



FCC 47 CFR PART 15 SUBPART B & C
ORIGINAL EQUIPMENT TEST REPORT
FOR

RF Interface

MODEL NUMBER: QSYC-J-RCVR

FCC ID: JPZ0112
IC: 2851A-JPZ0112

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Prepared for
LUTRON ELECTRONICS CO INC.
7200 SUTER RD
COOPERSBURG PA, 18036, USA

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Revision History

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TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	4
2. TEST METHODOLOGY	5
3. FACILITIES AND ACCREDITATION	5
4. CALIBRATION AND UNCERTAINTY	5
4.1. MEASURING INSTRUMENT CALIBRATION	5
4.2. SAMPLE CALCULATION.....	5
4.3. MEASUREMENT UNCERTAINTY	5
5. EQUIPMENT UNDER TEST	6
5.1. DESCRIPTION OF EUT.....	6
5.2. DESCRIPTION OF AVAILABLE ANTENNAS.....	6
5.3. SOFTWARE AND FIRMWARE.....	6
5.4. WORST-CASE CONFIGURATION AND MODE	6
5.5. MODIFICATIONS.....	6
5.6. DESCRIPTION OF TEST SETUP.....	7
6. TEST AND MEASUREMENT EQUIPMENT	9
7. ANTENNA PORT TEST RESULTS	10
7.1. 20 dB AND 99% BW	10
7.2. DUTY CYCLE.....	13
7.3. TRANSMISSION TIME	16
8. RADIATED EMISSION TEST RESULTS	17
8.1. TX RADIATED SPURIOUS EMISSION	17
8.2. DIGITAL RADIATED EMISSION.....	29
9. AC MAINS LINE CONDUCTED EMISSIONS.....	31
10. SETUP PHOTOS.....	40

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: LUTRON ELECTRONICS CO INC.
7200 SUTER RD
COOPERSBURG, PA, 18036, USA

EUT DESCRIPTION: RF Interface

MODEL: QSYC-J-RCVR

SERIAL NUMBER: Non-Serialized

DATE TESTED: August 21, 2015 – September 20, 2015

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C	Pass
*FCC PART 15 SUBPART B	Pass
*Includes testing for digital and receive modes – not required for certification	

UL LLC 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 LLC 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 LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC 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 LLC By: Michael Ferrer

Tested By: Bart Mucha



UL LLC



UL LLC

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.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 333 Pflingsten Road, Northbrook, IL 60062 USA. IC test site 2180-A

UL NBK is accredited by NVLAP, Laboratory Code 100414-0. The full scope of accreditation can be viewed at <http://www.nist.gov>

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

Sample Calculations

Radiated Field Strength and Conducted Emissions data contained within this report is calculated on the following basis:

Field Strength (dBuV/m) = Meter Reading (dBuV) + AF (dB/m) - Gain (dB) + Cable Loss (dB)

Conducted Voltage (dBuV) = Meter Reading (dBuV) + Cable Loss (dB) + LISN IL (dB)

Conducted Current (dBuA) = Meter Reading (dBuV) + Cable Loss (dB) - Transducer Factor (dBohms)

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
Radiated Emissions	30-200MHz	Bicon 3m Horz	3.30dB
Radiated Emissions	30-130MHz	Bicon 3m Vert	4.84dB
Radiated Emissions	130-200MHz	Bicon 3m Vert	4.94dB
Radiated Emissions	200-1000MHz	LogP 3m Horz	3.46dB
Radiated Emissions	200-1000MHz	LogP 3m Vert	4.98dB
Radiated Emissions	1-6GHz	Horn	5.02dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a control transceiver for use in window shade applications that operates on a single channel in the 431-437MHz range.

5.2. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an integral monopole antenna constructed of a wire.

5.3. SOFTWARE AND FIRMWARE

The EUT driver software installed during testing was FCCTest_FC.C4.

5.4. WORST-CASE CONFIGURATION AND MODE

Testing was conducted for Radiated and Conducted emissions on the lowest and highest channels. Because of the size and typical use of the device only X-Axis and Y-Axis testing was conducted.

5.5. MODIFICATIONS

No modifications were made during testing.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

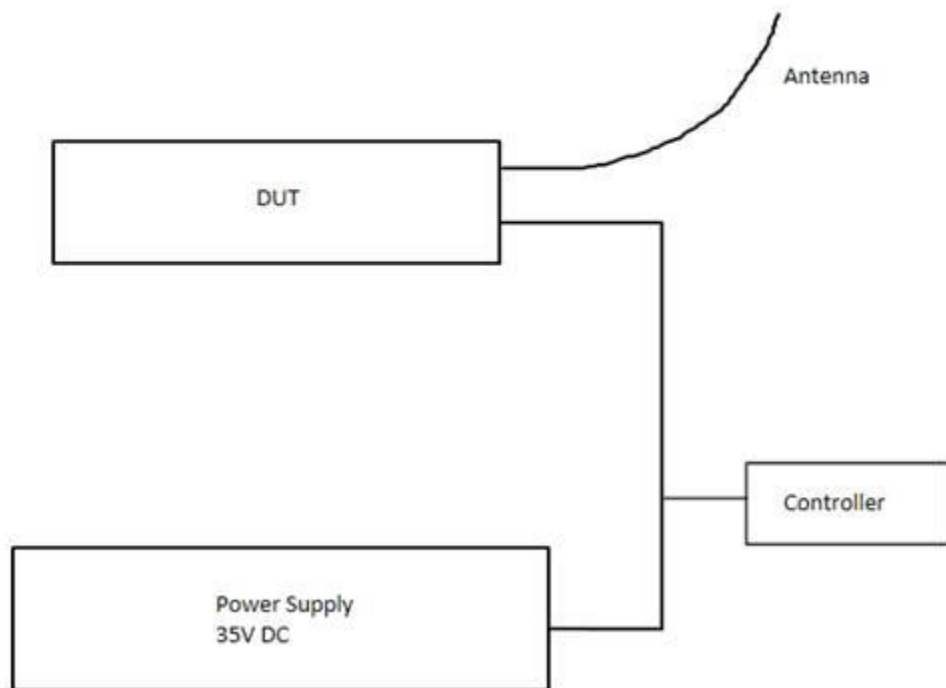
Peripheral Support Equipment List				
Description	Manufacutrer	Model	Serial Number	FCC ID
Comm Interface	Lutron	QSE-CI-NWU-E	-	-
Power Supply	Lutron	WIN-PS-I-35V	-	-
USB to RS-232	Generic	Generic	-	-
Laptop	Lenovo	T420	-	-

I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	RS232	1	db9	9 wire	1m	used only to program the device
2	Pwr+Data	1	terminal	4-wire	1m	shielded.

TEST SETUP

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

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

Conducted Emissions

Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due Date
EMI Test Receiver	Rohde & Schwarz	ESR	EMC4377	April 1, 2014	April 1, 2015
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 09, 2015	Jan 10, 2016
LISN - L2	Solar	8602-50-TS-50-N	EMC4064	Jan 09, 2015	Jan 10, 2016

Radiated Emissions including Duty Cycle Measurements & Bandwidth Measurements

Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due Date
EMI Test Receiver	Rohde & Schwarz	ESU	EMC4323	20141216	20151231
EMI Test Receiver	Rohde & Schwarz	ESCI	EMC4328	20141830	20151231
Log-P Antenna	Chase	UPA6109	EMC4313	20141119	20151130
Bicon Antenna	Electro-Metrics	EM6912A	EMC4070	20141014	20151031
Antenna Array	UL	BOMS	EMC4276	20141201	20151231
Spectrum Analyzer	Agilent	N9030A (PXA)	EMC4360	20141219	20151219

7. ANTENNA PORT TEST RESULTS

7.1. 20 dB AND 99% BW

LIMITS

FCC §15.231 (c)

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

IC RSS-210, A1.1.3

For the purpose of Section A1.1, the 99% Bandwidth shall be no wider than 0.25% of the center frequency for devices operating between 70-900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency.

TEST PROCEDURE

ANSI C63.10

The transmitter output is connected to the spectrum analyzer.

20dB Bandwidth: The RBW is set to 10 KHz. The VBW is set to 30 KHz. The sweep time is coupled. Bandwidth is determined at the points 20 dB down from the modulated carrier.

99% Bandwidth: The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

No non-compliance noted

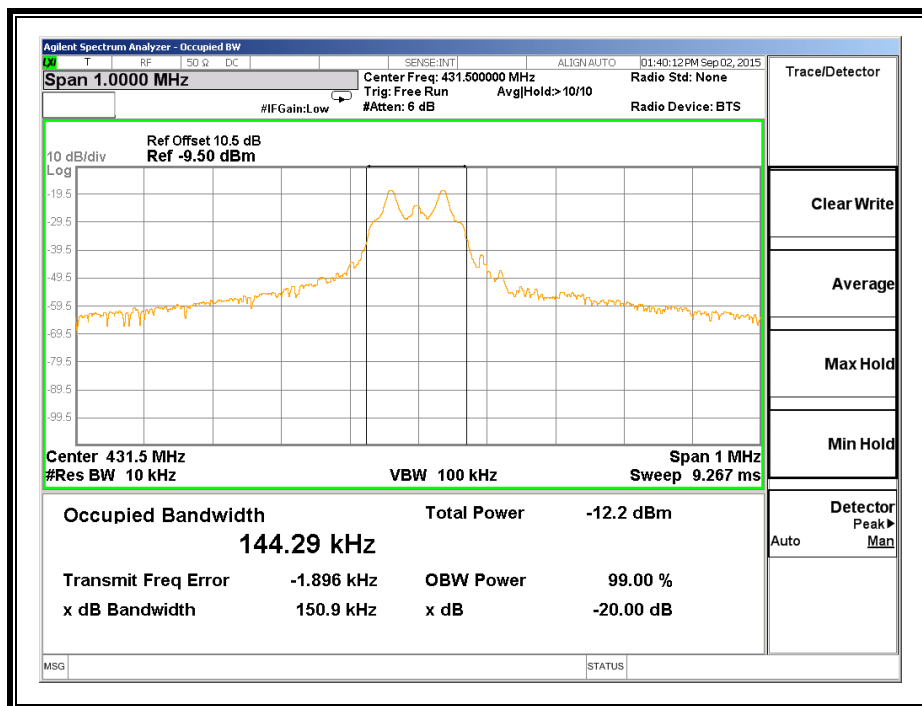
20dB Bandwidth

Frequency (MHz)	20dB Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
431.5	150.9	1078.75	-927.9
436.6	149.5	1091.5	-942.0

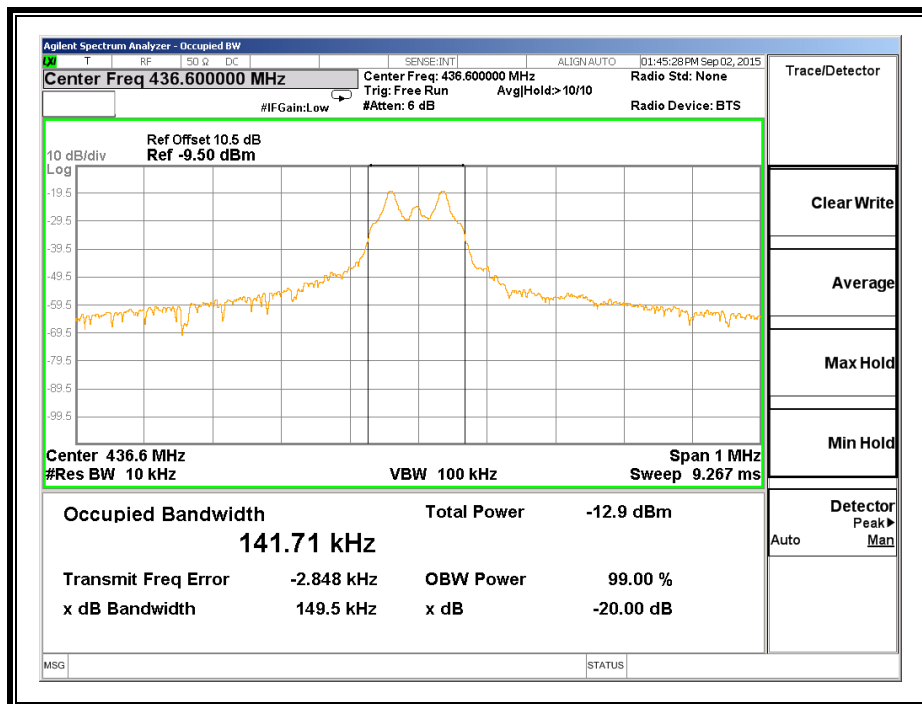
99% Bandwidth

Frequency (MHz)	99% Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
431.5	142.1	1078.75	-936.7
436.6	140.15	1091.5	-951.4

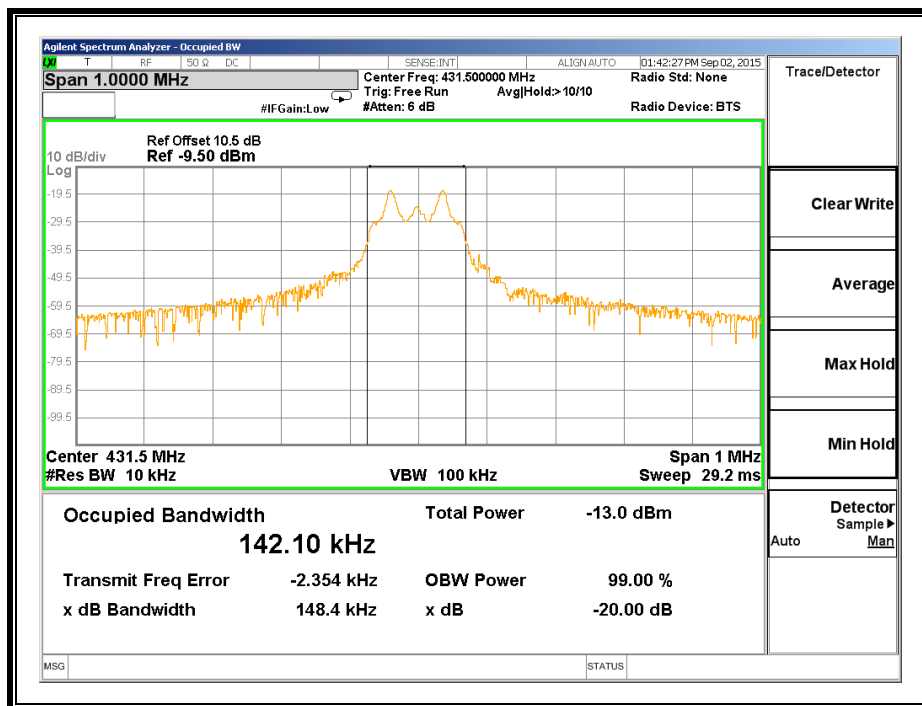
20dB BANDWIDTH Low Channel



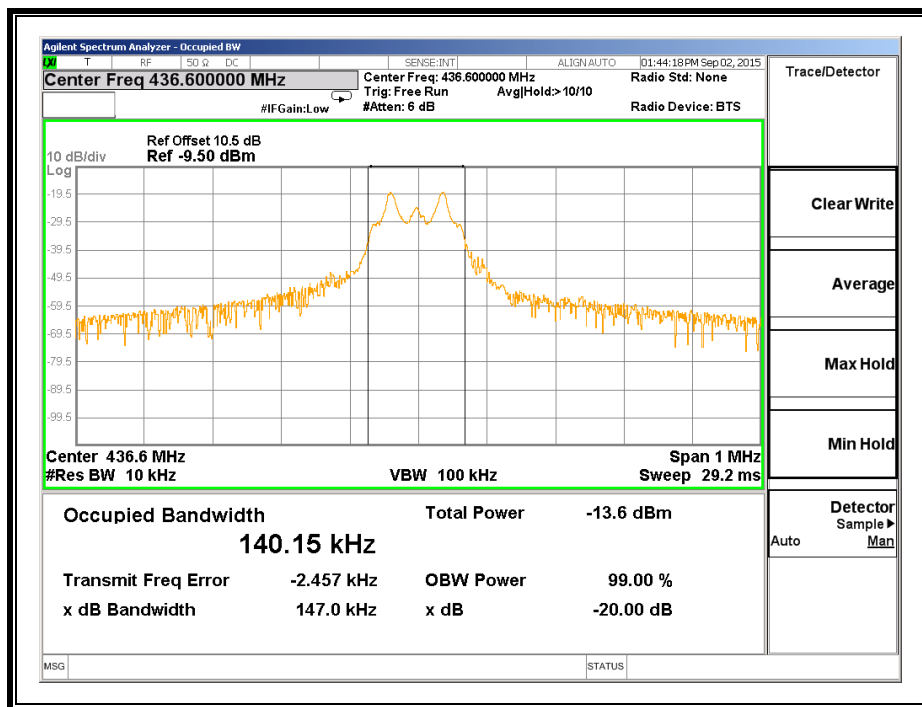
20dB BANDWIDTH High Channel



99% BANDWIDTH Low Channel



99% BANDWIDTH High Channel



7.2. DUTY CYCLE

LIMITS

FCC §15.35 (c)

The measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value. The exact method of calculating the average field strength shall be submitted with any application for certification or shall be retained in the measurement data file for equipment subject to notification or verification.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer or radiated field strength. The RBW is set to 1000 kHz and the VBW is set to 1000 kHz. The sweep time is coupled and the span is set to 0 Hz. The number of pulses is measured and calculated in a 100 ms scan.

