



FCC CFR47 PART 15 SUBPART C
INDUSTRY CANADA RSS-210 ISSUE 8

CERTIFICATION TEST REPORT

FOR

REPEATER

MODEL NUMBER: CCD-TRANS

**FCC ID: JPZ0087
IC: 2851A-JPZ0087**

REPORT NUMBER: 1001421784

ISSUE DATE:2011-12-20

Prepared for
**LUTRON ELECTRONICS INC
7200 SUTTER ROAD
COOPERBURG
PA 18036, USA**

Prepared by
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NVLAP LAB CODE 100255-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	2011-12-20	Initial Issue	B. DeLisi

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: LUTRON ELECTRONICS INC
7200 SUTTER ROAD
COOPERBURG, PA 18036, USA

EUT DESCRIPTION: Repeater

MODEL: CCD-TRANS

SERIAL NUMBER: Non-serialized production unit

DATE TESTED: 2011-09-21 through 2011-12-20

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C	Pass
INDUSTRY CANADA RSS-210 Issue 8, Annex 1	Pass
INDUSTRY CANADA RSS-GEN Issue 3	Pass

Underwriters Laboratories Inc. tested the above equipment in accordance with the requirements set forth in the above standards, using test results reported in the test report documents referenced below and/or documentation furnished by the applicant. All indications of Pass/Fail in this report are opinions expressed by Underwriters Laboratories Inc. based on interpretations of these calculations. The results show that the equipment 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 by the referenced documents. This document may not be altered or revised in any way unless done so by Underwriters Laboratories Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Underwriters Laboratories 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 By:



Joseph Danisi
Lead Engineering Associate
UL

Tested By:



Bob DeLisi
Sr. Staff Engineer
UL

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2003, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-GEN Issue 3, and RSS-210 Issue 8.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 1285 Walt Whitman Rd. Melville, NY 11747, USA.

UL Melville is accredited by NVLAP, Laboratory Code 100255-0. The full scope of accreditation can be viewed at <http://ts.nist.gov/standards/scopes/1002550.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, 0.15 to 30 MHz	± 3.3 dB
Radiated Disturbance, 30 to 1000 MHz	± 4.00 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a repeater intended for Lutron lighting applications.

The model number was changed after testing was completed to CCD-TRANS. Data in this report shows CCD-TRANS-BL and is representative of the CCD-TRANS.

5.2. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a permanently attached dipole antenna.

5.3. SOFTWARE AND FIRMWARE

The test utility software used during testing was cct-0.3.1.1-FCC provided by Lutron Electronics Inc..

5.4. WORST-CASE CONFIGURATION AND MODE

Testing was conducted at the lowest and highest channels available in the device for field strength measurements. The antenna and device were positioned in the worst case orientation. For antenna port tests, the center channel was used for all tests.

5.5. MODIFICATIONS

A ferrite, manufactured by Fair-Rite, part number 0443167251 was added to the Ethernet cable with one turn.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Compaq	CQ56-115DX	CNF1134NRP	DoC
Laptop AC Adpater	Compaq	PA1650-32Ht	1341838902	DoC

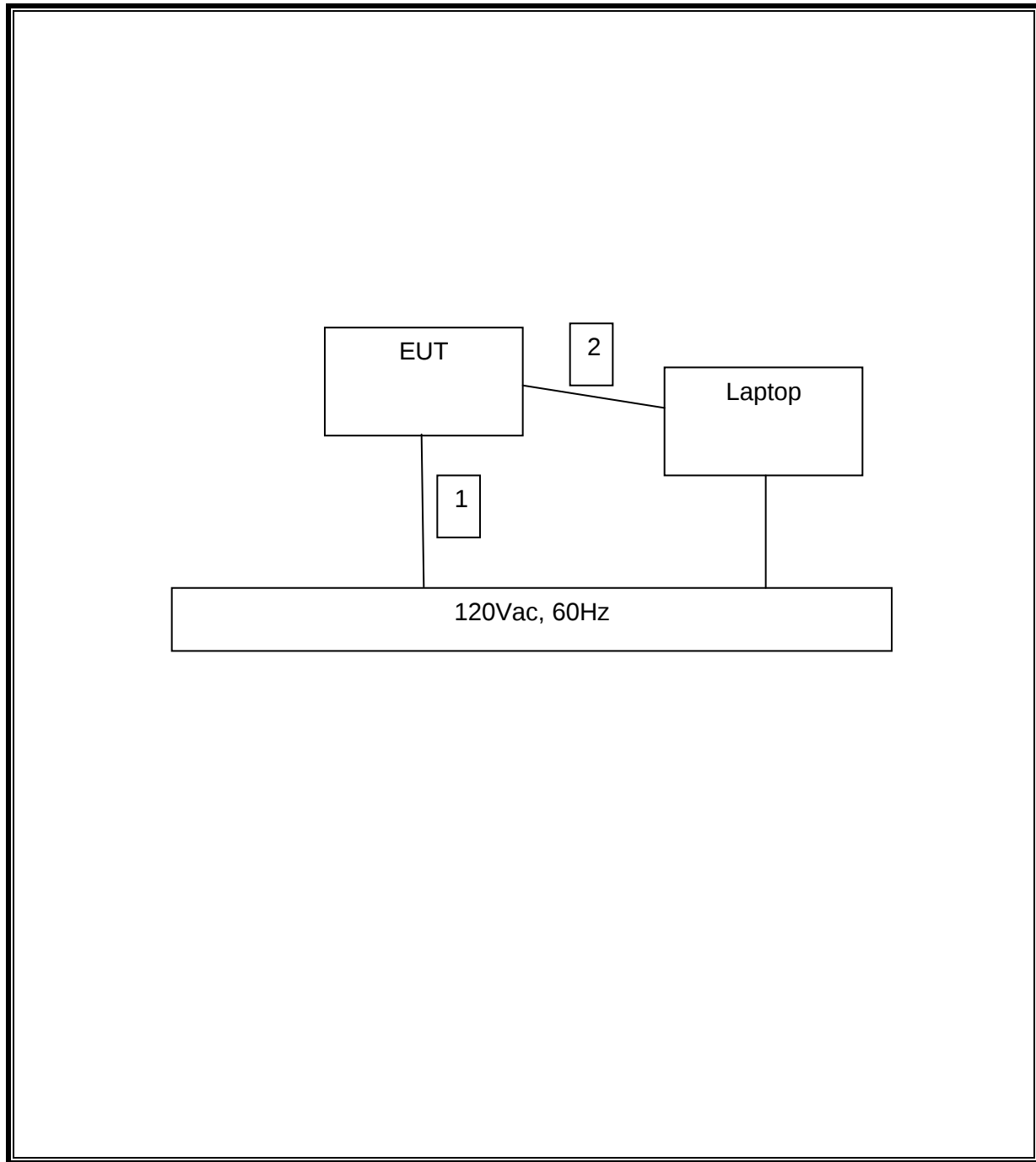
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identica Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	1	AC	Unshielded	1.8m	None
2	Ethernet	1	RJ-45	Unshielded	1.0m	None

TEST SETUP

The EUT was connected to a laptop. The device will not transmit when a USB dongle is connected to the device. The USB dongle is for software upgrades.

SETUP DIAGRAM FOR TESTS



SETUP FOR DIGITAL DEVICE TESTS

SUPPORT EQUIPMENT

I/O CABLE LIST						
Cable No.	Port	# of Identica Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	1	AC	Unshielded	1.8m	None
2	Ethernet	1	RJ-45	Unshielded	1.0m	None
3	USB	1	USB	Shielded	2.0m	None

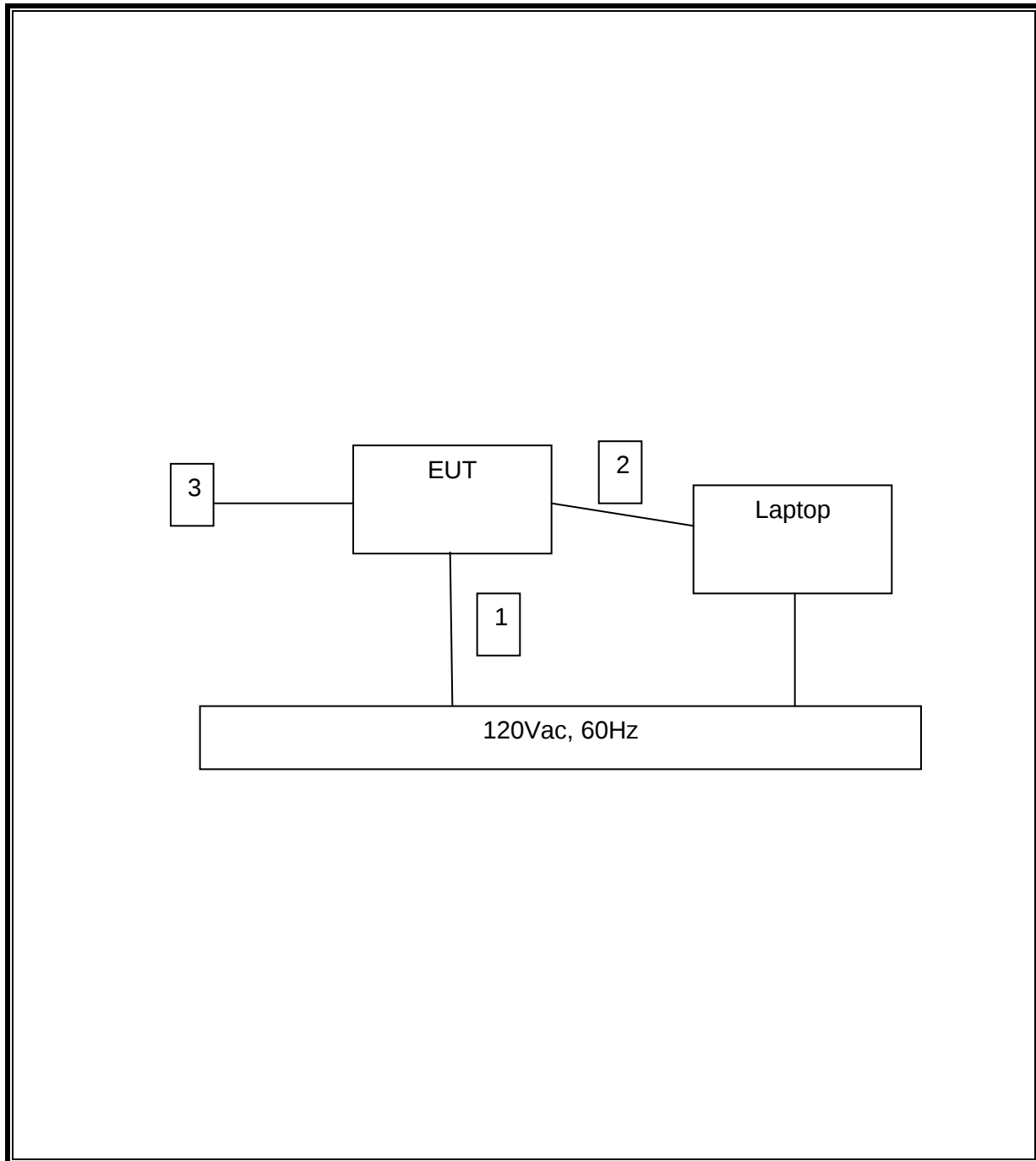
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identica Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	1	AC	Unshielded	1.8m	None
2	Ethernet	1	RJ-45	Unshielded	1.0m	None
3	USB	1	USB	Shielded	2.0m	None

TEST SETUP

Receive tests - The EUT was connected to a laptop and USB dongle.

SETUP DIAGRAM FOR DIGITAL DEVICE TESTS



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment Used – Radiated Emissions					
Description	Manufacturer	Model	Identifier	Cal Date	Cal Due Date
30-1000MHz					
EMI Receiver	Rohde & Schwarz	ESIB40	34968	2011-03-01	2012-03-01
Bicon Antenna	Schaffner	VBA6106A	54	2011-04-05	2012-04-05
Log-P Antenna	Schaffner	UPA6109	44067	2011-04-29	2012-04-29
Bias Tee	Miteq	AM-1523-7687	44392	N/A	N/A
Bias Tee	Miteq	AM-1523-7687	44393	N/A	N/A
Preamp	Miteq	AM-3A-000110-7687	44391	N/A	N/A
Preamp	Miteq	AM-3A-000110-7687	44394	N/A	N/A
Switch Driver	HP	11713A	ME7A-627	N/A	N/A
System Controller	Sunol Sciences	SC99V	44396	N/A	N/A
Camera Controller	Panasonic	WV-CU254	44395	N/A	N/A
RF Switch Box	UL	1	44398	N/A	N/A
Measurement Software	UL	Version 9.3	44740	N/A	N/A
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	4268	2010-12-07	2012-12-07
Multimeter	Fluke	83III	ME5B-305	2011-02-01	2012-02-29
Above 1GHz (Band Optimized System)					
Spectrum Analyzer	Agilent	E4446A	72823	2011-07-26	2012-07-26
Horn Antenna (1-2 GHz)	ETS	3161-01	51442	2008-03-28	See * below
Horn Antenna (2-4 GHz)	ETS	3161-02	48107	2007-09-27	See * below
Horn Antenna (4-8 GHz)	ETS	3161-03	48106	2007-09-27	See * below
Signal Path Controller	HP	11713A	50250	N/A	N/A
Gain Controller	HP	11713A	50251	N/A	N/A
RF Switch / Preamp Fixture	UL	BOMS1	50249	N/A	N/A
System Controller	UL	BOMS2	50252	N/A	N/A
Measurement Software	UL	Version 9.3	44740	N/A	N/A
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	4268	2010-12-07	2012-12-07
Multimeter	Fluke	83III	ME5B-305	2011-02-01	2012-02-29

Test Equipment Used – Radiated Emissions

Description	Manufacturer	Model	Identifier	Cal Date	Cal Due Date
* - Note: As allowed by the calibration standard ANSI C63.4 Section 4.4.2, standard gain horns need only a one-time calibration. Only if physical damage occurs will the horn antenna require re-calibration. * Gain standard horn antennas (sometimes called standard gain horn antennas) need not be calibrated beyond that which is provided by the manufacturer unless they are damaged or deterioration is suspected, or they are used at a distance closer than $2D^2/\lambda$. Gain standard horn antennas have gains that are fixed by their dimensions and dimensional tolerances.					

Test Equipment Used – Conducted Emissions

Description	Manufacturer	Model	Identifier	Cal Date	Cal Due Date
Conducted Emissions – GP 1					
EMI Receiver	Rohde & Schwarz	ESIB26	ME5B-081	2011-01-27	2012-01-31
LISN	EMCO	3825/2R	ME5-790	2011-02-04	2012-02-29
LISN	Solar	9252-50-R-24-BNC	ME5A-636	2011-02-04	2012-02-29
Switch Driver	HP	11713A	44397	N/A	N/A
RF Switch Box	UL	4	44404	N/A	N/A
Measurement Software	UL	Version 9.3	44736	N/A	N/A
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	43734	2010-03-08	2012-03-08
Multimeter	Fluke	83III	ME5B-305	2011-02-01	2012-02-29

Test Equipment Used – Occupied Bandwidth/Cease Operation/Duty Cycle

Description	Manufacturer	Model	Identifier	Cal Date	Cal Due Date
Spectrum Analyzer	Agilent	E4446A	72822	2011-02-07	2012-02-07
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	4268	2010-03-08	2012-03-08
Measurement Software	UL	Version 9.3	44740		
Multimeter	Fluke	83III	ME5B-305	2011-02-01	2012-02-29

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 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 C63.4

The transmitter output is connected to the spectrum analyzer.

