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

CERTIFICATION CLASS 2 PERMISIVE CHANGE TEST REPORT

FOR

900MHz FHSS RF ID Reader

MODEL NUMBER: RFC-6100XR with Antenna Assembly ITCS-A-210

FCC ID: WFQRFC-6100XR
IC: 10717A-RFC6100XR

REPORT NUMBER: 10185788B

ISSUE DATE: April 11, 2014

Prepared for
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Saint Louis, MO 63104

Prepared by
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NVLAP LAB CODE 100414-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	2014-04-11	Initial Issue	BM

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: **RF Controls LLC**
1400 South 3rd Street
Suite 220
Saint Louis, MO 63104

EUT DESCRIPTION: The EUT (Equipment Under Test) is a 900MHz FHSS RF ID Reader with 4x8 High Gain Steerable Beam Antenna.

MODEL: RFC-6100XR with Antenna Assembly ITCS-A-210

SERIAL NUMBER: Prototype

DATE TESTED: February 10, 2014 – February 25, 2014

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-210 Issue 8 Annex 8	Pass
INDUSTRY CANADA RSS-GEN Issue 3	Pass

**In order to show compliance as a system this report must be used in combination with UL issued report under order number 10185788A.*

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:

Michael Ferrer
EMC Engineer
UL Verification Services Inc.

Tested By:

Bart Mucha
EMC ENGINEER
UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2009, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-GEN Issue 3, and RSS-210 Issue 8, FCC publication DA 00-705.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 333 Pfingsten Road, Northbrook, IL, USA.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 100414-0. The full scope of accreditation can be viewed at http://ts.nist.gov/standards/scopes/100414.htm.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

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

4.3. MEASUREMENT UNCERTAINTY

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

Test	Range	Equipment	Uncertainty k=2
Conducted Emissions	150k-30MHz	LISN	2.29dB
Radiated Emissions	30-200MHz	Bicon 10m Horz	4.27dB
Radiated Emissions	30-200MHz	Bicon 10m Vert	4.28dB
Radiated Emissions	200-1000MHz	LogP 10m Horz	3.33dB
Radiated Emissions	200-1000MHz	LogP 10m Vert	3.39dB
Radiated Emissions	1-6GHz	Horn	5.02dB
Radiated Emissions	6-18GHz	Horn	5.34dB
Radiated Emissions	18-26GHz	Horn	6.60dB
Radiated Emissions	26-40GHz	Horn	7.02dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT (Equipment Under Test) is a 900MHz FHSS RF ID Reader with 4x8 High Gain Steerable Beam Antenna (ITCS-A-210). The unit tested and covered by this report is the AC powered version only.

The antenna uses a radio module is manufactured by RF Controls LLC, certified under FCC ID: WFQRFC-6100XR / IC:10717A-RFC6100XR

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power for ITCS-A-210 configuration as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
902-928	T6.25	24.003	251.36

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio is part of RF Controls Steerable Beam Antenna with declared gain of 11.65dBi.

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was RFRFCC000b031914, rev. 00b.
The EUT driver software installed in the host support equipment during testing was EthtoSerialConfig.application, rev. 1.0.0.42.
The test utility software used during testing was EthtoSerialConfig.application, rev. 1.0.0.42.

5.5. WORST-CASE CONFIGURATION AND MODE

EUT can operate in three different modulation modes described by manufacturer as T6.25 (largest bandwidth), T12.5 (medium bandwidth), and T25 (smallest bandwidth). Preliminary measurements showed that the output power does not change with the bandwidth change. The only measurements conducted with all three bandwidths were the bandwidth measurements and the band-edge measurements.

The EUT is powered by 120V/60Hz.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Laptopt Computer	Generic	-	-	-

I/O CABLES

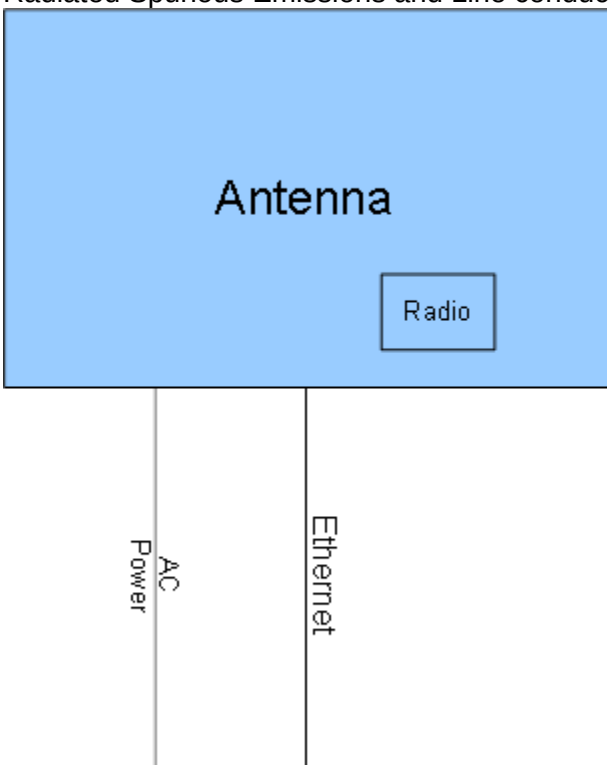
I/O Cable List						
Cable No	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
0	Enclosure	1	n/a	n/a	n/a	-
1	Ethernet	1	RF-45	Cat5 or Cat6	> 3m	Ethernet
2	AC Mains	1	AC	AC	< 3m	Standard AC Computer Cable

TEST SETUP

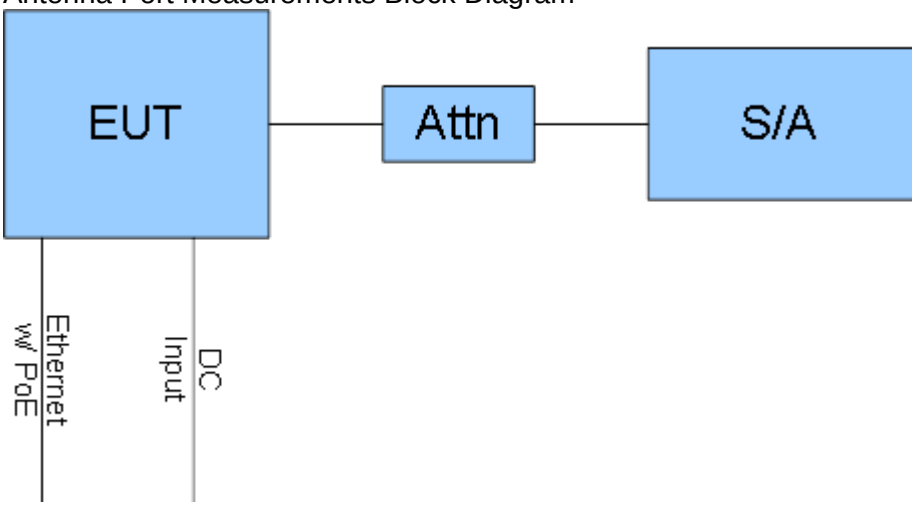
The EUT is a fully functional, steerable beam antenna that incorporates a 900MHz FHSS RF Transceiver.

SETUP DIAGRAM FOR TESTS

Radiated Spurious Emissions and Line conducted Emissions



Antenna Port Measurements Block Diagram



6. TEST AND MEASUREMENT EQUIPMENT

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

Radiated Emissions – 10-Meter Chamber and Antenna Port

Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due Date
EMI Test Receiver	Rohde & Schwarz	ESU	EMC4323	20131227	20141231
Bicon Antenna	Chase	VBA6106A	EMC4078	20130213	20140228
Log-P Antenna	Chase	UPA6109	EMC4313	20131003	20141003
Spectrum Analyzer	Rhode & Schwarz	FSEK	EMC4182	20131226	20141231
Antenna Array	UL	BOMS	EMC4276	20130912	20140930
Spectrum Analyzer	Agilent	N9030A (PXA)	EMC4360	20131221	20141221
Attenuator	-	-	-	*-	*-
* Characterized at the time of testing.					

Conducted Emissions

Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due Date
EMI Test Receiver	Rohde & Schwarz	ESCI	EMC4328	Dec 30, 2013	Dec 30, 2014
Transient Limiter	Electro-Metrics	EM7600-2	EMC4224	N/A	N/A
HighPass Filter	Solar Electronics	2803-150	885551	N/A	N/A
Attenuator	HP	8494B	2831A00838	N/A	N/A
LISN - L1	Solar	8602-50-TS-50-N	EMC4052	Jan 15, 2014	Jan 16, 2015
LISN - L2	Solar	8602-50-TS-50-N	EMC4064	Jan 15, 2014	Jan 16, 2015

7. ANTENNA PORT TEST RESULTS

7.1.1. OUTPUT POWER

LIMIT

§15.247 (b) (2)

RSS-210 Issue 7 Clause A8.4

The maximum antenna gain is 11.65dBi. The maximum output power limit is 24.35dBm. While the radio is capable of maximum output power of 1 watt, the output is factory adjustable and may not be changed by installer. Output power was measured and specific setting for specific antenna assembly was established.

TEST PROCEDURE

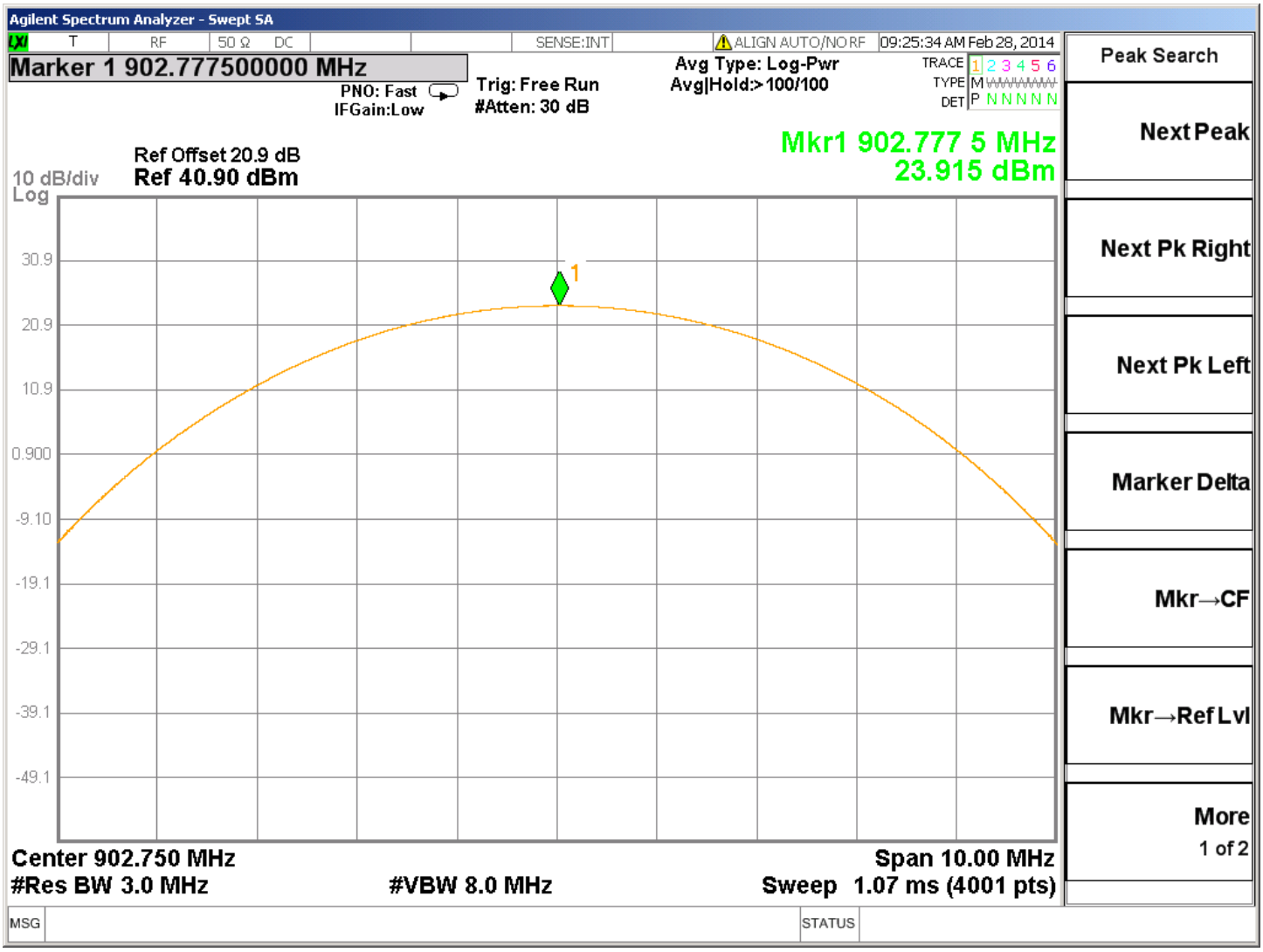
The transmitter output is connected to a spectrum analyzer the analyzer bandwidth is set to a value greater than the 20 dB bandwidth of the EUT.

RESULTS

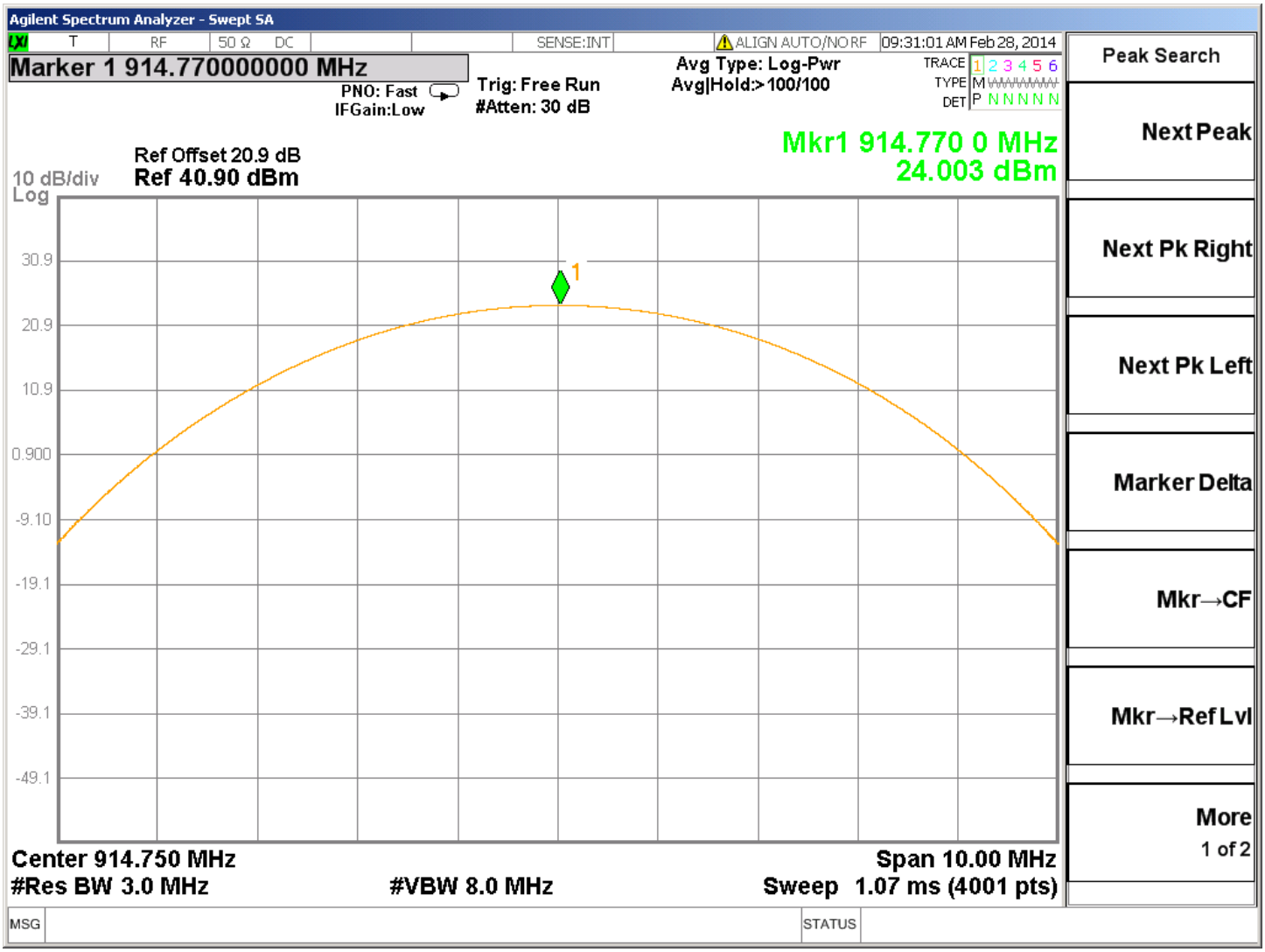
Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	902.75	23.92	24.35	-0.44
Middle	914.75	24.00	24.35	-0.35
High	927.25	23.87	24.35	-0.48

