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

CERTIFICATION TEST REPORT

FOR

APPLE WATCH

MODEL NUMBER: A1802

FCC ID: BCG-E3102
IC: 579C-E3102

REPORT NUMBER: 16U23780-E4V3

ISSUE DATE: AUGUST 27, 2016

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
V1	08/15/2016	Initial Issue	Chin Pang
V2	08/26/2016	Revised report to address TCB's questions	Tina Chu
V3	08/27/2016	Revised report to address TCB's questions	Tina Chu

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: APPLE, INC.
1 INFINITE LOOP
CUPERTINO, CA 95014, U.S.A.

EUT DESCRIPTION: APPLE WATCH

MODEL: A1802

SERIAL NUMBER: F9W53076MXUG6G5BB (CONDUCTED)
FH7RM045H91M (RADIATED)

DATE TESTED: JUNE 16, 2016 – AUGUST 25, 2016

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:

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SENIOR ENGINEER
UL VERIFICATION SERVICES INC.

Prepared By:

TOM CHEN
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, 9KHz to 0.15 MHz	3.84 dB
Conducted Disturbance, 0.15 to 30 MHz	3.65 dB
Radiated Disturbance, 9KHz to 30 MHz	3.15 dB
Radiated Disturbance, 30 to 1000 MHz	5.36 dB
Radiated Disturbance,1000 to 18000 MHz	4.32 dB
Radiated Disturbance,18000 to 26000 MHz	4.45 dB
Radiated Disturbance,26000 to 40000 MHz	5.24 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is an Apple Watch with WLAN, Bluetooth and NFC support.

CE mode is NFC Card Emulation Mode.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak radiated magnetic field strength as follows:

EUT WITH AC/DC ADAPTER

Frequency Range (MHz)	Mode	Type	E Field at 30m distance (dBuV/m)
13.56	CE Mode	A	5.35
		B	4.70
		F	3.68
	Reader	A	4.77
		B	3.76
		F	4.95

5.3. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was 14S310.

5.4. WORST-CASE CONFIGURATION AND MODE

EUT has 1 type of enclosure and various kinds of metallic and non-metallic wristbands. There are 2 types of metallic bands; Metal Links, and Metal Mesh. Worst case configuration was investigated; and it was found that metal mesh wristband was the worst case. All testing are performed on the worst case.

The fundamental of the EUT and radiated emission were investigated in three orthogonal orientations X (Flatbed), Y (Landscape), Z (Portrait).The Y (Landscape) orientation was determined to be the worst-case orientation; therefore, all final fundamental and radiated testing were performed with the EUT in Y (Landscape) orientation.

Fundamental and radiated emissions were investigated with EUT charging with wireless charger and as standalone. EUT charging with wireless charger was determined to be worst case. Therefore all final fundamental and radiated emissions were performed with the EUT charged by wireless charger

Based on all of the CE mode data rates, no significant difference among the data rates, therefore, all Reader mode 30-1000MHz spurious emission and frequency stability only performed on highest data rate.

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 937606.

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
Wireless Charger AC/DC Adapter	Apple	A1385	D292365B2FQDHLHC7	n/a
Wireless Charger	Apple	A1768	DLC616200ZYHE1Y835	BCGA1768

I/O CABLES (RADIATED TEST)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB	1	USB	Un-Shielded	2	To AC/DC adapter

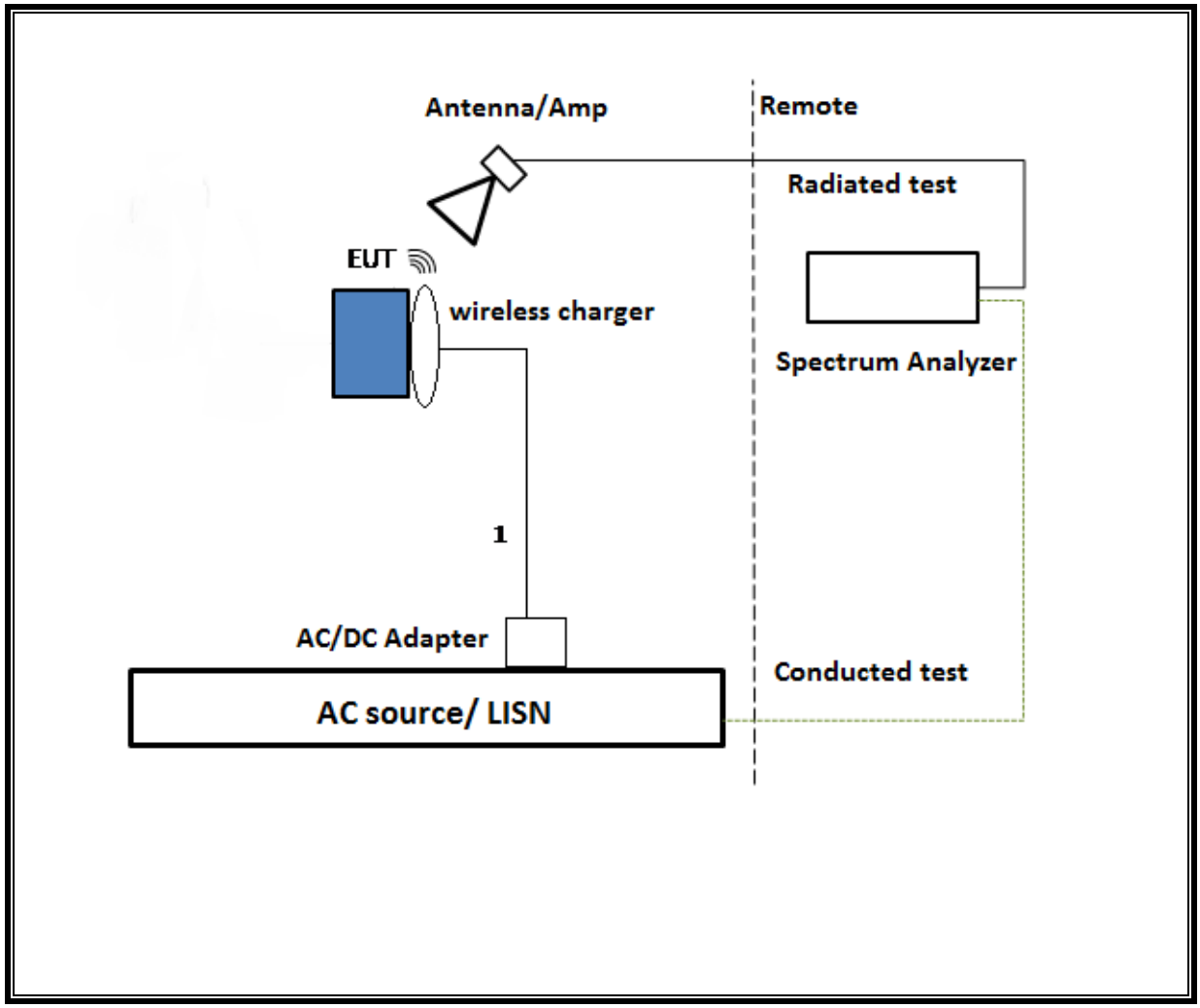
I/O CABLES (CONDUCTED TEST)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
2	USB	1	USB to mini USB	Shielded	1	To laptop and fixture

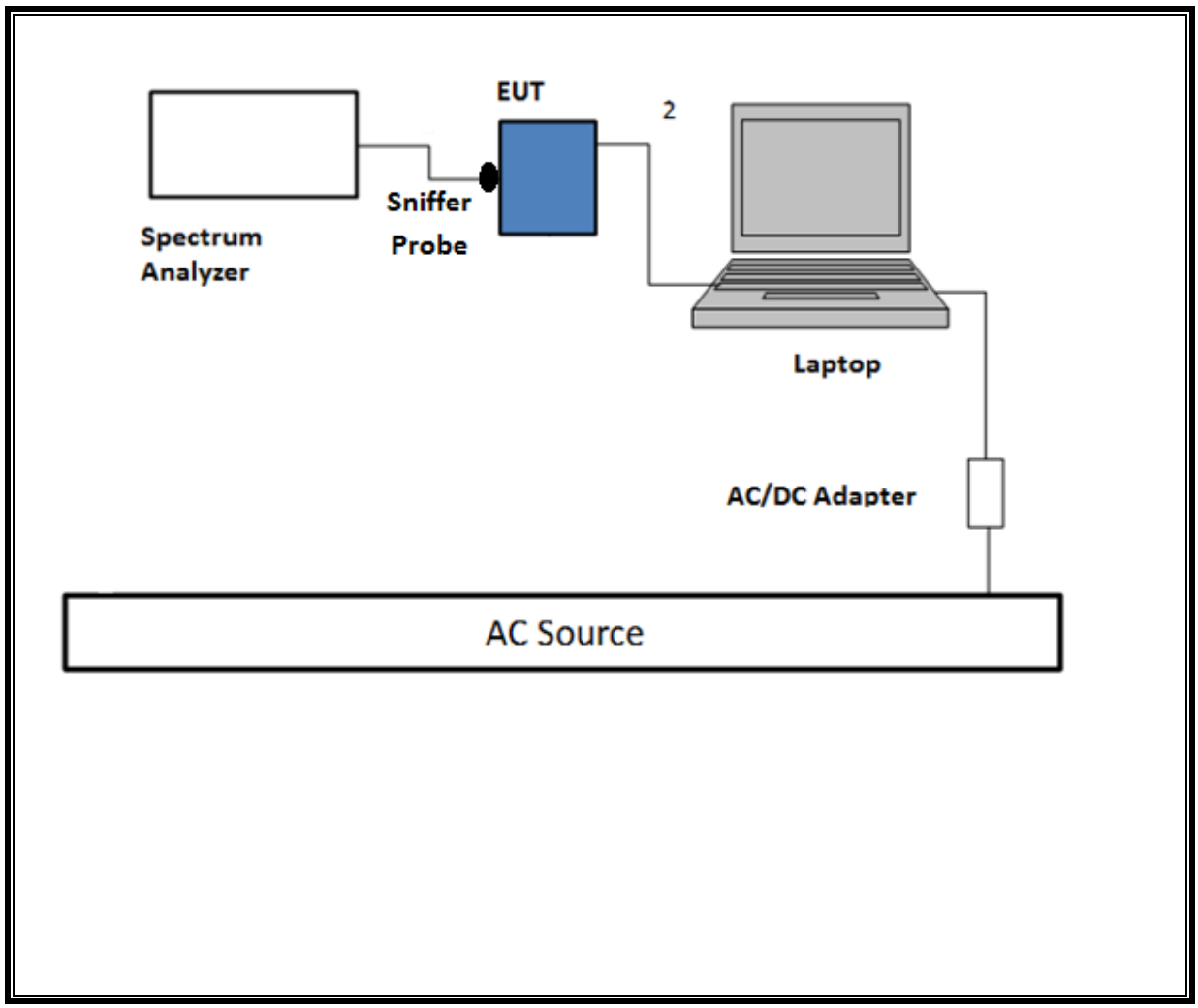
I/O CABLES (TEMPERATURE CHAMBER)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
3	DC	2	Alligator	18 AWG strand	1	Insulated cable

SETUP DIAGRAM RADIATED



SETUP DIAGRAM- CONDUCTED



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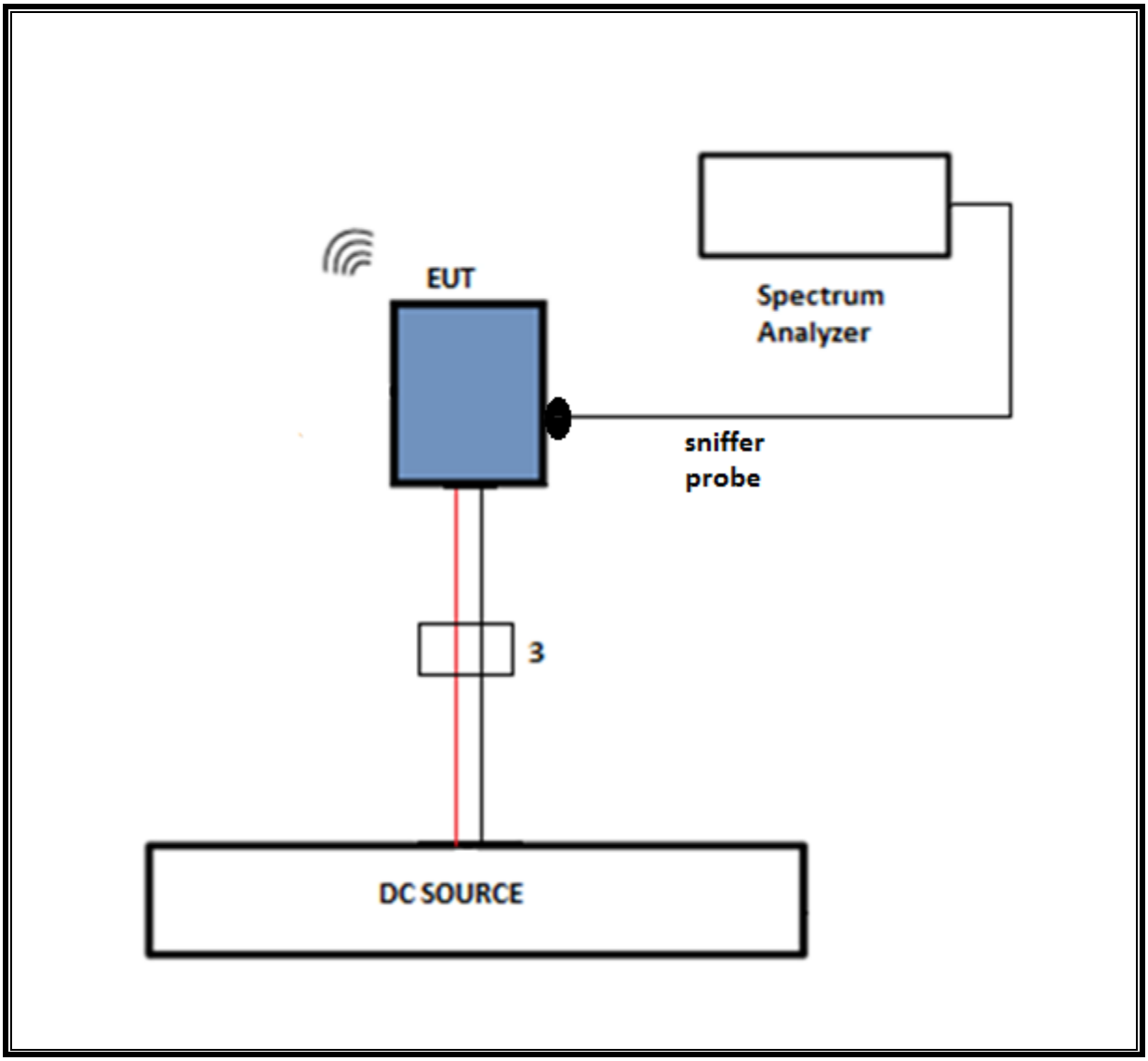


6. TEST AND MEASUREMENT EQUIPMENT

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	899	05/26/17
**Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	835	06/18/16
***Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	835	06/18/17
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	906	02/03/17
Antenna, Loop, 30 MHz	ETS Lindgren	6502	757	05/31/17
Chamber, Environmental	Cincinnati Sub Zero	ZPHS-8-3.5-SCT/WC	754	09/21/16
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	340	11/16/16
UL SOFTWARE				
*Radiated Software	UL	UL EMC	Fundamental mask, 5/7/15	
*Conducted Software	UL	UL EMC	Ver 2.2, March 31, 2015	
*Radiated Software	UL	UL EMC	Below 30Mhz, 6/24/15	
*Radiated Software	UL	UL EMC	Below 1Ghz, 7/15/14	

Note: * indicates automation software version used in the compliance certification testing.
**Equipment was used before calibration due date.
***Equipment was used after calibration.

7. OCCUPIED BANDWIDTH

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

ID:	29435	Date:	7/19/16

99% and 20dB BW

CE Mode

Moduation	Frequency (MHz)	Data Rate (Kbps)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
Type A	13.56	848	22.235	25.72
		424	21.507	25.55
		212	21.335	25.18
		106	21.569	25.14

Moduation	Frequency (MHz)	Data Rate (Kbps)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
Type B	13.56	848	21.78	24.94
		424	21.567	25.37
		212	21.273	25.14
		106	21.372	25.23

Moduation	Frequency (MHz)	Data Rate (Kbps)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
Type F	13.56	424	21.324	25.00
		212	21.643	25.22

READER Mode

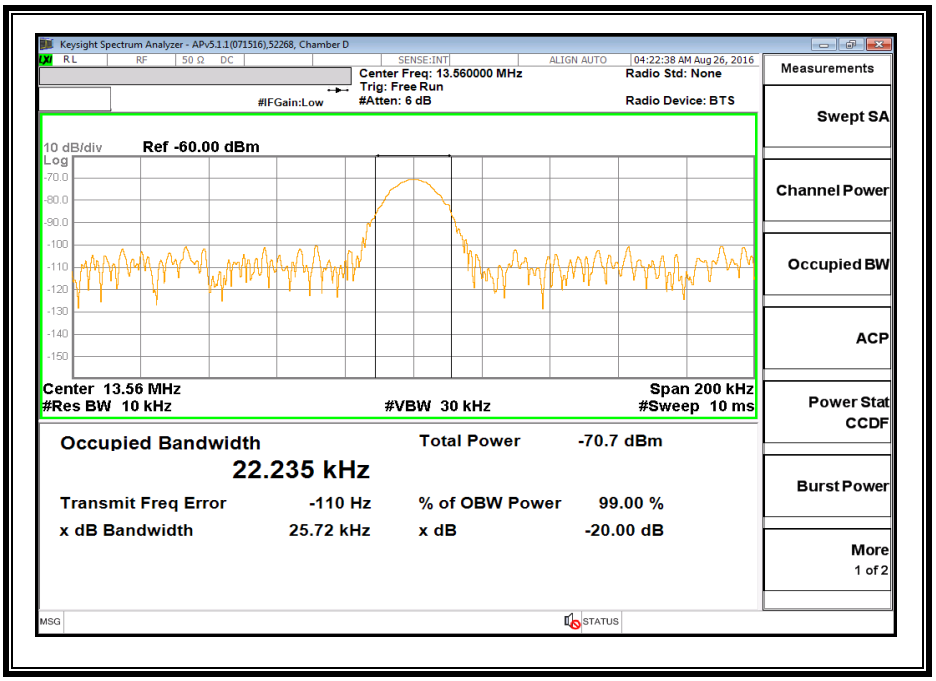
Moduation	Frequency (MHz)	Data Rate (Kbps)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
Type A	13.56	848	22.131	25.49
		424	21.771	25.27
		212	21.634	25.44
		106	22.57	26.05

Moduation	Frequency (MHz)	Data Rate (Kbps)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
Type B	13.56	848	22.513	25.00
		424	22.49	25.77
		212	22.637	25.01
		106	22.21	25.88

Moduation	Frequency (MHz)	Data Rate (Kbps)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
Type F	13.56	424	21.524	25.41
		212	21.372	25.05

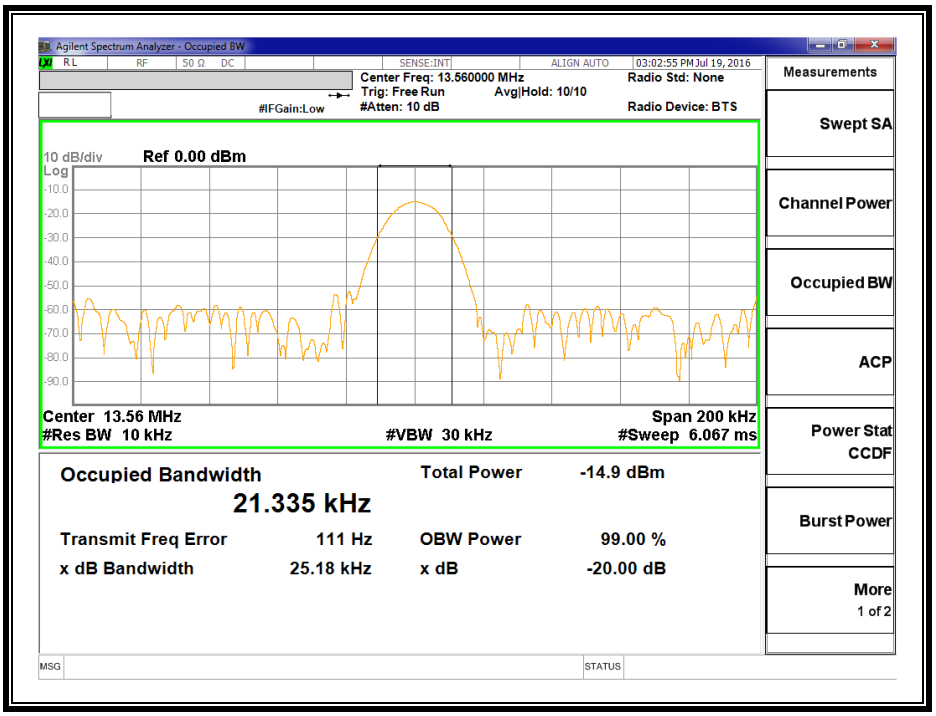
7.1. CE MODE

Type A
848Kbps

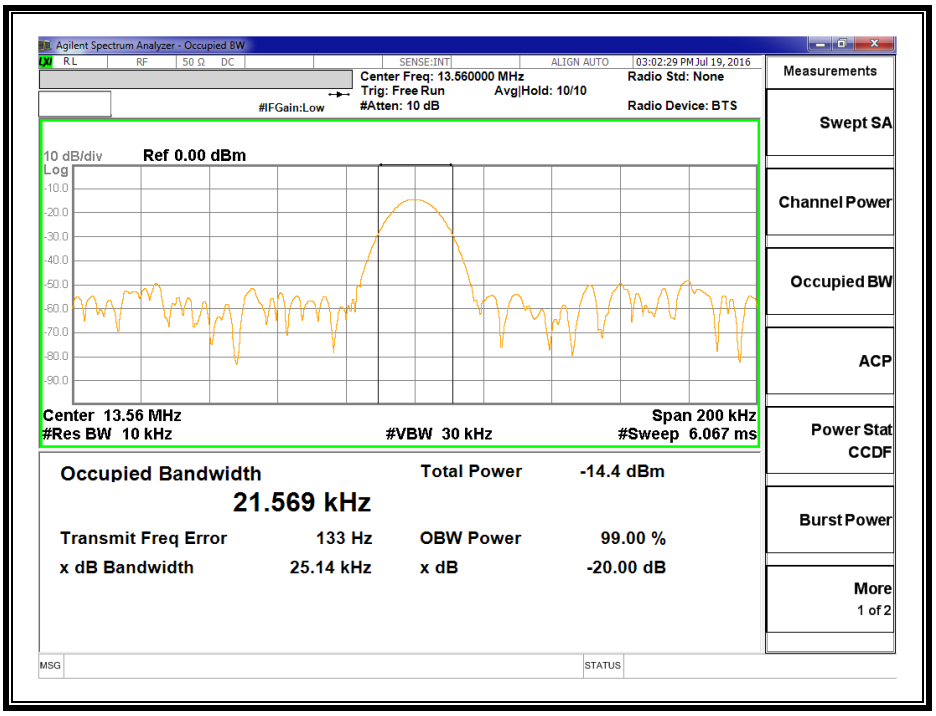


424Kbps

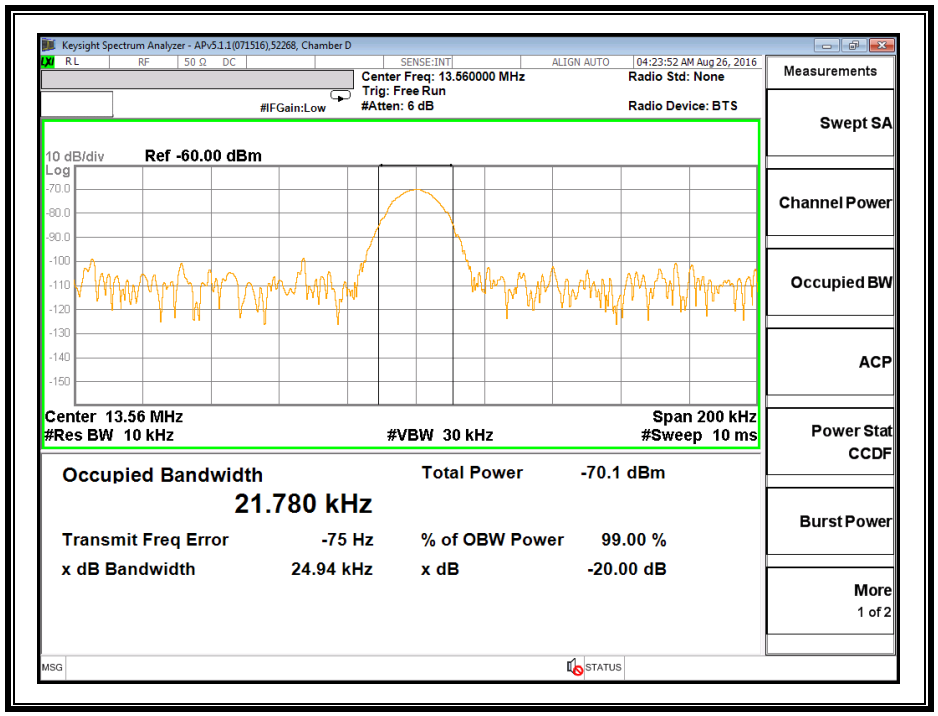
212Kbps



106Kbps

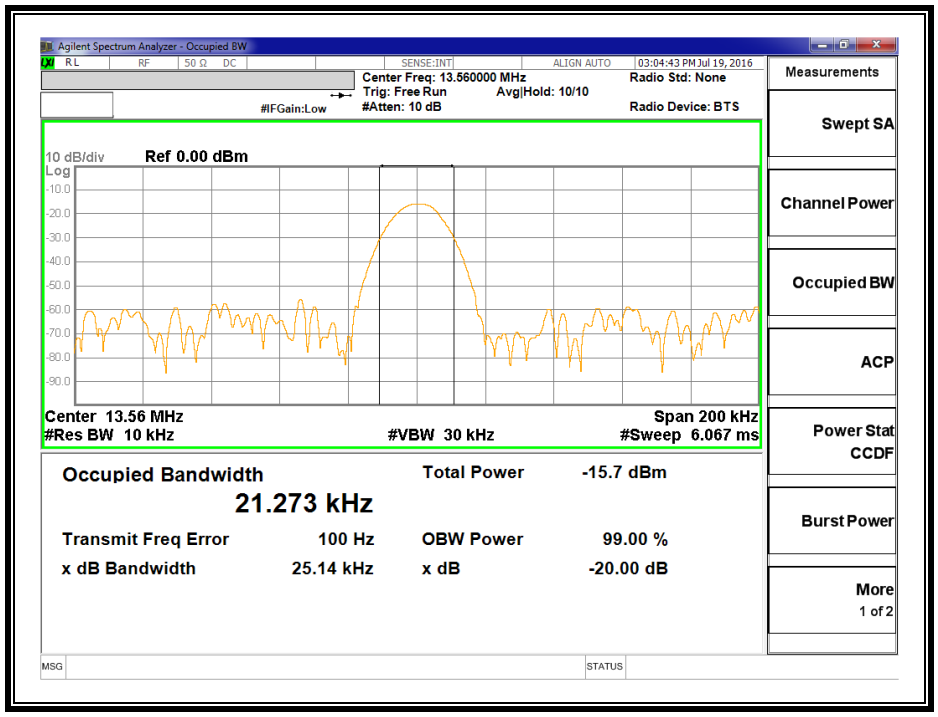


Type B
848Kbps

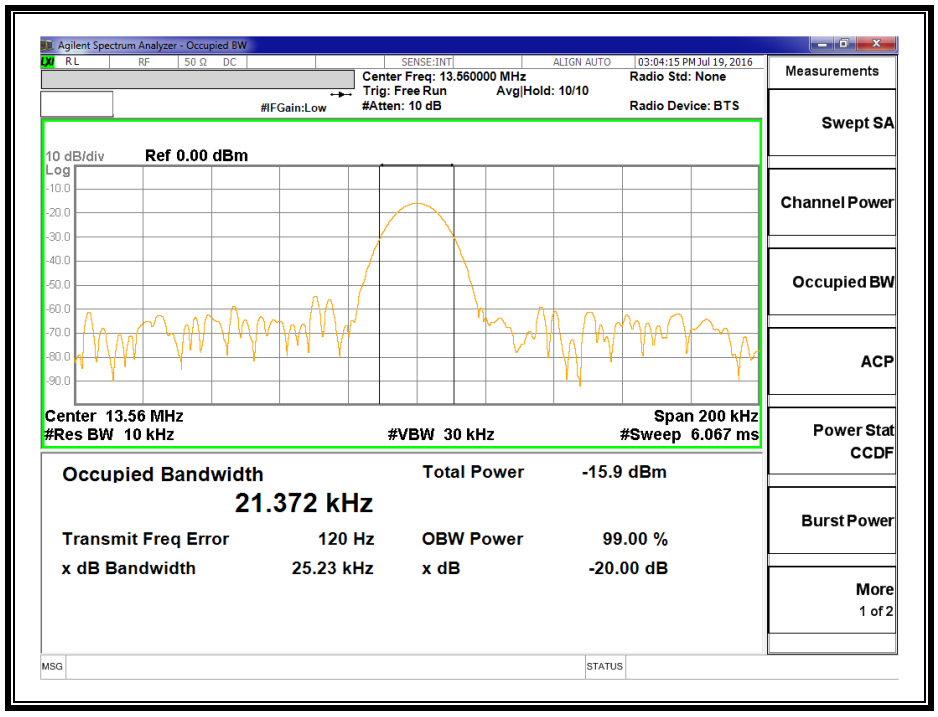


424Kbps

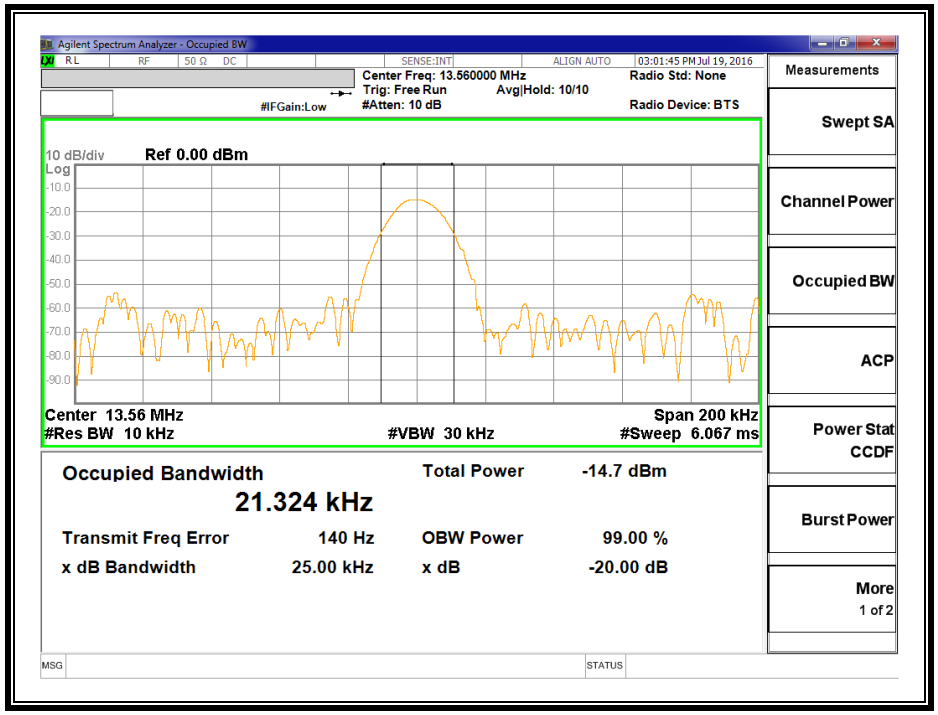
212Kbps



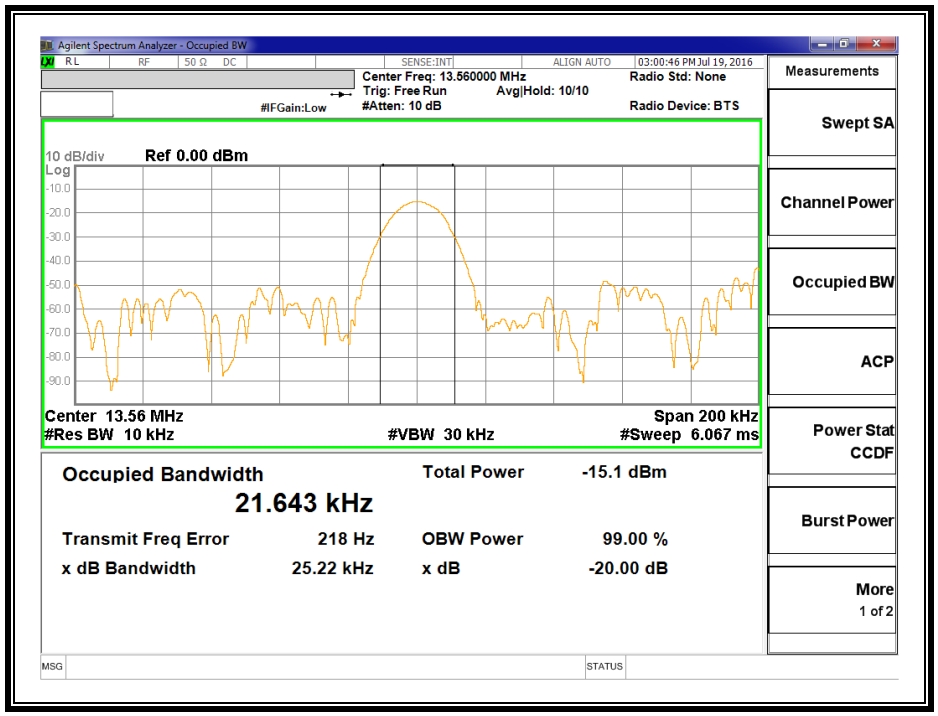
106Kbps



TYPE F
424Kbps

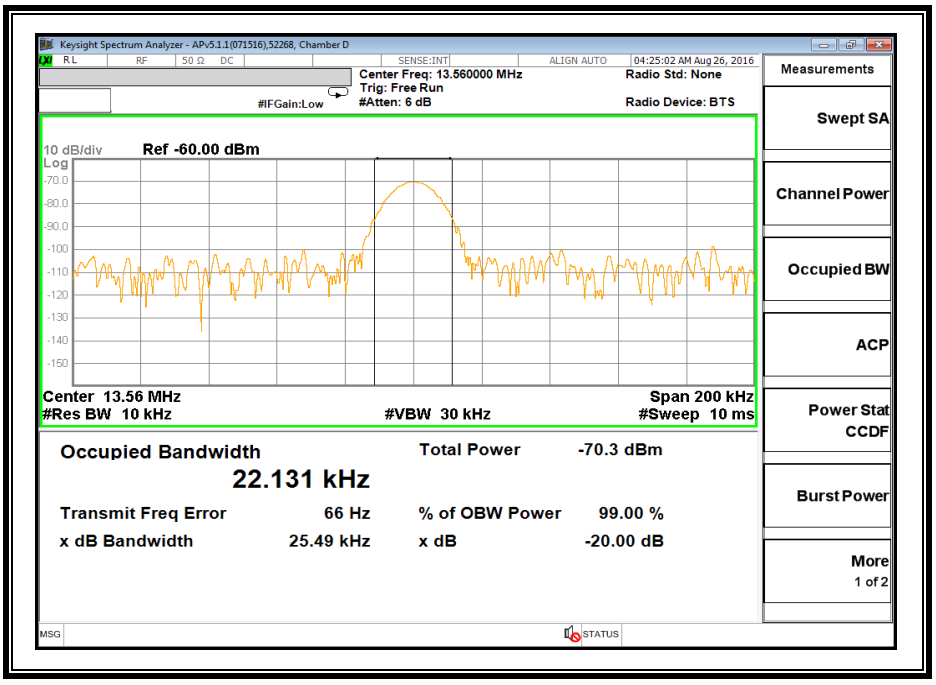


212Kbps

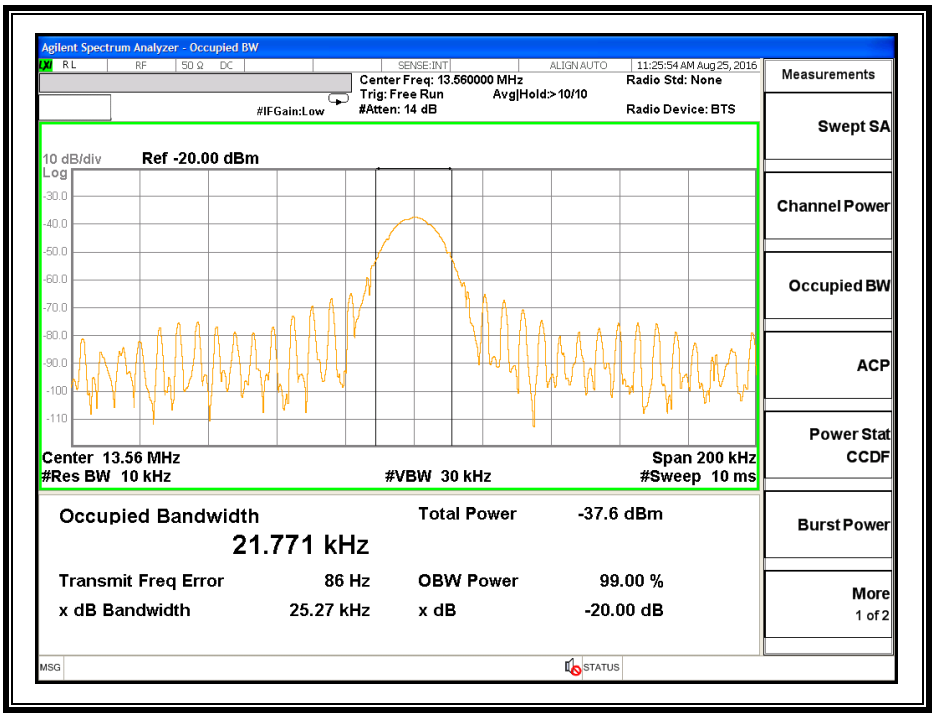


7.2. READER MODE

Type A
848Kbps



424Kbps



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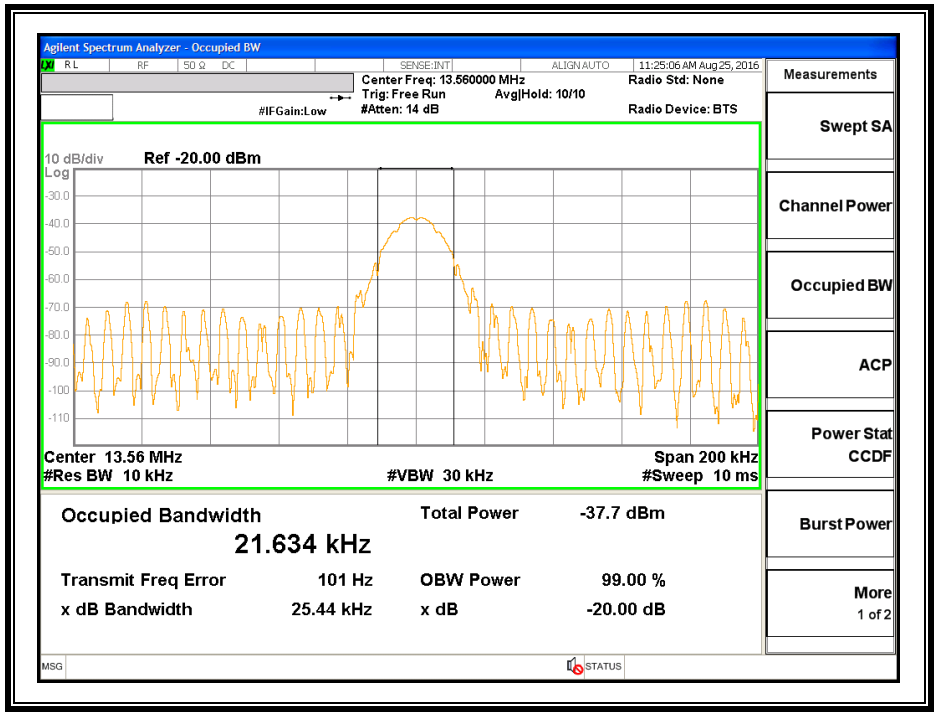
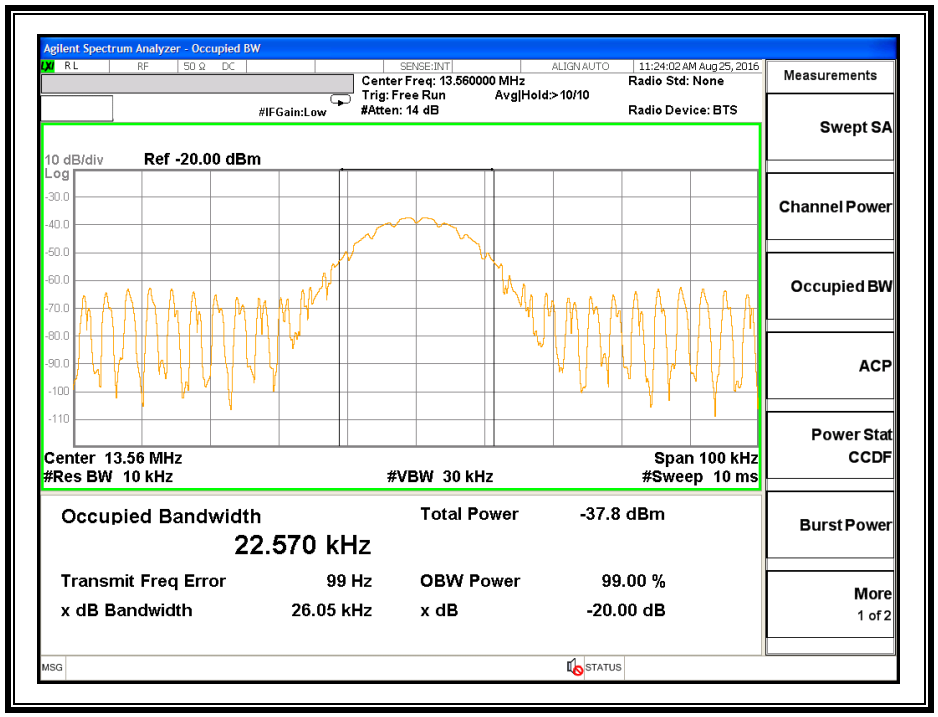
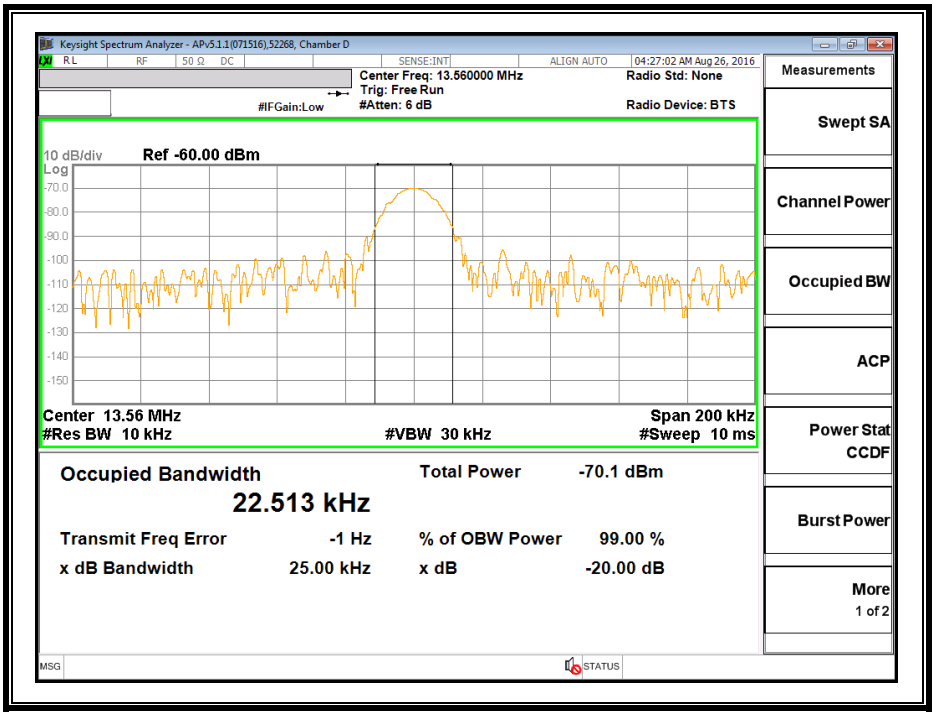


