



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

CERTIFICATION TEST REPORT

FOR

CELLULAR PHONE WITH BLUETOOTH AND WLAN RADIOS

MODEL NUMBER: A1660, A1780

**FCC ID: BCG-E3085A
IC: 579C-E3085A**

REPORT NUMBER: 16U233909-E10V4

ISSUE DATE: JULY 28, 2016

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

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



NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	07/13/2016	Initial Issue	Tom Chen
V2	07/21/2016	Address TCB's questions	Tom Chen
V3	07/26/2016	Address TCB's questions	Chin Pang
V4	07/28/2016	Update Section 5.4	Tina Chu

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1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: CELLULAR PHONE WITH BLUETOOTH AND WLAN RADIOS

MODEL: A1660, A1780

SERIAL NUMBER: C7CRP065HCR3

DATE TESTED: FEBRUARY 24, 2016 – MARCH 30, 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:

Prepared By:



CHIN PANG
SENIOR ENGINEER
UL Verification Services Inc.



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:

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

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 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, Model A1660, A1780 is a mobile phone with multimedia functions (music, application support, and video), cellular GSM/GPRS/EGPRS/WCDMA/HSPA+/DC-HSDPA/LTE radio, IEEE 802.11a/b/g/n/ac, NFC and Bluetooth radio. The rechargeable battery is not user accessible
CE mode is NFC Card Emulation Mode

5.2. MAXIMUM OUTPUT POWER

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

Frequency Range (MHz)	Mode	Type	E Field at 30m distance (dBuV/m)
13.56	CE Mode	A	19.27
		B	19.31
		F	20.14
13.56	Reader	A	19.27
		B	19.35
		F	19.35

5.3. SOFTWARE AND FIRMWARE

The test utility software used during testing was NCI UART RTM3 A2 Rev 1.24.

5.4. WORST-CASE CONFIGURATION AND MODE

The fundamental of the EUT was investigated under three orthogonal orientations X (Flatbed), Y (Landscape), and Z (Portrait). The Y (Landscape) orientation was determined to be the worst-case orientation.

The worst case position of the EUT was investigated under two configurations: EUT with power supply, EUT with earphones. The EUT with power supply configuration was determined to be worst-case configurations; therefore, all final tests were performed on the EUT with power supply.

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

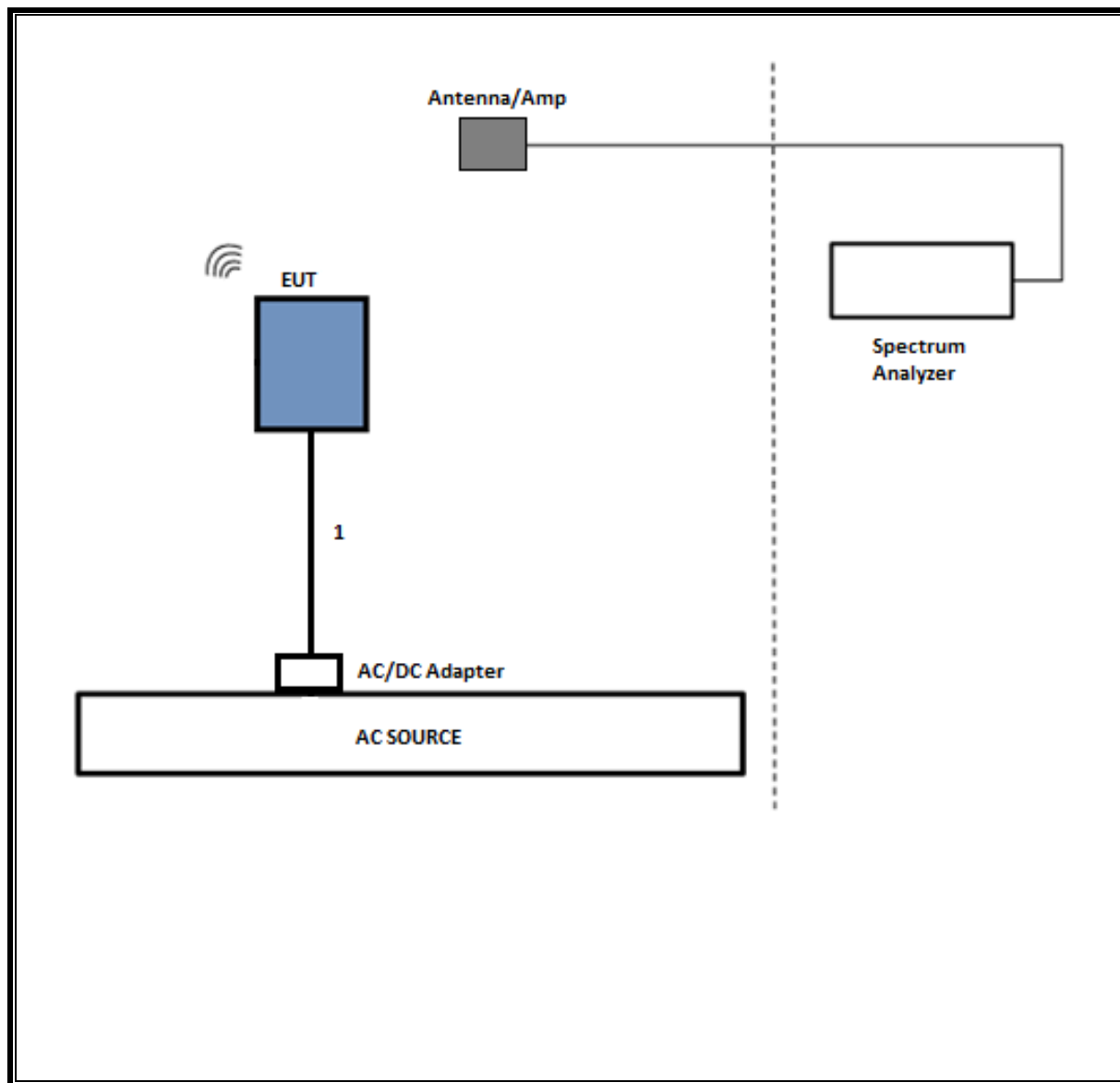
SUPPORT EQUIPMENT

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
EUT AC/DC Adapter	Apple	A1385	D292365B2FQDHLHC7	n/a

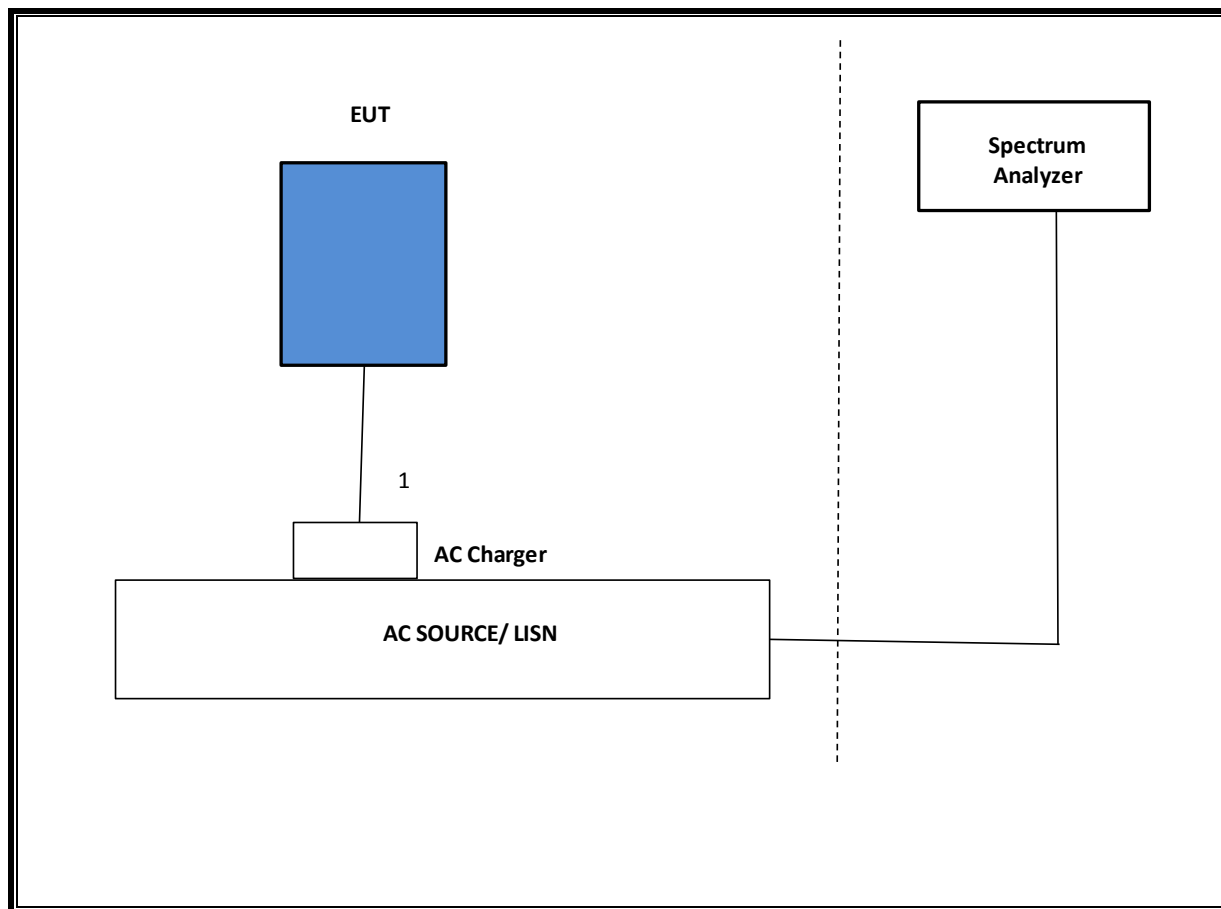
I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB	1	lightning	Un-shielded	1	n/a
2	DC	2	Alligator	18 AWG strand	1	Insulated cable

SETUP DIAGRAM FOR RADIATED TESTS



SETUP DIAGRAM FOR LINE CONDUCTED TESTS



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	Manufacturer	Model	T No.	Cal Due
**Spectrum Analyzer	Agilent	N9030A	906	06/11/16
**Antenna, Broadband Hybrid	Sunol Sciences	JB3	899	04/30/16
**Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	835	06/09/16
**Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	834	06/08/16
**Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	906	06/11/16
**Antenna, Loop, 30 MHz	ETS Lindgren	6502	757	05/21/16
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
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	212	08/07/16
LISN for Conducted Emissions CISPR-16	FCC	LISN-50/250-25-2	24	09/16/16
Line conducted Power cable ANSI 63.4	UL	PG1	861	07/28/16
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	
*AC Line Conducted Software	UL	UL EMC	Ver 9.5, April 3, 2015	

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

**Testing is completed before equipment expiration date.

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:	42497	Date:	3/15/16
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99% and 20dB BW

CE Mode

Moduation	Frequency (MHz)	Data Rate (Kbps)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
Type A	13.56	848	21.418	29.47
		424	21.378	28.49
		212	21.382	28.61
		106	21.481	28.46

Moduation	Frequency (MHz)	Data Rate (Kbps)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
Type B	13.56	848	21.594	28.57
		424	21.825	28.58
		212	21.304	28.26
		106	22.531	31.19

Moduation	Frequency (MHz)	Data Rate (Kbps)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
Type F	13.56	424	21.621	28.60
		212	21.494	28.42

READER

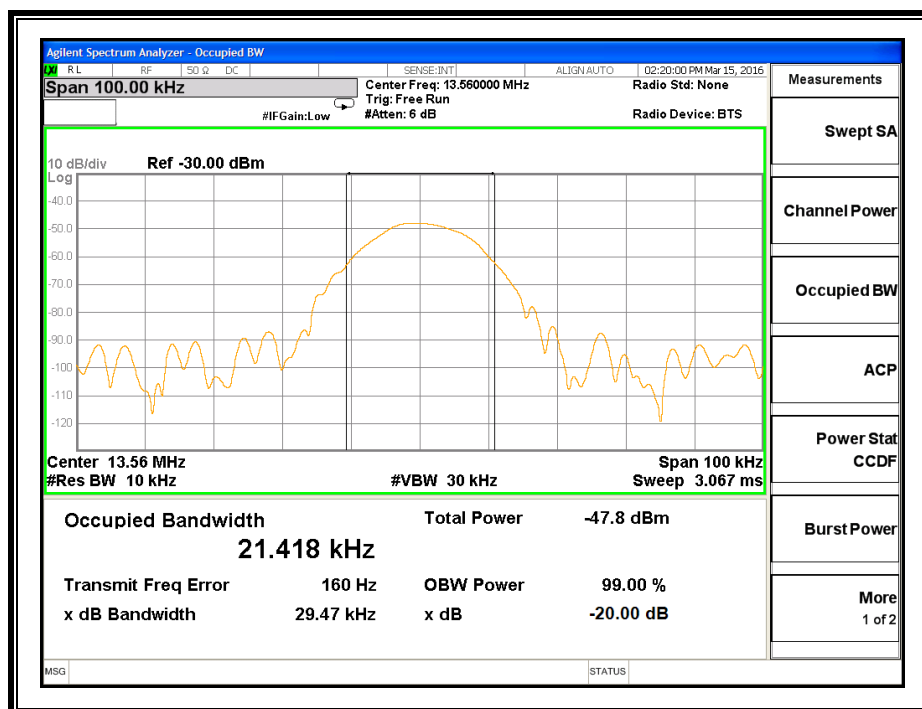
Moduation	Frequency (MHz)	Data Rate (Kbps)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
Type A	13.56	848	21.592	28.50
		424	22.004	30.94
		212	21.672	29.68
		106	23.271	33.23

Moduation	Frequency (MHz)	Data Rate (Kbps)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
Type B	13.56	848	22.217	28.62
		424	22.455	34.32
		212	21.596	30.13
		106	22.531	31.19

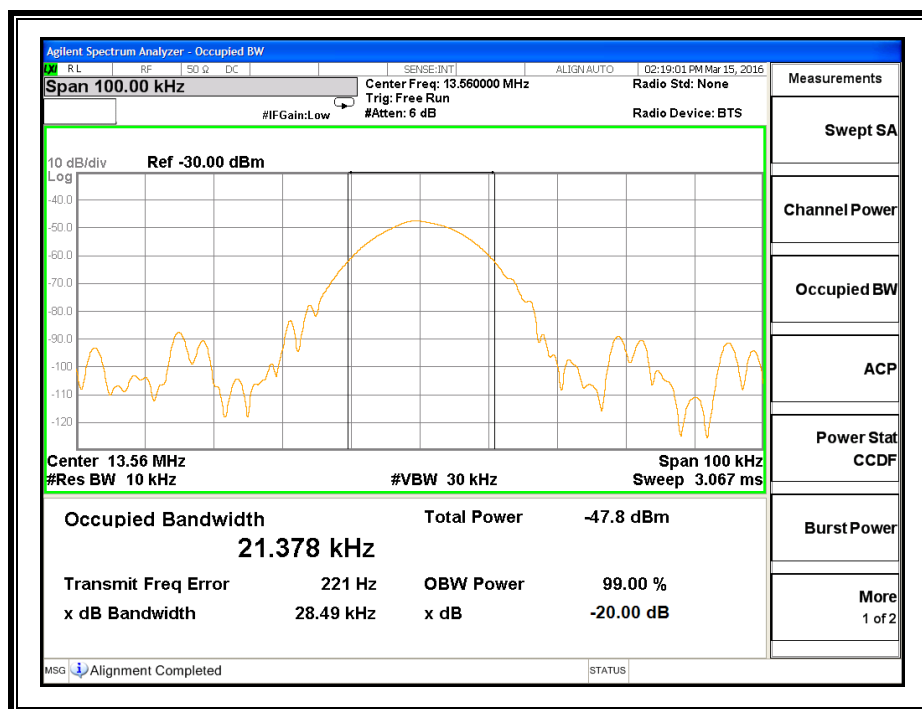
Moduation	Frequency (MHz)	Data Rate (Kbps)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
Type F	13.56	424	21.460	28.34
		212	21.146	28.12

7.1. CE MODE

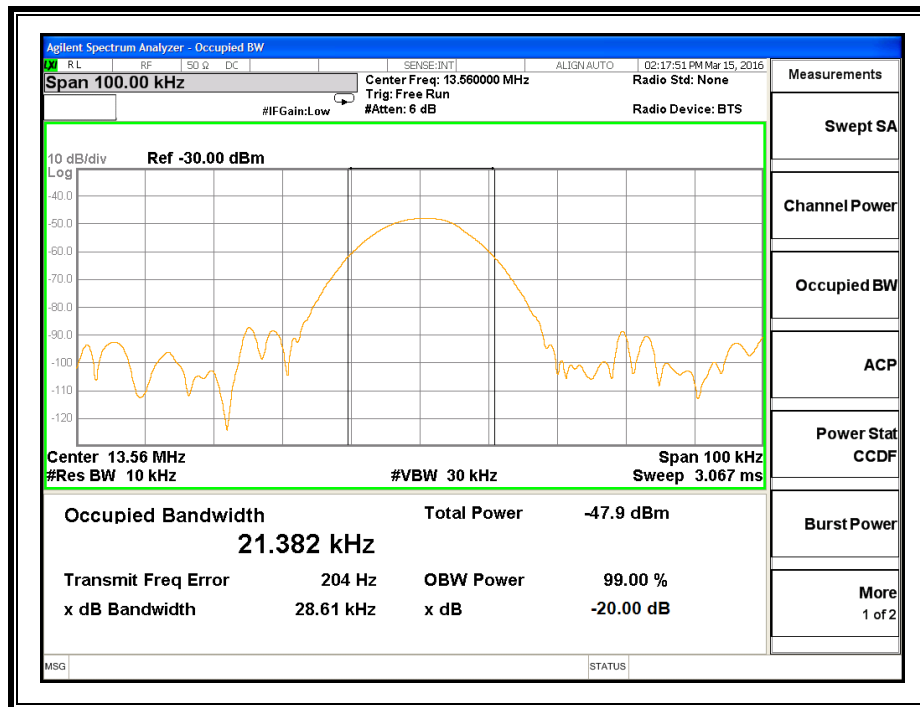
Type A, 848Kbps



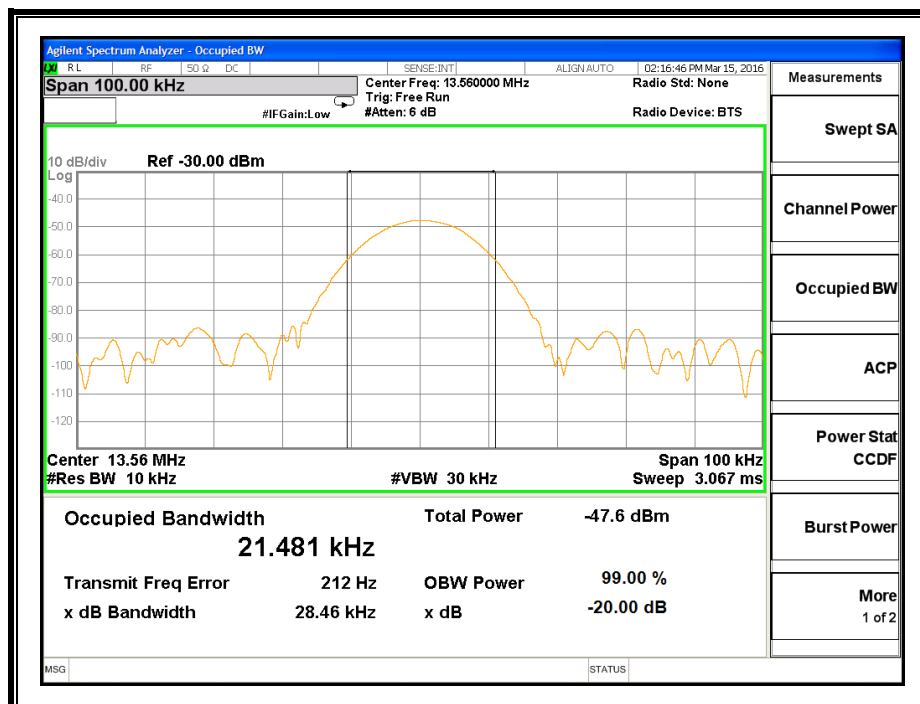
424Kbps



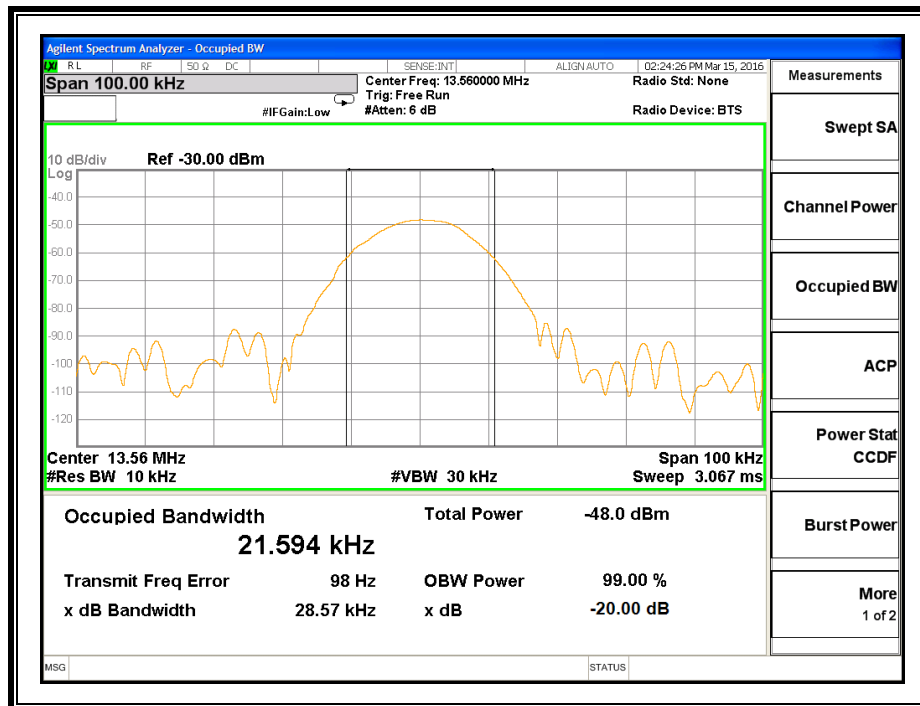
212Kbps



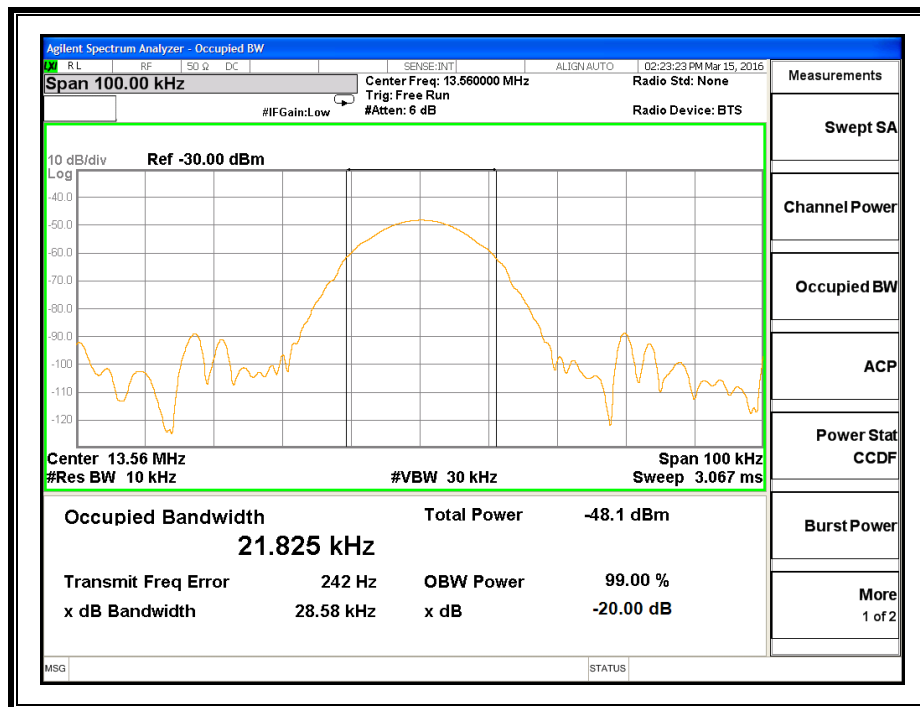
106Kbps



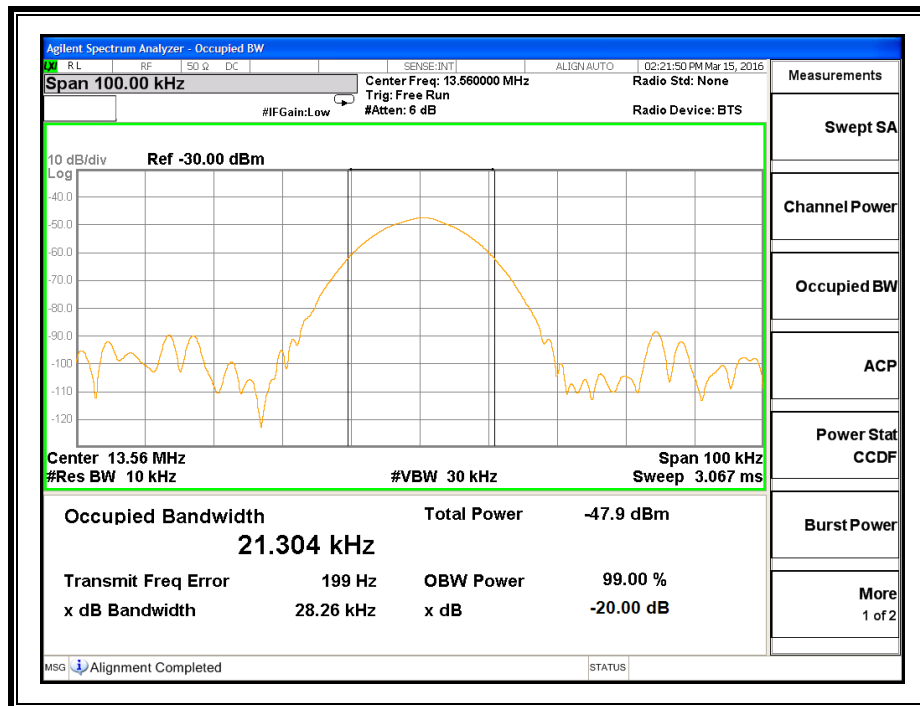
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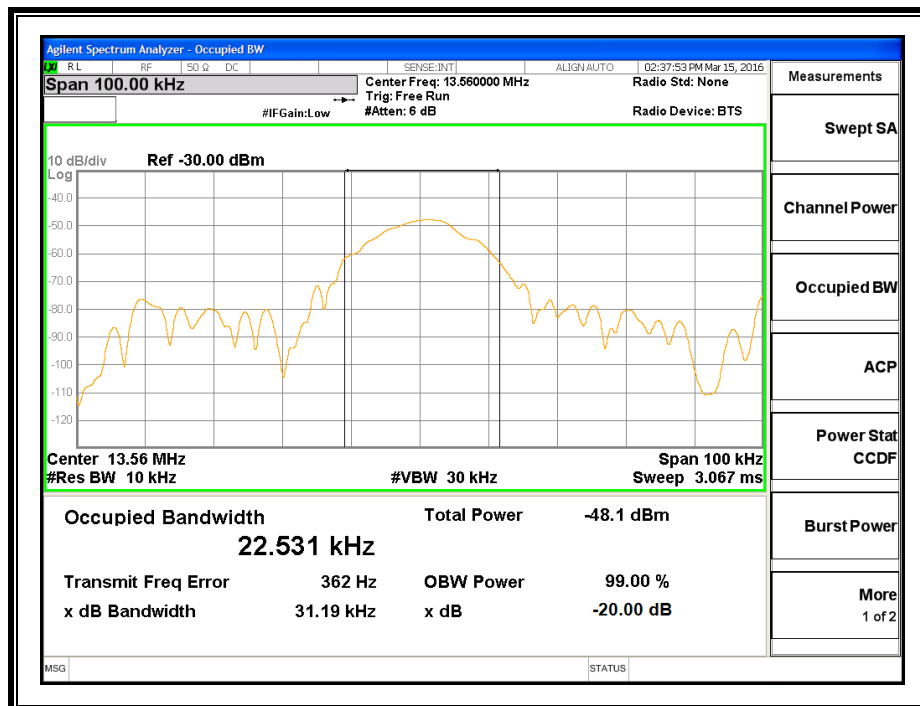
424Kbps



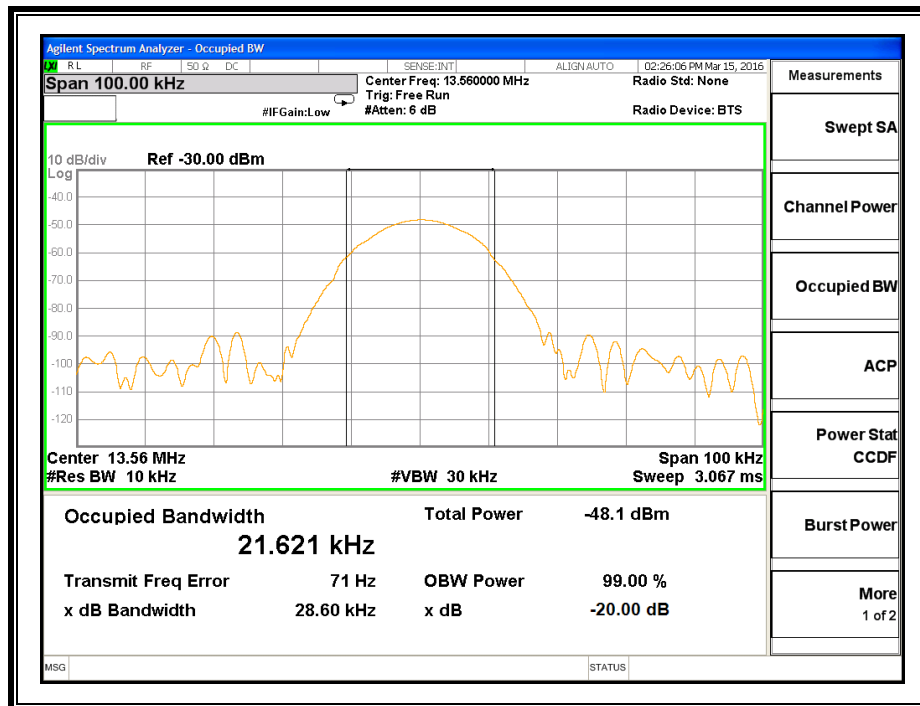
212Kbps



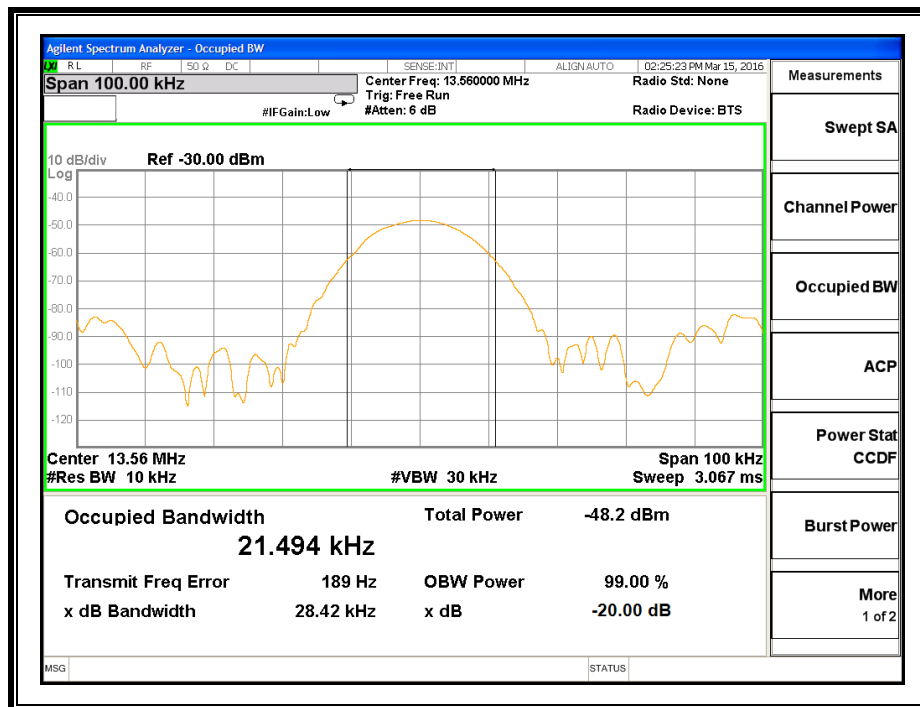
106Kbps



TYPE F, 424Kbps

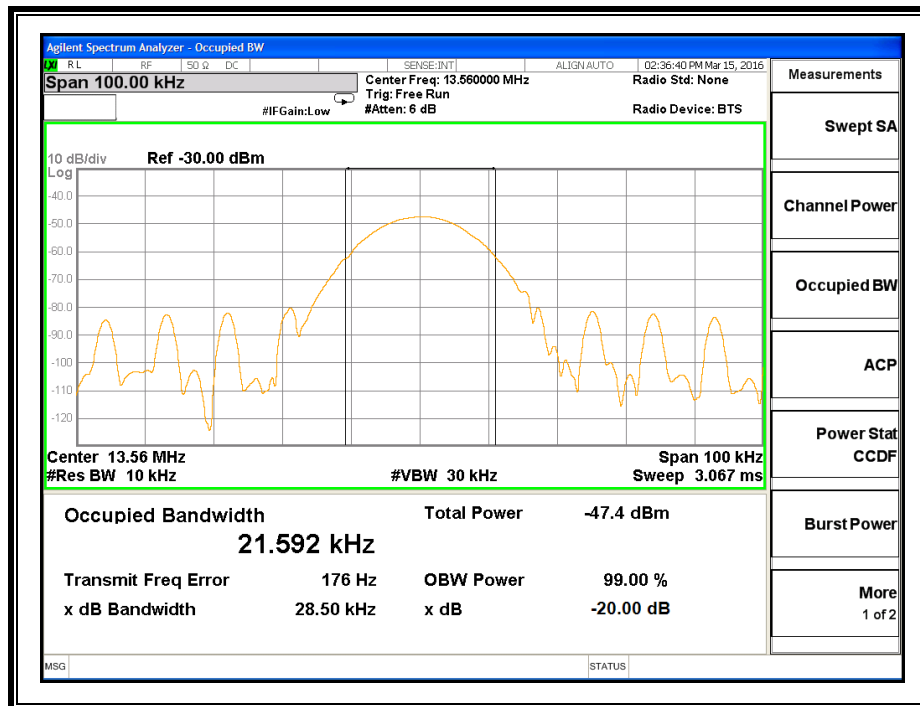


212Kbps

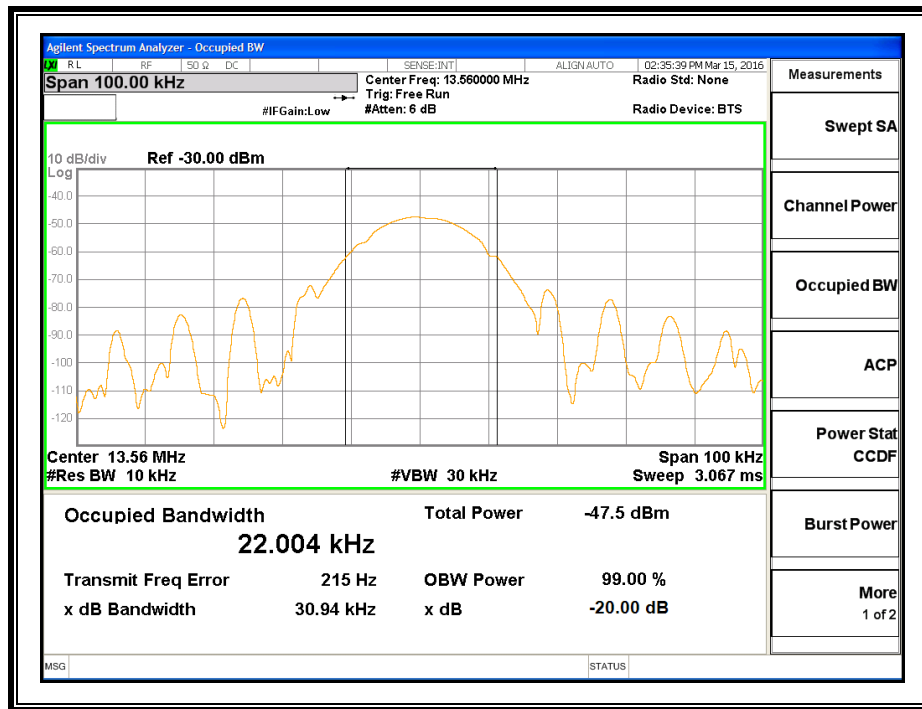


7.2. READER

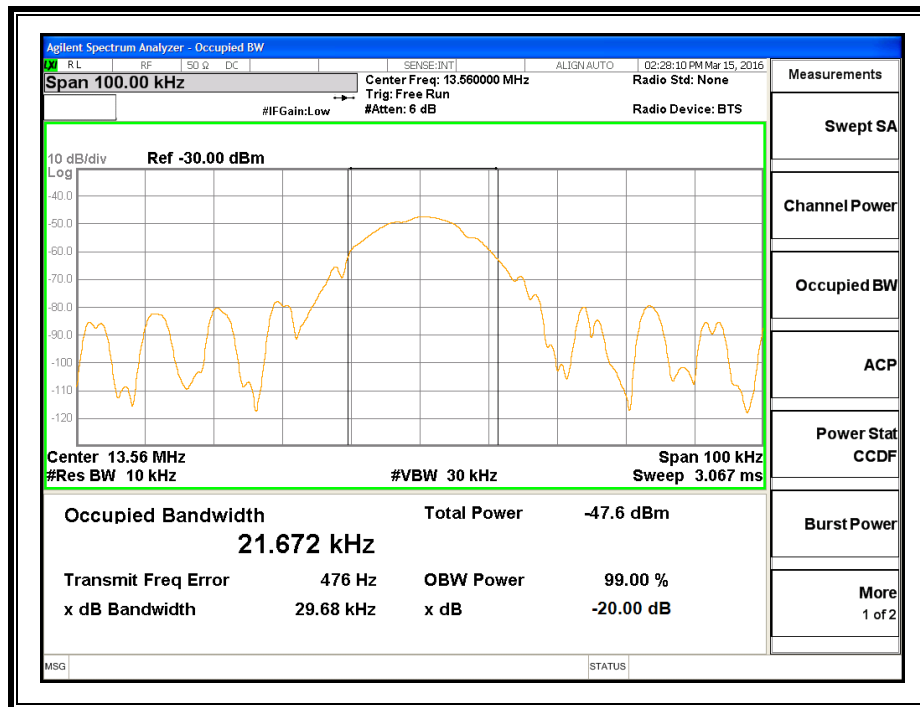
Type A, 848Kbps



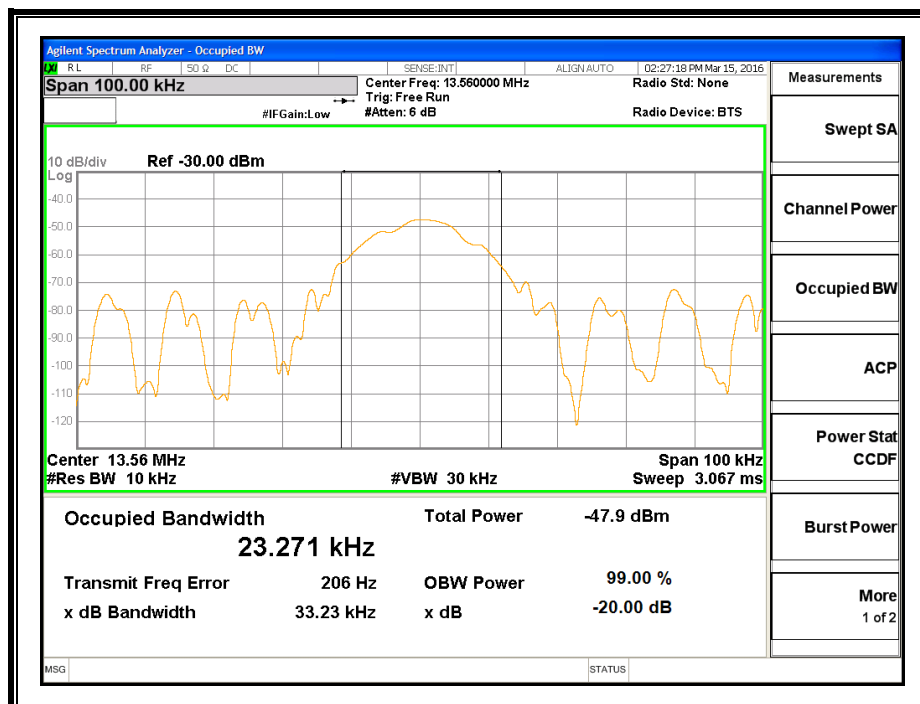
424Kbps



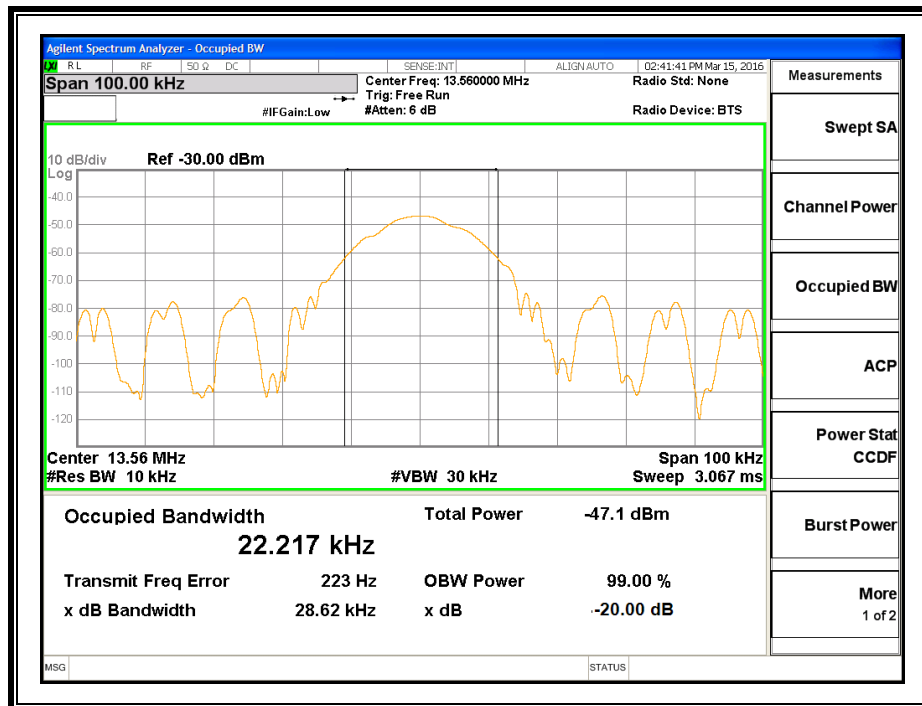
212Kbps



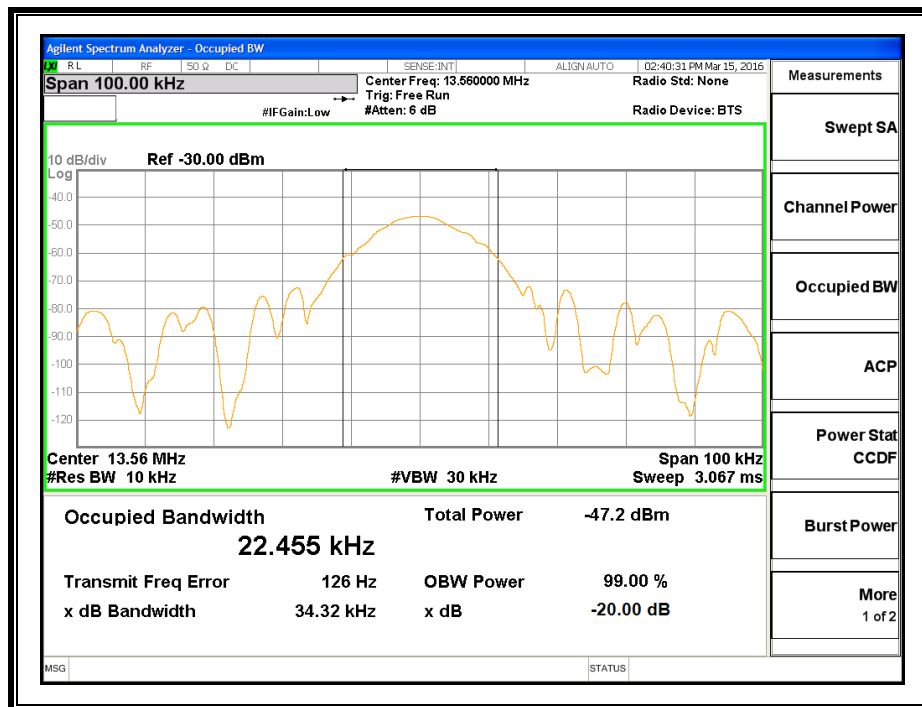
106Kbps



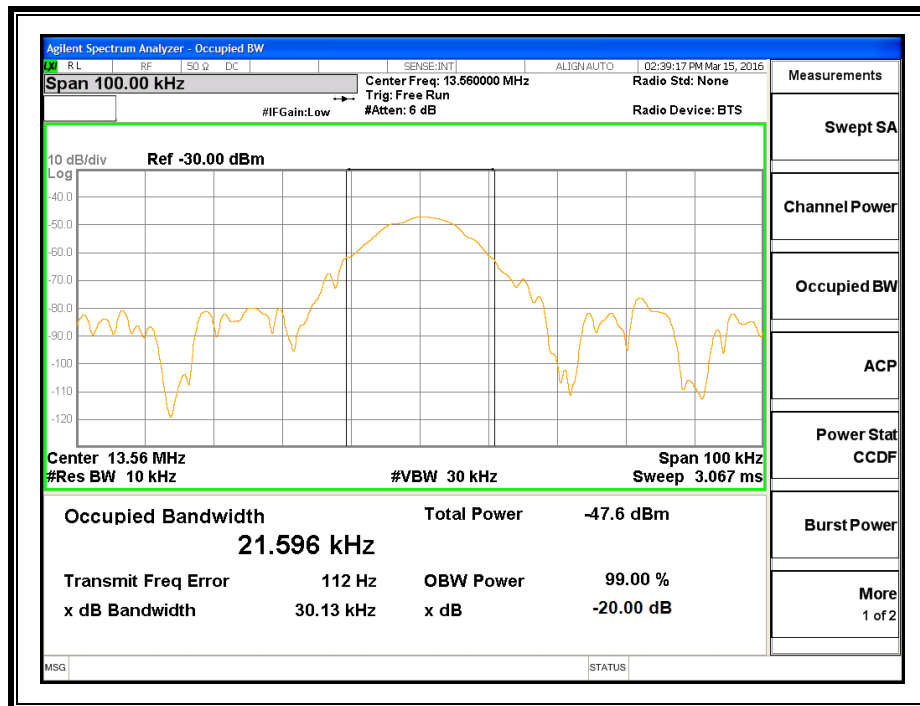
Type B, 848Kbps



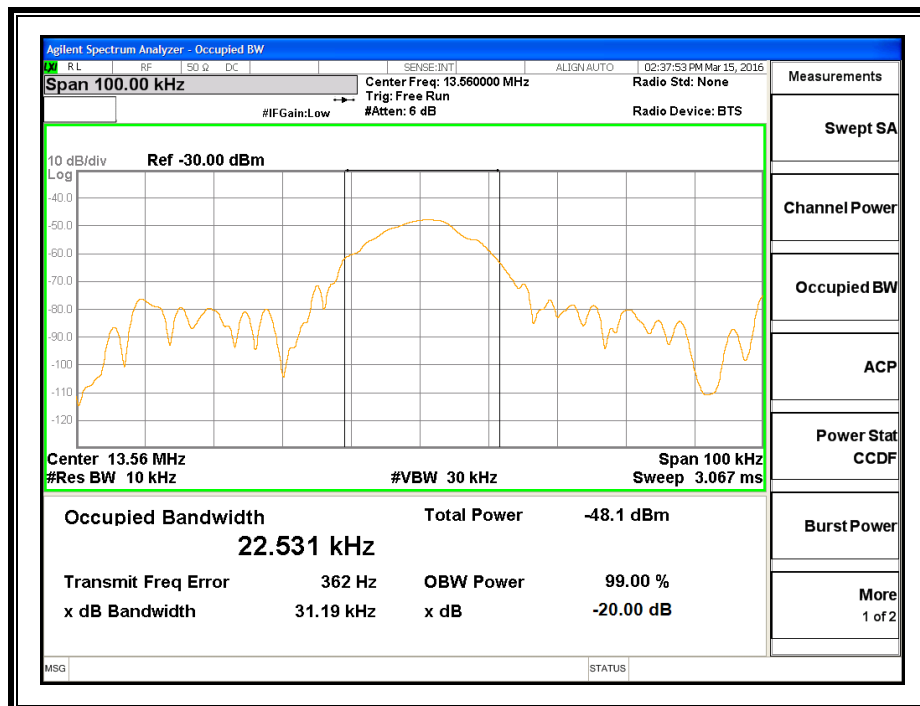
424Kbps



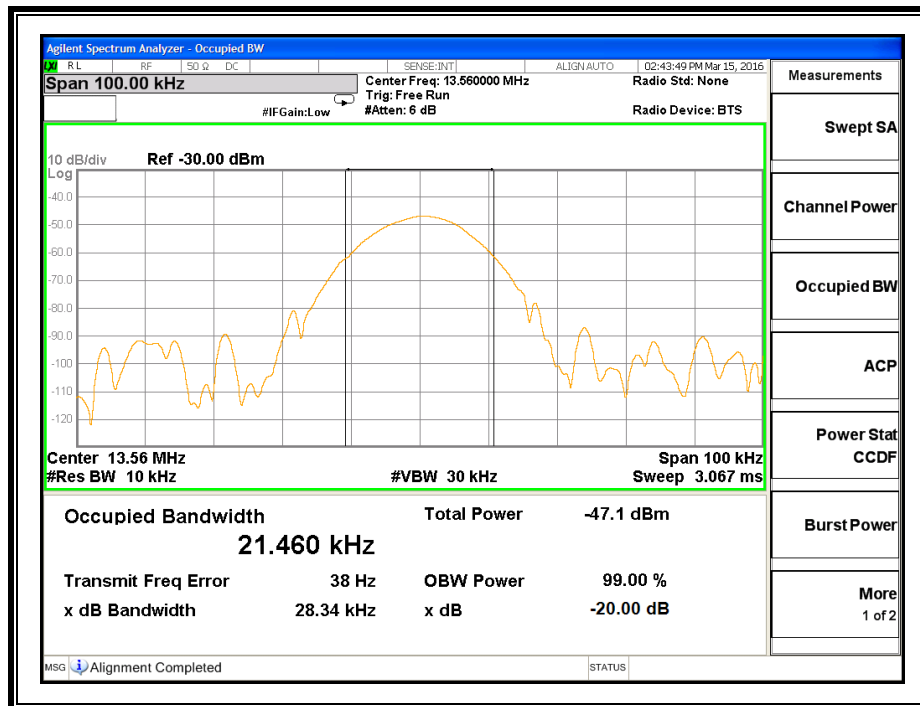
212Kbps



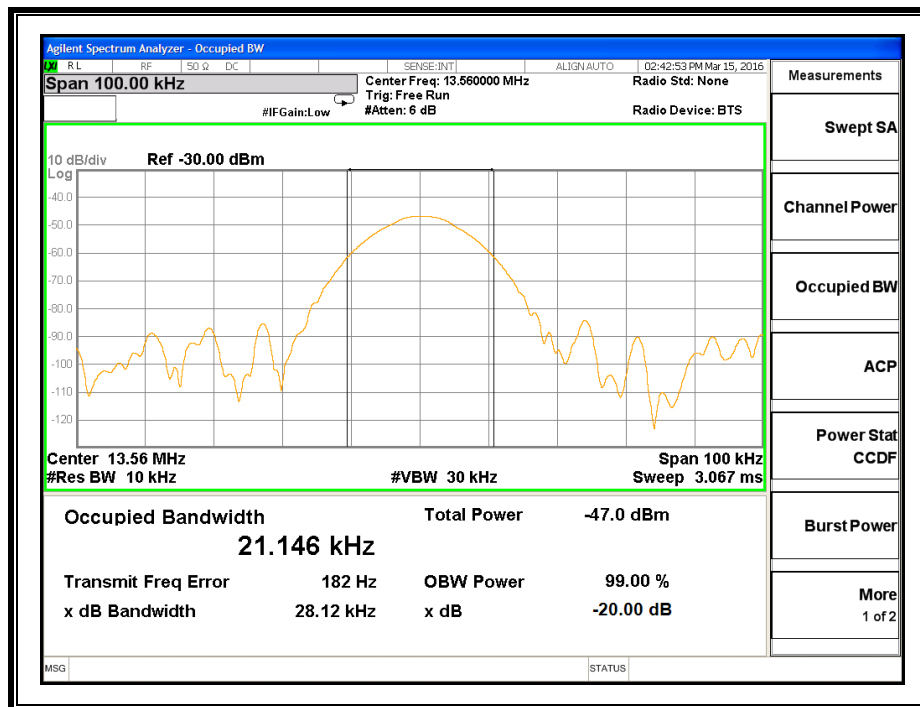
106Kbps



TYPE F, 424Kbps



212Kbps



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 field 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

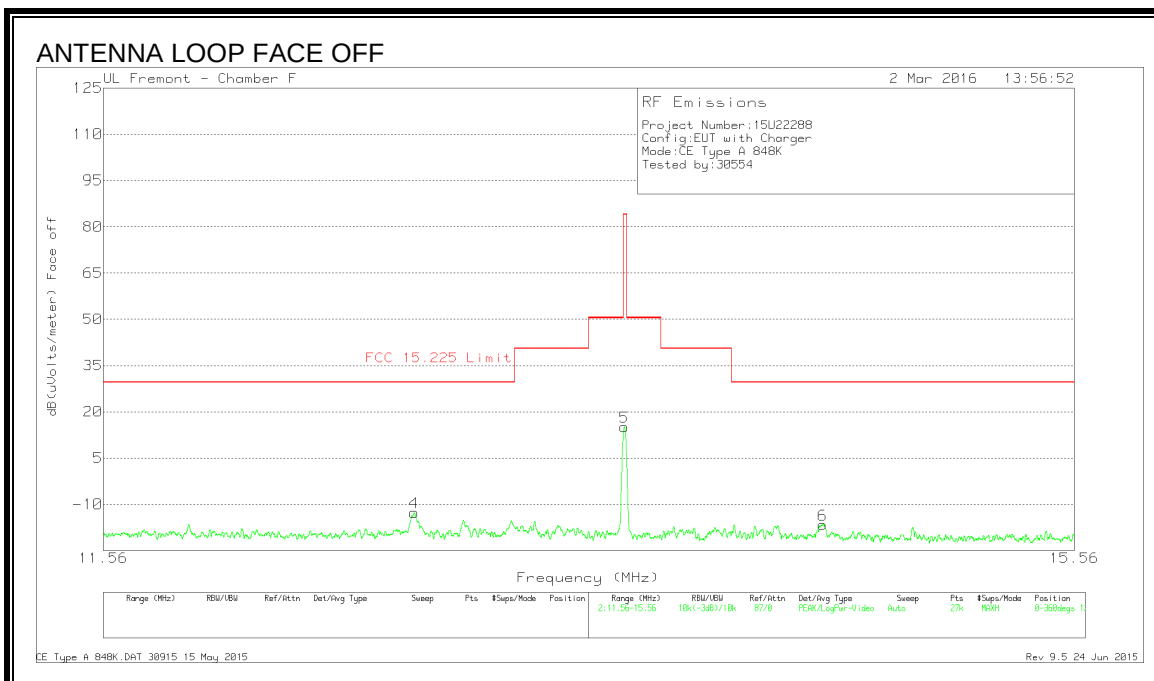
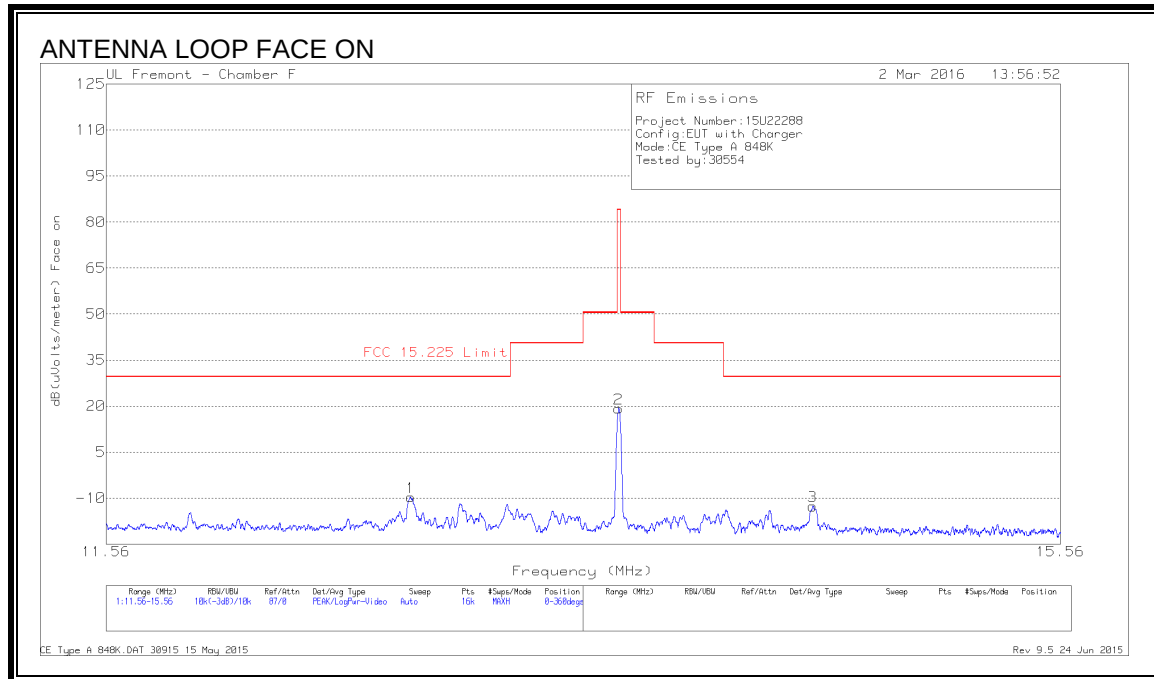
The EUT is an intentional radiator that incorporates a digital device, the highest fundamental frequency generated or used in the device is 13.56 MHz; therefore, the frequency range was investigated from 0.15 MHz to the 10th harmonic of the highest fundamental frequency, or 1000 MHz, whichever is greater.