OUTPUT POWER

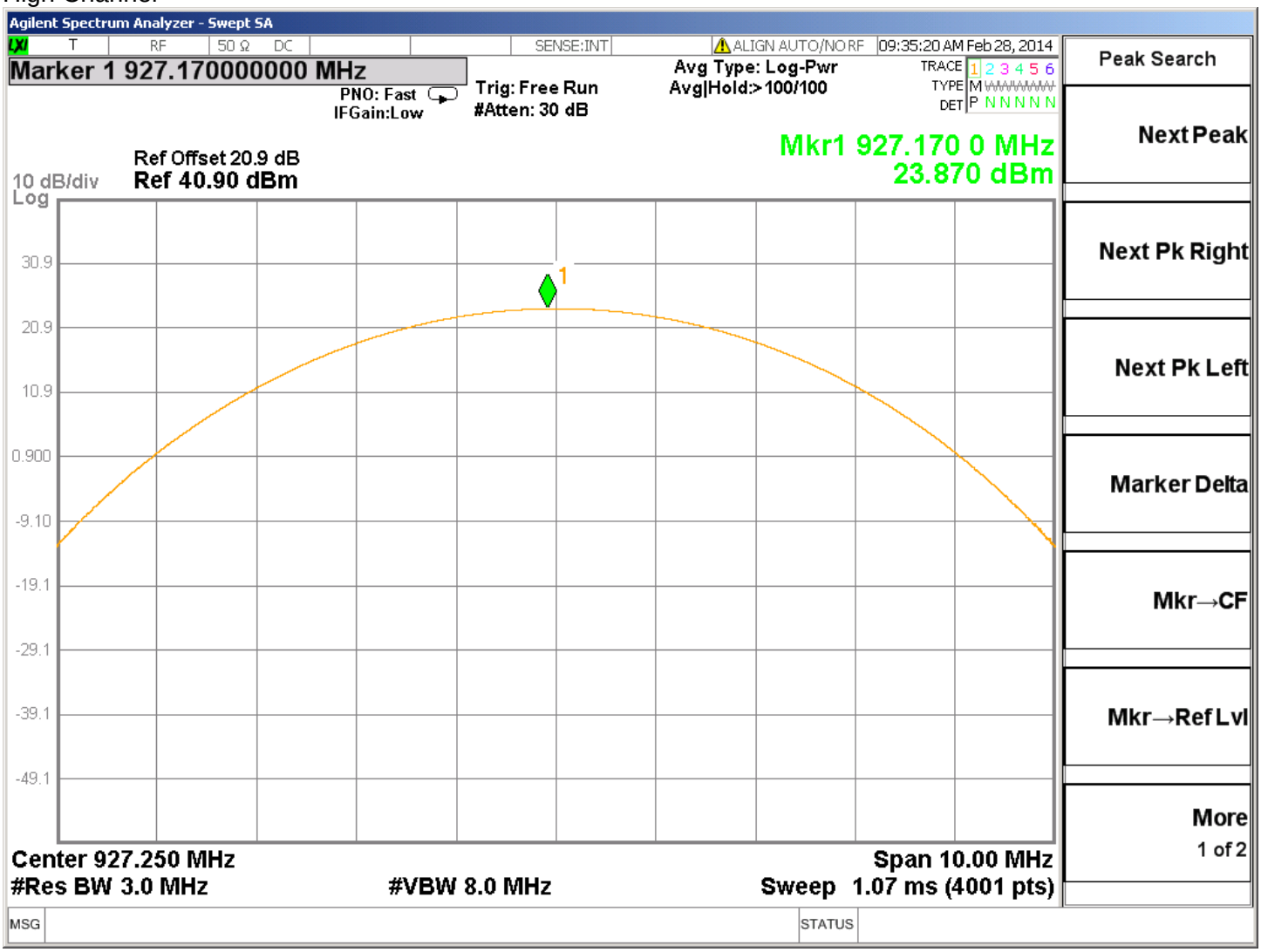
Low Channel



Middle Channel



High Channel



8. RADIATED TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-210 Clause 2.6 (Transmitter)

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

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters or 10 meters as noted. The EUT is configured in accordance with ANSI C63.4:2003. The EUT is set to transmit in a continuous mode.

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

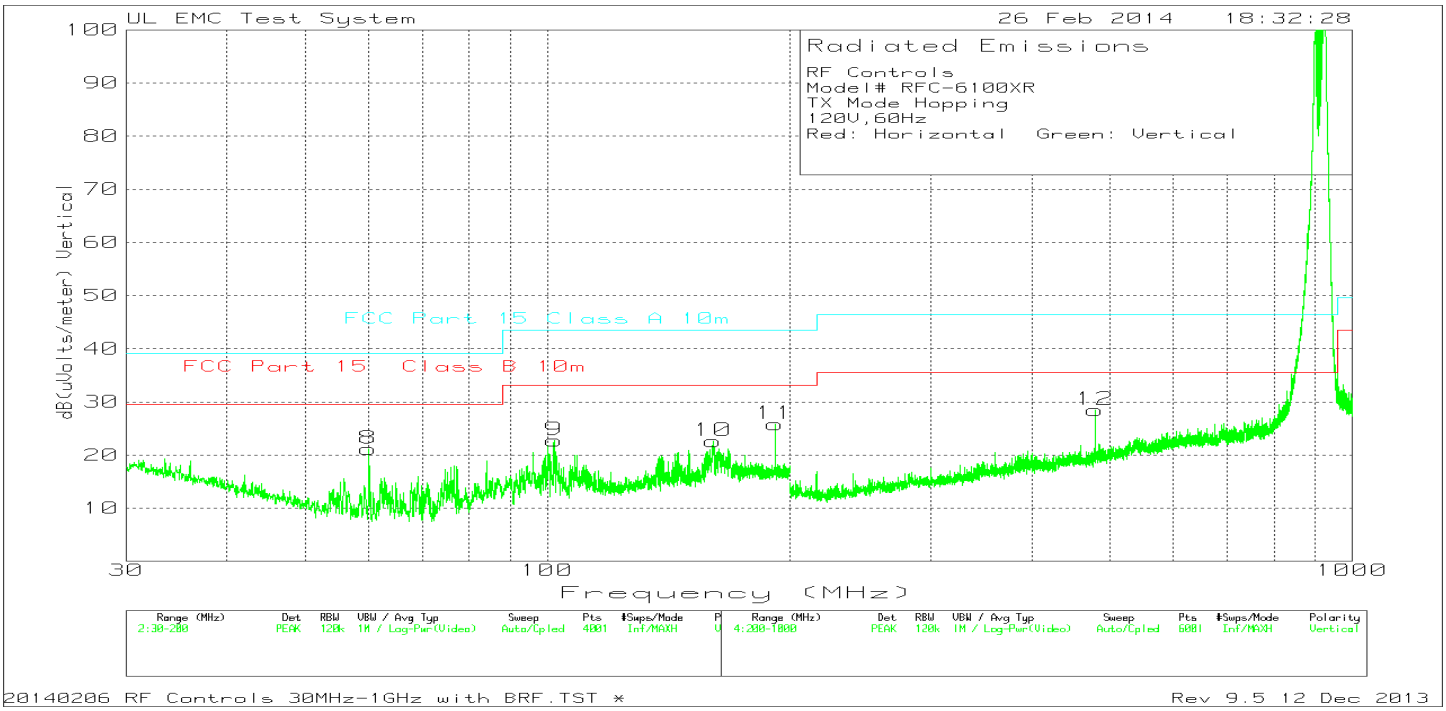
For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

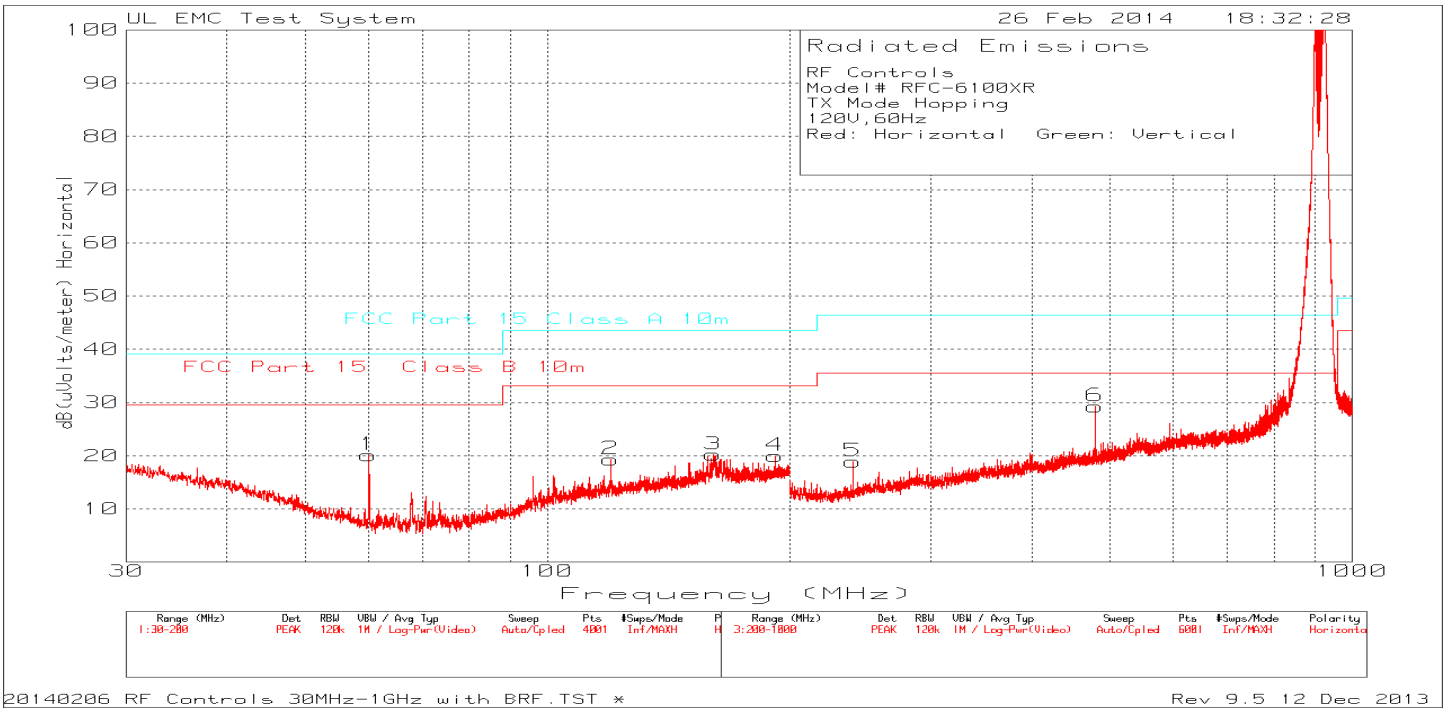
The spectrum from 30 MHz to 10 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 900 MHz band.

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

8.2. RADIATED SPUROUS BELOW 1 GHz

8.2.1. Radiated Spurious Emissions 30MHz-1GHz TX Hopping





* The area between 800MHz to1GHz above the limit is product of the HPF. There are no restricted bandedges covered by the HPF and there were no spurious emissions recorded in any restricted bands below 1GHz. All emissions marked are product of digital part of the device. Measurement distance was set to 10 meters. Limits were extrapolated to 10 meter distance.

RF Controls
Model# RFC-6100XR
TX Mode Hopping
120V,60Hz
Red: Horizontal Green: Vertical
Trace Markers

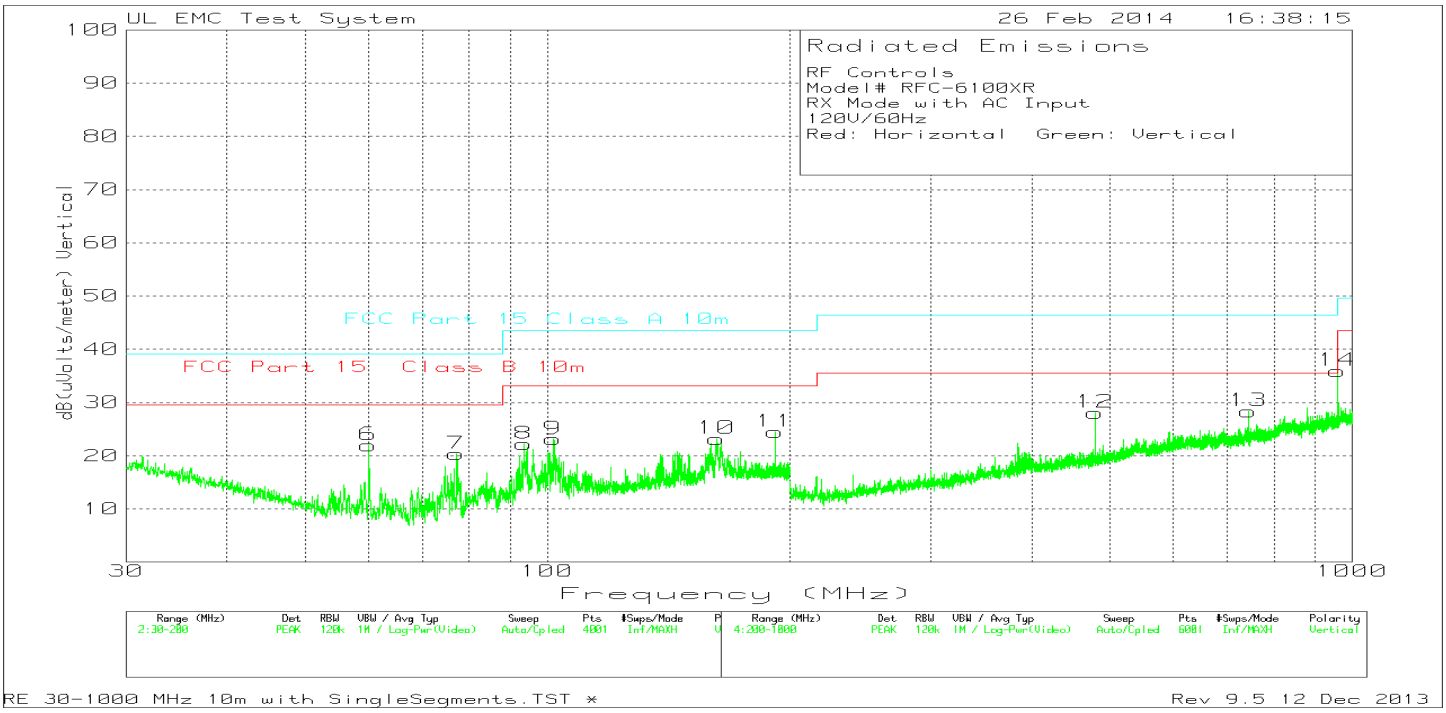
Marker No.	Test Frequency MHz	Meter Reading dBuV	Detector	Antenna Factor dB/m	Path Factor dB	BRF dB	Level dBuv/m	FCC Part 15 Class A 10m dBuV/m	Margin dB	FCC Part 15 Class B 10m dBuV/m	Margin dB	Azimuth Degs	Height cm	Polarity
1	60.005	43.29	PK	6.8	-30	-	20.09	39.08	-18.99	29.55	-9.46	0-360	399	H
2	120.015	35.89	PK	13.2	-29.8	-	19.29	43.52	-24.23	33.07	-13.78	0-360	399	H
3	160.9	34.49	PK	15.2	-29.5	-	20.19	43.52	-23.33	33.07	-12.88	0-360	399	H
4	192.0525	33.01	PK	15.9	-28.9	-	20.01	43.52	-23.51	33.07	-13.06	0-360	249	H
8	60.005	44.34	PK	6.8	-30	-	21.14	39.08	-17.94	29.55	-8.41	0-360	249	V
9	101.91	41.72	PK	10.9	-29.8	-	22.82	43.52	-20.7	33.07	-10.25	0-360	99	V
10	160.73	36.95	PK	15.2	-29.5	-	22.65	43.52	-20.87	33.07	-10.42	0-360	99	V
11	192.0525	38.78	PK	15.9	-28.9	-	25.78	43.52	-17.74	33.07	-7.29	0-360	99	V
5	240	34.08	PK	11.3	-26.6	0.1	18.88	46.44	-27.56	35.57	-16.69	0-360	199	H
6	480	36.97	PK	17.2	-25.1	0.2	29.27	46.44	-17.17	35.57	-6.3	0-360	199	H
7	909.7333	61.67	PK	23.3	-24.7	56.1	116.37	46.44	69.93	35.57	80.8	0-360	199	H
12	480	36.15	PK	17.2	-25.1	0.2	28.45	46.44	-17.99	35.57	-7.12	0-360	199	V
13	908.8	66.23	PK	23.3	-24.8	55.3	120.03	46.44	73.59	35.57	84.46	0-360	100	V

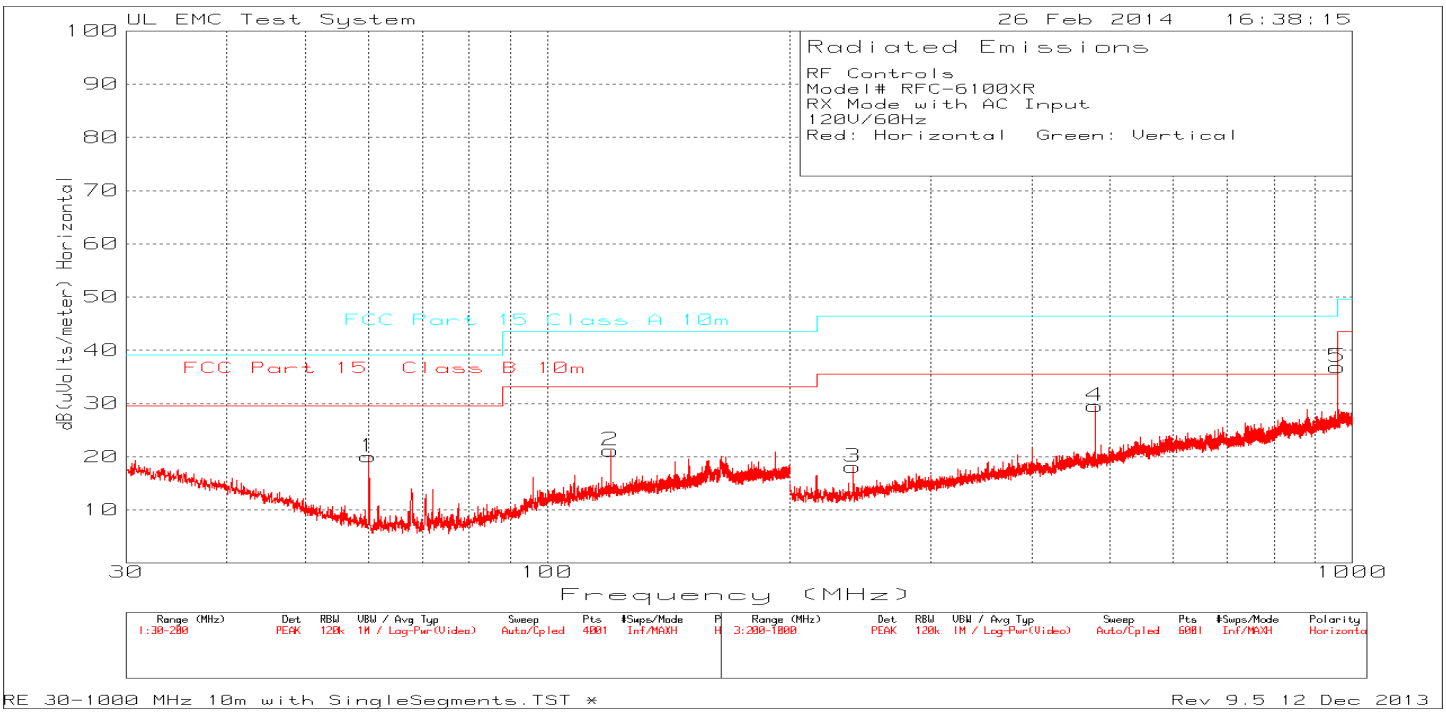
Radiated Emission Data

	Test Frequency MHz	Meter Reading dBuV	Detector	Antenna Factor dB/m	Path Factor dB	BRF dB	Level dBuv/m	FCC Part 15 Class A 10m dBuV/m	Margin dB	FCC Part 15 Class B 10m dBuV/m	Margin dB	Azimuth Degs	Height cm	Polarity
	192.02961	36.91	QP	15.9	-28.9	-	23.91	43.52	-19.61	33.07	-9.16	212	100	V
	480.03359	37.56	QP	17.2	-25.1	0.2	29.86	46.44	-16.58	35.57	-5.71	27	202	H
	480.03359	35.58	QP	17.2	-25.1	0.2	27.88	46.44	-18.56	35.57	-7.69	37	252	V

PK - Peak detector
QP - Quasi-Peak detector

8.2.2. Radiated Spurious Emissions 30MHz-1GHz RX/ Digital Hopping





* Measurement distance was set to 10 meters. Limits were extrapolated to 10 meter distance.