CALCULATION

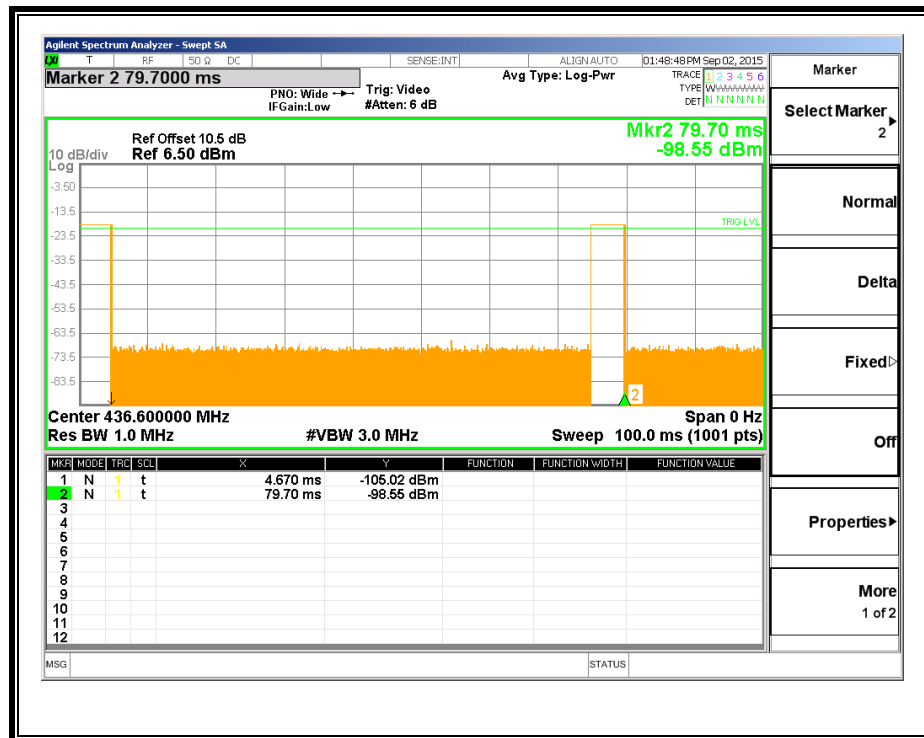
Average Reading = Peak Reading (dBuV/m) + 20log (Duty Cycle), Where Duty Cycle is
(# of long pulses * long pulse width) + (# of short pulses * short pulse width) / 100 or T

RESULTS

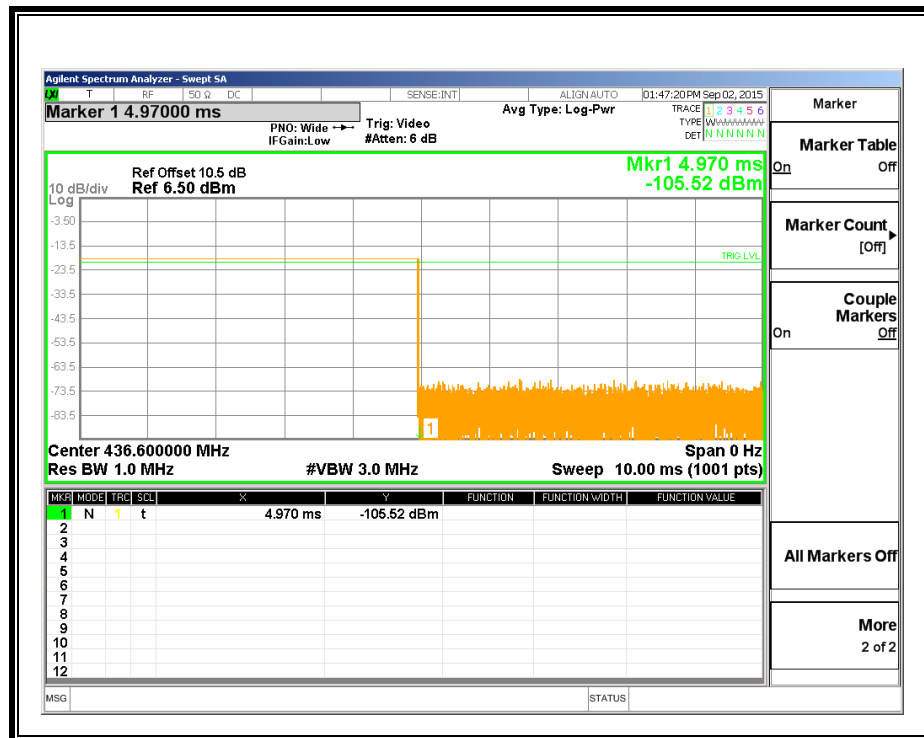
No non-compliance noted:

One Period (ms)	Pulse Width (ms)	# of Pulses	Duty Cycle	20*Log Duty Cycle (dB)
100	4.97	2	0.099	-20.052

Period



PULSE WIDTH



7.3. TRANSMISSION TIME

LIMITS

FCC §15.231 (a) (2)

IC RSS-210 A1.1.1 (b)

A transmitter activated automatically shall cease transmission within 5 seconds after activation.

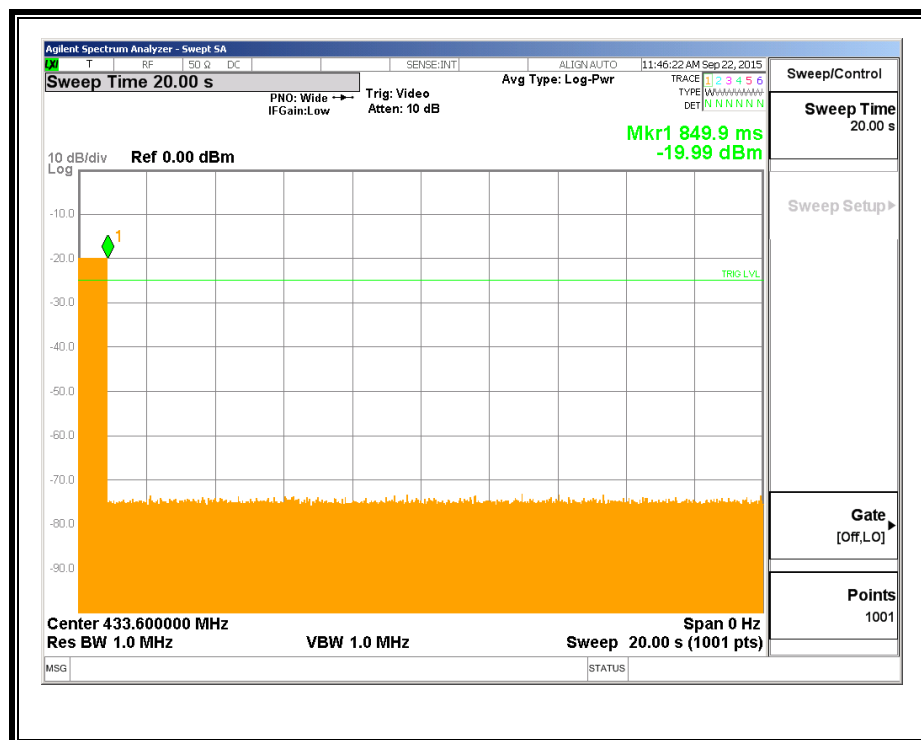
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer or radiated field strength. The RBW is set to 1MHz kHz and the VBW is set to equal or larger then RBW. The sweep time is set to necessary amount of time needed to show the maximum TX time after activation. Span is set to zero.

RESULTS

No non-compliance noted:

The device stops transmitting after 849.9ms.



8. RADIATED EMISSION TEST RESULTS

8.1. TX RADIATED SPURIOUS EMISSION

LIMITS

FCC §15.231 (b)

IC RSS-210 A1.1.2

In addition to the provisions of § 15.205, the field strength of emissions from Intentional radiators operated under this section shall not exceed the following:

Fundamental Frequency (MHz)	Field Strength of Fundamental Frequency (microvolts/meter)	Field Strength of Spurious Emissions (microvolts/meter)
40.66 - 40.70	2,250	225
70 - 130	1,250	125
130 - 174	1,250 to 3,750 ¹	125 to 375 ¹
174 - 260	3,750	375
260 - 470	3,750 to 12,500 ¹	375 to 1,250 ¹
Above 470	12,500	1,250

¹ Linear interpolation

§15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 -	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.52525	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.7 - 156.9	3260 - 3267	23.6 - 24.0
12.29 - 12.293	162.0125 - 167.17	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	167.72 - 173.2	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	240 - 285	3600 - 4400	(²)
13.36 - 13.41	322 - 335.4		

1 Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

2 Above 38.6

§15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

§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:

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
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

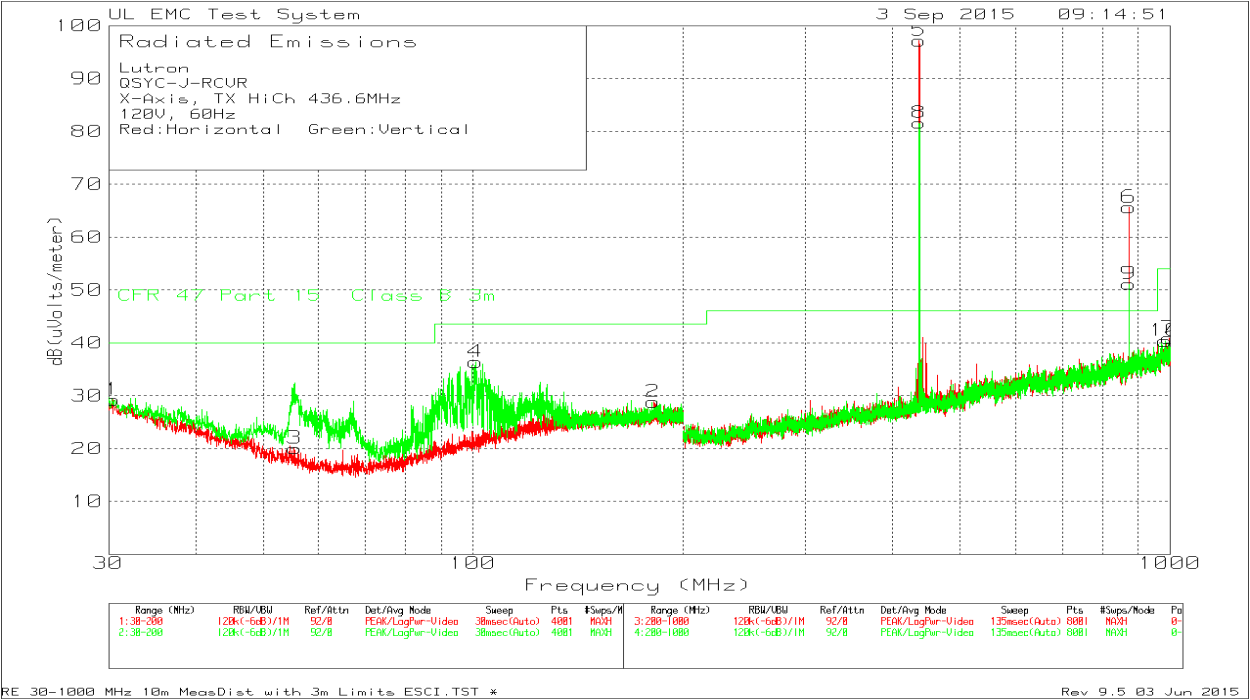
**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this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

§15.209 (b) In the emission table above, the tighter limit applies at the band edges.

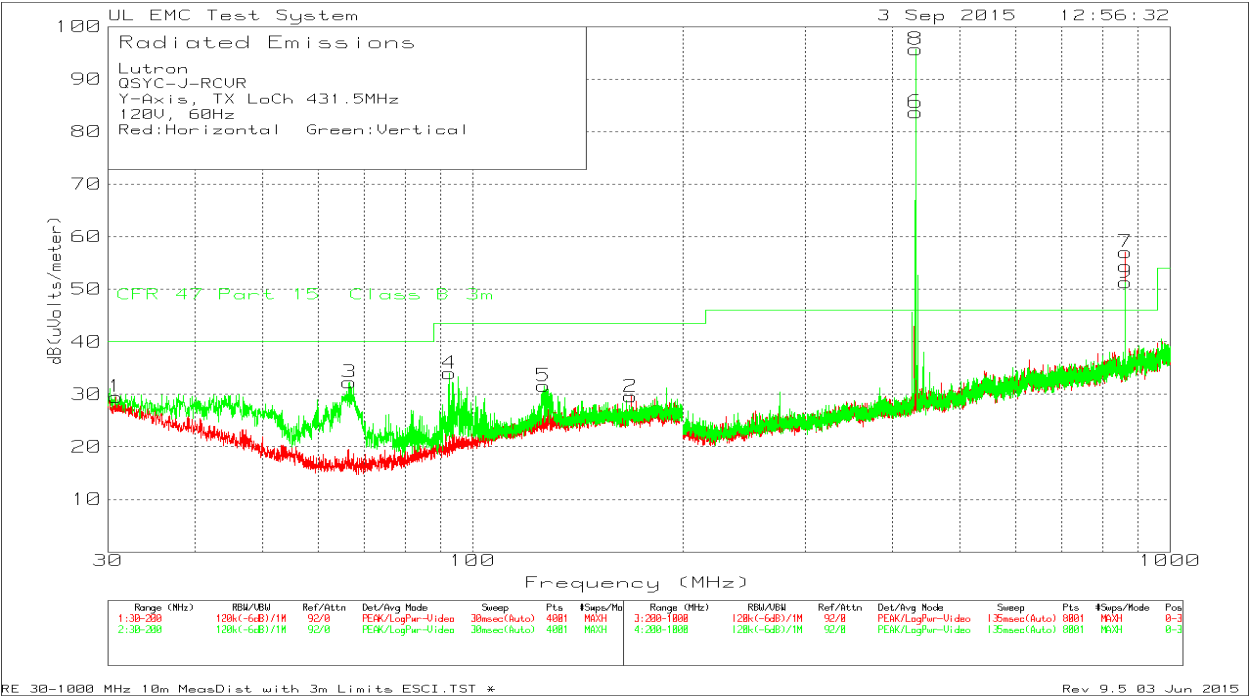
RESULTS

FUNDAMENTAL, HARMONICS AND TX SPURIOUS EMISSION (30 – 1000 MHz)

