Underwriters Laboratories Inc.
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Melville, NY 11747

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Job Number:	952983
Project Number:	08CA15832
File Number:	MC15896
Date:	01 Oct 2008
Model:	SZ-CI-PRG
FCC ID:	JPZ0034
Industry Canada ID:	2851-JPZ0034

Electromagnetic Compatibility Test Report

For

LUTRON ELECTRONICS INC

Test Report Details

Tests Performed By:	**Underwriters Laboratories Inc. 1285 Walt Whitman Rd. Melville, NY 11747**
Tests Performed For:	**LUTRON ELECTRONICS INC 7200 SUTTER ROAD COOPERBURG, PA 18036**
Applicant Contact: Title: Phone: E-mail:	**BOB SPEHALSKI ENGINEERING LEADER (610) 282-7424 RSPEHALSKI@LUTRON.COM**
Test Report Date:	**01 Oct 2008**
Product Type:	**Wireless integration module**
Product standards	**FCC Part 15, Subpart C, RSS-GEN, RSS-210**
Model Number:	**SZ-CI-PRG**
Sample Serial Number:	**Non-Serialized Demonstration Unit**
EUT Category:	**Periodic Low Power Transmitter**
Testing Start Date:	**18 Sept 2008**
Date Testing Complete:	**23 Sept 2008**
Overall Results:	**Compliant**

Underwriters Laboratories Inc. reports apply only to the specific samples tested under stated test conditions. All samples tested were in good operating condition throughout the entire test program. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. Underwriters Laboratories Inc. shall have no liability for any deductions, inferences or generalizations drawn by the client or others from Underwriters Laboratories Inc. issued reports. This report shall not be used to claim, constitute or imply product certification, approval, or endorsement by NVLAP, A2LA, or any agency of the US government.

This report may contain test results that are not covered by the NVLAP or A2LA accreditation. The scope of accreditation is limited to the specific tests that are listed on the NVLAP and/or A2LA websites referenced at the end of this report.

Report Directory

Report Revision History

Revision Date	Description	Revised By	Revision Reviewed By
None	Original	-	-

1.0 G E N E R A L - Product Description

1.1 Equipment Description

The SZ-CI-PRG is an integration module used to connect systems that communication via Ethernet, USB or RS-232.

Per FCC Part 2.1093 (c) this device is not required to undergo testing for radio-frequency radiation exposure.

Antenna description: It is a permanently attached to the RF circuit board. The external multi-position antenna cannot be removed from the product or changed by the user.

The transmitter circuitry is regulated and therefore frequency stability with varied input voltages was not required.

1.2 Report Scope

This report is being issued to confirm the manufacturers Class II permissive change. The current product that is covered by FCC ID: JPZ0034 and IC Number: 2851-JPZ0034 was changed by replacing the contact closures with Ethernet, USB and RS-232 ports.

1.3 Equipment Marking Plate

Not Available.

1.4 Device Configuration During Test

1.4.1 Equipment Used During Test:

Use	Product Type	Manufacturer	Model	Comments
EUT	Wireless Lighting (Interface	LUTRON ELECTRONICS INC	SZ-CI-PRG	None
AE	Laptop	IBM	T21	None
Note: **EUT** - Equipment Under Test, **AE** - Auxiliary/Associated Equipment, or **SIM** - Simulator (Not Subjected to Test)				

1.4.2 Input/Output Ports:

Port #	Name	Type*	Cable Max. >3m (Y/N)	Cable Shielded (Y/N)	Comments
0	Enclosure	N/E	—	—	None
1	Mains	AC	Y	N	None
2	RS-232	I/O	Y	Y	None
3	Ethernet	I/O	Y	N	None
4	USB	I/O	Y	N	None

Note:
AC = AC Power Port DC = DC Power Port N/E = Non-Electrical
I/O = Signal Input or Output Port (Not Involved in Process Control)
TP = Telecommunication Ports

1.4.3 EUT Internal Operating Frequencies:

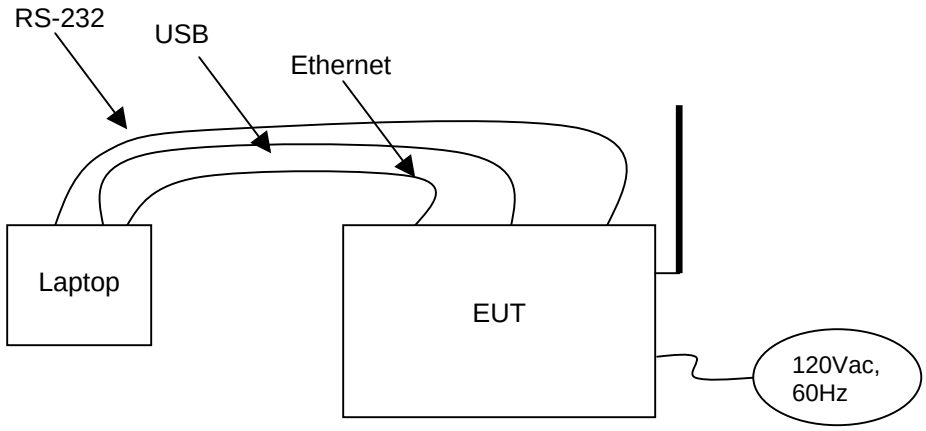
Frequency (MHz)	Description
431	Fundamental Frequency
434	Fundamental Frequency
437	Fundamental Frequency

1.4.4 Power Interface:

Mode # /Rated	Voltage (V)	Current (A)	Power (W)	Frequency (DC/AC-Hz)	Phases (#)	Comments
Rated	120Vac	-	-	60Hz	1	None
1	120Vac	-	-	60Hz	1	None

1.5 Block Diagram:

The diagram below illustrates the configuration of the equipment above.



1.6 EUT Configurations

Mode #	Description
1	Stand-alone with outputs connected to a laptop computer.

1.7 EUT Operation Modes

Mode #	Description
1	Continuously transmitting 431MHz
2	Continuously transmitting 434 MHz
3	Continuously transmitting 437 MHz

2.0 Summary

The tests listed in the Summary of Testing section of this report have been performed and the results recorded by Underwriters Laboratories Inc. in accordance with the procedures stated in each test requirement and specification. The applicant determined the list of tests performed were applicable to the Equipment Under Test. As a result, the subject product has been verified to comply or not comply as noted in the Summary of Testing with each test specification. The test results relate only to the items tested.

2.1 Deviations from standard test methods

None

2.2 Device Modifications Necessary for Compliance

None

2.3 Reference Standards

Standard Number	Standard Name	Standard Date
47 CFR Part 15, Subpart C, 15.231, 15.209	Code of Federal Regulations, Part 15, Radio Frequency Devices	2008
RSS-GEN	General Requirements and Information for the Certification of Radiocommunication Equipment	2007
RSS-210	Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment	2007

2.4 Results Summary

This product is considered a Periodic Transmitter

Requirement – Test	Result (Compliant / Non-Compliant)*
Radiated Emissions – Transmit Mode	Compliant
Conducted Emissions	Compliant
Cease Operation	Compliant
Occupied Bandwidth –20dBc	Compliant
Occupied Bandwidth 99% Power	Compliant

Test Engineer:

Bob DeLisi (Ext.22452)
Senior Staff Engineer
International EMC Services
Conformity Assessment Services-

Reviewer:

Joe Danisi(Ext.23055)
Lead Engineering Associate
International EMC Services
Conformity Assessment Services

3.0 Calibration of Equipment Used for Measurement

All test equipment and test accessories are calibrated on a regular basis. The maximum time between calibrations is one year or the manufacturers' recommendation, whichever is less.

All test equipment calibrations are traceable to the National Institute of Standards and Technology (NIST); therefore, all test data recorded in this report is traceable to NIST.

4.0 EMISSIONS TEST RESULTS

The emissions tests were performed according to following regulations:

---------- North America ----------

Code of Federal Regulations Title 47	Part 15, Subpart C, Radio Frequency Devices
Industry Canada	RSS-GEN, RSS-210

Unless specified otherwise in the individual Methods, the tests shall be conducted under the following ambient conditions. Confirmation of these conditions shall be verified at the time the test is conducted.

Ambient Temperature, °C	22.5 ± 2.5	Relative Humidity, %	45 ± 15	Barometric Pressure, mBar	950 ± 150

4.1

4.2 Test Conditions and Results – MAINS TERMINAL – CONDUCTED EMISSIONS

Test Description	Measurements were made on a ground plane. All power was connected to the system through Artificial Mains Network (AMN). Conducted voltage measurements on mains lines were made at the output of the AMN.		
Basic Standard		FCC Part 15 Subpart C / C63.4	
UL LPG		80-EM-S0026	
		Frequency range on each side of line	Measurement Point
Fully configured sample scanned over the following frequency range		150kHz to 30MHz	Mains
Limits			
Frequency (MHz)	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	
Supplementary information: None			

Table 1 Conducted Emissions EUT Configuration Settings

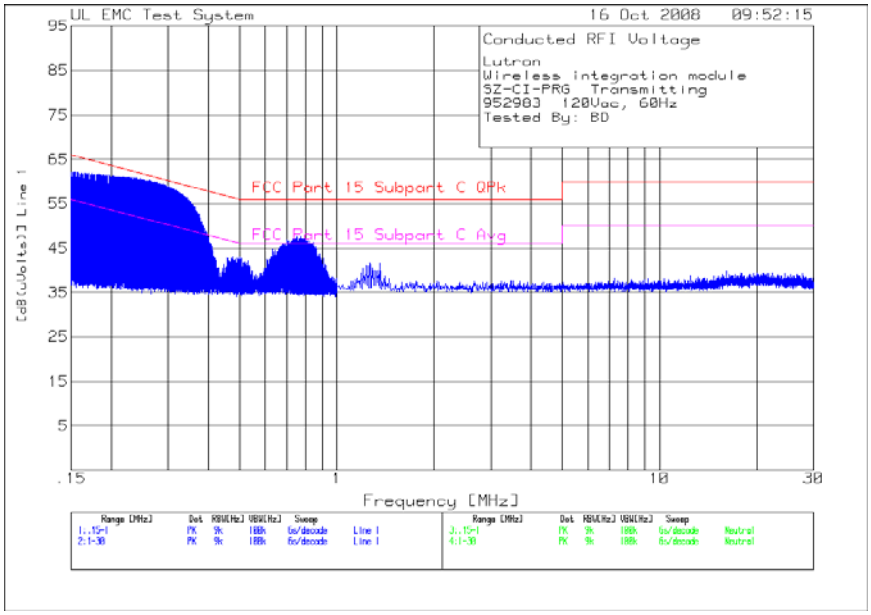
Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
1	1	1
Supplementary information: Since the transmitter power input is regulated conducted emissions was only tested on one channel.		