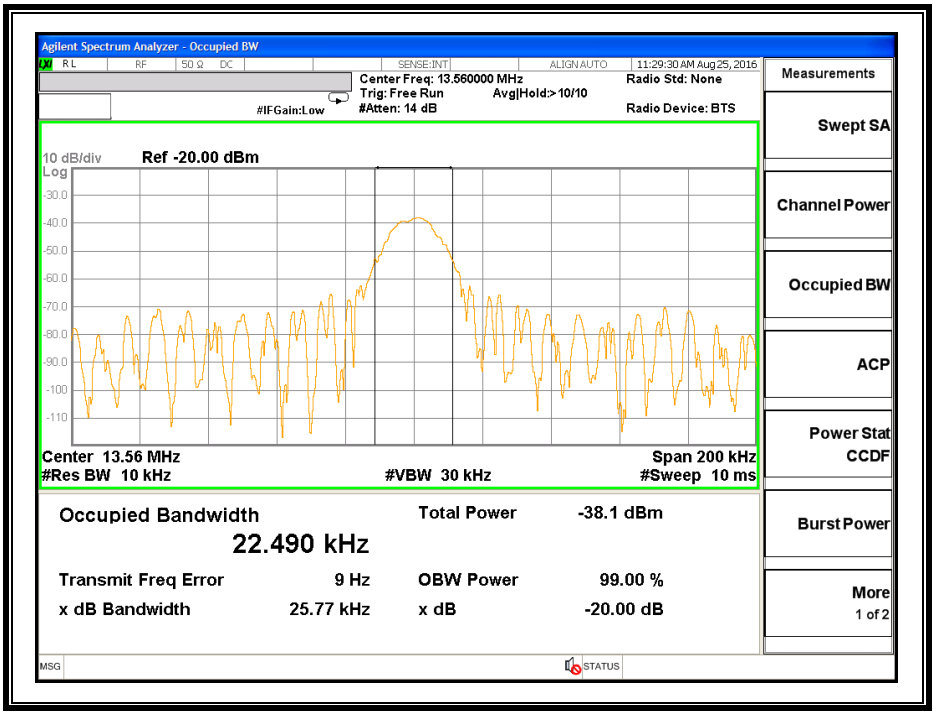
106Kbps



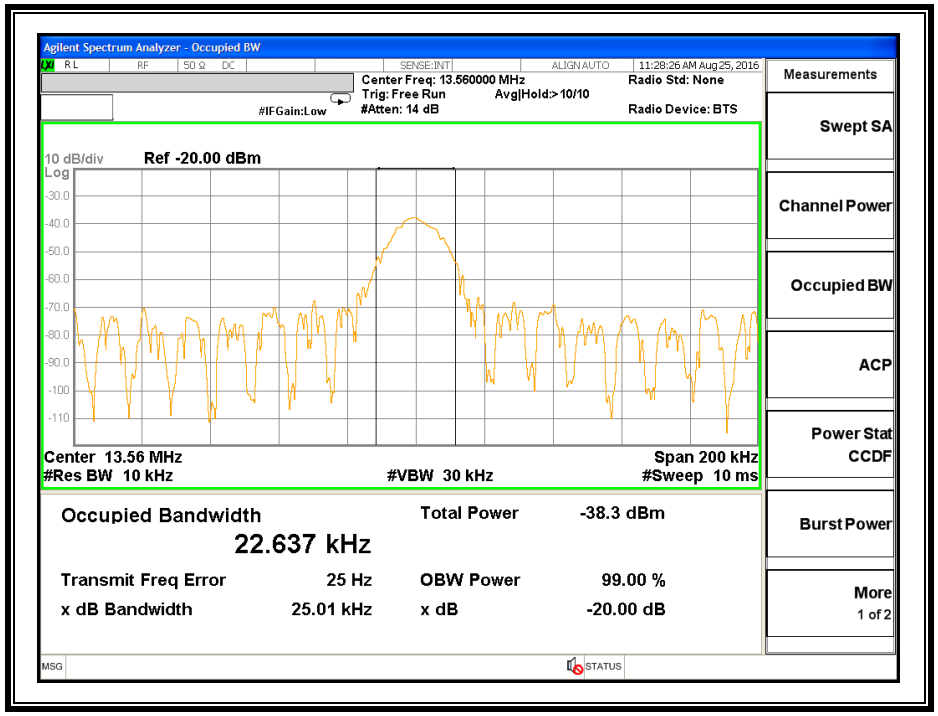
Type B
848Kbps



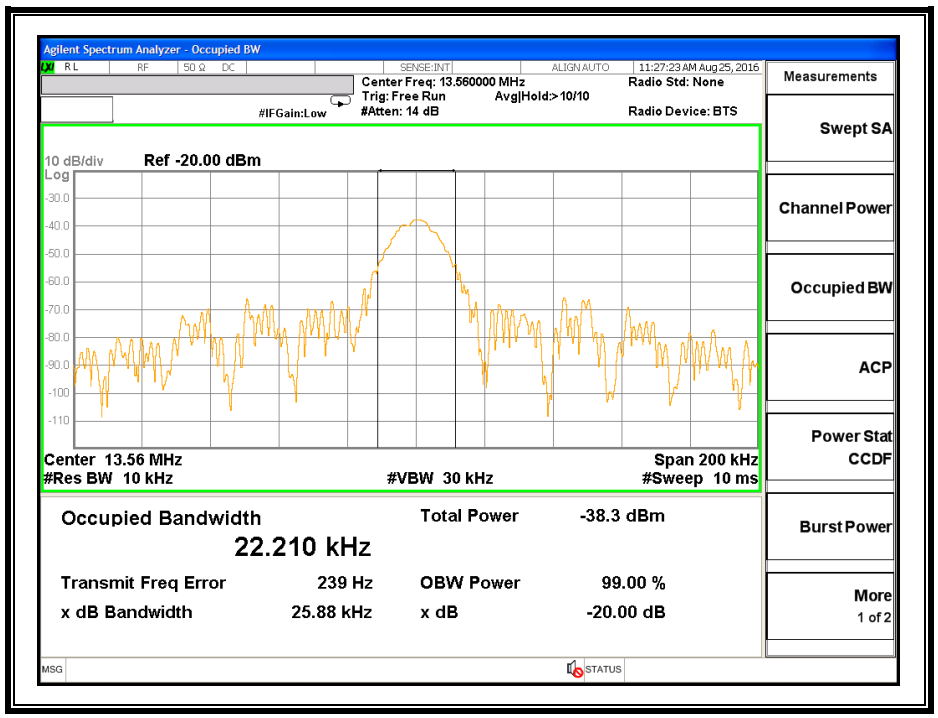
424Kbps



212Kbps



106Kbps



TYPE F
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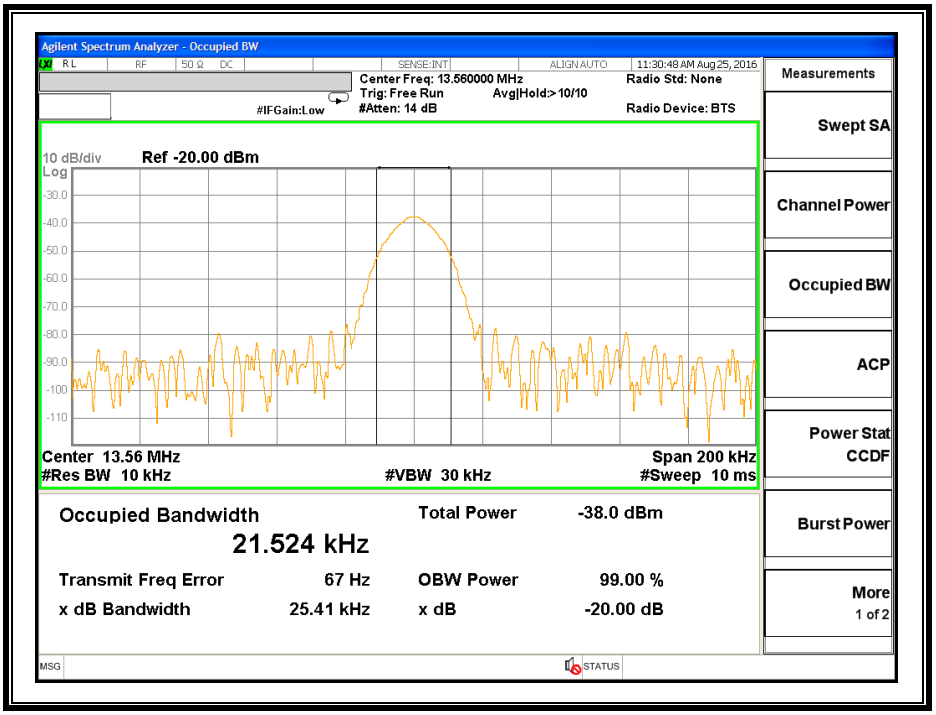

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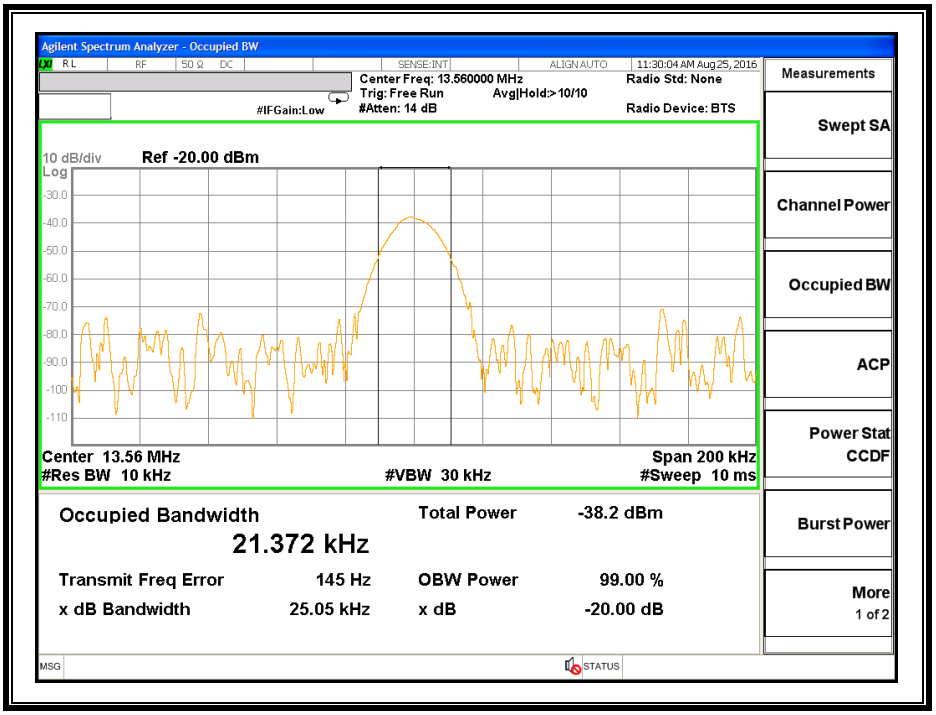


8. RADIATED EMISSION TEST RESULTS

8.1. 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

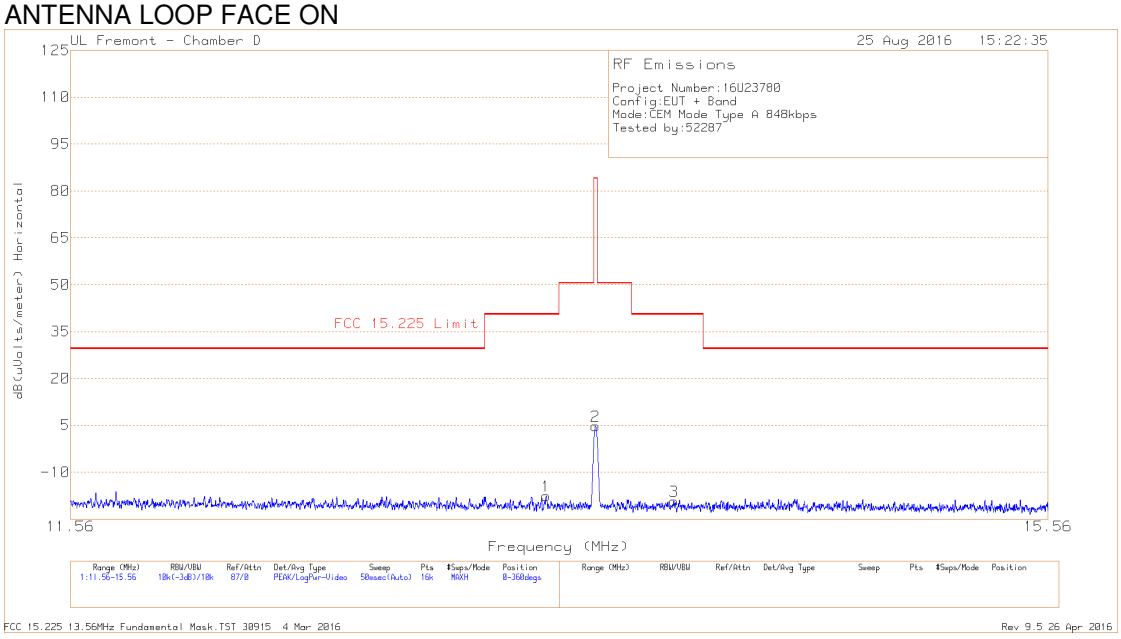
8.2. FUNDAMENTAL AND SPURIOUS EMISSIONS (0.15 – 30 MHz), EUT WITH AC/DC ADAPTER

8.2.1. CE MODE

TYPE A

848Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



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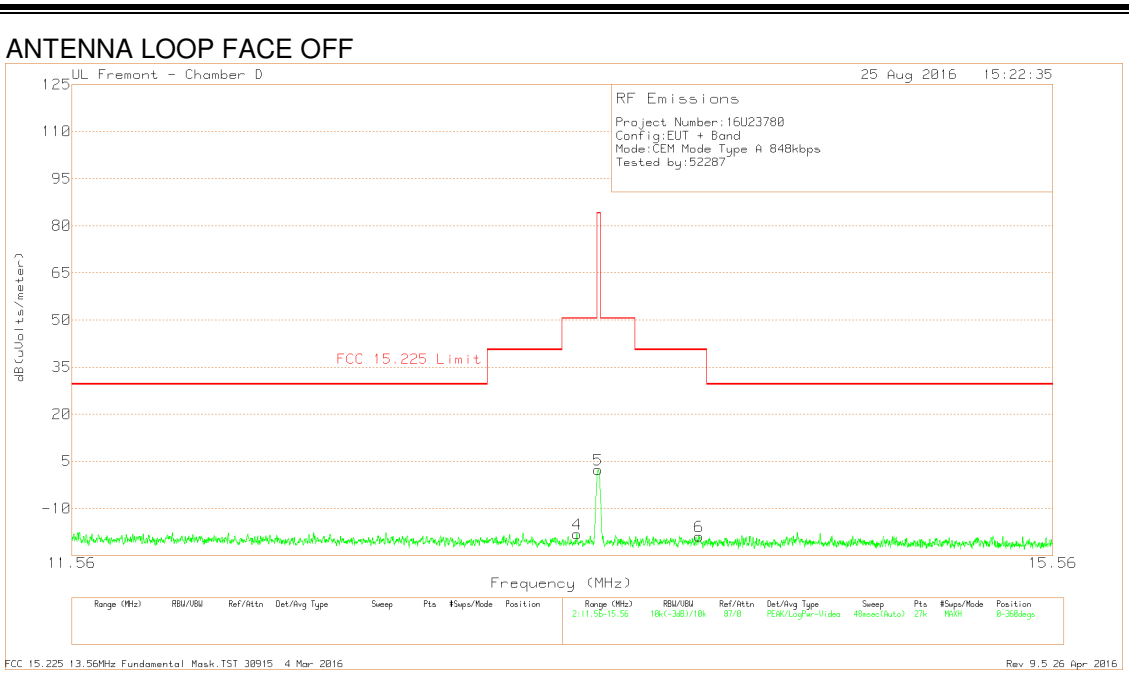


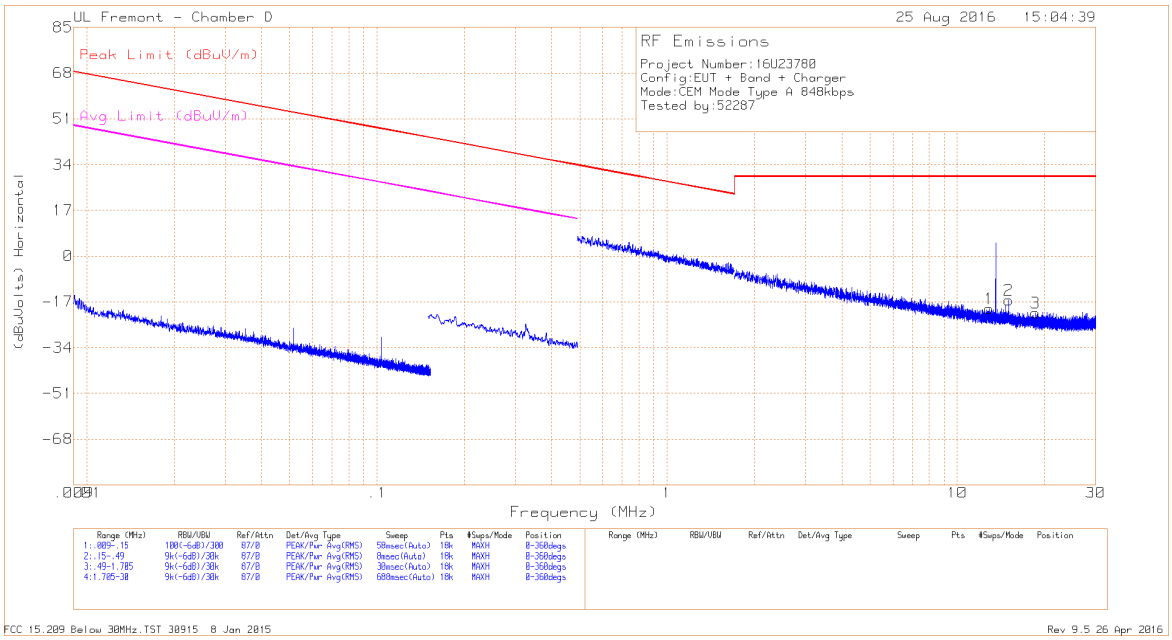
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr 30m	Corrected Reading dB(uVolts/meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	13.35838	11.26	Pk	10.7	.4	-40	-17.64	40.51	-58.15	0-360
4	13.47135	10.76	Pk	10.7	.4	-40	-18.14	50.5	-68.64	0-360
5	13.55911	31.37	Pk	10.6	.4	-40	2.37	84	-81.63	0-360
2	13.56	33.71	Pk	10.6	.4	-40	4.71	84	-79.29	0-360
3	13.88688	9.7	Pk	10.6	.4	-40	-19.3	40.51	-59.81	0-360
6	13.97788	10.17	Pk	10.6	.4	-40	-18.83	40.51	-59.34	0-360

Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



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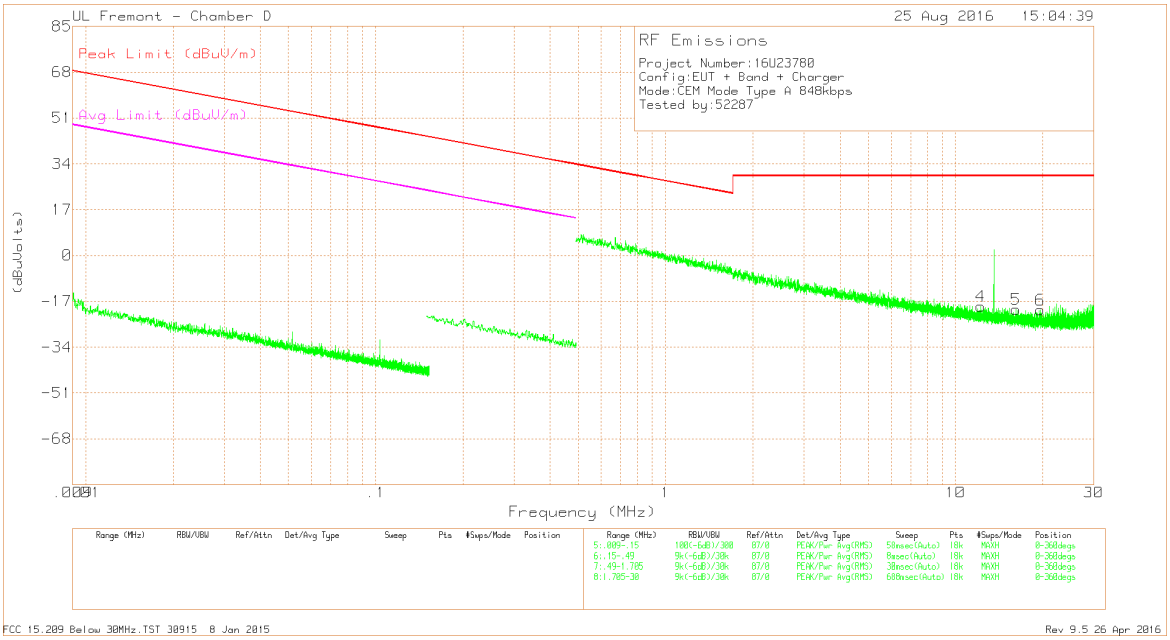


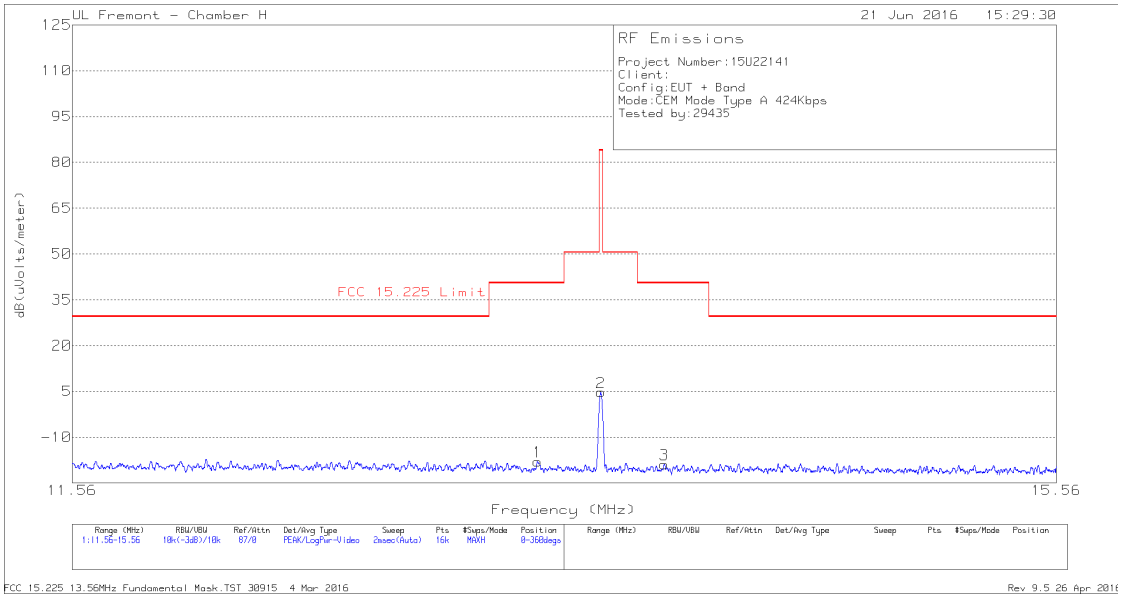
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
4	12.21854	9.95	Pk	10.8	.4	-40	-18.85	29.54	-48.39	-	-	0-360
1	12.91179	9.39	Pk	10.7	.4	-40	-19.51	29.54	-49.05	-	-	0-360
2	15.01984	12.7	Pk	10.5	.4	-40	-16.4	29.54	-45.94	-	-	0-360
5	16.13203	9.41	Pk	10.3	.4	-40	-19.89	29.54	-49.43	-	-	0-360
3	18.56784	8.29	Pk	10	.5	-40	-21.21	29.54	-50.75	-	-	0-360
6	19.60694	9.36	Pk	9.9	.5	-40	-20.24	29.54	-49.78	-	-	0-360

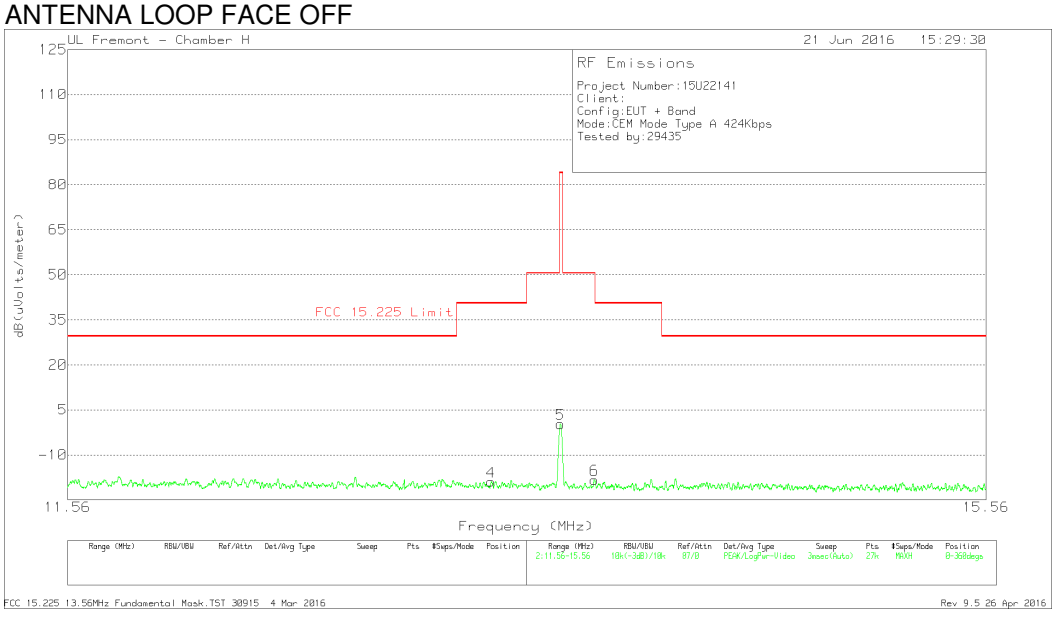
Pk - Peak detector

424Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



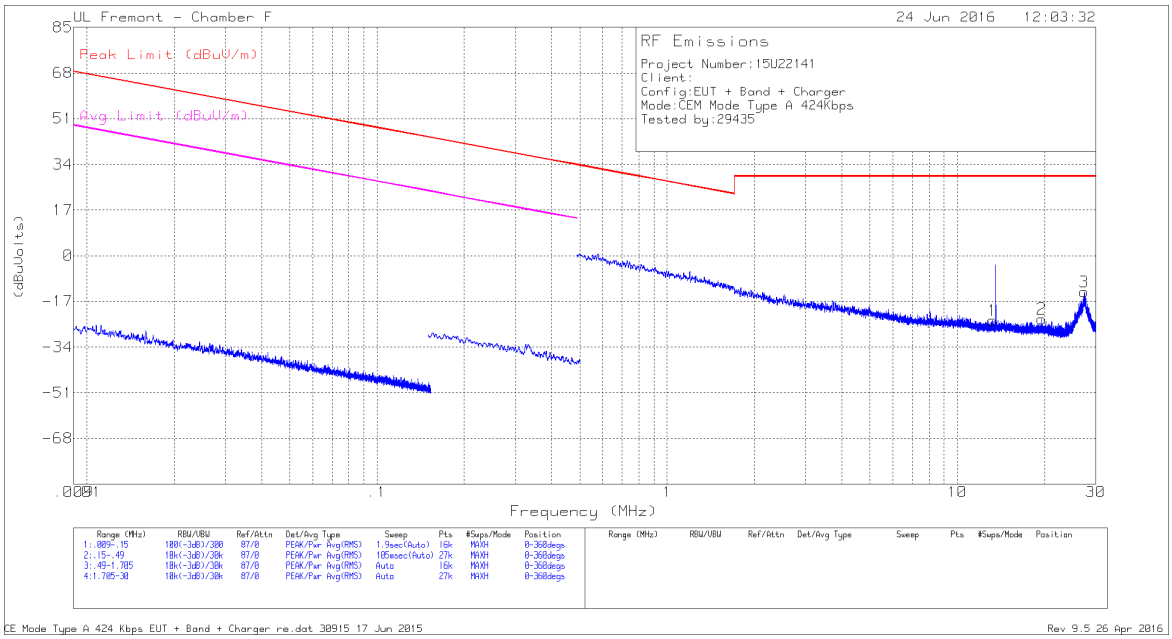
DATA

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)
4	13.258	9.78	Pk	10.7	.6	-40	-18.92	40.51	-59.43	0-360
1	13.30363	10.79	Pk	10.7	.6	-40	-17.91	40.51	-58.42	0-360
5	13.55822	29.09	Pk	10.6	.6	-40	.29	84	-83.71	0-360
2	13.56	33.5	Pk	10.6	.6	-40	4.7	84	-79.3	0-360
6	13.708	10.53	Pk	10.6	.6	-40	-18.27	50.5	-68.77	0-360
3	13.82325	10.08	Pk	10.6	.5	-40	-18.82	40.51	-59.33	0-360

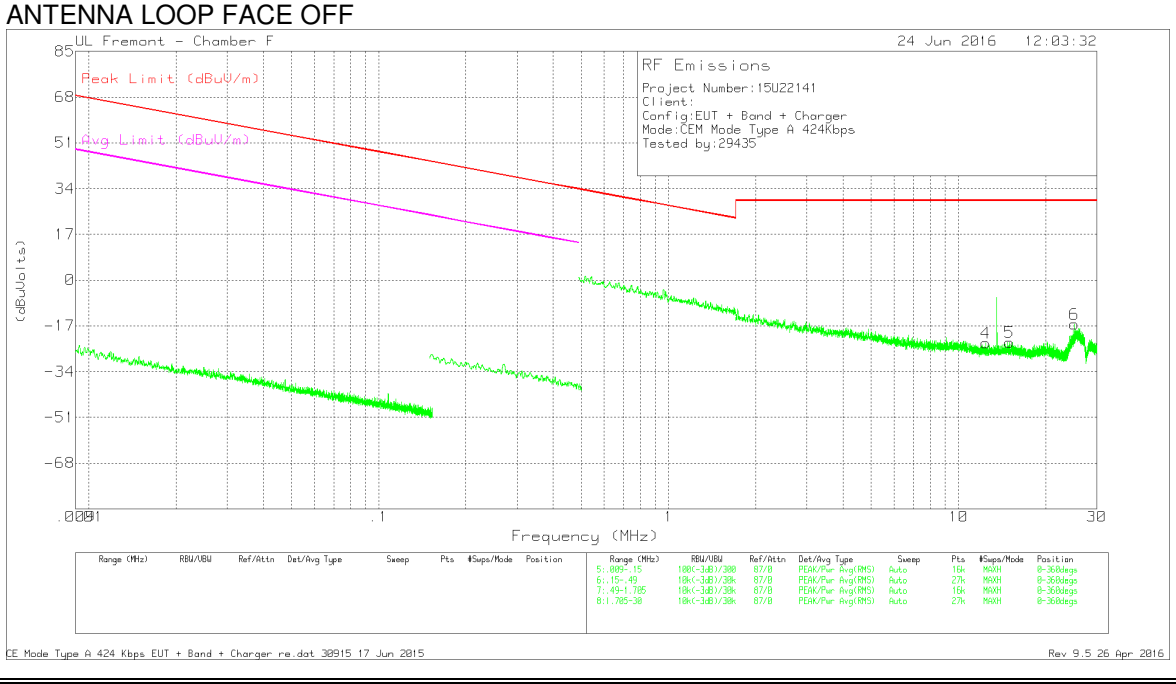
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



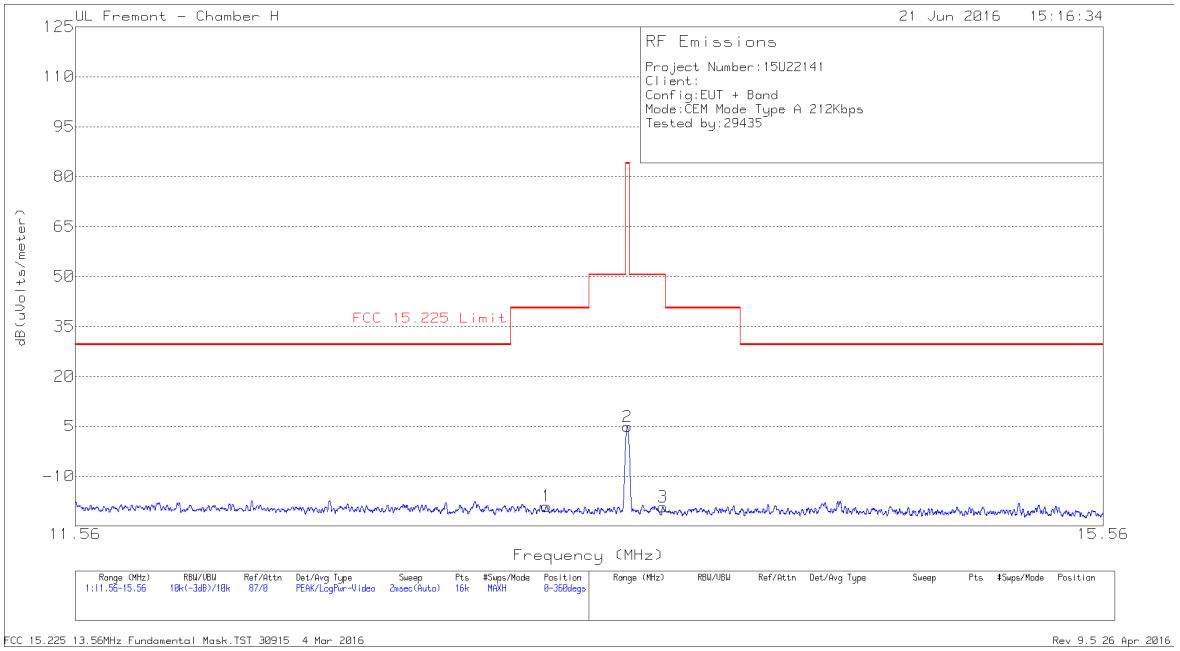
DATA

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	13.23719	4.73	Pk	10.7	.6	-40	-23.97	29.54	-53.51	-	-	0-360
2	19.54301	5.71	Pk	10.1	.7	-40	-23.49	29.54	-53.03	-	-	0-360
3	27.4313	17.11	Pk	8.6	.8	-40	-13.49	29.54	-43.03	-	-	0-360
4	12.40875	5.25	Pk	10.7	.6	-40	-23.45	29.54	-52.99	-	-	0-360
5	14.98997	5.74	Pk	10.6	.6	-40	-23.06	29.54	-52.6	-	-	0-360
6	25.14666	13.78	Pk	9.2	.7	-40	-16.32	29.54	-45.86	-	-	0-360

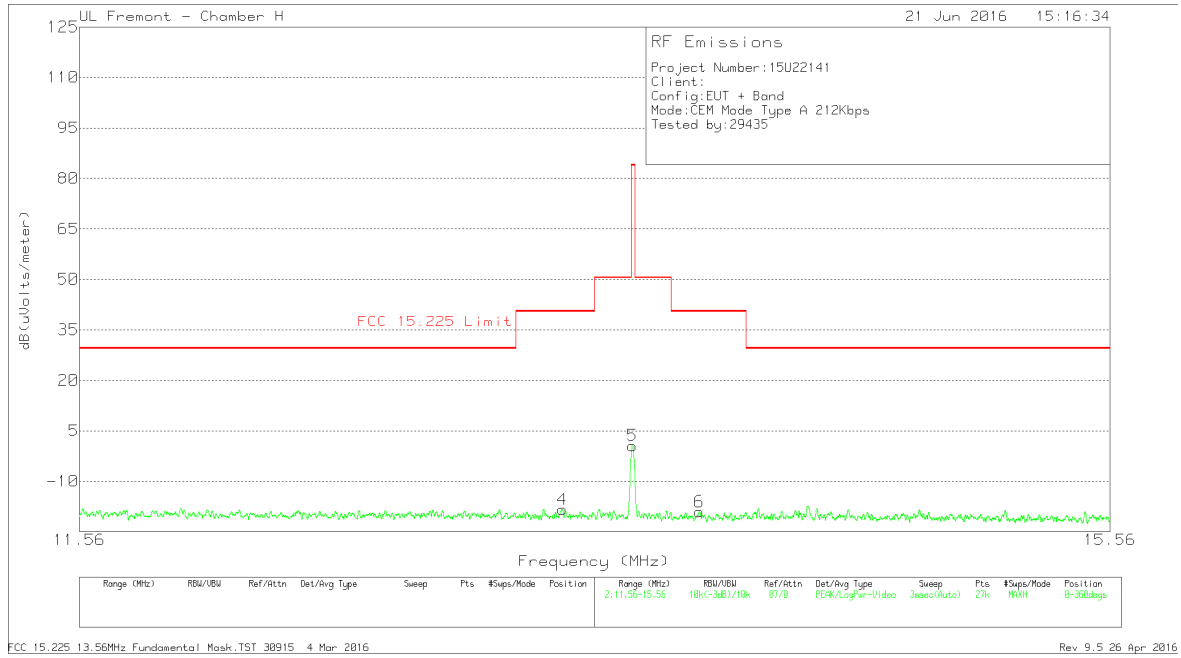
Pk - Peak detector

212Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



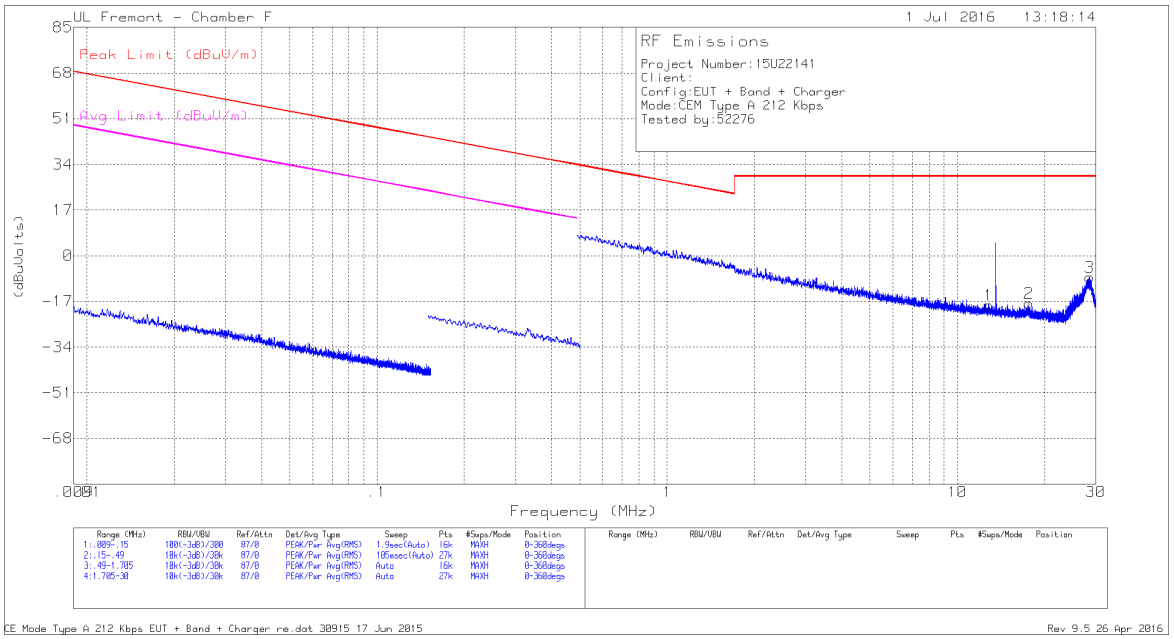
DATA

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	13.24863	9.7	Pk	10.7	.6	-40	-19	40.51	-59.51	0-360
4	13.28746	10.32	Pk	10.7	.6	-40	-18.38	40.51	-58.89	0-360
5	13.55807	29.42	Pk	10.6	.6	-40	.62	84	-83.38	0-360
2	13.56	33.72	Pk	10.6	.6	-40	4.92	84	-79.08	0-360
3	13.70013	9.61	Pk	10.6	.6	-40	-19.19	50.5	-69.69	0-360
6	13.82314	9.86	Pk	10.6	.5	-40	-19.04	40.51	-59.55	0-360

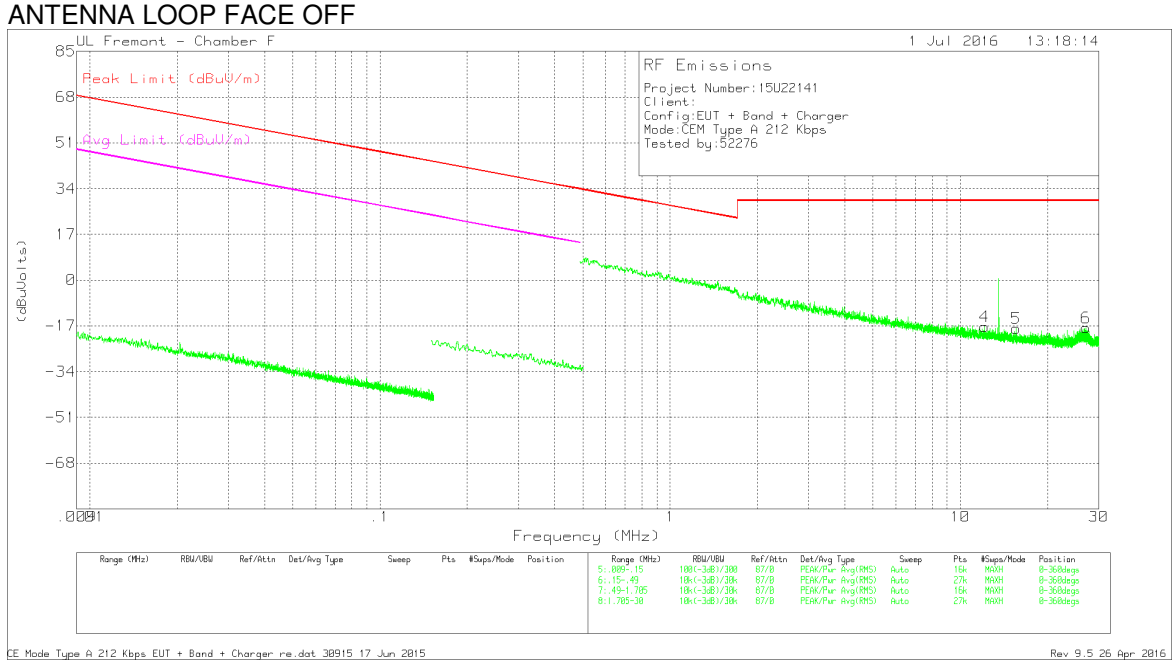
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



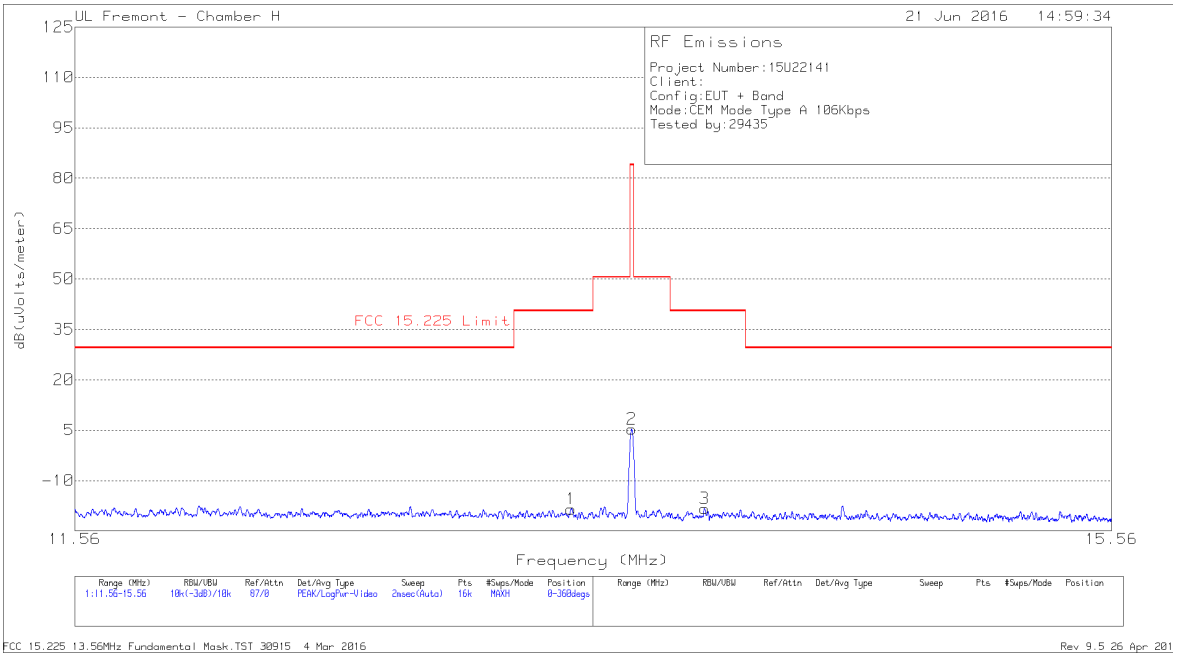
DATA

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	12.8159	10.3	Pk	10.7	.6	-40	-18.4	29.54	-47.94	-	-	0-360
2	17.62779	11.37	Pk	10.3	.6	-40	-17.73	29.54	-47.27	-	-	0-360
3	28.60926	22.95	Pk	8.3	.8	-40	-7.95	29.54	-37.49	-	-	0-360
4	12.09854	11.55	Pk	10.7	.5	-40	-17.25	29.54	-46.79	-	-	0-360
5	15.5407	10.99	Pk	10.5	.6	-40	-17.91	29.54	-47.45	-	-	0-360
6	27.08127	12.83	Pk	8.7	.8	-40	-17.67	29.54	-47.21	-	-	0-360