RF Controls
Model# RFC-6100XR
RX Mode with AC Input
120V/60Hz
Red: Horizontal Green: Vertical
Trace Markers

Marker No.	Test Frequency (MHz)	Meter Reading dBuV	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	FCC Part 15 Class A 10m dBuV/m	Margin dB	FCC Part 15 Class B 10m dBuV/m	Margin dB	Azimuth Degs	Height cm	Polarity
1	60.005	43.24	PK	6.8	-30	20.04	39.08	-19.04	29.55	-9.51	0-360	400	H
2	120.015	37.8	PK	13.2	-29.8	21.2	43.52	-22.32	33.07	-11.87	0-360	400	H
6	60.005	45.16	PK	6.8	-30	21.96	39.08	-17.12	29.55	-7.59	0-360	400	V
7	77.175	43.62	PK	6.6	-29.9	20.32	39.08	-18.76	29.55	-9.23	0-360	400	V
8	93.6225	42.48	PK	9.6	-29.9	22.18	43.52	-21.34	33.07	-10.89	0-360	249	V
9	101.8675	42	PK	10.9	-29.8	23.1	43.52	-20.42	33.07	-9.97	0-360	249	V
10	162.43	37.44	PK	15.2	-29.5	23.14	43.52	-20.38	33.07	-9.93	0-360	99	V
11	192.095	37.44	PK	15.9	-28.9	24.44	43.52	-19.08	33.07	-8.63	0-360	99	V
3	240	33.38	PK	11.3	-26.6	18.08	46.44	-28.36	35.57	-17.49	0-360	201	H
4	480	37.42	PK	17.2	-25.1	29.52	46.44	-16.92	35.57	-6.05	0-360	201	H
5	960.1333	37.71	PK	23.4	-24.3	36.81	49.54	-12.73	43.52	-6.71	0-360	99	H
12	480	35.95	PK	17.2	-25.1	28.05	46.44	-18.39	35.57	-7.52	0-360	99	V
13	743.3333	32.45	PK	20.6	-24.7	28.35	46.44	-18.09	35.57	-7.22	0-360	199	V
14	960.1333	36.8	PK	23.4	-24.3	35.9	49.54	-13.64	43.52	-7.62	0-360	199	V

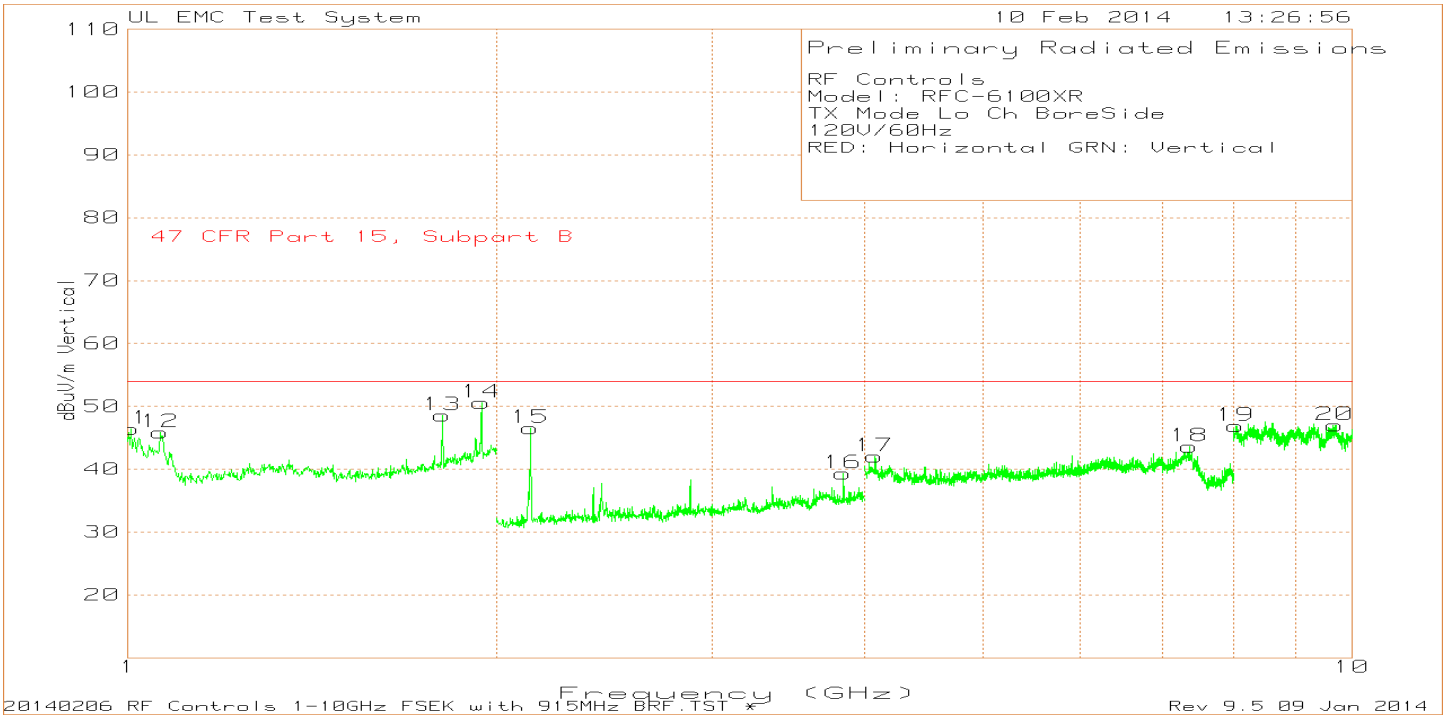
Radiated Emission Data

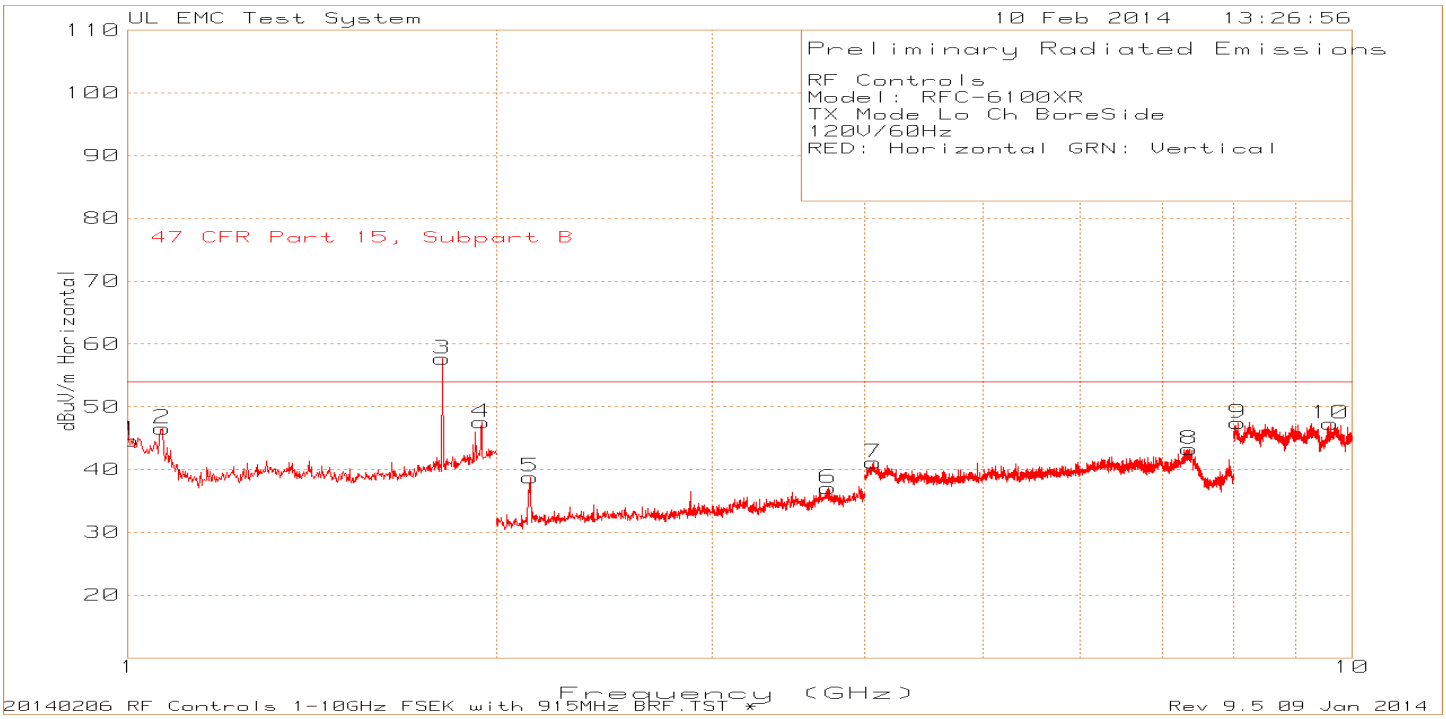
	Test Frequency (MHz)	Meter Reading dBuV	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	FCC Part 15 Class A 10m dBuV/m	Margin dB	FCC Part 15 Class B 10m dBuV/m	Margin dB	Azimuth Degs	Height cm	Polarity
	480.03238	37.49	QP	17.2	-25.1	29.59	46.44	-16.85	35.57	-5.98	31	198	H
	960.06851	36.46	QP	23.4	-24.3	35.56	49.54	-13.98	43.52	-7.96	320	100	H
	960	29.78	QP	23.4	-24.3	28.88	46.44	-17.56	35.57	-6.69	320	100	H
	960.06799	37.81	QP	23.4	-24.3	36.91	49.54	-12.63	43.52	-6.61	70	182	V
	960	30.94	QP	23.4	-24.3	30.04	46.44	-16.4	35.57	-5.53	70	182	V

PK - Peak detector
QP - Quasi-Peak detector

8.3. TRANSMITTER ABOVE 1 GHz

8.3.1. Radiated Emissions 1GHz – 10GHz Low Channel, Bore Side Beam Setting



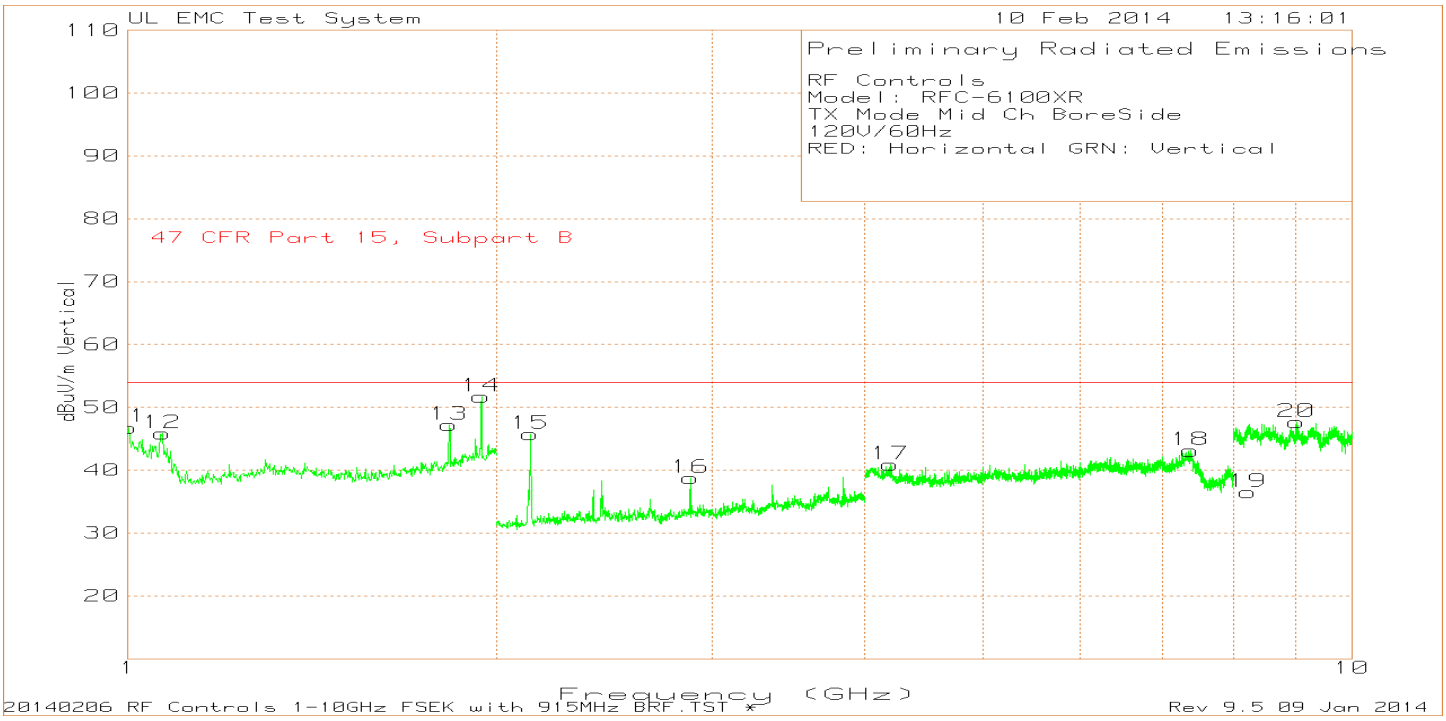


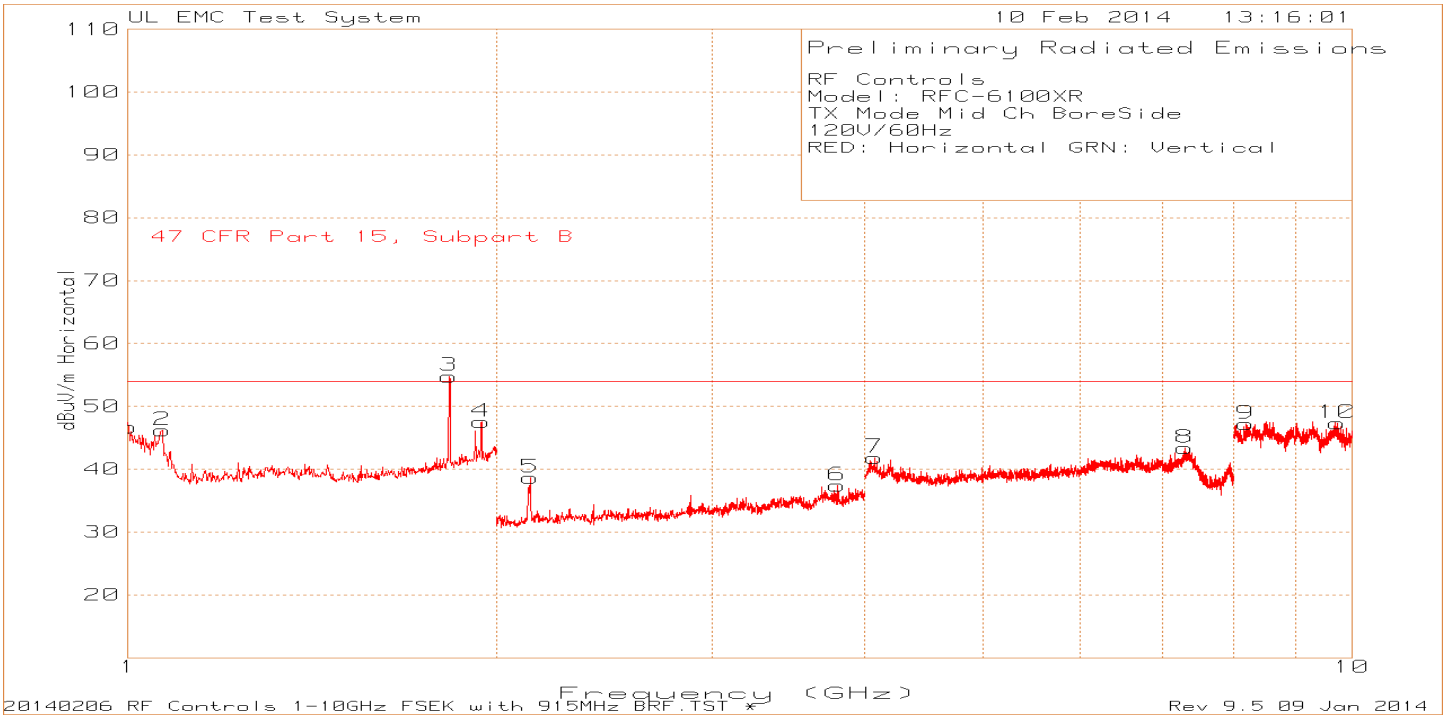
RF Controls
Model: RFC-6100XR
TX Mode Lo Ch BoreSide
120V/60Hz
RED: Horizontal GRN: Vertical
Trace Markers