Table 2 Conducted Emissions Test Equipment

Description	Manufacturer	Model	Identifier
Conducted Emissions – Shield Room			
Spectrum Analyzer	Agilent	E7402A	ME5B-123
LISN	Solar	9252-50-R-24-BNC	47367
LISN	EMCO	3825/2R	ME5-629
Switch Driver	HP	11713A	44403
RF Switch Box	UL	2	44400
Measurement Software	UL	Version 9.3	44743
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	43736
Multimeter	Fluke	83III	ME5B-305

Figure 1 Test Setup for Conducted Emissions

Figure 2 Conducted Emissions Graph



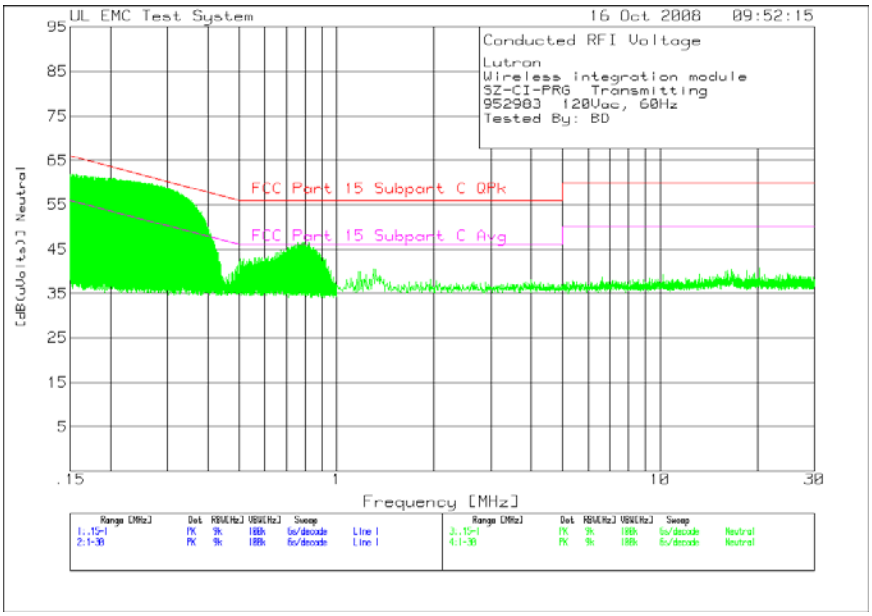


Table 3 Conducted Emissions Data Points

Lutron
Wireless integration module
SZ-CI-PRG Transmitting
952983 120Vac, 60Hz
Tested By: BD

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
Line 1 .15 - 1MHz											
1	.15488	50.13 pk	12	0	62.13	65.7	55.7	-	-	-	-
				Margin [dB]		-3.57	6.43	-	-	-	-
2	.16463	50.05 pk	11.8	0	61.85	65.2	55.2	-	-	-	-
				Margin [dB]		-3.35	6.65	-	-	-	-
3	.18392	50.01 pk	11.6	0	61.61	64.3	54.3	-	-	-	-
				Margin [dB]		-2.69	7.31	-	-	-	-
4	.19601	50.03 pk	11.4	0	61.43	63.8	53.8	-	-	-	-
				Margin [dB]		-2.37	7.63	-	-	-	-
5	.20937	49.85 pk	11.3	0	61.15	63.2	53.2	-	-	-	-
				Margin [dB]		-2.05	7.95	-	-	-	-
6	.22612	49.86 pk	11.2	0	61.06	62.6	52.6	-	-	-	-
				Margin [dB]		-1.54	8.46	-	-	-	-
7	.23863	49.85 pk	11.1	0	60.95	62.1	52.1	-	-	-	-
				Margin [dB]		-1.15	8.85	-	-	-	-
8	.25326	49.27 pk	11	0	60.27	61.6	51.6	-	-	-	-
				Margin [dB]		-1.33	8.67	-	-	-	-
9	.26895	49.07 pk	10.9	0	59.97	61.2	51.2	-	-	-	-
				Margin [dB]		-1.23	8.77	-	-	-	-
10	.28824	48.58 pk	10.9	0	59.48	60.6	50.6	-	-	-	-
				Margin [dB]		-1.12	8.88	-	-	-	-
11	.30647	47.81 pk	10.8	0	58.61	60.1	50.1	-	-	-	-
				Margin [dB]		-1.49	8.51	-	-	-	-
12	.33128	46.39 pk	10.7	0	57.09	59.4	49.4	-	-	-	-
				Margin [dB]		-2.31	7.69	-	-	-	-
13	.35312	44.42 pk	10.7	0	55.12	58.9	48.9	-	-	-	-
				Margin [dB]		-3.78	6.22	-	-	-	-
14	.37368	42.2 pk	10.6	0	52.8	58.4	48.4	-	-	-	-
				Margin [dB]		-5.6	4.4	-	-	-	-
15	.39171	38.33 pk	10.6	0	48.93	58	48	-	-	-	-
				Margin [dB]		-9.07	.93	-	-	-	-
16	.41142	33.93 pk	10.6	0	44.53	57.6	47.6	-	-	-	-
				Margin [dB]		-13.07	-3.07	-	-	-	-
17	.42902	30.03 pk	10.6	0	40.63	57.3	47.3	-	-	-	-
				Margin [dB]		-16.67	-6.67	-	-	-	-
18	.46167	31.6 pk	10.5	0	42.1	56.7	46.7	-	-	-	-
				Margin [dB]		-14.6	-4.6	-	-	-	-

LIMIT 1: FCC Part 15 Subpart C QPk
LIMIT 2: FCC Part 15 Subpart C Avg
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - denotes average log detection

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
Line 1 .15 - 1MHz											
19	.49963	32.45 pk	10.5	0	42.95	56	46	-	-	-	-
				Margin [dB]		-13.05	-3.05	-	-	-	-
20	.5433	29.26 pk	10.5	0	39.76	56	46	-	-	-	-
				Margin [dB]		-16.24	-6.24	-	-	-	-
21	.59567	30.03 pk	10.4	0	40.43	56	46	-	-	-	-
				Margin [dB]		-15.57	-5.57	-	-	-	-
22	.63575	33.84 pk	10.4	0	44.24	56	46	-	-	-	-
				Margin [dB]		-11.76	-1.76	-	-	-	-
23	.68493	35.44 pk	10.4	0	45.84	56	46	-	-	-	-
				Margin [dB]		-10.16	-.16	-	-	-	-
24	.72967	36.63 pk	10.4	0	47.03	56	46	-	-	-	-
				Margin [dB]		-8.97	1.03	-	-	-	-
25	.79731	36.77 pk	10.4	0	47.17	56	46	-	-	-	-
				Margin [dB]		-8.83	1.17	-	-	-	-
26	.86176	34.83 pk	10.4	0	45.23	56	46	-	-	-	-
				Margin [dB]		-10.77	-.77	-	-	-	-
27	.9188	31 pk	10.4	0	41.4	56	46	-	-	-	-
				Margin [dB]		-14.6	-4.6	-	-	-	-
28	.97986	27.25 pk	10.4	0	37.65	56	46	-	-	-	-
				Margin [dB]		-18.35	-8.35	-	-	-	-
Line 1 1 - 30MHz											
29	1.23148	30.68 pk	10.4	0	41.08	56	46	-	-	-	-
				Margin [dB]		-14.92	-4.92	-	-	-	-
30	1.26041	31.25 pk	10.4	0	41.65	56	46	-	-	-	-
				Margin [dB]		-14.35	-4.35	-	-	-	-
31	1.35445	31.04 pk	10.4	0	41.44	56	46	-	-	-	-
				Margin [dB]		-14.56	-4.56	-	-	-	-

LIMIT 1: FCC Part 15 Subpart C QPk
LIMIT 2: FCC Part 15 Subpart C Avg
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - denotes average log detection

Lutron
Wireless integration module
SZ-CI-PRG Transmitting
952983 120Vac, 60Hz
Tested By: BD

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
Line 1 .15 - 1MHz										
.15353	43.87 qp	12	0	55.87	65.8	55.8	-	-	-	-
			Margin [dB]:		-9.93	.07	-	-	-	-
.16457	43.79 qp	11.8	0	55.59	65.2	55.2	-	-	-	-
			Margin [dB]:		-9.61	.39	-	-	-	-
.18405	43.61 qp	11.5	0	55.11	64.3	54.3	-	-	-	-
			Margin [dB]:		-9.19	.81	-	-	-	-
.19609	43.48 qp	11.4	0	54.88	63.8	53.8	-	-	-	-
			Margin [dB]:		-8.92	1.08	-	-	-	-
.2077	43.35 qp	11.3	0	54.65	63.3	53.3	-	-	-	-
			Margin [dB]:		-8.65	1.35	-	-	-	-
.22657	43.08 qp	11.2	0	54.28	62.6	52.6	-	-	-	-
			Margin [dB]:		-8.32	1.68	-	-	-	-
.23981	42.82 qp	11.1	0	53.92	62.1	52.1	-	-	-	-
			Margin [dB]:		-8.18	1.82	-	-	-	-
.25244	42.6 qp	11	0	53.6	61.7	51.7	-	-	-	-
			Margin [dB]:		-8.1	1.9	-	-	-	-
.26759	42.21 qp	10.9	0	53.11	61.2	51.2	-	-	-	-
			Margin [dB]:		-8.09	1.91	-	-	-	-
.28665	41.63 qp	10.9	0	52.53	60.6	50.6	-	-	-	-
			Margin [dB]:		-8.07	1.93	-	-	-	-
.30607	40.84 qp	10.8	0	51.64	60.1	50.1	-	-	-	-
			Margin [dB]:		-8.46	1.54	-	-	-	-
.32977	39.27 qp	10.7	0	49.97	59.5	49.5	-	-	-	-
			Margin [dB]:		-9.53	.47	-	-	-	-
.35295	37.77 qp	10.7	0	48.47	58.9	48.9	-	-	-	-
			Margin [dB]:		-10.43	-.43	-	-	-	-
.37215	35.53 qp	10.6	0	46.13	58.5	48.5	-	-	-	-
			Margin [dB]:		-12.37	-2.37	-	-	-	-
.3916	32.1 qp	10.6	0	42.7	58	48	-	-	-	-
			Margin [dB]:		-15.3	-5.3	-	-	-	-

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

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - denotes average log detection
ave - denotes average detection

LIMIT 1: FCC Part 15 Subpart C QPk
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Lutron
Wireless integration module
SZ-CI-PRG Transmitting
952983 120Vac, 60Hz
Tested By: BD

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
Line 1 .15 - 1MHz										
.15488	9.52 ave	12	0	21.52	65.7	55.7	-	-	-	-
			Margin [dB]:		-44.18	-34.18	-	-	-	-
.16463	9.51 ave	11.8	0	21.31	65.2	55.2	-	-	-	-
			Margin [dB]:		-43.89	-33.89	-	-	-	-
.18392	9.37 ave	11.6	0	20.97	64.3	54.3	-	-	-	-
			Margin [dB]:		-43.33	-33.33	-	-	-	-
.19601	10.32 ave	11.4	0	21.72	63.8	53.8	-	-	-	-
			Margin [dB]:		-42.08	-32.08	-	-	-	-
.20937	10.46 ave	11.3	0	21.76	63.2	53.2	-	-	-	-
			Margin [dB]:		-41.44	-31.44	-	-	-	-
.22612	9.22 ave	11.2	0	20.42	62.6	52.6	-	-	-	-
			Margin [dB]:		-42.18	-32.18	-	-	-	-
.23863	9.2 ave	11.1	0	20.3	62.1	52.1	-	-	-	-
			Margin [dB]:		-41.8	-31.8	-	-	-	-
.25326	9.47 ave	11	0	20.47	61.6	51.6	-	-	-	-
			Margin [dB]:		-41.13	-31.13	-	-	-	-
.26895	9.71 ave	10.9	0	20.61	61.2	51.2	-	-	-	-
			Margin [dB]:		-40.59	-30.59	-	-	-	-
.28824	9.28 ave	10.9	0	20.18	60.6	50.6	-	-	-	-
			Margin [dB]:		-40.42	-30.42	-	-	-	-
.30647	8.74 ave	10.8	0	19.54	60.1	50.1	-	-	-	-
			Margin [dB]:		-40.56	-30.56	-	-	-	-
.33128	9.18 ave	10.7	0	19.88	59.4	49.4	-	-	-	-
			Margin [dB]:		-39.52	-29.52	-	-	-	-
.35312	8.77 ave	10.7	0	19.47	58.9	48.9	-	-	-	-
			Margin [dB]:		-39.43	-29.43	-	-	-	-
.37368	8.18 ave	10.6	0	18.78	58.4	48.4	-	-	-	-
			Margin [dB]:		-39.62	-29.62	-	-	-	-
.39171	8.11 ave	10.6	0	18.71	58	48	-	-	-	-
			Margin [dB]:		-39.29	-29.29	-	-	-	-

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

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - denotes average log detection
ave - denotes average detection