RESULTS

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

8.2.1. CE MODE

TYPE A 848Kbps

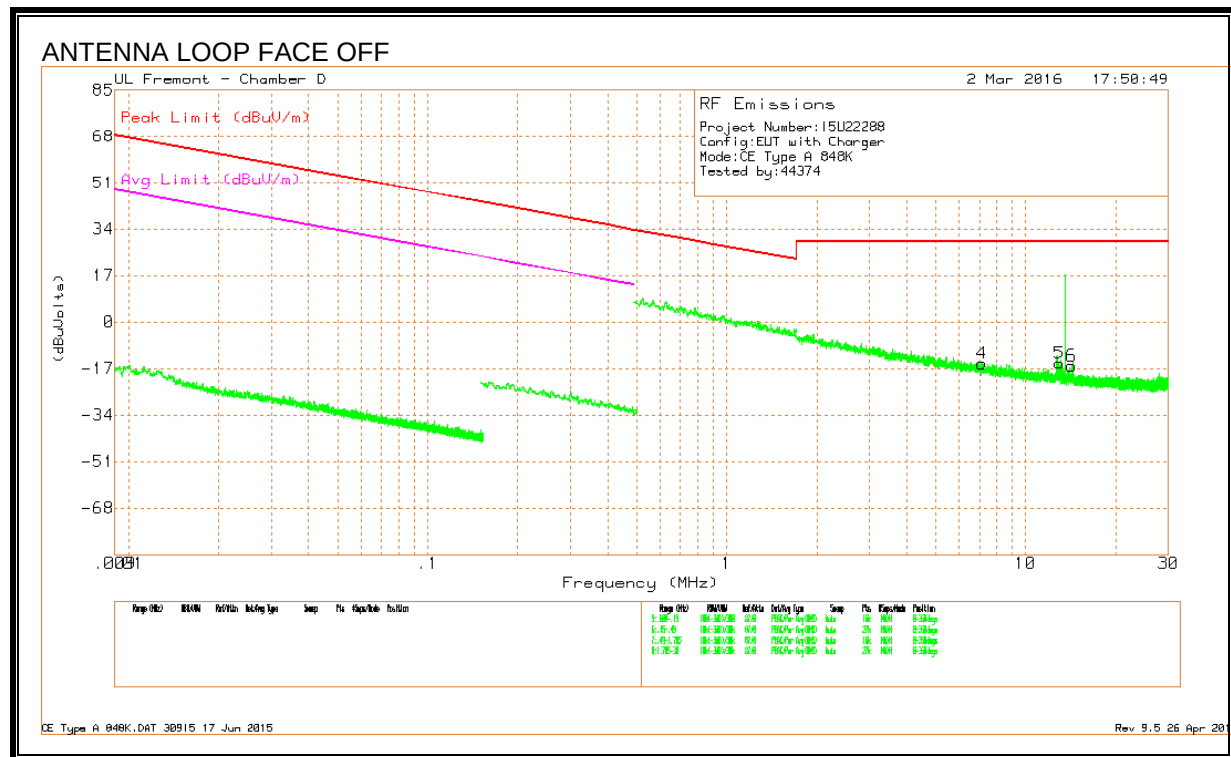
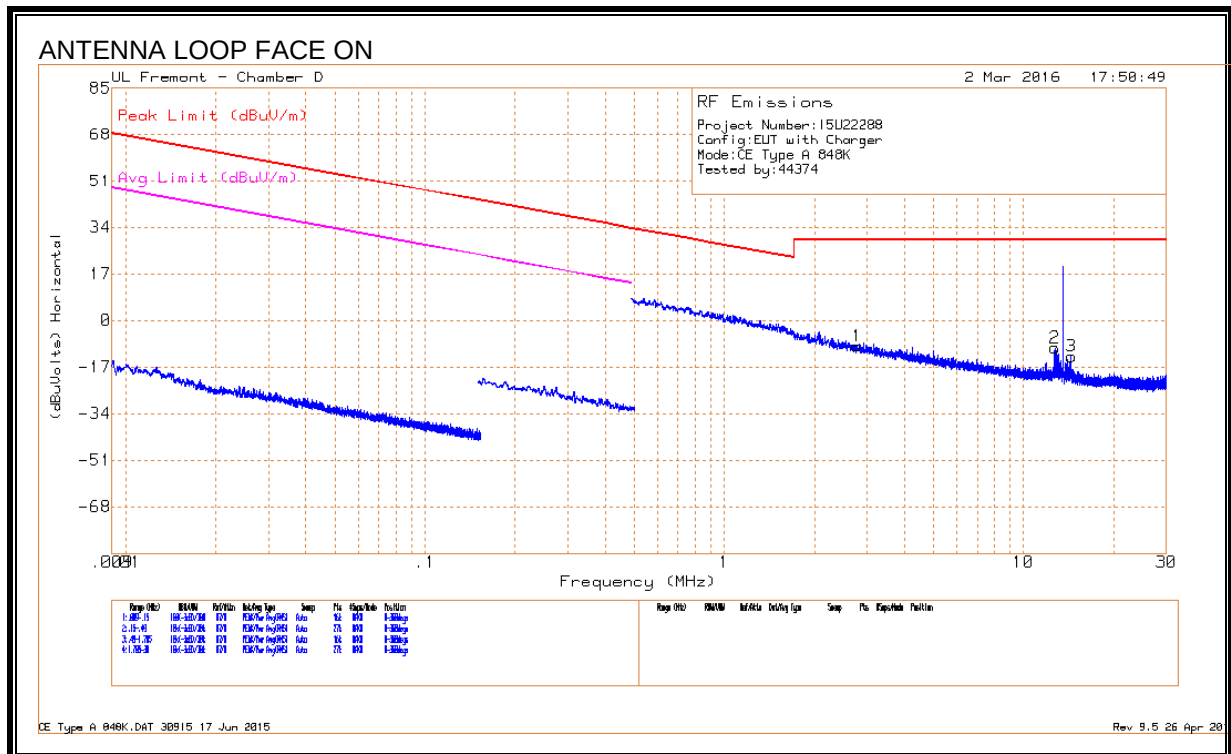


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	12.71	19.51	Pk	10.4	.4	-40	-9.69	29.54	-39.23	0-360
2	13.559	48.36	Pk	10.4	.4	-40	19.16	84	-64.84	0-360
3	14.40475	16.65	Pk	10.3	.4	-40	-12.65	29.54	-42.19	0-360
4	12.71307	16.52	Pk	10.4	.4	-40	-12.68	29.54	-42.22	0-360
5	13.55822	44.31	Pk	10.4	.4	-40	15.11	84	-68.89	0-360
6	14.40685	12.65	Pk	10.3	.4	-40	-16.65	29.54	-46.19	0-360

Pk - Peak detector

SPURIOUS EMISSION

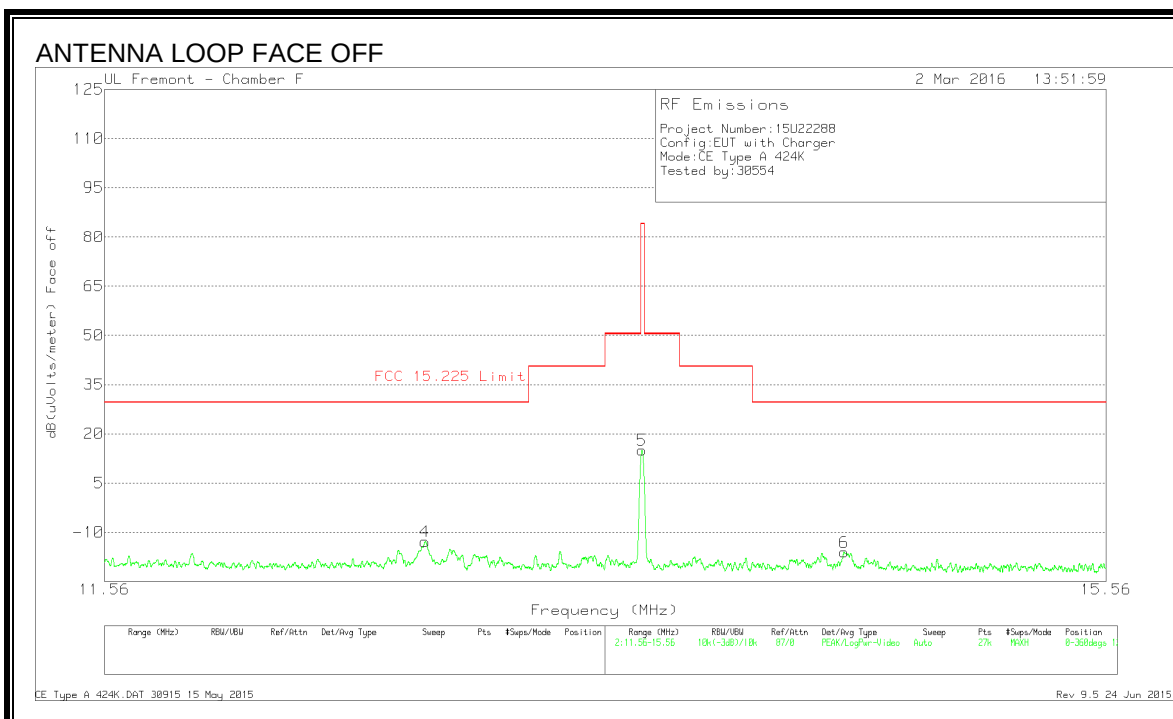
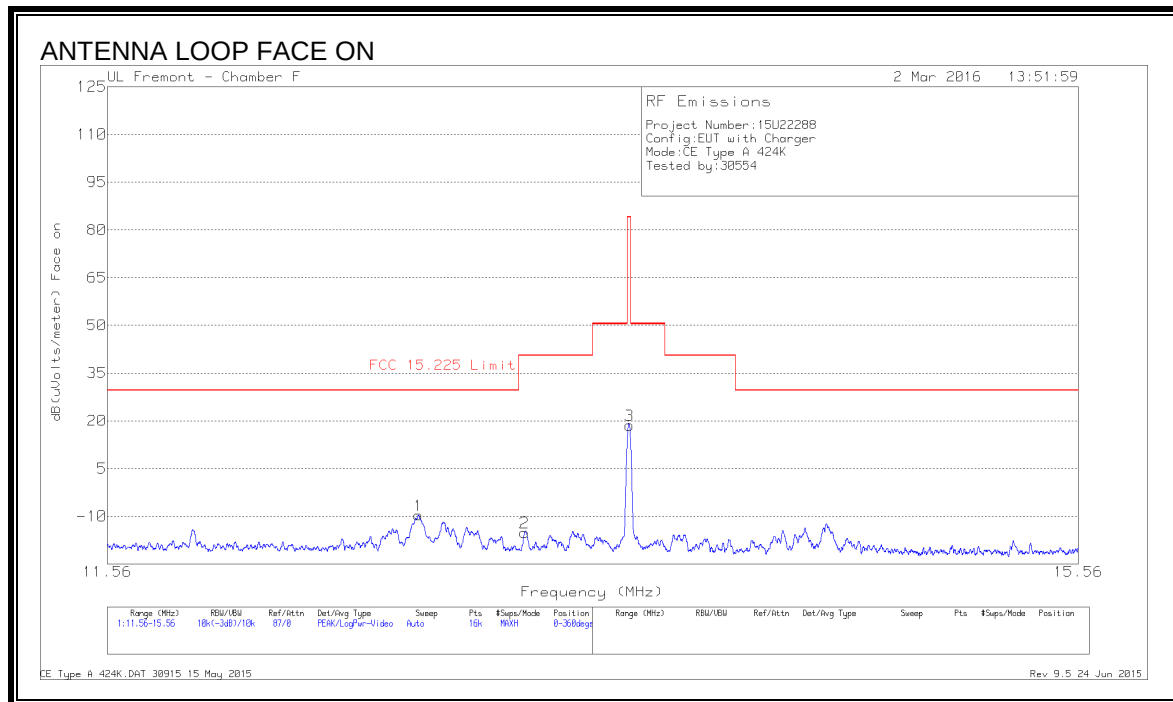


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts/meter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	2.77239	19.77	Pk	10.8	.2	-40	-9.23	29.54	-38.77	-	-	0-360
4	7.13888	13.81	Pk	10.9	.3	-40	-14.99	29.54	-44.53	-	-	0-360
2	12.7100	18.95	Pk	10.7	.4	-40	-9.95	29.54	-39.49	-	-	0-360
5	12.9060	14.01	Pk	10.7	.4	-40	-14.89	29.54	-44.43	-	-	0-360
6	14.2155	13.05	Pk	10.6	.4	-40	-15.95	29.54	-45.49	-	-	0-360
3	14.4141	16	Pk	10.6	.4	-40	-13	29.54	-42.54	-	-	0-360

Pk - Peak detector

424Kbps FUNDAMENTAL

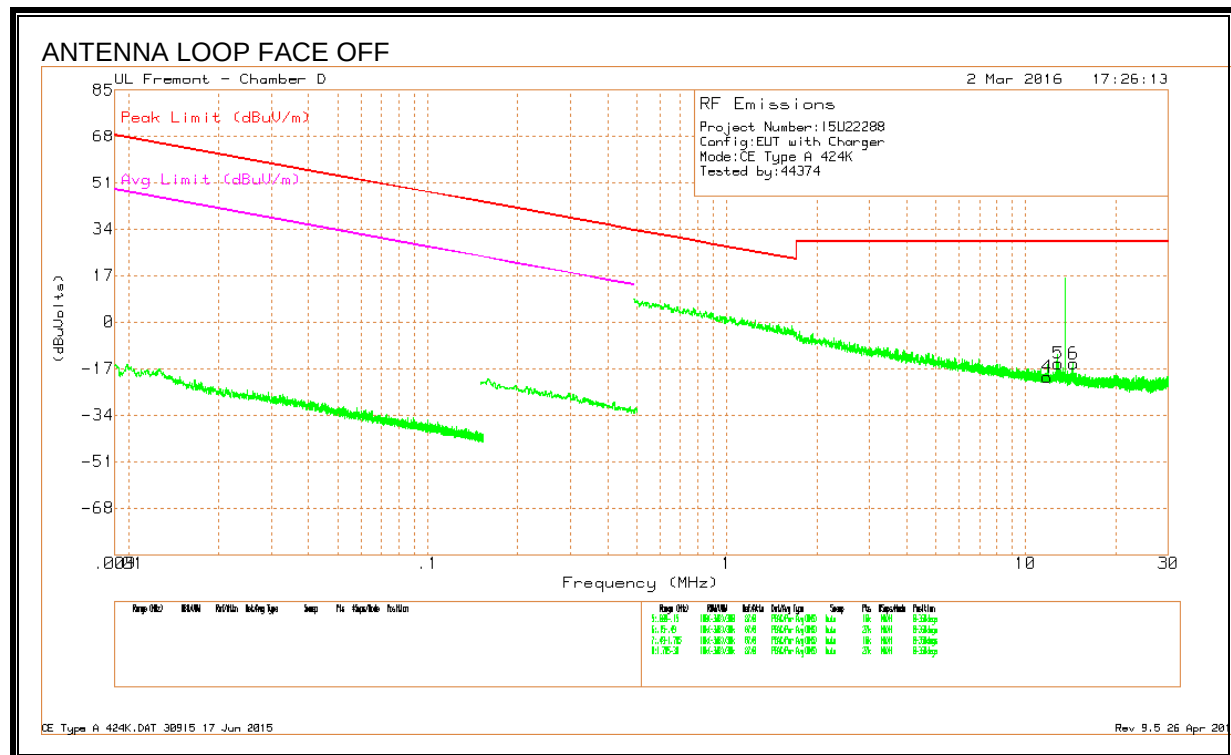
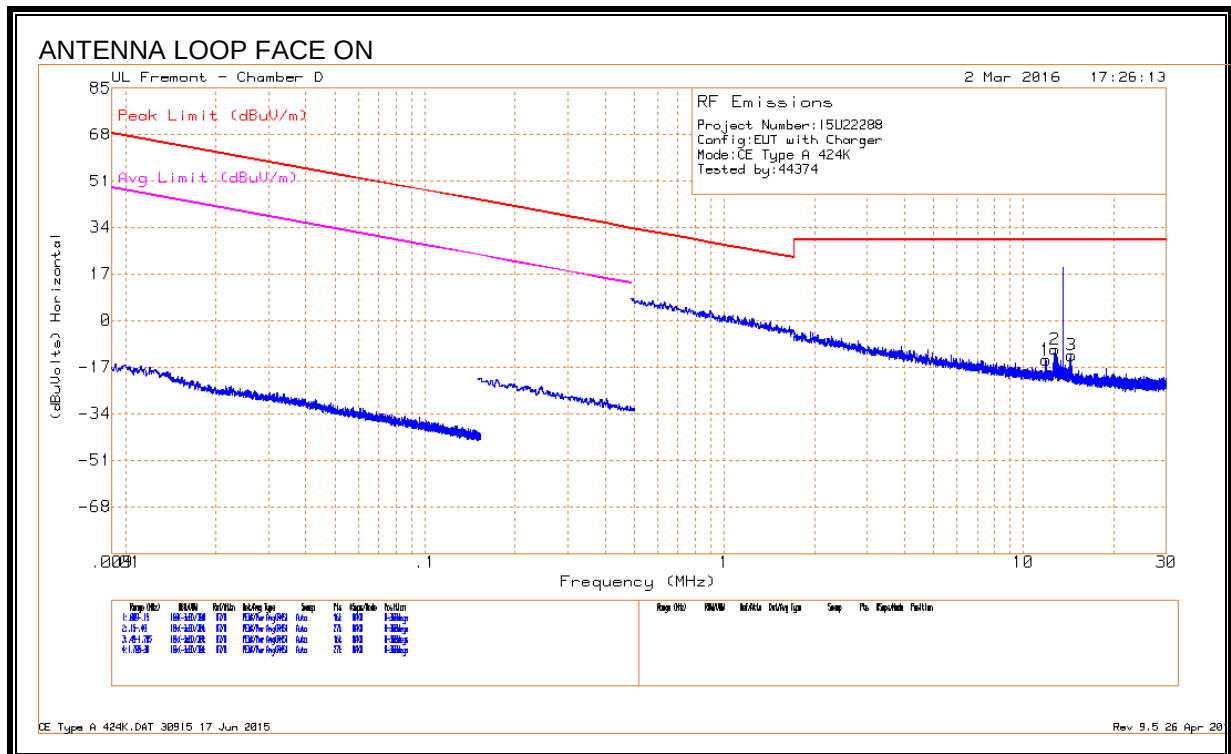


DATA

Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	12.71488	19.49	Pk	10.4	.4	-40	-9.71	29.54	-39.25	0-360
2	13.134	14.05	Pk	10.4	.4	-40	-15.15	40.51	-55.66	0-360
3	13.56275	47.77	Pk	10.4	.4	-40	18.57	84	-65.43	0-360
4	12.71299	16.34	Pk	10.4	.4	-40	-12.86	29.54	-42.4	0-360
5	13.55837	44.21	Pk	10.4	.4	-40	15.01	84	-68.99	0-360
6	14.39664	13.22	Pk	10.3	.4	-40	-16.08	29.54	-45.62	0-360

Pk - Peak detector

SPURIOUS EMISSION

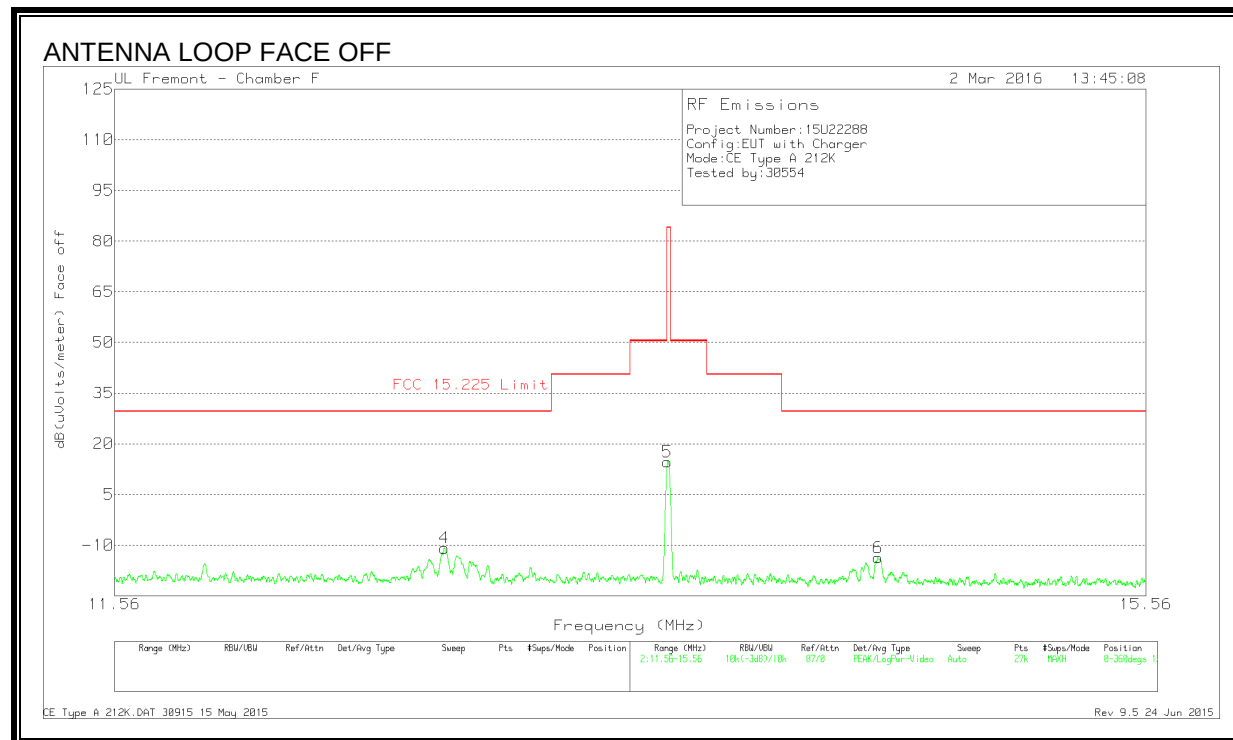
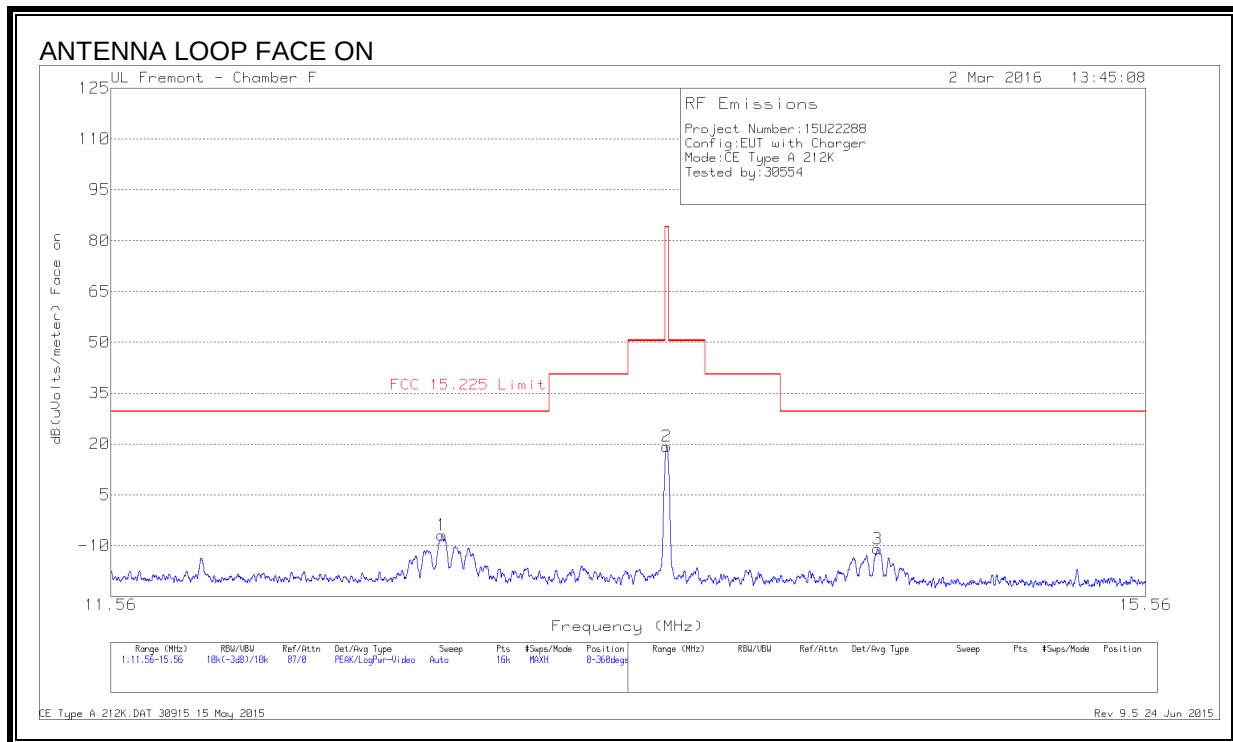


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts/meter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
4	11.815	8.81	Pk	10.7	.4	-40	-20.09	29.54	-49.63	-	-	0-360
1	11.866	14.52	Pk	10.7	.4	-40	-14.38	29.54	-43.92	-	-	0-360
2	12.712	18.46	Pk	10.7	.4	-40	-10.44	29.54	-39.98	-	-	0-360
5	12.823	13.84	Pk	10.7	.4	-40	-15.06	29.54	-44.6	-	-	0-360
3	14.406	16.4	Pk	10.6	.4	-40	-12.6	29.54	-42.14	-	-	0-360
6	14.407	13.88	Pk	10.6	.4	-40	-15.12	29.54	-44.66	-	-	0-360

Pk - Peak detector

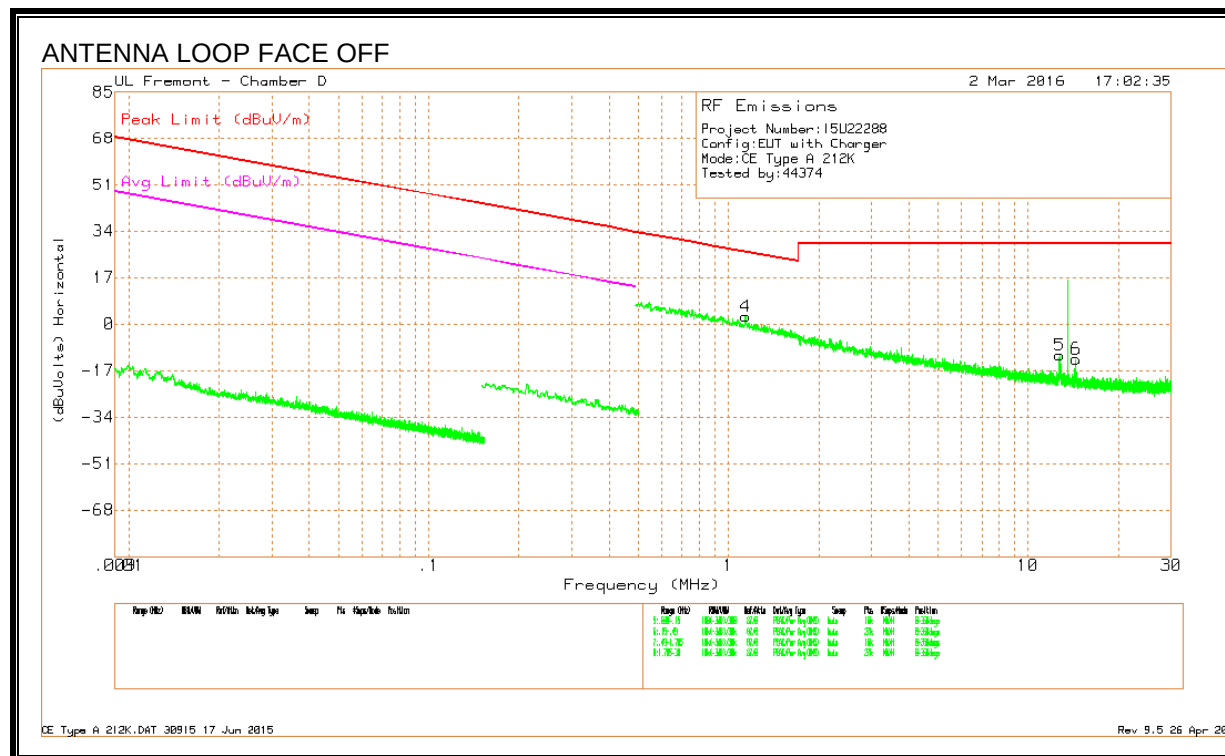
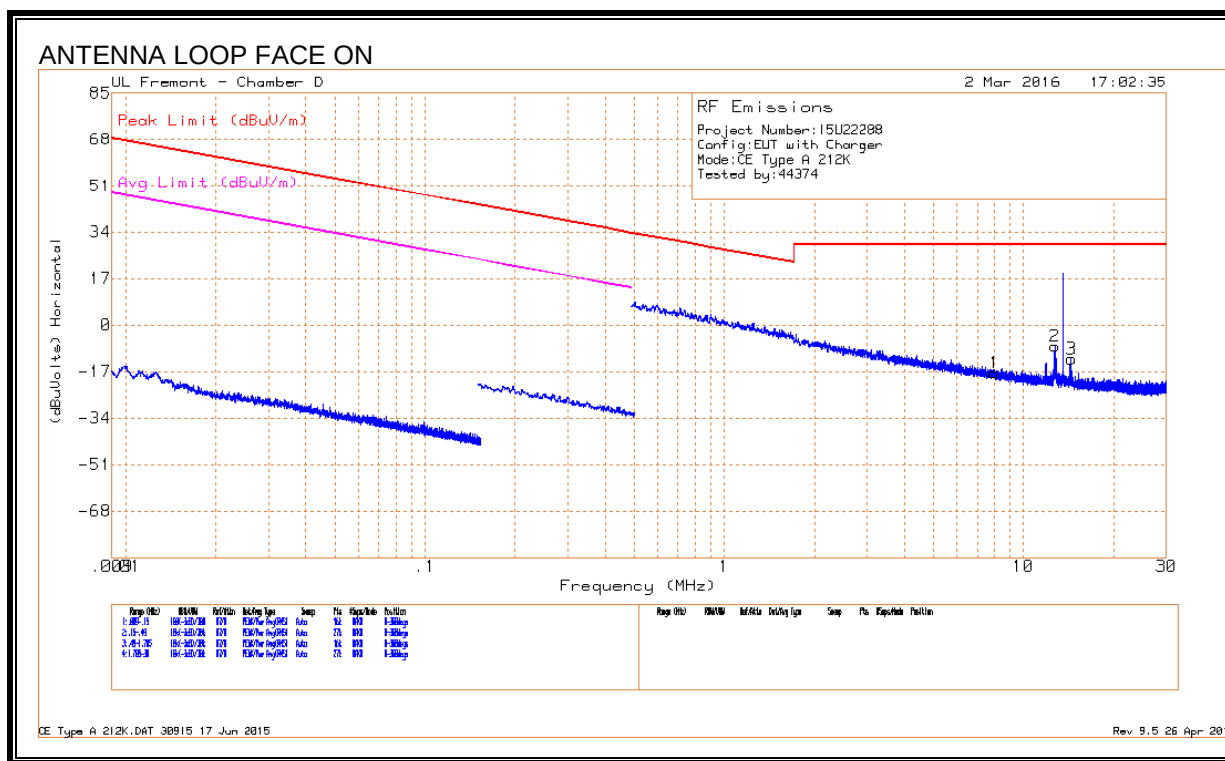
212Kbps FUNDAMENTAL



DATA

Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	12.71313	22.33	Pk	10.4	.4	-40	-6.87	29.54	-36.41	0-360
2	13.5605	48.47	Pk	10.4	.4	-40	19.27	84	-64.73	0-360
3	14.40663	18.33	Pk	10.3	.4	-40	-10.97	29.54	-40.51	0-360
4	12.71248	18.35	Pk	10.4	.4	-40	-10.85	29.54	-40.39	0-360
5	13.55637	43.85	Pk	10.4	.4	-40	14.65	84	-69.35	0-360
6	14.40397	15.6	Pk	10.3	.4	-40	-13.7	29.54	-43.24	0-360

Pk - Peak detector

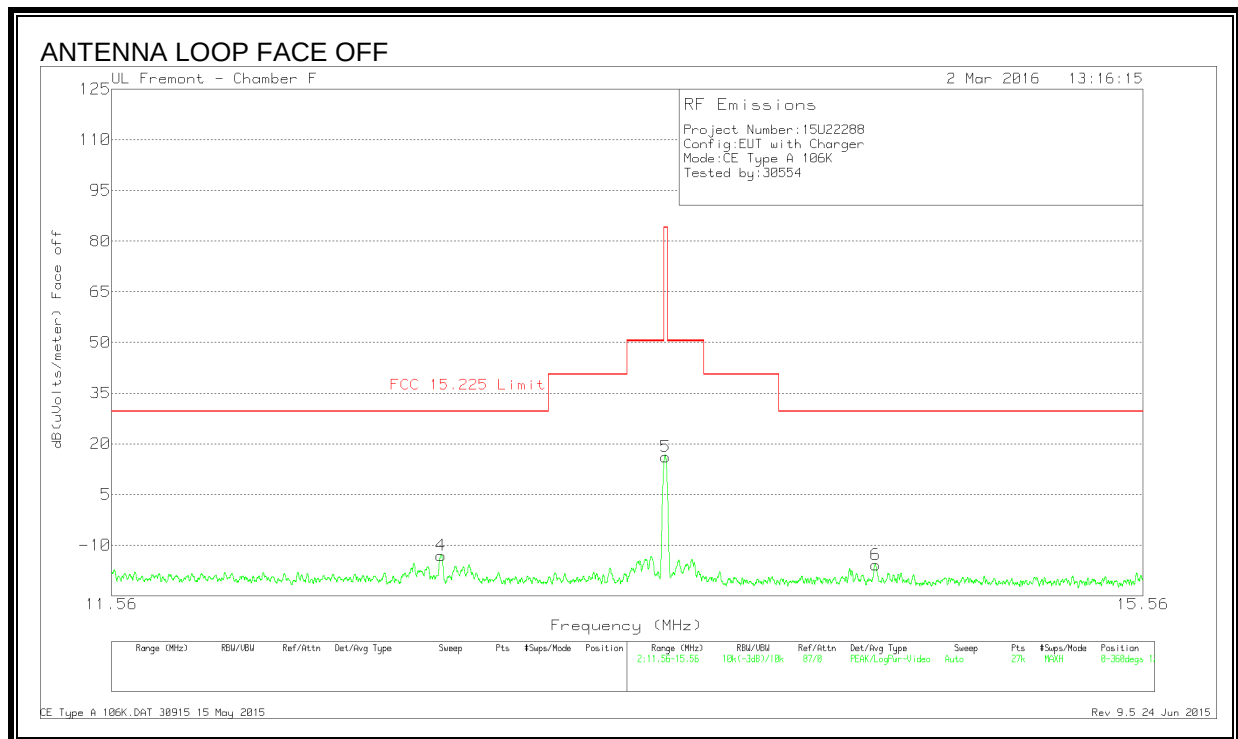
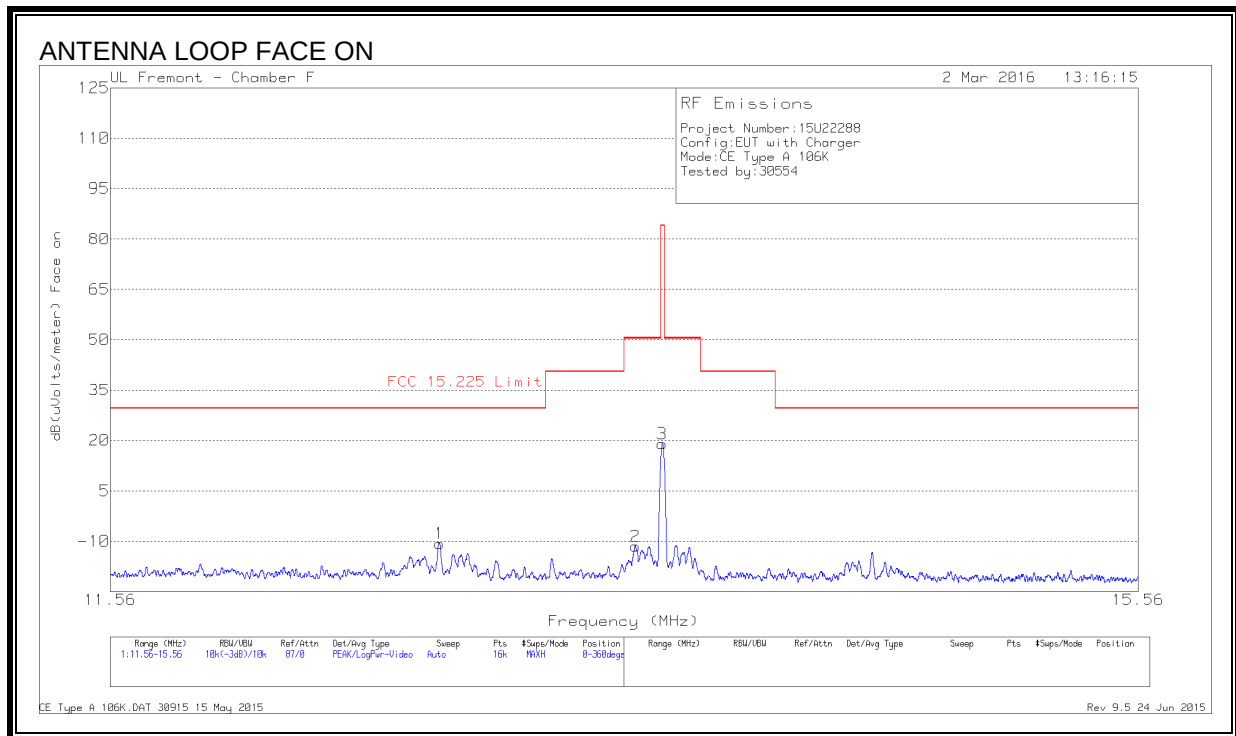


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts/meter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
4	1.13877	32.11	Pk	10.7	.1	-40	2.91	26.48	-23.57	-	-	0-360
1	7.97885	11.56	Pk	10.8	.3	-40	-17.34	29.54	-46.88	-	-	0-360
5	12.7100	17.67	Pk	10.7	.4	-40	-11.23	29.54	-40.77	-	-	0-360
2	12.7152	21.26	Pk	10.7	.4	-40	-7.64	29.54	-37.18	-	-	0-360
3	14.4088	16.68	Pk	10.6	.4	-40	-12.32	29.54	-41.86	-	-	0-360
6	14.4093	16.21	Pk	10.6	.4	-40	-12.79	29.54	-42.33	-	-	0-360

Pk - Peak detector

106Kbps FUNDAMENTAL

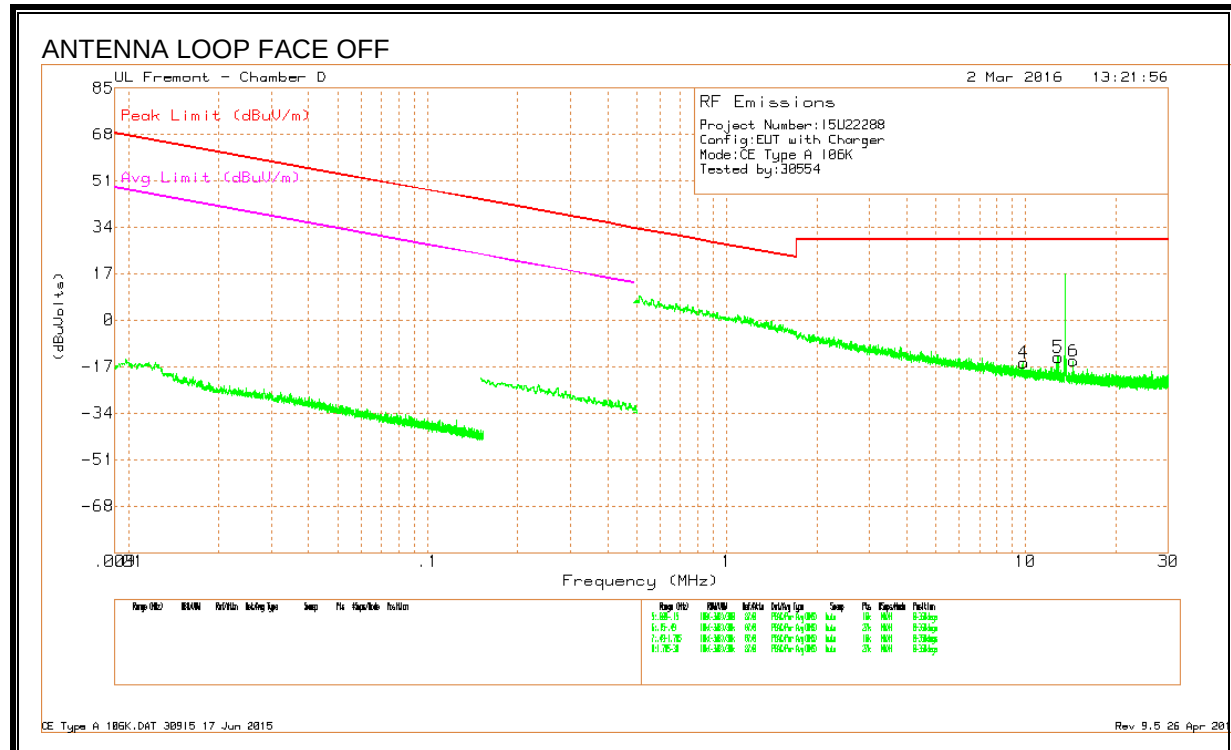
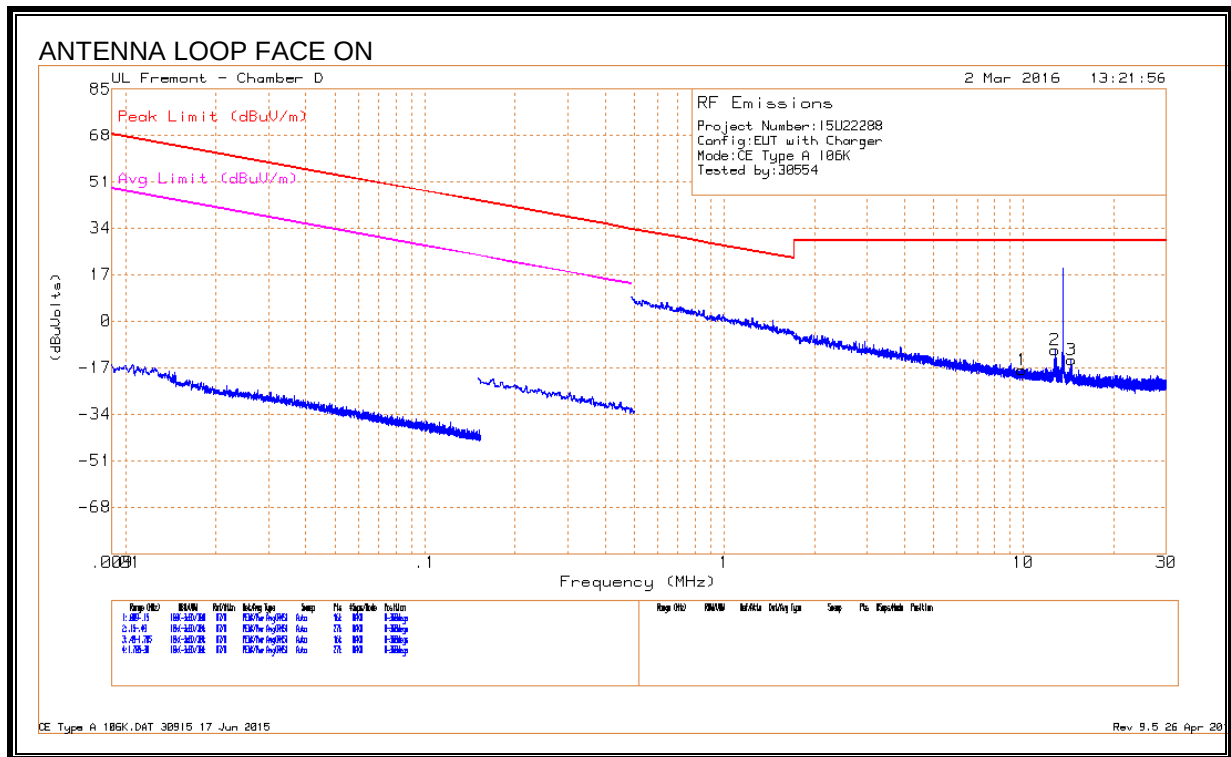


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	12.7145	18.52	Pk	10.4	.4	-40	-10.68	29.54	-40.22	0-360
2	13.45525	17.66	Pk	10.4	.4	-40	-11.54	50.5	-62.04	0-360
3	13.559	48.22	Pk	10.4	.4	-40	19.02	84	-64.98	0-360
4	12.7107	16.14	Pk	10.4	.4	-40	-13.06	29.54	-42.6	0-360
5	13.56052	45.37	Pk	10.4	.4	-40	16.17	84	-67.83	0-360
6	14.40663	13.51	Pk	10.3	.4	-40	-15.79	29.54	-45.33	0-360

Pk - Peak detector

SPURIOUS EMISSION



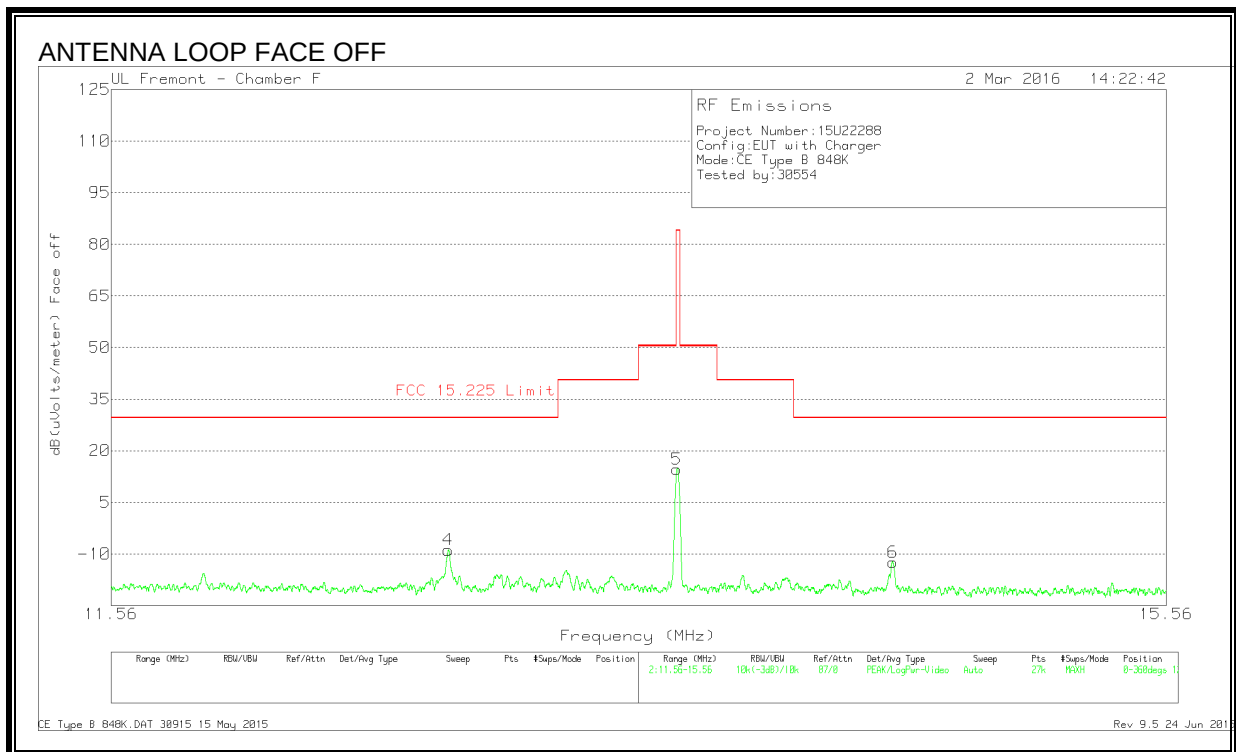
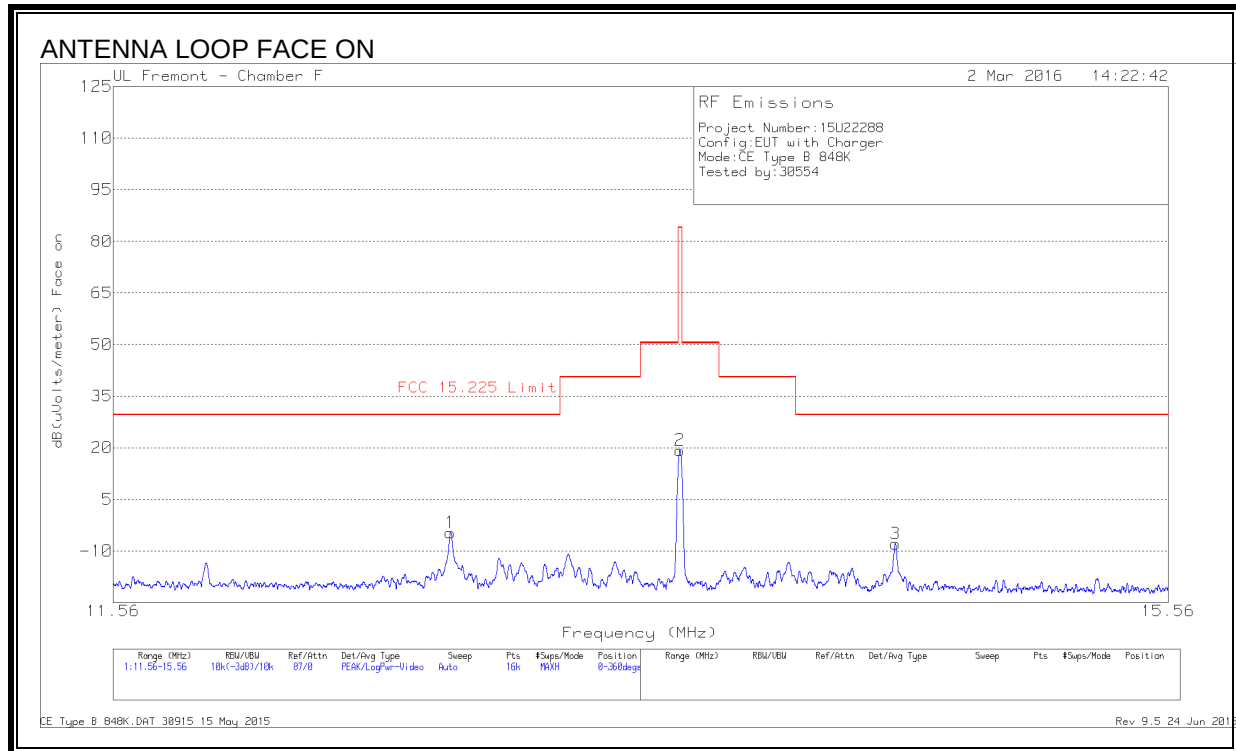
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts/meter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
4	9.81547	13.41	Pk	10.8	.3	-40	-15.49	29.54	-45.03	-	-	0-360
1	9.8794	11.13	Pk	10.8	.3	-40	-17.77	29.54	-47.31	-	-	0-360
2	12.71476	18.43	Pk	10.7	.4	-40	-10.47	29.54	-40.01	-	-	0-360
5	12.81799	15.43	Pk	10.7	.4	-40	-13.47	29.54	-43.01	-	-	0-360
3	14.4099	14.91	Pk	10.6	.4	-40	-14.09	29.54	-43.63	-	-	0-360
6	14.41095	14.13	Pk	10.6	.4	-40	-14.87	29.54	-44.41	-	-	0-360

Pk - Peak detector

TYPE B

848Kbps FUNDAMENTAL

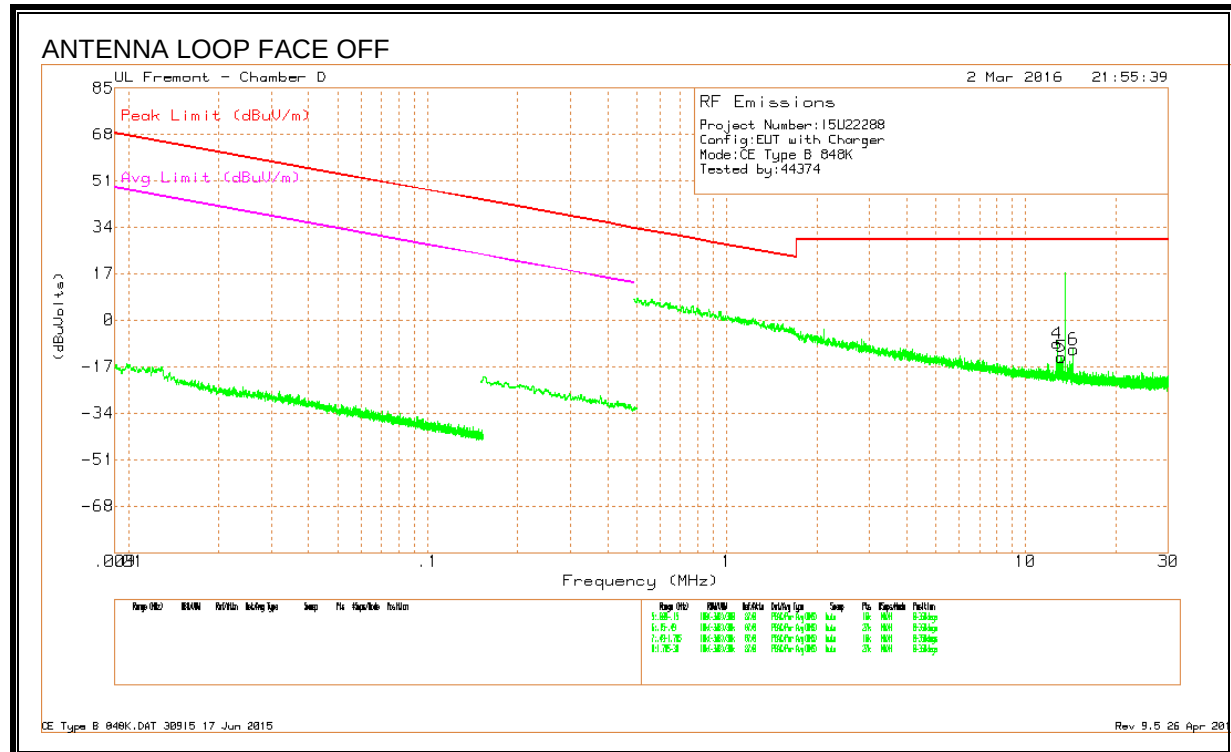
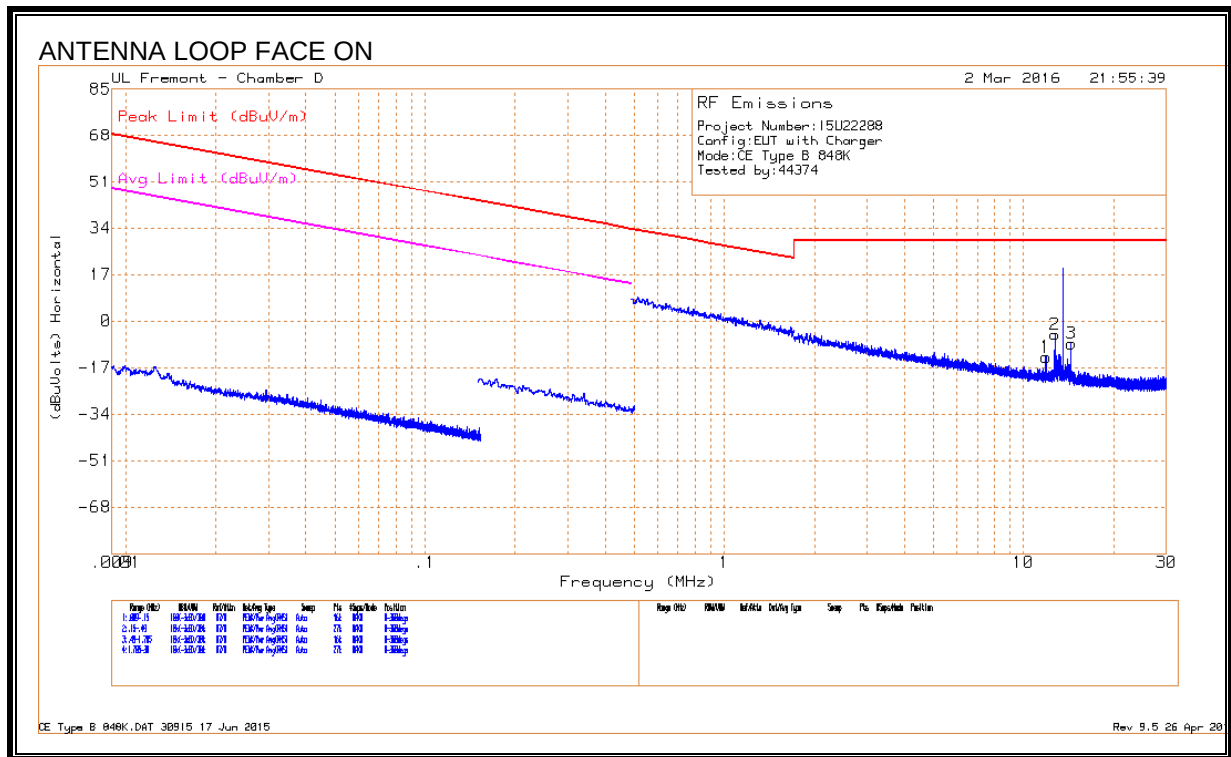