20dB Bandwidth: The RBW is set to 10 KHz. The VBW is set to 100 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:

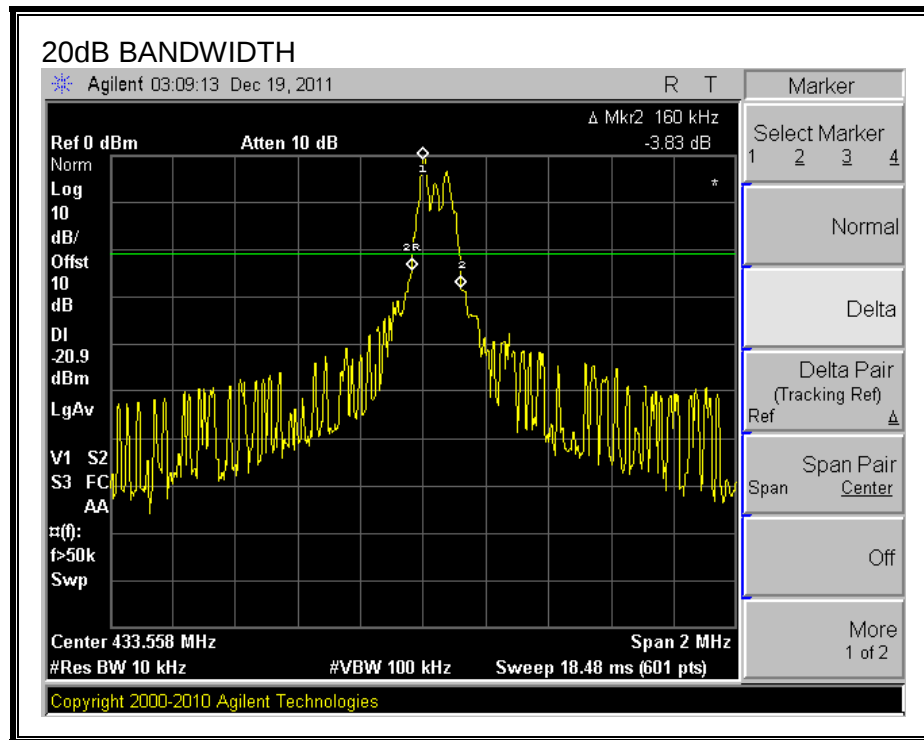
20dB Bandwidth

Frequency (MHz)	20dB Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
433.6	160	1084	-924

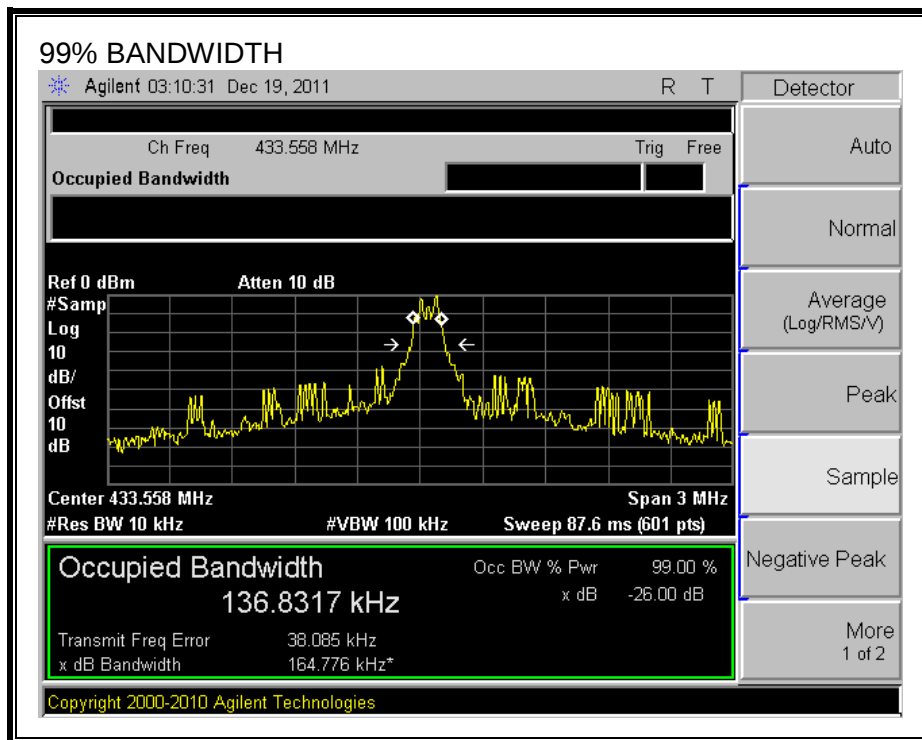
99% Bandwidth

Frequency (MHz)	99% Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
433.6	136.8	1084	-947.2

20dB BANDWIDTH



99% BANDWIDTH



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 1 MHz and the VBW is set to 1 MHz. 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

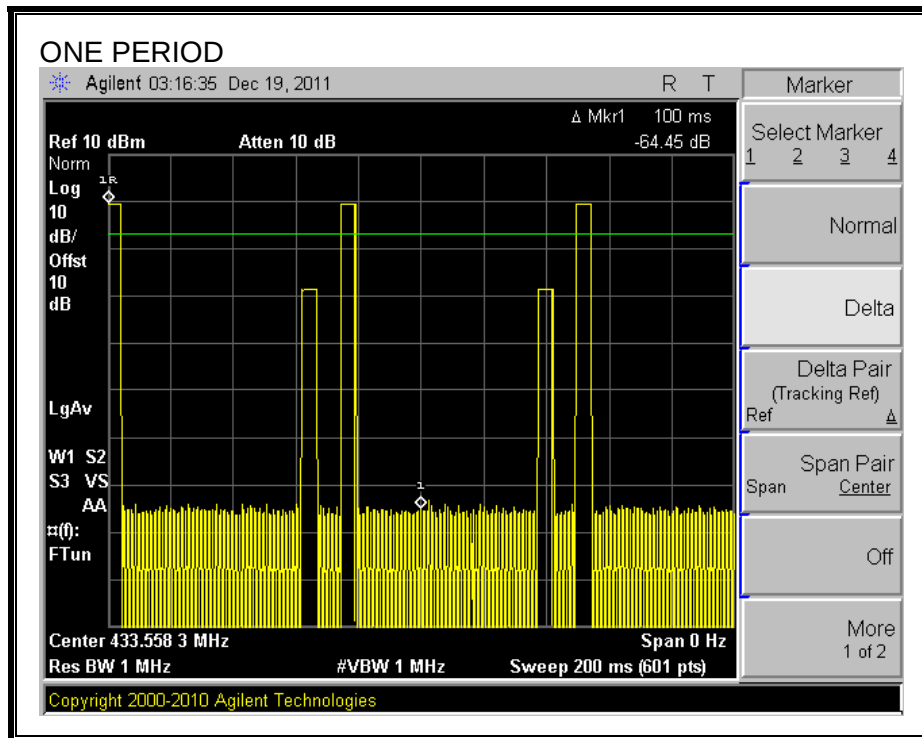
Average Reading = Peak Reading (dBuV/m) + 20log (Duty Cycle), Where Duty Cycle is (# of long pulses * long pulse width) + (# of short pulses * short pulse width) / 100 or T

RESULTS

No non-compliance noted:

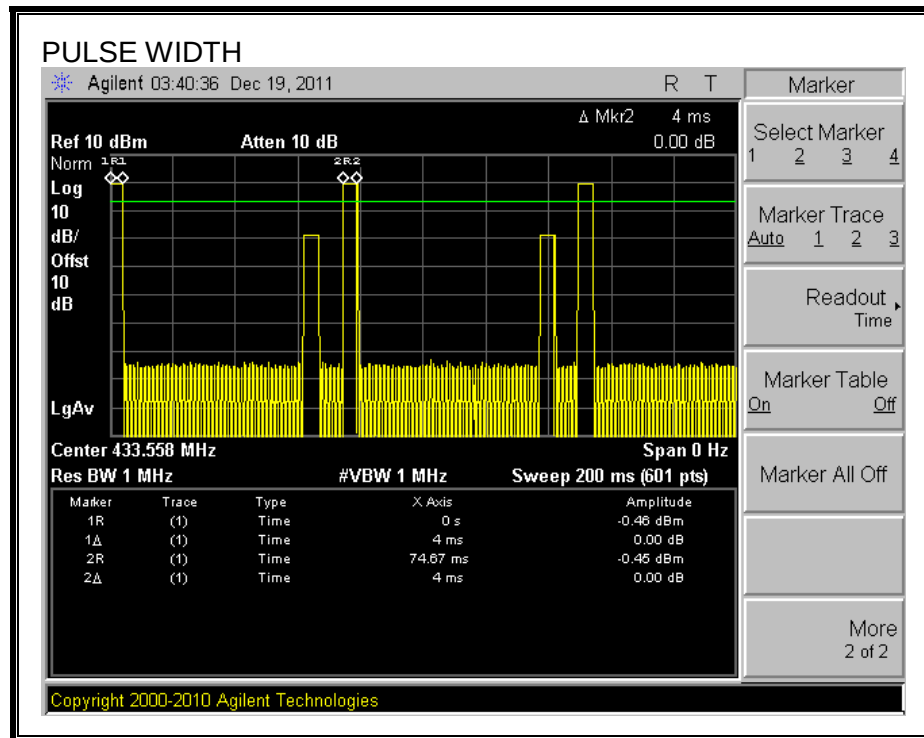
One Period (ms)	Long Pulse Width (ms)	# of Long Pulses	Short Width (ms)	# of Short Pulses	Duty Cycle	20*Log Duty Cycle (dB)
100	4	1	4.00	1	0.080	-21.94

ONE PERIOD



Note: lower level pulses are from triggering device for repeater to start transmission.

PULSE WIDTH



7.3. TRANSMISSION TIME

LIMITS

FCC §15.231 (a) (2)

IC A1.1.1 (b)

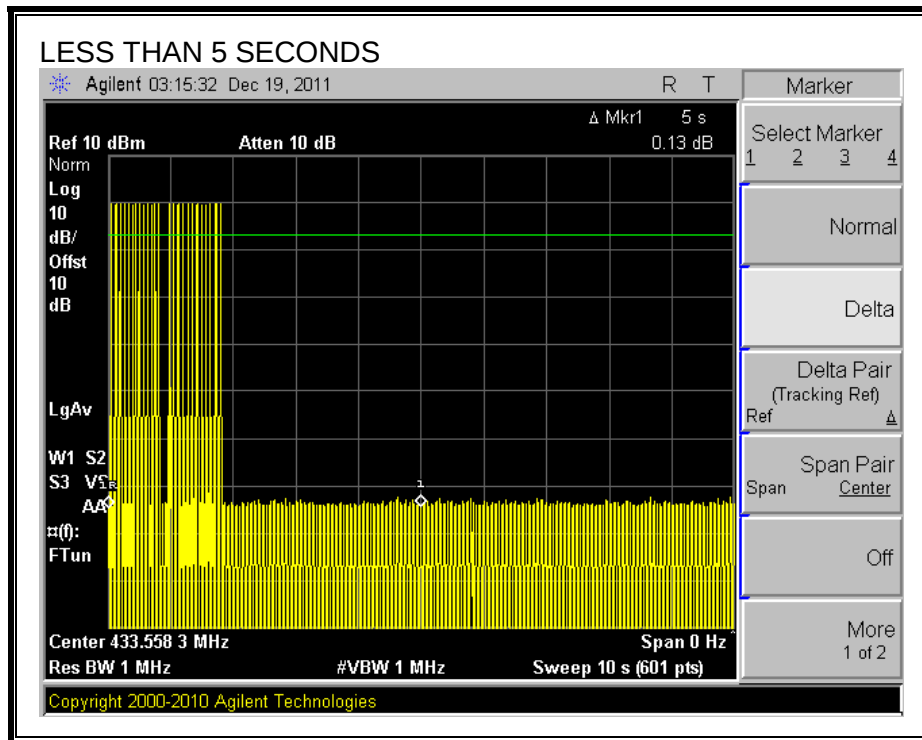
A transmitter activated automatically shall cease transmission within 5 seconds after activation.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer or radiated field strength. The RBW is set to 1 MHz and the VBW is set to 1 MHz. The sweep time is set to 10 seconds and the span is set to 0 Hz.

RESULTS

No non-compliance noted:



8. RADIATED EMISSION TEST RESULTS

8.1. TX RADIATED SPURIOUS EMISSION

LIMITS

FCC §15.231 (b)

IC 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 3,7501	125 to 3751
174 - 260	3,750	375
260 - 470	3,750 to 12,5001	375 to 1,2501
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)
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., Sections 15.231 and 15.241.

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

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. 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 1200 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

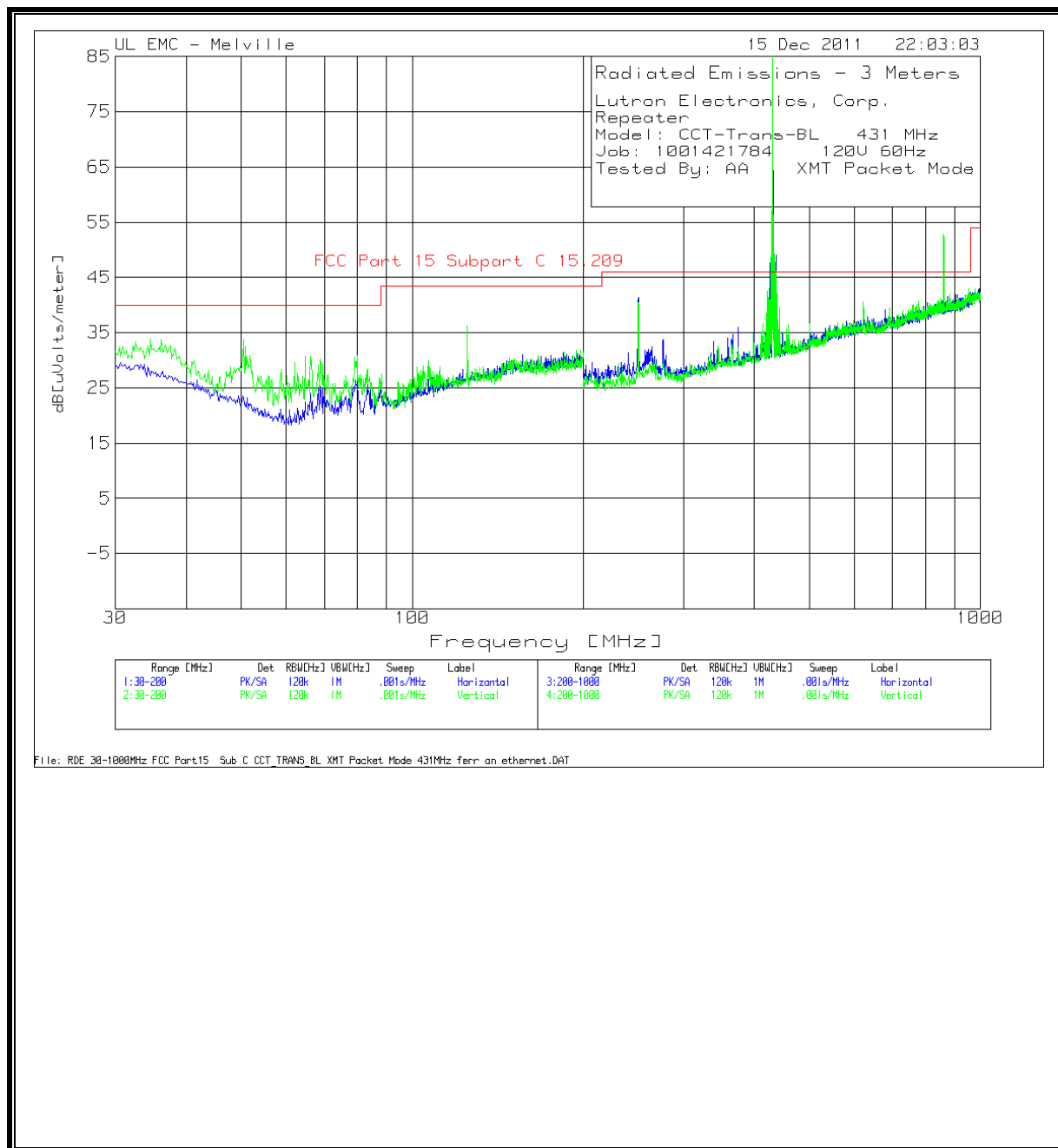
For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

The 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.