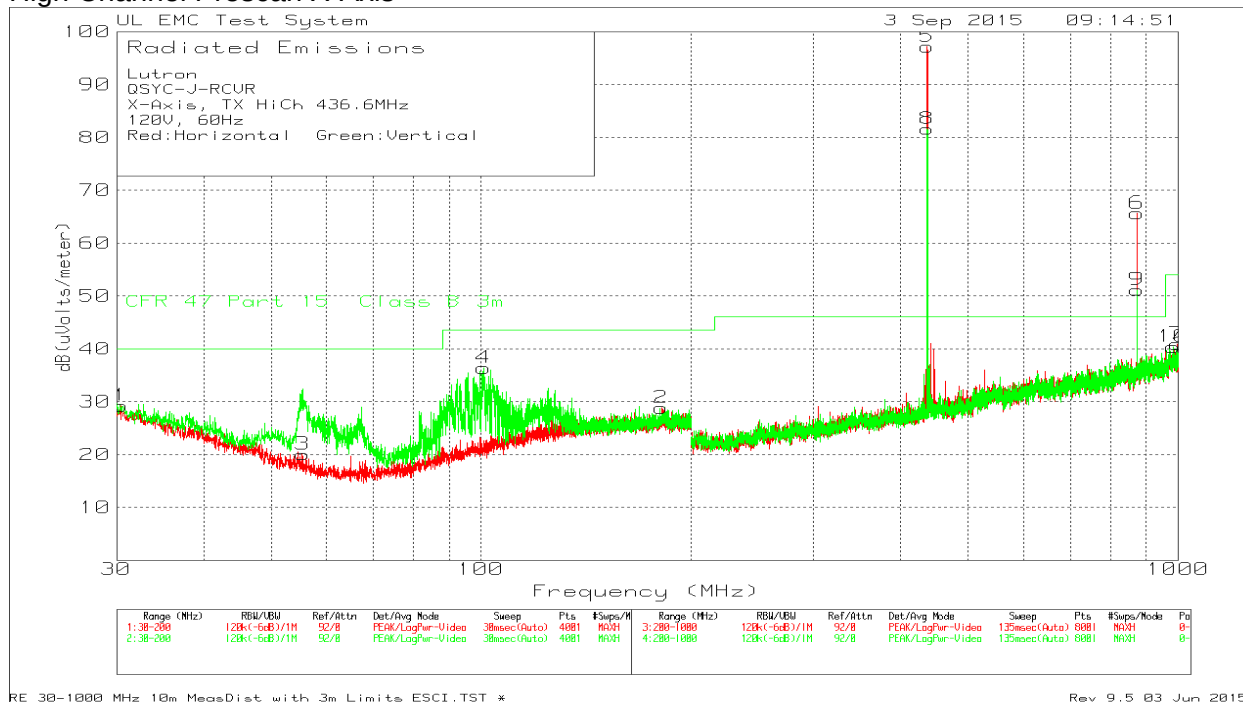
Low Channel Prescan X-Axis



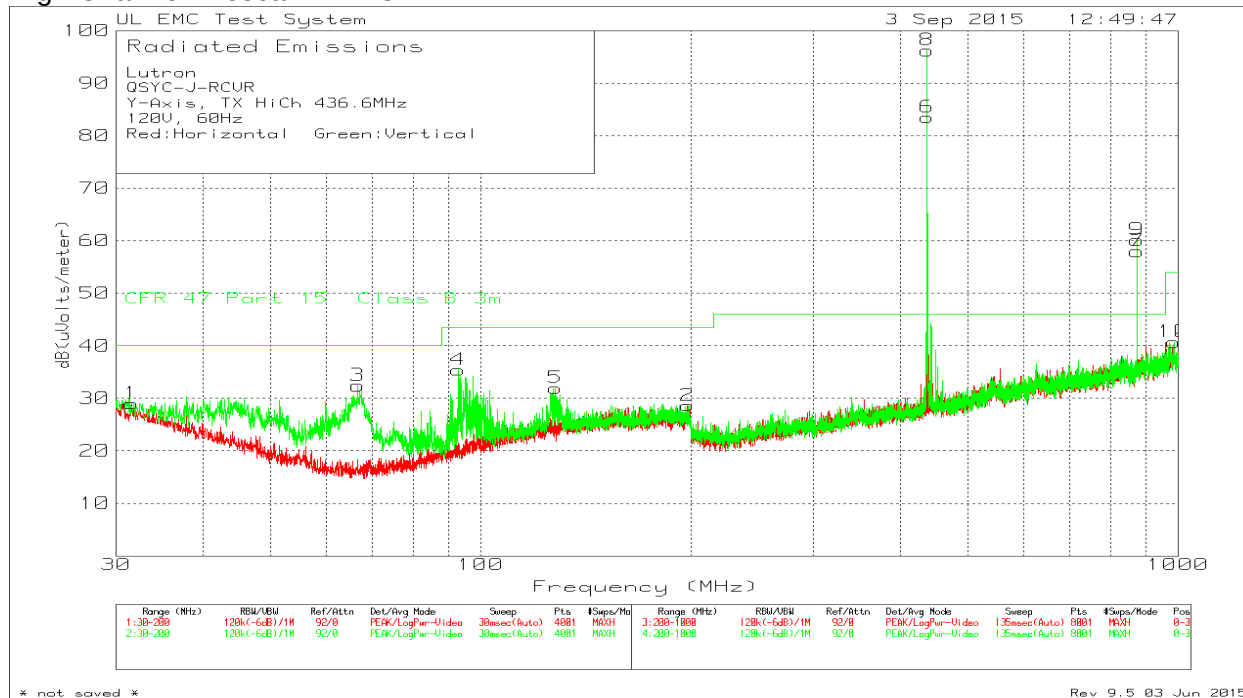
Low Channel Prescan Y-Axis



High Channel Prescan X-Axis



High Channel Prescan Y-Axis



Below 1GHz Data

Fundamental Measurements and Second Harmonic Measurements X & Y Axis

Lutron																
QSYC-J-RCVR																
120V, 60Hz																
Radiated Emission Data																
Test Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Peak Level dBuV/m	Peak Limit dBuV/m @ 3m	Peak Margin dB	Duty Cycle Factor dB	Average Level dBuV/m @ 3m	Average Limit dBuV/m	Average Margin dB	Azimuth [Degs]	Height [cm]	Polarity	Notes	
431.459	74.04	Pk	17	8.5	99.54	100.74	-1.2	-20.05	79.49	80.74	-1.25	0	232	H	X-Ax is	
431.535	64.23	Pk	17	8.5	89.73	100.74	-11.01	-20.05	69.68	80.74	-11.06	69	260	V	X-Ax is	
436.56	72.72	Pk	17.2	8.5	98.42	100.91	-2.49	-20.05	78.37	80.91	-2.54	5	101	H	X-Ax is	
436.561	63.51	Pk	17.2	8.5	89.21	100.91	-11.7	-20.05	69.16	80.91	-11.75	56	260	V	X-Ax is	
863.066	18.06	Pk	23.2	10.2	51.46	66.02	-14.56	-20.05	31.41	46.02	-14.61	121	103	H	X-Ax is	
863.077	14.62	Pk	23.2	10.2	48.02	66.02	-18	-20.05	27.97	46.02	-18.05	11	113	V	X-Ax is	
873.262	19.91	Pk	23	10.1	53.01	66.02	-13.01	-20.05	32.96	46.02	-13.06	345	101	H	X-Ax is	
873.2755	12.09	Pk	23	10.1	45.19	66.02	-20.83	-20.05	25.14	46.02	-20.88	355	165	V	X-Ax is	
431.4586	57.46	Pk	17	8.5	82.96	100.74	-17.78	-20.05	62.91	80.74	-17.83	302	193	H	Y-Ax is	
431.4615	74.86	Pk	17	8.5	100.36	100.74	-0.38	-20.05	80.31	80.74	-0.43	356	107	V	Y-Ax is	
436.5645	56.4	Pk	17.2	8.5	82.1	100.91	-18.81	-20.05	62.05	80.91	-18.86	297	193	H	Y-Ax is	
436.5605	74.49	Pk	17.2	8.5	100.19	100.91	-0.72	-20.05	80.14	80.91	-0.77	358	107	V	Y-Ax is	
862.921	16.25	Pk	23.2	10.2	49.65	66.02	-16.37	-20.05	29.6	46.02	-16.42	45	211	H	Y-Ax is	
862.917	19.61	Pk	23.2	10.2	53.01	66.02	-13.01	-20.05	32.96	46.02	-13.06	326	221	V	Y-Ax is	
873.262	13.66	Pk	23	10.1	46.76	66.02	-19.26	-20.05	26.71	46.02	-19.31	52	210	H	Y-Ax is	
873.1095	16.48	Pk	23	10.1	49.58	66.02	-16.44	-20.05	29.53	46.02	-16.49	11	229	V	Y-Ax is	
Pk - Peak detector																

Pre-scan Tabular Data TX Low Channel, X-Axis

QSYC-J-RCVR												
X-Axis, TX LoCh 431.5MHz												
Marker No.	Test Frequency (MHz)	Meter Reading (dBuV)	Antenna Factor dB/m	Path Factor dB	10M to 3M Factor dB	Level dBuV/m	Limit 47 CFR Part 15, subpart B dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity	
1	30.2125	31.88	Pk	18.2	-30.2	10.5	30.38	40	-9.62	0-360	101	H
2	181.13	31.99	Pk	15.9	-29.3	10.5	29.09	43.52	-14.43	0-360	101	H
3	55.33	44.65	Pk	7.3	-30.1	10.5	32.35	40	-7.65	0-360	101	V
4	97.83	43.95	Pk	10.8	-29.9	10.5	35.35	43.52	-8.17	0-360	101	V
5	126.0075	38.3	Pk	14.3	-29.8	10.5	33.3	43.52	-10.22	0-360	101	V
6	431.5	96.66	Pk	16.3	-27.7	10.5	95.76	-	-	0-360	99	H
7	863.1	58.33	Pk	21.8	-26.9	10.5	63.73	-	-	0-360	99	H
8	971.7	31.71	Pk	24	-25.1	10.5	41.11	53.97	-12.86	0-360	99	H
9	431.5	84.41	Pk	16.3	-27.7	10.5	83.51	-	-	0-360	99	V
10	863	42.07	Pk	21.8	-26.9	10.5	47.47	-	-	0-360	99	V
11	998.4	31.52	Pk	23.8	-24.8	10.5	41.02	53.97	-12.95	0-360	99	V
Pk - Peak detector												

Pre-scan Tabular Data TX Low Channel, Y-Axis

Lutron
QSYC-J-RCVR
Y-Axis, TX LoCh 431.5MHz
120V, 60Hz
Red:Horizontal Green:Vertical

Trace Markers												
No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading (dB)	Limit:1 (uVolts/meter)	2	3	4	5	6	
1	30.8075	31.4dBuV Pk	17.8	-19.7	29.5	40	-	-	-	-	-	
		Azimuth:0-360	Height:98	Horz	Margin (dB)	-10.5	-	-	-	-	-	
2	168.5925	33.09dBuV Pk	15.5	-19	29.59	43.52	-	-	-	-	-	
		Azimuth:0-360	Height:98	Horz	Margin (dB)	-13.93	-	-	-	-	-	
3	66.55	45.8dBuV Pk	6.1	-19.6	32.3	40	-	-	-	-	-	
		Azimuth:0-360	Height:98	Vert	Margin (dB)	-7.7	-	-	-	-	-	
4	92.645	43.39dBuV Pk	10.1	-19.5	33.99	43.52	-	-	-	-	-	
		Azimuth:0-360	Height:98	Vert	Margin (dB)	-9.53	-	-	-	-	-	
5	126.4325	36.61dBuV Pk	14.3	-19.3	31.61	43.52	-	-	-	-	-	
		Azimuth:0-360	Height:98	Vert	Margin (dB)	-11.91	-	-	-	-	-	
6	431.5	84.58dBuV Pk	16.3	-17.2	83.68	-	-	-	-	-	-	
		Azimuth:0-360	Height:99	Horz	Margin (dB)	-	-	-	-	-	-	
7	863.2	51.68dBuV Pk	21.8	-16.4	57.08	-	-	-	-	-	-	
		Azimuth:0-360	Height:99	Horz	Margin (dB)	-	-	-	-	-	-	
8	431.5	96.56dBuV Pk	16.3	-17.2	95.66	-	-	-	-	-	-	
		Azimuth:0-360	Height:99	Vert	Margin (dB)	-	-	-	-	-	-	
9	863.1	45.9dBuV Pk	21.8	-16.4	51.3	-	-	-	-	-	-	
		Azimuth:0-360	Height:99	Vert	Margin (dB)	-	-	-	-	-	-	

LIMIT 1: CFR 47 Part 15 Class B 3m
Pk - Peak detector

Pre-scan Tabular Data TX High Channel, X-Axis

Lutron												
QSYC-J-RCVR												
X-Axis, TX HiCh 436.6MHz												
Marker No.	Test Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	10M to 3M Factor dB	Level dBuV/m	Limit 47 CFR Part 15, subpart B dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
1	30.4675	30.96	Pk	18	-30.2	10.5	29.26	40	-10.74	0-360	101	H
2	181.385	31.76	Pk	15.9	-29.3	10.5	28.86	43.52	-14.66	0-360	101	H
3	55.4575	32.44	Pk	7.2	-30.1	10.5	20.04	40	-19.96	0-360	101	V
4	100.89	44.49	Pk	11.4	-30	10.5	36.39	43.52	-7.13	0-360	101	V
5	436.6	97.87	Pk	16.5	-27.7	10.5	97.17	-	-	0-360	99	H
6	873.3	58.84	Pk	22.5	-26.2	10.5	65.64	-	-	0-360	99	H
7	995.9	31.98	Pk	23.7	-25.3	10.5	40.88	53.97	-13.09	0-360	99	H
8	436.6	82.31	Pk	16.5	-27.7	10.5	81.61	-	-	0-360	99	V
9	873.2	44.36	Pk	22.5	-26.2	10.5	51.16	-	-	0-360	99	V
10	984.7	30.88	Pk	23.8	-24.8	10.5	40.38	53.97	-13.59	0-360	99	V
Pk - Peak detector												

Pre-scan Tabular Data TX High Channel, Y-Axis

Lutron
QSYC-J-RCVR
Y-Axis, TX HiCh 436.6MHz

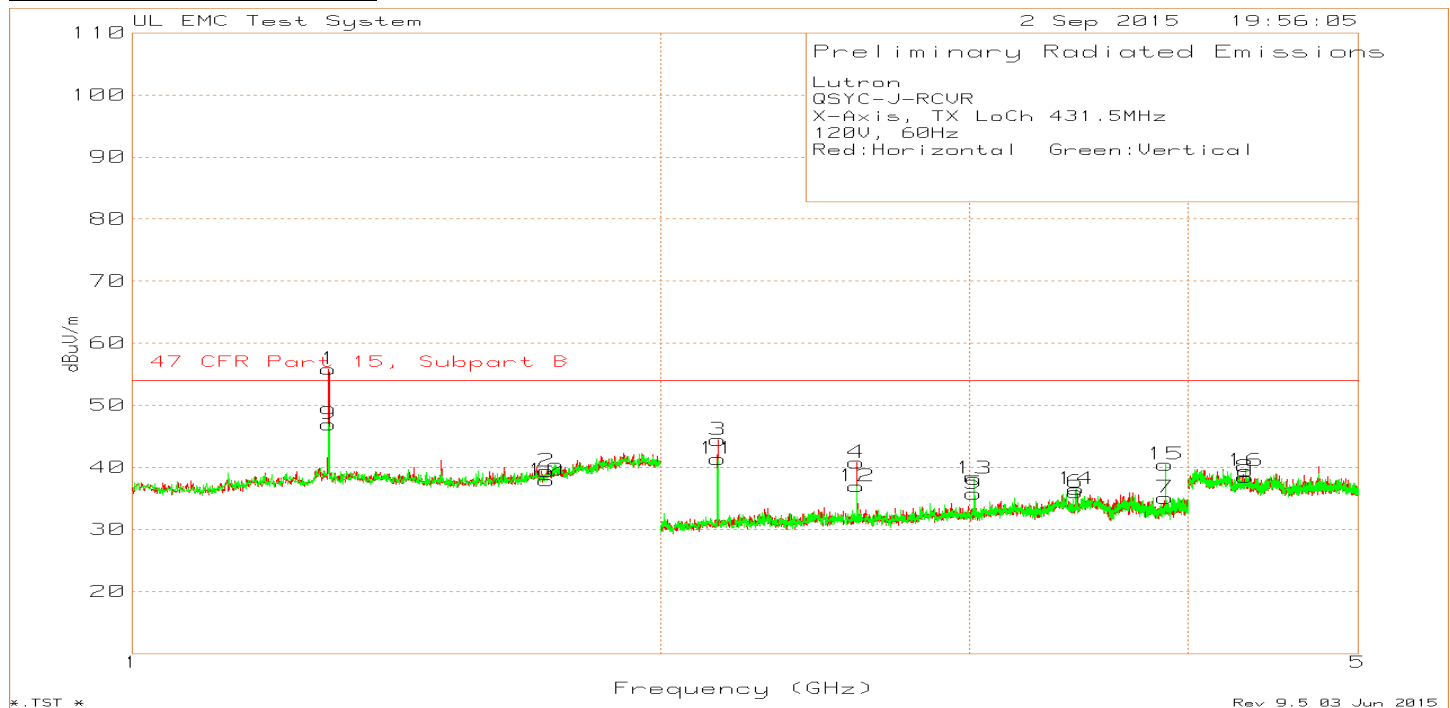
Trace Markers

Test No.	Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading	Limit:1 dB(uVolts/meter)	2	3	4	5	6
=====											
1	31.5725	31.14dBuV Pk	17.6	-19.7	29.04	40	-	-	-	-	-
		Azimuth:0-360	Height:98	Horz	Margin (dB)	-10.96	-	-	-	-	-
2	197.9175	31.33dBuV Pk	15.7	-18.4	28.63	43.52	-	-	-	-	-
		Azimuth:0-360	Height:98	Horz	Margin (dB)	-14.89	-	-	-	-	-
3	66.635	45.91dBuV Pk	6.1	-19.6	32.41	40	-	-	-	-	-
		Azimuth:0-360	Height:98	Vert	Margin (dB)	-7.59	-	-	-	-	-
4	92.8575	44.72dBuV Pk	10.2	-19.5	35.42	43.52	-	-	-	-	-
		Azimuth:0-360	Height:98	Vert	Margin (dB)	-8.1	-	-	-	-	-
5	128.0475	36.76dBuV Pk	14.5	-19.3	31.96	43.52	-	-	-	-	-
		Azimuth:0-360	Height:98	Vert	Margin (dB)	-11.56	-	-	-	-	-
6	436.6	84.18dBuV Pk	16.5	-17.2	83.48	-	-	-	-	-	-
		Azimuth:0-360	Height:99	Horz	Margin (dB)	-	-	-	-	-	-
7	873.2	51.19dBuV Pk	22.5	-15.7	57.99	-	-	-	-	-	-
		Azimuth:0-360	Height:99	Horz	Margin (dB)	-	-	-	-	-	-
8	436.6	96.92dBuV Pk	16.5	-17.2	96.22	-	-	-	-	-	-
		Azimuth:0-360	Height:99	Vert	Margin (dB)	-	-	-	-	-	-
9	873.2	53.33dBuV Pk	22.5	-15.7	60.13	-	-	-	-	-	-
		Azimuth:0-360	Height:99	Vert	Margin (dB)	-	-	-	-	-	-
10	985.9	31.1dBuV Pk	23.8	-14.2	40.7	53.97	-	-	-	-	-
		Azimuth:0-360	Height:99	Vert	Margin (dB)	-13.27	-	-	-	-	-