DATA

Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	12.711	24.49	Pk	10.4	.4	-40	-4.71	29.54	-34.25	0-360
2	13.5605	48.45	Pk	10.4	.4	-40	19.25	84	-64.75	0-360
3	14.409	21.39	Pk	10.3	.4	-40	-7.91	29.54	-37.45	0-360
4	12.7107	20.36	Pk	10.4	.4	-40	-8.84	29.54	-38.38	0-360
5	13.55637	43.8	Pk	10.4	.4	-40	14.6	84	-69.4	0-360
6	14.40663	16.85	Pk	10.3	.4	-40	-12.45	29.54	-41.99	0-360

Pk - Peak detector

SPURIOUS EMISSION

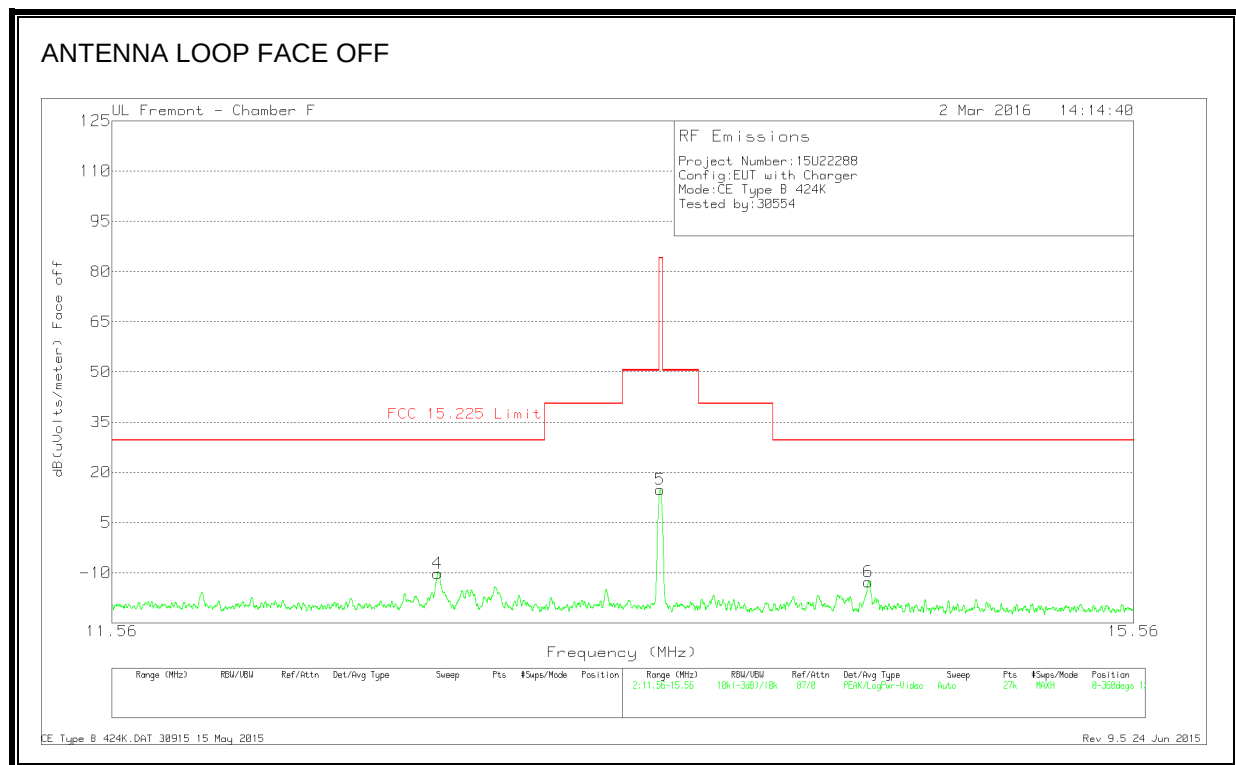
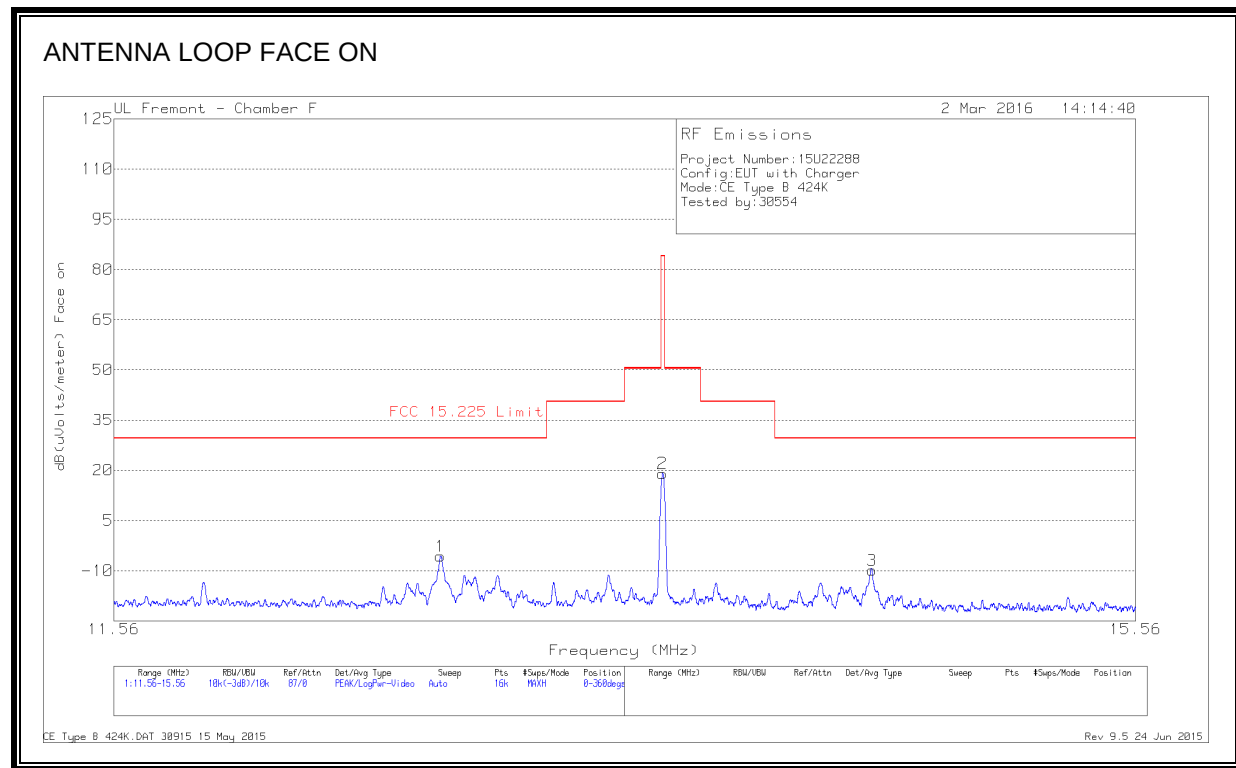


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp /Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts/ meter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV /m)	Margin (dB)	Azimuth (Degs)
1	11.866	15.84	Pk	10.7	.4	-40	-13.06	29.54	-42.6	-	-	0-360
2	12.714	24.1	Pk	10.7	.4	-40	-4.8	29.54	-34.34	-	-	0-360
4	12.717	20.47	Pk	10.7	.4	-40	-8.43	29.54	-37.97	-	-	0-360
5	13.140	15.58	Pk	10.7	.4	-40	-13.32	29.54	-42.86	-	-	0-360
6	14.407	18.35	Pk	10.6	.4	-40	-10.65	29.54	-40.19	-	-	0-360
3	14.410	20.94	Pk	10.6	.4	-40	-8.06	29.54	-37.6	-	-	0-360

Pk - Peak detector

424Kbps FUNDAMENTAL

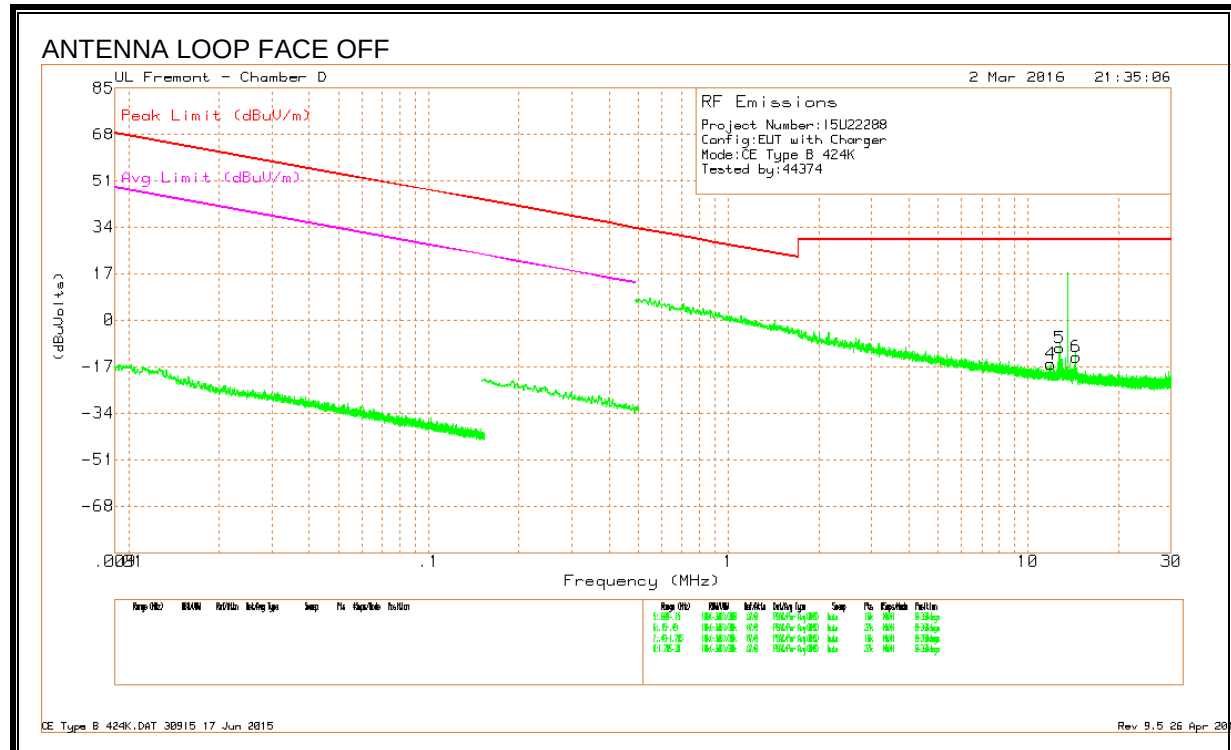
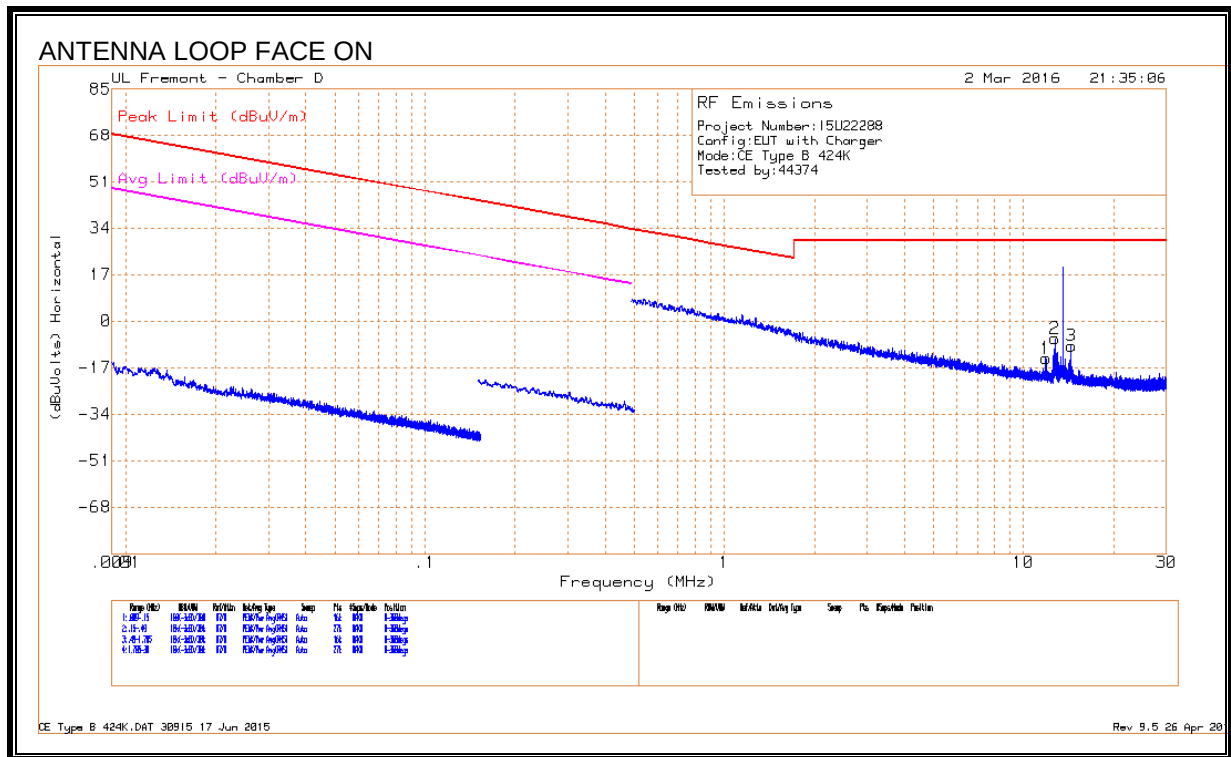


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	12.711	23.51	Pk	10.4	.4	-40	-5.69	29.54	-35.23	0-360
2	13.559	48.25	Pk	10.4	.4	-40	19.05	84	-64.95	0-360
3	14.4115	19.4	Pk	10.3	.4	-40	-9.9	29.54	-39.44	0-360
4	12.70848	19.05	Pk	10.4	.4	-40	-10.15	29.54	-39.69	0-360
5	13.55815	44.1	Pk	10.4	.4	-40	14.9	84	-69.1	0-360
6	14.40456	16.61	Pk	10.3	.4	-40	-12.69	29.54	-42.23	0-360

Pk - Peak detector

SPURIOUS EMISSION

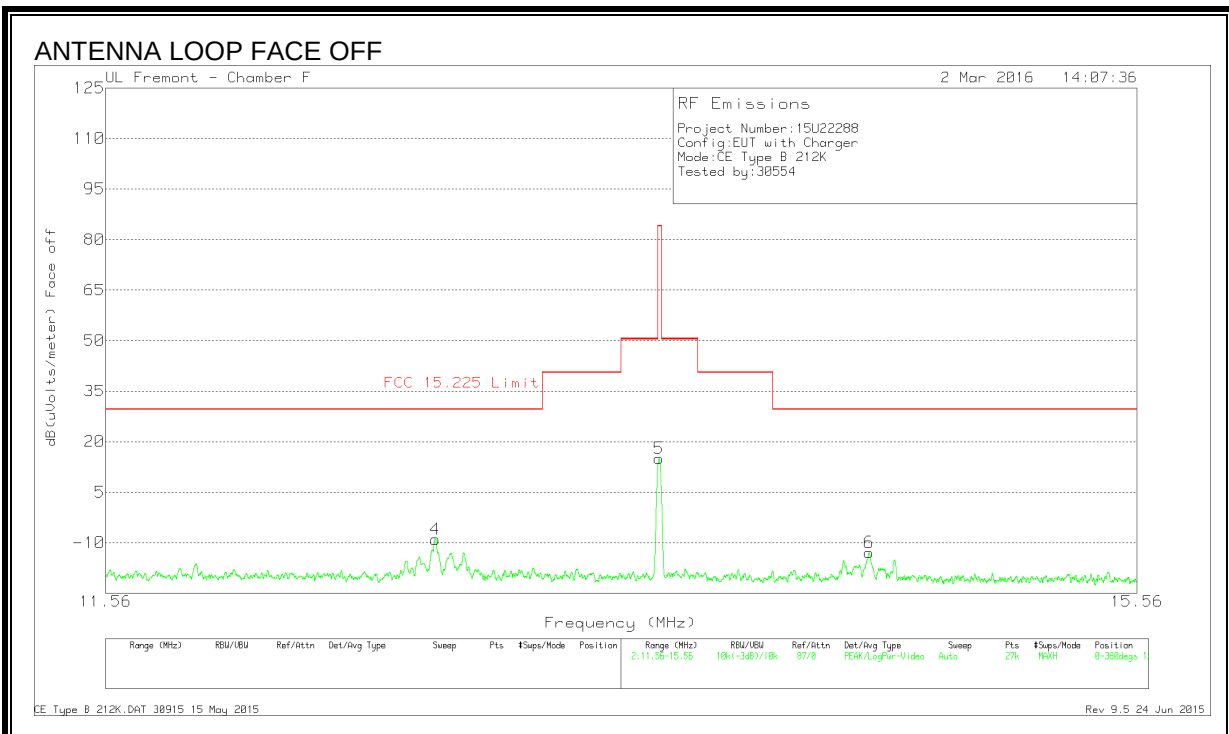
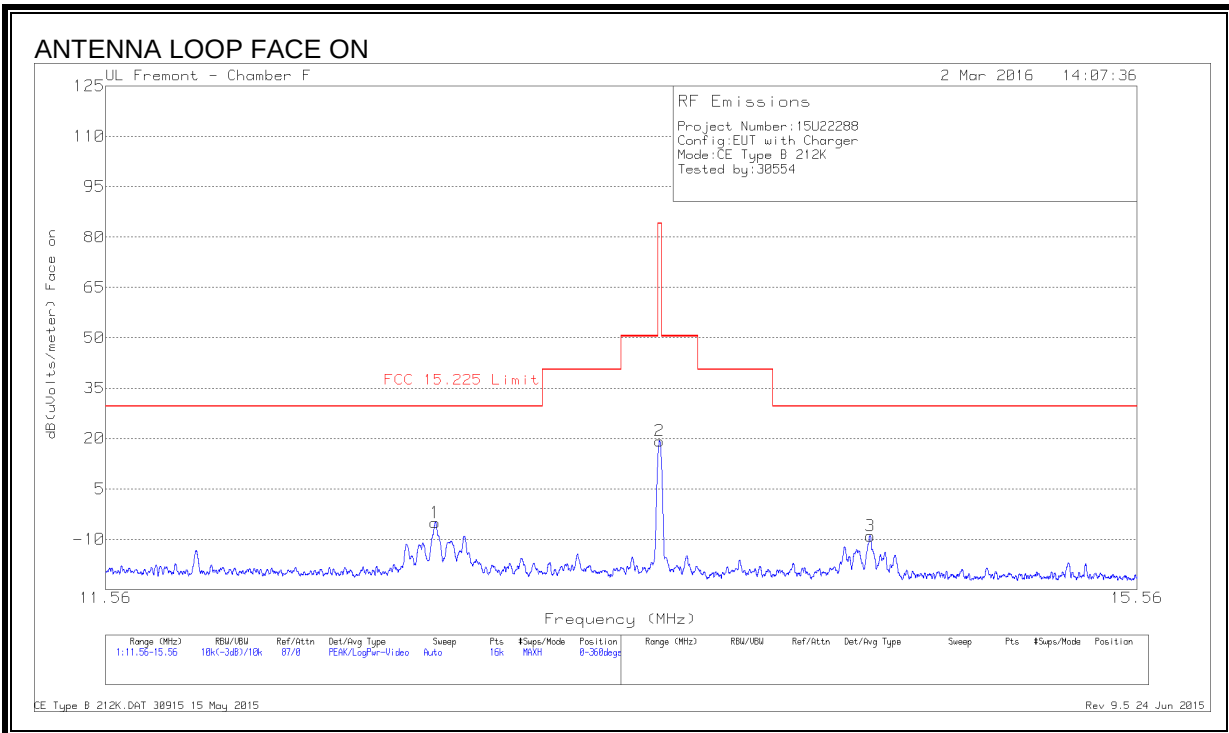


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uV olts/m eter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV /m)	Margin (dB)	Azimuth (Degr)
1	11.865	15.38	Pk	10.7	.4	-40	-13.52	29.54	-43.06	-	-	0-360
4	11.868	12.87	Pk	10.7	.4	-40	-16.03	29.54	-45.57	-	-	0-360
5	12.709	18.87	Pk	10.7	.4	-40	-10.03	29.54	-39.57	-	-	0-360
2	12.714	22.57	Pk	10.7	.4	-40	-6.33	29.54	-35.87	-	-	0-360
6	14.402	15.68	Pk	10.6	.4	-40	-13.32	29.54	-42.86	-	-	0-360
3	14.409	20.01	Pk	10.6	.4	-40	-8.99	29.54	-38.53	-	-	0-360

Pk - Peak detector

212Kbps FUNDAMENTAL

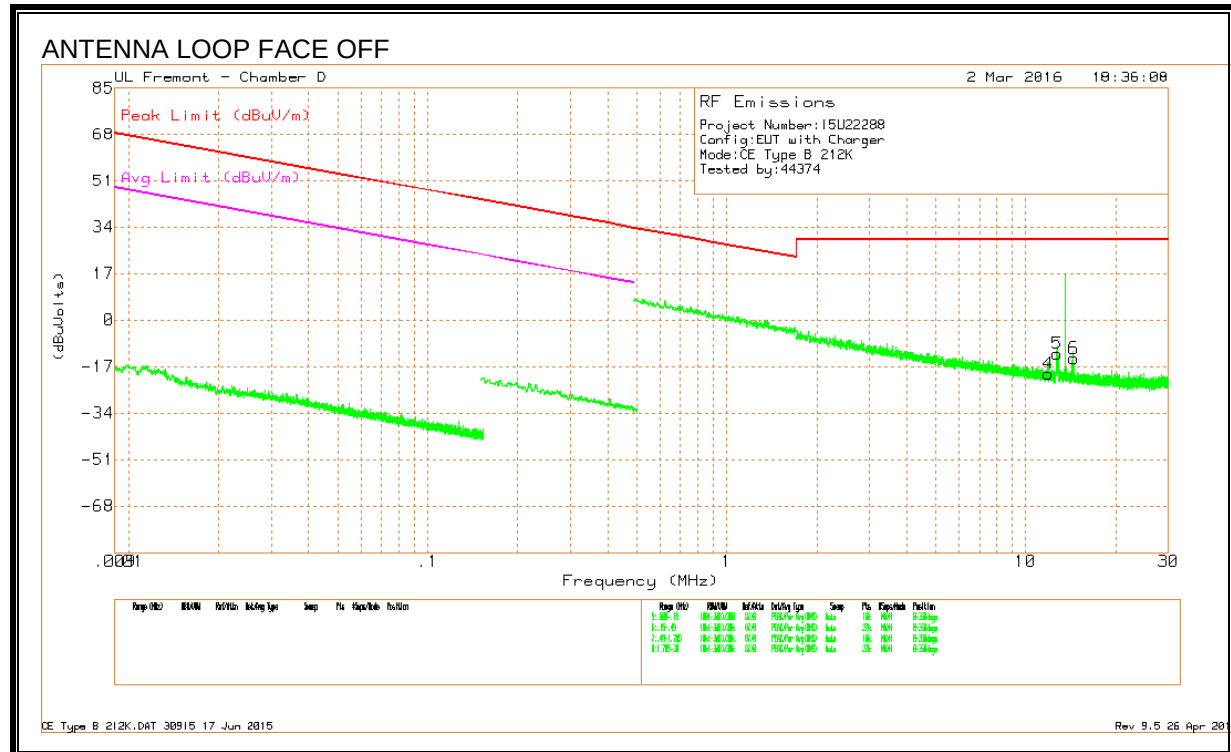
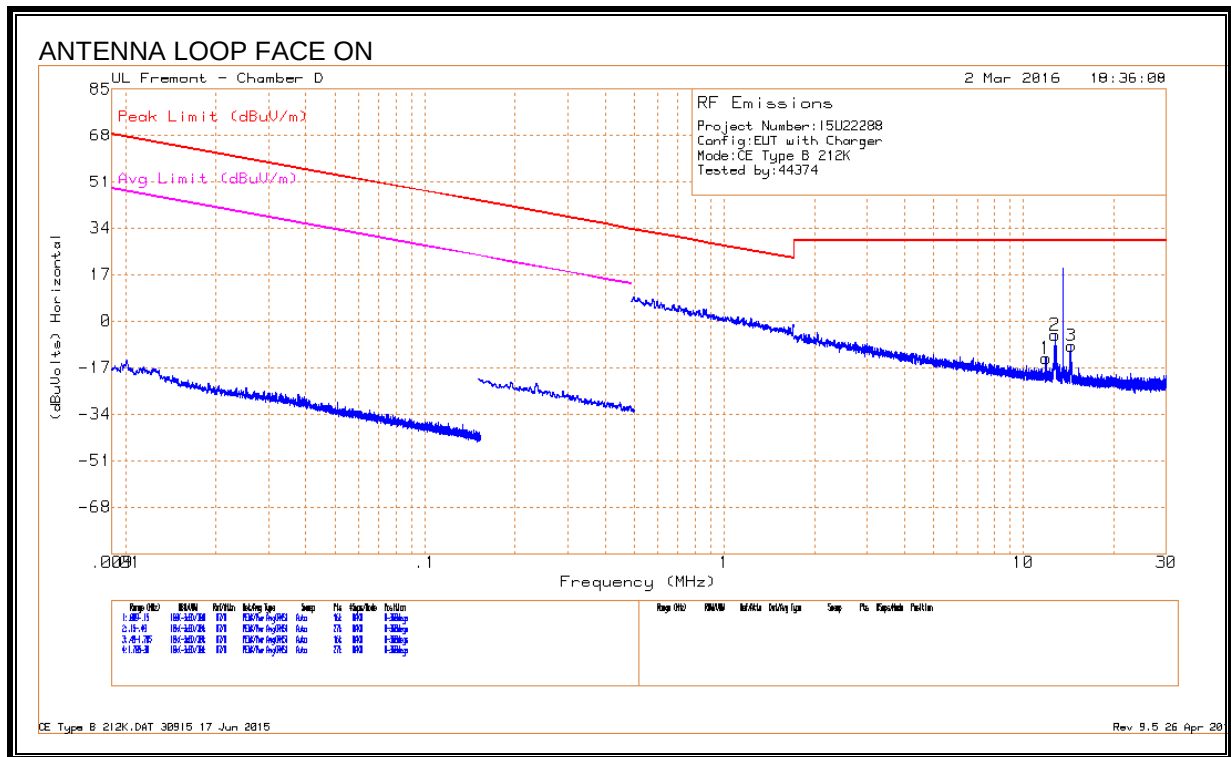


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	12.711	24.12	Pk	10.4	.4	-40	-5.08	29.54	-34.62	0-360
2	13.5605	48.47	Pk	10.4	.4	-40	19.27	84	-64.73	0-360
3	14.409	20.28	Pk	10.3	.4	-40	-9.02	29.54	-38.56	0-360
4	12.71248	20.18	Pk	10.4	.4	-40	-9.02	29.54	-38.56	0-360
5	13.55822	44.2	Pk	10.4	.4	-40	15	84	-69	0-360
6	14.40419	16.4	Pk	10.3	.4	-40	-12.9	29.54	-42.44	0-360

Pk - Peak detector

SPURIOUS EMISSION

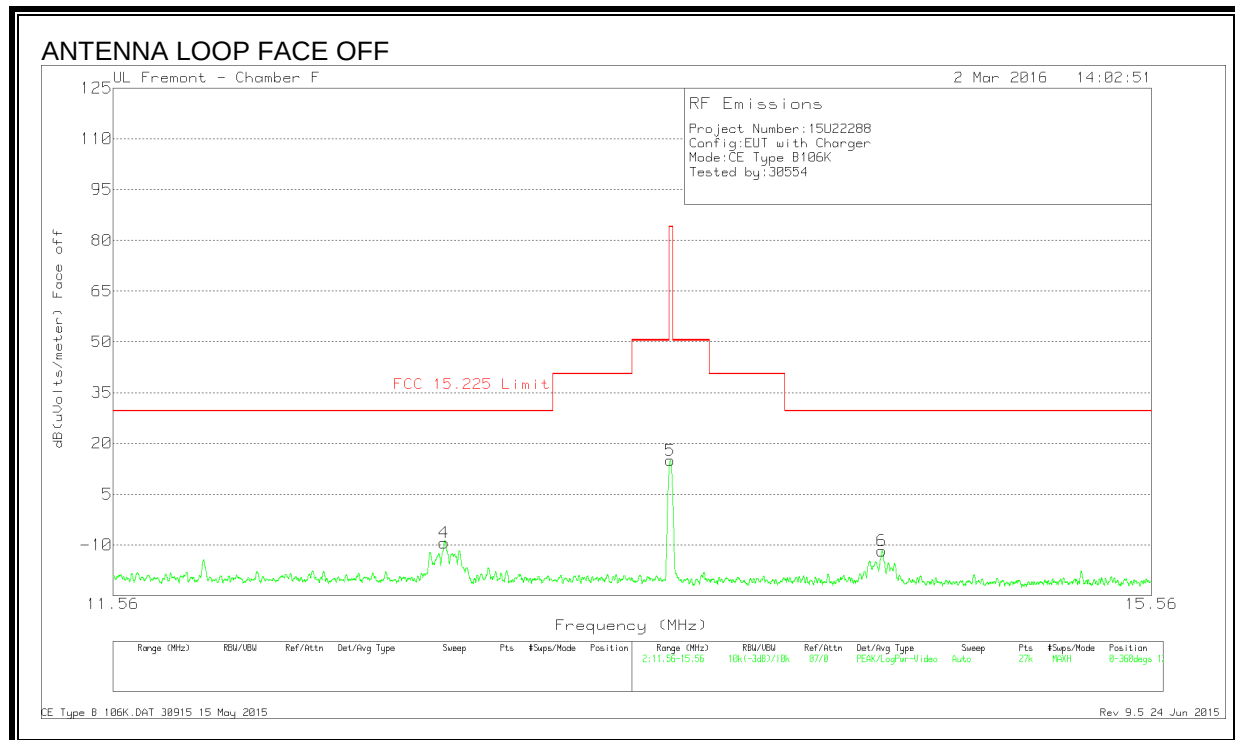
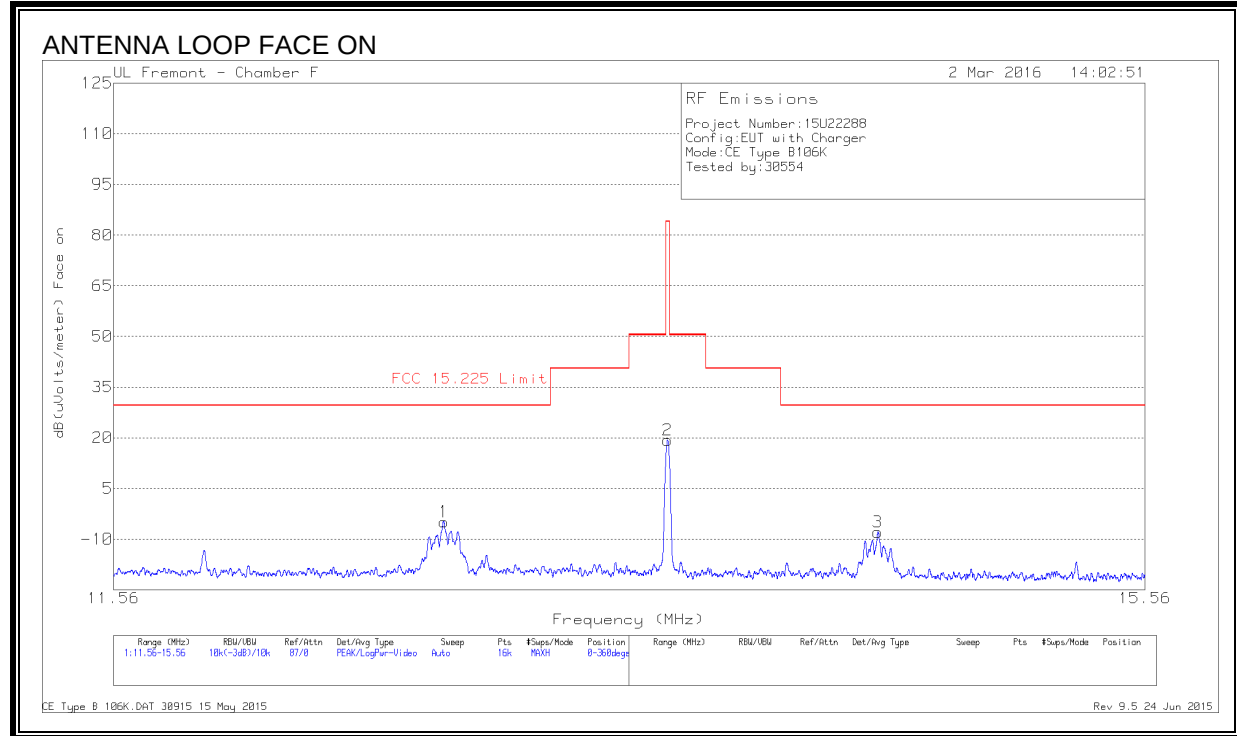


DATA

Marker	Frequen cy (MHz)	Meter Readin g (dBuV)	Det	Loop Anten na (dB/m)	Amp/ Cbl (dB)	Dist Corr (dB) 40Log	Correc ted Readin g dB(uV olts/m eter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV /m)	Mar gin (dB)	Azim uth (Degs)
1	11.8664	15.41	Pk	10.7	.4	-40	-13.49	29.54	-43.03	-	-	0-360
4	11.9088	9.5	Pk	10.7	.4	-40	-19.4	29.54	-48.94	-	-	0-360
2	12.7131	23.89	Pk	10.7	.4	-40	-5.01	29.54	-34.55	-	-	0-360
5	12.7257	16.69	Pk	10.7	.4	-40	-12.21	29.54	-41.75	-	-	0-360
3	14.4083	20.09	Pk	10.6	.4	-40	-8.91	29.54	-38.45	-	-	0-360
6	14.4203	15.04	Pk	10.6	.4	-40	-13.96	29.54	-43.5	-	-	0-360

Pk - Peak detector

106Kbps FUNDAMENTAL

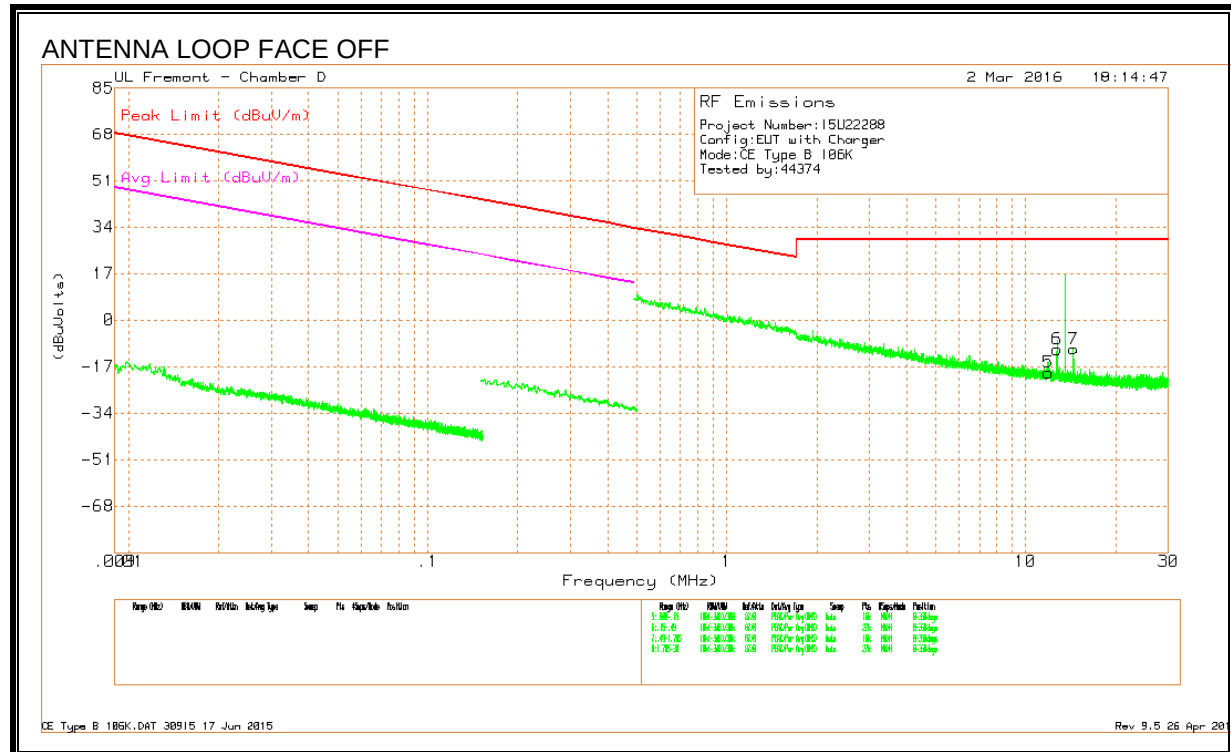
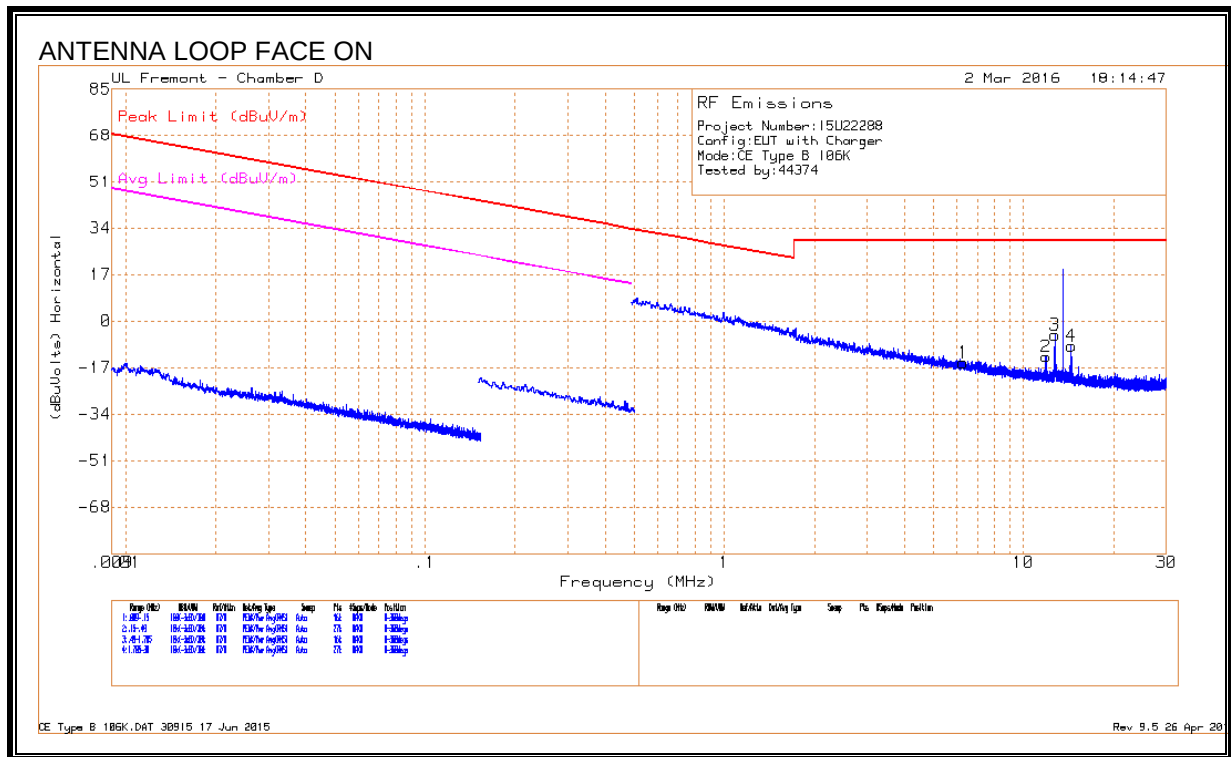


DATA

Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	12.7145	24.34	Pk	10.4	.4	-40	-4.86	29.54	-34.4	0-360
2	13.5605	48.51	Pk	10.4	.4	-40	19.31	84	-64.69	0-360
3	14.4075	21.4	Pk	10.3	.4	-40	-7.9	29.54	-37.44	0-360
4	12.70848	19.84	Pk	10.4	.4	-40	-9.36	29.54	-38.9	0-360
5	13.55837	44.19	Pk	10.4	.4	-40	14.99	84	-69.01	0-360
6	14.40456	17.57	Pk	10.3	.4	-40	-11.73	29.54	-41.27	0-360

Pk - Peak detector

SPURIOUS EMISSION



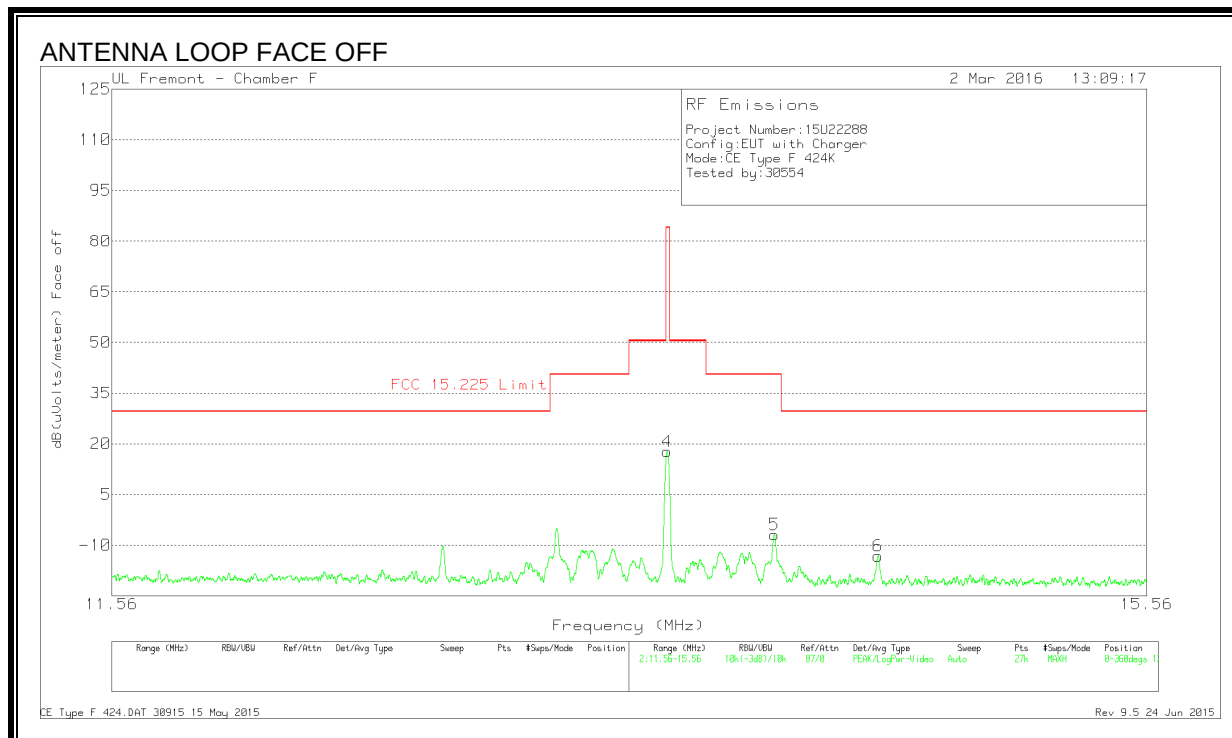
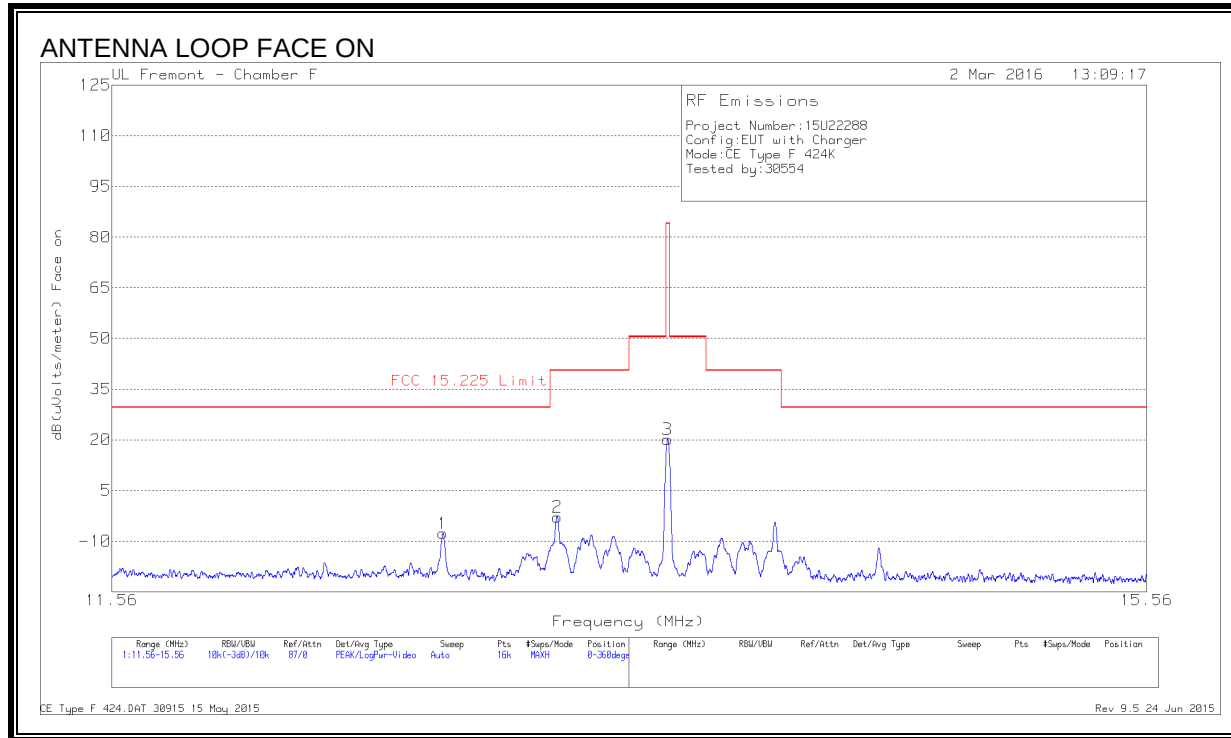
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp /Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uV olts/meter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV /m)	Margin (dB)	Azimuth (Degs)
1	6.28476	13.77	Pk	10.9	.2	-40	-15.13	29.54	-44.67	-	-	0-360
2	11.8664	16.04	Pk	10.7	.4	-40	-12.86	29.54	-42.4	-	-	0-360
5	11.8915	9.82	Pk	10.7	.4	-40	-19.08	29.54	-48.62	-	-	0-360
3	12.7142	23.95	Pk	10.7	.4	-40	-4.95	29.54	-34.49	-	-	0-360
6	12.7393	18.37	Pk	10.7	.4	-40	-10.53	29.54	-40.07	-	-	0-360
4	14.4078	19.99	Pk	10.6	.4	-40	-9.01	29.54	-38.55	-	-	0-360
7	14.4088	18.52	Pk	10.6	.4	-40	-10.48	29.54	-40.02	-	-	0-360

Pk - Peak detector

TYPE F

424Kbps FUNDAMENTAL

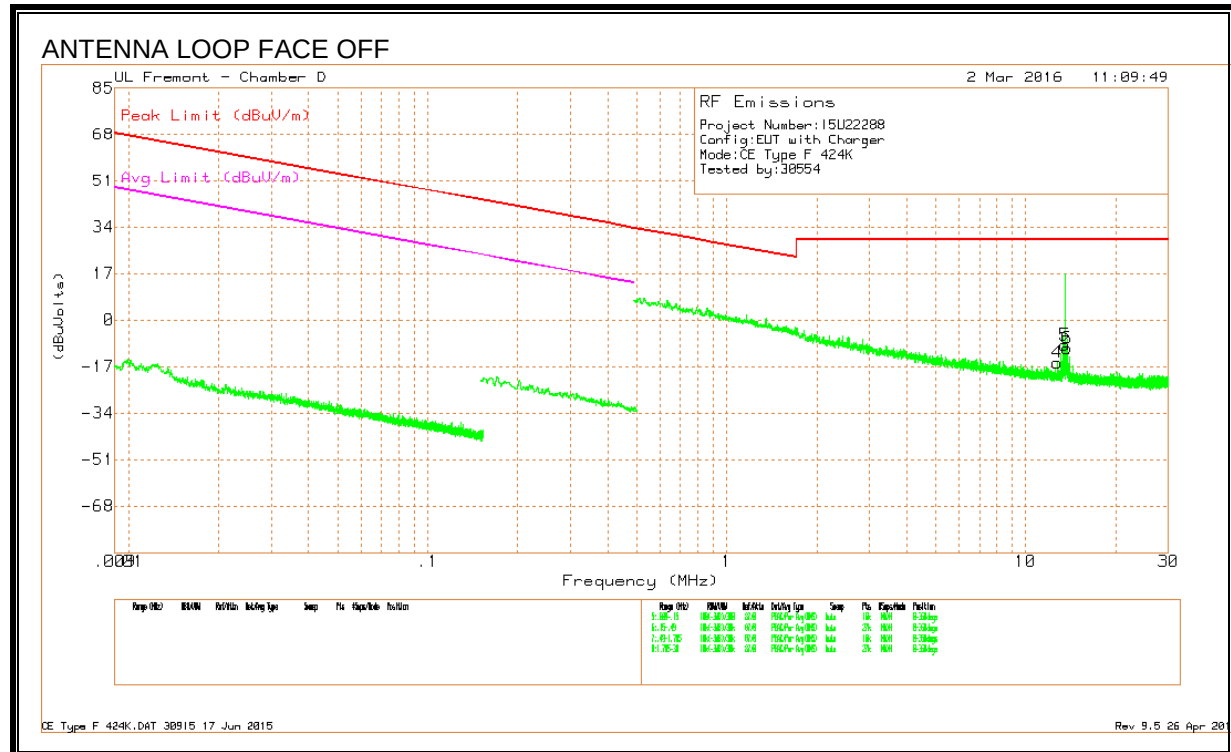
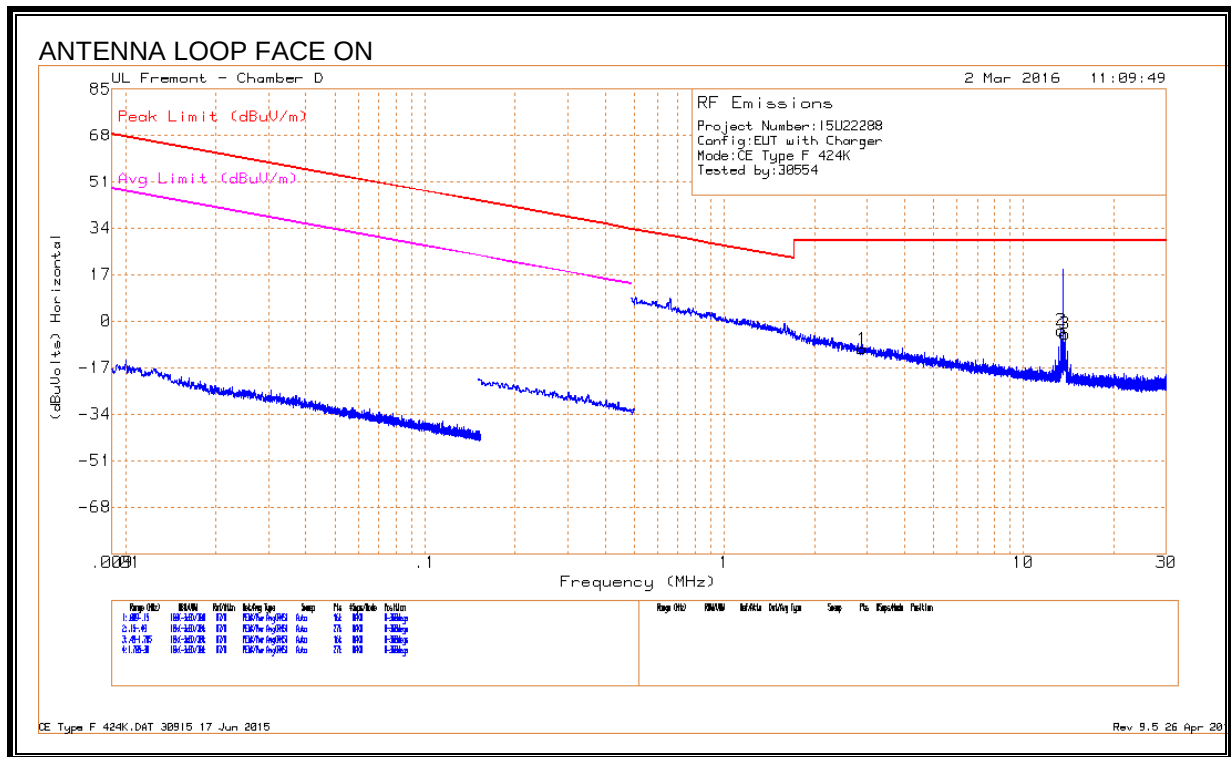


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	12.71275	21.53	Pk	10.4	.4	-40	-7.67	29.54	-37.21	0-360
2	13.1375	26.35	Pk	10.4	.4	-40	-2.85	40.51	-43.36	0-360
3	13.559	49.34	Pk	10.4	.4	-40	20.14	84	-63.86	0-360
4	13.55837	46.93	Pk	10.4	.4	-40	17.73	84	-66.27	0-360
5	13.98217	22.42	Pk	10.3	.4	-40	-6.88	40.51	-47.39	0-360
6	14.40456	16.08	Pk	10.3	.4	-40	-13.22	29.54	-42.76	0-360

Pk - Peak detector

SPURIOUS EMISSION

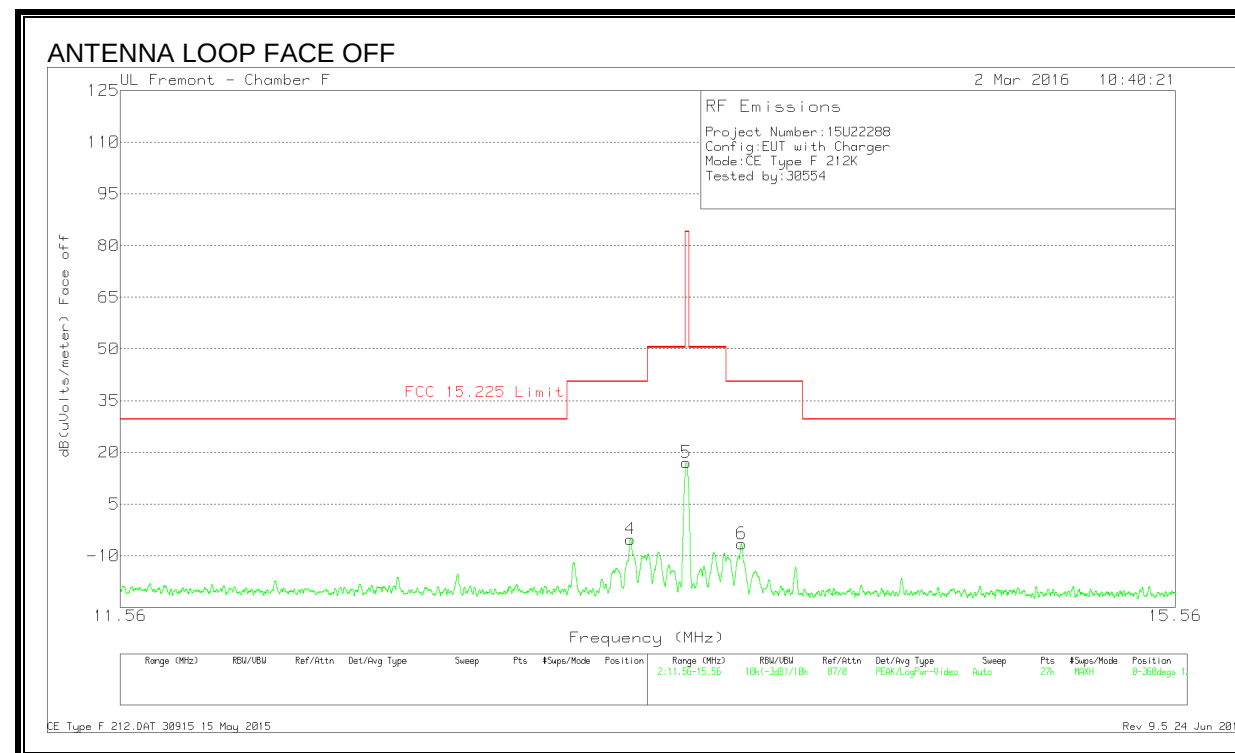
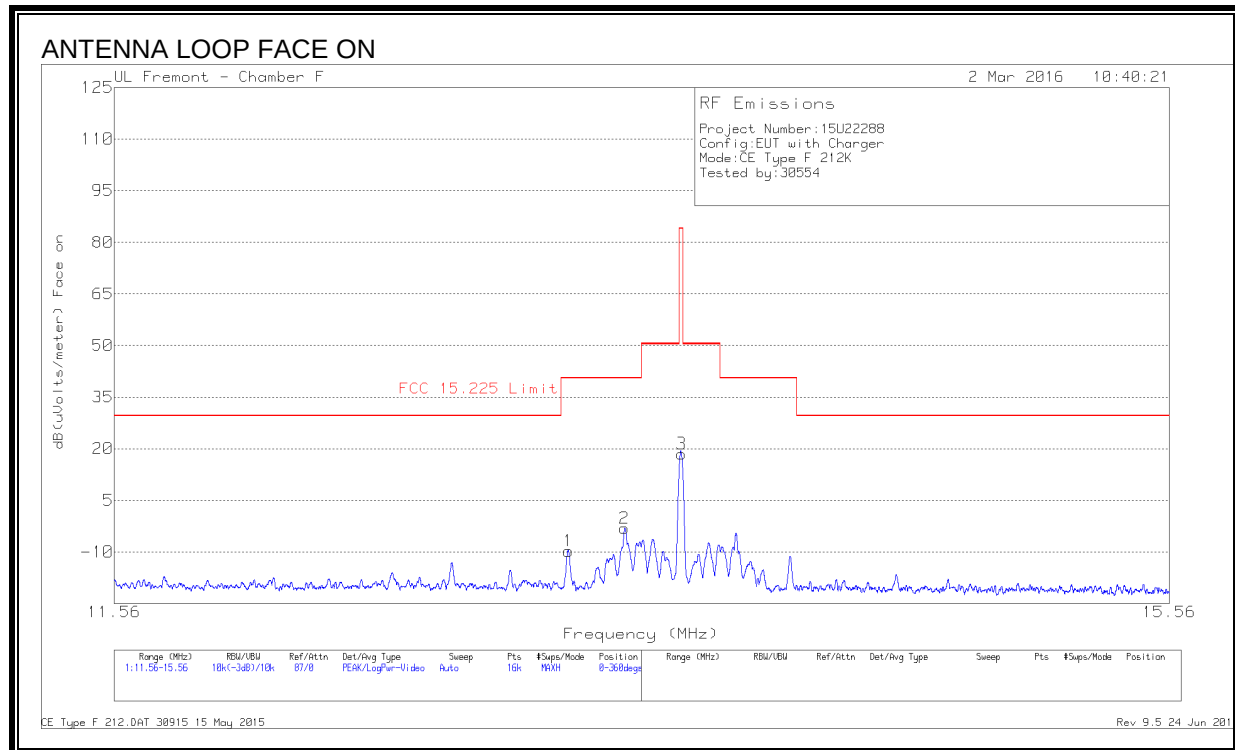