RESULTS

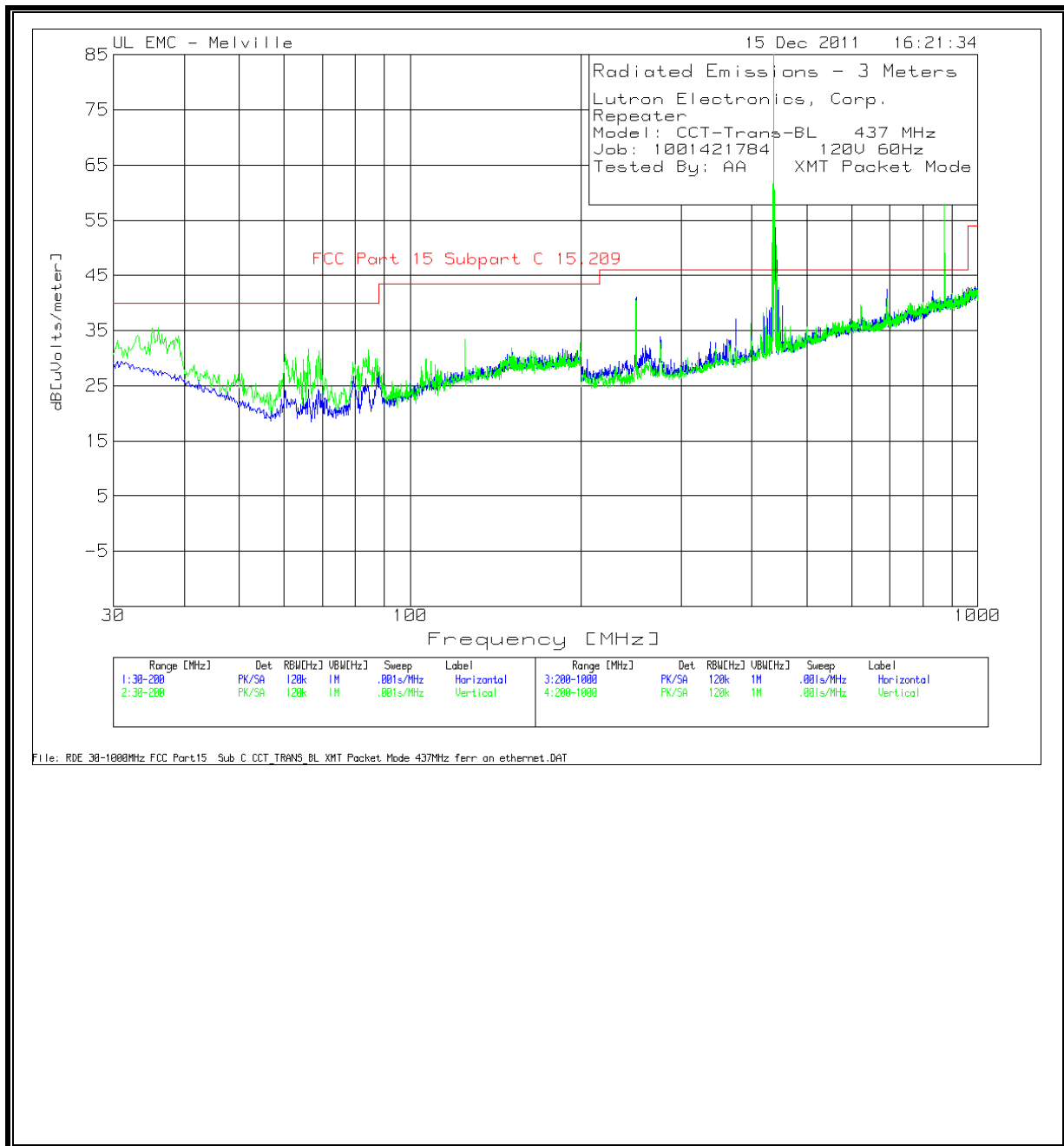
No non-compliance noted:

FUNDAMENTAL, HARMONICS AND TX SPURIOUS EMISSION (30 – 1000 MHz) 431MHz



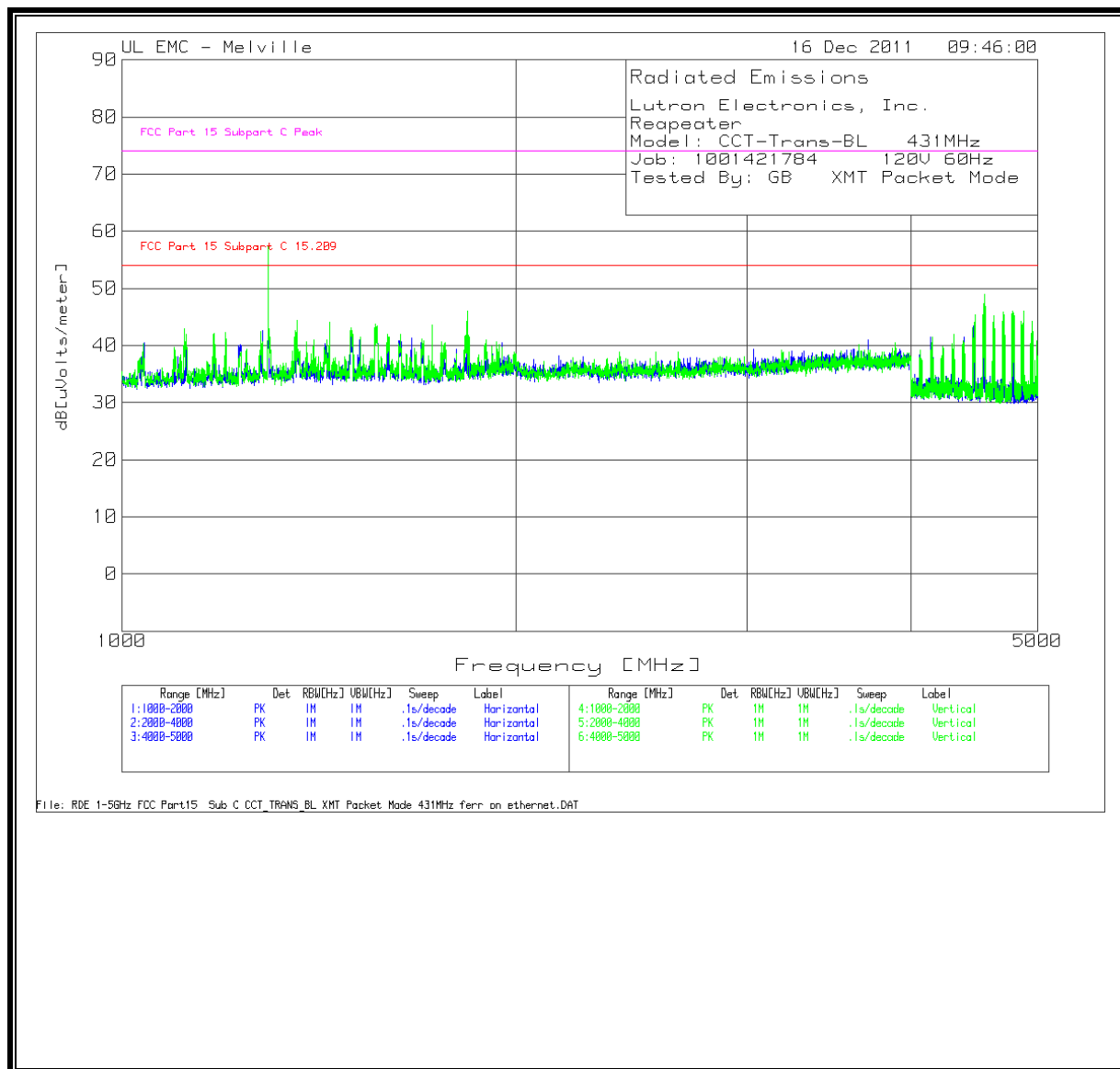
Lutron Electronics, Corp.														
Repeater														
Model: CCT-Trans-BL 431 MHz														
Job: 1001421784 120V 60Hz														
Tested By: AA XMT Packet Mode														
Test	Meter	Detector	AF-44067	GL-3M	dB[uVolts/		Corrected	FCC Part 15		FCC Part 15		Azimuth	Height	
Frequency	Reading		[dB]	[dB]	meter]	DCF [dB]	Level	Subpart C		Subpart C		[Degs]	[cm]	Polarity
Horizontal 200 - 1000MHz														
431.0157	75.39	PK	17	2.3	94.69	-21.94	72.75	-	-	80.7	-7.95	250	101	Horz
861.8919	22.28	PK	22.9	3.4	48.58	-21.94	26.64	-	-	60.7	-34.06	342	137	Horz
250.0052	26.03	QP	12.6	1.7	40.33	-	-	46	-5.67			252	133	Horz
429.3147	14.54	QP	17	2.3	33.84	-	-	46	-12.16			144	100	Horz
425.7129	8.68	QP	16.9	2.3	27.88	-	-	46	-18.12			250	103	Horz
432.1161	22.32	QP	17	2.3	41.62	-	-	46	-4.38			231	103	Horz
434.1171	13.92	QP	17.1	2.3	33.32	-	-	46	-12.68			232	100	Horz
436.5183	9.82	QP	17.1	2.3	29.22	-	-	46	-16.78			230	242	Horz
437.3187	10.19	QP	17.1	2.3	29.59	-	-	46	-16.41			297	185	Horz
Vertical 200 - 1000MHz														
862.062	35.56	PK	23	3.4	61.96	-21.94	40.02	-	-	60.7	-20.68	161	132	Vert
430.947	80.31	PK	16.5	2.3	99.11	-21.94	77.17	-	-	80.7	-3.53	187	123	Vert
249.9949	25.38	QP	12.6	1.7	39.68	-	-	46	-6.32			261	103	Vert
422.1111	8.35	QP	16.5	2.2	27.05	-	-	46	-18.95			322	111	Vert
424.1121	9.68	QP	16.5	2.3	28.48	-	-	46	-17.52			174	121	Vert
427.3137	12.83	QP	16.5	2.3	31.63	-	-	46	-14.37			188	125	Vert
428.9145	17.3	QP	16.5	2.3	36.1	-	-	46	-9.9			168	126	Vert
432.5163	23.32	QP	16.6	2.3	42.22	-	-	46	-3.78			194	142	Vert
433.7169	19	QP	16.6	2.3	37.9	-	-	46	-8.1			171	123	Vert
434.9175	14.43	QP	16.6	2.3	33.33	-	-	46	-12.67			196	125	Vert
436.1181	13.06	QP	16.6	2.3	31.96	-	-	46	-14.04			177	121	Vert
437.3187	12.43	QP	16.6	2.3	31.33	-	-	46	-14.67			192	113	Vert
PK - Peak detector														
QP - Quasi-Peak detector														
LnAv - Linear Average detector														
LgAv - Log Average detector														
Av - Average detector														
CAV - CISPR Average detector														
RMS - RMS detection														
CRMS - CISPR RMS detection														

FUNDAMENTAL, HARMONICS AND TX SPURIOUS EMISSION (30 – 1000 MHz) 437MHz



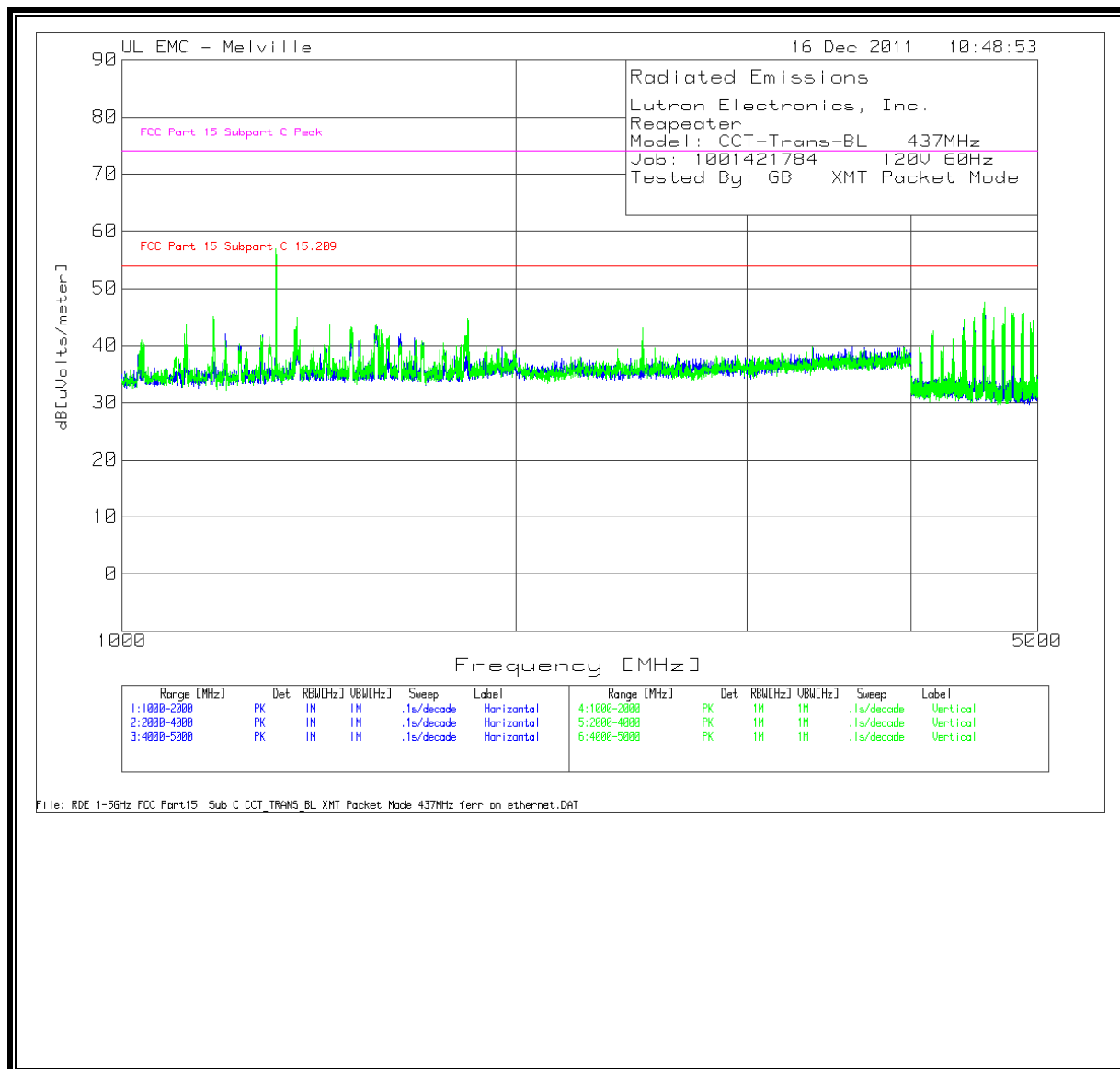
Lutron Electronics, Corp.													
Repeater													
Model: CCT-Trans-BL 437 MHz													
Job: 1001421784 120V 60Hz													
Tested By: AA XMT Packet Mode													
Test	Meter		AF-43441	GL-3M	dB[uVolts/ meter]		Corrected Level dB[uVolts/ meter]	FCC Part 15 Subpart C		FCC Part 15 Subpart C		Azimuth	Height
Frequency	Reading	Detector	[dB]	[dB]		DCF [dB]		15.209	Margin	15.231	Margin	[Degs]	[cm]
Horizontal 30 - 200MHz													
35.1051	6.23	QP	16.1	0.6	22.93	-	-	40	-17.07			183	115
Vertical 30 - 200MHz													
35.96	11.04	QP	15.6	0.6	27.24	-	-	40	-12.76			259	118
35.956	11.97	QP	15.6	0.6	28.17	-	-	40	-11.83			31	135
Horizontal 200 - 1000MHz													
436.9185	75.61	PK	17.1	2.3	95.01	-21.94	73.07	-	-	80.9	-7.83	249	100
874.0667	26.74	PK	23.3	3.4	53.44	-21.94	31.5	-	-	60.9	-29.4	268	176
249.9973	27.3	QP	12.6	1.7	41.6	-	-	46	-4.4			243	127
433.3167	10.96	QP	17.1	2.3	30.36	-	-	46	-15.64			141	100
435.3177	16.48	QP	17.1	2.3	35.88	-	-	46	-10.12			252	101
438.5193	20.84	QP	17.2	2.3	40.34	-	-	46	-5.66			229	101
439.3197	16.9	QP	17.2	2.3	36.4	-	-	46	-9.6			229	101
440.5203	12.7	QP	17.2	2.3	32.2	-	-	46	-13.8			114	101
442.9215	10.41	QP	17.1	2.4	29.91	-	-	46	-16.09			134	104
443.7219	9.78	QP	17.1	2.4	29.28	-	-	46	-16.72			143	100
692.2361	11.12	QP	21.3	3	35.42	-	-	46	-10.58			262	192
829.0378	9.15	QP	23.1	3.3	35.55	-	-	46	-10.45			196	203
Vertical 200 - 1000MHz													
436.9185	78.2	PK	16.6	2.3	97.1	-21.94	75.16	-	-	80.9	-5.74	178	122
874.0466	35.09	PK	23.3	3.4	61.79	-21.94	39.85	-	-	60.9	-21.05	301	116
250.001	24.58	QP	12.6	1.7	38.88	-	-	46	-7.12			292	107
434.1171	14.78	QP	16.6	2.3	33.68	-	-	46	-12.32			172	121
438.1191	24.98	QP	16.6	2.3	43.88	-	-	46	-2.12			15	124
438.9195	21.31	QP	16.6	2.3	40.21	-	-	46	-5.79			193	125
440.9205	14.88	QP	16.6	2.3	33.78	-	-	46	-12.22			173	123
442.5213	12.9	QP	16.7	2.4	32	-	-	46	-14			190	123
443.3217	12.32	QP	16.7	2.4	31.42	-	-	46	-14.58			183	119
446.9235	11	QP	16.8	2.4	30.2	-	-	46	-15.8			187	107
692.2461	12.25	QP	20.9	3	36.15	-	-	46	-9.85			291	212
PK - Peak detector													
QP - Quasi-Peak detector													
LnAv - Linear Average detector													
LgAv - Log Average detector													
Av - Average detector													
CAV - CISPR Average detector													
RMS - RMS detection													
CRMS - CISPR RMS detection													

