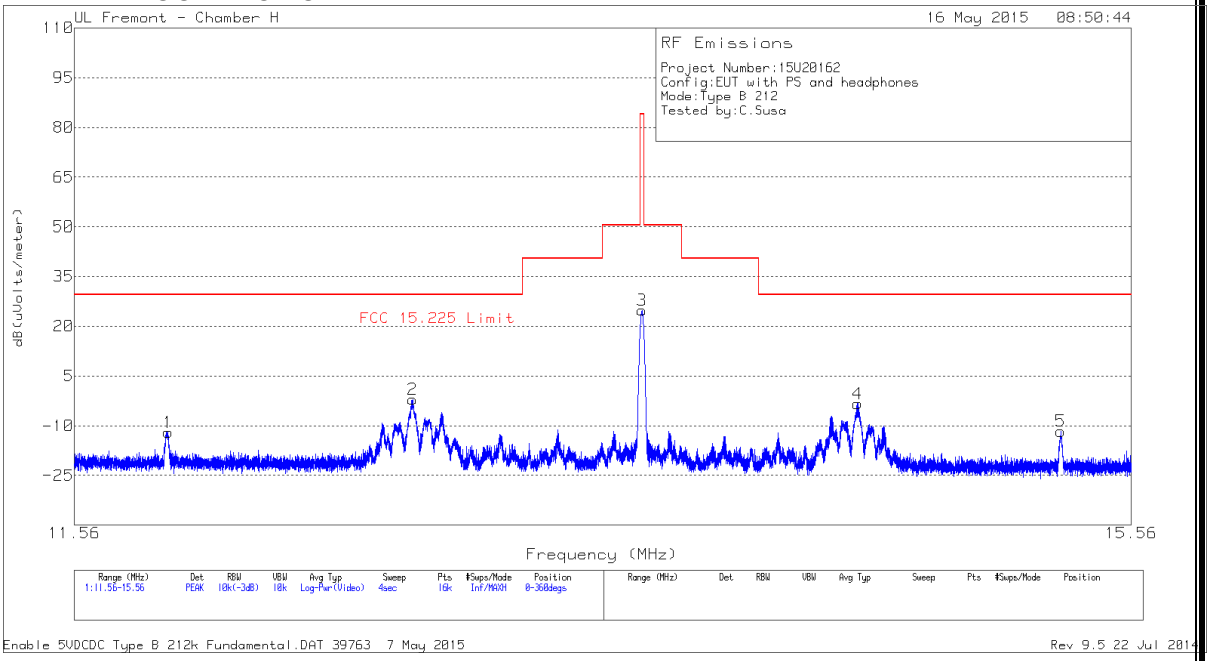
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	11.86484	15.72	PK	10.9	.5	-40	-12.88	29.54	-42.42	-	-	0-360
2	12.71057	23.33	PK	10.9	.6	-40	-5.17	29.54	-34.71	-	-	0-360
3	14.41148	21.38	PK	10.8	.5	-40	-7.32	29.54	-36.86	-	-	0-360
4	15.25564	15.92	PK	10.8	.6	-40	-12.68	29.54	-42.22	-	-	0-360
5	11.86484	13.4	PK	10.9	.5	-40	-15.2	29.54	-44.74	-	-	0-360
6	12.71214	21.61	PK	10.9	.6	-40	-6.89	29.54	-36.43	-	-	0-360
7	14.40833	19.94	PK	10.8	.5	-40	-8.76	29.54	-38.3	-	-	0-360
8	15.25564	11.33	PK	10.8	.6	-40	-17.27	29.54	-46.81	-	-	0-360
9	17.60578	12.96	PK	10.6	.6	-40	-15.84	29.54	-45.38	-	-	0-360

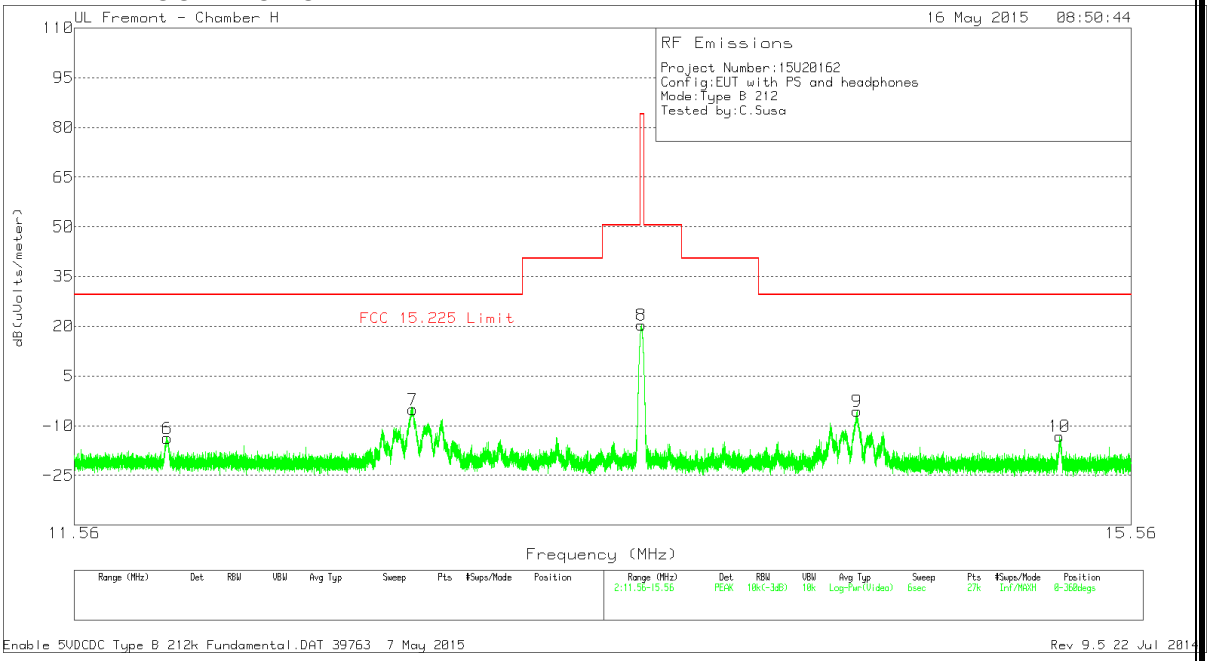
PK - Peak detector

FUNDAMENTAL 212Kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



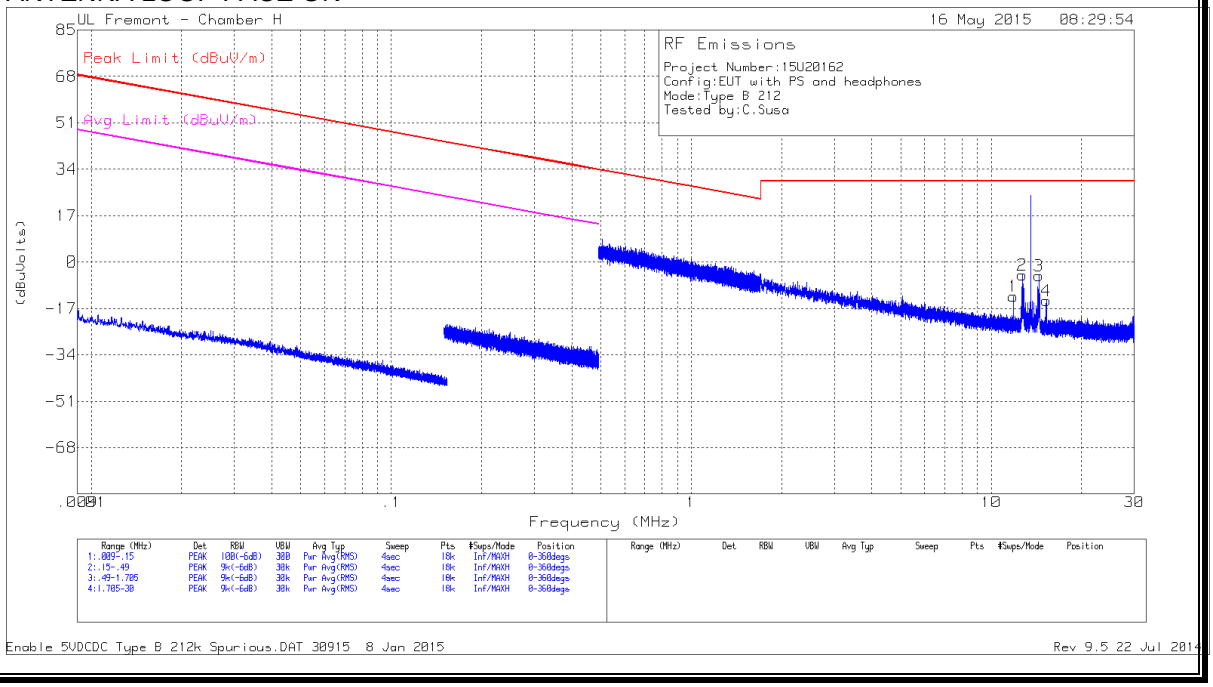
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	11.8685	16.6	PK	10.9	.5	-40	-12	29.54	-41.54	0-360
2	12.713	26.47	PK	10.9	.6	-40	-2.03	29.54	-31.57	0-360
3	13.55975	53.3	PK	10.9	.6	-40	24.8	84	-59.2	0-360
4	14.40725	25.35	PK	10.8	.5	-40	-3.35	29.54	-32.89	0-360
5	15.254	16.92	PK	10.8	.6	-40	-11.68	29.54	-41.22	0-360
6	11.86562	14.82	PK	10.9	.5	-40	-13.78	29.54	-43.32	0-360
7	12.71396	23.38	PK	10.9	.6	-40	-5.12	29.54	-34.66	0-360
8	13.5583	48.9	PK	10.9	.6	-40	20.4	84	-63.6	0-360
9	14.405	23.11	PK	10.8	.5	-40	-5.59	29.54	-35.13	0-360
10	15.24905	15.41	PK	10.8	.6	-40	-13.19	29.54	-42.73	0-360

PK - Peak detector

SPURIOUS EMISSIONS 212Kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF

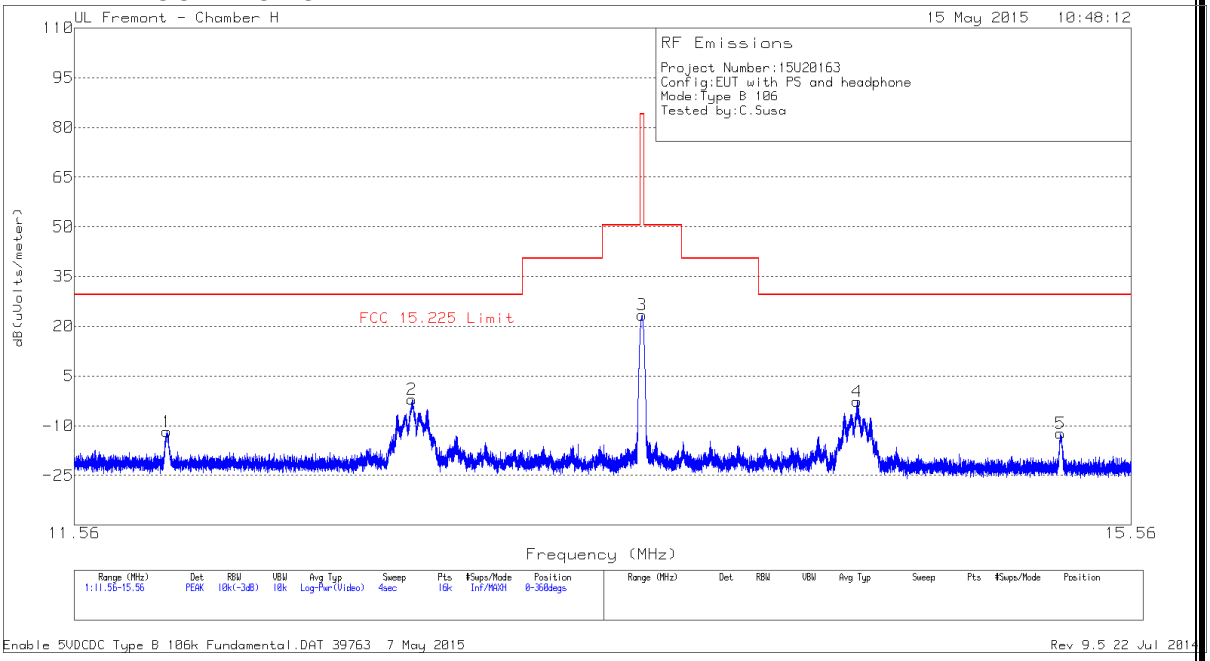
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	11.86484	16.06	PK	10.9	.5	-40	-12.54	29.54	-42.08	-	-	0-360
2	12.71529	24.07	PK	10.7	.6	-40	-4.63	29.54	-34.17	-	-	0-360
3	14.40519	23.65	PK	10.8	.5	-40	-5.05	29.54	-34.59	-	-	0-360
4	15.25407	14.51	PK	10.8	.6	-40	-14.09	29.54	-43.63	-	-	0-360
5	11.86484	13.91	PK	10.9	.5	-40	-14.69	29.54	-44.23	-	-	0-360
6	12.71057	22.78	PK	10.9	.6	-40	-5.72	29.54	-35.26	-	-	0-360
7	14.40676	19.9	PK	10.8	.5	-40	-8.8	29.54	-38.34	-	-	0-360
8	15.25564	13.05	PK	10.8	.6	-40	-15.55	29.54	-45.09	-	-	0-360

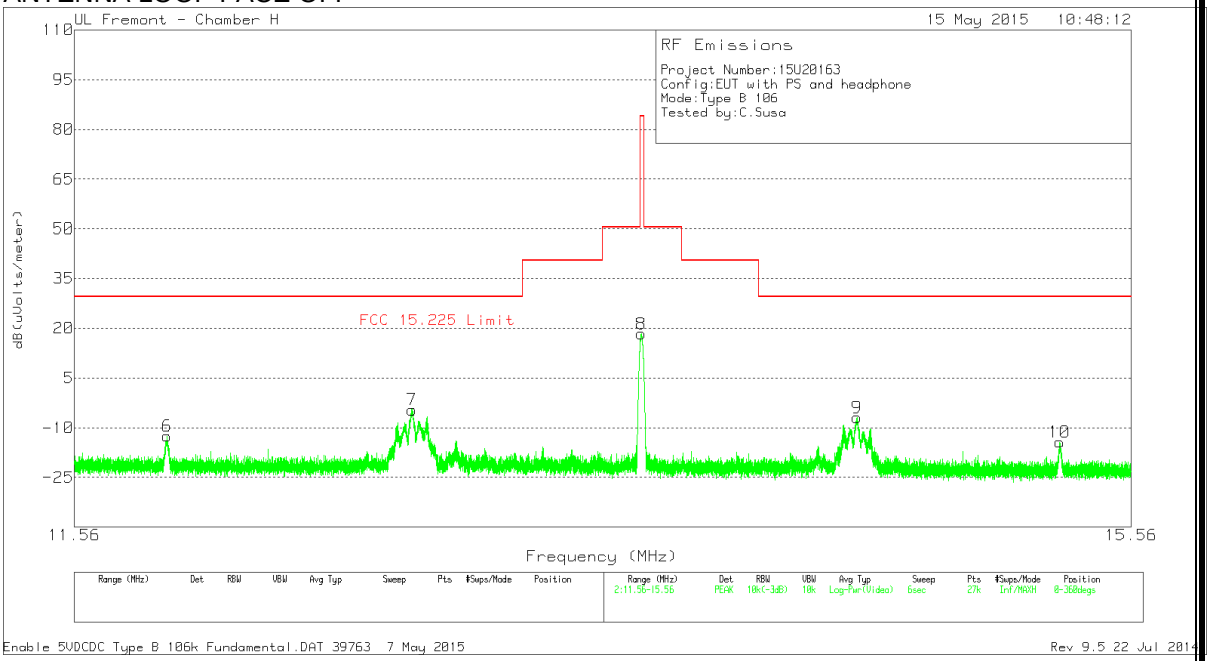
PK - Peak detector

FUNDAMENTAL 106Kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



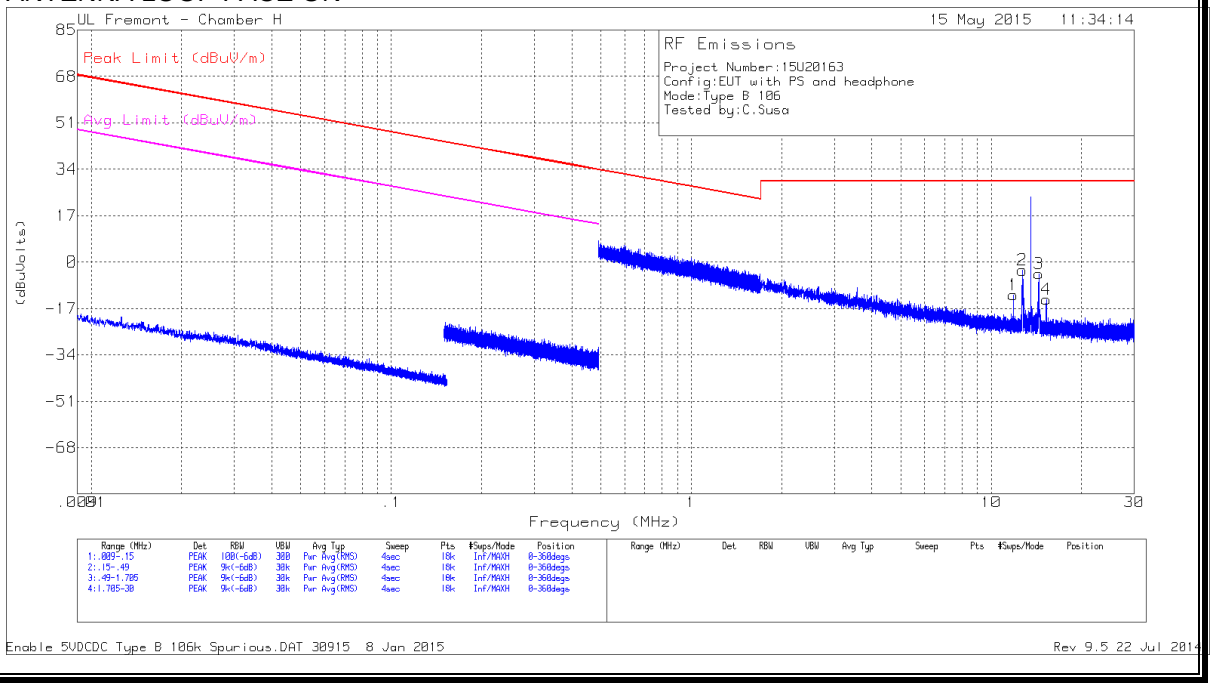
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	11.8645	17.03	PK	10.7	.5	-40	-11.77	29.54	-41.31	0-360
2	12.711	26.68	PK	10.7	.6	-40	-2.02	29.54	-31.56	0-360
3	13.55975	52.11	PK	10.7	.6	-40	23.41	84	-60.59	0-360
4	14.40575	26.27	PK	10.6	.5	-40	-2.63	29.54	-32.17	0-360
5	15.25325	16.47	PK	10.6	.6	-40	-12.33	29.54	-41.87	0-360
6	11.86518	16.25	PK	10.7	.5	-40	-12.55	29.54	-42.09	0-360
7	12.71129	24.08	PK	10.7	.6	-40	-4.62	29.54	-34.16	0-360
8	13.55756	47.05	PK	10.7	.6	-40	18.35	84	-65.65	0-360
9	14.4053	21.96	PK	10.6	.5	-40	-6.94	29.54	-36.48	0-360
10	15.24934	14.46	PK	10.6	.6	-40	-14.34	29.54	-43.88	0-360

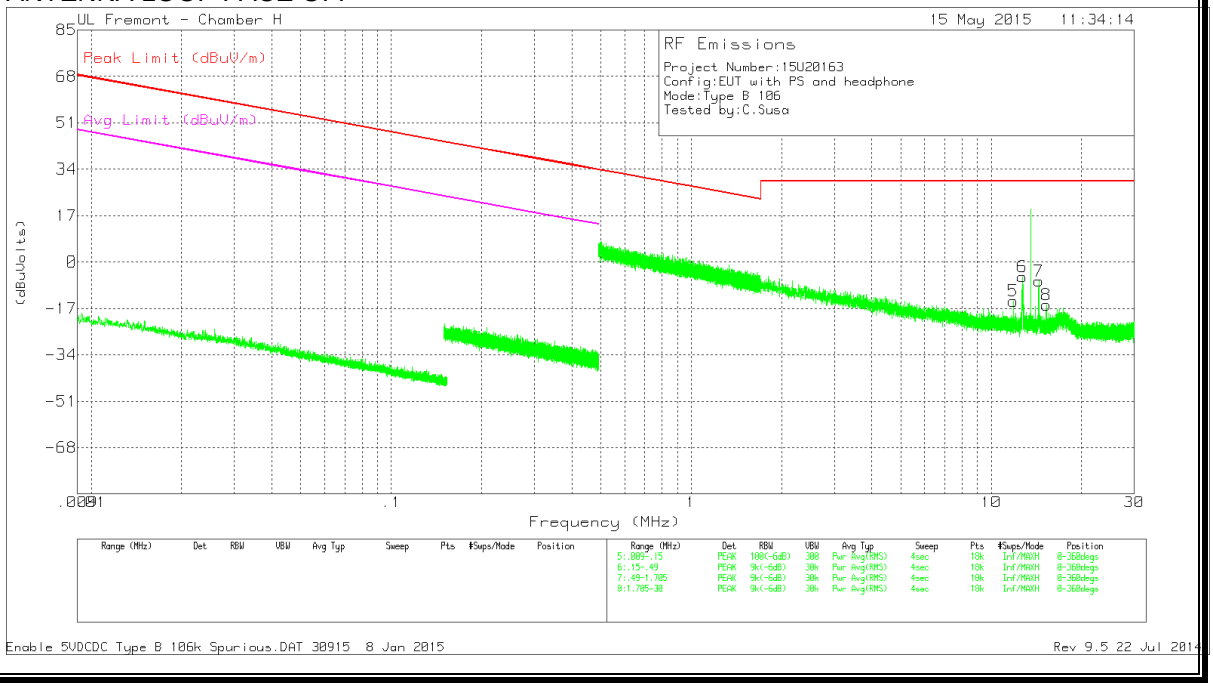
PK - Peak detector

SPURIOUS EMISSIONS 106Kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	11.86326	16.55	PK	10.9	.5	-40	-12.05	29.54	-41.59	-	-	0-360
2	12.71214	25.93	PK	10.7	.6	-40	-2.77	29.54	-32.31	-	-	0-360
3	14.40519	24.42	PK	10.8	.5	-40	-4.28	29.54	-33.82	-	-	0-360
4	15.25407	14.92	PK	10.8	.6	-40	-13.68	29.54	-43.22	-	-	0-360
5	11.86484	14.28	PK	10.9	.5	-40	-14.32	29.54	-43.86	-	-	0-360
6	12.71372	23.16	PK	10.9	.6	-40	-5.34	29.54	-34.88	-	-	0-360
7	14.40676	21.79	PK	10.8	.5	-40	-6.91	29.54	-36.45	-	-	0-360
8	15.25407	12.89	PK	10.8	.6	-40	-15.71	29.54	-45.25	-	-	0-360

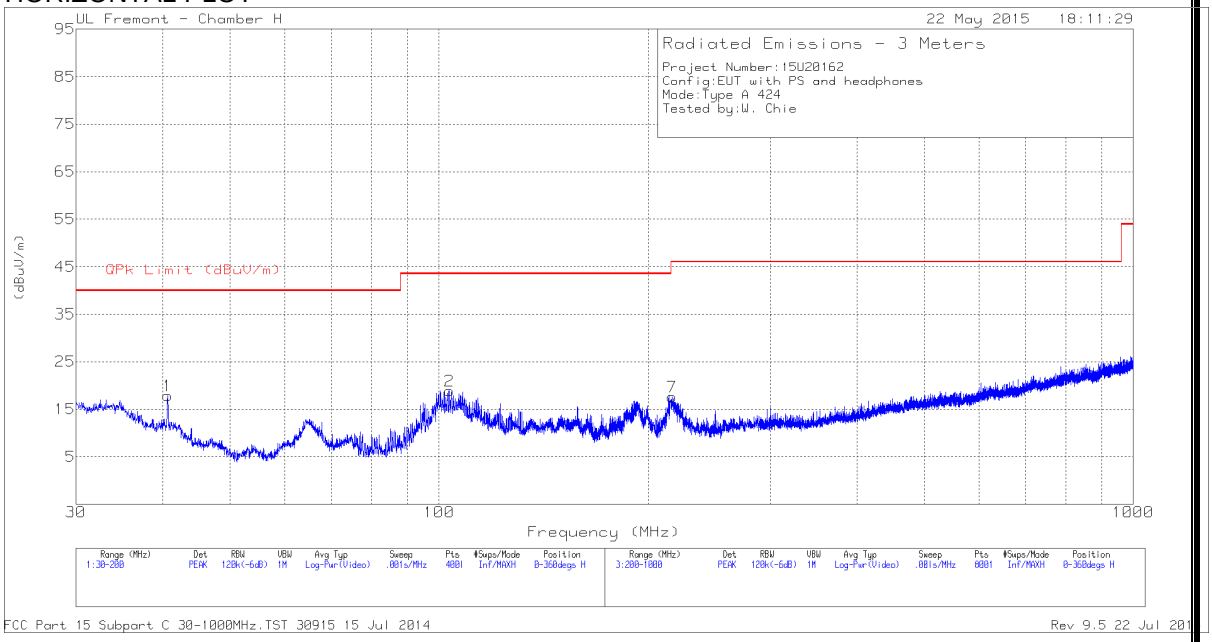
PK - Peak detector

9.3. TX SPURIOUS EMISSION 30 TO 1000 MHz

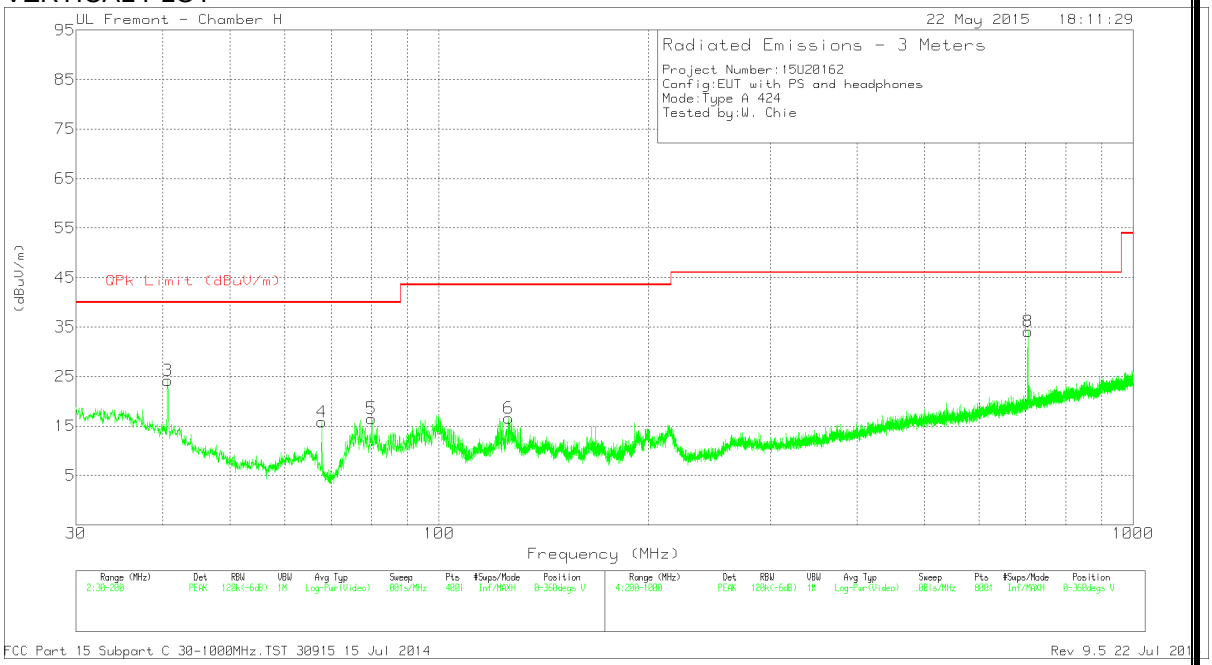
9.3.1. TYPE A

424Kbps

HORIZONTAL PLOT



VERTICAL PLOT



Trace Markers

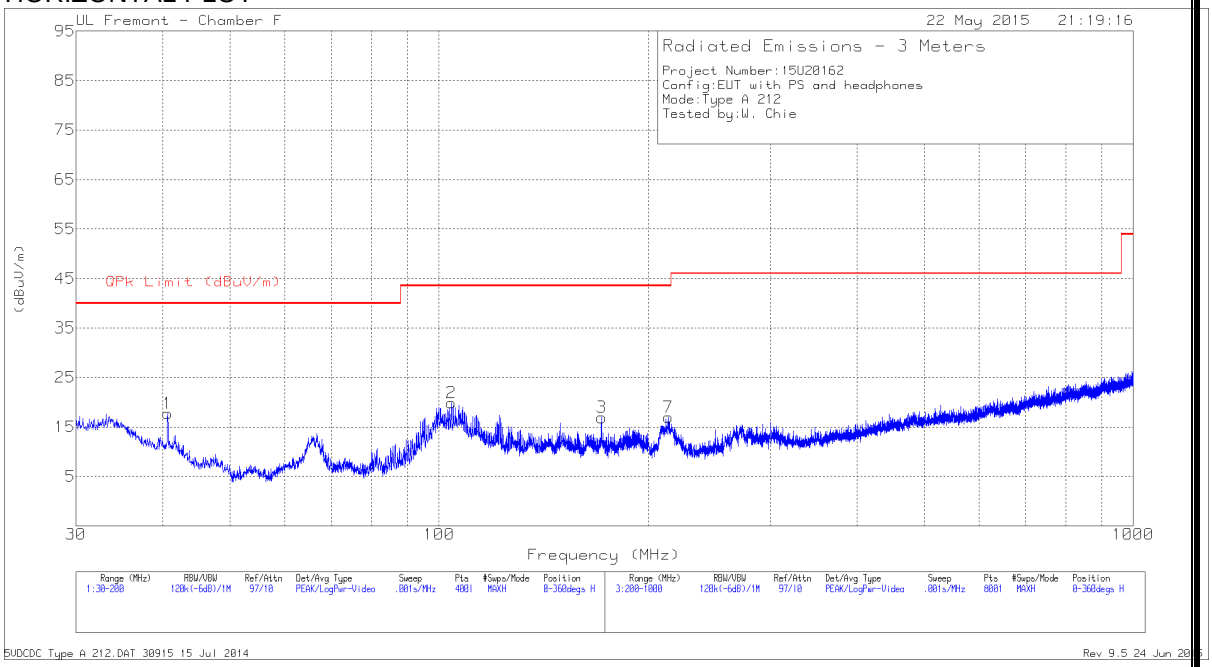
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.6675	35.01	PK	14.1	-31.2	17.91	40	-22.09	0-360	400	H
2	103.5675	38.46	PK	10.9	-30.5	18.86	43.52	-24.66	0-360	301	H
3	40.6675	41.33	PK	14.1	-31.2	24.23	40	-15.77	0-360	100	V
4	67.7825	38.08	PK	8.5	-30.8	15.78	40	-24.22	0-360	100	V
5	80.0225	39.42	PK	7.8	-30.7	16.52	40	-23.48	0-360	100	V
6	* 125.88	33.11	PK	13.8	-30.3	16.61	43.52	-26.91	0-360	100	V
7	216.7	36.96	PK	10.4	-29.7	17.66	46.02	-28.36	0-360	100	H
8	705	41.65	PK	20.1	-27.7	34.05	46.02	-11.97	0-360	201	V

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

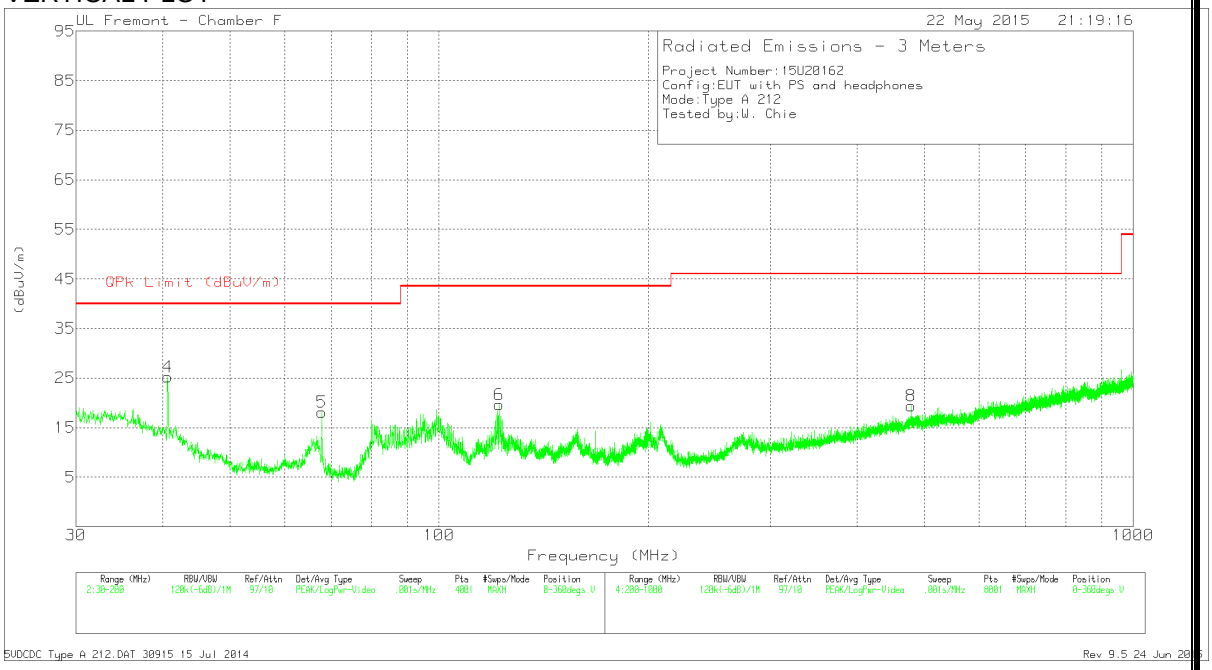
PK - Peak detector

212Kbps

HORIZONTAL PLOT



VERTICAL PLOT



Trace Markers

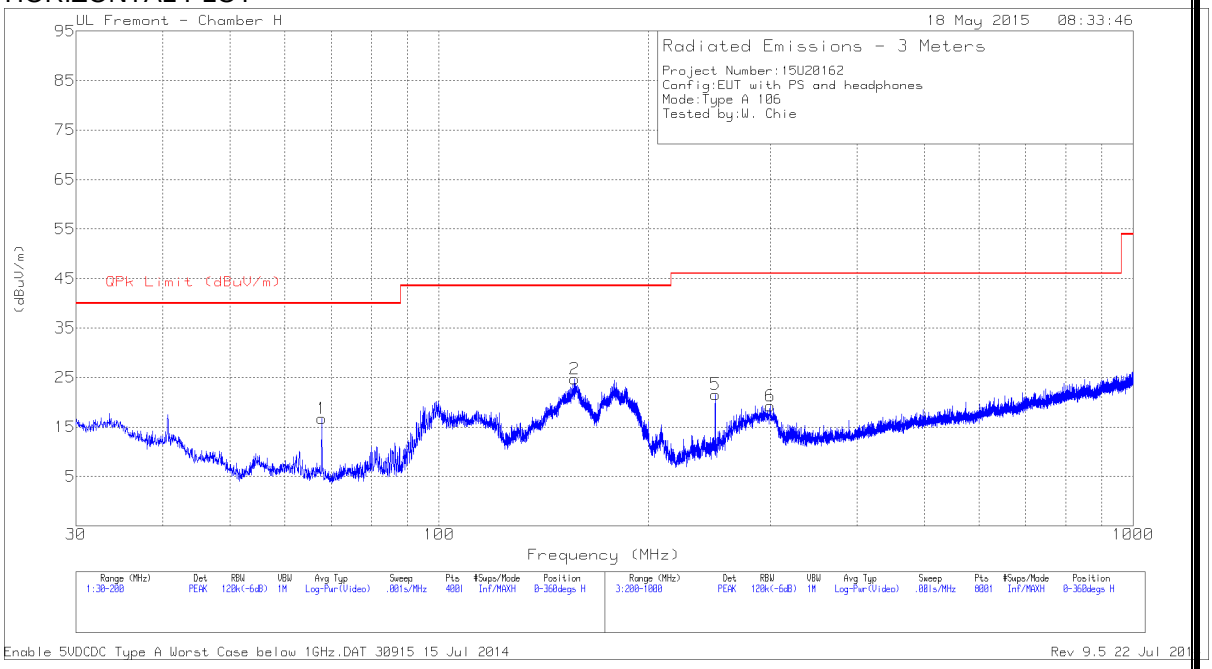
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.6675	34.87	Pk	14.1	-31.2	17.77	40	-22.23	0-360	401	H
2	104.29	39.31	Pk	11.1	-30.5	19.91	43.52	-23.61	0-360	301	H
3	* 171.44	35.11	Pk	11.7	-29.9	16.91	43.52	-26.61	0-360	201	H
4	40.6675	42.3	Pk	14.1	-31.2	25.2	40	-14.8	0-360	100	V
5	67.7825	40.44	Pk	8.5	-30.8	18.14	40	-21.86	0-360	100	V
6	* 122.055	36.24	Pk	13.7	-30.3	19.64	43.52	-23.88	0-360	100	V
7	214.2	36.19	Pk	10.4	-29.6	16.99	43.52	-26.53	0-360	99	H
8	478.5	30.19	Pk	17.6	-28.4	19.39	46.02	-26.63	0-360	201	V

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

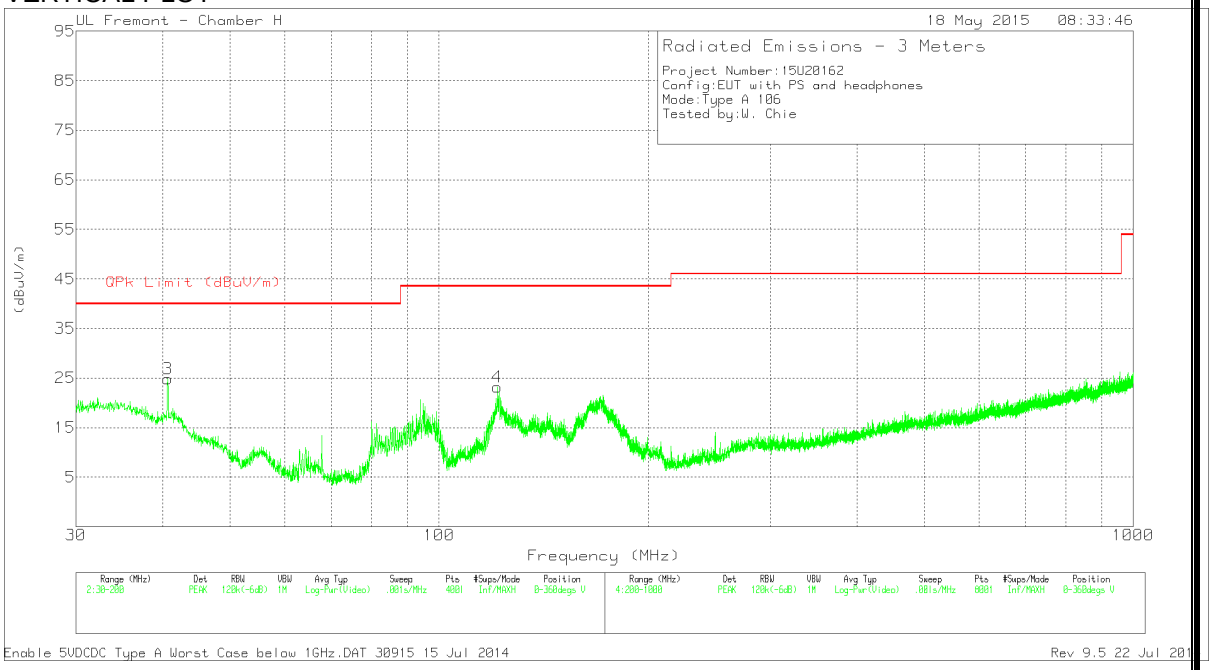
Pk - Peak detector

106Kbps

HORIZONTAL PLOT



VERTICAL PLOT



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	67.7825	38.96	PK	8.5	-30.8	16.66	40	-23.34	0-360	201	H
2	156.9475	42.59	PK	12.1	-30	24.69	43.52	-18.83	0-360	201	H
3	40.6675	41.89	PK	14.1	-31.2	24.79	40	-15.21	0-360	100	V
4	* 121.375	39.74	PK	13.7	-30.3	23.14	43.52	-20.38	0-360	100	V
5	* 250	39.6	PK	11.4	-29.4	21.6	46.02	-24.42	0-360	99	H
6	300	35.14	PK	13.2	-29.1	19.24	46.02	-26.78	0-360	99	H

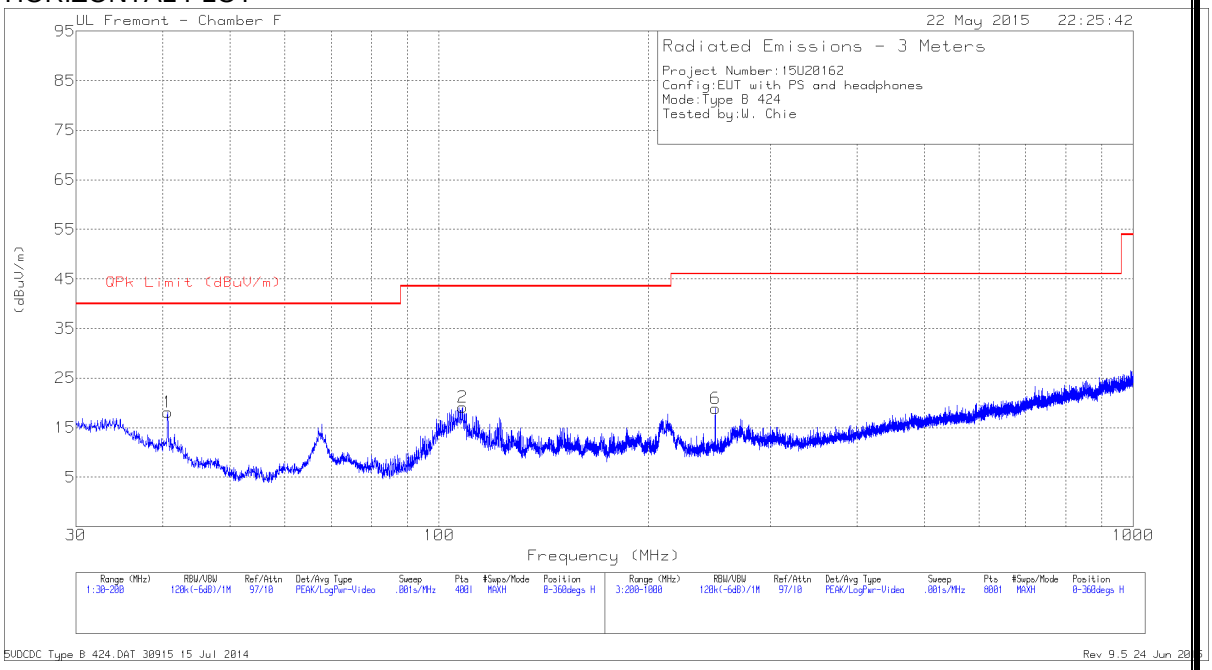
* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

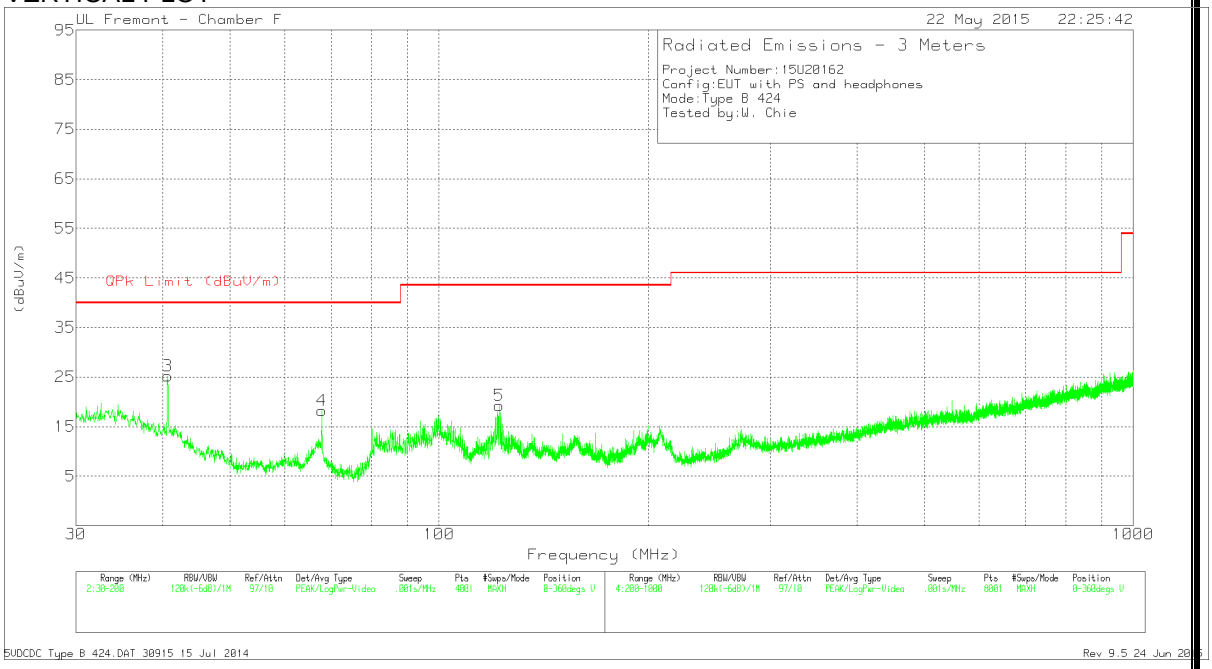
9.3.2. TYPE B

424Kbps

HORIZONTAL PLOT



VERTICAL PLOT



Trace Markers

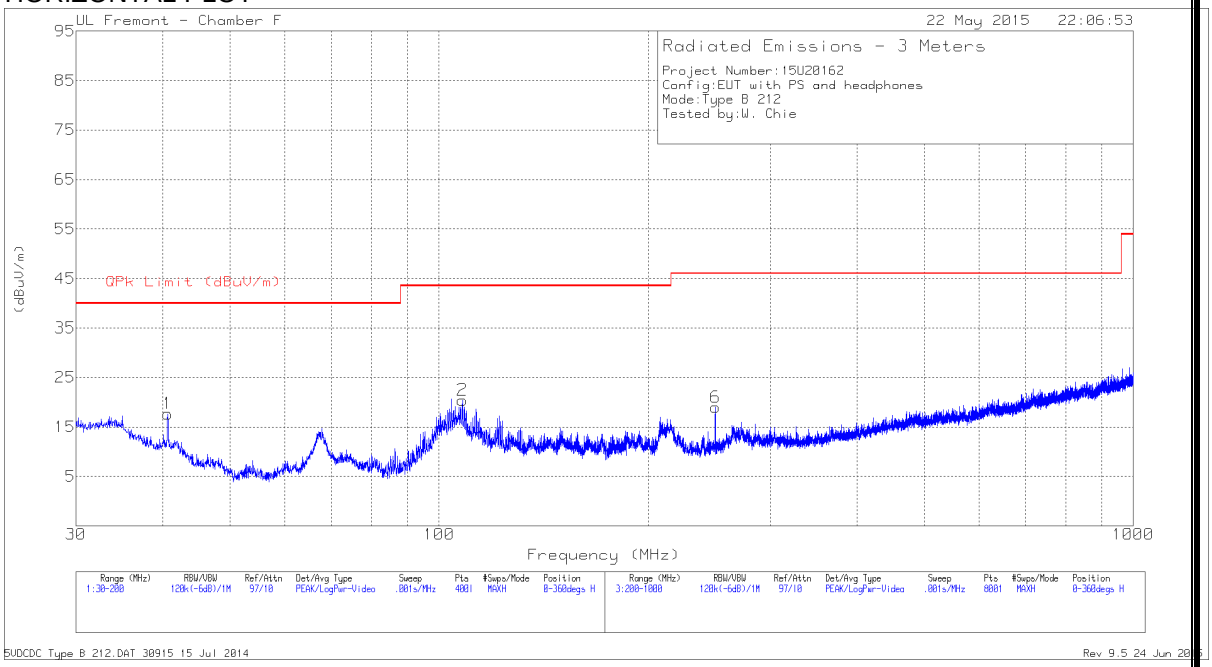
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.6675	35.18	Pk	14.1	-31.2	18.08	40	-21.92	0-360	400	H
2	* 108.1575	37.38	Pk	12.1	-30.4	19.08	43.52	-24.44	0-360	201	H
3	40.6675	42.37	Pk	14.1	-31.2	25.27	40	-14.73	0-360	100	V
4	67.7825	40.52	Pk	8.5	-30.8	18.22	40	-21.78	0-360	100	V
5	* 122.055	35.85	Pk	13.7	-30.3	19.25	43.52	-24.27	0-360	100	V
6	* 250	36.91	Pk	11.4	-29.4	18.91	46.02	-27.11	0-360	99	H