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cb l (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uV olts/m eter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	2.89186	18.94	Pk	10.8	.2	-40	-10.06	29.54	-39.6	-	-	0-360
4	12.71214	13.43	Pk	10.7	.4	-40	-15.47	29.54	-45.01	-	-	0-360
2	13.3488	25.67	Pk	10.7	.4	-40	-3.23	29.54	-32.77	-	-	0-360
5	13.45518	19.86	Pk	10.7	.4	-40	-9.04	29.54	-38.58	-	-	0-360
6	13.7067	18.77	Pk	10.7	.4	-40	-10.13	29.54	-39.67	-	-	0-360
3	13.77272	24.48	Pk	10.6	.4	-40	-4.52	29.54	-34.06	-	-	0-360

Pk - Peak detector

212Kbps FUNDAMENTAL

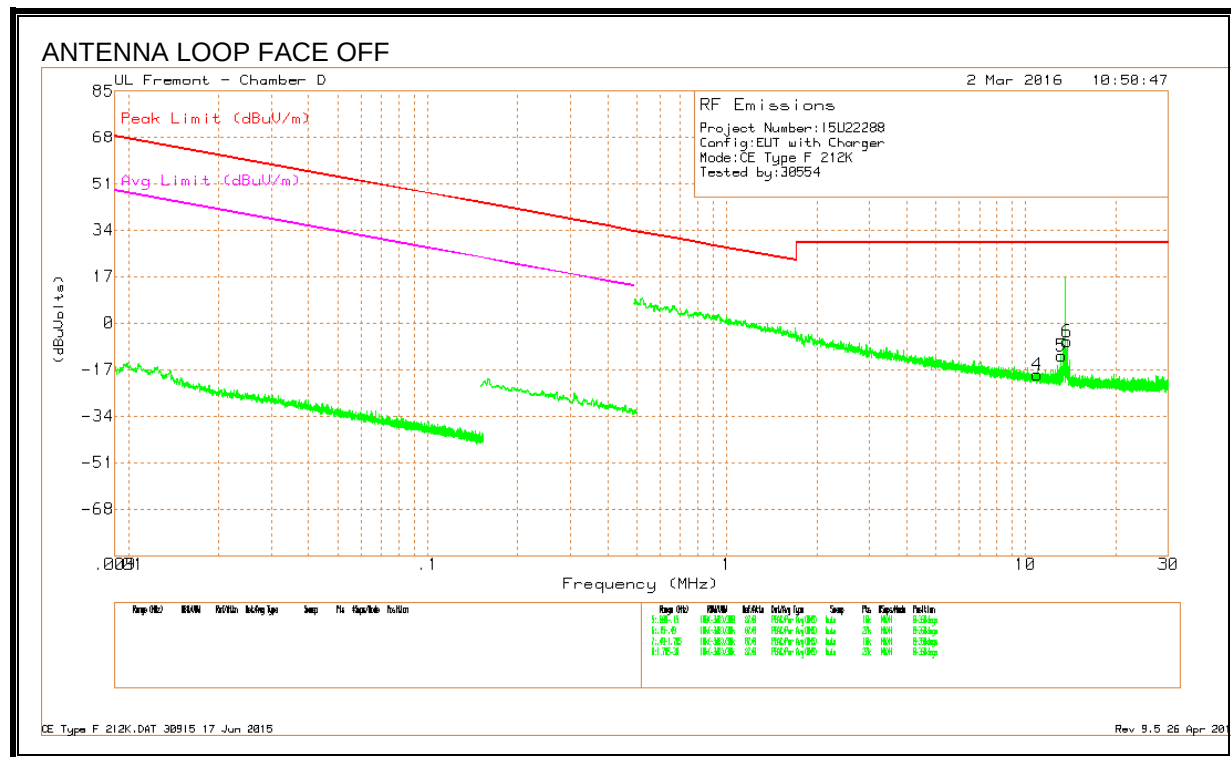
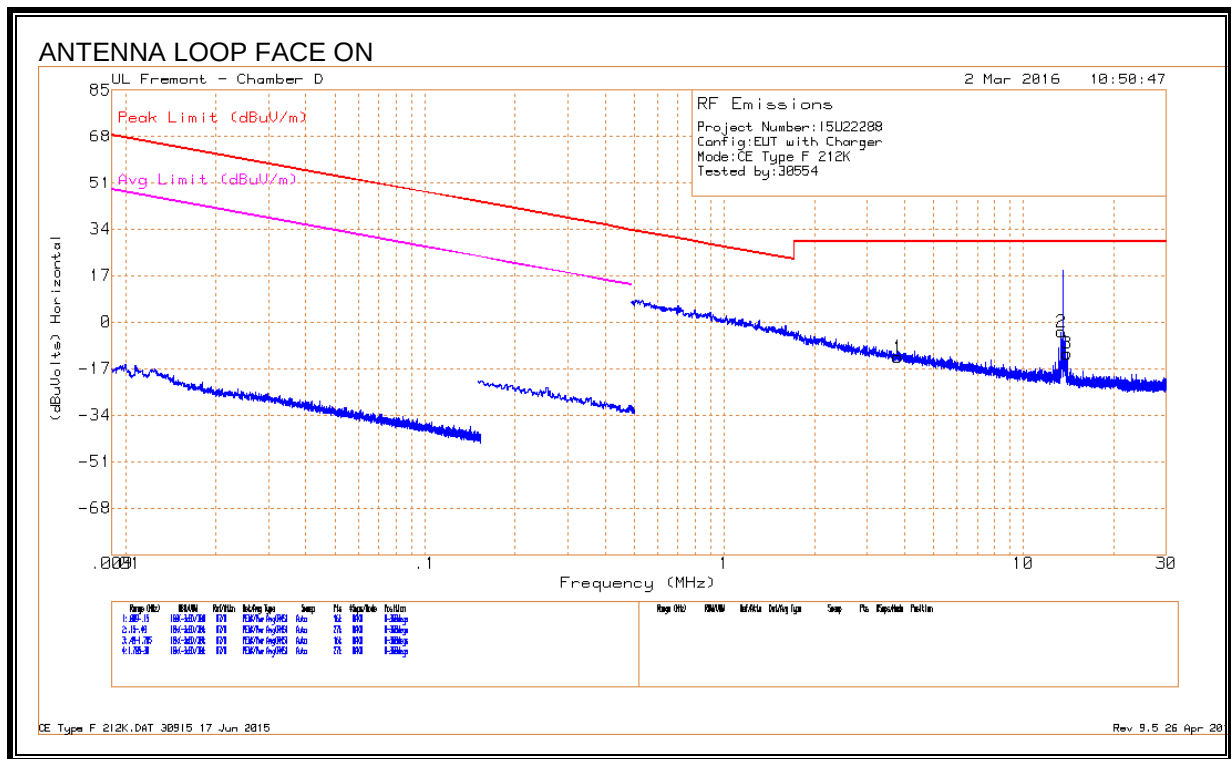


DATA

Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	13.1375	19.45	Pk	10.4	.4	-40	-9.75	40.51	-50.26	0-360
2	13.3470	26.07	Pk	10.4	.4	-40	-3.13	40.51	-43.64	0-360
3	13.56225	47.69	Pk	10.4	.4	-40	18.49	84	-65.51	0-360
4	13.34658	23.99	Pk	10.4	.4	-40	-5.21	40.51	-45.72	0-360
5	13.55822	46.21	Pk	10.4	.4	-40	17.01	84	-66.99	0-360
6	13.77023	22.8	Pk	10.3	.4	-40	-6.5	40.51	-47.01	0-360

Pk - Peak detector

SPURIOUS EMISSION



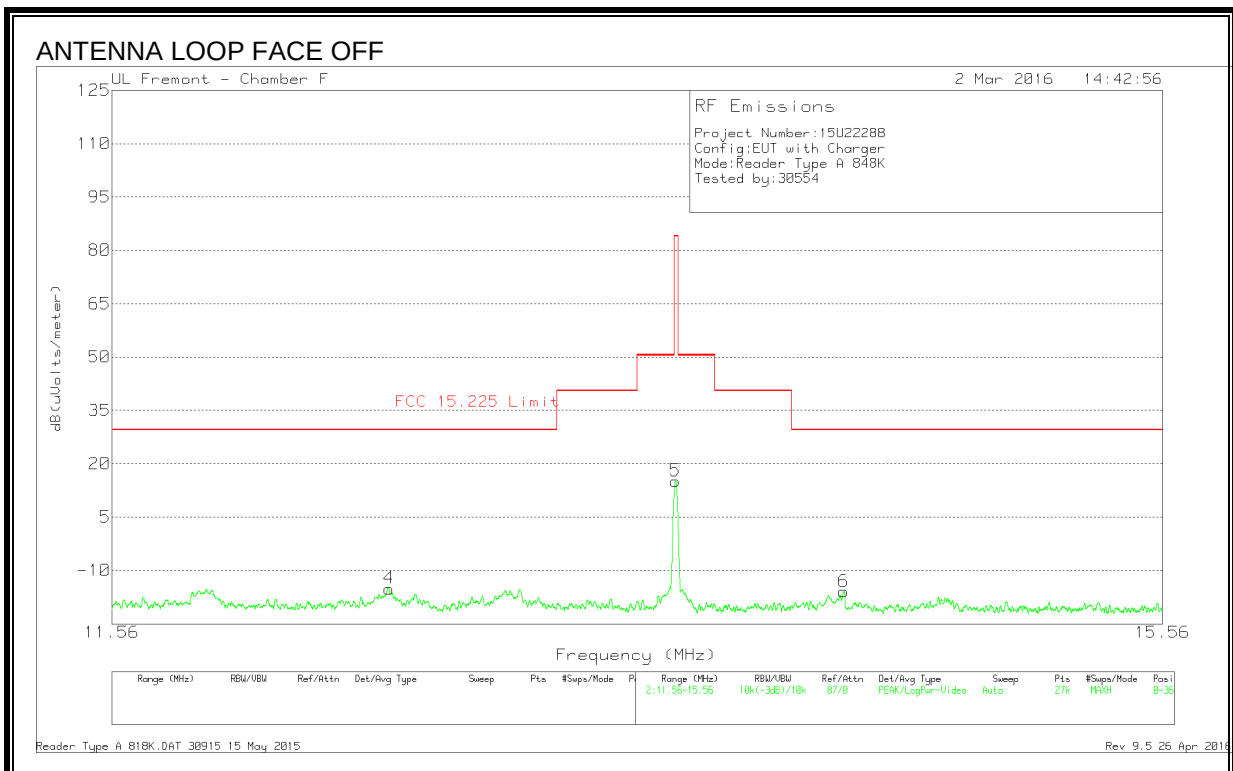
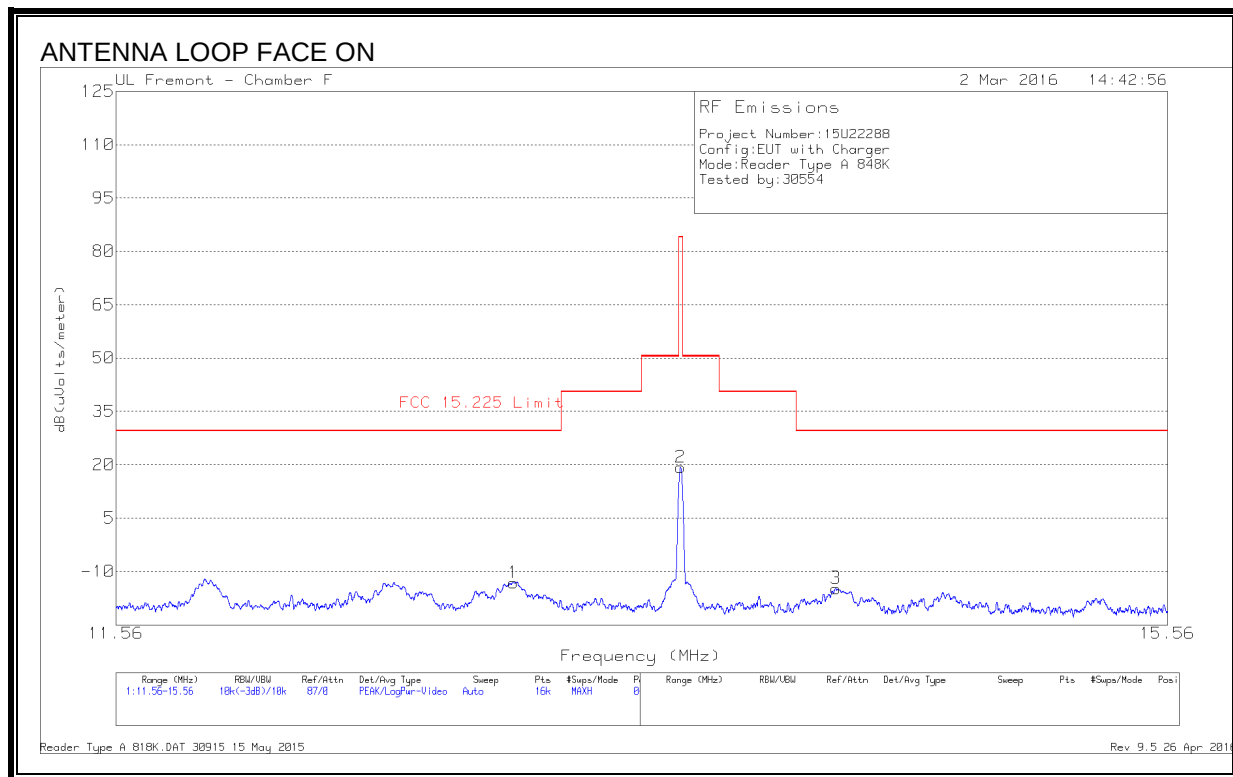
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uV olts/meter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	3.79995	16.16	Pk	10.9	.2	-40	-12.74	29.54	-42.28	-	-	0-360
4	10.9368	10.17	Pk	10.8	.3	-40	-18.73	29.54	-48.27	-	-	0-360
5	13.1376	17.03	Pk	10.7	.4	-40	-11.87	29.54	-41.41	-	-	0-360
2	13.3488	25.38	Pk	10.7	.4	-40	-3.52	29.54	-33.06	-	-	0-360
6	13.7732	22.34	Pk	10.6	.4	-40	-6.66	29.54	-36.2	-	-	0-360
3	13.9844	17.69	Pk	10.6	.4	-40	-11.31	29.54	-40.85	-	-	0-360

Pk - Peak detector

8.2.2. READER MODE

TYPE A, 848Kbps FUNDAMENTAL

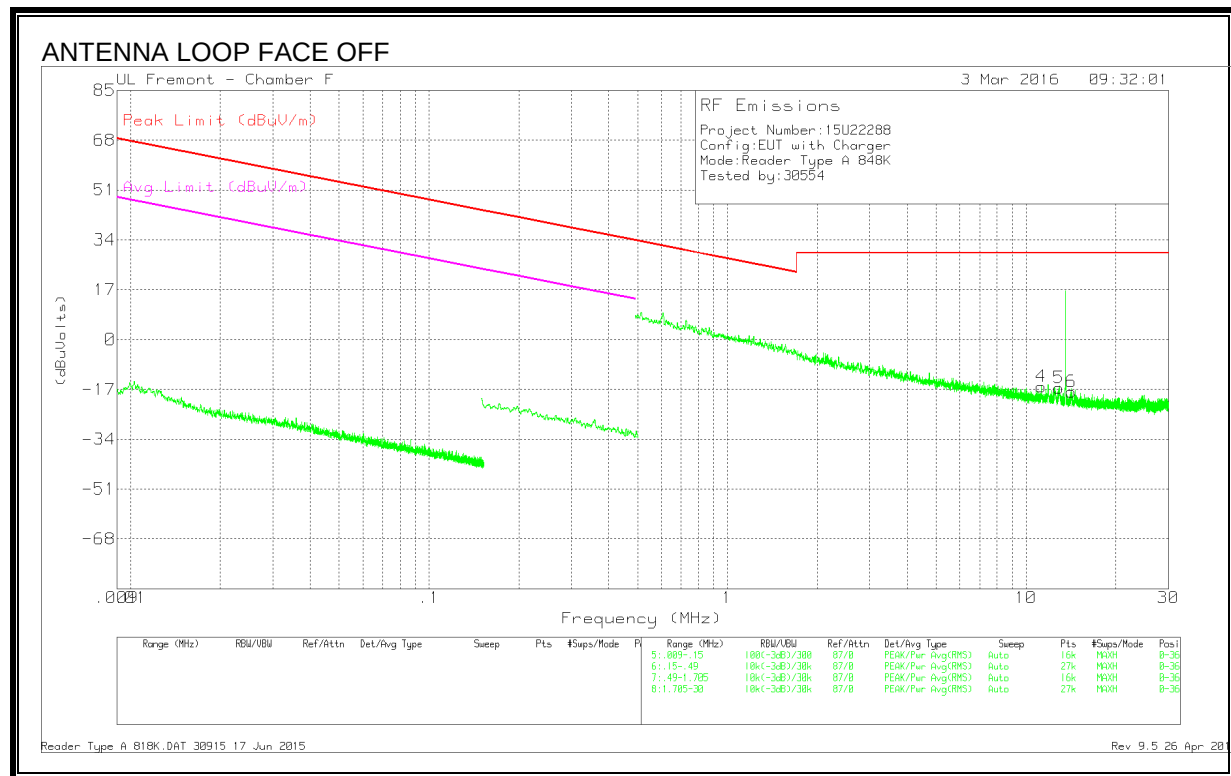
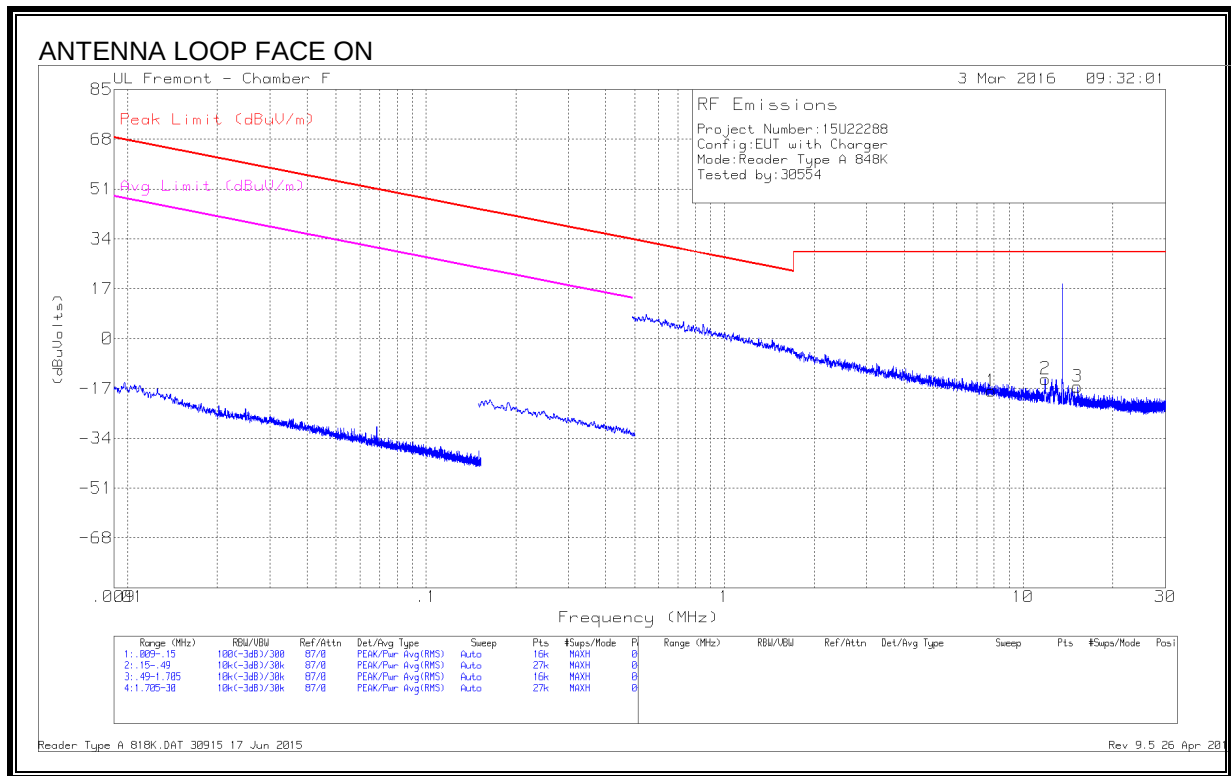


DATA

Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	12.93438	16.03	Pk	10.4	.4	-40	-13.17	29.54	-42.71	0-360
2	13.56038	48.47	Pk	10.4	.4	-40	19.27	84	-64.73	0-360
3	14.16863	14.51	Pk	10.3	.4	-40	-14.79	29.54	-44.33	0-360
4	12.50276	14.1	Pk	10.4	.4	-40	-15.1	29.54	-44.64	0-360
5	13.55837	44.35	Pk	10.4	.4	-40	15.15	84	-68.85	0-360
6	14.21949	13.35	Pk	10.3	.4	-40	-15.95	29.54	-45.49	0-360

Pk - Peak detector

SPURIOUS EMISSION

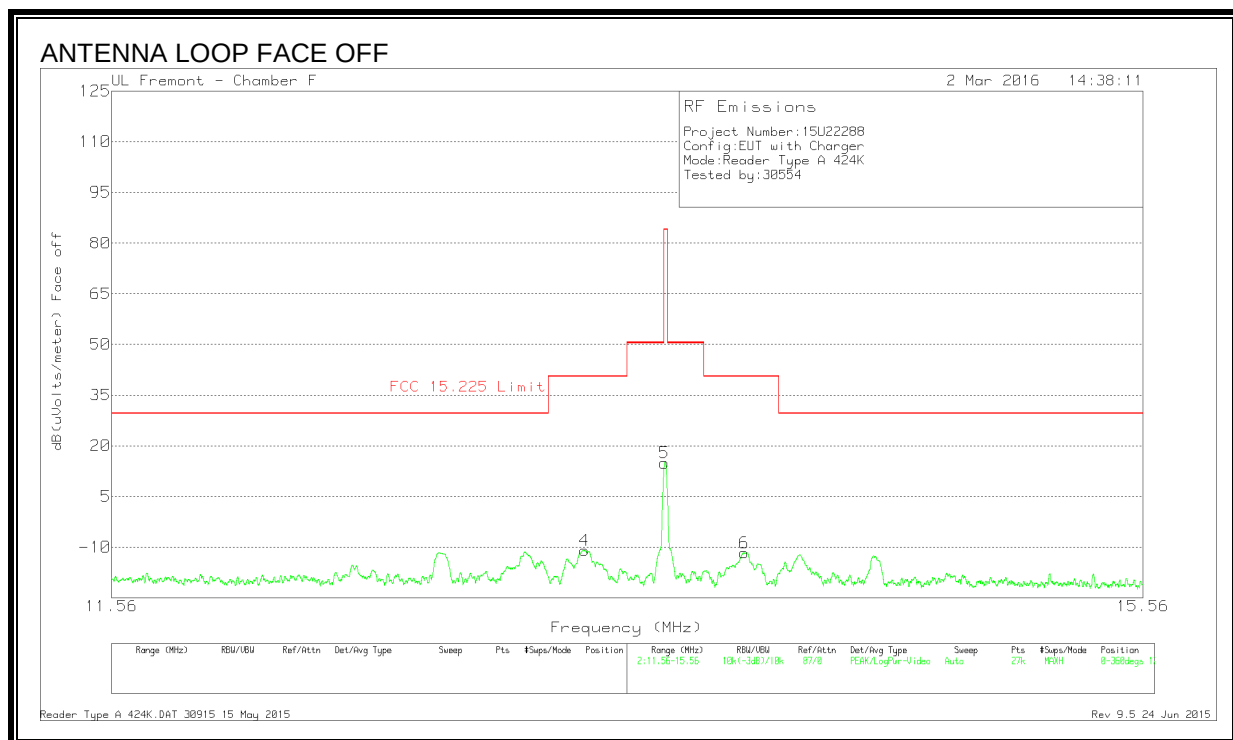
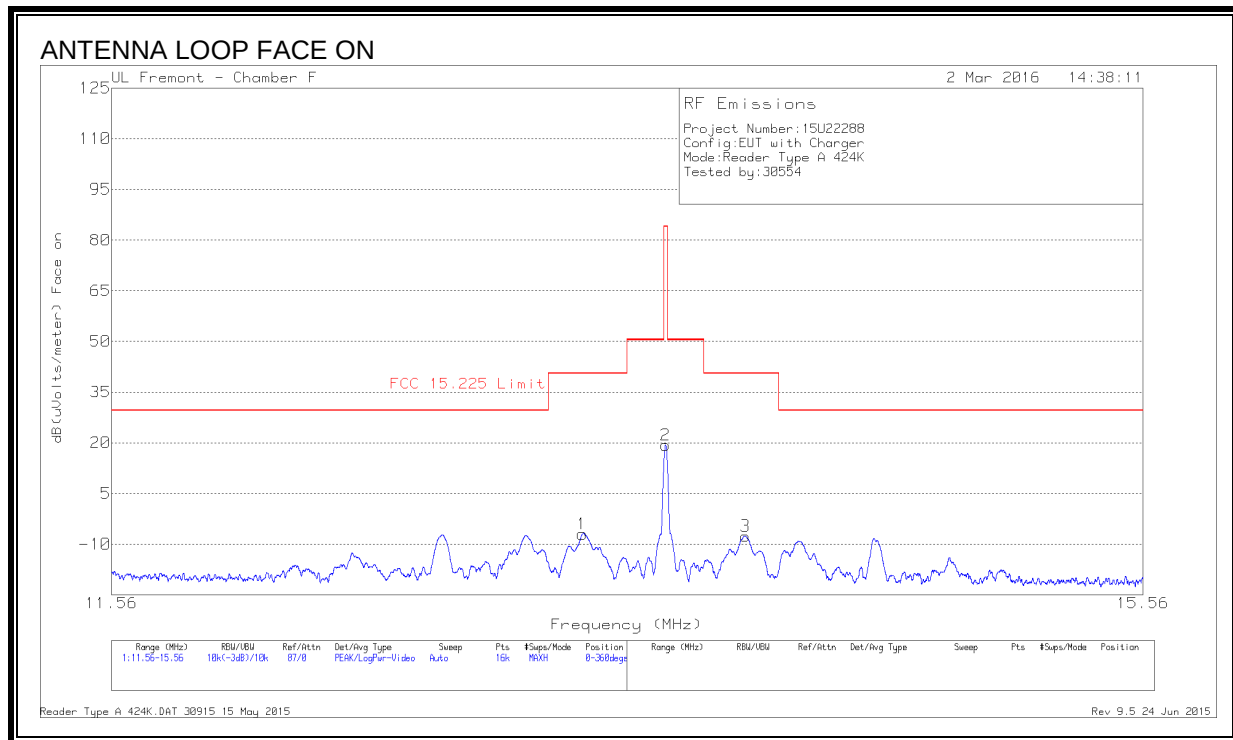


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uV olts/meter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	7.8347	11.07	Pk	10.8	.3	-40	-17.83	29.54	-47.37	-	-	0-360
4	11.2501	12.88	Pk	10.7	.3	-40	-16.12	29.54	-45.66	-	-	0-360
2	11.87636	15.14	Pk	10.7	.4	-40	-13.76	29.54	-43.3	-	-	0-360
5	12.9102	12.39	Pk	10.7	.4	-40	-16.51	29.54	-46.05	-	-	0-360
6	14.2092	11.12	Pk	10.6	.4	-40	-17.88	29.54	-47.42	-	-	0-360
3	15.2477	12.61	Pk	10.6	.4	-40	-16.39	29.54	-45.93	-	-	0-360

Pk - Peak detector

424Kbps FUNDAMENTAL

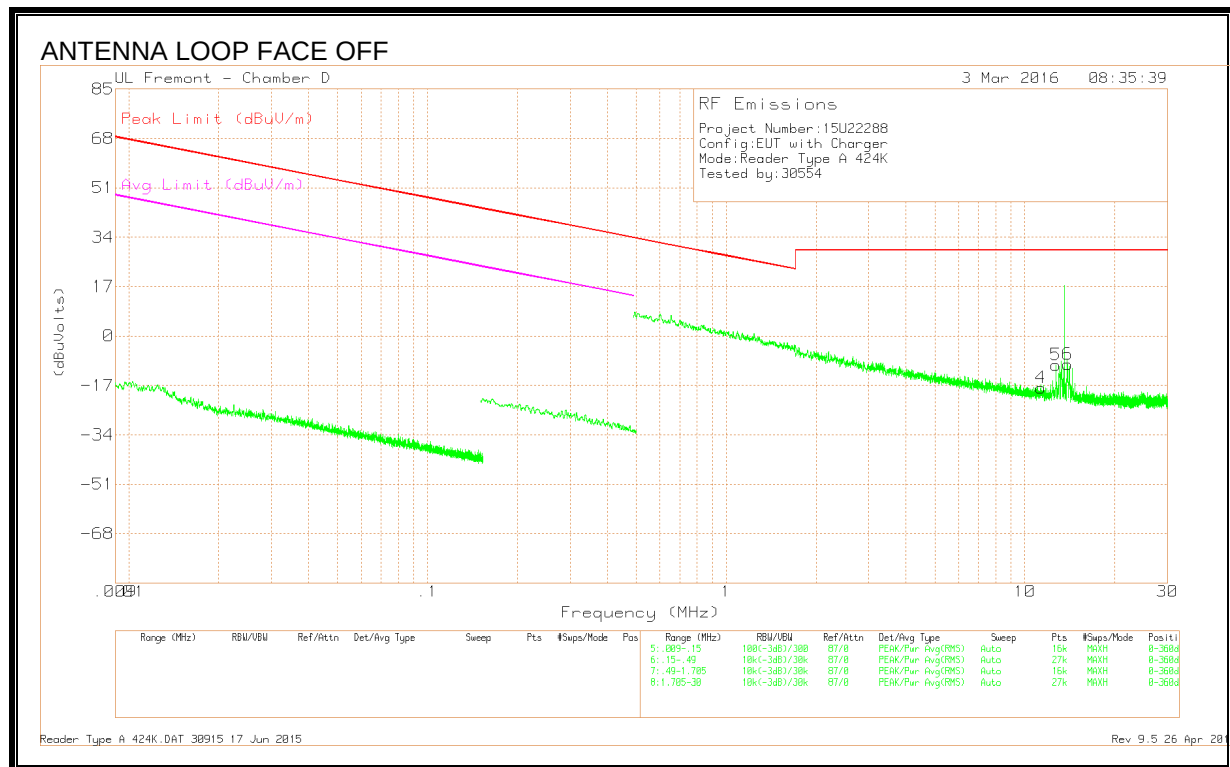
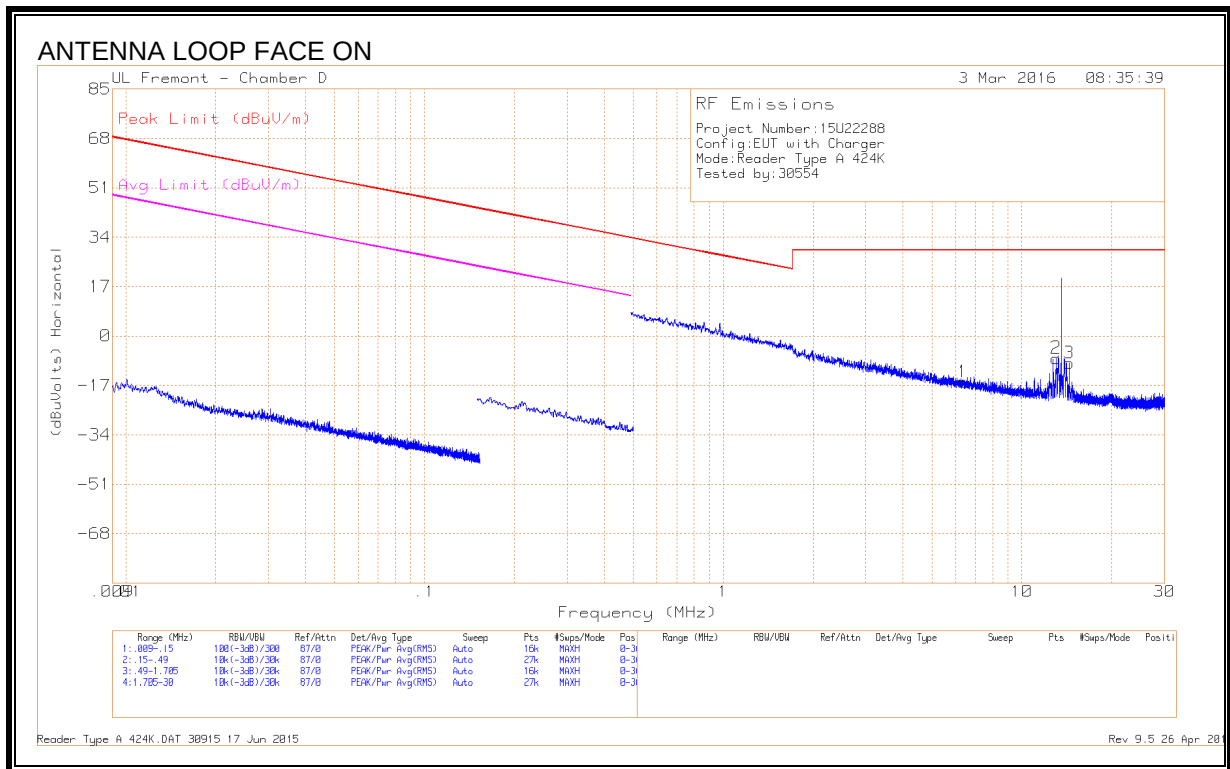


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	13.239	22.2	Pk	10.4	.4	-40	-7	40.51	-47.51	0-360
2	13.5605	48.53	Pk	10.4	.4	-40	19.33	84	-64.67	0-360
3	13.87588	21.67	Pk	10.3	.4	-40	-7.63	40.51	-48.14	0-360
4	13.24801	18.23	Pk	10.4	.4	-40	-10.97	40.51	-51.48	0-360
5	13.55637	44.13	Pk	10.4	.4	-40	14.93	84	-69.07	0-360
6	13.87169	17.61	Pk	10.3	.4	-40	-11.69	40.51	-52.2	0-360

Pk - Peak detector

SPURIOUS EMISSION

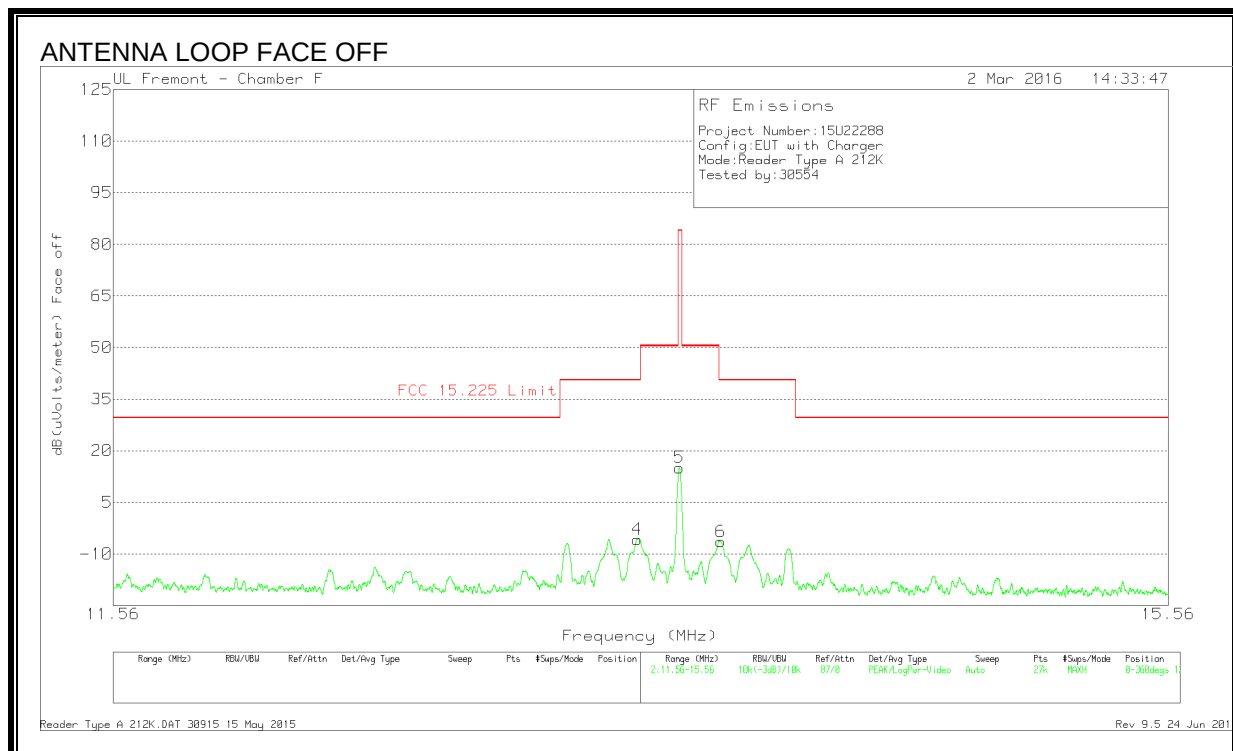
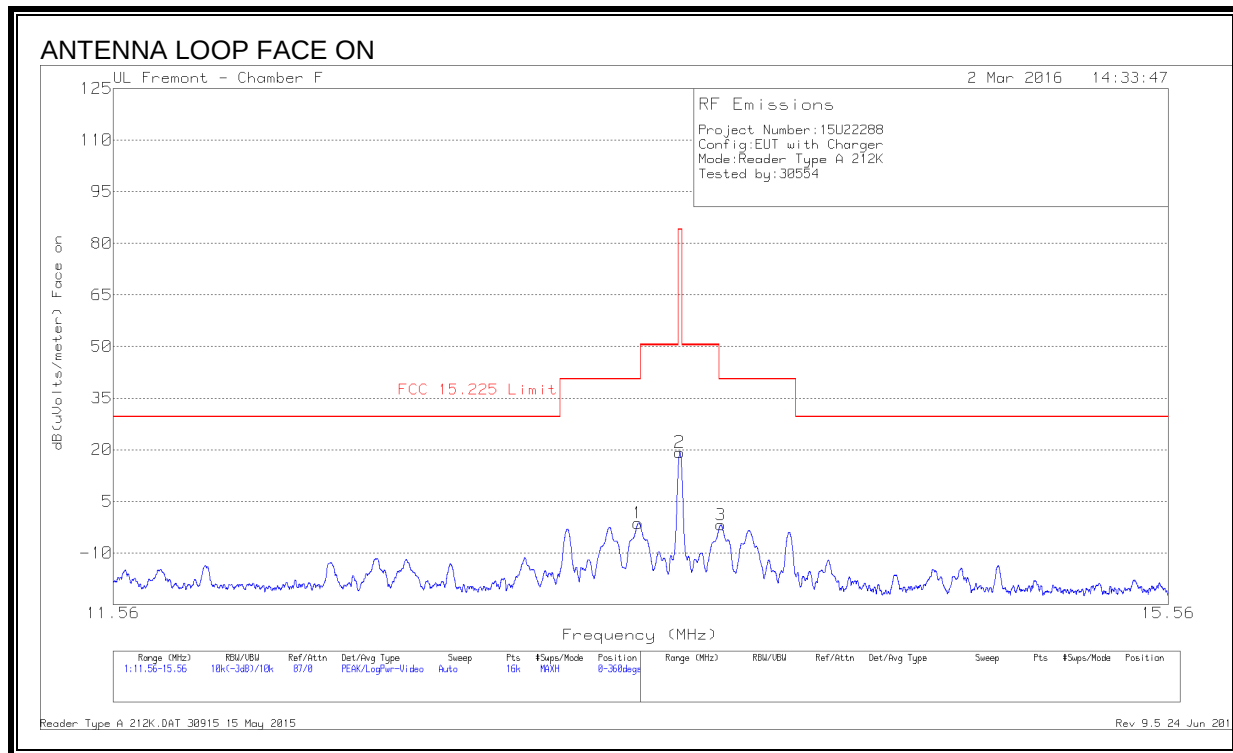


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uV olts/meter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	6.35078	13.06	Pk	10.9	.2	-40	-15.84	29.54	-45.38	-	-	0-360
4	11.33402	11.18	Pk	10.7	.3	-40	-17.82	29.54	-47.36	-	-	0-360
5	12.70795	18.85	Pk	10.7	.4	-40	-10.05	29.54	-39.59	-	-	0-360
2	13.02864	21.26	Pk	10.7	.4	-40	-7.64	29.54	-37.18	-	-	0-360
6	13.8859	19.27	Pk	10.6	.4	-40	-9.73	29.54	-39.27	-	-	0-360
3	14.40833	19.74	Pk	10.6	.4	-40	-9.26	29.54	-38.8	-	-	0-360

Pk - Peak detector

212Kbps FUNDAMENTAL

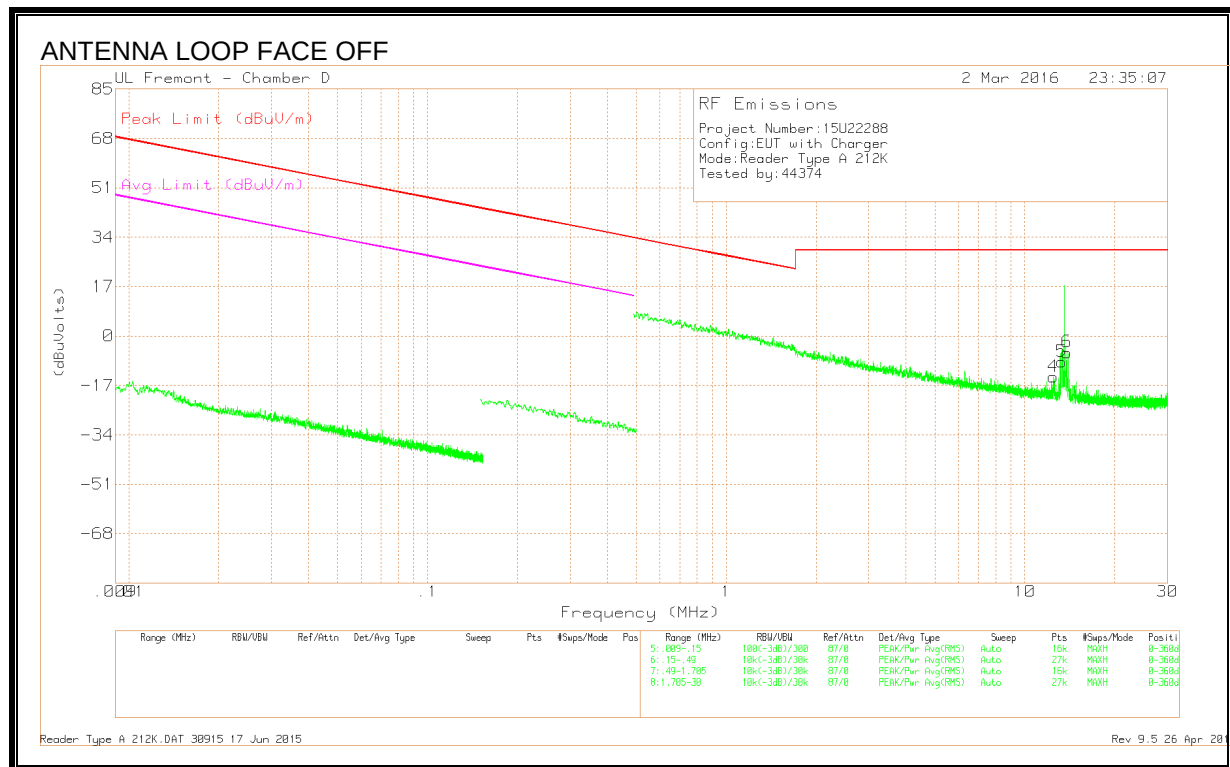
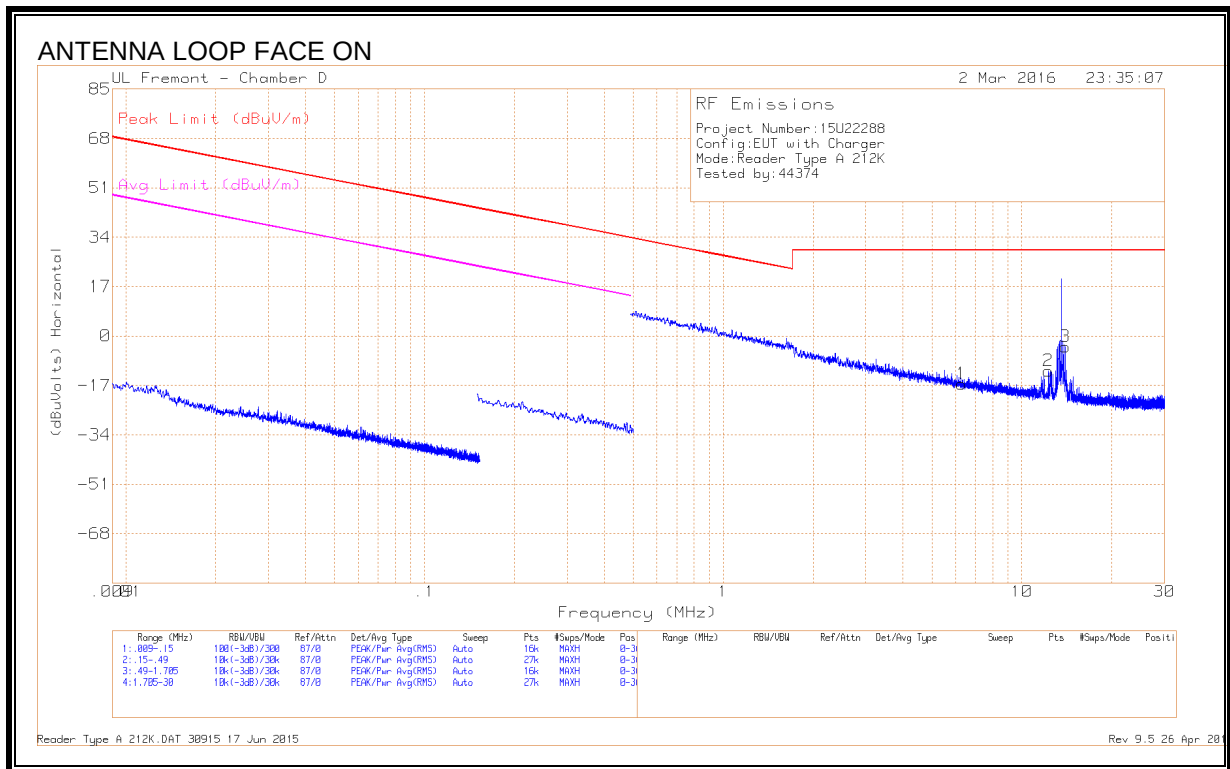


DATA

Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	13.4015	27.85	Pk	10.4	.4	-40	-1.35	40.51	-41.86	0-360
2	13.559	48.41	Pk	10.4	.4	-40	19.21	84	-64.79	0-360
3	13.71763	27.34	Pk	10.4	.4	-40	-1.86	40.51	-42.37	0-360
4	13.39897	23.43	Pk	10.4	.4	-40	-5.77	40.51	-46.28	0-360
5	13.55822	44.27	Pk	10.4	.4	-40	15.07	84	-68.93	0-360
6	13.7174	22.79	Pk	10.4	.4	-40	-6.41	40.51	-46.92	0-360

Pk - Peak detector

SPURIOUS EMISSION

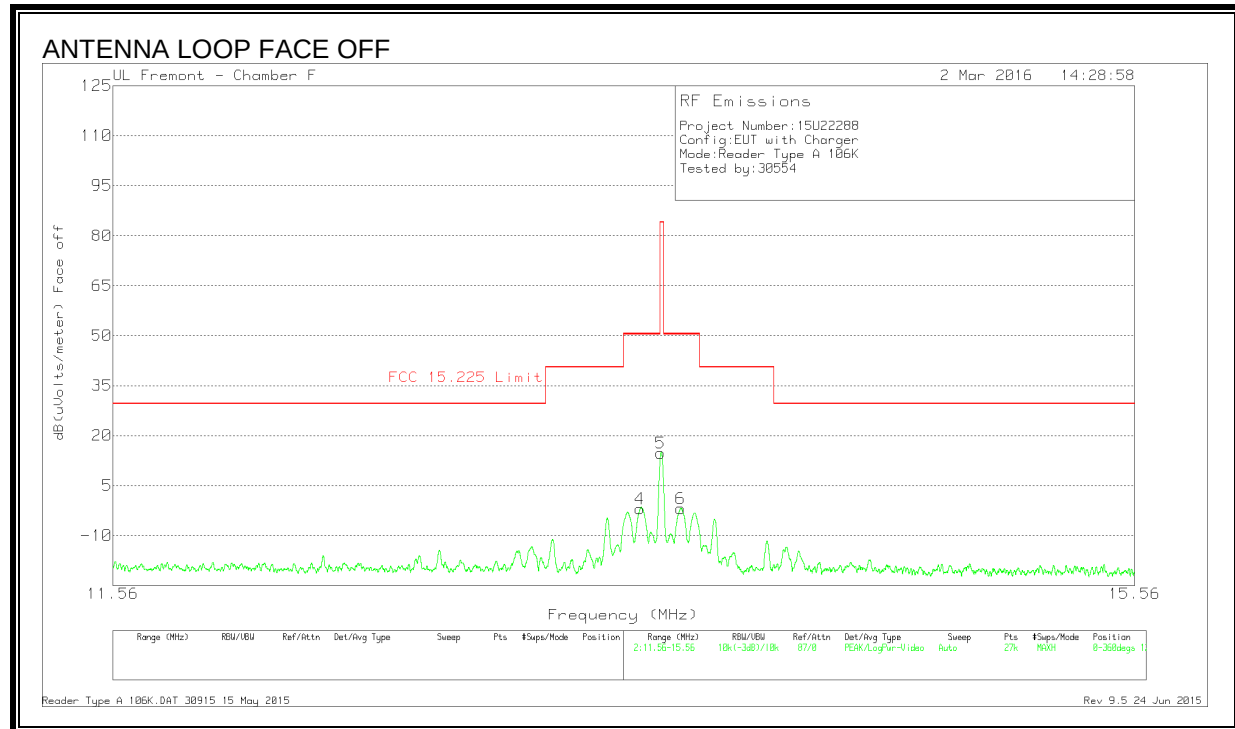
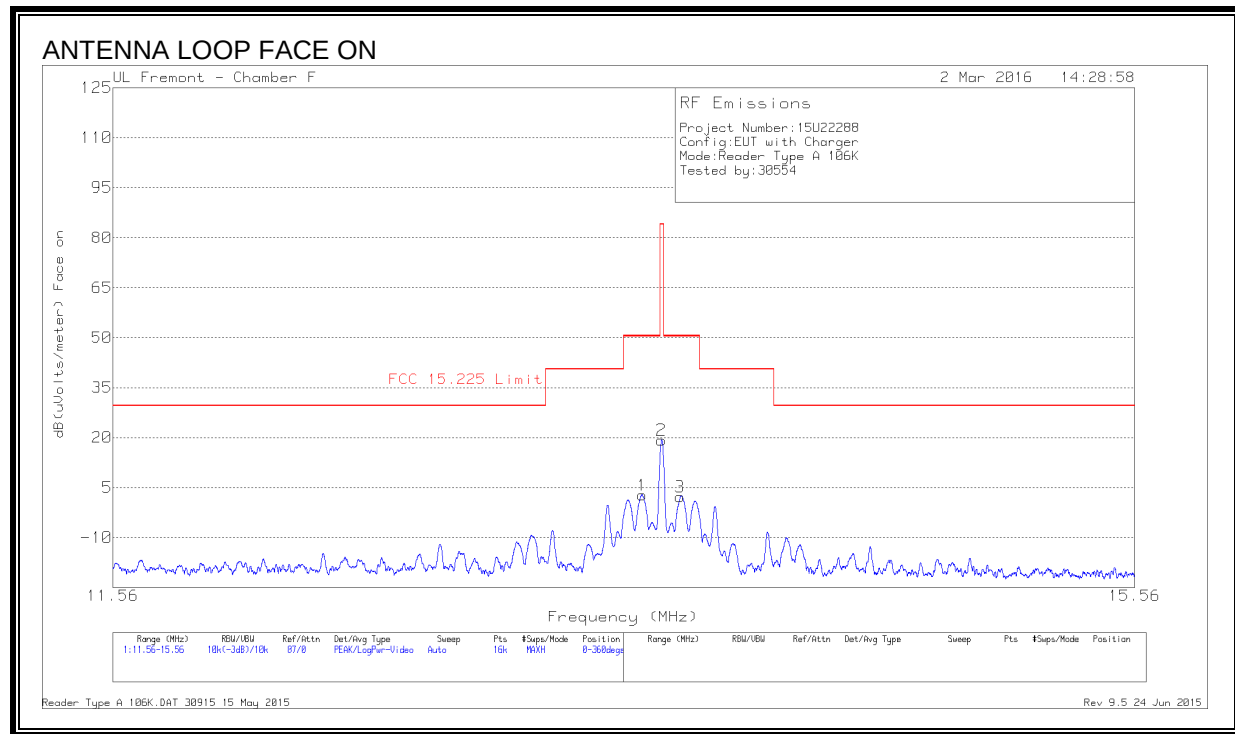


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uV olts/meter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	6.2774	12.37	Pk	10.9	.2	-40	-16.53	29.54	-46.07	-	-	0-360
2	12.2913	16.85	Pk	10.7	.4	-40	-12.05	29.54	-41.59	-	-	0-360
4	12.447	14.93	Pk	10.7	.4	-40	-13.97	29.54	-43.51	-	-	0-360
5	13.2780	20.05	Pk	10.7	.4	-40	-8.85	29.54	-38.39	-	-	0-360
6	13.8272	23.41	Pk	10.6	.4	-40	-5.59	29.54	-35.13	-	-	0-360
3	13.9833	25.39	Pk	10.6	.4	-40	-3.61	29.54	-33.15	-	-	0-360