HARMONICS AND TX SPURIOUS EMISSIONS ABOVE 1GHz - 431MHz



Lutron Electronics, Inc.														
Repeater														
Model: CCT-Trans-BL 431MHz														
Job: 1001421784 120V 60Hz														
Tested By: GB XMT Packet Mode														
Test	Meter			BOMS			Corrected	FCC Part 15		FCC Part 15		Azimuth	Height	
Frequency	Reading	Detector	AF-51442	Factor	dB[uVolts	DCF [dB]	Level	Subpart C	Margin	Subpart C	Margin	[Degs]	[cm]	Polarity
Horizontal 1000 - 2000MHz														
1292.83	79.34	PK	20.4	-44.42	55.32	-21.94	33.38	54	-20.62	74	-18.68	308	259	Horz
1723.98	64.47	PK	20.8	-44.13	41.14	-	-	54	-12.86	74	-32.86	347	177	Horz
Horizontal 4000 - 5000MHz														
4551.965	69.65	PK	27.3	-52.54	44.41	-	-	54	-9.59	74	-29.59	66	250	Horz
Vertical 1000 - 2000MHz														
1292.8	83.08	PK	20.4	-44.42	59.06	-21.94	37.12	54	-16.88	74	-14.94	303	293	Vert
1724.14	70.25	PK	20.8	-44.13	46.92	-	-	54	-7.08	74	-27.08	223	362	Vert
Vertical 4000 - 5000MHz														
4550.633	74.37	PK	27.2	-52.56	49.01	-	-	54	-4.99	74	-24.99	326	366	Vert
PK - Peak detector (maximized)														
QP - Quasi-Peak detector														
LnAv - Linear Average detector														
LgAv - Log Average detector														
Av - Average detector														
CAV - CISPR Average detector														
RMS - RMS detection														
CRMS - CISPR RMS detection														

HARMONICS AND TX SPURIOUS EMISSIONS ABOVE 1GHz – 437MHz



Lutron Electronics, Inc.														
Reapeater														
Model: CCT-Trans-BL 437MHz														
Job: 1001421784 120V 60Hz														
Tested By: GB XMT Packet Mode														
Test	Meter			BOMS			Corrected	FCC Part 15		FCC Part		Azimuth	Height	
Frequency	Reading	Detector	AF-51442	Factor	dB[uVolts/	DCF [dB]	Level	Subpart C	Margin	15 Subpart	Margin	[Degs]	[cm]	Polarity
			[dB]	[dB]	meter]		dB[uVolts/	15.209		C Peak				
Horizontal 1000 - 2000MHz														
1311.11	83.01	PK	20.5	-44.35	59.16	-21.94	37.22	54	-16.78	74	-14.84	240	272	Horz
1748.18	63.34	PK	20.8	-44.14	40	-	-	54	-14	74	-34	343	177	Horz
Horizontal 4000 - 5000MHz														
4547.302	68.91	PK	27.4	-52.58	43.73	-	-	54	-10.27	74	-30.27	67	250	Horz
Vertical 1000 - 2000MHz														
1310.785	85.63	PK	20.5	-44.35	61.78	-21.94	39.84	54	-14.16	74	-12.22	104	400	Vert
1748	68.46	PK	20.8	-44.14	45.12	-	-	54	-8.88	74	-28.88	215	358	Vert
Vertical 4000 - 5000MHz														
4550.966	72.21	PK	27.2	-52.56	46.85	-	-	54	-7.15	74	-27.15	40	250	Vert
PK - Peak detector (Maximized)														
QP - Quasi-Peak detector														
LnAv - Linear Average detector														
LgAv - Log Average detector														
Av - Average detector														
CAV - CISPR Average detector														
RMS - RMS detection														
CRMS - CISPR RMS detection														

8.2. RX RADIATED SPURIOUS EMISSION

LIMITS

IC RSS-Gen Issue 2, section 7.2.3.2

All spurious emissions shall comply with the limits shown below:

Limits for radiated disturbance of Class B ITE at measuring distance of 3 m	
Frequency range (MHz)	Quasi-peak limits (dB μ V/m)
30 to 88	40
88 to 216	43.5
216 to 960	46
Above 960 MHz	54
Note: The lower limit shall apply at the transition frequency.	

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. The EUT is configured in accordance with ANSI C63.4:2003. The EUT is set to receive 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.

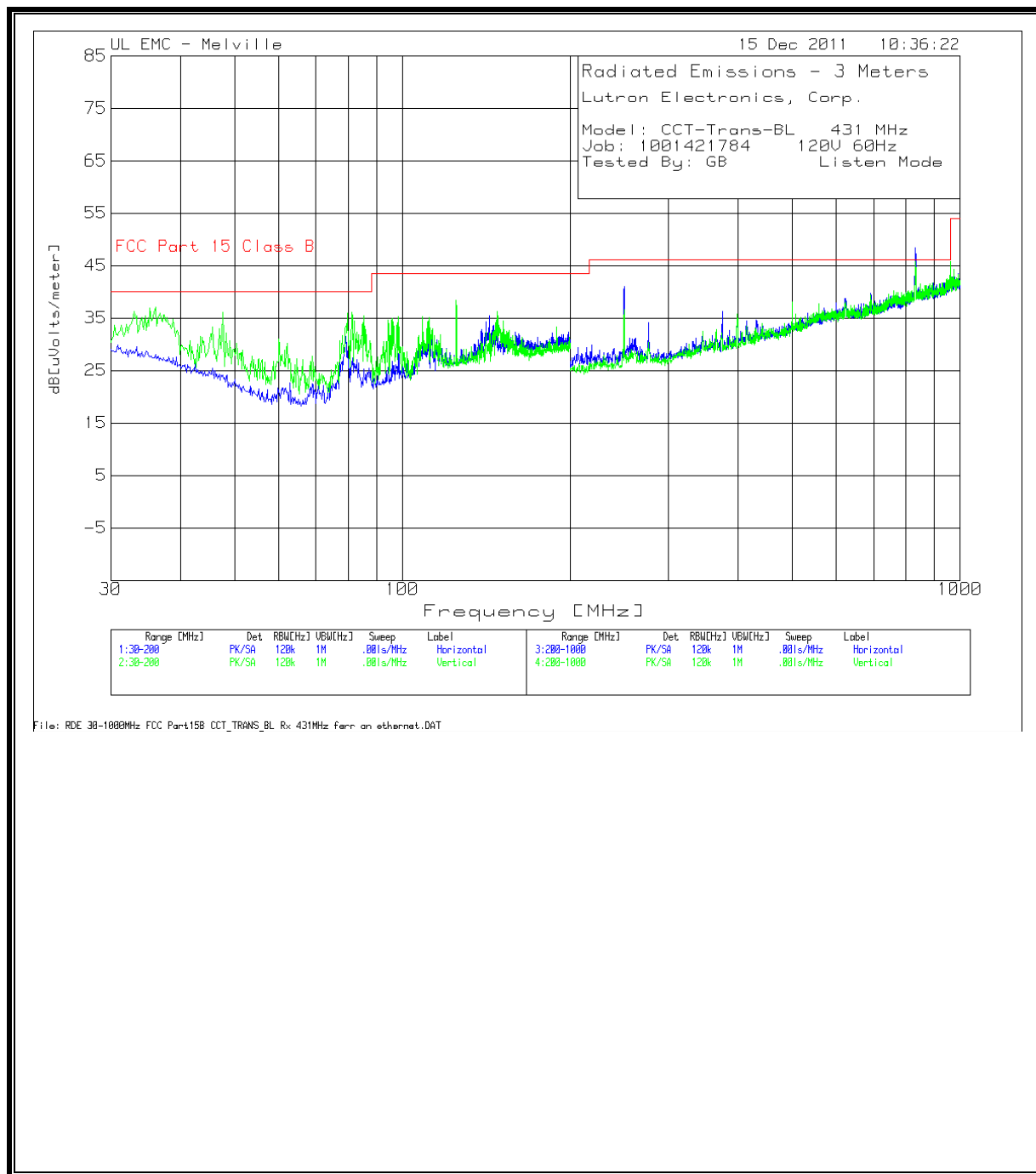
The spectrum from 30 MHz to 5th harmonic is investigated with the transmitter set to the middle channel.

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.

RESULTS

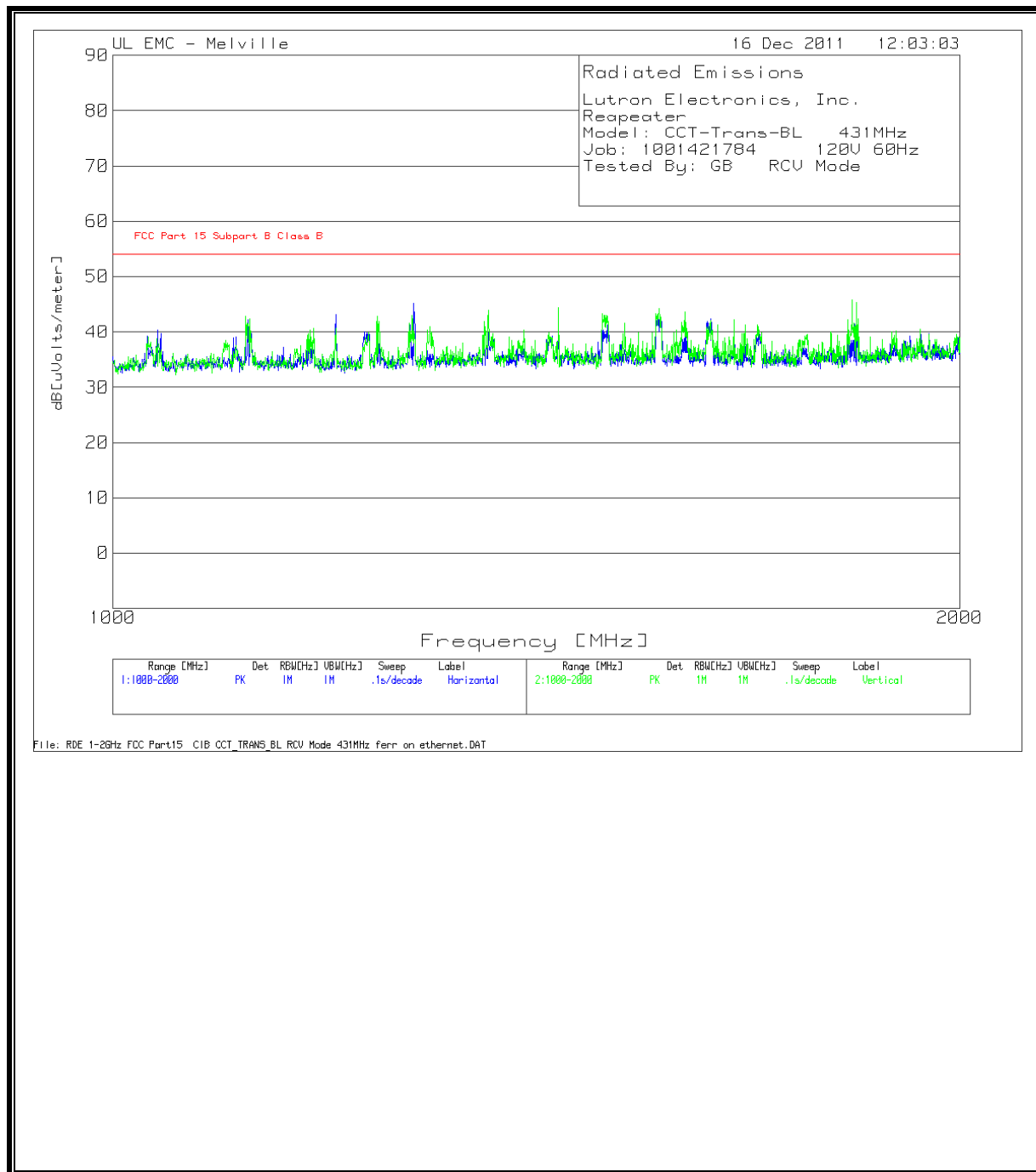
No non-compliance noted:

RECEIVER SPURIOUS EMISSION (30MHz - 1GHz) 431MHz



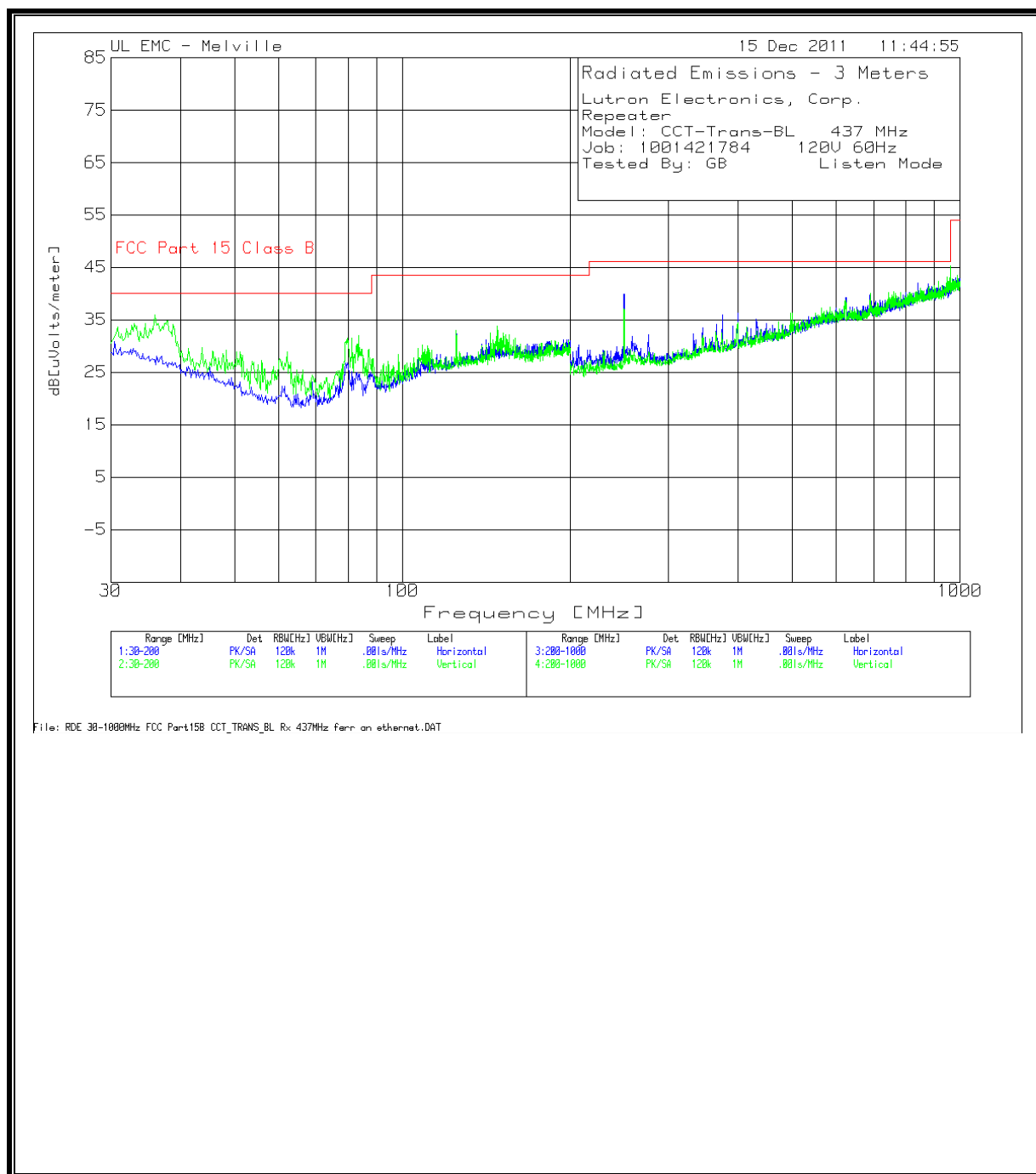
Lutron Electronics, Corp.										
Model: CCT-Trans-BL 431 MHz										
Job: 1001421784 120V 60Hz										
Tested By: GB Listen Mode										
Test	Meter		AF-43441	GL-3M	dB[uVolts	FCC Part		Azimuth	Height	
Frequency	Reading	Detector	[dB]	[dB]	/meter]	15 Class B	Margin	[Degs]	[cm]	Polarity
Vertical 30 - 200MHz										
33	11.74	QP	17	0.6	29.34	40	-10.66	276	109	Vert
36.0651	14.09	QP	15.6	0.6	30.29	40	-9.71	238	133	Vert
47.8152	18.06	QP	11	0.7	29.76	40	-10.24	285	101	Vert
79.7552	21.01	QP	7.6	0.9	29.51	40	-10.49	277	108	Vert
81.22	20.45	QP	8	0.9	29.35	40	-10.65	242	100	Vert
85.4412	17.9	QP	8.7	0.9	27.5	40	-12.5	294	100	Vert
125.0025	10.01	QP	13.4	1.2	24.61	43.5	-18.89	6	322	Vert
Horizontal 200 - 1000MHz										
830.5455	9.09	QP	23.1	3.3	35.49	46	-10.51	355	382	Horz
938.8	9.59	QP	23.6	3.6	36.79	46	-9.21	337	109	Horz
250.005	26.2	QP	12.6	1.7	40.5	46	-5.5	325	121	Horz
Vertical 200 - 1000MHz										
830.7	9.15	QP	23.1	3.3	35.55	46	-10.45	16	100	Vert
931.0297	9.59	QP	23.5	3.5	36.59	46	-9.41	251	383	Vert
959.9	13.44	QP	24.2	3.6	41.24	46	-4.76	59	193	Vert
PK - Peak detector										
QP - Quasi-Peak detector										
LnAv - Linear Average detector										
LgAv - Log Average detector										
Av - Average detector										
CAV - CISPR Average detector										
RMS - RMS detection										
CRMS - CISPR RMS detection										

RECEIVER SPURIOUS EMISSION ABOVE 1GHz – 431MHz



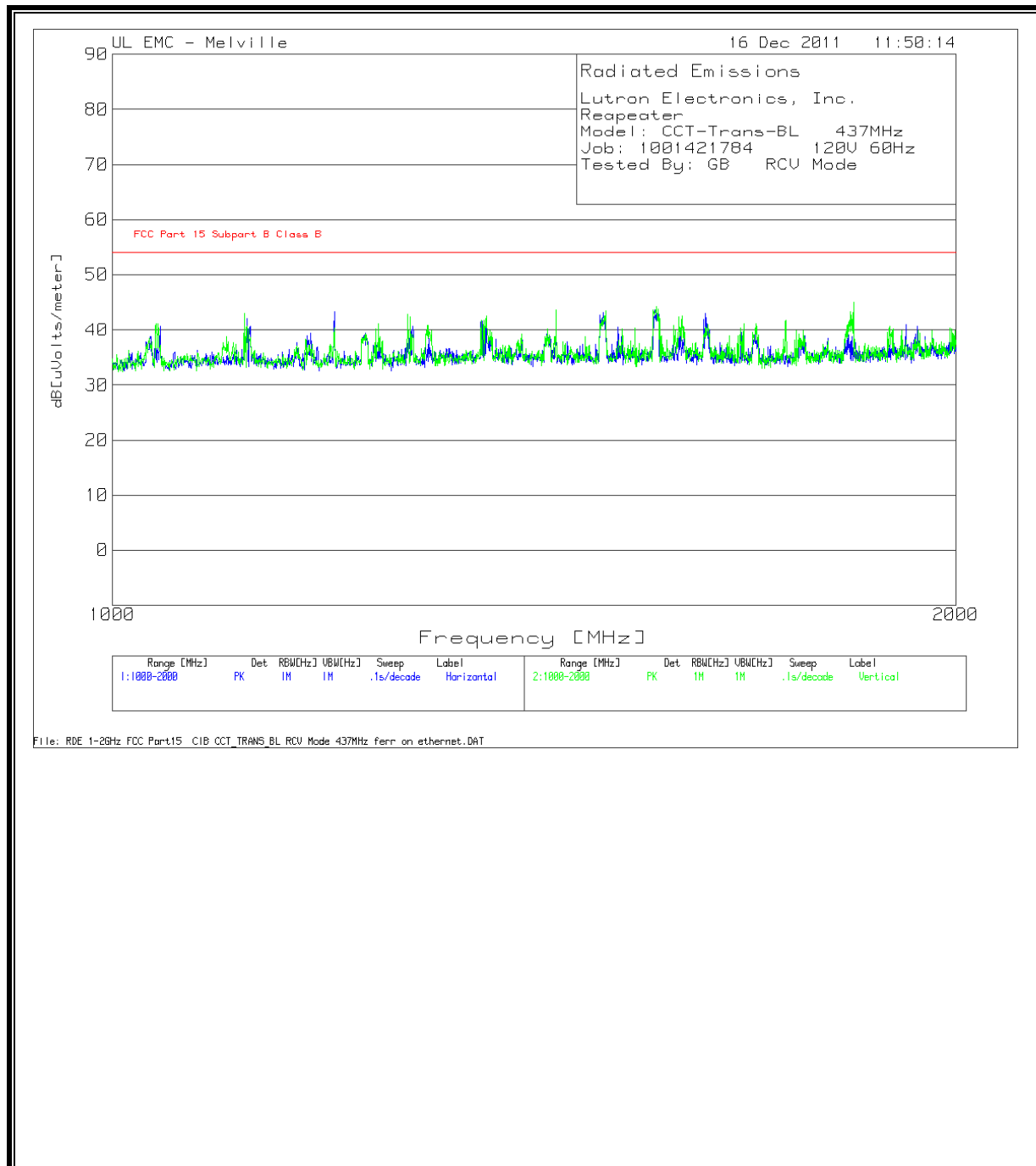
Lutron Electronics, Inc.										
Repeater										
Model: CCT-Trans-BL 431MHz										
Job: 1001421784 120V 60Hz										
Tested By: GB RCV Mode										
Test	Meter		AF-51442	BOMS		FCC Part 15				
Frequency	Reading	Detector	[dB]	Factor	dB[uVolts	Subpart B		Azimuth	Height	
					/meter]	Class B	Margin	[Degs]	[cm]	Polarity
Horizontal 1000 - 2000MHz										
1199.9	67.78	PK	19.8	-44.47	43.11	54	-10.89	128	249	Horz
1279.36	69.14	PK	20.4	-44.37	45.17	54	-8.83	128	99	Horz
Vertical 1000 - 2000MHz										
1359.82	67.65	PK	20.6	-44.37	43.88	54	-10.12	222	99	Vert
1439.78	68.05	PK	20.7	-44.34	44.41	54	-9.59	222	99	Vert
1563.718	67.39	PK	21.1	-44.2	44.29	54	-9.71	308	99	Vert
1831.084	68.61	PK	21.2	-44	45.81	54	-8.19	68	99	Vert
PK - Peak detector										
QP - Quasi-Peak detector										
LnAv - Linear Average detector										
LgAv - Log Average detector										
Av - Average detector										
CAV - CISPR Average detector										
RMS - RMS detection										
CRMS - CISPR RMS detection										

RECEIVER SPURIOUS EMISSION (30MHz - 1GHz) – 437MHz



Lutron Electronics, Corp.										
Repeater										
Model: CCT-Trans-BL 437 MHz										
Job: 1001421784 120V 60Hz										
Tested By: GB Listen Mode										
Test	Meter		AF-43441	GL-3M	dB[uVolts	FCC Part		Azimuth	Height	
Frequency	Reading	Detector	[dB]	[dB]	/meter]	15 Class B	Margin	[Degs]	[cm]	Polarity
Vertical 30 - 200MHz										
34.56	12.39	QP	16.3	0.6	29.29	40	-10.71	328	105	Vert
35.9	13.59	QP	15.7	0.6	29.89	40	-10.11	283	121	Vert
37.82	13.53	QP	15	0.6	29.13	40	-10.87	212	139	Vert
Horizontal 200 - 1000MHz										
249.985	25.57	QP	12.6	1.7	39.87	46	-6.13	316	138	Horz
841.5	9.25	QP	23.3	3.3	35.85	46	-10.15	48	155	Horz
875.53	9.34	QP	23.3	3.4	36.04	46	-9.96	351	103	Horz
960.015	10.46	QP	24.1	3.6	38.16	54	-15.84	217	121	Vert
960.015	12.43	QP	24.1	3.6	40.13	54	-13.87	319	128	Horz
PK - Peak detector										
QP - Quasi-Peak detector										
LnAv - Linear Average detector										
LgAv - Log Average detector										
Av - Average detector										
CAV - CISPR Average detector										
RMS - RMS detection										
CRMS - CISPR RMS detection										

RECEIVER SPURIOUS EMISSION ABOVE 1GHz – 437MHz



Lutron Electronics, Inc.										
Repeater										
Model: CCT-Trans-BL 437MHz										
Job: 1001421784 120V 60Hz										
Tested By: GB RCV Mode										
Test	Meter		AF-51442	BOMS		FCC Part 15				
Frequency	Reading	Detector	[dB]	Factor	dB[uVolts/ meter]	Subpart B Class B	Margin	Azimuth [Deps]	Height [cm]	Polarity
Horizontal 1000 - 2000MHz										
1199.9	68.02	PK	19.8	-44.47	43.35	54	-10.65	91	250	Horz
1496.252	66.67	PK	20.8	-44.32	43.15	54	-10.85	269	99	Horz
Vertical 1000 - 2000MHz										
1114.443	67.52	PK	20	-44.58	42.94	54	-11.06	77	250	Vert
1274.863	66.93	PK	20.3	-44.38	42.85	54	-11.15	129	99	Vert
1439.78	67.22	PK	20.7	-44.34	43.58	54	-10.42	103	99	Vert
1563.718	67.39	PK	21.1	-44.2	44.29	54	-9.71	281	250	Vert
PK - Peak detector										
QP - Quasi-Peak detector										
LnAv - Linear Average detector										
LgAv - Log Average detector										
Av - Average detector										
CAV - CISPR Average detector										
RMS - RMS detection										
CRMS - CISPR RMS detection										