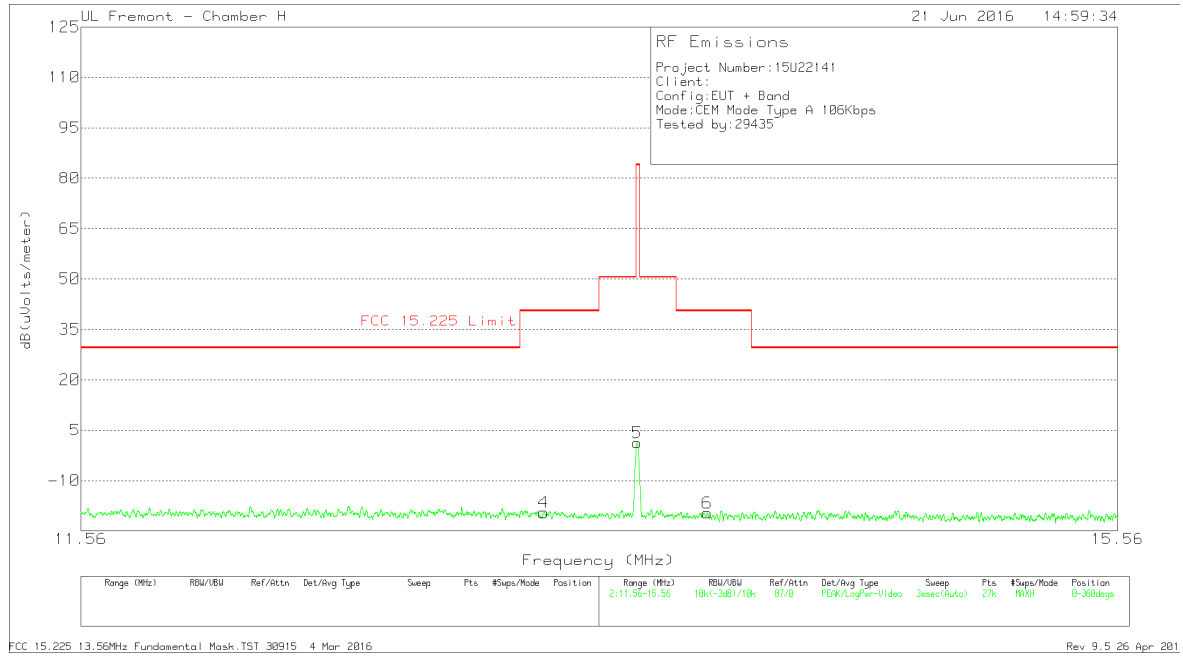
Pk - Peak detector

106Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



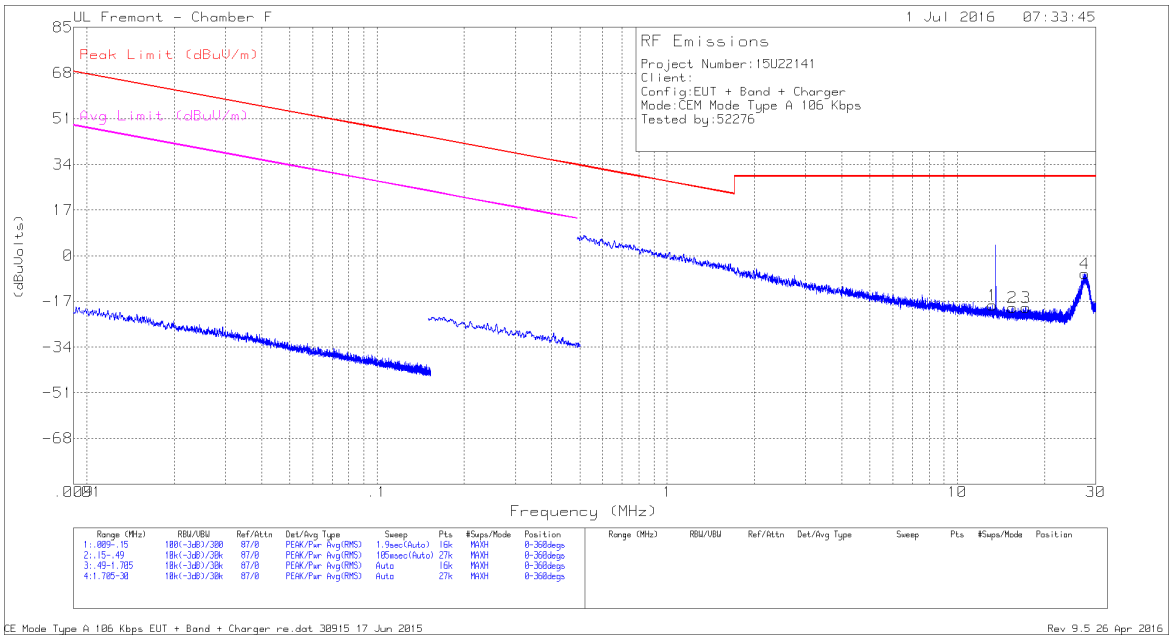
DATA

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)
4	13.19984	9.19	Pk	10.7	.6	-40	-19.51	40.51	-60.02	0-360
1	13.32675	10.26	Pk	10.7	.6	-40	-18.44	40.51	-58.95	0-360
5	13.55785	30.01	Pk	10.6	.6	-40	1.21	84	-82.79	0-360
2	13.56038	34.15	Pk	10.6	.6	-40	5.35	84	-78.65	0-360
6	13.8335	9.22	Pk	10.6	.5	-40	-19.68	40.51	-60.19	0-360
3	13.84638	10.59	Pk	10.6	.5	-40	-18.31	40.51	-58.82	0-360

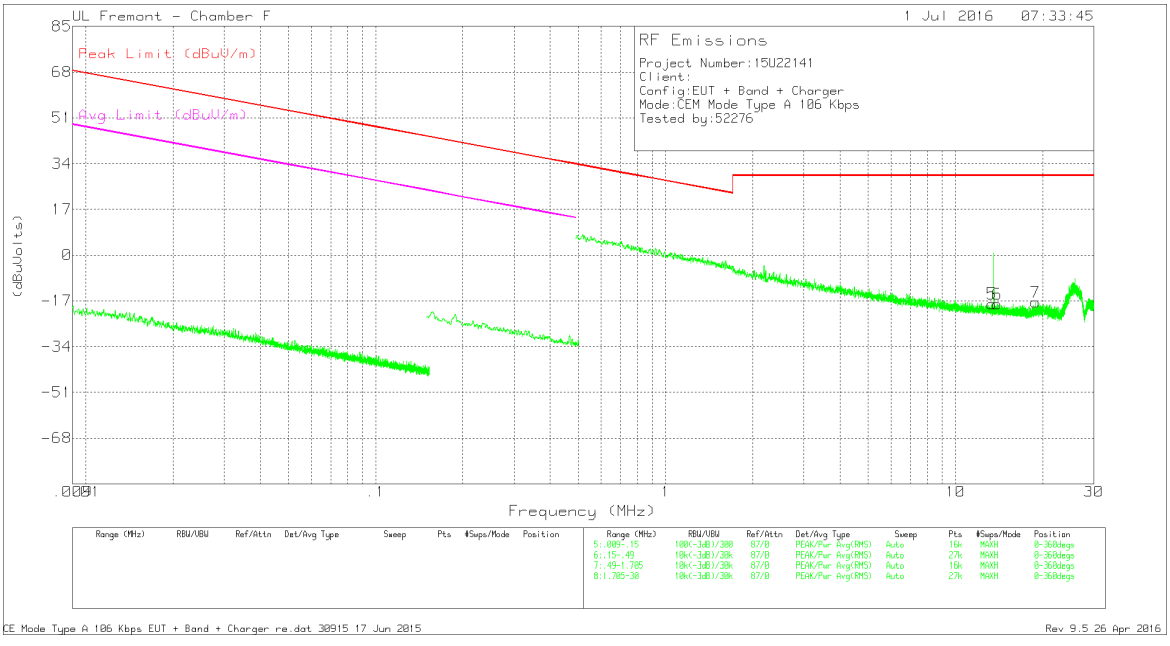
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



DATA

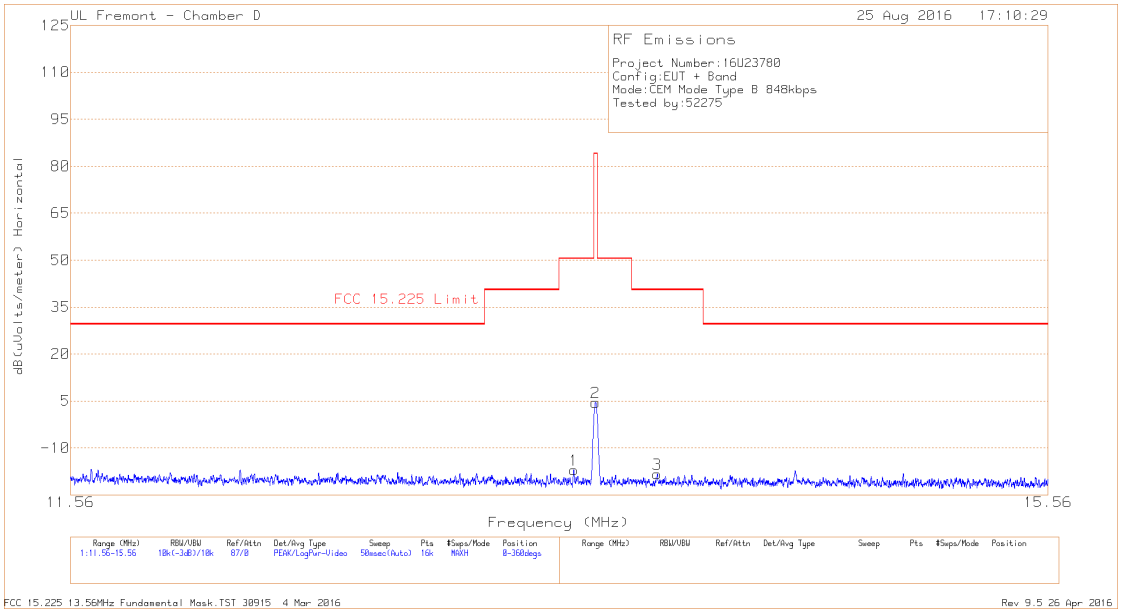
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	13.22671	10.35	Pk	10.7	.6	-40	-18.35	29.54	-47.89	-	-	0-360
2	15.53231	9.59	Pk	10.5	.6	-40	-19.31	29.54	-48.85	-	-	0-360
3	17.25627	9.69	Pk	10.4	.6	-40	-19.31	29.54	-48.85	-	-	0-360
4	27.50414	23.99	Pk	8.6	.8	-40	-6.61	29.54	-36.15	-	-	0-360
5	13.31841	10.63	Pk	10.7	.6	-40	-18.07	29.54	-47.61	-	-	0-360
6	13.96817	10.82	Pk	10.6	.5	-40	-18.08	29.54	-47.62	-	-	0-360
7	18.87386	11.62	Pk	10.2	.6	-40	-17.58	29.54	-47.12	-	-	0-360

Pk - Peak detector

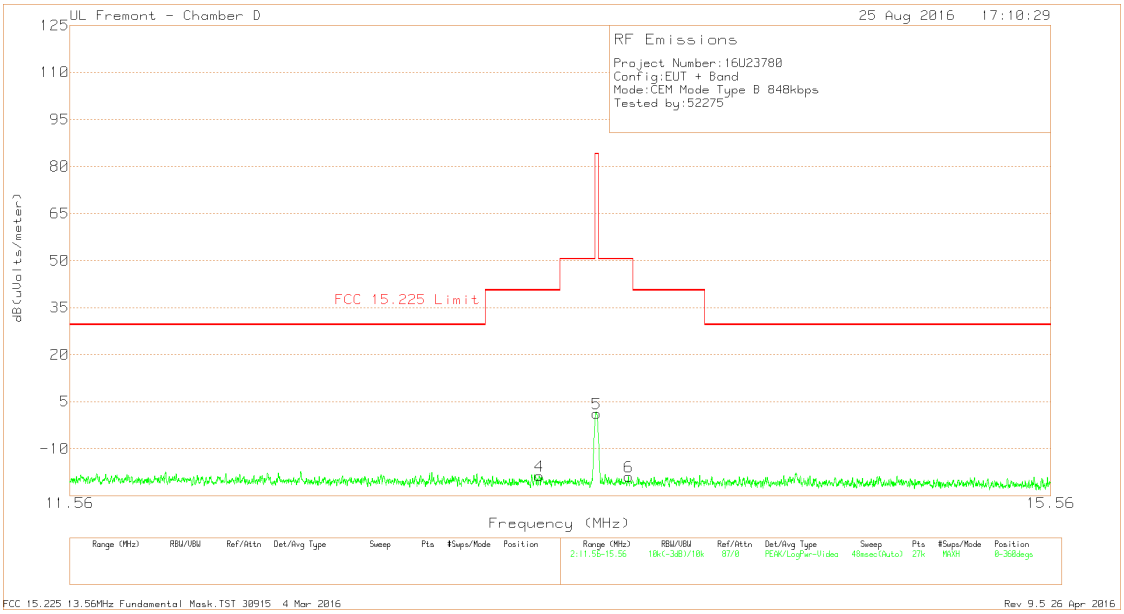
TYPE B

848Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



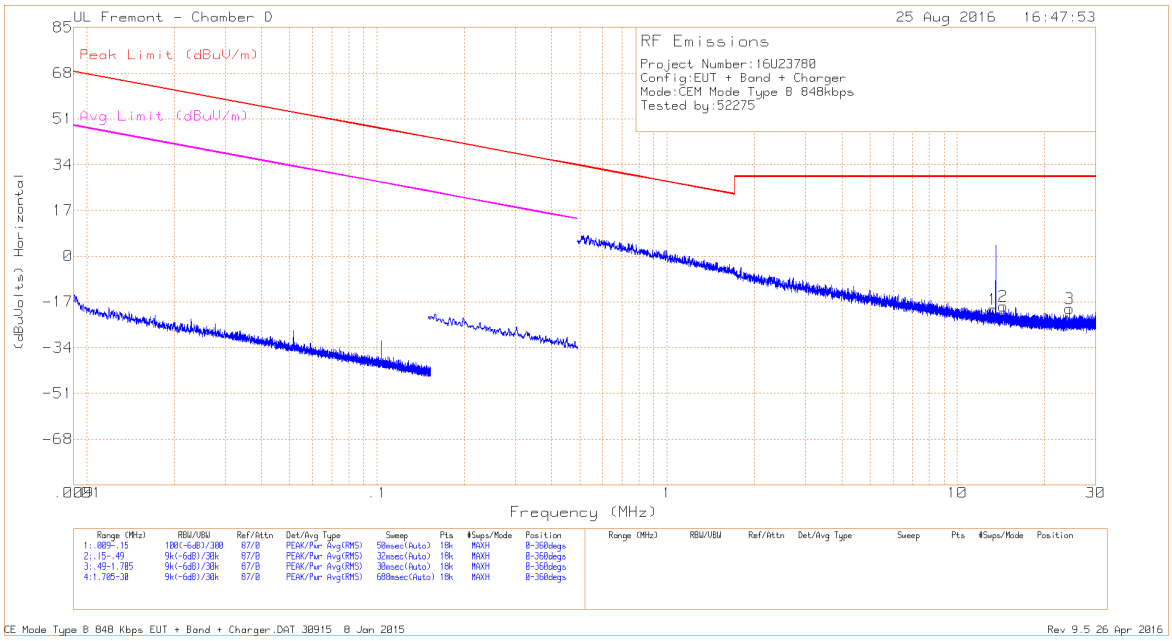
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr 30m	Corrected Reading dB(uVolts/meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
4	13.32675	10.19	Pk	10.7	.4	-40	-18.71	40.51	-59.22	0-360
1	13.47088	11.79	Pk	10.7	.4	-40	-17.11	50.5	-67.61	0-360
5	13.56052	30.23	Pk	10.6	.4	-40	1.23	84	-82.77	0-360
2	13.56088	33.47	Pk	10.6	.4	-40	4.47	84	-79.53	0-360
6	13.69224	10.07	Pk	10.6	.4	-40	-18.93	50.5	-69.43	0-360
3	13.81763	10.65	Pk	10.6	.4	-40	-18.35	40.51	-58.86	0-360

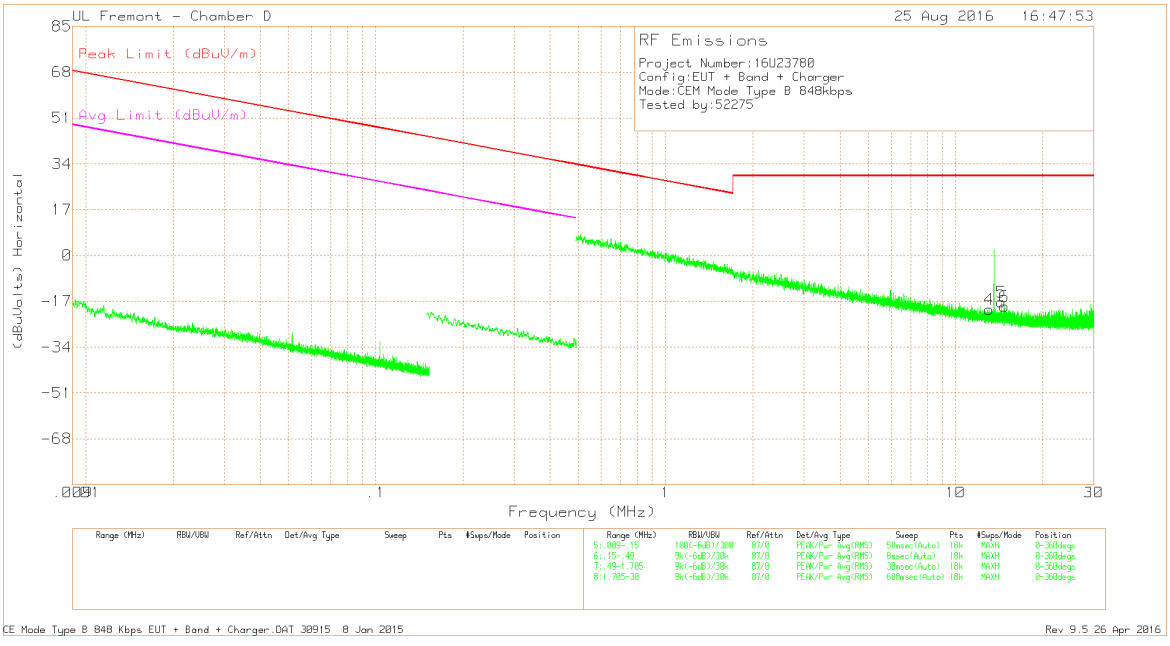
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



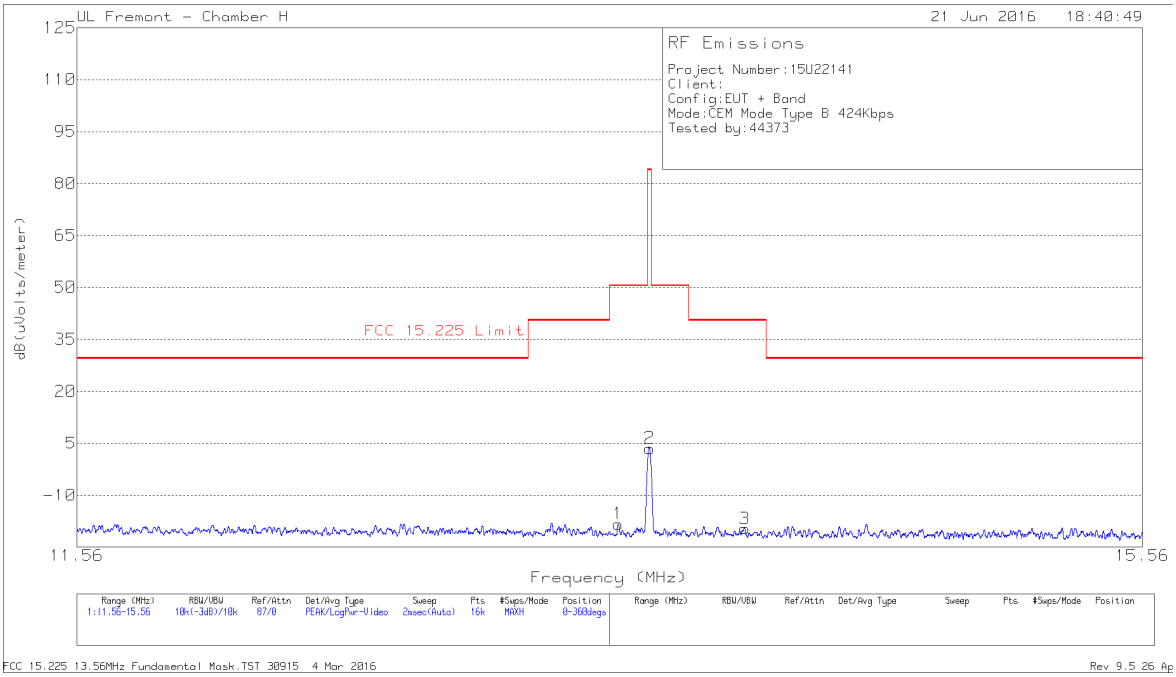
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
4	13.05484	8.82	Pk	10.7	.4	-40	-20.08	29.54	-49.62	-	-	0-360
1	13.26706	9.07	Pk	10.7	.4	-40	-19.83	29.54	-49.37	-	-	0-360
5	14.40676	11.66	Pk	10.6	.4	-40	-17.34	29.54	-46.88	-	-	0-360
2	14.40833	10.29	Pk	10.6	.4	-40	-18.71	29.54	-48.25	-	-	0-360
6	14.75653	10.18	Pk	10.5	.4	-40	-18.92	29.54	-48.46	-	-	0-360
3	24.32608	10.57	Pk	9.2	.6	-40	-19.63	29.54	-49.17	-	-	0-360

Pk - Peak detector

424Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF

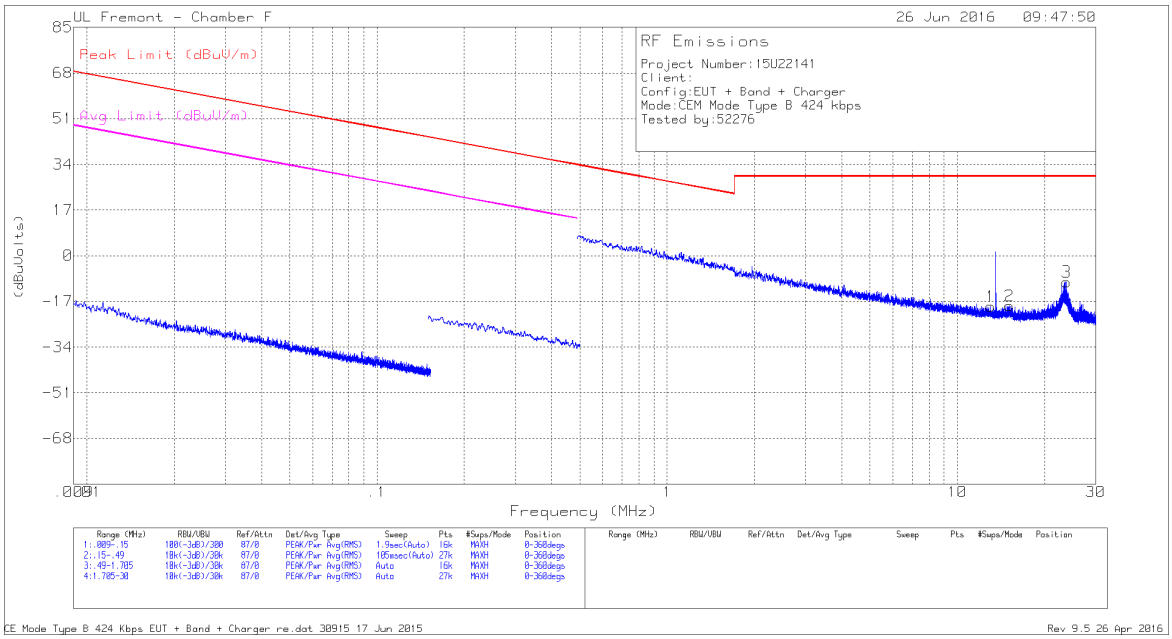
DATA

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)
4	13.31913	9.48	Pk	10.7	.6	-40	-19.22	40.51	-59.73	0-360
1	13.44388	10.44	Pk	10.7	.6	-40	-18.26	50.5	-68.76	0-360
5	13.56007	27.51	Pk	10.6	.6	-40	-1.29	84	-85.29	0-360
2	13.562	32.32	Pk	10.6	.6	-40	3.52	84	-80.48	0-360
6	13.8389	9.79	Pk	10.6	.5	-40	-19.11	40.51	-59.62	0-360
3	13.92675	9.28	Pk	10.6	.5	-40	-19.62	40.51	-60.13	0-360

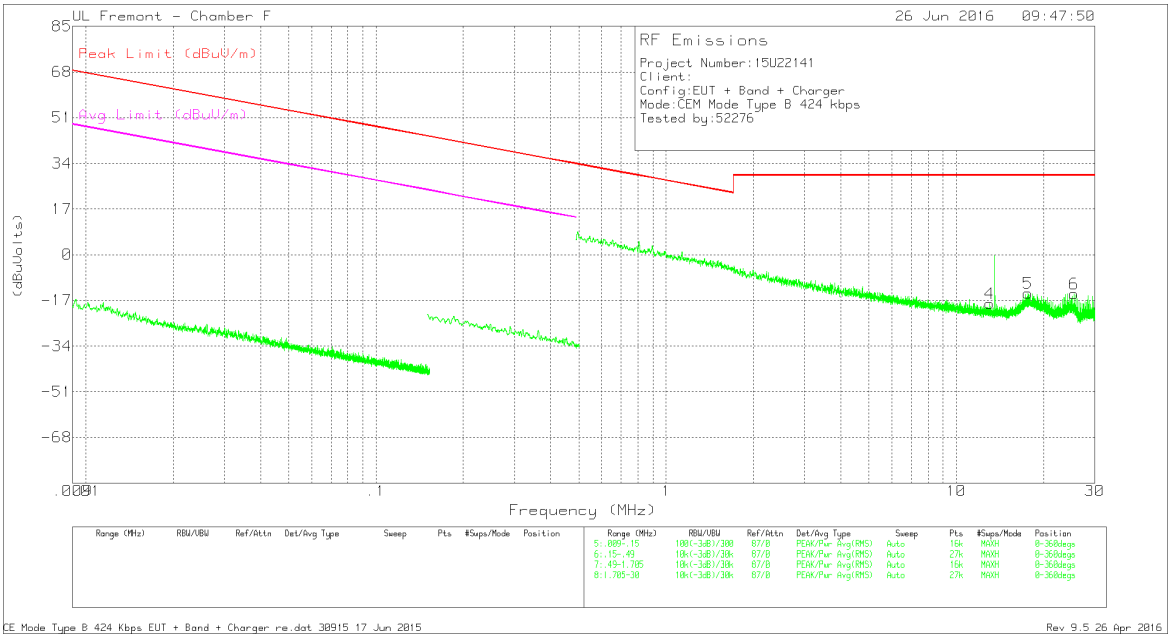
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



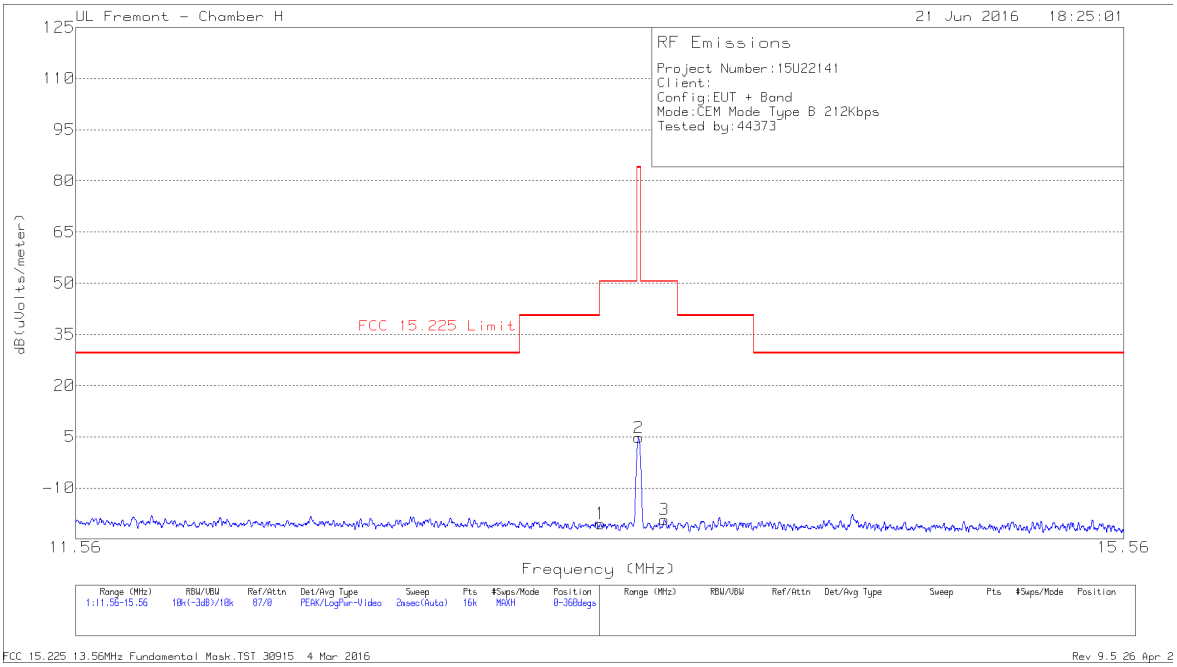
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	13.00663	10.14	Pk	10.7	.4	-40	-18.76	29.54	-48.3	-	-	0-360
2	15.15294	10.4	Pk	10.6	.4	-40	-18.6	29.54	-48.14	-	-	0-360
3	23.84033	20.29	Pk	9.4	.6	-40	-9.71	29.54	-39.25	-	-	0-360
4	13.05641	10.69	Pk	10.7	.4	-40	-18.21	29.54	-47.75	-	-	0-360
5	17.63827	14.94	Pk	10.3	.5	-40	-14.26	29.54	-43.8	-	-	0-360
6	25.47259	15.65	Pk	9.1	.6	-40	-14.65	29.54	-44.19	-	-	0-360

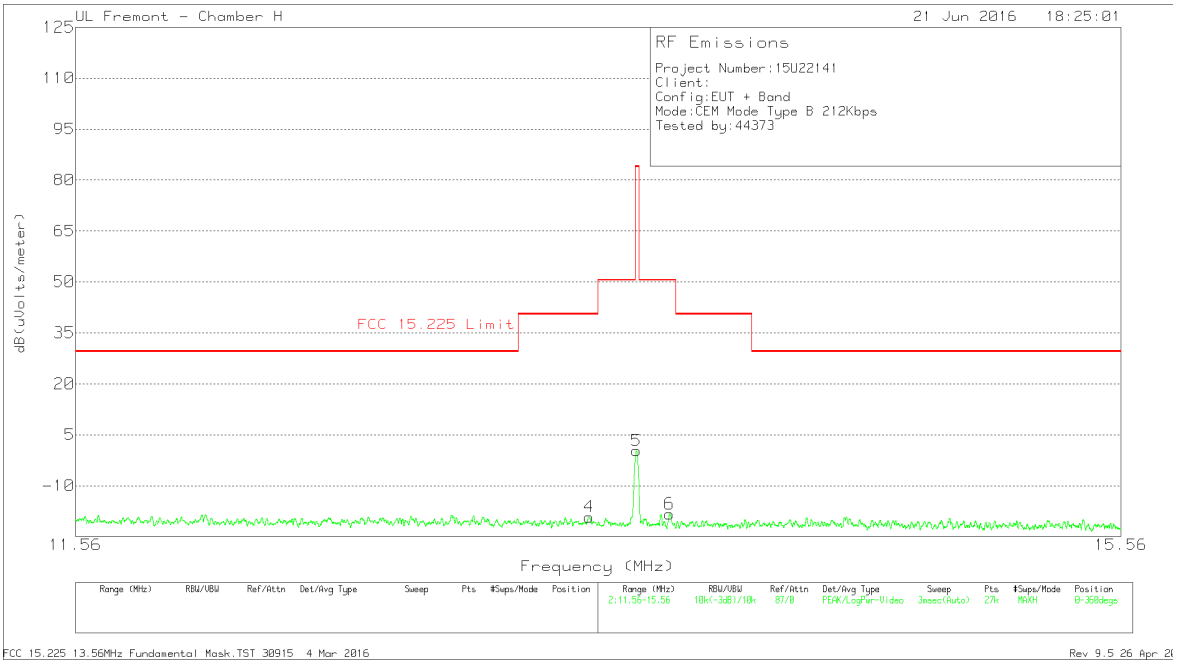
Pk - Peak detector

212Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



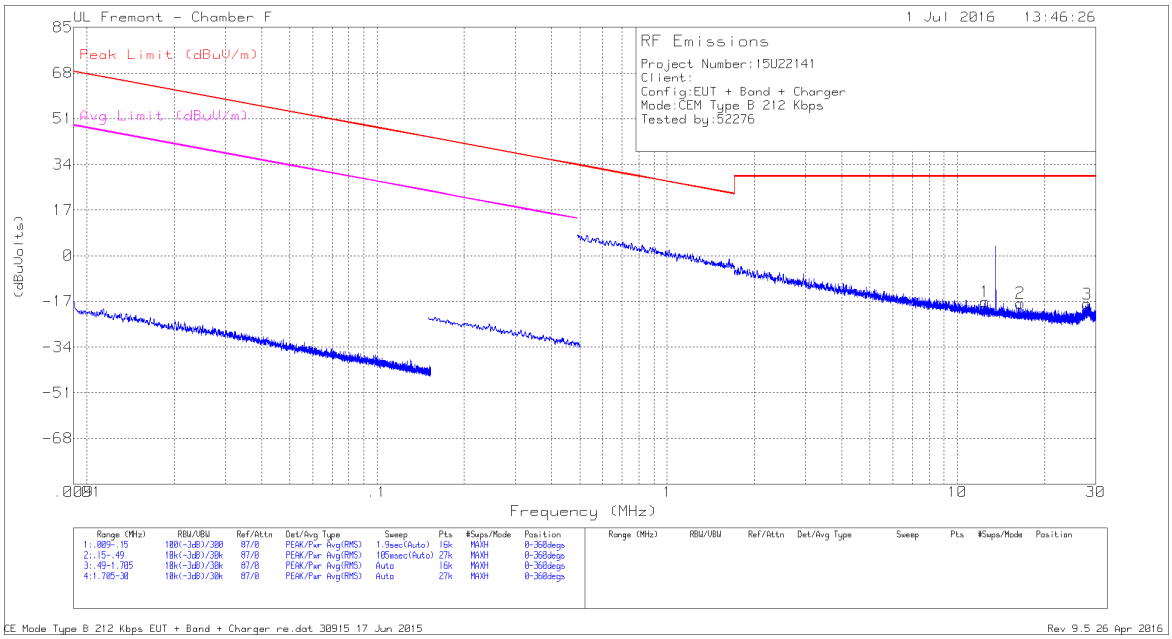
DATA

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)
4	13.37796	9.52	Pk	10.7	.6	-40	-19.18	40.51	-59.69	0-360
1	13.41488	8.19	Pk	10.7	.6	-40	-20.51	50.5	-71.01	0-360
5	13.55837	29.1	Pk	10.6	.6	-40	.3	84	-83.7	0-360
2	13.56025	33.5	Pk	10.6	.6	-40	4.7	84	-79.3	0-360
3	13.66038	9.5	Pk	10.6	.6	-40	-19.3	50.5	-69.8	0-360
6	13.68691	10.52	Pk	10.6	.6	-40	-18.28	50.5	-68.78	0-360

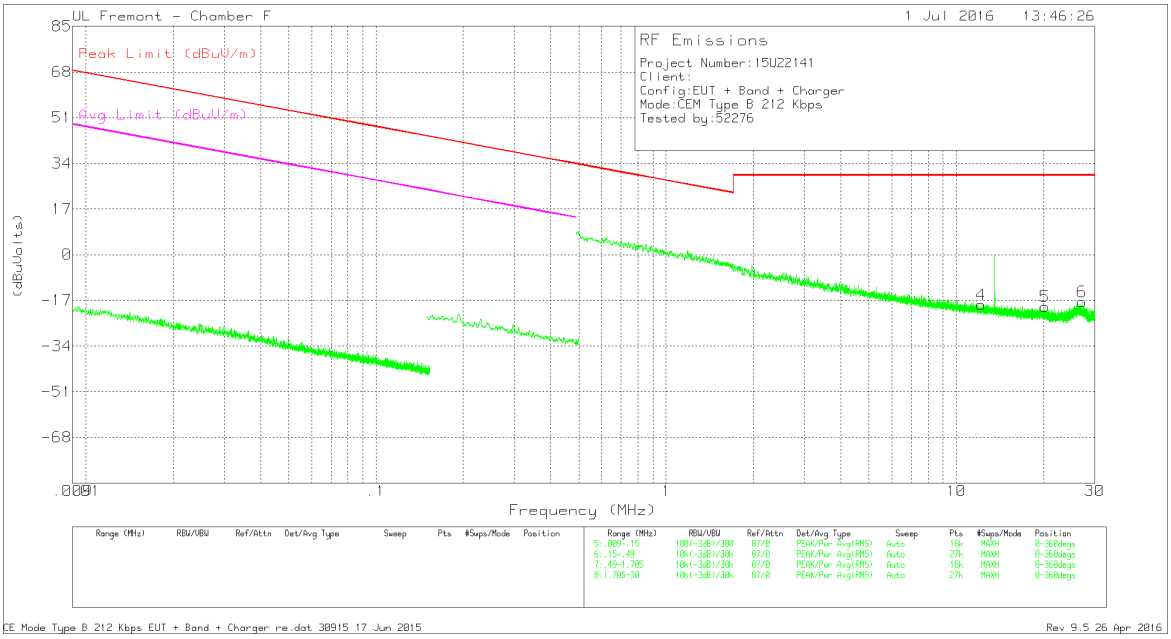
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



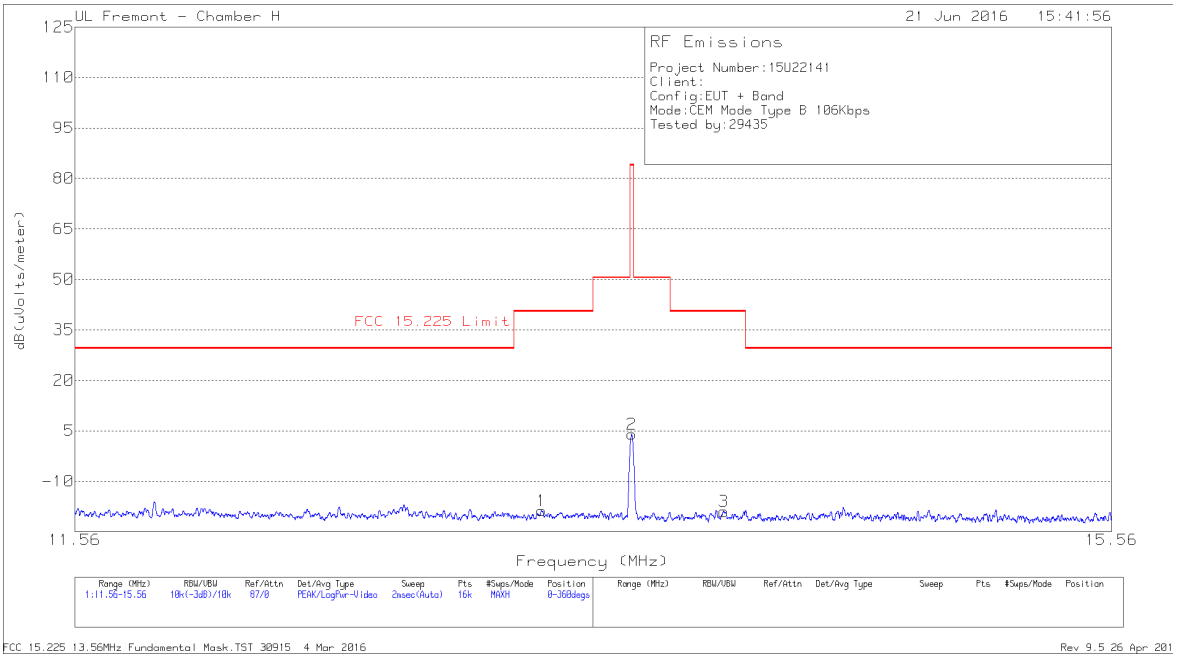
DATA

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	12.49783	11.68	Pk	10.7	.6	-40	-17.02	29.54	-46.56	-	-	0-360
2	16.48337	11.29	Pk	10.5	.6	-40	-17.61	29.54	-47.15	-	-	0-360
3	27.98779	12.85	Pk	8.5	.8	-40	-17.85	29.54	-47.39	-	-	0-360
4	12.20124	10.26	Pk	10.7	.5	-40	-18.54	29.54	-48.08	-	-	0-360
5	20.22788	9.92	Pk	10.1	.7	-40	-19.28	29.54	-48.82	-	-	0-360
6	27.12214	13.05	Pk	8.7	.8	-40	-17.45	29.54	-46.99	-	-	0-360

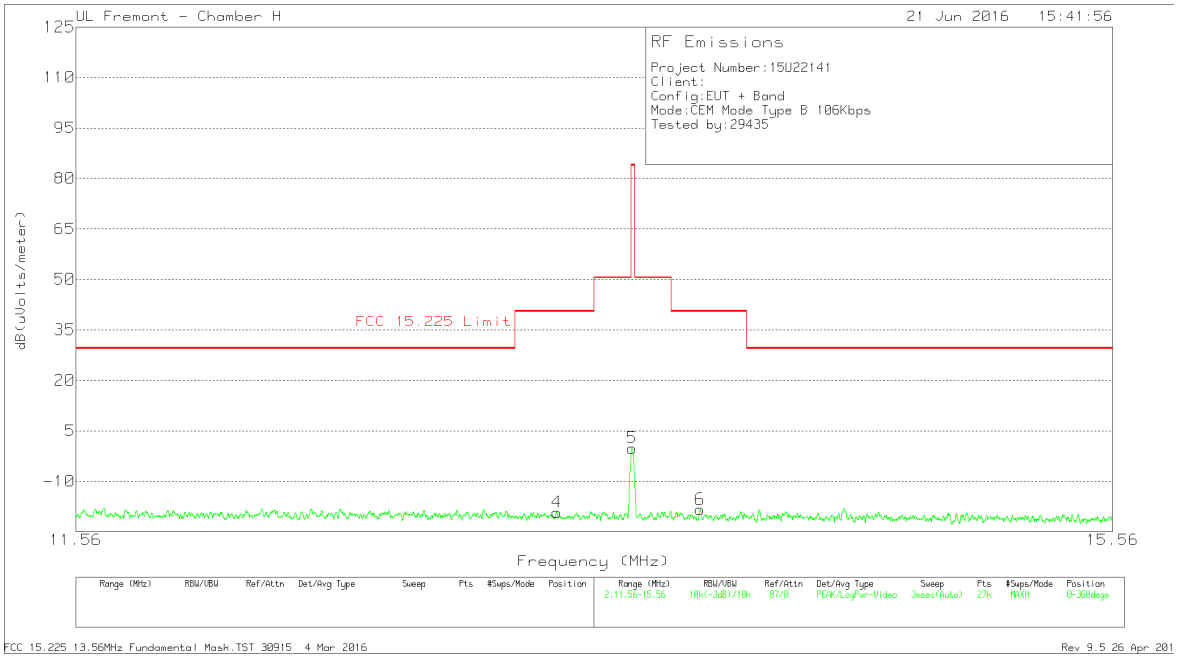
Pk - Peak detector

106Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



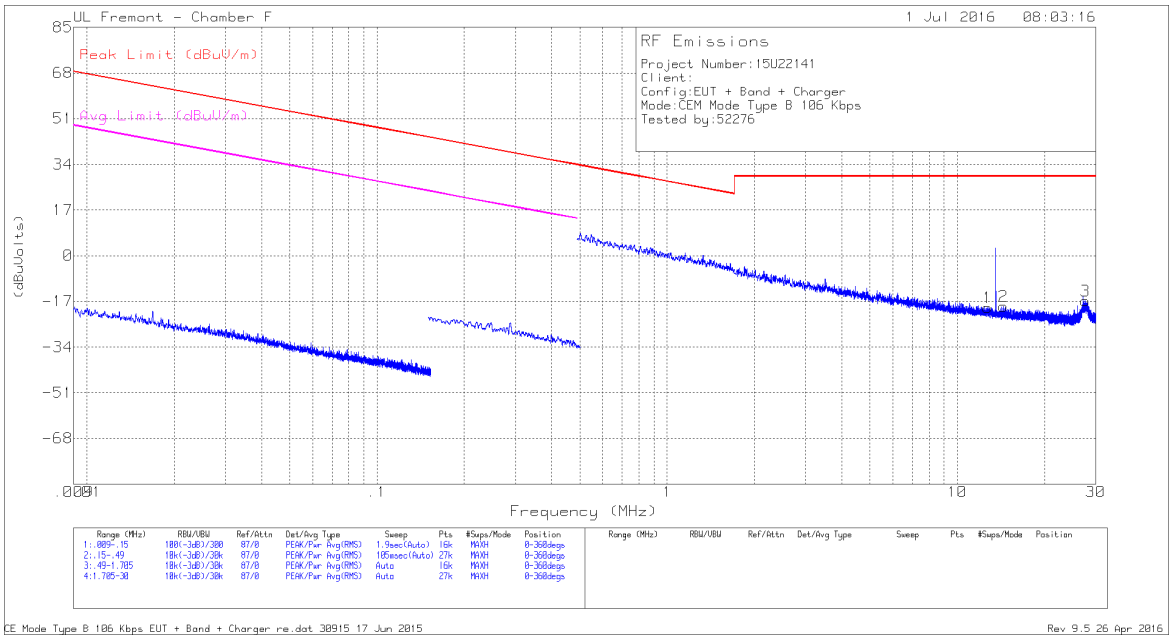
DATA

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	13.21438	10	Pk	10.7	.6	-40	-18.7	40.51	-59.21	0-360
4	13.26844	9.52	Pk	10.7	.6	-40	-19.18	40.51	-59.69	0-360
5	13.55837	28.69	Pk	10.6	.6	-40	-.11	84	-84.11	0-360
2	13.56	32.76	Pk	10.6	.6	-40	3.96	84	-80.04	0-360
6	13.82551	10.59	Pk	10.6	.5	-40	-18.31	40.51	-58.82	0-360
3	13.92263	9.94	Pk	10.6	.5	-40	-18.96	40.51	-59.47	0-360