LIMIT 1: CFR 47 Part 15 Class B 3m
Pk - Peak detector

HARMONICS AND TX SPURIOUS EMISSIONS ABOVE 1GHz

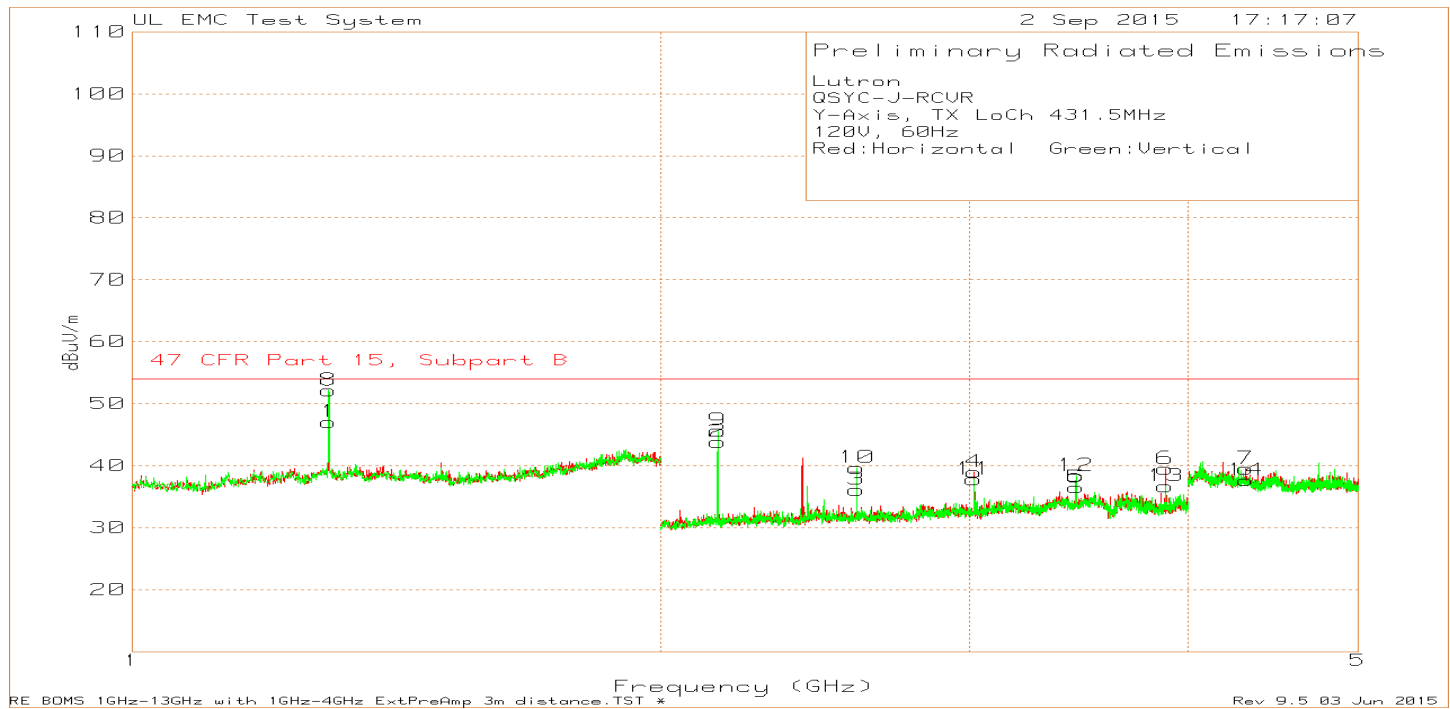
Low Channel X-Axis Prescan



Low Channel X-Axis Data

Lutron															
QSYC-J-RCVR															
X-Axis, TX LoCh 431.5MHz															
Marker No.	Test Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Peak Level dBuV/m	Peak Limit dBuV/m @ 3m	Peak Margin dB	Duty Cycle Factor dB	Average Level dBuV/m @ 3m	Average Limit dBuV/m	Average Margin dB	Azimuth [Deps]	Height [cm]	Polarity
1	1.2944	83.78	Pk	29.1	-55.71	57.17	74	-16.83	-20.05	37.12	54	-16.88	72	119	H
2	1.723	64.17	Pk	29.4	-54.19	39.38	74	-34.62	-20.05	19.33	54	-34.67	0-360	99	H
3	2.157	75.29	Pk	21.6	-52.48	44.41	74	-29.59	-20.05	24.36	54	-29.64	0-360	99	H
4	2.589	70.16	Pk	22.3	-51.71	40.75	74	-33.25	-20.05	20.7	54	-33.3	0-360	99	H
5	3.02	64.14	Pk	22.5	-50.88	35.76	74	-38.24	-20.05	15.71	54	-38.29	0-360	99	H
6	3.452	63.47	Pk	23.5	-51	35.97	74	-38.03	-20.05	15.92	54	-38.08	0-360	99	H
7	3.883	62.44	Pk	23.9	-51.26	35.08	74	-38.92	-20.05	15.03	54	-38.97	0-360	99	H
8	4.314	62.58	Pk	28.1	-52.25	38.43	74	-35.57	-20.05	18.38	54	-35.62	0-360	100	H
9	1.2947	76.63	Pk	29.1	-55.7	50.03	74	-23.97	-20.05	29.98	54	-24.02	343	292	V
10	1.723	62.66	Pk	29.4	-54.19	37.87	74	-36.13	-20.05	17.82	54	-36.18	0-360	150	V
11	2.157	72.24	Pk	21.6	-52.48	41.36	74	-32.64	-20.05	21.31	54	-32.69	0-360	99	V
12	2.589	66.35	Pk	22.3	-51.71	36.94	74	-37.06	-20.05	16.89	54	-37.11	0-360	99	V
13	3.021	66.55	Pk	22.5	-50.9	38.15	74	-35.85	-20.05	18.1	54	-35.9	0-360	99	V
14	3.453	64	Pk	23.5	-50.98	36.52	74	-37.48	-20.05	16.47	54	-37.53	0-360	99	V
15	3.884	67.91	Pk	23.8	-51.28	40.43	74	-33.57	-20.05	20.38	54	-33.62	0-360	99	V
16	4.315	63.59	Pk	28.1	-52.26	39.43	74	-34.57	-20.05	19.38	54	-34.62	0-360	100	V
Pk - Peak detector															

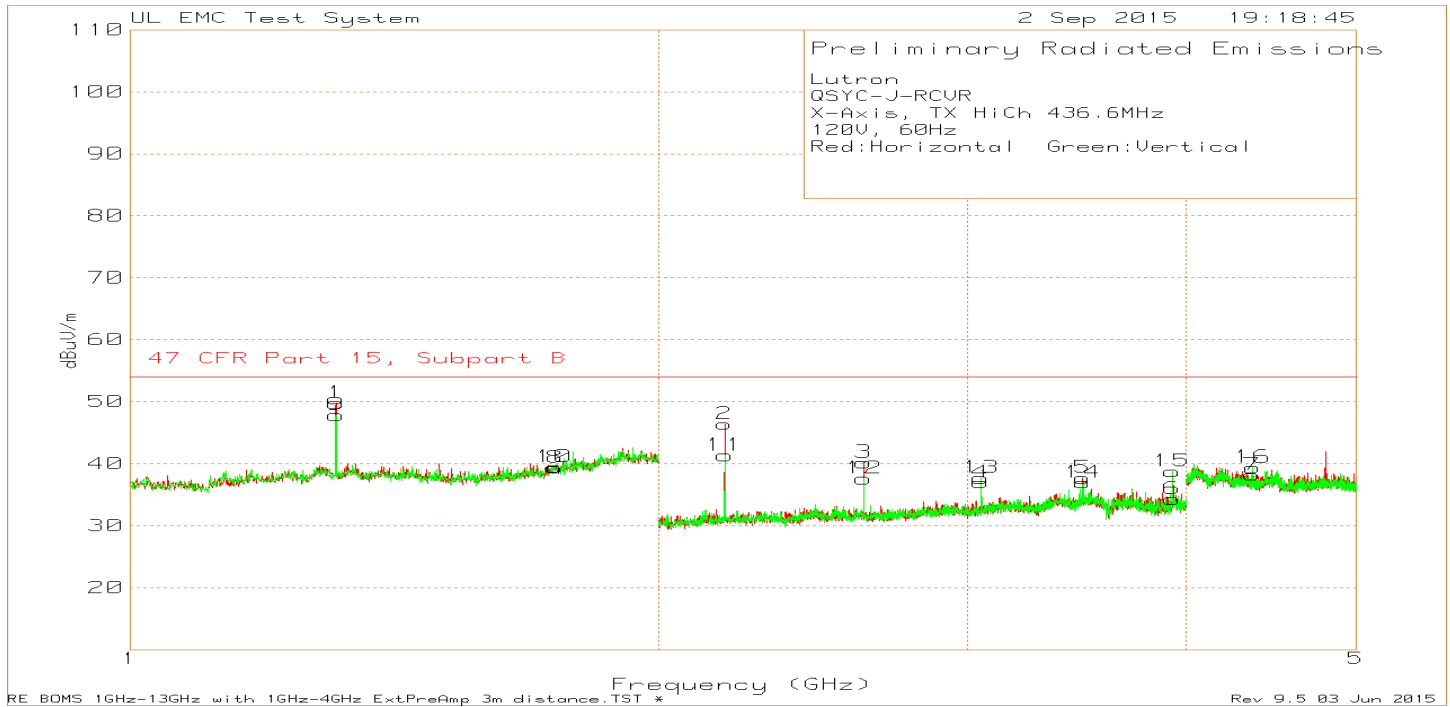
Low Channel Y-Axis Prescan



Low Channel Y-Axis Data

Lutron															
QSYC-J-RCVR															
Y-Axis, TX LoCh 431.5MHz															
Marker No.	Test Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Peak Level dBuV/m	Peak Limit dBuV/m @ 3m	Peak Margin dB	Duty Cycle Factor dB	Average Level dBuV/m @ 3m	Average Limit dBuV/m	Average Margin dB	Average Azimuth [Degs]	Height [cm]	Polarity
1	1.2944	76.91	Pk	29.1	-55.71	50.3	74	-23.7	-20.05	30.25	54	-23.75	315	143	H
2	2.157	74.73	Pk	21.6	-52.48	43.85	74	-30.15	-20.05	23.8	54	-30.2	0-360	100	H
3	2.589	65.55	Pk	22.3	-51.71	36.14	74	-37.86	-20.05	16.09	54	-37.91	0-360	100	H
4	3.021	67.39	Pk	22.5	-50.9	38.99	74	-35.01	-20.05	18.94	54	-35.06	0-360	150	H
5	3.453	63.98	Pk	23.5	-50.98	36.5	74	-37.5	-20.05	16.45	54	-37.55	0-360	150	H
6	3.884	66.97	Pk	23.8	-51.28	39.49	74	-34.51	-20.05	19.44	54	-34.56	0-360	150	H
7	4.315	63.67	Pk	28.1	-52.26	39.51	74	-34.49	-20.05	19.46	54	-34.54	0-360	150	H
8	1.2946	80.43	Pk	29.1	-55.71	53.82	74	-20.18	-20.05	33.77	54	-20.23	348	100	V
9	2.157	76.54	Pk	21.6	-52.48	45.66	74	-28.34	-20.05	25.61	54	-28.39	0-360	100	V
10	2.589	69.07	Pk	22.3	-51.71	39.66	74	-34.34	-20.05	19.61	54	-34.39	0-360	150	V
11	3.02	66.18	Pk	22.5	-50.88	37.8	74	-36.2	-20.05	17.75	54	-36.25	0-360	150	V
12	3.453	65.85	Pk	23.5	-50.98	38.37	74	-35.63	-20.05	18.32	54	-35.68	0-360	100	V
13	3.884	64.19	Pk	23.8	-51.28	36.71	74	-37.29	-20.05	16.66	54	-37.34	0-360	100	V
14	4.315	61.81	Pk	28.1	-52.26	37.65	74	-36.35	-20.05	17.6	54	-36.4	0-360	100	V
Pk - Peak detector															

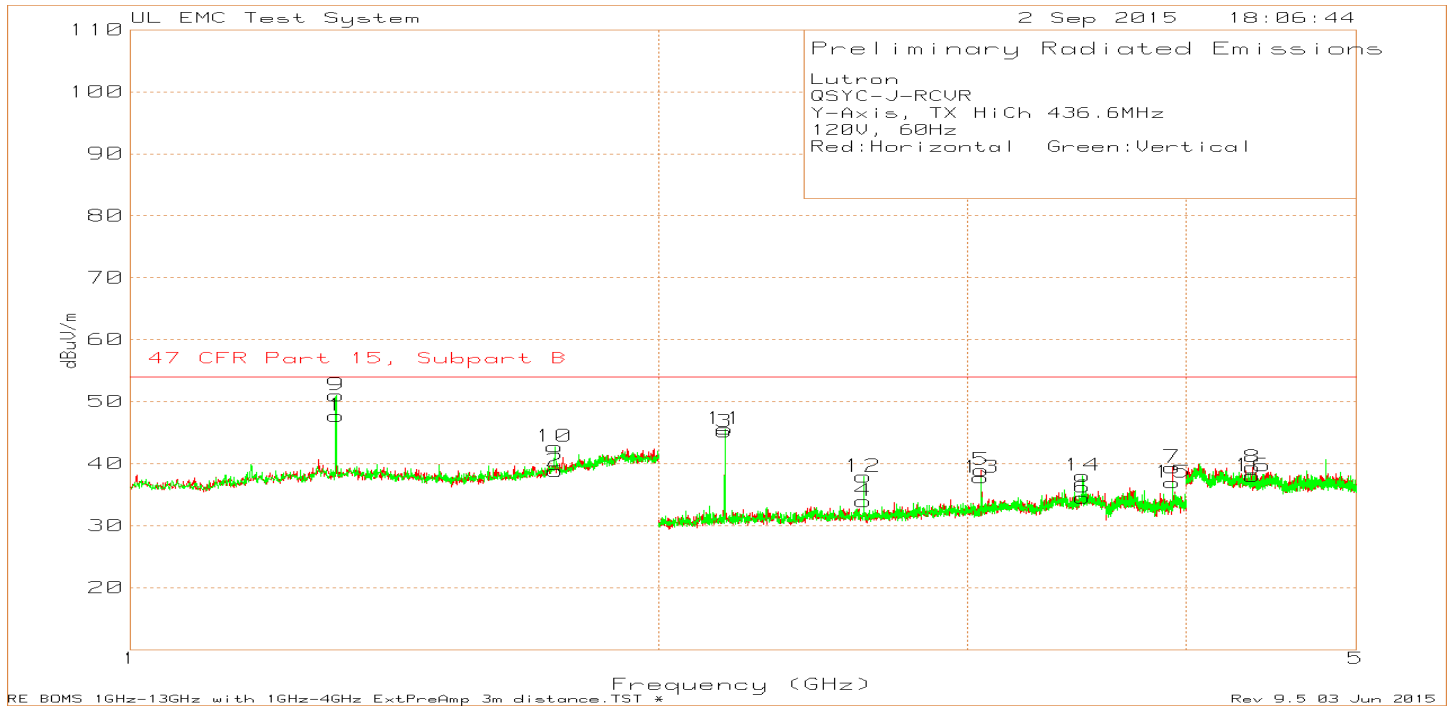
High Channel X-Axis Prescan



High Channel X-Axis Data

Lutron															
QSYC-J-RCVR															
X-Axis, TX HiCh 436.6MHz															
Marker No.	Test Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Peak Level dBuV/m	Peak Limit dBuV/m @ 3m	Peak Margin dB	Duty Cycle Factor dB	Average Level dBuV/m @ 3m	Average Limit dBuV/m	Average Margin dB	Average Azimuth [Degs]	Height [cm]	Polarity
1	1.3099	83.87	Pk	29.1	-55.54	57.43	74	-16.57	-20.05	37.38	54	-16.62	237	117	H
8	1.747	63.75	Pk	29.6	-53.99	39.36	74	-34.64	-20.05	19.31	54	-34.69	0-360	150	H
2	2.182	76.97	Pk	21.7	-52.27	46.4	74	-27.6	-20.05	26.35	54	-27.65	0-360	100	H
3	2.62	69.66	Pk	22.3	-51.79	40.17	74	-33.83	-20.05	20.12	54	-33.88	0-360	100	H
4	3.056	65.1	Pk	22.6	-50.72	36.98	74	-37.02	-20.05	16.93	54	-37.07	0-360	100	H
5	3.493	64.41	Pk	23.5	-50.18	37.73	74	-36.27	-20.05	17.68	54	-36.32	0-360	150	H
6	3.93	61.4	Pk	24	-51.11	34.29	74	-39.71	-20.05	14.24	54	-39.76	0-360	150	H
7	4.365	62.16	Pk	28.1	-52.06	38.2	74	-35.8	-20.05	18.15	54	-35.85	0-360	99	H
9	1.3099	79.42	Pk	29.1	-55.54	52.98	74	-21.02	-20.05	32.93	54	-21.07	187	179	V
10	1.745	63.85	Pk	29.6	-54	39.45	74	-34.55	-20.05	19.4	54	-34.6	0-360	150	V
11	2.183	71.9	Pk	21.7	-52.27	41.33	74	-32.67	-20.05	21.28	54	-32.72	0-360	99	V
12	2.62	67.08	Pk	22.3	-51.79	37.59	74	-36.41	-20.05	17.54	54	-36.46	0-360	99	V
13	3.056	65.85	Pk	22.6	-50.72	37.73	74	-36.27	-20.05	17.68	54	-36.32	0-360	99	V
14	3.494	63.6	Pk	23.5	-50.16	36.94	74	-37.06	-20.05	16.89	54	-37.11	0-360	99	V
15	3.929	65.89	Pk	24	-51.13	38.76	74	-35.24	-20.05	18.71	54	-35.29	0-360	99	V
16	4.366	63.32	Pk	28.1	-52.05	39.37	74	-34.63	-20.05	19.32	54	-34.68	0-360	100	V
Pk - Peak detector															