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

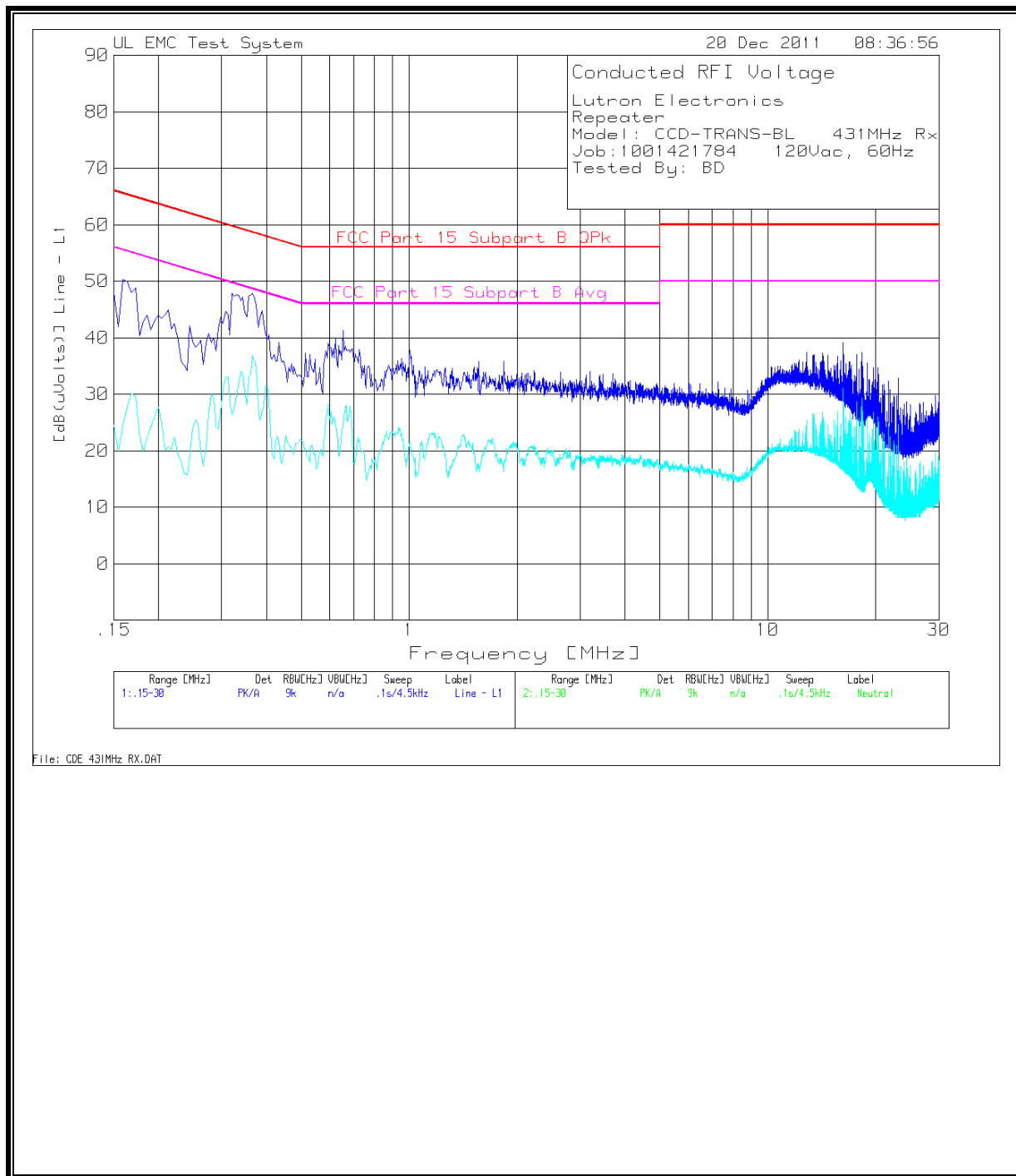
RESULTS

No non-compliance noted:

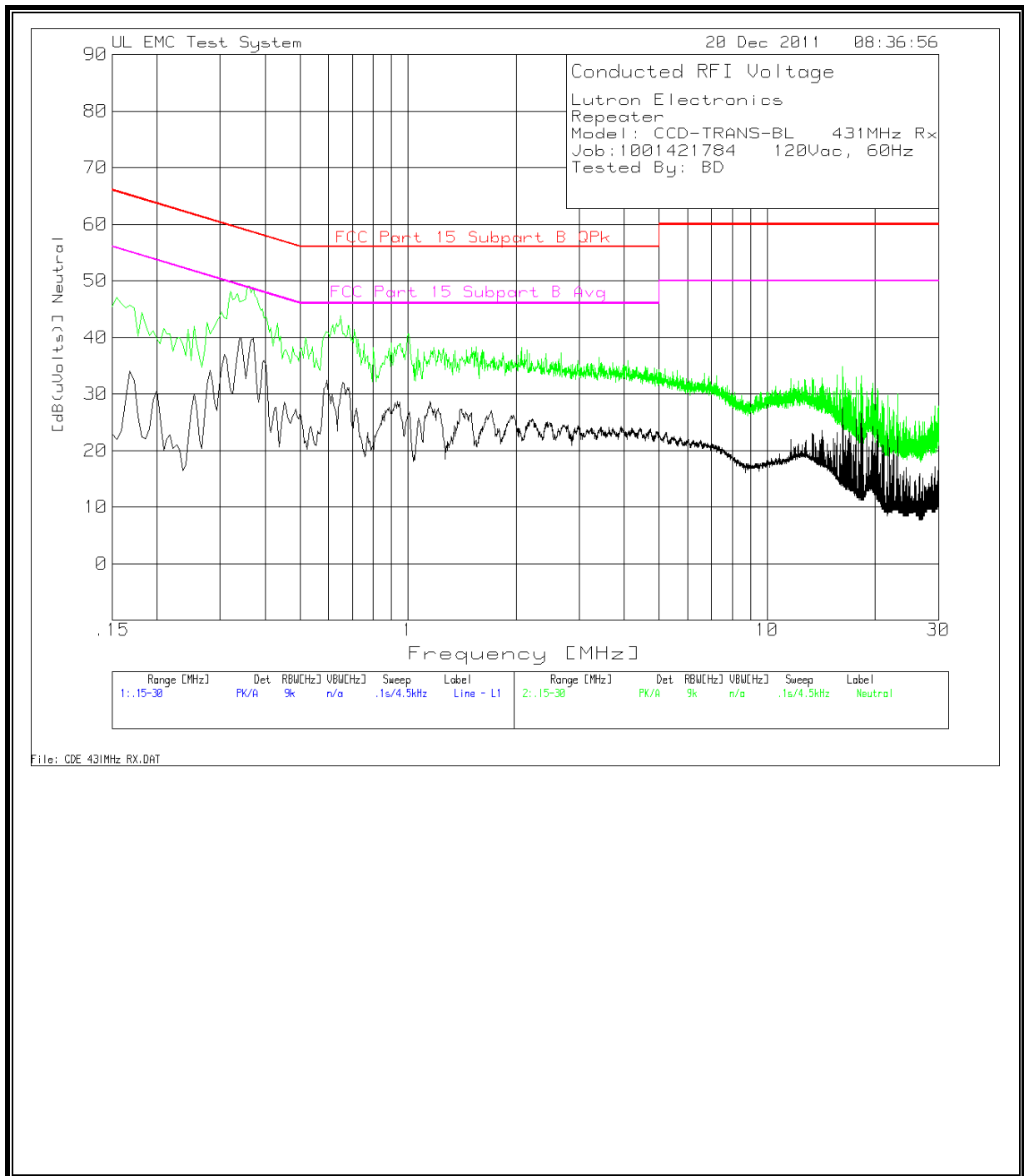
6 WORST EMISSIONS 431MHz Rx

Lutron Electronics									
Repeater									
Model: CCD-TRANS-BL 431MHz Rx									
Job:1001421784 120Vac, 60Hz									
Tested By: BD									
Test	Meter		5A636 with		FCC Part 15		FCC Part		
Frequency	Reading	Detector	TL and Sw		Subpart B		15 Subpart		
Line - L1 .15 - 30MHz			Line 1 [dB]	[dB(uVolts)]	QPk	Margin	B Avg	Margin	
0.159	38.72	PK	11.5	50.22	65.5	-15.28	55.5	-5.28	
0.159	13.01	Av	11.5	24.51	65.5	-40.99	55.5	-30.99	
0.321	37.19	PK	10.7	47.89	59.7	-11.81	49.7	-1.81	
0.321	15.7	Av	10.7	26.4	59.7	-33.3	49.7	-23.3	
0.366	37.22	PK	10.6	47.82	58.6	-10.78	48.6	-0.78	
0.366	26.29	Av	10.6	36.89	58.6	-21.71	48.6	-11.71	
0.654	30.89	PK	10.4	41.29	56	-14.71	46	-4.71	
0.654	13.85	Av	10.4	24.25	56	-31.75	46	-21.75	
1.005	27.35	PK	10.4	37.75	56	-18.25	46	-8.25	
1.005	11.07	Av	10.4	21.47	56	-34.53	46	-24.53	
16.2285	28.39	PK	10.7	39.09	60	-20.91	50	-10.91	
16.2285	20.39	Av	10.7	31.09	60	-28.91	50	-18.91	
Neutral .15 - 30MHz									
0.1545	35.4	PK	11.6	47	65.8	-18.8	55.8	-8.8	
0.1545	10.39	Av	11.6	21.99	65.8	-43.81	55.8	-33.81	
0.3615	38.49	PK	10.6	49.09	58.7	-9.61	48.7	0.39	
0.3615	27.34	Av	10.6	37.94	58.7	-20.76	48.7	-10.76	
0.6495	33.36	PK	10.5	43.86	56	-12.14	46	-2.14	
0.6495	19.29	Av	10.5	29.79	56	-26.21	46	-16.21	
0.94875	28.43	PK	10.4	38.83	56	-17.17	46	-7.17	
0.94875	16.18	Av	10.4	26.58	56	-29.42	46	-19.42	
2.067	27.75	PK	10.4	38.15	56	-17.85	46	-7.85	
2.067	12.03	Av	10.4	22.43	56	-33.57	46	-23.57	
18.1815	17.44	PK	10.8	28.24	60	-31.76	50	-21.76	
18.1815	9.26	Av	10.8	20.06	60	-39.94	50	-29.94	
PK - Peak detector									
QP - Quasi-Peak detector									
LnAv - Linear Average detector									
LgAv - Log Average detector									
Av - Average detector									
CAV - CISPR Average detector									
RMS - RMS detection									
CRMS - CISPR RMS detection									

