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

# CERTIFICATION TEST REPORT

**FOR**

**Wall Switch, Outlet**

**MODEL NUMBER: 6696 TX**

**FCC ID: QGH- 06696**
**IC: 2473A-06696**

**REPORT NUMBER: 1001448820**

**ISSUE DATE: 2012- 03-16**

*Prepared for*
**Leviton Mfg. Co. Inc.**
**201 N SERVICE RD**
**MELVILLE, NY 11747**

*Prepared by*
**UL LLC.**
**1285 WALT WHITMAN RD.**
**MELVILLE, NY 11747, U.S.A.**
**TEL: (631) 271-6200**
**FAX: (877) 854-3577**

Revision History

| Rev. | Issue Date | Revisions | Revised By |
|---|---|---|---|
| -- | 2012-03-16 | Initial Issue | Joseph Danisi |

# TABLE OF CONTENTS

# 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME: Leviton Mfg. Co. Inc.**
**201 N SERVICE RD**
**Melville, NY 11747**

**EUT DESCRIPTION: Wall Switch, Outlet**

**MODEL: 6696 TX**

**SERIAL NUMBER: Non-serialized production unit**

**DATE TESTED: 2012-01-04 to 2012-01-18**

| 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 |

UL LLC. 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:

Bob DeLisi
Sr. Staff Engineer
UL

Tested By:

Joseph Danisi
Lead Engineering Associate
UL

# 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2003, 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:

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

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

## 4.3. MEASUREMENT UNCERTAINTY

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

| 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 6696, is a wireless RF (Radio Frequency) Wall Switch designed to provide the effect of a 3-way circuit switch, requiring no additional wiring. Cat. No. 6696 consists of a RF Wall Switch Transmitter and a single pole Switch Receiver. The Switch Receiver replaces any existing single pole in wall switch. The Switch Transmitter allows you to add a second switch within 50 feet of the receiver. Cat. No. 6696 incorporates a selectable A/B code switch that allows you to place more than one set of products within the 50-foot operating range. The RF Switch Transmitter operates using 2 AAA batteries.

## 5.2. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an integral antenna, it is a permanently attached to the internal RF circuit board and the transmit antenna type is a wire within the product enclosure.

## 5.1. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was V1_00_U02.hex

## 5.2. WORST-CASE CONFIGURATION AND MODE

The worst-case channel is determined as the channel with the highest output power. The EUT was oriented in three Axis X, Y, and Z and the worst case orientation Y were reported.

## 5.3. MODIFICATIONS

No modifications were made during testing.

## 5.1. DESCRIPTION OF TEST SETUP

**SUPPORT EQUIPMENT**

| PERIPHERAL SUPPORT EQUIPMENT LIST | | | | |
|---|---|---|---|---|
| Description | Manufacturer | Model | Serial Number | FCC ID |
| Incandescent light bulb | Phillips | N/A | N/A | N/A |