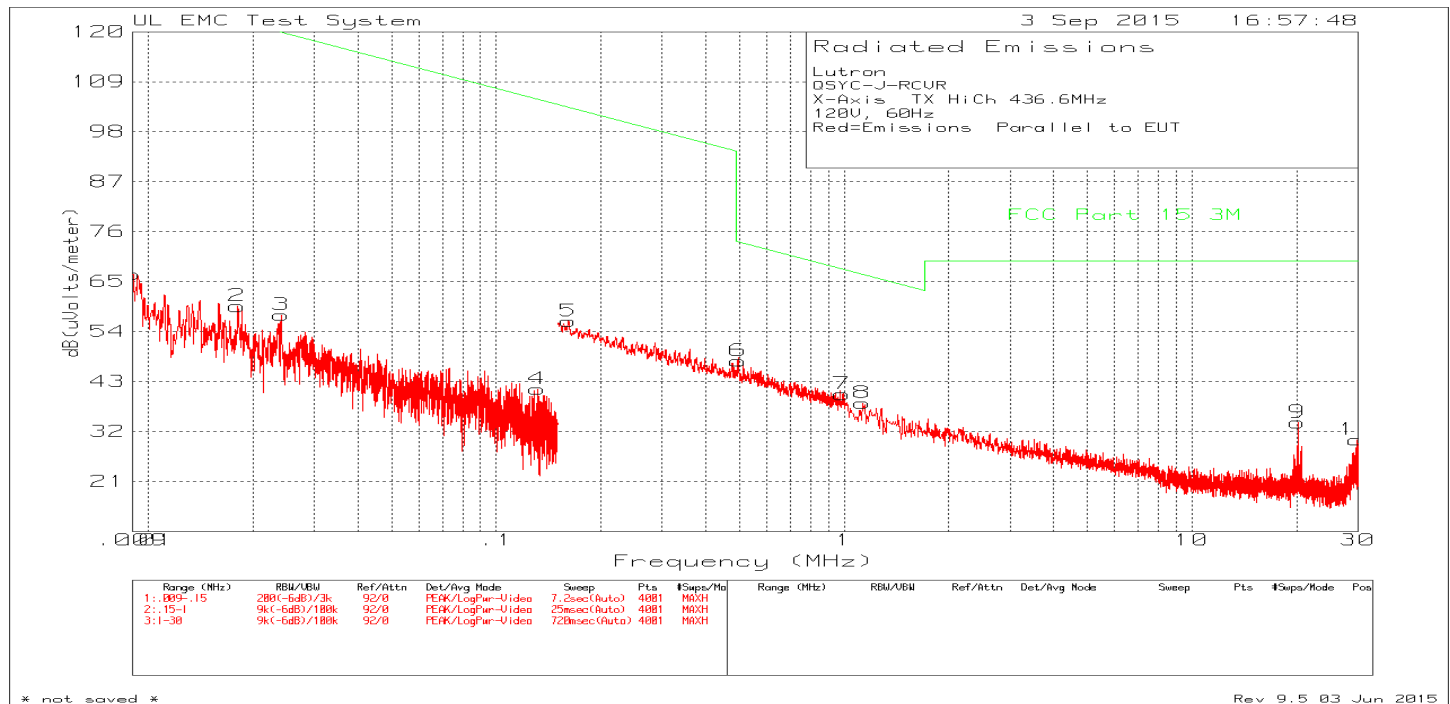
High Channel Y-Axis Prescan



High Channel Y-Axis Data

Lutron															
QSYC-J-RCUR															
Y-Axis, TX HiCh 436.6MHz															
Marker No.	Test Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Peak Level dBuV/m	Peak Limit dBuV/m @ 3m	Peak Margin dB	Duty Cycle Factor dB	Average Level dBuV/m @ 3m	Average Limit dBuV/m	Average Margin dB	Azimuth [Degs]	Height [cm]	Polarity
1	1.3097	75.48	Pk	29.1	-55.54	49.04	74	-24.96	-20.05	28.99	54	-25.01	279	113	H
2	1.748	63.2	Pk	29.6	-53.99	38.81	74	-35.19	-20.05	18.76	54	-35.24	0-360	100	H
3	2.182	75.74	Pk	21.7	-52.27	45.17	74	-28.83	-20.05	25.12	54	-28.88	0-360	150	H
4	2.619	63.44	Pk	22.3	-51.77	33.97	74	-40.03	-20.05	13.92	54	-40.08	0-360	99	H
5	3.057	67.08	Pk	22.6	-50.7	38.98	74	-35.02	-20.05	18.93	54	-35.07	0-360	99	H
6	3.493	61.2	Pk	23.5	-50.18	34.52	74	-39.48	-20.05	14.47	54	-39.53	0-360	150	H
7	3.93	66.48	Pk	24	-51.11	39.37	74	-34.63	-20.05	19.32	54	-34.68	0-360	150	H
8	4.366	63.36	Pk	28.1	-52.05	39.41	74	-34.59	-20.05	19.36	54	-34.64	0-360	150	H
9	1.31	80.27	Pk	29.1	-55.54	53.83	74	-20.17	-20.05	33.78	54	-20.22	0	213	V
10	1.746	67.14	Pk	29.6	-53.99	42.75	74	-31.25	-20.05	22.7	54	-31.3	0-360	100	V
11	2.183	76.18	Pk	21.7	-52.27	45.61	74	-28.39	-20.05	25.56	54	-28.44	0-360	100	V
12	2.619	67.39	Pk	22.3	-51.77	37.92	74	-36.08	-20.05	17.87	54	-36.13	0-360	150	V
13	3.056	65.89	Pk	22.6	-50.72	37.77	74	-36.23	-20.05	17.72	54	-36.28	0-360	150	V
14	3.493	64.75	Pk	23.5	-50.18	38.07	74	-35.93	-20.05	18.02	54	-35.98	0-360	150	V
15	3.93	64.08	Pk	24	-51.11	36.97	74	-37.03	-20.05	16.92	54	-37.08	0-360	100	V
16	4.366	61.98	Pk	28.1	-52.05	38.03	74	-35.97	-20.05	17.98	54	-36.02	0-360	99	V
Pk - Peak detector															

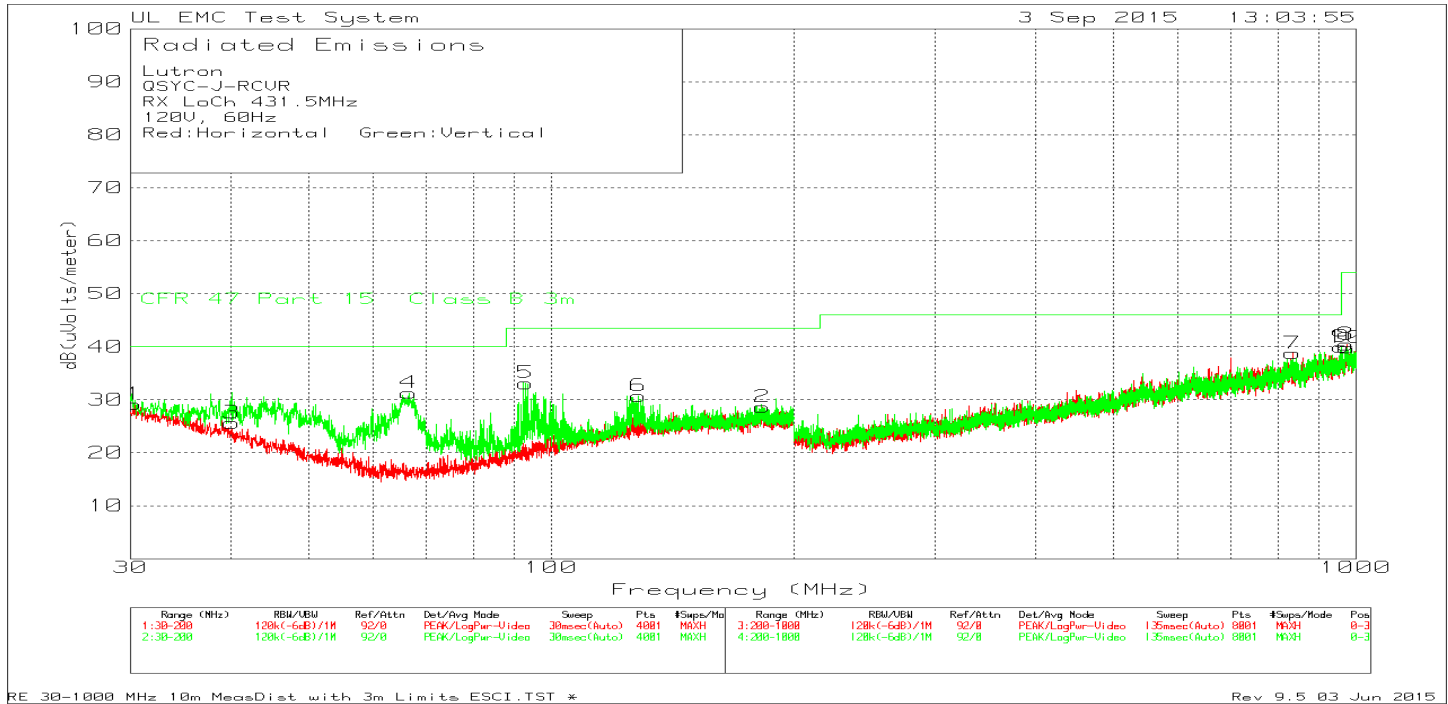
SPURIOUS EMISSIONS Below 30MHz



Lutron									
QSYC-J-RCVR									
Marker No.	Test Frequency (MHz)	Meter Reading (dBuV)	Detector	Antenna Facoter dB/m	Path Factor dB	Level dBuV/m	Limit 47 CFR Part 15, subpart B @ 3m dBuV/m	Margin (dB)	Azimuth [Degs]
1	0.009035	44.22	Pk	22.4	0	66.62	128.47	-61.85	0-360
2	0.01803	41.97	Pk	17.6	0	59.57	122.47	-62.9	0-360
3	0.02412	41.24	Pk	16.4	0	57.64	119.94	-62.3	0-360
4	0.131185	29.02	Pk	12.3	0	41.32	105.24	-63.92	0-360
5	0.16129	44.05	Pk	12.2	0	56.25	103.45	-47.2	0-360
6	0.49634	35.41	Pk	12.1	0	47.51	73.69	-26.18	0-360
7	0.98709	27.58	Pk	12.5	0.1	40.18	67.72	-27.54	0-360
8	1.1305	25.54	Pk	12.6	0.1	38.24	66.54	-28.3	0-360
9	20.13275	22.93	Pk	10.7	0.3	33.93	69.54	-35.61	0-360
10	29.81875	20.73	Pk	9.1	0.3	30.13	69.54	-39.41	0-360
Pk - Peak detector									

8.2. DIGITAL RADIATED EMISSION

Receive, Low Channel



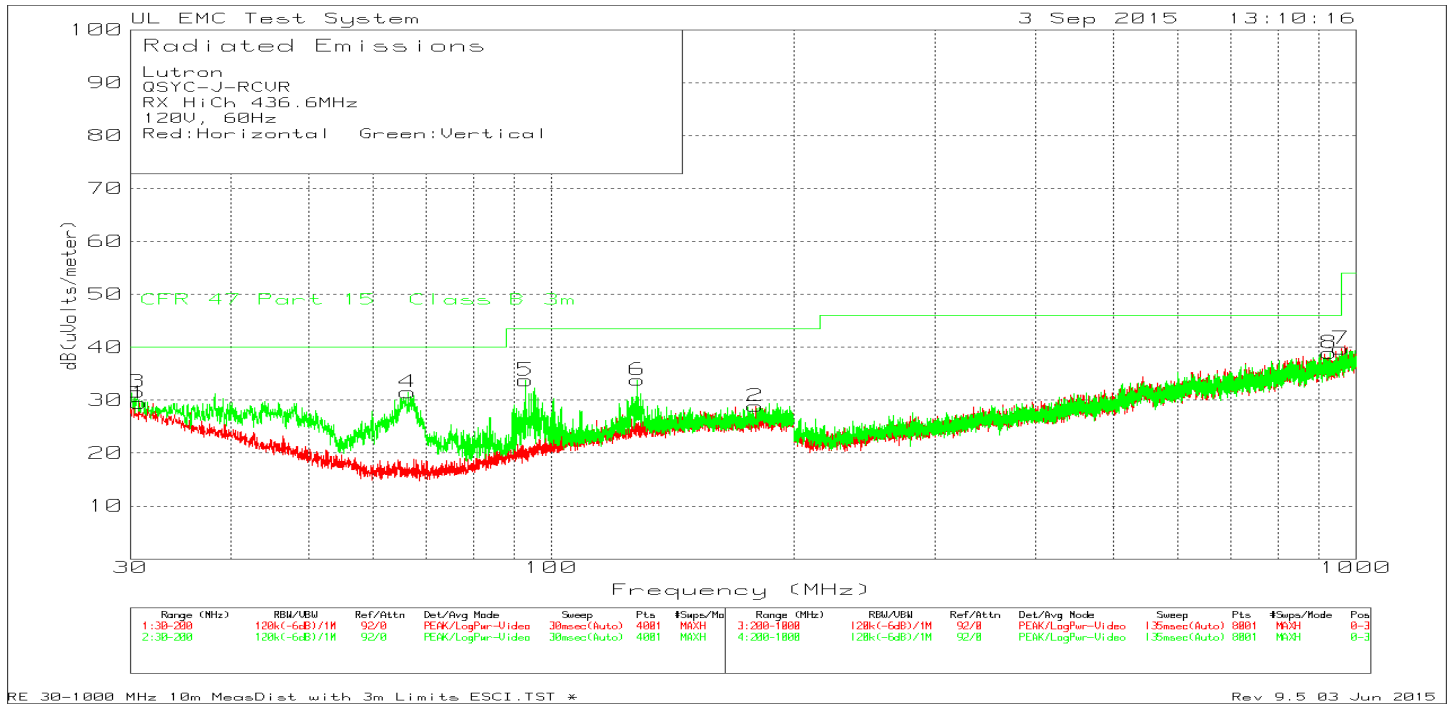
Lutron
QSYC-J-RCVR
RX LoCh 431.5MHz
120V, 60Hz
Red:Horizontal Green:Vertical

Trace Markers

Test No.	Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading	Limit:1	2	3	4	5	6
1	30.34	30.77dBuV Pk	18.1	-19.7	29.17	40	-	-	-	-	-
		Azimuth:0-360	Height:98	Horz	Margin (dB)	-10.83	-	-	-	-	-
2	183.1275	31.44dBuV Pk	16	-18.8	28.64	43.52	-	-	-	-	-
		Azimuth:0-360	Height:98	Horz	Margin (dB)	-14.88	-	-	-	-	-
3	40.0725	31.4dBuV Pk	13.9	-19.7	25.6	40	-	-	-	-	-
		Azimuth:0-360	Height:98	Vert	Margin (dB)	-14.4	-	-	-	-	-
4	66.5925	44.77dBuV Pk	6.1	-19.6	31.27	40	-	-	-	-	-
		Azimuth:0-360	Height:98	Vert	Margin (dB)	-8.73	-	-	-	-	-
5	92.985	42.4dBuV Pk	10.2	-19.5	33.1	43.52	-	-	-	-	-
		Azimuth:0-360	Height:98	Vert	Margin (dB)	-10.42	-	-	-	-	-
6	128.3875	35.6dBuV Pk	14.4	-19.3	30.7	43.52	-	-	-	-	-
		Azimuth:0-360	Height:98	Vert	Margin (dB)	-12.82	-	-	-	-	-
7	834.6	32.48dBuV Pk	22.6	-16.3	38.78	46.02	-	-	-	-	-
		Azimuth:0-360	Height:99	Horz	Margin (dB)	-7.24	-	-	-	-	-
8	973.3	30.89dBuV Pk	24.1	-14.6	40.39	53.97	-	-	-	-	-
		Azimuth:0-360	Height:99	Horz	Margin (dB)	-13.58	-	-	-	-	-
9	959.3	31.55dBuV Pk	23.5	-15.1	39.95	46.02	-	-	-	-	-
		Azimuth:0-360	Height:99	Vert	Margin (dB)	-6.07	-	-	-	-	-
10	973.6	30.3dBuV Pk	24.1	-14.6	39.8	53.97	-	-	-	-	-
		Azimuth:0-360	Height:99	Vert	Margin (dB)	-14.17	-	-	-	-	-

LIMIT 1: CFR 47 Part 15 Class B 3m
Pk - Peak detector

Receive, High Channel



Lutron
QSYC-J-RCVR
RX HiCh 436.6MHz
120V, 60Hz
Red:Horizontal Green:Vertical

Trace Markers

Test	Meter	Transducer	Gain/Loss	Corrected	Limit:1	2	3	4	5	6
No.	Frequency (MHz)	Reading	Factor (dB)	Factor (dB)	Reading dB(uVolts/meter)					
1	30.765	31.36dBuV Pk	17.8	-19.7	29.46	40	-	-	-	-
		Azimuth:0-360	Height:98	Horz	Margin (dB)	-10.54	-	-	-	-
2	179.345	31.99dBuV Pk	15.8	-18.9	28.89	43.52	-	-	-	-
		Azimuth:0-360	Height:98	Horz	Margin (dB)	-14.63	-	-	-	-
3	30.595	33.37dBuV Pk	17.9	-19.7	31.57	40	-	-	-	-
		Azimuth:0-360	Height:98	Vert	Margin (dB)	-8.43	-	-	-	-
4	66.38	45.02dBuV Pk	6.1	-19.6	31.52	40	-	-	-	-
		Azimuth:0-360	Height:98	Vert	Margin (dB)	-8.48	-	-	-	-
5	92.9425	43.05dBuV Pk	10.2	-19.5	33.75	43.52	-	-	-	-
		Azimuth:0-360	Height:98	Vert	Margin (dB)	-9.77	-	-	-	-
6	128.005	38.61dBuV Pk	14.5	-19.3	33.81	43.52	-	-	-	-
		Azimuth:0-360	Height:98	Vert	Margin (dB)	-9.71	-	-	-	-
7	959.5	31.33dBuV Pk	23.5	-15.1	39.73	46.02	-	-	-	-
		Azimuth:0-360	Height:99	Horz	Margin (dB)	-6.29	-	-	-	-
8	927.1	31.73dBuV Pk	22.8	-15.6	38.93	46.02	-	-	-	-
		Azimuth:0-360	Height:99	Vert	Margin (dB)	-7.09	-	-	-	-

LIMIT 1: CFR 47 Part 15 Class B 3m

Pk - Peak detector

9. AC MAINS LINE CONDUCTED EMISSIONS

LIMITS

§15.207 (a)
IC RSS-GEN, Section 7.2.2

Frequency of emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50
* Decreases with the logarithm of the frequency.		