LIMIT 1: FCC Part 15 Subpart C QPk
LIMIT 2: FCC Part 15 Subpart C Avg
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
.41142	7.68 ave	10.6	0	18.28	57.6	47.6	-	-	-	-
			Margin [dB]:		-39.32	-29.32	-	-	-	-
.42902	7.19 ave	10.6	0	17.79	57.3	47.3	-	-	-	-
			Margin [dB]:		-39.51	-29.51	-	-	-	-
.46167	6.71 ave	10.5	0	17.21	56.7	46.7	-	-	-	-
			Margin [dB]:		-39.49	-29.49	-	-	-	-
.49963	6.88 ave	10.5	0	17.38	56	46	-	-	-	-
			Margin [dB]:		-38.62	-28.62	-	-	-	-
.5433	6.95 ave	10.5	0	17.45	56	46	-	-	-	-
			Margin [dB]:		-38.55	-28.55	-	-	-	-
.59567	7.22 ave	10.4	0	17.62	56	46	-	-	-	-
			Margin [dB]:		-38.38	-28.38	-	-	-	-
.63575	8.02 ave	10.4	0	18.42	56	46	-	-	-	-
			Margin [dB]:		-37.58	-27.58	-	-	-	-
.68493	8 ave	10.4	0	18.4	56	46	-	-	-	-
			Margin [dB]:		-37.6	-27.6	-	-	-	-
.72967	8.04 ave	10.4	0	18.44	56	46	-	-	-	-
			Margin [dB]:		-37.56	-27.56	-	-	-	-
.79731	7.31 ave	10.4	0	17.71	56	46	-	-	-	-
			Margin [dB]:		-38.29	-28.29	-	-	-	-
.86176	6.76 ave	10.4	0	17.16	56	46	-	-	-	-
			Margin [dB]:		-38.84	-28.84	-	-	-	-
.9188	6.34 ave	10.4	0	16.74	56	46	-	-	-	-
			Margin [dB]:		-39.26	-29.26	-	-	-	-
.97986	6.07 ave	10.4	0	16.47	56	46	-	-	-	-
			Margin [dB]:		-39.53	-29.53	-	-	-	-
Line 1 1 - 30MHz										
1.23148	6.84 ave	10.4	0	17.24	56	46	-	-	-	-
			Margin [dB]:		-38.76	-28.76	-	-	-	-
1.26041	6.96 ave	10.4	0	17.36	56	46	-	-	-	-
			Margin [dB]:		-38.64	-28.64	-	-	-	-
1.35445	6.12 ave	10.4	0	16.52	56	46	-	-	-	-
			Margin [dB]:		-39.48	-29.48	-	-	-	-

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

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - denotes average log detection
ave - denotes average detection

LIMIT 1: FCC Part 15 Subpart C QPk
LIMIT 2: FCC Part 15 Subpart C Avg
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

Lutron
Wireless integration module
SZ-CI-PRG Transmitting
952983 120Vac, 60Hz
Tested By: BD

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
Neutral .15 - 1MHz											
1	.15127	49.9 pk	12	0	61.9	65.9	55.9	-	-	-	-
				Margin [dB]		-4	6	-	-	-	-
2	.16209	49.72 pk	11.8	0	61.52	65.4	55.4	-	-	-	-
				Margin [dB]		-3.88	6.12	-	-	-	-
3	.17544	49.62 pk	11.7	0	61.32	64.7	54.7	-	-	-	-
				Margin [dB]		-3.38	6.62	-	-	-	-
4	.19241	49.65 pk	11.5	0	61.15	63.9	53.9	-	-	-	-
				Margin [dB]		-2.75	7.25	-	-	-	-
5	.20322	49.71 pk	11.3	0	61.01	63.5	53.5	-	-	-	-
				Margin [dB]		-2.49	7.51	-	-	-	-
6	.21785	49.36 pk	11.2	0	60.56	62.9	52.9	-	-	-	-
				Margin [dB]		-2.34	7.66	-	-	-	-
7	.23566	49.14 pk	11.1	0	60.24	62.2	52.2	-	-	-	-
				Margin [dB]		-1.96	8.04	-	-	-	-
8	.25368	48.98 pk	11	0	59.98	61.6	51.6	-	-	-	-
				Margin [dB]		-1.62	8.38	-	-	-	-
9	.26937	48.8 pk	10.9	0	59.7	61.1	51.1	-	-	-	-
				Margin [dB]		-1.4	8.6	-	-	-	-
10	.2876	48.54 pk	10.8	0	59.34	60.6	50.6	-	-	-	-
				Margin [dB]		-1.26	8.74	-	-	-	-
11	.30923	47.64 pk	10.8	0	58.44	60	50	-	-	-	-
				Margin [dB]		-1.56	8.44	-	-	-	-
12	.32683	46.82 pk	10.7	0	57.52	59.5	49.5	-	-	-	-
				Margin [dB]		-1.98	8.02	-	-	-	-
13	.34125	46.01 pk	10.7	0	56.71	59.2	49.2	-	-	-	-
				Margin [dB]		-2.49	7.51	-	-	-	-
14	.36308	44.35 pk	10.6	0	54.95	58.7	48.7	-	-	-	-
				Margin [dB]		-3.75	6.25	-	-	-	-
15	.38005	42.83 pk	10.6	0	53.43	58.3	48.3	-	-	-	-
				Margin [dB]		-4.87	5.13	-	-	-	-
16	.39213	40.8 pk	10.6	0	51.4	58	48	-	-	-	-
				Margin [dB]		-6.6	3.4	-	-	-	-
17	.41121	36.65 pk	10.6	0	47.25	57.6	47.6	-	-	-	-
				Margin [dB]		-10.35	-.35	-	-	-	-

LIMIT 1: FCC Part 15 Subpart C QPk
LIMIT 2: FCC Part 15 Subpart C Avg
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - denotes average log detection

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]		Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
Neutral .15 - 1MHz												
18	.42097	35.38	pk	10.6	0	45.98	57.4	47.4	-	-	-	-
					Margin [dB]		-11.42	-1.42	-	-	-	-
19	.43432	31.57	pk	10.5	0	42.07	57.2	47.2	-	-	-	-
					Margin [dB]		-15.13	-5.13	-	-	-	-
20	.46379	28.43	pk	10.5	0	38.93	56.6	46.6	-	-	-	-
					Margin [dB]		-17.67	-7.67	-	-	-	-
Neutral .15 - 1MHz												
21	.50365	32.34	pk	10.5	0	42.84	56	46	-	-	-	-
					Margin [dB]		-13.16	-3.16	-	-	-	-
22	.53631	32.14	pk	10.5	0	42.64	56	46	-	-	-	-
					Margin [dB]		-13.36	-3.36	-	-	-	-
23	.5785	32.86	pk	10.4	0	43.26	56	46	-	-	-	-
					Margin [dB]		-12.74	-2.74	-	-	-	-
24	.61369	33.05	pk	10.4	0	43.45	56	46	-	-	-	-
					Margin [dB]		-12.55	-2.55	-	-	-	-
25	.65589	34.02	pk	10.4	0	44.42	56	46	-	-	-	-
					Margin [dB]		-11.58	-1.58	-	-	-	-
26	.68727	34.15	pk	10.4	0	44.55	56	46	-	-	-	-
					Margin [dB]		-11.45	-1.45	-	-	-	-
27	.71377	34.68	pk	10.4	0	45.08	56	46	-	-	-	-
					Margin [dB]		-10.92	-.92	-	-	-	-
28	.75299	35.75	pk	10.4	0	46.15	56	46	-	-	-	-
					Margin [dB]		-9.85	.15	-	-	-	-
29	.79413	36.01	pk	10.4	0	46.41	56	46	-	-	-	-
					Margin [dB]		-9.59	.41	-	-	-	-
30	.84374	34.66	pk	10.4	0	45.06	56	46	-	-	-	-
					Margin [dB]		-10.94	-.94	-	-	-	-
31	.88127	33.97	pk	10.4	0	44.37	56	46	-	-	-	-
					Margin [dB]		-11.63	-1.63	-	-	-	-
32	.91031	32.11	pk	10.4	0	42.51	56	46	-	-	-	-
					Margin [dB]		-13.49	-3.49	-	-	-	-
33	.93957	30.74	pk	10.4	0	41.14	56	46	-	-	-	-
					Margin [dB]		-14.86	-4.86	-	-	-	-
34	.97329	28.11	pk	10.4	0	38.51	56	46	-	-	-	-
					Margin [dB]		-17.49	-7.49	-	-	-	-

LIMIT 1: FCC Part 15 Subpart C QPk
LIMIT 2: FCC Part 15 Subpart C Avg
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - denotes average log detection

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
Neutral 1 - 30MHz											
35	1.10851	28.16 pk	10.4	0	38.56	56	46	-	-	-	-
				Margin [dB]		-17.44	-7.44	-	-	-	-
36	1.18084	29.62 pk	10.4	0	40.02	56	46	-	-	-	-
				Margin [dB]		-15.98	-5.98	-	-	-	-
37	1.23148	28.9 pk	10.4	0	39.3	56	46	-	-	-	-
				Margin [dB]		-16.7	-6.7	-	-	-	-
38	1.30382	30.11 pk	10.4	0	40.51	56	46	-	-	-	-
				Margin [dB]		-15.49	-5.49	-	-	-	-
39	1.31828	29.94 pk	10.4	0	40.34	56	46	-	-	-	-
				Margin [dB]		-15.66	-5.66	-	-	-	-
40	1.35445	28.58 pk	10.4	0	38.98	56	46	-	-	-	-
				Margin [dB]		-17.02	-7.02	-	-	-	-

LIMIT 1: FCC Part 15 Subpart C QPk
LIMIT 2: FCC Part 15 Subpart C Avg
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - denotes average log detection

Lutron
Wireless integration module
SZ-CI-PRG Transmitting
952983 120Vac, 60Hz
Tested By: BD

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
Neutral .15 - 1MHz										
.15263	43.54 qp	12	0	55.54	65.9	55.9	-	-	-	-
			Margin [dB]:		-10.36	-.36	-	-	-	-
.16254	43.57 qp	11.8	0	55.37	65.3	55.3	-	-	-	-
			Margin [dB]:		-9.93	.07	-	-	-	-
.1738	43.47 qp	11.7	0	55.17	64.8	54.8	-	-	-	-
			Margin [dB]:		-9.63	.37	-	-	-	-
.19155	43.28 qp	11.5	0	54.78	64	54	-	-	-	-
			Margin [dB]:		-9.22	.78	-	-	-	-
.20156	43.2 qp	11.4	0	54.6	63.5	53.5	-	-	-	-
			Margin [dB]:		-8.9	1.1	-	-	-	-
.21717	42.96 qp	11.2	0	54.16	62.9	52.9	-	-	-	-
			Margin [dB]:		-8.74	1.26	-	-	-	-
.23451	42.77 qp	11.1	0	53.87	62.3	52.3	-	-	-	-
			Margin [dB]:		-8.43	1.57	-	-	-	-
.25507	42.38 qp	11	0	53.38	61.6	51.6	-	-	-	-
			Margin [dB]:		-8.22	1.78	-	-	-	-
.26837	42.12 qp	10.9	0	53.02	61.2	51.2	-	-	-	-
			Margin [dB]:		-8.18	1.82	-	-	-	-
.28621	41.67 qp	10.9	0	52.57	60.6	50.6	-	-	-	-
			Margin [dB]:		-8.03	1.97	-	-	-	-
.30858	40.87 qp	10.8	0	51.67	60	50	-	-	-	-
			Margin [dB]:		-8.33	1.67	-	-	-	-
.32566	40.04 qp	10.7	0	50.74	59.6	49.6	-	-	-	-
			Margin [dB]:		-8.86	1.14	-	-	-	-
.34049	39.06 qp	10.7	0	49.76	59.2	49.2	-	-	-	-
			Margin [dB]:		-9.44	.56	-	-	-	-
.36151	37.36 qp	10.7	0	48.06	58.7	48.7	-	-	-	-
			Margin [dB]:		-10.64	-.64	-	-	-	-
.37845	35.41 qp	10.6	0	46.01	58.3	48.3	-	-	-	-
			Margin [dB]:		-12.29	-2.29	-	-	-	-
.39053	33.65 qp	10.6	0	44.25	58.1	48.1	-	-	-	-
			Margin [dB]:		-13.85	-3.85	-	-	-	-