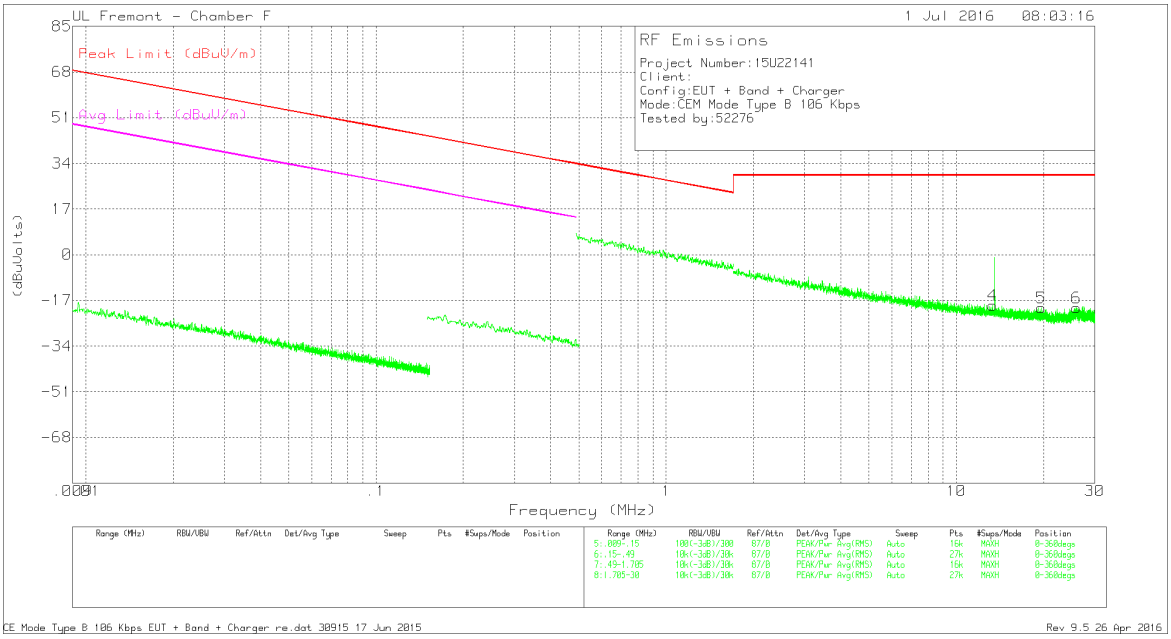
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



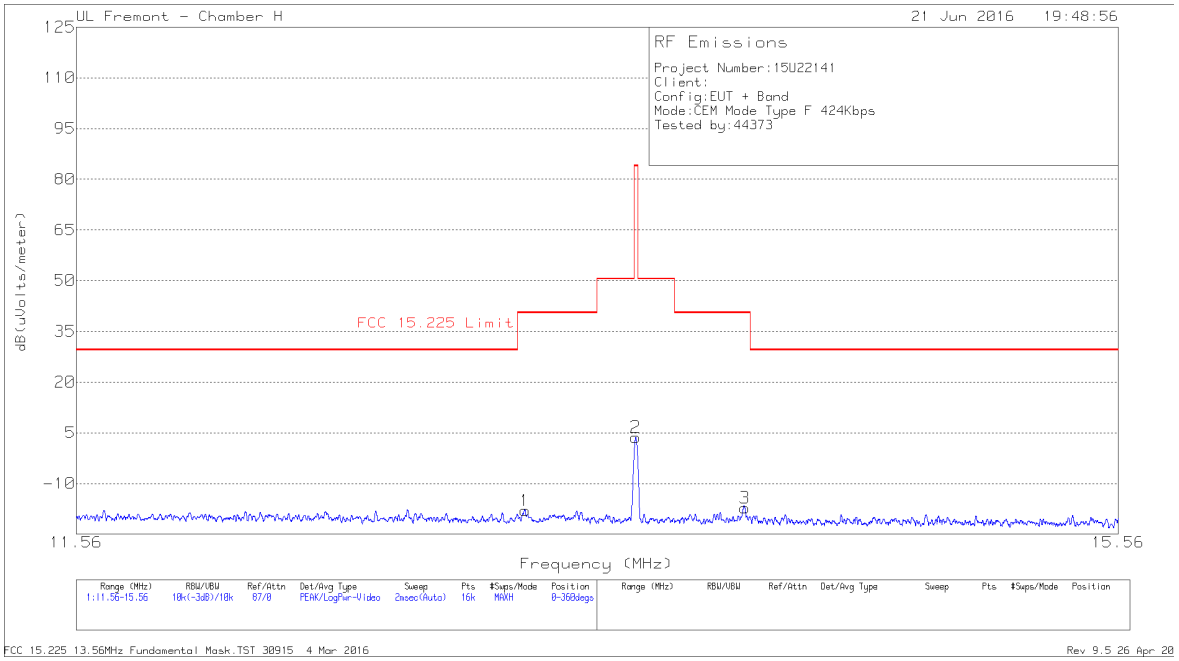
DATA

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	12.71267	9.38	Pk	10.7	.6	-40	-19.32	29.54	-48.86	-	-	0-360
2	14.40676	10.05	Pk	10.6	.5	-40	-18.85	29.54	-48.39	-	-	0-360
3	27.65191	13.82	Pk	8.6	.8	-40	-16.78	29.54	-46.32	-	-	0-360
4	13.35247	9.81	Pk	10.7	.6	-40	-18.89	29.54	-48.43	-	-	0-360
5	19.64204	9.46	Pk	10.1	.7	-40	-19.74	29.54	-49.28	-	-	0-360
6	26.01022	10.38	Pk	9	.8	-40	-19.82	29.54	-49.36	-	-	0-360

Pk - Peak detector

TYPE F 424Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF

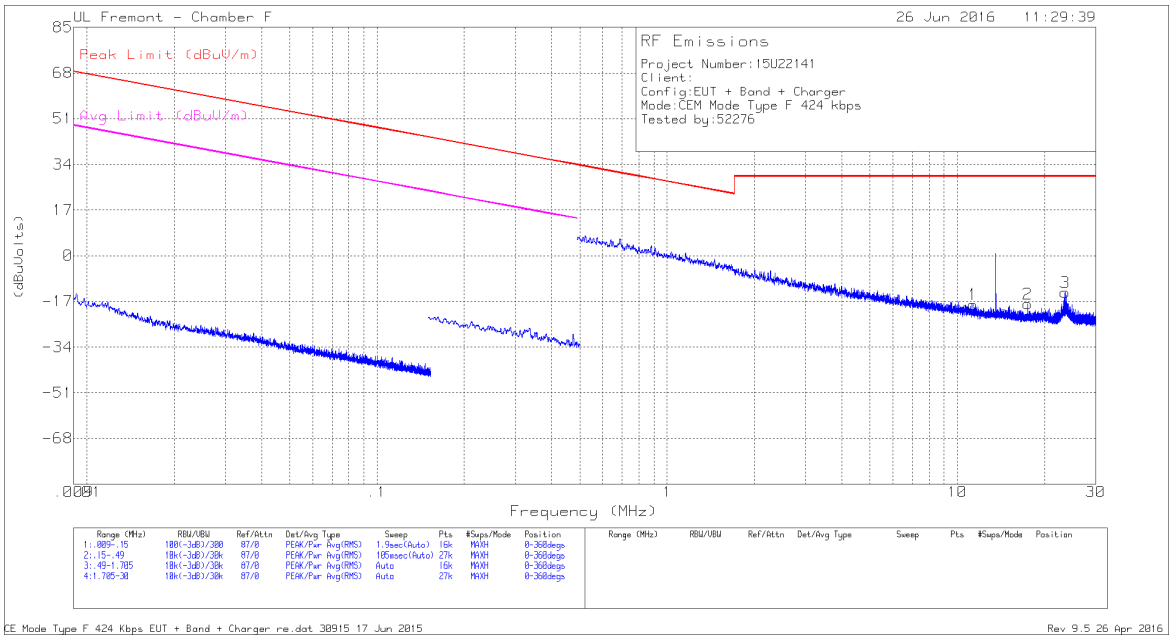
DATA

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)
4	13.13738	9.53	Pk	10.7	.6	-40	-19.17	40.51	-59.68	0-360
1	13.13925	10.7	Pk	10.7	.6	-40	-18	40.51	-58.51	0-360
5	13.55822	28.32	Pk	10.6	.6	-40	-.48	84	-84.48	0-360
2	13.55975	32.48	Pk	10.6	.6	-40	3.68	84	-80.32	0-360
6	13.98772	9.86	Pk	10.6	.5	-40	-19.04	40.51	-59.55	0-360
3	13.9885	11.69	Pk	10.6	.5	-40	-17.21	40.51	-57.72	0-360

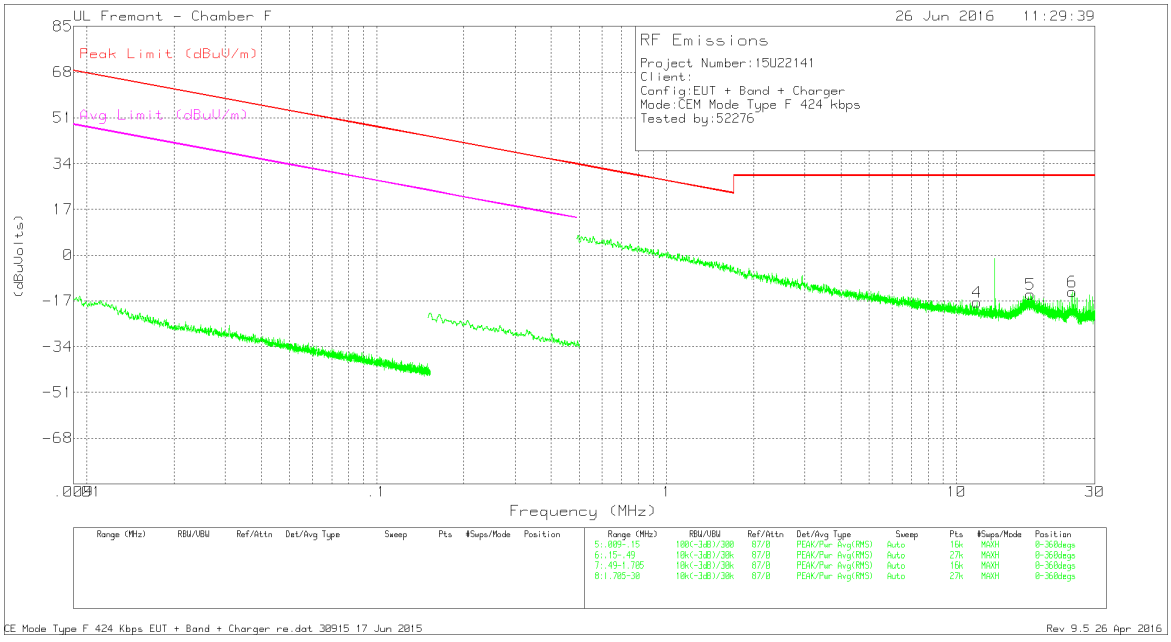
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



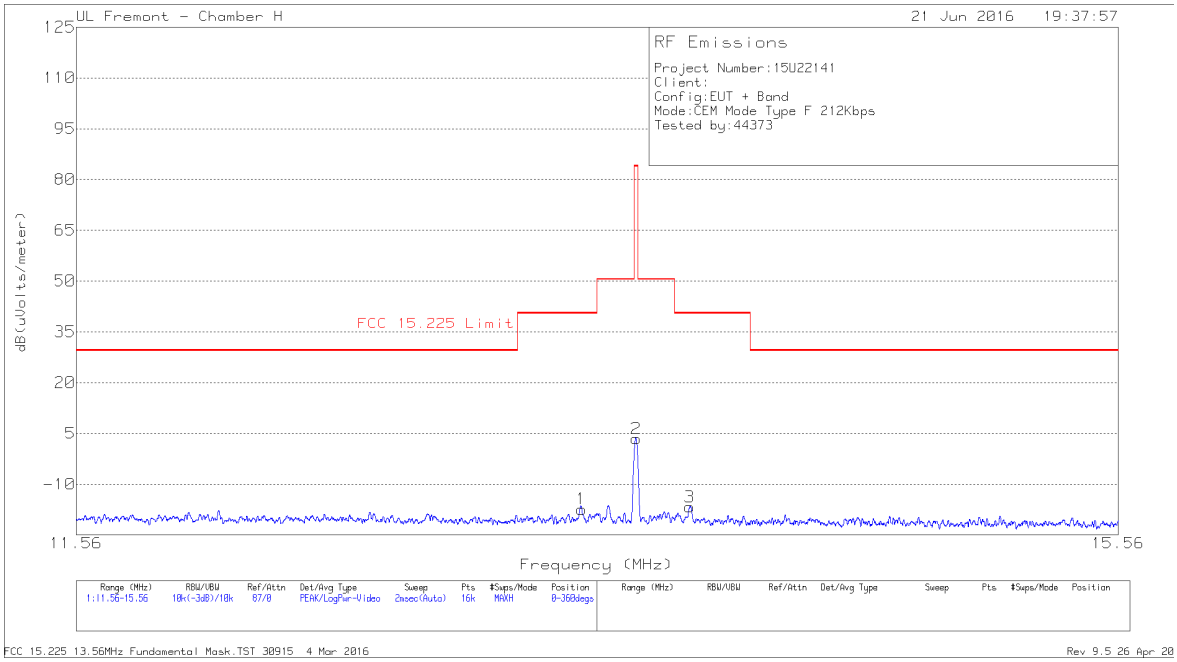
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	11.34188	10.93	Pk	10.7	.3	-40	-18.07	29.54	-47.61	-	-	0-360
2	17.46168	11.13	Pk	10.4	.5	-40	-17.97	29.54	-47.51	-	-	0-360
3	23.51598	16.33	Pk	9.5	.6	-40	-13.57	29.54	-43.11	-	-	0-360
4	11.75637	11.33	Pk	10.7	.4	-40	-17.57	29.54	-47.11	-	-	0-360
5	18.0014	14.54	Pk	10.3	.5	-40	-14.66	29.54	-44.2	-	-	0-360
6	25.14352	16.45	Pk	9.2	.6	-40	-13.75	29.54	-43.29	-	-	0-360

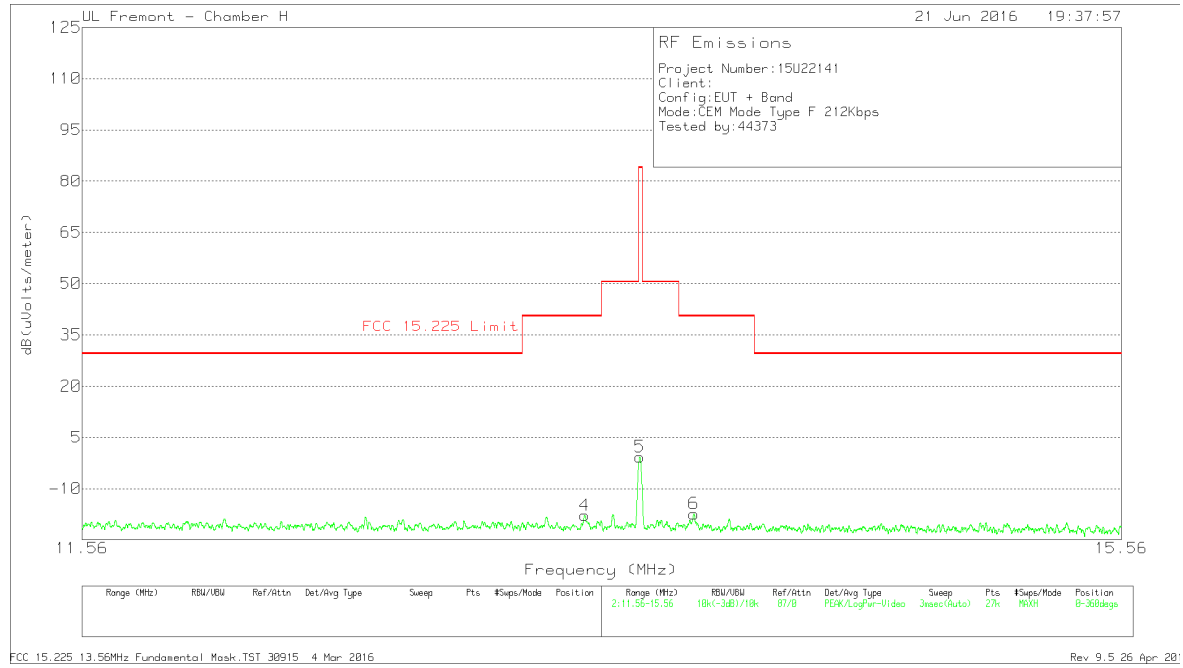
Pk - Peak detector

212Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



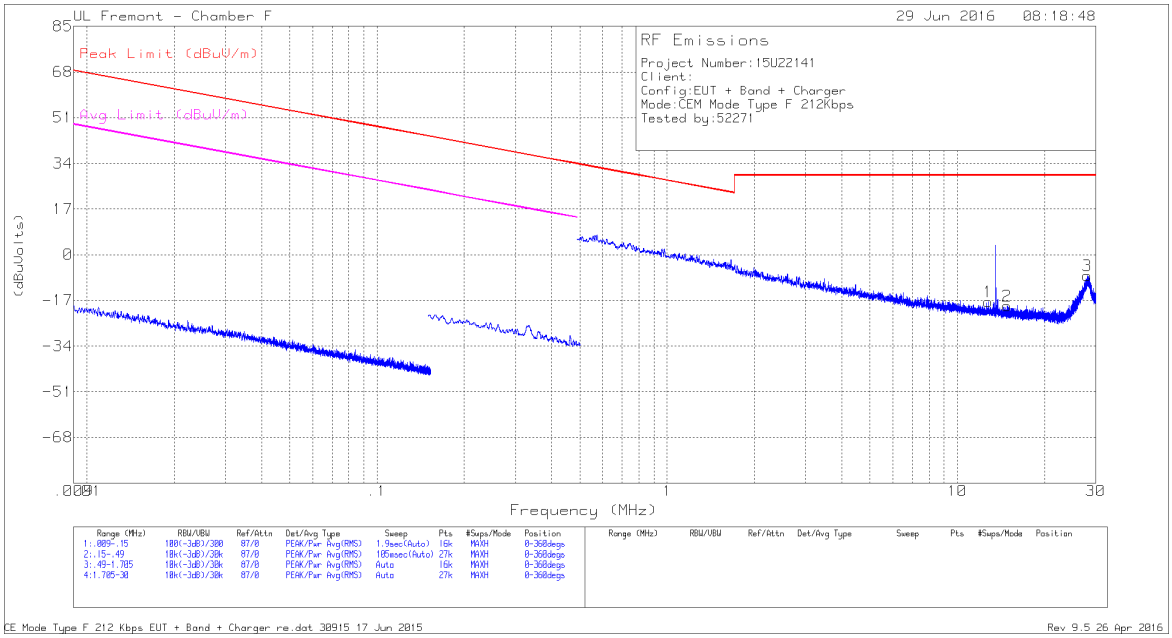
DATA

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)
4	13.34643	10.88	Pk	10.7	.6	-40	-17.82	40.51	-58.33	0-360
1	13.3525	11.36	Pk	10.7	.6	-40	-17.34	40.51	-57.85	0-360
5	13.55837	28.1	Pk	10.6	.6	-40	-.7	84	-84.7	0-360
2	13.562	32.25	Pk	10.6	.6	-40	3.45	84	-80.55	0-360
3	13.77	12.18	Pk	10.6	.5	-40	-16.72	40.51	-57.23	0-360
6	13.77001	11.55	Pk	10.6	.5	-40	-17.35	40.51	-57.86	0-360

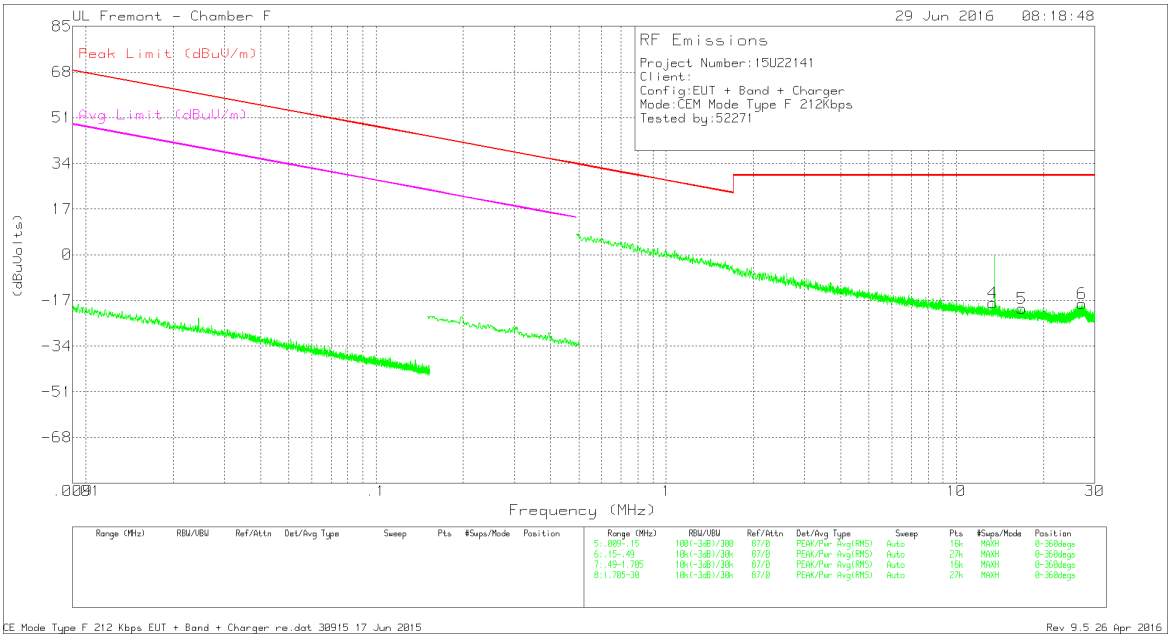
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



DATA

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	12.80437	11.18	Pk	10.7	.6	-40	-17.52	29.54	-47.06	-	-	0-360
2	14.84116	9.68	Pk	10.6	.6	-40	-19.12	29.54	-48.66	-	-	0-360
3	28.04543	22.9	Pk	8.5	.8	-40	-7.8	29.54	-37.34	-	-	0-360
4	13.35195	10.85	Pk	10.7	.6	-40	-17.85	29.54	-47.39	-	-	0-360
5	16.81297	9	Pk	10.4	.6	-40	-20	29.54	-49.54	-	-	0-360
6	27.11795	12.3	Pk	8.7	.8	-40	-18.2	29.54	-47.74	-	-	0-360

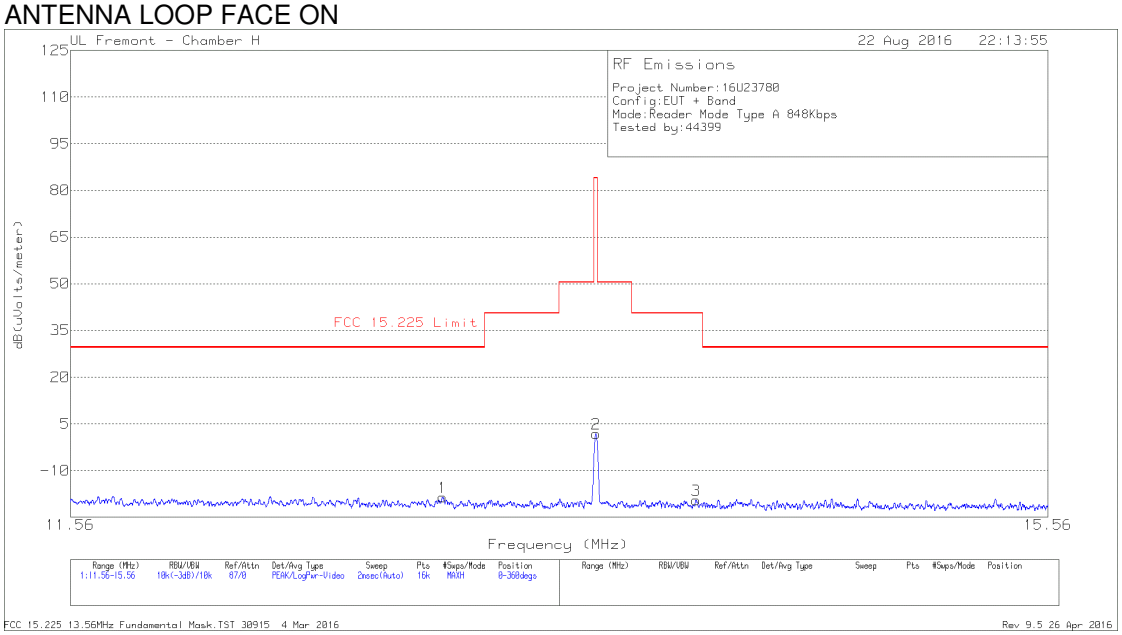
Pk - Peak detector

8.2.2. READER MODE

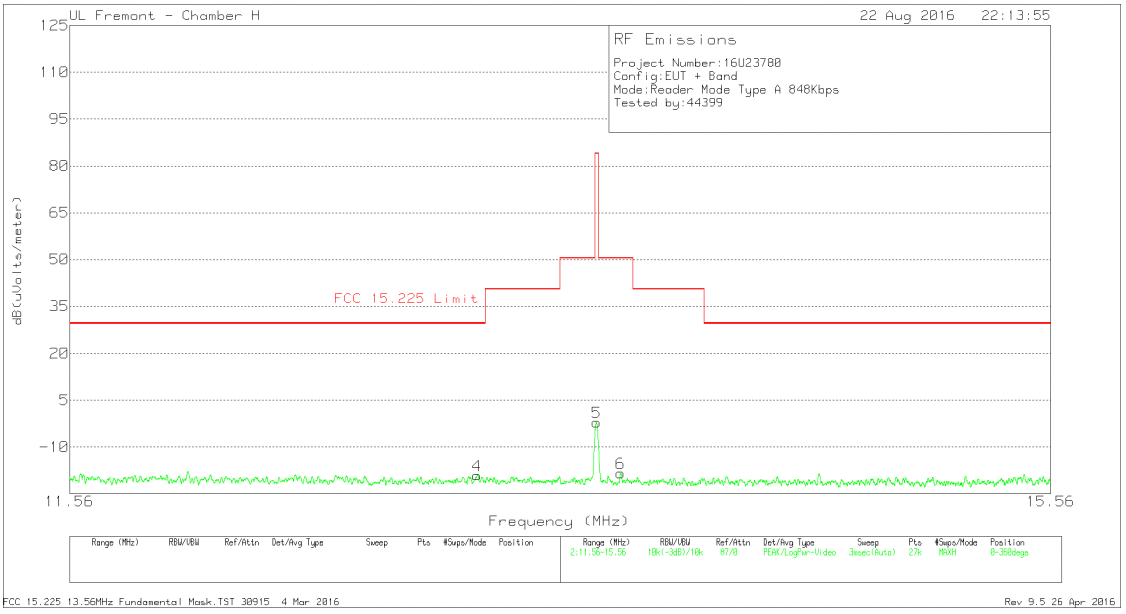
TYPE A

848Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



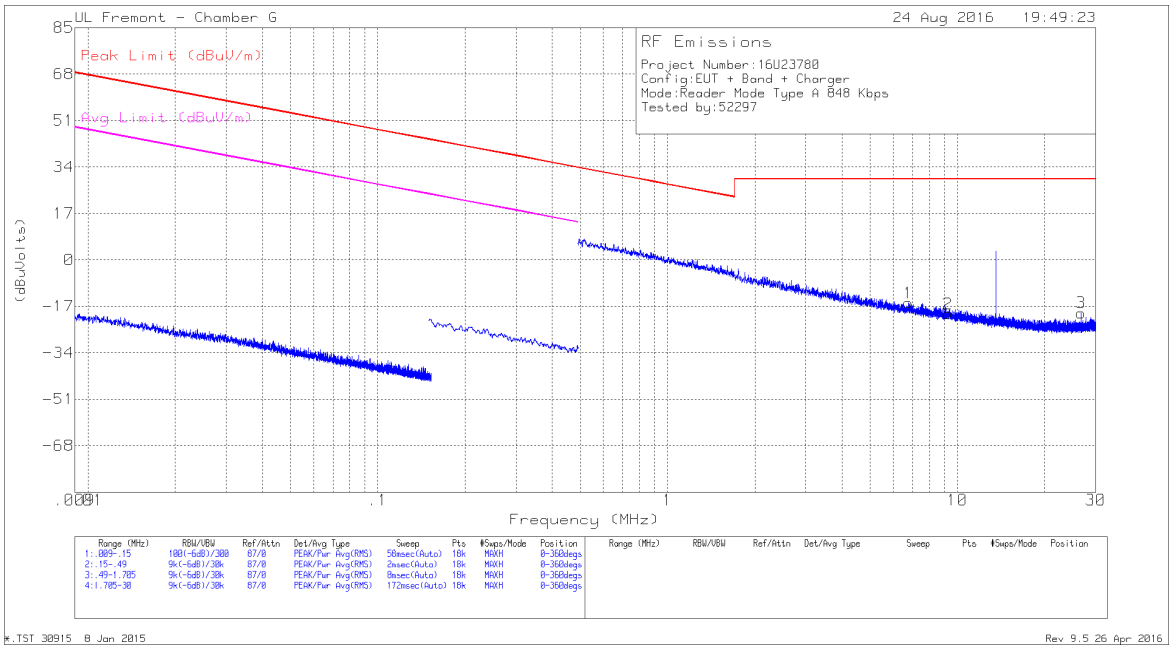
DATA

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	12.94425	10.11	Pk	10.7	.6	-40	-18.59	29.54	-48.13	0-360
4	13.07937	9.68	Pk	10.7	.6	-40	-19.02	29.54	-48.56	0-360
5	13.56022	26.77	Pk	10.6	.6	-40	-2.03	84	-86.03	0-360
2	13.56238	30.71	Pk	10.6	.6	-40	1.91	84	-82.09	0-360
6	13.66019	10.46	Pk	10.6	.6	-40	-18.34	50.5	-68.84	0-360
3	13.98163	9.42	Pk	10.6	.5	-40	-19.48	40.51	-59.99	0-360

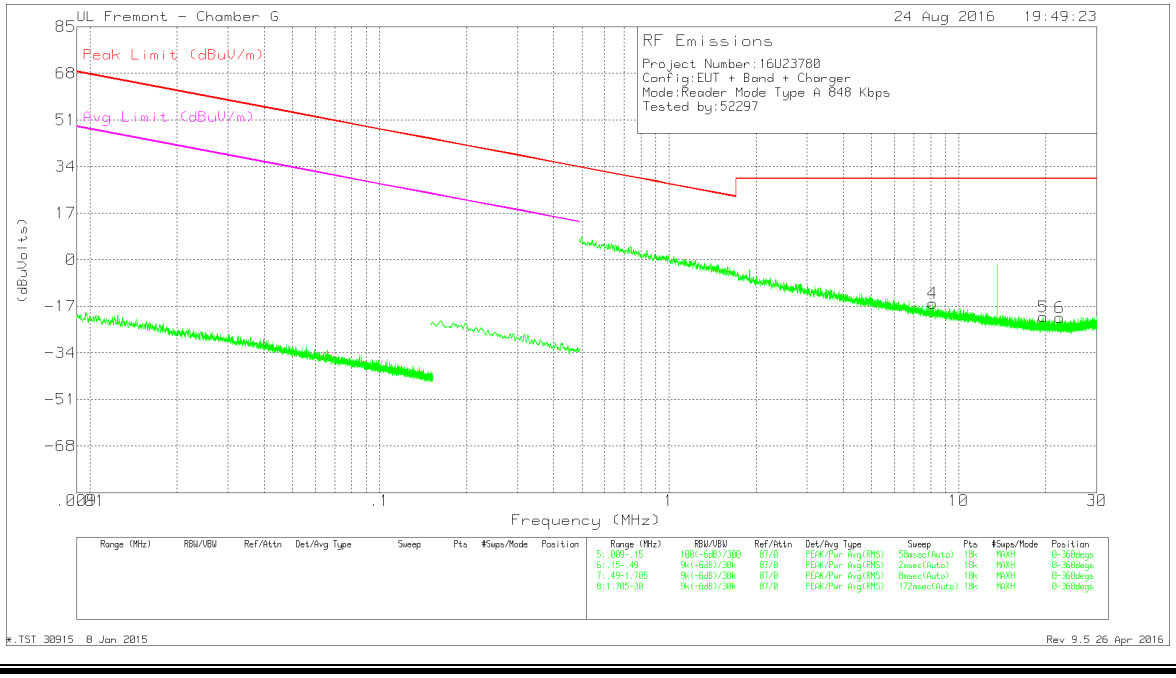
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



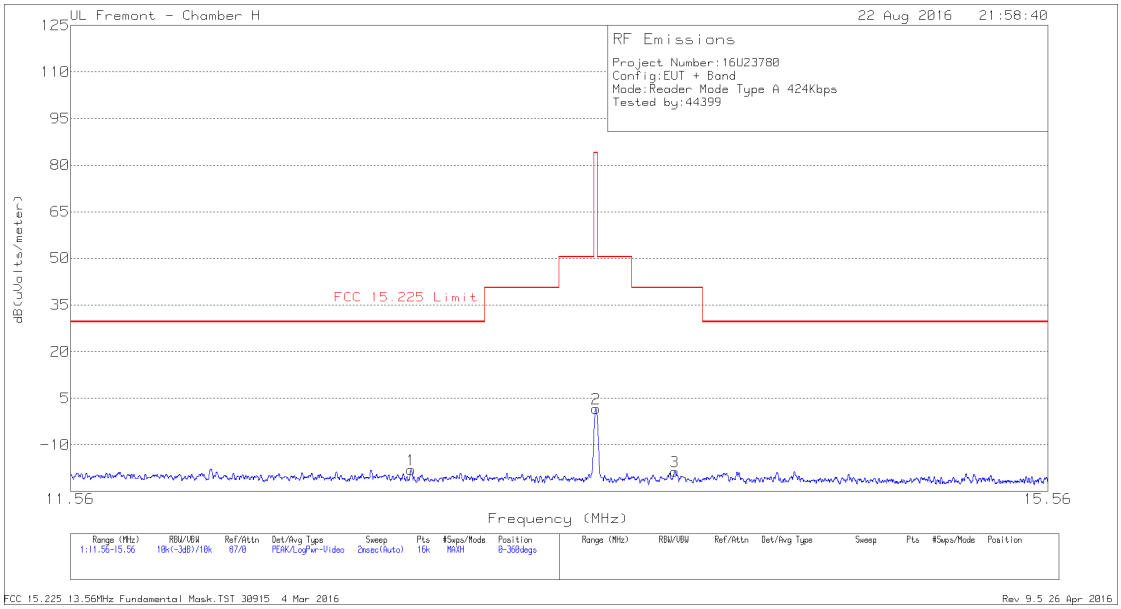
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	6.76527	12.51	Pk	11.3	.4	-40	-15.79	29.54	-45.33	-	-	0-360
4	8.12662	12.41	Pk	11.2	.5	-40	-15.89	29.54	-45.43	-	-	0-360
2	9.26318	8.64	Pk	11.1	.5	-40	-19.76	29.54	-49.3	-	-	0-360
5	19.56606	8.56	Pk	9.9	.7	-40	-20.84	29.54	-50.38	-	-	0-360
6	22.33436	8.59	Pk	9.5	.8	-40	-21.11	29.54	-50.65	-	-	0-360
3	26.67936	10.78	Pk	8.9	.9	-40	-19.42	29.54	-48.96	-	-	0-360

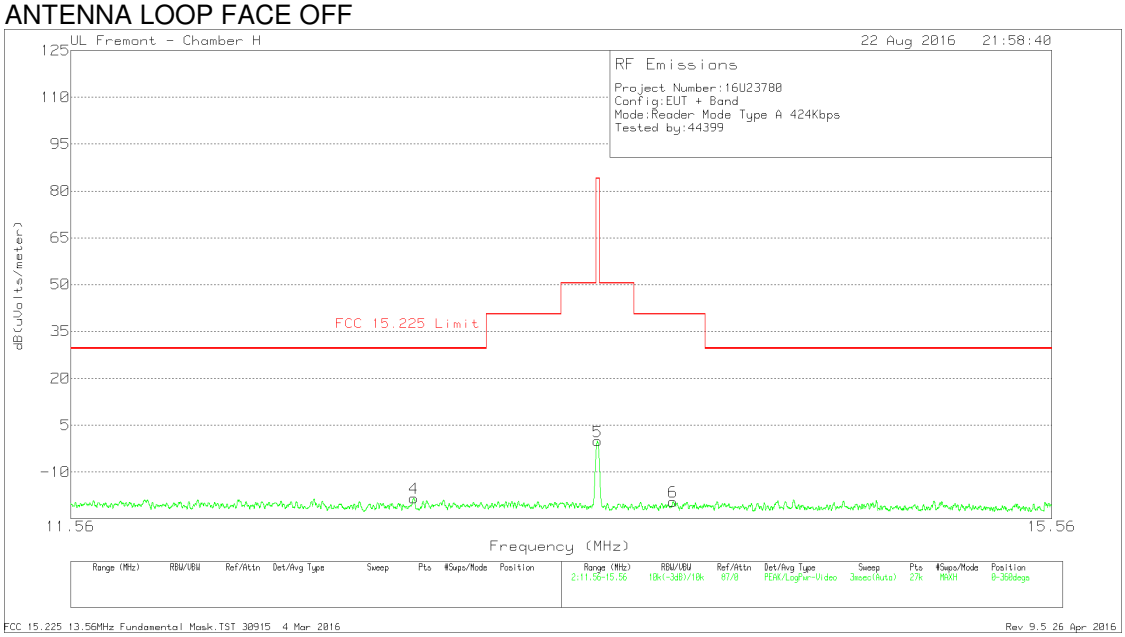
Pk - Peak detector

424Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



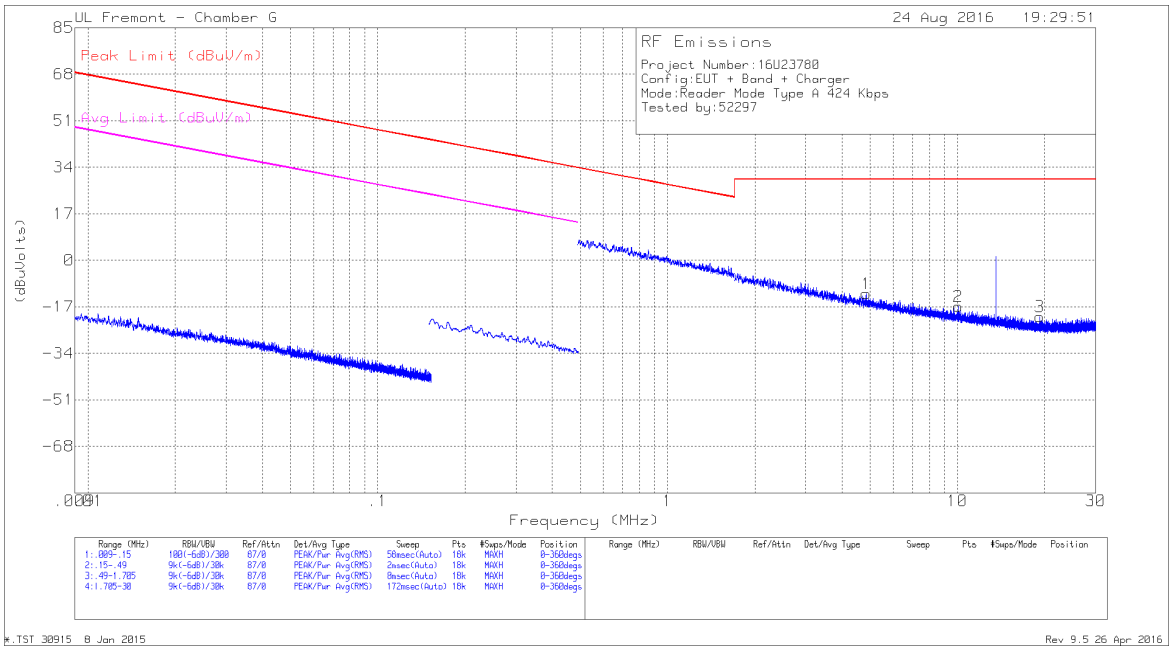
DATA

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	12.82213	10.73	Pk	10.7	.6	-40	-17.97	29.54	-47.51	0-360
4	12.82651	10.38	Pk	10.7	.6	-40	-18.32	29.54	-47.86	0-360
5	13.56	28.69	Pk	10.6	.6	-40	-.11	84	-84.11	0-360
2	13.56225	30.54	Pk	10.6	.6	-40	1.74	84	-82.26	0-360
6	13.87465	9.43	Pk	10.6	.5	-40	-19.47	40.51	-59.98	0-360
3	13.892	10.39	Pk	10.6	.5	-40	-18.51	40.51	-59.02	0-360

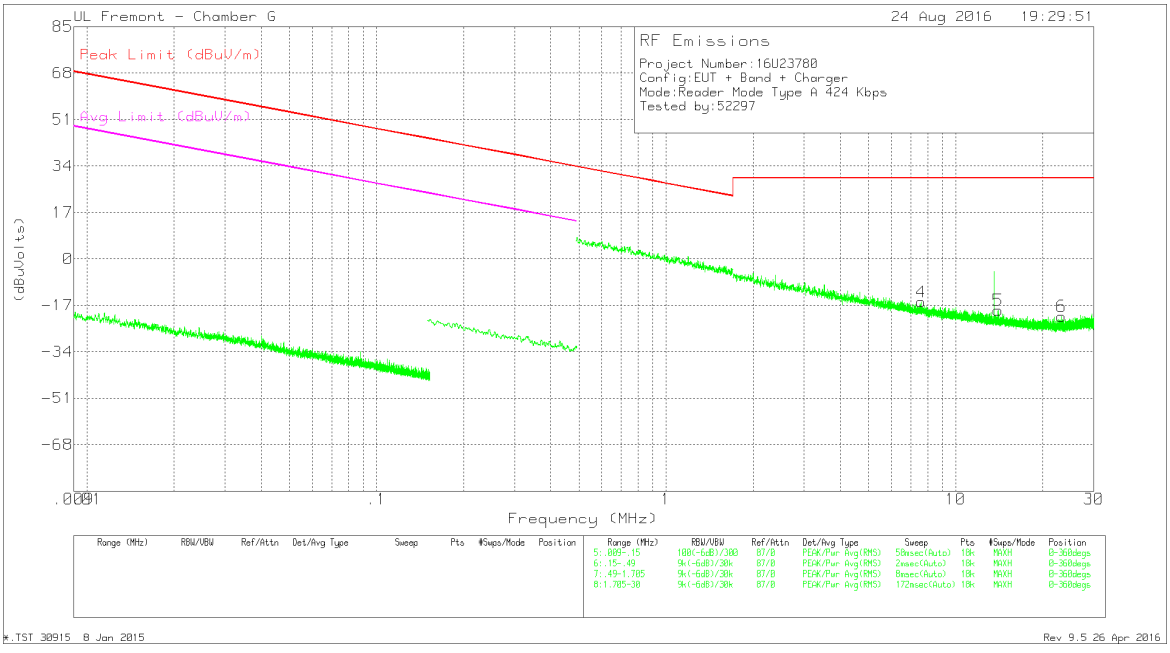
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