Marker No.	Test Frequency GHz	Meter Reading dBuV	Detector	Antenna Factor dB/m	BRF dB	Path Factor dB	Level dBuV/m	47 CFR Part 15.209 dBuV/m	Margin dB	Azimuth Degs	Height cm	Polarity
1	* 1.006	72.15	PK	27.4	1	-55.87	44.68	54	-9.32	0-360	149	H
2	* 1.0661	74.87	PK	27.2	0.5	-55.98	46.59	54	-7.41	0-360	149	H
3	**1.8056	80.9	PK	29.9	0.4	-53.52	57.68	-	-	0-360	149	H
4	1.9439	68.63	PK	31.4	0.5	-52.97	47.56	54	-6.44	0-360	100	H
5	2.1321	69.42	PK	21.5	-52.09	-	38.83	54	-15.17	0-360	150	H
6	* 3.7337	63.09	PK	23.7	-49.68	-	37.11	54	-16.89	0-360	150	H
7	* 4.064	63.32	PK	28.4	-50.55	-	41.17	54	-12.83	0-360	150	H
8	* 7.3657	58.26	PK	30.9	-45.93	-	43.23	54	-10.77	0-360	150	H
9	* 8.0741	59	PK	36.2	-47.77	-	47.43	54	-6.57	0-360	150	H
10	9.6056	59.34	PK	36.4	-48.42	-	47.32	54	-6.68	0-360	150	H
11	* 1.006	73.92	PK	27.4	1	-55.87	46.45	54	-7.55	0-360	150	V
12	* 1.0621	74.2	PK	27.2	0.5	-56.01	45.89	54	-8.11	0-360	150	V
13	**1.8056	71.8	PK	29.9	0.4	-53.52	48.58	-	-	0-360	150	V
14	1.9439	71.65	PK	31.4	0.5	-52.97	50.58	54	-3.42	0-360	150	V
15	2.1321	77.16	PK	21.5	-52.09	-	46.57	54	-7.43	0-360	150	V
16	* 3.8418	65.78	PK	24	-50.48	-	39.3	54	-14.7	0-360	150	V
17	* 4.072	64.2	PK	28.4	-50.57	-	42.03	54	-11.97	0-360	150	V
18	* 7.3617	58.6	PK	30.9	-45.9	-	43.6	54	-10.4	0-360	150	V
19	* 8.032	57.68	PK	36.1	-46.89	-	46.89	54	-7.11	0-360	150	V
20	9.6917	58.26	PK	36.4	-47.7	-	46.96	54	-7.04	0-360	150	V

PK - Peak detector
* Frequencies in restricted bands. General 15.209 limit applies.
** Frequencies not in restricted band. No radiated Spurious limits are applicable.

8.3.2. Radiated Emissions 1GHz – 10GHz Middle Channel, Bore Side Beam Setting



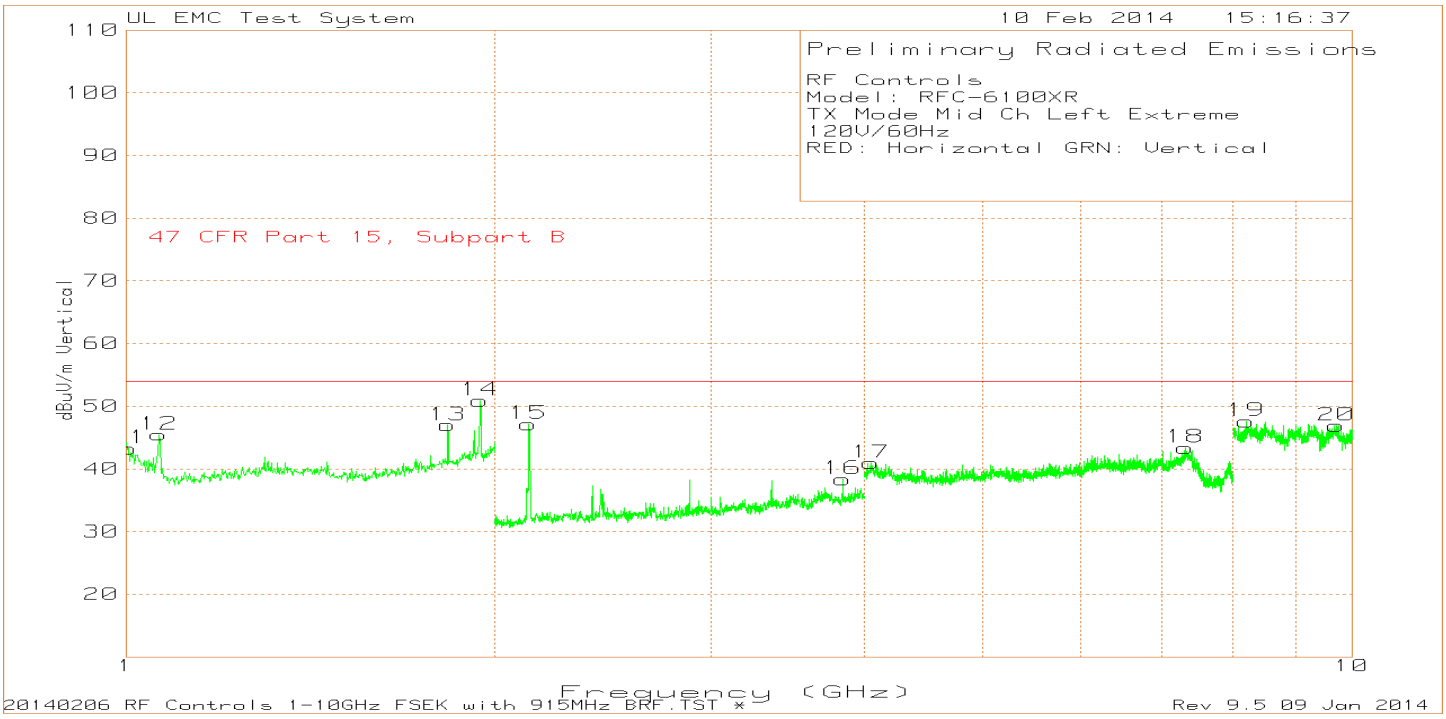


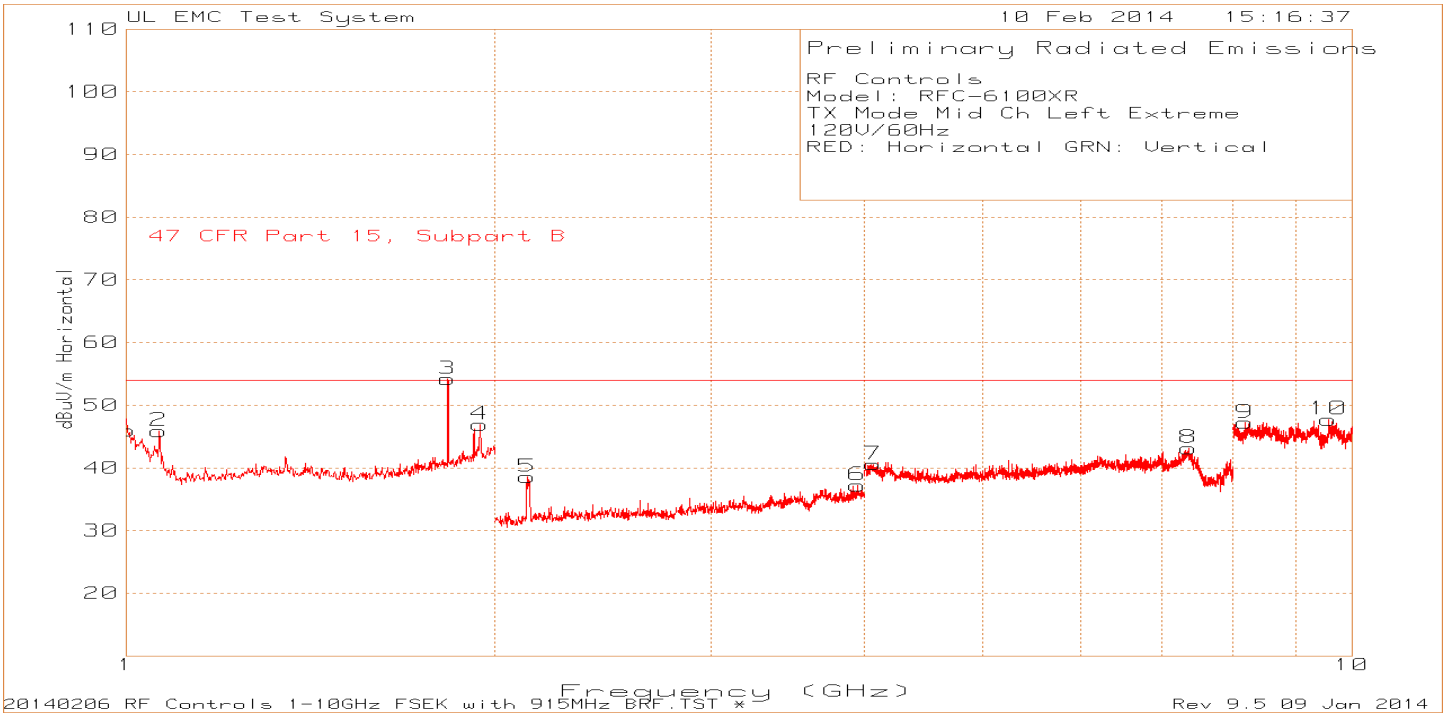
RF Controls
Model: RFC-6100XR
TX Mode Mid Ch BoreSide
120V/60Hz
RED: Horizontal GRN: Vertical
Trace Markers

Marker No.	Test Frequency GHz	Meter Reading dBuV	Detector	Antenna Factor dB/m	BRF dB	Path Factor dB	Level dBuV/m	47 CFR Part 15.209 dBuV/m	Margin dB	Azimuth Degs	Height cm	Polarity
1	* 1.002	74.06	PK	27.4	1.1	-55.85	46.71	54	-7.29	0-360	100	H
2	* 1.0661	74.45	PK	27.2	0.5	-55.98	46.17	54	-7.83	0-360	149	H
3	**1.8297	77.73	PK	30.2	0.4	-53.52	54.81	-	-	0-360	149	H
4	1.9439	68.6	PK	31.4	0.5	-52.97	47.53	54	-6.47	0-360	149	H
5	2.1301	69.31	PK	21.5	-	-52.13	38.68	54	-15.32	0-360	150	H
6	* 3.8018	63.99	PK	24.1	-	-50.7	37.39	54	-16.61	0-360	150	H
7	* 4.072	64.03	PK	28.4	-	-50.57	41.86	54	-12.14	0-360	150	H
8	* 7.3117	58.6	PK	30.5	-	-45.71	43.39	54	-10.61	0-360	150	H
9	* 8.1902	58.82	PK	36.3	-	-47.91	47.21	54	-6.79	0-360	150	H
10	9.7277	58.77	PK	36.4	-	-47.89	47.28	54	-6.72	0-360	150	H
11	* 1.002	74.17	PK	27.4	1.1	-55.85	46.82	54	-7.18	0-360	150	V
12	* 1.0661	74.15	PK	27.2	0.5	-55.98	45.87	54	-8.13	0-360	150	V
13	**1.8297	70.11	PK	30.2	0.4	-53.52	47.19	-	-	0-360	150	V
14	1.9439	72.74	PK	31.4	0.5	-52.97	51.67	54	-2.33	0-360	150	V
15	2.1321	76.37	PK	21.5	-	-52.09	45.78	54	-8.22	0-360	150	V
16	* 2.8809	66.61	PK	22.5	-	-50.32	38.79	54	-15.21	0-360	150	V
17	* 4.1981	63.72	PK	28.3	-	-51.13	40.89	54	-13.11	0-360	150	V
18	* 7.3757	58.12	PK	31	-	-46.01	43.11	54	-10.89	0-360	150	V
19	* 8.2282	47.15	PK	36.4	-	-46.99	36.56	54	-17.44	0-360	150	V
20	* 9.005	59.65	PK	36.1	-	-48.11	47.64	54	-6.36	0-360	150	V

PK - Peak detector
* Frequencies in restricted bands. General 15.209 limit applies.
** Frequencies not in restricted band. No radiated Spurious limits are applicable.

8.3.3. Radiated Emissions 1GHz – 10GHz Middle Channel, Extreme Left Beam Setting



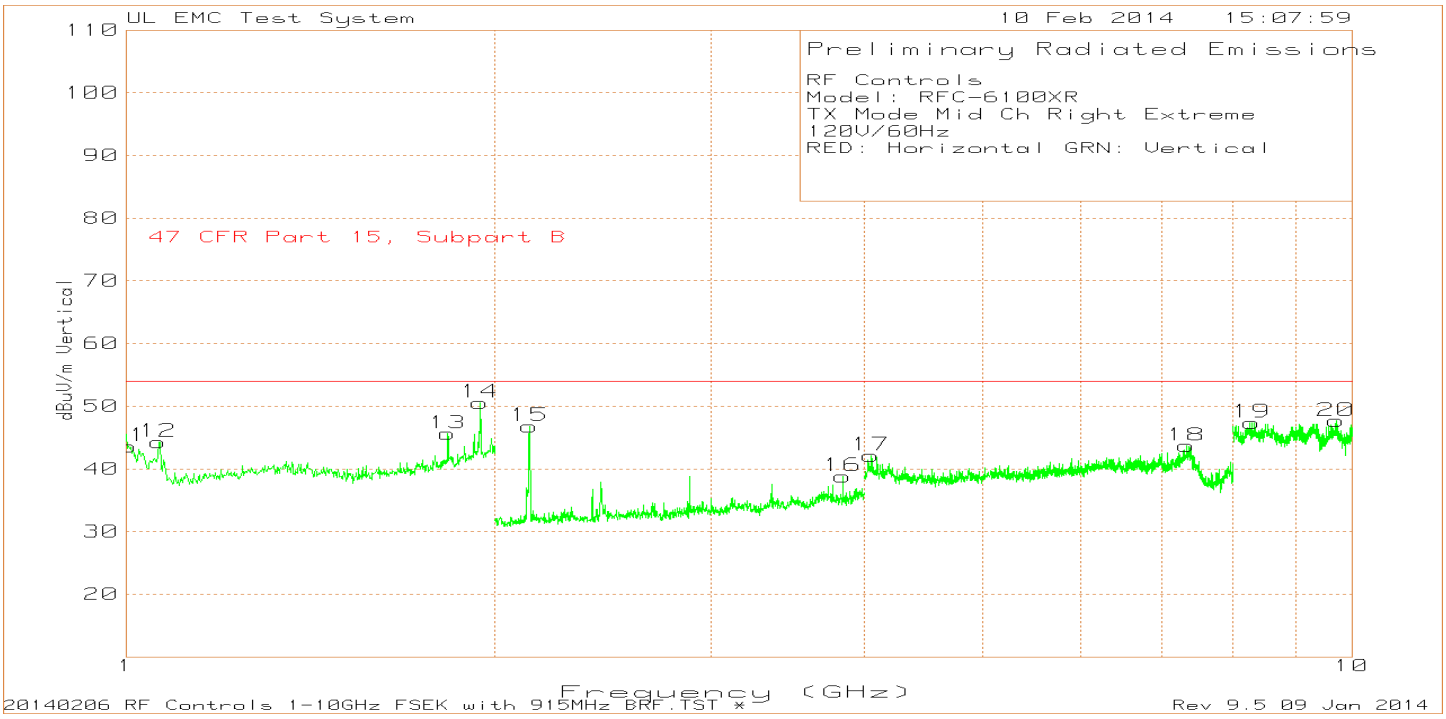


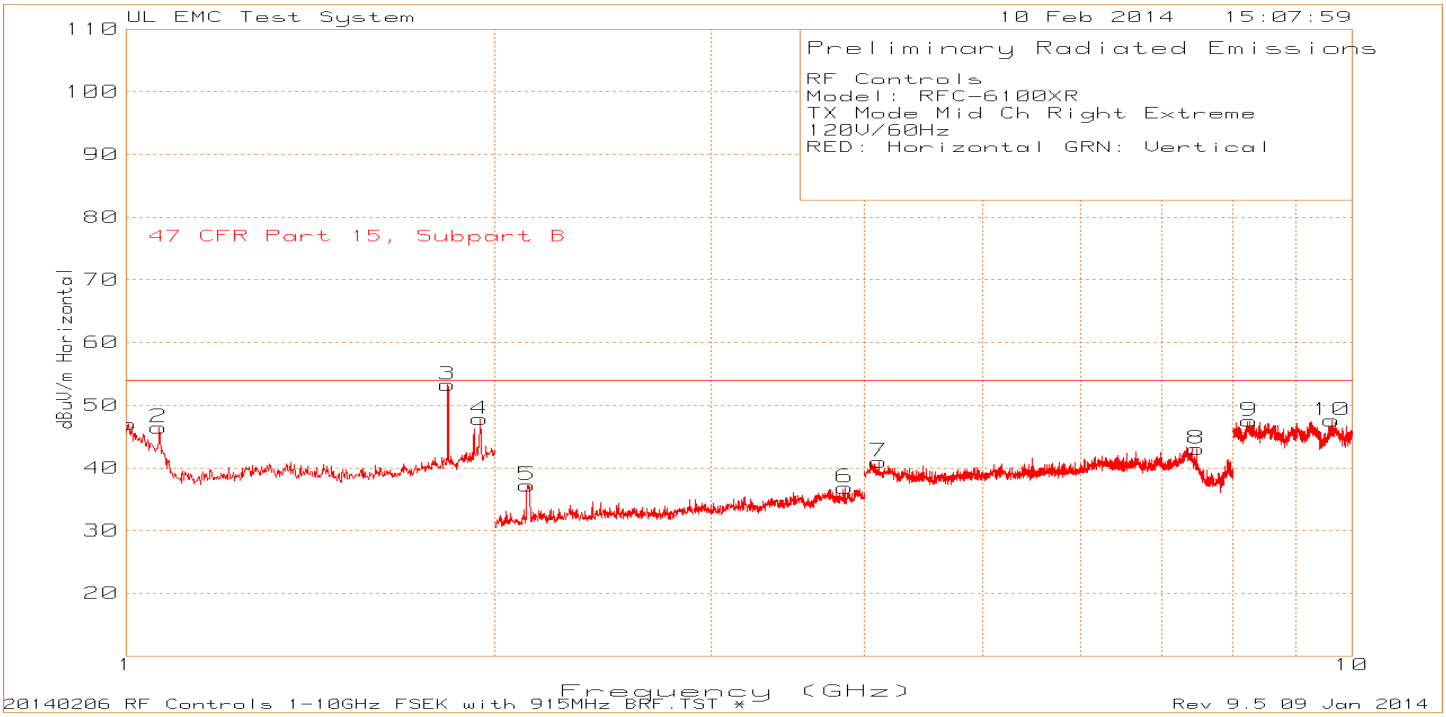
RF Controls
Model: RFC-6100XR
TX Mode Mid Ch Left Extreme
120V/60Hz
RED: Horizontal GRN: Vertical
Trace Markers