LINE 1 RESULTS



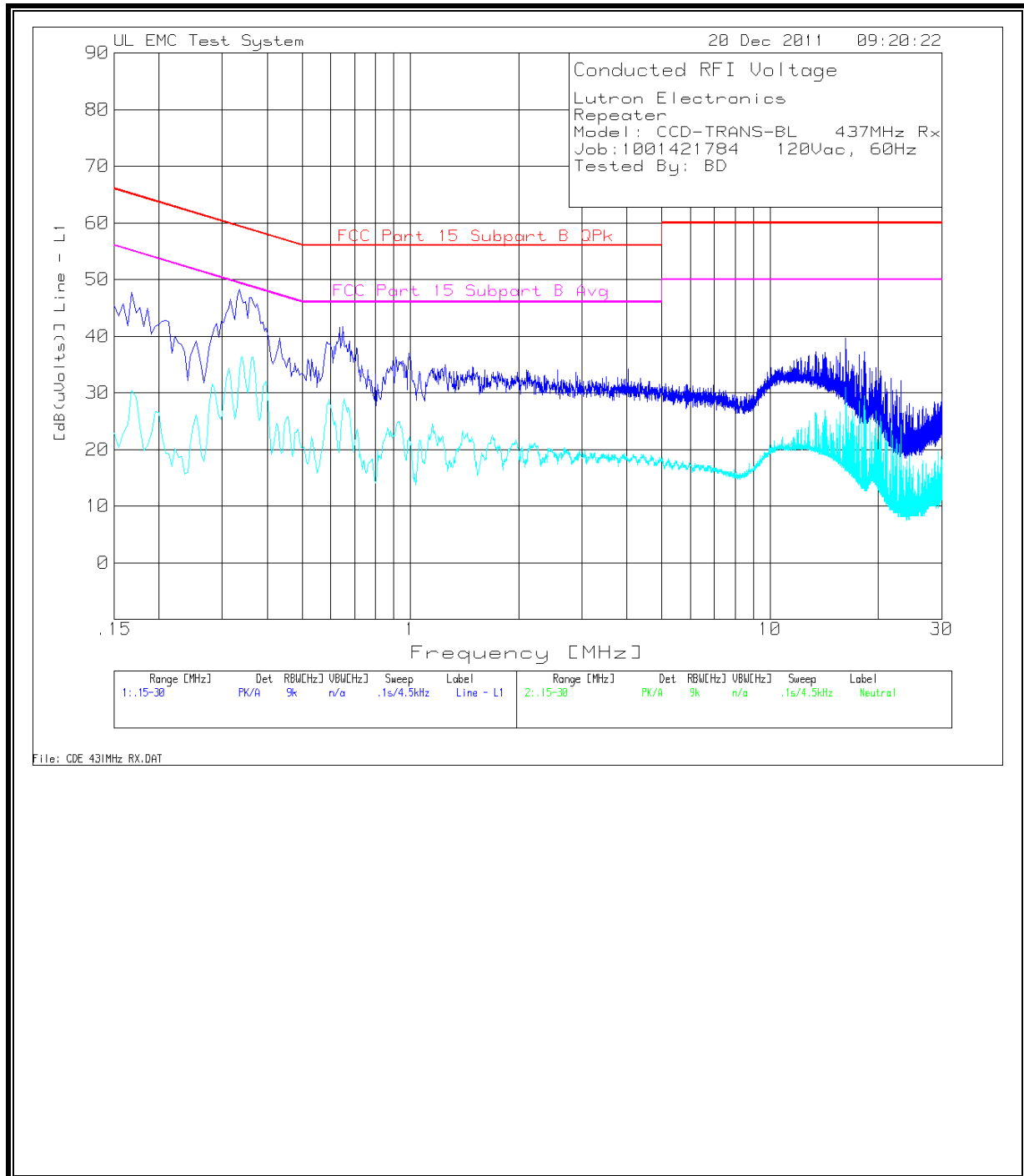
LINE 2 RESULTS



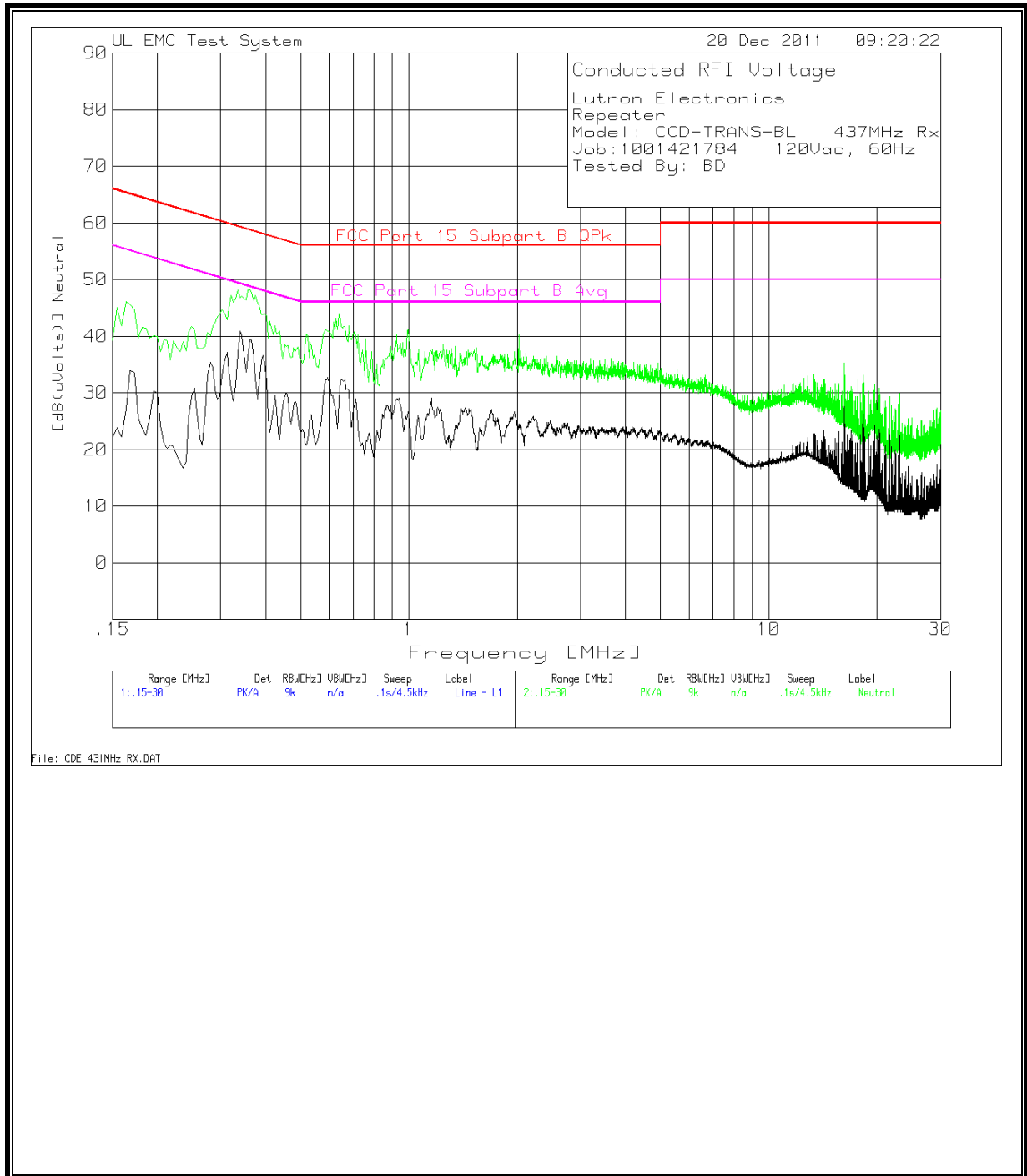
6 WORST EMISSIONS 437 MHz Rx

Lutron Electronics									
Repeater									
Model: CCD-TRANS-BL 437MHz Rx									
Job:1001421784 120Vac, 60Hz									
Tested By: BD									
Test	Meter		5A636 with		FCC Part 15		FCC Part 15		
Frequency	Reading	Detector	Line 1 [dB]	[dB(uVolts)]	Subpart B	Margin	Subpart B	Margin	
Line - L1 .15 - 30MHz									
0.168	36.31	PK	11.4	47.71	65.1	-17.39	55.1	-7.39	
0.168	19.08	Av	11.4	30.48	65.1	-34.62	55.1	-24.62	
0.3345	37.54	PK	10.7	48.24	59.3	-11.06	49.3	-1.06	
0.3345	23.37	Av	10.7	34.07	59.3	-25.23	49.3	-15.23	
0.357	36.23	PK	10.6	46.83	58.8	-11.97	48.8	-1.97	
0.357	21.55	Av	10.6	32.15	58.8	-26.65	48.8	-16.65	
0.6495	31.27	PK	10.4	41.67	56	-14.33	46	-4.33	
0.6495	17.16	Av	10.4	27.56	56	-28.44	46	-18.44	
14.154	25.45	PK	10.6	36.05	60	-23.95	50	-13.95	
14.154	14.73	Av	10.6	25.33	60	-34.67	50	-24.67	
16.2285	29.05	PK	10.7	39.75	60	-20.25	50	-10.25	
16.2285	20.3	Av	10.7	31	60	-29	50	-19	
Neutral .15 - 30MHz									
0.1635	34.56	PK	11.5	46.06	65.3	-19.24	55.3	-9.24	
0.1635	15.52	Av	11.5	27.02	65.3	-38.28	55.3	-28.28	
0.3615	37.73	PK	10.6	48.33	58.7	-10.37	48.7	-0.37	
0.3615	28.81	Av	10.6	39.41	58.7	-19.29	48.7	-9.29	
0.6405	33.49	PK	10.5	43.99	56	-12.01	46	-2.01	
0.6405	18.36	Av	10.5	28.86	56	-27.14	46	-17.14	
0.996	30.72	PK	10.4	41.12	56	-14.88	46	-4.88	
0.996	16.24	Av	10.4	26.64	56	-29.36	46	-19.36	
2.0175	29.76	PK	10.4	40.16	56	-15.84	46	-5.84	
2.0175	14.06	Av	10.4	24.46	56	-31.54	46	-21.54	
16.2285	24.51	PK	10.7	35.21	60	-24.79	50	-14.79	
16.2285	16.9	Av	10.7	27.6	60	-32.4	50	-22.4	
PK - Peak detector									
QP - Quasi-Peak detector									
LnAv - Linear Average detector									
LgAv - Log Average detector									
Av - Average detector									
CAV - CISPR Average detector									
RMS - RMS detection									
CRMS - CISPR RMS detection									

LINE 1 RESULTS



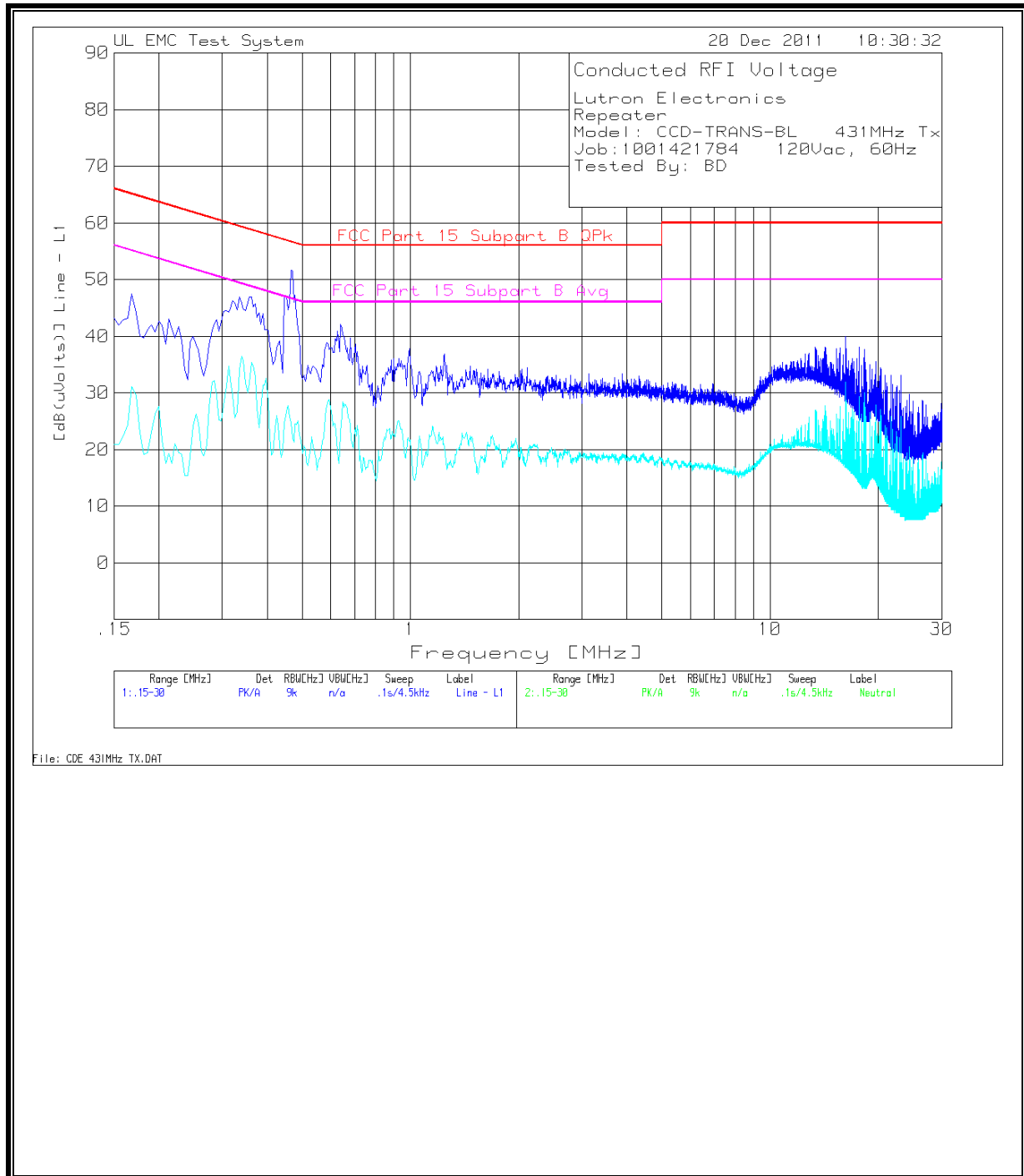
LINE 2 RESULTS



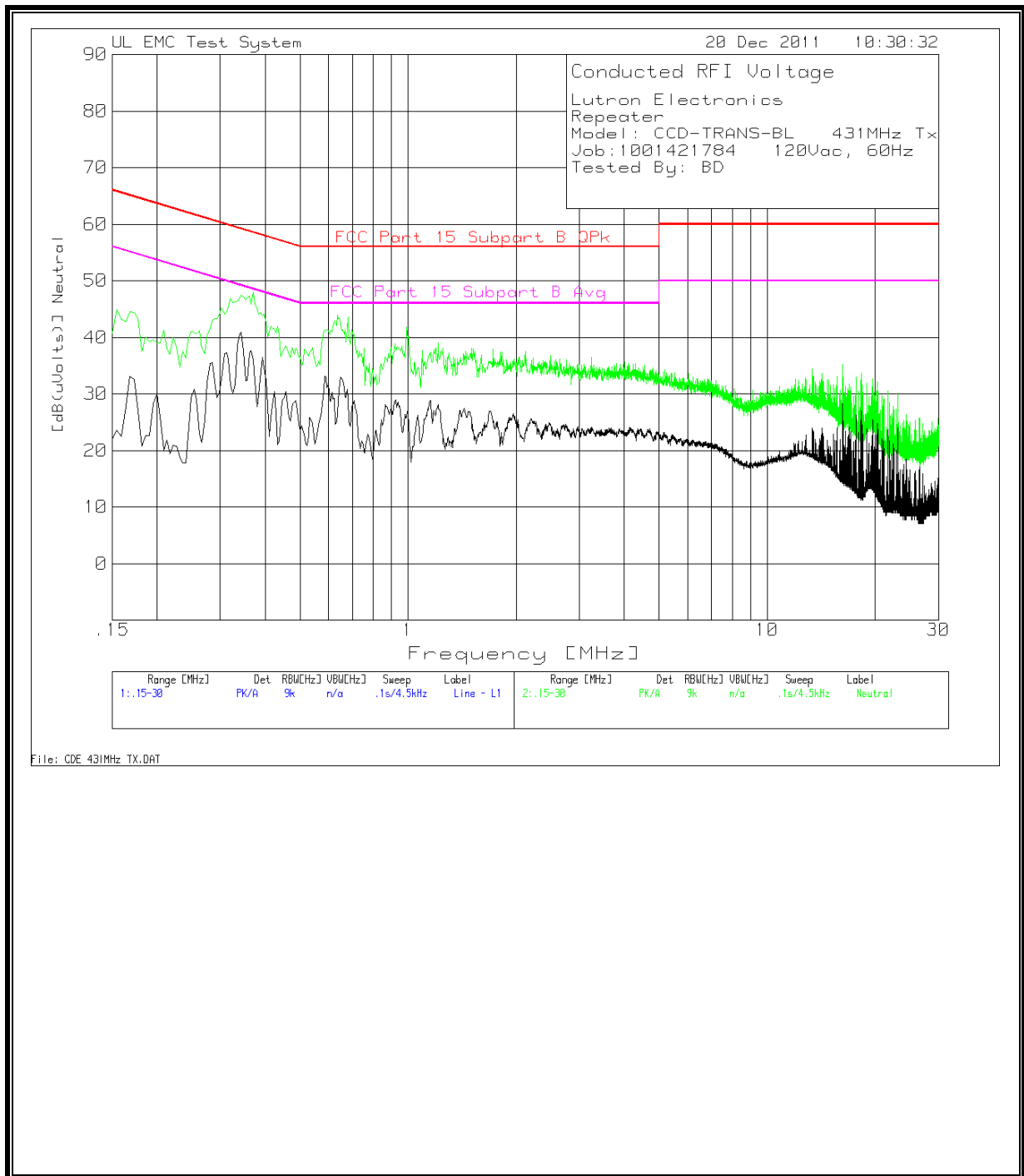
6 WORST EMISSIONS 431 MHz Tx

Lutron Electronics								
Repeater								
Model: CCD-TRANS-BL 431MHz Tx								
Job:1001421784 120Vac, 60Hz								
Tested By: BD								
Test	Meter		5A636 with		FCC Part 15		FCC Part 15	
Frequency	Reading	Detector	TI and Sw		Subpart B		Subpart B	
			Line 1 [dB]	[dB(uVolts)]	QPk	Margin	Avg	Margin
Line - L1 .15 - 30MHz								
0.168	36.06	PK	11.4	47.46	65.1	-17.64	55.1	-7.64
0.168	19.72	Av	11.4	31.12	65.1	-33.98	55.1	-23.98
0.3345	36.28	PK	10.7	46.98	59.3	-12.32	49.3	-2.32
0.3345	23.31	Av	10.7	34.01	59.3	-25.29	49.3	-15.29
0.465	41.14	PK	10.5	51.64	56.6	-4.96	46.6	5.04
0.465	14.29	Av	10.5	24.79	56.6	-31.81	46.6	-21.81
0.6405	31.66	PK	10.4	42.06	56	-13.94	46	-3.94
0.6405	12.65	Av	10.4	23.05	56	-32.95	46	-22.95
0.996	27.36	PK	10.4	37.76	56	-18.24	46	-8.24
0.996	11.08	Av	10.4	21.48	56	-34.52	46	-24.52
16.2285	29.19	PK	10.7	39.89	60	-20.11	50	-10.11
16.2285	21.22	Av	10.7	31.92	60	-28.08	50	-18.08
Neutral .15 - 30MHz								
0.1545	33.26	PK	11.6	44.86	65.8	-20.94	55.8	-10.94
0.1545	12.02	Av	11.6	23.62	65.8	-42.18	55.8	-32.18
0.3435	36.88	PK	10.6	47.48	59.1	-11.62	49.1	-1.62
0.3435	30.32	Av	10.6	40.92	59.1	-18.18	49.1	-8.18
0.3705	37.34	PK	10.6	47.94	58.5	-10.56	48.5	-0.56
0.3705	25.45	Av	10.6	36.05	58.5	-22.45	48.5	-12.45
0.636	33.49	PK	10.5	43.99	56	-12.01	46	-2.01
0.636	16.04	Av	10.5	26.54	56	-29.46	46	-19.46
0.681	33.2	PK	10.4	43.6	56	-12.4	46	-2.4
0.681	18.77	Av	10.4	29.17	56	-26.83	46	-16.83
0.9195	28.42	PK	10.4	38.82	56	-17.18	46	-7.18
0.9195	18.36	Av	10.4	28.76	56	-27.24	46	-17.24
PK - Peak detector								
QP - Quasi-Peak detector								
LnAv - Linear Average detector								
LgAv - Log Average detector								
Av - Average detector								
CAV - CISPR Average detector								
RMS - RMS detection								
CRMS - CISPR RMS detection								