TEST PROCEDURE

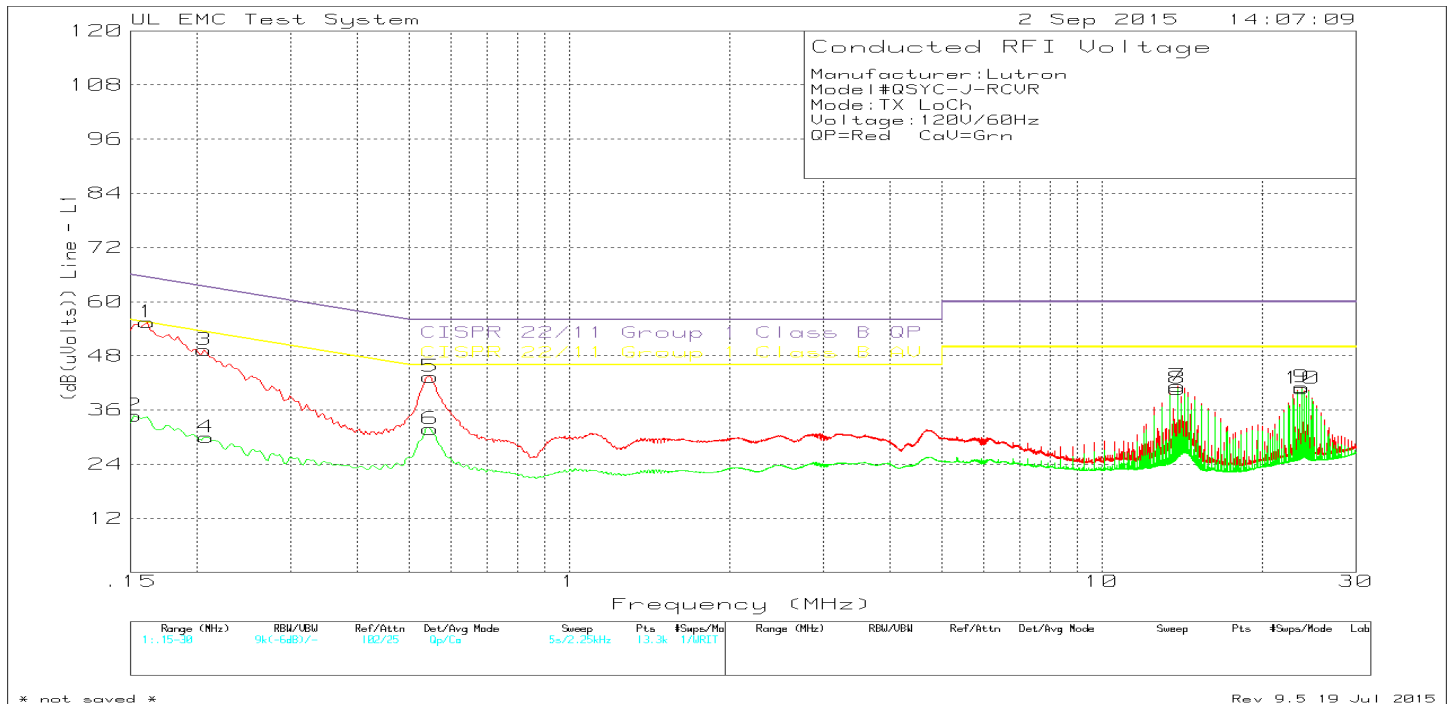
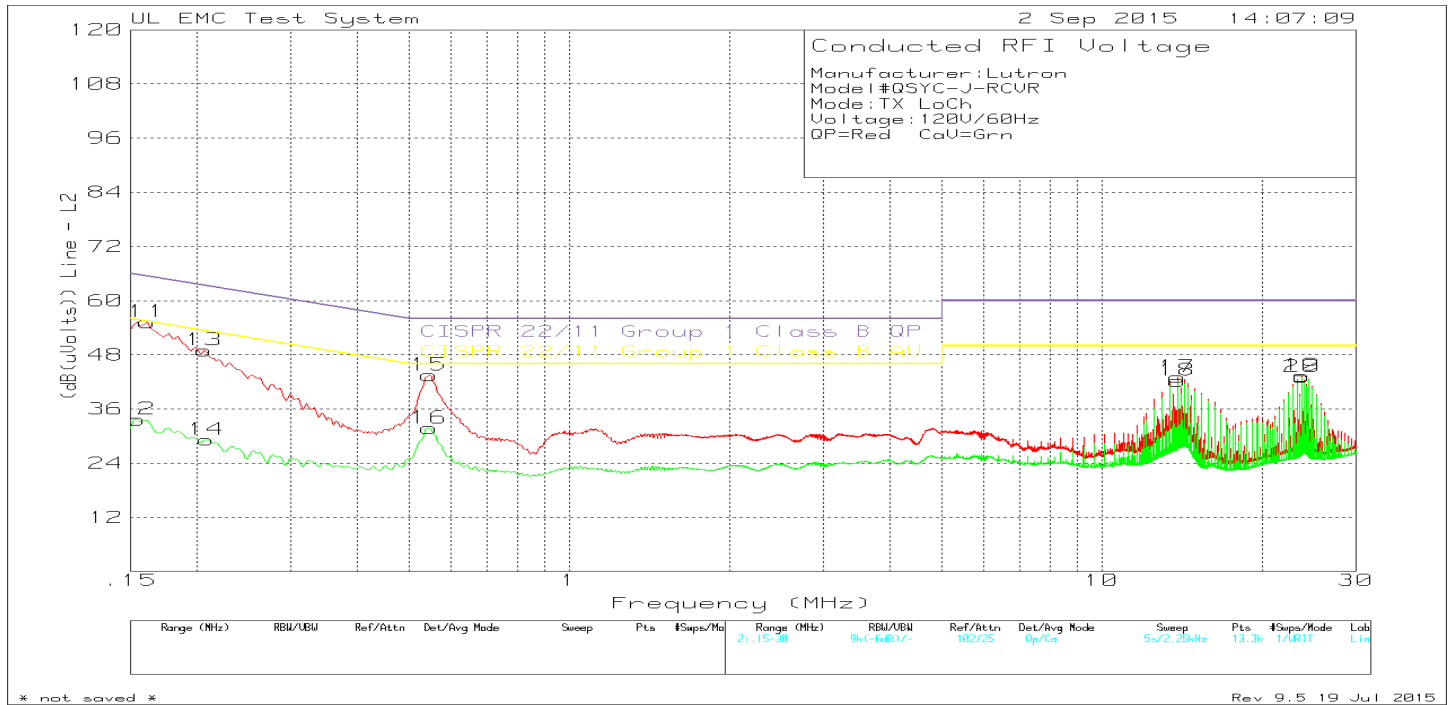
ANSI C63.4

RESULTS

No non-compliance noted:

Conducted Emissions Scan

Line and Neutral Low Channel TX



Manufacturer:Lutron
Model#QSYC-J-RCVR
Mode:TX LoCh
Voltage:120V/60Hz
QP=Red CaV=Grn

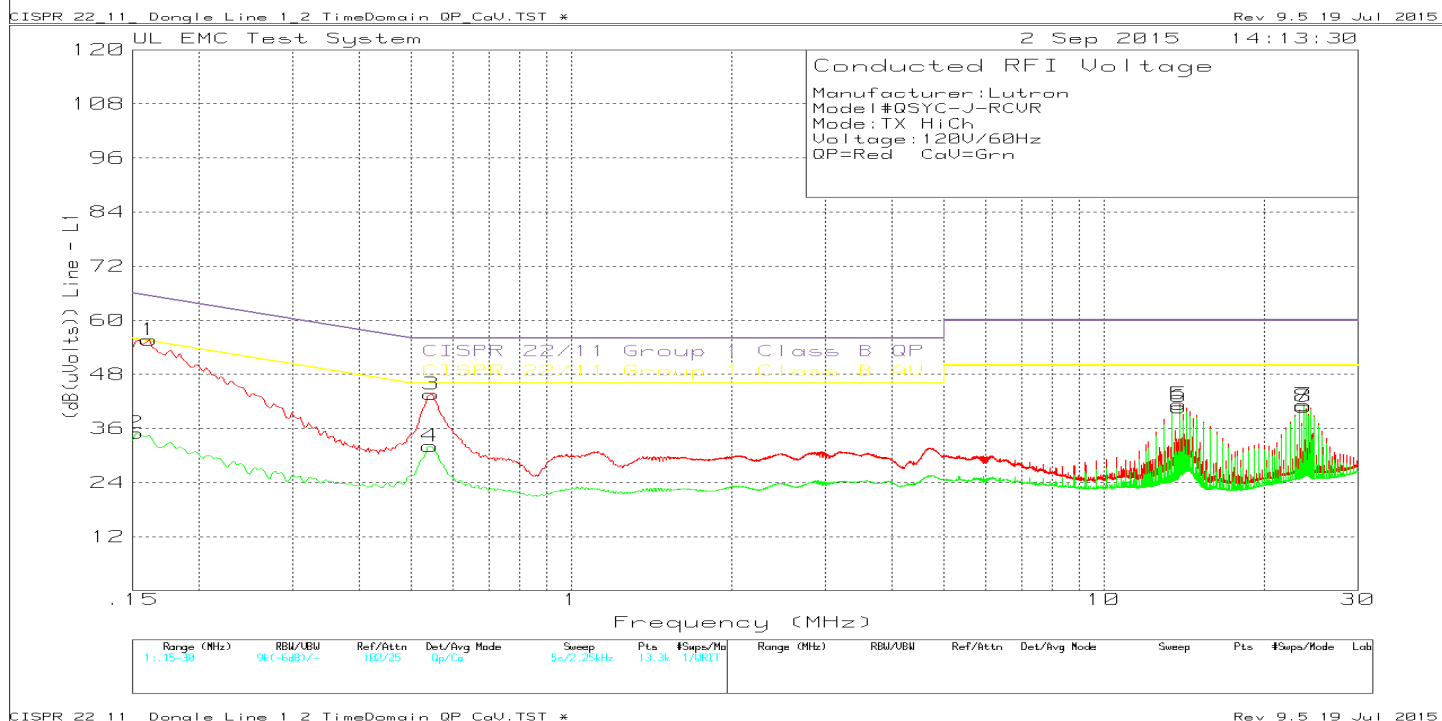
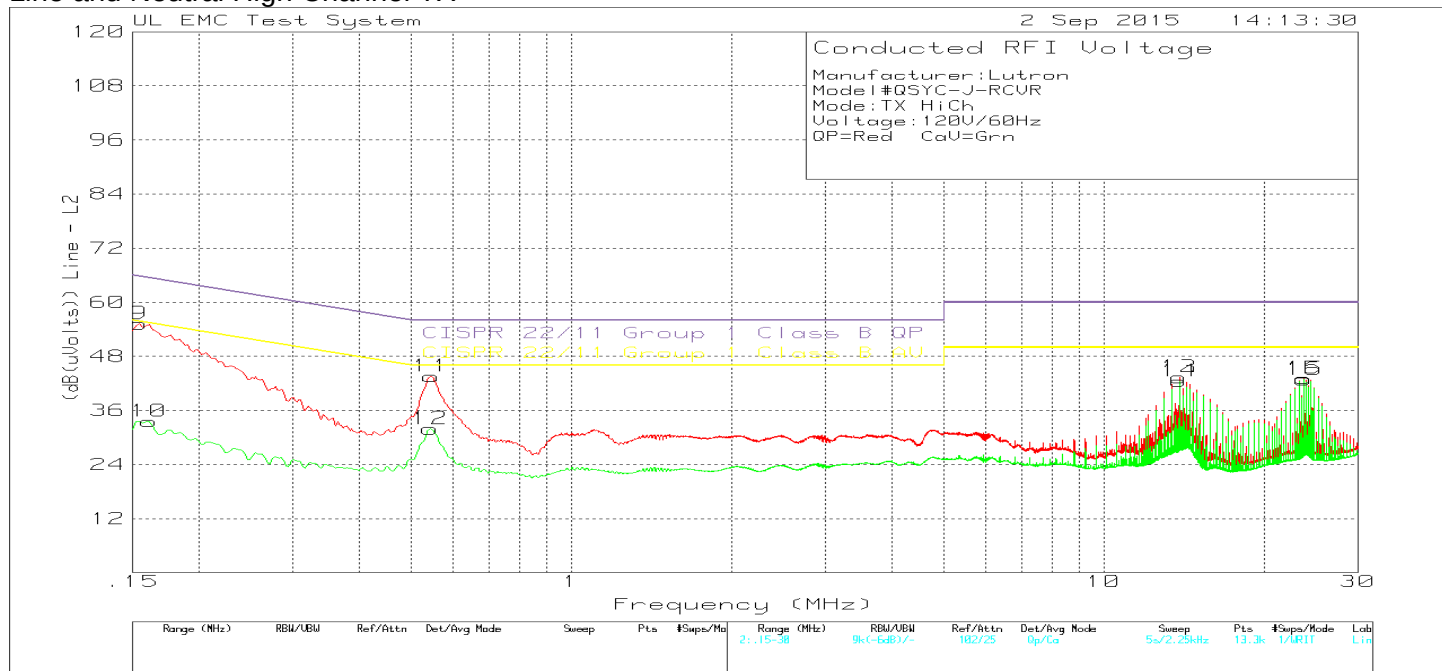
Trace Markers

Test No.	Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading (dB(uVolts))	Limit:1	2	3	4	5	6
=====											
Range 1: Line - L1 .15 - 30MHz -----											
1	.16125	42.84dBuV Qp	.1	12.5	55.44	-	-	65.4	-	-	-
					Margin (dB)	-	-	-9.96	-	-	-
2	.15225	21.99dBuV Ca	.1	12.7	34.79	-	-	-	55.88	-	-
					Margin (dB)	-	-	-	-21.09	-	-
3	.20625	37.82dBuV Qp	.1	11.4	49.32	-	-	63.35	-	-	-
					Margin (dB)	-	-	-14.03	-	-	-
4	.2085	18.46dBuV Ca	.1	11.4	29.96	-	-	-	53.26	-	-
					Margin (dB)	-	-	-	-23.3	-	-
5	.54825	32.65dBuV Qp	.1	10.6	43.35	-	-	56	-	-	-
					Margin (dB)	-	-	-12.65	-	-	-
6	.54825	21.11dBuV Ca	.1	10.6	31.81	-	-	-	46	-	-
					Margin (dB)	-	-	-	-14.19	-	-
7	13.86375	29.74dBuV Qp	.5	11.1	41.34	-	-	60	-	-	-
					Margin (dB)	-	-	-18.66	-	-	-
8	13.86375	29.11dBuV Ca	.5	11.1	40.71	-	-	-	50	-	-
					Margin (dB)	-	-	-	-9.29	-	-
9	23.766	28.27dBuV Qp	1.2	11.6	41.07	-	-	60	-	-	-
					Margin (dB)	-	-	-18.93	-	-	-
10	23.766	27.96dBuV Ca	1.2	11.6	40.76	-	-	-	50	-	-
					Margin (dB)	-	-	-	-9.24	-	-
Range 2: Line - L2 .15 - 30MHz -----											
11	.16125	42.56dBuV Qp	.1	12.6	55.26	-	-	65.4	-	-	-
					Margin (dB)	-	-	-10.14	-	-	-
12	.1545	20.8dBuV Ca	.1	12.8	33.7	-	-	-	55.75	-	-
					Margin (dB)	-	-	-	-22.05	-	-
13	.20625	37.38dBuV Qp	.1	11.5	48.98	-	-	63.35	-	-	-
					Margin (dB)	-	-	-14.37	-	-	-
14	.2085	17.59dBuV Ca	.1	11.5	29.19	-	-	-	53.26	-	-
					Margin (dB)	-	-	-	-24.07	-	-
15	.546	32.67dBuV Qp	.1	10.7	43.47	-	-	56	-	-	-
					Margin (dB)	-	-	-12.53	-	-	-
16	.546	20.96dBuV Ca	.1	10.7	31.76	-	-	-	46	-	-
					Margin (dB)	-	-	-	-14.24	-	-
17	13.8615	31.41dBuV Qp	.5	11.2	43.11	-	-	60	-	-	-
					Margin (dB)	-	-	-16.89	-	-	-
18	13.8615	30.59dBuV Ca	.5	11.2	42.29	-	-	-	50	-	-
					Margin (dB)	-	-	-	-7.71	-	-
19	23.7615	30.46dBuV Qp	1.2	11.7	43.36	-	-	60	-	-	-
					Margin (dB)	-	-	-16.64	-	-	-
20	23.7615	30.21dBuV Ca	1.2	11.7	43.11	-	-	-	50	-	-
					Margin (dB)	-	-	-	-6.89	-	-