Marker No.	Test Frequency GHz	Meter Reading dBuV	Detector	Antenna Factor dB/m	BRF dB	Path Factor dB	Level dBuV/m	47 CFR Part 15.209 dBuV/m	Margin dB	Azimuth Degs	Height cm	Polarity
1	*1.002	73.32	PK	27.4	1.1	-55.85	45.97	54	-8.03	0-360	100	H
2	*1.0641	74.18	PK	27.2	0.5	-56	45.88	54	-8.12	0-360	149	H
3	**1.8297	77.08	PK	30.2	0.4	-53.52	54.16	-	-	0-360	100	H
4	1.9419	68	PK	31.4	0.5	-52.97	46.93	54	-7.07	0-360	100	H
5	2.1261	69.22	PK	21.5	-	-52.18	38.54	54	-15.46	0-360	150	H
6	*3.952	63.37	PK	24.1	-	-50.27	37.2	54	-16.8	0-360	150	H
7	*4.066	62.74	PK	28.4	-	-50.56	40.58	54	-13.42	0-360	150	H
8	*7.3637	58.17	PK	30.9	-	-45.92	43.15	54	-10.85	0-360	150	H
9	*8.1842	59.03	PK	36.3	-	-48.13	47.2	54	-6.8	0-360	150	H
10	9.5656	60.16	PK	36.4	-	-48.87	47.69	54	-6.31	0-360	150	H
11	*1.004	70.61	PK	27.4	1.1	-55.86	43.25	54	-10.75	0-360	150	V
12	*1.0641	73.78	PK	27.2	0.5	-56	45.48	54	-8.52	0-360	150	V
13	**1.8297	69.89	PK	30.2	0.4	-53.52	46.97	-	-	0-360	150	V
14	1.9439	71.99	PK	31.4	0.5	-52.97	50.92	54	-3.08	0-360	150	V
15	2.1301	77.78	PK	21.5	-	-52.13	47.15	54	-6.85	0-360	150	V
16	*3.8418	64.84	PK	24	-	-50.48	38.36	54	-15.64	0-360	150	V
17	*4.05	63.3	PK	28.4	-	-50.75	40.95	54	-13.05	0-360	150	V
18	*7.3077	58.63	PK	30.5	-	-45.71	43.42	54	-10.58	0-360	150	V
19	*8.2022	58.8	PK	36.3	-	-47.5	47.6	54	-6.4	0-360	150	V
20	9.7197	58.21	PK	36.4	-	-47.73	46.88	54	-7.12	0-360	150	V

PK - Peak detector
* Frequencies in restricted bands. General 15.209 limit applies.
** Frequencies not in restricted band. No radiated Spurious limits are applicable.

8.3.4. Radiated Emissions 1GHz – 10GHz Middle Channel, Extreme Right Beam Setting



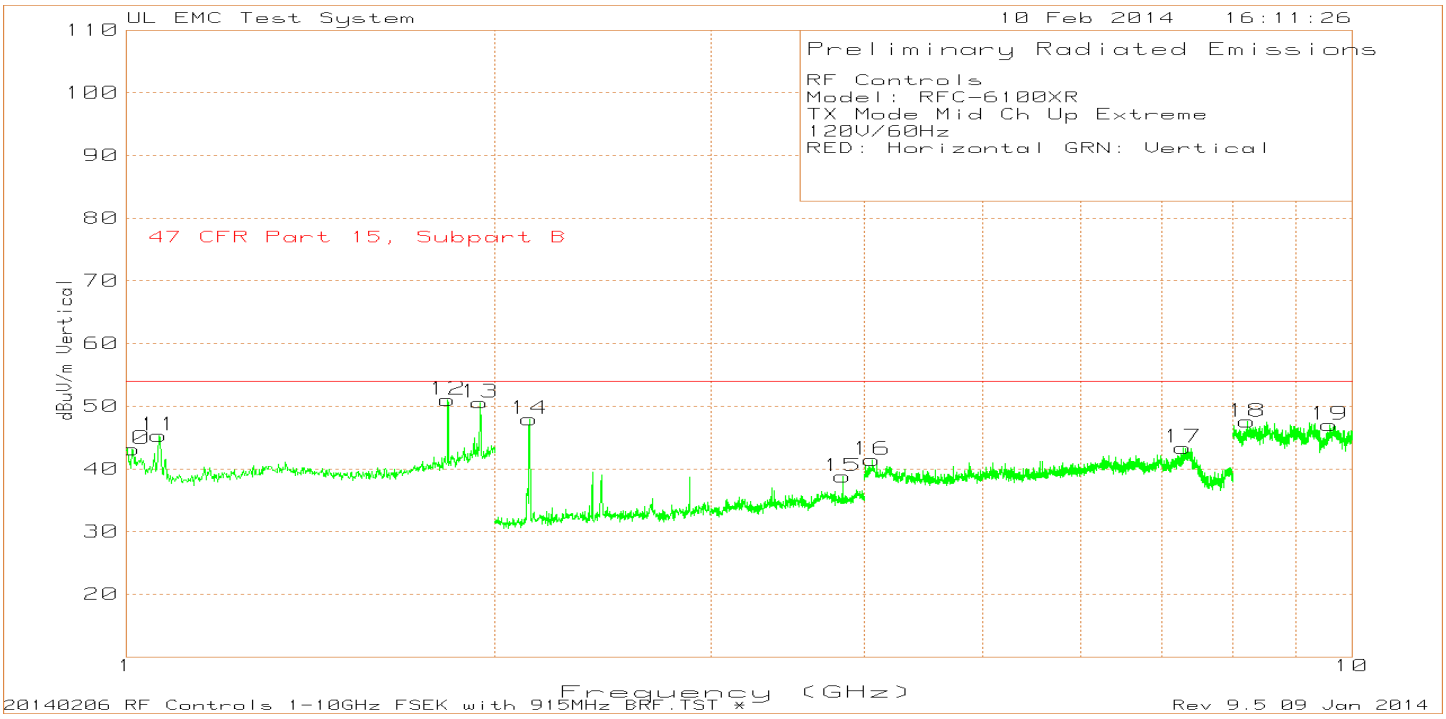


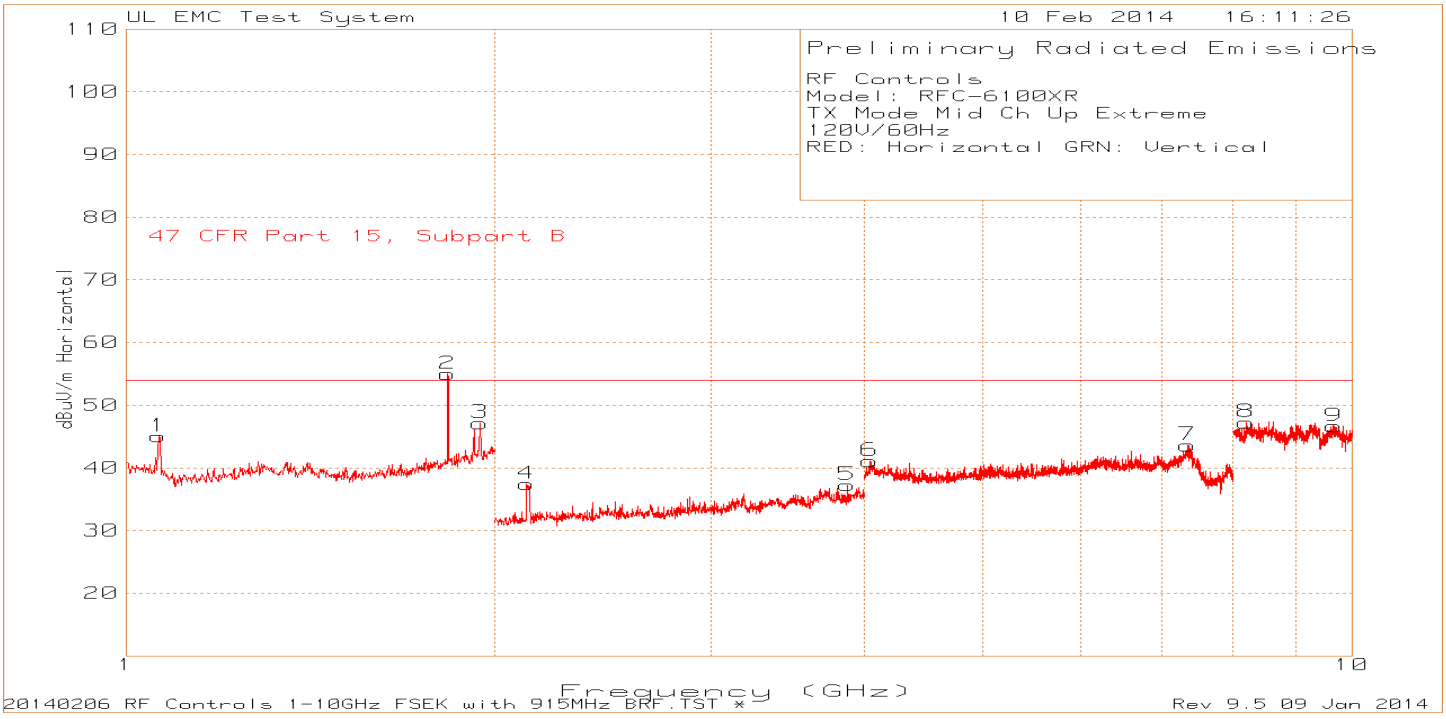
RF Controls
Model: RFC-6100XR
TX Mode Mid Ch Right Extreme
120V/60Hz
RED: Horizontal GRN: Vertical
Trace Markers

Marker No.	Test Frequency GHz	Meter Reading dBuV	Detector	Antenna Factor dB/m	BRF dB	Path Factor dB	Level dBuV/m	47 CFR Part 15.209 dBuV/m	Margin dB	Azimuth Degs	Height cm	Polarity
1	*1.004	74.39	PK	27.4	1.1	-55.86	47.03	54	-6.97	0-360	150	H
2	*1.0641	74.73	PK	27.2	0.5	-56	46.43	54	-7.57	0-360	150	H
3	**1.8297	76.18	PK	30.2	0.4	-53.52	53.26	-	-	0-360	150	H
4	1.9439	68.85	PK	31.4	0.5	-52.97	47.78	54	-6.22	0-360	150	H
5	2.1241	67.94	PK	21.5	-	-52.19	37.25	54	-16.75	0-360	150	H
6	*3.8579	63.53	PK	23.9	-	-50.51	36.92	54	-17.08	0-360	150	H
7	*4.1101	63.06	PK	28.4	-	-50.47	40.99	54	-13.01	0-360	150	H
8	*7.4637	59.54	PK	30.2	-	-46.71	43.03	54	-10.97	0-360	150	H
9	*8.2482	58.22	PK	36.4	-	-47.09	47.53	54	-6.47	0-360	150	H
10	9.6296	59.46	PK	36.4	-	-48.31	47.55	54	-6.45	0-360	150	H
11	*1.004	70.97	PK	27.4	1.1	-55.86	43.61	54	-10.39	0-360	150	V
12	*1.0621	72.64	PK	27.2	0.5	-56.01	44.33	54	-9.67	0-360	150	V
13	**1.8297	68.53	PK	30.2	0.4	-53.52	45.61	-	-	0-360	150	V
14	1.9439	71.66	PK	31.4	0.5	-52.97	50.59	54	-3.41	0-360	150	V
15	2.1321	77.36	PK	21.5	-	-52.09	46.77	54	-7.23	0-360	150	V
16	*3.8418	65.33	PK	24	-	-50.48	38.85	54	-15.15	0-360	150	V
17	*4.054	64.42	PK	28.4	-	-50.66	42.16	54	-11.84	0-360	150	V
18	*7.3297	58.68	PK	30.7	-	-45.71	43.67	54	-10.33	0-360	150	V
19	*8.2843	58.76	PK	36.4	-	-47.75	47.41	54	-6.59	0-360	150	V
20	9.7177	58.98	PK	36.4	-	-47.72	47.66	54	-6.34	0-360	150	V

PK - Peak detector
* Frequencies in restricted bands. General 15.209 limit applies.
** Frequencies not in restricted band. No radiated Spurious limits are applicable.