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

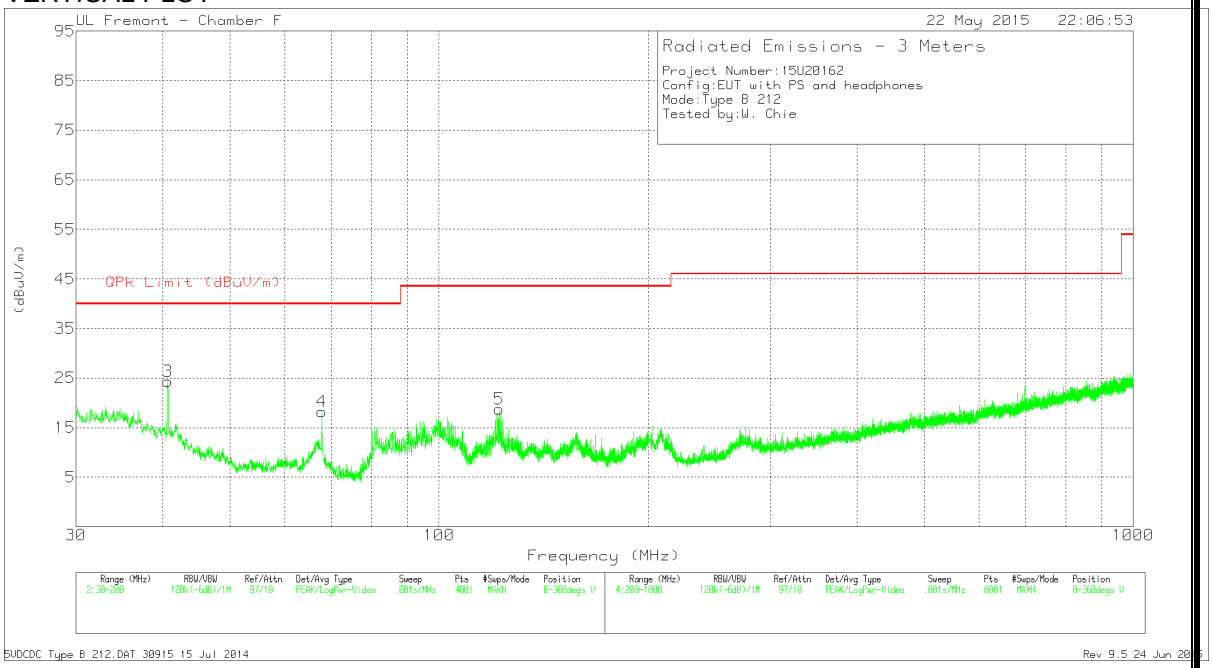
Pk - Peak detector

212Kbps

HORIZONTAL PLOT



VERTICAL PLOT



Trace Markers

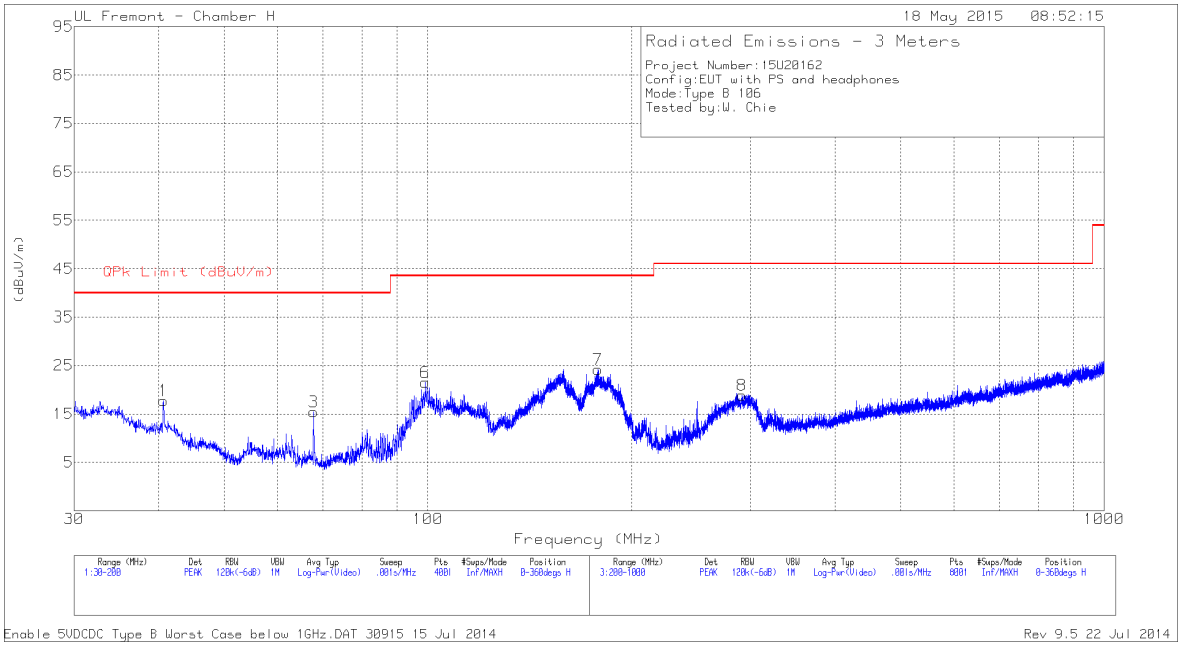
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.6675	34.77	Pk	14.1	-31.2	17.67	40	-22.33	0-360	400	H
2	* 108.0725	38.76	Pk	12.1	-30.4	20.46	43.52	-23.06	0-360	301	H
3	40.6675	41.41	Pk	14.1	-31.2	24.31	40	-15.69	0-360	100	V
4	67.7825	40.51	Pk	8.5	-30.8	18.21	40	-21.79	0-360	100	V
5	* 122.055	35.38	Pk	13.7	-30.3	18.78	43.52	-24.74	0-360	100	V
6	* 250	37.02	Pk	11.4	-29.4	19.02	46.02	-27	0-360	98	H

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

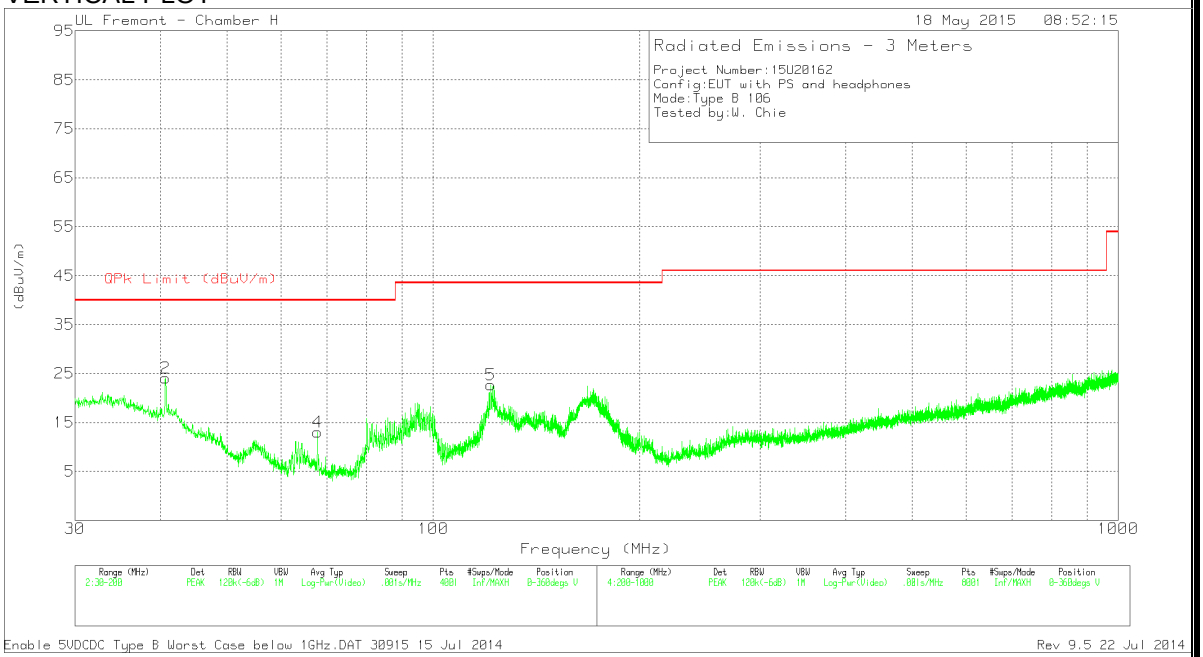
Pk - Peak detector

106Kbps

HORIZONTAL PLOT



VERTICAL PLOT



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.6675	34.89	PK	14.1	-31.2	17.79	40	-22.21	0-360	399	H
2	40.6675	41.14	PK	14.1	-31.2	24.04	40	-15.96	0-360	100	V
3	67.7825	37.74	PK	8.5	-30.8	15.44	40	-24.56	0-360	201	H
4	67.7825	35.37	PK	8.5	-30.8	13.07	40	-26.93	0-360	100	V
5	* 121.375	39.31	PK	13.7	-30.3	22.71	43.52	-20.81	0-360	100	V
6	99.0625	42.12	PK	9.9	-30.5	21.52	43.52	-22	0-360	302	H
7	178.6225	42.63	PK	11.5	-29.9	24.23	43.52	-19.29	0-360	103	H
8	291.1	34.77	PK	13.3	-29.2	18.87	46.02	-27.15	0-360	98	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

10. RADIATED EMISSION TEST RESULTS (MODEL A:1687)

10.1. LIMITS AND PROCEDURE

LIMIT

§15.225
IC RSS-210, A2.6
IC RSS-GEN, Section 8.9 (Transmitter)
IC RSS-GEN, Section 7.1.2 (Receiver)

(a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/ meter at 30 meters.

(b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

(c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

(d) The field strength of any emissions appearing outside of the 13.110– 14.010 MHz and shall not exceed the general radiated emission limits in § 15.209 as follows:
§15.209 (a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Limits for radiated disturbance of an intentional radiator		
Frequency range (MHz)	Limits (µV/m)	Measurement Distance (m)
0.009 – 0.490	2400 / F (kHz)	300
0.490 – 1.705	24000 / F (kHz)	30
1.705 – 30.0	30	30
30 – 88	100**	3
88 - 216	150**	3
216 – 960	200**	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g. §§ 15.231 and 15.241.
§15.209 (b) In the emission table above, the tighter limit applies at the band edges.

Formula for converting the filed strength from uV/m to dBuV/m is:
Limit (dBuV/m) = 20 log limit (uV/m)

In addition:

§15.209 (d) The emission limits shown the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

§15.209 (d) The provisions in §§ 15.225, measuring emissions at distances other than the distances specified in the above table, determining the frequency range over which radiated emissions are to be measured, and limiting peak emissions apply to all devices operated under this part.

TEST PROCEDURE

ANSI C63.10:2013

The EUT is an intentional radiator that incorporates a digital device, the highest fundamental frequency generated or used in the device is 13.56 MHz; therefore, the frequency range was investigated from 0.15 MHz to the 10th harmonic of the highest fundamental frequency, or 1000 MHz, whichever is greater.

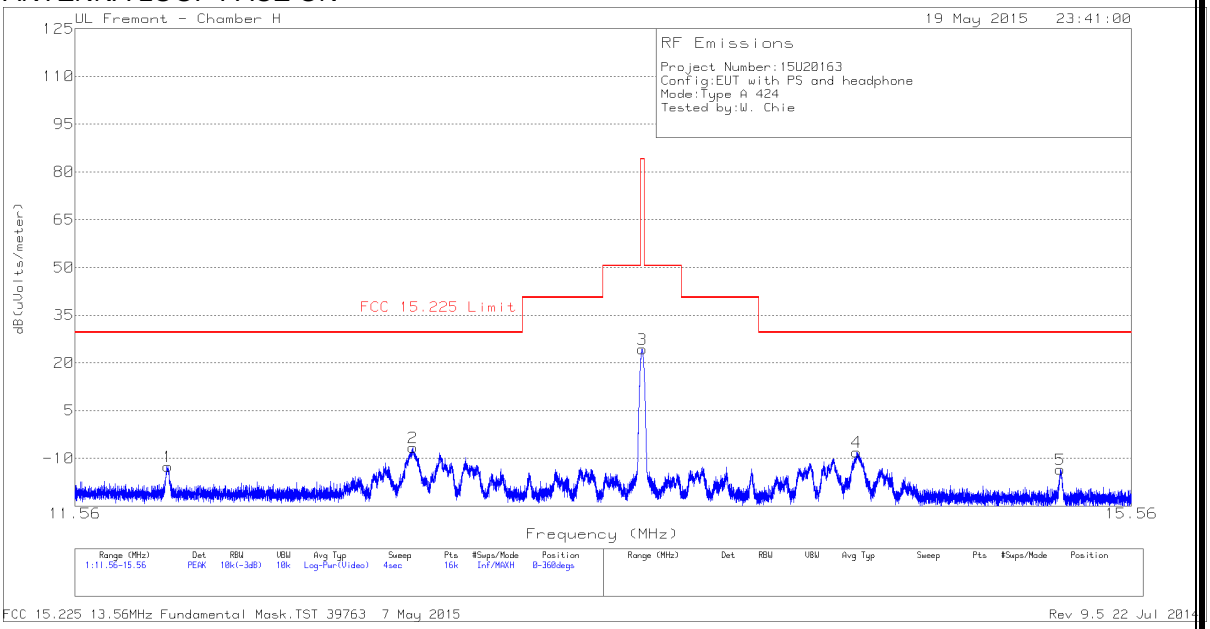
RESULTS

10.2. FUNDAMENTAL AND SPURIOUS EMISSIONS (0.15 – 30 MHz)

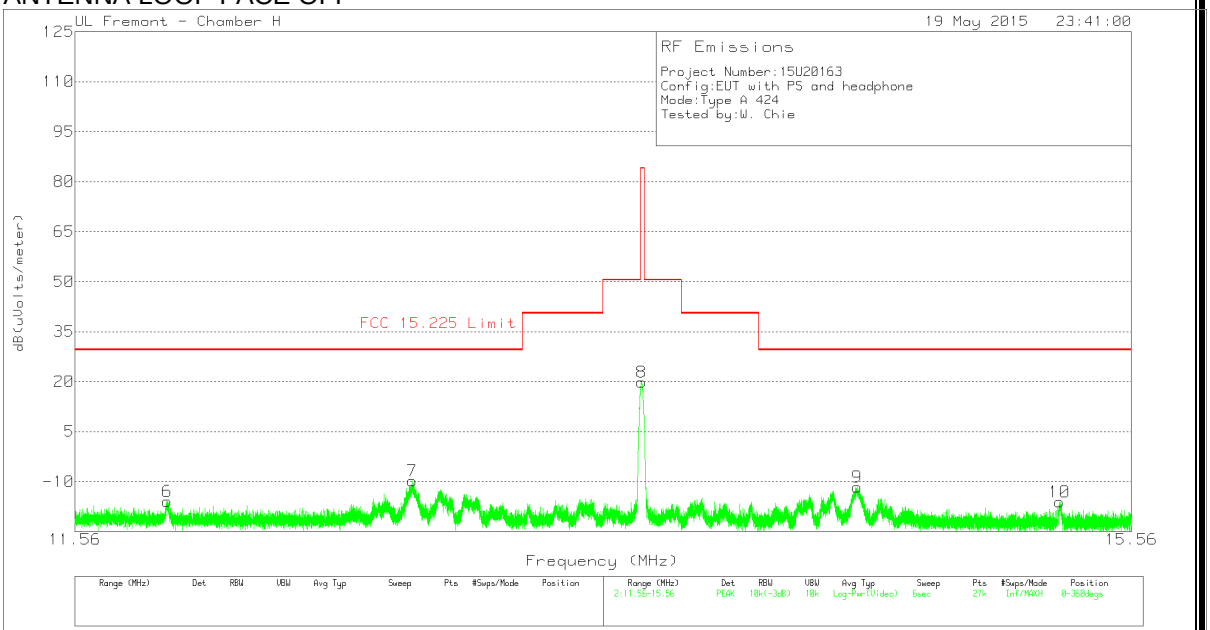
10.2.1. TYPE A

FUNDAMENTAL 424Kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



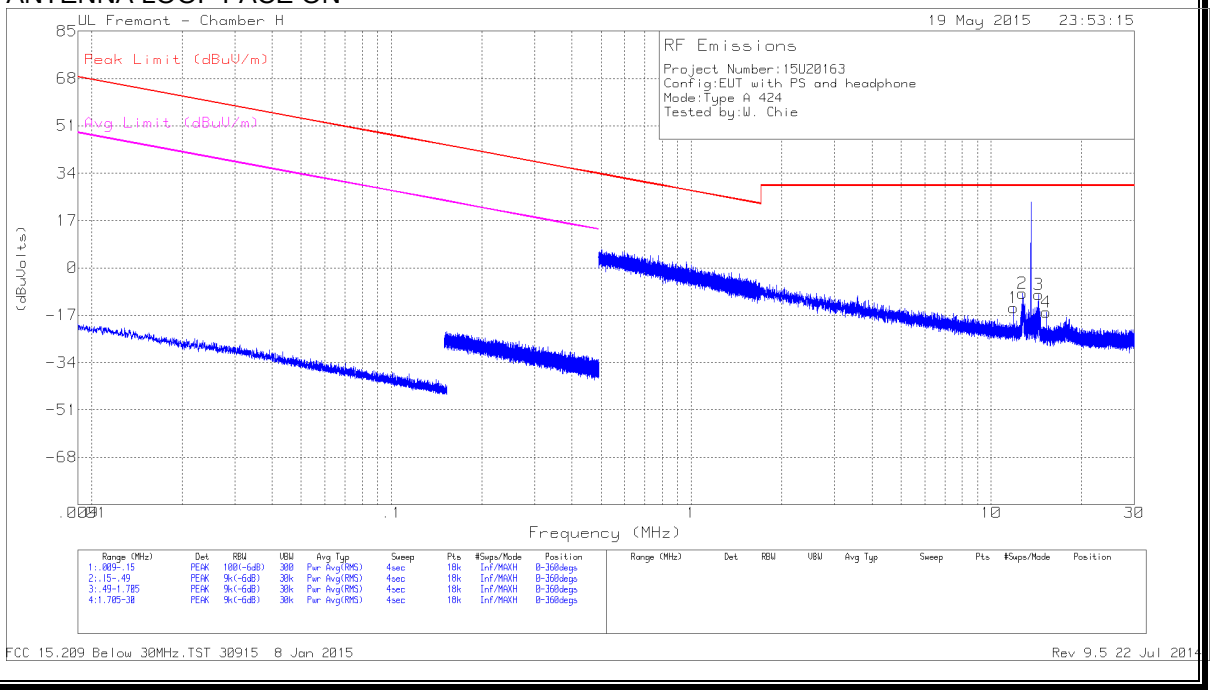
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	11.86563	16.28	PK	10.7	.5	-40	-12.52	29.54	-42.06	0-360
2	12.71325	22.03	PK	10.7	.6	-40	-6.67	29.54	-36.21	0-360
3	13.5595	52.97	PK	10.7	.6	-40	24.27	84	-59.73	0-360
4	14.40225	20.88	PK	10.6	.5	-40	-8.02	29.54	-37.56	0-360
5	15.2525	15.33	PK	10.6	.6	-40	-13.47	29.54	-43.01	0-360
6	11.86325	12.91	PK	10.7	.5	-40	-15.89	29.54	-45.43	0-360
7	12.70981	18.86	PK	10.7	.6	-40	-9.84	29.54	-39.38	0-360
8	13.5577	48.5	PK	10.7	.6	-40	19.8	84	-64.2	0-360
9	14.40619	17.33	PK	10.6	.5	-40	-11.57	29.54	-41.11	0-360
10	15.24934	12.74	PK	10.6	.6	-40	-16.06	29.54	-45.6	0-360

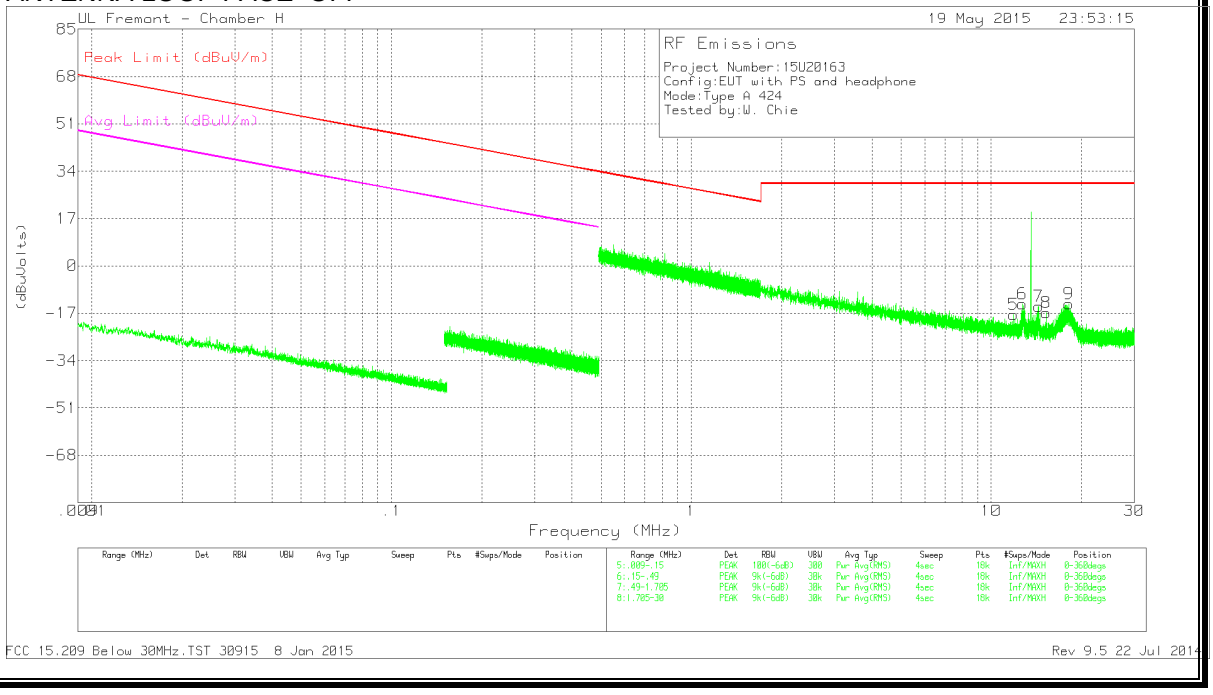
PK - Peak detector

SPURIOUS EMISSIONS 424kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



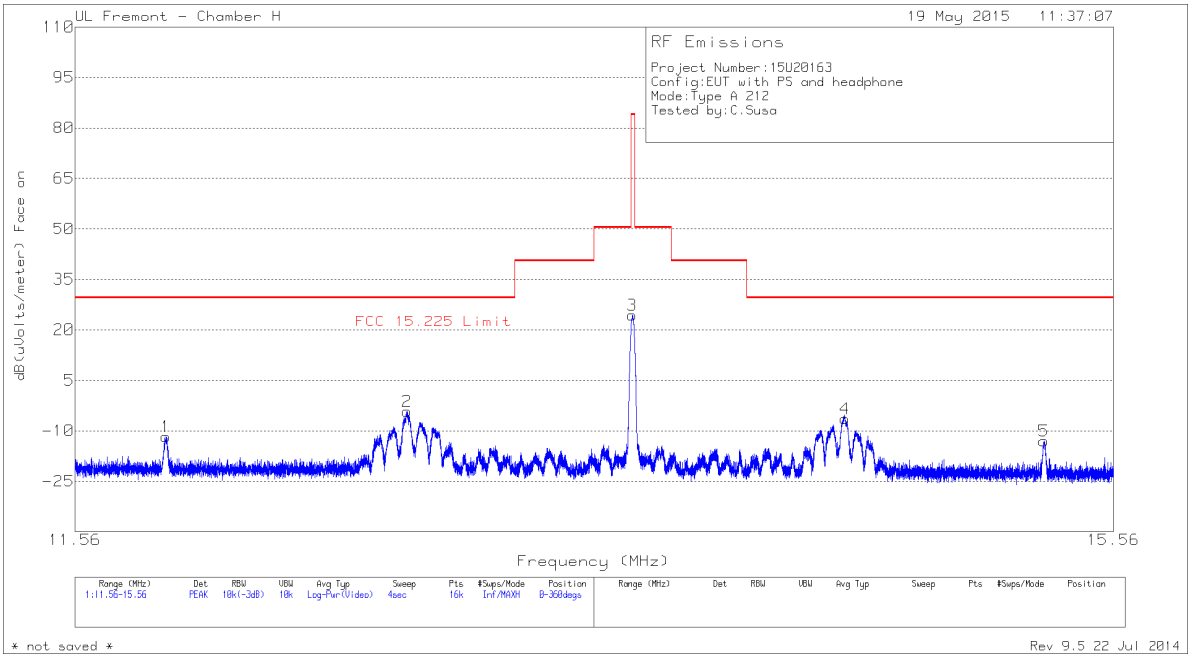
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	11.86484	14.38	PK	10.7	.5	-40	-14.42	29.54	-43.96	-	-	0-360
2	12.71529	19.52	PK	10.7	.6	-40	-9.18	29.54	-38.72	-	-	0-360
3	14.40676	19.25	PK	10.6	.5	-40	-9.65	29.54	-39.19	-	-	0-360
4	15.25328	12.93	PK	10.6	.6	-40	-15.87	29.54	-45.41	-	-	0-360
5	11.86641	11.34	PK	10.7	.5	-40	-17.46	29.54	-47	-	-	0-360
6	12.71214	15.12	PK	10.7	.6	-40	-13.58	29.54	-43.12	-	-	0-360
7	14.40676	14.36	PK	10.6	.5	-40	-14.54	29.54	-44.08	-	-	0-360
8	15.25564	11.96	PK	10.6	.6	-40	-16.84	29.54	-46.38	-	-	0-360
9	18.12297	15.34	PK	10.3	.6	-40	-13.76	29.54	-43.3	-	-	0-360

PK - Peak detector

FUNDAMENTAL 212Kbps

ANTENNA LOOP FACE ON



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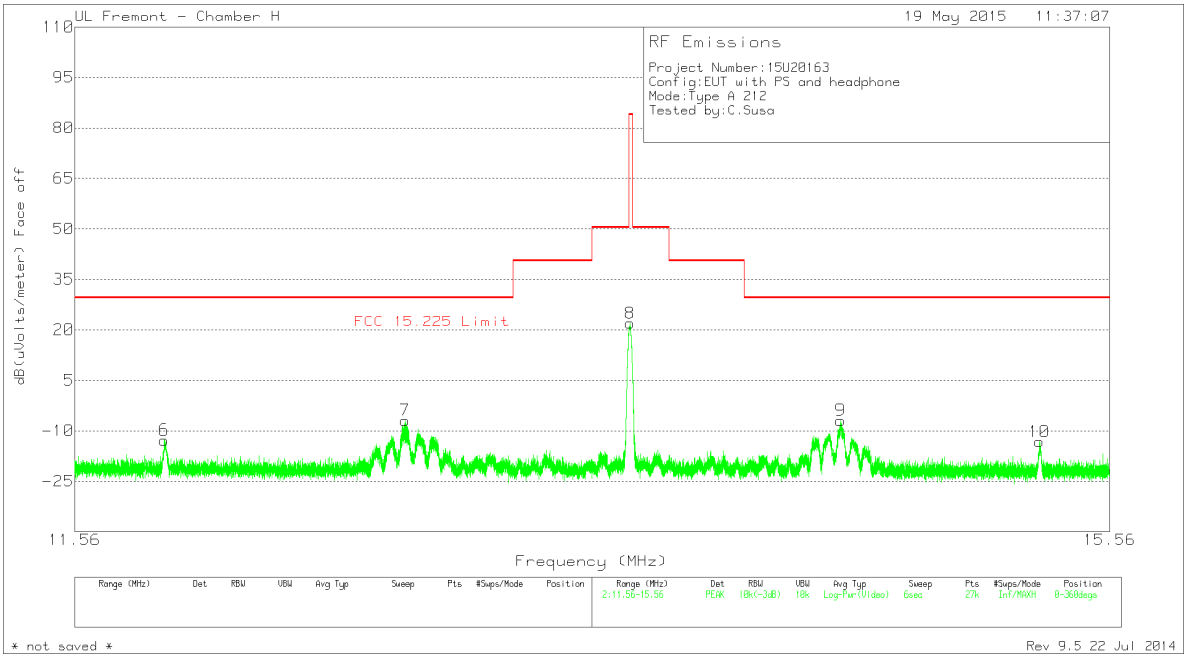


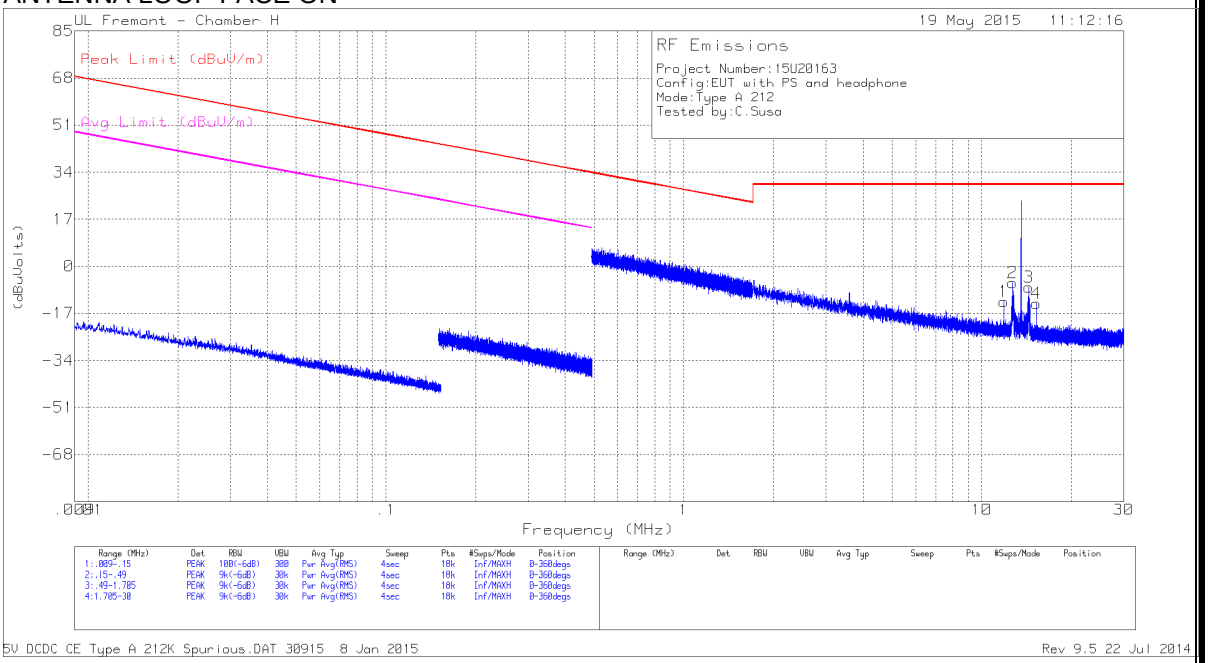
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	11.8645	17.09	PK	10.7	.5	-40	-11.71	29.54	-41.25	0-360
2	12.71275	23.21	PK	10.9	.6	-40	-5.29	29.54	-34.83	0-360
3	13.55925	53.08	PK	10.7	.6	-40	24.38	84	-59.62	0-360
4	14.41025	22.48	PK	10.6	.5	-40	-6.42	29.54	-35.96	0-360
5	15.25325	15.79	PK	10.6	.6	-40	-13.01	29.54	-42.55	0-360
6	11.86059	16.04	PK	10.7	.5	-40	-12.76	29.54	-42.3	0-360
7	12.7107	21.84	PK	10.7	.6	-40	-6.86	29.54	-36.4	0-360
8	13.55785	50.71	PK	10.7	.6	-40	22.01	84	-61.99	0-360
9	14.40293	22	PK	10.6	.5	-40	-6.9	29.54	-36.44	0-360
10	15.24846	15.59	PK	10.6	.6	-40	-13.21	29.54	-42.75	0-360

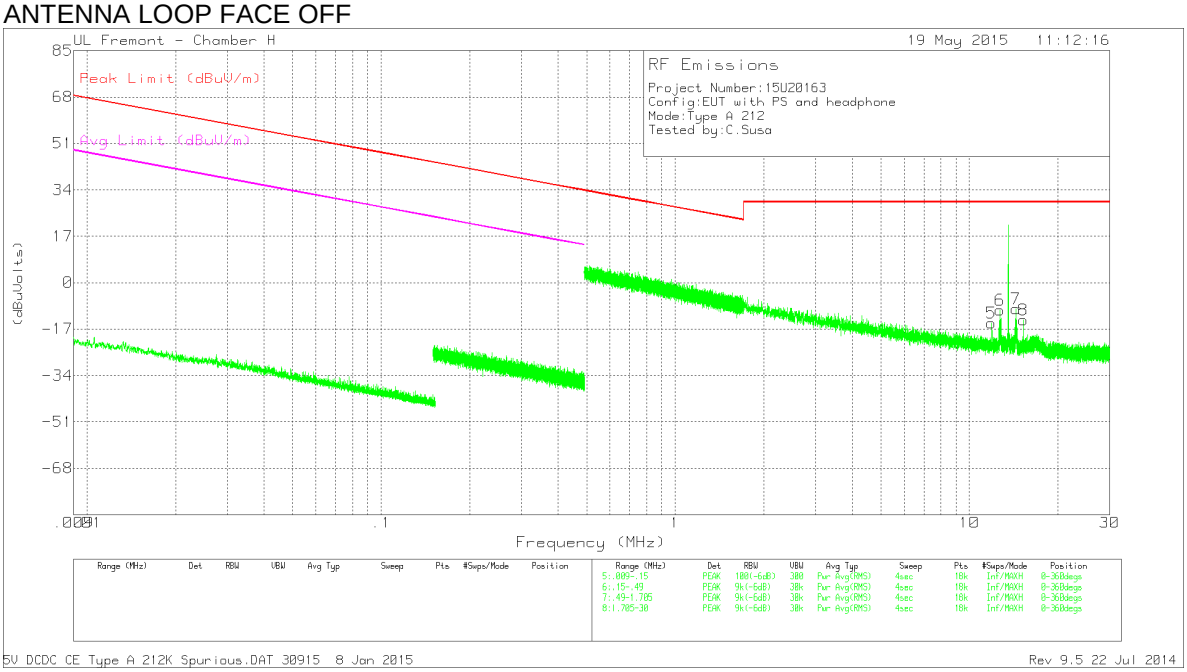
PK - Peak detector

SPURIOUS EMISSIONS 212kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



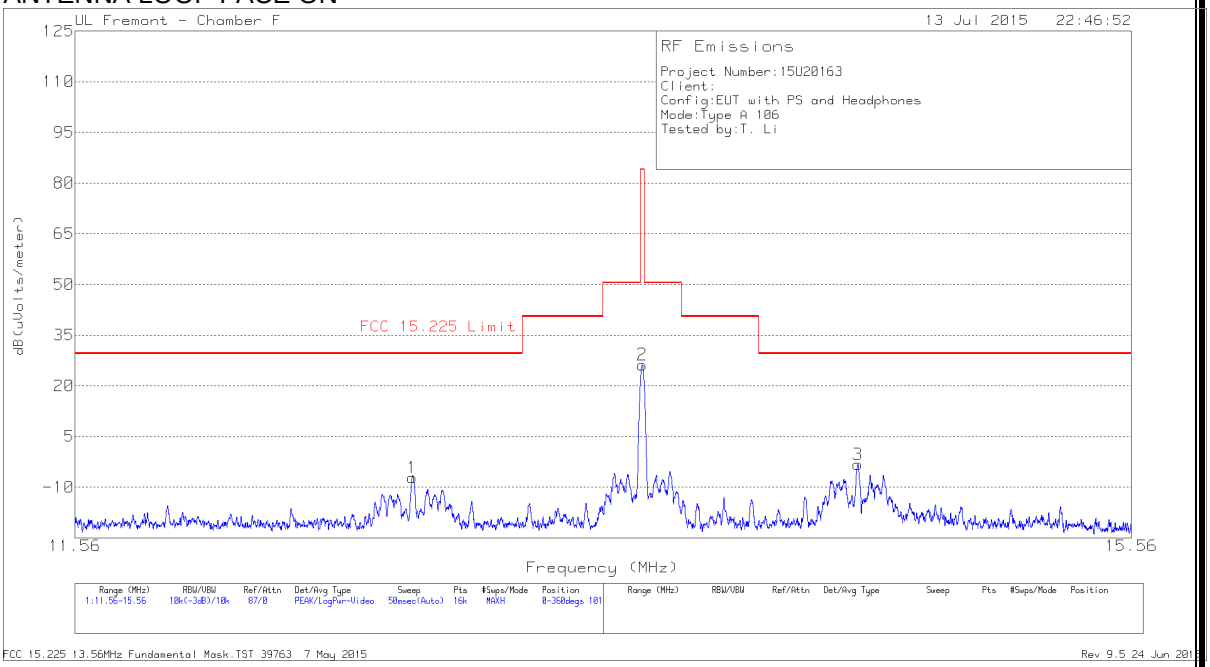
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	11.86641	16.13	PK	10.7	.5	-40	-12.67	29.54	-42.21	-	-	0-360
2	12.71372	22.33	PK	10.9	.6	-40	-6.17	29.54	-35.71	-	-	0-360
3	14.40362	21.43	PK	10.6	.5	-40	-7.47	29.54	-37.01	-	-	0-360
4	15.25407	15.47	PK	10.6	.6	-40	-13.33	29.54	-42.87	-	-	0-360
5	11.86484	14.04	PK	10.7	.5	-40	-14.76	29.54	-44.3	-	-	0-360
6	12.71214	18.71	PK	10.7	.6	-40	-9.99	29.54	-39.53	-	-	0-360
7	14.40676	19.33	PK	10.6	.5	-40	-9.57	29.54	-39.11	-	-	0-360
8	15.25564	15.06	PK	10.6	.6	-40	-13.74	29.54	-43.28	-	-	0-360

PK - Peak detector

FUNDAMENTAL 106Kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF

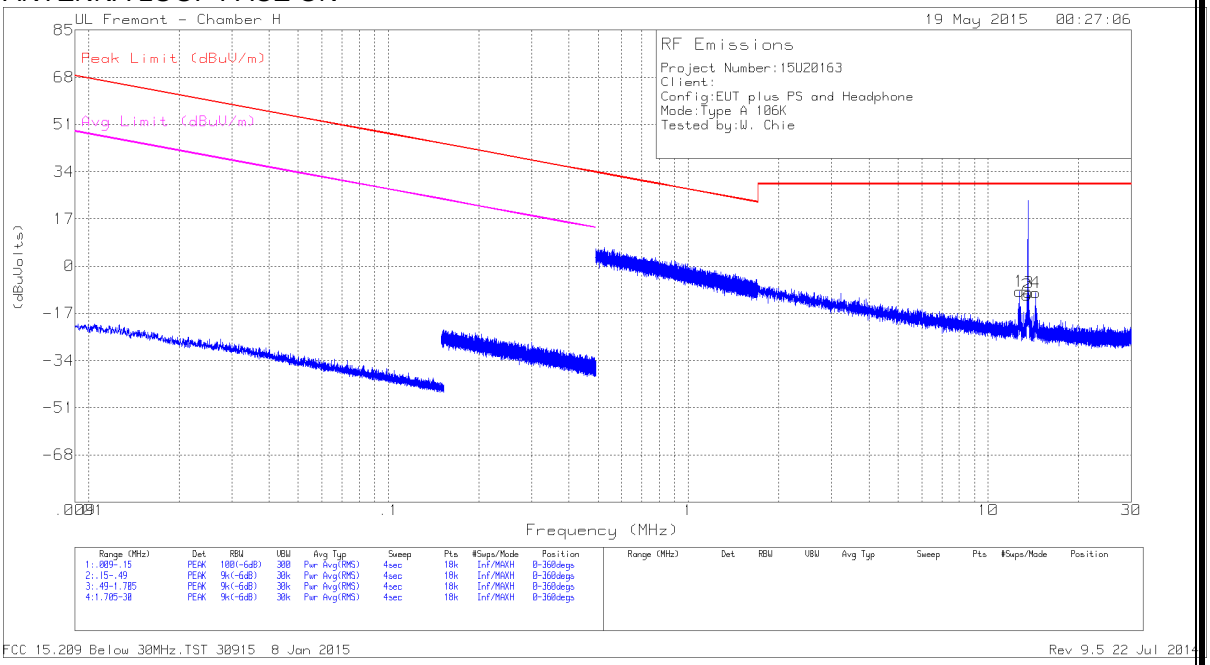
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	12.70975	22.01	Pk	10.4	.4	-40	-7.19	29.54	-36.73	0-360
2	13.56025	55.45	Pk	10.4	.4	-40	26.25	84	-57.75	0-360
3	14.40788	26.01	Pk	10.3	.4	-40	-3.29	29.54	-32.83	0-360
4	12.71144	19.6	Pk	10.4	.4	-40	-9.6	29.54	-39.14	0-360
5	13.55778	51.67	Pk	10.4	.4	-40	22.47	84	-61.53	0-360
6	14.40552	22.87	Pk	10.3	.4	-40	-6.43	29.54	-35.97	0-360

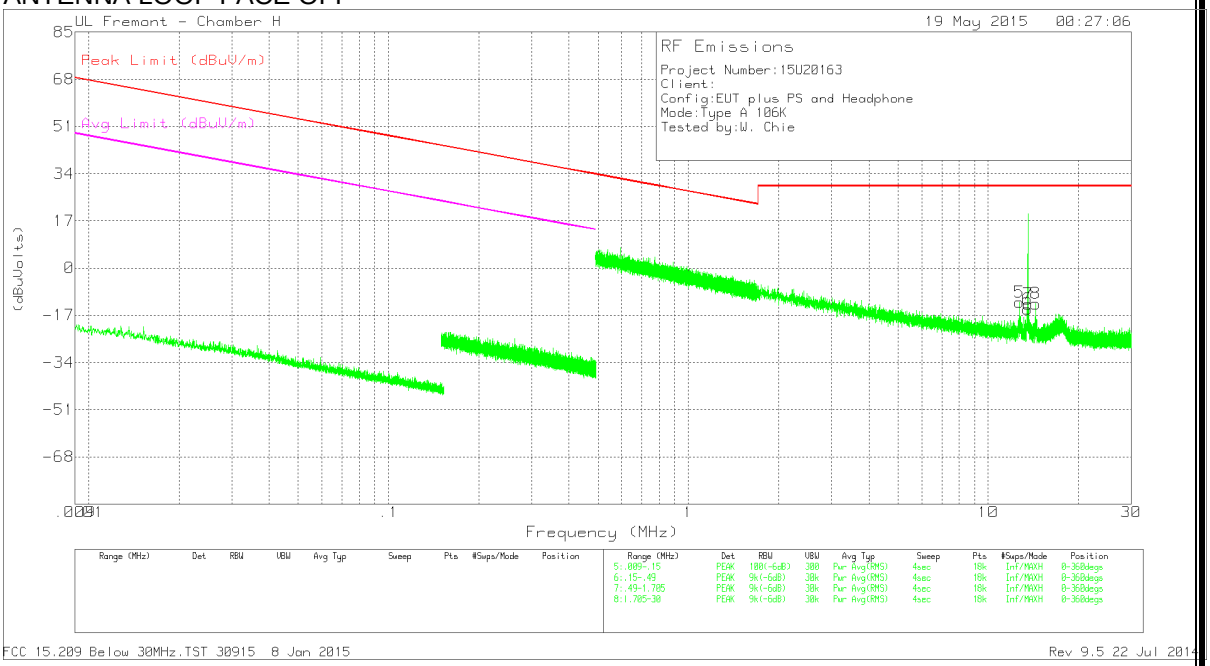
Pk - Peak detector

SPURIOUS EMISSIONS 106kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



Trace Markers

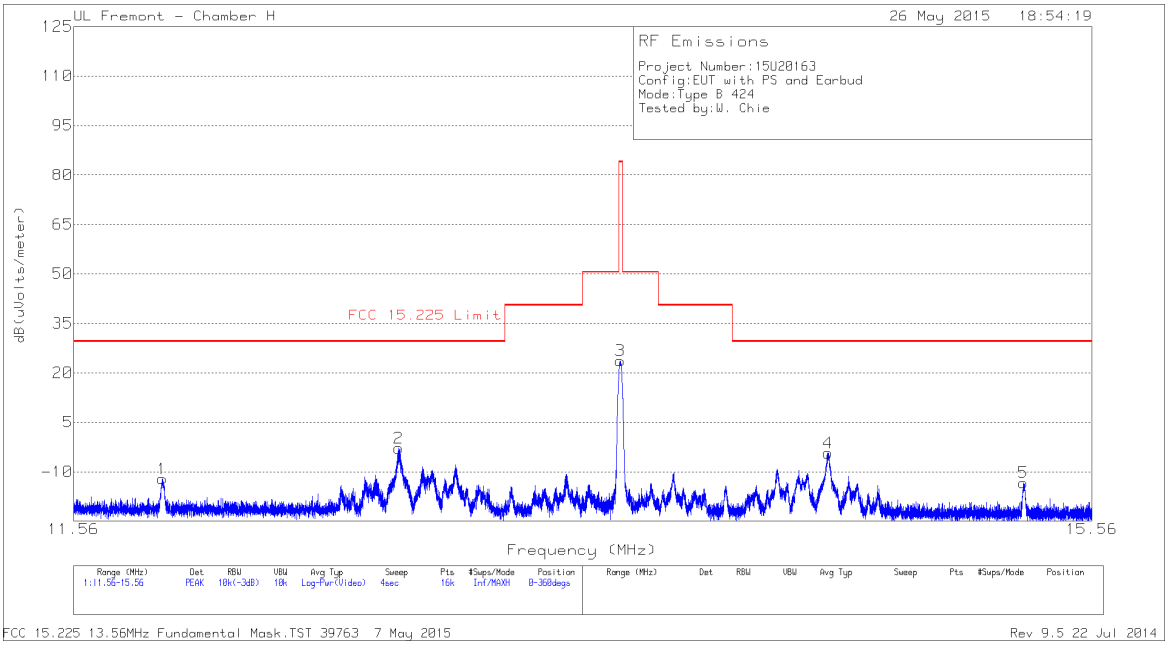
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	12.71372	19.57	PK	10.7	.6	-40	-9.13	29.54	-38.67	-	-	0-360
2	13.45098	18.27	PK	10.7	.6	-40	-10.43	29.54	-39.97	-	-	0-360
3	13.66478	19.16	PK	10.7	.6	-40	-9.54	29.54	-39.08	-	-	0-360
4	14.40833	19.21	PK	10.6	.5	-40	-9.69	29.54	-39.23	-	-	0-360
5	12.71214	16.37	PK	10.7	.6	-40	-12.33	29.54	-41.87	-	-	0-360
6	13.506	13.97	PK	10.7	.6	-40	-14.73	29.54	-44.27	-	-	0-360
7	13.61133	15.63	PK	10.7	.6	-40	-13.07	29.54	-42.61	-	-	0-360
8	14.40833	16.04	PK	10.6	.5	-40	-12.86	29.54	-42.4	-	-	0-360