Pk - Peak detector

106Kbps FUNDAMENTAL

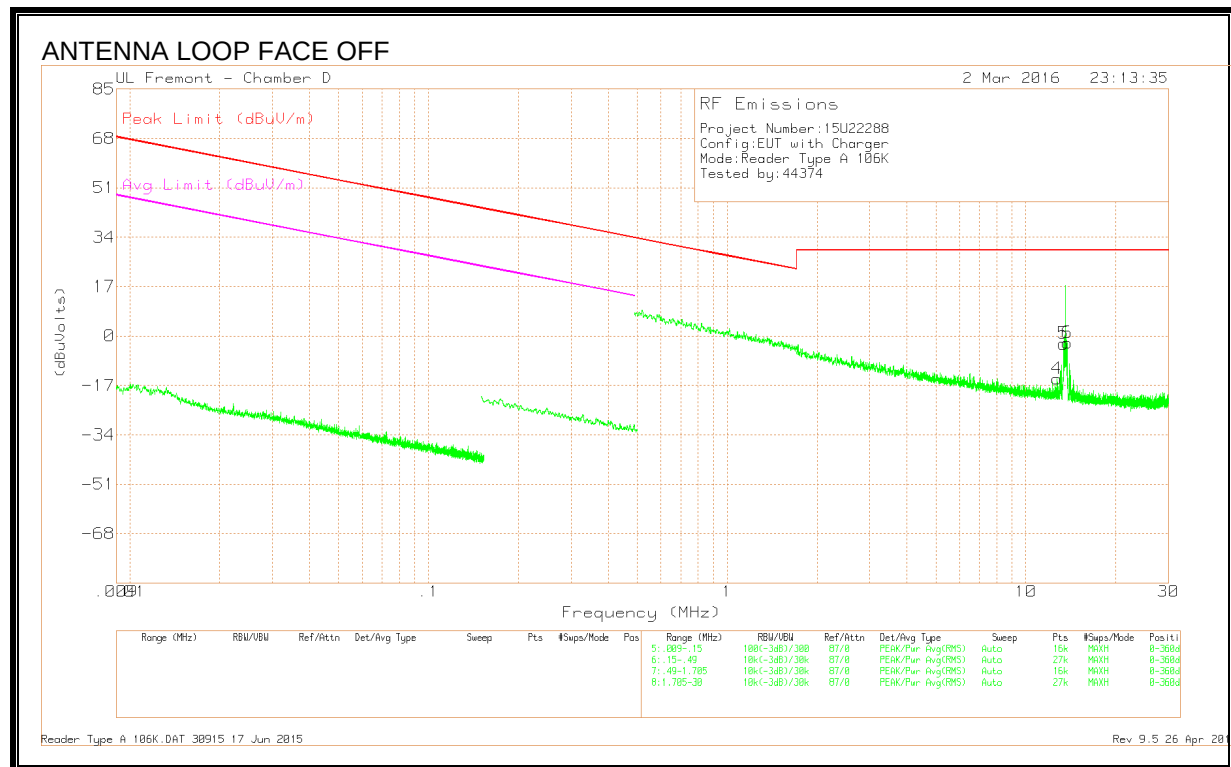
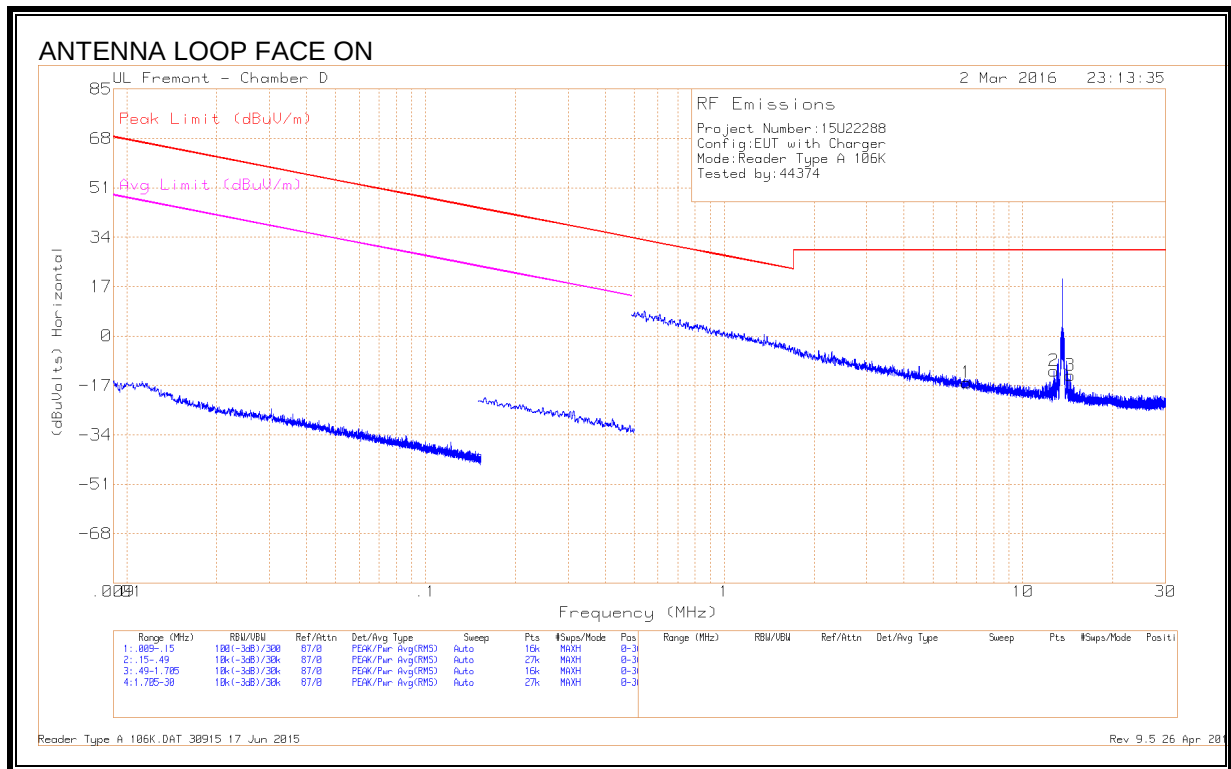


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degr)
1	13.48375	31.95	Pk	10.4	.4	-40	2.75	50.5	-47.75	0-360
2	13.559	48.43	Pk	10.4	.4	-40	19.23	84	-64.77	0-360
3	13.6335	31.41	Pk	10.4	.4	-40	2.21	50.5	-48.29	0-360
4	13.47512	27.22	Pk	10.4	.4	-40	-1.98	50.5	-52.48	0-360
5	13.55637	43.96	Pk	10.4	.4	-40	14.76	84	-69.24	0-360
6	13.63533	27.31	Pk	10.4	.4	-40	-1.89	50.5	-52.39	0-360

Pk - Peak detector

SPURIOUS EMISSION



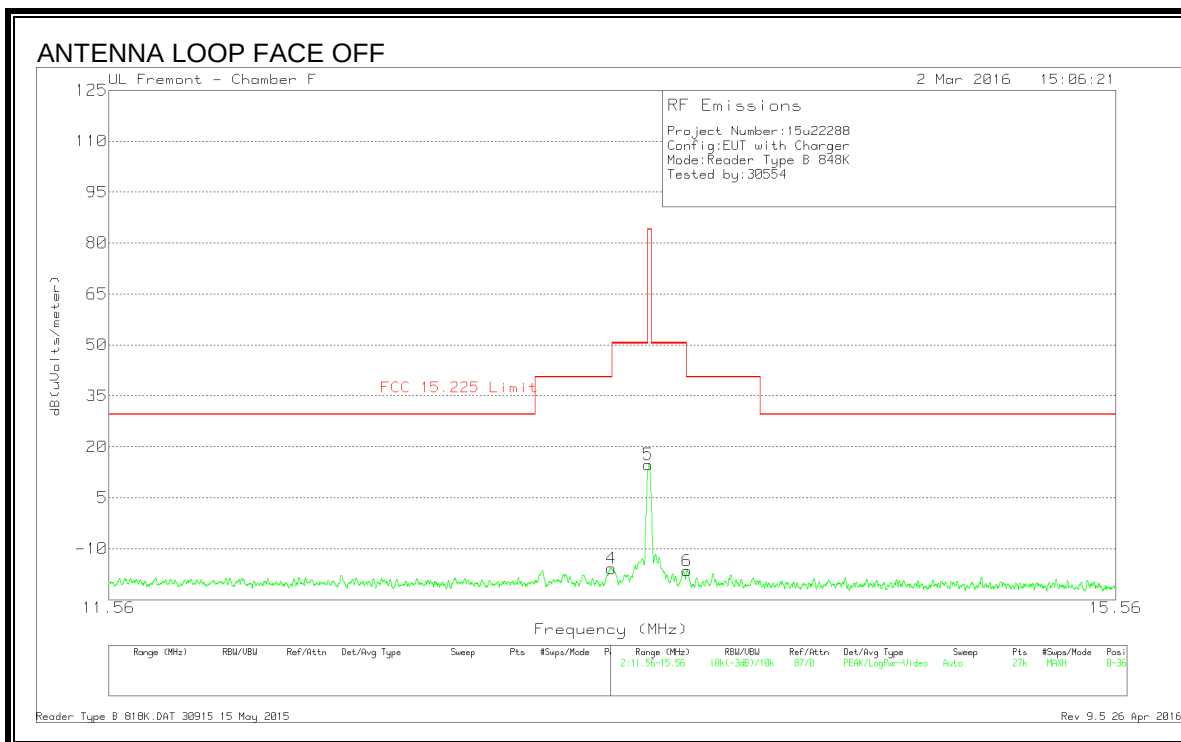
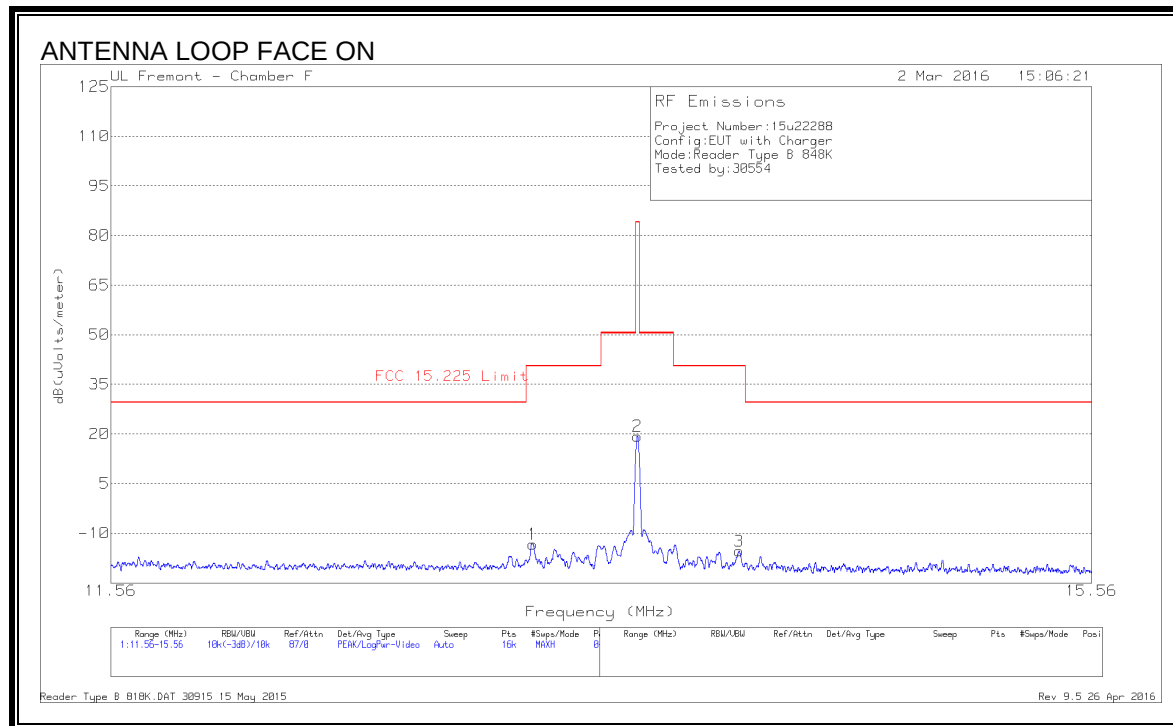
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts/meter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	6.47602	12.91	Pk	10.9	.2	-40	-15.99	29.54	-45.53	-	-	0-360
2	12.71319	16.83	Pk	10.7	.4	-40	-12.07	29.54	-41.61	-	-	0-360
4	12.71424	14.23	Pk	10.7	.4	-40	-14.67	29.54	-44.21	-	-	0-360
5	13.3488	26.25	Pk	10.7	.4	-40	-2.65	29.54	-32.19	-	-	0-360
6	13.77272	26.64	Pk	10.6	.4	-40	-2.36	29.54	-31.9	-	-	0-360
3	14.4099	15.43	Pk	10.6	.4	-40	-13.57	29.54	-43.11	-	-	0-360

Pk - Peak detector

TYPE B

848Kbps FUNDAMENTAL

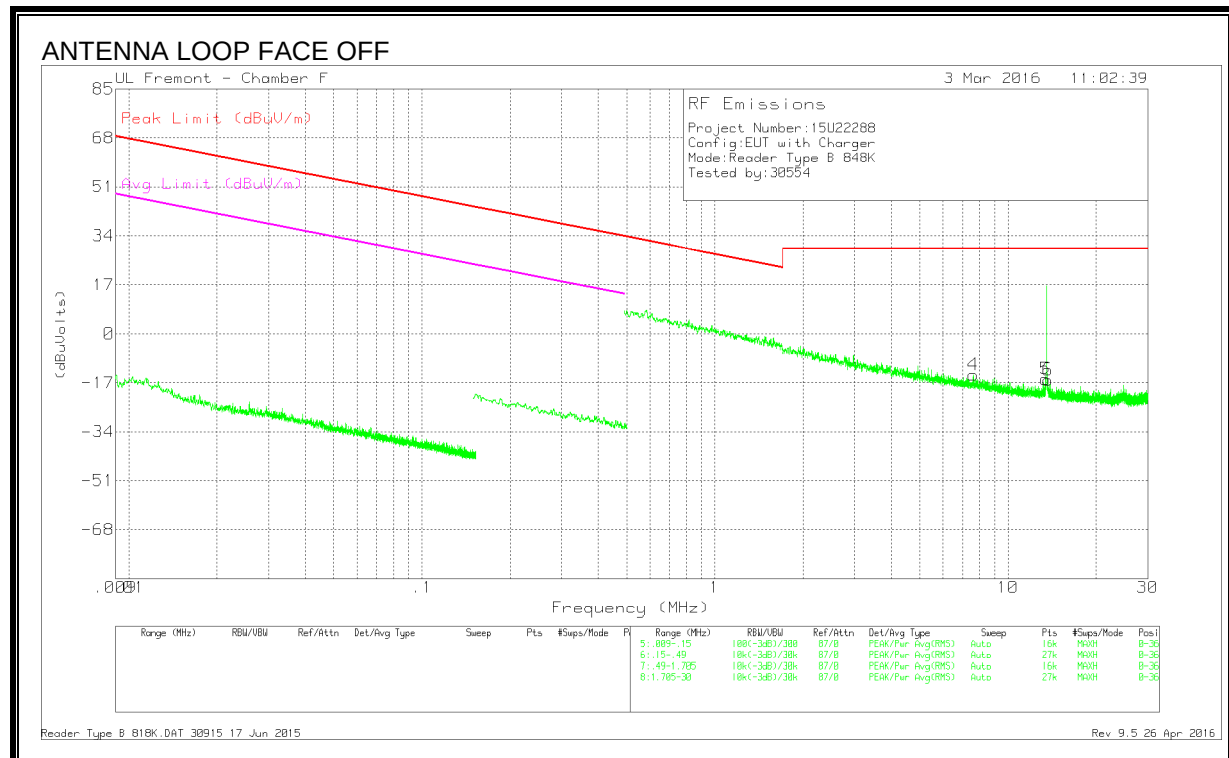
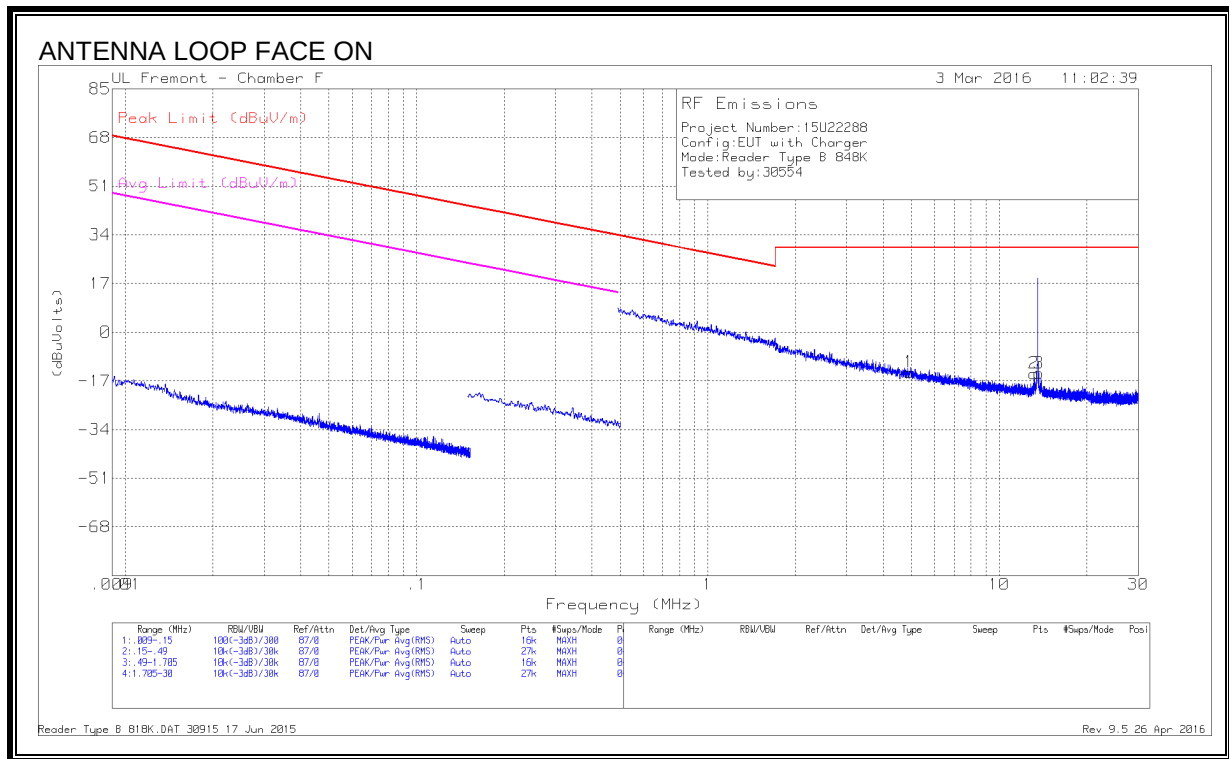


DATA

Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	13.1375	15.88	Pk	10.4	.4	-40	-13.32	40.51	-53.83	0-360
2	13.5605	48.55	Pk	10.4	.4	-40	19.35	84	-64.65	0-360
3	13.98513	13.88	Pk	10.3	.4	-40	-15.42	40.51	-55.93	0-360
4	13.408	13.39	Pk	10.4	.4	-40	-15.81	40.51	-56.32	0-360
5	13.55637	43.98	Pk	10.4	.4	-40	14.78	84	-69.22	0-360
6	13.71074	12.69	Pk	10.4	.4	-40	-16.51	40.51	-57.02	0-360

Pk - Peak detector

SPURIOUS EMISSION

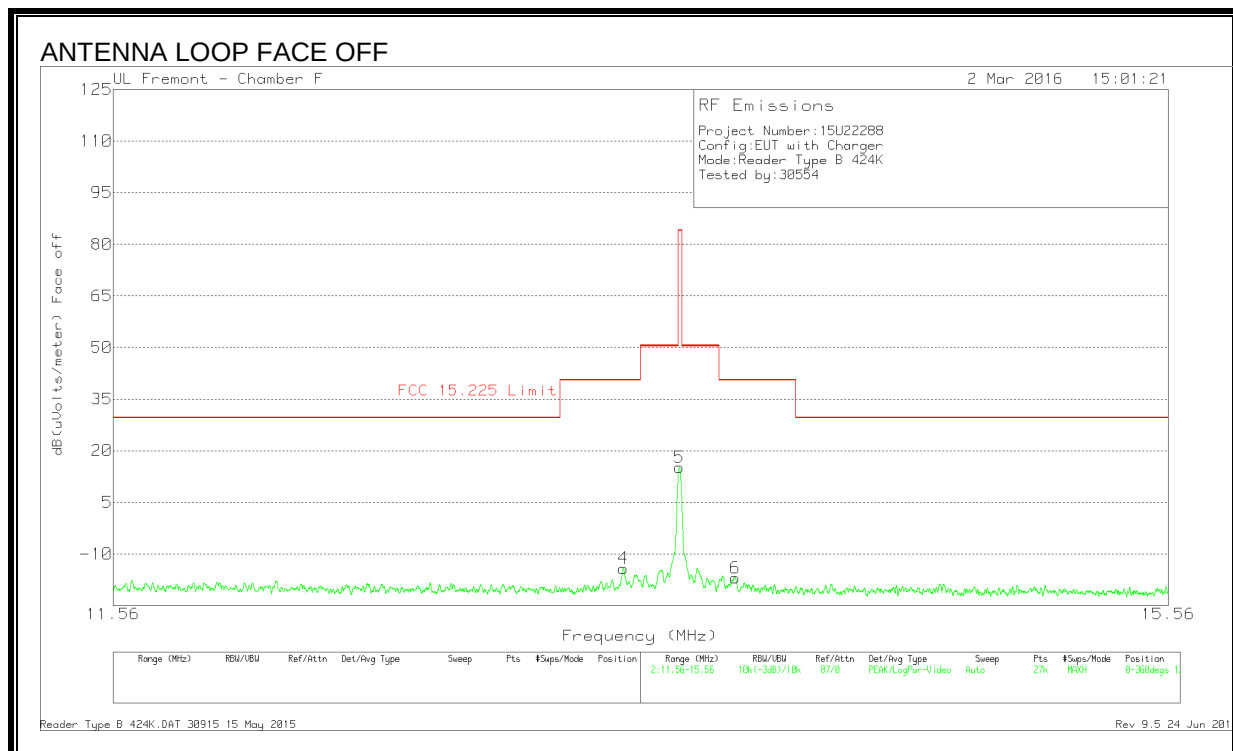
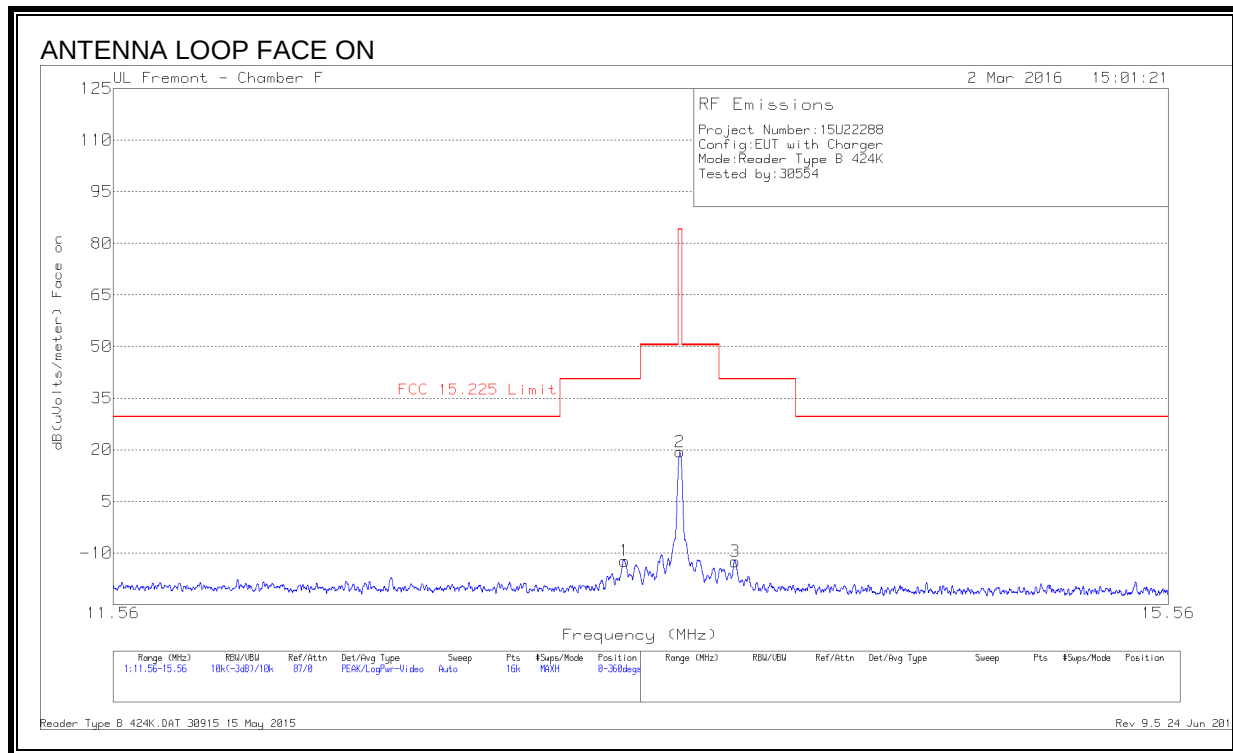


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp /Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uV olts/m eter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV /m)	Margin (dB)	Azimuth (Degs)
1	4.90454	14.95	Pk	10.9	.2	-40	-13.95	29.54	-43.49	-	-	0-360
4	7.62201	14.68	Pk	10.8	.3	-40	-14.22	29.54	-43.76	-	-	0-360
2	13.14025	14.5	Pk	10.7	.4	-40	-14.4	29.54	-43.94	-	-	0-360
5	13.42164	13.2	Pk	10.7	.4	-40	-15.7	29.54	-45.24	-	-	0-360
3	13.71456	14.59	Pk	10.7	.4	-40	-14.31	29.54	-43.85	-	-	0-360
6	13.72032	12.86	Pk	10.7	.4	-40	-16.04	29.54	-45.58	-	-	0-360

Pk - Peak detector

424Kbps FUNDAMENTAL

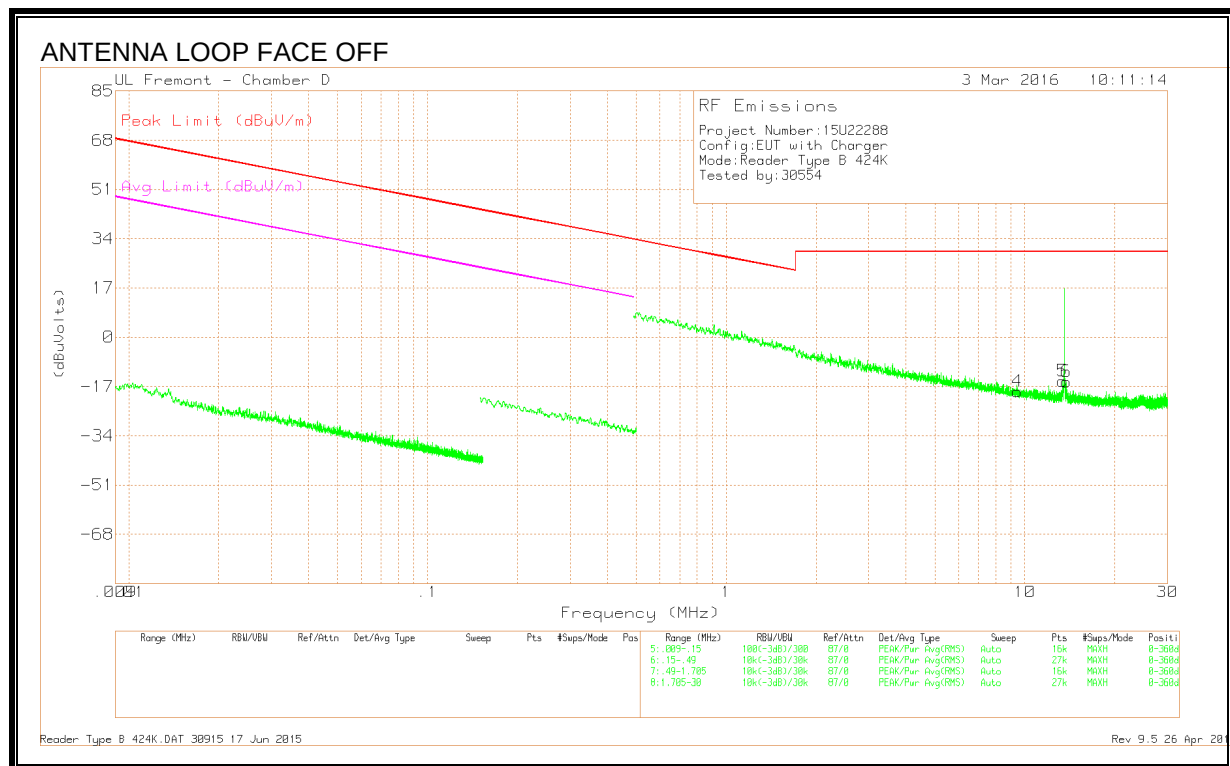
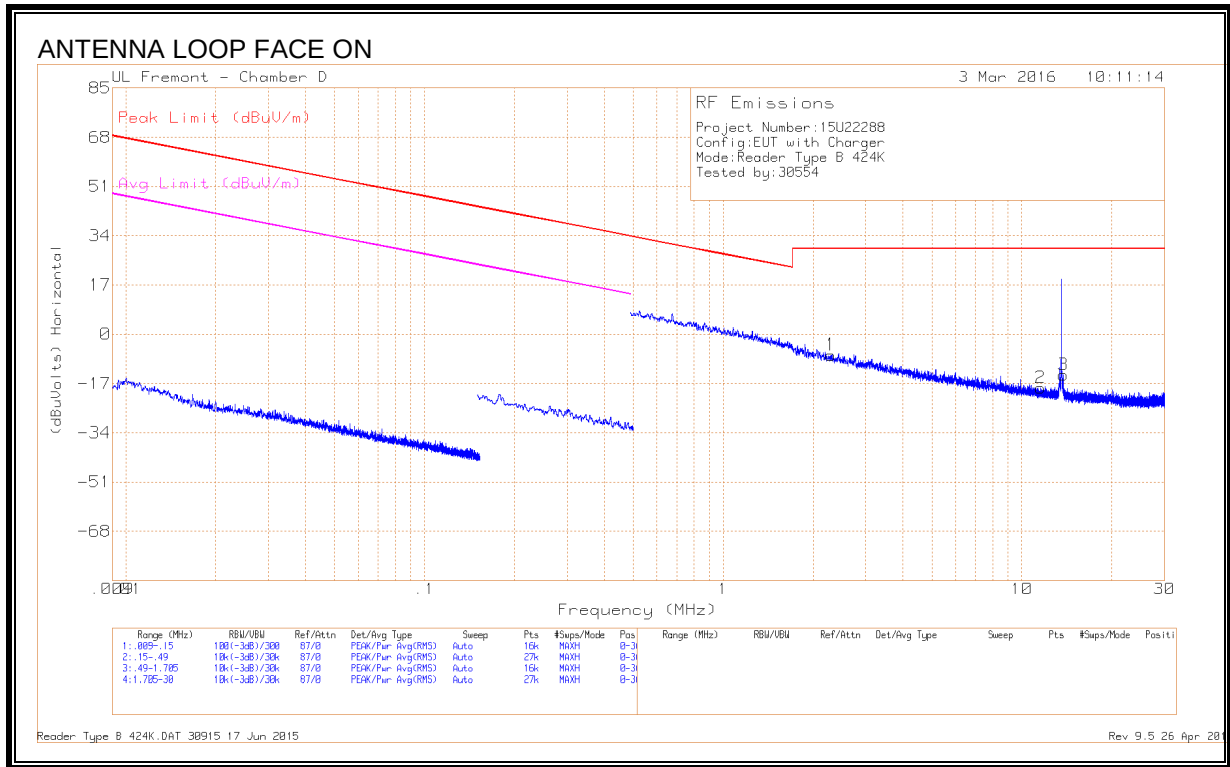


DATA

Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	13.35075	16.91	Pk	10.4	.4	-40	-12.29	40.51	-52.8	0-360
2	13.5605	48.54	Pk	10.4	.4	-40	19.34	84	-64.66	0-360
3	13.77325	16.84	Pk	10.3	.4	-40	-12.46	40.51	-52.97	0-360
4	13.34636	15.01	Pk	10.4	.4	-40	-14.19	40.51	-54.7	0-360
5	13.55822	44.37	Pk	10.4	.4	-40	15.17	84	-68.83	0-360
6	13.77334	12.31	Pk	10.3	.4	-40	-16.99	40.51	-57.5	0-360

Pk - Peak detector

SPURIOUS EMISSION

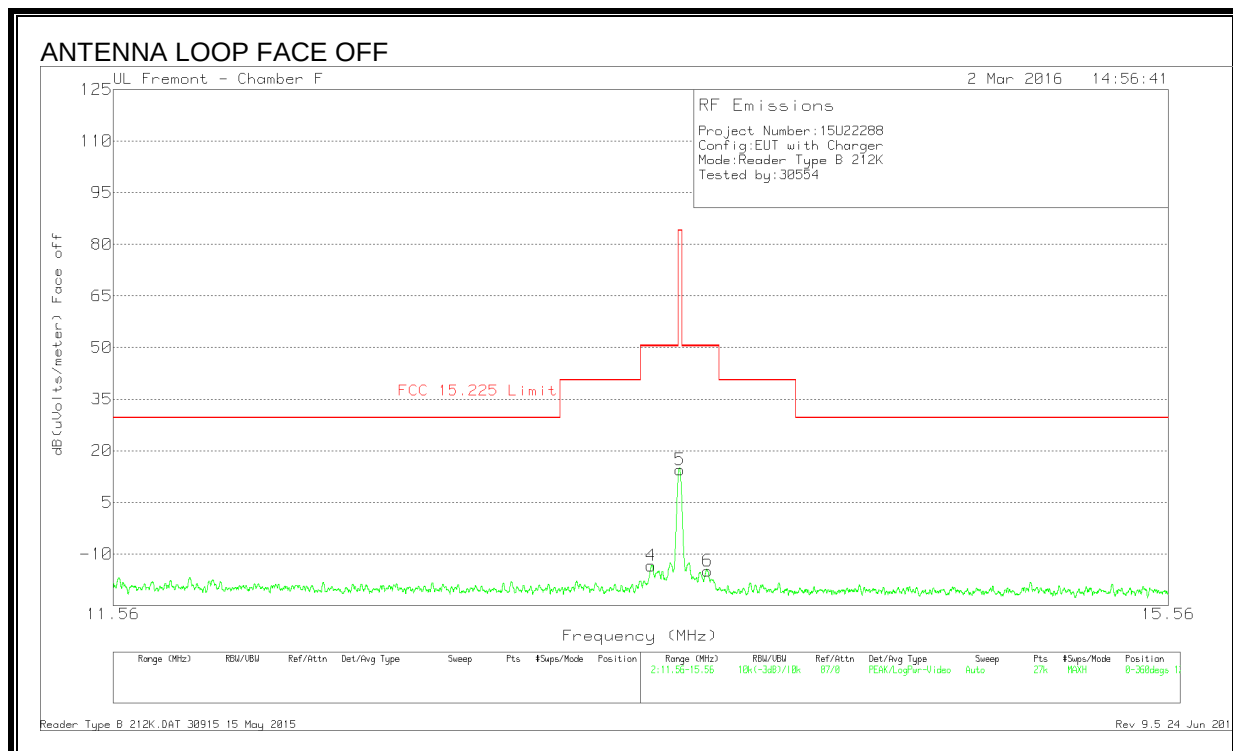
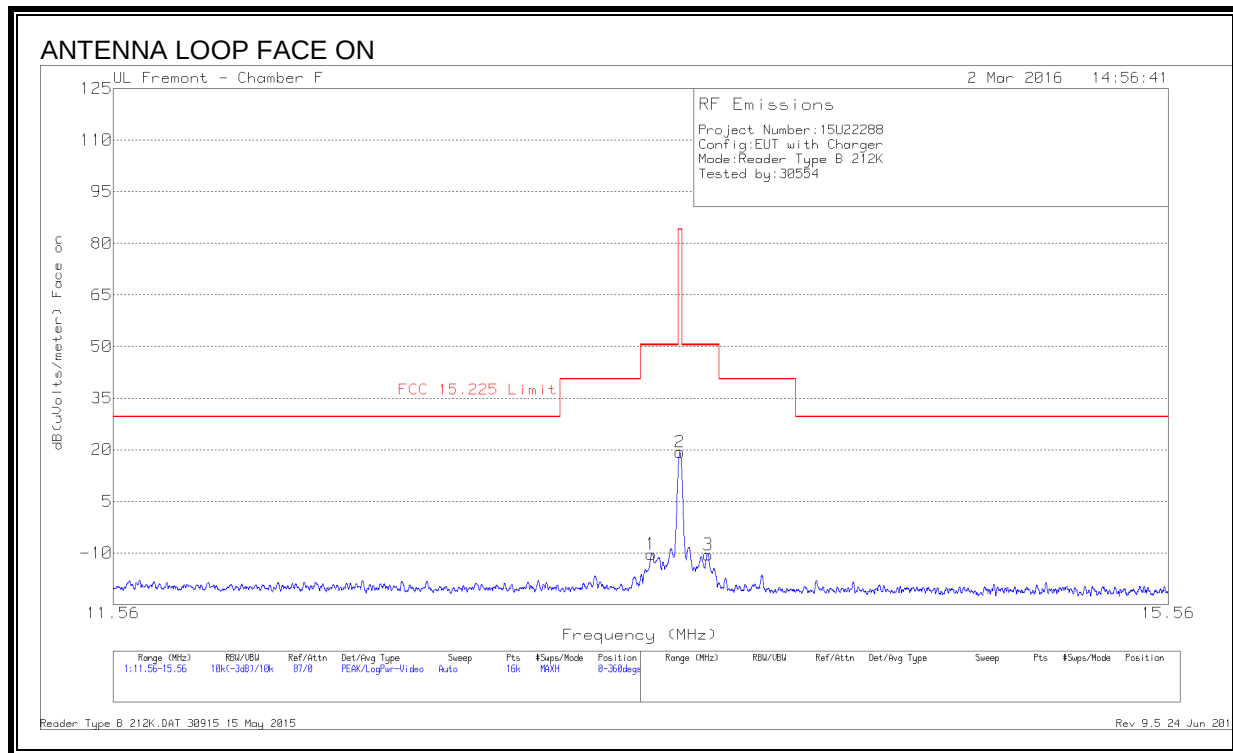


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uV olts/meter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	2.29922	21.82	Pk	10.8	.2	-40	-7.18	29.54	-36.72	-	-	0-360
4	9.42719	10.23	Pk	10.8	.3	-40	-18.67	29.54	-48.21	-	-	0-360
2	11.55725	10.56	Pk	10.7	.3	-40	-18.44	29.54	-47.98	-	-	0-360
5	13.34985	13.8	Pk	10.7	.4	-40	-15.1	29.54	-44.64	-	-	0-360
6	13.77167	13.59	Pk	10.6	.4	-40	-15.41	29.54	-44.95	-	-	0-360
3	13.77429	15.01	Pk	10.6	.4	-40	-13.99	29.54	-43.53	-	-	0-360

Pk - Peak detector

212Kbps FUNDAMENTAL

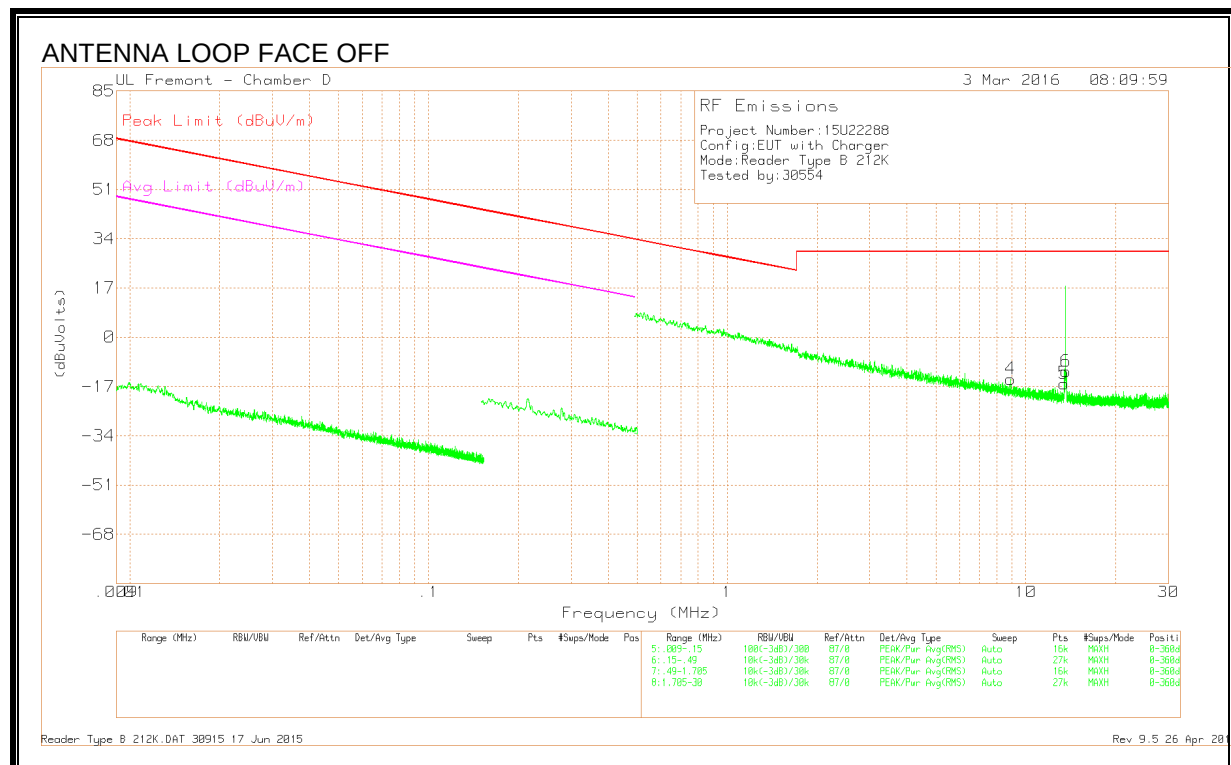
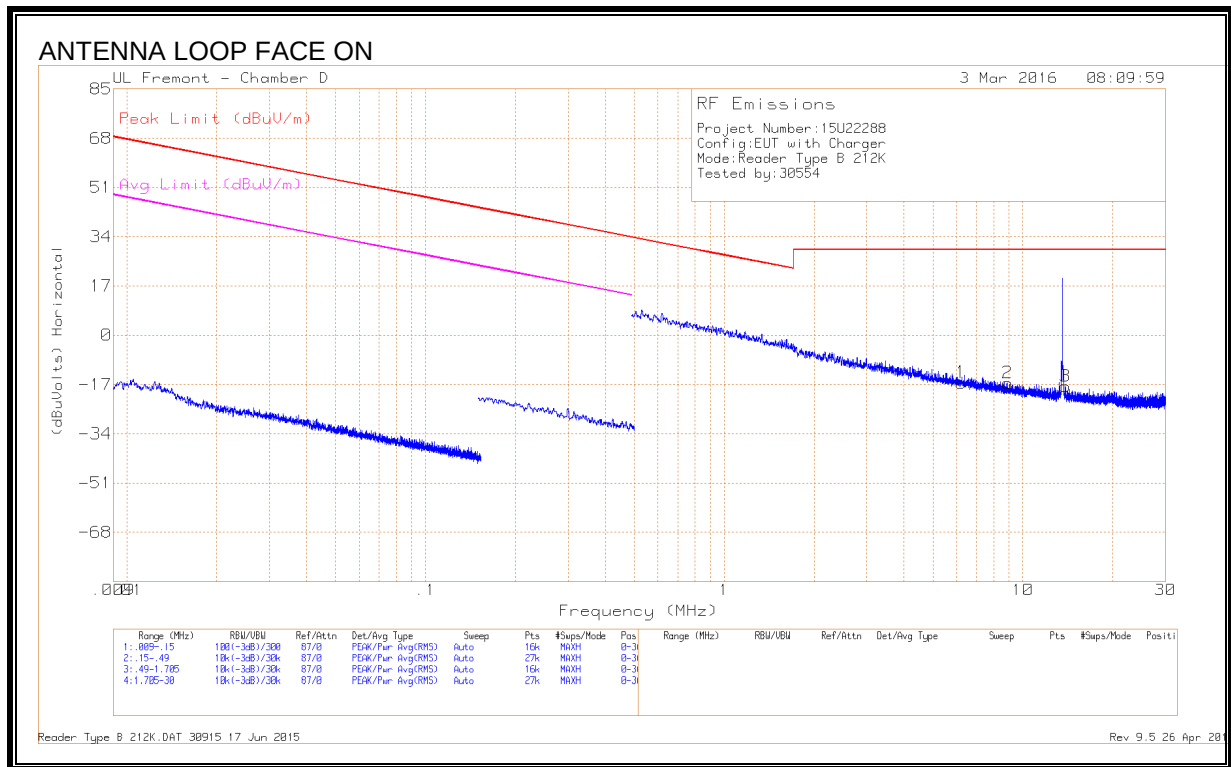


DATA

Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	13.4515	18.83	Pk	10.4	.4	-40	-10.37	50.5	-60.87	0-360
2	13.5605	48.52	Pk	10.4	.4	-40	19.32	84	-64.68	0-360
3	13.66875	18.64	Pk	10.4	.4	-40	-10.56	50.5	-61.06	0-360
4	13.45129	15.82	Pk	10.4	.4	-40	-13.38	50.5	-63.88	0-360
5	13.56052	43.69	Pk	10.4	.4	-40	14.49	84	-69.51	0-360
6	13.66663	14.3	Pk	10.4	.4	-40	-14.9	50.5	-65.4	0-360

Pk - Peak detector

SPURIOUS EMISSION

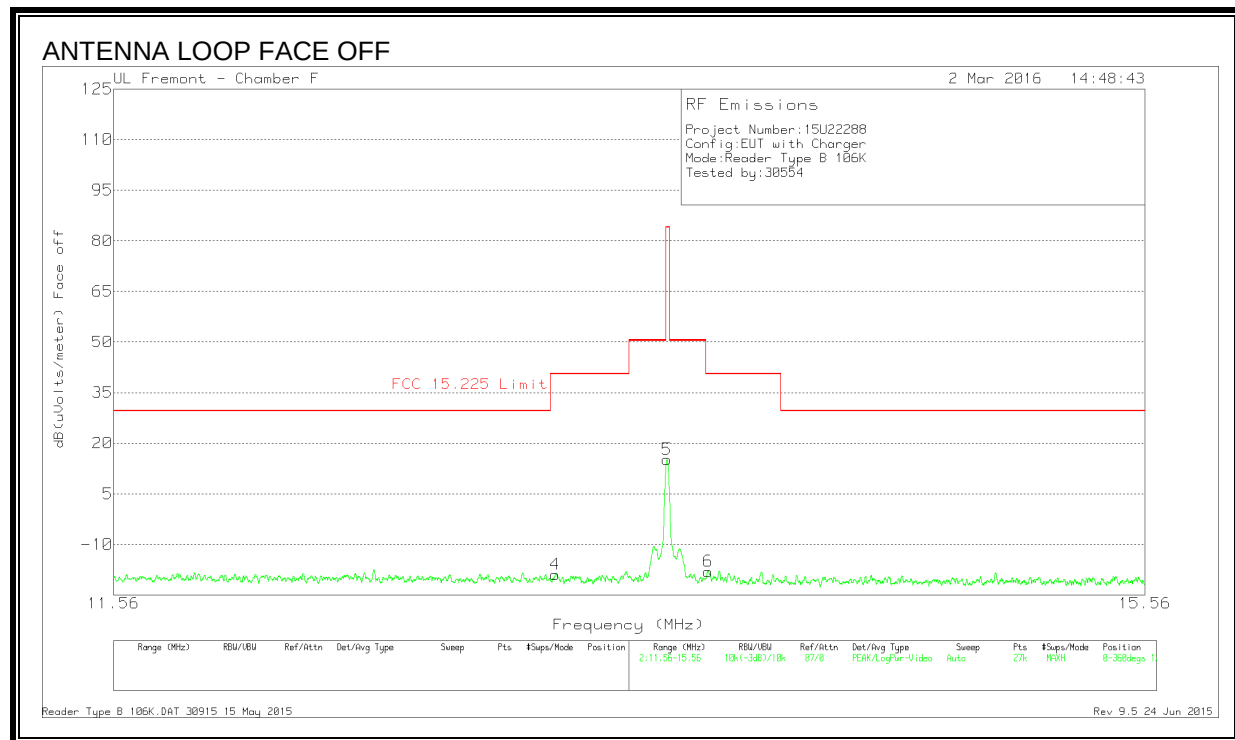
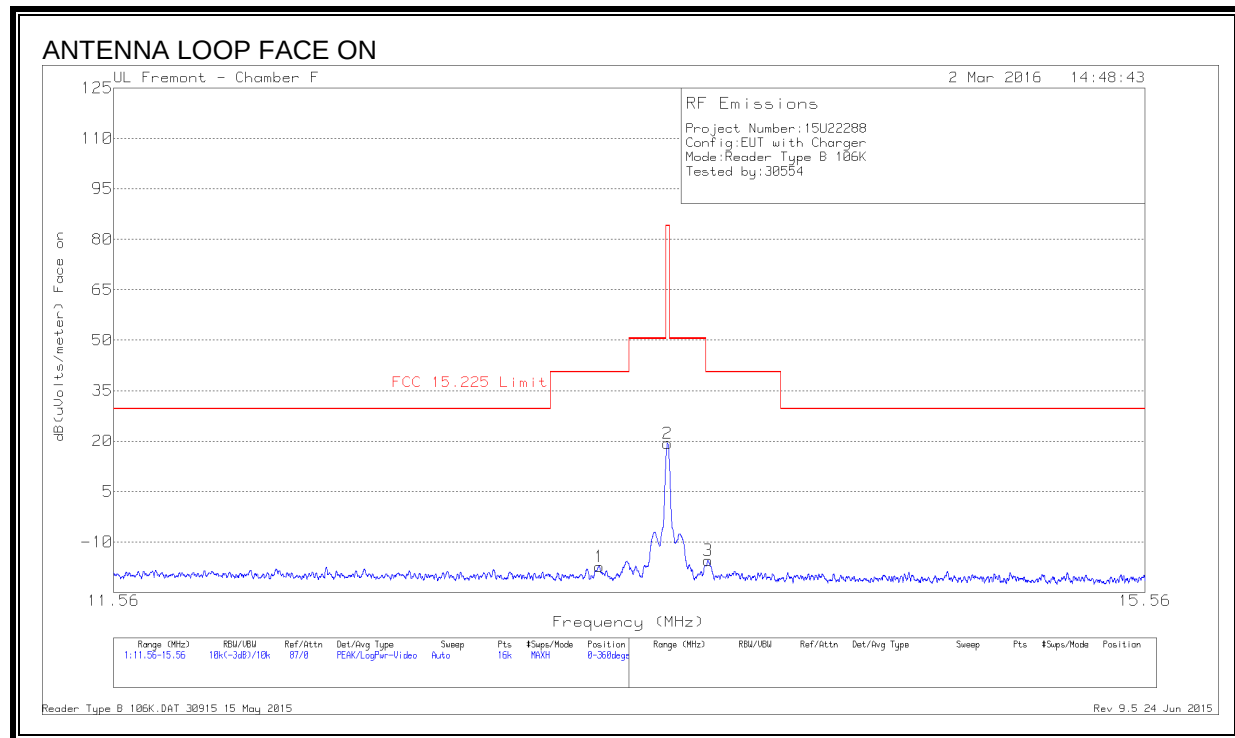


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uV olts/m eter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	6.2245	12.5	Pk	10.9	.2	-40	-16.4	29.54	-45.94	-	-	0-360
2	8.88118	12.34	Pk	10.8	.3	-40	-16.56	29.54	-46.1	-	-	0-360
4	8.90633	14.52	Pk	10.8	.3	-40	-14.38	29.54	-43.92	-	-	0-360
5	13.4316	12.96	Pk	10.7	.4	-40	-15.94	29.54	-45.48	-	-	0-360
6	13.66582	17.2	Pk	10.7	.4	-40	-11.7	29.54	-41.24	-	-	0-360
3	13.87647	11.43	Pk	10.6	.4	-40	-17.57	29.54	-47.11	-	-	0-360

Pk - Peak detector

106Kbps FUNDAMENTAL

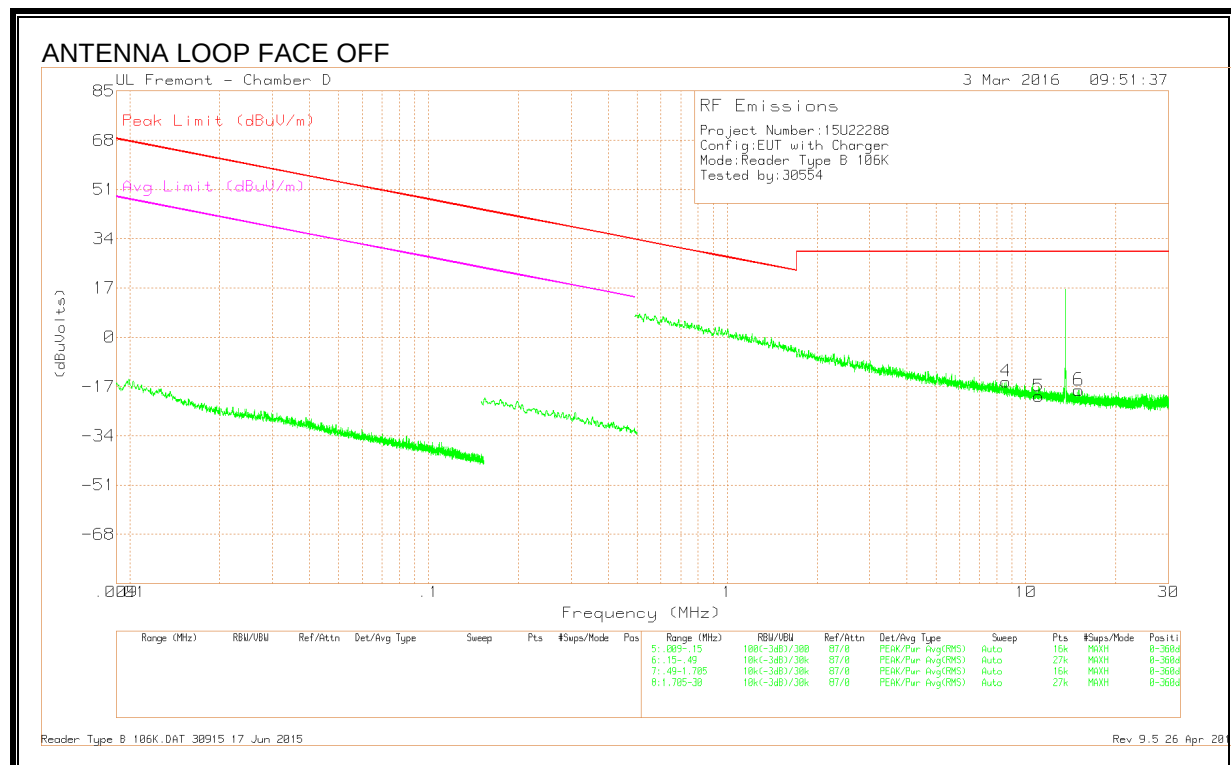
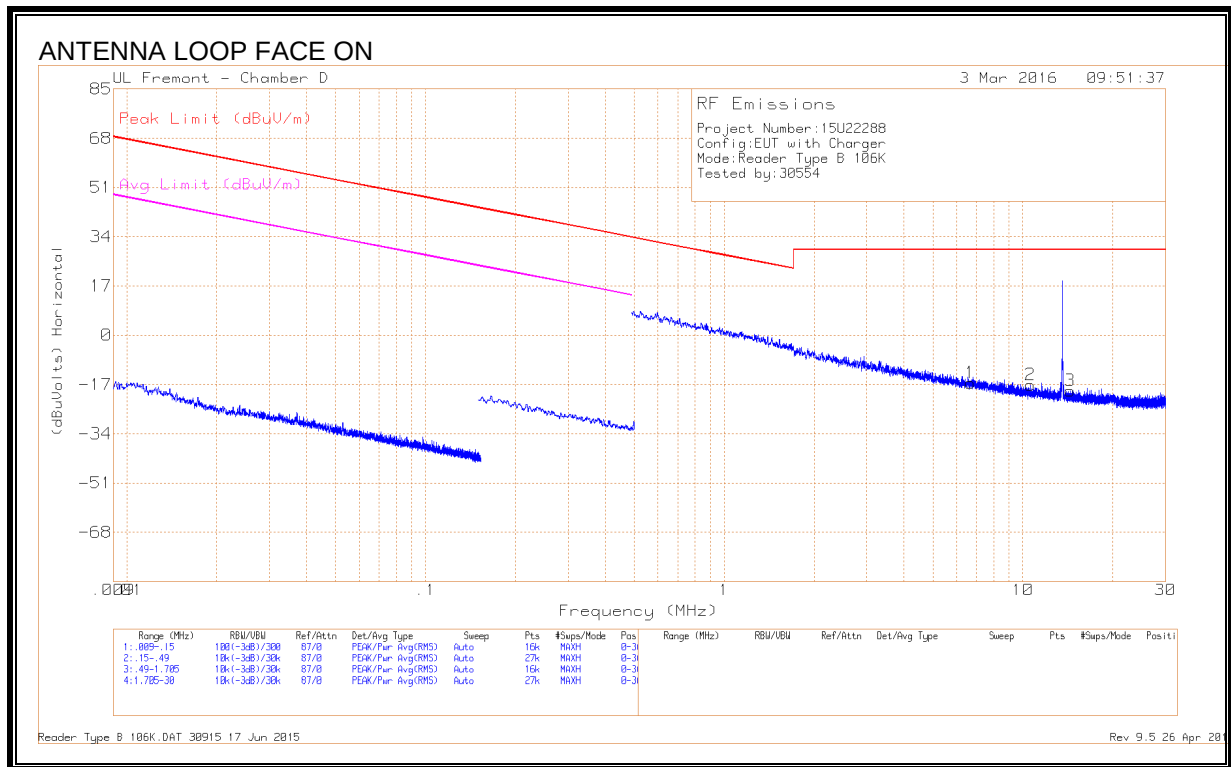


DATA

Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	13.2965	11.86	Pk	10.4	.4	-40	-17.34	40.51	-57.85	0-360
2	13.5605	48.52	Pk	10.4	.4	-40	19.32	84	-64.68	0-360
3	13.71975	13.71	Pk	10.4	.4	-40	-15.49	40.51	-56	0-360
4	13.1291	10.3	Pk	10.4	.4	-40	-18.9	40.51	-59.41	0-360
5	13.55822	44.38	Pk	10.4	.4	-40	15.18	84	-68.82	0-360
6	13.71991	11.21	Pk	10.4	.4	-40	-17.99	40.51	-58.5	0-360