8.3.5. Radiated Emissions 1GHz – 10GHz Middle Channel, Extreme Up Beam Setting



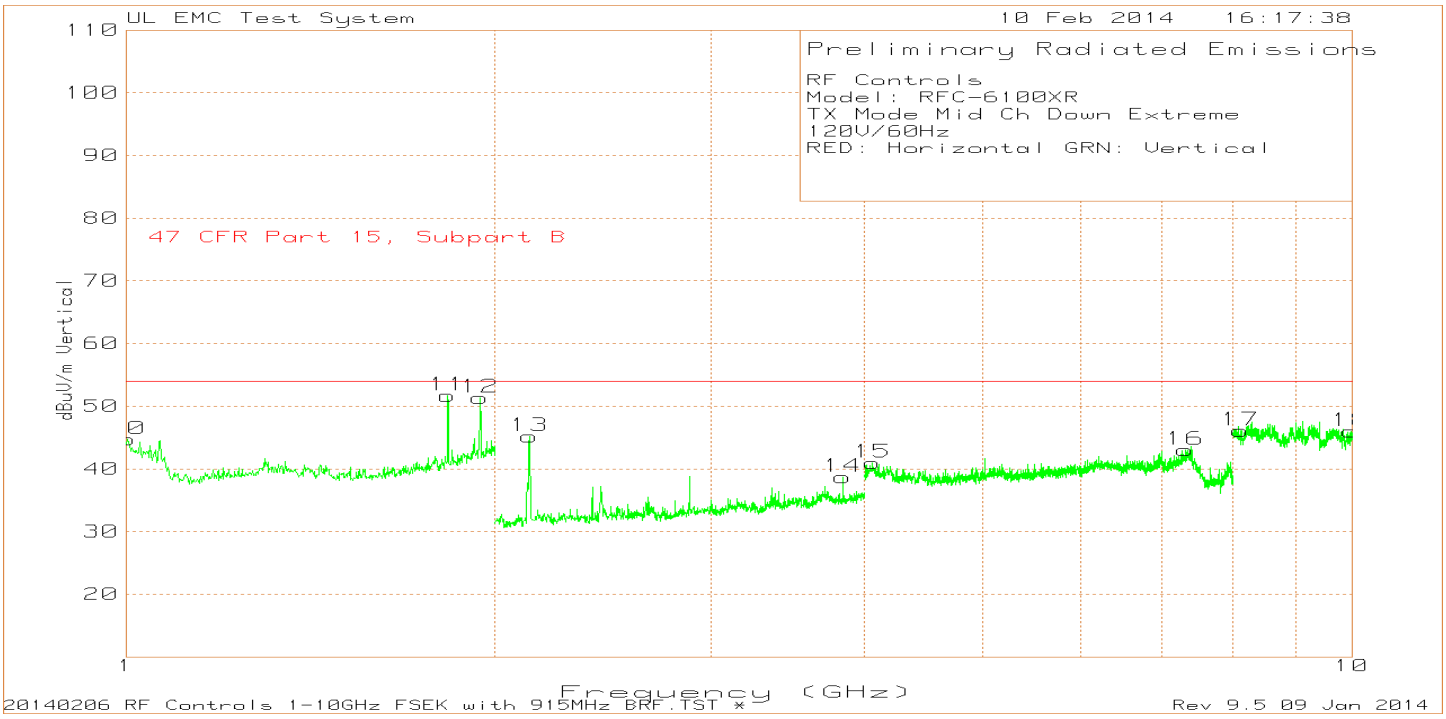


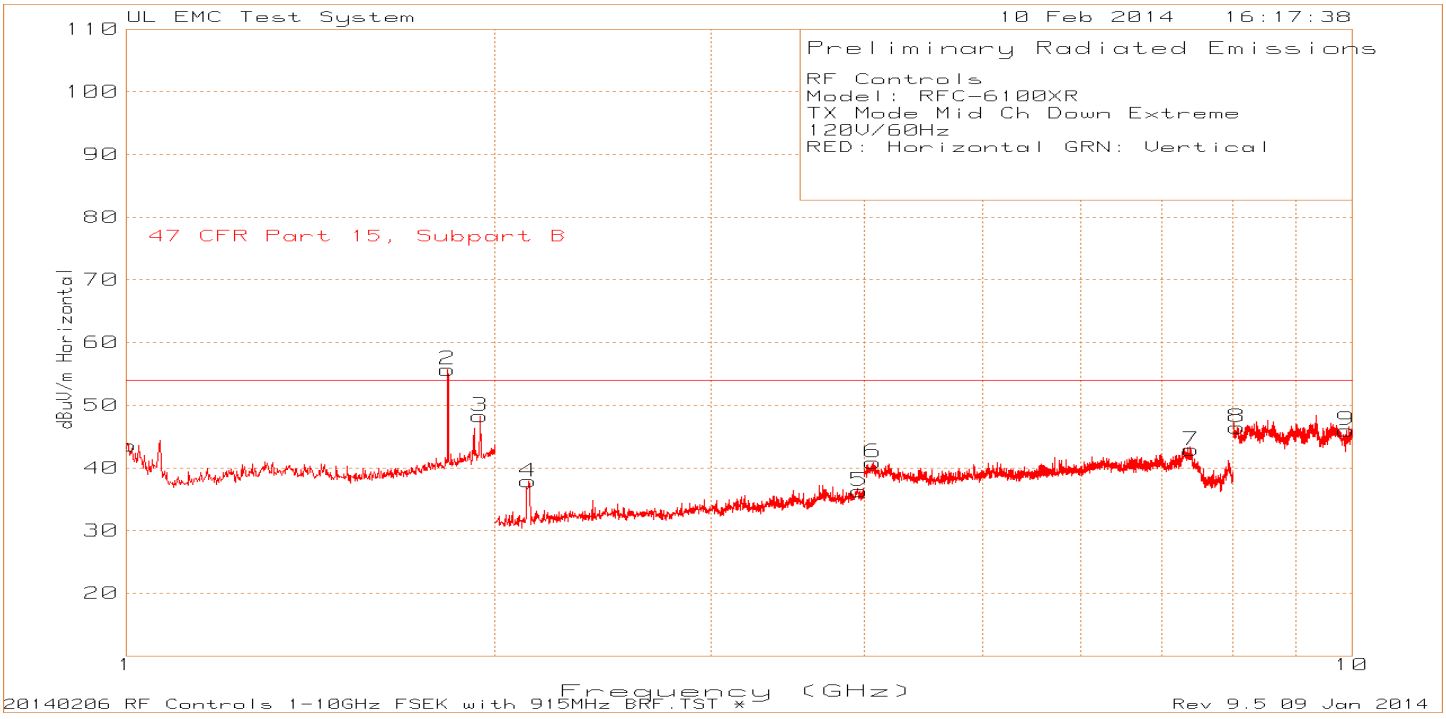
RF Controls
Model: RFC-6100XR
TX Mode Mid Ch Up Extreme
120V/60Hz
RED: Horizontal GRN: Vertical
Trace Markers

Marker No.	Test Frequency GHz	Meter Reading dBuV	Detector	Antenna Factor dB/m	BRF dB	Path Factor dB	Level dBuV/m	47 CFR Part 15.209 dBuV/m	Margin dB	Azimuth Degs	Height cm	Polarity
1	* 1.0621	73.34	PK	27.2	0.5	-56.01	45.03	54	-8.97	0-360	149	H
2	**1.8297	77.89	PK	30.2	0.4	-53.52	54.97	-	-	0-360	100	H
3	1.9419	68.22	PK	31.4	0.5	-52.97	47.15	54	-6.85	0-360	149	H
4	2.1221	68.11	PK	21.5	-	-52.2	37.41	54	-16.59	0-360	150	H
5	* 3.8759	64.04	PK	23.9	-	-50.67	37.27	54	-16.73	0-360	150	H
6	* 4.046	63.35	PK	28.5	-	-50.78	41.07	54	-12.93	0-360	150	H
7	* 7.3377	58.68	PK	30.7	-	-45.75	43.63	54	-10.37	0-360	150	H
8	* 8.2022	58.5	PK	36.3	-	-47.5	47.3	54	-6.7	0-360	150	H
9	9.6697	58.17	PK	36.4	-	-47.93	46.64	54	-7.36	0-360	150	H
10	* 1.01	70.75	PK	27.4	0.9	-55.89	43.16	54	-10.84	0-360	150	V
11	* 1.0641	73.65	PK	27.2	0.5	-56	45.35	54	-8.65	0-360	150	V
12	**1.8297	73.95	PK	30.2	0.4	-53.52	51.03	-	-	0-360	150	V
13	1.9439	71.68	PK	31.4	0.5	-52.97	50.61	54	-3.39	0-360	150	V
14	2.1341	78.49	PK	21.5	-	-52.06	47.93	54	-6.07	0-360	149	V
15	* 3.8418	65.26	PK	24	-	-50.48	38.78	54	-15.22	0-360	149	V
16	* 4.058	63.63	PK	28.4	-	-50.57	41.46	54	-12.54	0-360	150	V
17	* 7.2836	59	PK	30.3	-	-45.92	43.38	54	-10.62	0-360	150	V
18	* 8.2182	58.27	PK	36.4	-	-47.13	47.54	54	-6.46	0-360	150	V
19	9.5916	59.05	PK	36.4	-	-48.45	47	54	-7	0-360	150	V

PK - Peak detector
* Frequencies in restricted bands. General 15.209 limit applies.
** Frequencies not in restricted band. No radiated Spurious limits are applicable.

8.3.6. Radiated Emissions 1GHz – 10GHz Middle Channel, Extreme Down Beam Setting



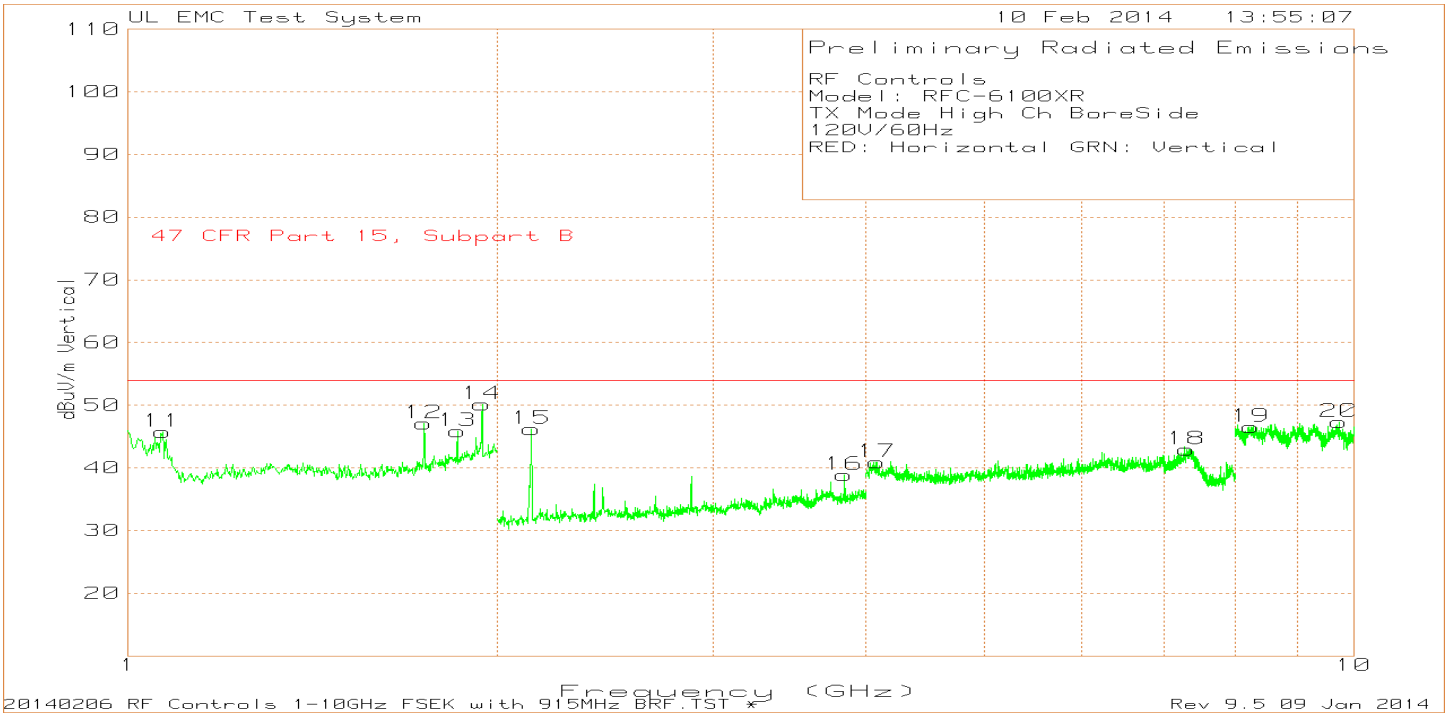


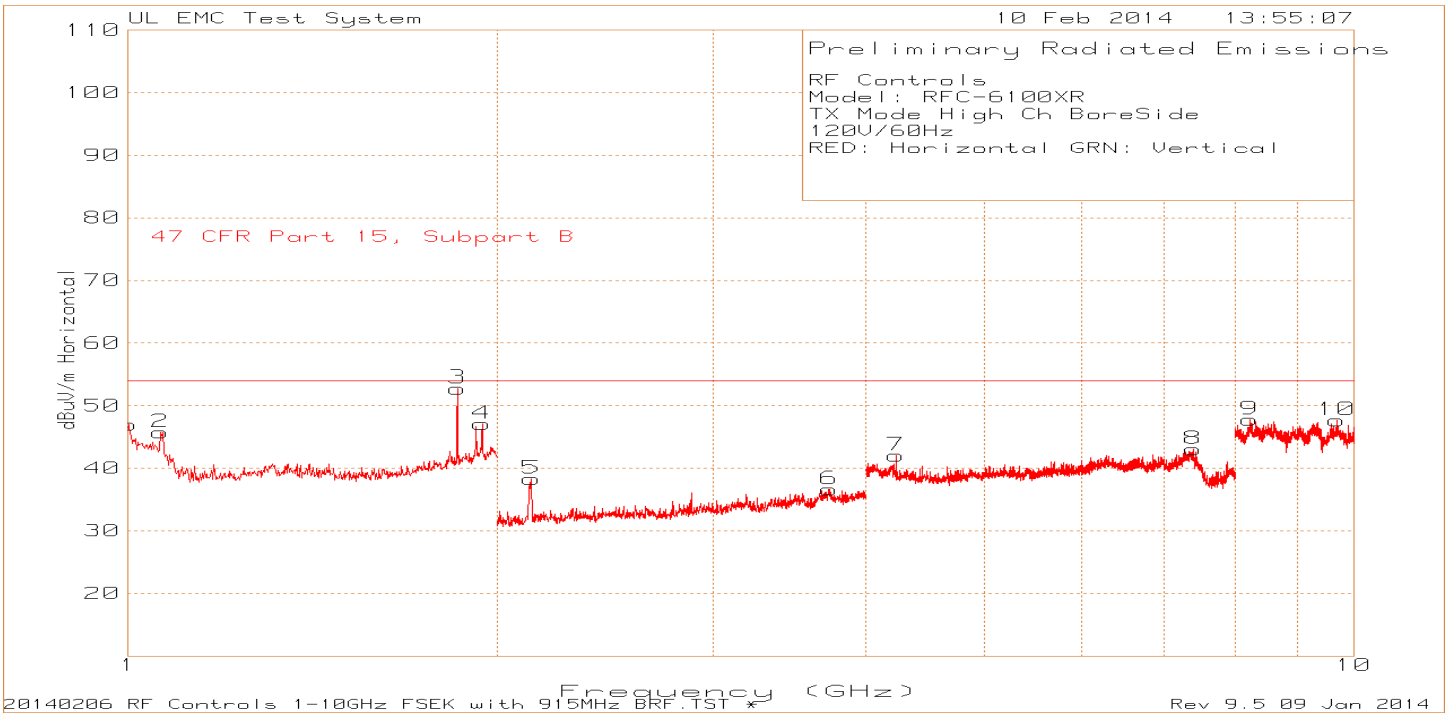
RF Controls
Model: RFC-6100XR
TX Mode Mid Ch Down Extreme
120V/60Hz
RED: Horizontal GRN: Vertical
Trace Markers

Marker No.	Test Frequency GHz	Meter Reading dBuV	Detector	Antenna Factor dB/m	BRF dB	Path Factor dB	Level dBuV/m	47 CFR Part 15.209 dBuV/m	Margin dB	Azimuth Degs	Height cm	Polarity
1	* 1.004	70.94	PK	27.4	1.1	-55.86	43.58	54	-10.42	0-360	100	H
2	**1.8297	78.63	PK	30.2	0.4	-53.52	55.71	-	-	0-360	149	H
3	1.9439	69.35	PK	31.4	0.5	-52.97	48.28	54	-5.72	0-360	149	H
4	2.1301	68.48	PK	21.5	-	-52.13	37.85	54	-16.15	0-360	150	H
5	* 3.97	62.29	PK	24.2	-	-50.19	36.3	54	-17.7	0-360	150	H
6	* 4.066	63.03	PK	28.4	-	-50.56	40.87	54	-13.13	0-360	150	H
7	* 7.3977	57.99	PK	31.2	-	-46.32	42.87	54	-11.13	0-360	150	H
8	* 8.0581	57.57	PK	36.2	-	-47.3	46.47	54	-7.53	0-360	150	H
9	9.8999	59.03	PK	36.4	-	-49.39	46.04	54	-7.96	0-360	150	H
10	* 1.002	72.05	PK	27.4	1.1	-55.85	44.7	54	-9.3	0-360	150	V
11	**1.8297	74.59	PK	30.2	0.4	-53.52	51.67	-	-	0-360	150	V
12	1.9439	72.46	PK	31.4	0.5	-52.97	51.39	54	-2.61	0-360	150	V
13	2.1341	75.8	PK	21.5	-	-52.06	45.24	54	-8.76	0-360	150	V
14	* 3.8418	65.22	PK	24	-	-50.48	38.74	54	-15.26	0-360	150	V
15	* 4.064	63.11	PK	28.4	-	-50.55	40.96	54	-13.04	0-360	150	V
16	* 7.3157	58.16	PK	30.6	-	-45.71	43.05	54	-10.95	0-360	150	V
17	* 8.1101	58.46	PK	36.2	-	-48.52	46.14	54	-7.86	0-360	150	V
18	9.978	57.54	PK	36.4	-	-47.93	46.01	54	-7.99	0-360	150	V

PK - Peak detector
* Frequencies in restricted bands. General 15.209 limit applies.
** Frequencies not in restricted band. No radiated Spurious limits are applicable.

8.3.7. Radiated Emissions 1GHz – 10GHz High Channel, Bore Side Beam Setting





RF Controls
Model: RFC-6100XR
TX Mode High Ch BoreSide
120V/60Hz
RED: Horizontal GRN: Vertical
Trace Markers

Marker No.	Test Frequency GHz	Meter Reading dBuV	Detector	Antenna Factor dB/m	BRF dB	Path Factor dB	Level dBuV /m	47 CFR Part 15.209 dBuV/m	Margin dB	Azimuth Degs	Height cm	Polarity
1	* 1.002	74.33	PK	27.4	1.1	-55.85	46.98	54	-7.02	0-360	100	H
2	* 1.0621	74.1	PK	27.2	0.5	-56.01	45.79	54	-8.21	0-360	149	H
3	**1.8557	75.18	PK	30.6	0.4	-53.4	52.78	-	-	0-360	100	H
4	1.9439	68.19	PK	31.4	0.5	-52.97	47.12	54	-6.88	0-360	149	H
5	2.1341	68.86	PK	21.5	-	-52.06	38.3	54	-15.7	0-360	150	H
6	* 3.7317	62.55	PK	23.7	-	-49.61	36.64	54	-17.36	0-360	150	H
7	* 4.2301	65.2	PK	28.3	-	-51.5	42	54	-12	0-360	150	H
8	* 7.4037	58.28	PK	31.1	-	-46.36	43.02	54	-10.98	0-360	150	H
9	* 8.2202	58.45	PK	36.4	-	-47.09	47.76	54	-6.24	0-360	150	H
10	9.6897	58.95	PK	36.4	-	-47.72	47.63	54	-6.37	0-360	150	H
11	* 1.0661	74.03	PK	27.2	0.5	-55.98	45.75	54	-8.25	0-360	150	V
12	1.7435	70.66	PK	29.5	0.4	-53.5	47.06	54	-6.94	0-360	150	V
13	**1.8557	68.31	PK	30.6	0.4	-53.4	45.91	-	-	0-360	150	V
14	1.9439	71.17	PK	31.4	0.5	-52.97	50.1	54	-3.9	0-360	150	V
15	2.1341	76.79	PK	21.5	-	-52.06	46.23	54	-7.77	0-360	150	V
16	* 3.8418	65.39	PK	24	-	-50.48	38.91	54	-15.09	0-360	150	V
17	* 4.084	62.96	PK	28.4	-	-50.46	40.9	54	-13.1	0-360	150	V
18	* 7.3077	58.13	PK	30.5	-	-45.71	42.92	54	-11.08	0-360	150	V
19	* 8.2442	57.17	PK	36.4	-	-47.04	46.53	54	-7.47	0-360	150	V
20	9.7297	58.85	PK	36.4	-	-47.94	47.31	54	-6.69	0-360	150	V

PK - Peak detector
* Frequencies in restricted bands. General 15.209 limit applies.
** Frequencies not in restricted band. No radiated Spurious limits are applicable.

9. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

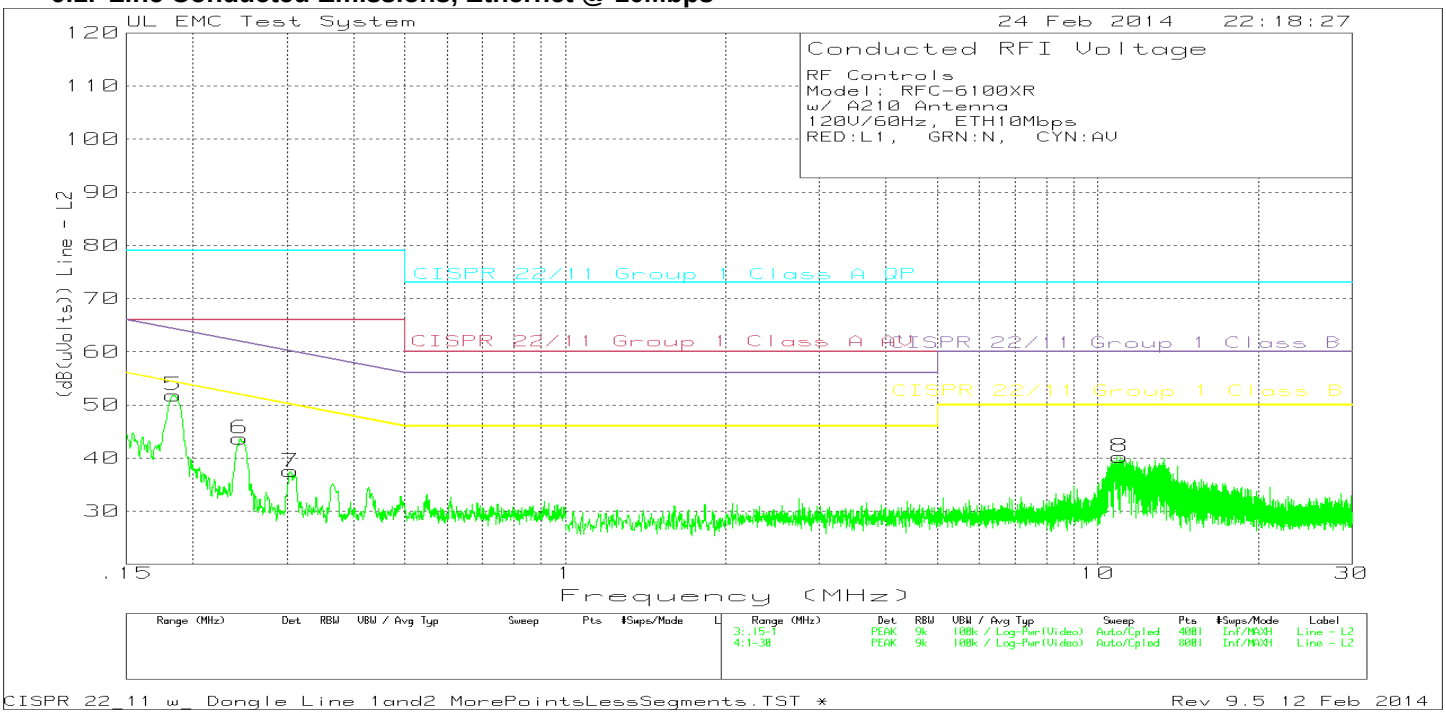
The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

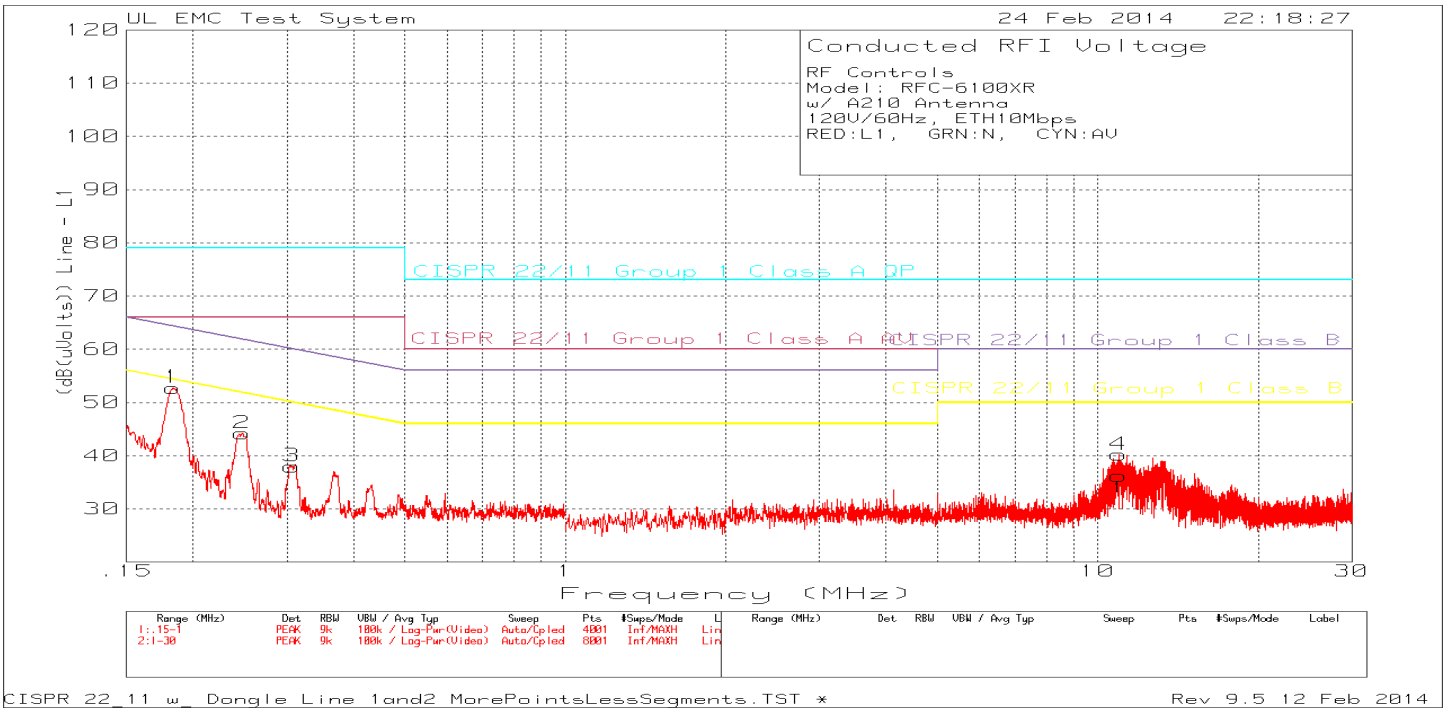
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

9.1. Line Conducted Emissions, Ethernet @ 10Mbps





RF Controls
Model: RFC-6100XR
w/ A210 Antenna
120V/60Hz, ETH10Mbps
RED:L1, GRN:N, CYN:AV

Trace Markers

No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading (dB(uVolts))	Limit:1	2	3	4	5	6
Line - L1											
1	.18336	40.72dBuV PK	.1	11.9	52.72	79	66	64.33	54.33	-	-
					Margin (dB)	-26.28	-13.28	-11.61	-1.61	-	-
2	.24775	32.87dBuV PK	.1	11.2	44.17	79	66	61.83	51.83	-	-
					Margin (dB)	-34.83	-21.83	-17.66	-7.66	-	-
3	.30704	27.09dBuV PK	.1	10.8	37.99	79	66	60.05	50.05	-	-
					Margin (dB)	-41.01	-28.01	-22.06	-12.06	-	-
4	10.95788	28.98dBuV PK	.2	11	40.18	73	60	60	50	-	-
					Margin (dB)	-32.82	-19.82	-19.82	-9.82	-	-
Line - L2											
5	.18358	39.8dBuV PK	.1	11.9	51.8	79	66	64.32	54.32	-	-
					Margin (dB)	-27.2	-14.2	-12.52	-2.52	-	-
6	.24531	32.27dBuV PK	.1	11.3	43.67	79	66	61.91	51.91	-	-
					Margin (dB)	-35.33	-22.33	-18.24	-8.24	-	-
7	.30523	26.52dBuV PK	.1	10.9	37.52	79	66	60.1	50.1	-	-
					Margin (dB)	-41.48	-28.48	-22.58	-12.58	-	-
8	11.02313	29.07dBuV PK	.2	11	40.27	73	60	60	50	-	-
					Margin (dB)	-32.73	-19.73	-19.73	-9.73	-	-

LIMIT 1: CISPR 22/11 Group 1 Class A QP
LIMIT 2: CISPR 22/11 Group 1 Class A AV
LIMIT 3: CISPR 22/11 Group 1 Class B QP
LIMIT 4: CISPR 22/11 Group 1 Class B AV

PK - Peak detector
QP - Quasi-Peak detector
Av - Average detector

RF Controls
Model: RFC-6100XR
w/ A210 Antenna
120V/60Hz, ETH10Mbps
RED:L1, GRN:N, CYN:AV Quais-peak Data

Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading(dB(uVolts))	Limit:1	2	3	4	5
Line - L1									
.18408	36.69dBuV QP .1	11.8	48.59	79	66	64.3	54.3	-	-
		Margin (dB):		-30.41	-17.41	-15.71	-5.71	-	-
.24509	28.21dBuV QP .1	11.2	39.51	79	66	61.92	51.92	-	-
		Margin (dB):		-39.49	-26.49	-22.41	-12.41	-	-
.3085	21.79dBuV QP .1	10.8	32.69	79	66	60.01	50.01	-	-
		Margin (dB):		-46.31	-33.31	-27.32	-17.32	-	-
10.9612	24.71dBuV QP .2	11	35.91	73	60	60	50	-	-
		Margin (dB):		-37.09	-24.09	-24.09	-14.09	-	-
Line - L2									
.18523	36.46dBuV QP .1	11.8	48.36	79	66	64.25	54.25	-	-
		Margin (dB):		-30.64	-17.64	-15.89	-5.89	-	-
.24674	28.1dBuV QP .1	11.3	39.5	79	66	61.87	51.87	-	-
		Margin (dB):		-39.5	-26.5	-22.37	-12.37	-	-
.30441	21.95dBuV QP .1	10.9	32.95	79	66	60.12	50.12	-	-
		Margin (dB):		-46.05	-33.05	-27.17	-17.17	-	-
11.02328	25.12dBuV QP .2	11	36.32	73	60	60	50	-	-
		Margin (dB):		-36.68	-23.68	-23.68	-13.68	-	-

NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

PK - Peak detector
QP - Quasi-Peak detector
Av - average detection

LIMIT 1: CISPR 22/11 Group 1 Class A QP
LIMIT 2: CISPR 22/11 Group 1 Class A AV
LIMIT 3: CISPR 22/11 Group 1 Class B QP
LIMIT 4: CISPR 22/11 Group 1 Class B AV

RF Controls
Model: RFC-6100XR
w/ A210 Antenna
120V/60Hz, ETH10Mbps
RED:L1, GRN:N, CYN:AV

Average Data

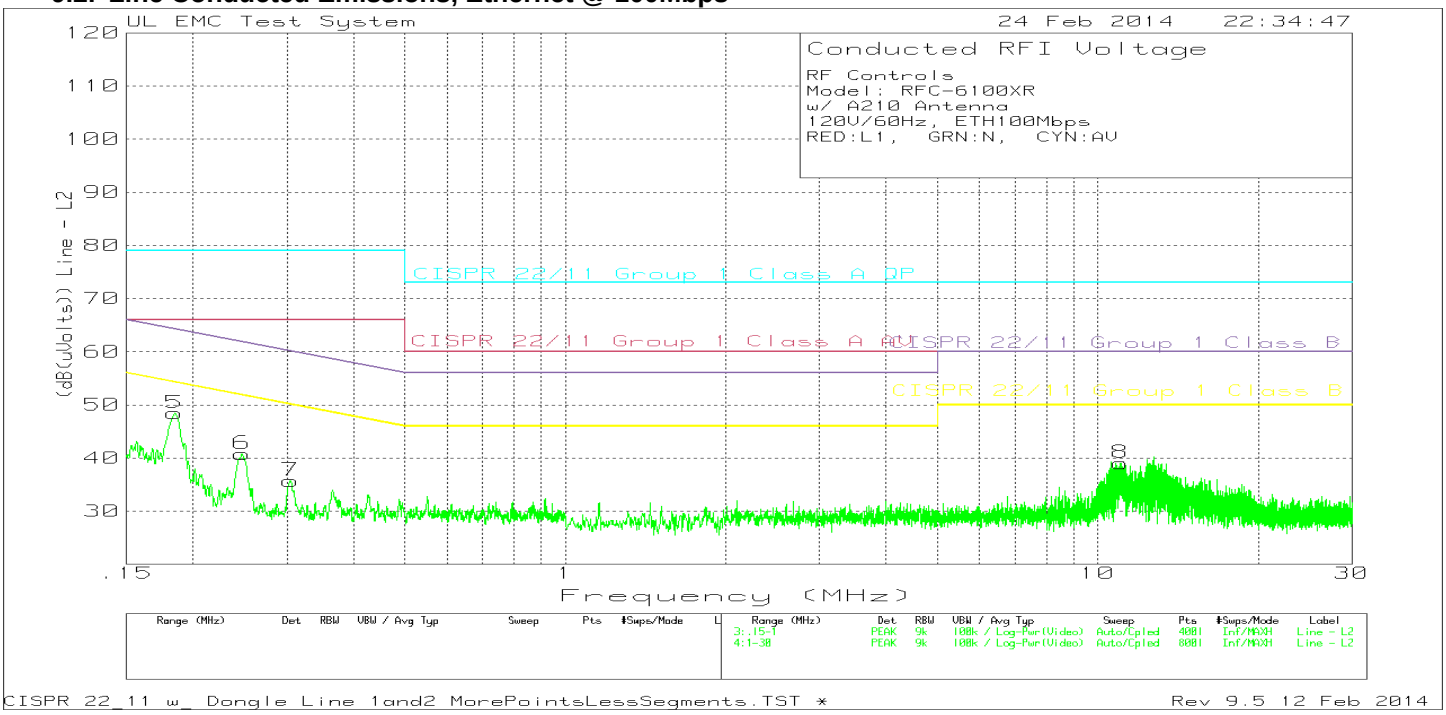
Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading(dB(uVolts))	Limit:1	2	3	4	5
Line - L1									
.18408	24.37dBuV Av	.1	11.8	36.27	79	66	64.3	54.3	-	-
			Margin (dB):		-42.73	-29.73	-28.03	-18.03	-	-
.24509	14.84dBuV Av	.1	11.2	26.14	79	66	61.92	51.92	-	-
			Margin (dB):		-52.86	-39.86	-35.78	-25.78	-	-
.3085	8.18dBuV Av	.1	10.8	19.08	79	66	60.01	50.01	-	-
			Margin (dB):		-59.92	-46.92	-40.93	-30.93	-	-
10.9612	17.83dBuV Av	.2	11	29.03	73	60	60	50	-	-
			Margin (dB):		-43.97	-30.97	-30.97	-20.97	-	-
Line - L2									
.18523	22.69dBuV Av	.1	11.8	34.59	79	66	64.25	54.25	-	-
			Margin (dB):		-44.41	-31.41	-29.66	-19.66	-	-
.24674	13.12dBuV Av	.1	11.3	24.52	79	66	61.87	51.87	-	-
			Margin (dB):		-54.48	-41.48	-37.35	-27.35	-	-
.30441	8dBuV Av	.1	10.9	19	79	66	60.12	50.12	-	-
			Margin (dB):		-60	-47	-41.12	-31.12	-	-
11.02328	18.11dBuV Av	.2	11	29.31	73	60	60	50	-	-
			Margin (dB):		-43.69	-30.69	-30.69	-20.69	-	-

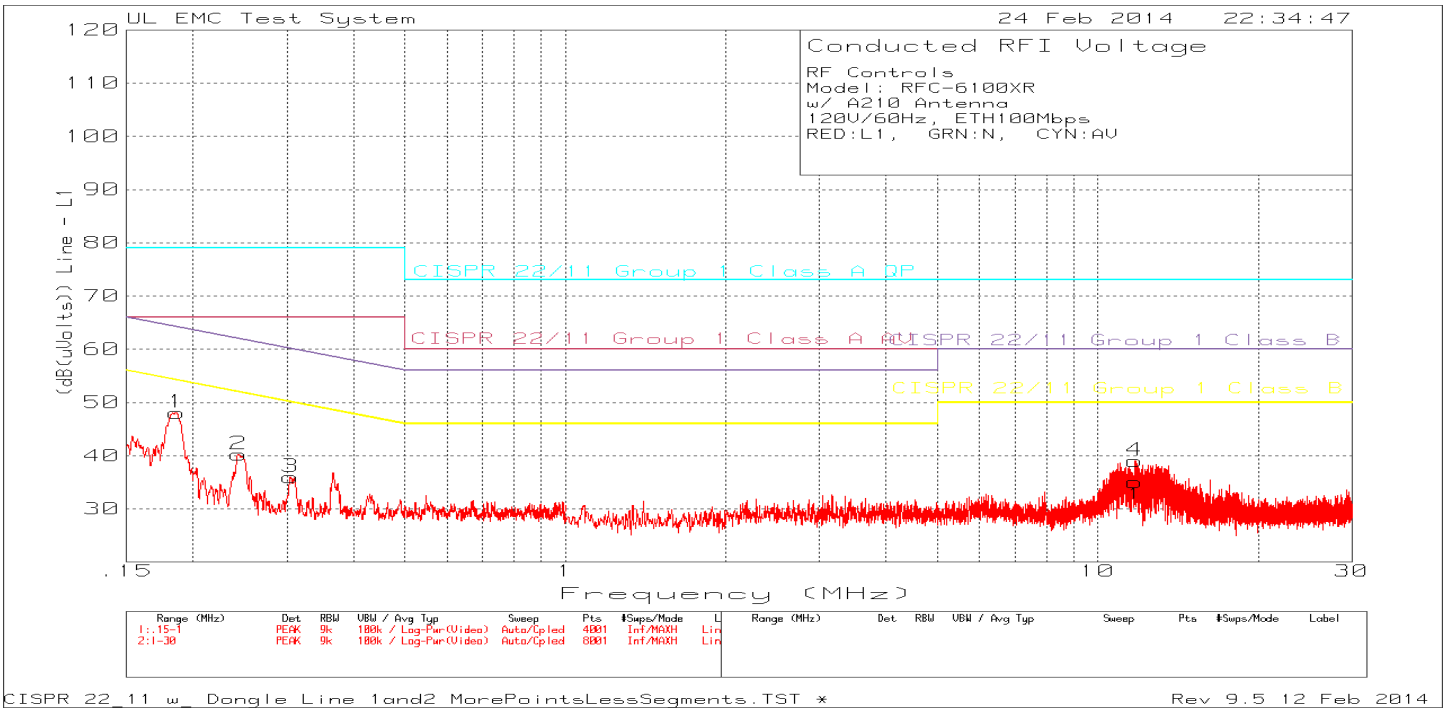
NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