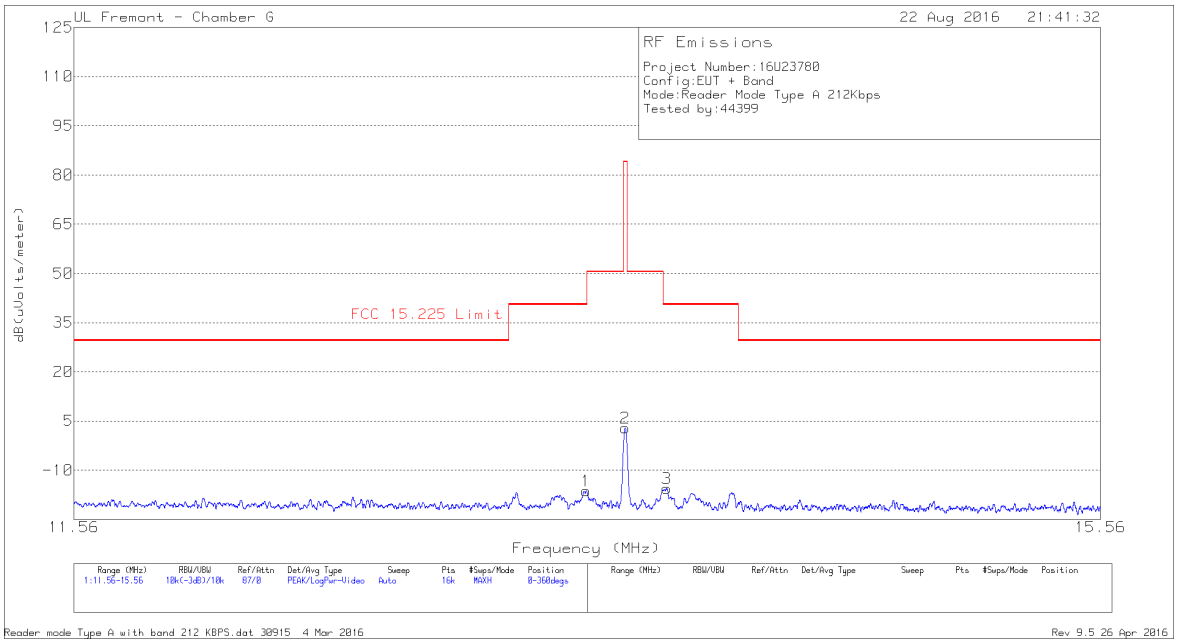
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	4.84271	16.04	Pk	11.5	.3	-40	-12.16	29.54	-41.7	-	-	0-360
4	7.60314	12.55	Pk	11.2	.5	-40	-15.75	29.54	-45.29	-	-	0-360
2	10.05625	11.64	Pk	11	.5	-40	-16.86	29.54	-46.4	-	-	0-360
5	14.01062	9.98	Pk	10.6	.6	-40	-18.82	29.54	-48.36	-	-	0-360
3	19.22808	8.82	Pk	9.9	.7	-40	-20.58	29.54	-50.12	-	-	0-360
6	23.2524	8.89	Pk	9.3	.8	-40	-21.01	29.54	-50.55	-	-	0-360

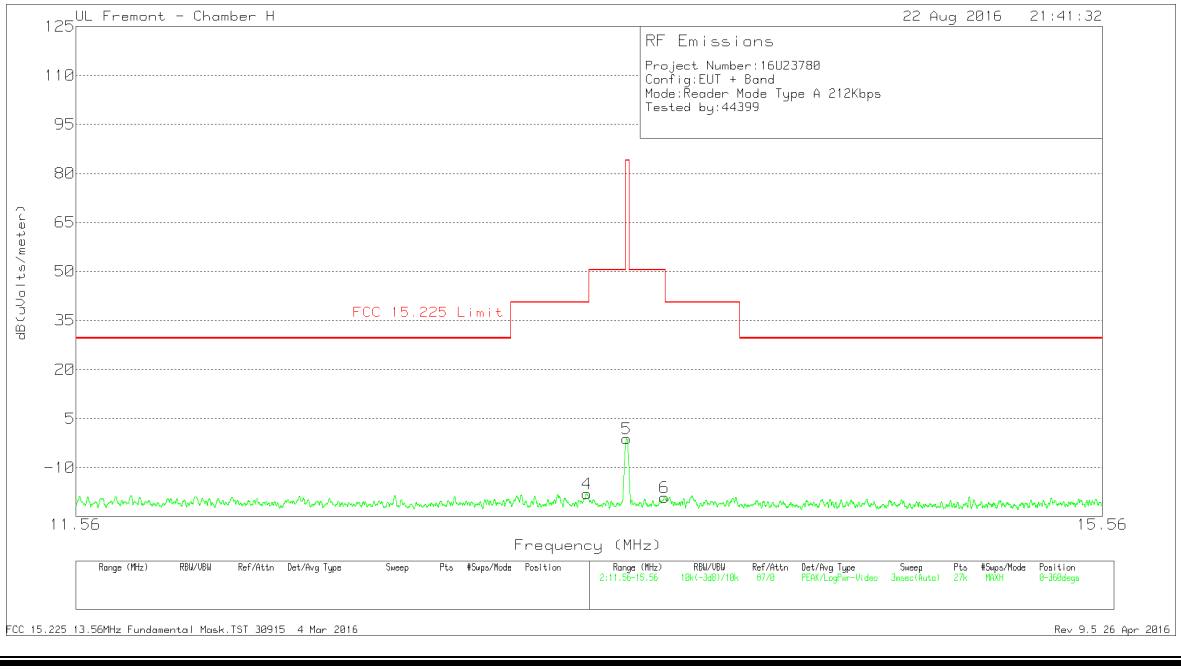
Pk - Peak detector

212Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



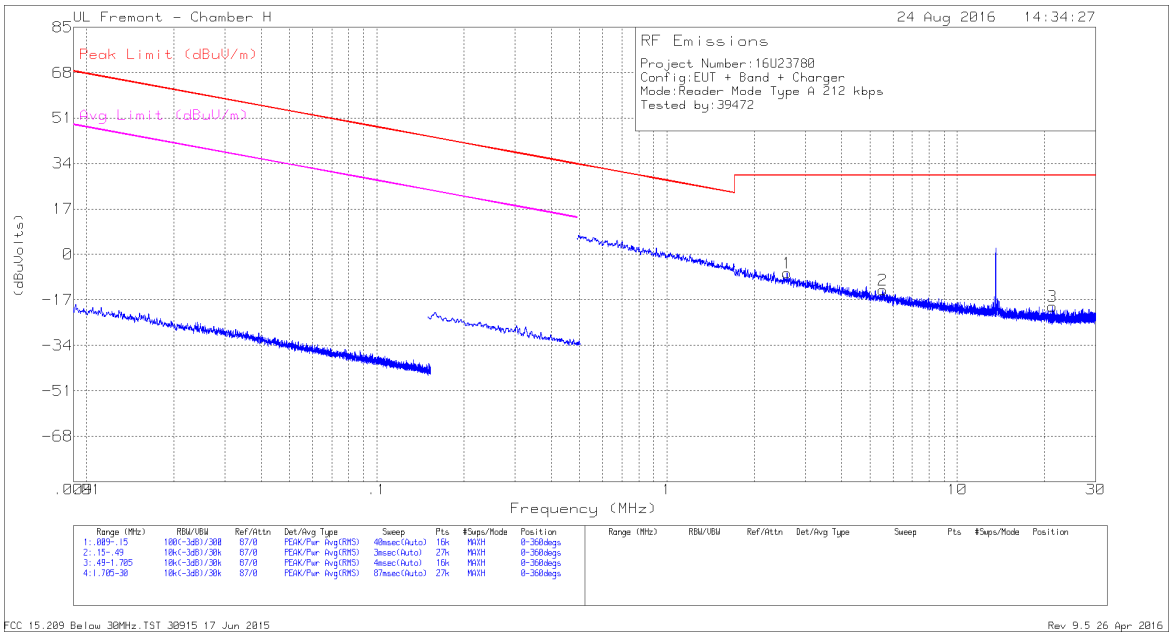
DATA

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)
4	13.40267	10.75	Pk	10.7	.6	-40	-17.95	40.51	-58.46	0-360
1	13.40863	12.46	Pk	10.7	.6	-40	-16.24	40.51	-56.75	0-360
5	13.558	27.71	Pk	10.6	.6	-40	-1.09	84	-85.09	0-360
2	13.56025	31.68	Pk	10.6	.6	-40	2.88	84	-81.12	0-360
6	13.70704	9.7	Pk	10.6	.6	-40	-19.1	50.5	-69.6	0-360
3	13.72363	13.21	Pk	10.6	.6	-40	-15.59	40.51	-56.1	0-360

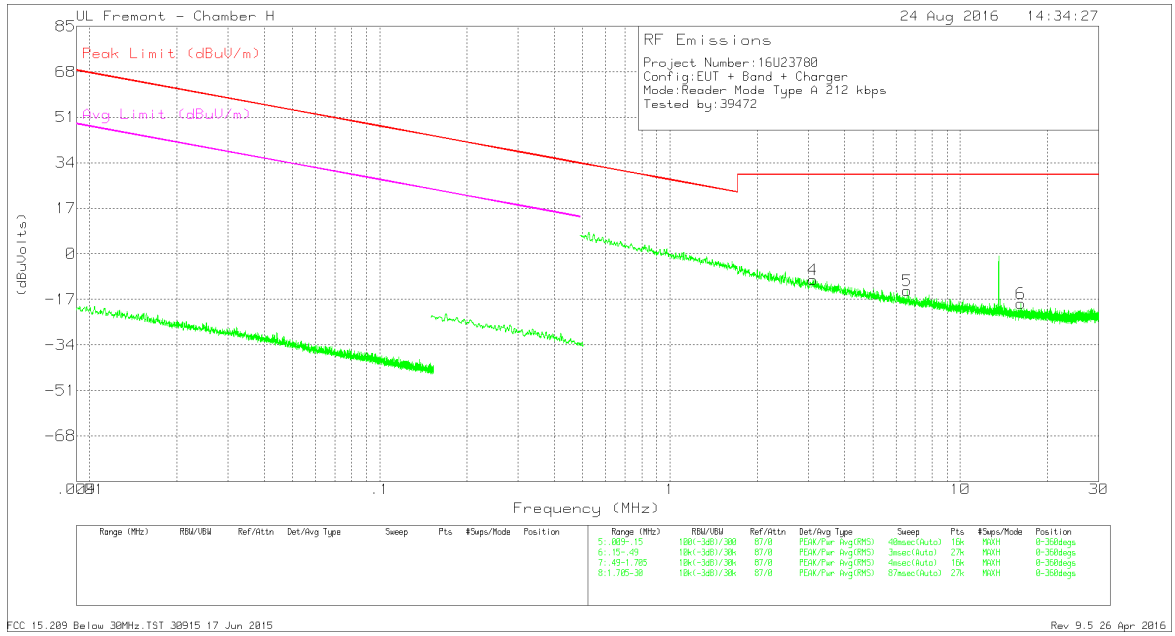
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



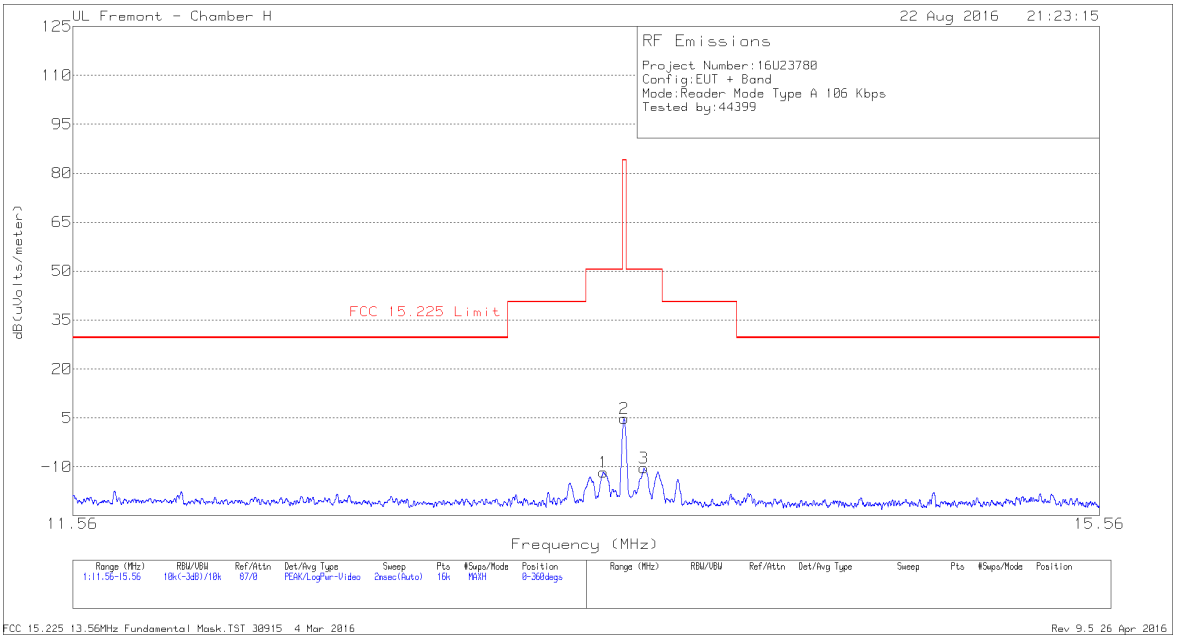
DATA

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	2.59161	22.02	Pk	10.8	.3	-40	-6.88	29.54	-36.42	-	-	0-360
2	5.52915	15.52	Pk	10.9	.4	-40	-13.18	29.54	-42.72	-	-	0-360
3	21.26487	10.09	Pk	9.9	.7	-40	-19.31	29.54	-48.85	-	-	0-360
4	3.10251	19.33	Pk	10.8	.3	-40	-9.57	29.54	-39.11	-	-	0-360
5	6.552	14.88	Pk	10.9	.4	-40	-13.82	29.54	-43.36	-	-	0-360
6	16.20041	10.31	Pk	10.5	.6	-40	-18.59	29.54	-48.13	-	-	0-360

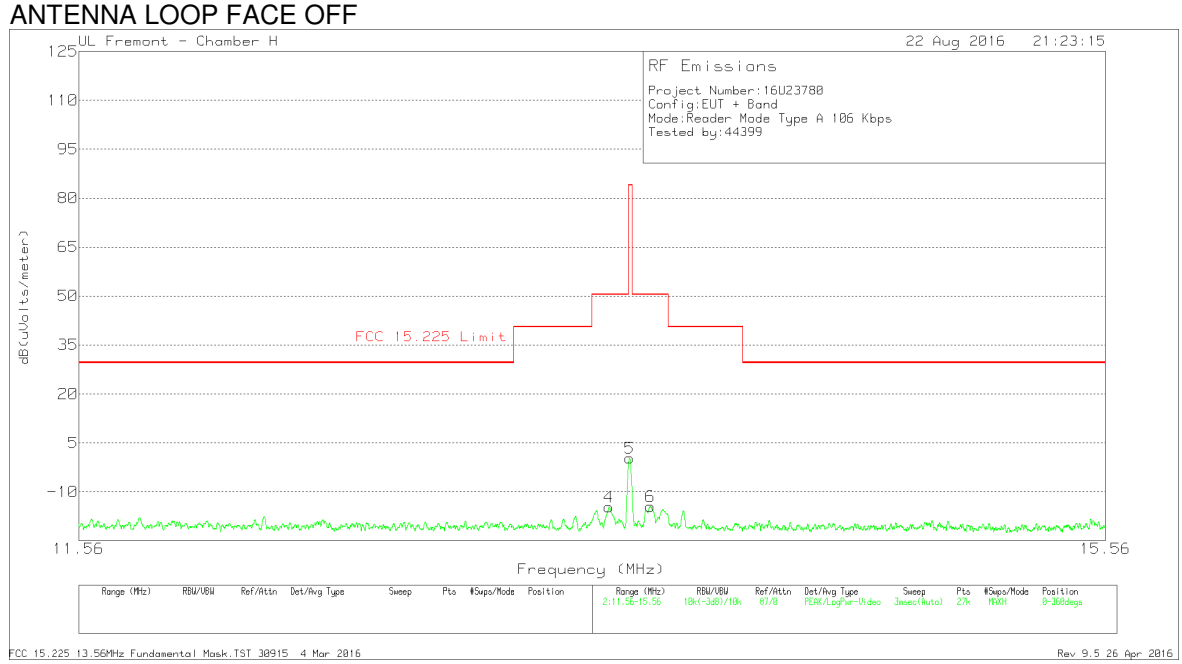
Pk - Peak detector

106Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



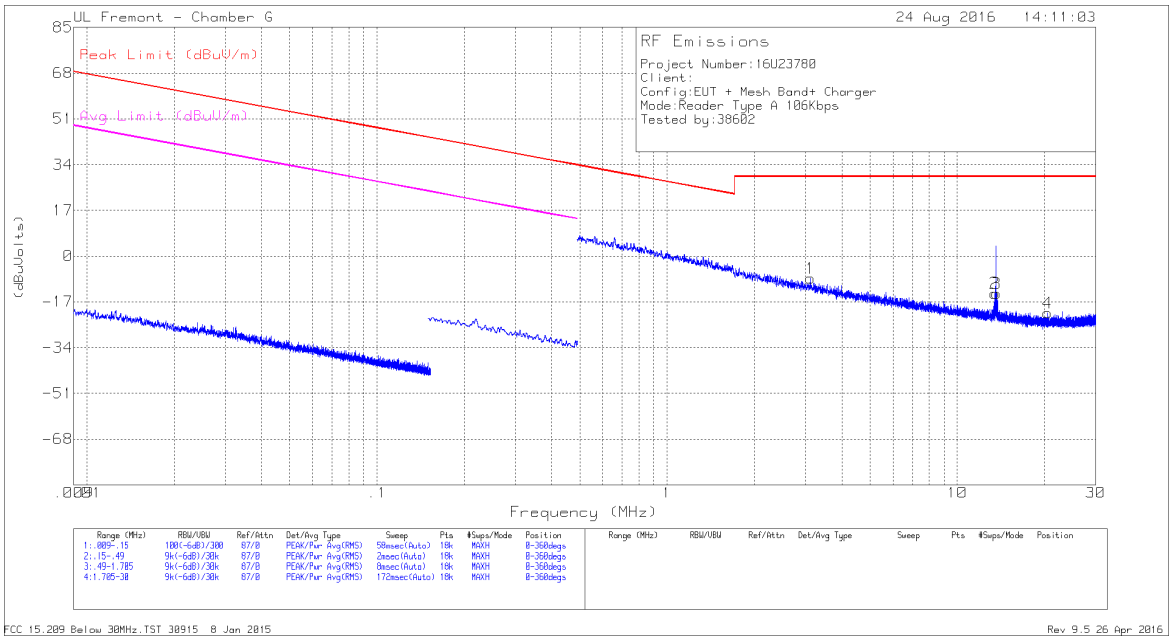
DATA

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)
4	13.47808	14.09	Pk	10.7	.6	-40	-14.61	50.5	-65.11	0-360
1	13.47925	17.02	Pk	10.7	.6	-40	-11.68	50.5	-62.18	0-360
5	13.55822	29.13	Pk	10.6	.6	-40	.33	84	-83.67	0-360
2	13.56025	33.57	Pk	10.6	.6	-40	4.77	84	-79.23	0-360
3	13.63863	18.41	Pk	10.6	.6	-40	-10.39	50.5	-60.89	0-360
6	13.6397	14.33	Pk	10.6	.6	-40	-14.47	50.5	-64.97	0-360

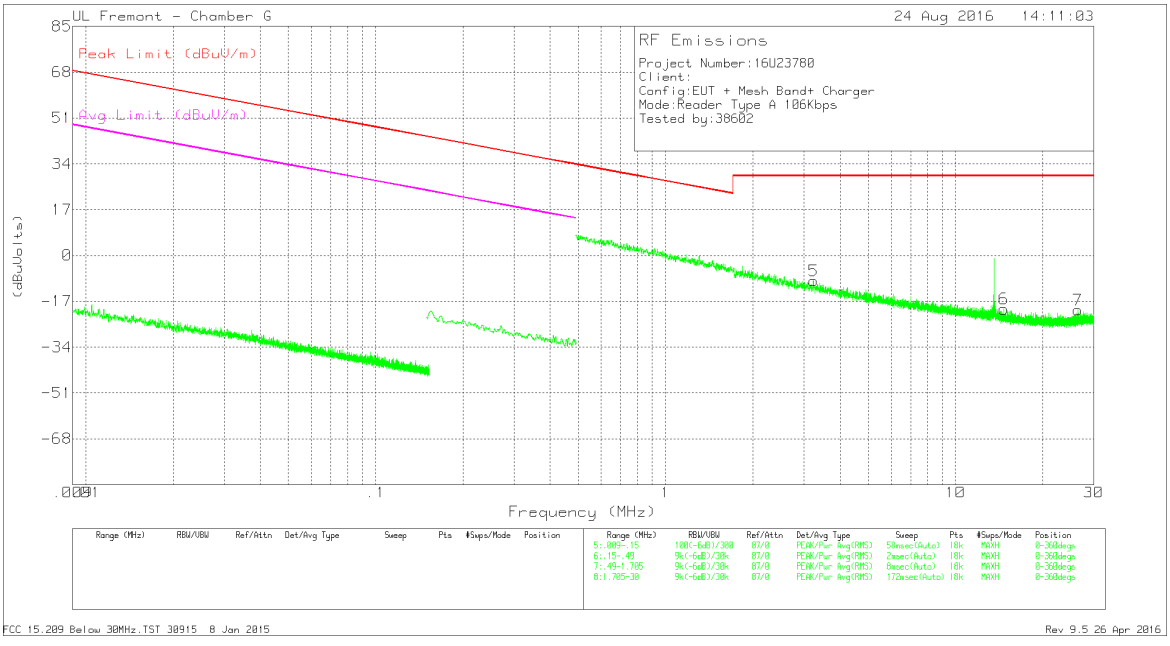
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



DATA

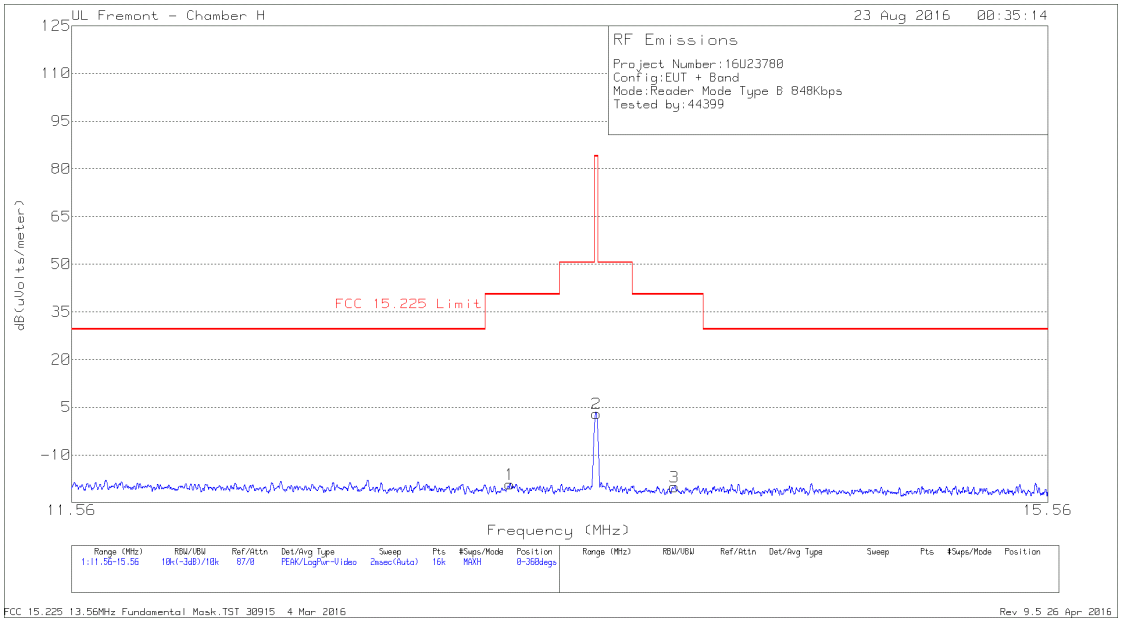
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	3.11508	19.58	Pk	11.8	.3	-40	-8.32	29.54	-37.86	-	-	0-360
5	3.23456	18.51	Pk	11.8	.3	-40	-9.39	29.54	-38.93	-	-	0-360
2	13.48085	14.93	Pk	10.7	.6	-40	-13.77	29.54	-43.31	-	-	0-360
3	13.63648	15	Pk	10.6	.6	-40	-13.8	29.54	-43.34	-	-	0-360
6	14.66614	9.04	Pk	10.5	.6	-40	-19.86	29.54	-49.4	-	-	0-360
4	20.48333	8.43	Pk	9.7	.8	-40	-21.07	29.54	-50.61	-	-	0-360
7	26.48915	9.95	Pk	8.9	.9	-40	-20.25	29.54	-49.79	-	-	0-360

Pk - Peak detector

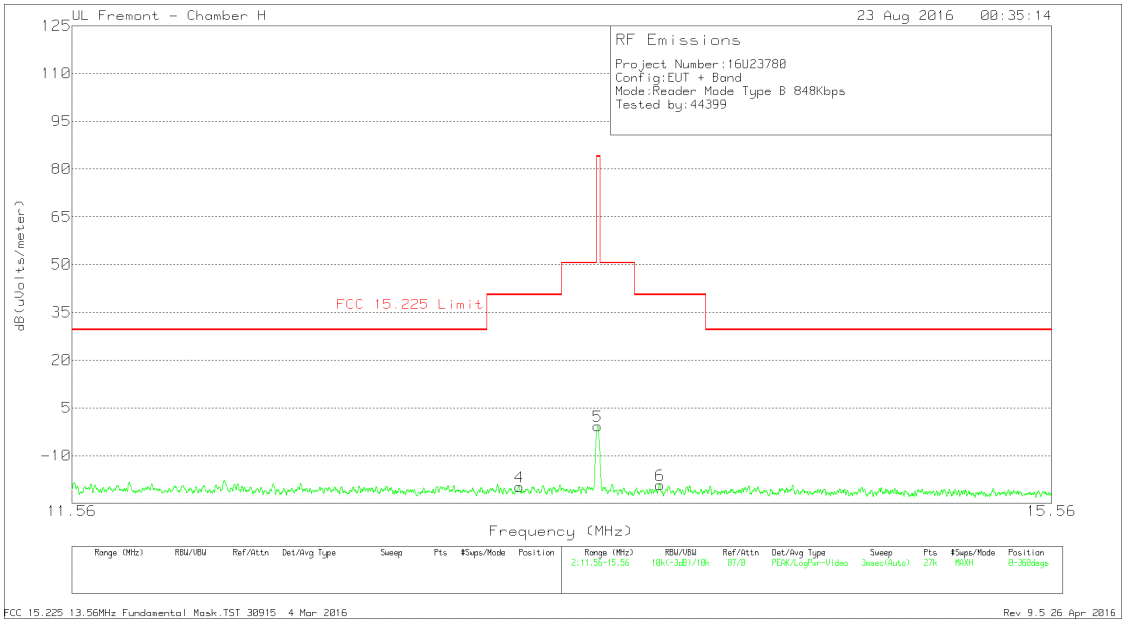
TYPE B

848Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



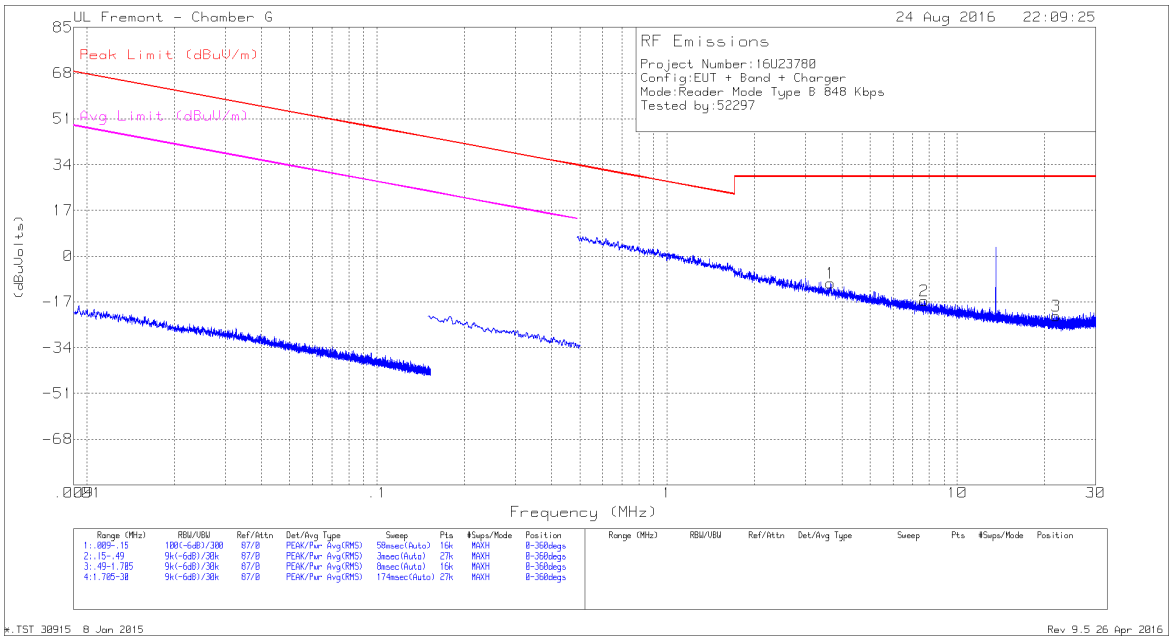
DATA

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	13.20925	9.48	Pk	10.7	.6	-40	-19.22	40.51	-59.73	0-360
4	13.2401	8.86	Pk	10.7	.6	-40	-19.84	40.51	-60.35	0-360
5	13.55822	28.03	Pk	10.6	.6	-40	-.77	84	-84.77	0-360
2	13.562	31.79	Pk	10.6	.6	-40	2.99	84	-81.01	0-360
6	13.81685	9.65	Pk	10.6	.5	-40	-19.25	40.51	-59.76	0-360
3	13.8875	8.84	Pk	10.6	.5	-40	-20.06	40.51	-60.57	0-360

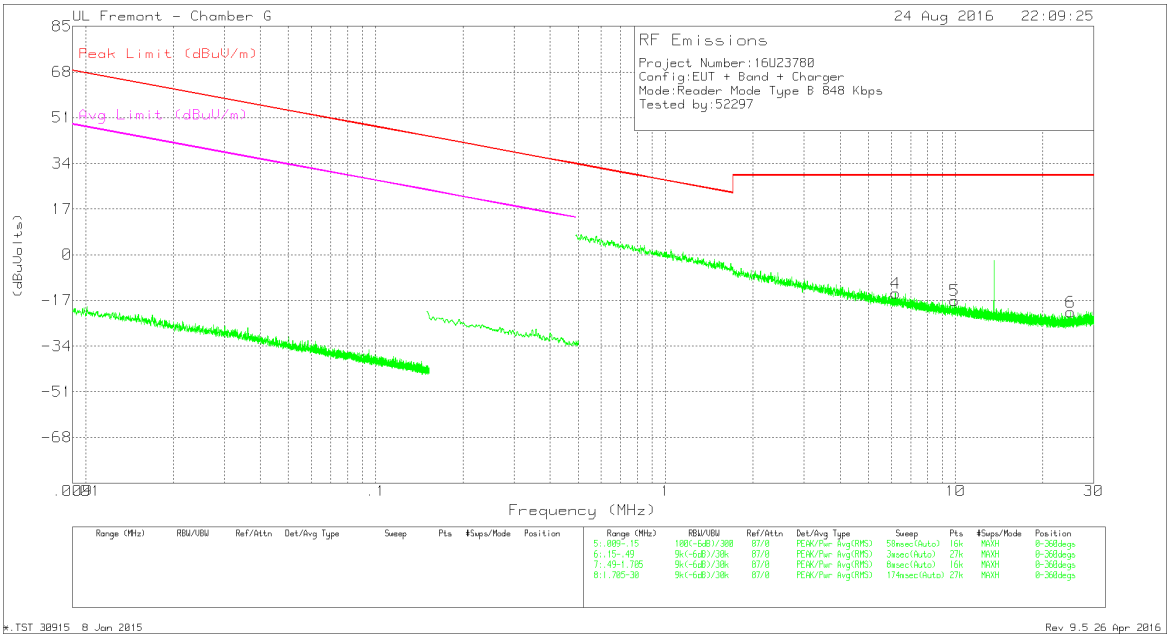
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



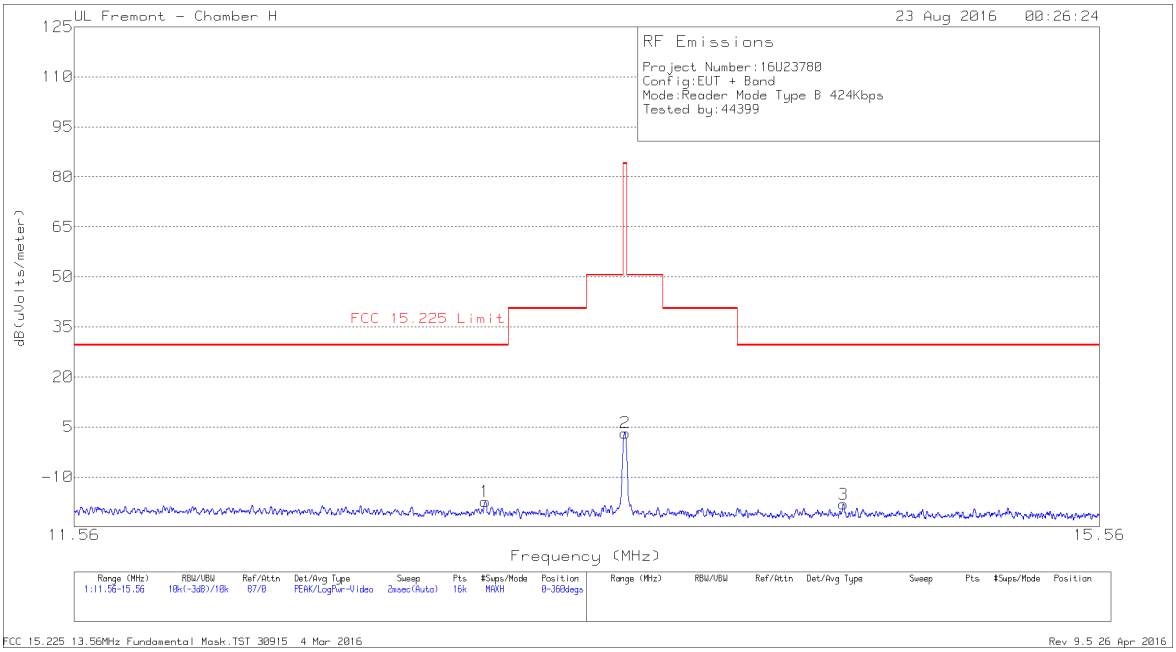
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	3.65218	18.05	Pk	11.7	.3	-40	-9.95	29.54	-39.49	-	-	0-360
4	6.20302	13.82	Pk	11.4	.4	-40	-14.38	29.54	-43.92	-	-	0-360
2	7.69013	11.8	Pk	11.2	.5	-40	-16.5	29.54	-46.04	-	-	0-360
5	9.91398	11.52	Pk	11	.5	-40	-16.98	29.54	-46.52	-	-	0-360
3	21.86328	7.49	Pk	9.5	.8	-40	-22.21	29.54	-51.75	-	-	0-360
6	24.89934	8.81	Pk	9.1	.8	-40	-21.29	29.54	-50.83	-	-	0-360

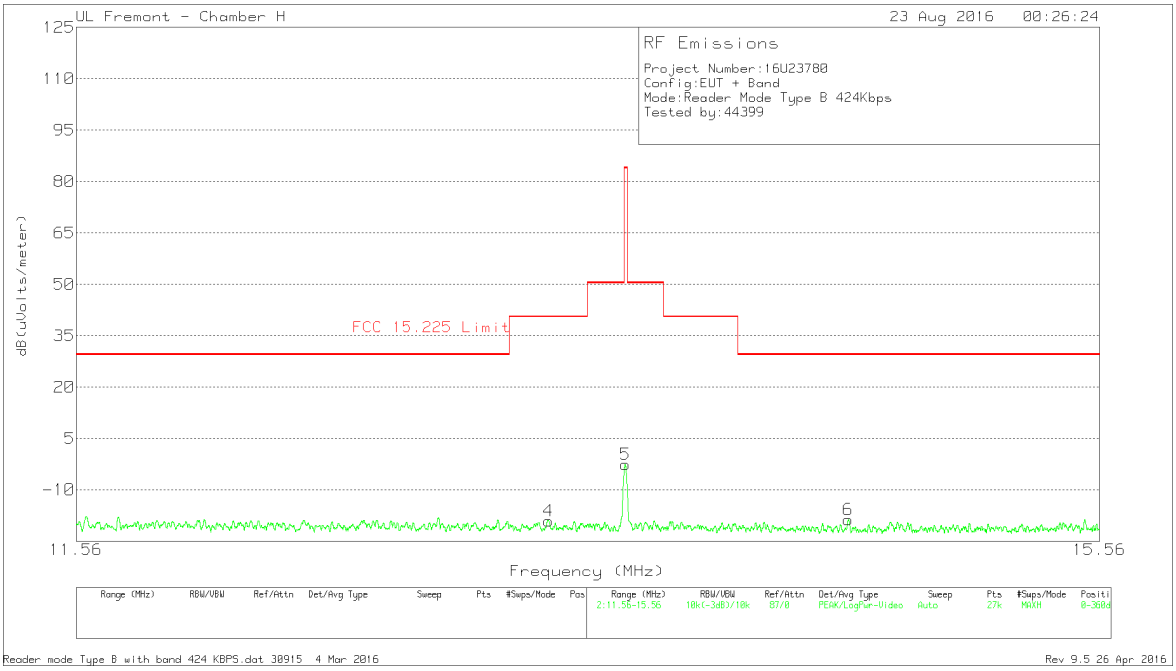
Pk - Peak detector

424Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



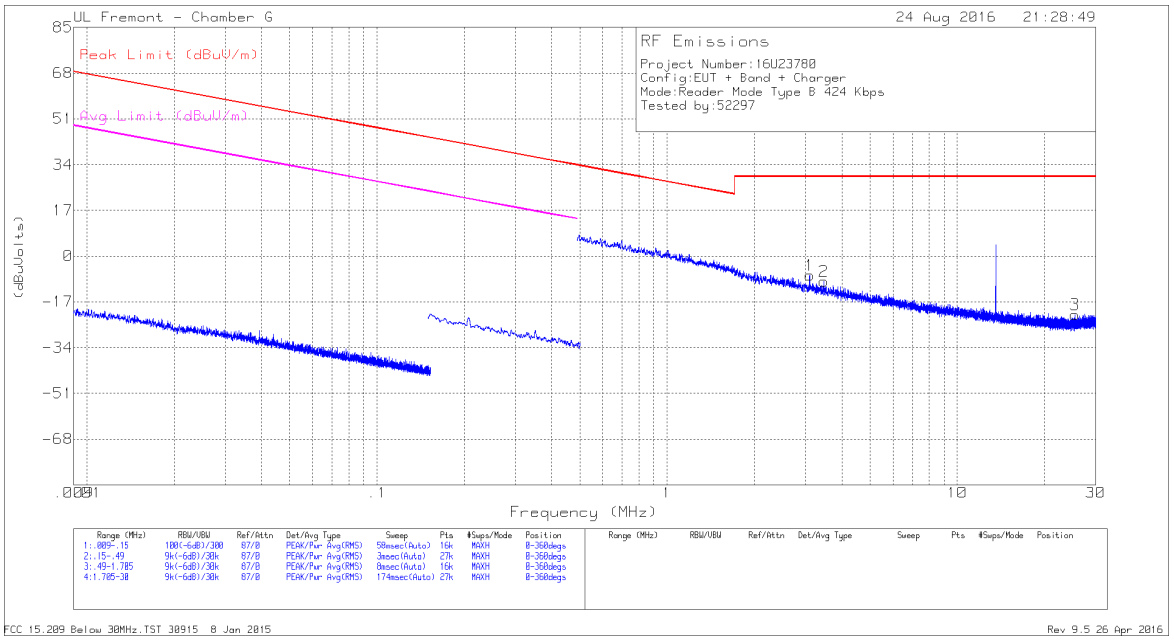
DATA

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	13.02338	11.34	Pk	10.7	.6	-40	-17.36	29.54	-46.9	0-360
4	13.26111	9.59	Pk	10.7	.6	-40	-19.11	40.51	-59.62	0-360
5	13.55837	26.17	Pk	10.6	.6	-40	-2.63	84	-86.63	0-360
2	13.562	31.98	Pk	10.6	.6	-40	3.18	84	-80.82	0-360
3	14.44713	10.73	Pk	10.6	.5	-40	-18.17	29.54	-47.71	0-360
6	14.46642	10.21	Pk	10.6	.5	-40	-18.69	29.54	-48.23	0-360

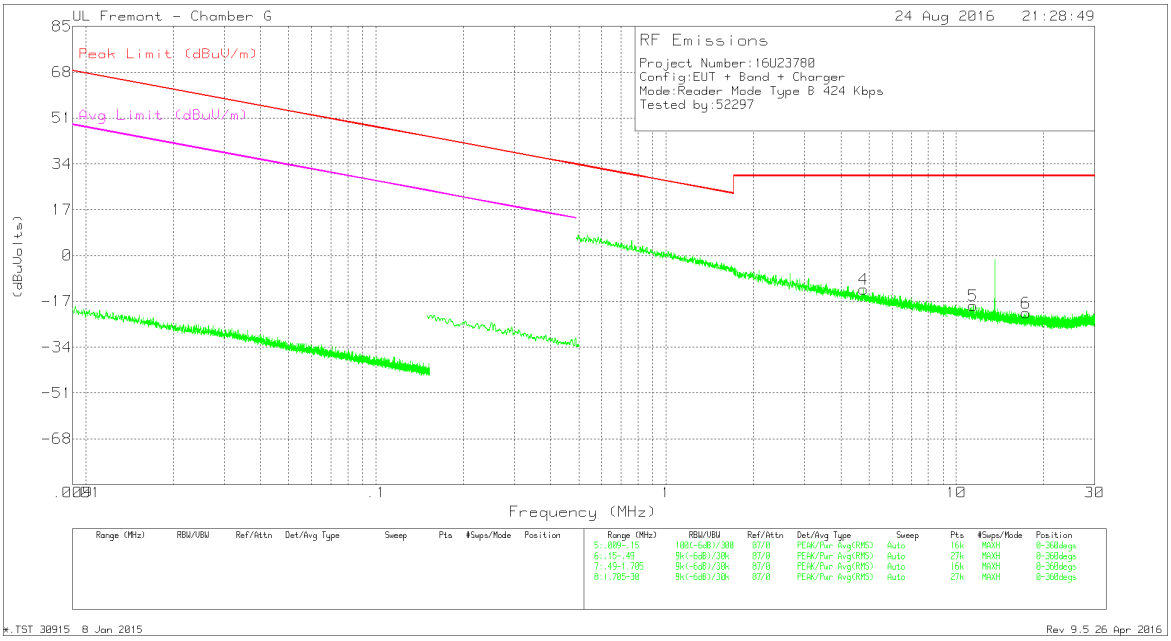
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



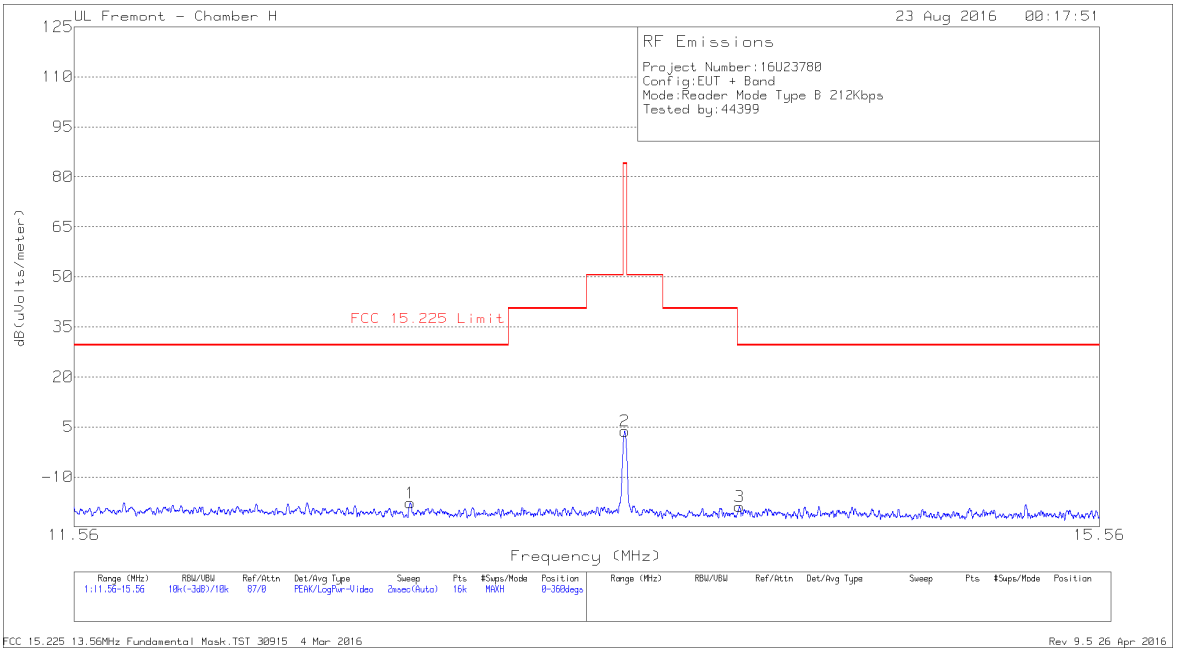
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	3.09674	20.7	Pk	11.8	.3	-40	-7.2	29.54	-36.74	-	-	0-360
2	3.46774	18.62	Pk	11.7	.3	-40	-9.38	29.54	-38.92	-	-	0-360
4	4.79346	15.77	Pk	11.5	.3	-40	-12.43	29.54	-41.97	-	-	0-360
5	11.44616	9.8	Pk	10.9	.6	-40	-18.7	29.54	-48.24	-	-	0-360
6	17.38518	7.82	Pk	10.2	.7	-40	-21.28	29.54	-50.82	-	-	0-360
3	25.43067	8.52	Pk	9	.8	-40	-21.68	29.54	-51.22	-	-	0-360