PK - Peak detector

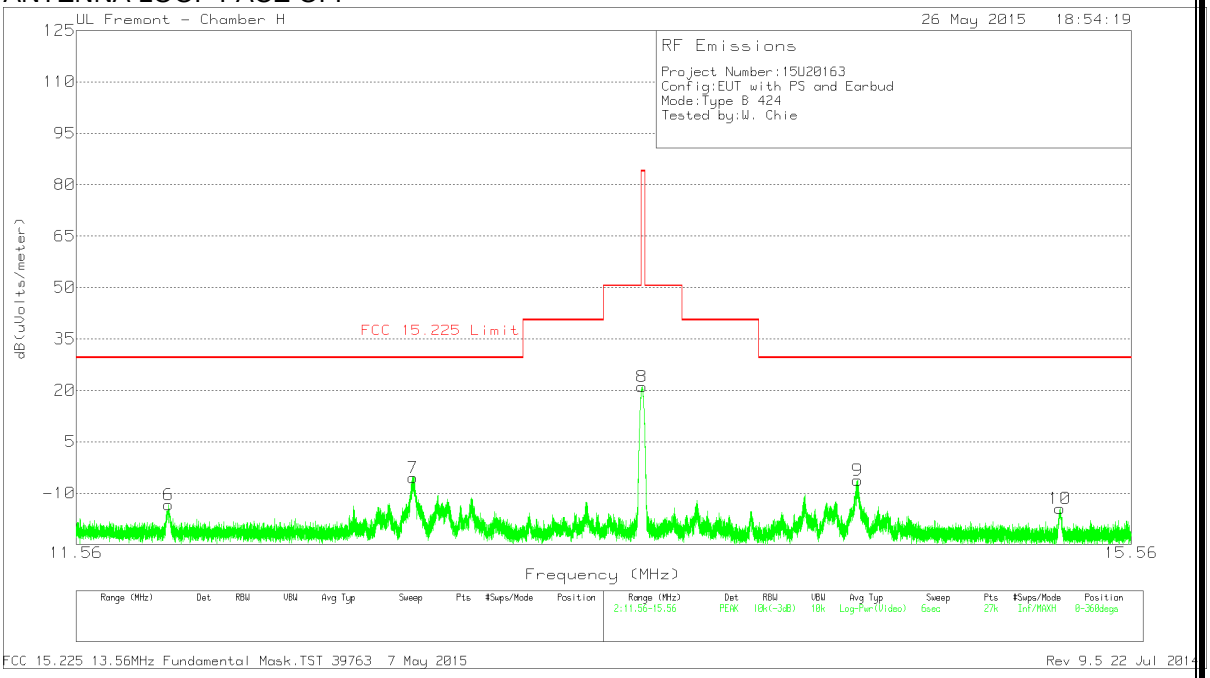
10.2.2. TYPE B

FUNDAMENTAL 424Kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



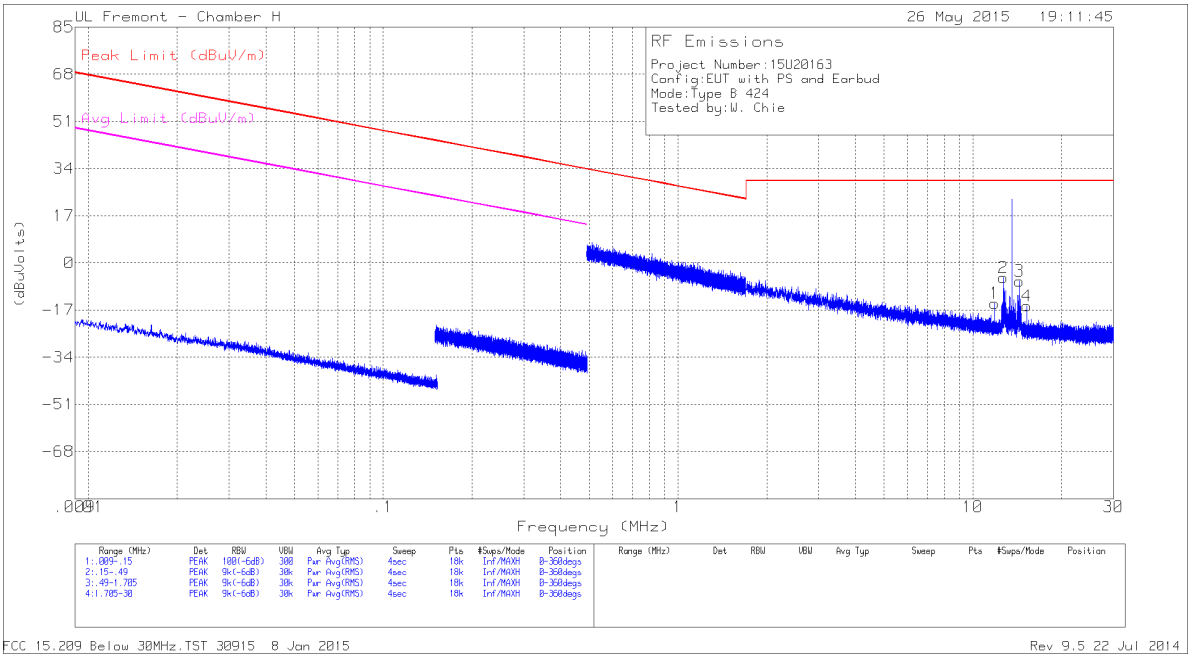
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	11.86375	16.66	PK	10.7	.5	-40	-12.14	29.54	-41.68	0-360
2	12.71025	24.81	PK	10.9	.6	-40	-3.69	29.54	-33.23	0-360
3	13.5595	52.41	PK	10.7	.6	-40	23.71	84	-60.29	0-360
4	14.40675	24.61	PK	10.6	.5	-40	-4.29	29.54	-33.83	0-360
5	15.25225	15.49	PK	10.6	.6	-40	-13.31	29.54	-42.85	0-360
6	11.86429	15.42	PK	10.7	.5	-40	-13.38	29.54	-42.92	0-360
7	12.71048	23.2	PK	10.7	.6	-40	-5.5	29.54	-35.04	0-360
8	13.55726	49.71	PK	10.7	.6	-40	21.01	84	-62.99	0-360
9	14.40574	22.64	PK	10.6	.5	-40	-6.26	29.54	-35.8	0-360
10	15.25053	14.29	PK	10.6	.6	-40	-14.51	29.54	-44.05	0-360

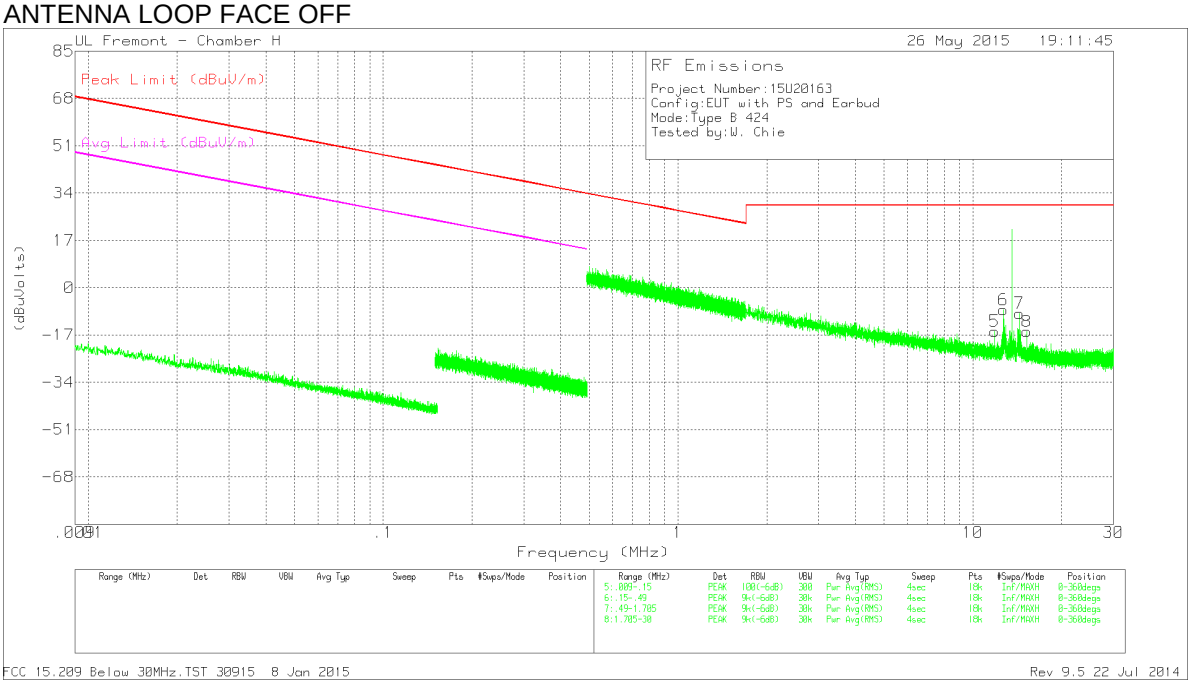
PK - Peak detector

SPURIOUS EMISSIONS 424Kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



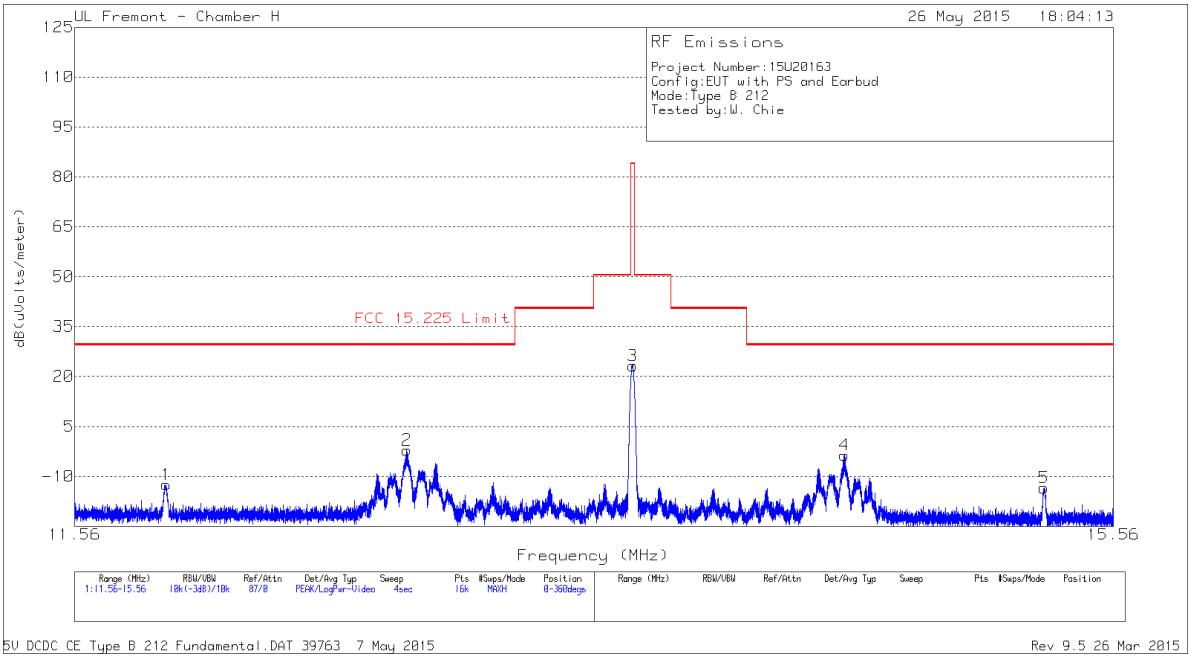
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	11.86641	14.23	PK	10.7	.5	-40	-14.57	29.54	-44.11	-	-	0-360
2	12.709	23.41	PK	10.7	.6	-40	-5.29	29.54	-34.83	-	-	0-360
3	14.40597	22.33	PK	10.6	.5	-40	-6.57	29.54	-36.11	-	-	0-360
4	15.25407	13.26	PK	10.6	.6	-40	-15.54	29.54	-45.08	-	-	0-360
5	11.86169	13.09	PK	10.7	.5	-40	-15.71	29.54	-45.25	-	-	0-360
6	12.71214	20.72	PK	10.7	.6	-40	-7.98	29.54	-37.52	-	-	0-360
7	14.40833	19.68	PK	10.6	.5	-40	-9.22	29.54	-38.76	-	-	0-360
8	15.25564	13.06	PK	10.6	.6	-40	-15.74	29.54	-45.28	-	-	0-360

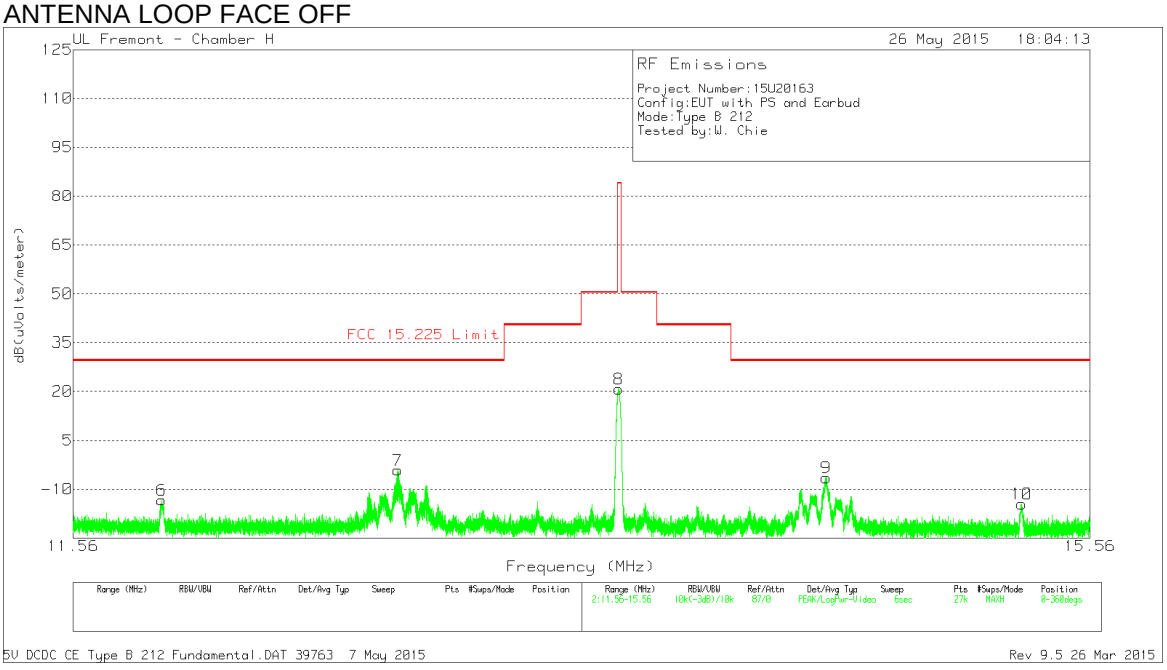
PK - Peak detector

FUNDAMENTAL 212Kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



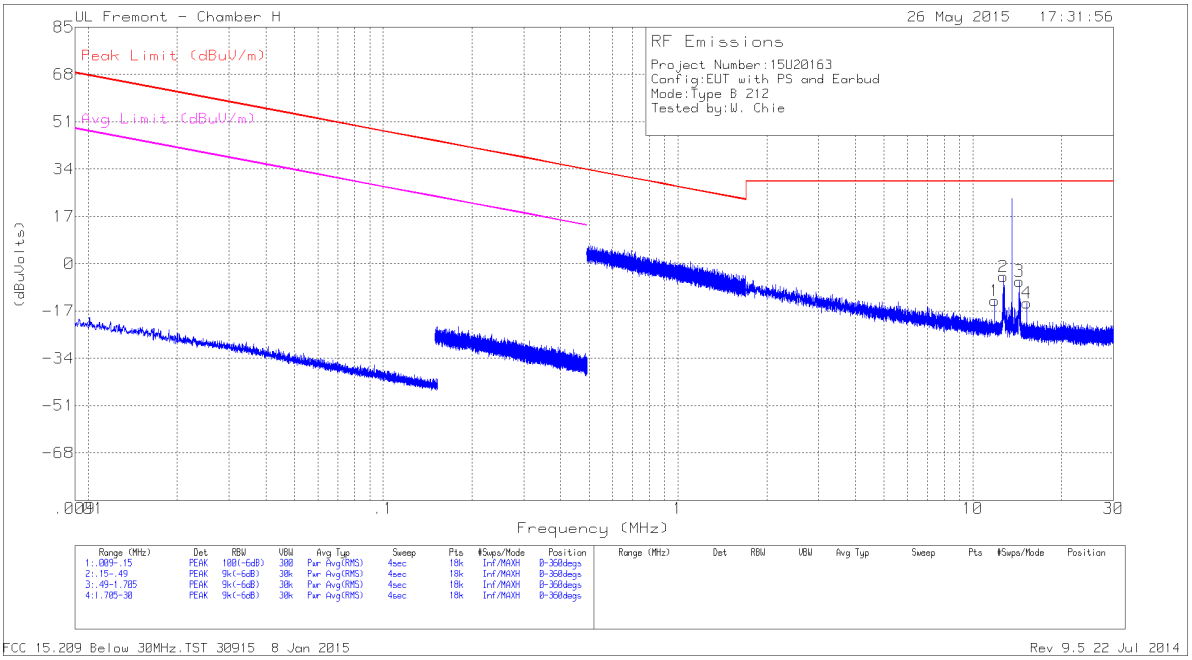
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	11.8665	16.38	PK	10.7	.5	-40	-12.42	29.54	-41.96	0-360
2	12.712	26.61	PK	10.7	.6	-40	-2.09	29.54	-31.63	0-360
3	13.5615	51.92	PK	10.7	.6	-40	23.22	84	-60.78	0-360
4	14.408	25.27	PK	10.6	.5	-40	-3.63	29.54	-33.17	0-360
5	15.25325	15.37	PK	10.6	.6	-40	-13.43	29.54	-42.97	0-360
6	11.86325	15.46	PK	10.7	.5	-40	-13.34	29.54	-42.88	0-360
7	12.71026	24.56	PK	10.7	.6	-40	-4.14	29.54	-33.68	0-360
8	13.55785	49.45	PK	10.7	.6	-40	20.75	84	-63.25	0-360
9	14.405	22.44	PK	10.6	.5	-40	-6.46	29.54	-36	0-360
10	15.25216	14.28	PK	10.6	.6	-40	-14.52	29.54	-44.06	0-360

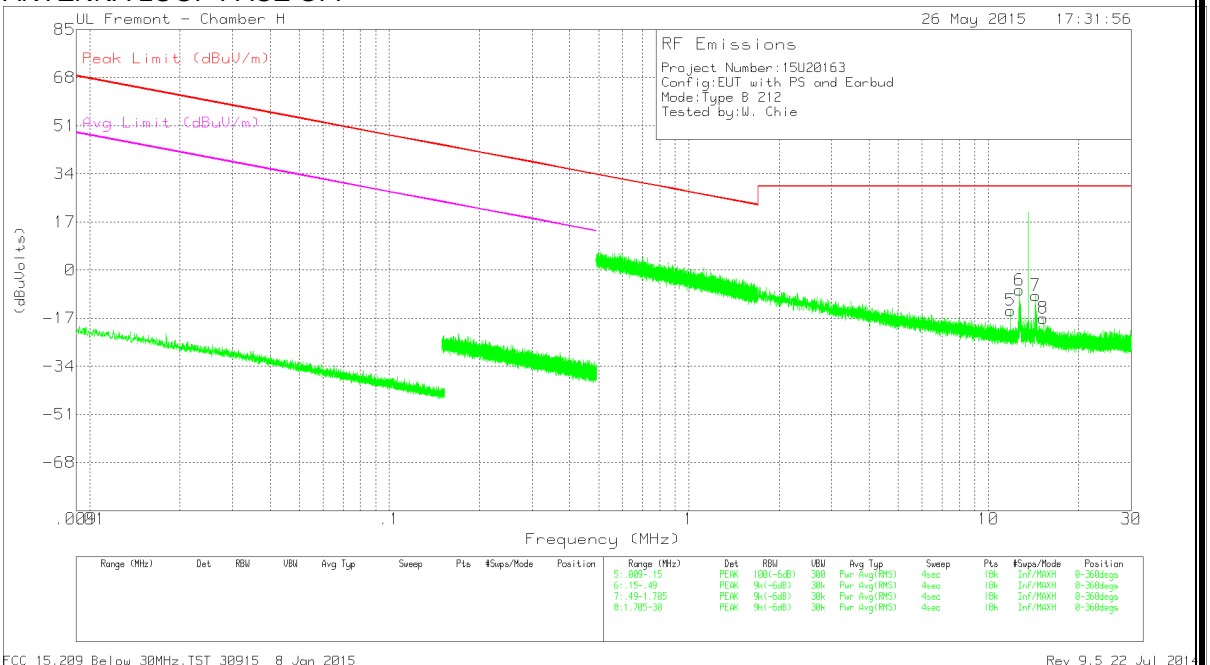
PK - Peak detector

SPURIOUS EMISSIONS 212Kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



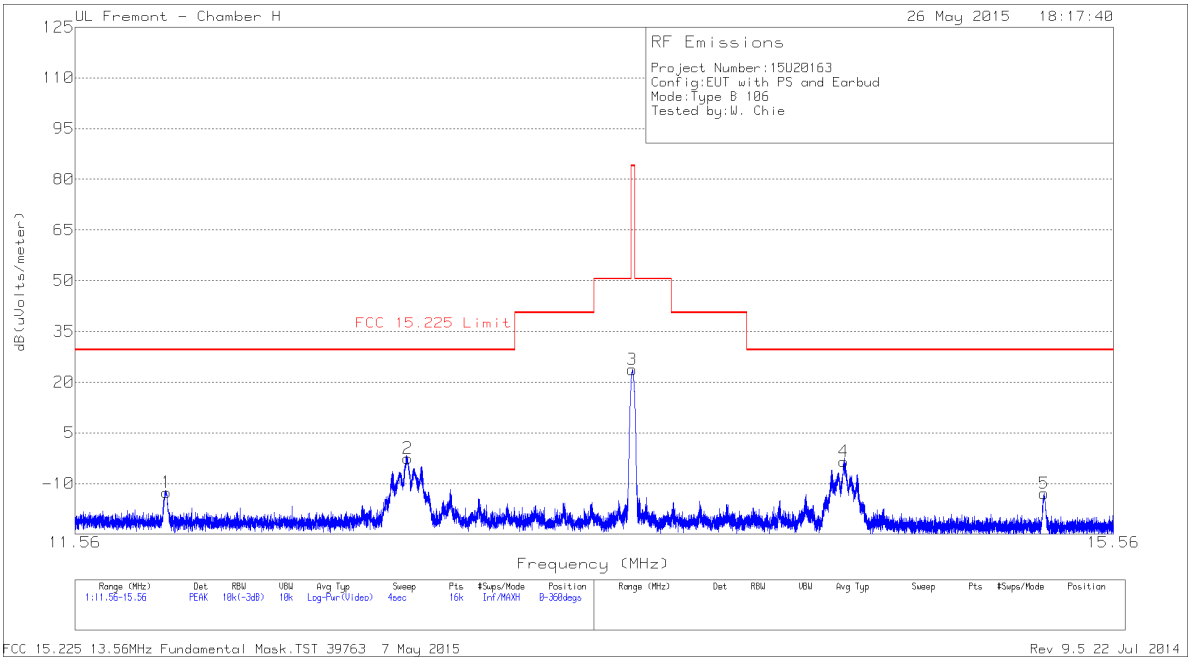
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	11.86484	15.47	PK	10.7	.5	-40	-13.33	29.54	-42.87	-	-	0-360
2	12.71057	23.75	PK	10.9	.6	-40	-4.75	29.54	-34.29	-	-	0-360
5	11.86326	14.49	PK	10.7	.5	-40	-14.31	29.54	-43.85	-	-	0-360
3	14.40362	22.58	PK	10.6	.5	-40	-6.32	29.54	-35.86	-	-	0-360
4	15.25407	14.69	PK	10.6	.6	-40	-14.11	29.54	-43.65	-	-	0-360
6	12.709	21.61	PK	10.7	.6	-40	-7.09	29.54	-36.63	-	-	0-360
7	14.40519	19.86	PK	10.6	.5	-40	-9.04	29.54	-38.58	-	-	0-360
8	15.25407	11.82	PK	10.6	.6	-40	-16.98	29.54	-46.52	-	-	0-360

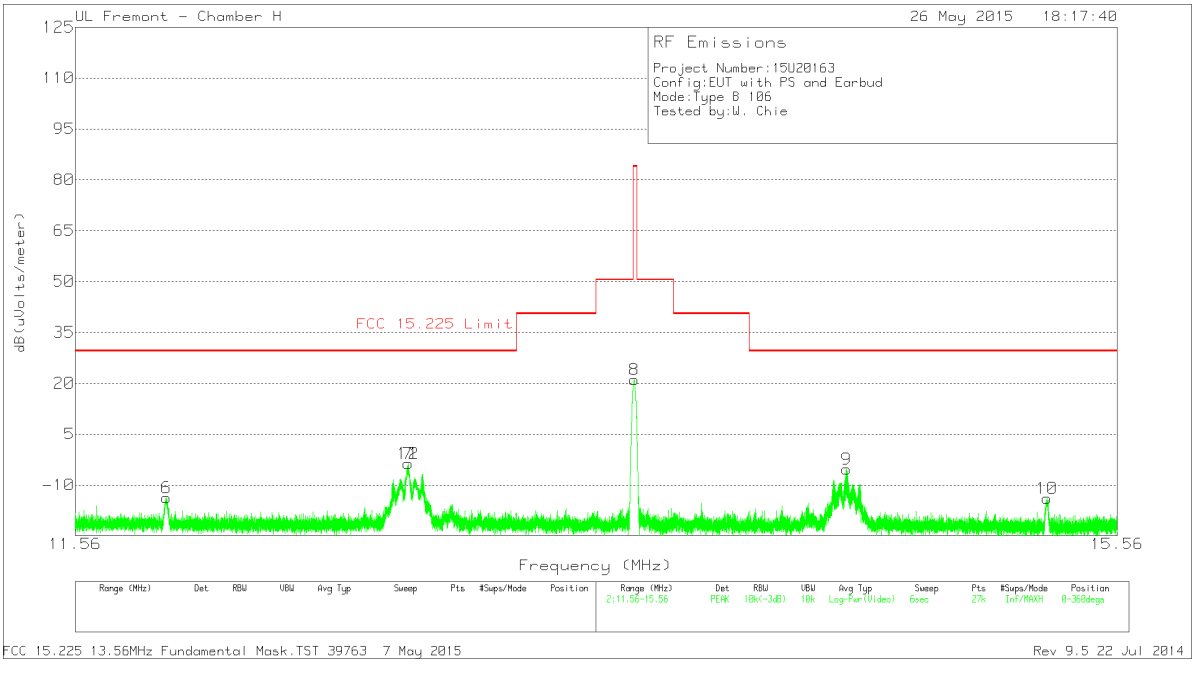
PK - Peak detector

FUNDAMENTAL 106Kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



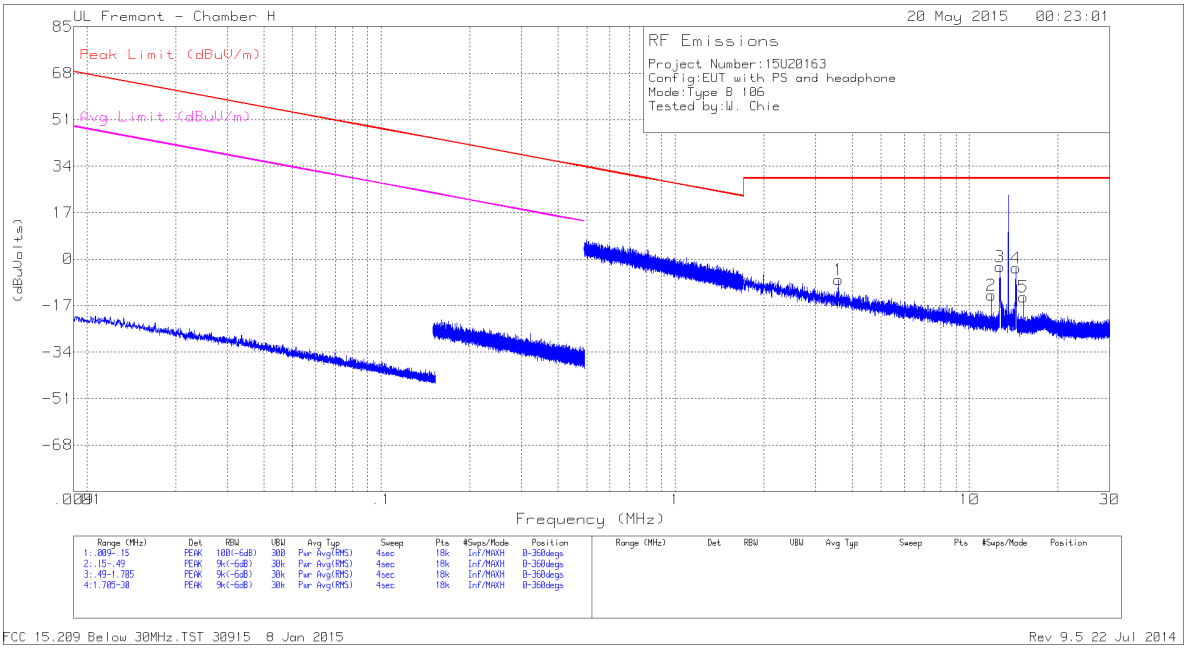
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	11.86675	16.17	PK	10.7	.5	-40	-12.63	29.54	-42.17	0-360
2	12.71525	26.15	PK	10.7	.6	-40	-2.55	29.54	-32.09	0-360
3	13.55925	52.43	PK	10.7	.6	-40	23.73	84	-60.27	0-360
4	14.405	25.42	PK	10.6	.5	-40	-3.48	29.54	-33.02	0-360
5	15.2535	15.89	PK	10.6	.6	-40	-12.91	29.54	-42.45	0-360
6	11.86458	15.03	PK	10.7	.5	-40	-13.77	29.54	-43.31	0-360
7	12.71159	25	PK	10.7	.6	-40	-3.7	29.54	-33.24	0-360
8	13.55778	49.75	PK	10.7	.6	-40	21.05	84	-62.95	0-360
9	14.40486	23.52	PK	10.6	.5	-40	-5.38	29.54	-34.92	0-360
10	15.25082	14.82	PK	10.6	.6	-40	-13.98	29.54	-43.52	0-360
11	12.71159	25	PK	10.7	.6	-40	-3.7	29.54	-33.24	0-360
12	12.71159	25	PK	10.7	.6	-40	-3.7	29.54	-33.24	0-360

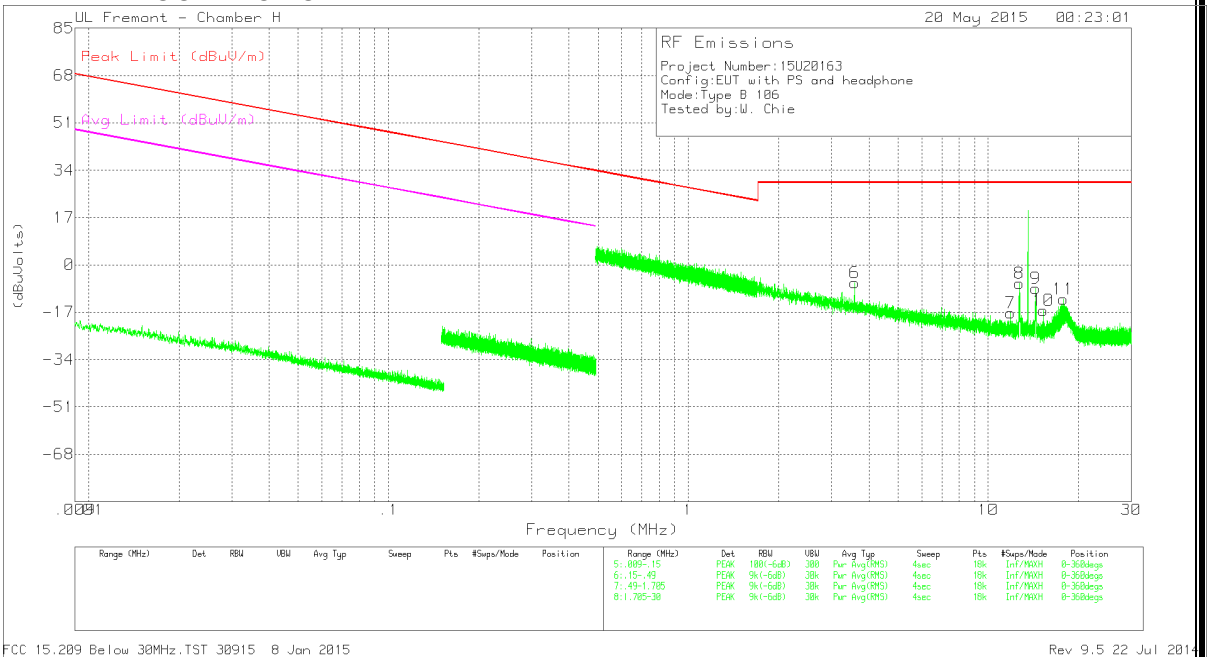
PK - Peak detector

SPURIOUS EMISSIONS 106Kbps

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	3.57882	21.19	PK	10.9	.3	-40	-7.61	29.54	-37.15	-	-	0-360
2	11.86484	15.55	PK	10.7	.5	-40	-13.25	29.54	-42.79	-	-	0-360
3	12.71057	25.52	PK	10.9	.6	-40	-2.98	29.54	-32.52	-	-	0-360
4	14.40676	25.65	PK	10.6	.5	-40	-3.25	29.54	-32.79	-	-	0-360
5	15.25564	15.03	PK	10.6	.6	-40	-13.77	29.54	-43.31	-	-	0-360
6	3.5804	22.35	PK	10.9	.3	-40	-6.45	29.54	-35.99	-	-	0-360
7	11.86484	11.56	PK	10.7	.5	-40	-17.24	29.54	-46.78	-	-	0-360
8	12.71057	22.03	PK	10.7	.6	-40	-6.67	29.54	-36.21	-	-	0-360
9	14.40833	20.52	PK	10.6	.5	-40	-8.38	29.54	-37.92	-	-	0-360
10	15.25407	12.46	PK	10.6	.6	-40	-16.34	29.54	-45.88	-	-	0-360
11	17.818	16.81	PK	10.3	.6	-40	-12.29	29.54	-41.83	-	-	0-360

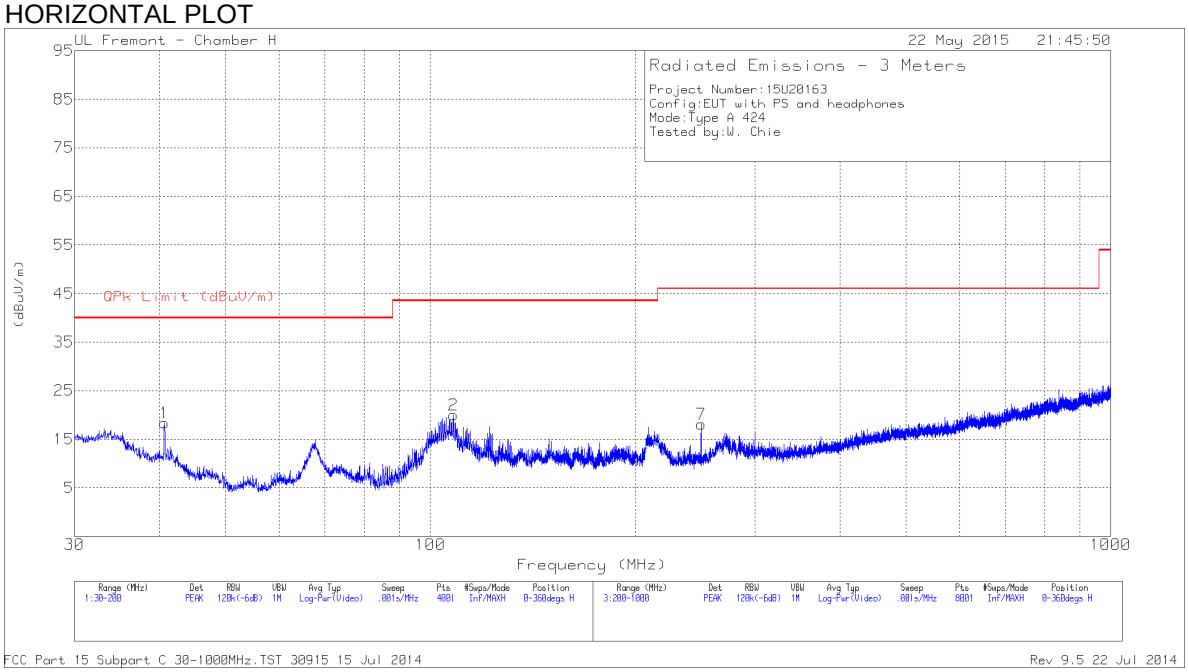
PK - Peak detector

10.3. TX SPURIOUS EMISSION 30 TO 1000 MHz

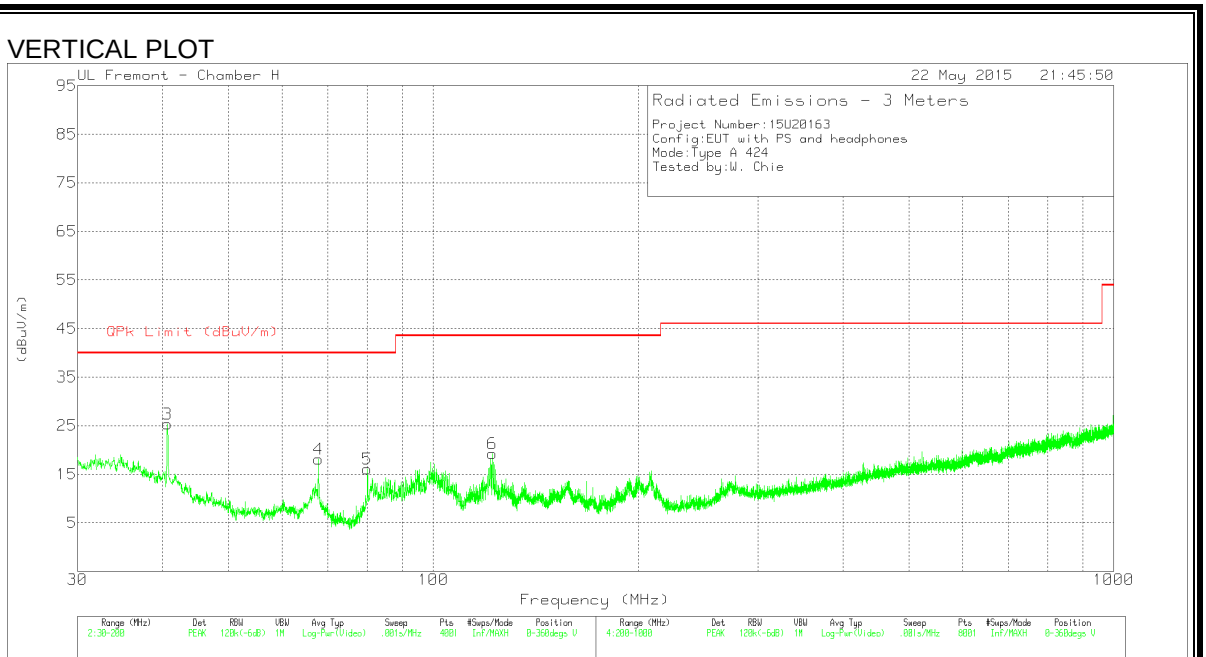
10.3.1. TYPE A

424Kbps

HORIZONTAL PLOT



VERTICAL PLOT



Trace Markers

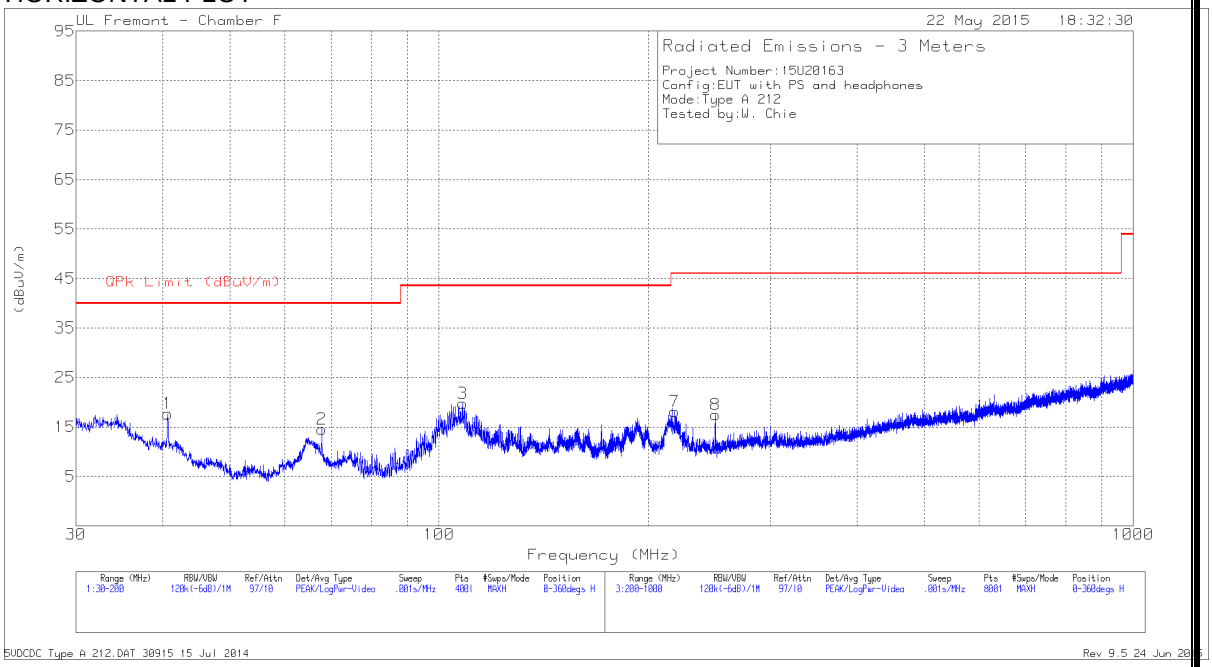
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.71	35.49	PK	14.1	-31.2	18.39	40	-21.61	0-360	400	H
2	* 108.115	38.34	PK	12.1	-30.4	20.04	43.52	-23.48	0-360	301	H
3	40.6675	42.4	PK	14.1	-31.2	25.3	40	-14.7	0-360	100	V
4	67.7825	40.38	PK	8.5	-30.8	18.08	40	-21.92	0-360	100	V
5	80.0225	38.94	PK	7.8	-30.7	16.04	40	-23.96	0-360	100	V
6	* 122.0125	35.8	PK	13.7	-30.3	19.2	43.52	-24.32	0-360	100	V
7	* 250	36.09	PK	11.4	-29.4	18.09	46.02	-27.93	0-360	100	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

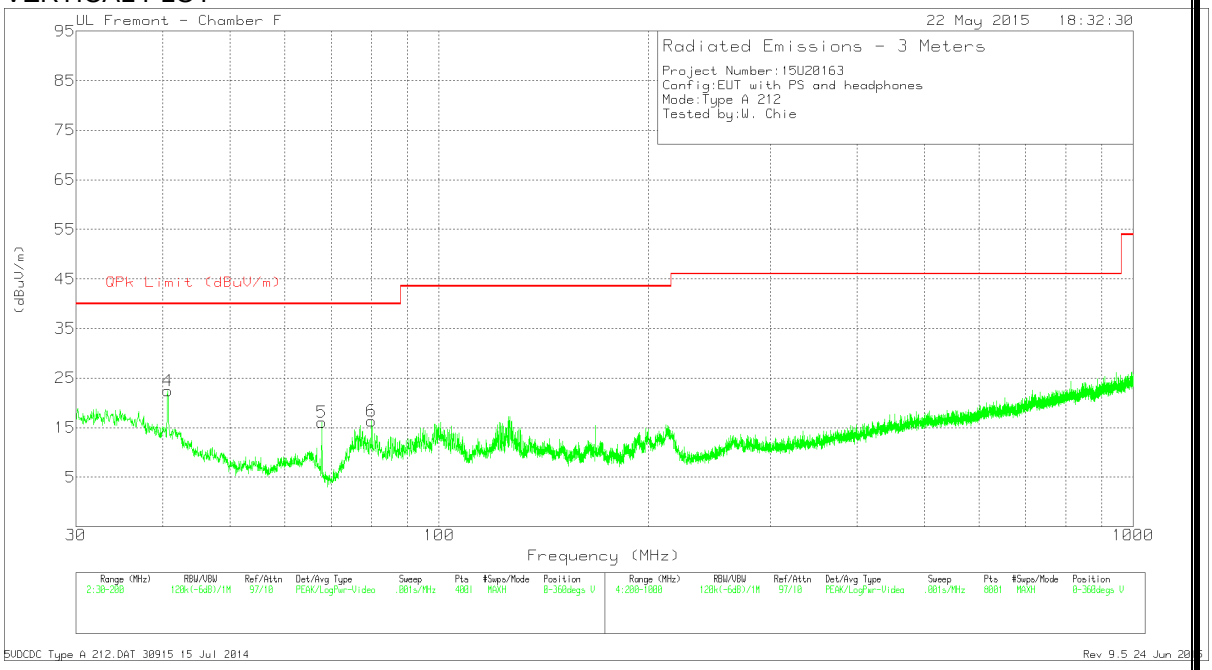
PK - Peak detector

212Kbps

HORIZONTAL PLOT



VERTICAL PLOT



Trace Markers

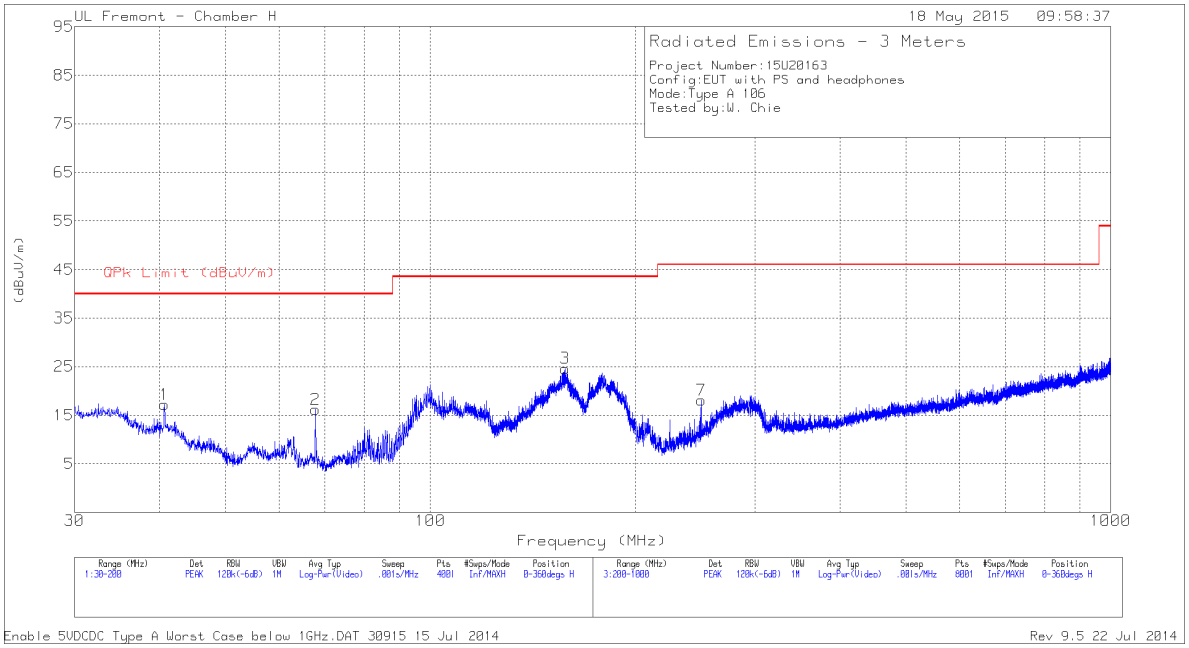
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.6675	34.77	Pk	14.1	-31.2	17.67	40	-22.33	0-360	400	H
2	67.7825	36.84	Pk	8.5	-30.8	14.54	40	-25.46	0-360	301	H
3	* 108.115	38.04	Pk	12.1	-30.4	19.74	43.52	-23.78	0-360	301	H
4	40.6675	39.49	Pk	14.1	-31.2	22.39	40	-17.61	0-360	100	V
5	67.7825	38.35	Pk	8.5	-30.8	16.05	40	-23.95	0-360	100	V
6	79.98	39.22	Pk	7.8	-30.7	16.32	40	-23.68	0-360	100	V
7	218.7	37.17	Pk	10.5	-29.6	18.07	46.02	-27.95	0-360	100	H
8	* 250	35.43	Pk	11.4	-29.4	17.43	46.02	-28.59	0-360	100	H