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

Qp - Quasi-Peak detector
RMS - RMS detection

Line and Neutral High Channel TX



Manufacturer:Lutron
Model#QSYC-J-RCVR
Mode:TX HiCh
Voltage:120V/60Hz
QP=Red CaV=Grn

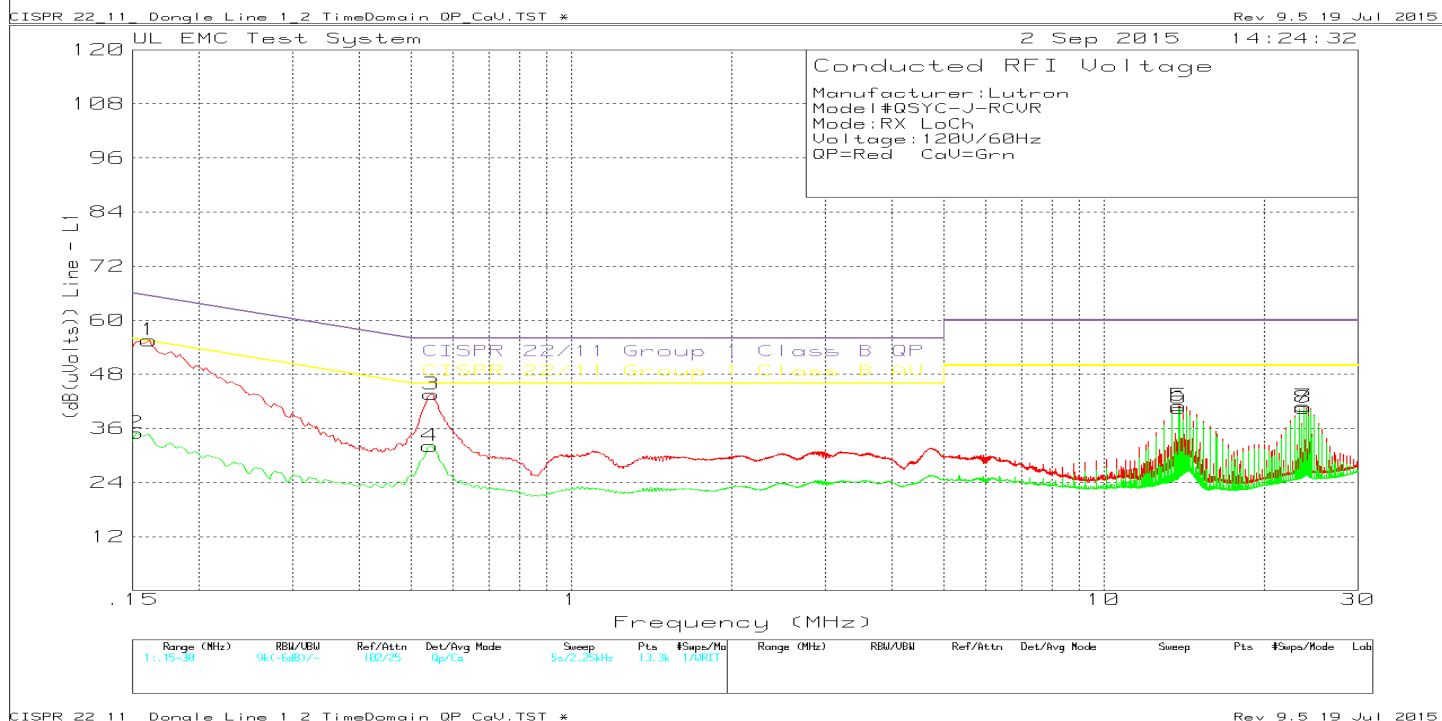
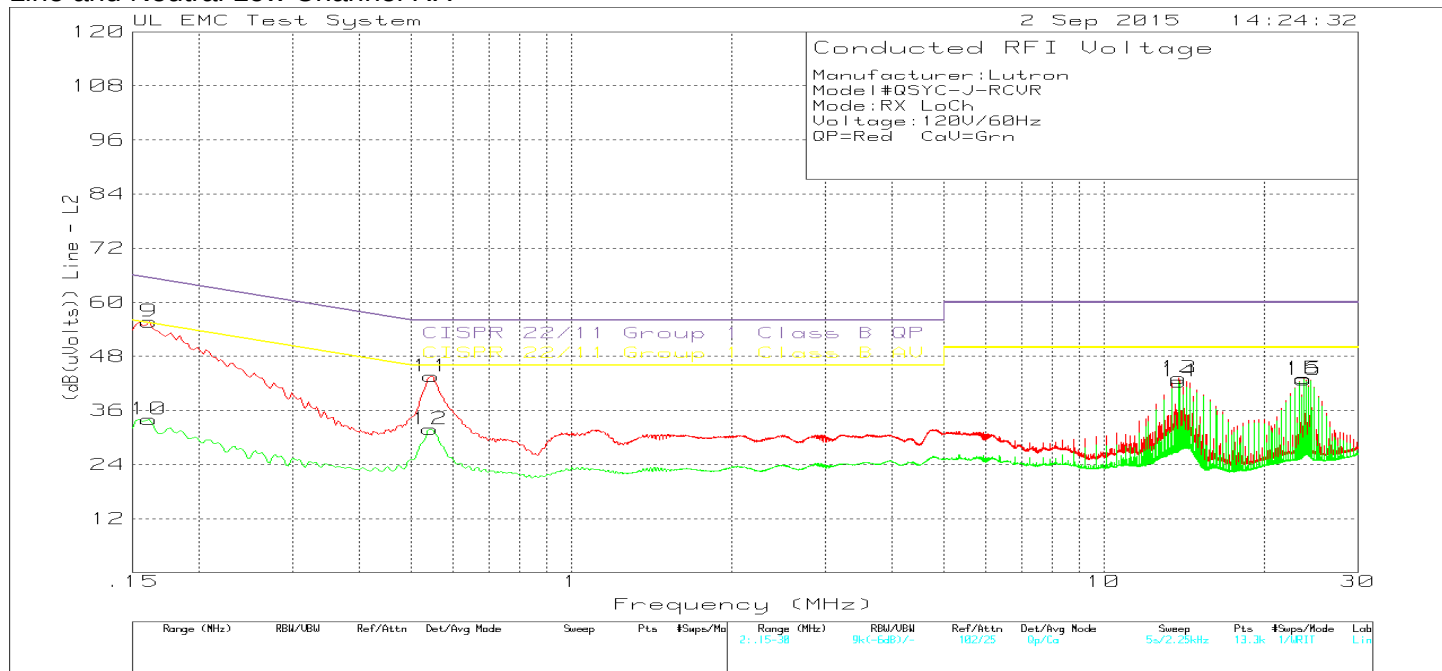
Trace Markers

Test No.	Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading (dB(uVolts))	Limit:1	2	3	4	5	6
=====											
Range 1: Line - L1 .15 - 30MHz -----											
1	.16125	43.05dBuV Qp	.1	12.5	55.65	-	-	65.4	-	-	-
					Margin (dB)	-	-	-9.75	-	-	-
2	.15225	22.19dBuV Ca	.1	12.7	34.99	-	-	-	55.88	-	-
					Margin (dB)	-	-	-	-20.89	-	-
3	.546	32.89dBuV Qp	.1	10.6	43.59	-	-	56	-	-	-
					Margin (dB)	-	-	-12.41	-	-	-
4	.54375	21.36dBuV Ca	.1	10.6	32.06	-	-	-	46	-	-
					Margin (dB)	-	-	-	-13.94	-	-
5	13.8525	29.77dBuV Qp	.5	11.1	41.37	-	-	60	-	-	-
					Margin (dB)	-	-	-18.63	-	-	-
6	13.8525	29.13dBuV Ca	.5	11.1	40.73	-	-	-	50	-	-
					Margin (dB)	-	-	-	-9.27	-	-
7	23.748	28.32dBuV Qp	1.2	11.6	41.12	-	-	60	-	-	-
					Margin (dB)	-	-	-18.88	-	-	-
8	23.748	28.02dBuV Ca	1.2	11.6	40.82	-	-	-	50	-	-
					Margin (dB)	-	-	-	-9.18	-	-
Range 2: Line - L2 .15 - 30MHz -----											
9	.1545	42.29dBuV Qp	.1	12.8	55.19	-	-	65.75	-	-	-
					Margin (dB)	-	-	-10.56	-	-	-
10	.16125	20.9dBuV Ca	.1	12.6	33.6	-	-	-	55.4	-	-
					Margin (dB)	-	-	-	-21.8	-	-
11	.546	32.76dBuV Qp	.1	10.7	43.56	-	-	56	-	-	-
					Margin (dB)	-	-	-12.44	-	-	-
12	.54375	21.1dBuV Ca	.1	10.7	31.9	-	-	-	46	-	-
					Margin (dB)	-	-	-	-14.1	-	-
13	13.8525	31.65dBuV Qp	.5	11.2	43.35	-	-	60	-	-	-
					Margin (dB)	-	-	-16.65	-	-	-
14	13.8525	30.77dBuV Ca	.5	11.2	42.47	-	-	-	50	-	-
					Margin (dB)	-	-	-	-7.53	-	-
15	23.74688	30.22dBuV Qp	1.2	11.7	43.12	-	-	60	-	-	-
					Margin (dB)	-	-	-16.88	-	-	-
16	23.748	29.96dBuV Ca	1.2	11.7	42.86	-	-	-	50	-	-
					Margin (dB)	-	-	-	-7.14	-	-

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

Qp - Quasi-Peak detector
RMS - RMS detection

Line and Neutral Low Channel RX



Manufacturer:Lutron
Model#QSYC-J-RCVR
Mode:RX LoCh
Voltage:120V/60Hz
QP=Red CaV=Grn

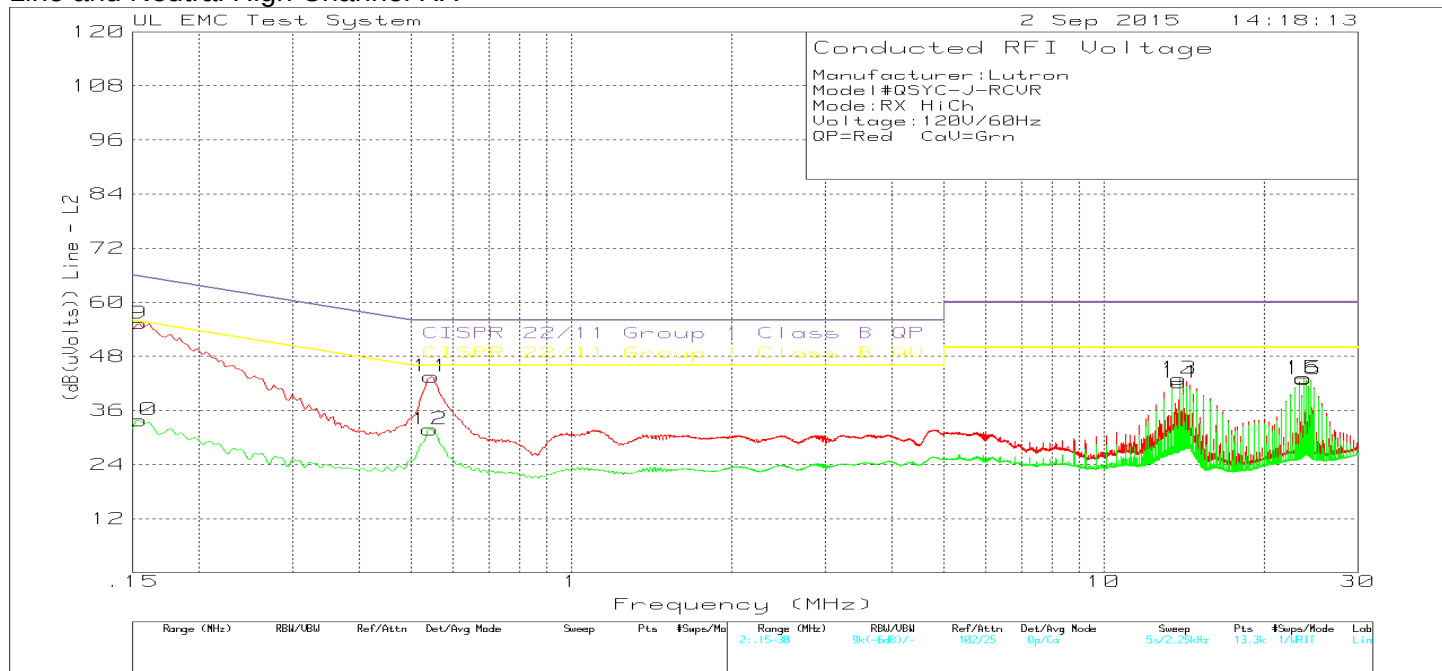
Trace Markers

Test No.	Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading (dB(uVolts))	Limit:1	2	3	4	5	6
=====											
Range 1: Line - L1 .15 - 30MHz											
1	.16125	42.98dBuV Qp	.1	12.5	55.58	-	-	65.4	-	-	-
					Margin (dB)	-	-	-9.82	-	-	-
2	.15225	22.19dBuV Ca	.1	12.7	34.99	-	-	-	55.88	-	-
					Margin (dB)	-	-	-	-20.89	-	-
3	.546	32.87dBuV Qp	.1	10.6	43.57	-	-	56	-	-	-
					Margin (dB)	-	-	-12.43	-	-	-
4	.54375	21.4dBuV Ca	.1	10.6	32.1	-	-	-	46	-	-
					Margin (dB)	-	-	-	-13.9	-	-
5	13.848	29.49dBuV Qp	.5	11.1	41.09	-	-	60	-	-	-
					Margin (dB)	-	-	-18.91	-	-	-
6	13.848	28.86dBuV Ca	.5	11.1	40.46	-	-	-	50	-	-
					Margin (dB)	-	-	-	-9.54	-	-
7	23.73675	28.12dBuV Qp	1.2	11.6	40.92	-	-	60	-	-	-
					Margin (dB)	-	-	-19.08	-	-	-
8	23.73675	27.78dBuV Ca	1.2	11.6	40.58	-	-	-	50	-	-
					Margin (dB)	-	-	-	-9.42	-	-
Range 2: Line - L2 .15 - 30MHz											
9	.16125	43.02dBuV Qp	.1	12.6	55.72	-	-	65.4	-	-	-
					Margin (dB)	-	-	-9.68	-	-	-
10	.16125	21.33dBuV Ca	.1	12.6	34.03	-	-	-	55.4	-	-
					Margin (dB)	-	-	-	-21.37	-	-
11	.546	32.78dBuV Qp	.1	10.7	43.58	-	-	56	-	-	-
					Margin (dB)	-	-	-12.42	-	-	-
12	.54375	21.07dBuV Ca	.1	10.7	31.87	-	-	-	46	-	-
					Margin (dB)	-	-	-	-14.13	-	-
13	13.84575	31.53dBuV Qp	.5	11.2	43.23	-	-	60	-	-	-
					Margin (dB)	-	-	-16.77	-	-	-
14	13.84575	30.75dBuV Ca	.5	11.2	42.45	-	-	-	50	-	-
					Margin (dB)	-	-	-	-7.55	-	-
15	23.73675	30.23dBuV Qp	1.2	11.7	43.13	-	-	60	-	-	-
					Margin (dB)	-	-	-16.87	-	-	-
16	23.73675	29.96dBuV Ca	1.2	11.7	42.86	-	-	-	50	-	-
					Margin (dB)	-	-	-	-7.14	-	-