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

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - denotes average log detection
ave - denotes average detection

LIMIT 1: FCC Part 15 Subpart C QPk
LIMIT 2: FCC Part 15 Subpart C Avg
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

Lutron
Wireless integration module
SZ-CI-PRG Transmitting
952983 120Vac, 60Hz
Tested By: BD

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
Neutral .15 - 1MHz										
.15175	10 ave	12	0	22	65.9	55.9	-	-	-	-
			Margin [dB]:		-43.9	-33.9	-	-	-	-
.16209	9.41 ave	11.8	0	21.21	65.4	55.4	-	-	-	-
			Margin [dB]:		-44.19	-34.19	-	-	-	-
.17544	9.42 ave	11.7	0	21.12	64.7	54.7	-	-	-	-
			Margin [dB]:		-43.58	-33.58	-	-	-	-
.19241	11.68 ave	11.5	0	23.18	63.9	53.9	-	-	-	-
			Margin [dB]:		-40.72	-30.72	-	-	-	-
.20322	12.25 ave	11.3	0	23.55	63.5	53.5	-	-	-	-
			Margin [dB]:		-39.95	-29.95	-	-	-	-
.21785	9.98 ave	11.2	0	21.18	62.9	52.9	-	-	-	-
			Margin [dB]:		-41.72	-31.72	-	-	-	-
.23566	9.22 ave	11.1	0	20.32	62.2	52.2	-	-	-	-
			Margin [dB]:		-41.88	-31.88	-	-	-	-
.25368	9.21 ave	11	0	20.21	61.6	51.6	-	-	-	-
			Margin [dB]:		-41.39	-31.39	-	-	-	-
.26937	9.1 ave	10.9	0	20	61.1	51.1	-	-	-	-
			Margin [dB]:		-41.1	-31.1	-	-	-	-
.2876	8.8 ave	10.8	0	19.6	60.6	50.6	-	-	-	-
			Margin [dB]:		-41	-31	-	-	-	-
.30923	8.75 ave	10.8	0	19.55	60	50	-	-	-	-
			Margin [dB]:		-40.45	-30.45	-	-	-	-
.32683	8.71 ave	10.7	0	19.41	59.5	49.5	-	-	-	-
			Margin [dB]:		-40.09	-30.09	-	-	-	-
.34125	9.08 ave	10.7	0	19.78	59.2	49.2	-	-	-	-
			Margin [dB]:		-39.42	-29.42	-	-	-	-
.36308	8.23 ave	10.6	0	18.83	58.7	48.7	-	-	-	-
			Margin [dB]:		-39.87	-29.87	-	-	-	-
.38005	7.9 ave	10.6	0	18.5	58.3	48.3	-	-	-	-
			Margin [dB]:		-39.8	-29.8	-	-	-	-

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

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - denotes average log detection
ave - denotes average detection

LIMIT 1: FCC Part 15 Subpart C QPk
LIMIT 2: FCC Part 15 Subpart C Avg
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
Neutral .15 - 1MHz										
.39213	7.6 ave	10.6	0	18.2	58	48	-	-	-	-
			Margin [dB]:		-39.8	-29.8	-	-	-	-
.41121	7.34 ave	10.6	0	17.94	57.6	47.6	-	-	-	-
			Margin [dB]:		-39.66	-29.66	-	-	-	-
.42097	7.03 ave	10.6	0	17.63	57.4	47.4	-	-	-	-
			Margin [dB]:		-39.77	-29.77	-	-	-	-
.43432	6.37 ave	10.5	0	16.87	57.2	47.2	-	-	-	-
			Margin [dB]:		-40.33	-30.33	-	-	-	-
.46379	7.15 ave	10.5	0	17.65	56.6	46.6	-	-	-	-
			Margin [dB]:		-38.95	-28.95	-	-	-	-
.50365	7.12 ave	10.5	0	17.62	56	46	-	-	-	-
			Margin [dB]:		-38.38	-28.38	-	-	-	-
.53631	7.06 ave	10.5	0	17.56	56	46	-	-	-	-
			Margin [dB]:		-38.44	-28.44	-	-	-	-
.5785	7.19 ave	10.4	0	17.59	56	46	-	-	-	-
			Margin [dB]:		-38.41	-28.41	-	-	-	-
.61369	7.93 ave	10.4	0	18.33	56	46	-	-	-	-
			Margin [dB]:		-37.67	-27.67	-	-	-	-
.65589	7.74 ave	10.4	0	18.14	56	46	-	-	-	-
			Margin [dB]:		-37.86	-27.86	-	-	-	-
.68727	7.76 ave	10.4	0	18.16	56	46	-	-	-	-
			Margin [dB]:		-37.84	-27.84	-	-	-	-
.71377	7.8 ave	10.4	0	18.2	56	46	-	-	-	-
			Margin [dB]:		-37.8	-27.8	-	-	-	-
.75299	7.46 ave	10.4	0	17.86	56	46	-	-	-	-
			Margin [dB]:		-38.14	-28.14	-	-	-	-
.79413	7.53 ave	10.4	0	17.93	56	46	-	-	-	-
			Margin [dB]:		-38.07	-28.07	-	-	-	-
.84374	6.52 ave	10.4	0	16.92	56	46	-	-	-	-
			Margin [dB]:		-39.08	-29.08	-	-	-	-
.88127	6.27 ave	10.4	0	16.67	56	46	-	-	-	-
			Margin [dB]:		-39.33	-29.33	-	-	-	-
.91031	5.86 ave	10.4	0	16.26	56	46	-	-	-	-
			Margin [dB]:		-39.74	-29.74	-	-	-	-
.93957	5.76 ave	10.4	0	16.16	56	46	-	-	-	-
			Margin [dB]:		-39.84	-29.84	-	-	-	-
.97329	6.16 ave	10.4	0	16.56	56	46	-	-	-	-
			Margin [dB]:		-39.44	-29.44	-	-	-	-

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

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - denotes average log detection
ave - denotes average detection

LIMIT 1: FCC Part 15 Subpart C QPk
LIMIT 2: FCC Part 15 Subpart C Avg
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
Neutral 1 - 30MHz										
1.10851	6.55 ave	10.4	0	16.95	56	46	-	-	-	-
			Margin [dB]:		-39.05	-29.05	-	-	-	-
1.18084	6.48 ave	10.4	0	16.88	56	46	-	-	-	-
			Margin [dB]:		-39.12	-29.12	-	-	-	-
1.23148	6.6 ave	10.4	0	17	56	46	-	-	-	-
			Margin [dB]:		-39	-29	-	-	-	-
1.30382	6.51 ave	10.4	0	16.91	56	46	-	-	-	-
			Margin [dB]:		-39.09	-29.09	-	-	-	-
1.31828	6.42 ave	10.4	0	16.82	56	46	-	-	-	-
			Margin [dB]:		-39.18	-29.18	-	-	-	-
1.35445	5.8 ave	10.4	0	16.2	56	46	-	-	-	-
			Margin [dB]:		-39.8	-29.8	-	-	-	-

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

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - denotes average log detection
ave - denotes average detection

LIMIT 1: FCC Part 15 Subpart C QPk
LIMIT 2: FCC Part 15 Subpart C Avg
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

4.3 Test Conditions and Results – OCCUPIED BANDWIDTH

Test Description	Measurements were made in the laboratory environment. A Dipole (or equivalent) antenna tuned to the transmit frequency was attached to the input of a spectrum analyzer. The device was operated and the spectrum analyzer resolution bandwidth set per the appropriate standard.
Basic Standard	
Occupied Bandwidth Limits	
0.25% of the f_o (431MHz – 1.08MHz, 434MHz – 1.09MHz, 437MHz – 1.09MHz)	

Table 4 Occupied Bandwidth Configuration Settings

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
1	1	1
1	1	2
1	1	3
Supplementary information: None		

Table 5 Occupied Bandwidth Spectrum Analyzer Settings

Resolution Bandwidth (MHz)	Occupied Bandwidth Requirements	
	dBc	%
0.100	-20	99
Supplementary information: None		

Table 6 Occupied Bandwidth Test Equipment

Test Equipment Used			
Description	Manufacturer	Model	Identifier
EMI Receiver	Agilent	E7402A	5B123
EMI Receiver	Rohde & Schwarz	ESIB40	34968
Dipole Antenna	EMCO	3121C	3359
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	43736
Measurement Software	UL	Version 9.3	44740
Multimeter	Fluke	83III	ME5B-305

Figure 3 Test Setup for Occupied Bandwidth

Figure 4 Occupied Bandwidth Graph (431MHz -20dB OBW)

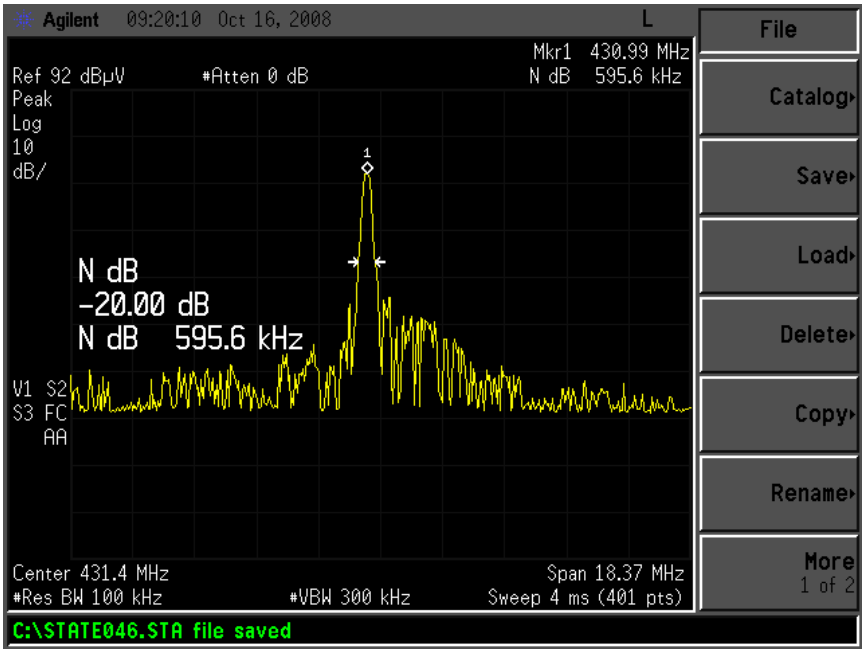


Figure 5 Occupied Bandwidth Graph (434MHz -20dB OBW)

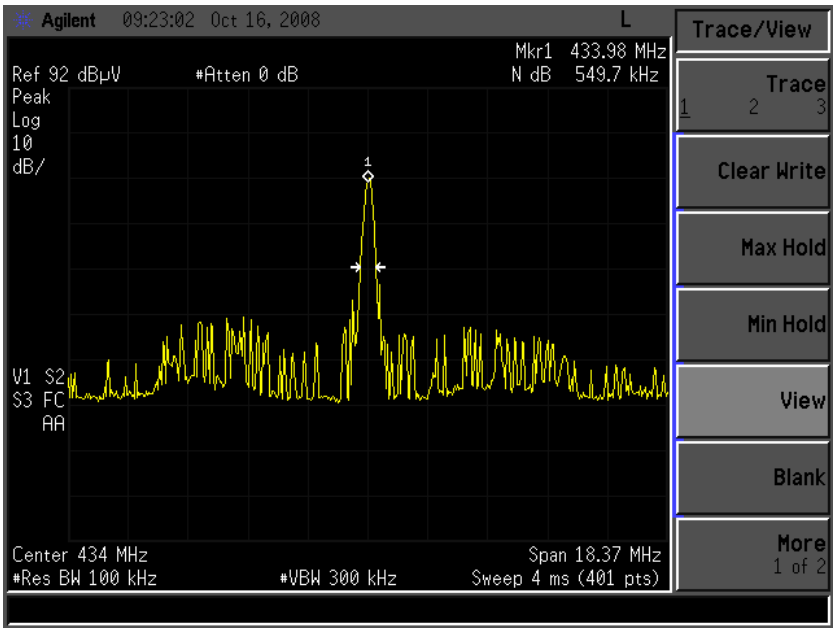


Figure 6 Occupied Bandwidth Graph (437MHz -20dB OBW)