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

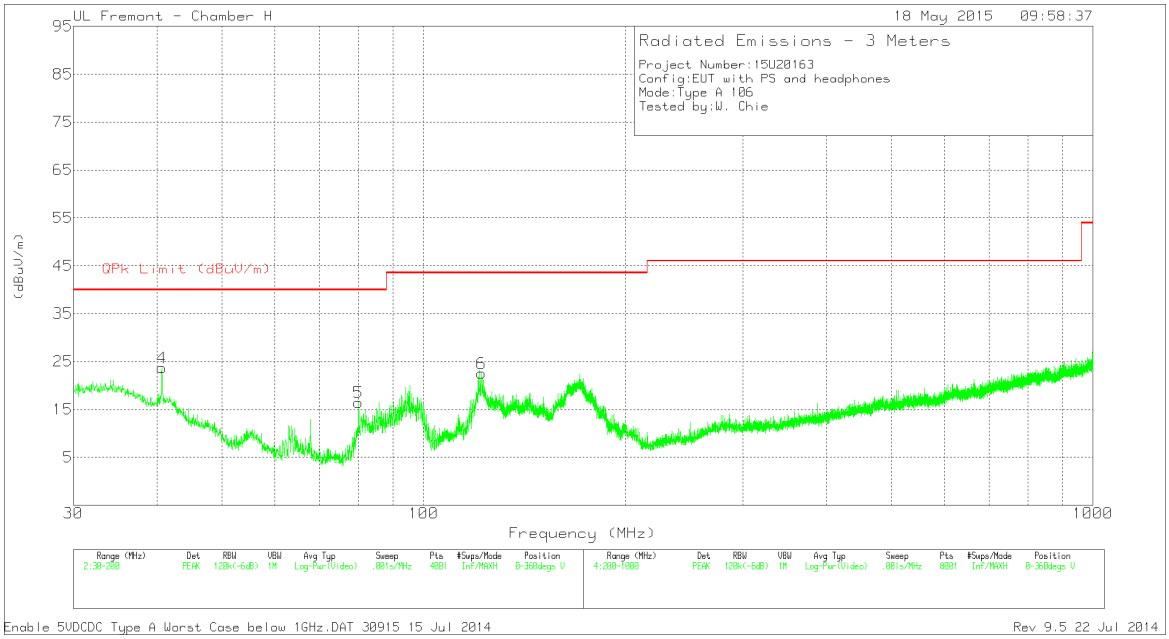
Pk - Peak detector

106Kbps

HORIZONTAL PLOT



VERTICAL PLOT



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.6675	34.33	PK	14.1	-31.2	17.23	40	-22.77	0-360	301	H
2	67.7825	38.47	PK	8.5	-30.8	16.17	40	-23.83	0-360	301	H
3	157.755	42.55	PK	12.1	-30	24.65	43.52	-18.87	0-360	201	H
4	40.6675	40.82	PK	14.1	-31.2	23.72	40	-16.28	0-360	103	V
5	80.0225	39.31	PK	7.8	-30.7	16.41	40	-23.59	0-360	103	V
6	* 122.055	39.13	PK	13.7	-30.3	22.53	43.52	-20.99	0-360	103	V
7	* 250	36.09	PK	11.4	-29.4	18.09	46.02	-27.93	0-360	103	H

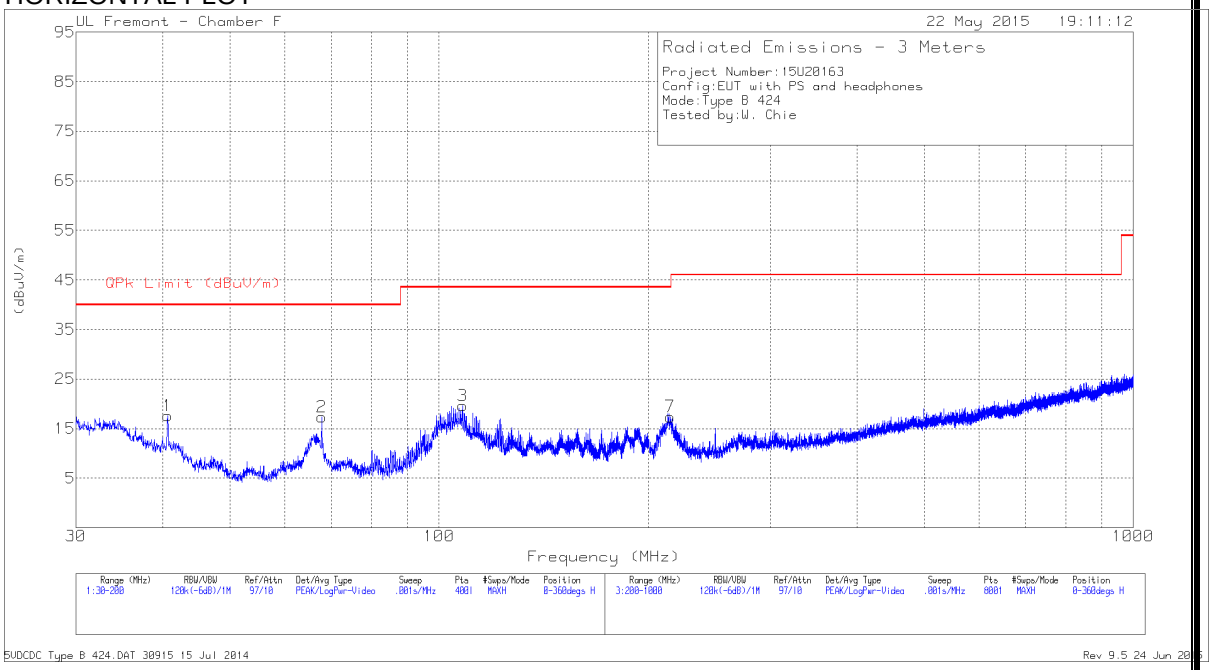
* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

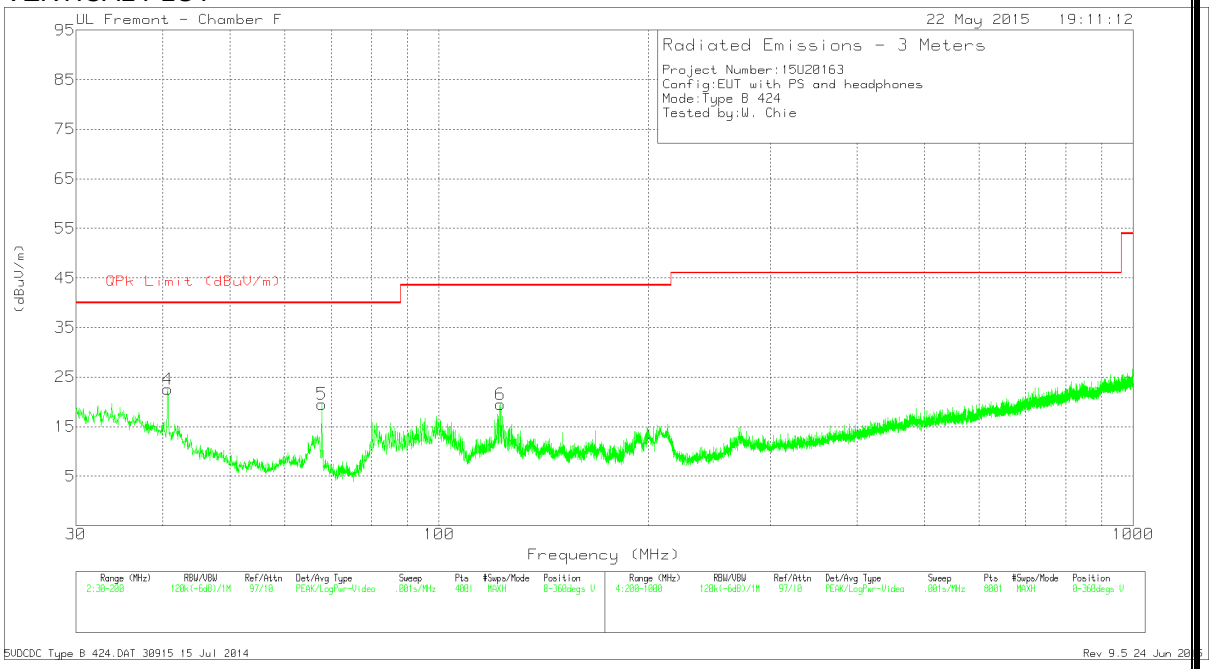
10.3.2. TYPE B

424Kbps

HORIZONTAL PLOT



VERTICAL PLOT



Trace Markers

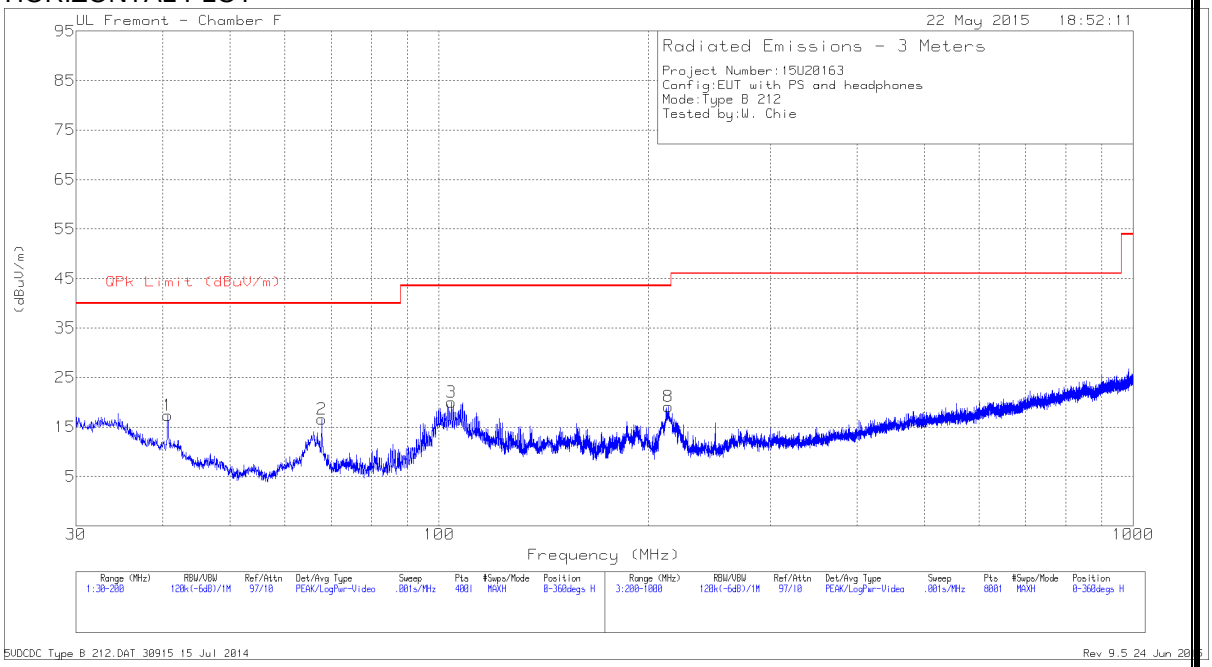
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.71	34.66	Pk	14.1	-31.2	17.56	40	-22.44	0-360	400	H
2	67.825	39.6	Pk	8.5	-30.8	17.3	40	-22.7	0-360	400	H
3	* 108.115	37.9	Pk	12.1	-30.4	19.6	43.52	-23.92	0-360	301	H
4	40.6675	39.68	Pk	14.1	-31.2	22.58	40	-17.42	0-360	100	V
5	67.7825	41.87	Pk	8.5	-30.8	19.57	40	-20.43	0-360	100	V
6	* 122.6925	36.06	Pk	13.8	-30.3	19.56	43.52	-23.96	0-360	100	V
7	215.4	36.61	Pk	10.4	-29.6	17.41	43.52	-26.11	0-360	100	H

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

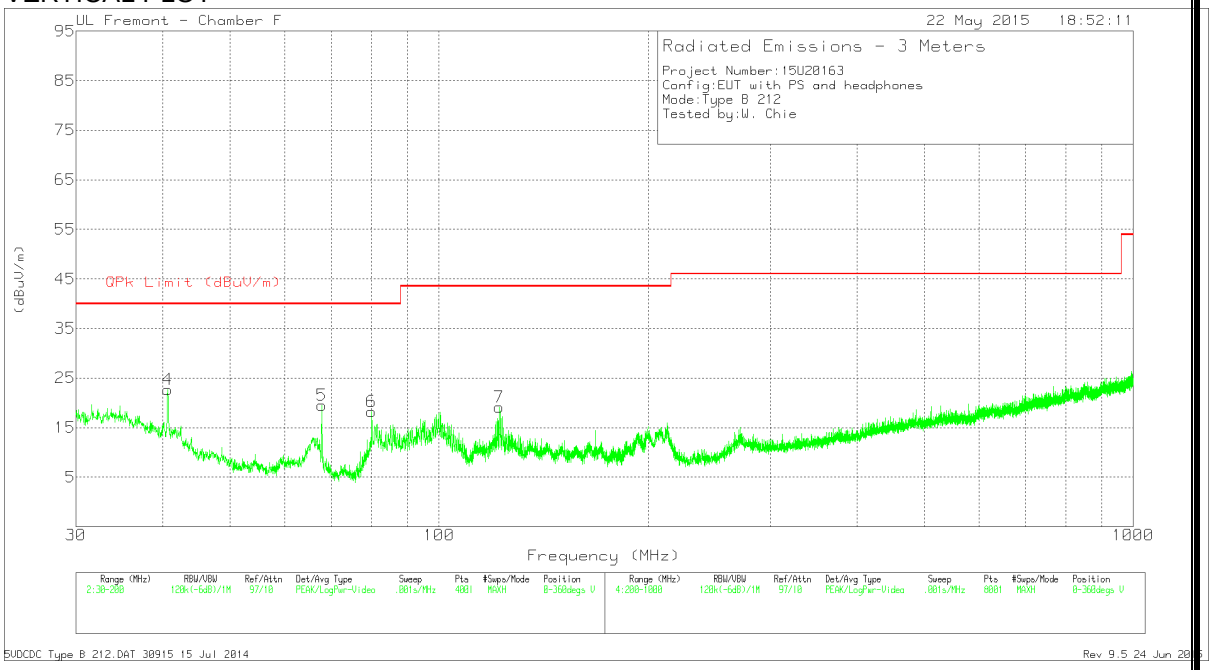
Pk - Peak detector

212Kbps

HORIZONTAL PLOT



VERTICAL PLOT



Trace Markers

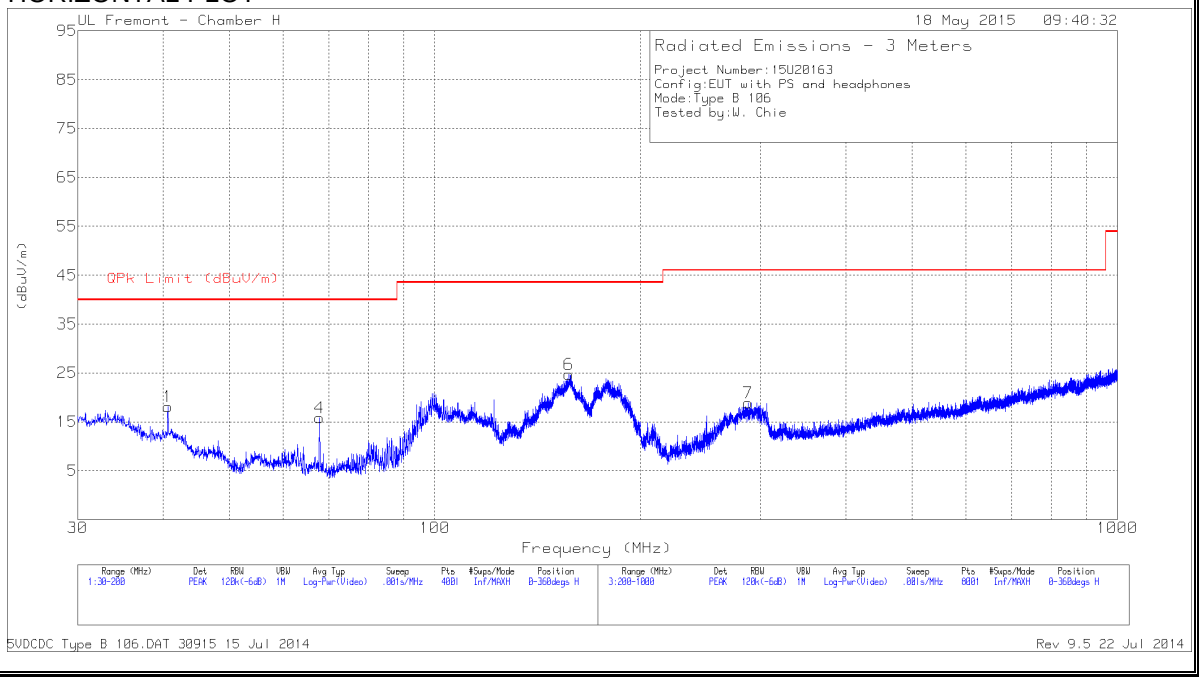
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.71	34.41	Pk	14.1	-31.2	17.31	40	-22.69	0-360	301	H
2	67.7825	38.92	Pk	8.5	-30.8	16.62	40	-23.38	0-360	400	H
3	104.29	39.43	Pk	11.1	-30.5	20.03	43.52	-23.49	0-360	301	H
4	40.71	39.75	Pk	14.1	-31.2	22.65	40	-17.35	0-360	100	V
5	67.7825	41.84	Pk	8.5	-30.8	19.54	40	-20.46	0-360	100	V
6	80.0225	41.09	Pk	7.8	-30.7	18.19	40	-21.81	0-360	100	V
7	* 122.0125	35.74	Pk	13.7	-30.3	19.14	43.52	-24.38	0-360	100	V
8	213.8	38.35	Pk	10.4	-29.6	19.15	43.52	-24.37	0-360	100	H

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

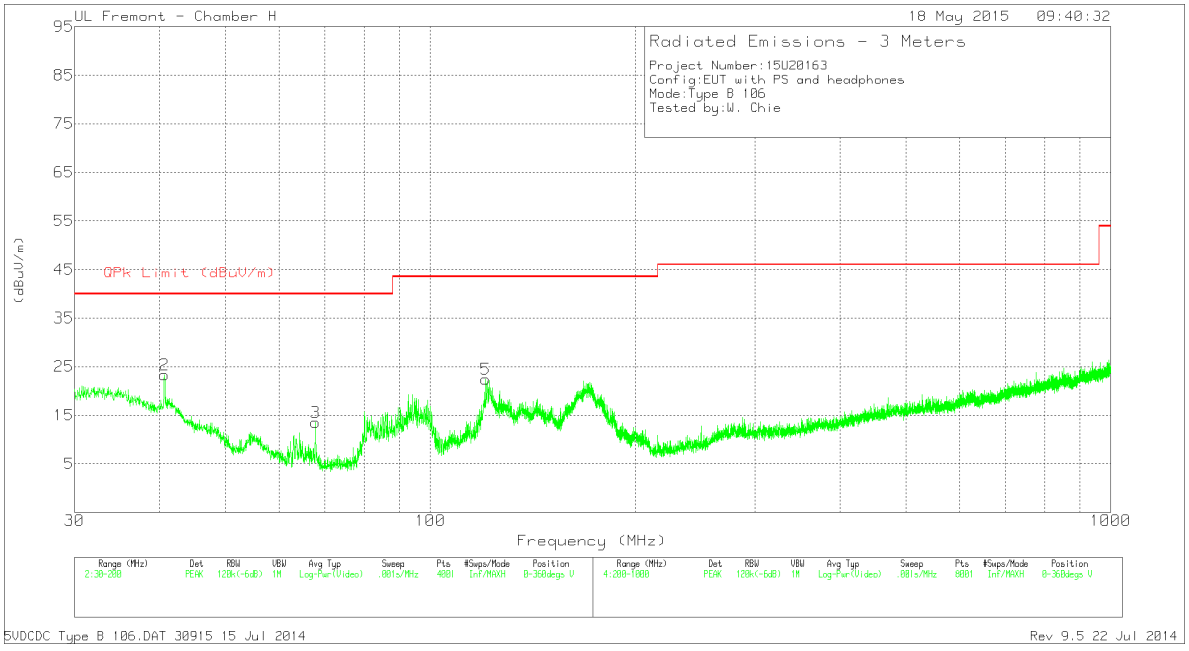
Pk - Peak detector

106Kbps

HORIZONTAL PLOT



VERTICAL PLOT



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.6675	35.24	PK	14.1	-31.2	18.14	40	-21.86	0-360	399	H
2	40.71	40.47	PK	14.1	-31.2	23.37	40	-16.63	0-360	100	V
3	67.7825	35.81	PK	8.5	-30.8	13.51	40	-26.49	0-360	100	V
4	67.7825	38.17	PK	8.5	-30.8	15.87	40	-24.13	0-360	201	H
5	* 120.695	39.06	PK	13.7	-30.3	22.46	43.52	-21.06	0-360	100	V
6	157.2025	42.62	PK	12.1	-30	24.72	43.52	-18.8	0-360	201	H
7	287.8	34.63	PK	13.4	-29.1	18.93	46.02	-27.09	0-360	100	H

* - indicates frequency in CFR 47, Part 15 and Industry Canada RSS-Restricted Band.

PK - Peak detector

11. FREQUENCY STABILITY (MODEL: A1634)

LIMIT

§15.225 (e) The frequency tolerance of the carrier signal shall be maintained within ±0.01% of the operating frequency, over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

TEST PROCEDURE

ANSI C63.10 Clause 6.8

RESULTS

11.1. TYPE A

424Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20ºC Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measureed with Time Elapse								
(Vdc)	(ºC)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592194	6.627	13.5592193	6.632	13.5592192	6.640	13.5592132	7.082	± 100
3.80	40	13.5592384	5.222	13.5592379	5.258	13.5592377	5.276	13.5592376	5.285	± 100
3.80	30	13.5592932	1.180	13.5592919	1.275	13.5592909	1.352	13.5592892	1.480	± 100
3.80	***20***	***13.5593092***	***0.000***	***13.5593094***	***-0.015***	***13.5593092***	***0.005***	***13.5593090***	***0.014***	***± 100***
3.80	10	13.5593452	-2.650	13.5593451	-2.649	13.5593451	-2.647	13.5593451	-2.645	± 100
3.80	0	13.5593669	-4.251	13.5593667	-4.240	13.5593667	-4.236	13.5593666	-4.233	± 100
3.80	-10	13.5593675	-4.299	13.5593676	-4.304	13.5593675	-4.295	13.5593675	-4.294	± 100
3.80	-20	13.5593516	-3.128	13.5593421	-2.423	13.5593420	-2.420	13.5593419	-2.410	± 100
3.23	20	13.5593090	0.016	13.5593089	0.021	13.5593089	0.025	13.5593088	0.029	± 100
4.37	20	13.5593081	0.085	13.5593092	0.002	13.5593104	-0.090	13.5593105	-0.097	± 100

212Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20ºC Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measureed with Time Elapse								
(Vdc)	(ºC)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592194	4.291	13.5592193	4.292	13.5592133	4.735	13.5592193	4.292	± 100
3.80	40	13.5592380	2.913	13.5592381	2.906	13.5592384	2.887	13.5592384	2.886	± 100
3.80	30	13.5592594	1.340	13.5592600	1.295	13.5592604	1.268	13.5592610	1.222	± 100
3.80	***20***	***13.5592775***	***0.000***	***13.5592792***	***-0.125***	***13.5592802***	***-0.198***	***13.5592812***	***-0.270***	***± 100***
3.80	10	13.5593395	-4.572	13.5593395	-4.568	13.5593395	-4.570	13.5593395	-4.571	± 100
3.80	0	13.5593398	-4.590	13.5593404	-4.633	13.5593404	-4.633	13.5593405	-4.646	± 100
3.80	-10	13.5593672	-6.613	13.5593673	-6.617	13.5593673	-6.618	13.5593673	-6.617	± 100
3.80	-20	13.5593427	-4.807	13.5593427	-4.804	13.5593427	-4.803	13.5593424	-4.786	± 100
3.23	20	13.5592875	-0.735	13.5592886	-0.814	13.5592889	-0.838	13.5592924	-1.092	± 100
4.37	20	13.5592874	-0.728	13.5592881	-0.780	13.5592914	-1.019	13.5592927	-1.116	± 100

106Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20ºC Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measureed with Time Elapse								
(Vdc)	(ºC)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592193	7.399	13.5592193	7.401	13.5592193	7.401	13.5592193	7.399	± 100
3.80	40	13.5592452	5.493	13.5592451	5.499	13.5592450	5.508	13.5592449	5.518	± 100
3.80	30	13.5592882	2.324	13.5592889	2.269	13.5592886	2.293	13.5592883	2.311	± 100
3.80	***20***	***13.5593197***	***0.000***	***13.5593196***	***0.006***	***13.5593195***	***0.011***	***13.5593194***	***0.016***	***± 100***
3.80	10	13.5593415	-1.608	13.5593419	-1.641	13.5593424	-1.677	13.5593457	-1.918	± 100
3.80	0	13.5593639	-3.262	13.5593659	-3.406	13.5593649	-3.333	13.5593659	-3.407	± 100
3.80	-10	13.5593651	-3.347	13.5593651	-3.348	13.5593656	-3.384	13.5593651	-3.351	± 100
3.80	-20	13.5592860	2.486	13.5593373	-1.302	13.5593328	-0.968	13.5593329	-0.978	± 100
3.23	20	13.5593196	0.008	13.5593190	0.052	13.5593197	0.001	13.5593206	-0.068	± 100
4.37	20	13.5593207	-0.075	13.5593200	-0.021	13.5593202	-0.038	13.5593206	-0.070	± 100

11.2. TYPE B

424Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20ºC Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measureed with Time Elapse								
(Vdc)	(ºC)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592191	6.624	13.5592191	6.625	13.5592191	6.625	13.5592191	6.626	± 100
3.80	40	13.5592364	5.351	13.5592364	5.350	13.5592364	5.351	13.5592364	5.351	± 100
3.80	30	13.5592696	2.905	13.5592695	2.907	13.5592695	2.908	13.5592695	2.908	± 100
3.80	***20***	***13.5593090***	***0.000***	***13.5593090***	***0.001***	***13.5593089***	***0.002***	***13.5593089***	***0.005***	***± 100***
3.80	10	13.5593430	-2.507	13.5593429	-2.506	13.5593423	-2.459	13.5593423	-2.460	± 100
3.80	0	13.5593650	-4.130	13.5593650	-4.131	13.5593650	-4.132	13.5593650	-4.129	± 100
3.80	-10	13.5593676	-4.321	13.5593676	-4.322	13.5593676	-4.321	13.5593676	-4.323	± 100
3.80	-20	13.5593422	-2.453	13.5593420	-2.433	13.5593420	-2.434	13.5593419	-2.433	± 100
3.23	20	13.5593084	0.040	13.5593085	0.037	13.5593084	0.040	13.5593084	0.044	± 100
4.37	20	13.5593095	-0.038	13.5593095	-0.039	13.5593094	-0.034	13.5593095	-0.043	± 100

212Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20ºC Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measureed with Time Elapse								
(Vdc)	(ºC)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592183	6.611	13.5592182	6.617	13.5592183	6.609	13.5592184	6.603	± 100
3.80	40	13.5592326	5.551	13.5592325	5.557	13.5592326	5.551	13.5592327	5.544	± 100
3.80	30	13.5592698	2.811	13.5592693	2.845	13.5592691	2.858	13.5592691	2.864	± 100
3.80	***20***	***13.5593079***	***0.000***	***13.5593080***	***-0.005***	***13.5593080***	***-0.007***	***13.5593080***	***-0.005***	***± 100***
3.80	10	13.5593437	-2.640	13.5593438	-2.650	13.5593433	-2.611	13.5593424	-2.546	± 100
3.80	0	13.5593650	-4.210	13.5593650	-4.210	13.5593650	-4.210	13.5593650	-4.212	± 100
3.80	-10	13.5593670	-4.356	13.5593669	-4.351	13.5593669	-4.349	13.5593669	-4.348	± 100
3.80	-20	13.5593517	-3.228	13.5593511	-3.187	13.5593501	-3.113	13.5593495	-3.068	± 100
3.23	20	13.5593078	0.006	13.5593077	0.015	13.5593078	0.005	13.5593078	0.008	± 100
4.37	20	13.5593079	0.001	13.5593081	-0.015	13.5593081	-0.017	13.5593081	-0.016	± 100

106Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20ºC Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measureed with Time Elapse								
(Vdc)	(ºC)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592183	6.667	13.5592184	6.656	13.5592182	6.670	13.5592183	6.663	± 100
3.80	40	13.5592339	5.516	13.5592329	5.588	13.5592329	5.585	13.5592330	5.581	± 100
3.80	30	13.5592751	2.479	13.5592745	2.521	13.5592732	2.620	13.5592698	2.863	± 100
3.80	***20***	***13.5593087***	***0.000***	***13.5593085***	***0.013***	***13.5593088***	***-0.009***	***13.5593085***	***0.015***	***± 100***
3.80	10	13.5593424	-2.488	13.5593421	-2.463	13.5593420	-2.457	13.5593420	-2.456	± 100
3.80	0	13.5593651	-4.161	13.5593650	-4.155	13.5593650	-4.151	13.5593650	-4.152	± 100
3.80	-10	13.5593668	-4.288	13.5593669	-4.291	13.5593669	-4.291	13.5593669	-4.291	± 100
3.80	-20	13.5593535	-3.306	13.5593533	-3.292	13.5593529	-3.263	13.5593528	-3.251	± 100
3.23	20	13.5593085	0.012	13.5593085	0.012	13.5593085	0.014	13.5593082	0.033	± 100
4.37	20	13.5593084	0.019	13.5593085	0.015	13.5593085	0.013	13.5593086	0.008	± 100

12. FREQUENCY STABILITY (MODEL: A1687)

LIMIT

§15.225 (e) The frequency tolerance of the carrier signal shall be maintained within ±0.01% of the operating frequency, over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

TEST PROCEDURE

ANSI C63.10 Clause 6.8

RESULTS

12.1. TYPE A

424Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20ºC Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measureed with Time Elapse								
(Vdc)	(ºC)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592231	6.305	13.5592214	6.428	13.5592197	6.549	13.5592204	6.501	± 100
3.80	40	13.5592373	5.253	13.5592377	5.222	13.5592389	5.138	13.5592354	5.392	± 100
3.80	30	13.5592534	4.064	13.5592626	3.385	13.5592621	3.429	13.5592654	3.183	± 100
3.80	***20***	***13.5593085***	***0.000***	***13.5593086***	***-0.007***	***13.5593088***	***-0.018***	***13.5593087***	***-0.014***	***± 100***
3.80	10	13.5593348	-1.935	13.5593358	-2.012	13.5593392	-2.258	13.5593422	-2.482	± 100
3.80	0	13.5593603	-3.813	13.5593632	-4.034	13.5593621	-3.953	13.5593643	-4.110	± 100
3.80	-10	13.5593684	-4.413	13.5593678	-4.367	13.5593685	-4.418	13.5593671	-4.321	± 100
3.80	-20	13.5593538	-3.337	13.5593487	-2.959	13.5593449	-2.683	13.5593423	-2.486	± 100
3.23	20	13.5593044	0.306	13.5593078	0.054	13.5593079	0.047	13.5593029	0.415	± 100
4.37	20	13.5593076	0.067	13.5593029	0.418	13.5593032	0.397	13.5593071	0.104	± 100

212Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20ºC Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measureed with Time Elapse								
(Vdc)	(ºC)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592189	6.318	13.5592188	6.323	13.5592189	6.318	13.5592189	6.318	± 100
3.80	40	13.5592359	5.063	13.5592349	5.136	13.5592362	5.037	13.5592346	5.158	± 100
3.80	30	13.5592677	2.713	13.5592693	2.601	13.5592687	2.640	13.5592691	2.613	± 100
3.80	***20***	***13.5593045***	***0.000***	***13.5593046***	***-0.002***	***13.5593046***	***-0.005***	***13.5593046***	***-0.007***	***± 100***
3.80	10	13.5593429	-2.829	13.5593430	-2.835	13.5593427	-2.815	13.5593430	-2.838	± 100
3.80	0	13.5593667	-4.582	13.5593669	-4.597	13.5593667	-4.586	13.5593672	-4.618	± 100
3.80	-10	13.5593695	-4.792	13.5593682	-4.693	13.5593677	-4.656	13.5593690	-4.758	± 100
3.80	-20	13.5593476	-3.180	13.5593476	-3.177	13.5593473	-3.157	13.5593465	-3.092	± 100
3.23	20	13.5593033	0.093	13.5593035	0.079	13.5593038	0.053	13.5593039	0.046	± 100
4.37	20	13.5592994	0.381	13.5593008	0.271	13.5593000	0.331	13.5593009	0.268	± 100

106Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20ºC Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measureed with Time Elapse								
(Vdc)	(ºC)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592189	6.203	13.5592189	6.205	13.5592189	6.204	13.5592187	6.216	± 100
3.80	40	13.5592323	5.215	13.5592357	4.963	13.5592357	4.963	13.5592358	4.959	± 100
3.80	30	13.5592693	2.487	13.5592688	2.519	13.5592685	2.542	13.5592689	2.513	± 100
3.80	***20***	***13.5593030***	***0.000***	***13.5593042***	***-0.092***	***13.5593046***	***-0.119***	***13.5593050***	***-0.150***	***± 100***
3.80	10	13.5593417	-2.853	13.5593420	-2.876	13.5593427	-2.925	13.5593428	-2.932	± 100
3.80	0	13.5593674	-4.750	13.5593670	-4.721	13.5593652	-4.589	13.5593646	-4.539	± 100
3.80	-10	13.5593689	-4.863	13.5593688	-4.855	13.5593695	-4.907	13.5593699	-4.935	± 100
3.80	-20	13.5593525	-3.649	13.5593525	-3.650	13.5593469	-3.236	13.5593529	-3.683	± 100
3.23	20	13.5593026	0.030	13.5593029	0.008	13.5593055	-0.185	13.5593057	-0.197	± 100
4.37	20	13.5593061	-0.231	13.5593065	-0.262	13.5593047	-0.122	13.5593070	-0.294	± 100

12.2. TYPE B

424Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20ºC Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measureed with Time Elapse								
(Vdc)	(ºC)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592189	6.537	13.5592188	6.541	13.5592188	6.546	13.5592189	6.538	± 100
3.80	40	13.5592359	5.279	13.5592357	5.298	13.5592359	5.281	13.5592369	5.206	± 100
3.80	30	13.5592667	3.008	13.5592687	2.863	13.5592633	3.259	13.5592677	2.933	± 100
3.80	***20***	***13.5593075***	***0.000***	***13.5593023***	***0.387***	***13.5593079***	***-0.030***	***13.5593080***	***-0.038***	***± 100***
3.80	10	13.5593430	-2.620	13.5593402	-2.408	13.5593428	-2.602	13.5593431	-2.626	± 100
3.80	0	13.5593660	-4.314	13.5593649	-4.232	13.5593652	-4.256	13.5593657	-4.293	± 100
3.80	-10	13.5593690	-4.531	13.5593690	-4.530	13.5593693	-4.555	13.5593692	-4.547	± 100
3.80	-20	13.5593476	-2.954	13.5593461	-2.841	13.5593461	-2.846	13.5593462	-2.850	± 100
3.23	20	13.5593077	-0.014	13.5593031	0.326	13.5593027	0.357	13.5593047	0.206	± 100
4.37	20	13.5593089	-0.098	13.5593037	0.282	13.5593029	0.342	13.5593090	-0.111	± 100

212Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20ºC Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measureed with Time Elapse								
(Vdc)	(ºC)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592189	6.558	13.5592188	6.564	13.5592188	6.563	13.5592189	6.557	± 100
3.80	40	13.5592359	5.299	13.5592350	5.372	13.5592356	5.323	13.5592349	5.379	± 100
3.80	30	13.5592644	3.198	13.5592682	2.921	13.5592632	3.291	13.5592678	2.951	± 100
3.80	***20***	***13.5593078***	***0.000***	***13.5593074***	***0.026***	***13.5593070***	***0.059***	***13.5593072***	***0.044***	***± 100***
3.80	10	13.5593432	-2.607	13.5593435	-2.632	13.5593428	-2.583	13.5593430	-2.592	± 100
3.80	0	13.5593638	-4.129	13.5593638	-4.129	13.5593648	-4.205	13.5593637	-4.125	± 100
3.80	-10	13.5593690	-4.516	13.5593693	-4.538	13.5593693	-4.534	13.5593699	-4.579	± 100
3.80	-20	13.5593466	-2.864	13.5593506	-3.156	13.5593476	-2.932	13.5593459	-2.809	± 100
3.23	20	13.5593075	0.020	13.5593072	0.043	13.5593073	0.040	13.5593063	0.111	± 100
4.37	20	13.5593077	0.007	13.5593077	0.008	13.5593035	0.320	13.5593021	0.419	± 100

106Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20ºC Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measureed with Time Elapse								
(Vdc)	(ºC)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592185	6.182	13.5592189	6.156	13.5592189	6.156	13.5592189	6.156	± 100
3.80	40	13.5592351	4.960	13.5592363	4.870	13.5592363	4.867	13.5592357	4.917	± 100
3.80	30	13.5592684	2.503	13.5592647	2.776	13.5592628	2.919	13.5592670	2.608	± 100
3.80	***20***	***13.5593023***	***0.000***	***13.5593050***	***-0.196***	***13.5593019***	***0.030***	***13.5593009***	***0.109***	***± 100***
3.80	10	13.5593429	-2.987	13.5593422	-2.940	13.5593425	-2.961	13.5593430	-2.995	± 100
3.80	0	13.5593630	-4.471	13.5593648	-4.605	13.5593631	-4.482	13.5593628	-4.459	± 100
3.80	-10	13.5593692	-4.927	13.5593691	-4.925	13.5593691	-4.921	13.5593691	-4.920	± 100
3.80	-20	13.5593476	-3.339	13.5593458	-3.205	13.5593452	-3.157	13.5593454	-3.174	± 100
3.23	20	13.5593063	-0.289	13.5593019	0.032	13.5593066	-0.313	13.5593072	-0.354	± 100
4.37	20	13.5593069	-0.334	13.5593068	-0.329	13.5593040	-0.122	13.5593028	-0.035	± 100

13. AC MAINS LINE CONDUCTED EMISSIONS (MODEL: 1634)

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

Frequency of Emission (MHz)	Conducted Limit (dBµV)	
	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

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10: 2013.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

13.1. TYPE A

13.1.1. NORMAL OPERATION, 424 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1635	51	Pk	1.2	0	52.2	65.28	-13.08	-	-
2	.168	29.57	Av	1.2	0	30.77	-	-	55.06	-24.29
3	.2445	47.56	Pk	.7	0	48.26	61.94	-13.68	-	-
4	.249	26.18	Av	.7	0	26.88	-	-	51.79	-24.91
5	.789	39.42	Pk	.3	0	39.72	56	-16.28	-	-
6	.7935	21.12	Av	.3	0	21.42	-	-	46	-24.58

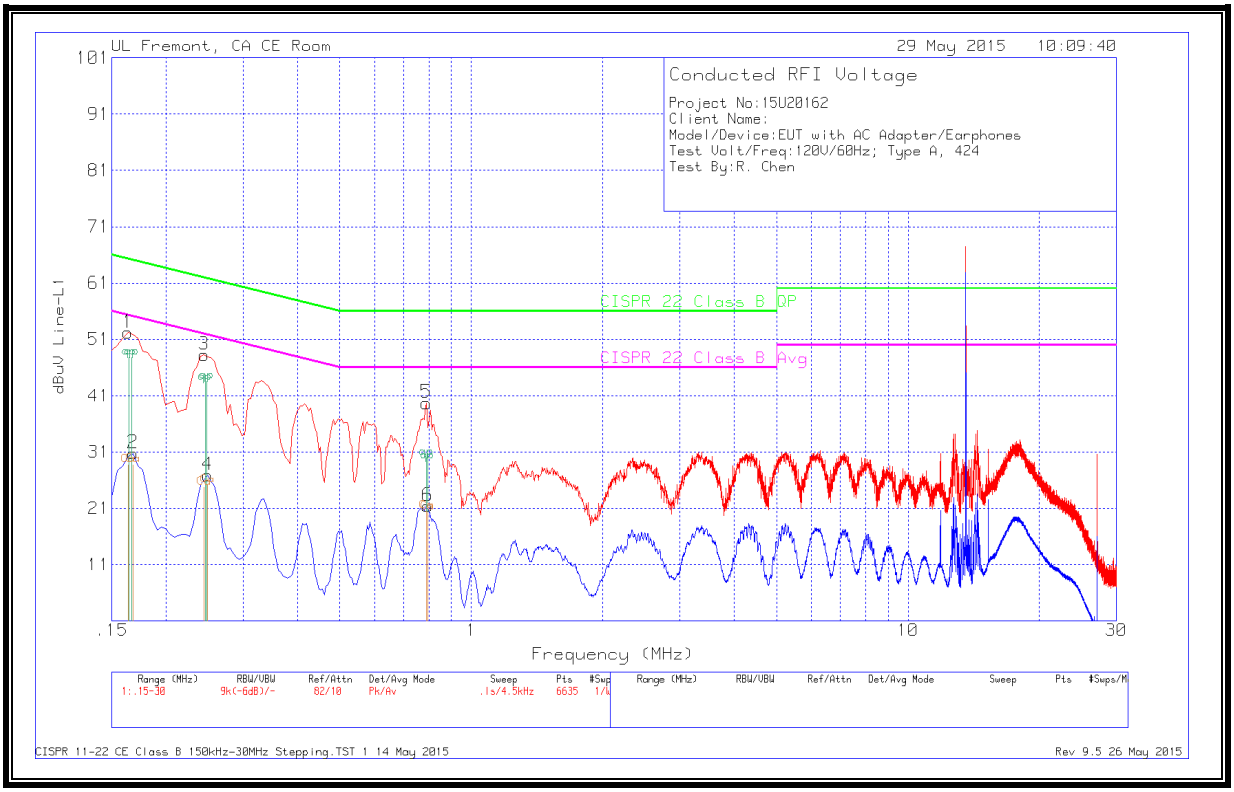
Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1635	49.17	Pk	1.3	0	50.47	65.28	-14.81	-	-
8	.168	27.76	Av	1.3	0	29.06	-	-	55.06	-26
9	.2445	45.99	Pk	.8	0	46.79	61.94	-15.15	-	-
10	.249	26.04	Av	.7	0	26.74	-	-	51.79	-25.05
11	.7845	38.42	Pk	.3	0	38.72	56	-17.28	-	-
12	.762	26.15	Av	.3	0	26.45	-	-	46	-19.55

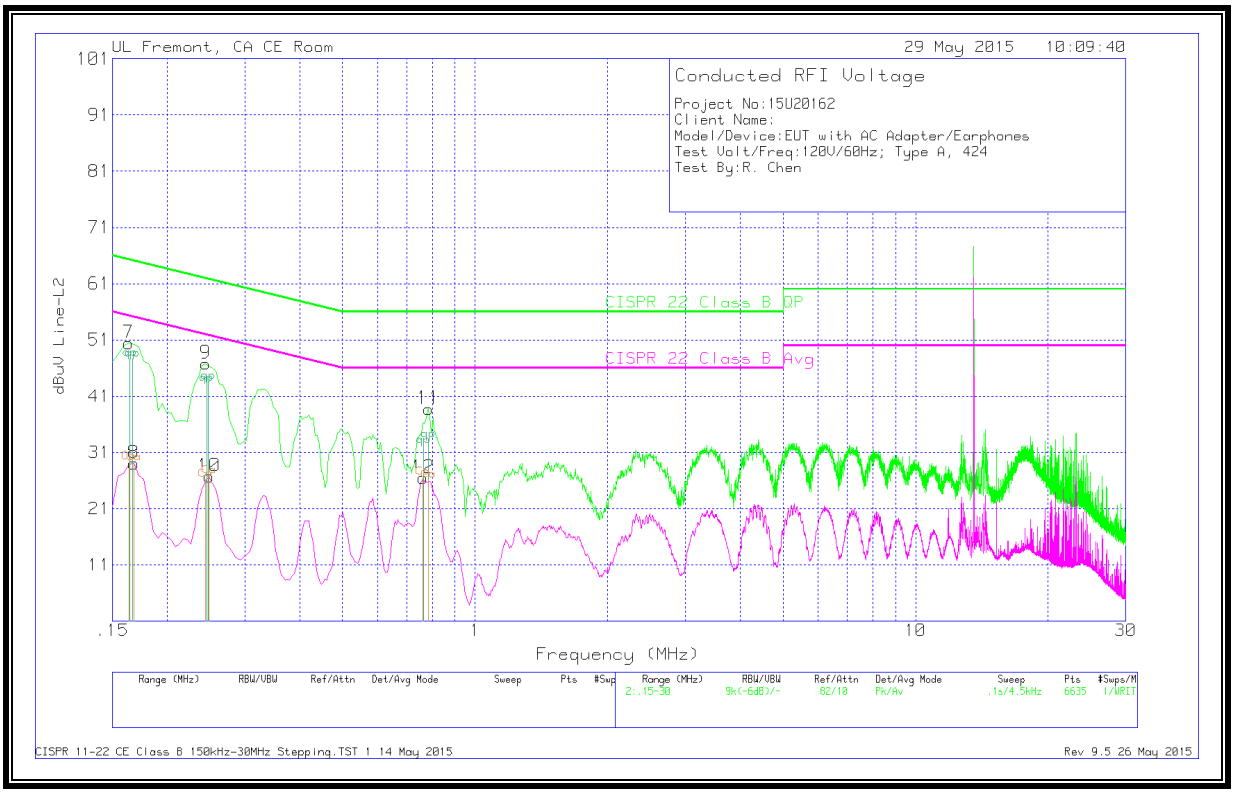
Pk - Peak detector
Av - Average detection

Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicate that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

LINE 1 RESULTS



LINE 2 RESULTS



13.1.2. NORMAL OPERATION WITH ANTENNA PORT TERMINATED, 424 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

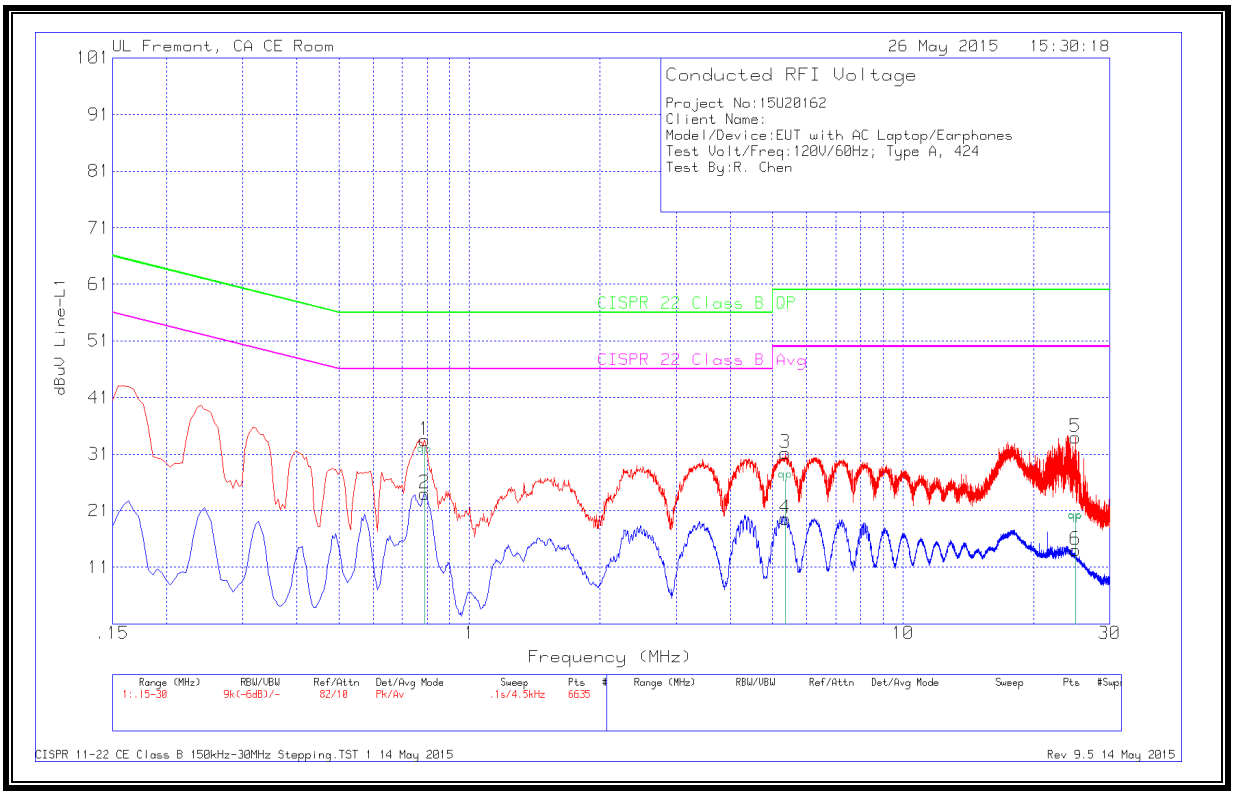
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.789	33.16	Pk	.3	0	33.46	56	-22.54	-	-
2	.789	23.75	Av	.3	0	24.05	-	-	46	-21.95
3	5.3565	30.91	Pk	.2	.1	31.21	60	-28.79	-	-
4	5.361	19.33	Av	.2	.1	19.63	-	-	50	-30.37
5	24.981	33.42	Pk	.3	.3	34.02	60	-25.98	-	-
6	24.999	13.5	Av	.3	.3	14.1	-	-	50	-35.9