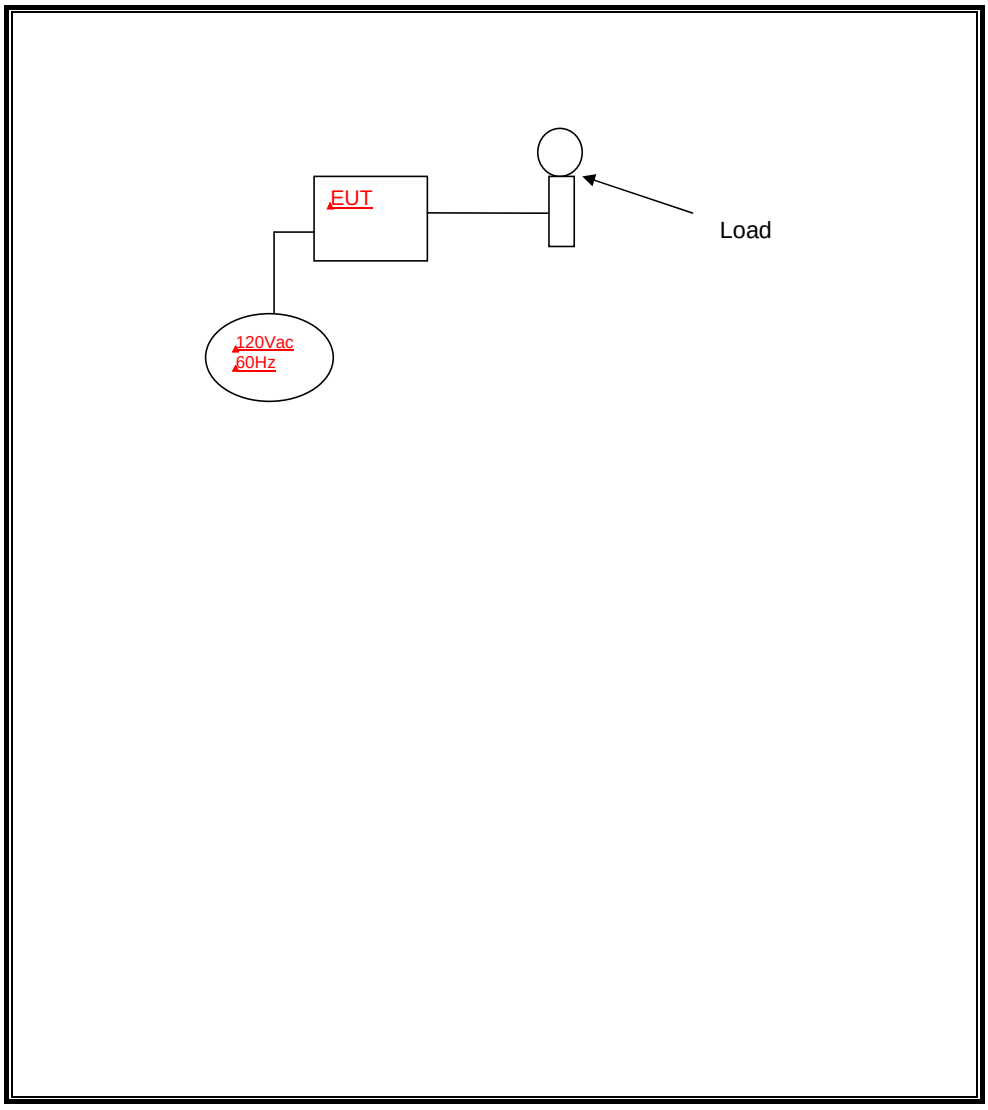
**I/O CABLES**

| I/O CABLE LIST | | | | | | |
|---|---|---|---|---|---|---|
| Cable No. | Port | # of Identical Ports | Connector Type | Cable Type | Cable Length | Remarks |
| 1 | Mains | 1 | AC | Power cord | < 3Meters | N/A |

**TEST SETUP**

The EUT was configured by the manufacturer Leviton with the equipment under test placed inside a typically one outlet plastic gang box then two wires connected to an incandescent light fixture with a typically off shelf light bulb.

**SETUP DIAGRAM FOR TESTS**




Formatted: Font: 10 pt

Formatted: Font: 8 pt

Formatted: Font: 8 pt

## 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 | | | | | |
|---|---|---|---|---|---|
| 30-1000MHz | | | | | |
| EMI Receiver | Rohde & Schwarz | ESIB40 | 34968 | 2011-03-01 | 2012-03-01 |
| Bicon Antenna | Schaffner | VBA6106A | 43441 | 2011-10-12 | 2012-10-12 |
| Log-P Antenna | Schaffner | UPA6109 | 44068 | 2011-04-05 | 2012-04-05 |
| 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 9.5 | 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 |
| 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 9.5 | 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 |
|---|
| * - 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.<br>* 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 | Solar | 9252-50-R-24-BNC | ME5A-636 | 2011-02-04 | 2012-02-04 |
| Switch Driver | HP | 11713A | 44397 | N/A | N/A |
| RF Switch Box | UL | 4 | 44404 | N/A | N/A |
| Measurement Software | UL | Version 9.5 | 44736 | N/A | N/A |
| Temp/Humidity/Pressure Meter | Cole Parmer | 99760-00 | 43734 | 2010-03-08 | 2012-03-08 |
| Multimeter | Fluke | 87V | 64386 | 2011-02-02 | 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 | 2012-01-31 | 2013-02-28 |
| Dipole Antenna | EMCO | 3121C | 3359 | 2011-12-16 | 2012-12-16 |
| Temp/Humidity/Pressure Meter | Cole Parmer | 99760-00 | 4268 | 2010-12-07 | 2012-12-07 |
| Multimeter | Fluke | 87V | 64386 | 2011-02-02 | 2012-02-29 |