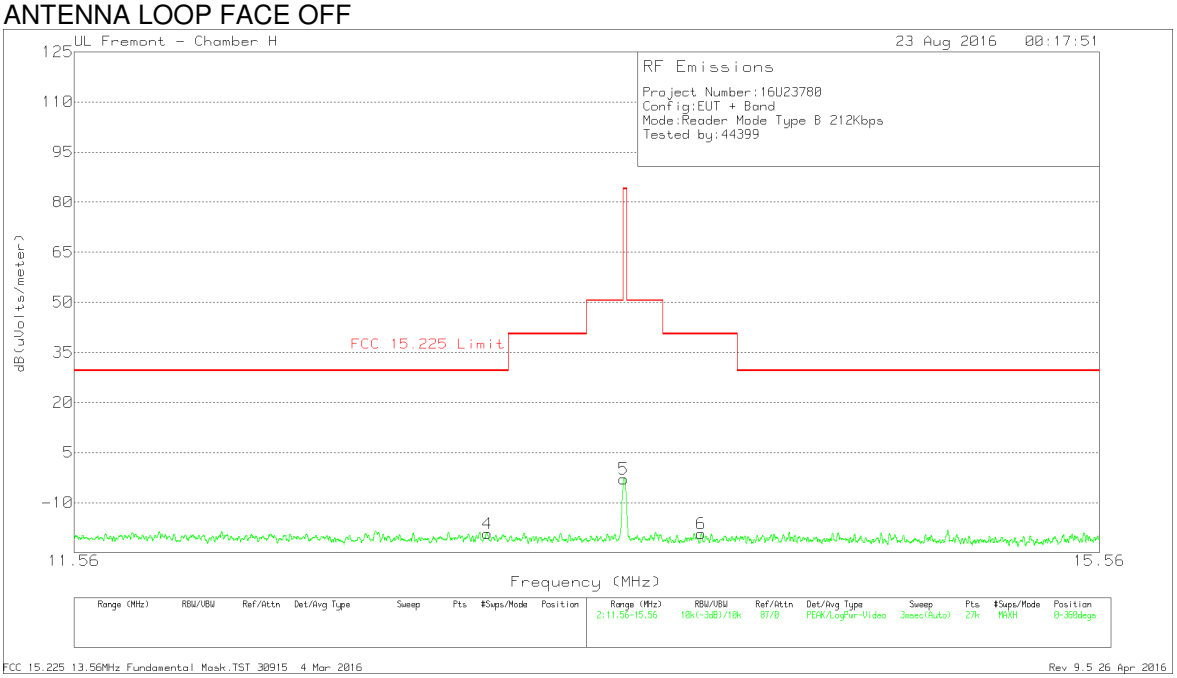
Pk - Peak detector

212Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



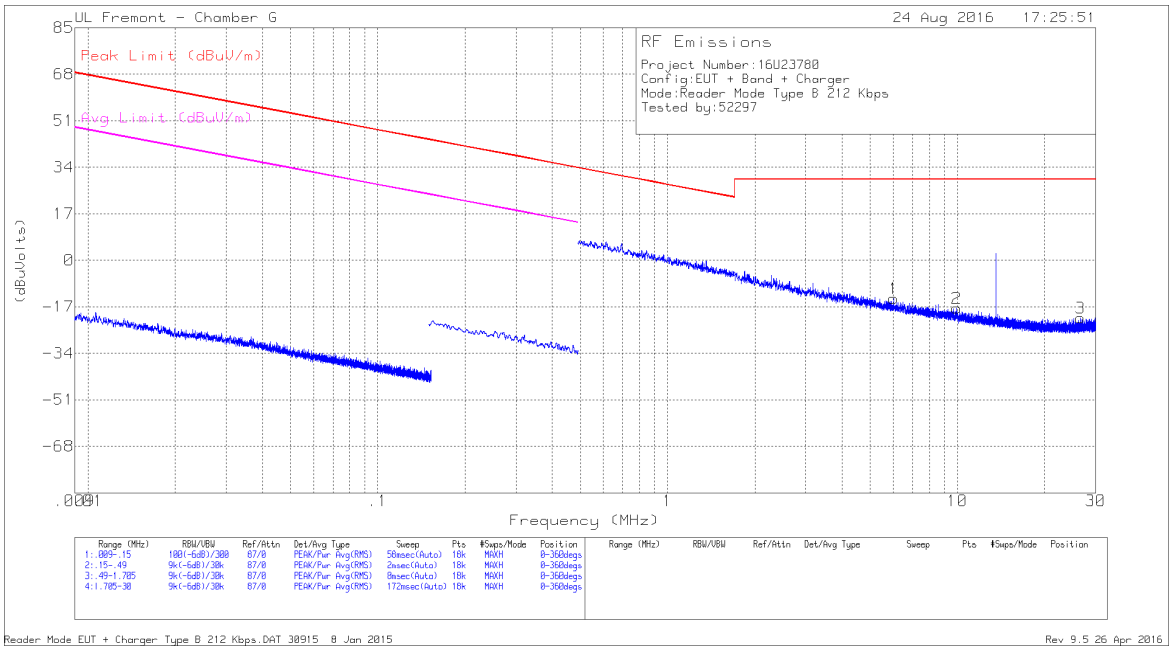
DATA

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	12.74313	10.91	Pk	10.7	.6	-40	-17.79	29.54	-47.33	0-360
4	13.03082	9.45	Pk	10.7	.6	-40	-19.25	29.54	-48.79	0-360
5	13.55682	25.89	Pk	10.6	.6	-40	-2.91	84	-86.91	0-360
2	13.56	32.56	Pk	10.6	.6	-40	3.76	84	-80.24	0-360
6	13.86488	9.64	Pk	10.6	.5	-40	-19.26	40.51	-59.77	0-360
3	14.01863	10.01	Pk	10.6	.5	-40	-18.89	29.54	-48.43	0-360

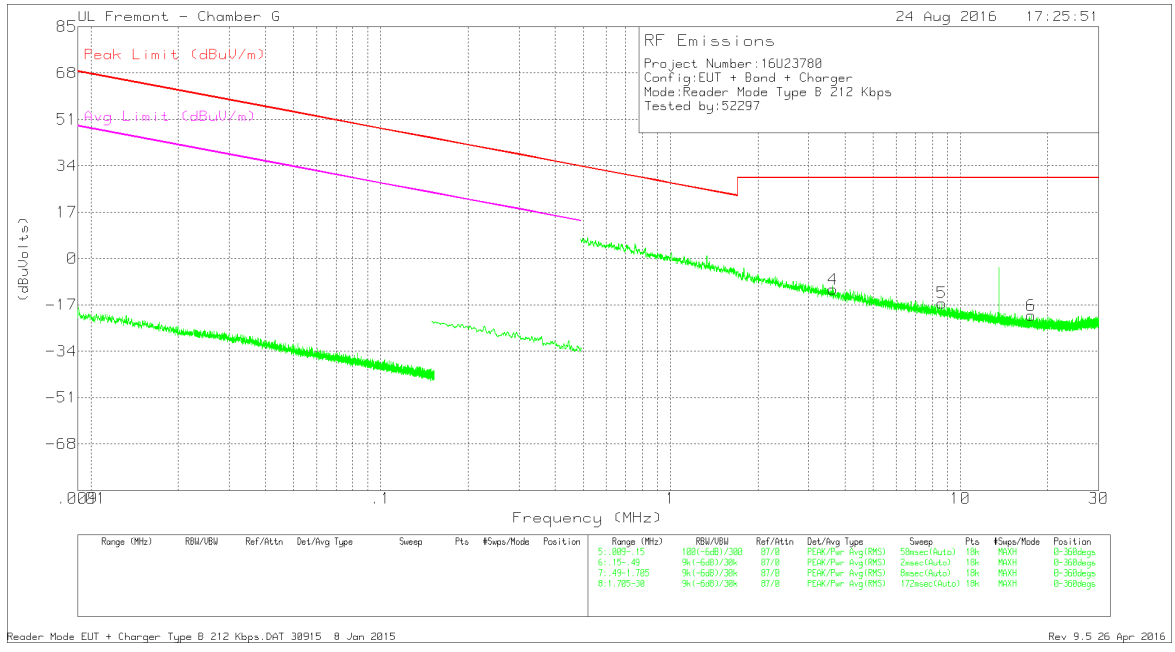
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



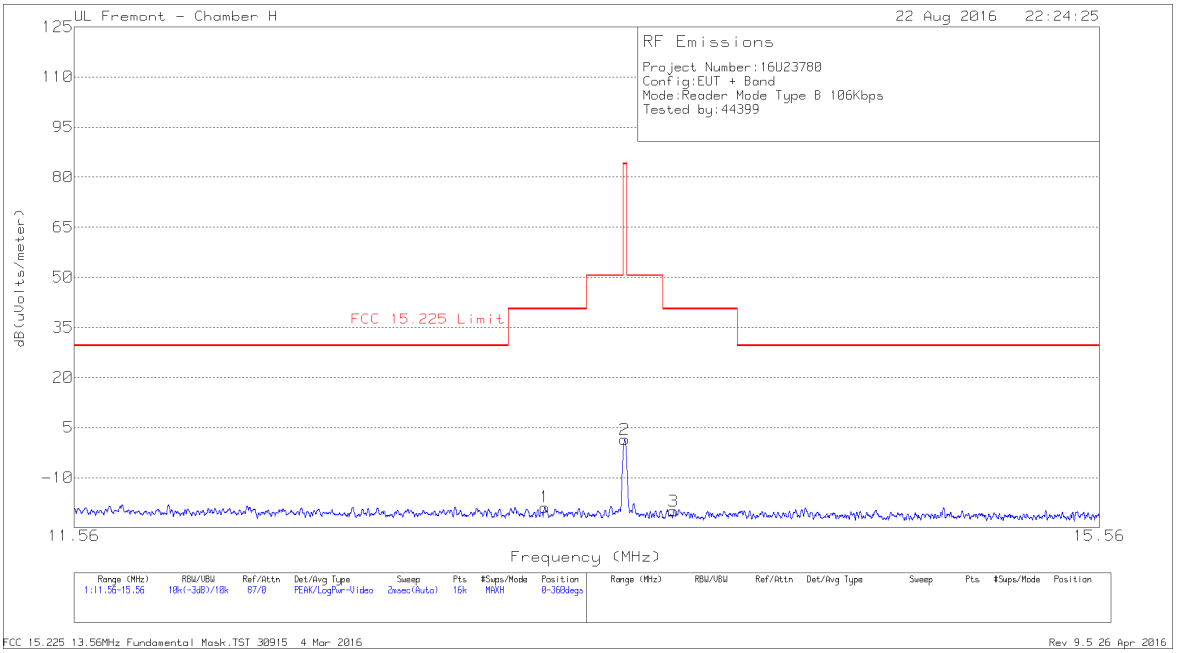
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
4	3.63699	16.73	Pk	11.7	.3	-40	-11.27	29.54	-40.81	-	-	0-360
1	6.01857	14.18	Pk	11.4	.4	-40	-14.02	29.54	-43.56	-	-	0-360
5	8.62023	12.1	Pk	11.1	.5	-40	-16.3	29.54	-45.84	-	-	0-360
2	9.93835	10.99	Pk	11	.5	-40	-17.51	29.54	-47.05	-	-	0-360
6	17.50989	8.33	Pk	10.1	.7	-40	-20.87	29.54	-50.41	-	-	0-360
3	26.58662	9.14	Pk	8.9	.9	-40	-21.06	29.54	-50.6	-	-	0-360

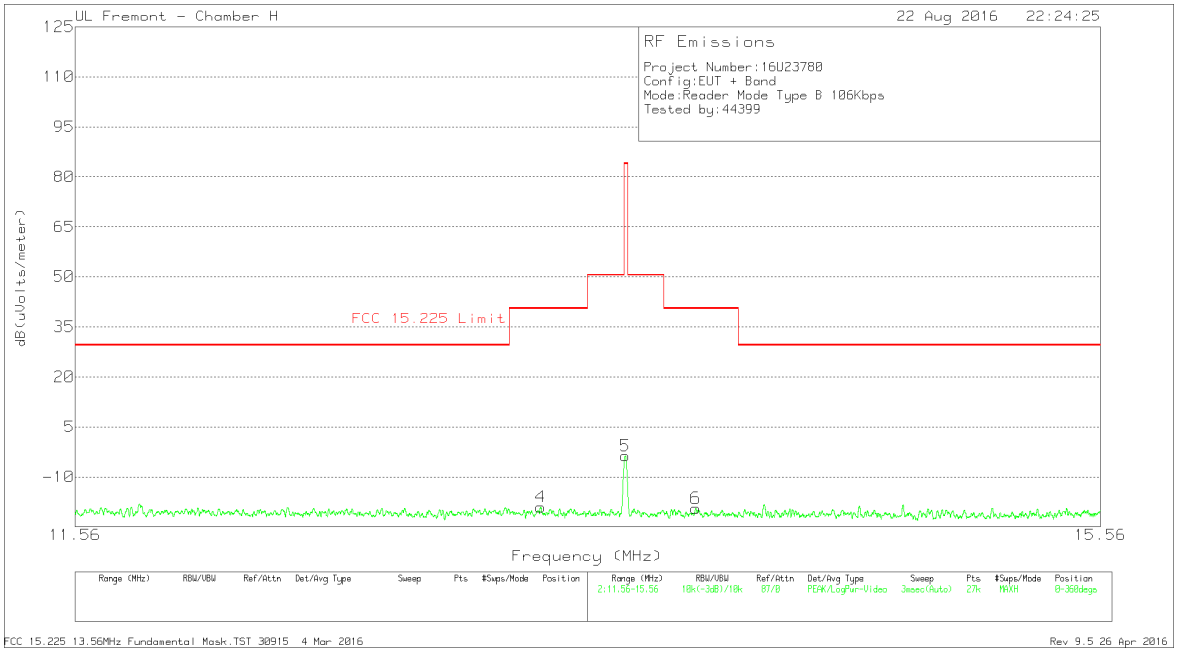
Pk - Peak detector

106Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



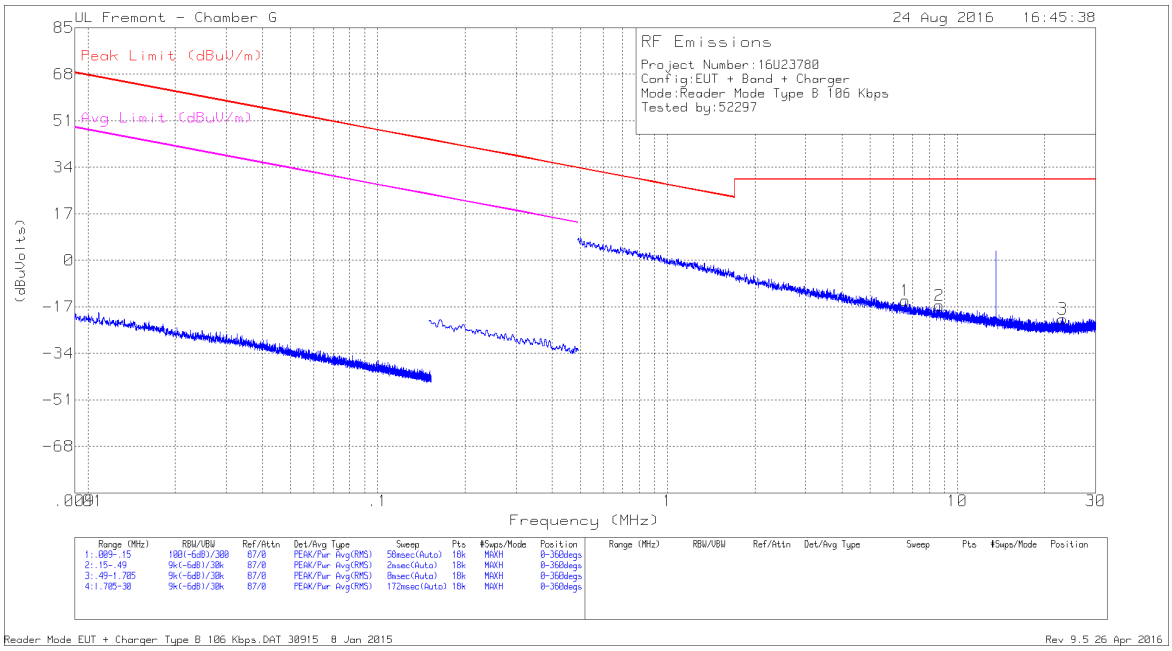
DATA

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)
4	13.23025	9.71	Pk	10.7	.6	-40	-18.99	40.51	-59.5	0-360
1	13.24975	9.89	Pk	10.7	.6	-40	-18.81	40.51	-59.32	0-360
5	13.55837	25.15	Pk	10.6	.6	-40	-3.65	84	-87.65	0-360
2	13.55975	30.23	Pk	10.6	.6	-40	1.43	84	-82.57	0-360
3	13.753	8.87	Pk	10.6	.5	-40	-20.03	40.51	-60.54	0-360
6	13.83839	9.52	Pk	10.6	.5	-40	-19.38	40.51	-59.89	0-360

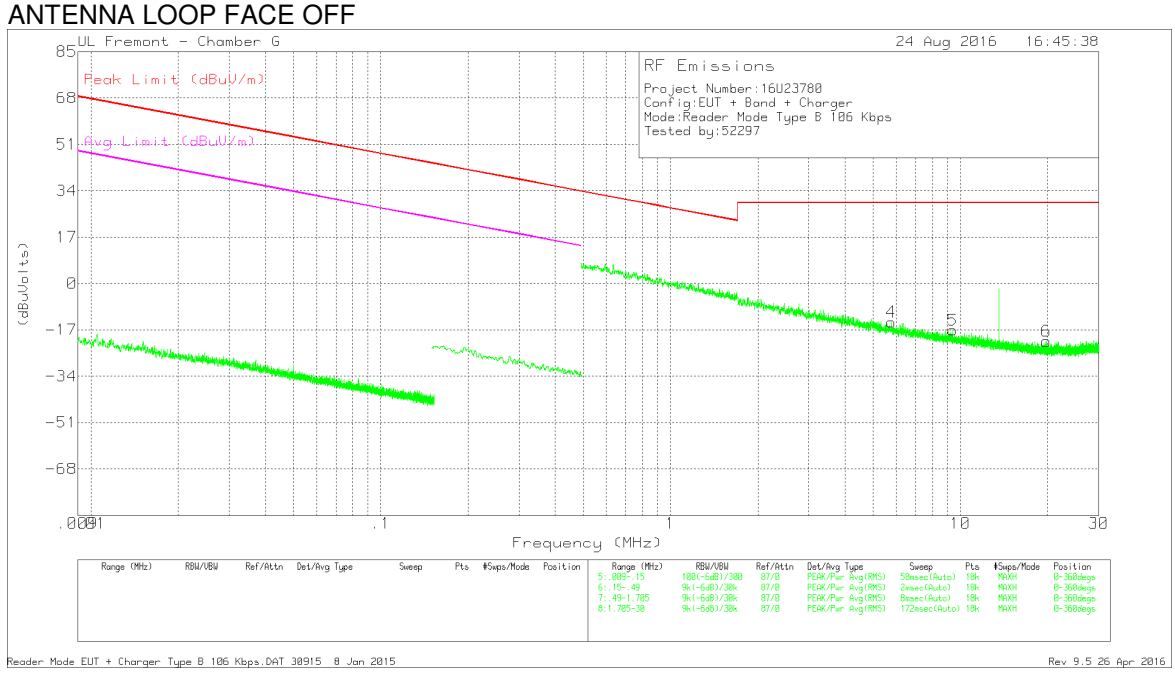
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



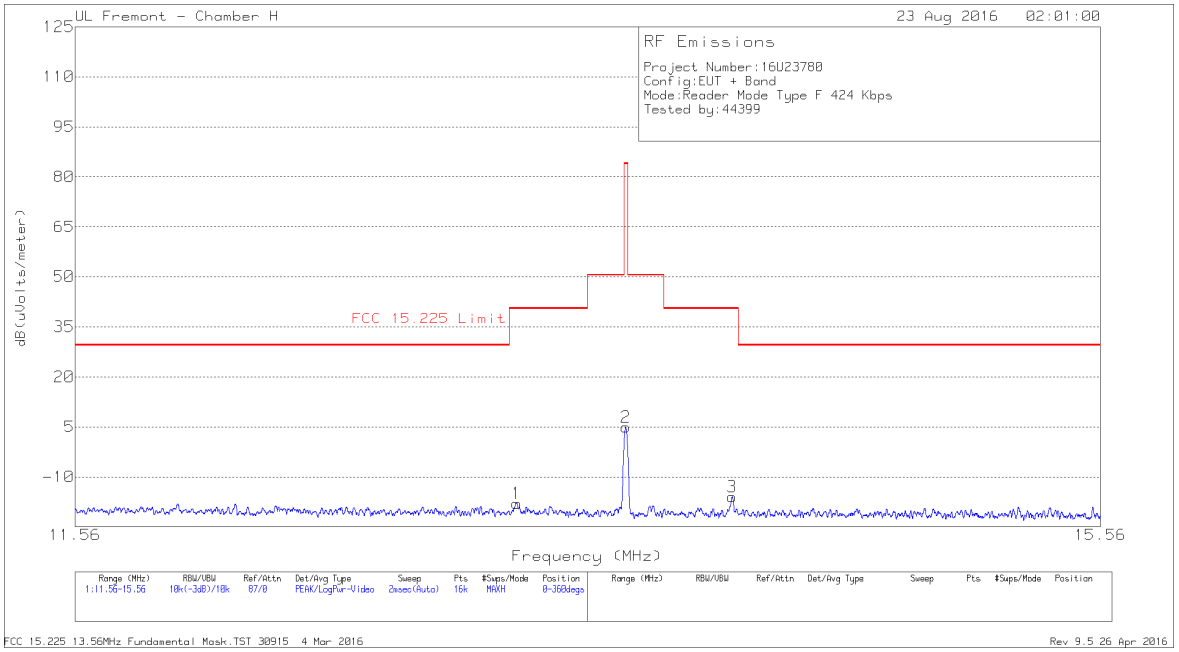
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
4	5.78355	14.05	Pk	11.4	.4	-40	-14.15	29.54	-43.69	-	-	0-360
1	6.6175	13.57	Pk	11.3	.4	-40	-14.73	29.54	-44.27	-	-	0-360
2	8.67525	11.91	Pk	11.1	.5	-40	-16.49	29.54	-46.03	-	-	0-360
5	9.41566	11.27	Pk	11.1	.5	-40	-17.13	29.54	-46.67	-	-	0-360
6	19.75628	8.34	Pk	9.8	.7	-40	-21.16	29.54	-50.7	-	-	0-360
3	23.05433	8.37	Pk	9.4	.8	-40	-21.43	29.54	-50.97	-	-	0-360

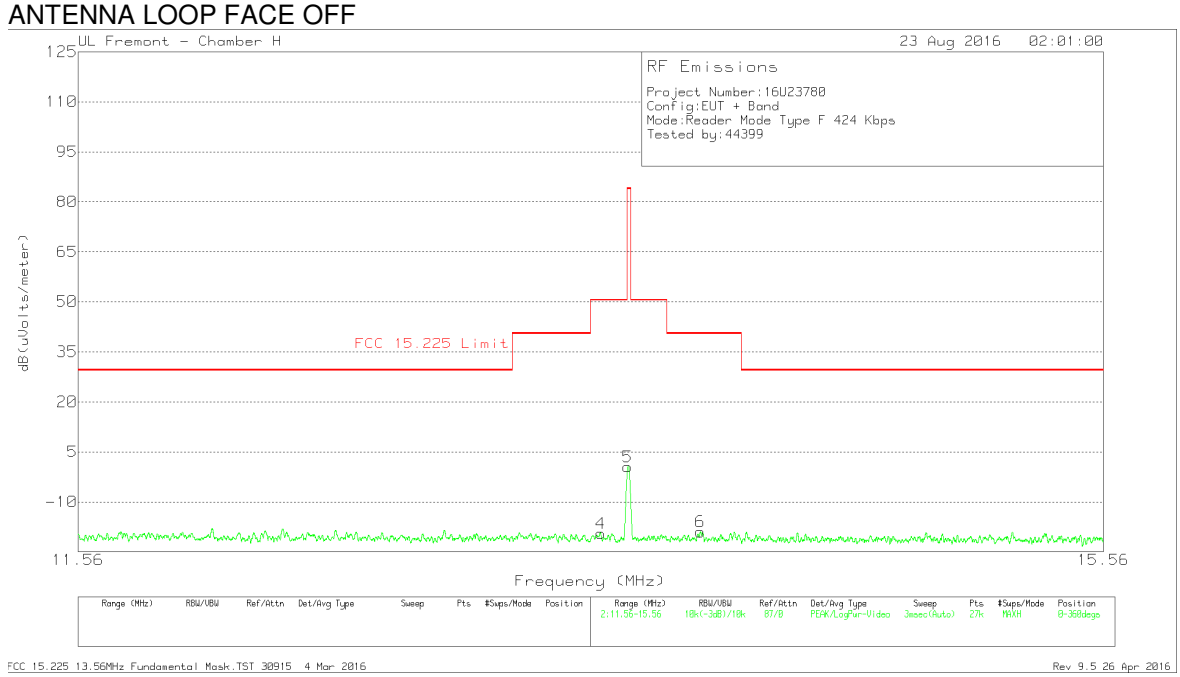
Pk - Peak detector

TYPE F 424Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



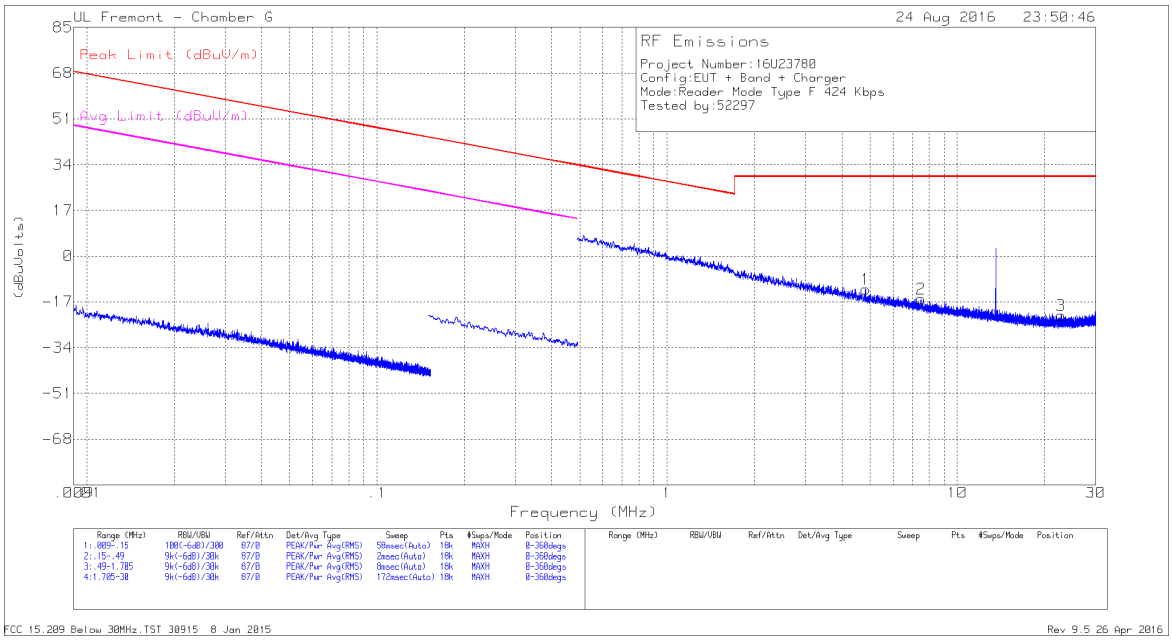
DATA

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	13.13925	10.79	Pk	10.7	.6	-40	-17.91	40.51	-58.42	0-360
4	13.45026	9.27	Pk	10.7	.6	-40	-19.43	50.5	-69.93	0-360
5	13.55682	29.34	Pk	10.6	.6	-40	.54	84	-83.46	0-360
2	13.56	33.75	Pk	10.6	.6	-40	4.95	84	-79.05	0-360
6	13.84519	9.95	Pk	10.6	.5	-40	-18.95	40.51	-59.46	0-360
3	13.98538	12.98	Pk	10.6	.5	-40	-15.92	40.51	-56.43	0-360

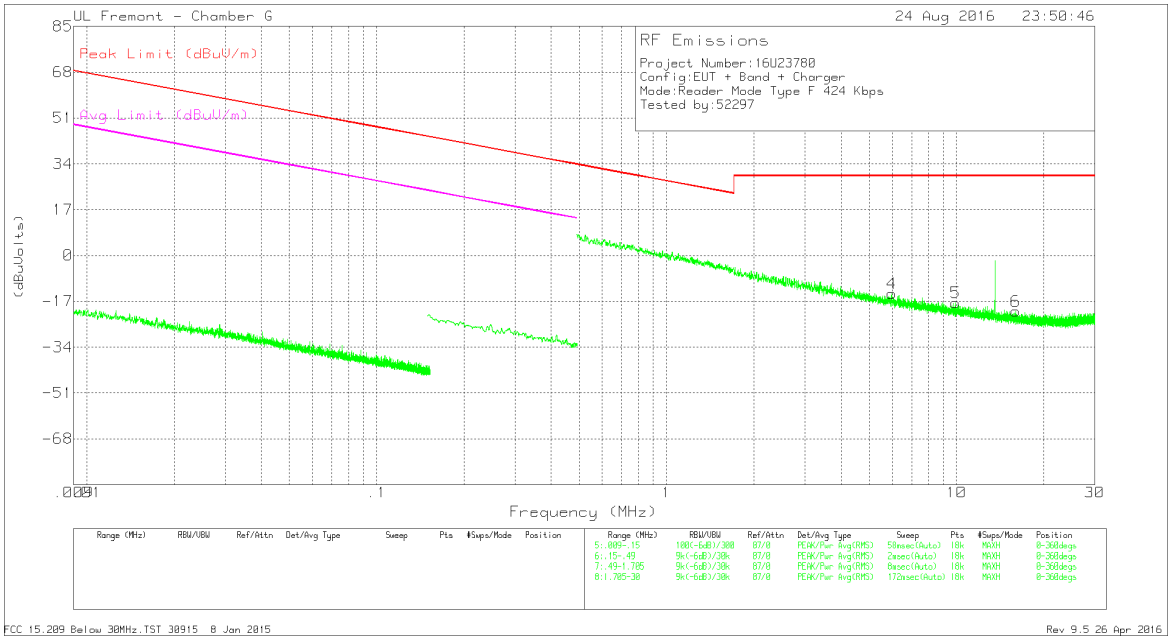
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



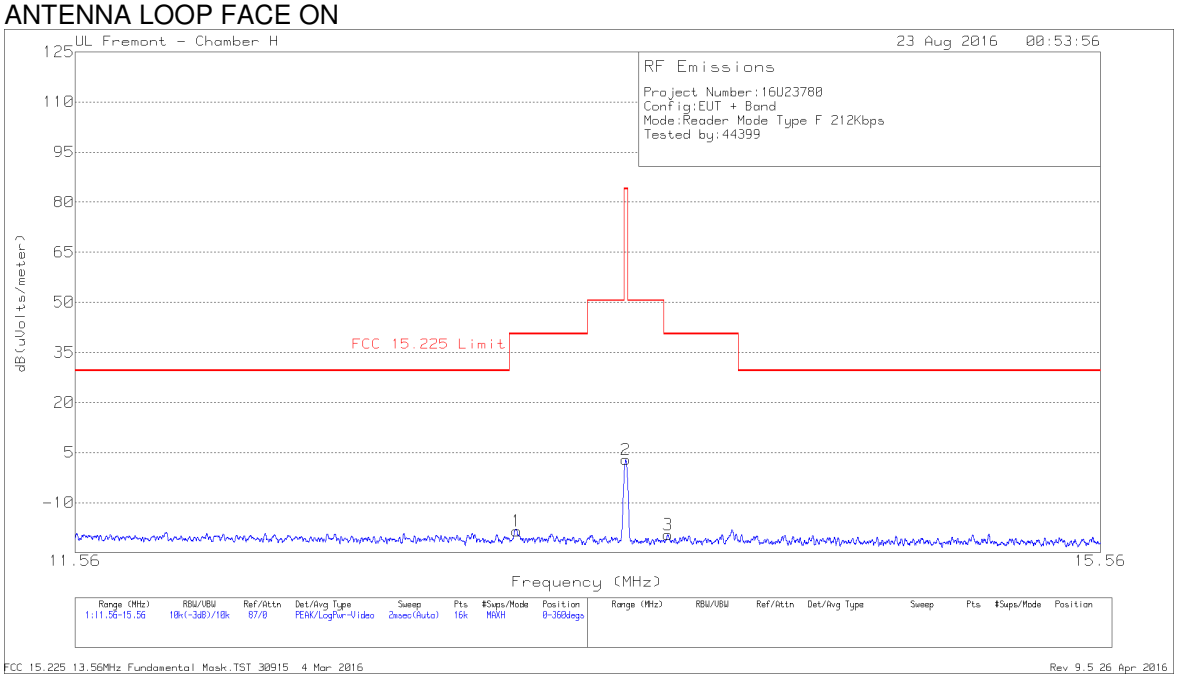
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	4.82699	15.88	Pk	11.5	.3	-40	-12.32	29.54	-41.86	-	-	0-360
4	5.97377	14.03	Pk	11.4	.4	-40	-14.17	29.54	-43.71	-	-	0-360
2	7.48839	12.21	Pk	11.3	.5	-40	-15.99	29.54	-45.53	-	-	0-360
5	9.92656	11.06	Pk	11	.5	-40	-17.44	29.54	-46.98	-	-	0-360
6	15.9992	8.27	Pk	10.4	.7	-40	-20.63	29.54	-50.17	-	-	0-360
3	22.75565	7.8	Pk	9.4	.8	-40	-22	29.54	-51.54	-	-	0-360

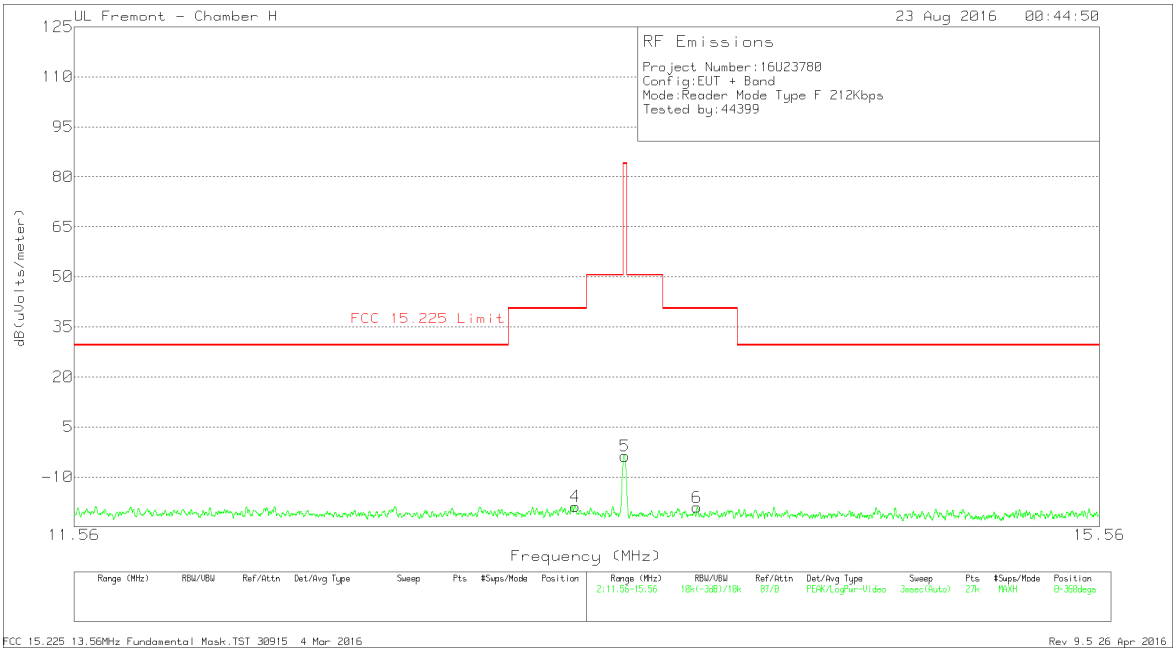
Pk - Peak detector

212Kbps FUNDAMENTAL

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



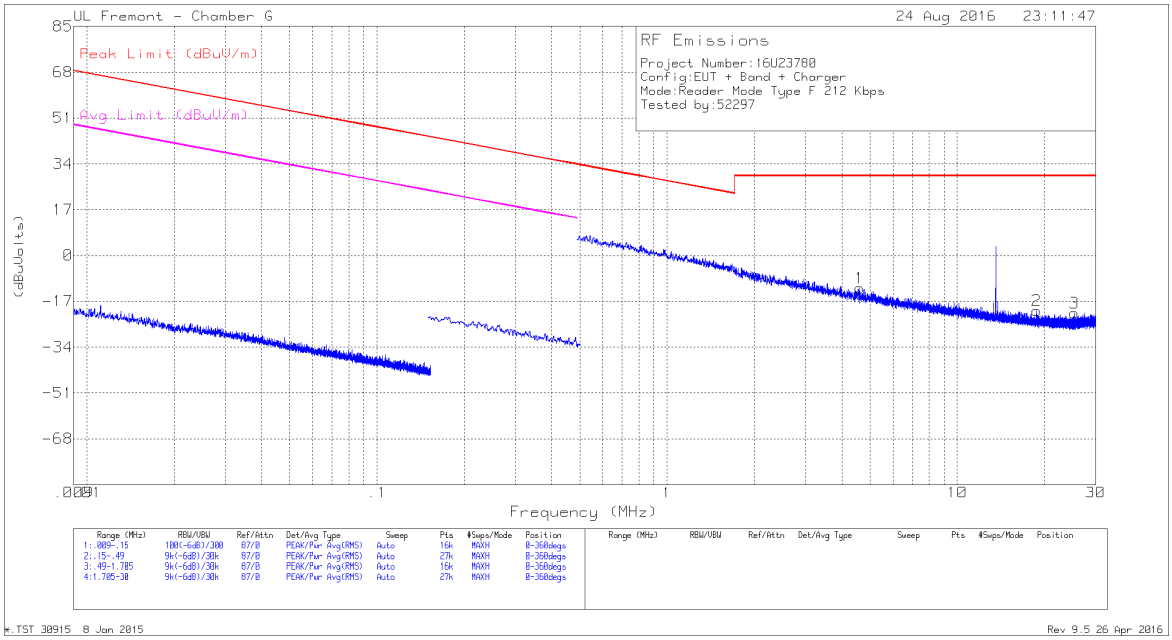
DATA

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	13.13925	10.21	Pk	10.7	.6	-40	-18.49	40.51	-59	0-360
4	13.36723	9.85	Pk	10.7	.6	-40	-18.85	40.51	-59.36	0-360
5	13.56007	25.06	Pk	10.6	.6	-40	-3.74	84	-87.74	0-360
2	13.56025	31.67	Pk	10.6	.6	-40	2.87	84	-81.13	0-360
3	13.72713	9.2	Pk	10.6	.6	-40	-19.6	40.51	-60.11	0-360
6	13.84778	9.83	Pk	10.6	.5	-40	-19.07	40.51	-59.58	0-360

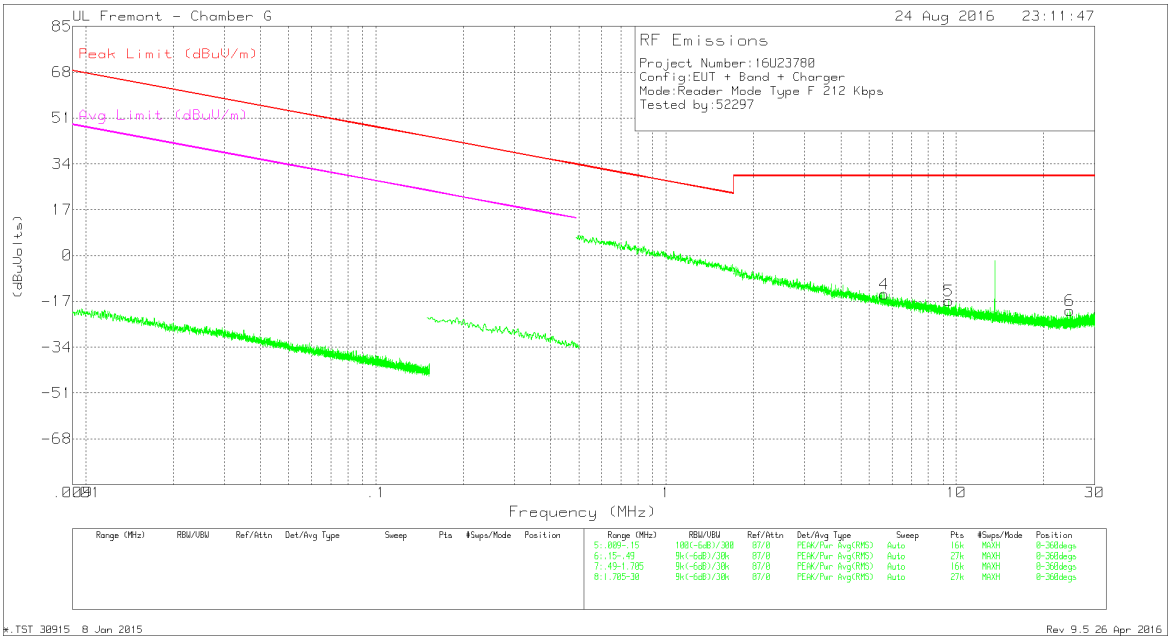
Pk - Peak detector

SPURIOUS EMISSION

ANTENNA LOOP FACE ON



ANTENNA LOOP FACE OFF



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	4.61425	16.07	Pk	11.5	.3	-40	-12.13	29.54	-41.67	-	-	0-360
4	5.64129	13.87	Pk	11.4	.4	-40	-14.33	29.54	-43.87	-	-	0-360
5	9.40046	11.57	Pk	11.1	.5	-40	-16.83	29.54	-46.37	-	-	0-360
2	18.72924	8.91	Pk	10	.7	-40	-20.39	29.54	-49.93	-	-	0-360
6	24.65306	9.63	Pk	9.1	.8	-40	-20.47	29.54	-50.01	-	-	0-360
3	25.36308	8.93	Pk	9	.8	-40	-21.27	29.54	-50.81	-	-	0-360