Range 2: Line-L2 .15 - 30MHz

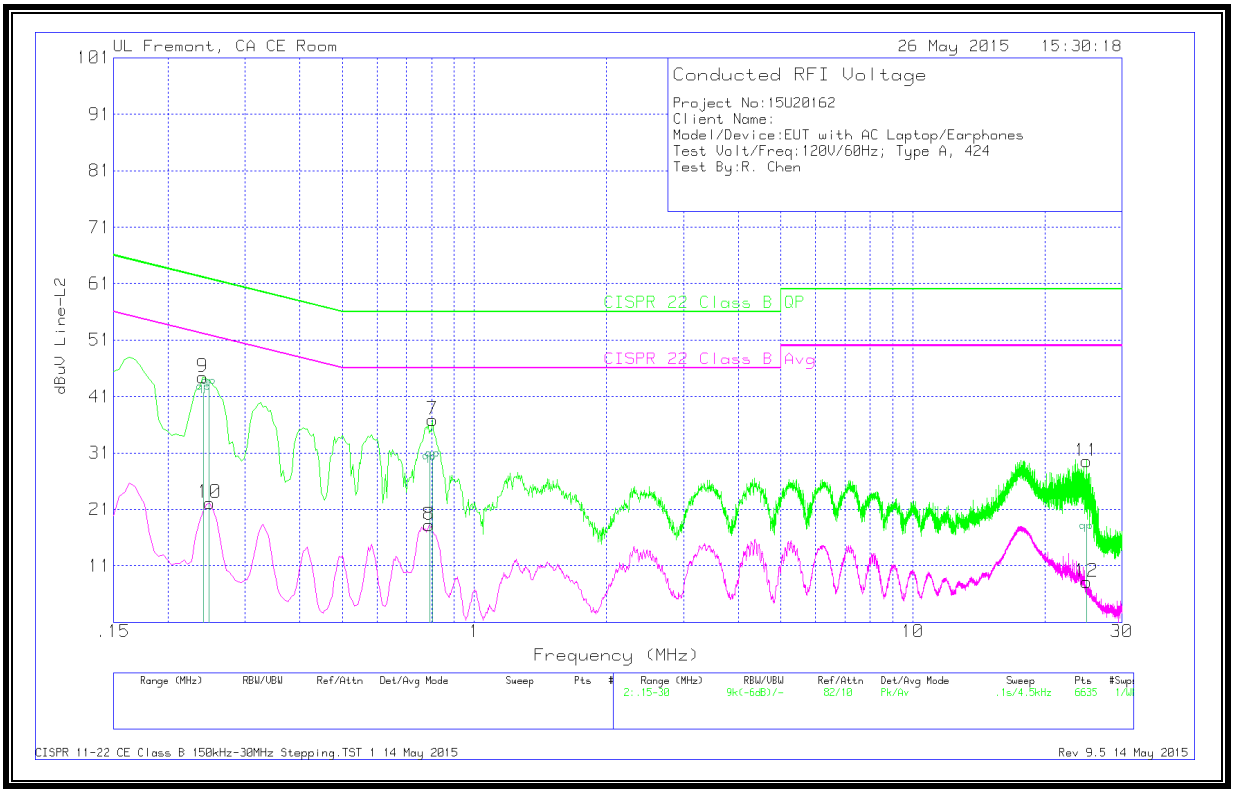
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.8025	36.6	Pk	.3	0	36.9	56	-19.1	-	-
8	.789	17.9	Av	.3	0	18.2	-	-	46	-27.8
9	.24	43.61	Pk	.8	0	44.41	62.1	-17.69	-	-
10	.249	21.48	Av	.7	0	22.18	-	-	51.79	-29.61
11	24.891	28.92	Pk	.3	.3	29.52	60	-30.48	-	-
12	24.891	7.53	Av	.3	.3	8.13	-	-	50	-41.87

Pk - Peak detector
Av - Average detection

LINE 1 RESULTS



LINE 2 RESULTS



13.1.3. NORMAL OPERATION, 212 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1635	40.32	Pk	1.2	0	41.52	65.28	-23.76	-	-
2	.159	18.73	Av	1.3	0	20.03	-	-	55.52	-35.49
3	.7845	33.28	Pk	.3	0	33.58	56	-22.42	-	-
4	.789	20.72	Av	.3	0	21.02	-	-	46	-24.98
5	13.56	62.58	Pk	.2	.2	62.98	60	2.98	-	-
6	13.56	58.77	Av	.2	.2	59.17	-	-	50	9.17

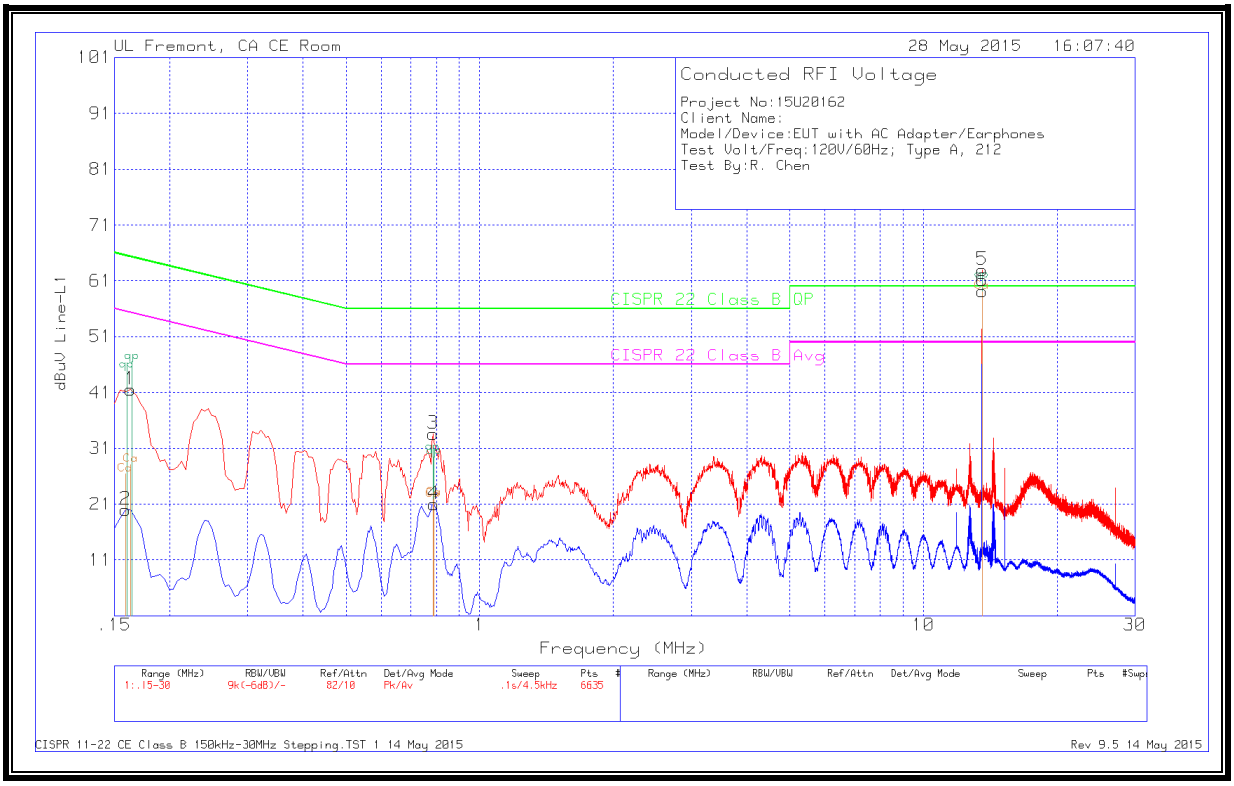
Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.16125	45.61	Pk	1.4	0	47.01	65.4	-18.39	-	-
8	.1635	24.86	Av	1.3	0	26.16	-	-	55.28	-29.12
9	.78	35.16	Pk	.3	0	35.46	56	-20.54	-	-
10	.7575	21.04	Av	.3	0	21.34	-	-	46	-24.66
11	13.56	59.01	Pk	.2	.2	59.41	60	-.59	-	-
12	13.56	56.63	Av	.2	.2	57.03	-	-	50	7.03

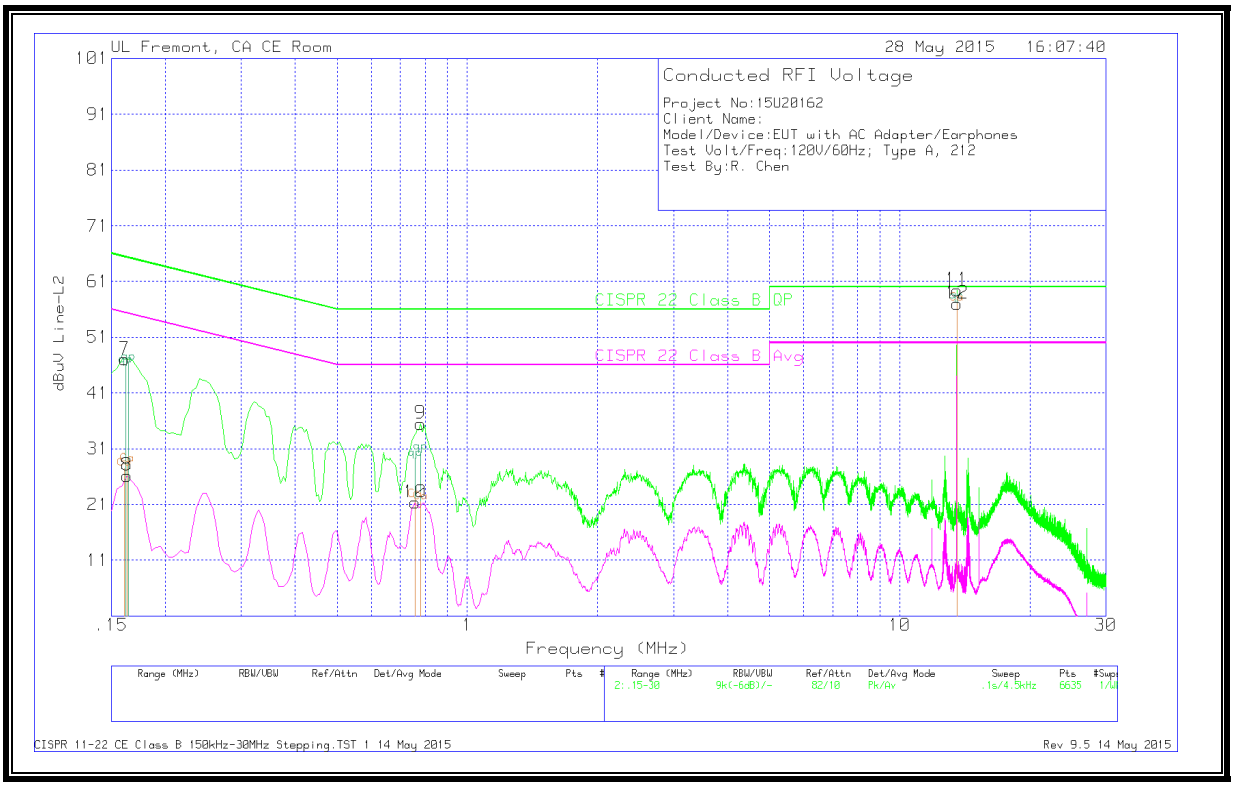
Pk - Peak detector
Av - Average detection

Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicate that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

LINE 1 RESULTS



LINE 2 RESULTS



13.1.4. NORMAL OPERATION WITH ANTENNA PORT TERMINATED, 212 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

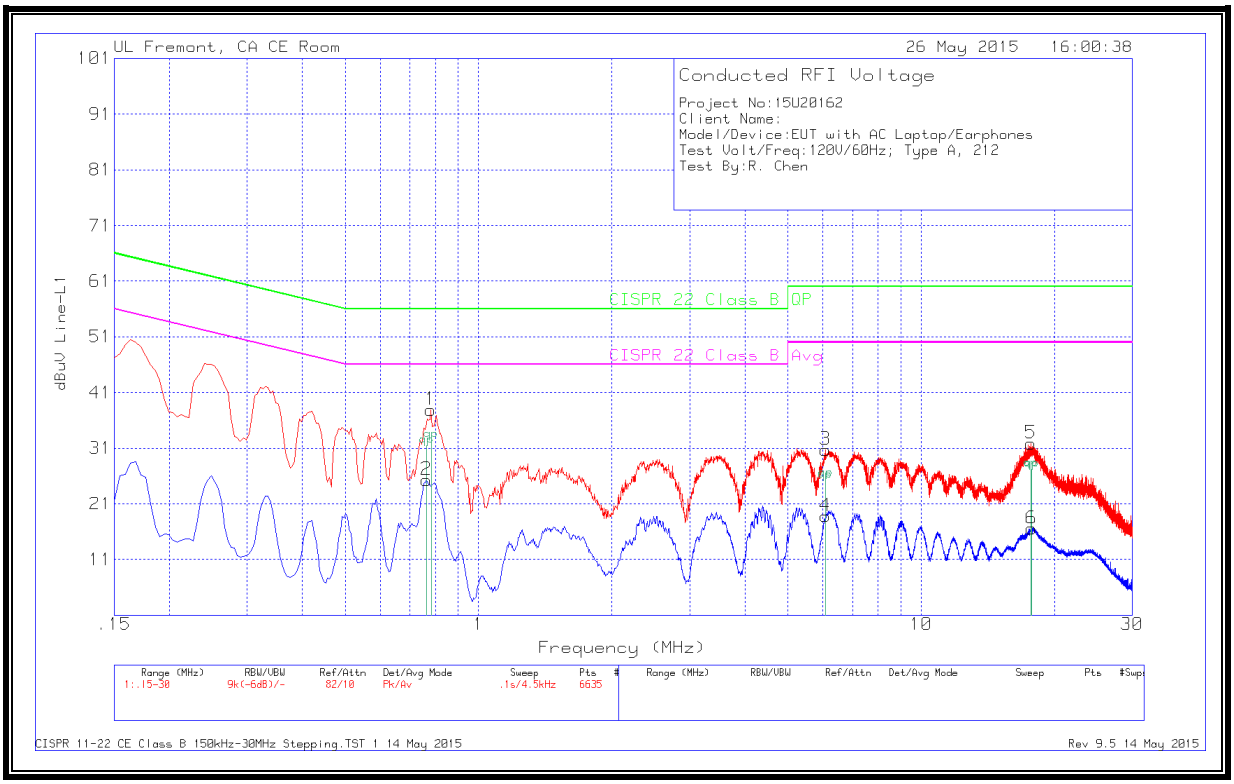
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.78	37.6	Pk	.3	0	37.9	56	-18.1	-	-
2	.762	25	Av	.3	0	25.3	-	-	46	-20.7
3	6.0855	30.38	Pk	.2	.1	30.68	60	-29.32	-	-
4	6.072	18.49	Av	.2	.1	18.79	-	-	50	-31.21
5	17.6955	31.38	Pk	.3	.2	31.88	60	-28.12	-	-
6	17.781	16.04	Av	.3	.2	16.54	-	-	50	-33.46

Range 2: Line-L2 .15 - 30MHz

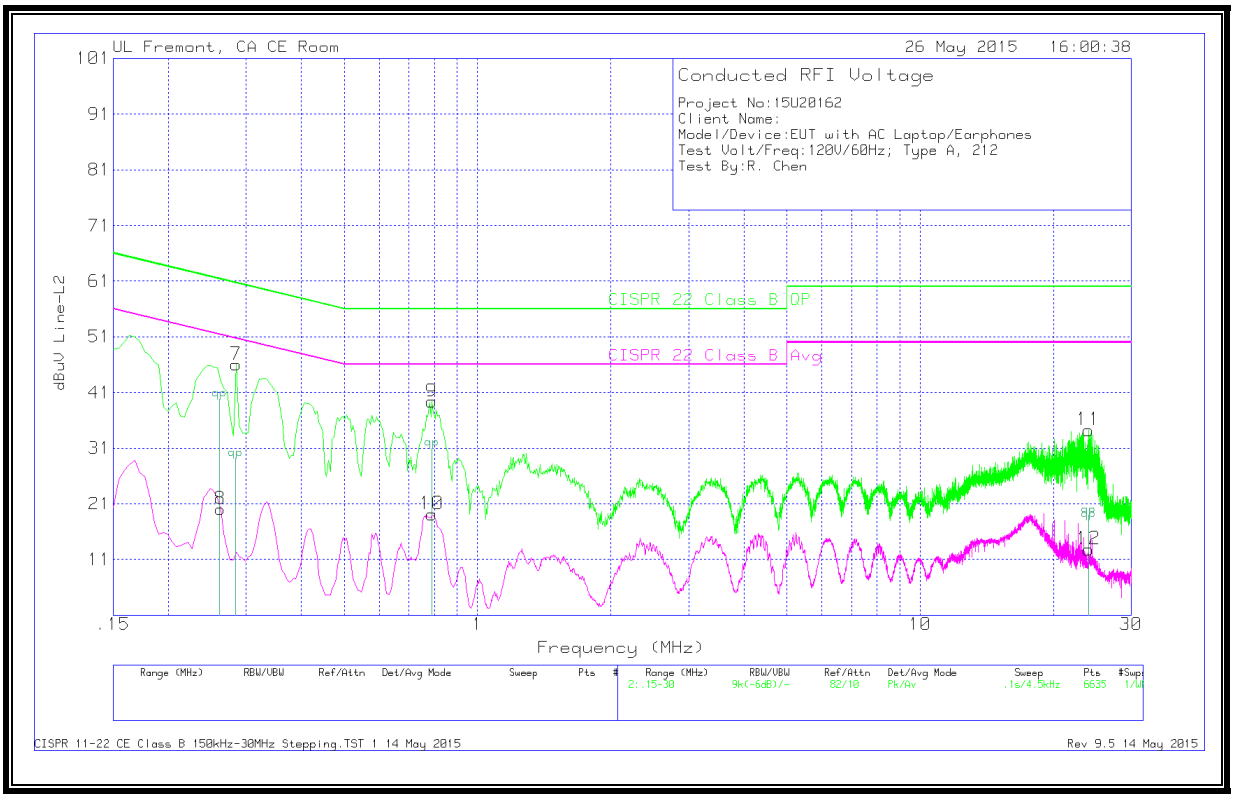
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.285	45.4	Pk	.6	0	46	60.67	-14.67	-	-
8	.2625	19.35	Av	.7	0	20.05	-	-	51.35	-31.3
9	.789	39.04	Pk	.3	0	39.34	56	-16.66	-	-
10	.789	18.85	Av	.3	0	19.15	-	-	46	-26.85
11	24.0315	33.76	Pk	.3	.2	34.26	60	-25.74	-	-
12	24.0495	12.34	Av	.3	.2	12.84	-	-	50	-37.16

Pk - Peak detector
Av - Average detection

LINE 1 RESULTS



LINE 2 RESULTS



13.1.5. NORMAL OPERATION, 106 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1635	49.31	Pk	1.2	0	50.51	65.28	-14.77	-	-
2	.168	28.01	Av	1.2	0	29.21	-	-	55.06	-25.85
3	.7755	36.78	Pk	.3	0	37.08	56	-18.92	-	-
4	.762	24.85	Av	.3	0	25.15	-	-	46	-20.85
5	27.1185	34.7	Pk	.3	.3	35.3	60	-24.7	-	-
6	27.1185	20.72	Av	.3	.3	21.32	-	-	50	-28.68

Range 2: Line-L2 .15 - 30MHz

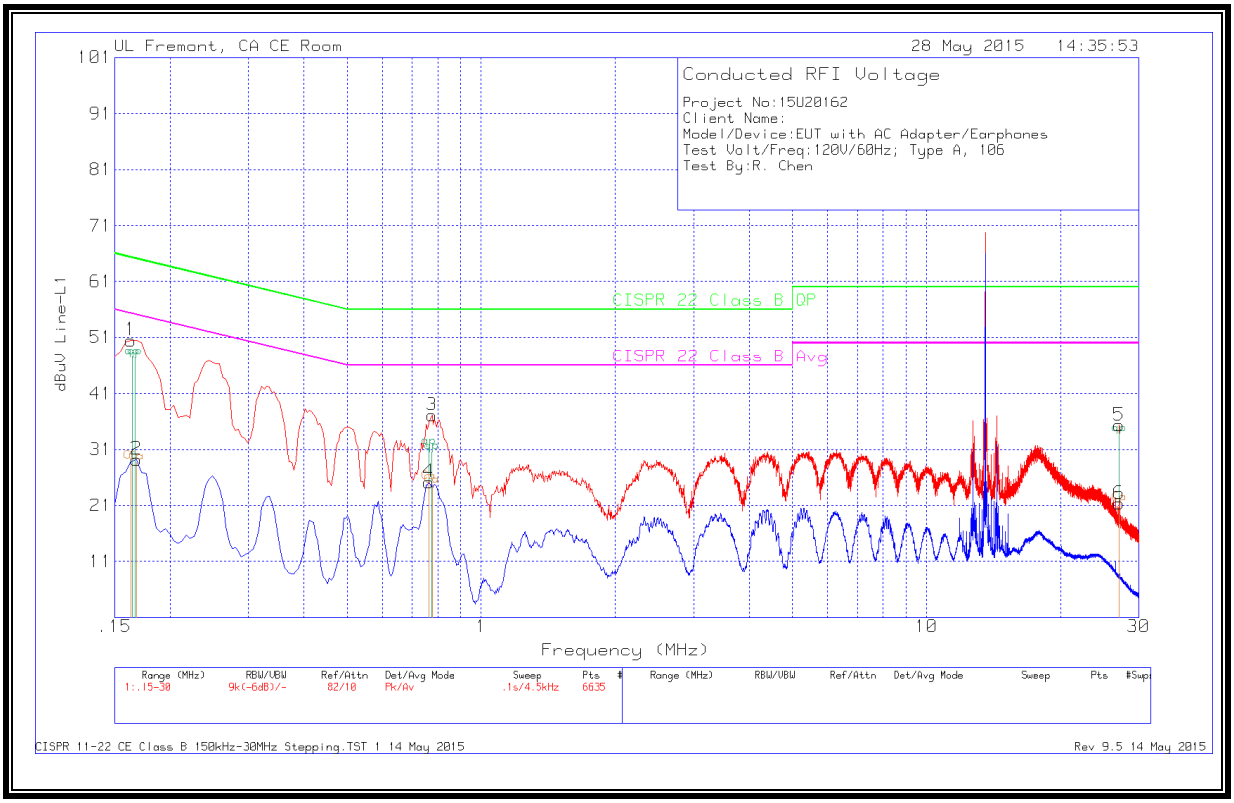
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1635	48.83	Pk	1.3	0	50.13	65.28	-15.15	-	-
8	.168	26.56	Av	1.3	0	27.86	-	-	55.06	-27.2
9	.8025	36.94	Pk	.3	0	37.24	56	-18.76	-	-
10	.7935	18.43	Av	.3	0	18.73	-	-	46	-27.27
11	27.1185	27.75	Pk	.3	.3	28.35	60	-31.65	-	-
12	27.1185	13.69	Av	.3	.3	14.29	-	-	50	-35.71

Pk - Peak detector

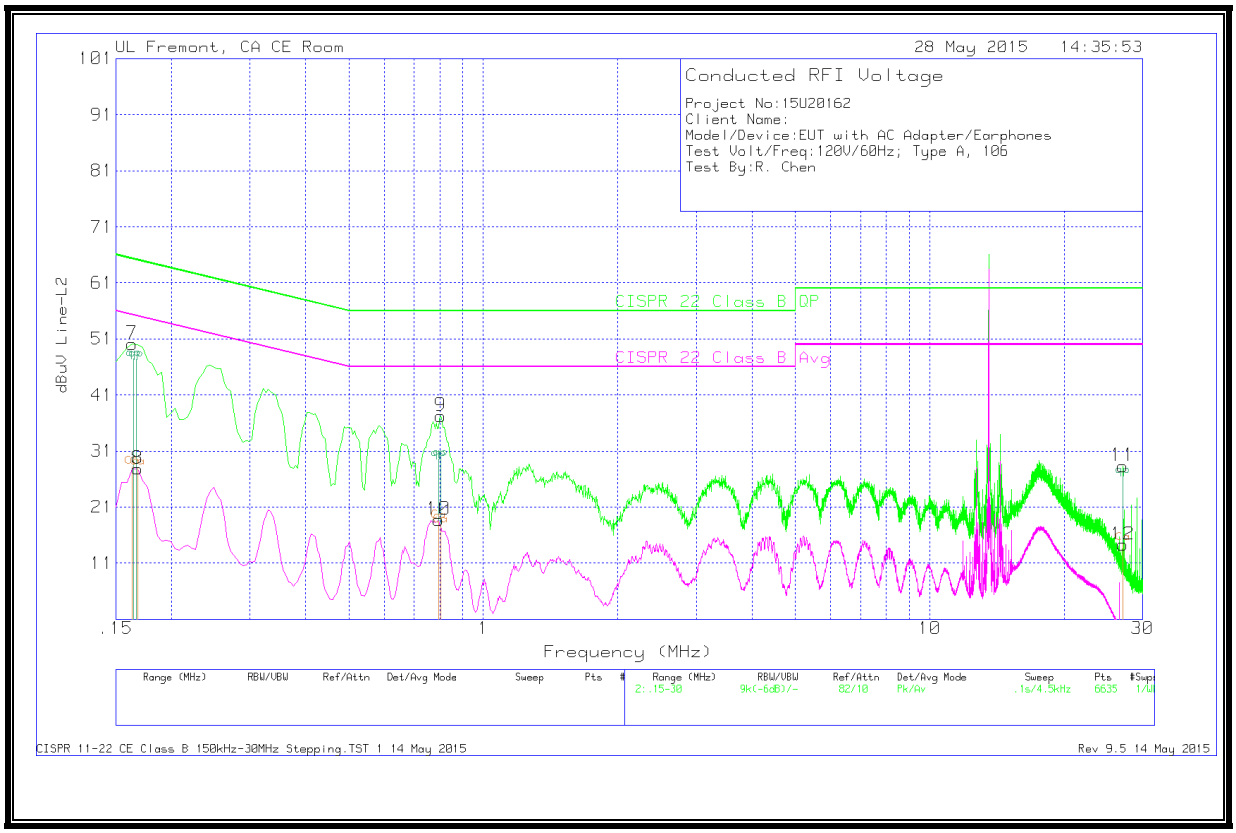
Av - Average detection

Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicate that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

LINE 1 RESULTS



LINE 2 RESULTS



13.1.6. NORMAL OPERATION WITH ANTENNA PORT TERMINATED, 106 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

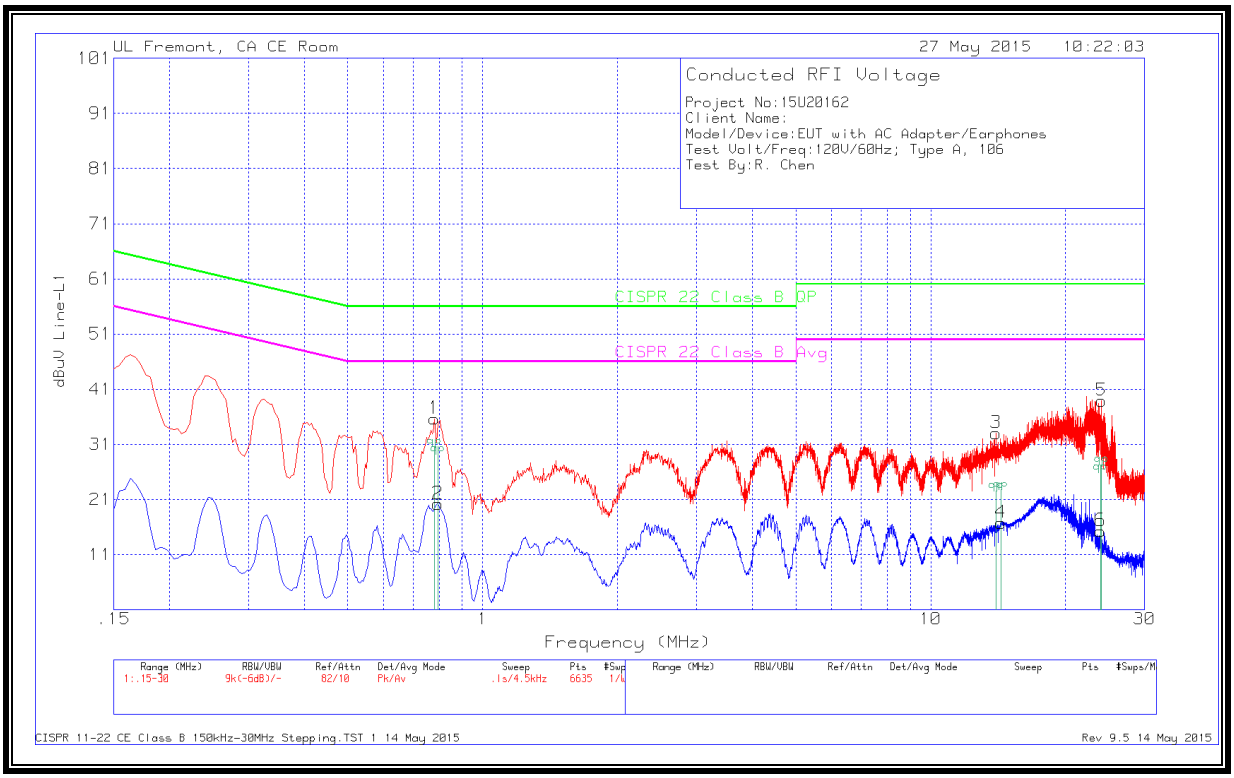
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.78	35.34	Pk	.3	0	35.64	56	-20.36		
2	.7935	19.87	Av	.3	0	20.17	-	-	46	-25.83
3	13.992	32.65	Pk	.2	.2	33.05	60	-26.95		
4	14.0475	16.38	Av	.2	.2	16.78	-	-	50	-33.22
5	24.0675	38.4	Pk	.3	.2	38.9	60	-21.1		
6	23.928	14.77	Av	.3	.2	15.27	-	-	50	-34.73

Range 2: Line-L2 .15 - 30MHz

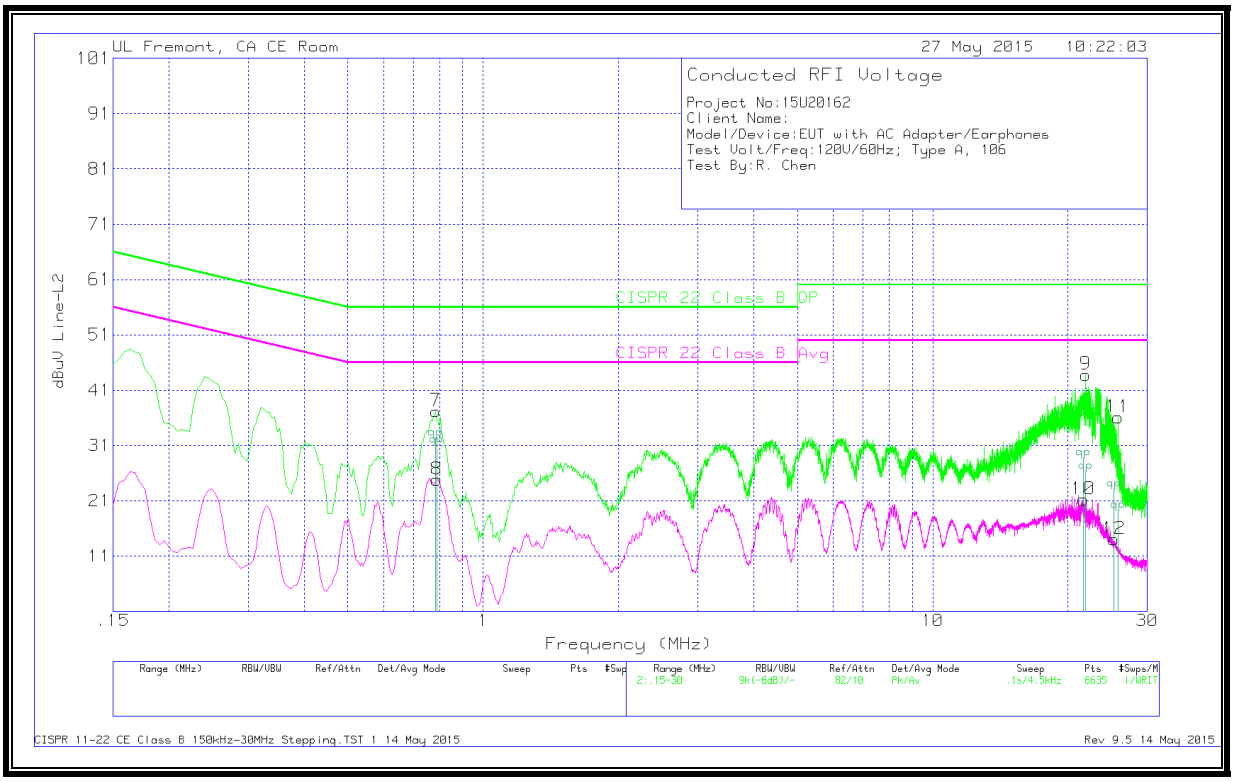
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.7845	36.88	Pk	.3	0	37.18	56	-18.82		
8	.789	24.52	Av	.3	0	24.82	-	-	46	-21.18
9	21.894	43.32	Pk	.3	.2	43.82	60	-16.18		
10	21.633	20.76	Av	.3	.2	21.26	-	-	50	-28.74
11	25.8495	35.51	Pk	.3	.3	36.11	60	-23.89		
12	25.314	13.49	Av	.3	.3	14.09	-	-	50	-35.91

Pk - Peak detector
Av - Average detection

LINE 1 RESULTS



LINE 2 RESULTS



13.1.7. NORMAL OPERATION WITH LAPTOP, WORST CASE

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1905	57.73	Pk	1	0	58.73	64.01	-5.28	-	-
2	.1995	41.02	Av	.9	0	41.92	-	-	53.63	-11.71
3	.2625	48.59	Pk	.7	0	49.29	61.35	-12.06	-	-
4	.267	32.89	Av	.6	0	33.49	-	-	51.21	-17.72
5	13.5015	46.03	Pk	.2	.2	46.43	60	-13.57	-	-
6	13.5015	34.55	Av	.2	.2	34.95	-	-	50	-15.05

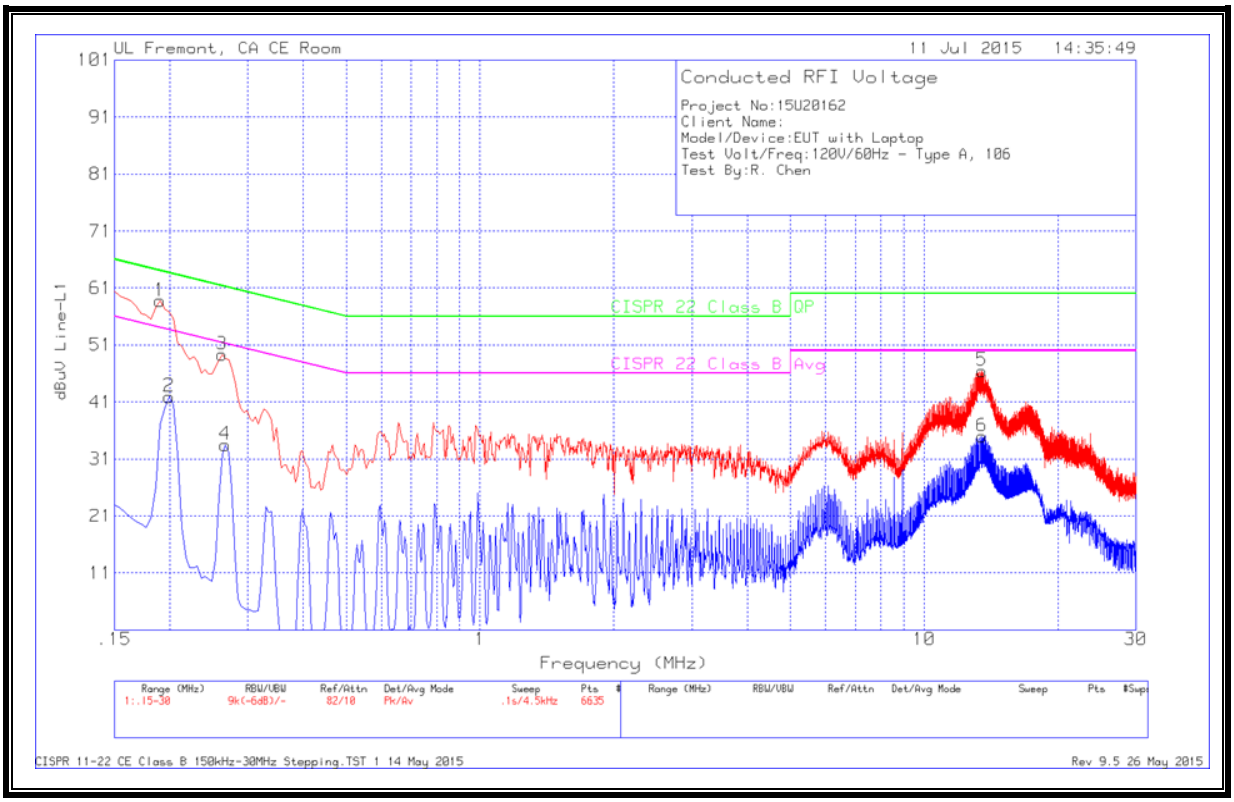
Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1545	57.24	Pk	1.4	0	58.64	65.75	-7.11	-	-
8	.1815	34.84	Av	1.2	0	36.04	-	-	54.42	-18.38
9	5.2395	37.58	Pk	.2	.1	37.88	60	-22.12	-	-
10	5.2395	24.34	Av	.2	.1	24.64	-	-	50	-25.36
11	17.772	43.03	Pk	.3	.2	43.53	60	-16.47	-	-
12	17.772	29.79	Av	.3	.2	30.29	-	-	50	-19.71

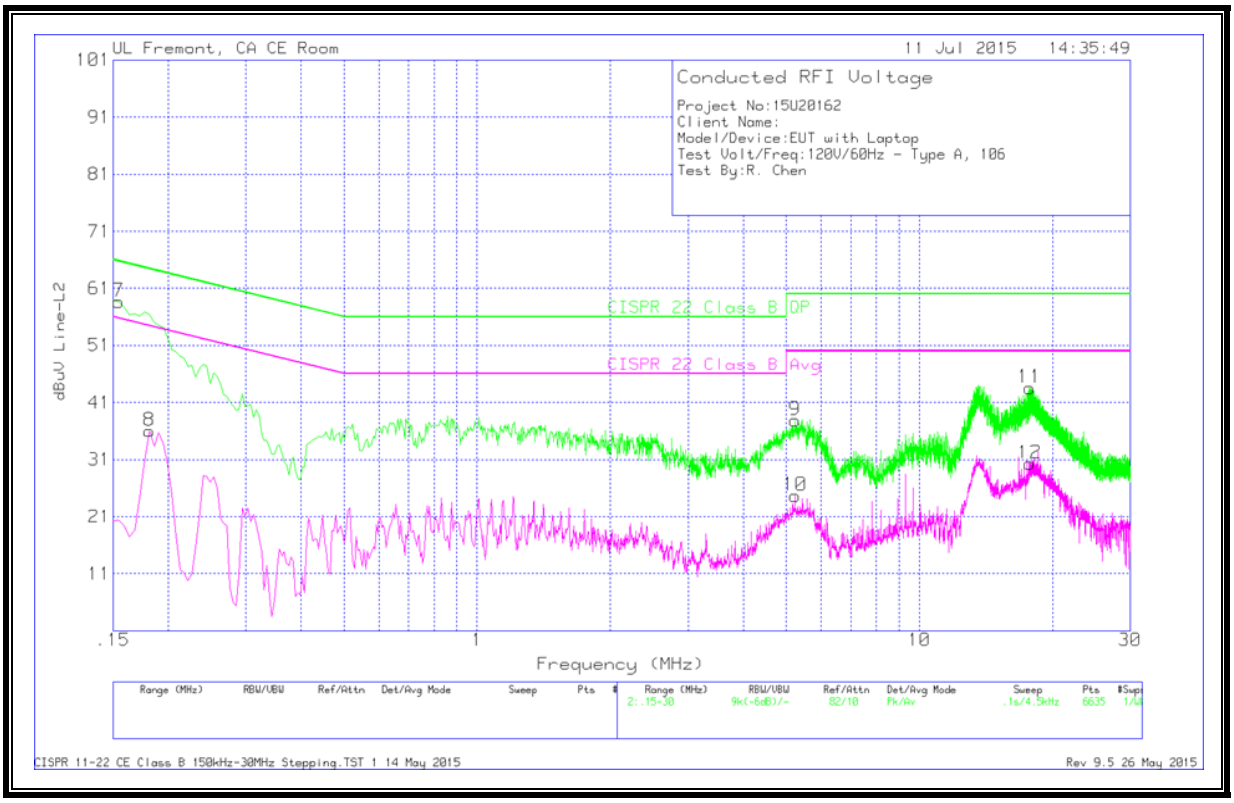
Pk - Peak detector

Av - Average detection

LINE 1 RESULTS



LINE 2 RESULTS



13.2. TYPE B

13.2.1. NORMAL OPERATION, 424 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1635	49.6	Pk	1.2	0	50.8	65.28	-14.48	-	-
2	.168	27.87	Av	1.2	0	29.07	-	-	55.06	-25.99
3	.7845	37.62	Pk	.3	0	37.92	56	-18.08	-	-
4	.789	21.28	Av	.3	0	21.58	-	-	46	-24.42
5	27.1185	26.28	Pk	.3	.3	26.88	60	-33.12	-	-
6	27.159	14.04	Av	.3	.3	14.64	-	-	50	-35.36

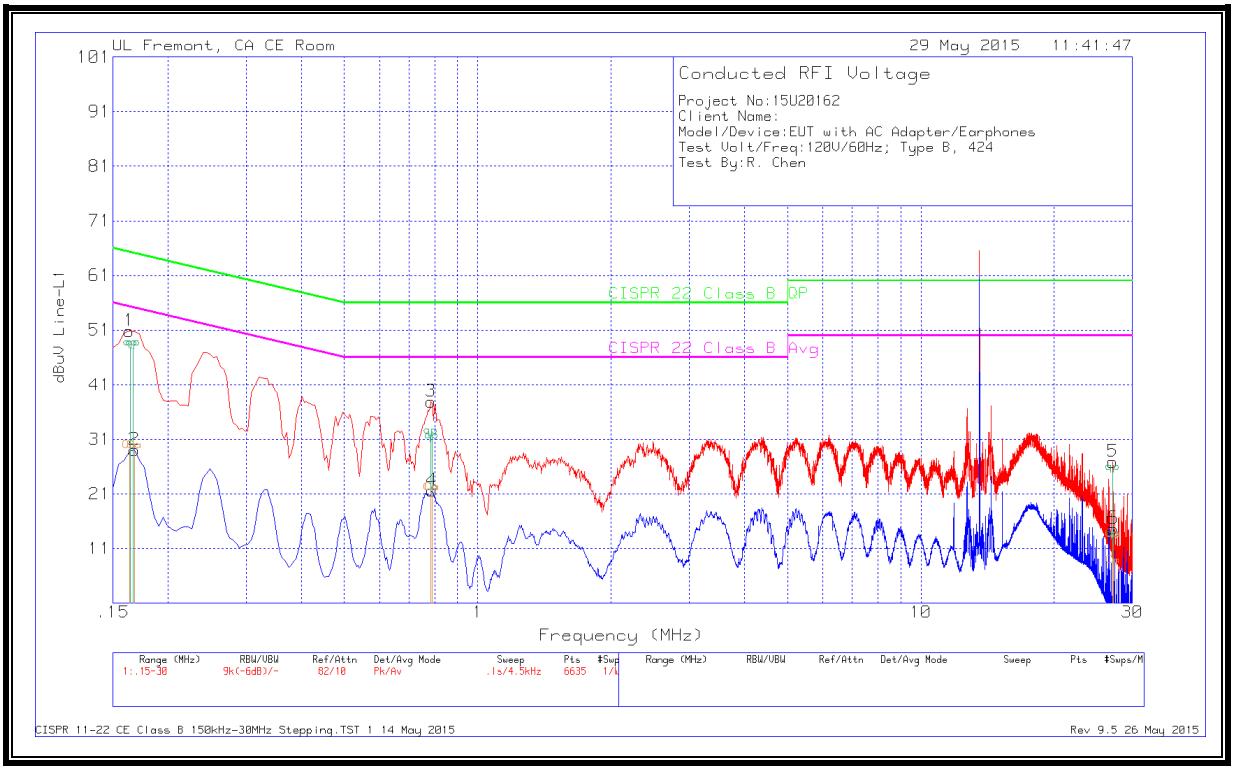
Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.168	48.98	Pk	1.3	0	50.28	65.06	-14.78	-	-
8	.168	27.88	Av	1.3	0	29.18	-	-	55.06	-25.88
9	.7845	36.77	Pk	.3	0	37.07	56	-18.93	-	-
10	.762	25.6	Av	.3	0	25.9	-	-	46	-20.1
11	6.2385	32.48	Pk	.2	.1	32.78	60	-27.22	-	-
12	6.2475	20.45	Av	.2	.1	20.75	-	-	50	-29.25

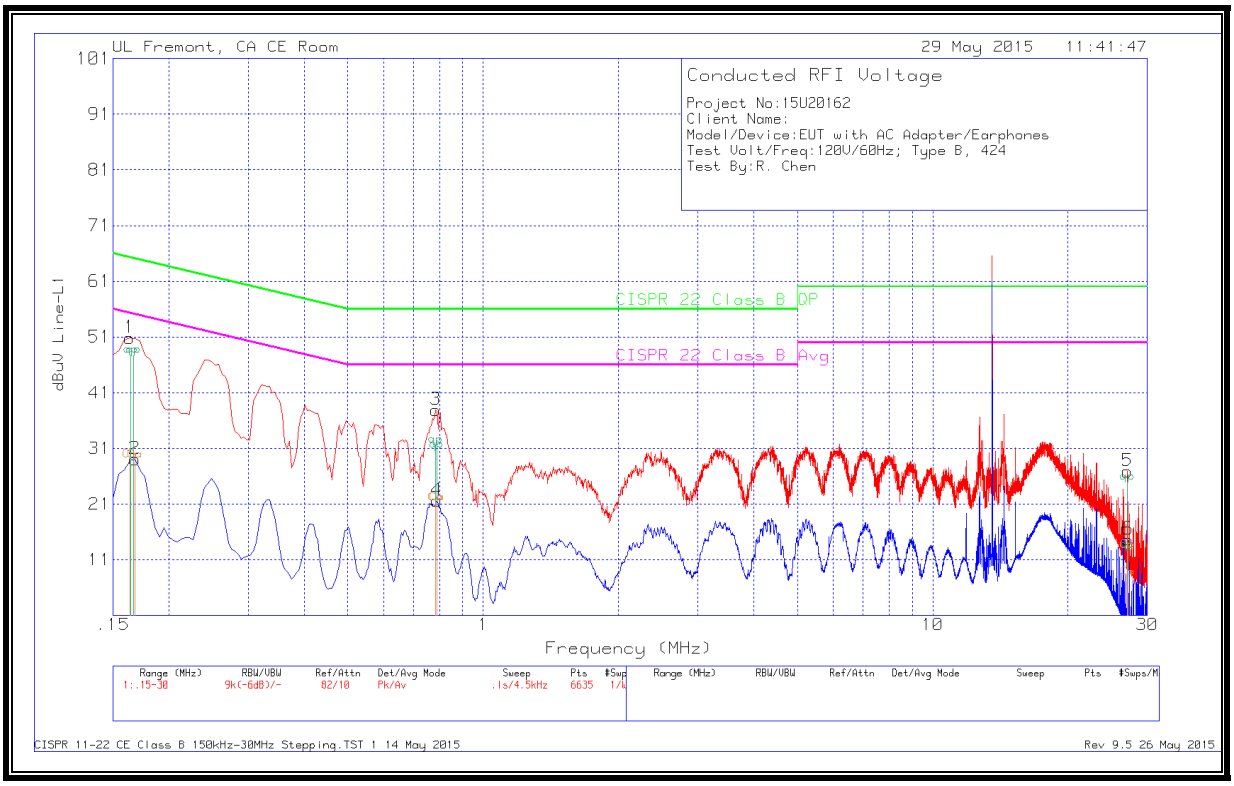
Pk - Peak detector
Av - Average detection

Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicate that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