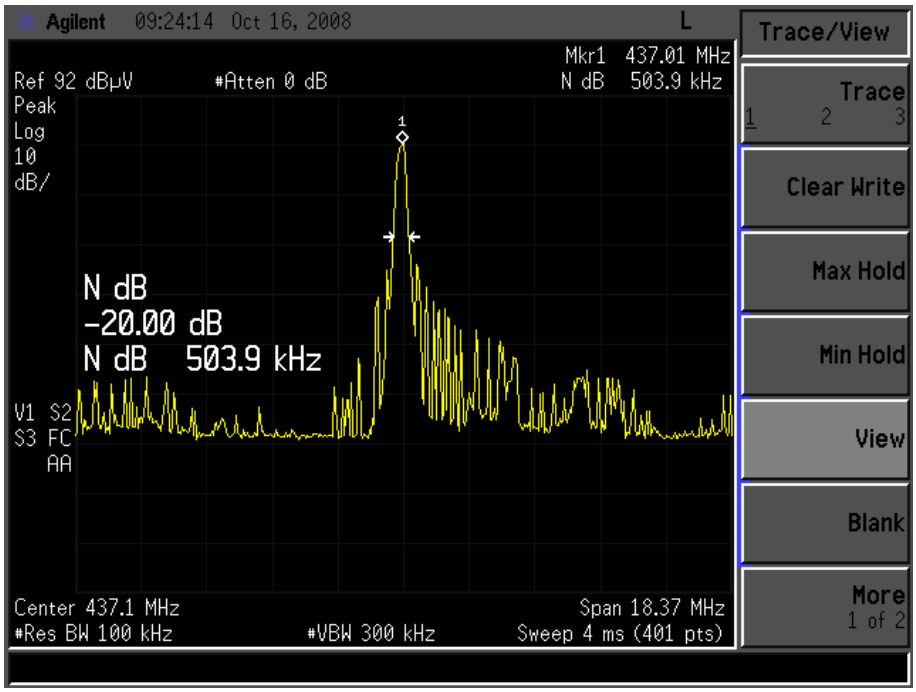


Figure 7 Occupied Bandwidth Graph (431MHz 99% OBW)

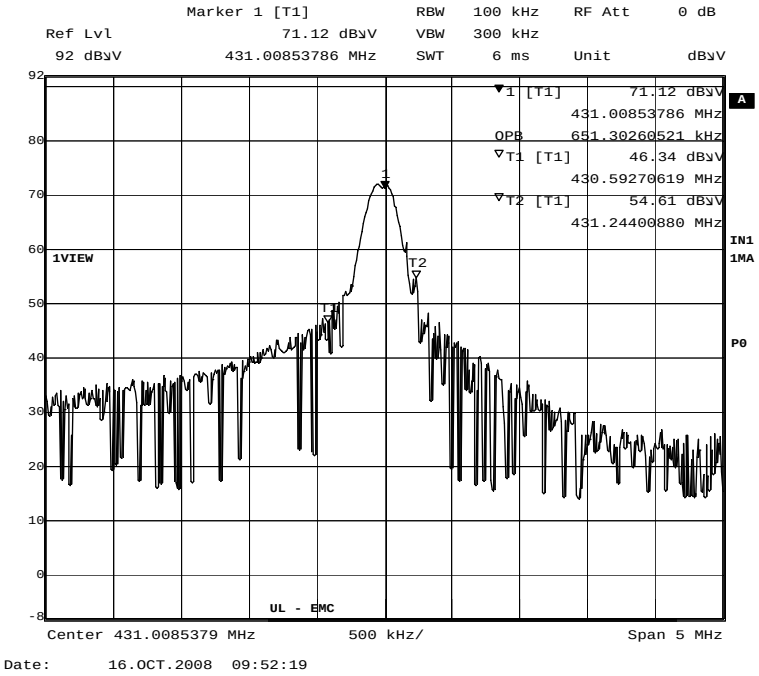


Figure 8 Occupied Bandwidth Graph (434MHz 99% OBW)

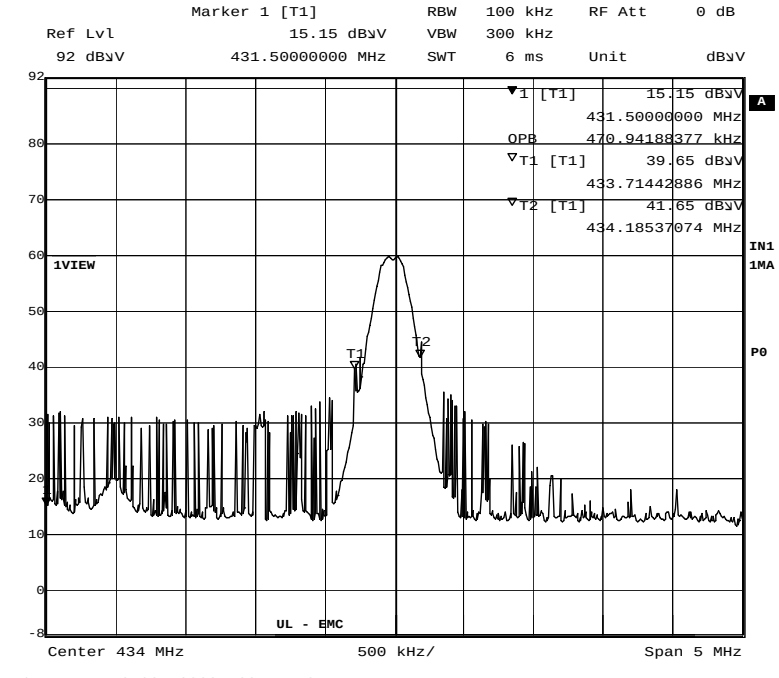
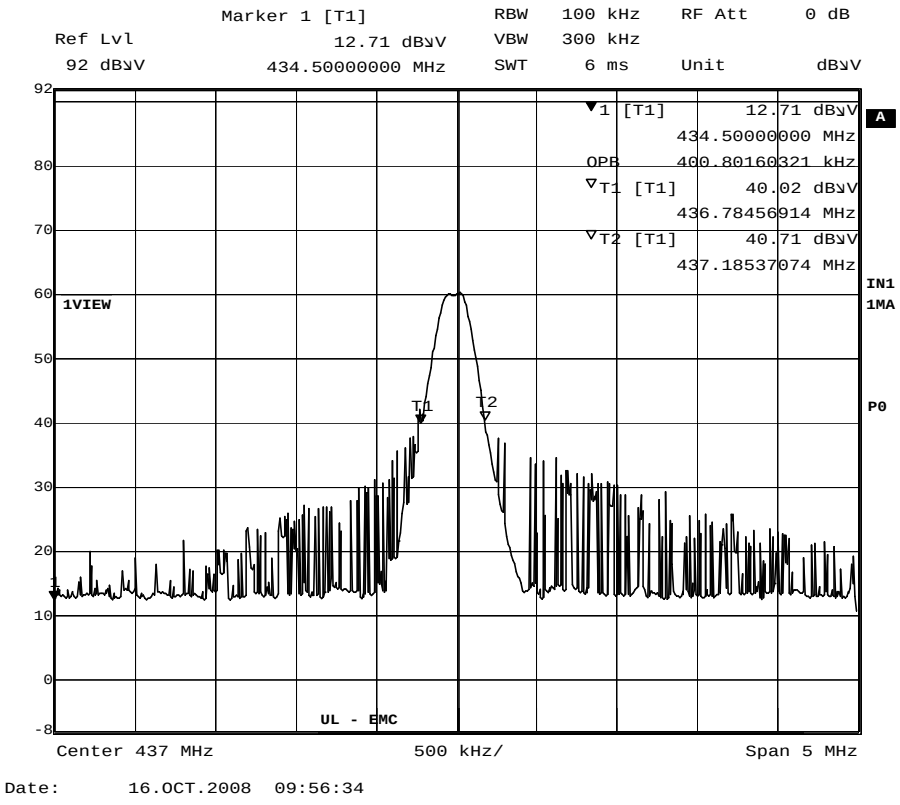


Figure 9 Occupied Bandwidth Graph (437MHz 99% OBW)



4.4 Test Conditions and Results – CEASE OPERATION

Test Description	Measurements were made in the laboratory environment. A Dipole (or equivalent) antenna tuned to the transmit frequency was attached to the input of a spectrum analyzer. The device was operated and the transmission time measured with the spectrum analyzer set to zero span at the fundamental frequency.
Basic Standard	
Cease Operation Limits	
The transmissions shall stop within 5 seconds of either a button being released or if automatically controlled transmissions shall be stopped 5 seconds after transmissions begin.	

Table 7 Cease Operation Configuration Settings

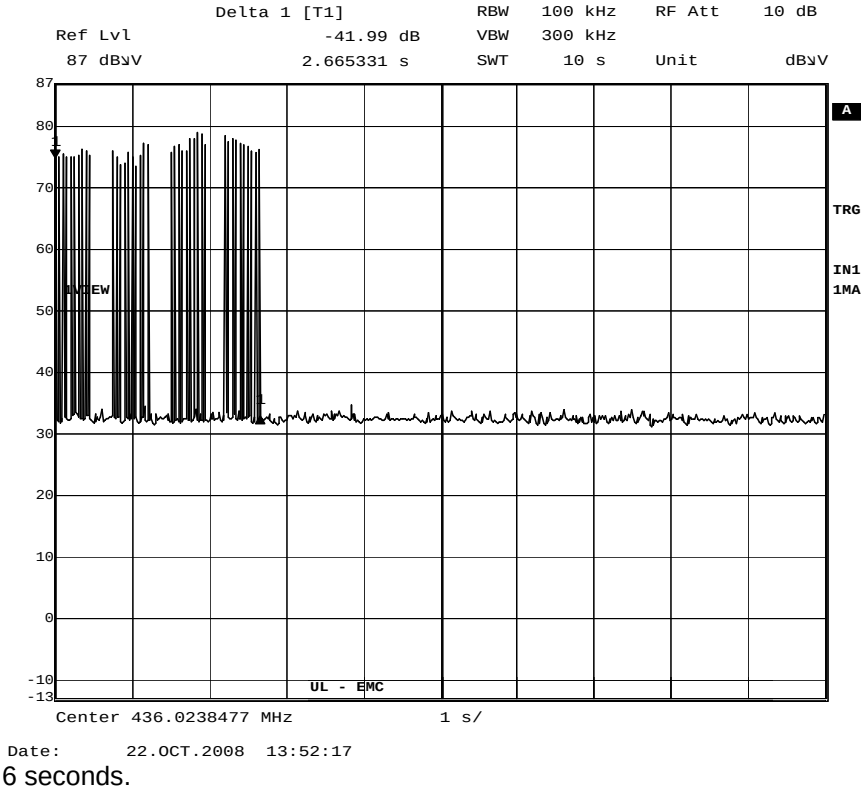
Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
1	1	3
Supplementary information: None		

Table 8 Cease Operation Test Equipment

Test Equipment Used			
Description	Manufacturer	Model	Identifier
EMI Receiver	Agilent	E7402A	5B123
Dipole Antenna	EMCO	3121C	3359
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	43736
Measurement Software	UL	Version 9.3	44740
Multimeter	Fluke	83III	ME5B-305

Figure 10 Test Setup for Cease Operation

Figure 11 Cease Operation Graph



Cease Operation – 2.6 seconds.

4.5 Test Conditions and Results – PULSE TRAIN

Test Description	Measurements were made in the laboratory environment. A Dipole (or equivalent) antenna tuned to the transmit frequency was attached to the input of a spectrum analyzer. The pulse train was measured with the spectrum analyzer set to zero span at the fundamental frequency.
Basic Standard	FCC Part 15 Subpart A, 15.35
Pulse Train Limits	
There are no limits for this test. This data is used to calculate the averaging correction factor that is applied to the measured peak radiated emissions results.	