## 6.1. 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 100 KHz. The VBW is set to 300 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:

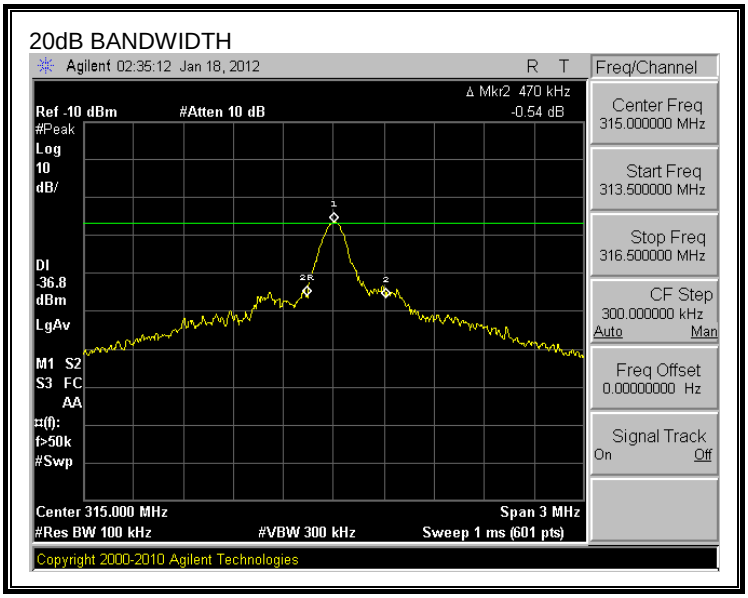
20dB Bandwidth

| Frequency (MHz) | 20dB Bandwidth (kHz) | Limit (kHz) | Margin (kHz) |
|---|---|---|---|
| 315 | 470 | 787.5 | -317.5 |

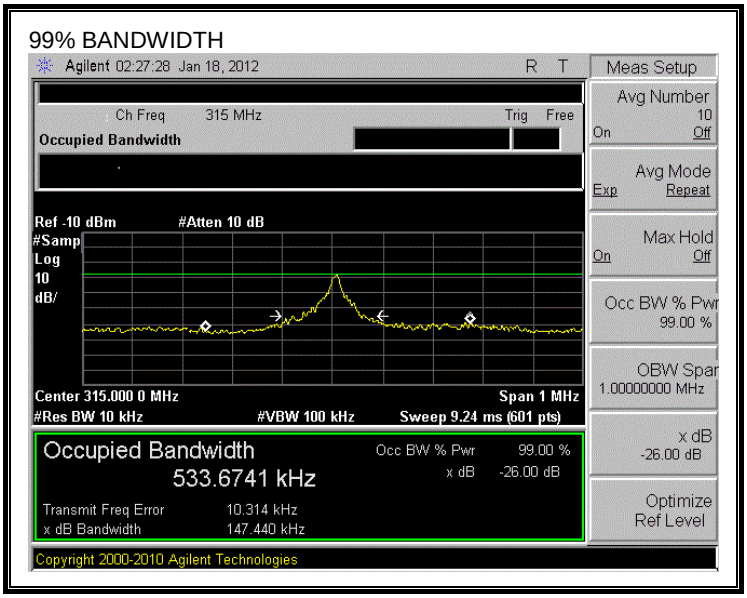
99% Bandwidth

| Frequency (MHz) | 99% Bandwidth (kHz) | Limit (kHz) | Margin (kHz) |
|---|---|---|---|
| 315 | 533.6 | 787.5 | -253.9 |

20dB BANDWIDTH



99% BANDWIDTH



## 6.1. 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 100 kHz and the VBW is set to 100 kHz. The sweep time is coupled and the span is set to 0 Hz. The number of pulses is measured and calculated in a 100 ms scan.