LINE 1 RESULTS



LINE 2 RESULTS



13.2.2. NORMAL OPERATION WITH ANTENNA PORT TERMINATED, 424 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

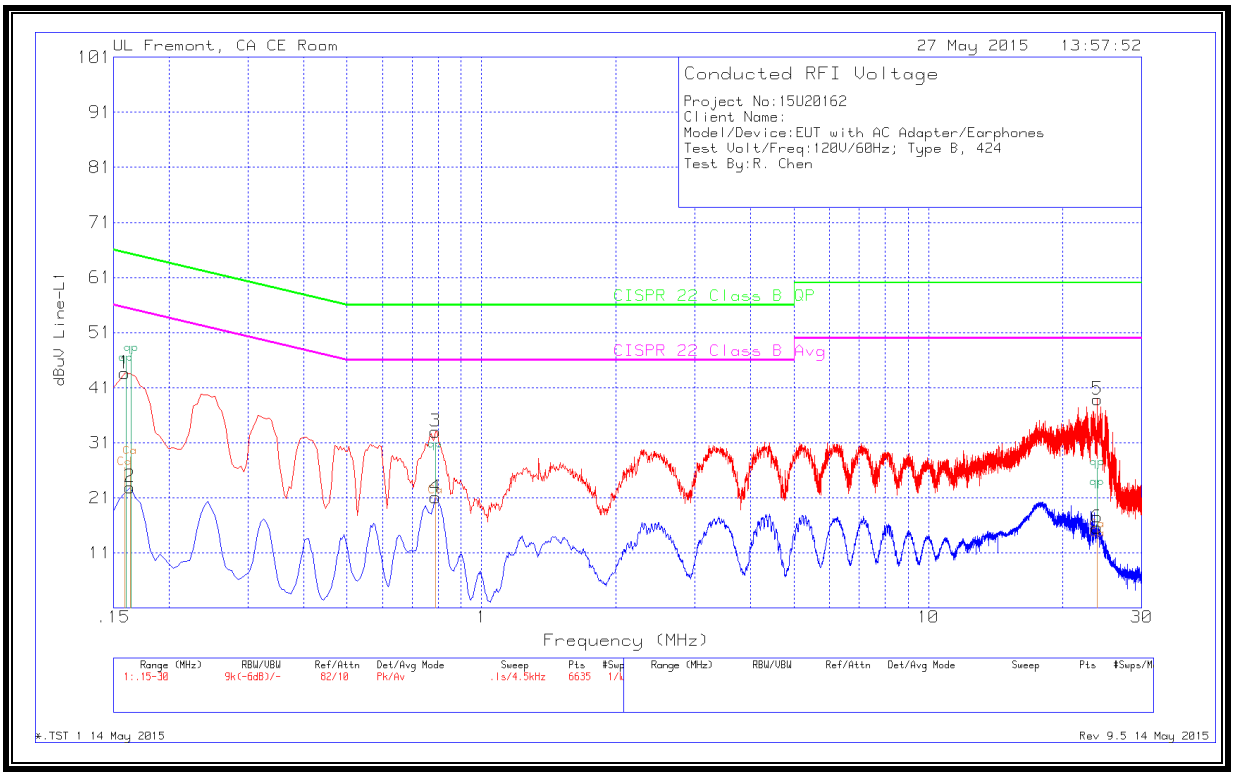
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.159	42.32	Pk	1.3	0	43.62	65.52	-21.9	-	-
2	.1635	21.75	Av	1.2	0	22.95	-	-	55.28	-32.33
3	.789	32.75	Pk	.3	0	33.05	56	-22.95	-	-
4	.789	20.84	Av	.3	0	21.14	-	-	46	-24.86
5	23.892	38.36	Pk	.3	.2	38.86	60	-21.14	-	-
6	23.856	15.1	Av	.3	.2	15.6	-	-	50	-34.4

Range 2: Line-L2 .15 - 30MHz

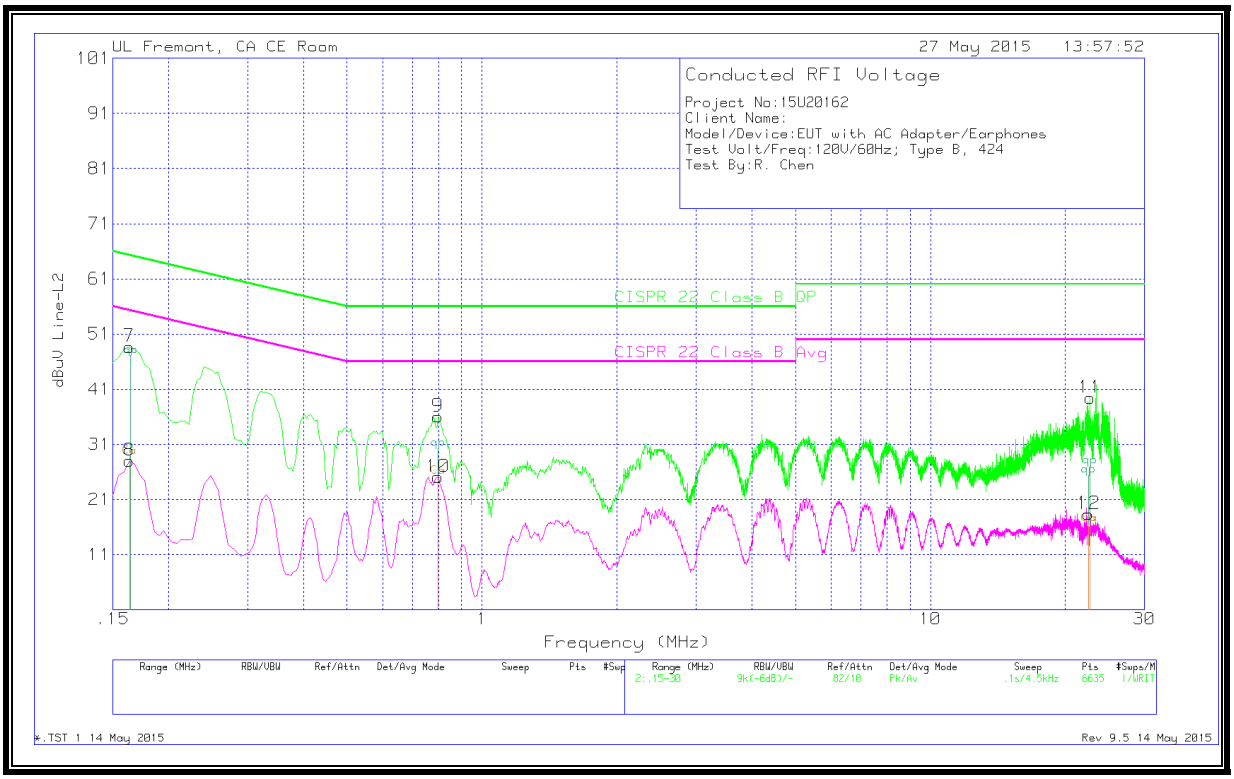
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1635	47.39	Pk	1.3	0	48.69	65.28	-16.59	-	-
8	.1635	26.73	Av	1.3	0	28.03	-	-	55.28	-27.25
9	.798	35.73	Pk	.3	0	36.03	56	-19.97	-	-
10	.798	24.81	Av	.3	0	25.11	-	-	46	-20.89
11	22.704	38.83	Pk	.3	.3	39.43	60	-20.57	-	-
12	22.5285	17.85	Av	.3	.2	18.35	-	-	50	-31.65

Pk - Peak detector
Av - Average detection

LINE 1 RESULTS



LINE 2 RESULTS



13.2.3. NORMAL OPERATION, 212 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1635	49.62	Pk	1.2	0	50.82	65.28	-14.46	-	-
2	.168	27.4	Av	1.2	0	28.6	-	-	55.06	-26.46
3	.2445	46.28	Pk	.7	0	46.98	61.94	-14.96	-	-
4	.249	24.85	Av	.7	0	25.55	-	-	51.79	-26.24
5	.789	36.99	Pk	.3	0	37.29	56	-18.71	-	-
6	.789	21	Av	.3	0	21.3	-	-	46	-24.7

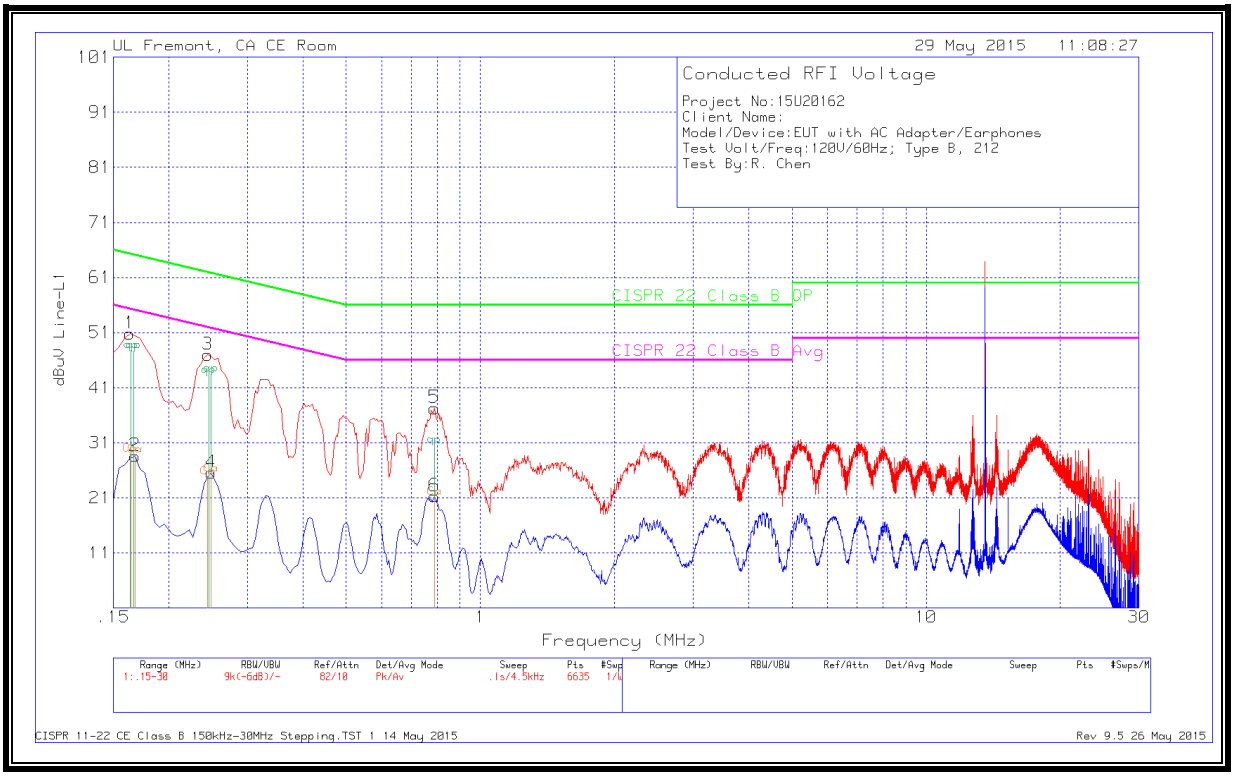
Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.168	49.02	Pk	1.3	0	50.32	65.06	-14.74	-	-
8	.168	27.42	Av	1.3	0	28.72	-	-	55.06	-26.34
9	.7845	36.71	Pk	.3	0	37.01	56	-18.99	-	-
10	.762	25.76	Av	.3	0	26.06	-	-	46	-19.94
11	23.127	28.67	Pk	.3	.2	29.17	60	-30.83	-	-
12	23.127	18.75	Av	.3	.2	19.25	-	-	50	-30.75

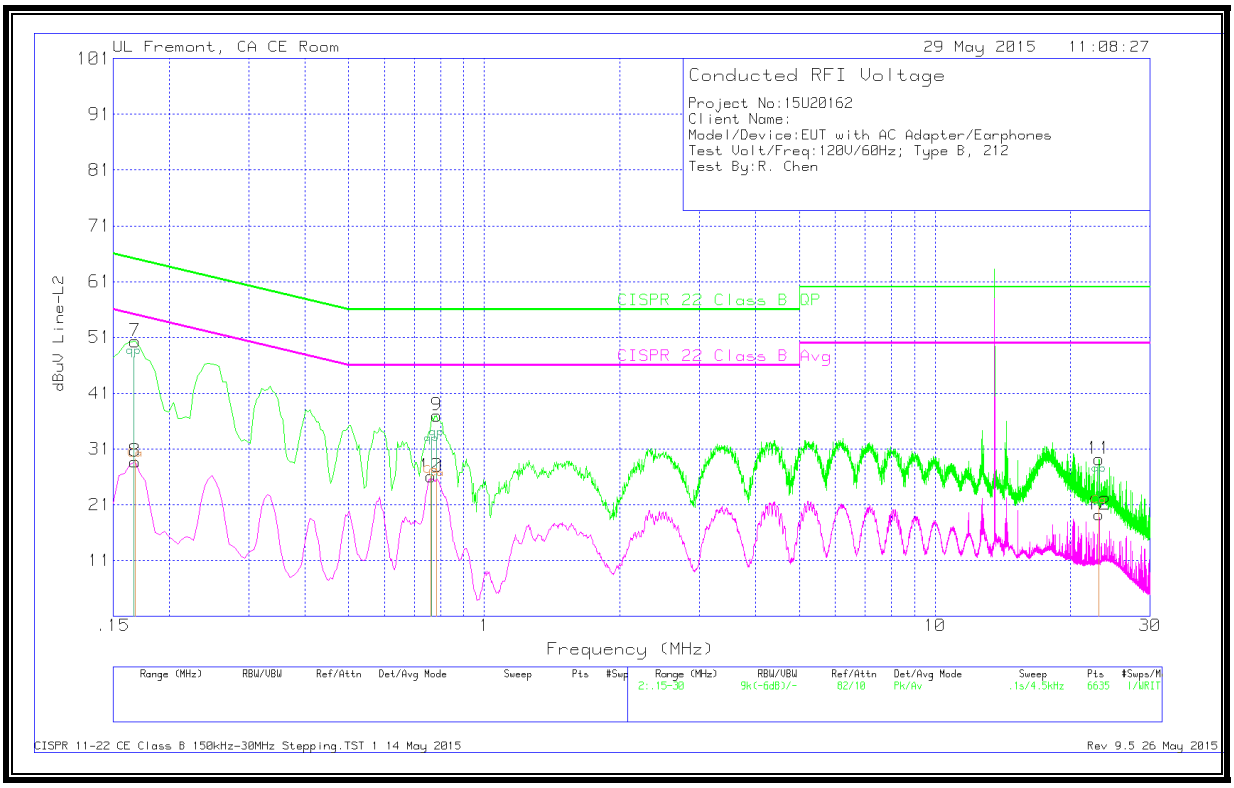
Pk - Peak detector
Av - Average detection

Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicate that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

LINE 1 RESULTS



LINE 2 RESULTS



13.2.4. NORMAL OPERATION WITH ANTENNA PORT TERMINATED, 212 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

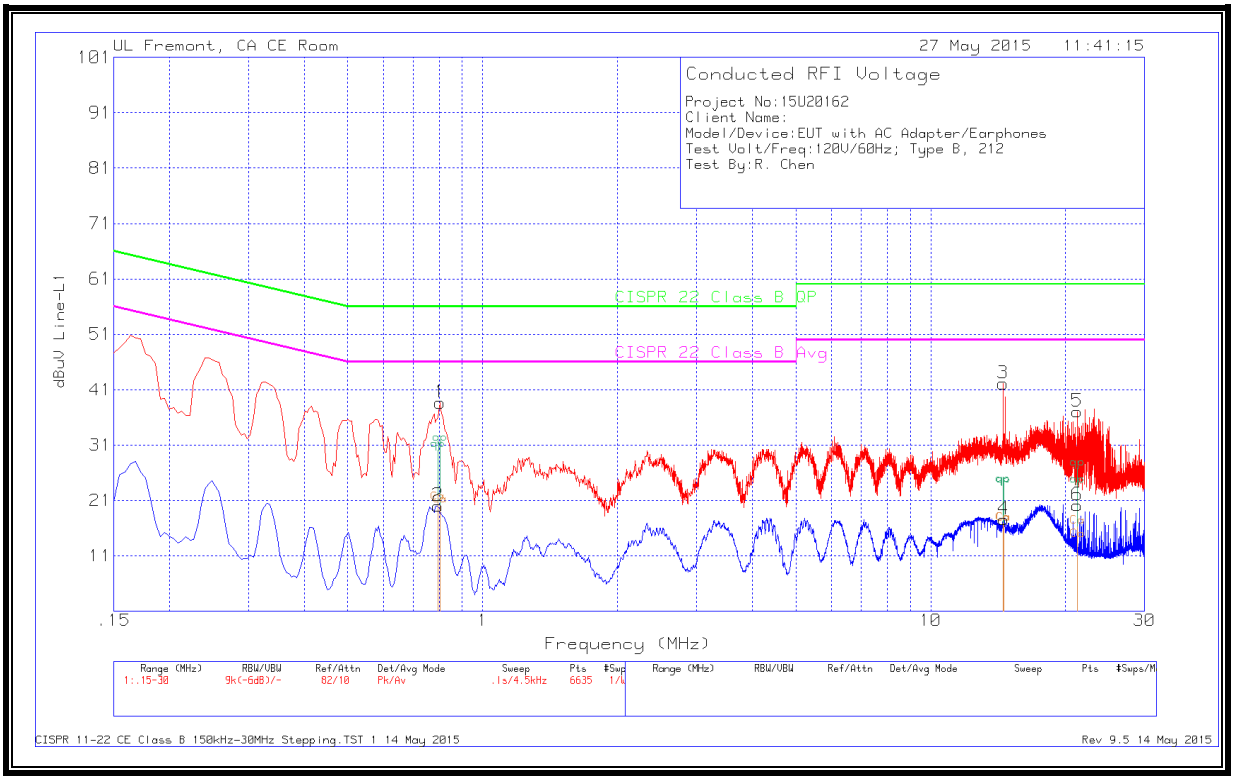
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.8025	38.39	Pk	.3	0	38.69	56	-17.31	-	-
2	.7935	19.71	Av	.3	0	20.01	-	-	46	-25.99
3	14.487	41.74	Pk	.2	.2	42.14	60	-17.86	-	-
4	14.55	17.2	Av	.2	.2	17.6	-	-	50	-32.4
5	21.2595	36.55	Pk	.3	.2	37.05	60	-22.95	-	-
6	21.246	19.64	Av	.3	.2	20.14	-	-	50	-29.86

Range 2: Line-L2 .15 - 30MHz

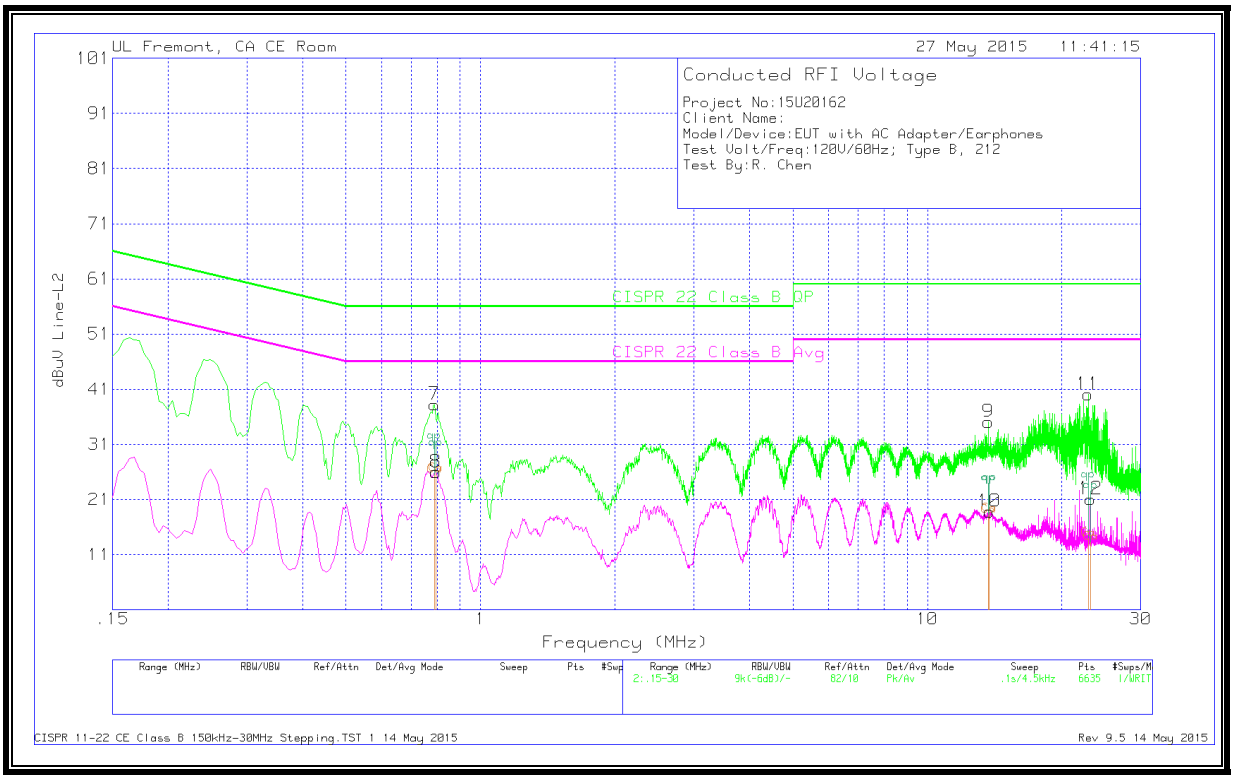
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.789	37.9	Pk	.3	0	38.2	56	-17.8	-	-
8	.7935	25.64	Av	.3	0	25.94	-	-	46	-20.06
9	13.686	34.65	Pk	.2	.2	35.05	60	-24.95	-	-
10	13.758	18.42	Av	.2	.2	18.82	-	-	50	-31.18
11	22.884	39.53	Pk	.3	.2	40.03	60	-19.97	-	-
12	23.172	20.55	Av	.3	.2	21.05	-	-	50	-28.95

Pk - Peak detector
Av - Average detection

LINE 1 RESULTS



LINE 2 RESULTS



13.2.5. NORMAL OPERATION, 106 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1635	52.46	Pk	1.2	0	53.66	65.28	-11.62	-	-
2	.168	30.6	Av	1.2	0	31.8	-	-	55.06	-23.26
3	.7935	39.42	Pk	.3	0	39.72	56	-16.28	-	-
4	.78	25.06	Av	.3	0	25.36	-	-	46	-20.64
5	13.56	67.79	Pk	.2	.2	68.19	60	8.19	-	-
6	13.56	63.6	Av	.2	.2	64	-	-	50	14

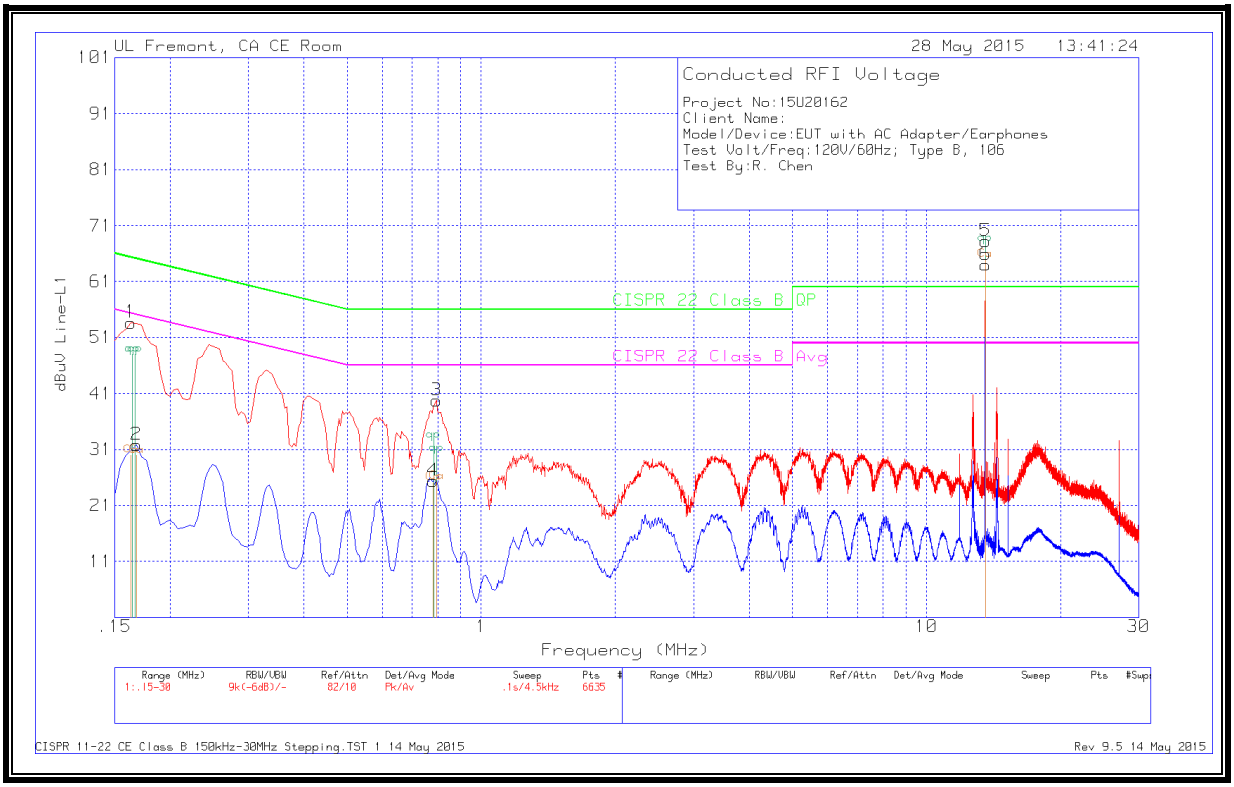
Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1635	49.65	Pk	1.3	0	50.95	65.28	-14.33	-	-
8	.168	27.74	Av	1.3	0	29.04	-	-	55.06	-26.02
9	.789	38.46	Pk	.3	0	38.76	56	-17.24	-	-
10	.762	18.84	Av	.3	0	19.14	-	-	46	-26.86
11	13.56	63.95	Pk	.2	.2	64.35	60	4.35	-	-
12	13.56	61.15	Av	.2	.2	61.55	-	-	50	11.55

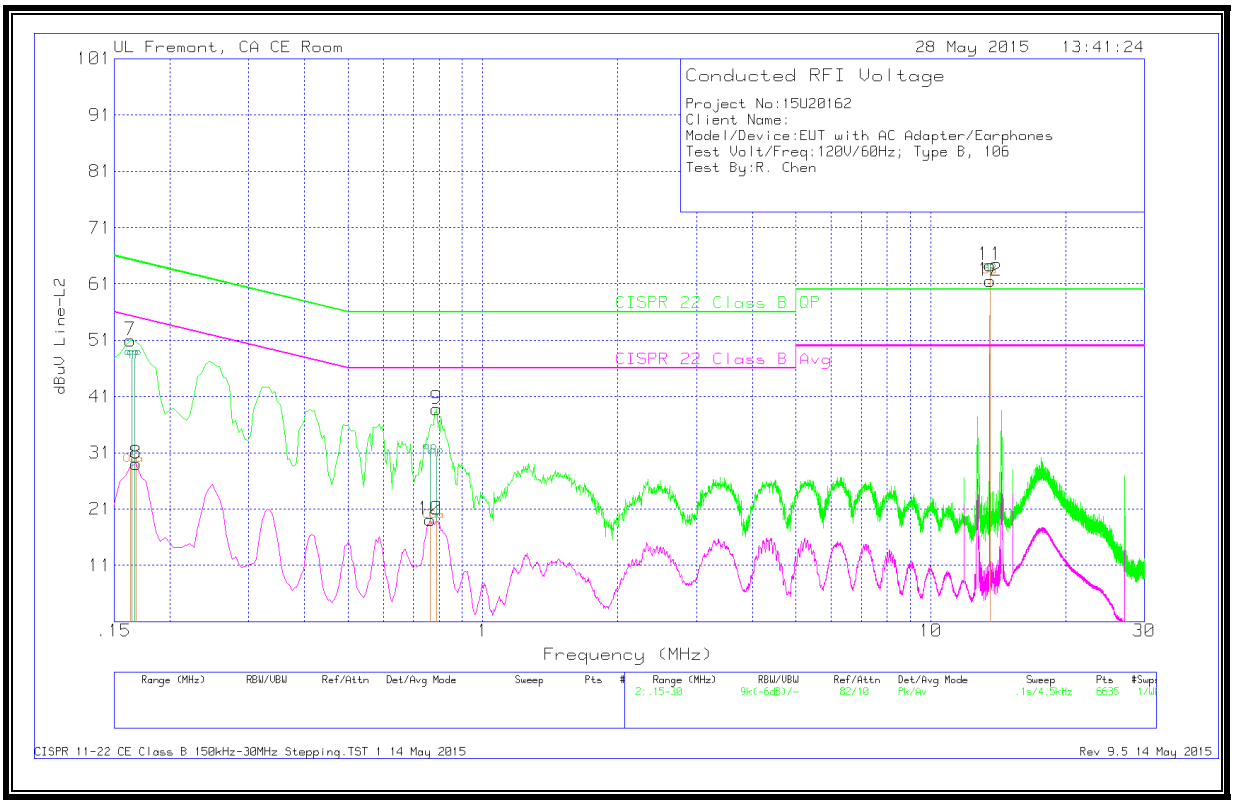
Pk - Peak detector
Av - Average detection

Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicate that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

LINE 1 RESULTS



LINE 2 RESULTS



13.2.6. NORMAL OPERATION WITH ANTENNA PORT TERMINATED, 106 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

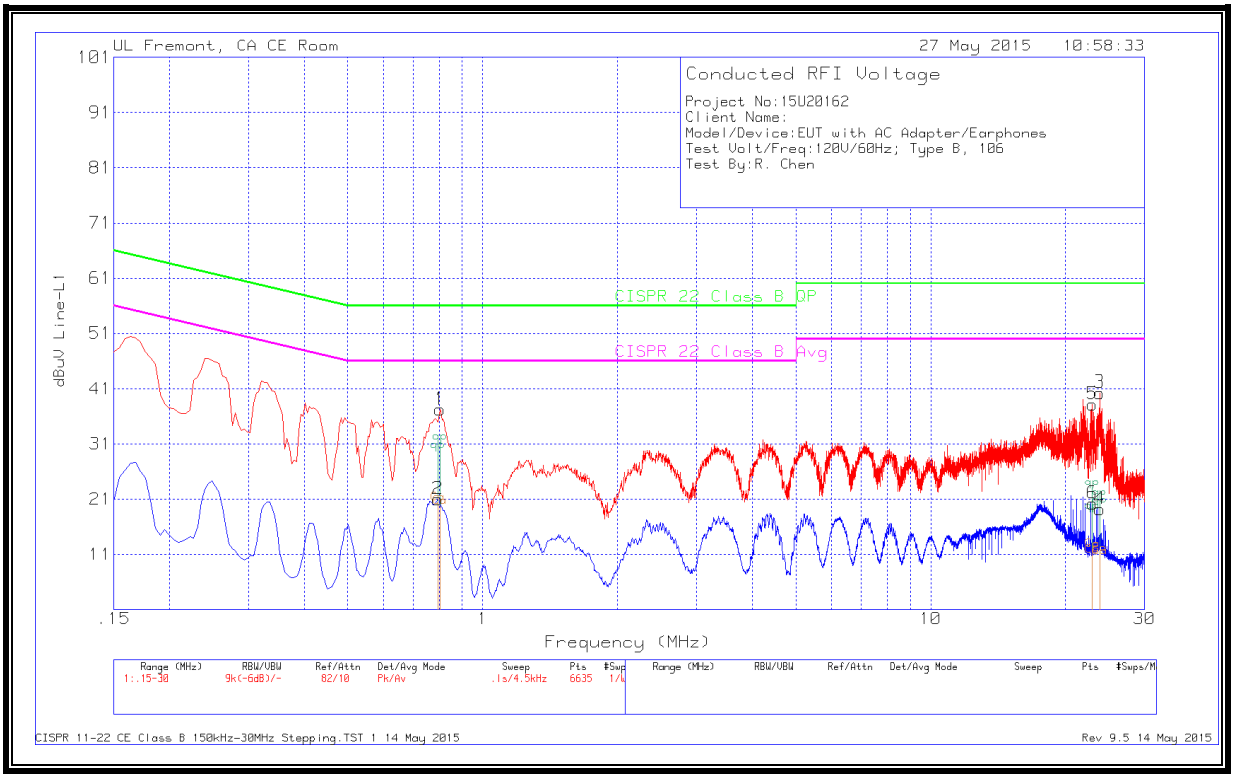
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.8025	36.92	Pk	.3	0	37.22	56	-18.78	-	-
2	.7935	20.71	Av	.3	0	21.01	-	-	46	-24.99
3	23.82	39.74	Pk	.3	.2	40.24	60	-19.76	-	-
4	23.847	18.68	Av	.3	.2	19.18	-	-	50	-30.82
5	22.956	37.65	Pk	.3	.2	38.15	60	-21.85	-	-
6	22.9515	19.7	Av	.3	.2	20.2	-	-	50	-29.8

Range 2: Line-L2 .15 - 30MHz

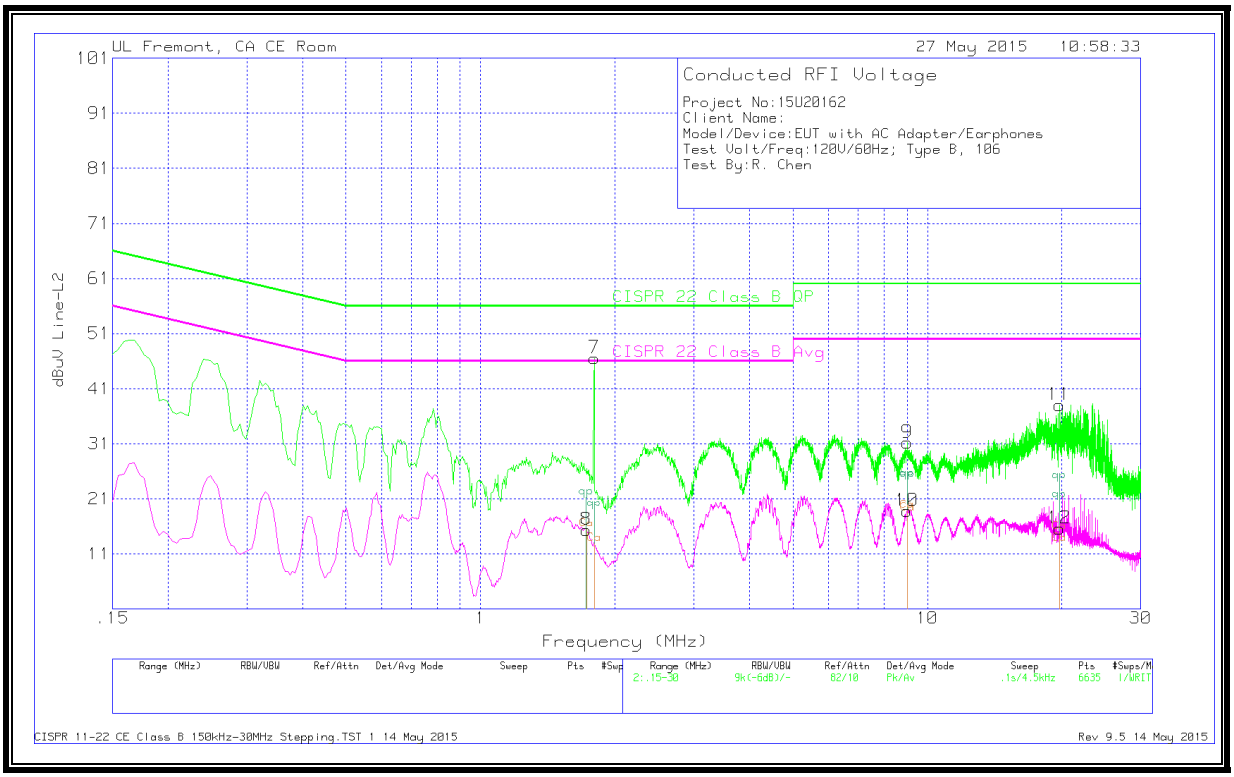
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	1.797	46.23	Pk	.2	.1	46.53	56	-9.47	-	-
8	1.725	15.08	Av	.2	.1	15.38	-	-	46	-30.62
9	9.024	30.9	Pk	.2	.1	31.2	60	-28.8	-	-
10	9.0015	18.5	Av	.2	.1	18.8	-	-	50	-31.2
11	19.725	37.55	Pk	.3	.2	38.05	60	-21.95	-	-
12	19.734	15.14	Av	.3	.2	15.64	-	-	50	-34.36

Pk - Peak detector
Av - Average detection

LINE 1 RESULTS



LINE 2 RESULTS



13.2.7. NORMAL OPERATION WITH LAPTOP, WORST CASE CASE

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1905	56.65	Pk	1	0	57.65	64.01	-6.36	-	-
2	.1995	40.97	Av	.9	0	41.87	-	-	53.63	-11.76
3	.258	48.18	Pk	.7	0	48.88	61.5	-12.62	-	-
4	.2715	32.04	Av	.6	0	32.64	-	-	51.07	-18.43
5	13.2945	46.05	Pk	.2	.2	46.45	60	-13.55	-	-
6	13.362	35.1	Av	.2	.2	35.5	-	-	50	-14.5

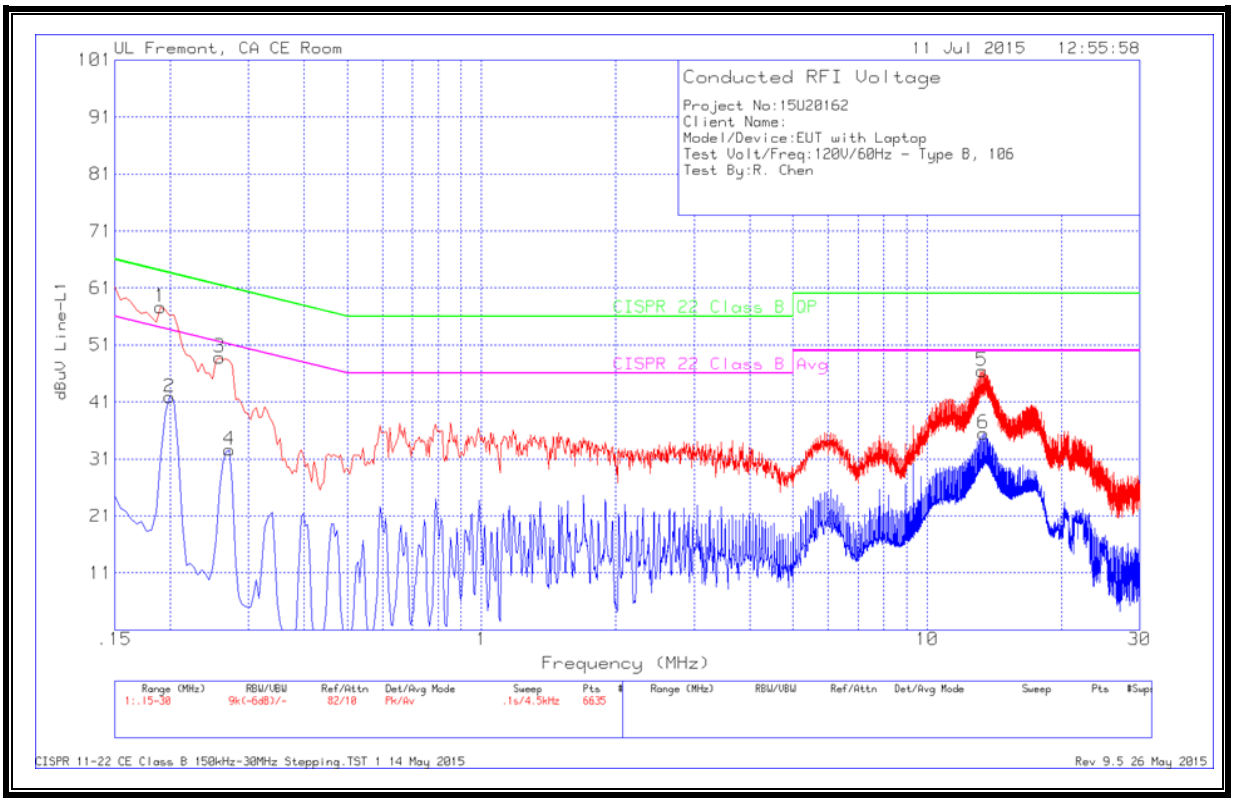
Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.159	57.1	Pk	1.4	0	58.5	65.52	-7.02	-	-
8	.1815	34.31	Av	1.2	0	35.51	-	-	54.42	-18.91
9	.6405	38	Pk	.3	0	38.3	56	-17.7	-	-
10	.627	22.69	Av	.3	0	22.99	-	-	46	-23.01
11	18.0375	42.36	Pk	.3	.2	42.86	60	-17.14	-	-
12	18.0375	28.7	Av	.3	.2	29.2	-	-	50	-20.8

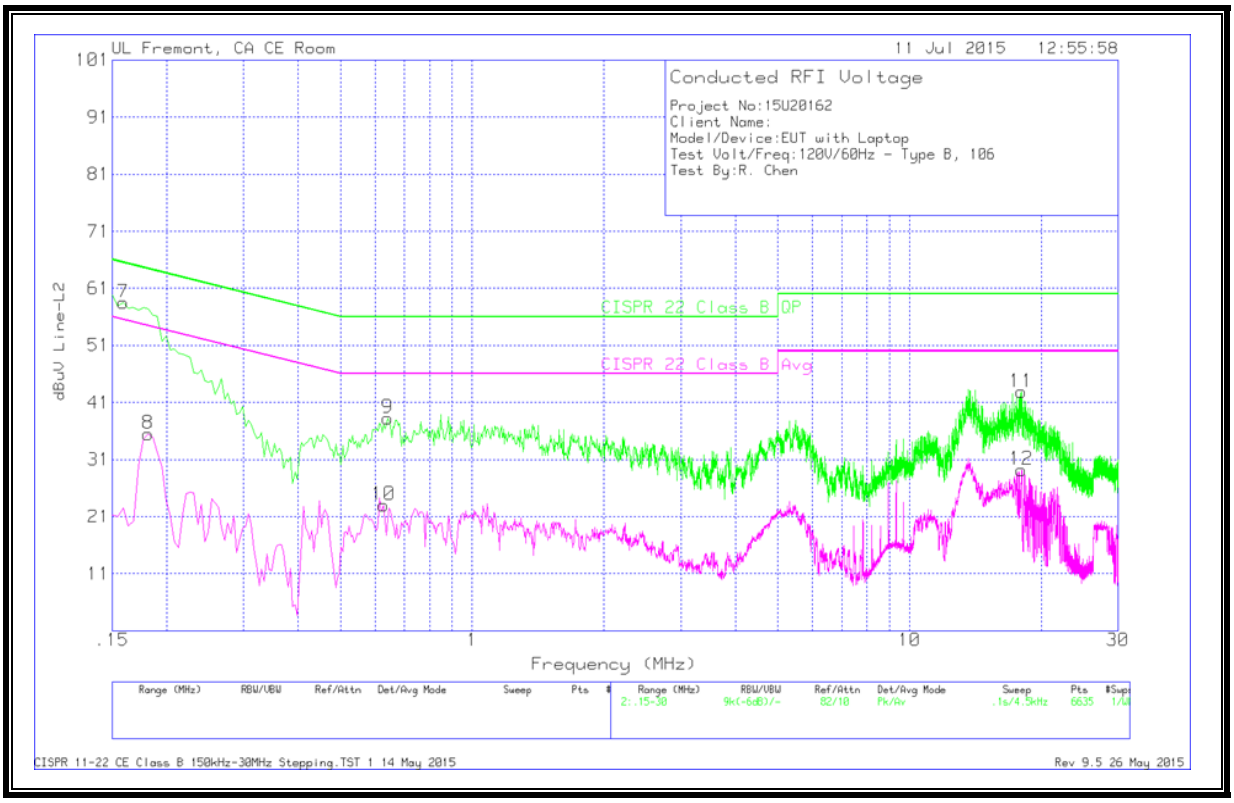
Pk - Peak detector

Av - Average detection

LINE 1 RESULTS



LINE 2 RESULTS



14. AC MAINS LINE CONDUCTED EMISSIONS (MODEL: A1687)

LIMITS

§15.207
IC RSS-GEN, Section 7.2.2

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50µH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges.

Frequency range (MHz)	Limits (dBµV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50
Notes: 1. The lower limit shall apply at the transition frequencies 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.		