Table 9 Pulse Train Configuration Settings

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
1	1	3
Supplementary information: Since the same modulation techniques are used from channel to channel, only one channel was checked.		

Table 10 Pulse Train Calculation

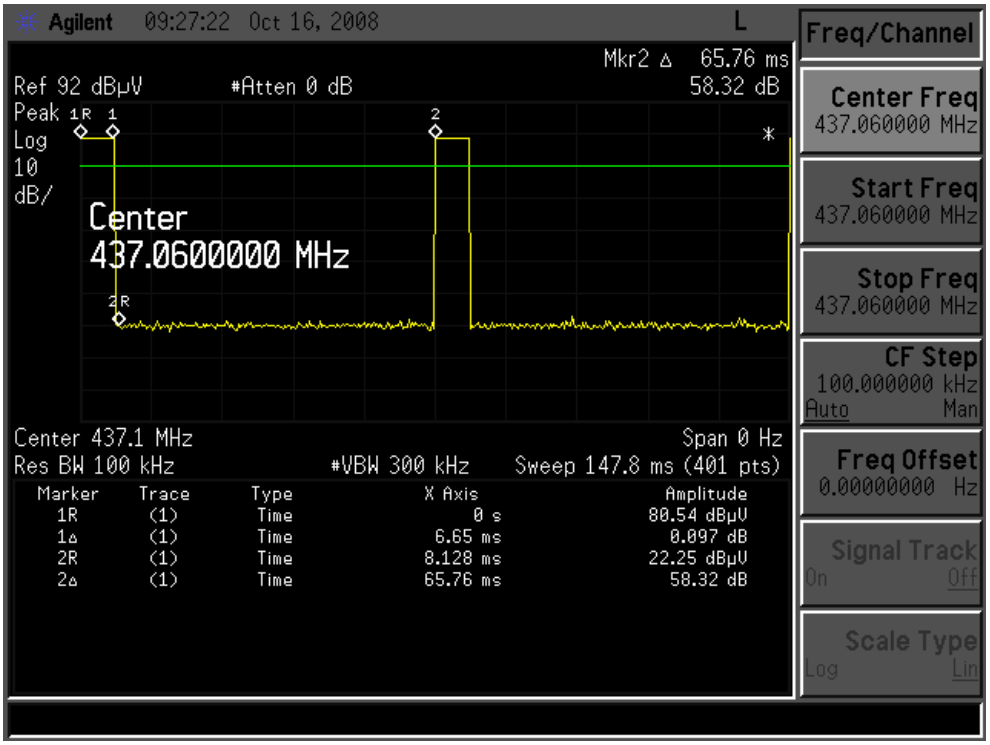
Pulse Width (mS)	Total Transmission time or 100ms which ever is lesser	Average Correction Factor (dB) $20\log\left(\frac{PulseWidth}{TotalTransmissionTime}\right)$
6.65	65.76	-21

Table 11 Pulse Train Test Equipment

Test Equipment Used			
Description	Manufacturer	Model	Identifier
EMI Receiver	Agilent	E7402A	5B123
Dipole Antenna	EMCO	3121C	3359
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	43736
Measurement Software	UL	Version 9.3	44740
Multimeter	Fluke	83III	ME5B-305

Figure 12 Test Setup for Pulse Train

Figure 13 Pulse Train Graph



4.6 Test Conditions and Results – RADIATED EMISSIONS

Test Description	Measurements were made in a 10-meter semi-anechoic chamber that complies to CISPR 16/ANSI C63.4. Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 10-meters and 3-meters. The EUT was rotated 360° about its azimuth with the receive antenna located at various heights in both horizontal and vertical polarities. Final measurements (quasi-peak or average as noted) were then performed by rotating the EUT 360° and adjusting the receive antenna height from 1 to 4-meters. All frequencies were investigated in both horizontal and vertical antenna polarity, where applicable.		
Basic Standard	FCC Part 15, Subpart C, 15.231, 15.209, RSS-GEN, RSS-210		
UL LPG	80-EM-S0029		
	Frequency range		Measurement Point
Fully configured sample scanned over the following frequency range	30MHz – 1GHz		(10 meter measurement distance)
Fully configured sample scanned over the following frequency range	1GHz – 5 GHz		(3 meter measurement distance)
Limits			
Frequency (MHz)	Limit (dBµV/m)		
	Quasi-Peak	Average	
	General Emissions	Fundamental	Spurious/ Unintentional
431	-	70.7	-
434	-	70.8	-
437	-	70.9	-
Harmonics of the Fundamental 431	-	-	50.7 (10m) / 60.7 (3m)
Harmonics of the Fundamental 434	-	-	50.8 (10m) / 60.8 (3m)
Harmonics of the Fundamental 437	-	-	50.9 (10m) / 60.9 (3m)
Supplementary information: Spurious limits are only applied against products of the transmitter. Class II permissive change testing only required checking the fundamental and spurious emissions. The EUT was tested as a wall mount device and the antenna manipulated to determine worst-case emissions. Only the worst-case emissions are reported.			

Table 12 Radiated Emissions EUT Configuration Settings

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
1	1	1
1	1	2
1	1	3
Supplementary information: None		

Table 13 Radiated Emissions Test Equipment

Description	Manufacturer	Model	Identifier
Spectrum Analyzer	HP	8566B	EMC4085
Quasi-Peak Detector	HP	85650A	EMC4016
Bicon Antenna	Chase	VBA6106A	EMC4078
Log-P Antenna	Chase	UPA6109	EMC4313
Spectrum Analyzer	Rhode & Schwartz	FSEK	EMC4182
Antenna Array	UL	BOMS	EMC4276
Amplified 1GHz – 10GHz System	UL w/ EMCO Horn Antenna	3117	EMC4293
Multimeter	Fluke	87	EMC4306
Temperature / Humidity Indicator	Oakton	-	EMC4279
Emissions Software	UL EMC	9.3 2008AUG23	-

Figure 14 Test setup for Radiated Emissions

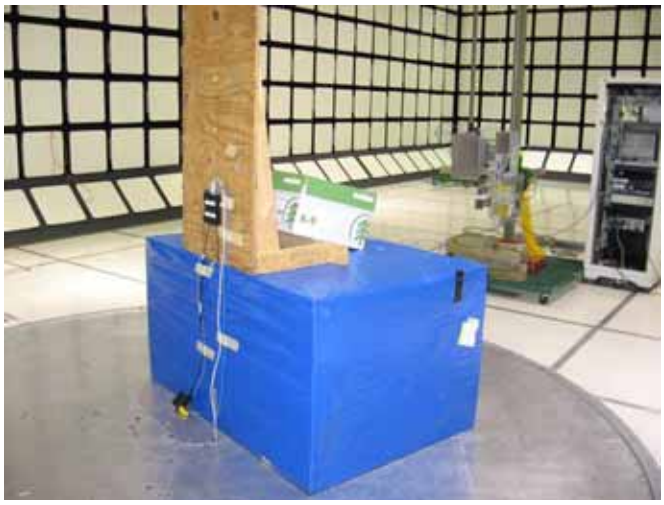


Figure 15 Radiated Emissions Graph

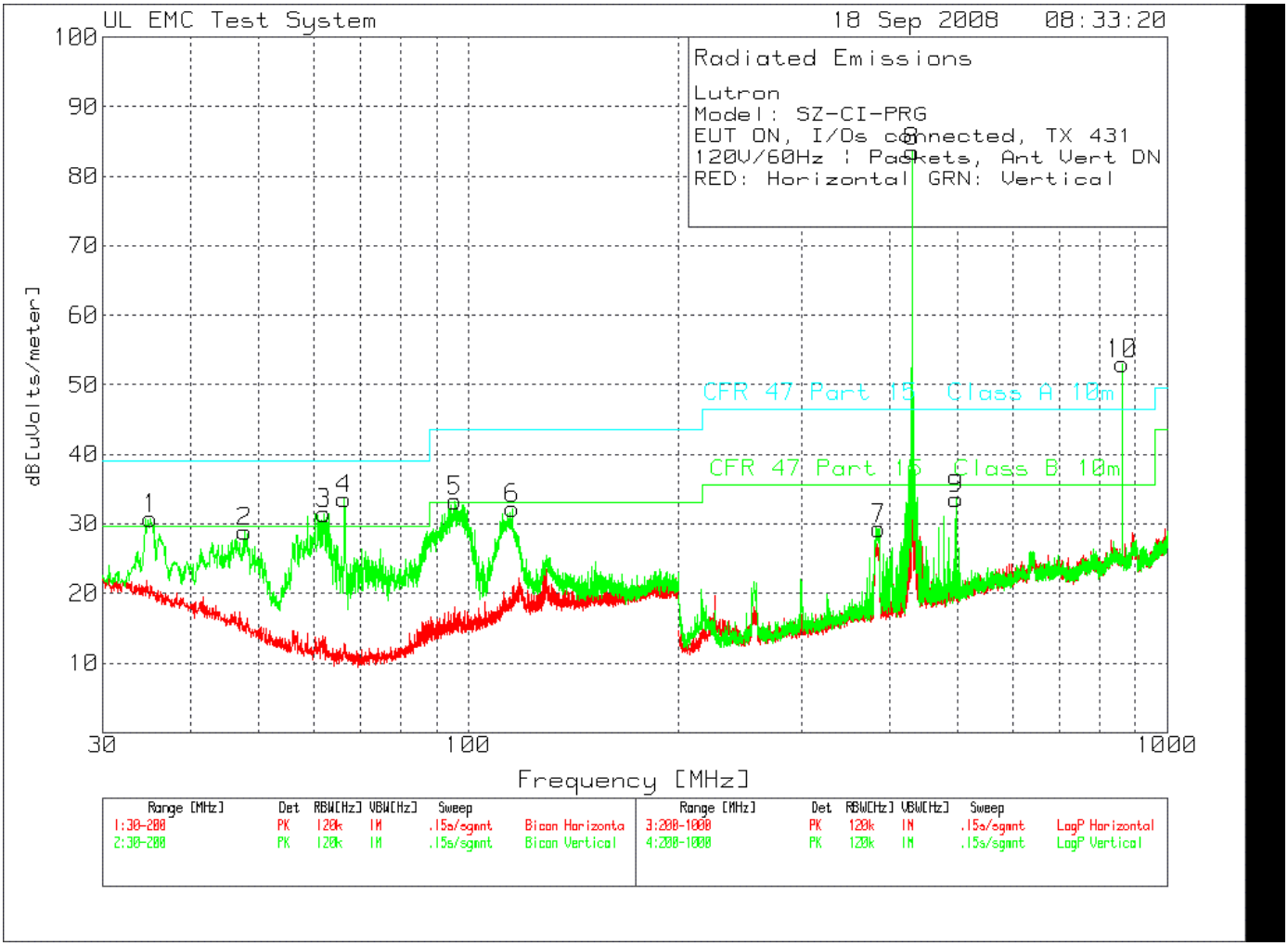


Table 14 Radiated Emissions Data Points

Lutron
Model: SZ-CI-PRG
EUT ON, I/Os connected, TX 431
120V/60Hz | Packets, Ant Vert DN
RED: Horizontal GRN: Vertical

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	2	3	4	5	6
430.9403	101.49 qp	-32.1	16.3	64.69*	-	-	70.7	-	-	-
Azimuth: 196	Height:153 Horz		Margin [dB]:		-	-	-6.01	-	-	-
430.9767	101.65 qp	-32.1	16.3	64.85*	-	-	70.7	-	-	-
Azimuth: 49	Height:104 Vert		Margin [dB]:		-	-	-5.85	-	-	-
862.0112	60.09 qp	-31.6	22.6	30.09*	-	-	-	50.7	-	-
Azimuth: 201	Height:134 Horz		Margin [dB]:		-	-	-	-20.61	-	-
862.0112	57.99 qp	-31.6	22.6	27.99*	-	-	-	50.7	-	-
Azimuth: 37	Height:104 Vert		Margin [dB]:		-	-	-	-22.71	-	-

*Duty cycle correction factor of 21dB applied.