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

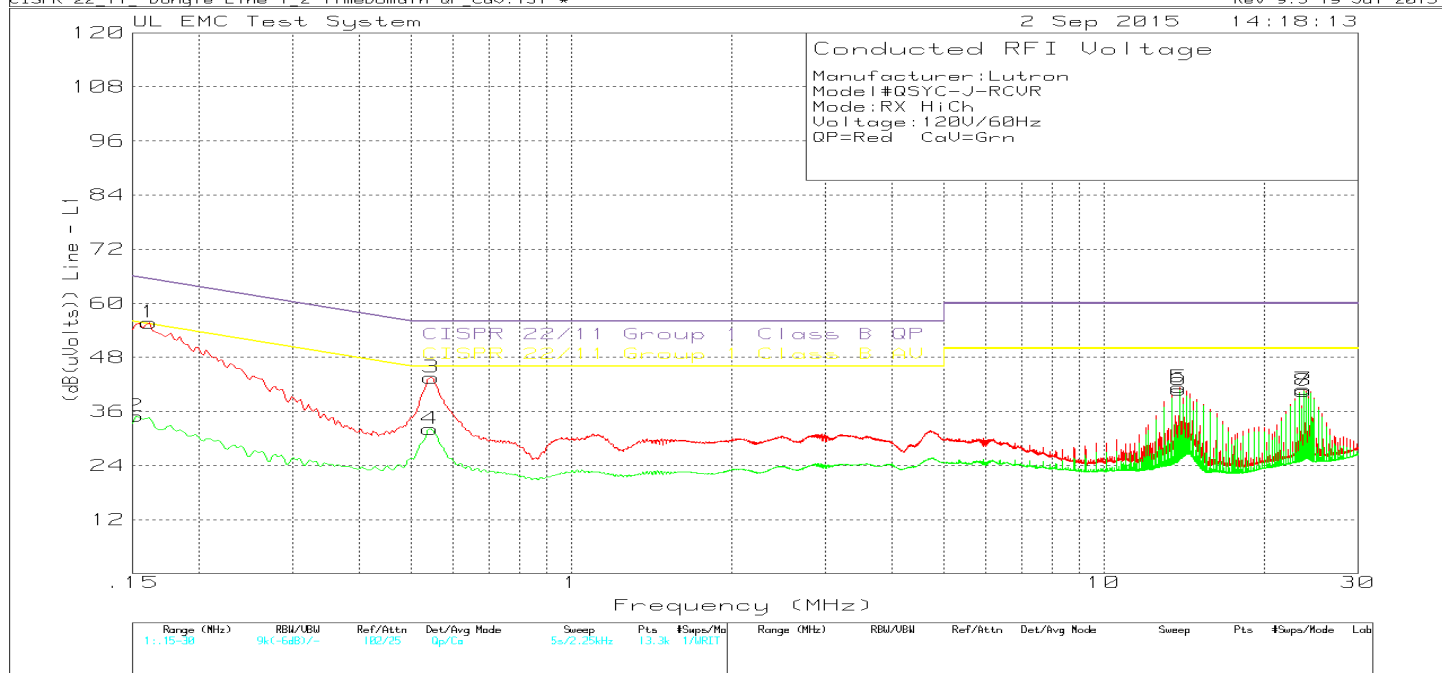
Qp - Quasi-Peak detector
RMS - RMS detection

Line and Neutral High Channel RX



CISPR 22.11 Dongle Line 1.2 TimeDomain QP_CaU.TST *

Rev 9.5 19 Jul 2015



CISPR 22.11 Dongle Line 1.2 TimeDomain QP_CaU.TST *

Rev 9.5 19 Jul 2015

Manufacturer:Lutron
Model#QSYC-J-RCVR
Mode:RX HiCh
Voltage:120V/60Hz
QP=Red CaV=Grn

Trace Markers

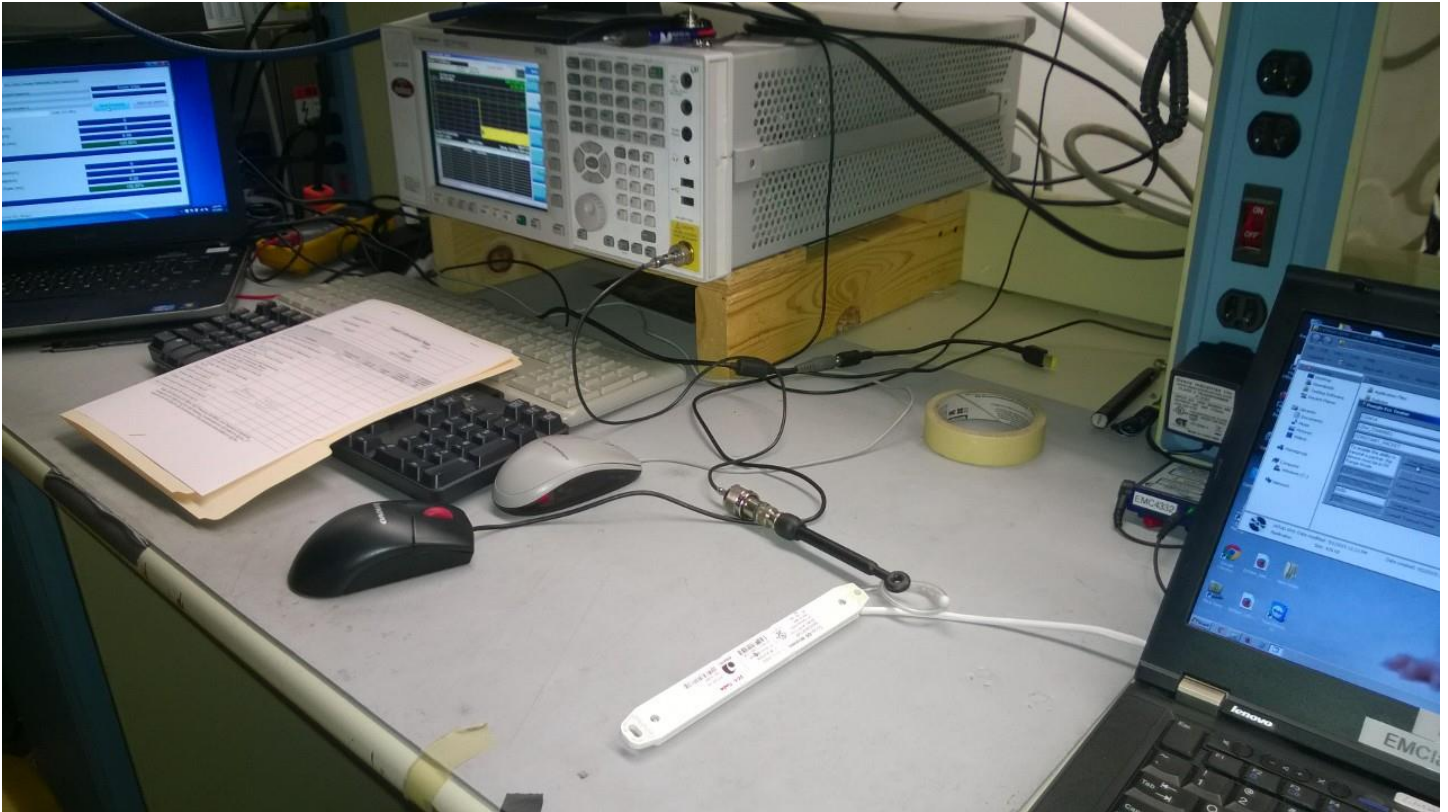
Test No.	Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading (dB(uVolts))	Limit:1	2	3	4	5	6
=====											
Range 1: Line - L1 .15 - 30MHz											
1	.16125	43.1dBuV Qp	.1	12.5	55.7	-	-	65.4	-	-	-
					Margin (dB)	-	-	-9.7	-	-	-
2	.15225	22.19dBuV Ca	.1	12.7	34.99	-	-	-	55.88	-	-
					Margin (dB)	-	-	-	-20.89	-	-
3	.546	32.82dBuV Qp	.1	10.6	43.52	-	-	56	-	-	-
					Margin (dB)	-	-	-12.48	-	-	-
4	.54375	21.4dBuV Ca	.1	10.6	32.1	-	-	-	46	-	-
					Margin (dB)	-	-	-	-13.9	-	-
5	13.8525	29.81dBuV Qp	.5	11.1	41.41	-	-	60	-	-	-
					Margin (dB)	-	-	-18.59	-	-	-
6	13.8525	29.17dBuV Ca	.5	11.1	40.77	-	-	-	50	-	-
					Margin (dB)	-	-	-	-9.23	-	-
7	23.74575	28.12dBuV Qp	1.2	11.6	40.92	-	-	60	-	-	-
					Margin (dB)	-	-	-19.08	-	-	-
8	23.74575	27.78dBuV Ca	1.2	11.6	40.58	-	-	-	50	-	-
					Margin (dB)	-	-	-	-9.42	-	-
Range 2: Line - L2 .15 - 30MHz											
9	.1545	42.42dBuV Qp	.1	12.8	55.32	-	-	65.75	-	-	-
					Margin (dB)	-	-	-10.43	-	-	-
10	.1545	20.96dBuV Ca	.1	12.8	33.86	-	-	-	55.75	-	-
					Margin (dB)	-	-	-	-21.89	-	-
11	.546	32.7dBuV Qp	.1	10.7	43.5	-	-	56	-	-	-
					Margin (dB)	-	-	-12.5	-	-	-
12	.54375	21.02dBuV Ca	.1	10.7	31.82	-	-	-	46	-	-
					Margin (dB)	-	-	-	-14.18	-	-
13	13.8525	31.38dBuV Qp	.5	11.2	43.08	-	-	60	-	-	-
					Margin (dB)	-	-	-16.92	-	-	-
14	13.8525	30.5dBuV Ca	.5	11.2	42.2	-	-	-	50	-	-
					Margin (dB)	-	-	-	-7.8	-	-
15	23.74575	30.31dBuV Qp	1.2	11.7	43.21	-	-	60	-	-	-
					Margin (dB)	-	-	-16.79	-	-	-
16	23.74575	30.09dBuV Ca	1.2	11.7	42.99	-	-	-	50	-	-
					Margin (dB)	-	-	-	-7.01	-	-

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

Qp - Quasi-Peak detector
RMS - RMS detection

10. SETUP PHOTOS

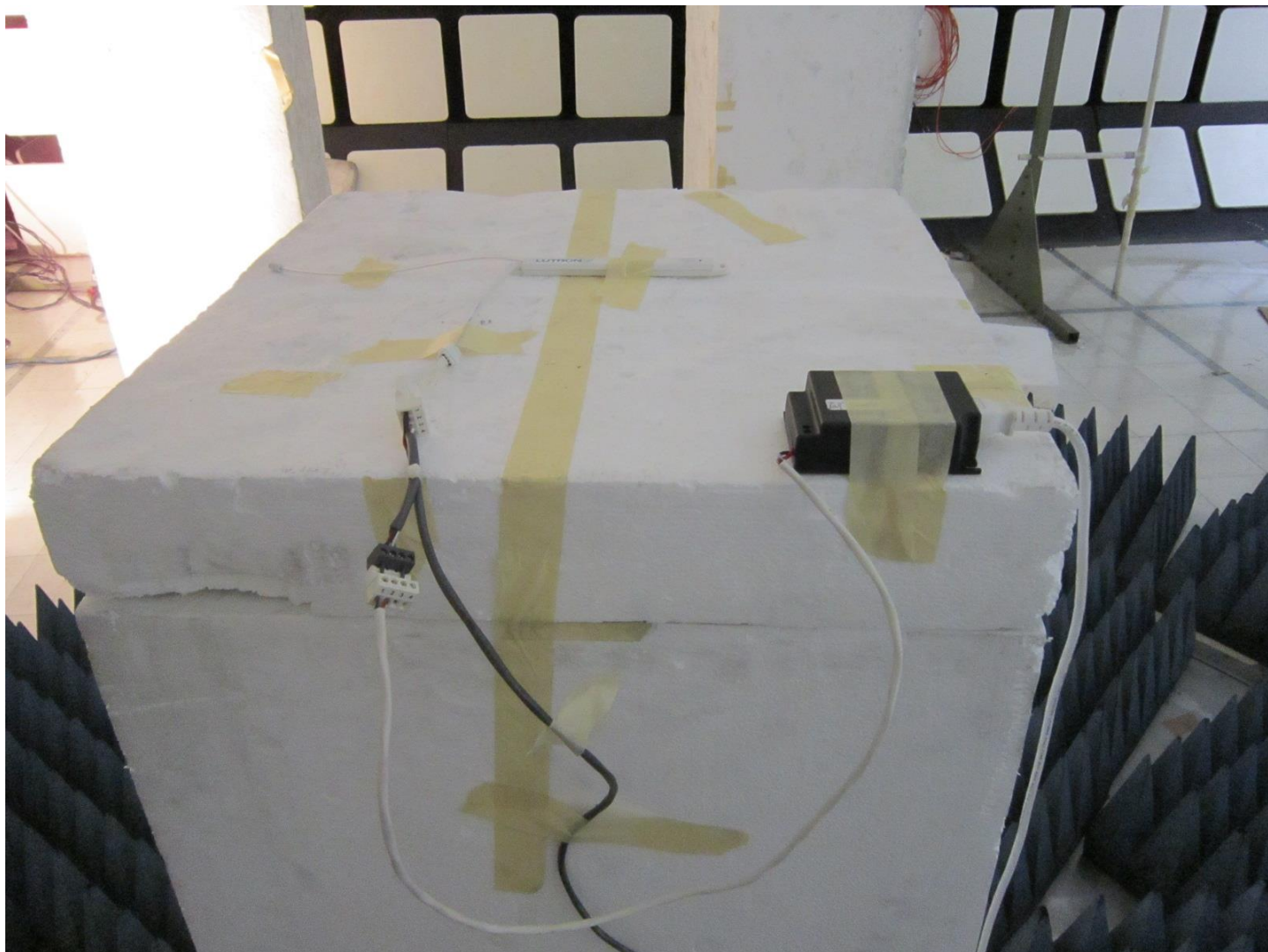
NEARFIELD MEASUREMENTS



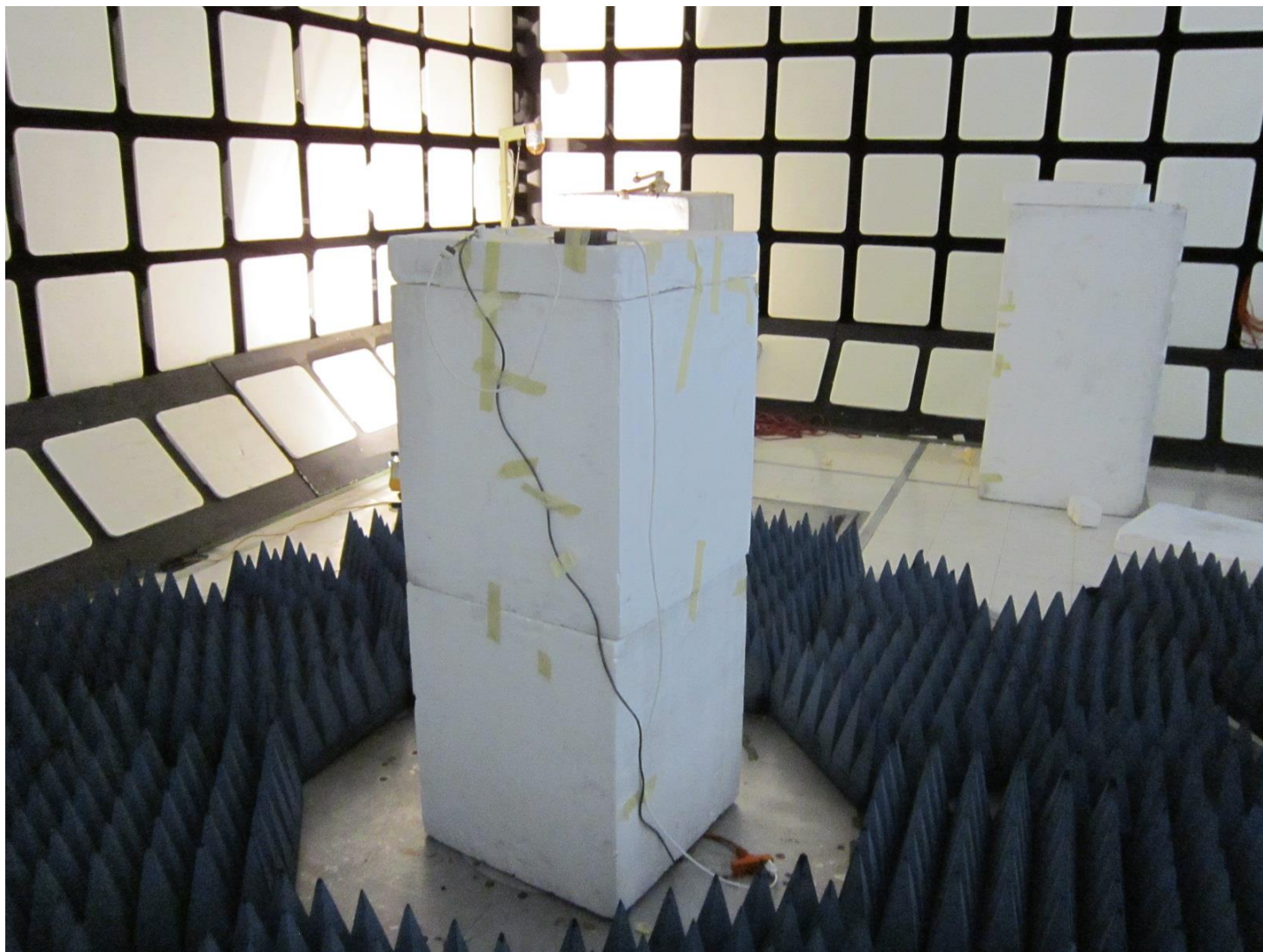
RADIATED EMISSION CONFIGURATION Y-AXIS



RADIATED EMISSION CONFIGURATION X-AXIS



RADIATED EMISSION CONFIGURATION ABOVE 1GHz



LINE CONDUCTED EMISSIONS



END OF REPORT