Pk - Peak detector

SPURIOUS EMISSION



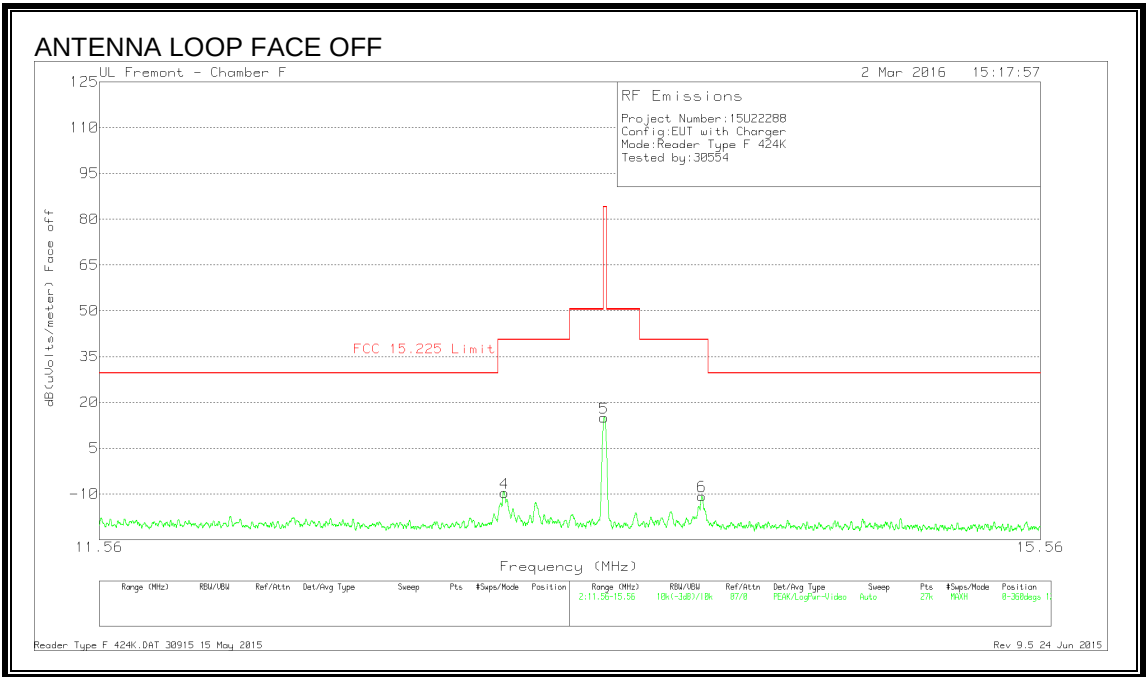
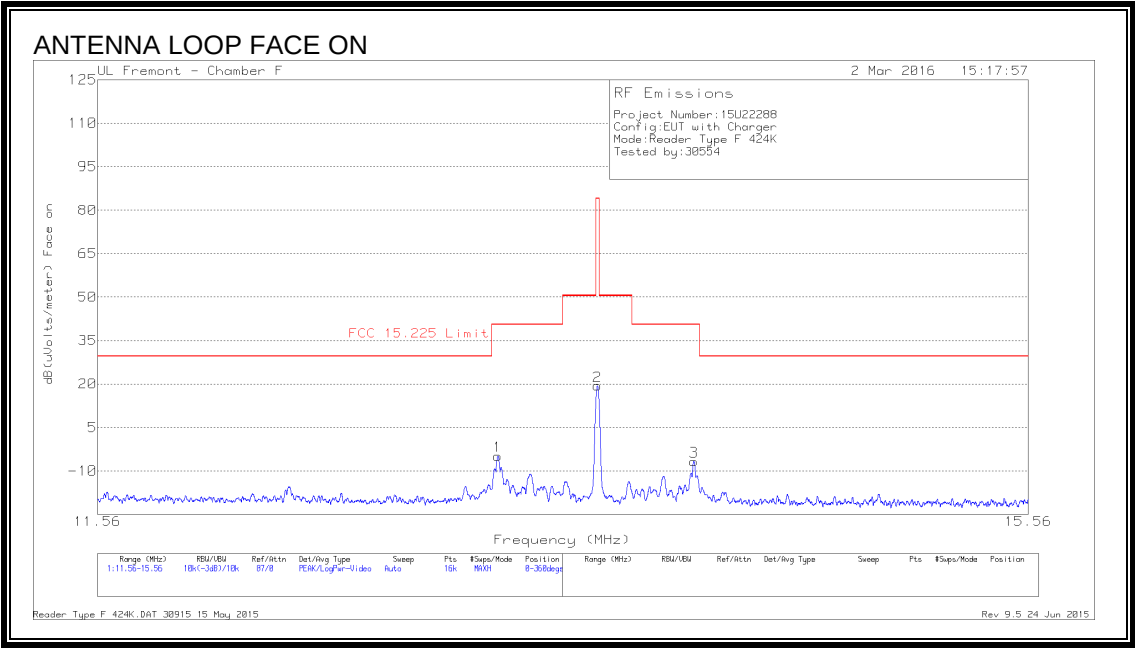
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts/meter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	6.67409	12.39	Pk	10.9	.2	-40	-16.51	29.54	-46.05	-	-	0-360
4	8.58302	13.64	Pk	10.8	.3	-40	-15.26	29.54	-44.8	-	-	0-360
2	10.59938	11.68	Pk	10.8	.3	-40	-17.22	29.54	-46.76	-	-	0-360
5	11.05945	8.56	Pk	10.8	.3	-40	-20.34	29.54	-49.88	-	-	0-360
3	14.39628	9.79	Pk	10.6	.4	-40	-19.21	29.54	-48.75	-	-	0-360
6	15.04394	10.79	Pk	10.6	.4	-40	-18.21	29.54	-47.75	-	-	0-360

Pk - Peak detector

TYPE F

424Kbps FUNDAMENTAL

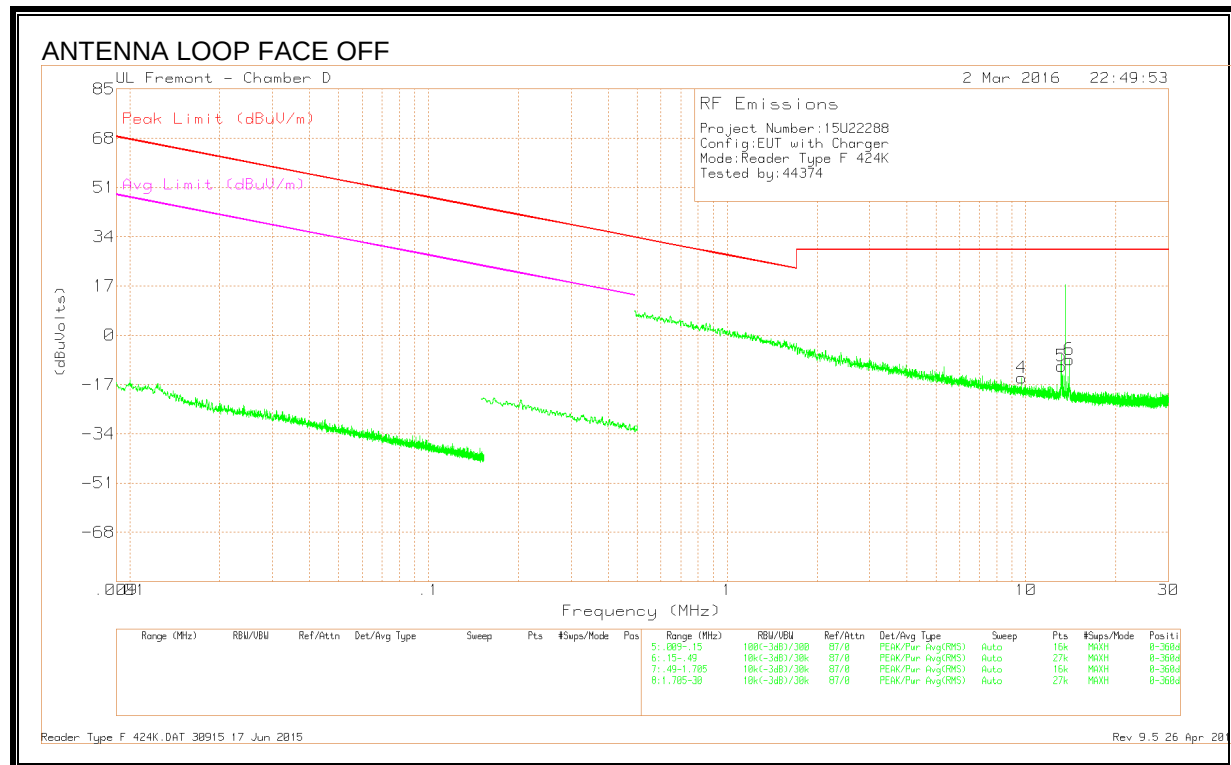
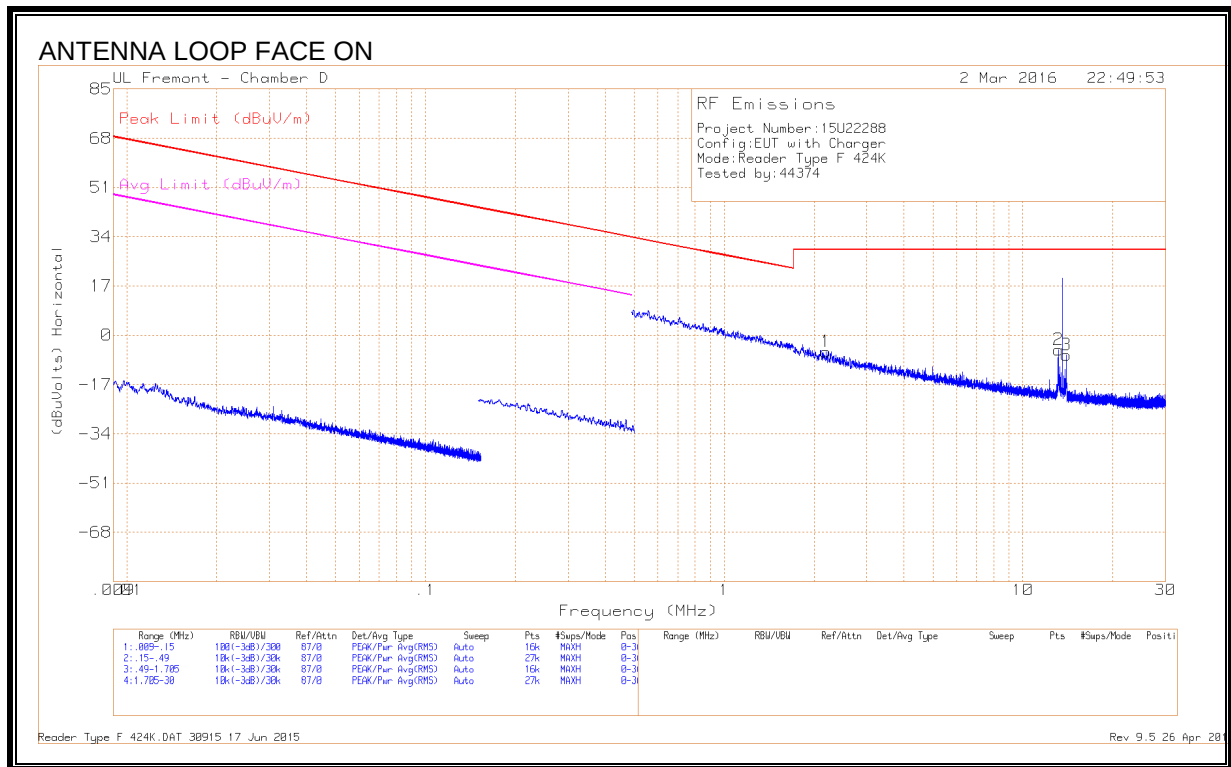


DATA

Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	13.13588	24.37	Pk	10.4	.4	-40	-4.83	40.51	-45.34	0-360
2	13.5605	48.55	Pk	10.4	.4	-40	19.35	84	-64.65	0-360
3	13.9845	22.6	Pk	10.3	.4	-40	-6.7	40.51	-47.21	0-360
4	13.13738	19.52	Pk	10.4	.4	-40	-9.68	40.51	-50.19	0-360
5	13.55682	44.17	Pk	10.4	.4	-40	14.97	84	-69.03	0-360
6	13.98209	18.6	Pk	10.3	.4	-40	-10.7	40.51	-51.21	0-360

Pk - Peak detector

SPURIOUS EMISSION

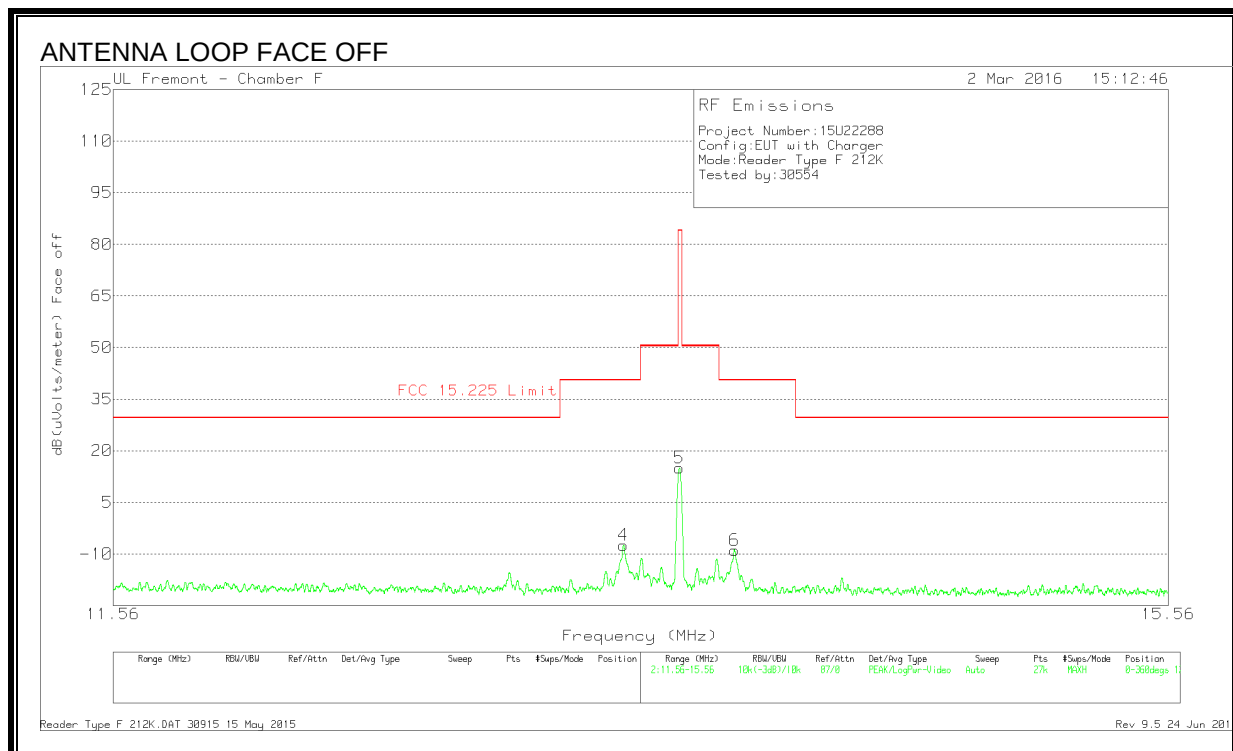
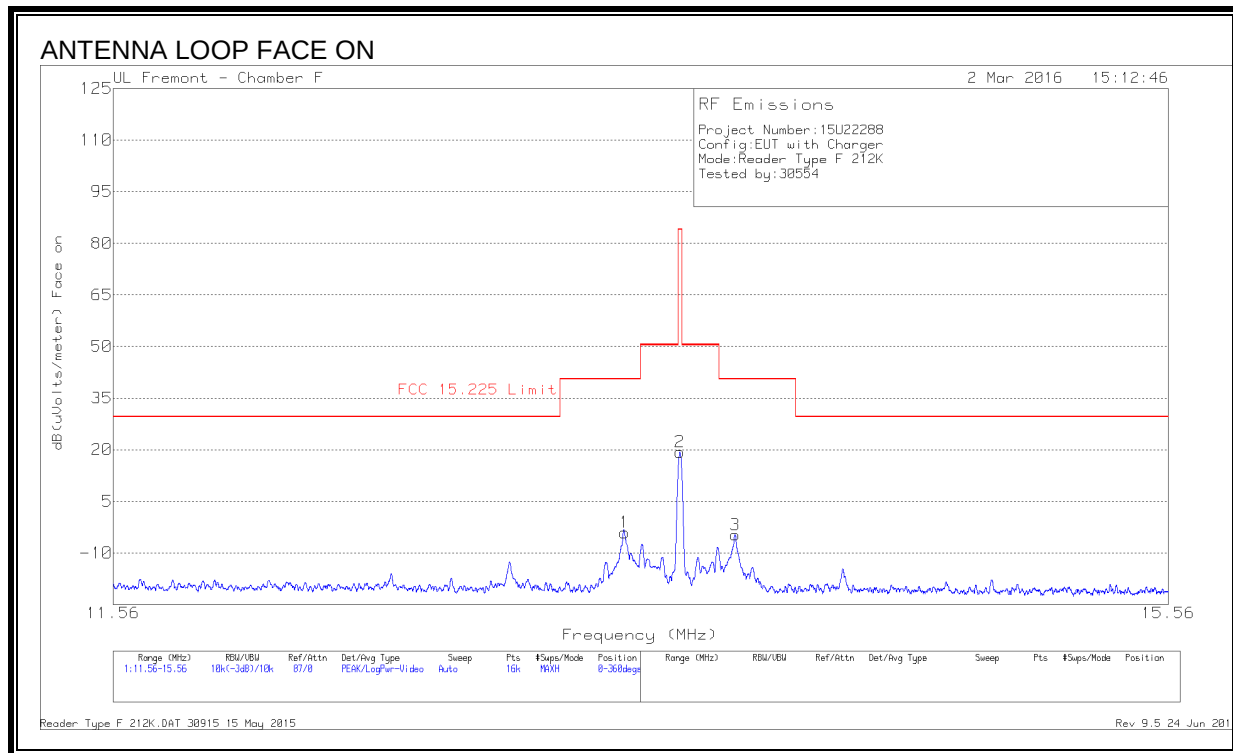


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp /Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts/meter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	2.19546	23.23	Pk	10.8	.2	-40	-5.77	29.54	-35.31	-	-	0-360
4	9.69652	14.14	Pk	10.8	.3	-40	-14.76	29.54	-44.3	-	-	0-360
2	13.13763	23.85	Pk	10.7	.4	-40	-5.05	29.54	-34.59	-	-	0-360
5	13.15021	18.32	Pk	10.7	.4	-40	-10.58	29.54	-40.12	-	-	0-360
6	13.98442	20.64	Pk	10.6	.4	-40	-8.36	29.54	-37.9	-	-	0-360
3	13.98494	22.18	Pk	10.6	.4	-40	-6.82	29.54	-36.36	-	-	0-360

Pk - Peak detector

212Kbps FUNDAMENTAL

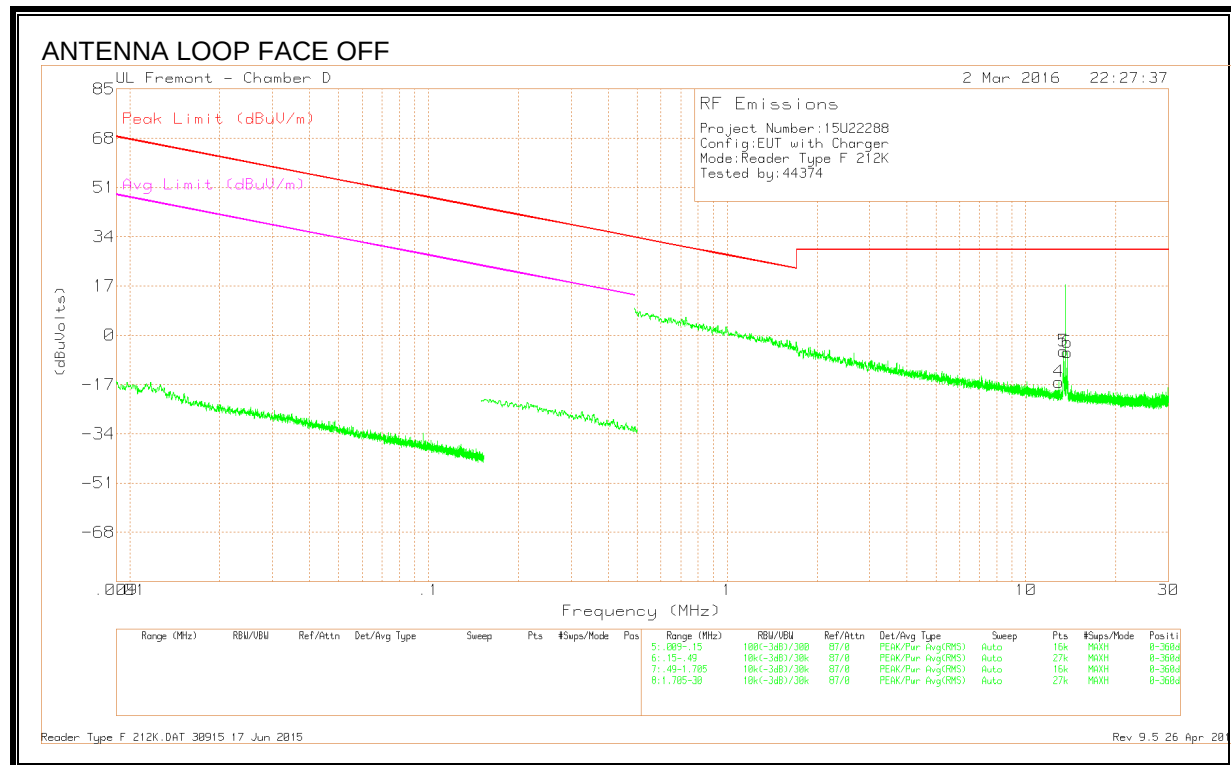
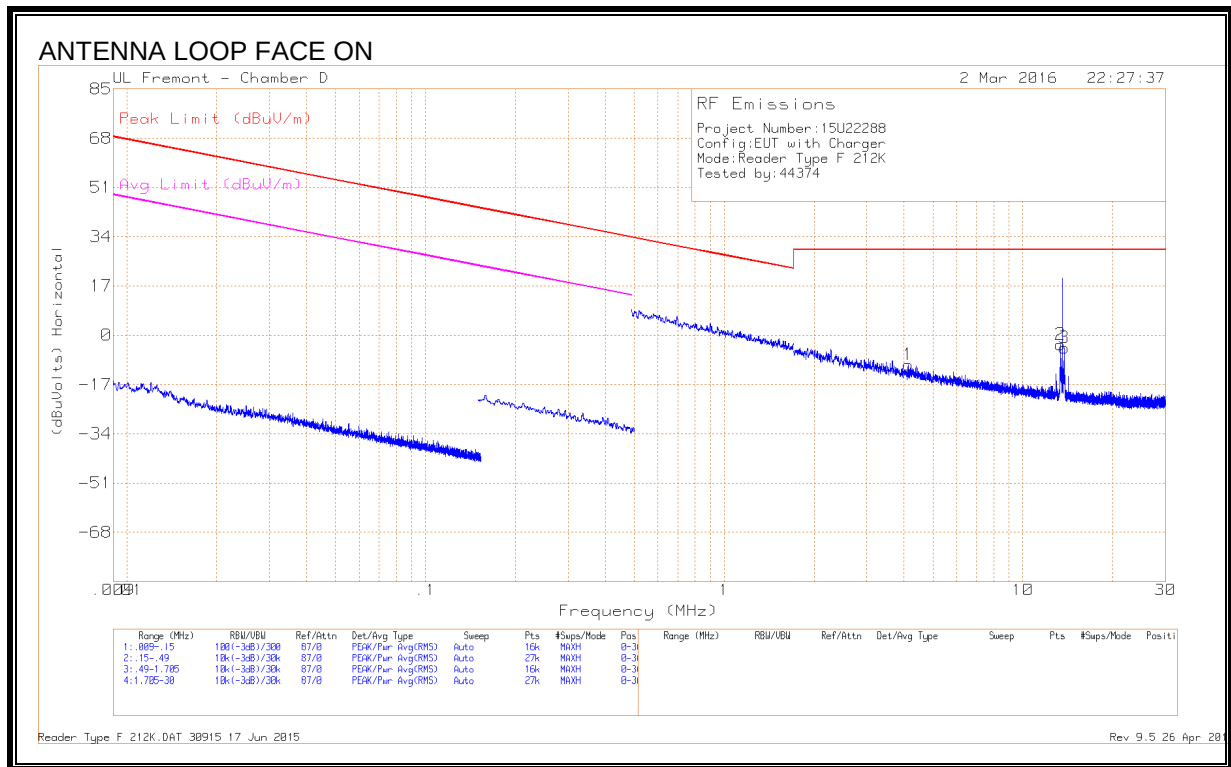


DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uVolts /meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	13.35075	25.13	Pk	10.4	.4	-40	-4.07	40.51	-44.58	0-360
2	13.56038	48.53	Pk	10.4	.4	-40	19.33	84	-64.67	0-360
3	13.77325	24.54	Pk	10.3	.4	-40	-4.76	40.51	-45.27	0-360
4	13.34658	21.73	Pk	10.4	.4	-40	-7.47	40.51	-47.98	0-360
5	13.55837	44.2	Pk	10.4	.4	-40	15	84	-69	0-360
6	13.77097	20.38	Pk	10.3	.4	-40	-8.92	40.51	-49.43	0-360

Pk - Peak detector

SPURIOUS EMISSION



DATA

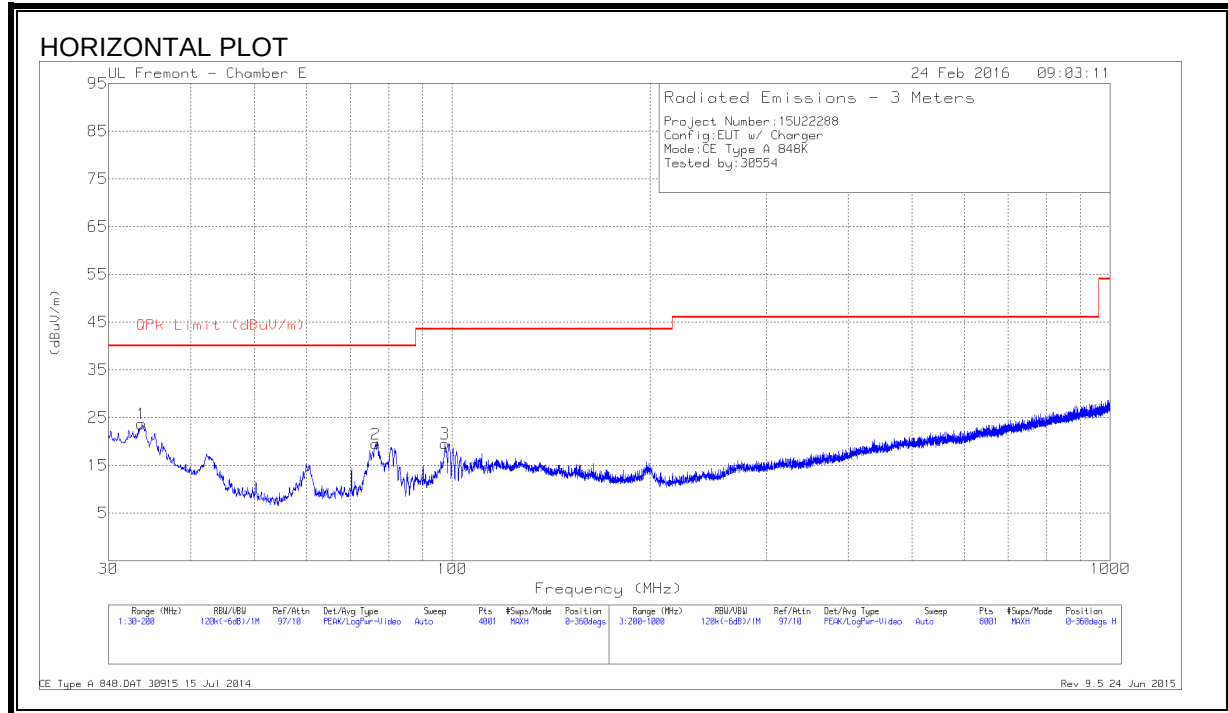
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Amp/Cbl (dB)	Dist Corr (dB) 40Log	Corrected Reading dB(uV olts/meter)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	4.1306	18.63	Pk	10.9	.2	-40	-10.27	29.54	-39.81	-	-	0-360
4	12.92541	12.76	Pk	10.7	.4	-40	-16.14	29.54	-45.68	-	-	0-360
2	13.3488	25.61	Pk	10.7	.4	-40	-3.29	29.54	-32.83	-	-	0-360
5	13.34933	23.44	Pk	10.7	.4	-40	-5.46	29.54	-35	-	-	0-360
3	13.77272	24.68	Pk	10.6	.4	-40	-4.32	29.54	-33.86	-	-	0-360
6	13.77324	22.99	Pk	10.6	.4	-40	-6.01	29.54	-35.55	-	-	0-360

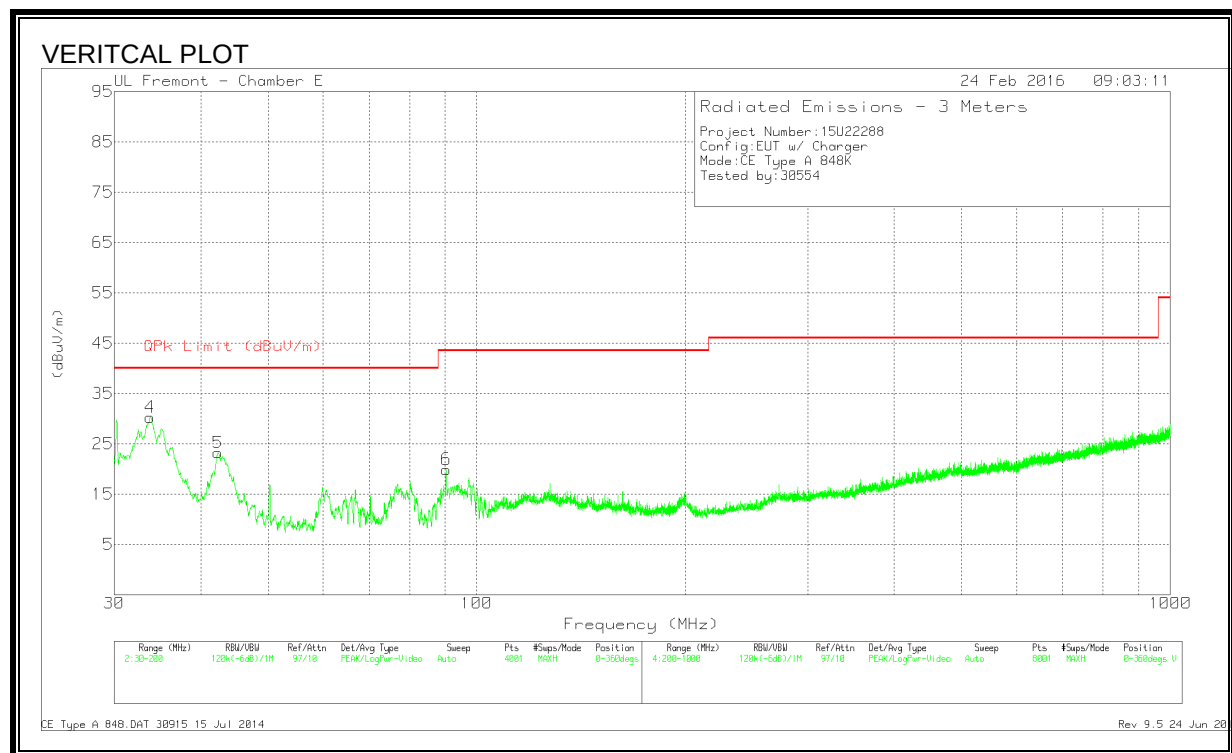
Pk - Peak detector

8.3. TX SPURIOUS EMISSION 30 TO 1000 MHz

8.3.1. CE MODE

TYPE A, 848Kbps





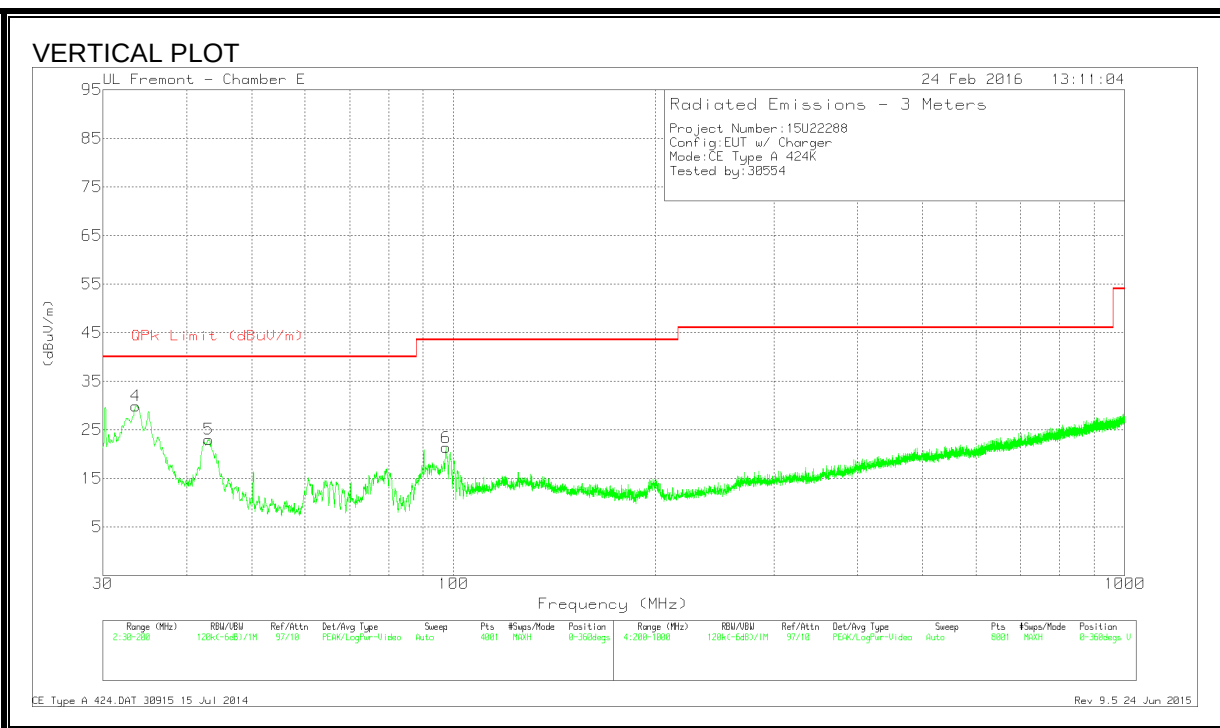
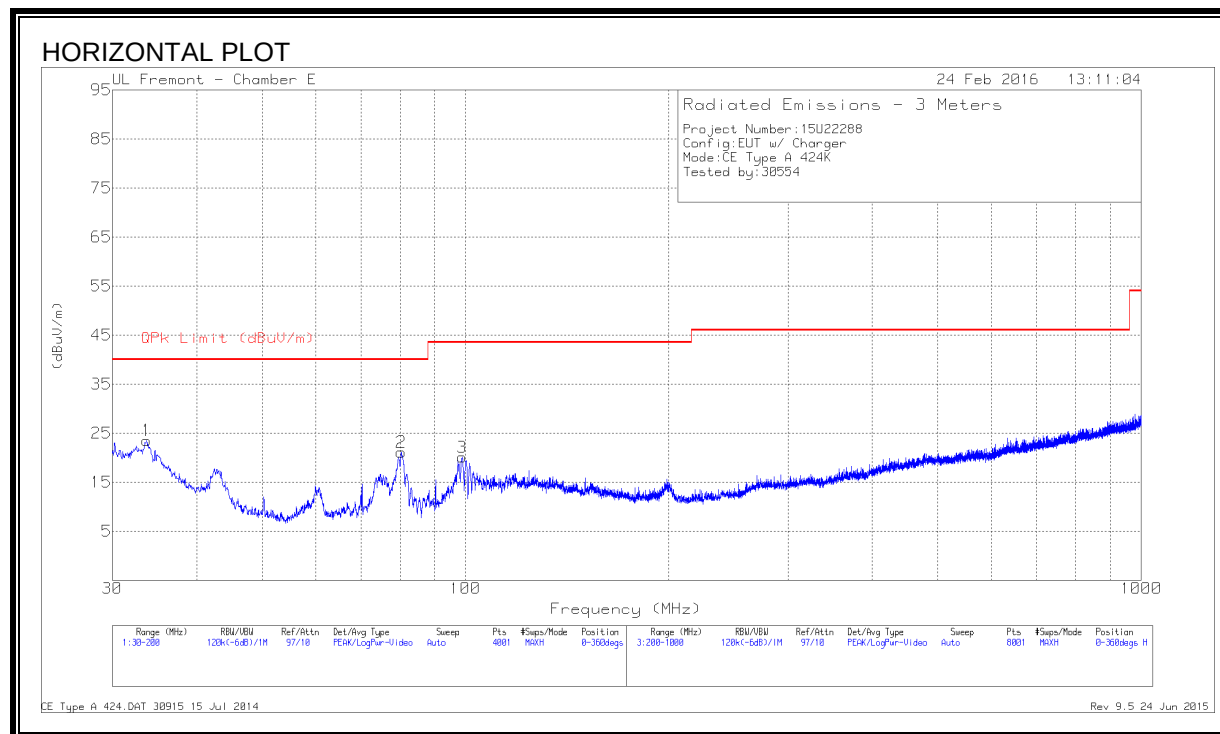
RESULTS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	33.6975	33.07	Pk	22.4	-31.8	23.67	40	-16.33	0-360	301	H
4	33.825	39.75	Pk	22.3	-31.8	30.25	40	-9.75	0-360	100	V
5	42.325	39	Pk	16	-31.8	23.2	40	-16.8	0-360	100	V
2	76.5375	39.15	Pk	11.7	-31.4	19.45	40	-20.55	0-360	401	H
6	90.35	39.59	Pk	11.7	-31.4	19.89	43.52	-23.63	0-360	100	V
3	97.49	37.41	Pk	13.4	-31.3	19.51	43.52	-24.01	0-360	301	H

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

Pk - Peak detector

424Kbps



DATA

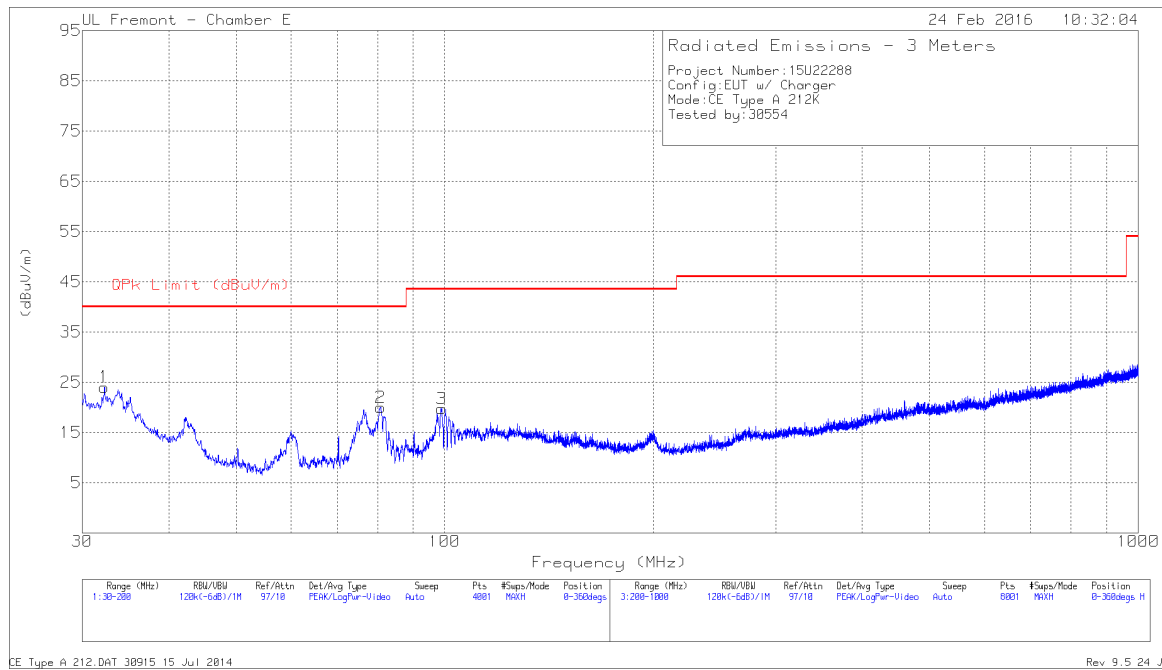
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	33.6125	39.21	Pk	22.5	-31.8	29.91	40	-10.09	0-360	100	V
1	33.74	32.92	Pk	22.4	-31.8	23.52	40	-16.48	0-360	301	H
5	43.175	39.23	Pk	15.5	-31.7	23.03	40	-16.97	0-360	100	V
2	80.32	41.11	Pk	11.5	-31.5	21.11	40	-18.89	0-360	401	H
6	97.4475	39.22	Pk	13.4	-31.3	21.32	43.52	-22.2	0-360	100	V
3	98.9138	37.58	Pk	13.9	-31.4	20.08	43.52	-23.44	0-360	301	H

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

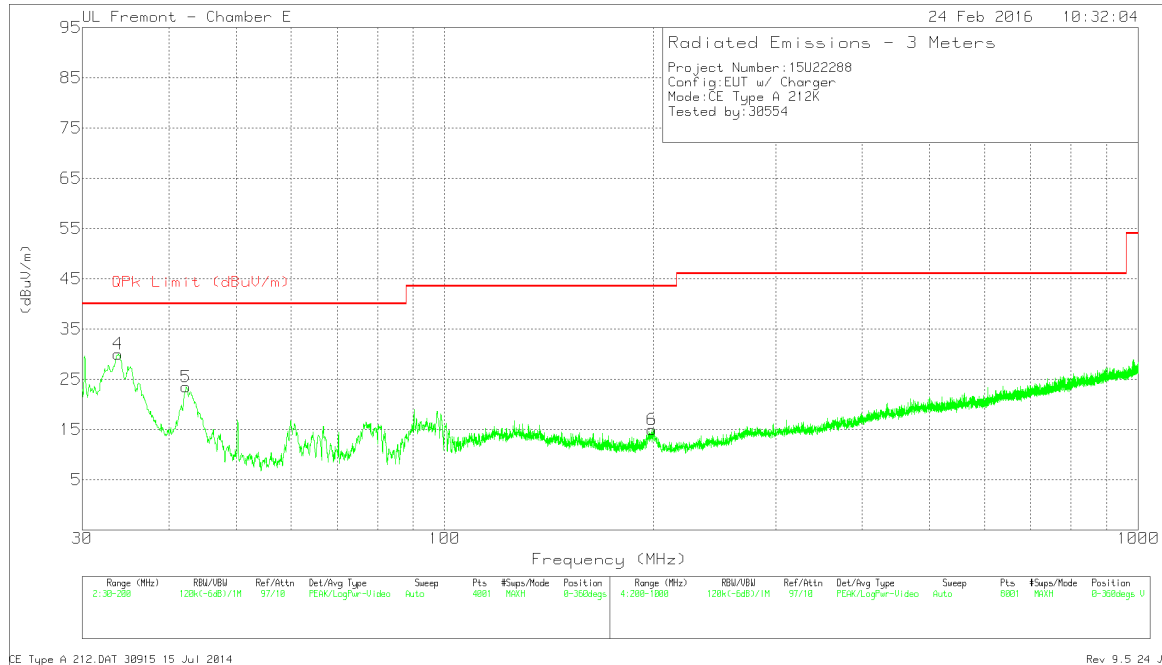
Pk - Peak detector

212Kbps

HORIZONTAL PLOT



VERTICAL PLOT



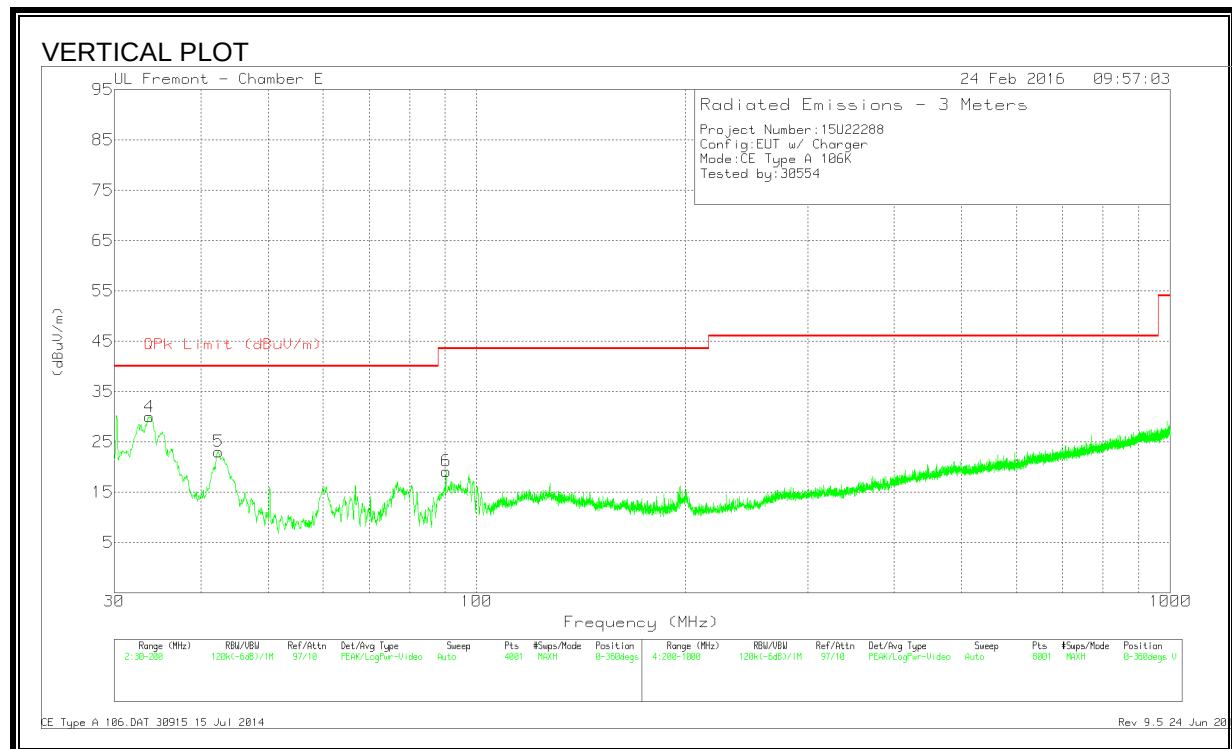
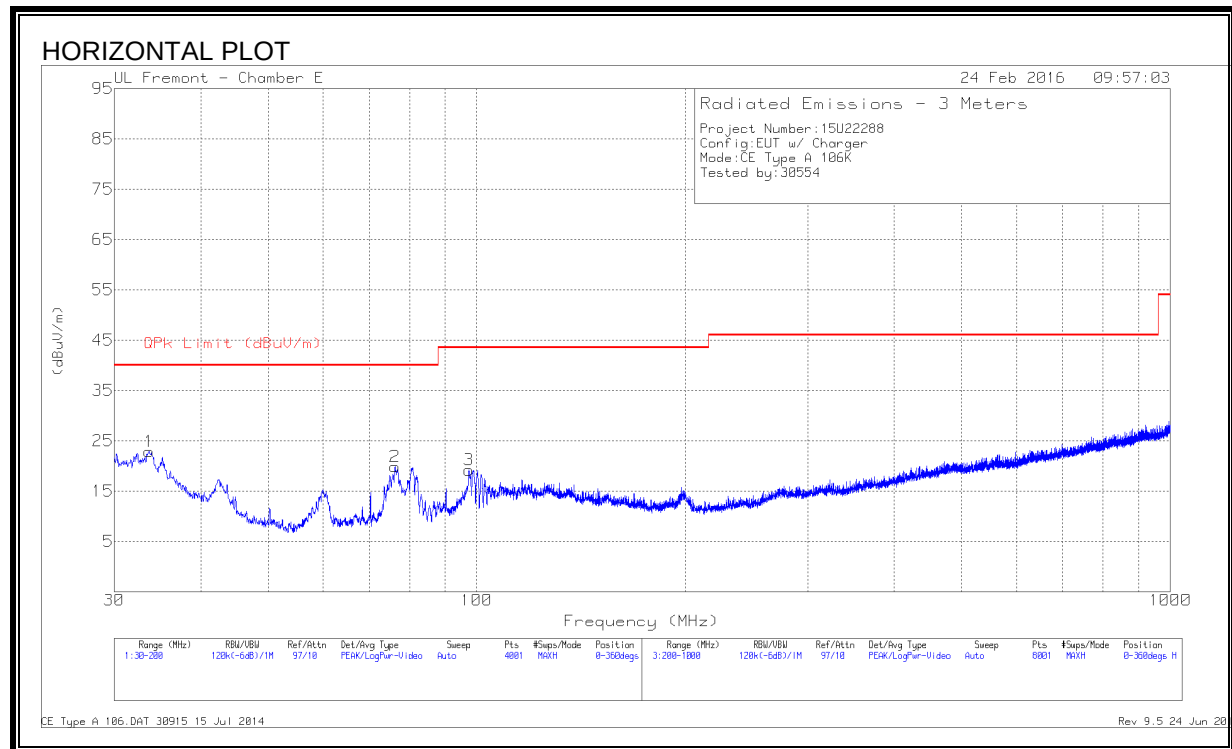
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	32.295	32.42	Pk	23.4	-31.8	24.02	40	-15.98	0-360	301	H
4	33.825	39.52	Pk	22.3	-31.8	30.02	40	-9.98	0-360	100	V
5	42.3675	39.25	Pk	16	-31.8	23.45	40	-16.55	0-360	100	V
2	80.83	39.98	Pk	11.4	-31.4	19.98	40	-20.02	0-360	201	H
3	98.9775	37.2	Pk	13.9	-31.4	19.7	43.52	-23.82	0-360	201	H
6	198.98	28.98	Pk	16.8	-30.8	14.98	43.52	-28.54	0-360	100	V

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

Pk - Peak detector

106Kbps



DATA

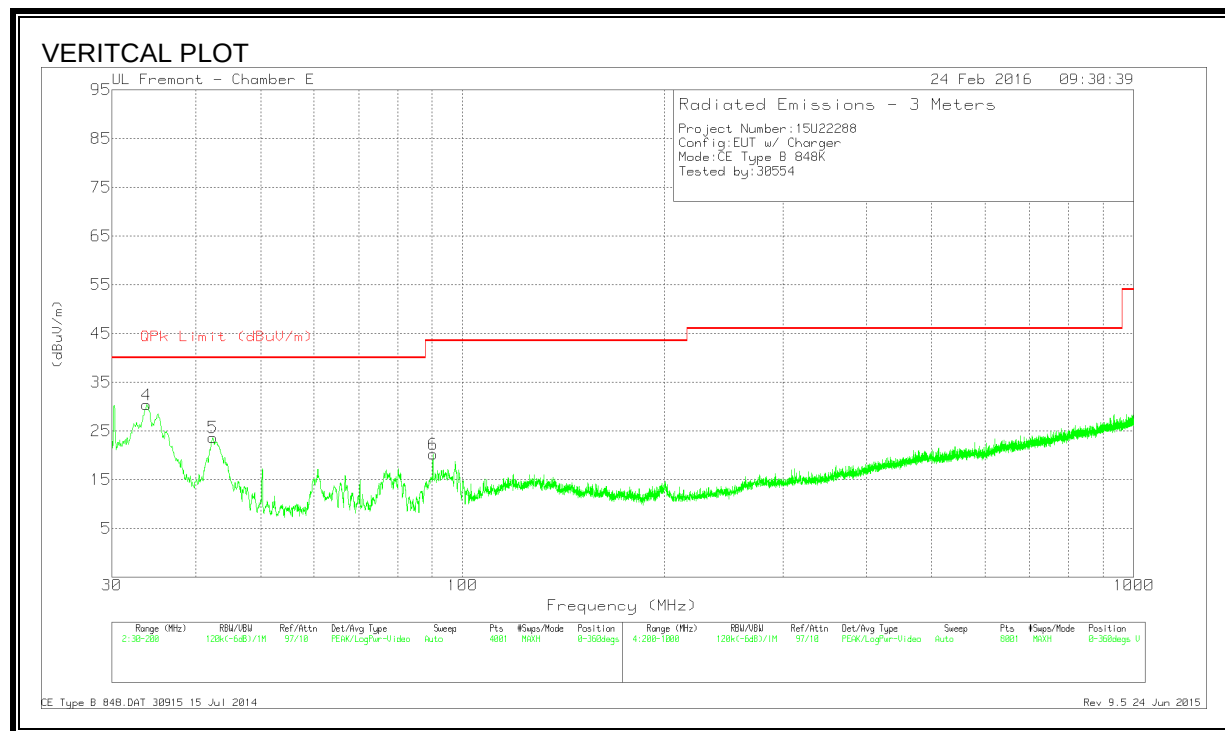
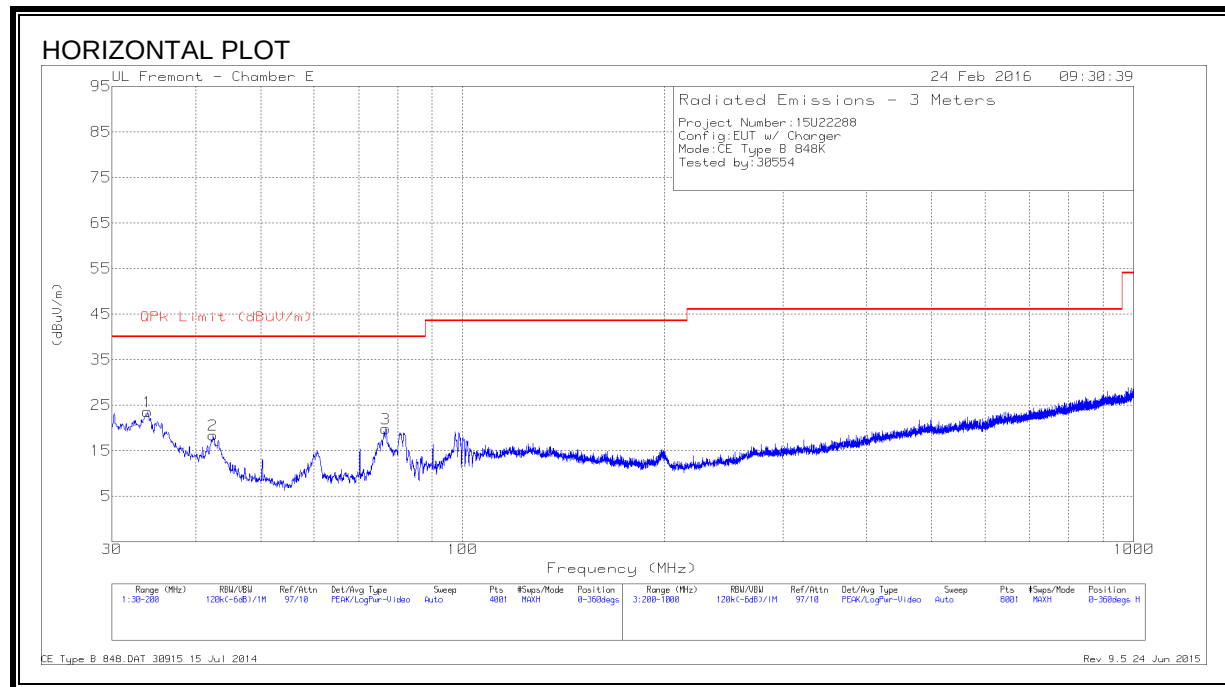
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	33.6975	32.22	Pk	22.4	-31.8	22.82	40	-17.18	0-360	301	H
4	33.74	39.37	Pk	22.4	-31.8	29.97	40	-10.03	0-360	100	V
5	42.41	38.83	Pk	16	-31.8	23.03	40	-16.97	0-360	100	V
2	76.24	39.54	Pk	11.8	-31.5	19.84	40	-20.16	0-360	201	H
6	90.35	38.86	Pk	11.7	-31.4	19.16	43.52	-24.36	0-360	100	V
3	97.4263	37.07	Pk	13.4	-31.3	19.17	43.52	-24.35	0-360	301	H