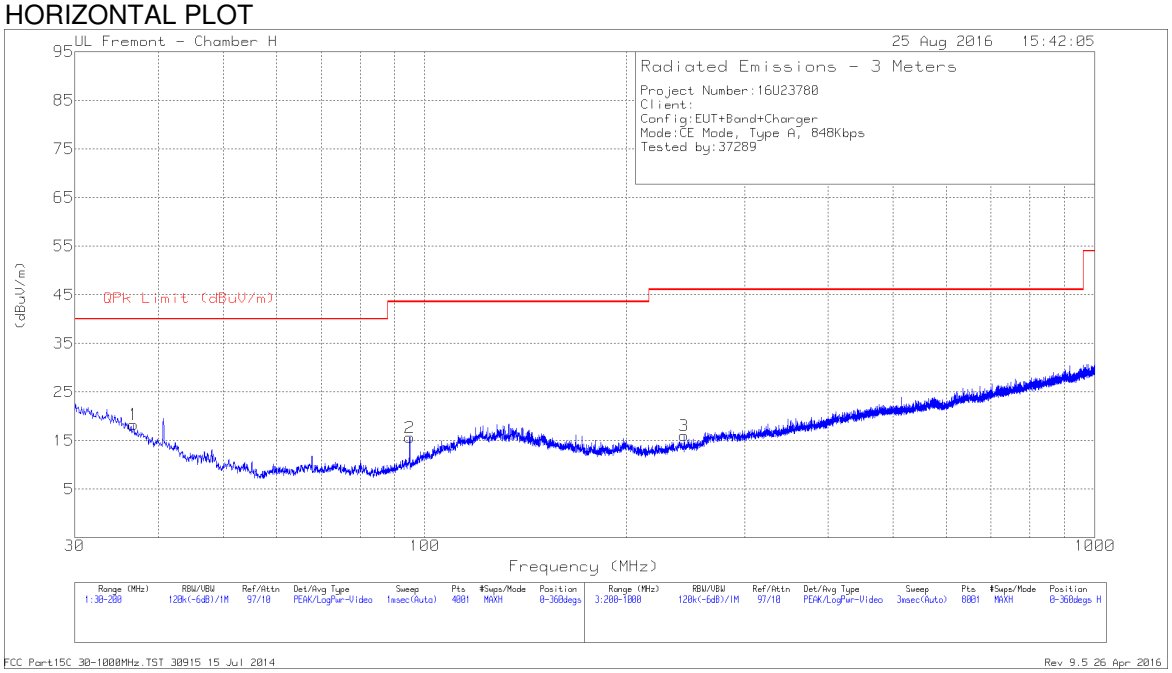
Pk - Peak detector

8.3. TX SPURIOUS EMISSION 30 TO 1000 MHz, EUT WITH AC/DC ADAPTER

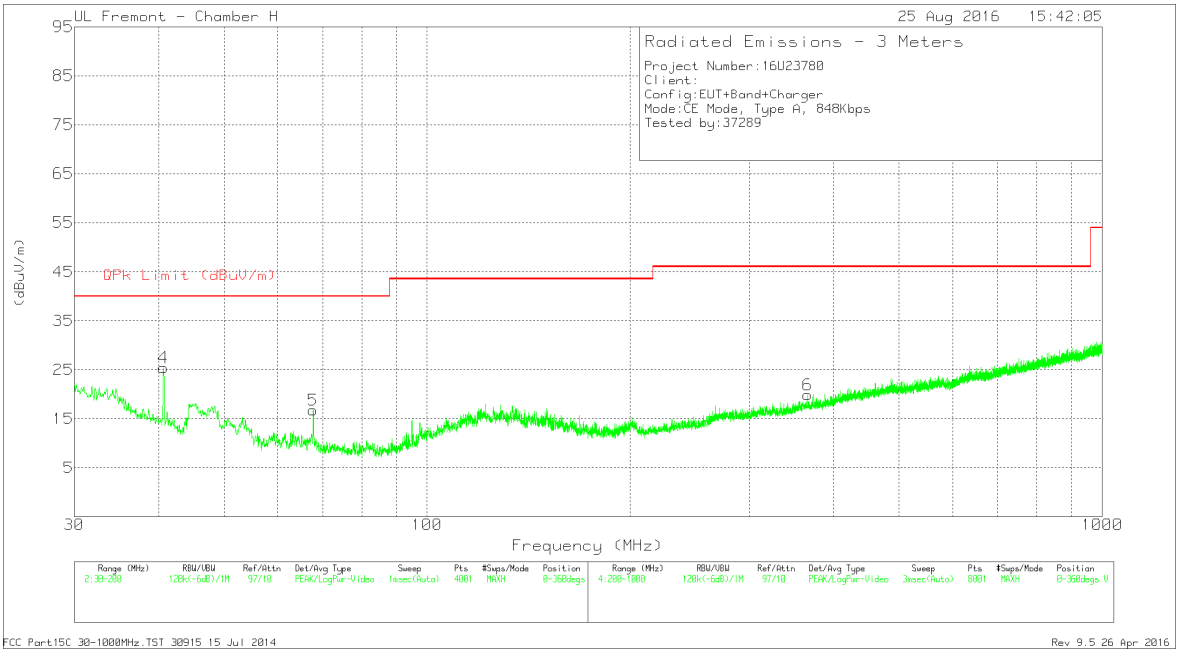
8.3.1. CE MODE

TYPE A 848Kbps

HORIZONTAL PLOT



VERTICAL PLOT



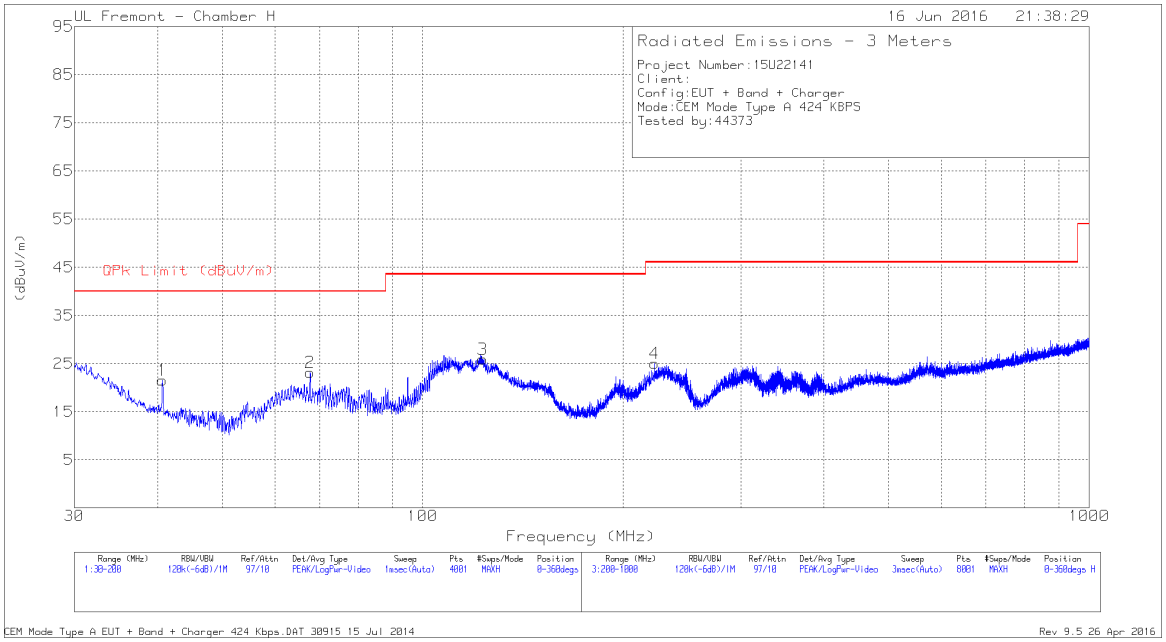
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T407 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 243.6	29.94	Pk	15.5	-29.4	16.04	46.02	-29.98	0-360	199	H
1	36.715	29.31	Pk	20.2	-31.2	18.31	40	-21.69	0-360	299	H
4	40.6675	39.32	Pk	17.3	-31.2	25.42	40	-14.58	0-360	100	V
5	67.7825	35.55	Pk	12	-30.8	16.75	40	-23.25	0-360	100	V
2	94.94	33.46	Pk	12.8	-30.6	15.66	43.52	-27.86	0-360	199	H
6	366.2	29.91	Pk	18.8	-28.8	19.91	46.02	-26.11	0-360	201	V

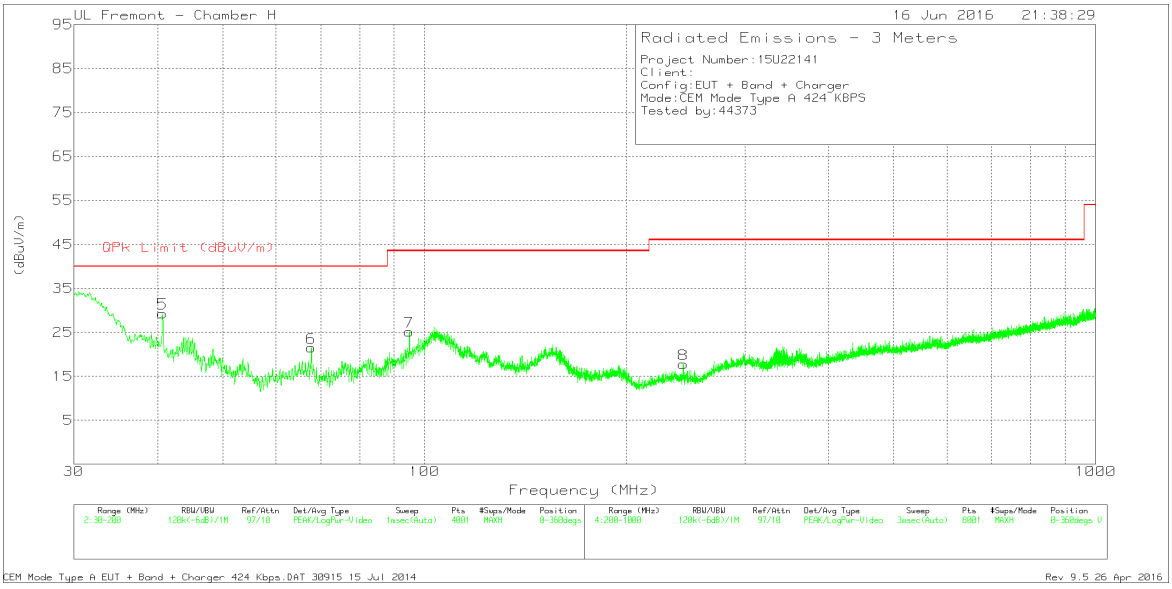
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

424Kbps

HORIZONTAL PLOT



VERTICAL PLOT



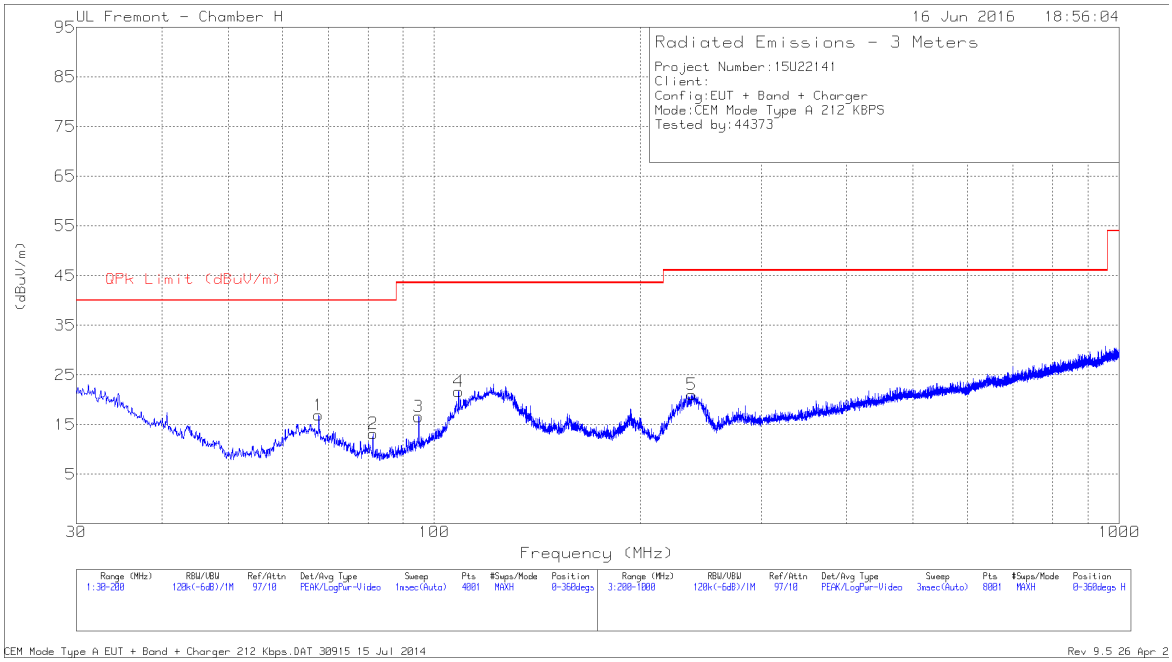
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T407 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 122.99	38.42	Pk	17.8	-30.3	25.92	43.52	-17.6	0-360	199	H
8	* 242.9	31.68	Pk	15.5	-29.4	17.78	46.02	-28.24	0-360	201	V
1	40.6675	35.47	Pk	17.3	-31.2	21.57	40	-18.43	0-360	399	H
5	40.6675	43.21	Pk	17.3	-31.2	29.31	40	-10.69	0-360	100	V
2	67.7825	42	Pk	12	-30.8	23.2	40	-16.8	0-360	299	H
6	67.7825	40.3	Pk	12	-30.8	21.5	40	-18.5	0-360	100	V
7	94.8975	42.96	Pk	12.8	-30.6	25.16	43.52	-18.36	0-360	100	V
4	222.7	39.85	Pk	14.7	-29.5	25.05	46.02	-20.97	0-360	100	H

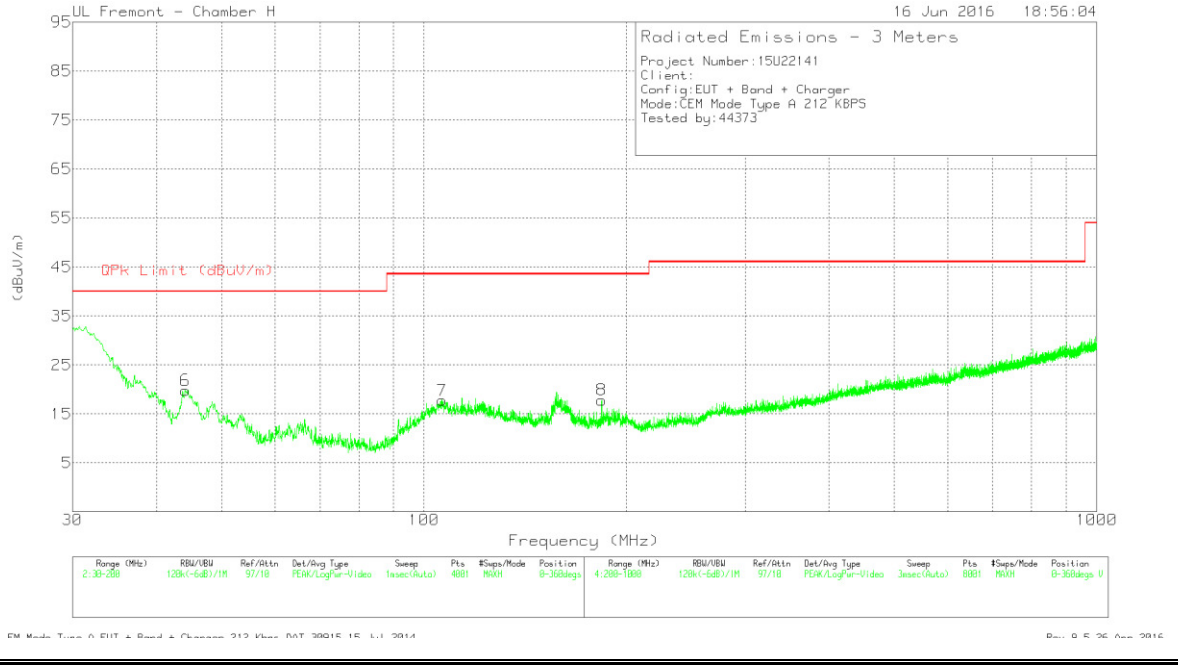
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

212Kbps

HORIZONTAL PLOT



VERTICAL PLOT



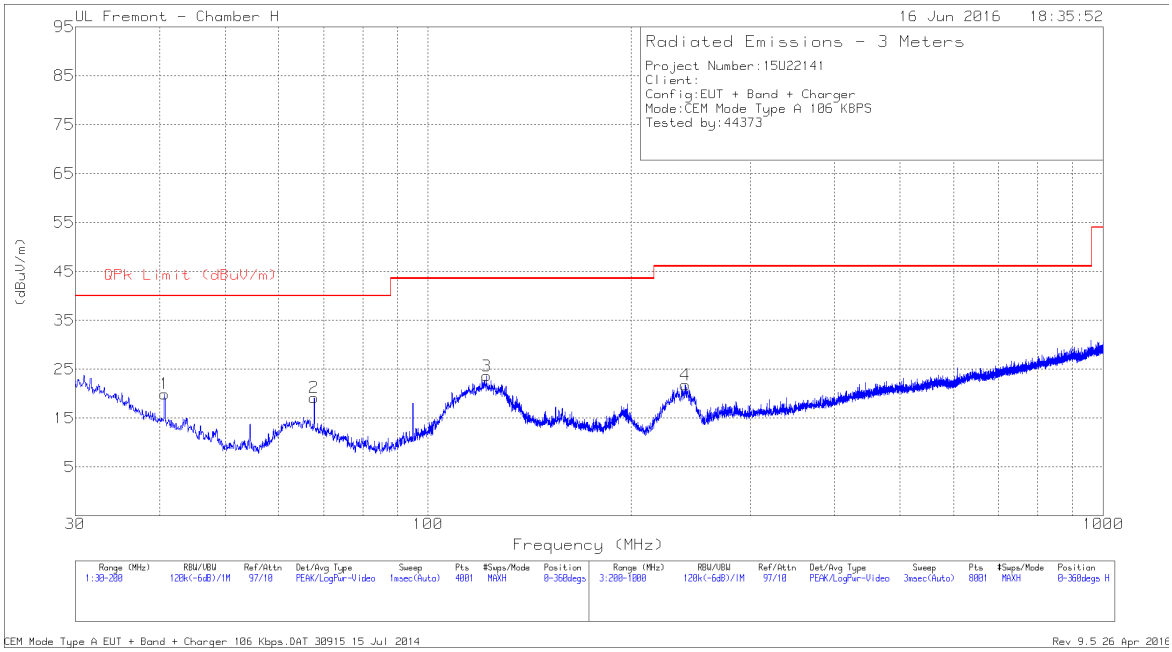
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T407 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 108.4975	35.86	Pk	16.2	-30.4	21.66	43.52	-21.86	0-360	299	H
6	44.1525	36.11	Pk	14.8	-31.1	19.81	40	-20.19	0-360	100	V
1	67.7825	35.7	Pk	12	-30.8	16.9	40	-23.1	0-360	199	H
2	81.3825	32.49	Pk	11.4	-30.7	13.19	40	-26.81	0-360	299	H
3	94.8975	34.42	Pk	12.8	-30.6	16.62	43.52	-26.9	0-360	299	H
7	106.4575	32.46	Pk	15.8	-30.5	17.76	43.52	-25.76	0-360	100	V
8	183.6375	32.74	Pk	15	-29.9	17.84	43.52	-25.68	0-360	100	V
5	237.5	35.15	Pk	15.4	-29.5	21.05	46.02	-24.97	0-360	100	H

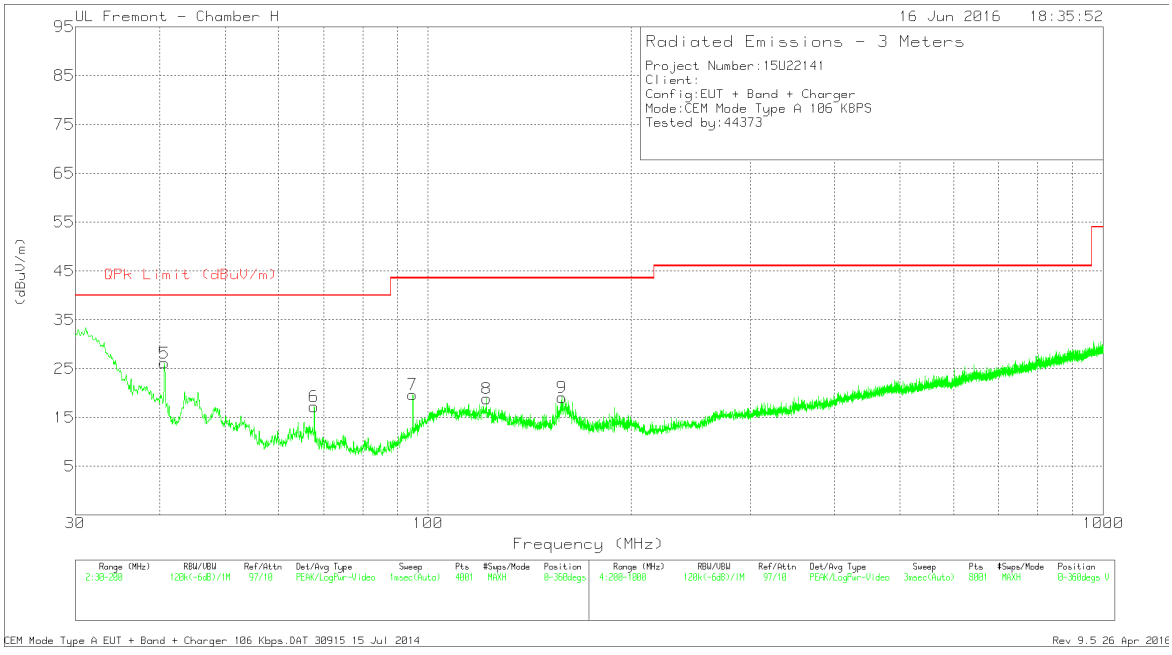
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

106Kbps

HORIZONTAL PLOT



VERTICAL PLOT



DATA

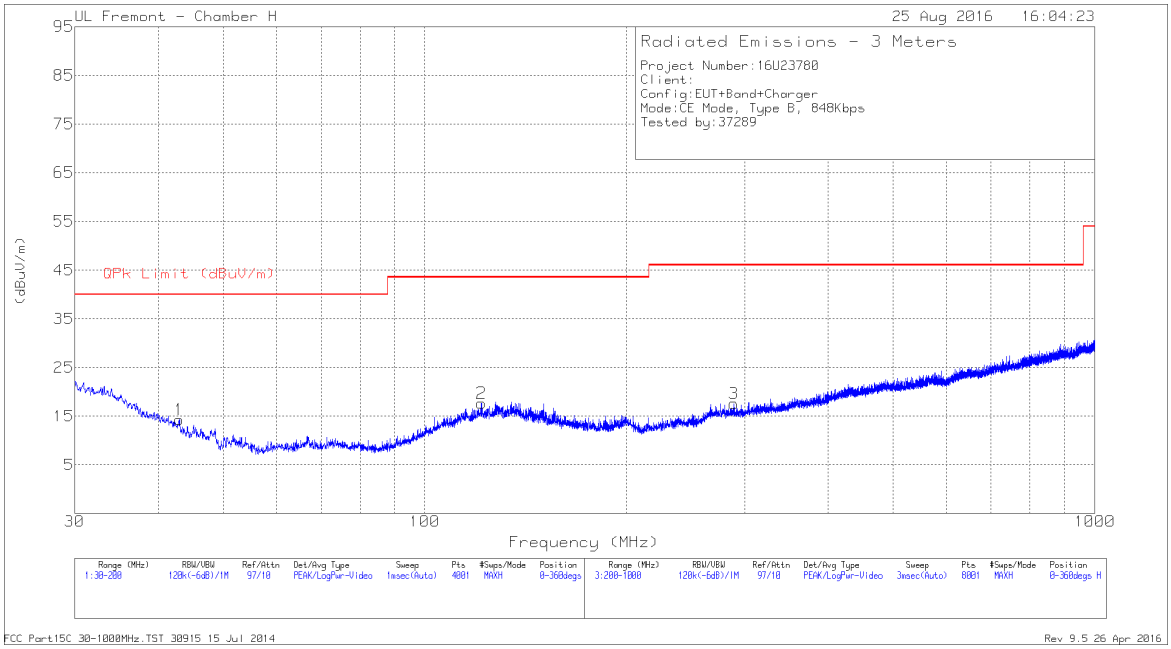
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T407 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 122.055	36.12	Pk	17.8	-30.3	23.62	43.52	-19.9	0-360	199	H
8	* 122.055	31.37	Pk	17.8	-30.3	18.87	43.52	-24.65	0-360	100	V
4	* 240.4	35.7	Pk	15.5	-29.4	21.8	46.02	-24.22	0-360	100	H
5	40.6675	40.05	Pk	17.3	-31.2	26.15	40	-13.85	0-360	100	V
1	40.6888	33.96	Pk	17.2	-31.2	19.96	40	-20.04	0-360	299	H
2	67.7825	38.02	Pk	12	-30.8	19.22	40	-20.78	0-360	199	H
6	67.7825	36.04	Pk	12	-30.8	17.24	40	-22.76	0-360	100	V
7	94.8975	37.47	Pk	12.8	-30.6	19.67	43.52	-23.85	0-360	100	V
9	157.7975	32.9	Pk	16.2	-30	19.1	43.52	-24.42	0-360	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

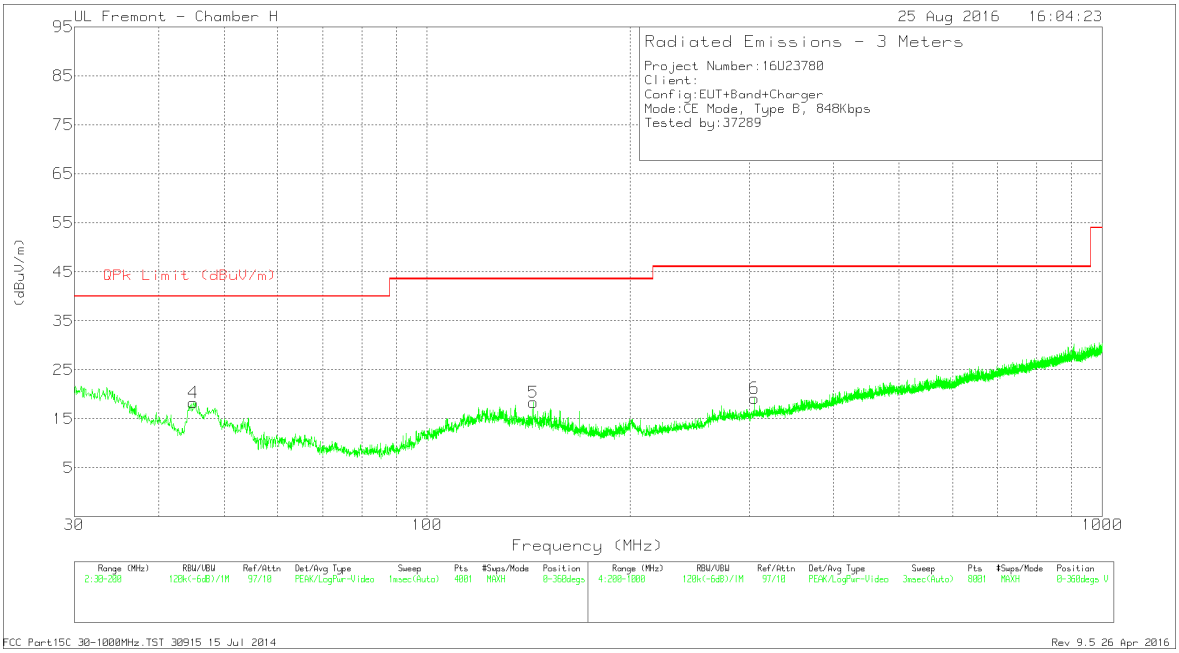
TYPE B

848Kbps

HORIZONTAL PLOT



VERTICAL PLOT



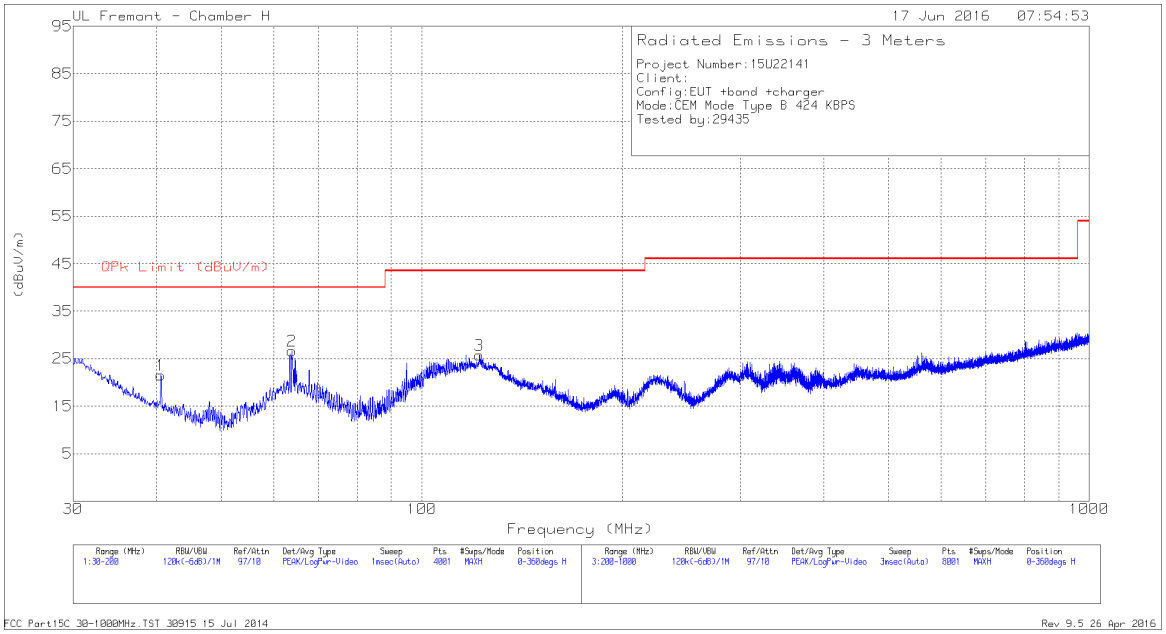
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T407 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 121.4388	30.18	Pk	17.8	-30.3	17.68	43.52	-25.84	0-360	399	H
1	43.005	29.9	Pk	15.6	-31.2	14.3	40	-25.7	0-360	199	H
4	45.045	35.1	Pk	14.3	-31.1	18.3	40	-21.7	0-360	100	V
5	143.645	31.86	Pk	16.6	-30.1	18.36	43.52	-25.16	0-360	100	V
3	289.1	29.6	Pk	17.2	-29.2	17.6	46.02	-28.42	0-360	399	H
6	305.2	30.71	Pk	17.5	-29	19.21	46.02	-26.81	0-360	399	V

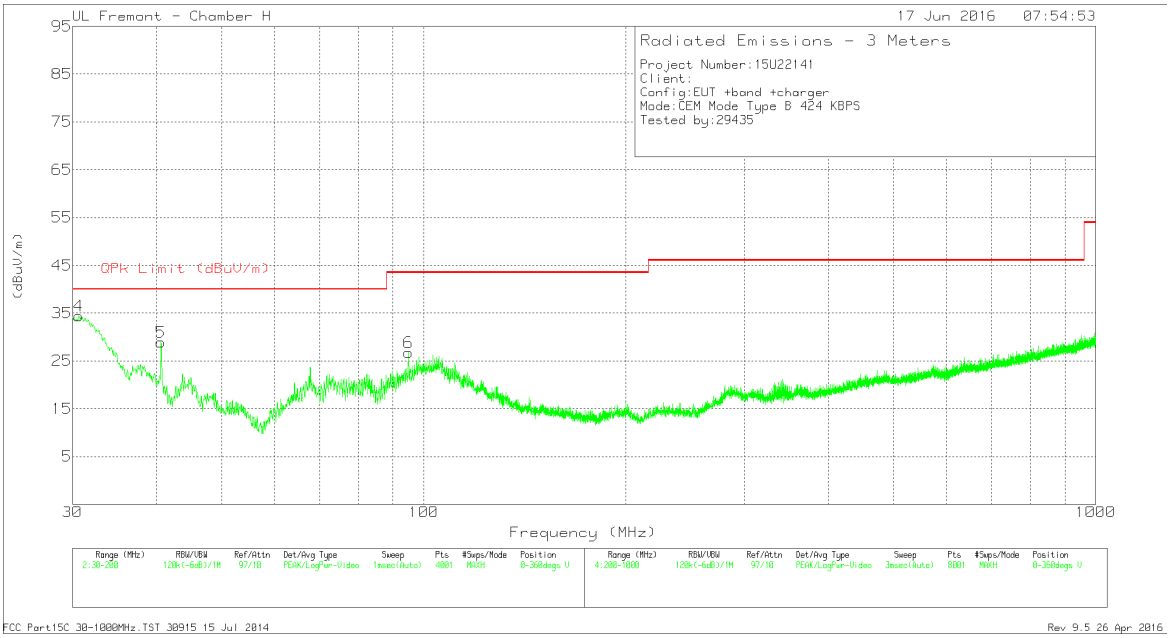
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

424Kbps

HORIZONTAL PLOT



VERTICAL PLOT



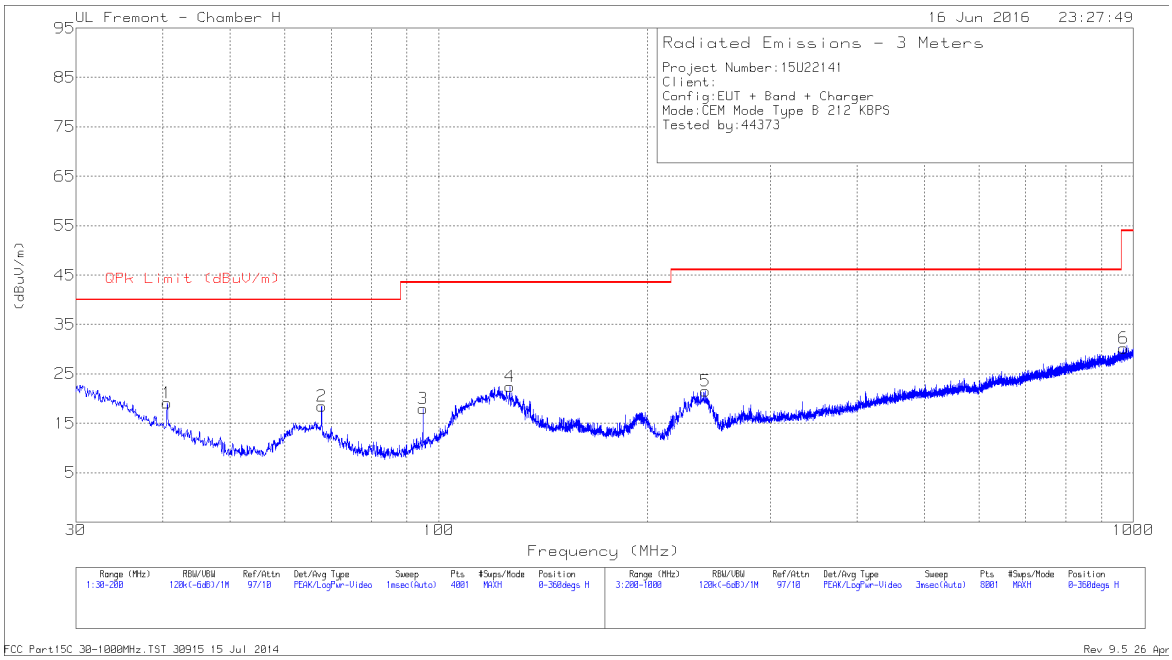
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T407 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 122.0338	38.26	Pk	17.8	-30.3	25.76	43.52	-17.76	0-360	199	H
4	30.68	40.96	Pk	24.7	-31.3	34.36	40	-5.64	0-360	100	V
1	40.6675	35.38	Pk	17.3	-31.2	21.48	40	-18.52	0-360	399	H
5	40.6675	42.78	Pk	17.3	-31.2	28.88	40	-11.12	0-360	100	V
2	63.8725	45.69	Pk	11.8	-30.9	26.59	40	-13.41	0-360	100	H
6	94.94	44.6	Pk	12.8	-30.6	26.8	43.52	-16.72	0-360	100	V

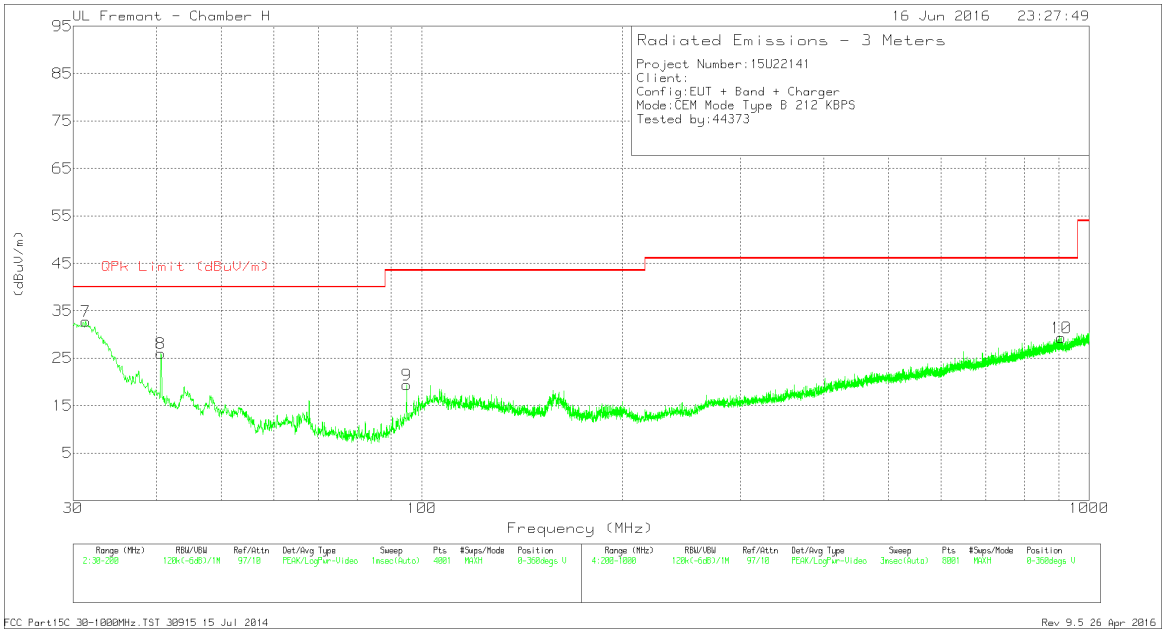
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

212Kbps

HORIZONTAL PLOT



VERTICAL PLOT



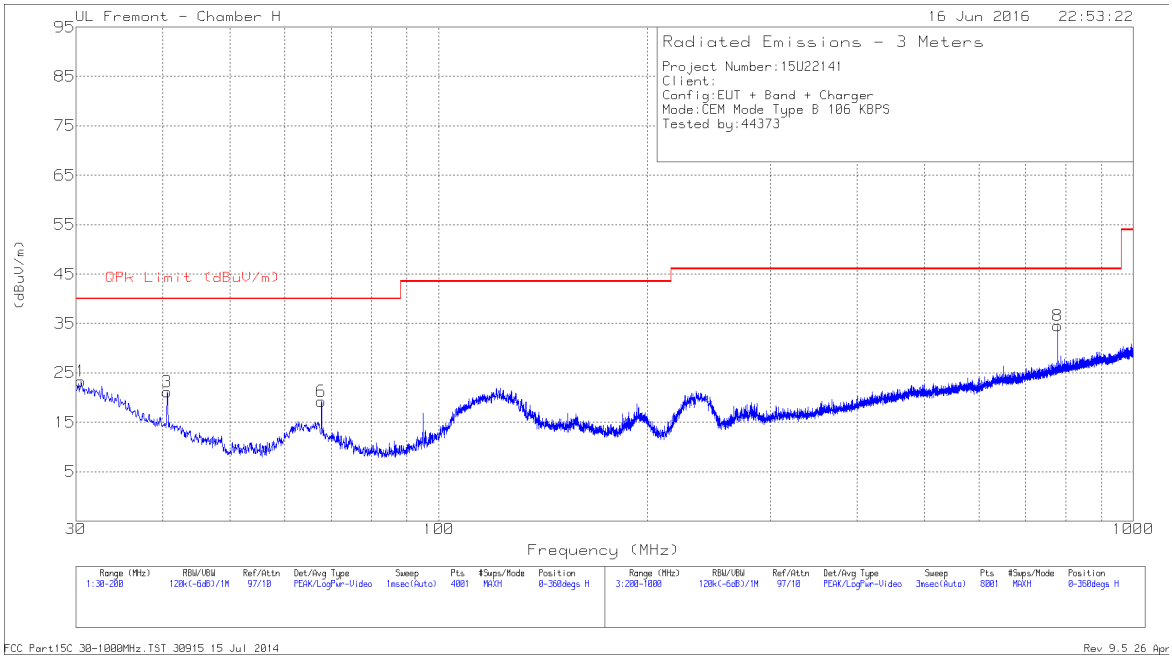
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T407 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 126.56	34.92	Pk	17.8	-30.3	22.42	43.52	-21.1	0-360	199	H
5	* 242	35.47	Pk	15.5	-29.4	21.57	46.02	-24.45	0-360	100	H
6	* 969.5	28.82	Pk	27	-25.6	30.22	53.97	-23.75	0-360	299	H
7	31.36	39.71	Pk	24.3	-31.3	32.71	40	-7.29	0-360	100	V
1	40.6675	32.96	Pk	17.3	-31.2	19.06	40	-20.94	0-360	299	H
8	40.6675	39.86	Pk	17.3	-31.2	25.96	40	-14.04	0-360	100	V
2	67.825	37.21	Pk	12	-30.8	18.41	40	-21.59	0-360	199	H
3	94.94	35.76	Pk	12.8	-30.6	17.96	43.52	-25.56	0-360	299	H
9	94.94	37.2	Pk	12.8	-30.6	19.4	43.52	-24.12	0-360	100	V
10	908.1	29.44	Pk	26.3	-26.4	29.34	46.02	-16.68	0-360	201	V

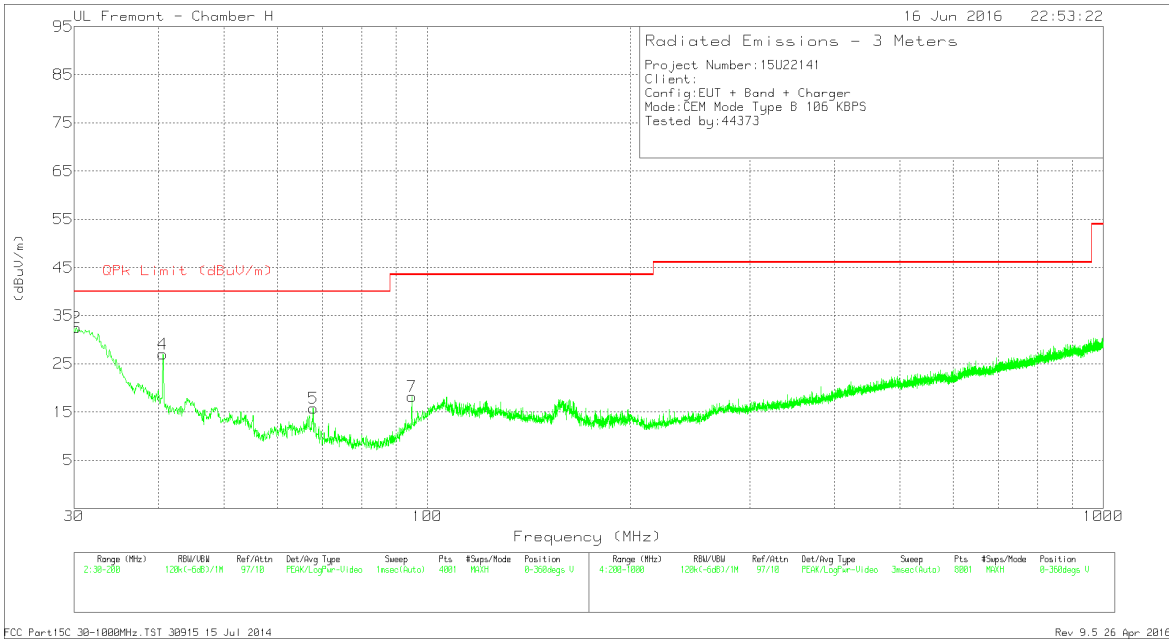
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

106Kbps

HORIZONTAL PLOT



VERTICAL PLOT



DATA

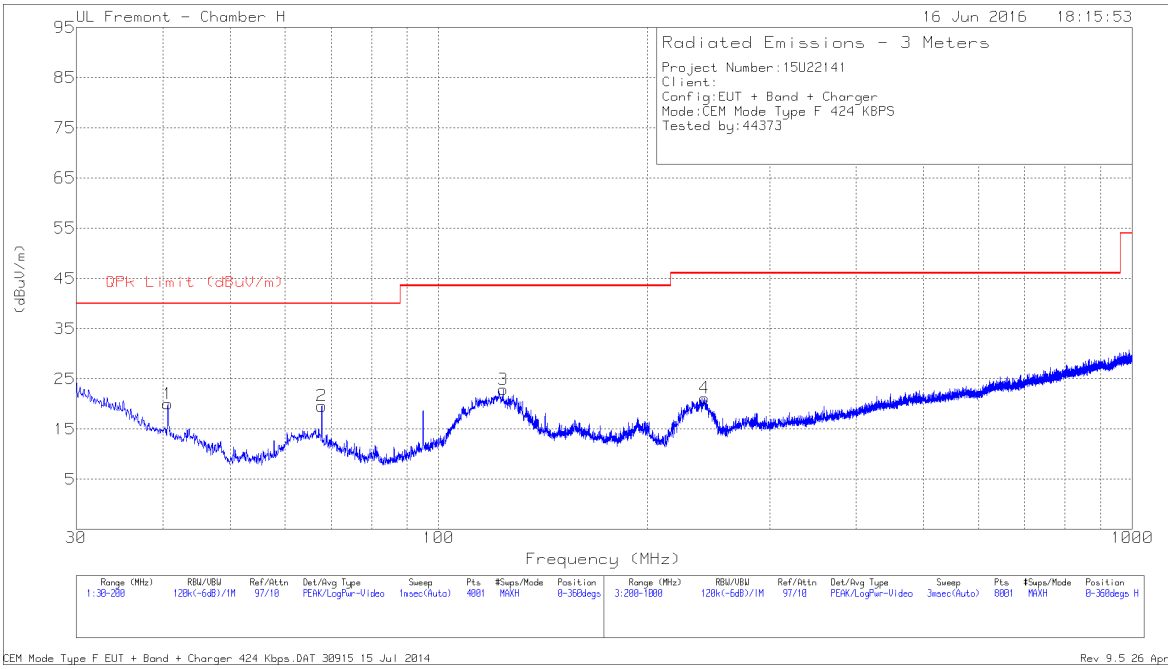
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T407 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	30.255	38.9	Pk	24.9	-31.3	32.5	40	-7.5	0-360	100	V
1	30.5525	29.85	Pk	24.8	-31.3	23.35	40	-16.65	0-360	299	H
3	40.6675	35.03	Pk	17.3	-31.2	21.13	40	-18.87	0-360	399	H
4	40.6675	40.92	Pk	17.3	-31.2	27.02	40	-12.98	0-360	100	V
6	67.7825	38.02	Pk	12	-30.8	19.22	40	-20.78	0-360	299	H
5	67.825	34.62	Pk	12	-30.8	15.82	40	-24.18	0-360	100	V
7	94.8975	36.03	Pk	12.8	-30.6	18.23	43.52	-25.29	0-360	100	V
8	778.5	36.92	Pk	24.9	-27.3	34.52	46.02	-11.5	0-360	399	H