TEST PROCEDURE

ANSI C63.10:2013

RESULTS

14.1. TYPE A

14.1.1. NORMAL OPERATION, 424 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1635	46.87	Pk	1.2	0	48.07	65.28	-17.21	-	-
2	.1635	26.93	Av	1.2	0	28.13	-	-	55.28	-27.15
3	.753	34.4	Pk	.3	0	34.7	56	-21.3	-	-
4	.7485	25.11	Av	.3	0	25.41	-	-	46	-20.59
5	18.7125	34.79	Pk	.3	.2	35.29	60	-24.71	-	-
6	18.717	20.1	Av	.3	.2	20.6	-	-	50	-29.4

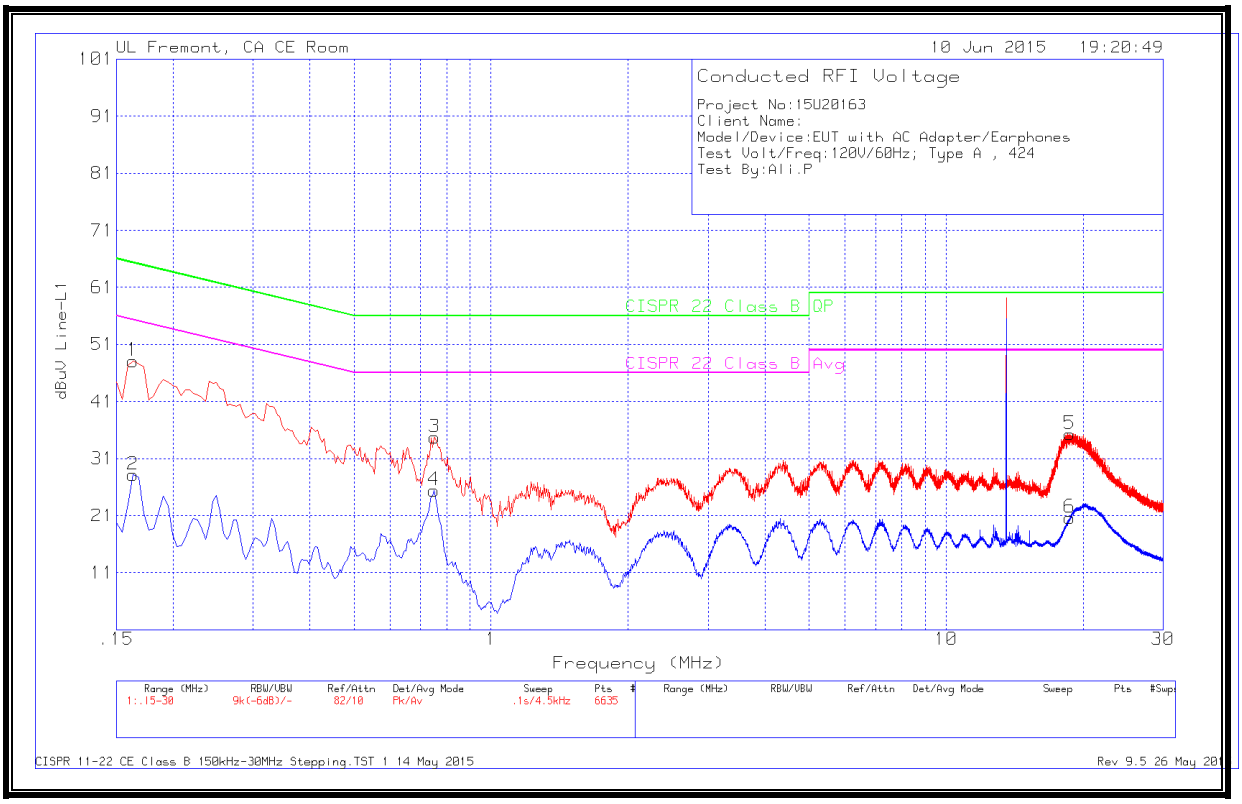
Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1635	46.38	Pk	1.3	0	47.68	65.28	-17.6	-	-
8	.1635	26.36	Av	1.3	0	27.66	-	-	55.28	-27.62
9	.75075	33.62	Pk	.3	0	33.92	56	-22.08	-	-
10	.7485	23.39	Av	.3	0	23.69	-	-	46	-22.31
11	18.6765	31.52	Pk	.3	.2	32.02	60	-27.98	-	-
12	18.681	22.48	Av	.3	.2	22.98	-	-	50	-27.02

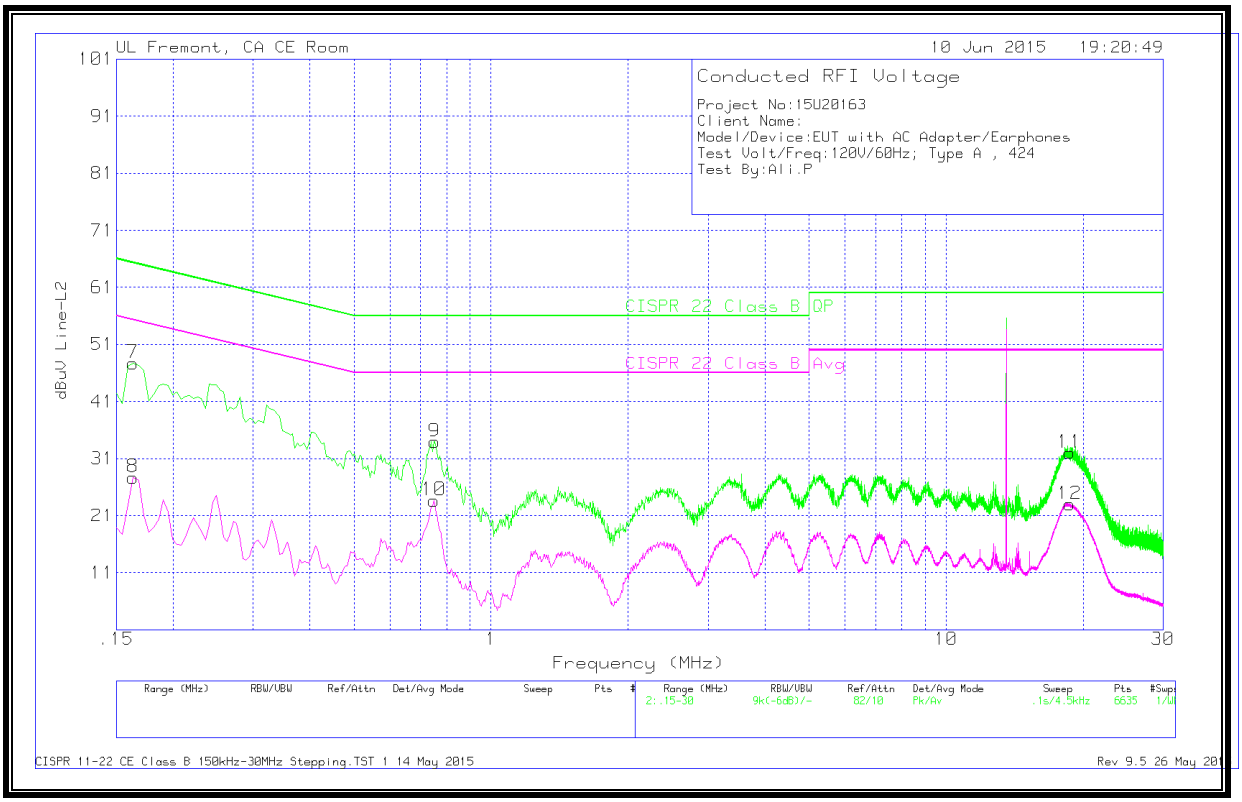
Pk - Peak detector
Av - Average detection

Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicate that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

LINE 1 RESULTS



LINE 2 RESULTS



14.1.2. NORMAL OPERATION WITH ANTENNA PORT TERMINATED, 424 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1635	49.37	Pk	1.2	0	50.57	65.28	-14.71	-	-
2	.168	28.83	Av	1.2	0	30.03	-	-	55.06	-25.03
3	.7845	38.42	Pk	.3	0	38.72	56	-17.28	-	-
4	.762	25.81	Av	.3	0	26.11	-	-	46	-19.89
5	22.38	45.47	Pk	.3	.2	45.97	60	-14.03	-	-
6	22.4025	25.59	Av	.3	.2	26.09	-	-	50	-23.91

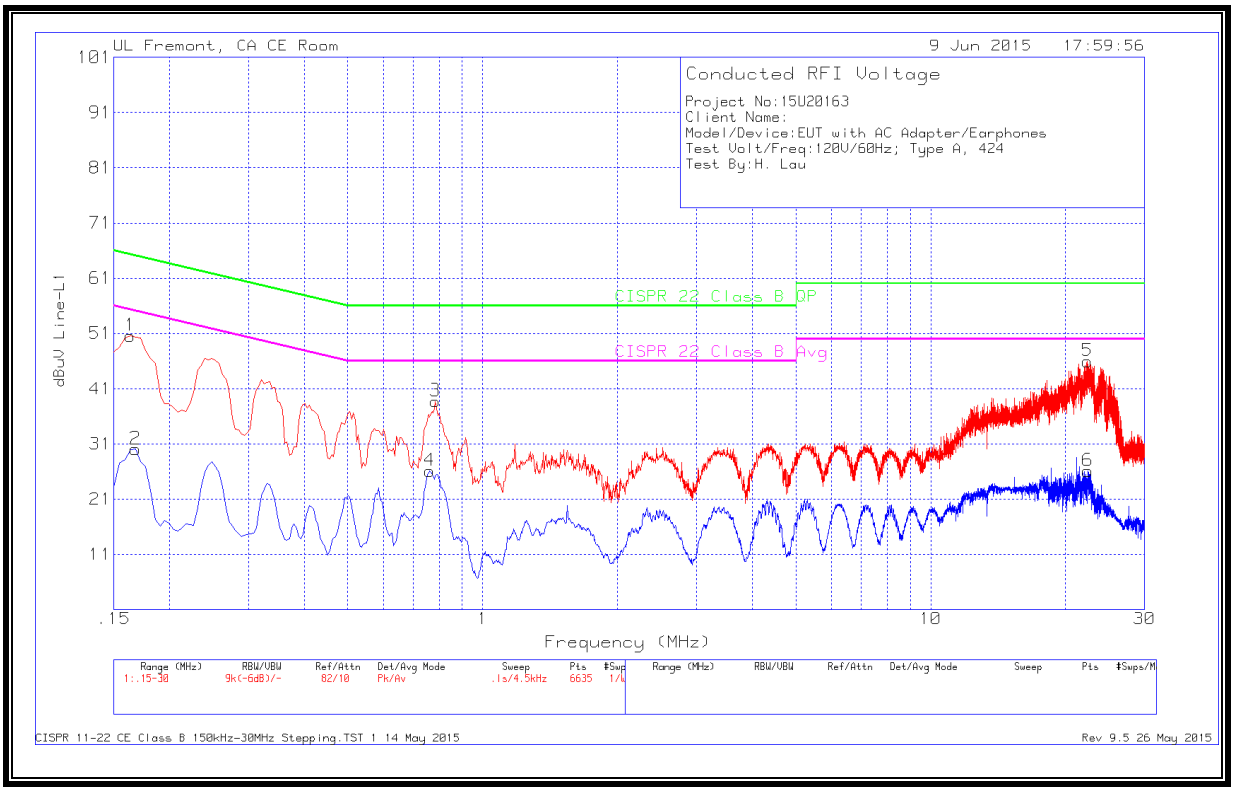
Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1635	48.68	Pk	1.3	0	49.98	65.28	-15.3	-	-
8	.168	27.66	Av	1.3	0	28.96	-	-	55.06	-26.1
9	.7845	38.59	Pk	.3	0	38.89	56	-17.11	-	-
10	.762	19.6	Av	.3	0	19.9	-	-	46	-26.1
11	23.5275	41.93	Pk	.3	.2	42.43	60	-17.57	-	-
12	23.487	21.07	Av	.3	.2	21.57	-	-	50	-28.43

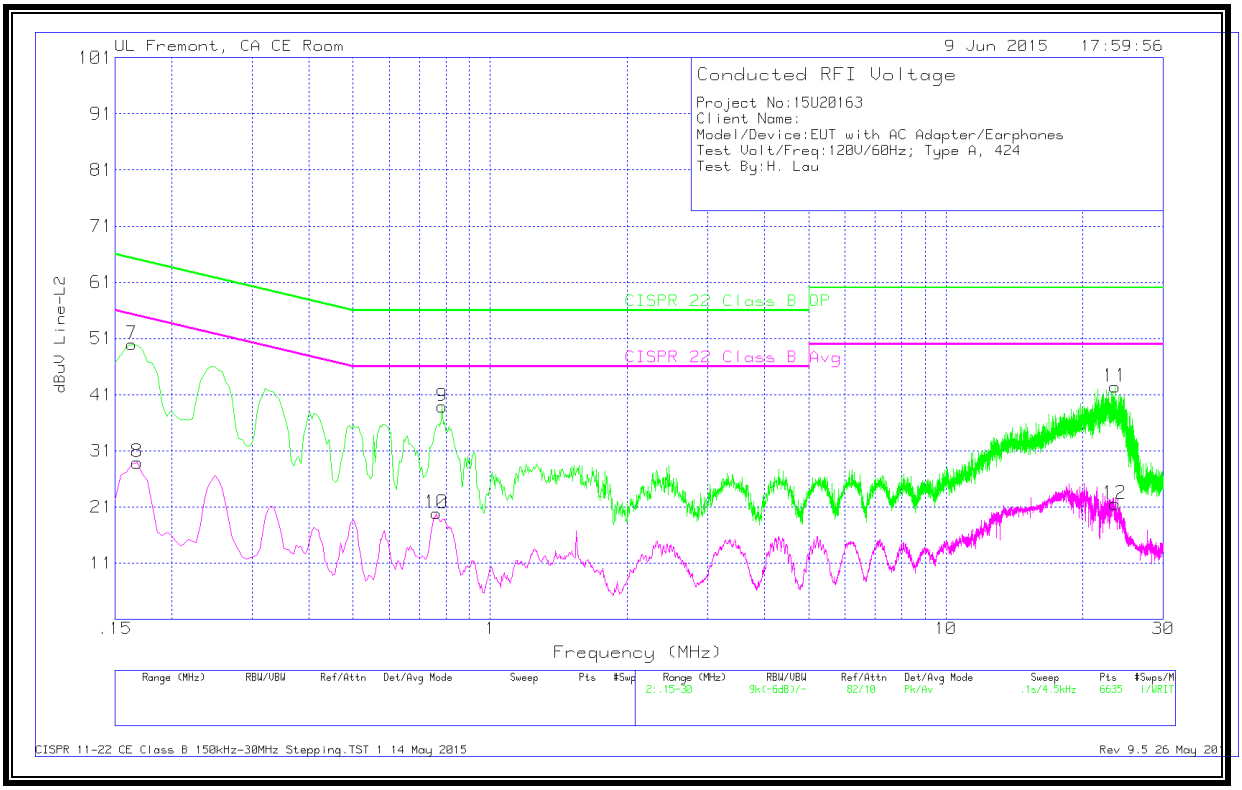
Pk - Peak detector

Av - Average detection

LINE 1 RESULTS



LINE 2 RESULTS



14.1.3. NORMAL OPERATION, 212 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1635	47.02	Pk	1.2	0	48.22	65.28	-17.06	-	-
2	.1635	27.12	Av	1.2	0	28.32	-	-	55.28	-26.96
3	.7395	36.08	Pk	.3	0	36.38	56	-19.62	-	-
4	.7485	25.11	Av	.3	0	25.41	-	-	46	-20.59
5	18.7035	35.98	Pk	.3	.2	36.48	60	-23.52	-	-
6	18.6855	20.75	Av	.3	.2	21.25	-	-	50	-28.75

Range 2: Line-L2 .15 - 30MHz

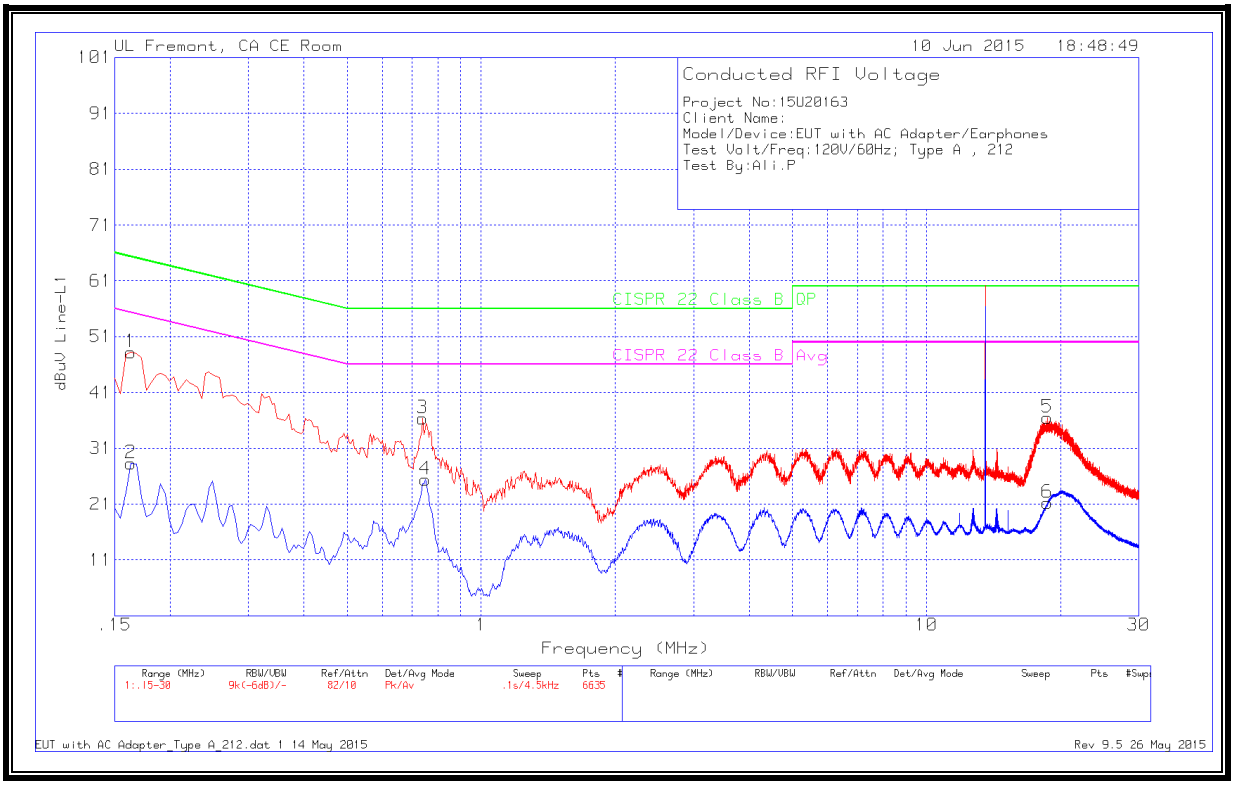
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1635	46.48	Pk	1.3	0	47.78	65.28	-17.5	-	-
8	.1635	26.77	Av	1.3	0	28.07	-	-	55.28	-27.21
9	.753	34.3	Pk	.3	0	34.6	56	-21.4	-	-
10	.7485	23.36	Av	.3	0	23.66	-	-	46	-22.34
11	18.7125	31.79	Pk	.3	.2	32.29	60	-27.71	-	-
12	18.681	22.6	Av	.3	.2	23.1	-	-	50	-26.9

Pk - Peak detector

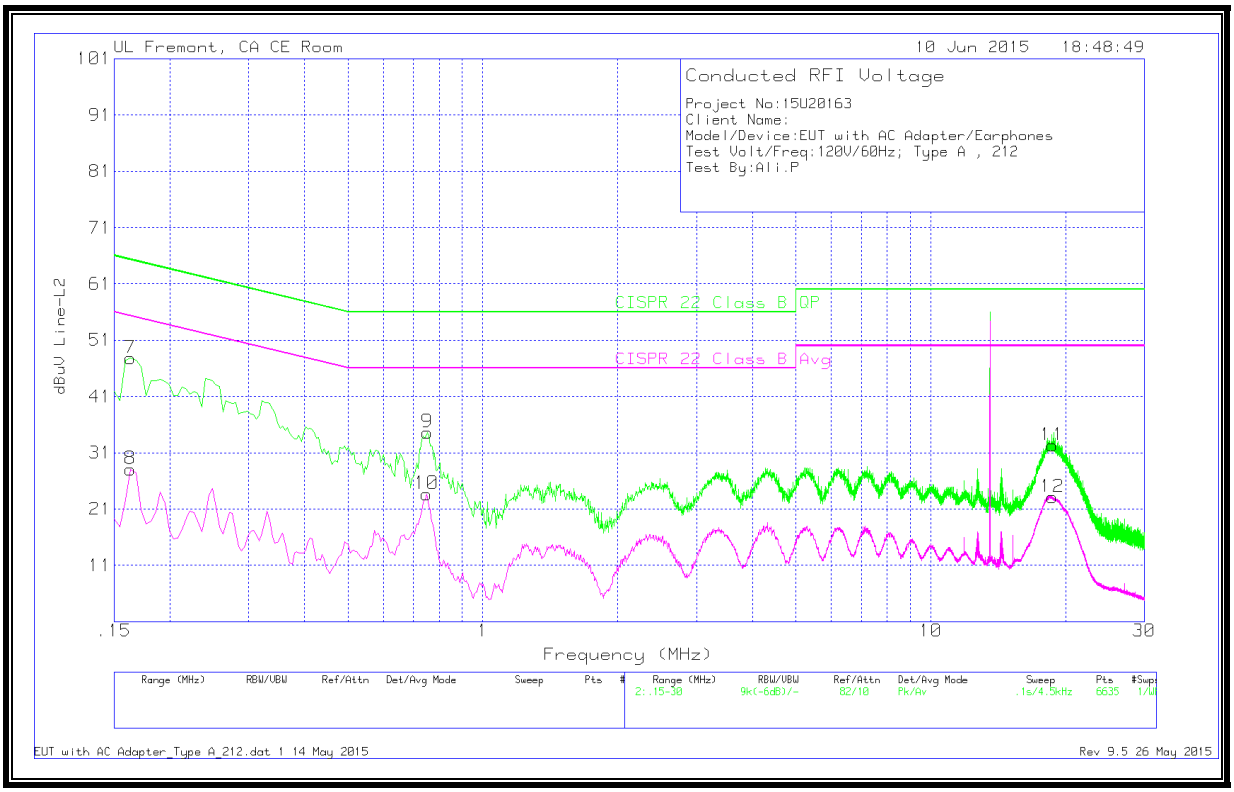
Av - Average detection

Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicate that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

LINE 1 RESULTS



LINE 2 RESULTS



14.1.4. NORMAL OPERATION WITH ANTENNA PORT TERMINATED, 212 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

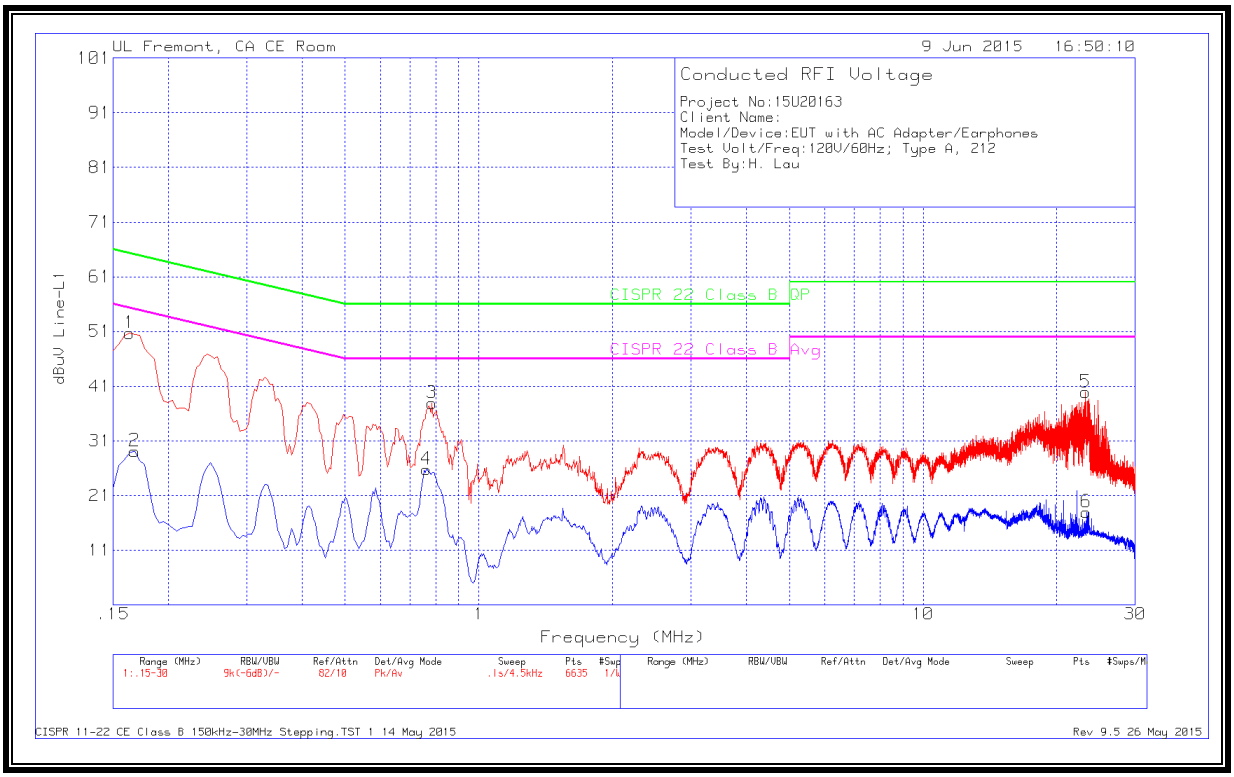
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1635	49.5	Pk	1.2	0	50.7	65.28	-14.58	-	-
2	.168	27.9	Av	1.2	0	29.1	-	-	55.06	-25.96
3	.7845	37.6	Pk	.3	0	37.9	56	-18.1	-	-
4	.762	25.49	Av	.3	0	25.79	-	-	46	-20.21
5	23.2125	39.41	Pk	.3	.2	39.91	60	-20.09	-	-
6	23.3025	17.36	Av	.3	.3	17.96	-	-	50	-32.04

Range 2: Line-L2 .15 - 30MHz

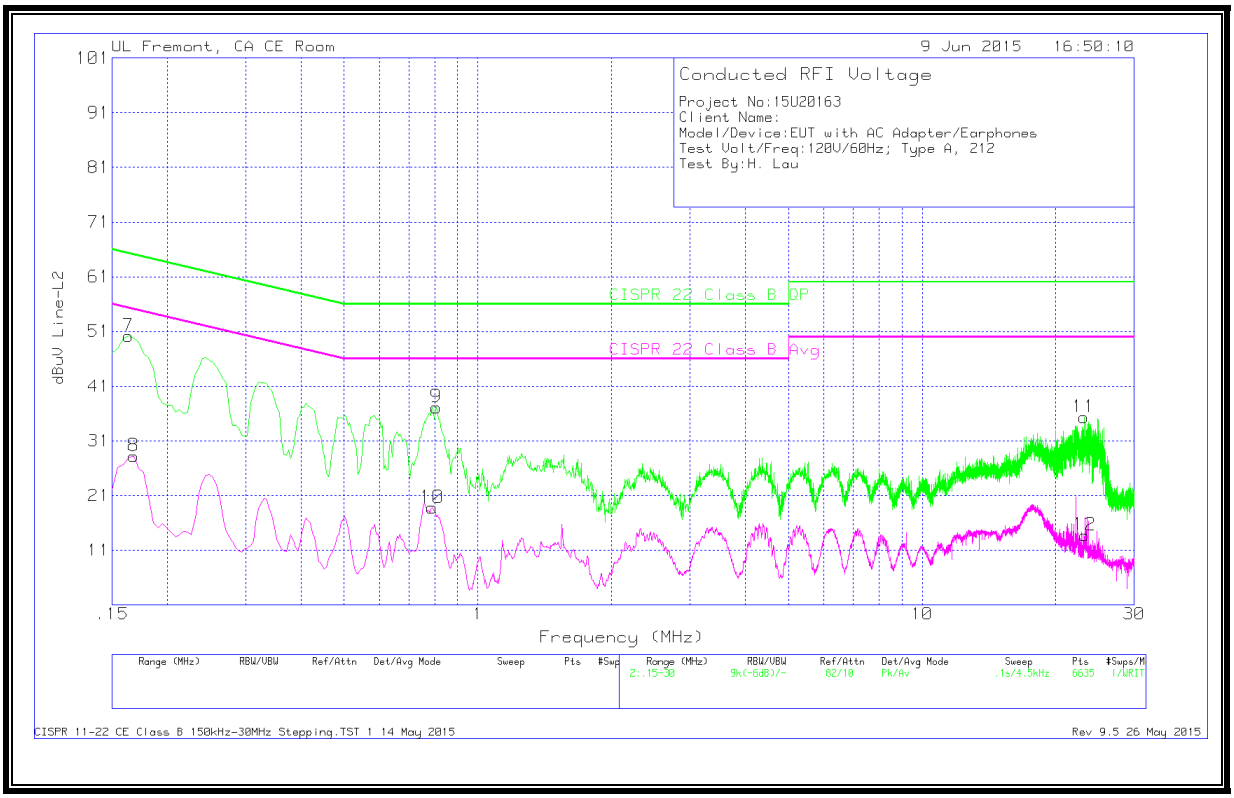
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1635	48.89	Pk	1.3	0	50.19	65.28	-15.09	-	-
8	.168	26.91	Av	1.3	0	28.21	-	-	55.06	-26.85
9	.807	36.86	Pk	.3	0	37.16	56	-18.84	-	-
10	.789	18.48	Av	.3	0	18.78	-	-	46	-27.22
11	23.1315	34.82	Pk	.3	.2	35.32	60	-24.68	-	-
12	23.2215	13.24	Av	.3	.2	13.74	-	-	50	-36.26

Pk - Peak detector
Av - Average detection

LINE 1 RESULTS



LINE 2 RESULTS



14.1.5. NORMAL OPERATION, 106 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1635	46.9	Pk	1.2	0	48.1	65.28	-17.18	-	-
2	.1635	27.19	Av	1.2	0	28.39	-	-	55.28	-26.89
3	.7485	35.57	Pk	.3	0	35.87	56	-20.13	-	-
4	.7485	25	Av	.3	0	25.3	-	-	46	-20.7
5	18.7665	34.42	Pk	.3	.2	34.92	60	-25.08	-	-
6	18.7755	20.62	Av	.3	.2	21.12	-	-	50	-28.88

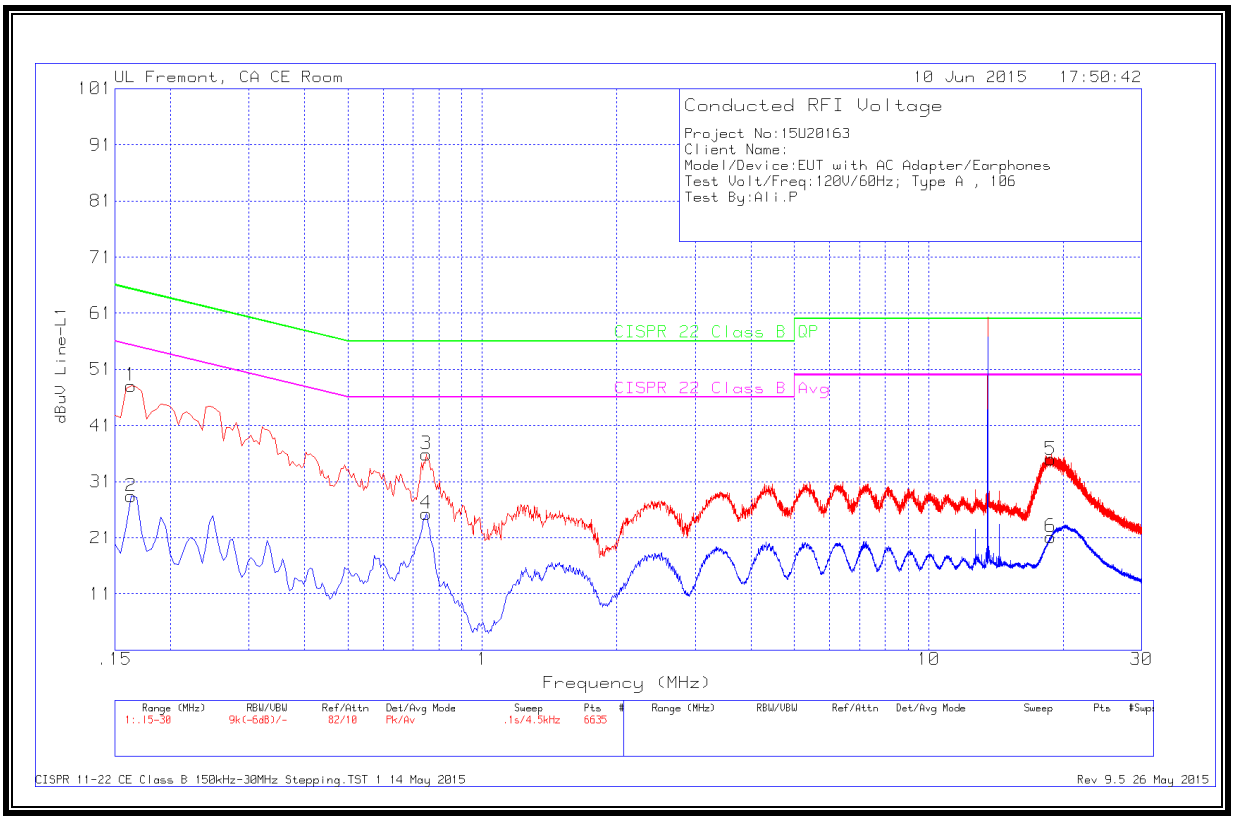
Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1635	46.35	Pk	1.3	0	47.65	65.28	-17.63	-	-
8	.1635	26.86	Av	1.3	0	28.16	-	-	55.28	-27.12
9	.7395	34.1	Pk	.3	0	34.4	56	-21.6	-	-
10	.7485	23.69	Av	.3	0	23.99	-	-	46	-22.01
11	18.474	32.09	Pk	.3	.2	32.59	60	-27.41	-	-
12	18.4875	22.81	Av	.3	.2	23.31	-	-	50	-26.69

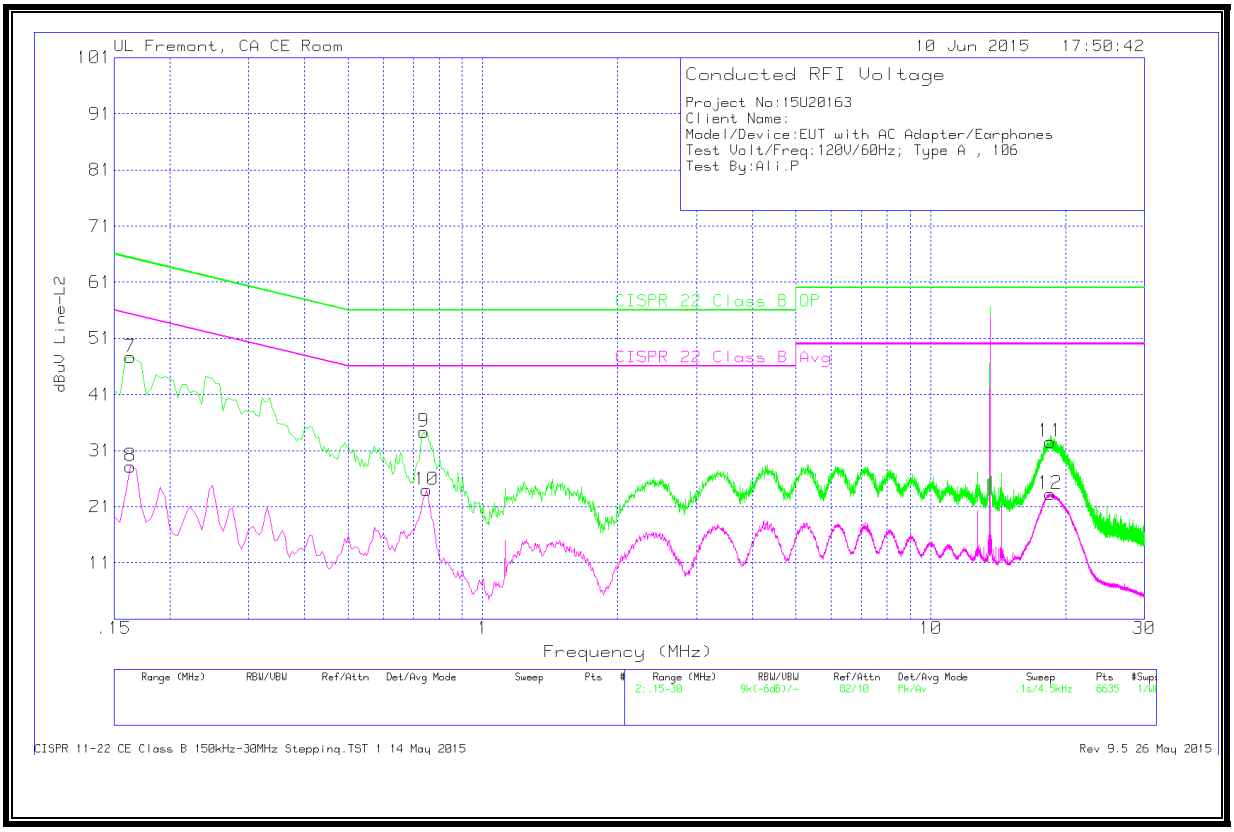
Pk - Peak detector
Av - Average detection

Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicate that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

LINE 1 RESULTS



LINE 2 RESULTS



14.1.6. NORMAL OPERATION WITH ANTENNA PORT TERMINATED, 106 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

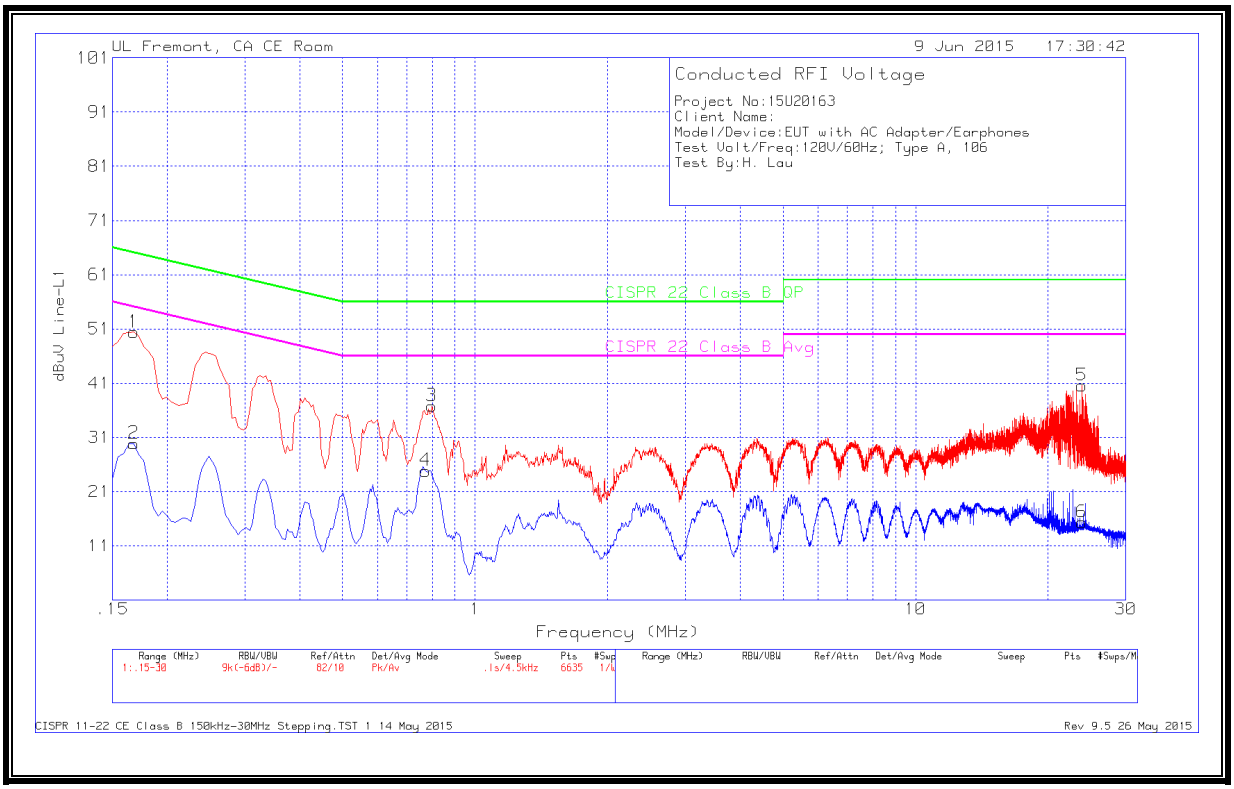
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.168	49.21	Pk	1.2	0	50.41	65.06	-14.65	-	-
2	.168	28.67	Av	1.2	0	29.87	-	-	55.06	-25.19
3	.798	36.49	Pk	.3	0	36.79	56	-19.21	-	-
4	.771	24.57	Av	.3	0	24.87	-	-	46	-21.13
5	23.8695	40.06	Pk	.3	.2	40.56	60	-19.44	-	-
6	23.8425	14.84	Av	.3	.2	15.34	-	-	50	-34.66

Range 2: Line-L2 .15 - 30MHz

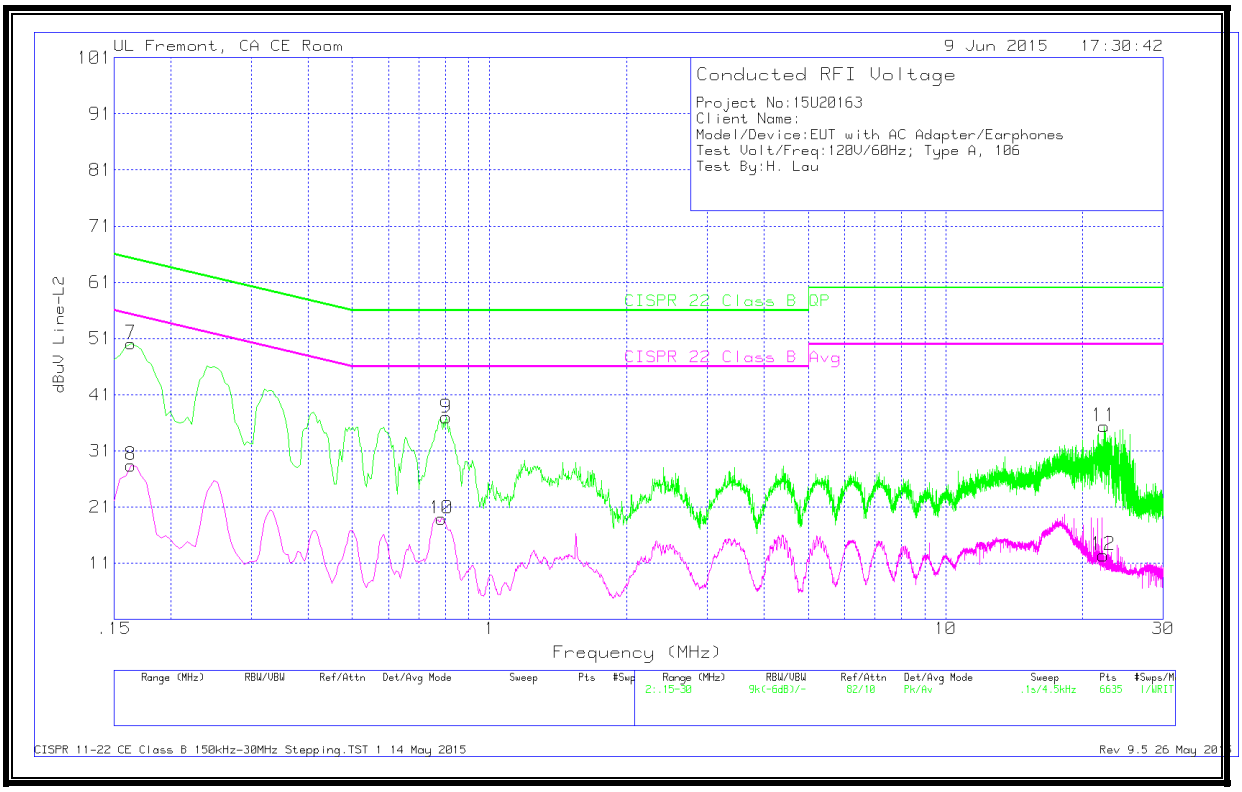
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1635	48.81	Pk	1.3	0	50.11	65.28	-15.17	-	-
8	.1635	27.15	Av	1.3	0	28.45	-	-	55.28	-26.83
9	.8025	36.65	Pk	.3	0	36.95	56	-19.05	-	-
10	.7845	18.62	Av	.3	0	18.92	-	-	46	-27.08
11	22.263	34.78	Pk	.3	.3	35.38	60	-24.62	-	-
12	22.191	11.95	Av	.3	.2	12.45	-	-	50	-37.55

Pk - Peak detector
Av - Average detection

LINE 1 RESULTS



LINE 2 RESULTS



14.1.7. NORMAL OPERATION WITH LAPTOP, WORST CASE CASE

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1545	59.41	Pk	1.3	0	60.71	65.75	-5.04	-	-
2	.1545	21.25	Av	1.3	0	22.55	-	-	55.75	-33.2
3	.195	57.83	Pk	1	0	58.83	63.82	-4.99	-	-
4	.1995	43.17	Av	.9	0	44.07	-	-	53.63	-9.56
5	13.587	46.46	Pk	.2	.2	46.86	60	-13.14	-	-
6	13.587	34.87	Av	.2	.2	35.27	-	-	50	-14.73

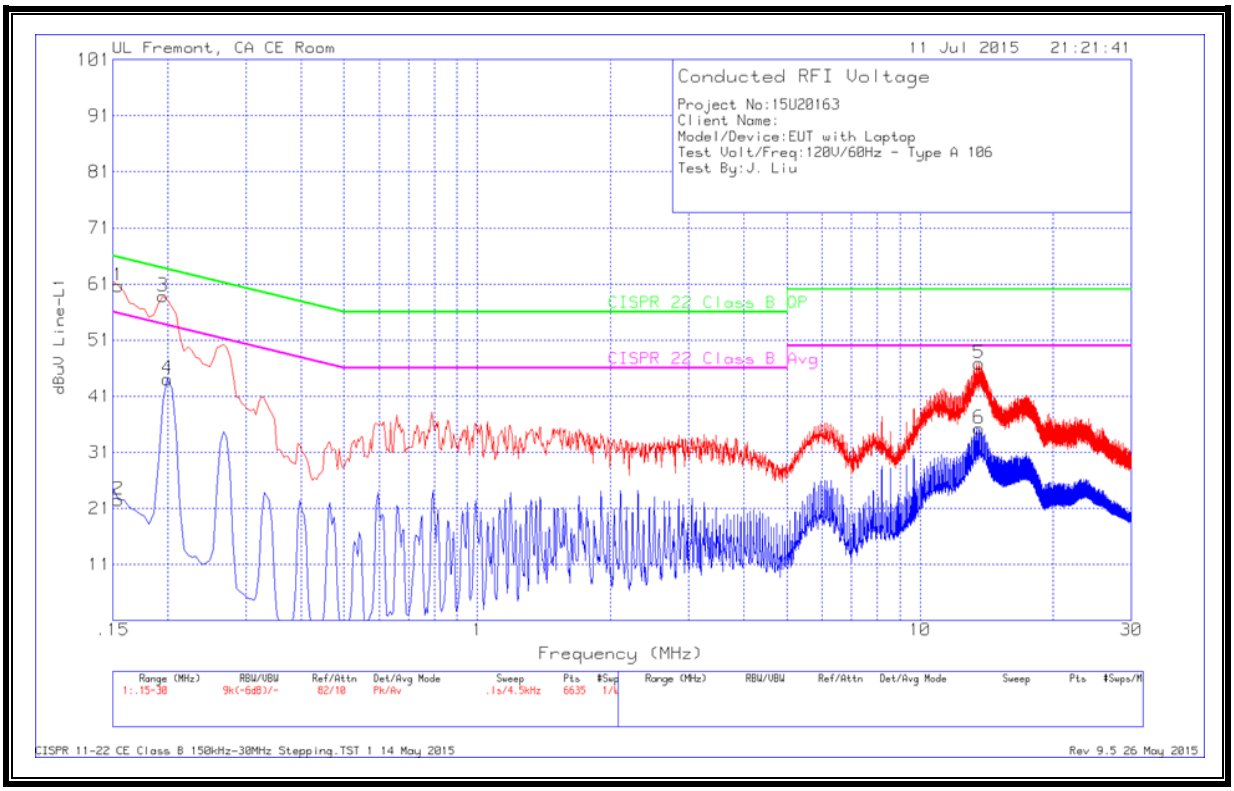
Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1545	57.3	Pk	1.4	0	58.7	65.75	-7.05	-	-
8	.1545	19.28	Av	1.4	0	20.68	-	-	55.75	-35.07
9	.1815	55.45	Pk	1.2	0	56.65	64.42	-7.77	-	-
10	.1905	31.81	Av	1.1	0	32.91	-	-	54.01	-21.1
11	.1905	54.29	Pk	1.1	0	55.39	64.01	-8.62	-	-
12	.195	36.37	Av	1	0	37.37	-	-	53.82	-16.45

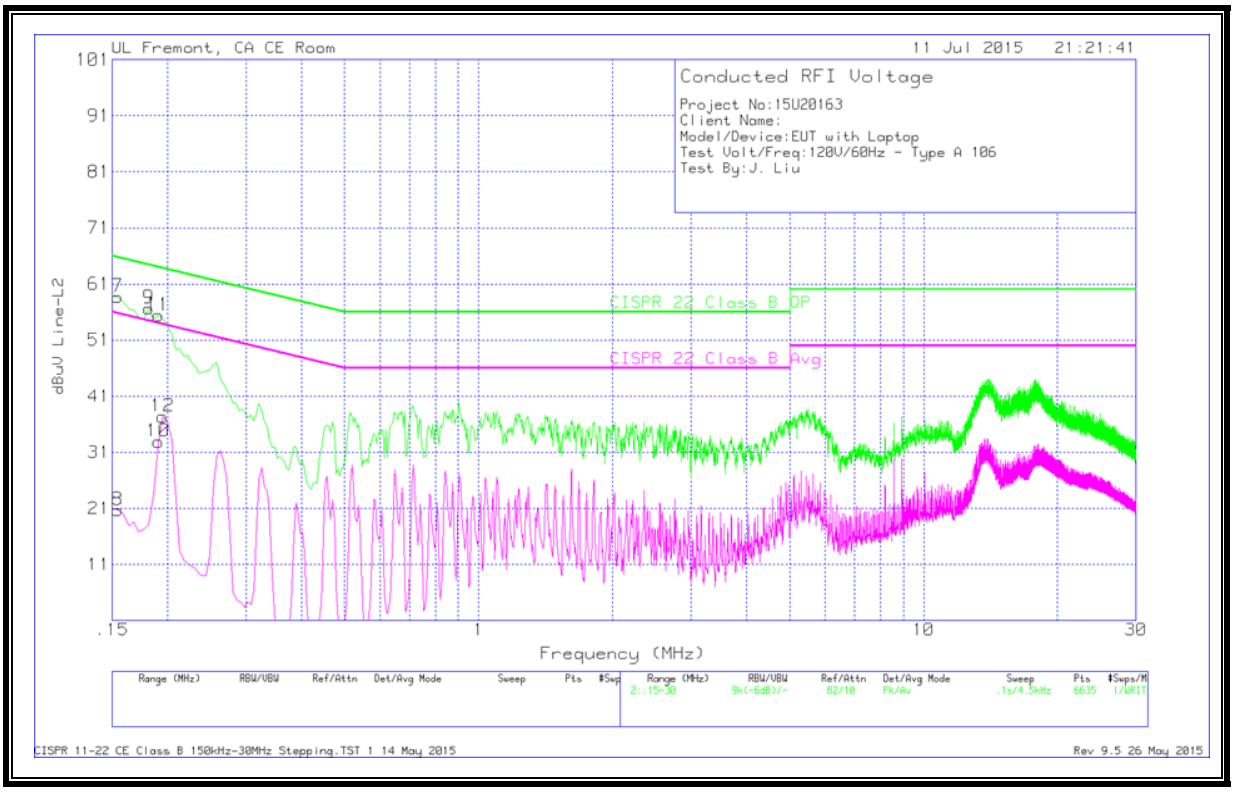
Pk - Peak detector

Av - Average detection

LINE 1 RESULTS



LINE 2 RESULTS



14.2. TYPE B

14.2.1. NORMAL OPERATION, 424 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1635	46.91	Pk	1.2	0	48.11	65.28	-17.17	-	-
2	.1635	26.95	Av	1.2	0	28.15	-	-	55.28	-27.13
3	.735	34.95	Pk	.3	0	35.25	56	-20.75	-	-
4	.7485	24.9	Av	.3	0	25.2	-	-	46	-20.8
5	18.4245	35.5	Pk	.3	.2	36	60	-24	-	-
6	18.447	20.35	Av	.3	.2	20.85	-	-	50	-29.15