PK - Peak detector
QP - Quasi-Peak detector
Av - average detection

LIMIT 1: CISPR 22/11 Group 1 Class A QP
LIMIT 2: CISPR 22/11 Group 1 Class A AV
LIMIT 3: CISPR 22/11 Group 1 Class B QP
LIMIT 4: CISPR 22/11 Group 1 Class B AV

9.2. Line Conducted Emissions, Ethernet @ 100Mbps





RF Controls
Model: RFC-6100XR
w/ A210 Antenna
120V/60Hz, ETH100Mbps
RED:L1, GRN:N, CYN:AV

Trace Markers

No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading (dB(uVolts)) / Limit:1	2	3	4	5	6
Line - L1										
1	.18613	36.31dBuV PK	.1	11.7	48.11	79	66	64.21	54.21	-	-
					Margin (dB)	-30.89	-17.89	-16.1	-6.1	-	-
2	.24371	28.86dBuV PK	.1	11.3	40.26	79	66	61.97	51.97	-	-
					Margin (dB)	-38.74	-25.74	-21.71	-11.71	-	-
3	.30449	24.98dBuV PK	.1	10.9	35.98	79	66	60.12	50.12	-	-
					Margin (dB)	-43.02	-30.02	-24.14	-14.14	-	-
4	11.75175	27.85dBuV PK	.2	11	39.05	73	60	60	50	-	-
					Margin (dB)	-33.95	-20.95	-20.95	-10.95	-	-
Line - L2										
5	.18506	36.52dBuV PK	.1	11.8	48.42	79	66	64.26	54.26	-	-
					Margin (dB)	-30.58	-17.58	-15.84	-5.84	-	-
6	.24722	29.42dBuV PK	.1	11.3	40.82	79	66	61.85	51.85	-	-
					Margin (dB)	-38.18	-25.18	-21.03	-11.03	-	-
7	.30523	24.78dBuV PK	.1	10.9	35.78	79	66	60.1	50.1	-	-
					Margin (dB)	-43.22	-30.22	-24.32	-14.32	-	-
8	11.034	27.89dBuV PK	.2	11	39.09	73	60	60	50	-	-
					Margin (dB)	-33.91	-20.91	-20.91	-10.91	-	-

LIMIT 1: CISPR 22/11 Group 1 Class A QP
LIMIT 2: CISPR 22/11 Group 1 Class A AV
LIMIT 3: CISPR 22/11 Group 1 Class B QP
LIMIT 4: CISPR 22/11 Group 1 Class B AV

PK - Peak detector
QP - Quasi-Peak detector
Av - Average detector

RF Controls
Model: RFC-6100XR
w/ A210 Antenna
120V/60Hz, ETH100Mbps
RED:L1, GRN:N, CYN:AV

Quais-peak Data

Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading(dB(uVolts))	Limit:1	2	3	4	5
Line - L1									
.18274	33.17dBuV QP .1	12	45.27	79	66	64.36	54.36	-	-
		Margin (dB):		-33.73	-20.73	-19.09	-9.09	-	-
.24377	25.3dBuV QP .1	11.3	36.7	79	66	61.97	51.97	-	-
		Margin (dB):		-42.3	-29.3	-25.27	-15.27	-	-
.30645	18.47dBuV QP .1	10.8	29.37	79	66	60.07	50.07	-	-
		Margin (dB):		-49.63	-36.63	-30.7	-20.7	-	-
11.7607	22.09dBuV QP .2	11	33.29	73	60	60	50	-	-
		Margin (dB):		-39.71	-26.71	-26.71	-16.71	-	-
Line - L2									
.18513	33.83dBuV QP .1	11.8	45.73	79	66	64.25	54.25	-	-
		Margin (dB):		-33.27	-20.27	-18.52	-8.52	-	-
.24667	25.54dBuV QP .1	11.3	36.94	79	66	61.87	51.87	-	-
		Margin (dB):		-42.06	-29.06	-24.93	-14.93	-	-
.30406	19.98dBuV QP .1	10.9	30.98	79	66	60.13	50.13	-	-
		Margin (dB):		-48.02	-35.02	-29.15	-19.15	-	-
11.03205	23.84dBuV QP .2	11	35.04	73	60	60	50	-	-
		Margin (dB):		-37.96	-24.96	-24.96	-14.96	-	-

NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

PK - Peak detector
QP - Quasi-Peak detector
Av - average detection

RF Controls
Model: RFC-6100XR
w/ A210 Antenna
120V/60Hz, ETH100Mbps
RED:L1, GRN:N, CYN:AV

Average Data

Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading(dB(uVolts))	Limit:1	2	3	4	5
Line - L1									
.18274	22.4dBuV Av .1	12	34.5	79	66	64.36	54.36	-	-
		Margin (dB):		-44.5	-31.5	-29.86	-19.86	-	-
.24377	12.46dBuV Av .1	11.3	23.86	79	66	61.97	51.97	-	-
		Margin (dB):		-55.14	-42.14	-38.11	-28.11	-	-
.30645	9dBuV Av .1	10.8	19.9	79	66	60.07	50.07	-	-
		Margin (dB):		-59.1	-46.1	-40.17	-30.17	-	-
11.7607	16.51dBuV Av .2	11	27.71	73	60	60	50	-	-
		Margin (dB):		-45.29	-32.29	-32.29	-22.29	-	-
Line - L2									
.18513	21.04dBuV Av .1	11.8	32.94	79	66	64.25	54.25	-	-
		Margin (dB):		-46.06	-33.06	-31.31	-21.31	-	-
.24667	11.24dBuV Av .1	11.3	22.64	79	66	61.87	51.87	-	-
		Margin (dB):		-56.36	-43.36	-39.23	-29.23	-	-
.30406	6.53dBuV Av .1	10.9	17.53	79	66	60.13	50.13	-	-
		Margin (dB):		-61.47	-48.47	-42.6	-32.6	-	-
11.03205	17.43dBuV Av .2	11	28.63	73	60	60	50	-	-
		Margin (dB):		-44.37	-31.37	-31.37	-21.37	-	-

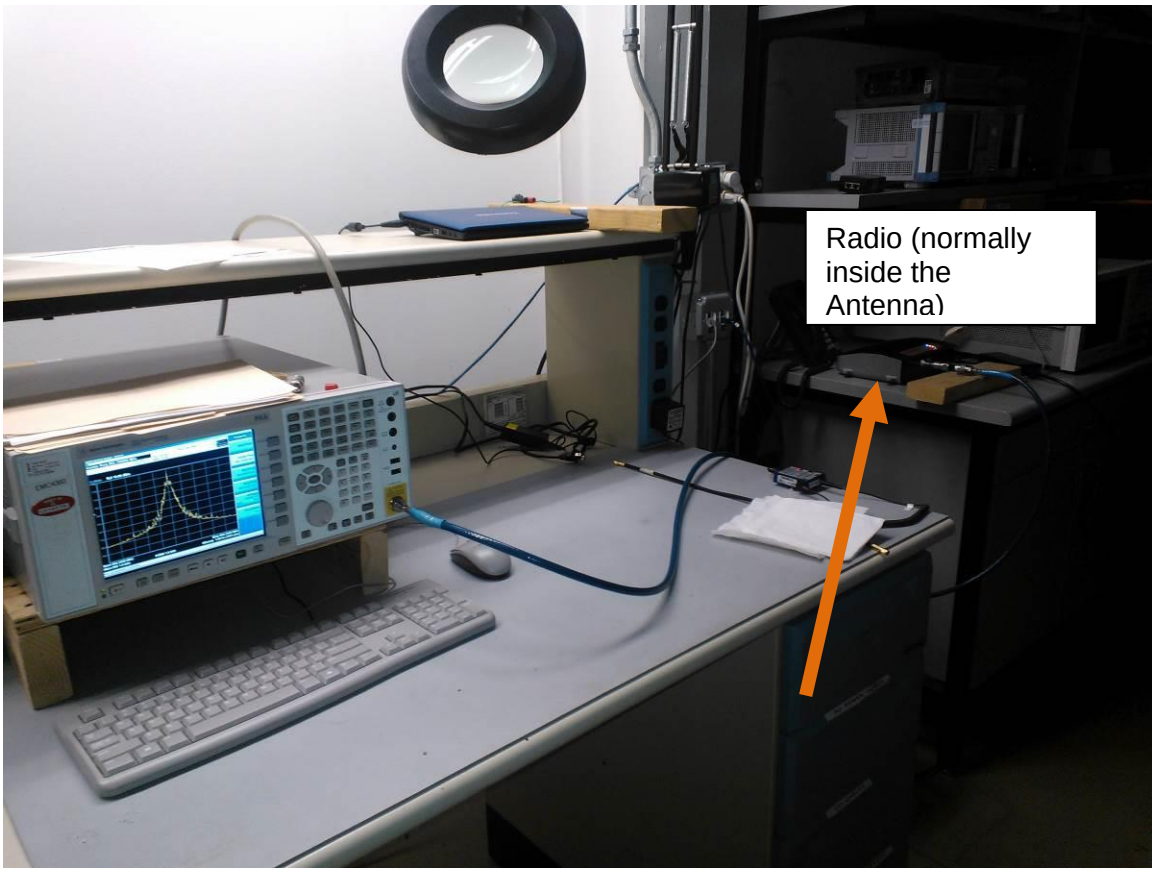
NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

PK - Peak detector
QP - Quasi-Peak detector
Av - average detection

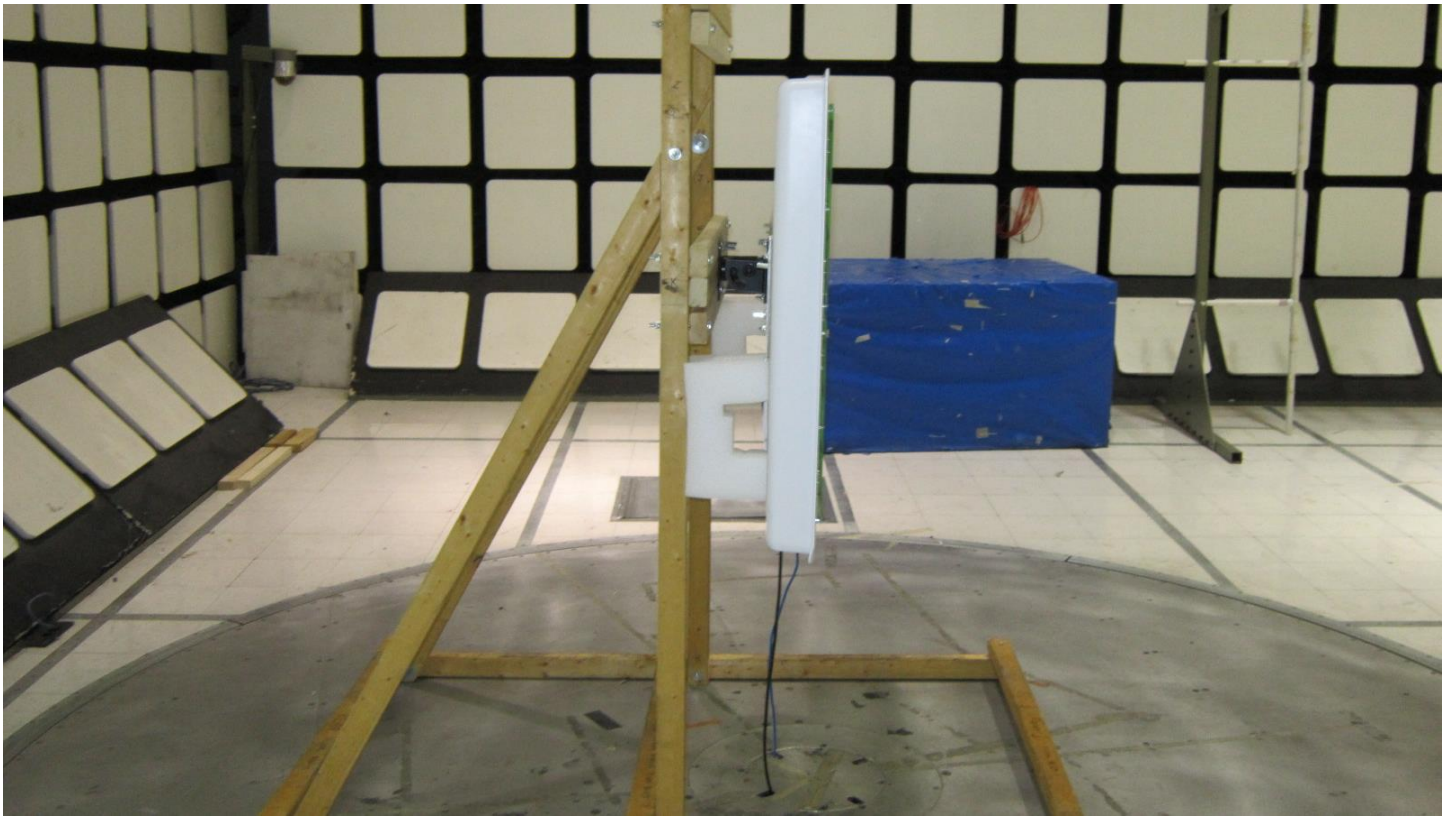
LIMIT 1: CISPR 22/11 Group 1 Class A QP
LIMIT 2: CISPR 22/11 Group 1 Class A AV
LIMIT 3: CISPR 22/11 Group 1 Class B QP
LIMIT 4: CISPR 22/11 Group 1 Class B AV

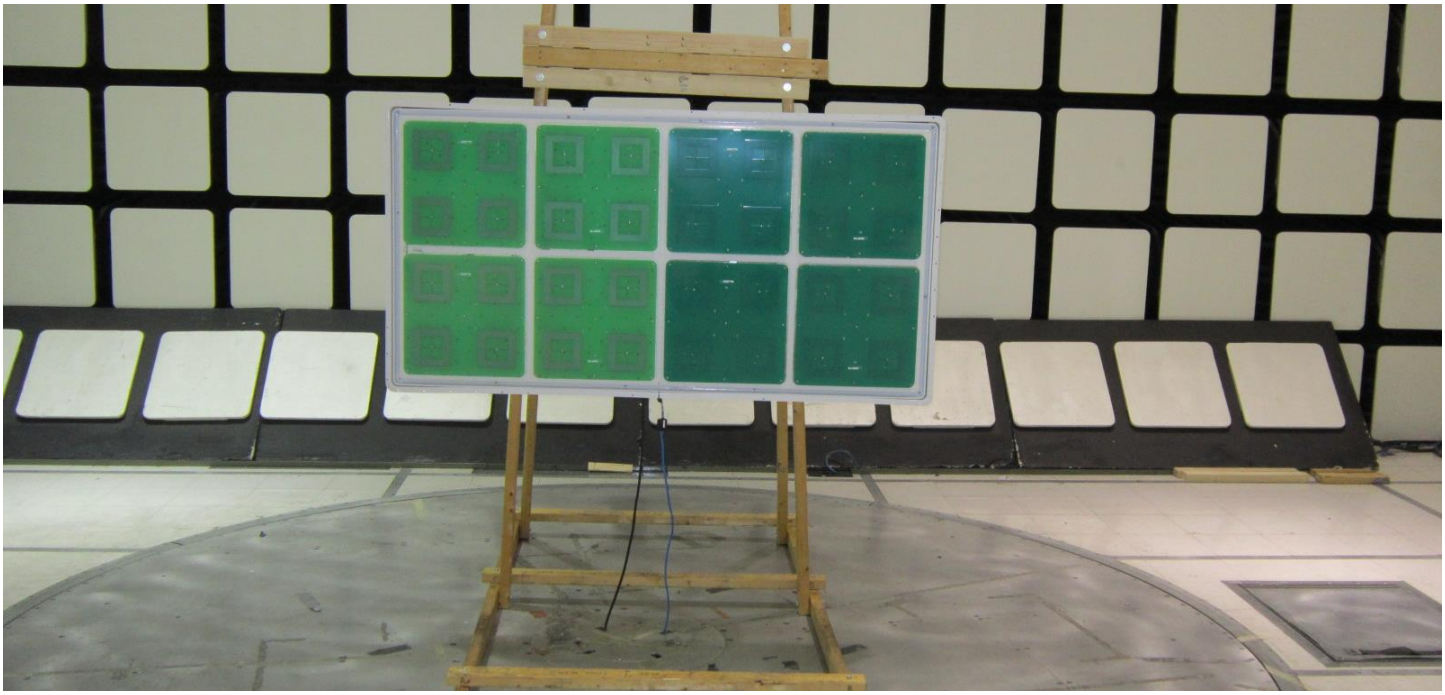
10. SETUP PHOTOS

ANTENNA PORT CONDUCTED RF MEASUREMENT SETUP



RADIATED RF MEASUREMENT SETUP (BELOW 1 GHz)





POWERLINE CONDUCTED EMISSIONS MEASUREMENT SETUP

END OF REPORT