LIMIT 1: NONE
LIMIT 2: NONE
LIMIT 3: CFR 47 Part 15.231 Fundamental
LIMIT 4: CFR 47 Part 15.231 Spurious
LIMIT 5: NONE
LIMIT 6: NONE

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - Average log detector
ave - Average detector

Figure 16 Radiated Emissions Graph

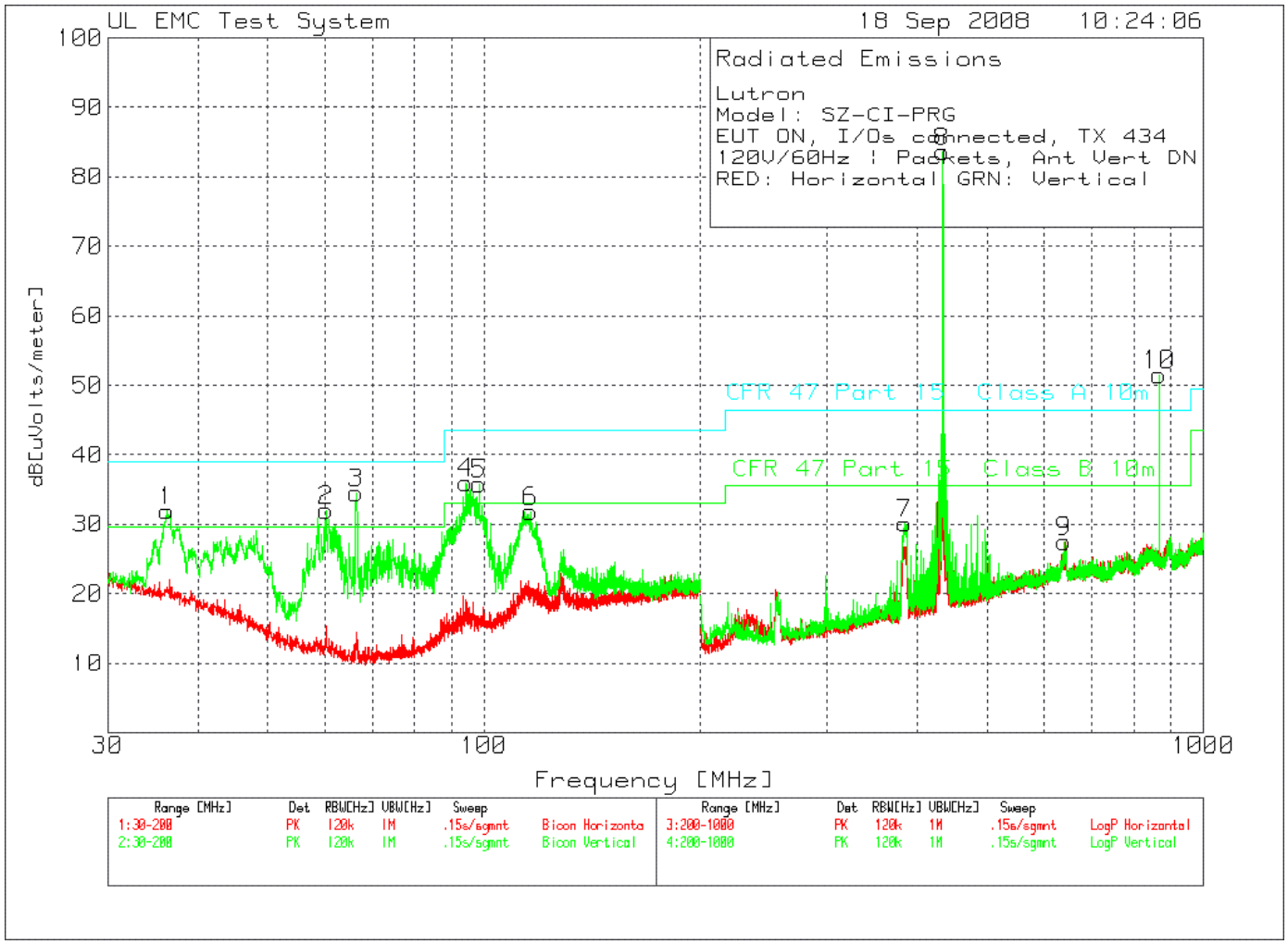


Table 15 Radiated Emissions Data Points

Lutron
Model: SZ-CI-PRG
EUT ON, I/Os connected, TX 431
120V/60Hz | Packets, Ant Vert DN
RED: Horizontal GRN: Vertical

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	2	3	4	5	6
433.9798	99.86 qp	-32.1	16.4	51.45*	-	-	70.8	-	-	-
Azimuth: 199	Height:104	Vert		Margin [dB]:	-	-	-19.35	-	-	-
433.9798	100.93 qp	-32.1	16.4	64.23*	-	-	70.8	-	-	-
Azimuth: 203	Height:147	Horz		Margin [dB]:	-	-	-6.57	-	-	-
868.018	60.94 qp	-31.8	22.3	30.44*	-	-	-	50.8	-	-
Azimuth: 200	Height:153	Horz		Margin [dB]:	-	-	-	-20.36	-	-
868.018	57.66 qp	-31.8	22.3	27.16*	-	-	-	50.8	-	-
Azimuth: 21	Height:102	Vert		Margin [dB]:	-	-	-	-23.64	-	-

*Duty cycle correction factor of 21dB applied.

LIMIT 1: NONE
LIMIT 2: NONE
LIMIT 3: CFR 47 Part 15.231 Fundamental
LIMIT 4: CFR 47 Part 15.231 Spurious
LIMIT 5: NONE
LIMIT 6: NONE

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - Average log detector
ave - Average detector

Figure 17 Radiated Emissions Graph

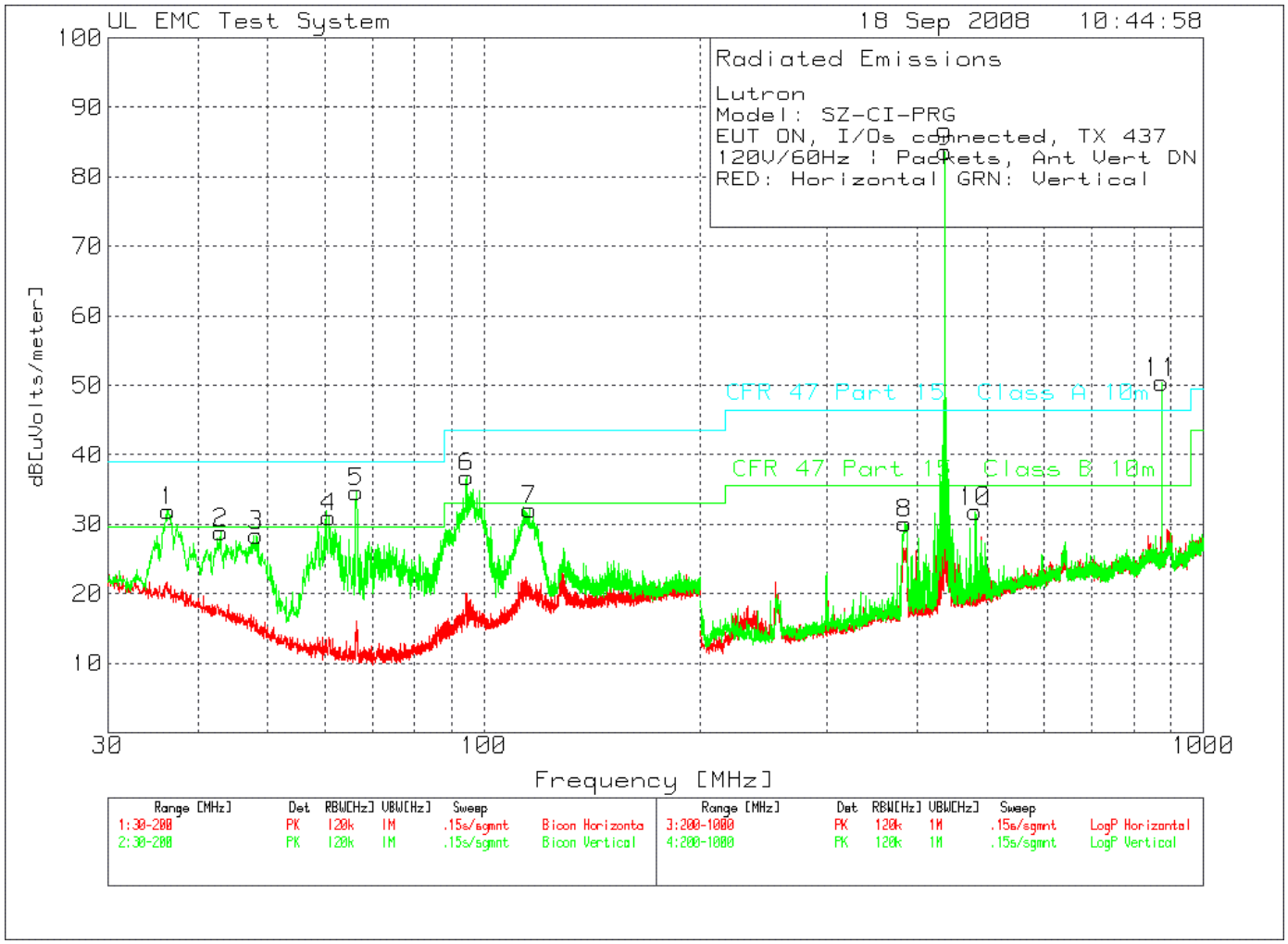


Table 16 Radiated Emissions Data Points

Lutron
Model: SZ-CI-PRG
EUT ON, I/Os connected, TX 437
120V/60Hz | Packets, Ant Vert DN
RED: Horizontal GRN: Vertical

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	2	3	4	5	6
LogP Horizontal 200 - 1000MHz										
436.975	101.43 qp	-32.2	16.5	64.73*	-	-	70.9	-	-	-
Azimuth: 214	Height:135 Horz		Margin [dB]:		-	-	-6.17	-	-	-
436.975	97.52 qp	-32.2	16.5	60.82*	-	-	70.9	-	-	-
Azimuth: 18	Height:102 Vert		Margin [dB]:		-	-	-10.08	-	-	-
874.0129	57.39 qp	-31.8	22.3	47.89	-	-	-	50.9	-	-
Azimuth: 196	Height:104 Vert		Margin [dB]:		-	-	-	-3.01	-	-
874.0129	61.53 qp	-31.8	22.3	31.03*	-	-	-	50.9	-	-
Azimuth: 201	Height:143 Horz		Margin [dB]:		-	-	-	-19.87	-	-

*Duty cycle correction factor of 21dB applied.

LIMIT 1: NONE
LIMIT 2: NONE
LIMIT 3: CFR 47 Part 15.231 Fundamental
LIMIT 4: CFR 47 Part 15.231 Spurious
LIMIT 5: NONE
LIMIT 6: NONE

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - Average log detector
ave - Average detector

Figure 18 Radiated Emissions Graph

Table 17 Radiated Emissions Data Points

Lutron
Model: SZ-CI-PRG
EUT ON, I/Os connected, TX 431
120V/60Hz
RED: Horizontal GRN: Vertical

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	2	3	4	5	6
1 - 2GHz 1000 - 2000MHz											
1	1292.862	86.8 pk	-55.41	24.7	56.09	60.7	-	-	-	-	-
		Height:150 Horz		Margin [dB]		-4.61	-	-	-	-	-
2 - 4GHz 2000 - 4000MHz											
3	2154.77	67.36 pk	-52.26	21.6	36.7	60.7	-	-	-	-	-
		Height:100 Horz		Margin [dB]		-24.0	-	-	-	-	-
1 - 2GHz 1000 - 2000MHz											
2	1292.862	92.87 pk	-55.41	24.7	62.16	60.7	-	-	-	-	-
		Height:150 Vert		Margin [dB]		1.46	-	-	-	-	-
2 - 4GHz 2000 - 4000MHz											
4	2154.77	74.97 pk	-52.26	21.6	44.31	60.7	-	-	-	-	-
		Height:100 Vert		Margin [dB]		-16.39	-	-	-	-	-

LIMIT 1: CFR 47 Part 15.231 Spurious
LIMIT 2: NONE
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - Average log detector
ave - Average detector

Lutron
Model: SZ-CI-PRG
EUT ON, I/Os connected, TX 431
120V/60Hz
RED: Horizontal GRN: Vertical

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	2	3	4	5	6
1 - 2GHz 1000 - 2000MHz										
1293.0405	88.86 pk	-55.41	24.7	58.15	60.7	-	-	-	-	-
Azimuth: 305	Height:115 Horz			Margin [dB]:	-2.55	-	-	-	-	-
1292.8481	92.64 pk	-55.41	24.7	40.93*	60.7	-	-	-	-	-
Azimuth: 189	Height:222 Vert			Margin [dB]:	-19.77	-	-	-	-	-

*Duty cycle correction factor of 21dB applied.