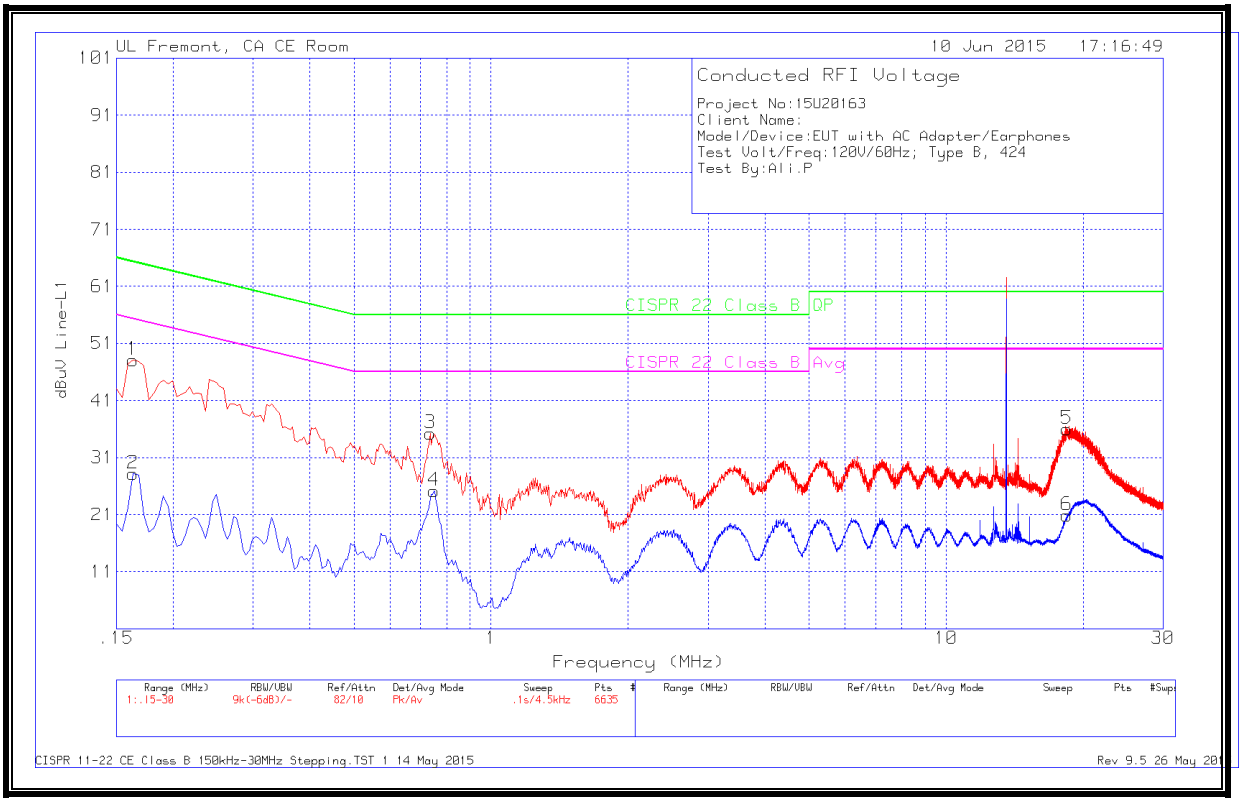
Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1635	46.26	Pk	1.3	0	47.56	65.28	-17.72	-	-
8	.1635	26.39	Av	1.3	0	27.69	-	-	55.28	-27.59
9	.7485	34.08	Pk	.3	0	34.38	56	-21.62	-	-
10	.7485	23.46	Av	.3	0	23.76	-	-	46	-22.24
11	18.7125	32.42	Pk	.3	.2	32.92	60	-27.08	-	-
12	18.71475	22.72	Av	.3	.2	23.22	-	-	50	-26.78

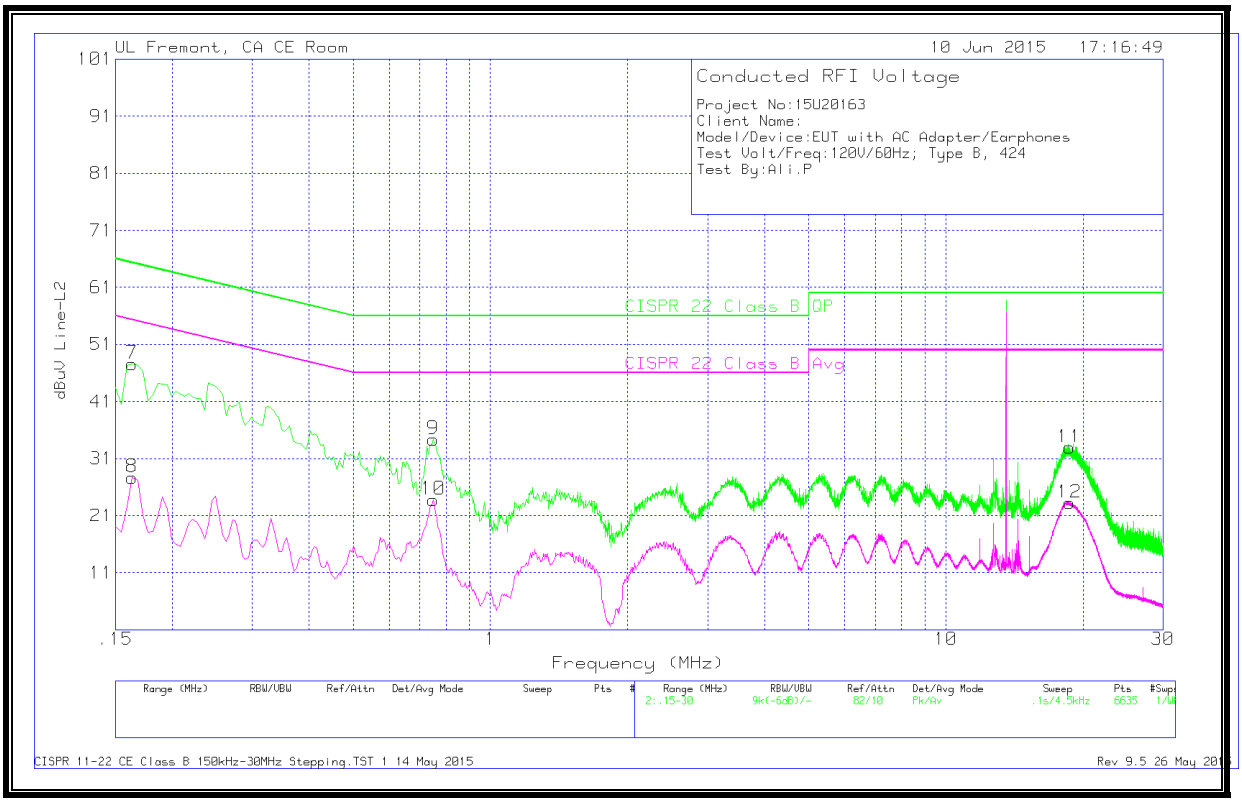
Pk - Peak detector
Av - Average detection

Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicate that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

LINE 1 RESULTS



LINE 2 RESULTS



14.2.2. NORMAL OPERATION WITH ANTENNA PORT TERMINATED, 424 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

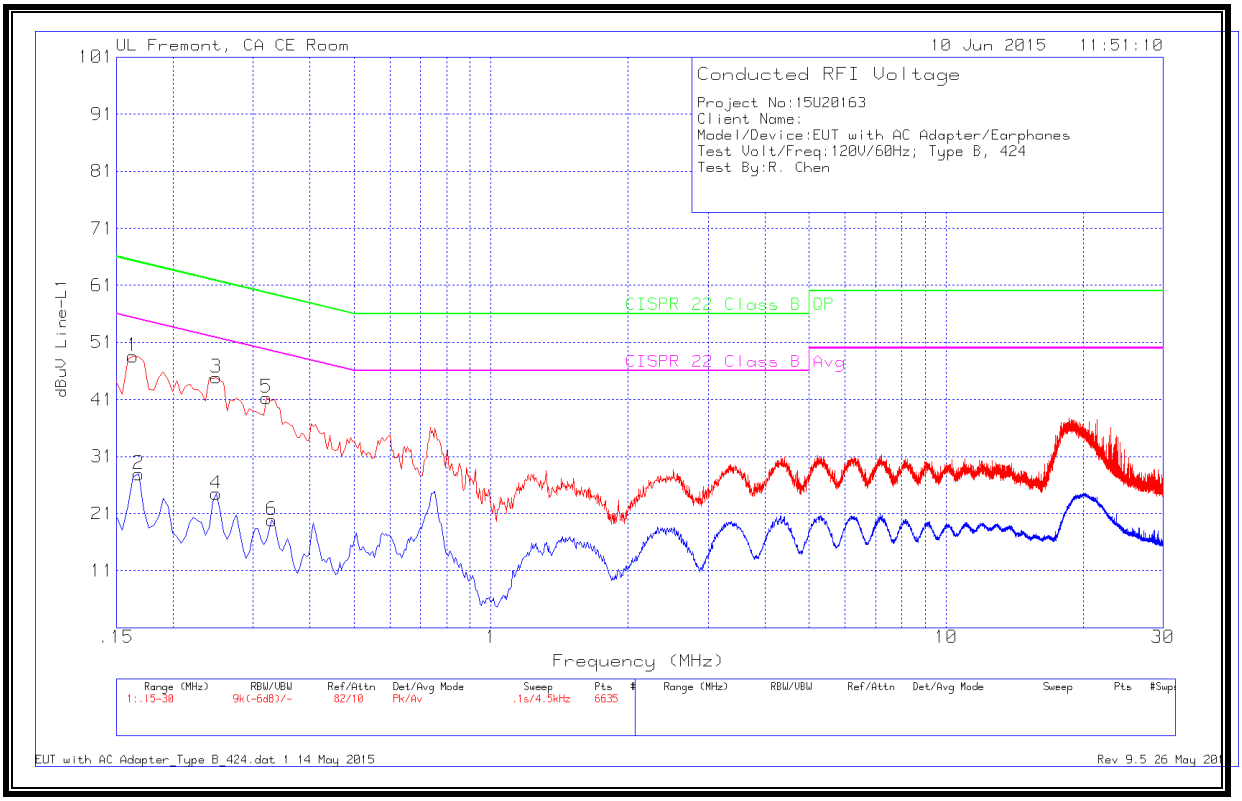
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1635	47.36	Pk	1.2	0	48.56	65.28	-16.72	-	-
2	.168	26.74	Av	1.2	0	27.94	-	-	55.06	-27.12
3	.249	44.16	Pk	.7	0	44.86	61.79	-16.93	-	-
4	.249	23.78	Av	.7	0	24.48	-	-	51.79	-27.31
5	.321	40.77	Pk	.5	0	41.27	59.68	-18.41	-	-
6	.33	19.36	Av	.5	0	19.86	-	-	49.45	-29.59

Range 2: Line-L2 .15 - 30MHz

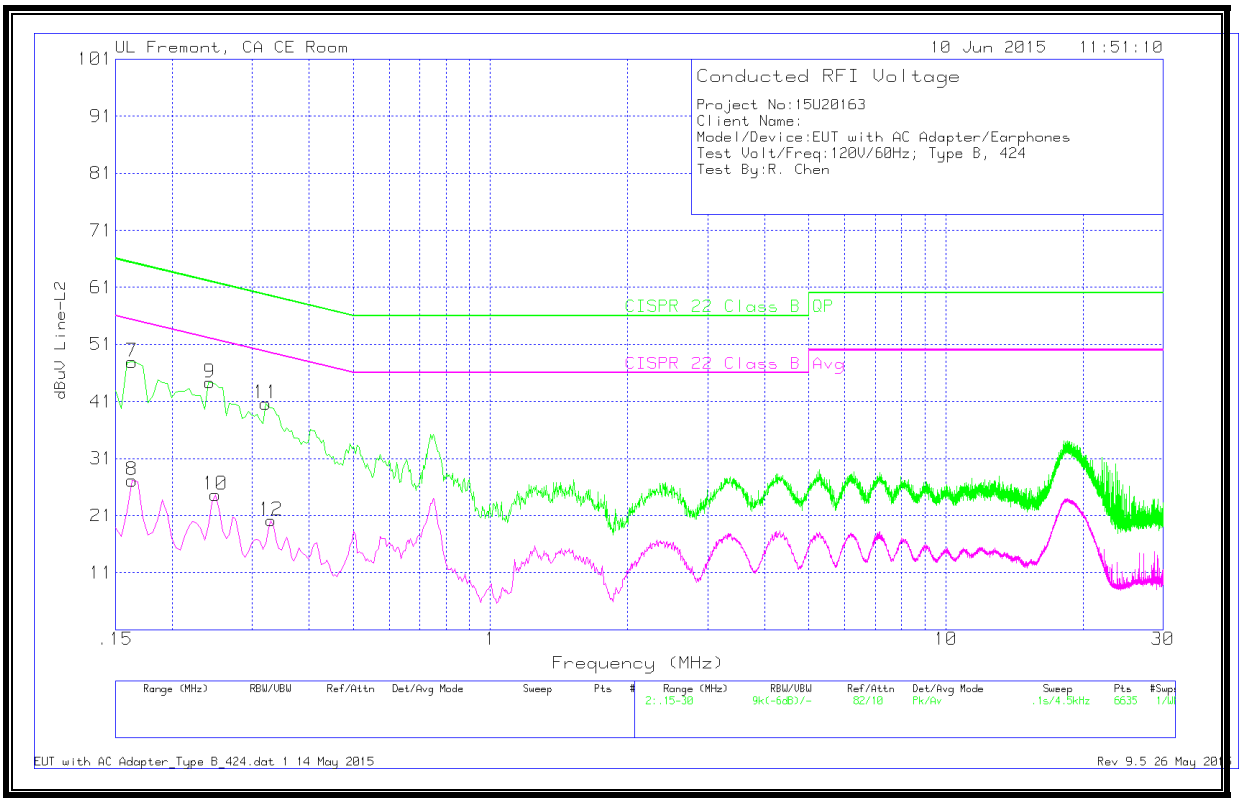
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1635	46.69	Pk	1.3	0	47.99	65.28	-17.29	-	-
8	.1635	25.9	Av	1.3	0	27.2	-	-	55.28	-28.08
9	.24225	43.56	Pk	.8	0	44.36	62.02	-17.66	-	-
10	.249	23.99	Av	.7	0	24.69	-	-	51.79	-27.1
11	.321	40.08	Pk	.6	0	40.68	59.68	-19	-	-
12	.33	19.68	Av	.5	0	20.18	-	-	49.45	-29.27

Pk - Peak detector
Av - Average detection

LINE 1 RESULTS



LINE 2 RESULTS



14.2.3. NORMAL OPERATION, 212 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.168	46.9	Pk	1.2	0	48.1	65.06	-16.96	-	-
2	.1635	26.92	Av	1.2	0	28.12	-	-	55.28	-27.16
3	.753	35.38	Pk	.3	0	35.68	56	-20.32	-	-
4	.7485	24.9	Av	.3	0	25.2	-	-	46	-20.8
5	18.8475	36.12	Pk	.3	.2	36.62	60	-23.38	-	-
6	18.8565	22.47	Av	.3	.2	22.97	-	-	50	-27.03

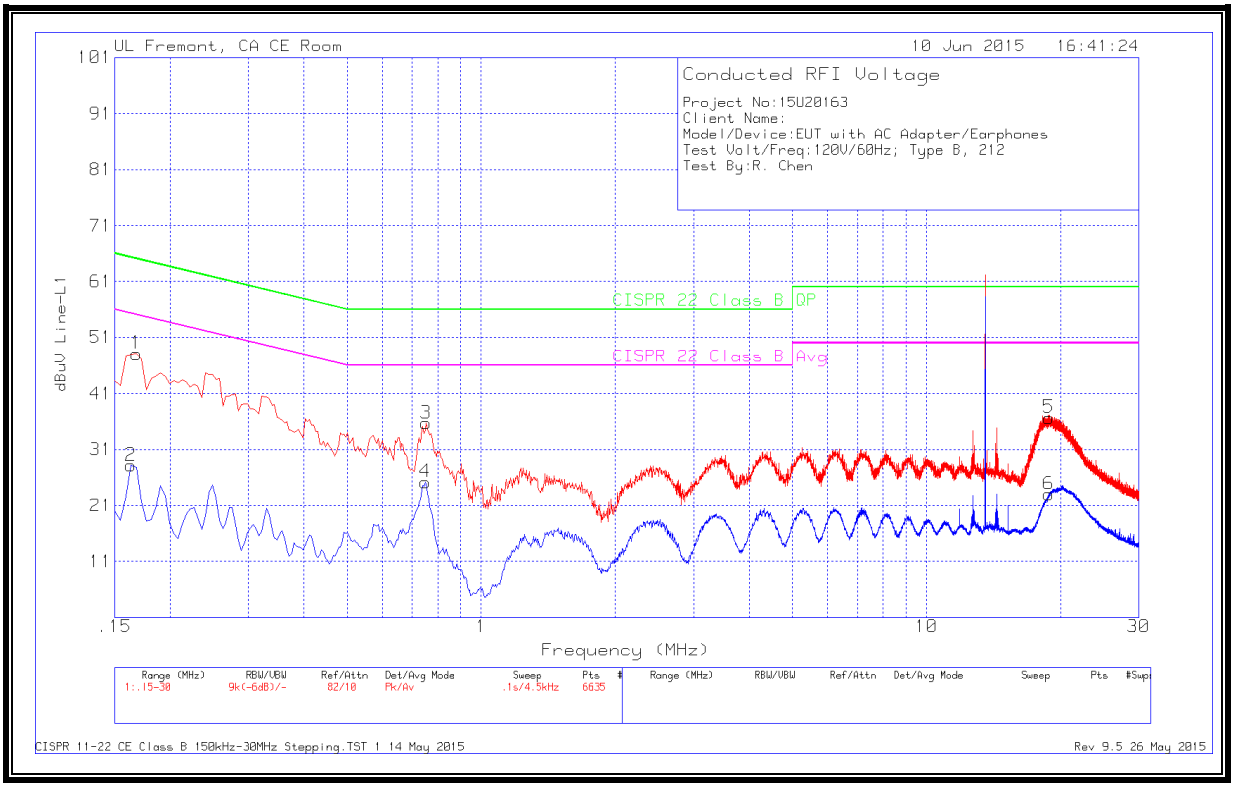
Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1635	46.43	Pk	1.3	0	47.73	65.28	-17.55	-	-
8	.1635	26.18	Av	1.3	0	27.48	-	-	55.28	-27.8
9	.753	34.75	Pk	.3	0	35.05	56	-20.95	-	-
10	.7485	23.43	Av	.3	0	23.73	-	-	46	-22.27
11	18.6765	32.6	Pk	.3	.2	33.1	60	-26.9	-	-
12	18.6945	23.05	Av	.3	.2	23.55	-	-	50	-26.45

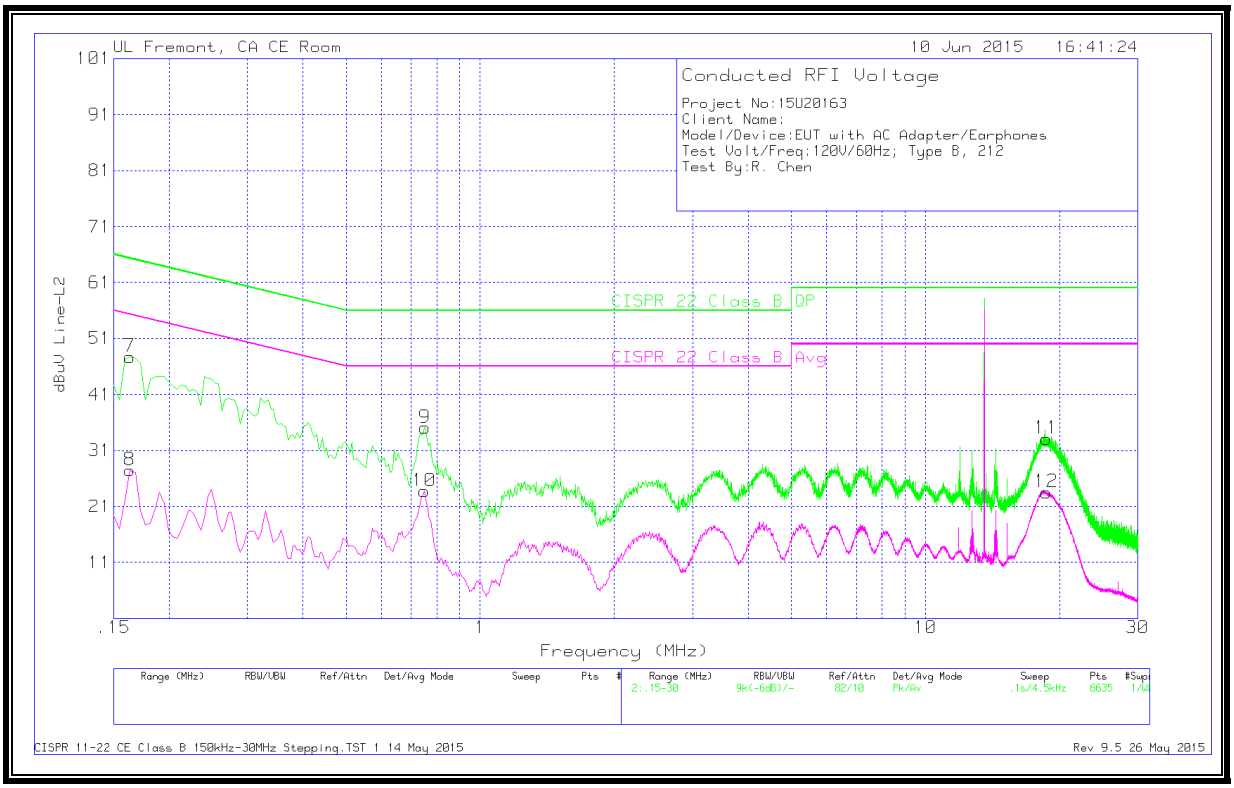
Pk - Peak detector
Av - Average detection

Note: 13.56MHz is a fundamental frequency of the EUT. Data under the following section indicate that when the antenna terminal is terminated the fundamental amplitude is lowering below the limit line.

LINE 1 RESULTS



LINE 2 RESULTS



14.2.4. NORMAL OPERATION WITH ANTENNA PORT TERMINATED, 212 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

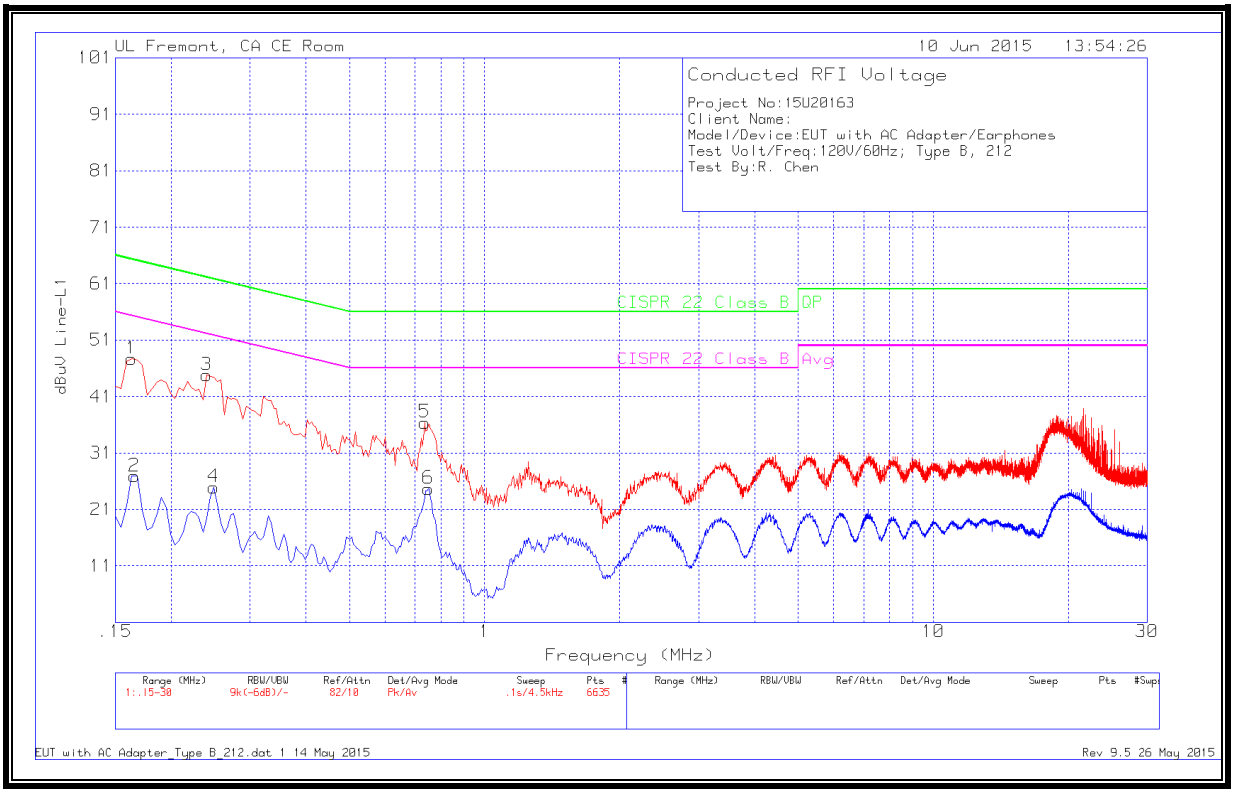
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1635	46.46	Pk	1.2	0	47.66	65.28	-17.62	-	-
2	.16575	25.66	Av	1.2	0	26.86	-	-	55.17	-28.31
3	.24	44.06	Pk	.7	0	44.76	62.1	-17.34	-	-
4	.249	24.22	Av	.7	0	24.92	-	-	51.79	-26.87
5	.735	36.11	Pk	.3	0	36.41	56	-19.59	-	-
6	.7485	24.37	Av	.3	0	24.67	-	-	46	-21.33

Range 2: Line-L2 .15 - 30MHz

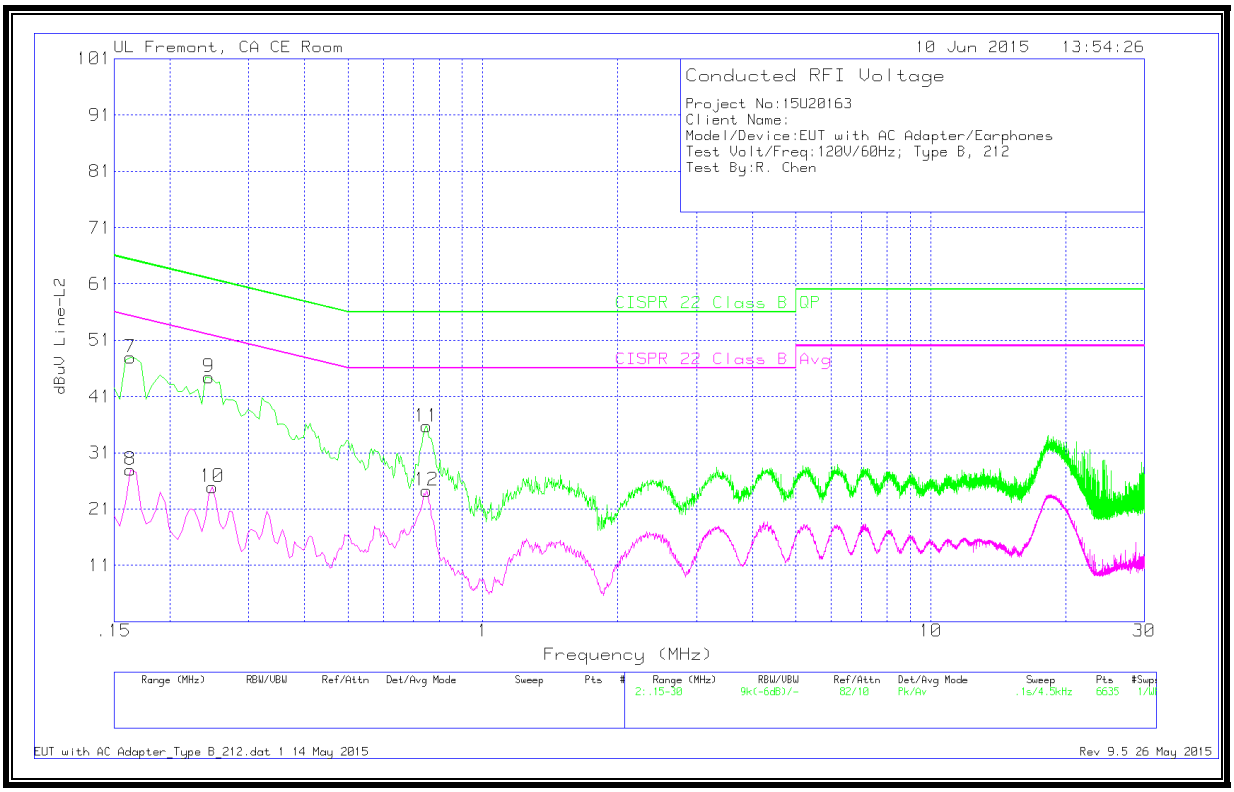
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1635	46.61	Pk	1.3	0	47.91	65.28	-17.37	-	-
8	.1635	26.68	Av	1.3	0	27.98	-	-	55.28	-27.3
9	.2445	43.67	Pk	.8	0	44.47	61.94	-17.47	-	-
10	.249	24.19	Av	.7	0	24.89	-	-	51.79	-26.9
11	.7485	35.38	Pk	.3	0	35.68	56	-20.32	-	-
12	.7485	23.98	Av	.3	0	24.28	-	-	46	-21.72

Pk - Peak detector
Av - Average detection

LINE 1 RESULTS



LINE 2 RESULTS



14.2.5. NORMAL OPERATION, 106 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

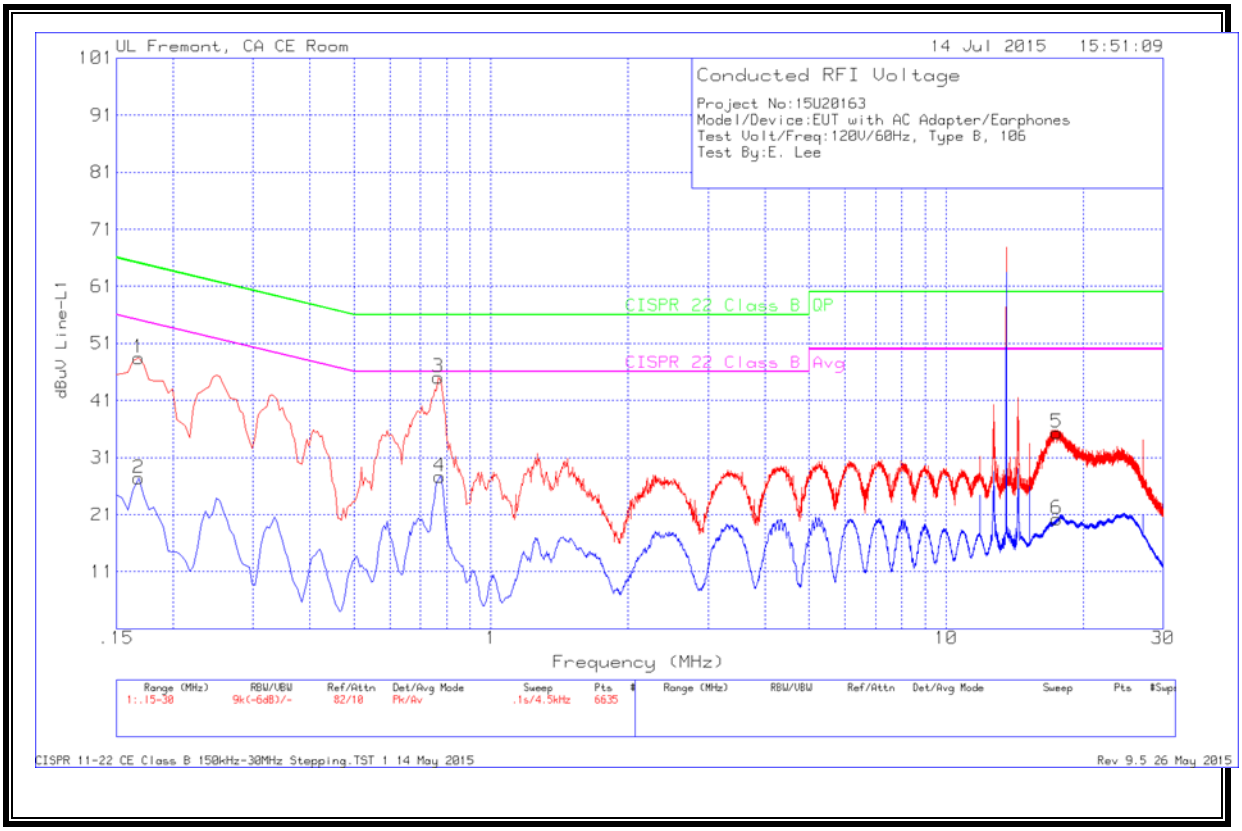
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.168	47.29	Pk	1.2	0	48.49	65.06	-16.57	-	-
2	.168	26.18	Av	1.2	0	27.38	-	-	55.06	-27.68
3	.7665	44.76	Pk	.3	0	45.06	56	-10.94	-	-
4	.771	27.38	Av	.3	0	27.68	-	-	46	-18.32
5	17.511	34.89	Pk	.3	.2	35.39	60	-24.61	-	-
6	17.52	19.77	Av	.3	.2	20.27	-	-	50	-29.73

Range 2: Line-L2 .15 - 30MHz

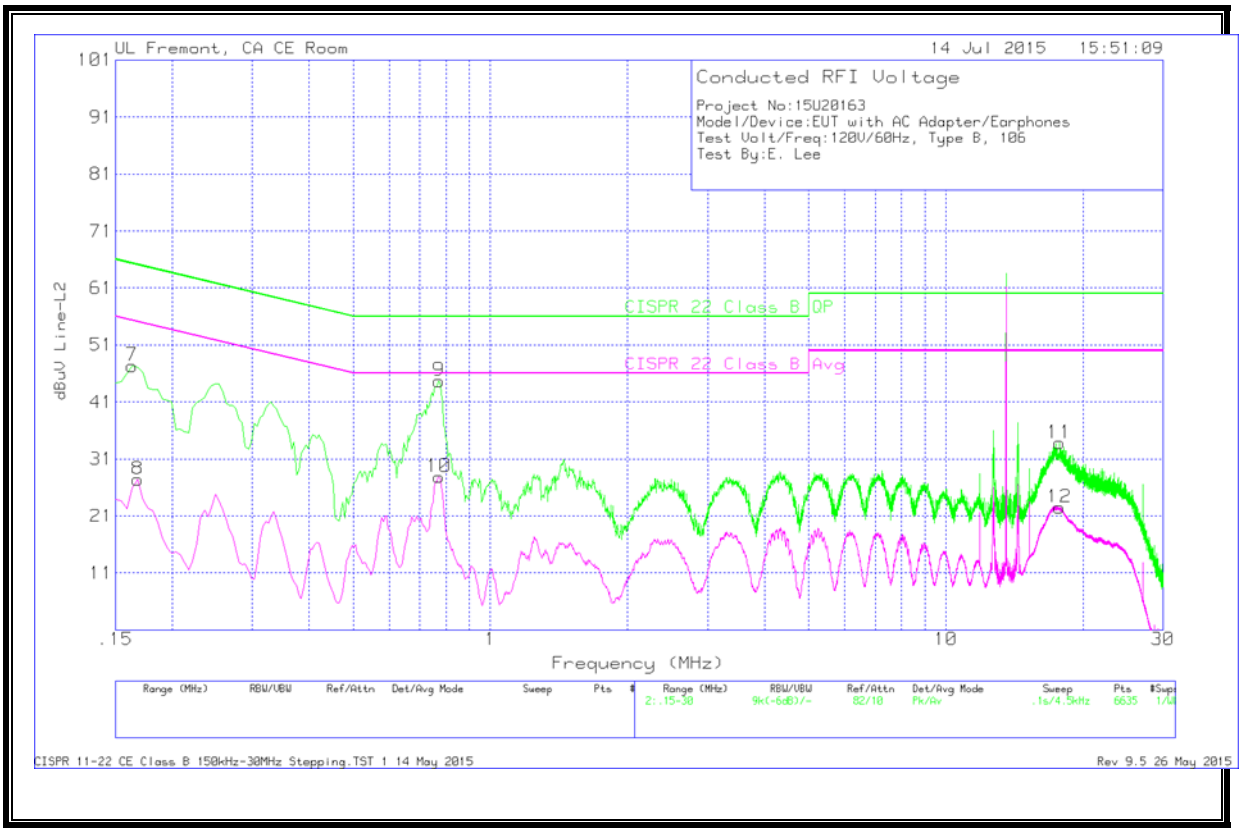
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1635	46.03	Pk	1.3	0	47.33	65.28	-17.95	-	-
8	.168	26.09	Av	1.3	0	27.39	-	-	55.06	-27.67
9	.771	44.42	Pk	.3	0	44.72	56	-11.28	-	-
10	.771	27.56	Av	.3	0	27.86	-	-	46	-18.14
11	17.781	33.29	Pk	.3	.2	33.79	60	-26.21	-	-
12	17.745	21.97	Av	.3	.2	22.47	-	-	50	-27.53

Pk - Peak detector
Av - Average detection

LINE 1 RESULTS



LINE 2 RESULTS



14.2.6. NORMAL OPERATION WITH ANTENNA PORT TERMINATED, 106 KBPS

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

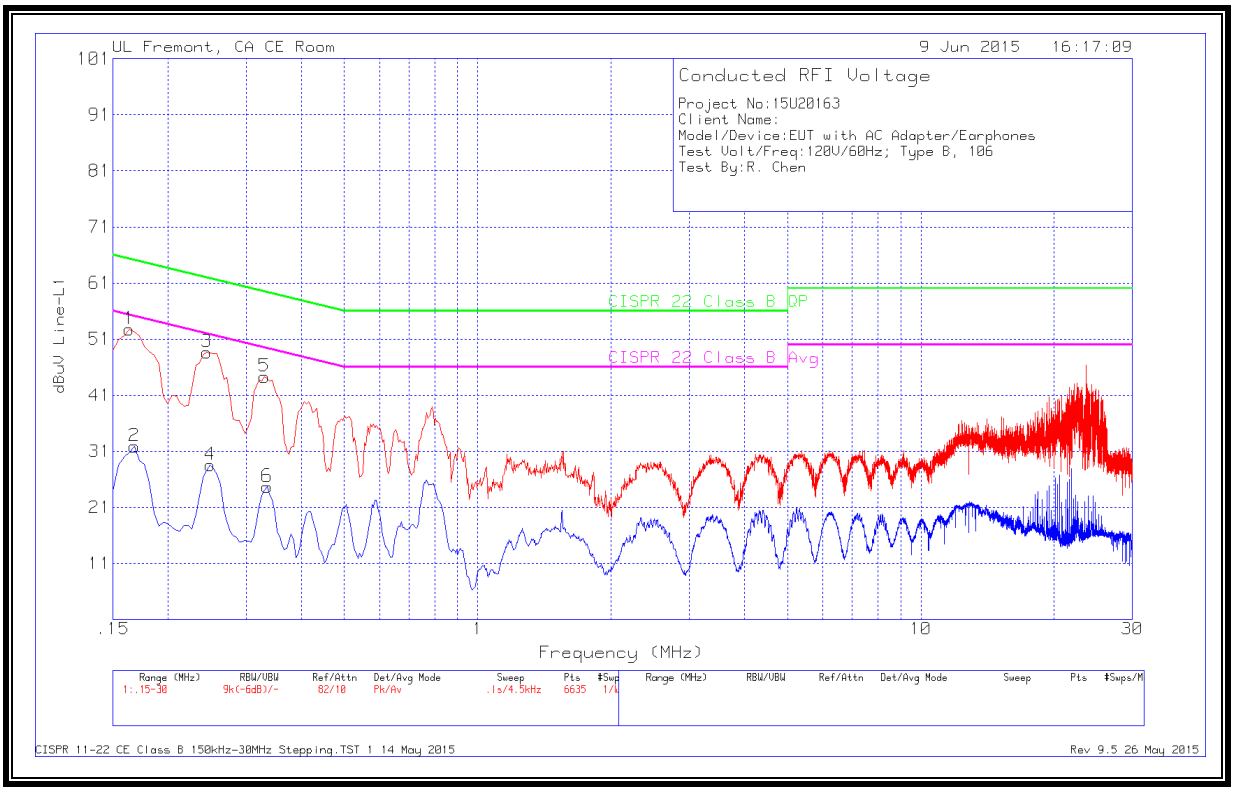
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.1635	51.55	Pk	1.2	0	52.75	65.28	-12.53	-	-
2	.168	30.69	Av	1.2	0	31.89	-	-	55.06	-23.17
3	.2445	47.97	Pk	.7	0	48.67	61.94	-13.27	-	-
4	.249	27.83	Av	.7	0	28.53	-	-	51.79	-23.26
5	.33	43.81	Pk	.5	0	44.31	59.45	-15.14	-	-
6	.3345	24.15	Av	.5	0	24.65	-	-	49.34	-24.69

Range 2: Line-L2 .15 - 30MHz

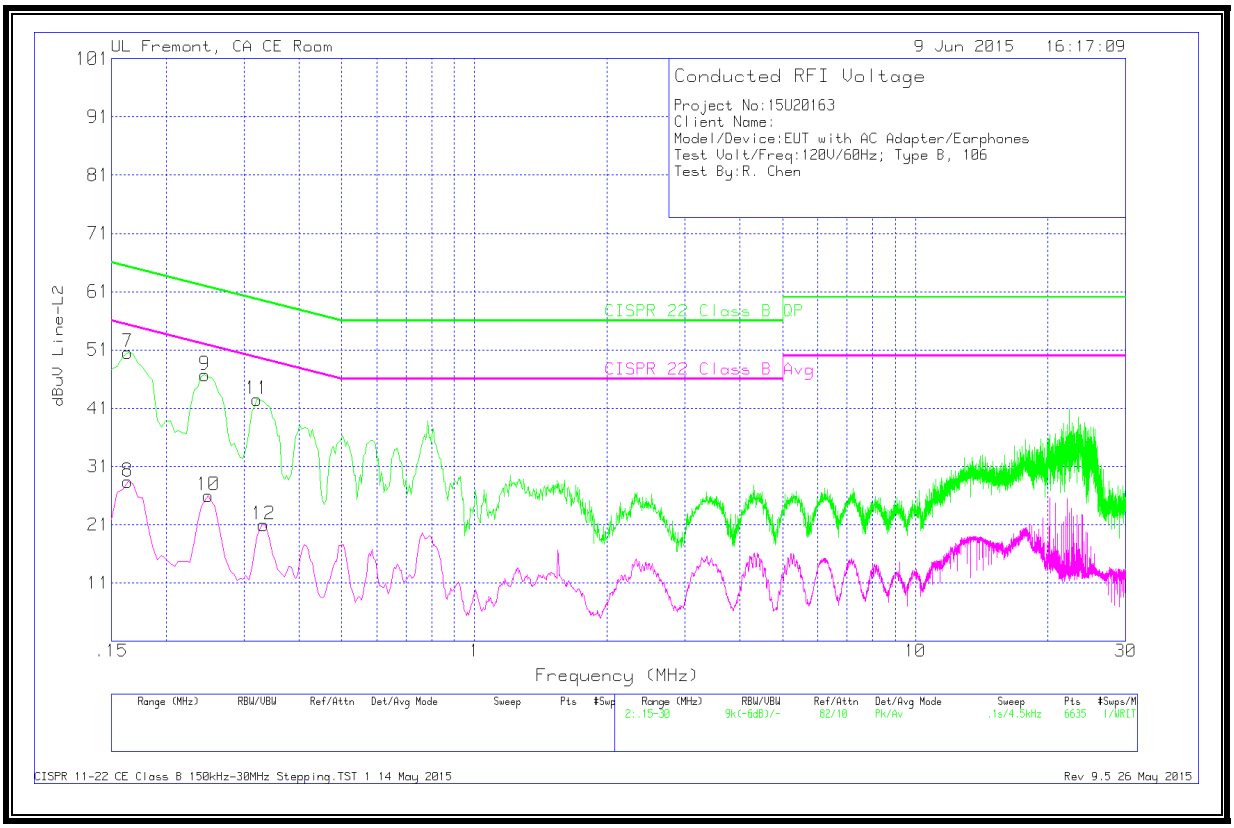
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1635	49.24	Pk	1.3	0	50.54	65.28	-14.74	-	-
8	.1635	27.07	Av	1.3	0	28.37	-	-	55.28	-26.91
9	.2445	45.88	Pk	.8	0	46.68	61.94	-15.26	-	-
10	.249	25.31	Av	.7	0	26.01	-	-	51.79	-25.78
11	.321	41.9	Pk	.6	0	42.5	59.68	-17.18	-	-
12	.33225	20.47	Av	.5	0	20.97	-	-	49.39	-28.42

Pk - Peak detector
Av - Average detection

LINE 1 RESULTS



LINE 2 RESULTS



14.2.7. NORMAL OPERATION WITH LAPTOP, WORST CASE CASE

6 WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.15	58.03	Pk	1.4	0	59.43	66	-6.57	-	-
2	.15	20.59	Av	1.4	0	21.99	-	-	56	-34.01
3	.186	55.49	Pk	1	0	56.49	64.21	-7.72	-	-
4	.1995	36.92	Av	.9	0	37.82	-	-	53.63	-15.81
5	13.3755	46.43	Pk	.2	.2	46.83	60	-13.17	-	-
6	13.308	34.34	Av	.2	.2	34.74	-	-	50	-15.26

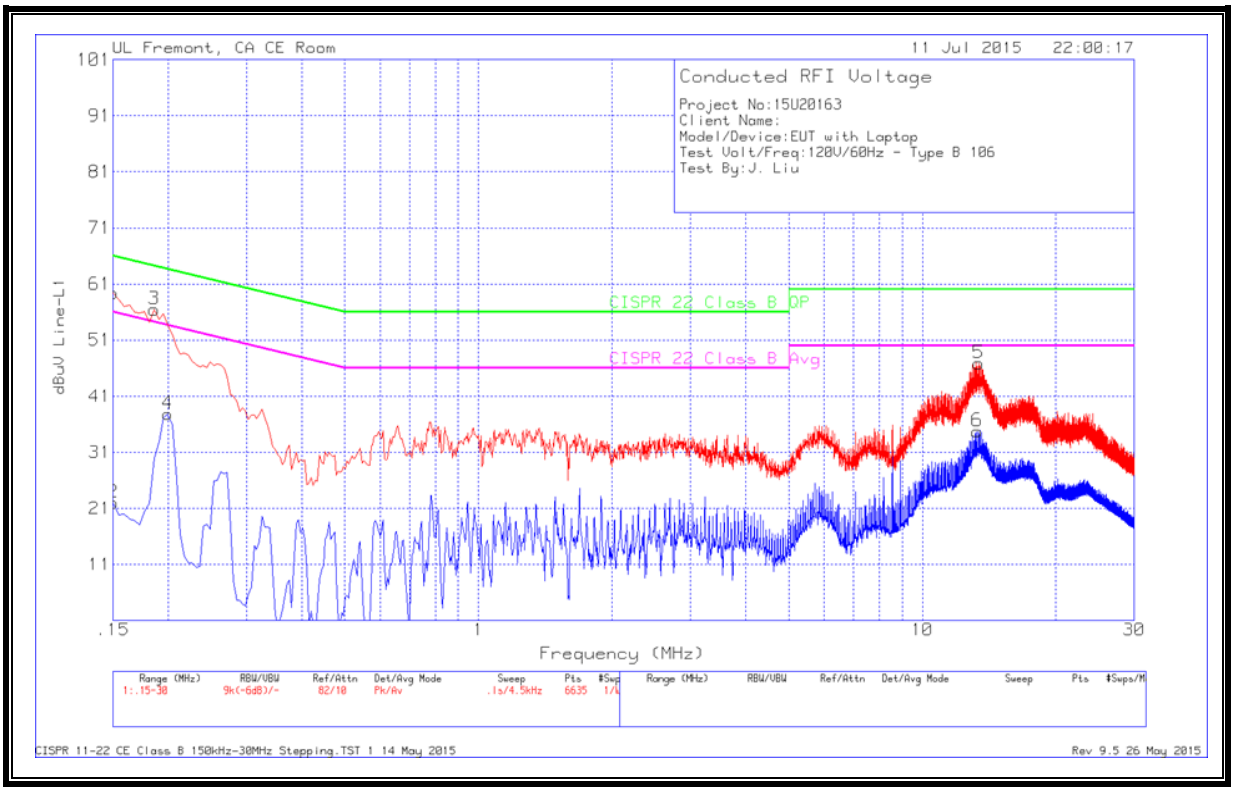
Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
7	.1545	57.06	Pk	1.4	0	58.46	65.75	-7.29	-	-
8	.1545	18.96	Av	1.4	0	20.36	-	-	55.75	-35.39
9	.186	54.25	Pk	1.1	0	55.35	64.21	-8.86	-	-
10	.195	33.64	Av	1	0	34.64	-	-	53.82	-19.18
11	17.8215	42.95	Pk	.3	.2	43.45	60	-16.55	-	-
12	17.4885	31.45	Av	.3	.2	31.95	-	-	50	-18.05

Pk - Peak detector

Av - Average detection

LINE 1 RESULTS



LINE 2 RESULTS