LINE 1 RESULTS



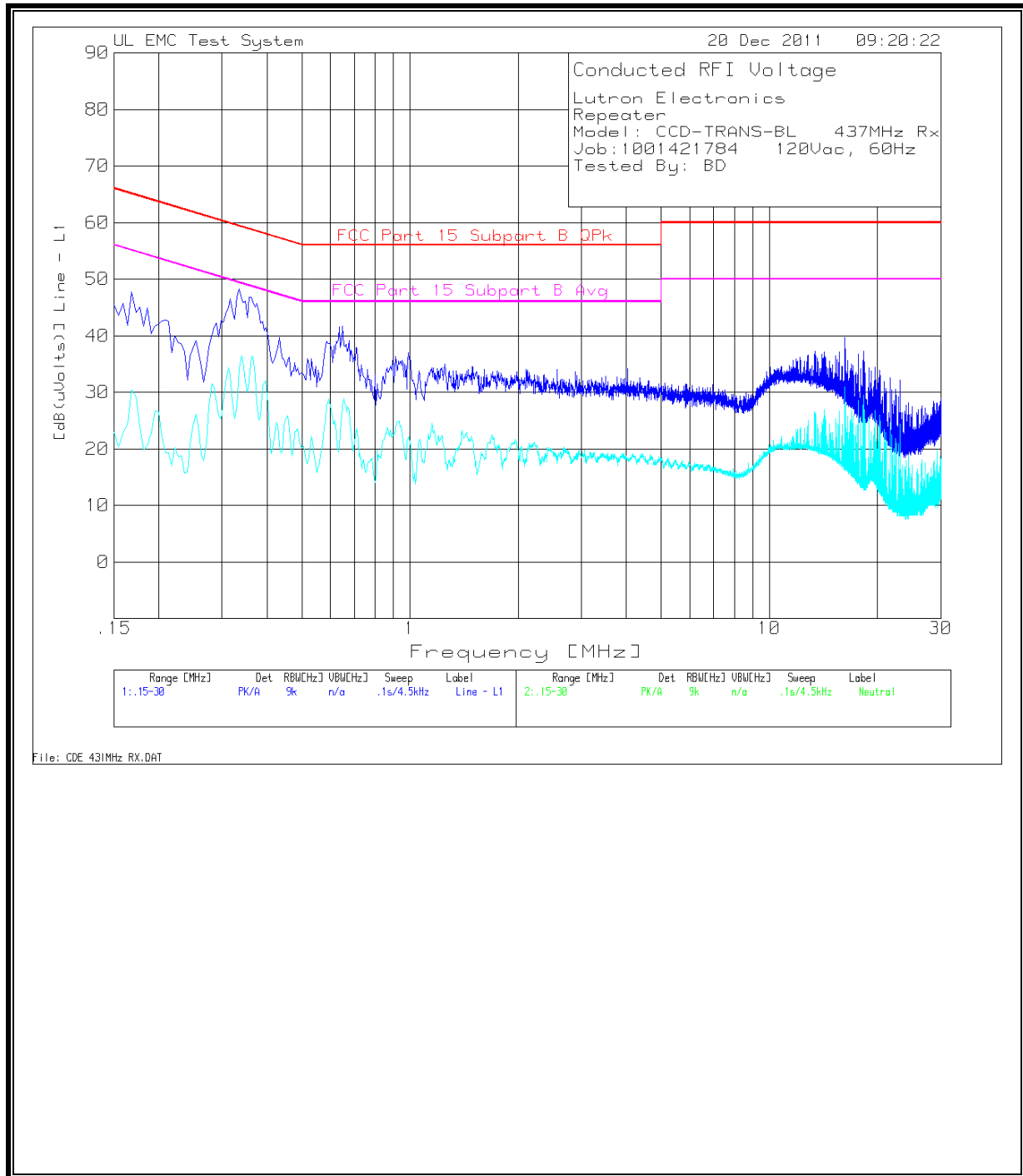
LINE 2 RESULTS



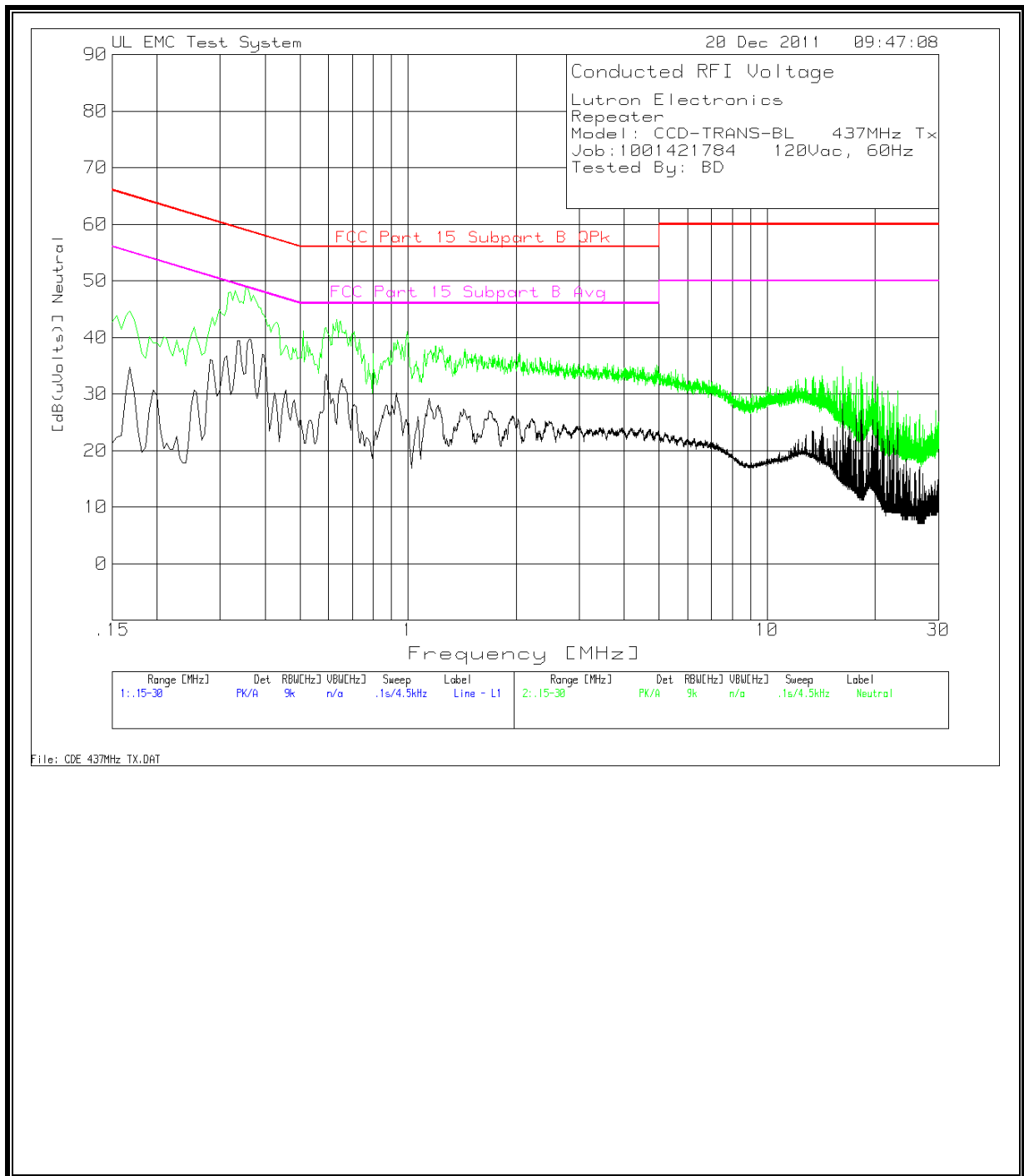
6 WORST EMISSIONS 437 MHz Tx

Lutron Electronics								
Repeater								
Model: CCD-TRANS-BL 437MHz Tx								
Job:1001421784 120Vac, 60Hz								
Tested By: BD								
Test	Meter		5A636 with		FCC Part 15		FCC Part 15	
Frequency	Reading	Detector	TL and Sw		Subpart B		Subpart B	
Line 1 [dB]				[dB(uVolts)]	QPk	Margin	Avg	Margin
Line - L1 .15 - 30MHz								
0.168	36.44	PK	11.4	47.84	65.1	-17.26	55.1	-7.26
0.168	19.29	Av	11.4	30.69	65.1	-34.41	55.1	-24.41
0.3255	37.05	PK	10.7	47.75	59.6	-11.85	49.6	-1.85
0.3255	15.62	Av	10.7	26.32	59.6	-33.28	49.6	-23.28
0.3615	36.22	PK	10.6	46.82	58.7	-11.88	48.7	-1.88
0.3615	25.41	Av	10.6	36.01	58.7	-22.69	48.7	-12.69
0.618	29.44	PK	10.5	39.94	56	-16.06	46	-6.06
0.618	14.73	Av	10.5	25.23	56	-30.77	46	-20.77
0.996	27.36	PK	10.4	37.76	56	-18.24	46	-8.24
0.996	11.34	Av	10.4	21.74	56	-34.26	46	-24.26
16.2285	28.92	PK	10.7	39.62	60	-20.38	50	-10.38
16.2285	21.18	Av	10.7	31.88	60	-28.12	50	-18.12
Neutral .15 - 30MHz								
0.168	33.29	PK	11.4	44.69	65.1	-20.41	55.1	-10.41
0.168	23.28	Av	11.4	34.68	65.1	-30.42	55.1	-20.42
0.33	37.55	PK	10.7	48.25	59.5	-11.25	49.5	-1.25
0.33	23.77	Av	10.7	34.47	59.5	-25.03	49.5	-15.03
0.357	38.38	PK	10.6	48.98	58.8	-9.82	48.8	0.18
0.357	28.37	Av	10.6	38.97	58.8	-19.83	48.8	-9.83
0.6315	32.73	PK	10.5	43.23	56	-12.77	46	-2.77
0.6315	14.13	Av	10.5	24.63	56	-31.37	46	-21.37
0.9915	29.65	PK	10.4	40.05	56	-15.95	46	-5.95
0.9915	15.11	Av	10.4	25.51	56	-30.49	46	-20.49
1.2435	28.01	PK	10.4	38.41	56	-17.59	46	-7.59
1.2435	15.49	Av	10.4	25.89	56	-30.11	46	-20.11
PK - Peak detector								
QP - Quasi-Peak detector								
LnAv - Linear Average detector								
LgAv - Log Average detector								
Av - Average detector								
CAV - CISPR Average detector								
RMS - RMS detection								
CRMS - CISPR RMS detection								

LINE 1 RESULTS

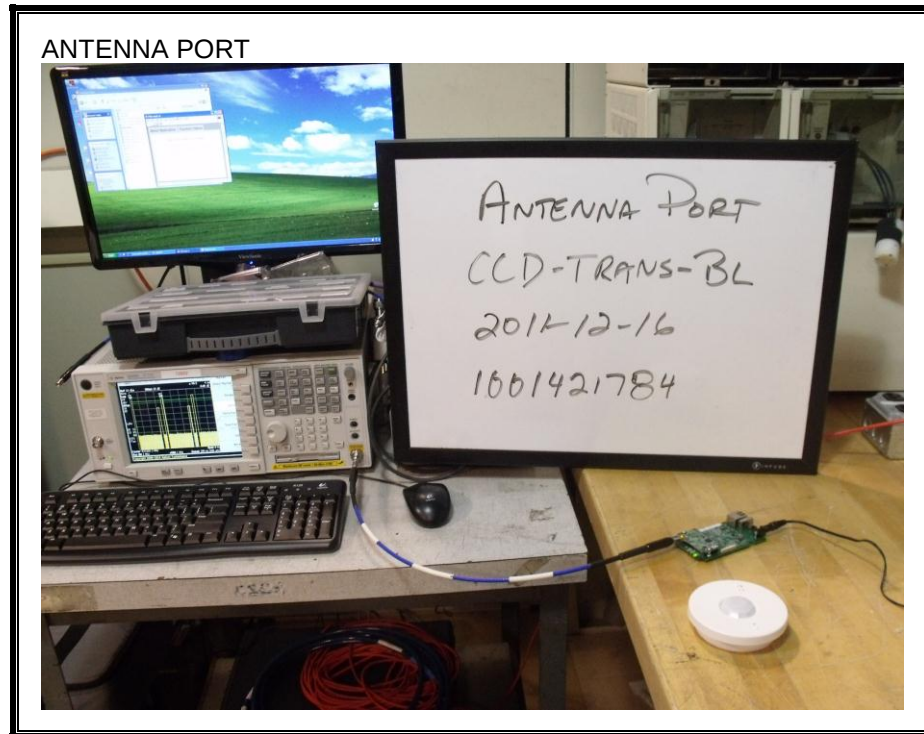


LINE 2 RESULTS



10. SETUP PHOTOS

ANTENNA PORT

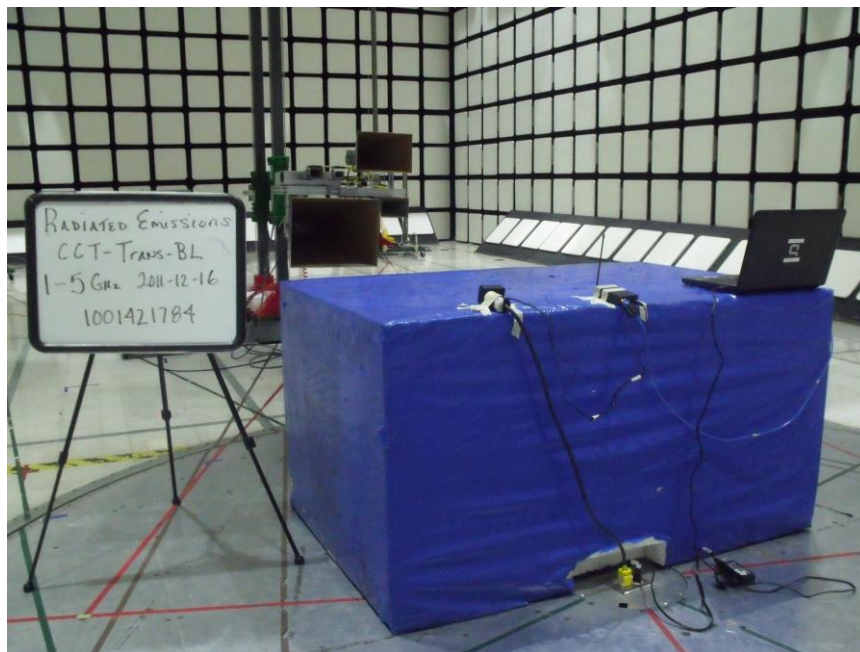


RADIATED EMISSION ABOVE 30 MHz

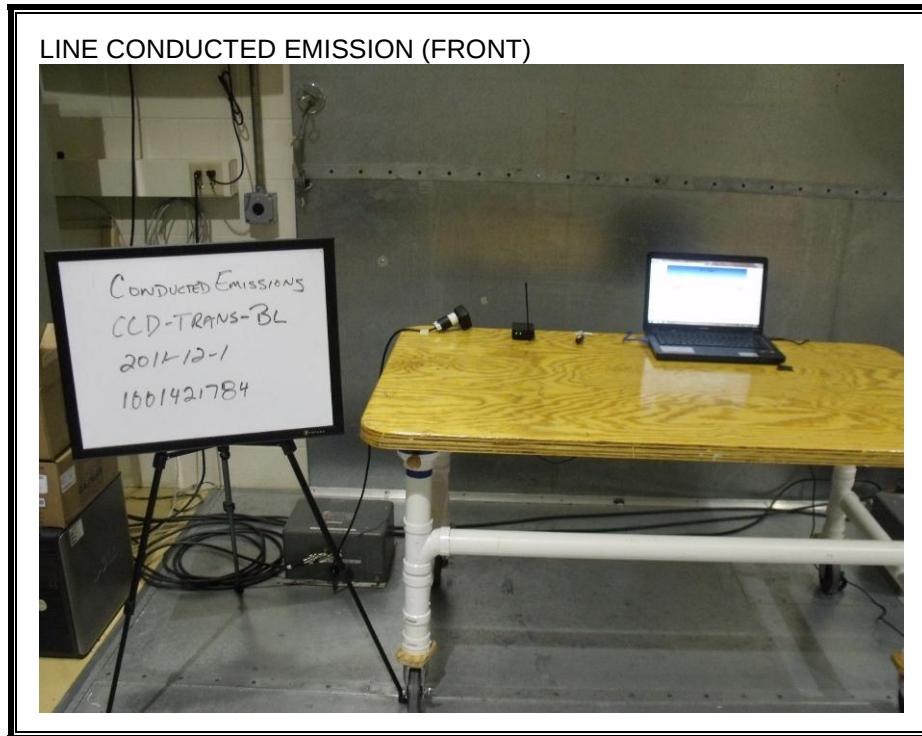
RADIATED EMISSIONS ABOVE 30 MHz (FRONT)



RADIATED EMISSIONS ABOVE 30 MHz (BACK) - TX



AC MAINS LINE CONDUCTED EMISSION





END OF REPORT