LIMIT 1: CFR 47 Part 15.231 Spurious
LIMIT 2: NONE
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

pk - Peak detector (maximized peak)
qp - Quasi-Peak detector
av - Average detector
avlg - Average log detector
ave - Average detector

Figure 19 Radiated Emissions Graph

Table 18 Radiated Emissions Data Points

Lutron
Model: SZ-CI-PRG
EUT ON, I/Os connected, TX 434
120V/60Hz
RED: Horizontal GRN: Vertical

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	2	3	4	5	6
1 - 2GHz 1000 - 2000MHz											
1	1301.534	86.42 pk	-55.36	24.7	55.76	60.8	-	-	-	-	-
		Height:150 Horz		Margin [dB]		-5.04	-	-	-	-	-
2 - 4GHz 2000 - 4000MHz											
3	2169.446	68.08 pk	-52.16	21.7	37.62	60.8	-	-	-	-	-
		Height:101 Horz		Margin [dB]		-23.18	-	-	-	-	-
1 - 2GHz 1000 - 2000MHz											
2	1302.201	91.07 pk	-55.36	24.7	60.41	60.8	-	-	-	-	-
		Height:149 Vert		Margin [dB]		-0.39	-	-	-	-	-
2 - 4GHz 2000 - 4000MHz											
4	2169.446	72.77 pk	-52.16	21.7	42.31	60.8	-	-	-	-	-
		Height:150 Vert		Margin [dB]		-18.49	-	-	-	-	-

LIMIT 1: CFR 47 Part 15.231 Spurious
LIMIT 2: NONE
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - Average log detector
ave - Average detector

Lutron
Model: SZ-CI-PRG
EUT ON, I/Os connected, TX 434
120V/60Hz
RED: Horizontal GRN: Vertical

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	2	3	4	5	6
1 - 2GHz 1000 - 2000MHz										
#1302.1523	88.3 pk	-55.36	24.7	36.64*	54	-	-	-	-	-
Azimuth: 307	Height:116 Horz		Margin [dB]:	-17.36		-	-	-	-	-
#1302.0922	93.68 pk	-55.36	24.7	42.02*	54	-	-	-	-	-
Azimuth: 191	Height:219 Vert		Margin [dB]:	-11.98		-	-	-	-	-

*Duty cycle correction factor of 21dB applied.
#Frequency located in a restricted band. General Limits apply.

LIMIT 1: CFR 47 Part 15.231 Spurious
LIMIT 2: NONE
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

pk - Peak detector (maximized peak)
qp - Quasi-Peak detector
av - Average detector
avlg - Average log detector
ave - Average detector

Figure 20 Radiated Emissions Graph

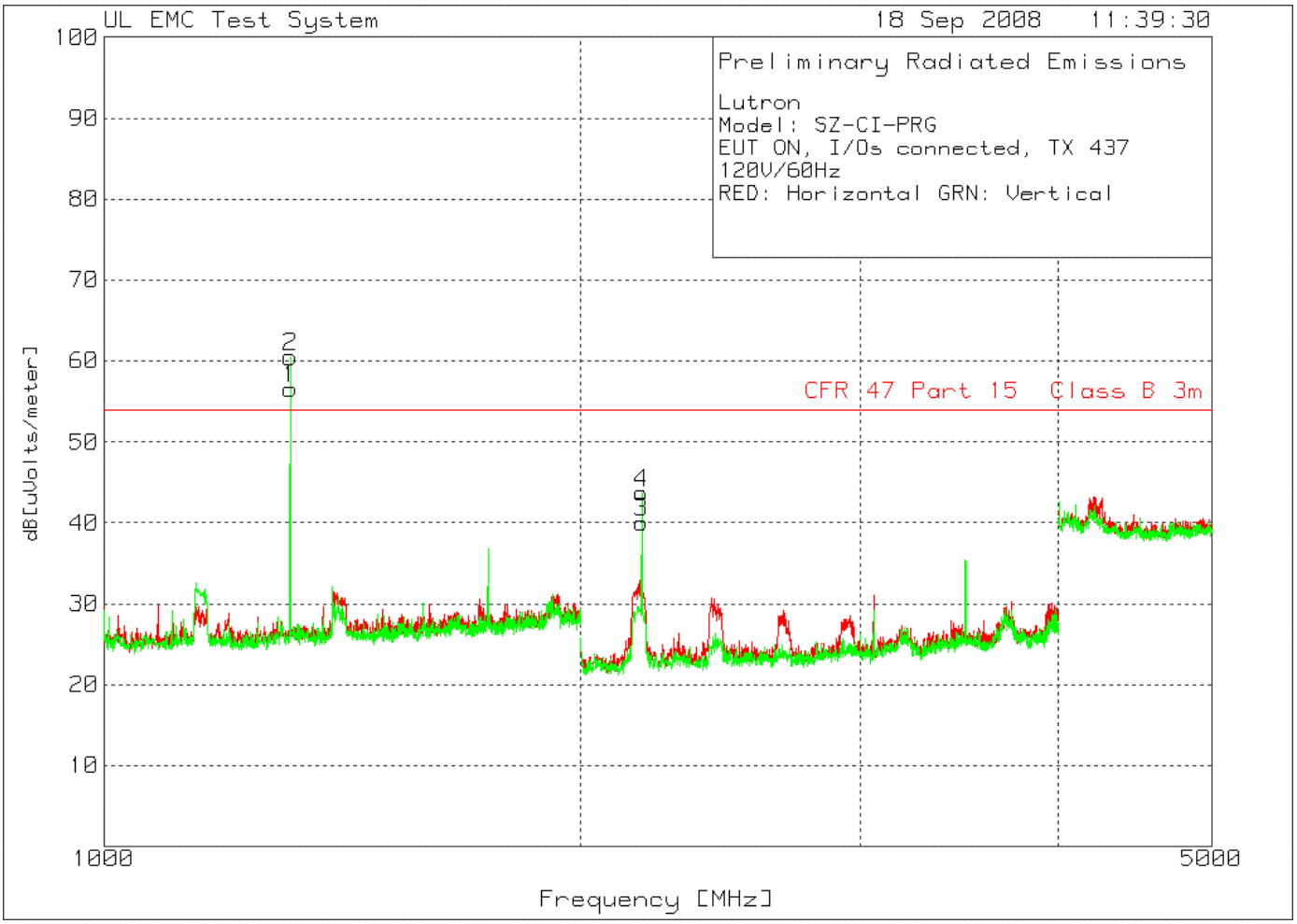


Table 19 Radiated Emissions Data Points

Lutron
Model: SZ-CI-PRG
EUT ON, I/Os connected, TX 437
120V/60Hz
RED: Horizontal GRN: Vertical

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	2	3	4	5	6
1 - 2GHz 1000 - 2000MHz											
1	1310.874	87.18 pk	-55.32	24.7	56.56	60.9	-	-	-	-	-
		Height:150 Horz		Margin [dB]		-4.34	-	-	-	-	-
2 - 4GHz 2000 - 4000MHz											
3	2184.123	70.48 pk	-52.14	21.7	40.04	60.9	-	-	-	-	-
		Height:101 Horz		Margin [dB]		-20.86	-	-	-	-	-
1 - 2GHz 1000 - 2000MHz											
2	1310.874	91.11 pk	-55.32	24.7	60.49	60.9	-	-	-	-	-
		Height:150 Vert		Margin [dB]		-0.41	-	-	-	-	-
2 - 4GHz 2000 - 4000MHz											
4	2184.123	74.13 pk	-52.14	21.7	43.69	60.9	-	-	-	-	-
		Height:100 Vert		Margin [dB]		-17.21	-	-	-	-	-

LIMIT 1: CFR 47 Part 15.231 Spurious
LIMIT 2: NONE
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector
avlg - Average log detector
ave - Average detector

Lutron
Model: SZ-CI-PRG
EUT ON, I/Os connected, TX 434
120V/60Hz
RED: Horizontal GRN: Vertical

Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	2	3	4	5	6
#1310.8928	89.68 pk	-55.32	24.7	38.06*	54	-	-	-	-	-
Azimuth: 324	Height:112 Horz			Margin [dB]:	-15.94	-	-	-	-	-
#1311.1272	92.46 pk	-55.32	24.7	40.48*	54	-	-	-	-	-
Azimuth: 192	Height:215 Vert			Margin [dB]:	-13.52	-	-	-	-	-

*Duty cycle correction factor of 21dB applied.
#Frequency located in a restricted band. General Limits apply.

LIMIT 1: CFR 47 Part 15.231 Spurious
LIMIT 2: NONE
LIMIT 3: NONE
LIMIT 4: NONE
LIMIT 5: NONE
LIMIT 6: NONE

pk - Peak detector (maximized peak)
qp - Quasi-Peak detector
av - Average detector
avlg - Average log detector
ave - Average detector

Appendix A

Accreditations and Authorizations

NVLAP Lab code: 100255-0

NVLAP: Recognized under the National Voluntary Laboratory Accreditation Program (NVLAP) for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC EN17025 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. For a full scope listing see http://ts.nist.gov/ts/htdocs/210/214/scopes/1002550.htm

FCC: Details of the measurement facilities used for these tests have been filed with the Federal Communications Commission's Laboratory in Columbia, Maryland (Ref. No. 91040).

Industry Canada Industrie Canada

Industry of Canada: Accredited by Industry Canada for performance of radiated measurements. Our test site complies with RSP 100, Issue 7, Section 3.3. File #: IC 2181

VCCI: Accepted as an Associate Member to the VCCI. The measurement facilities detailed in this test report have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. Registration Nos.: (Radiated Emissions) R-797, (Conducted Emissions) C-832, C-833, C-834 and (Conducted Emissions - Telecommunications Ports) T-160.

ICASA: ICASA (Independent Communications Authority of South Africa) has appointed UL as a Designated Test Laboratory to test Telecommunications equipment for type approval in compliance with CISPR 22 to assist in fulfilling its mandate under section 54(1) of the Telecommunications Act, 1996 (Act 103 of 1996).

NIST/CAB: Validated by the European Commission as a U.S. Conformity Assessment Body (CAB) of the U.S.-EU Mutual Recognition Agreement (MRA) for the Electromagnetic Compatibility - Council Directive 89/336/EEC, Article 10 (2). Also validated for the Telecommunication Equipment-Council Directive 99/5/EC, Annex III and IV, Identification Number: 0983.
NIST/CAB: Provisioned to act as a U.S. Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the Asia Pacific Economic Cooperation (APEC) MRA between the American Institute in Taiwan (AIT) and the United States. Our laboratory is considered qualified to test equipment subject to the applicable EMC regulations of the Chinese Taipei Bureau of Standards, Metrology and Inspection (BSMI) which require testing to CNS 13438 (CISPR 22).
NIST/CAB: Recognized by the Infocomm Development Authority of Singapore (IDA) under the Asia Pacific Economic Cooperation Mutual Recognition Agreement (APEC MRA). Our laboratory is provisionally designated to act as a Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the APEC MRA. Our scope of designation includes IDA TS EMC (CISPR 22), IEC 61000-4-2, -4-3, -4-4, -4-5, and -4-6

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