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

Pk - Peak detector

TYPE B

848Kbps



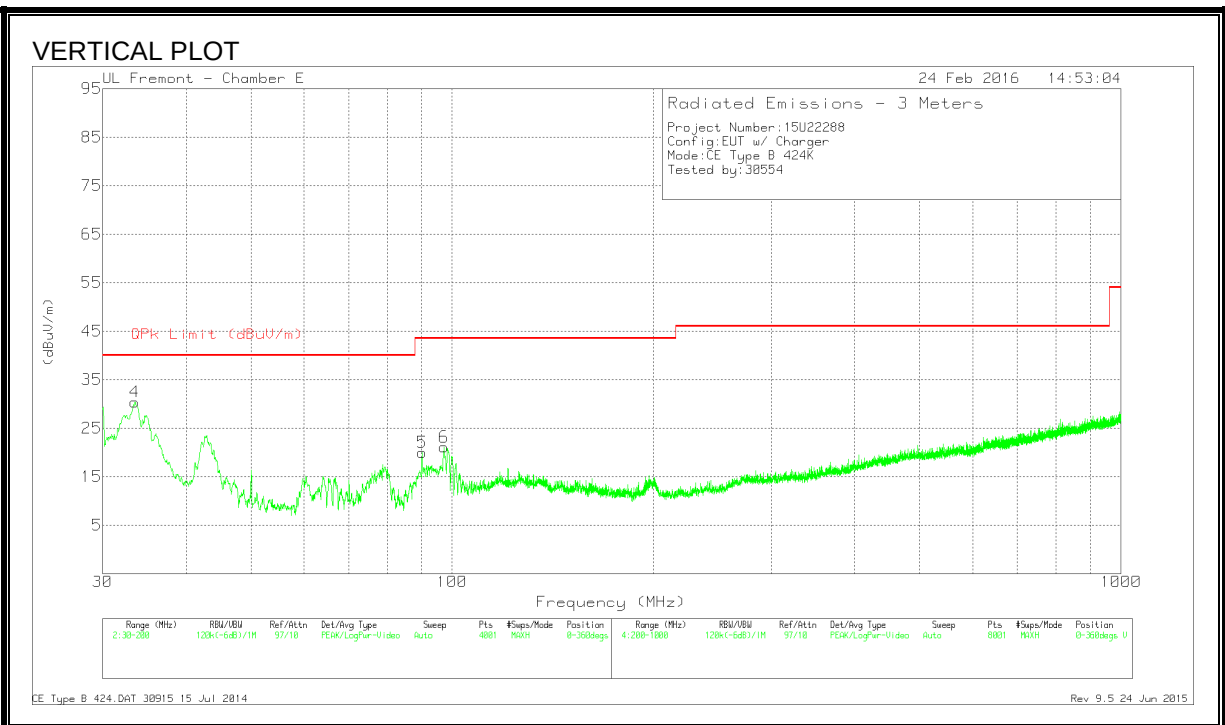
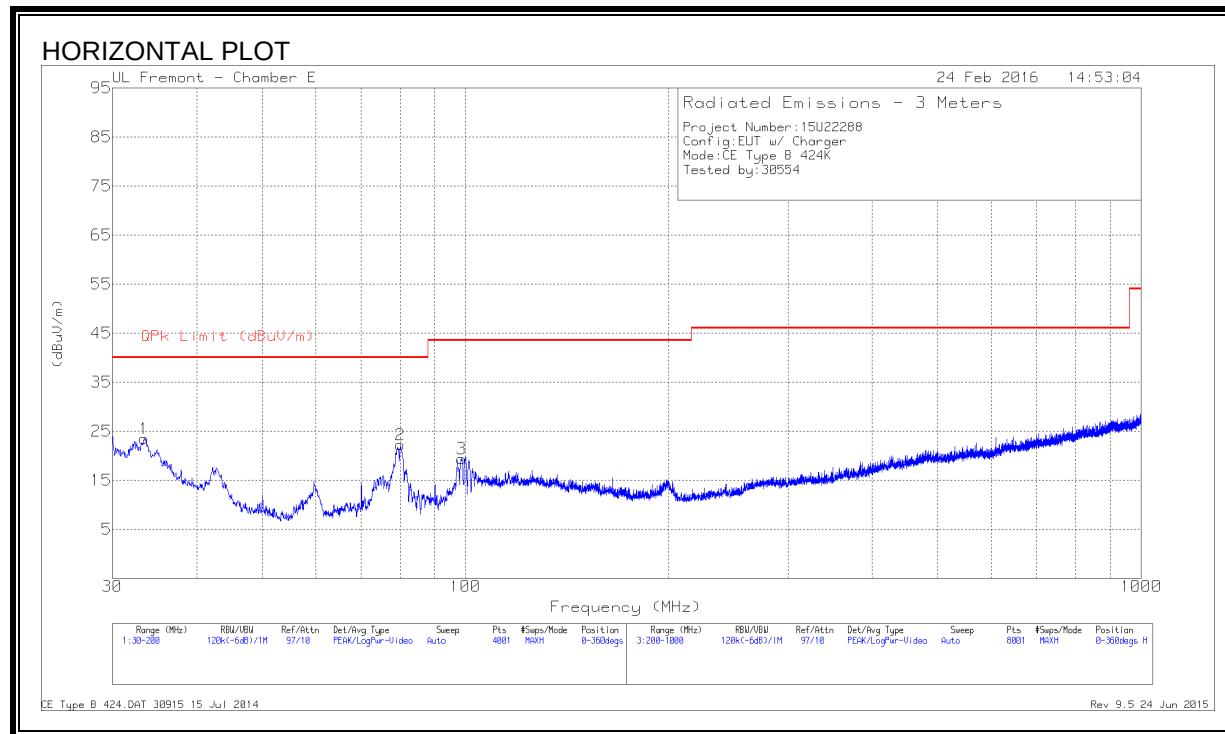
RESULTS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	33.825	39.84	Pk	22.3	-31.8	30.34	40	-9.66	0-360	100	V
1	33.91	33.04	Pk	22.3	-31.8	23.54	40	-16.46	0-360	301	H
2	42.4525	34.3	Pk	15.9	-31.8	18.4	40	-21.6	0-360	301	H
5	42.4525	39.54	Pk	15.9	-31.8	23.64	40	-16.36	0-360	100	V
3	76.835	39.6	Pk	11.7	-31.5	19.8	40	-20.2	0-360	201	H
6	90.35	39.89	Pk	11.7	-31.4	20.19	43.52	-23.33	0-360	100	V

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

Pk - Peak detector

424Kbps



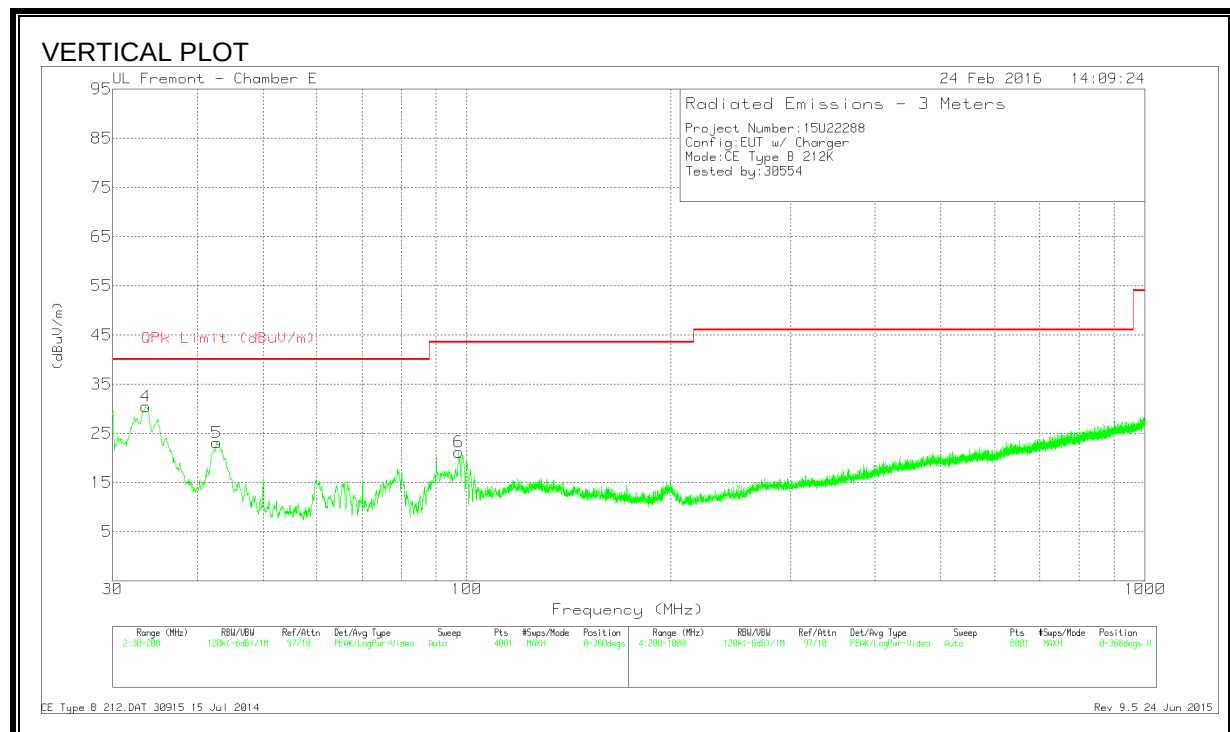
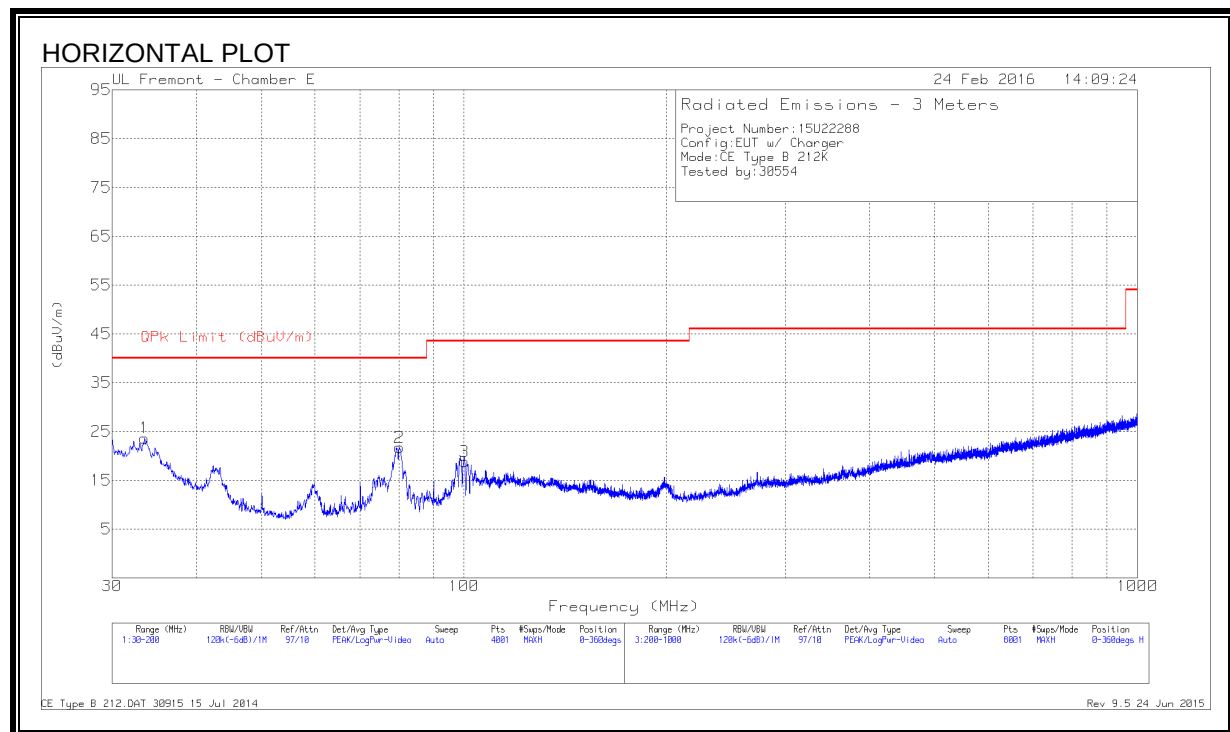
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	33.4425	32.65	Pk	22.6	-31.8	23.45	40	-16.55	0-360	301	H
4	33.5275	39.7	Pk	22.5	-31.8	30.4	40	-9.6	0-360	100	V
2	80.1075	42.22	Pk	11.5	-31.5	22.22	40	-17.78	0-360	401	H
5	90.1375	39.81	Pk	11.6	-31.4	20.01	43.52	-23.51	0-360	100	V
6	97.2775	38.92	Pk	13.4	-31.2	21.12	43.52	-22.4	0-360	100	V
3	98.7225	36.99	Pk	13.8	-31.4	19.39	43.52	-24.13	0-360	201	H

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

Pk - Peak detector

212Kbps



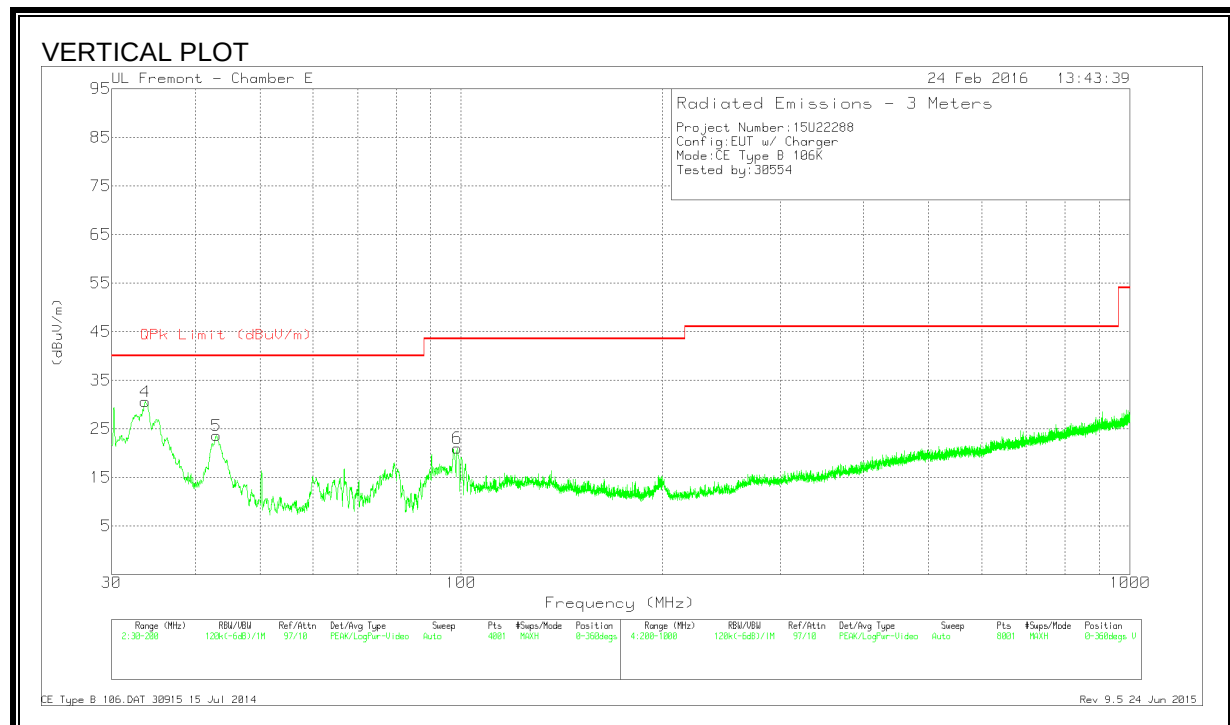
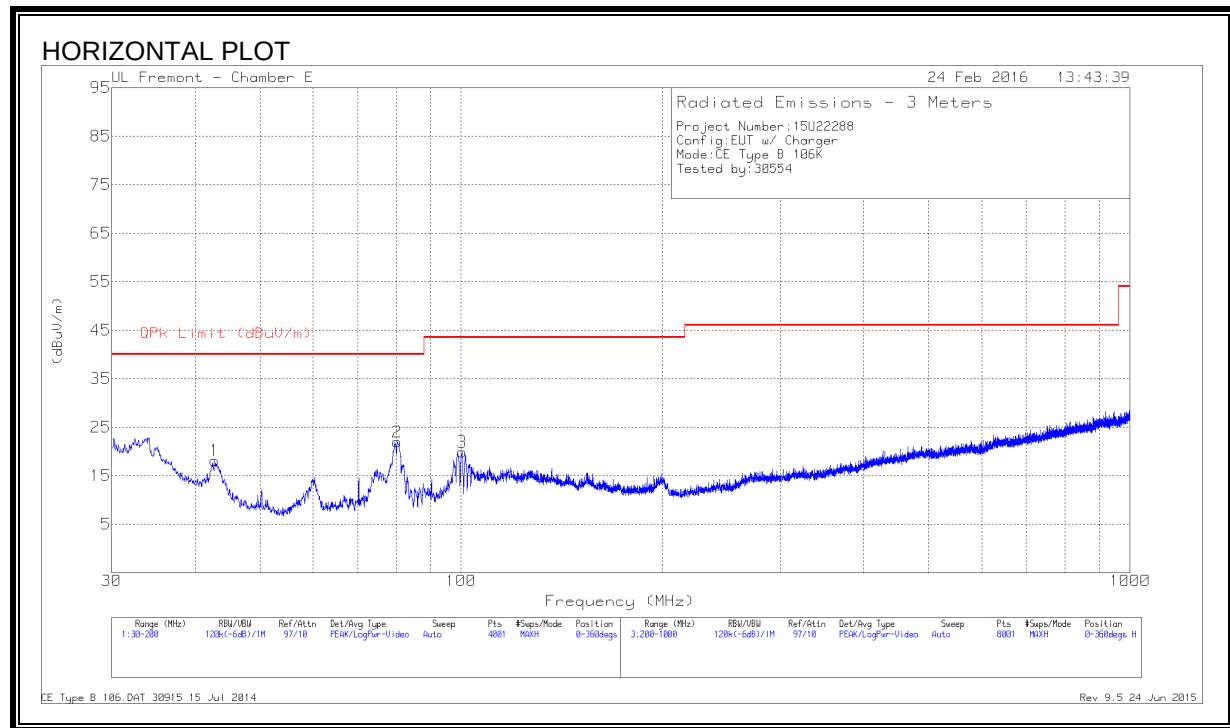
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	33.5275	32.95	Pk	22.5	-31.8	23.65	40	-16.35	0-360	201	H
4	33.57	39.72	Pk	22.5	-31.8	30.42	40	-9.58	0-360	100	V
5	42.75	38.98	Pk	15.8	-31.7	23.08	40	-16.92	0-360	100	V
2	80.15	41.71	Pk	11.5	-31.5	21.71	40	-18.29	0-360	301	H
6	97.2775	38.98	Pk	13.4	-31.2	21.18	43.52	-22.34	0-360	100	V
3	100.1675	35.83	Pk	14.3	-31.3	18.83	43.52	-24.69	0-360	301	H

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

Pk - Peak detector

106Kbps



DATA

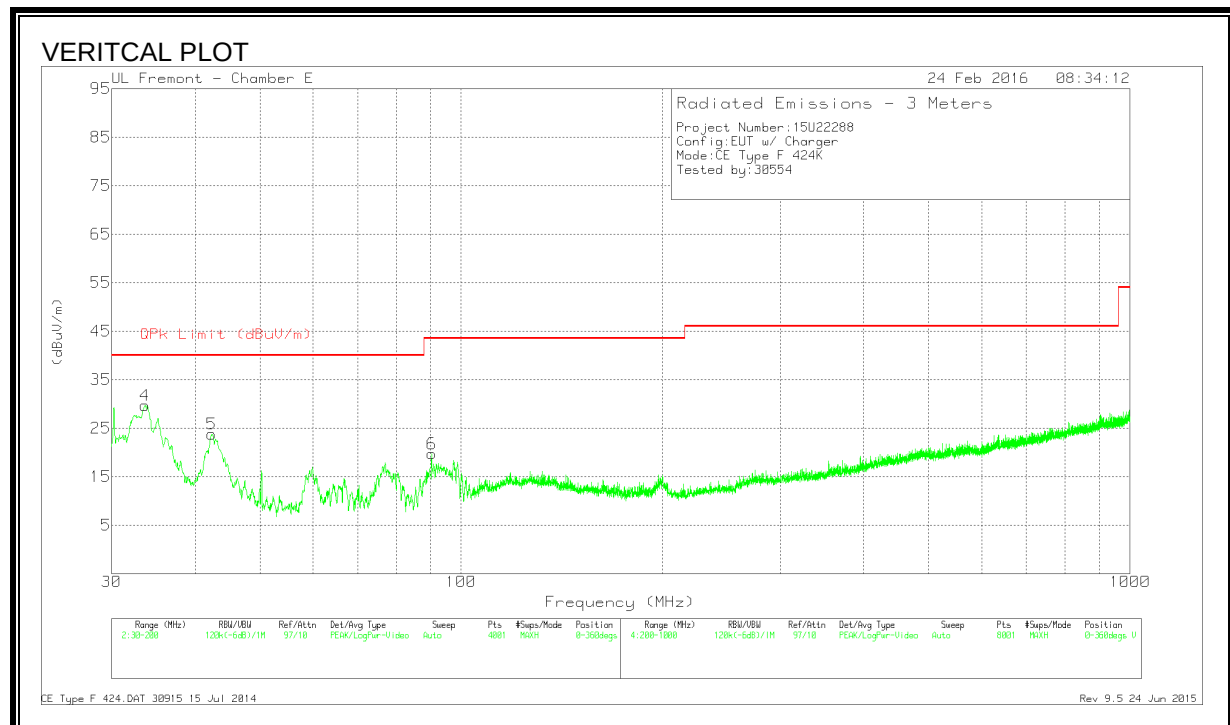
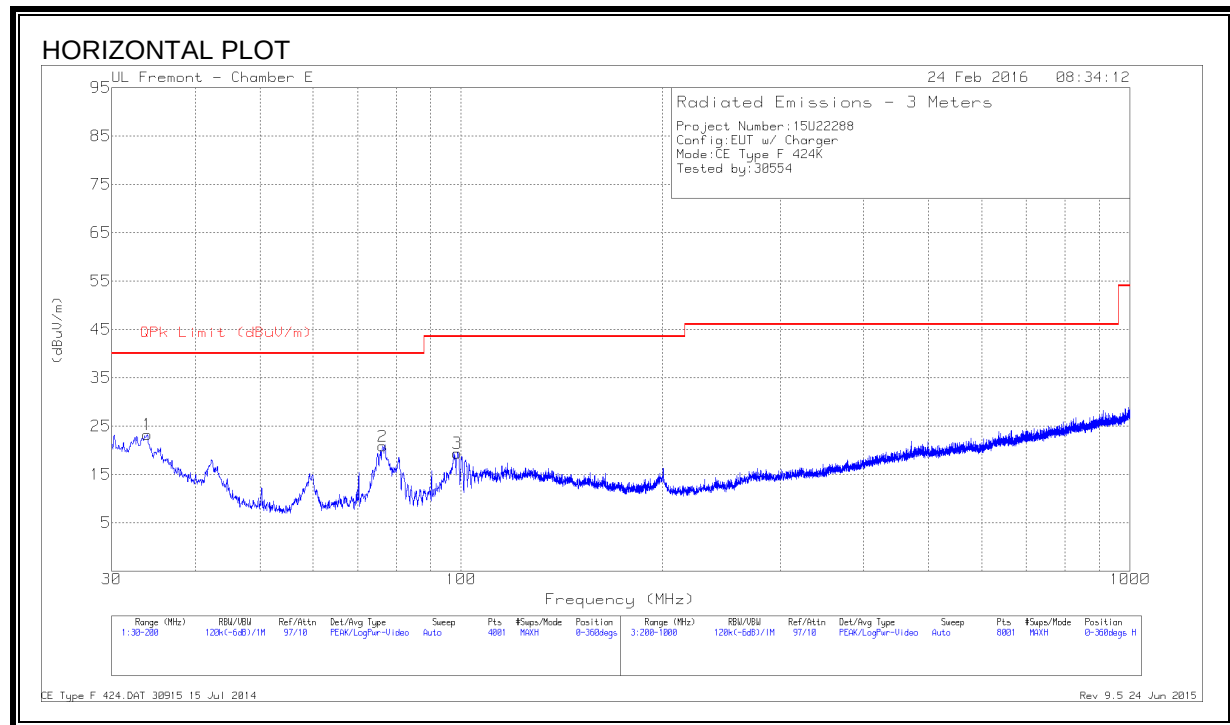
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	33.6975	40	Pk	22.4	-31.8	30.6	40	-9.4	0-360	100	V
1	42.8138	34.14	Pk	15.7	-31.7	18.14	40	-21.86	0-360	401	H
5	43.09	39.8	Pk	15.5	-31.7	23.6	40	-16.4	0-360	100	V
2	80.235	41.95	Pk	11.5	-31.5	21.95	40	-18.05	0-360	201	H
6	98.68	38.61	Pk	13.8	-31.4	21.01	43.52	-22.51	0-360	100	V
3	100.2525	36.97	Pk	14.3	-31.4	19.87	43.52	-23.65	0-360	301	H

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

Pk - Peak detector

TYPE F

424Kbps



RESULTS

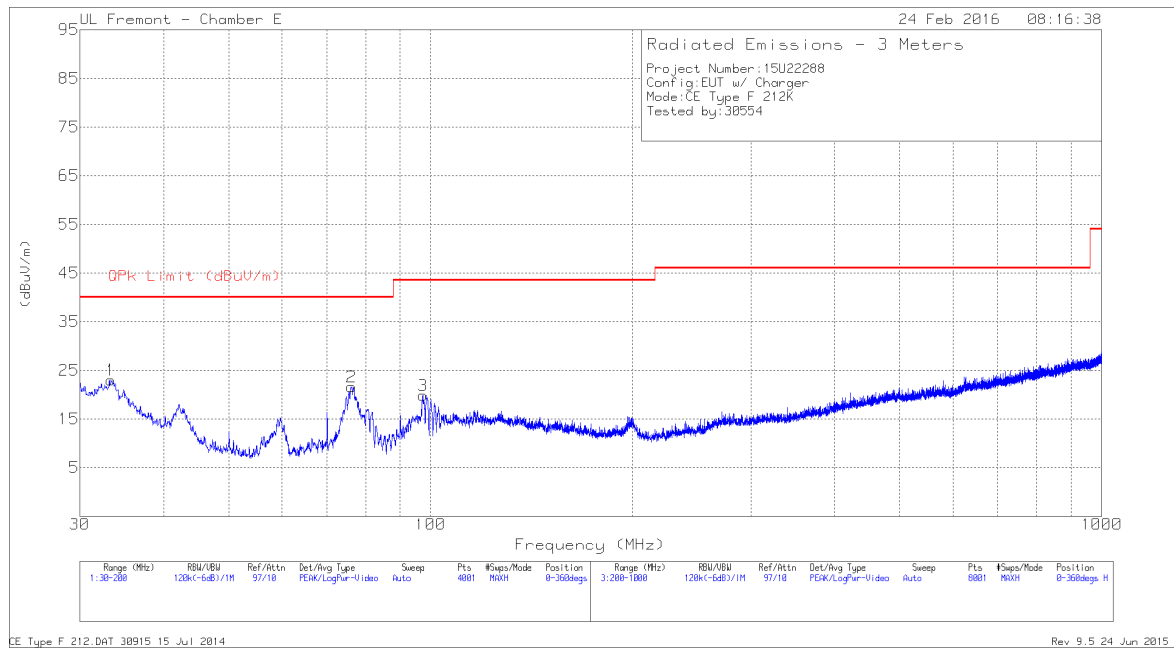
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	33.655	39.08	Pk	22.4	-31.8	29.68	40	-10.32	0-360	100	V
1	33.9525	32.86	Pk	22.2	-31.8	23.26	40	-16.74	0-360	201	H
5	42.3675	39.59	Pk	16	-31.8	23.79	40	-16.21	0-360	100	V
2	76.325	40.45	Pk	11.8	-31.4	20.85	40	-19.15	0-360	201	H
6	90.35	39.44	Pk	11.7	-31.4	19.74	43.52	-23.78	0-360	100	V
3	98.7225	36.99	Pk	13.8	-31.4	19.39	43.52	-24.13	0-360	301	H

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

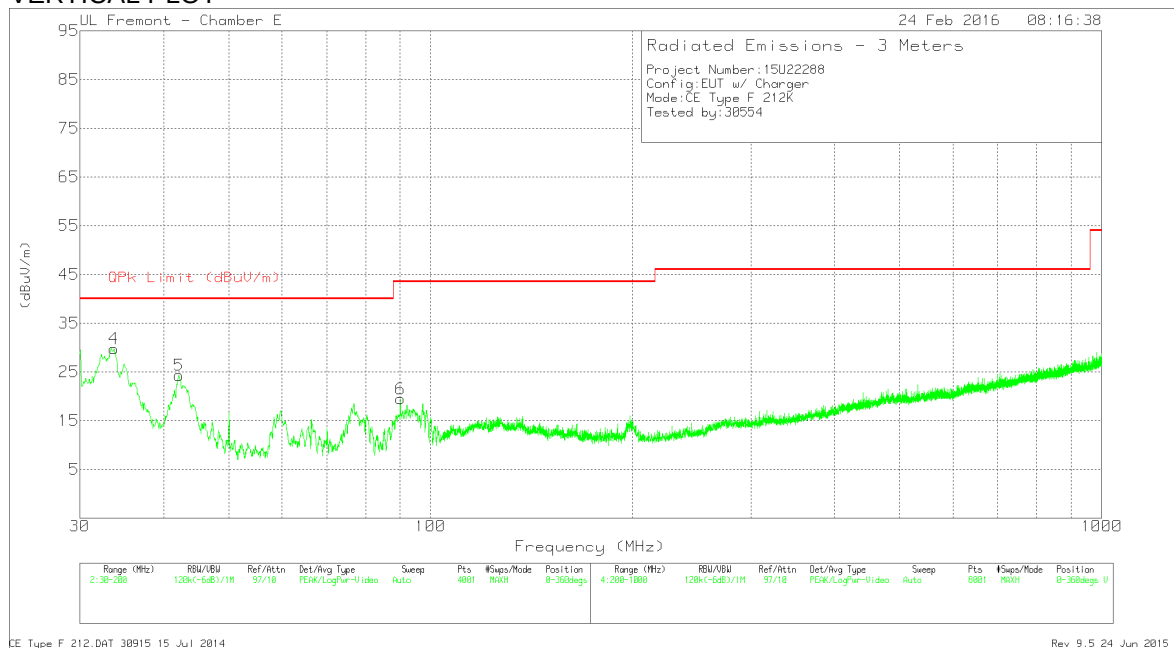
Pk - Peak detector

212Kbps

HORIZONTAL PLOT



VERTICAL PLOT



DATA

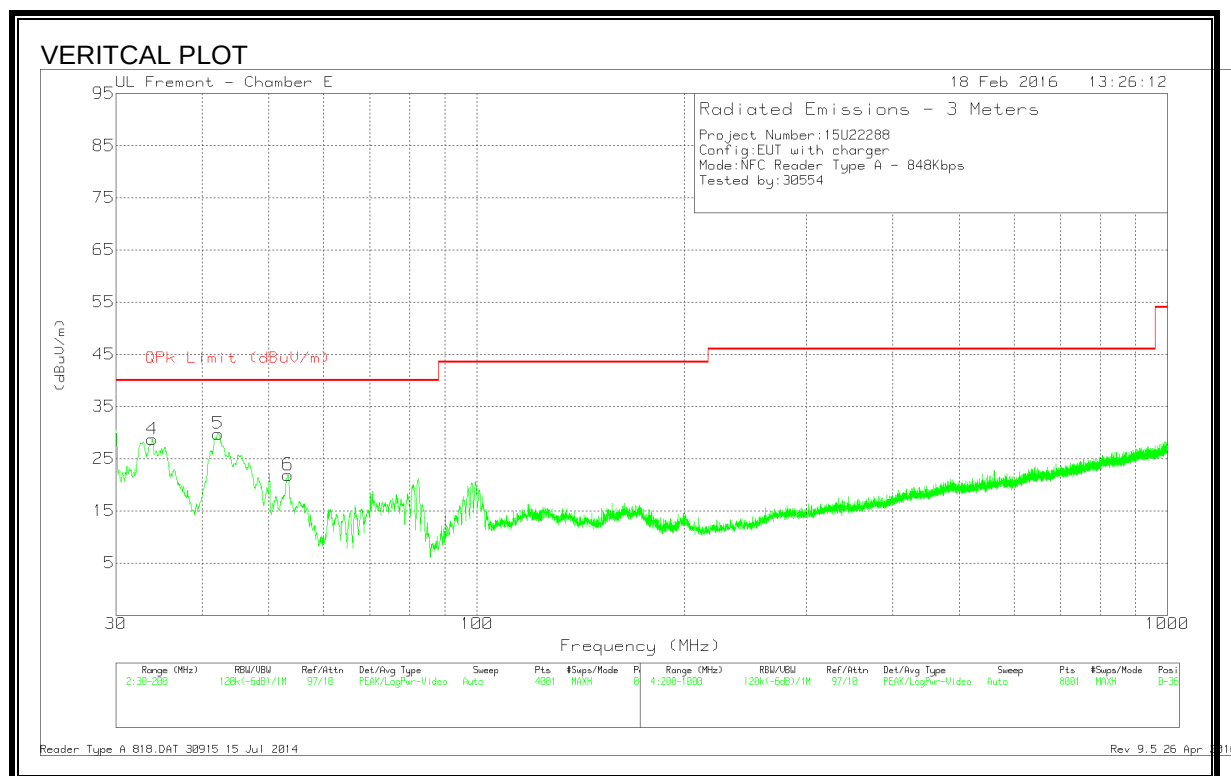
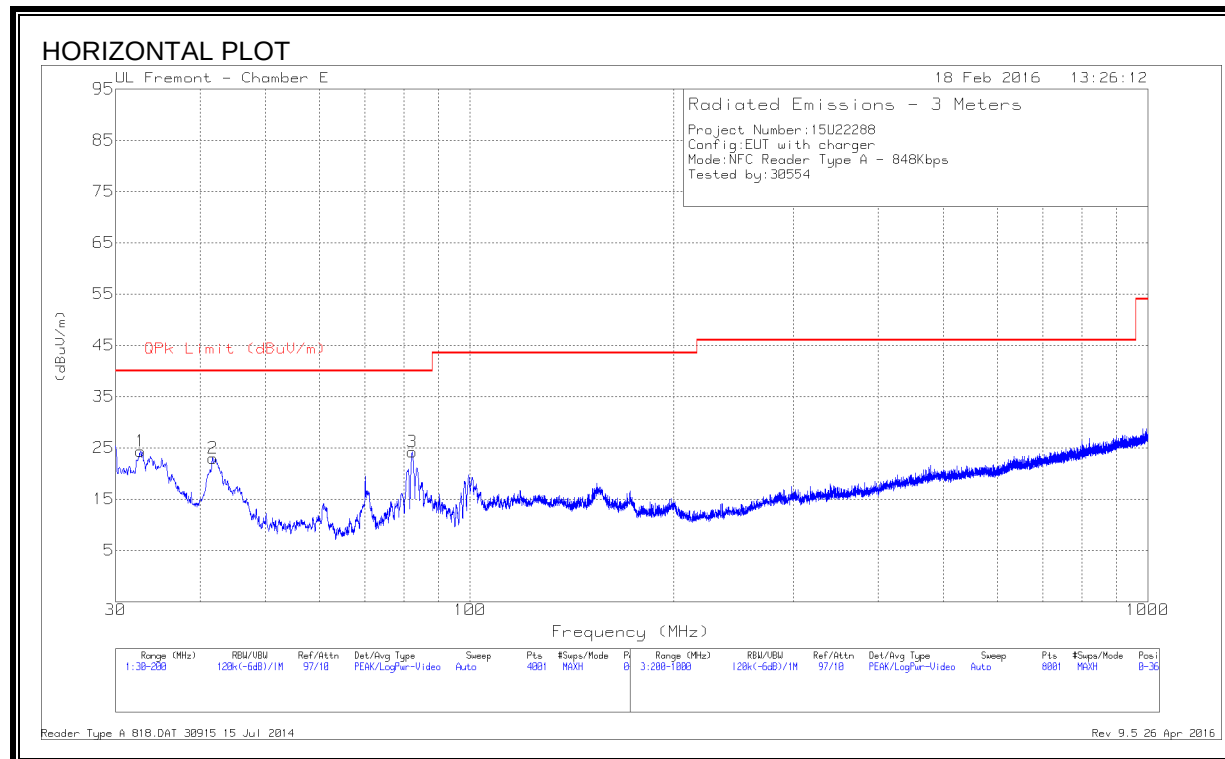
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	33.4	32.19	Pk	22.6	-31.8	22.99	40	-17.01	0-360	301	H
4	33.74	39.16	Pk	22.4	-31.8	29.76	40	-10.24	0-360	100	V
5	42.155	39.99	Pk	16.1	-31.8	24.29	40	-15.71	0-360	100	V
2	76.24	41.26	Pk	11.8	-31.5	21.56	40	-18.44	0-360	201	H
6	90.1375	39.26	Pk	11.6	-31.4	19.46	43.52	-24.06	0-360	100	V
3	97.3625	37.62	Pk	13.4	-31.2	19.82	43.52	-23.7	0-360	201	H

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

Pk - Peak detector

8.3.2. READER MODE

TYPE A, 848Kbps



RESULTS

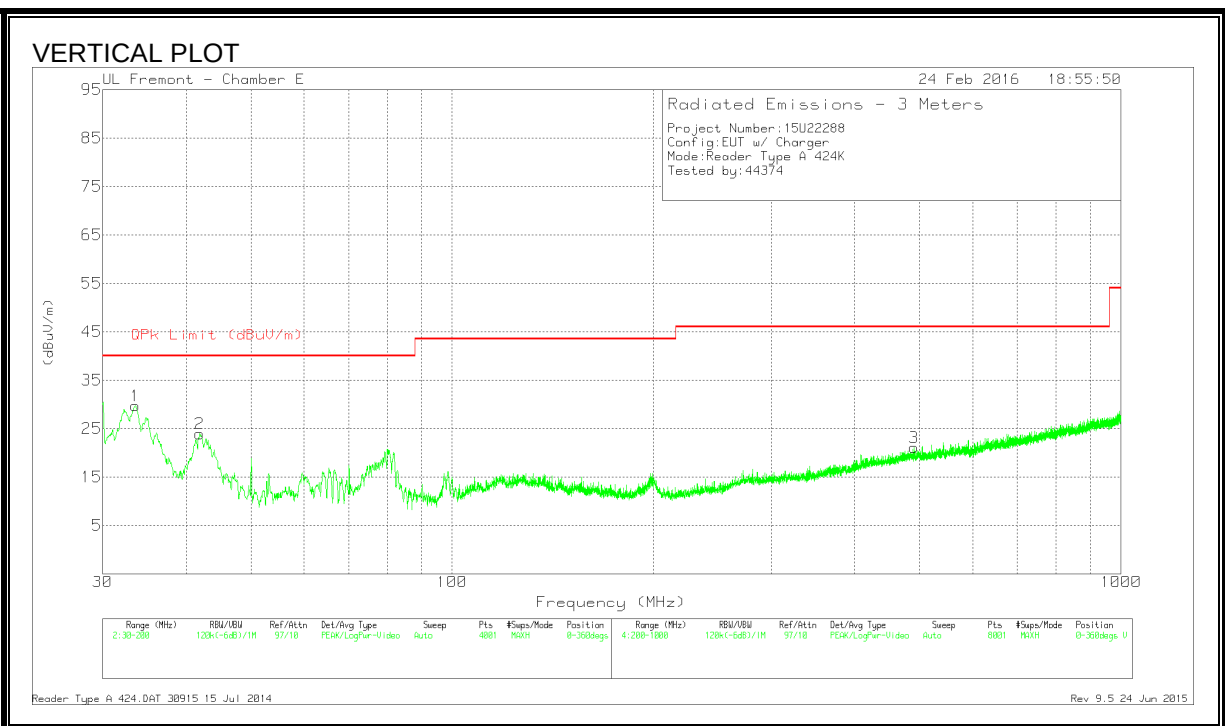
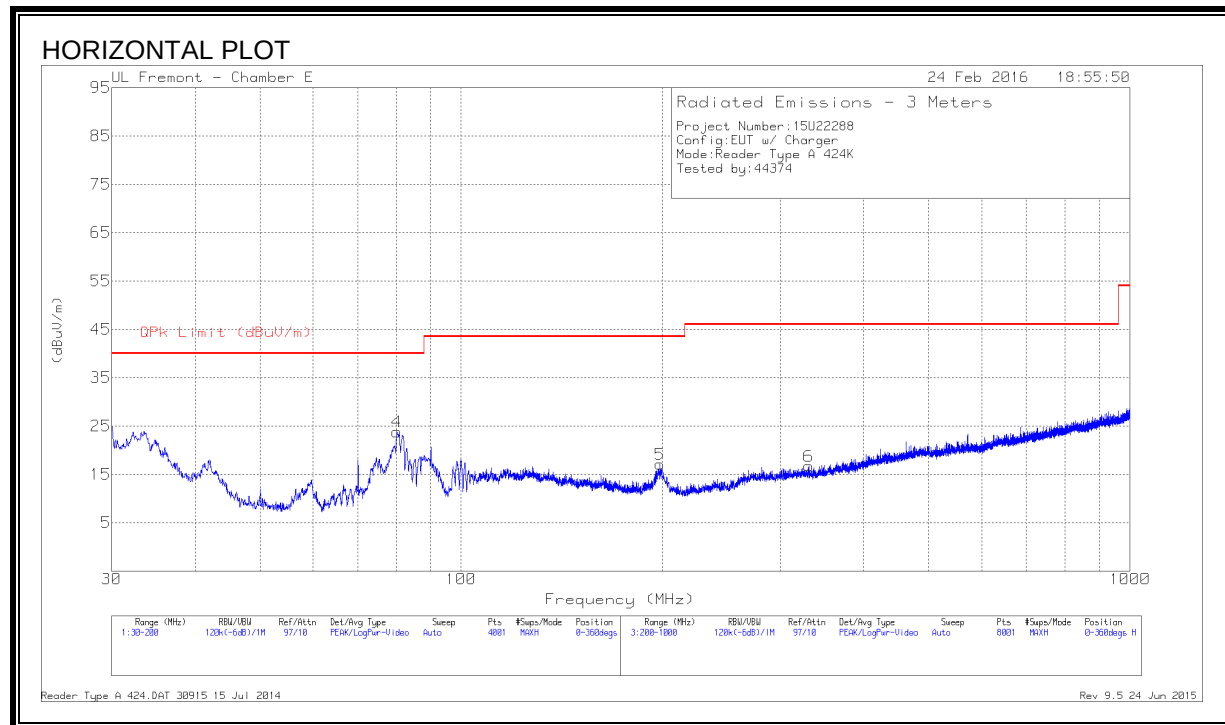
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	32.6775	33.04	Pk	23.1	-31.8	24.34	40	-15.66	0-360	201	H
4	33.8675	38.19	Pk	22.3	-31.8	28.69	40	-11.31	0-360	100	V
2	41.7725	38.23	Pk	16.4	-31.7	22.93	40	-17.07	0-360	301	H
5	42.1975	45.46	Pk	16.1	-31.8	29.76	40	-10.24	0-360	100	V
6	53.2688	42.18	Pk	11.3	-31.6	21.88	40	-18.12	0-360	100	V
3	82.19	44.19	Pk	11.3	-31.3	24.19	40	-15.81	0-360	201	H

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

Pk - Peak detector

424Kbps



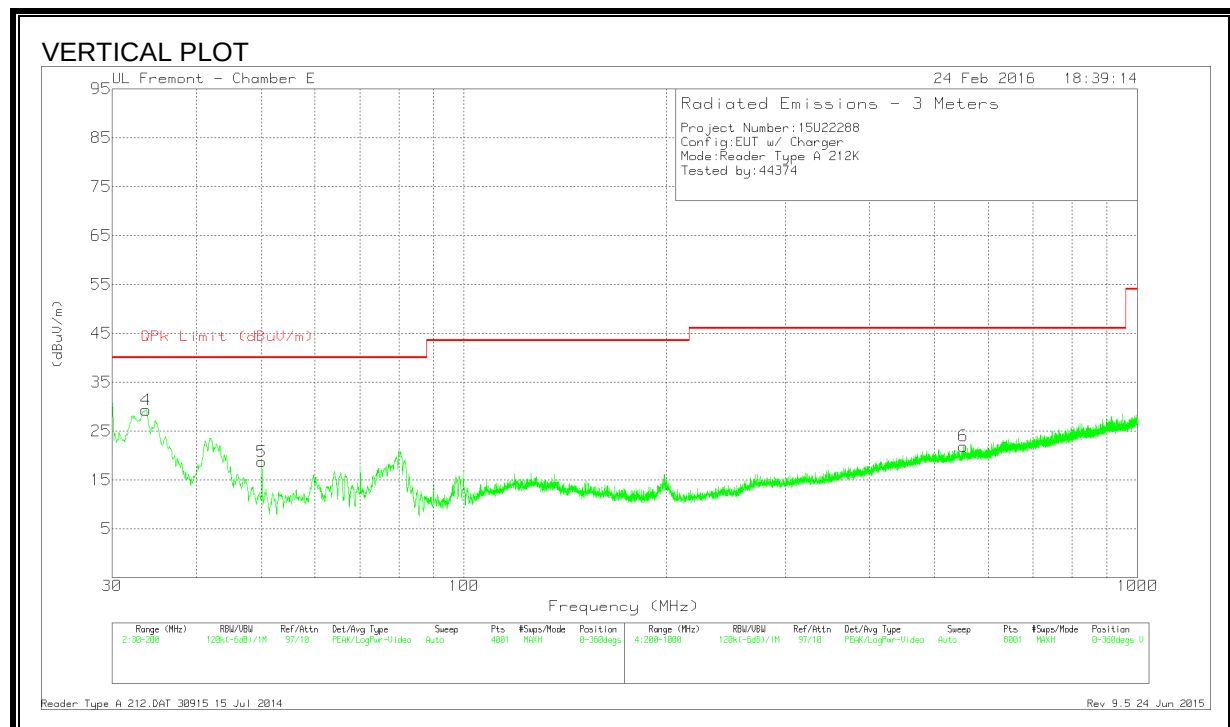
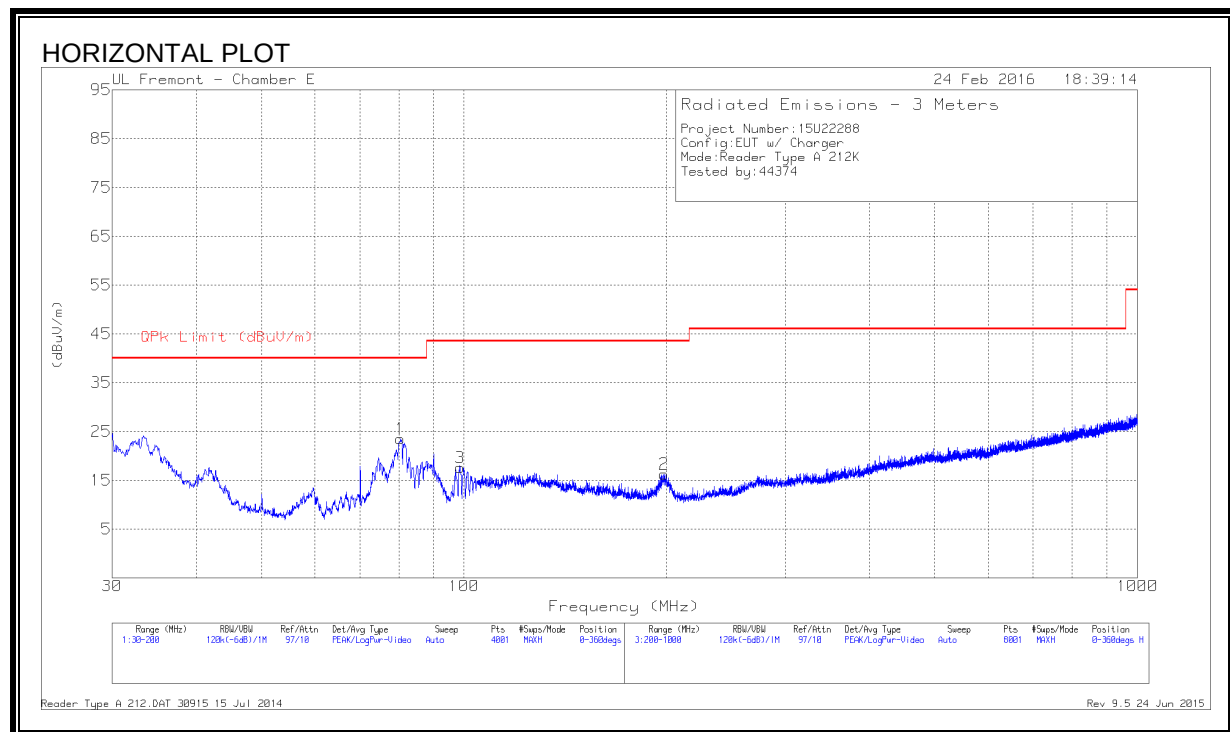
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 330.9	29.01	Pk	17.9	-30.2	16.71	46.02	-29.31	0-360	401	H
1	33.5913	39.03	Pk	22.5	-31.8	29.73	40	-10.27	0-360	100	V
2	41.9425	39.52	Pk	16.2	-31.8	23.92	40	-16.08	0-360	100	V
4	80.15	43.8	Pk	11.5	-31.5	23.8	40	-16.2	0-360	201	H
5	198.0875	31.17	Pk	16.7	-30.8	17.07	43.52	-26.45	0-360	100	H
3	490.3	28.98	Pk	21.8	-29.7	21.08	46.02	-24.94	0-360	99	V

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

Pk - Peak detector

212Kbps



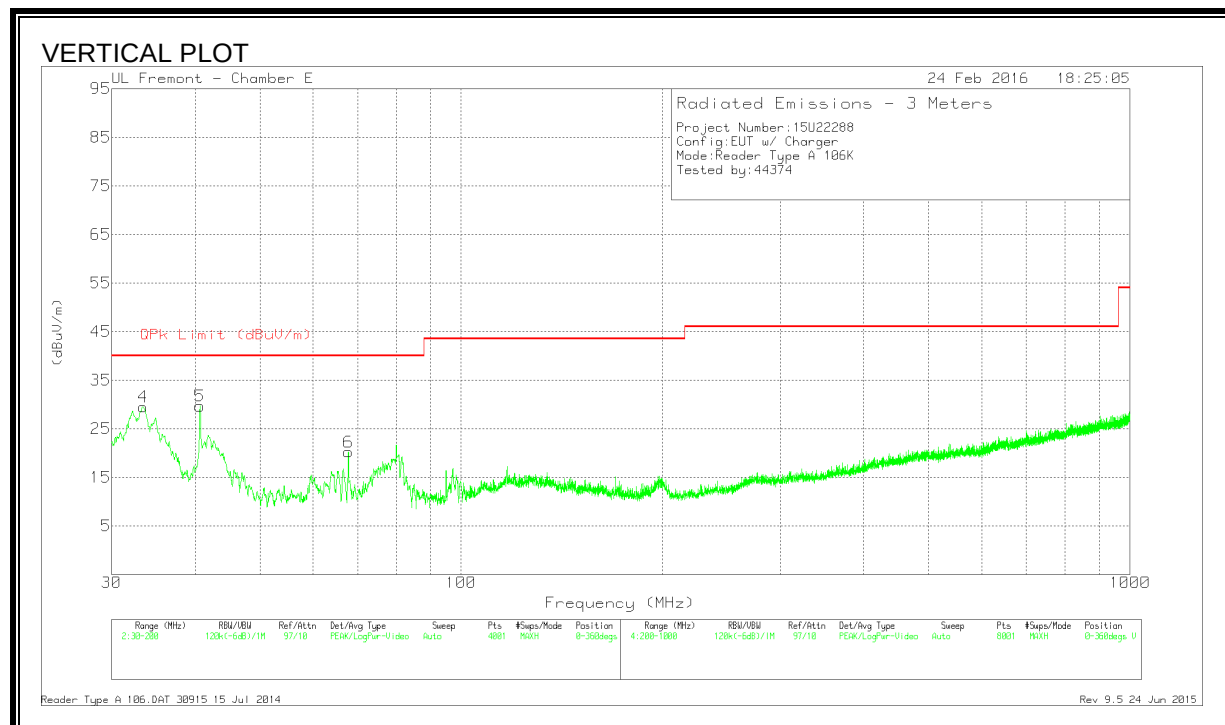
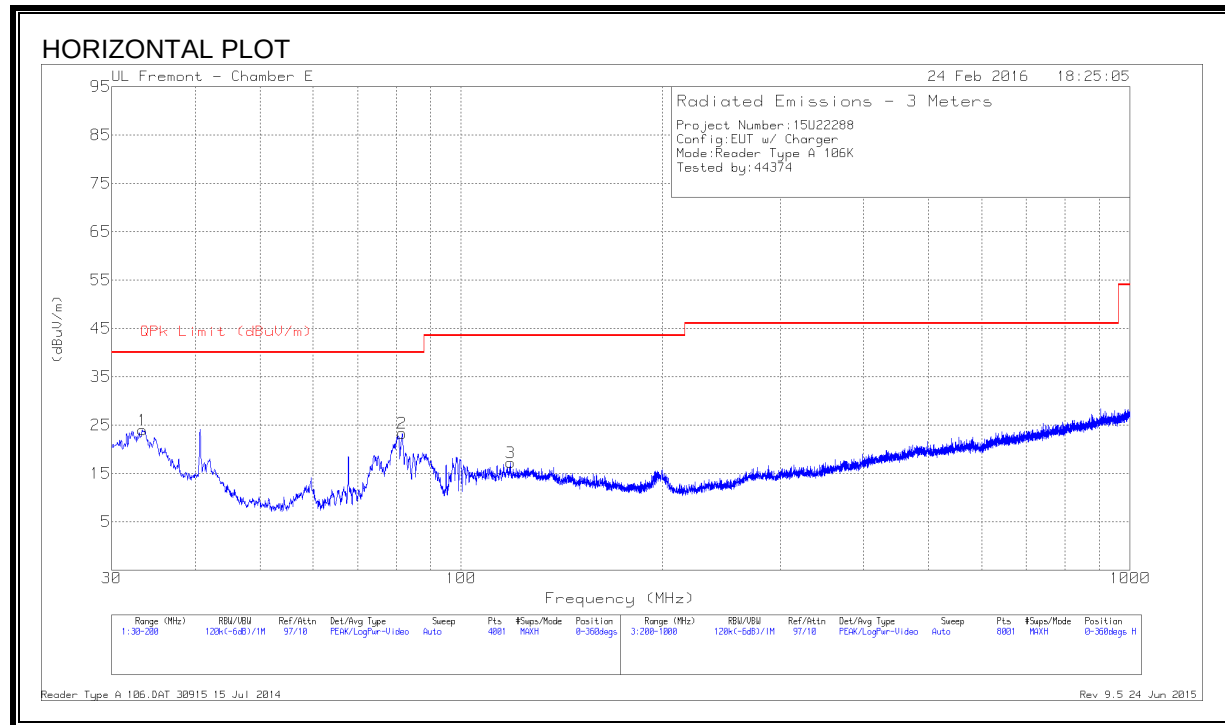
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	33.6975	38.7	Pk	22.4	-31.8	29.3	40	-10.7	0-360	100	V
5	50.06	38.5	Pk	11.9	-31.7	18.7	40	-21.3	0-360	100	V
1	80.4475	43.51	Pk	11.5	-31.5	23.51	40	-16.49	0-360	201	H
3	98.68	35.16	Pk	13.8	-31.4	17.56	43.52	-25.96	0-360	301	H
2	198.215	30.36	Pk	16.7	-30.8	16.26	43.52	-27.26	0-360	100	H
6	551.1	29.2	Pk	22.2	-29.5	21.9	46.02	-24.12	0-360	301	V

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

Pk - Peak detector

106Kbps



DATA

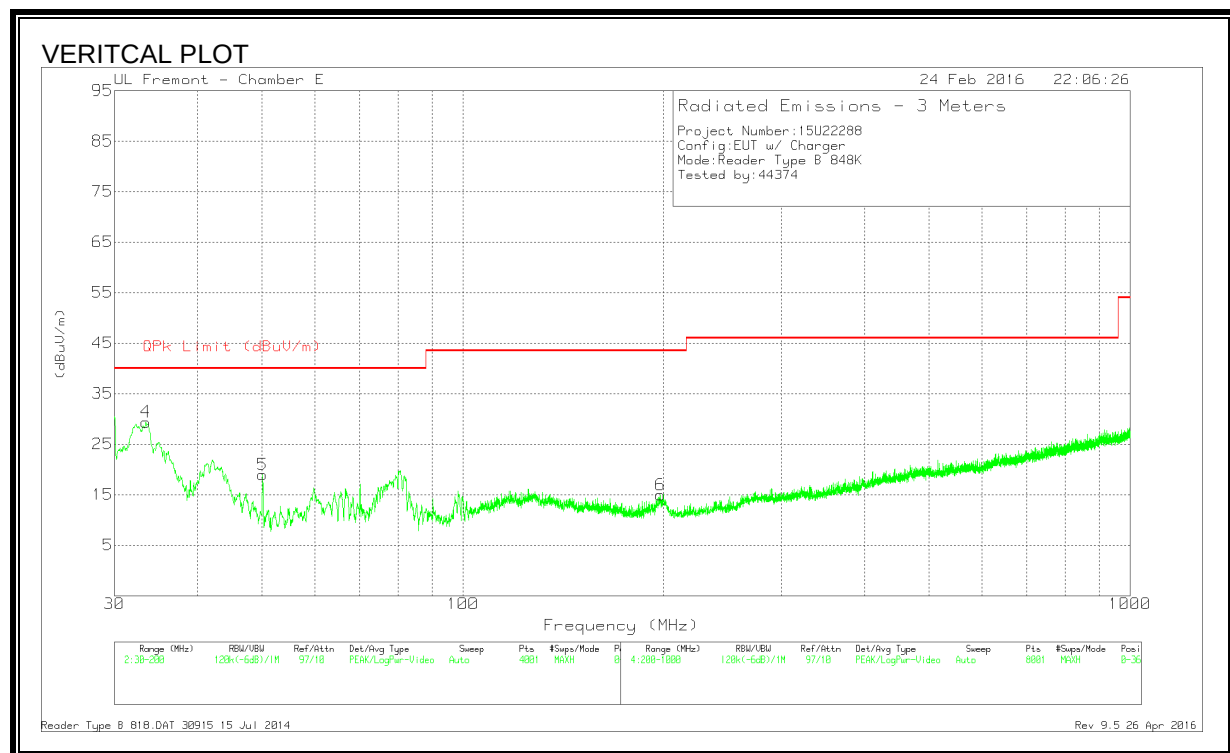
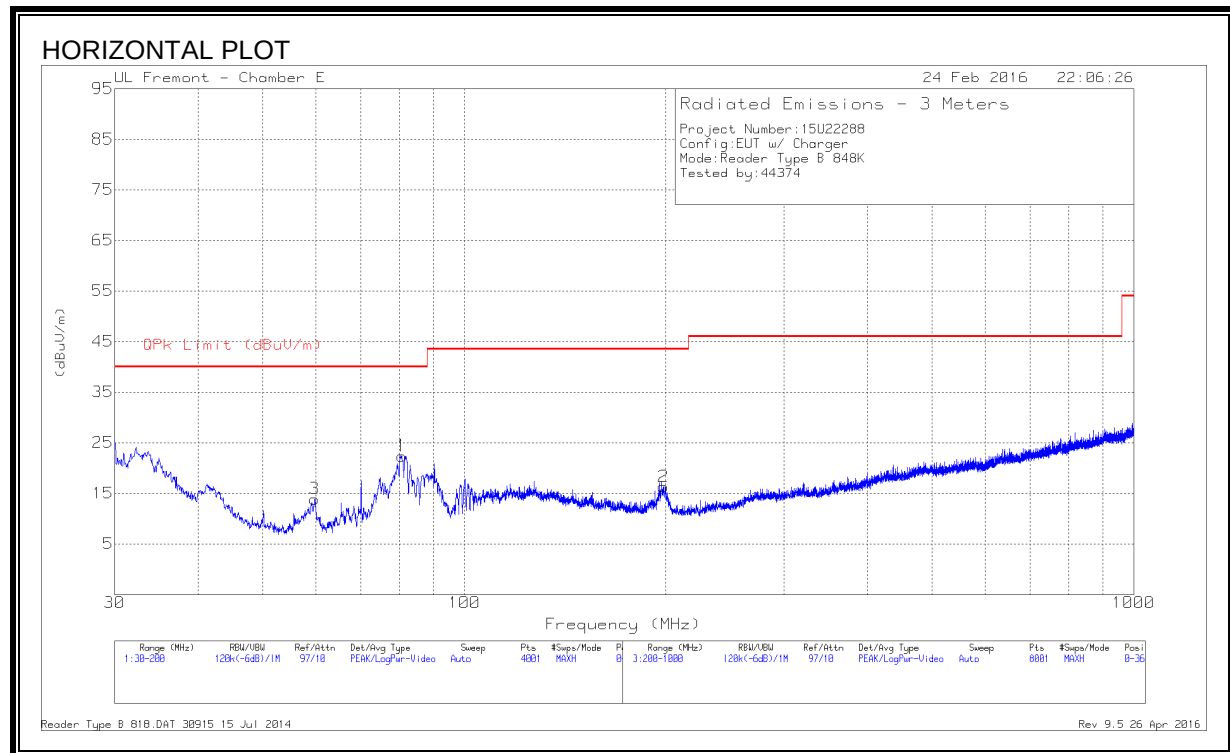
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 118.5275	30.49	Pk	17.9	-31.2	17.19	43.52	-26.33	0-360	201	H
1	33.3575	33.14	Pk	22.6	-31.8	23.94	40	-16.06	0-360	201	H
4	33.4425	38.72	Pk	22.6	-31.8	29.52	40	-10.48	0-360	100	V
5	40.6675	44.27	Pk	17.2	-31.8	29.67	40	-10.33	0-360	100	V
6	67.825	39.92	Pk	11.9	-31.6	20.22	40	-19.78	0-360	100	V
2	81.6163	43.49	Pk	11.3	-31.5	23.29	40	-16.71	0-360	201	H