Pk - Peak detector

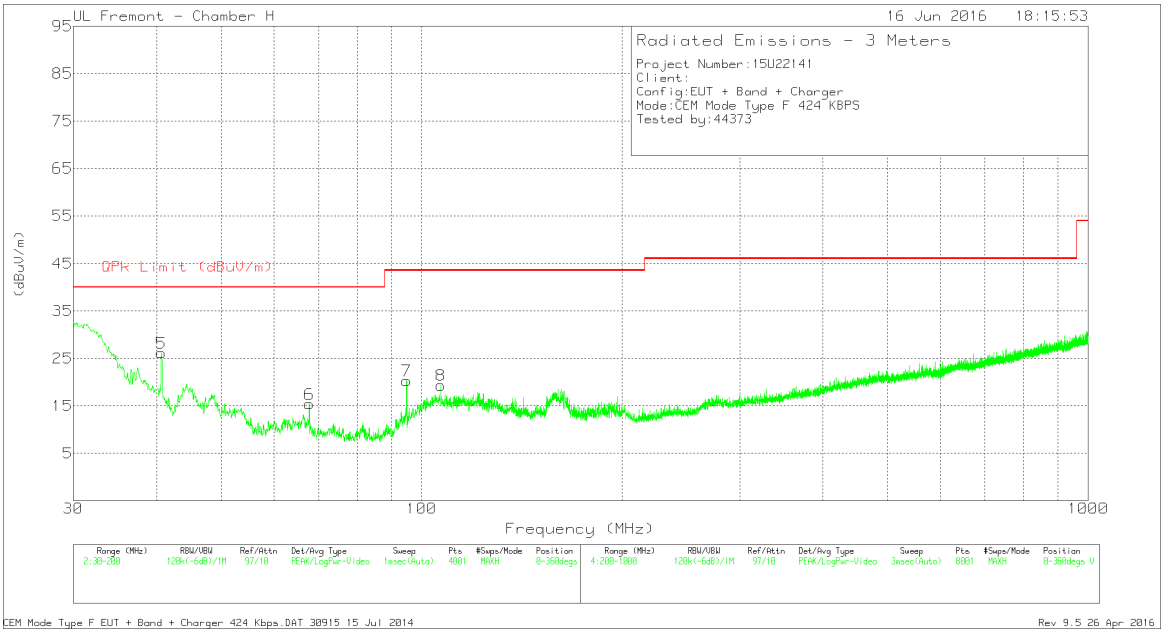
TYPE F

424Kbps

HORIZONTAL PLOT



VERITCAL PLOT



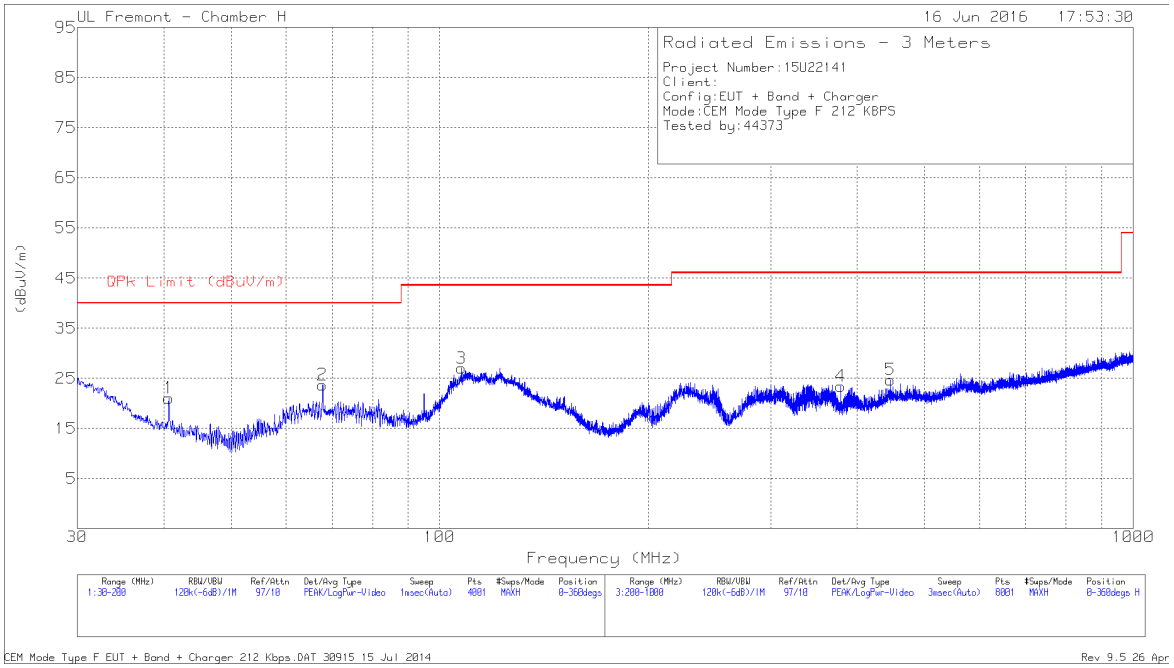
RESULTS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T407 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 123.84	35.4	Pk	17.8	-30.3	22.9	43.52	-20.62	0-360	199	H
4	* 241.7	35.09	Pk	15.5	-29.4	21.19	46.02	-24.83	0-360	100	H
1	40.6675	33.94	Pk	17.3	-31.2	20.04	40	-19.96	0-360	299	H
5	40.6675	40.03	Pk	17.3	-31.2	26.13	40	-13.87	0-360	100	V
2	67.825	38.42	Pk	12	-30.8	19.62	40	-20.38	0-360	299	H
6	67.825	34.19	Pk	12	-30.8	15.39	40	-24.61	0-360	100	V
7	94.9188	38.13	Pk	12.8	-30.6	20.33	43.52	-23.19	0-360	100	V
8	106.7975	33.95	Pk	15.9	-30.5	19.35	43.52	-24.17	0-360	100	V

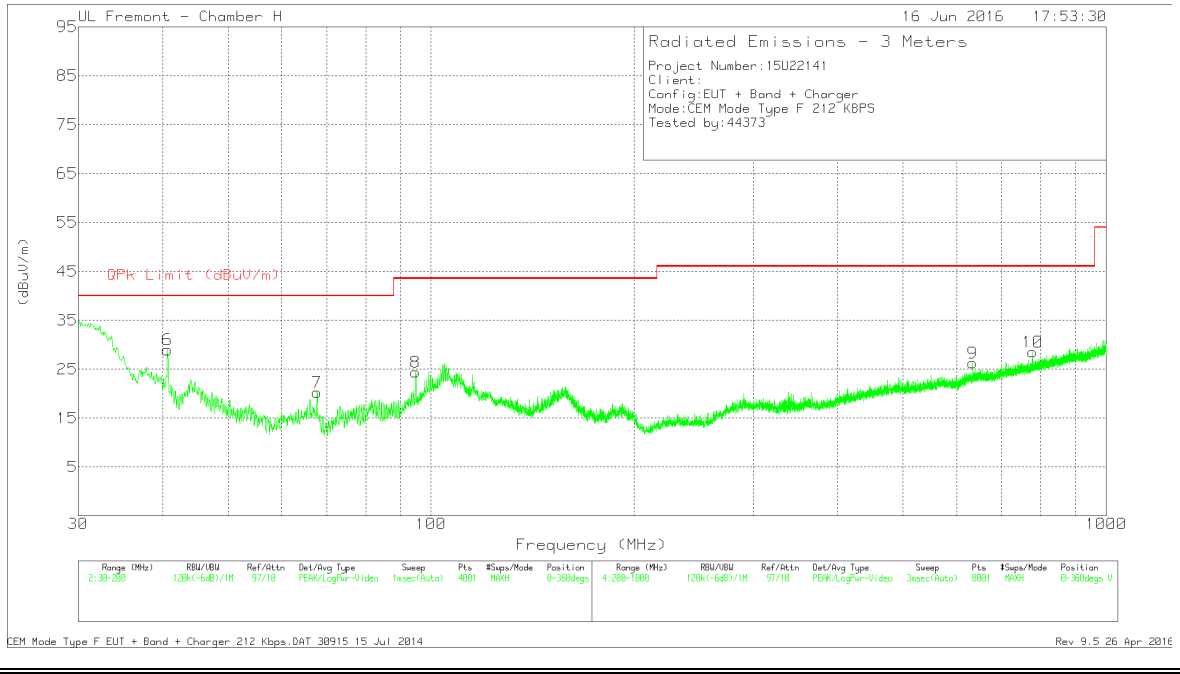
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

212Kbps

HORIZONTAL PLOT



VERTICAL PLOT



DATA

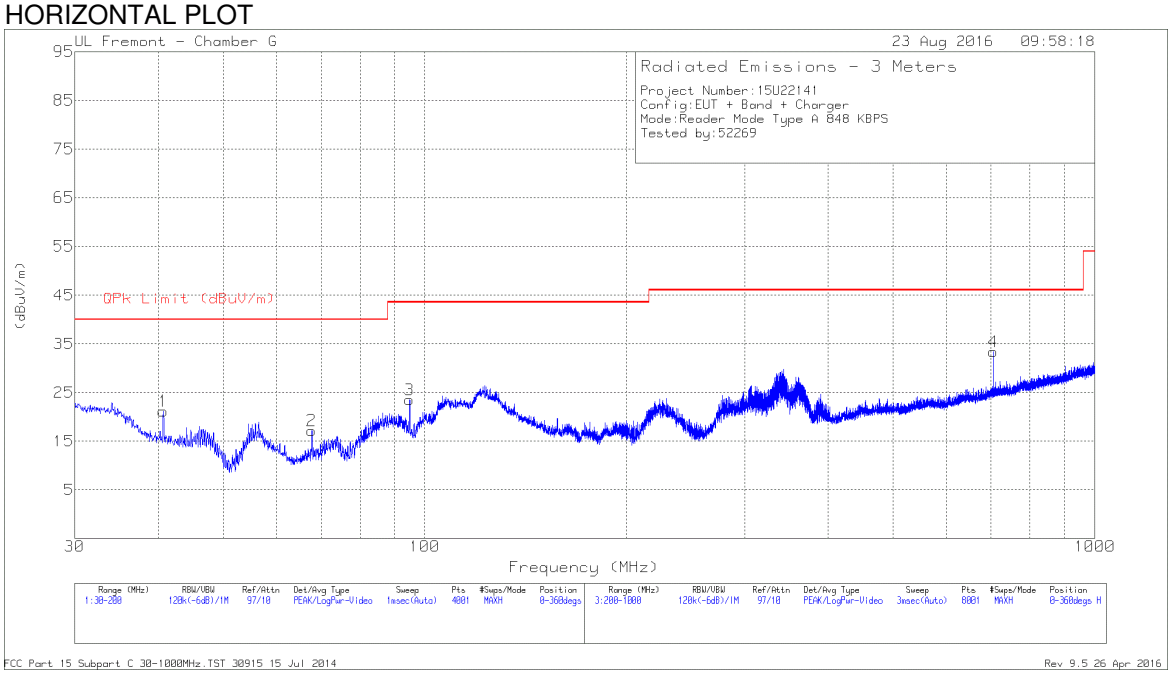
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T407 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.6675	34.98	Pk	17.3	-31.2	21.08	40	-18.92	0-360	399	H
6	40.6675	42.88	Pk	17.3	-31.2	28.98	40	-11.02	0-360	100	V
2	67.7825	42.5	Pk	12	-30.8	23.7	40	-16.3	0-360	299	H
7	67.7825	39.05	Pk	12	-30.8	20.25	40	-19.75	0-360	100	V
8	94.8975	42.2	Pk	12.8	-30.6	24.4	43.52	-19.12	0-360	100	V
3	107.5625	41.49	Pk	16	-30.5	26.99	43.52	-16.53	0-360	299	H
4	378.4	33.22	Pk	18.9	-28.7	23.42	46.02	-22.6	0-360	199	H
5	446.3	32.51	Pk	20.6	-28.4	24.71	46.02	-21.31	0-360	199	H
9	634.4	30.66	Pk	23.6	-28	26.26	46.02	-19.76	0-360	301	V
10	778.4	30.93	Pk	24.9	-27.3	28.53	46.02	-17.49	0-360	399	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

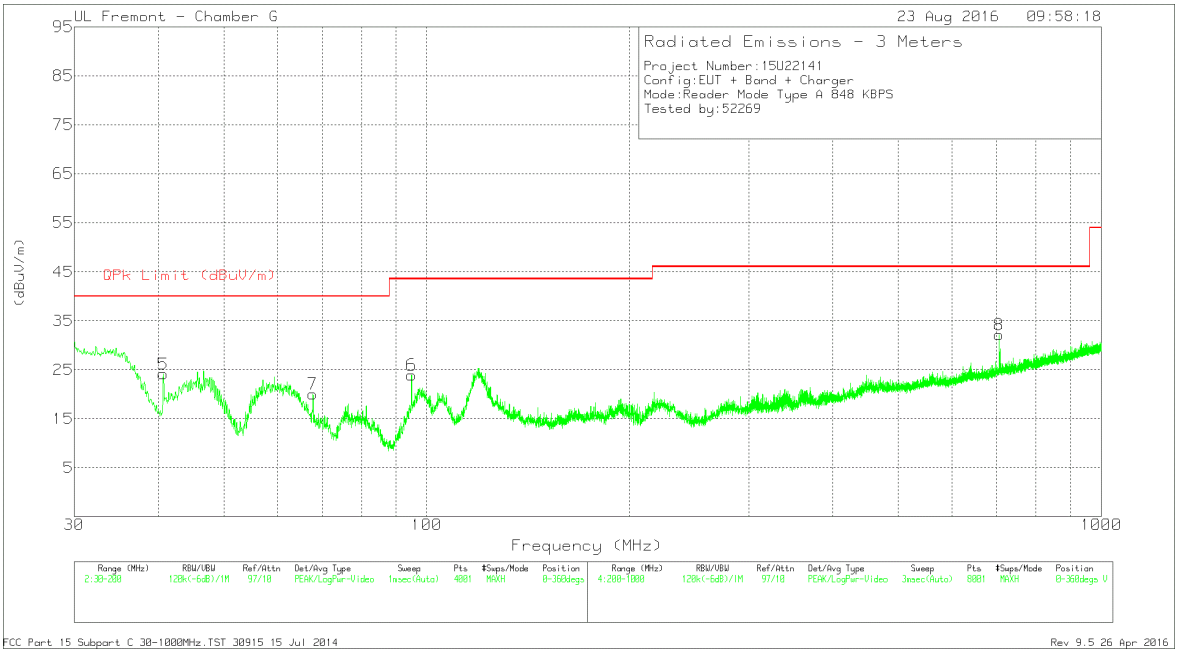
8.3.2. READER MODE

TYPE A 848Kbps

HORIZONTAL PLOT



VERTICAL PLOT



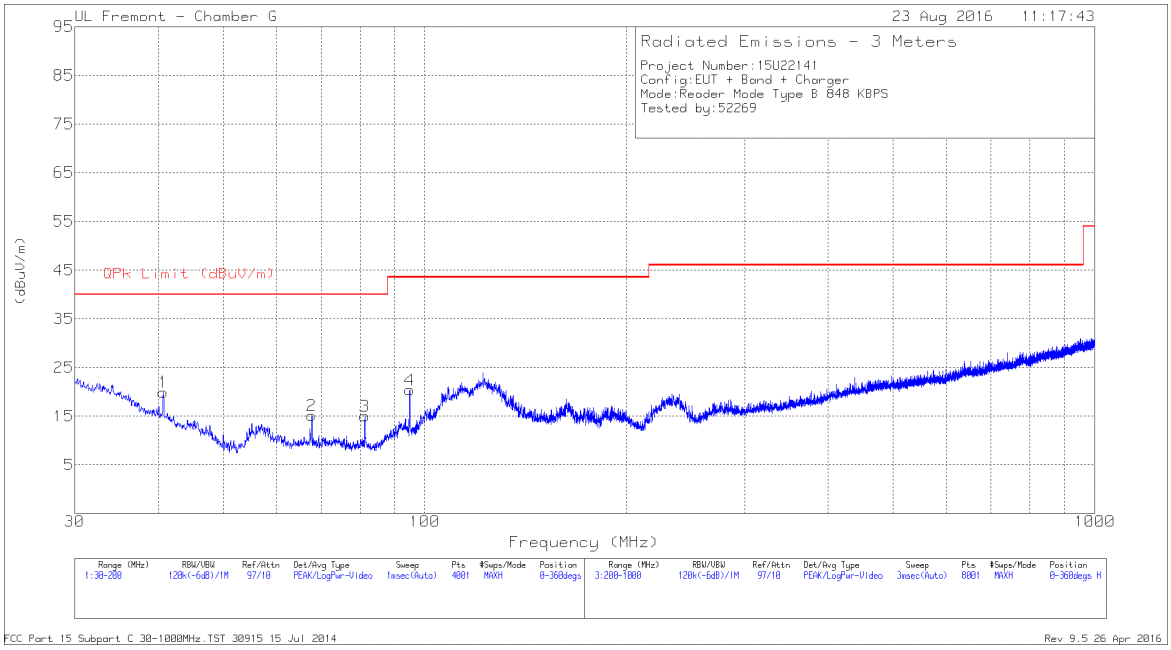
DATA

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	34.47	Pk	17.8	-31.1	21.17	40	-18.83	0-360	300	H
5	40.6675	37.46	Pk	17.8	-31.1	24.16	40	-15.84	0-360	100	V
7	67.7825	38.66	Pk	12.2	-30.8	20.06	40	-19.94	0-360	100	V
2	67.8038	35.79	Pk	12.2	-30.8	17.19	40	-22.81	0-360	400	H
3	94.8975	41.23	Pk	12.8	-30.5	23.53	43.52	-19.99	0-360	300	H
6	94.94	41.65	Pk	12.8	-30.5	23.95	43.52	-19.57	0-360	100	V
4	705.3	36.3	Pk	24.3	-27.2	33.4	46.02	-12.62	0-360	400	H
8	705.3	35.06	Pk	24.3	-27.2	32.16	46.02	-13.86	0-360	301	V

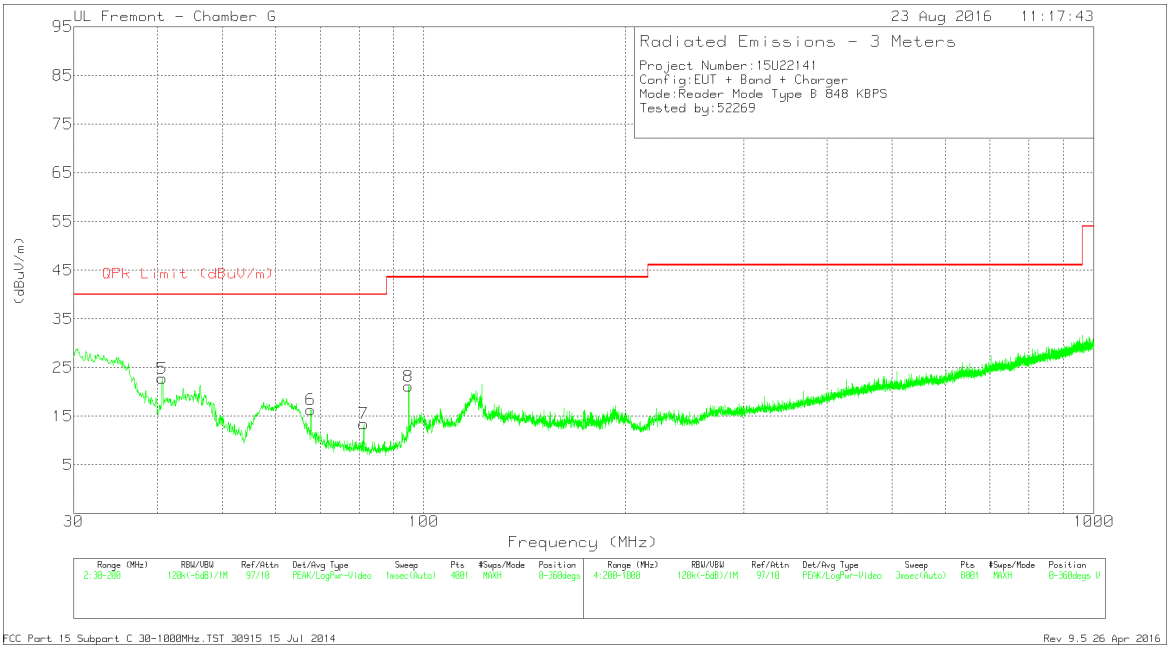
TYPE B

848Kbps

HORIZONTAL PLOT



VERTICAL PLOT



DATA

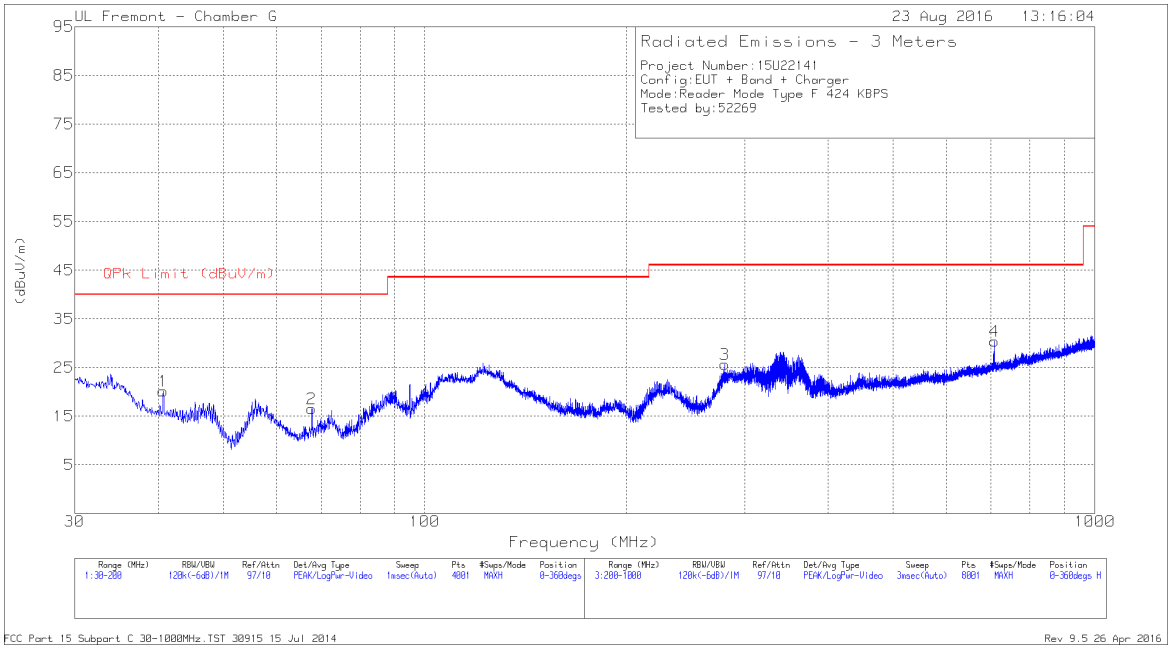
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T900 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	40.6675	33.22	Pk	17.8	-31.1	19.92	40	-20.08	0-360	300	H
5	40.6675	36.09	Pk	17.8	-31.1	22.79	40	-17.21	0-360	100	V
2	67.7825	33.77	Pk	12.2	-30.8	15.17	40	-24.83	0-360	300	H
6	67.8038	34.94	Pk	12.2	-30.8	16.34	40	-23.66	0-360	100	V
3	81.34	34.31	Pk	11.3	-30.6	15.01	40	-24.99	0-360	400	H
7	81.34	32.77	Pk	11.3	-30.6	13.47	40	-26.53	0-360	100	V
8	94.8975	38.82	Pk	12.8	-30.5	21.12	43.52	-22.4	0-360	100	V
4	94.94	38.07	Pk	12.8	-30.5	20.37	43.52	-23.15	0-360	200	H

Pk - Peak detector

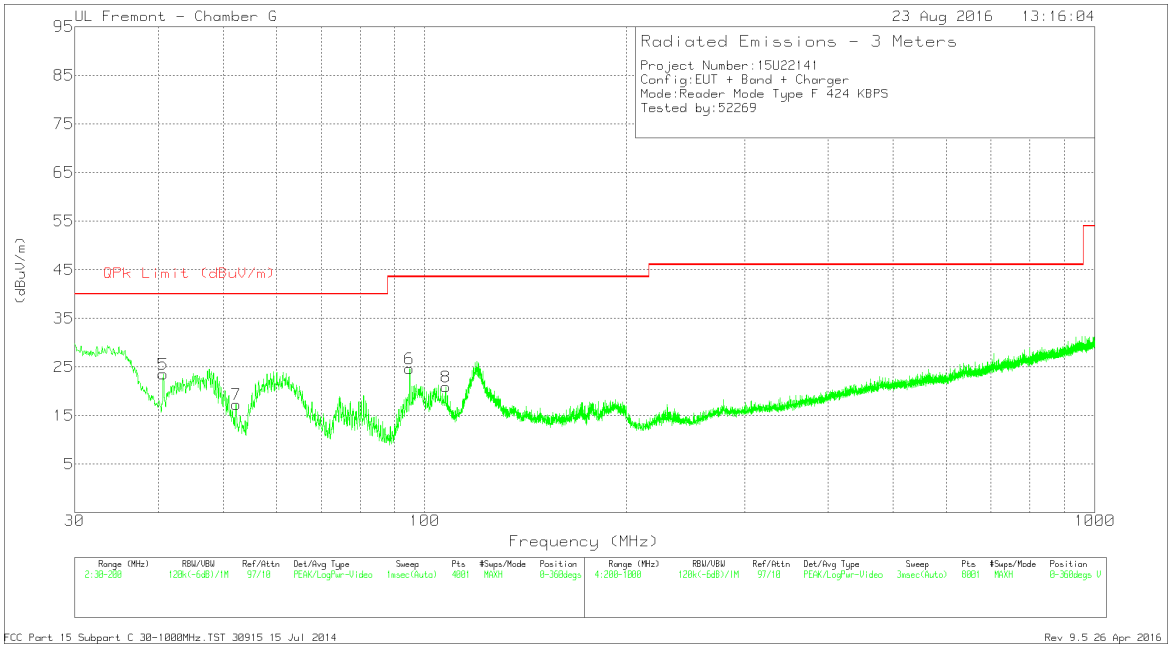
TYPE F

424Kbps

HORIZONTAL PLOT



VERITCAL PLOT



DATA

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
3	* 280.2	37.34	Pk	17.3	-29	25.64	46.02	-20.38	0-360	100	H
1	40.6675	33.46	Pk	17.8	-31.1	20.16	40	-19.84	0-360	200	H
5	40.6675	36.81	Pk	17.8	-31.1	23.51	40	-16.49	0-360	100	V
7	52.27	37.26	Pk	11	-31	17.26	40	-22.74	0-360	100	V
2	67.7825	35.13	Pk	12.2	-30.8	16.53	40	-23.47	0-360	300	H
6	94.8975	42.33	Pk	12.8	-30.5	24.63	43.52	-18.89	0-360	100	V
8	107.435	35.29	Pk	16	-30.4	20.89	43.52	-22.63	0-360	100	V
4	708.9	33.19	Pk	24.3	-27.1	30.39	46.02	-15.63	0-360	300	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

9. FREQUENCY STABILITY

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

No non-compliance noted.

9.1. CE MODE

ID:	52275	Date:	08/252016

TYPE A
848Kbps

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	13.5600145	2.857	13.5600148	13.560	13.5600150	2.817	13.5600152	2.804	± 100
3.80	40	13.5600115	3.074	13.5600113	3.092	13.5600112	3.095	13.5600112	3.097	± 100
3.80	30	13.5600267	1.954	13.5600257	2.027	13.5600251	2.074	13.5600246	2.105	± 100
3.80	***20***	***13.5600532***	***0.000***	***13.5600524***	***0.061***	***13.5600518***	***0.106***	***13.5600514***	***0.134***	***± 100***
3.80	10	13.5600828	-2.185	13.5600819	-2.119	13.5600813	-2.072	13.5600809	-2.040	± 100
3.80	0	13.5601072	-3.982	13.5601065	-3.934	13.5601062	-3.906	13.5601061	-3.902	± 100
3.80	-10	13.5601241	-5.228	13.5601238	-5.209	13.5601236	-5.193	13.5601234	-5.181	± 100
3.80	-20	13.5601217	-5.056	13.5601223	-5.099	13.5601227	-5.127	13.5601229	-5.139	± 100
3.23	20	13.5600543	-0.083	13.5600534	-0.017	13.5600525	0.049	13.5600512	0.150	± 100
4.37	20	13.5600532	0.000	13.5600513	0.142	13.5600535	-0.025	13.5600522	0.073	± 100

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	13.5600139	2.944	13.5600142	2.917	13.5600145	2.899	13.5600148	2.878	± 100
3.80	40	13.5600110	3.154	13.5600109	3.164	13.5600109	3.159	13.5600110	3.158	± 100
3.80	30	13.5600259	2.057	13.5600253	2.100	13.5600249	2.130	13.5600248	2.141	± 100
3.80	***20***	***13.5600538***	***0.000***	***13.5600530***	***0.061***	***13.5600524***	***0.105***	***13.5600518***	***0.147***	***± 100***
3.80	10	13.5600819	-2.073	13.5600814	-2.039	13.5600812	-2.021	13.5600810	-2.008	± 100
3.80	0	13.5601043	-3.727	13.5601045	-3.741	13.5601049	-3.769	13.5601054	-3.810	± 100
3.80	-10	13.5601240	-5.177	13.5601239	-5.168	13.5601237	-5.152	13.5601236	-5.150	± 100
3.80	-20	13.5601228	-5.090	13.5601231	-5.109	13.5601229	-5.098	13.5601229	-5.097	± 100
3.23	20	13.5600524	0.099	13.5600469	0.505	13.5600530	0.056	13.5600653	-0.847	± 100
4.37	20	13.5600725	-1.381	13.5600656	-0.872	13.5600603	-0.482	13.5600754	-1.595	± 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	13.5600134	3.443	13.5600137	3.422	13.5600139	3.404	13.5600143	3.379	± 100
3.80	40	13.5600108	3.636	13.5600106	3.650	13.5600105	3.658	13.5600106	3.645	± 100
3.80	30	13.5600263	2.494	13.5600255	2.551	13.5600251	2.579	13.5600250	2.590	± 100
3.80	***20***	***13.5600601***	***0.000***	***13.5600575***	***0.189***	***13.5600550***	***0.372***	***13.5600532***	***0.506***	***± 100***
3.80	10	13.5600831	-1.696	13.5600822	-1.631	13.5600816	-1.587	13.5600812	-1.560	± 100
3.80	0	13.5600930	-2.430	13.5600965	-2.689	13.5601000	-2.943	13.5601031	-3.173	± 100
3.80	-10	13.5601243	-4.735	13.5601240	-4.713	13.5601238	-4.699	13.5601237	-4.691	± 100
3.80	-20	13.5601256	-4.830	13.5601252	-4.802	13.5601245	-4.754	13.5601237	-4.694	± 100
3.23	20	13.5600792	-1.413	13.5600534	0.492	13.5600604	-0.022	13.5600772	-1.259	± 100
4.37	20	13.5600876	-2.032	13.5600660	-0.438	13.5600723	-0.903	13.5600719	-0.872	± 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	13.5600153	2.265	13.5600126	2.460	13.5600111	2.572	13.5600112	2.563	± 100
3.80	40	13.5600111	2.570	13.5600109	2.587	13.5600108	2.594	13.5600108	2.597	± 100
3.80	30	13.5600202	1.901	13.5600189	1.999	13.5600176	2.092	13.5600174	2.105	± 100
3.80	***20***	***13.5600460***	***0.000***	***13.5600436***	***0.177***	***13.5600413***	***0.349***	***13.5600390***	***0.514***	***± 100***
3.80	10	13.5600770	-2.288	13.5600743	-2.084	13.5600714	-1.877	13.5600689	-1.692	± 100
3.80	0	13.5601036	-4.250	13.5601013	-4.078	13.5600991	-3.913	13.5600972	-3.779	± 100
3.80	-10	13.5601216	-5.579	13.5601205	-5.493	13.5601195	-5.420	13.5601188	-5.366	± 100
3.80	-20	13.5601244	-5.780	13.5601248	-5.814	13.5601251	-5.836	13.5601253	-5.851	± 100
3.23	20	13.5600719	-1.907	13.5600649	-1.392	13.5600786	-2.404	13.5600651	-1.411	± 100
4.37	20	13.5600223	1.747	13.5600321	1.027	13.5600428	0.238	13.5600518	-0.429	± 100

TYPE B

848Kbps

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	13.5600143	2.828	13.5600147	2.794	13.5600150	2.770	13.5600153	2.748	± 100
3.80	40	13.5600149	2.782	13.5600140	2.846	13.5600133	2.898	13.5600127	2.940	± 100
3.80	30	13.5600262	1.949	13.5600259	1.970	13.5600257	1.987	13.5600254	2.007	± 100
3.80	***20***	***13.5600526***	***0.000***	***13.5600521***	***0.040***	***13.5600517***	***0.067***	***13.5600515***	***0.081***	***± 100***
3.80	10	13.5600811	-2.104	13.5600805	-2.060	13.5600802	-2.037	13.5600802	-2.034	± 100
3.80	0	13.5601082	-4.098	13.5601079	-4.077	13.5601076	-4.059	13.5601074	-4.040	± 100
3.80	-10	13.5601229	-5.186	13.5601228	-5.179	13.5601228	-5.179	13.5601229	-5.181	± 100
3.80	-20	13.5601220	-5.119	13.5601224	-5.146	13.5601226	-5.165	13.5601228	-5.174	± 100
3.23	20	13.5600499	0.199	13.5600520	0.044	13.5600526	0.001	13.5600522	0.031	± 100
4.37	20	13.5600540	-0.103	13.5600519	0.049	13.5600517	0.063	13.5600515	0.082	± 100

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	13.5600130	2.941	13.5600139	2.880	13.5600146	2.826	13.5600151	2.791	± 100
3.80	40	13.5600262	1.970	13.5600211	2.344	13.5600172	2.632	13.5600145	2.836	± 100
3.80	30	13.5600267	1.933	13.5600259	1.997	13.5600252	2.041	13.5600249	2.069	± 100
3.80	***20***	***13.5600529***	***0.000***	***13.5600522***	***0.051***	***13.5600518***	***0.080***	***13.5600516***	***0.096***	***± 100***
3.80	10	13.5600814	-2.102	13.5600810	-2.068	13.5600808	-2.055	13.5600807	-2.046	± 100
3.80	0	13.5601087	-4.116	13.5601081	-4.071	13.5601077	-4.040	13.5601076	-4.029	± 100
3.80	-10	13.5601116	-4.331	13.5601155	-4.615	13.5601189	-4.867	13.5601215	-5.054	± 100
3.80	-20	13.5601218	-5.076	13.5601222	-5.111	13.5601225	-5.129	13.5601227	-5.147	± 100
3.23	20	13.5600716	-1.380	13.5600444	0.626	13.5600580	-0.372	13.5600615	-0.633	± 100
4.37	20	13.5600614	-0.622	13.5600552	-0.167	13.5600742	-1.567	13.5600733	-1.500	± 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	13.5600143	2.971	13.5600147	2.944	13.5600149	2.927	13.5600152	2.911	± 100
3.80	40	13.5600118	3.158	13.5600115	3.178	13.5600114	3.186	13.5600113	3.194	± 100
3.80	30	13.5600262	2.097	13.5600255	2.152	13.5600251	2.176	13.5600249	2.194	± 100
3.80	***20***	***13.5600546***	***0.000***	***13.5600533***	***0.096***	***13.5600524***	***0.162***	***13.5600518***	***0.205***	***± 100***
3.80	10	13.5600818	-2.003	13.5600814	-1.972	13.5600811	-1.953	13.5600810	-1.947	± 100
3.80	0	13.5601044	-3.669	13.5601053	-3.735	13.5601061	-3.796	13.5601069	-3.854	± 100
3.80	-10	13.5601228	-5.029	13.5601229	-5.031	13.5601230	-5.041	13.5601232	-5.057	± 100
3.80	-20	13.5601216	-4.938	13.5601222	-4.984	13.5601225	-5.006	13.5601226	-5.015	± 100
3.23	20	13.5600126	3.102	13.5600661	-0.844	13.5600625	-0.580	13.5600720	-1.279	± 100
4.37	20	13.5600635	-0.656	13.5600504	0.315	13.5600433	0.839	13.5600552	-0.041	± 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	13.5600147	2.864	13.5600149	2.855	13.5600149	2.854	13.5600150	2.846	± 100
3.80	40	13.5600114	3.107	13.5600114	3.111	13.5600113	3.116	13.5600113	3.121	± 100
3.80	30	13.5600263	2.014	13.5600257	2.058	13.5600253	2.087	13.5600250	2.104	± 100
3.80	***20***	***13.5600536***	***0.000***	***13.5600528***	***0.060***	***13.5600523***	***0.096***	***13.5600520***	***0.118***	***± 100***
3.80	10	13.5600827	-2.148	13.5600820	-2.096	13.5600816	-2.067	13.5600814	-2.050	± 100
3.80	0	13.5601072	-3.958	13.5601069	-3.932	13.5601067	-3.919	13.5601067	-3.917	± 100
3.80	-10	13.5601238	-5.176	13.5601236	-5.162	13.5601235	-5.156	13.5601235	-5.156	± 100
3.80	-20	13.5601222	-5.059	13.5601225	-5.087	13.5601227	-5.095	13.5601227	-5.097	± 100
3.23	20	13.5600896	-2.659	13.5600405	0.965	13.5600223	2.308	13.5600329	1.523	± 100
4.37	20	13.5600979	-3.270	13.5600576	-0.298	13.5600487	0.361	13.5600402	0.988	± 100

TYPE F

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	13.5600142	2.913	13.5600147	2.876	13.5600150	2.853	13.5600153	2.836	± 100
3.80	40	13.5600127	3.029	13.5600124	3.045	13.5600122	3.060	13.5600121	3.073	± 100
3.80	30	13.5600158	2.799	13.5600174	2.678	13.5600192	2.546	13.5600212	2.401	± 100
3.80	***20***	***13.5600537***	***0.000***	***13.5600529***	***0.065***	***13.5600522***	***0.115***	***13.5600518***	***0.142***	***± 100***
3.80	10	13.5600638	-0.743	13.5600679	-1.046	13.5600723	-1.366	13.5600762	-1.659	± 100
3.80	0	13.5601092	-4.089	13.5601084	-4.034	13.5601079	-3.993	13.5601077	-3.982	± 100
3.80	-10	13.5601094	-4.105	13.5601135	-4.404	13.5601170	-4.667	13.5601201	-4.895	± 100
3.80	-20	13.5601217	-5.015	13.5601222	-5.046	13.5601223	-5.059	13.5601224	-5.062	± 100
3.23	20	13.5600738	-1.478	13.5600562	-0.183	13.5600660	-0.903	13.5600865	-2.420	± 100
4.37	20	13.5600809	-2.007	13.5600583	-0.338	13.5600606	-0.508	13.5600790	-1.866	± 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	13.5600142	2.871	13.5600145	2.848	13.5600148	2.830	13.5600149	2.820	± 100
3.80	40	13.5600131	2.955	13.5600129	2.970	13.5600126	2.986	13.5600124	3.001	± 100
3.80	30	13.5600386	1.075	13.5600363	1.245	13.5600337	1.435	13.5600310	1.633	± 100
3.80	***20***	***13.5600531***	***0.000***	***13.5600527***	***0.030***	***13.5600525***	***0.051***	***13.5600523***	***0.060***	***± 100***
3.80	10	13.5600787	-1.883	13.5600789	-1.897	13.5600794	-1.935	13.5600800	-1.984	± 100
3.80	0	13.5601099	-4.184	13.5601089	-4.109	13.5601083	-4.071	13.5601081	-4.053	± 100
3.80	-10	13.5601219	-5.073	13.5601219	-5.067	13.5601221	-5.087	13.5601225	-5.113	± 100
3.80	-20	13.5601215	-5.039	13.5601220	-5.078	13.5601223	-5.101	13.5601224	-5.105	± 100
3.23	20	13.5600678	-0.171	13.5600555	-0.171	13.5600623	-0.674	13.5600780	-1.835	± 100
4.37	20	13.5600449	0.604	13.5600396	0.995	13.5600431	0.742	13.5600670	-1.020	± 100

9.2. READER MODE

ID:	39004	Date:	8/24/16

TYPE A

848Kbps

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	13.5598972	7.065	13.5598947	7.249	13.5598846	7.994	13.5598853	7.942	± 100
3.80	40	13.5599072	6.327	13.5599054	6.460	13.5599043	6.541	13.5599036	6.593	± 100
3.80	30	13.5599722	1.534	13.5599541	2.869	13.5599415	3.798	13.5599314	4.543	± 100
3.80	***20***	***13.5599930***	***0.000***	***13.5599920***	***0.074***	***13.5599870***	***0.442***	***13.5599860***	***0.516***	***± 100***
3.80	10	13.5600121	-1.409	13.5600126	-1.445	13.5600129	-1.468	13.5600132	-1.490	± 100
3.80	0	13.5600381	-3.326	13.5600403	-3.488	13.5600420	-3.614	13.5600432	-3.702	± 100
3.80	-10	13.5600574	-4.749	13.5600602	-4.956	13.5600615	-5.052	13.5600624	-5.118	± 100
3.80	-20	13.5600598	-4.926	13.5600611	-5.022	13.5600623	-5.111	13.5600771	-6.202	± 100
3.23	20	13.5599946	-0.115	13.5599965	-0.258	13.5599987	-0.420	13.5599995	-0.479	± 100
4.37	20	13.5599972	-0.310	13.5600087	-1.158	13.5600098	-1.239	13.5600112	-1.342	± 100

TYPE B

848Kbps

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	13.5598965	6.401	13.5598851	7.242	13.5598833	7.375	13.5598831	7.389	± 100
3.80	40	13.5599084	5.524	13.5599075	5.590	13.5599064	5.671	13.5599057	5.723	± 100
3.80	30	13.5599517	2.330	13.5599423	3.024	13.5599378	3.355	13.5599301	3.923	± 100
3.80	***20***	***13.5599833***	***0.000***	***13.5599797***	***0.265***	***13.5599779***	***0.398***	***13.5599773***	***0.442***	***± 100***
3.80	10	13.5600076	-1.792	13.5600081	-1.829	13.5600084	-1.851	13.5600087	-1.873	± 100
3.80	0	13.5600324	-3.621	13.5600356	-3.857	13.5600366	-3.931	13.5600369	-3.953	± 100
3.80	-10	13.5600625	-5.841	13.5600633	-5.900	13.5600638	-5.937	13.5600642	-5.966	± 100
3.80	-20	13.5600655	-6.062	13.5600698	-6.379	13.5600701	-6.401	13.5600722	-6.556	± 100
3.23	20	13.5599888	-0.406	13.5599906	-0.538	13.5599946	-0.833	13.5599987	-1.136	± 100
4.37	20	13.5599866	-0.243	13.5599907	-0.546	13.5600012	-1.320	13.5600086	-1.866	± 100

TYPE F

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	13.5598874	6.401	13.5598835	6.689	13.5598821	6.792	13.5598815	6.836	± 100
3.80	40	13.5599125	4.550	13.5599104	4.705	13.5599092	4.794	13.5599087	4.830	± 100
3.80	30	13.5599428	2.316	13.5599402	2.507	13.5599281	3.400	13.5599274	3.451	± 100
3.80	***20***	***13.5599742***	***0.000***	***13.5599727***	***0.111***	***13.5599725***	***0.125***	***13.5599722***	***0.147***	***± 100***
3.80	10	13.5599612	0.959	13.5599663	0.583	13.5599995	-1.866	13.5600014	-2.006	± 100
3.80	0	13.5600174	-3.186	13.5600204	-3.407	13.5600233	-3.622	13.5600254	-3.776	± 100
3.80	-10	13.5600501	-5.597	13.5600556	-6.003	13.5600602	-6.342	13.5600618	-6.460	± 100
3.80	-20	13.5600653	-6.718	13.5600661	-6.777	13.5600674	-6.873	13.5600780	-7.655	± 100
3.23	20	13.5599755	-0.096	13.5599816	-0.546	13.5599844	-0.752	13.5599907	-1.217	± 100
4.37	20	13.5599746	-0.029	13.5599821	-0.583	13.5599874	-0.973	13.5599917	-1.291	± 100

10. AC MAINS LINE CONDUCTED EMISSIONS

LIMITS

§15.207
IC RSS-GEN, Section 8.8

(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

EUT is powered by battery. AC line conducted emission is not applicable.