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

Pk - Peak detector

TYPE B

848Kbps



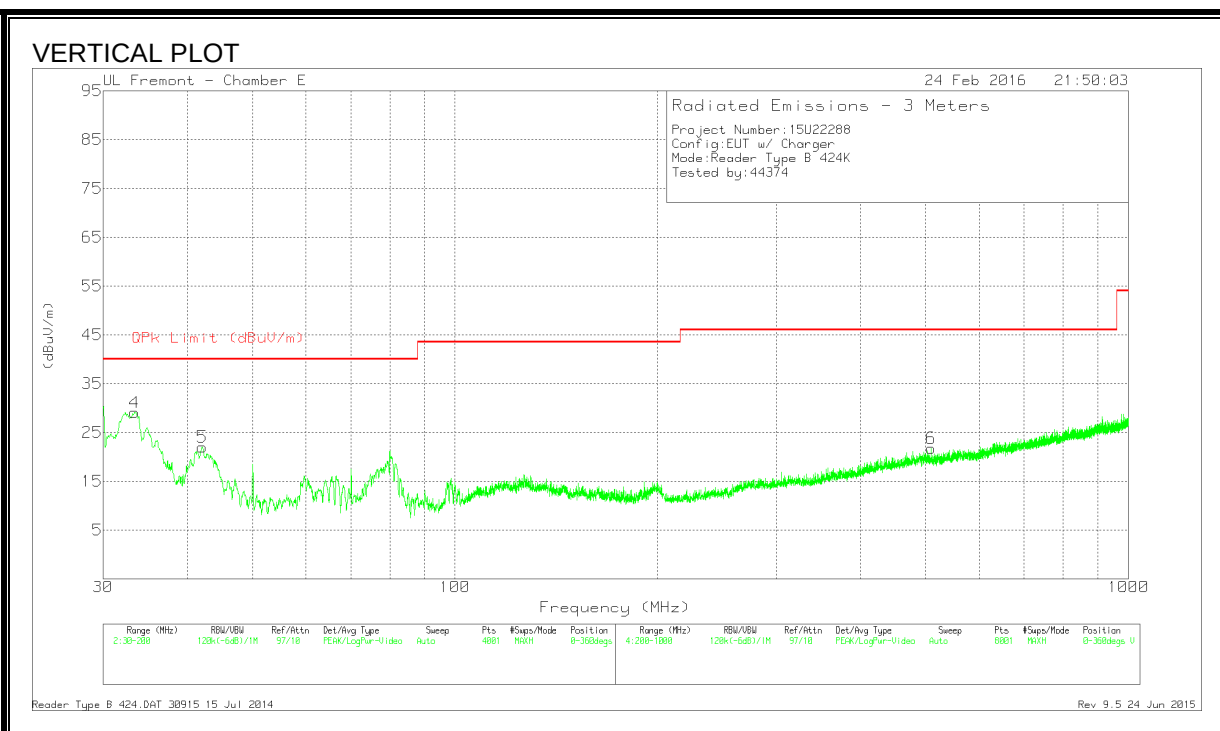
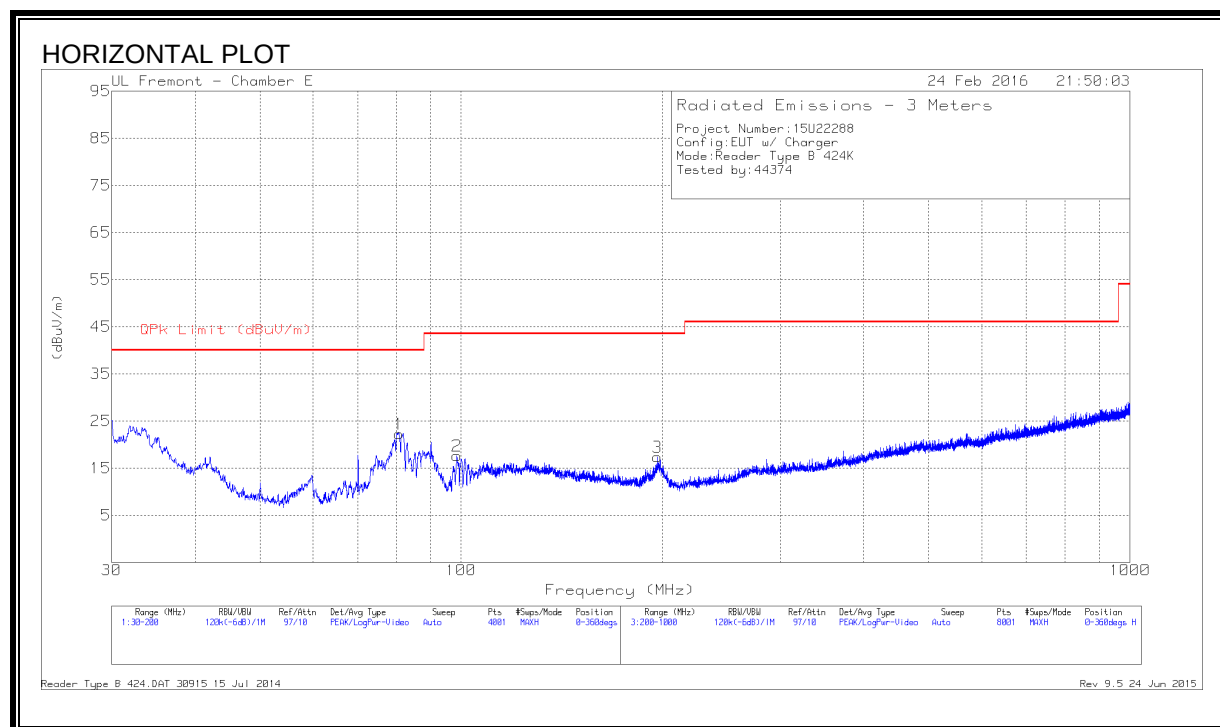
RESULTS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	33.4425	38.58	Pk	22.6	-31.8	29.38	40	-10.62	0-360	100	V
5	50.06	38.74	Pk	11.9	-31.7	18.94	40	-21.06	0-360	100	V
3	59.75	34.08	Pk	11.4	-31.6	13.88	40	-26.12	0-360	201	H
1	80.575	42.47	Pk	11.4	-31.5	22.37	40	-17.63	0-360	201	H
6	197.705	29.26	Pk	16.6	-30.9	14.96	43.52	-28.56	0-360	100	V
2	198.385	30.51	Pk	16.7	-30.9	16.31	43.52	-27.21	0-360	100	H

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

Pk - Peak detector

424Kbps



DATA

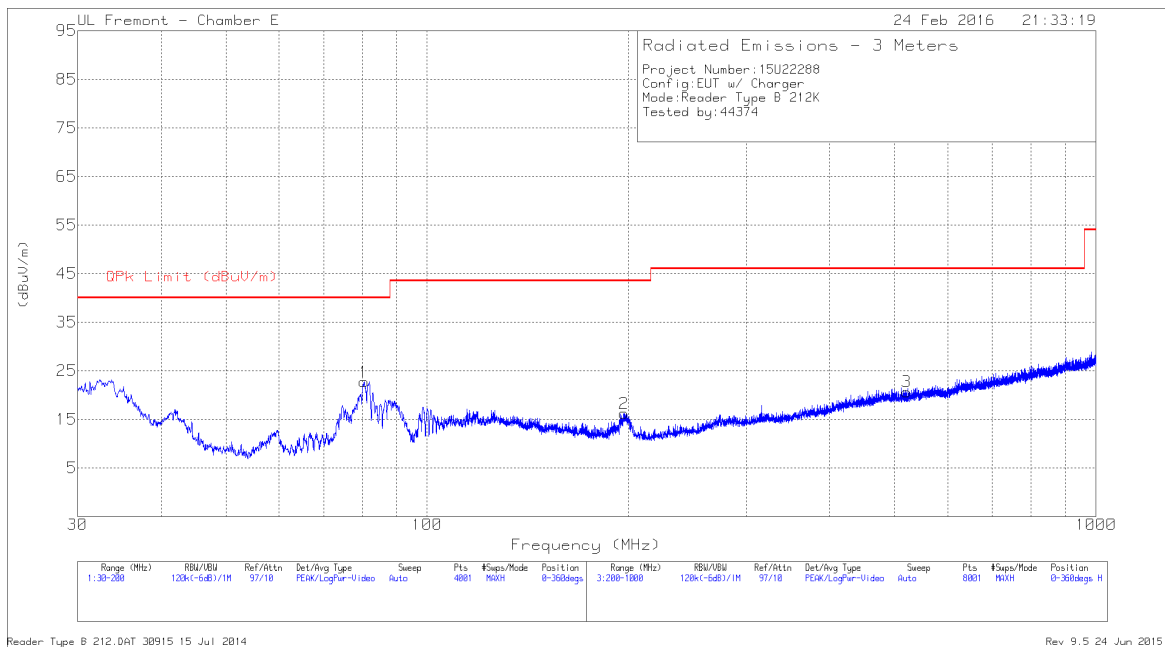
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	33.4213	38.26	Pk	22.6	-31.8	29.06	40	-10.94	0-360	100	V
5	42.1338	37.71	Pk	16.1	-31.8	22.01	40	-17.99	0-360	100	V
1	80.745	42.25	Pk	11.4	-31.4	22.25	40	-17.75	0-360	201	H
2	98.5525	35.23	Pk	13.8	-31.4	17.63	43.52	-25.89	0-360	301	H
3	196.6425	31.76	Pk	16.4	-30.8	17.36	43.52	-26.16	0-360	100	H
6	508.9	29.76	Pk	21.6	-29.6	21.76	46.02	-24.26	0-360	201	V

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

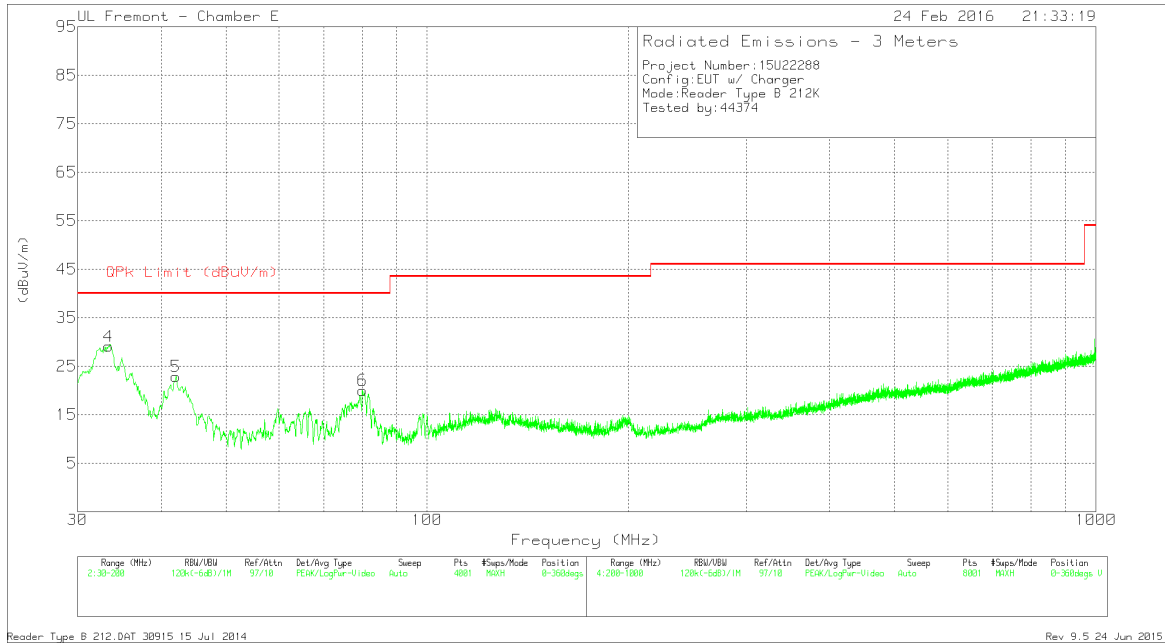
Pk - Peak detector

212Kbps

HORIZONTAL PLOT



VERTICAL PLOT



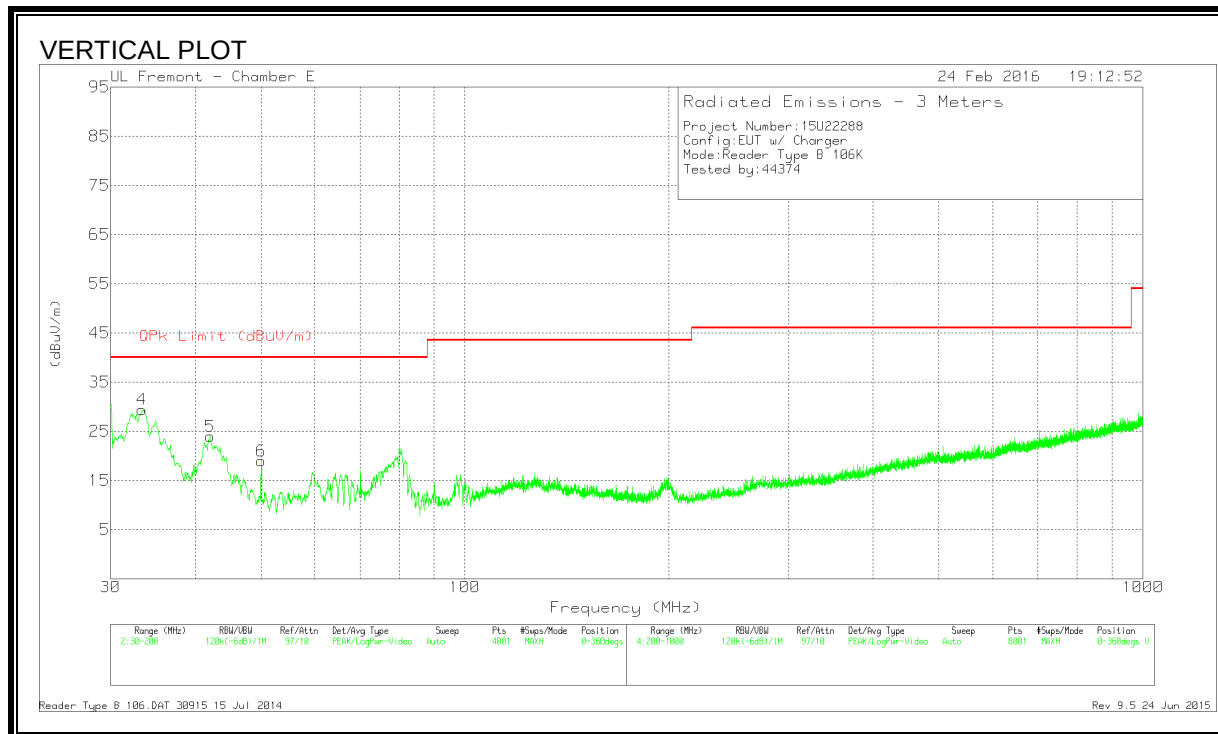
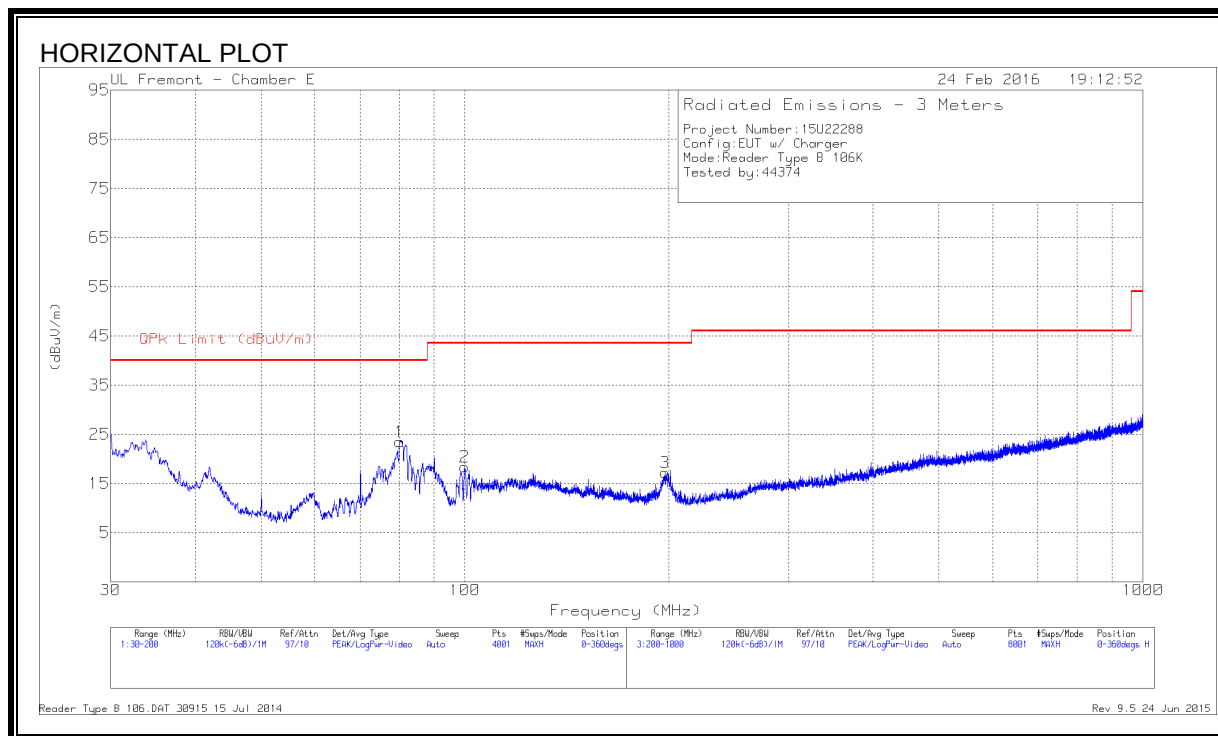
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	33.4	38.27	Pk	22.6	-31.8	29.07	40	-10.93	0-360	100	V
5	42.1125	38.57	Pk	16.1	-31.8	22.87	40	-17.13	0-360	100	V
6	80.0225	40.02	Pk	11.5	-31.5	20.02	40	-19.98	0-360	100	V
1	80.49	42.71	Pk	11.5	-31.5	22.71	40	-17.29	0-360	201	H
2	196.8975	30.52	Pk	16.5	-30.8	16.22	43.52	-27.3	0-360	100	H
3	520.9	28.55	Pk	21.7	-29.6	20.65	46.02	-25.37	0-360	100	H

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

Pk - Peak detector

106Kbps



DATA

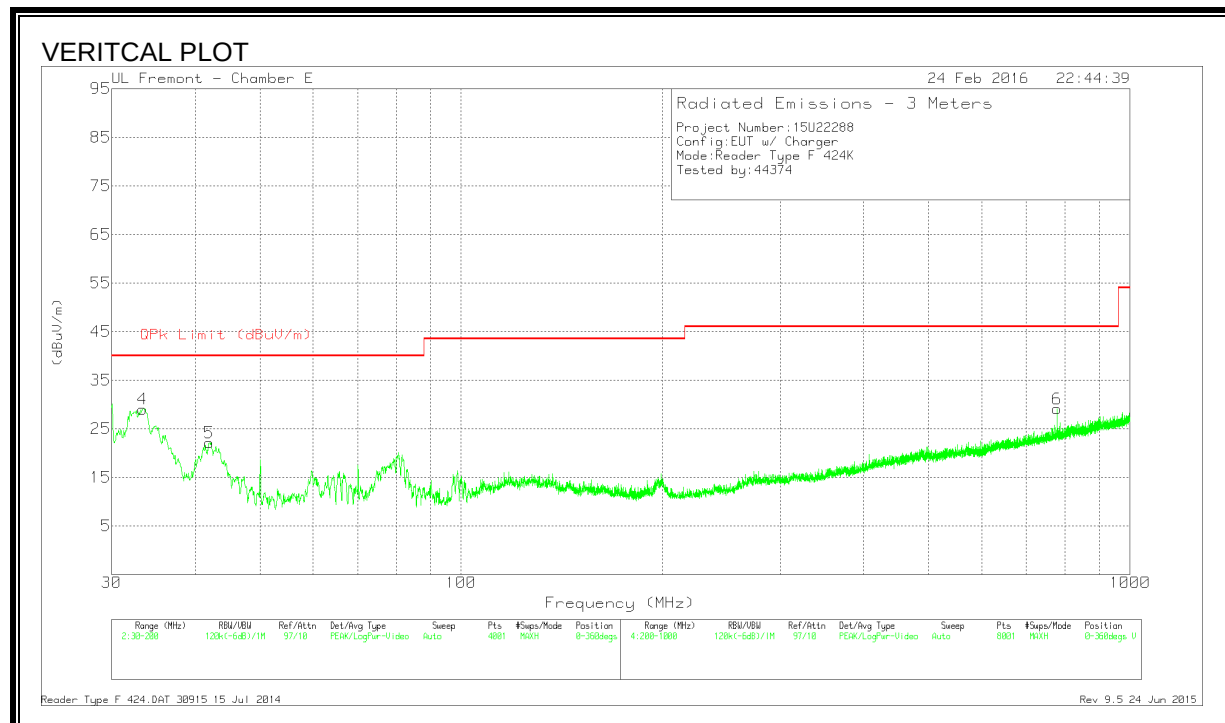
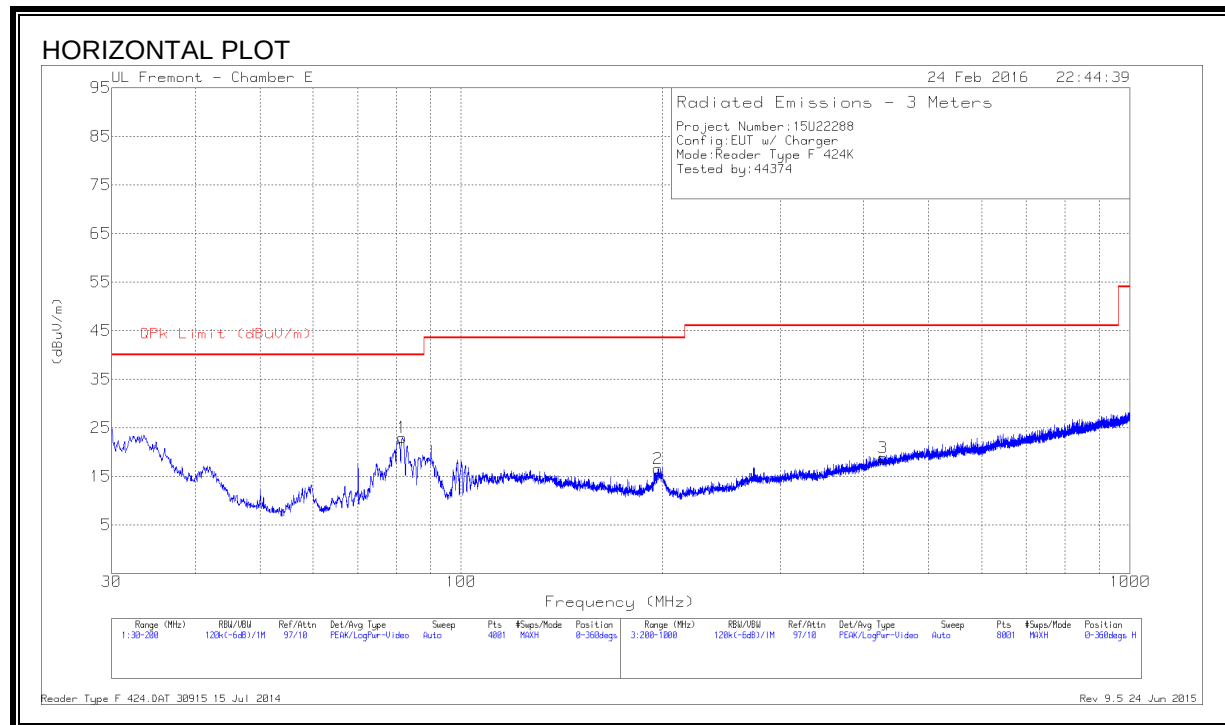
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	33.4	38.6	Pk	22.6	-31.8	29.4	40	-10.6	0-360	100	V
5	42.1125	39.65	Pk	16.1	-31.8	23.95	40	-16.05	0-360	100	V
6	50.06	38.76	Pk	11.9	-31.7	18.96	40	-21.04	0-360	100	V
1	80.15	43.46	Pk	11.5	-31.5	23.46	40	-16.54	0-360	201	H
2	99.87	35.47	Pk	14.2	-31.3	18.37	43.52	-25.15	0-360	301	H
3	197.2588	31.42	Pk	16.6	-30.8	17.22	43.52	-26.3	0-360	100	H

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

Pk - Peak detector

TYPE F

424Kbps



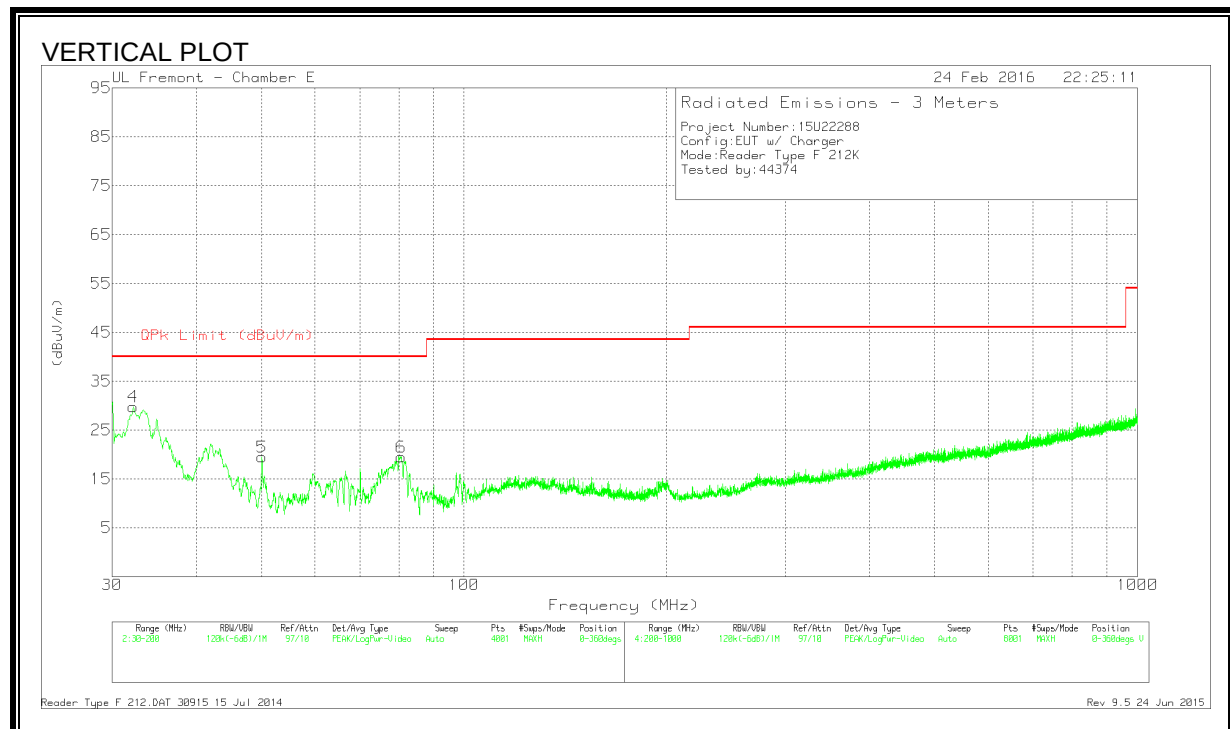
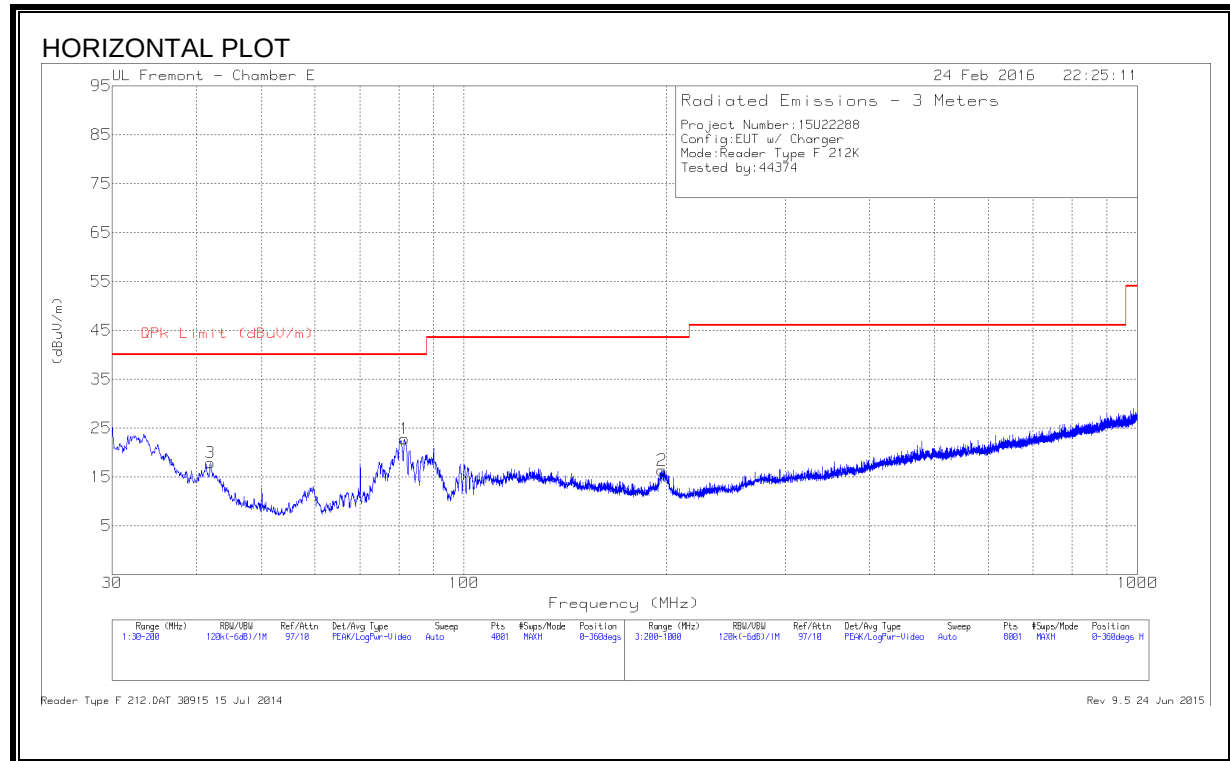
RESULTS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	33.4	38.23	Pk	22.6	-31.8	29.03	40	-10.97	0-360	100	V
5	41.985	37.71	Pk	16.2	-31.8	22.11	40	-17.89	0-360	100	V
1	81.5525	43.22	Pk	11.3	-31.5	23.02	40	-16.98	0-360	201	H
2	196.94	30.88	Pk	16.5	-30.8	16.58	43.52	-26.94	0-360	100	H
3	427.2	28.32	Pk	20.4	-29.9	18.82	46.02	-27.2	0-360	100	H
6	777.9	32.8	Pk	25.2	-28.9	29.1	46.02	-16.92	0-360	100	V

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

Pk - Peak detector

212Kbps



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	32.2525	38.17	Pk	23.4	-31.8	29.77	40	-10.23	0-360	100	V
3	42.0275	33.5	Pk	16.2	-31.8	17.9	40	-22.1	0-360	301	H
5	50.1025	39.25	Pk	11.9	-31.7	19.45	40	-20.55	0-360	100	V
6	80.66	39.54	Pk	11.4	-31.5	19.44	40	-20.56	0-360	100	V
1	81.5525	42.99	Pk	11.3	-31.5	22.79	40	-17.21	0-360	401	H
2	196.7275	30.76	Pk	16.4	-30.8	16.36	43.52	-27.16	0-360	100	H

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

Pk - Peak detector

8.4. FREQUENCY STABILITY

LIMIT

§15.225 (e) The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ 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 603.10:2013 Clause 2.3.1 and 2.3.2

RESULTS

No non-compliance noted.

CE TYPE A,

848Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592710	0.959	13.5592700	1.032	13.5592710	0.959	13.5592720	0.885	± 100
3.80	40	13.5592870	-0.221	13.5592840	0.000	13.5592790	0.369	13.5592750	0.664	± 100
3.80	30	13.5593120	-2.065	13.5593030	-1.401	13.5593020	-1.327	13.5592970	-0.959	± 100
3.80	20	13.559284	0.000	13.559285	-0.074	13.559286	-0.147	13.559288	-0.295	± 100
3.80	10	13.5592940	-0.737	13.5593250	-3.024	13.5593270	-3.171	13.5593320	-3.540	± 100
3.80	0	13.5593540	-5.162	13.5593550	-5.236	13.5593600	-5.605	13.5593610	-5.678	± 100
3.80	-10	13.5593660	-6.047	13.5593670	-6.121	13.5593660	-6.047	13.5593650	-5.973	± 100
3.80	-20	13.5593570	-5.383	13.5593520	-5.015	13.5593510	-4.941	13.5593480	-4.720	± 100
3.23	20	13.5593280	-3.245	13.5593280	-3.245	13.5593290	-3.319	13.5593290	-3.319	± 100
4.37	20	13.5593270	-3.171	13.5593270	-3.171	13.5593270	-3.171	13.5593260	-3.097	± 100

424Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592710	3.171	13.5592720	3.097	13.5592710	3.171	13.5592710	3.171	± 100
3.80	40	13.5592860	2.065	13.5592850	2.139	13.5592870	1.991	13.5592770	2.729	± 100
3.80	30	13.5593120	0.147	13.5593110	0.221	13.5592990	1.106	13.5592950	1.401	± 100
3.80	20	13.559314	0.000	13.559315	-0.074	13.559316	-0.147	13.559319	-0.369	± 100
3.80	10	13.5592980	1.180	13.5593010	0.959	13.5593260	-0.885	13.5593400	-1.917	± 100
3.80	0	13.5593570	-3.171	13.5593580	-3.245	13.5593580	-3.245	13.5593600	-3.392	± 100
3.80	-10	13.5593650	-3.761	13.5593670	-3.909	13.5593670	-3.909	13.5593660	-3.835	± 100
3.80	-20	13.5593510	-2.729	13.5593500	-2.655	13.5593490	-2.581	13.5593480	-2.507	± 100
3.23	20	13.5593500	-2.655	13.5593470	-2.434	13.5593440	-2.212	13.5593400	-1.917	± 100
4.37	20	13.5593370	-1.696	13.5593360	-1.622	13.5593360	-1.622	13.5593290	-1.106	± 100

212Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592742	3.237	13.5592712	3.459	13.5592715	3.437	13.5592719	3.407	± 100
3.80	40	13.5592885	2.183	13.5592875	2.257	13.5592814	2.706	13.5592785	2.920	± 100
3.80	30	13.5593039	1.047	13.5593032	1.099	13.5593024	1.158	13.5592965	1.593	± 100
3.80	20	13.559318	0.000	13.559318	0.007	13.559318	-0.007	13.559318	-0.015	± 100
3.80	10	13.5593201	-0.147	13.5593223	-0.310	13.5593224	-0.317	13.5593372	-1.409	± 100
3.80	0	13.5593469	-2.124	13.5593491	-2.286	13.5593551	-2.729	13.5593581	-2.950	± 100
3.80	-10	13.5593657	-3.510	13.5593666	-3.577	13.5593670	-3.606	13.5593690	-3.754	± 100
3.80	-20	13.5593657	-3.510	13.5593589	-3.009	13.5593535	-2.611	13.5593502	-2.367	± 100
3.23	20	13.5593288	-0.789	13.5593265	-0.619	13.5593261	-0.590	13.5593259	-0.575	± 100
4.37	20	13.5593432	-1.851	13.5593394	-1.571	13.5593356	-1.291	13.5593297	-0.855	± 100

106Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592718	2.903	13.5592714	2.932	13.5592715	2.925	13.5592717	2.910	± 100
3.80	40	13.5592885	1.671	13.5592866	1.811	13.5592789	2.379	13.5592777	2.468	± 100
3.80	30	13.5593057	0.403	13.5593028	0.617	13.5593014	0.720	13.5593972	-6.345	± 100
3.80	20	13.559311	0.000	13.559313	-0.139	13.559314	-0.227	13.559315	-0.300	± 100
3.80	10	13.5593472	-2.655	13.5593435	-2.382	13.5593431	-2.356	13.5593431	-2.358	± 100
3.80	0	13.5593632	-3.835	13.5593624	-3.780	13.5593623	-3.775	13.5593624	-3.778	± 100
3.80	-10	13.5593666	-4.090	13.5593674	-4.144	13.5593674	-4.147	13.5593674	-4.150	± 100
3.80	-20	13.5593461	-2.574	13.5593514	-2.968	13.5593518	-2.998	13.5593517	-2.992	± 100
3.23	20	13.5593163	-0.379	13.5593163	-0.382	13.5593163	-0.379	13.5593164	-0.387	± 100
4.37	20	13.5593157	-0.334	13.5593158	-0.340	13.5593159	-0.351	13.5593161	-0.361	± 100

CE TYPE B,

848Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5603400	-0.069	13.5603396	-0.045	13.5603394	-0.027	13.5603392	-0.011	± 100
3.80	40	13.5603404	-0.103	13.5603404	-0.104	13.5603404	-0.105	13.5603404	-0.102	± 100
3.80	30	13.5603394	-0.026	13.5603394	-0.030	13.5603394	-0.029	13.5603394	-0.027	± 100
3.80	20	13.560339	0.000	13.560339	0.004	13.560339	0.007	13.560339	0.009	± 100
3.80	10	13.5603374	0.118	13.5603375	0.110	13.5603376	0.103	13.5603377	0.098	± 100
3.80	0	13.5603369	0.156	13.5603368	0.164	13.5603368	0.167	13.5603367	0.167	± 100
3.80	-10	13.5603361	0.213	13.5603362	0.208	13.5603362	0.208	13.5603363	0.198	± 100
3.80	-20	13.5603312	0.578	13.5603355	0.258	13.5603355	0.258	13.5603356	0.253	± 100
3.23	20	13.5603389	0.010	13.5603389	0.012	13.5603389	0.008	13.5603390	0.005	± 100
4.37	20	13.5603389	0.008	13.5603389	0.010	13.5603389	0.007	13.5603389	0.011	± 100

424Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5603398	-0.058	13.5603395	-0.034	13.5603392	-0.015	13.5603390	0.002	± 100
3.80	40	13.5603405	-0.108	13.5603404	-0.104	13.5603404	-0.102	13.5603404	-0.101	± 100
3.80	30	13.5603397	-0.052	13.5603398	-0.054	13.5603397	-0.052	13.5603397	-0.051	± 100
3.80	20	13.560339	0.000	13.560339	0.000	13.560339	-0.004	13.560339	-0.006	± 100
3.80	10	13.5603372	0.131	13.5603374	0.121	13.5603375	0.115	13.5603376	0.108	± 100
3.80	0	13.5603368	0.163	13.5603367	0.170	13.5603367	0.174	13.5603367	0.174	± 100
3.80	-10	13.5603358	0.238	13.5603358	0.235	13.5603360	0.225	13.5603361	0.216	± 100
3.80	-20	13.5603354	0.266	13.5603354	0.270	13.5603354	0.265	13.5603355	0.263	± 100
3.23	20	13.5603391	-0.008	13.5603391	-0.008	13.5603392	-0.011	13.5603392	-0.010	± 100
4.37	20	13.5603392	-0.011	13.5603392	-0.010	13.5603392	-0.010	13.5603392	-0.011	± 100

212Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5603396	-0.133	13.5603397	-0.140	13.5603395	-0.125	13.5603394	-0.118	± 100
3.80	40	13.5603398	-0.147	13.5603399	-0.155	13.5603400	-0.162	13.5603402	-0.177	± 100
3.80	30	13.5603389	-0.081	13.5603389	-0.081	13.5603388	-0.074	13.5603388	-0.074	± 100
3.80	20	13.560338	0.000	13.560338	0.000	13.560338	0.000	13.560338	-0.007	± 100
3.80	10	13.5603377	0.007	13.5603377	0.007	13.5603378	0.000	13.5603378	0.000	± 100
3.80	0	13.5603367	0.081	13.5603367	0.081	13.5603367	0.081	13.5603367	0.081	± 100
3.80	-10	13.5603358	0.147	13.5603359	0.140	13.5603360	0.133	13.5603361	0.125	± 100
3.80	-20	13.5603354	0.177	13.5603353	0.184	13.5603355	0.170	13.5603355	0.170	± 100
3.23	20	13.5603378	0.000	13.5603378	0.000	13.5603379	-0.007	13.5603379	-0.007	± 100
4.37	20	13.5603379	-0.007	13.5603379	-0.007	13.5603379	-0.007	13.5603379	-0.007	± 100

106Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5603404	-0.066	13.5603403	-0.059	13.5603401	-0.044	13.5603400	-0.037	± 100
3.80	40	13.5603405	-0.074	13.5603405	-0.074	13.5603406	-0.081	13.5603406	-0.081	± 100
3.80	30	13.5603394	0.007	13.5603394	0.007	13.5603395	0.000	13.5603395	0.000	± 100
3.80	20	13.560340	0.000	13.560340	0.000	13.560340	0.000	13.560340	-0.007	± 100
3.80	10	13.5603389	0.044	13.5603389	0.044	13.5603390	0.037	13.5603391	0.029	± 100
3.80	0	13.5603376	0.140	13.5603377	0.133	13.5603377	0.133	13.5603377	0.133	± 100
3.80	-10	13.5603370	0.184	13.5603370	0.184	13.5603369	0.192	13.5603367	0.206	± 100
3.80	-20	13.5603354	0.302	13.5603355	0.295	13.5603355	0.295	13.5603353	0.310	± 100
3.23	20	13.5603396	-0.007	13.5603396	-0.007	13.5603396	-0.007	13.5603396	-0.007	± 100
4.37	20	13.5603396	-0.007	13.5603396	-0.007	13.5603396	-0.007	13.5603397	-0.015	± 100

CE TYPE F,

424Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5603401	-0.052	13.5603398	-0.031	13.5603391	0.025	13.5603396	-0.010	± 100
3.80	40	13.5603407	-0.091	13.5603407	-0.096	13.5603407	-0.093	13.5603407	-0.093	± 100
3.80	30	13.5603398	-0.027	13.5603398	-0.030	13.5603399	-0.032	13.5603399	-0.032	± 100
3.80	20	13.560339	0.000	13.560339	0.008	13.560339	0.010	13.560339	0.013	± 100
3.80	10	13.5603374	0.149	13.5603375	0.139	13.5603376	0.135	13.5603377	0.128	± 100
3.80	0	13.5603371	0.174	13.5603368	0.196	13.5603367	0.205	13.5603366	0.206	± 100
3.80	-10	13.5603361	0.244	13.5603362	0.240	13.5603363	0.233	13.5603363	0.228	± 100
3.80	-20	13.5603354	0.295	13.5603355	0.292	13.5603356	0.286	13.5603356	0.282	± 100
3.23	20	13.5603392	0.014	13.5603393	0.012	13.5603393	0.013	13.5603393	0.012	± 100
4.37	20	13.5603392	0.013	13.5603393	0.013	13.5603393	0.011	13.5603393	0.012	± 100

212Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5603402	-0.068	13.5603400	-0.053	13.5603398	-0.037	13.5603396	-0.021	± 100
3.80	40	13.5603412	-0.135	13.5603412	-0.136	13.5603411	-0.134	13.5603410	-0.127	± 100
3.80	30	13.5603401	-0.057	13.5603402	-0.064	13.5603402	-0.065	13.5603402	-0.065	± 100
3.80	20	13.560339	0.000	13.560339	-0.001	13.560339	-0.002	13.560339	-0.001	± 100
3.80	10	13.5603378	0.110	13.5603379	0.105	13.5603381	0.091	13.5603382	0.084	± 100
3.80	0	13.5603370	0.173	13.5603369	0.179	13.5603369	0.180	13.5603369	0.179	± 100
3.80	-10	13.5603359	0.251	13.5603360	0.243	13.5603361	0.236	13.5603362	0.231	± 100
3.80	-20	13.5603354	0.290	13.5603354	0.289	13.5603355	0.281	13.5603355	0.280	± 100
3.23	20	13.5603393	0.002	13.5603393	0.001	13.5603393	0.002	13.5603393	0.001	± 100
4.37	20	13.5603393	0.000	13.5603393	-0.001	13.5603393	0.000	13.5603393	0.003	± 100

Reader TYPE A,

848Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592714	3.894	13.5592721	3.838	13.5592730	3.773	13.5592737	3.719	± 100
3.80	40	13.5592762	3.539	13.5592740	3.701	13.5592738	3.716	13.5592737	3.724	± 100
3.80	30	13.5592944	2.196	13.5592931	2.287	13.5592920	2.370	13.5592910	2.445	± 100
3.80	20	13.559324	0.000	13.559318	0.490	13.559317	0.547	13.559317	0.557	± 100
3.80	10	13.5593459	-1.602	13.5593420	-1.314	13.5593418	-1.302	13.5593422	-1.332	± 100
3.80	0	13.5593643	-2.958	13.5593617	-2.768	13.5593614	-2.746	13.5593614	-2.745	± 100
3.80	-10	13.5593669	-3.152	13.5593670	-3.158	13.5593670	-3.159	13.5593670	-3.157	± 100
3.80	-20	13.5593381	-1.026	13.5593528	-2.111	13.5593515	-2.016	13.5593546	-2.246	± 100
3.23	20	13.5593167	0.547	13.5593167	0.552	13.5593166	0.555	13.5593167	0.553	± 100
4.37	20	13.5593165	0.565	13.5593165	0.568	13.5593165	0.562	13.5593165	0.565	± 100

424Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592715	3.656	13.5592724	3.587	13.5592733	3.527	13.5592742	3.458	± 100
3.80	40	13.5592758	3.338	13.5592738	3.486	13.5592736	3.503	13.5592735	3.510	± 100
3.80	30	13.5592962	1.832	13.5592937	2.023	13.5592919	2.152	13.5592906	2.252	± 100
3.80	20	13.559321	0.000	13.559320	0.092	13.559319	0.152	13.559318	0.211	± 100
3.80	10	13.5593445	-1.729	13.5593423	-1.567	13.5593422	-1.556	13.5593423	-1.566	± 100
3.80	0	13.5593604	-2.899	13.5593611	-2.949	13.5593616	-2.986	13.5593621	-3.023	± 100
3.80	-10	13.5593639	-3.158	13.5593670	-3.384	13.5593673	-3.411	13.5593674	-3.416	± 100
3.80	-20	13.5593586	-2.769	13.5593560	-2.572	13.5593525	-2.319	13.5593515	-2.240	± 100
3.23	20	13.5593174	0.274	13.5593172	0.284	13.5593171	0.296	13.5593169	0.308	± 100
4.37	20	13.5593180	0.230	13.5593177	0.250	13.5593176	0.258	13.5593173	0.281	± 100

212Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592730	3.463	13.5592748	3.329	13.5592751	3.309	13.5592751	3.307	± 100
3.80	40	13.5592754	3.286	13.5592736	3.416	13.5592735	3.430	13.5592734	3.433	± 100
3.80	30	13.5592937	1.937	13.5592895	2.247	13.5592893	2.261	13.5592895	2.246	± 100
3.80	20	13.559320	0.000	13.559315	0.360	13.559315	0.363	13.559315	0.340	± 100
3.80	10	13.5593429	-1.693	13.5593410	-1.553	13.5593409	-1.541	13.5593411	-1.555	± 100
3.80	0	13.5593616	-3.068	13.5593624	-3.131	13.5593619	-3.094	13.5593618	-3.088	± 100
3.80	-10	13.5593633	-3.196	13.5593671	-3.473	13.5593673	-3.490	13.5593673	-3.491	± 100
3.80	-20	13.5593407	-1.529	13.5593529	-2.430	13.5593531	-2.443	13.5593530	-2.437	± 100
3.23	20	13.5593167	0.241	13.5593166	0.250	13.5593166	0.250	13.5593166	0.250	± 100
4.37	20	13.5593213	-0.099	13.5593168	0.235	13.5593165	0.255	13.5593164	0.260	± 100

106Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592719	3.902	13.5592738	3.762	13.5592742	3.730	13.5592744	3.713	± 100
3.80	40	13.5592764	3.566	13.5592748	3.688	13.5592744	3.714	13.5592743	3.724	± 100
3.80	30	13.5592928	2.360	13.5592916	2.449	13.5592913	2.467	13.5592912	2.474	± 100
3.80	20	13.559325	0.000	13.559318	0.537	13.559317	0.600	13.559317	0.587	± 100
3.80	10	13.5593468	-1.620	13.5593439	-1.407	13.5593434	-1.375	13.5593434	-1.377	± 100
3.80	0	13.5593611	-2.675	13.5593616	-2.716	13.5593621	-2.750	13.5593624	-2.774	± 100
3.80	-10	13.5593657	-3.020	13.5593672	-3.130	13.5593673	-3.139	13.5593674	-3.141	± 100
3.80	-20	13.5593535	-2.115	13.5593505	-1.895	13.5593498	-1.842	13.5593492	-1.801	± 100
3.23	20	13.5593171	0.565	13.5593172	0.556	13.5593170	0.575	13.5593171	0.565	± 100
4.37	20	13.5593166	0.606	13.5593168	0.592	13.5593168	0.587	13.5593168	0.586	± 100

Reader TYPE B.

848Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592720	3.302	13.5592711	3.367	13.5592715	3.341	13.5592723	3.279	± 100
3.80	40	13.5592859	2.279	13.5592806	2.670	13.5592779	2.868	13.5592760	3.004	± 100
3.80	30	13.5593102	0.484	13.5593050	0.868	13.5593004	1.205	13.5592970	1.460	± 100
3.80	20	13.559317	0.000	13.559315	0.121	13.559315	0.152	13.559314	0.172	± 100
3.80	10	13.5593281	-0.835	13.5593352	-1.356	13.5593377	-1.546	13.5593393	-1.659	± 100
3.80	0	13.5593554	-2.848	13.5593585	-3.074	13.5593599	-3.182	13.5593609	-3.256	± 100
3.80	-10	13.5593668	-3.690	13.5593669	-3.697	13.5593669	-3.695	13.5593668	-3.688	± 100
3.80	-20	13.5593568	-2.953	13.5593531	-2.677	13.5593511	-2.528	13.5593502	-2.461	± 100
3.23	20	13.5593145	0.171	13.5593154	0.105	13.5593154	0.103	13.5593154	0.100	± 100
4.37	20	13.5593152	0.114	13.5593153	0.108	13.5593153	0.106	13.5593154	0.104	± 100

424Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592724	3.606	13.5592745	3.454	13.5592748	3.431	13.5592749	3.424	± 100
3.80	40	13.5592761	3.336	13.5592742	3.477	13.5592739	3.500	13.5592737	3.511	± 100
3.80	30	13.5592935	2.055	13.5592918	2.178	13.5592910	2.235	13.5592908	2.249	± 100
3.80	20	13.559321	0.000	13.559317	0.286	13.559317	0.313	13.559317	0.328	± 100
3.80	10	13.5593442	-1.684	13.5593406	-1.424	13.5593408	-1.436	13.5593415	-1.488	± 100
3.80	0	13.5593651	-3.226	13.5593627	-3.052	13.5593623	-3.024	13.5593623	-3.025	± 100
3.80	-10	13.5593644	-3.175	13.5593669	-3.361	13.5593673	-3.387	13.5593673	-3.391	± 100
3.80	-20	13.5593428	-1.586	13.5593511	-2.199	13.5593524	-2.290	13.5593528	-2.321	± 100
3.23	20	13.5593168	0.331	13.5593168	0.337	13.5593168	0.336	13.5593167	0.345	± 100
4.37	20	13.5593167	0.340	13.5593167	0.341	13.5593167	0.342	13.5593167	0.342	± 100

212Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592725	2.416	13.5592747	2.257	13.5592750	2.238	13.5592751	2.225	± 100
3.80	40	13.5592734	2.354	13.5592734	2.354	13.5592734	2.355	13.5592734	2.356	± 100
3.80	30	13.5592936	0.862	13.5592904	1.100	13.5592901	1.120	13.5592902	1.114	± 100
3.80	20	13.559305	0.000	13.559309	-0.284	13.559312	-0.488	13.559314	-0.624	± 100
3.80	10	13.5593460	-3.001	13.5593421	-2.711	13.5593417	-2.681	13.5593418	-2.691	± 100
3.80	0	13.5593605	-4.071	13.5593610	-4.104	13.5593613	-4.128	13.5593618	-4.164	± 100
3.80	-10	13.5593632	-4.267	13.5593672	-4.566	13.5593675	-4.584	13.5593675	-4.586	± 100
3.80	-20	13.5593547	-3.641	13.5593539	-3.581	13.5593533	-3.539	13.5593527	-3.492	± 100
3.23	20	13.5593190	-1.008	13.5593169	-0.855	13.5593169	-0.853	13.5593169	-0.854	± 100
4.37	20	13.5593216	-1.200	13.5593172	-0.878	13.5593168	-0.847	13.5593168	-0.844	± 100

106Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592716	3.685	13.5592721	3.646	13.5592729	3.592	13.5592736	3.538	± 100
3.80	40	13.5592761	3.352	13.5592744	3.476	13.5592743	3.485	13.5592742	3.495	± 100
3.80	30	13.5592942	2.020	13.5592927	2.127	13.5592921	2.175	13.5592916	2.214	± 100
3.80	20	13.559322	0.000	13.559318	0.287	13.559317	0.306	13.559317	0.309	± 100
3.80	10	13.5593392	-1.300	13.5593404	-1.386	13.5593414	-1.464	13.5593423	-1.526	± 100
3.80	0	13.5593631	-3.064	13.5593630	-3.054	13.5593629	-3.047	13.5593630	-3.057	± 100
3.80	-10	13.5593668	-3.338	13.5593665	-3.316	13.5593665	-3.310	13.5593664	-3.305	± 100
3.80	-20	13.5593417	-1.483	13.5593503	-2.121	13.5593513	-2.191	13.5593514	-2.198	± 100
3.23	20	13.5593175	0.302	13.5593175	0.304	13.5593174	0.305	13.5593174	0.308	± 100
4.37	20	13.5593173	0.315	13.5593174	0.312	13.5593174	0.307	13.5593174	0.307	± 100

Reader TYPE F,

424Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592718	5.129	13.5592725	5.084	13.5592731	5.035	13.5592739	4.978	± 100
3.80	40	13.5592778	4.692	13.5592759	4.834	13.5592747	4.918	13.5592739	4.978	± 100
3.80	30	13.5592956	3.376	13.5592938	3.513	13.5592922	3.625	13.5592911	3.706	± 100
3.80	20	13.559341	0.000	13.559326	1.148	13.559322	1.466	13.559318	1.719	± 100
3.80	10	13.5593276	1.021	13.5593306	0.793	13.5593330	0.621	13.5593355	0.433	± 100
3.80	0	13.5593547	-0.982	13.5593566	-1.118	13.5593586	-1.269	13.5593597	-1.353	± 100
3.80	-10	13.5593671	-1.898	13.5593671	-1.896	13.5593671	-1.896	13.5593671	-1.895	± 100
3.80	-20	13.5593558	-1.066	13.5593541	-0.935	13.5593529	-0.851	13.5593520	-0.779	± 100
3.23	20	13.5593165	1.839	13.5593163	1.852	13.5593160	1.873	13.5593158	1.886	± 100
4.37	20	13.5593178	1.741	13.5593173	1.776	13.5593169	1.809	13.5593164	1.847	± 100

212Kbps

Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(VAC)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5592719	2.627	13.5592737	2.497	13.5592740	2.469	13.5592742	2.459	± 100
3.80	40	13.5592761	2.316	13.5592742	2.461	13.5592740	2.470	13.5592740	2.475	± 100
3.80	30	13.5592962	0.832	13.5592919	1.148	13.5592914	1.187	13.5592912	1.203	± 100
3.80	20	13.559308	0.000	13.559331	-1.742	13.559313	-0.426	13.559314	-0.508	± 100
3.80	10	13.5593433	-2.638	13.5593407	-2.443	13.5593408	-2.452	13.5593414	-2.498	± 100
3.80	0	13.5593648	-4.221	13.5593616	-3.986	13.5593612	-3.956	13.5593612	-3.957	± 100
3.80	-10	13.5593640	-4.164	13.5593675	-4.424	13.5593677	-4.438	13.5593678	-4.444	± 100
3.80	-20	13.5593453	-2.784	13.5593543	-3.453	13.5593545	-3.463	13.5593540	-3.428	± 100
3.23	20	13.5593147	-0.532	13.5593150	-0.554	13.5593154	-0.580	13.5593158	-0.613	± 100
4.37	20	13.5593157	-0.604	13.5593160	-0.623	13.5593161	-0.630	13.5593161	-0.636	± 100