**CALCULATION**

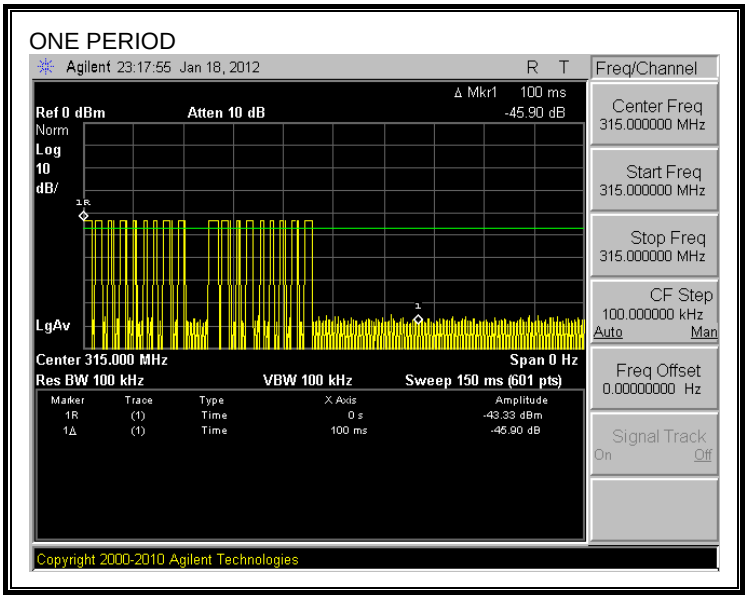
Average Reading = Peak Reading (dBuV/m) + 20log (Duty Cycle), Where Duty Cycle is
(# of long pulses * long pulse width) + (# of short pulses * short pulse width) / 100 or T

**RESULTS**

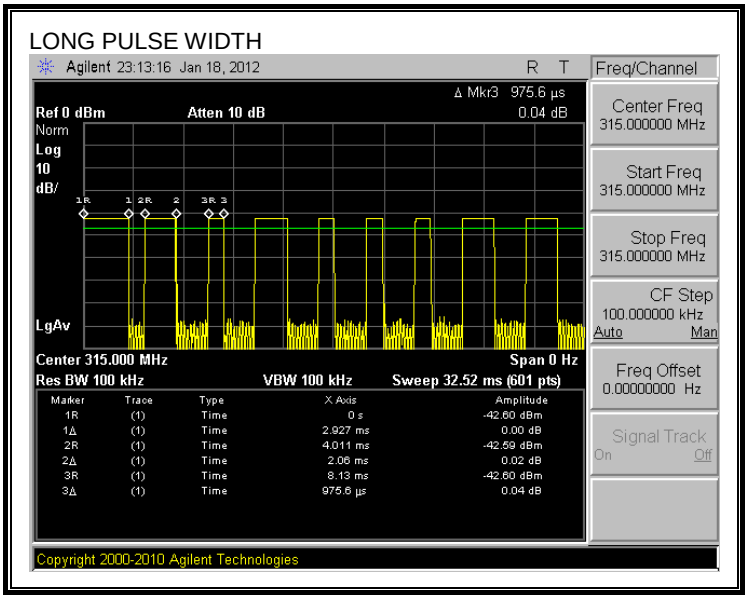
No non-compliance noted:

| One Period (ms) | Long Pulse Width (ms) | # of Long Pulses | Short Width (ms) | # of Short Pulses | Short Width (ms) | # of Short Pulses | Duty Cycle | 20*Log Duty Cycle (dB) |
|---|---|---|---|---|---|---|---|---|
| 68.5 | 2.976 | 2 | 2.06 | 8.00 | 0.98 | 8 | 0.442 | -7.09 |

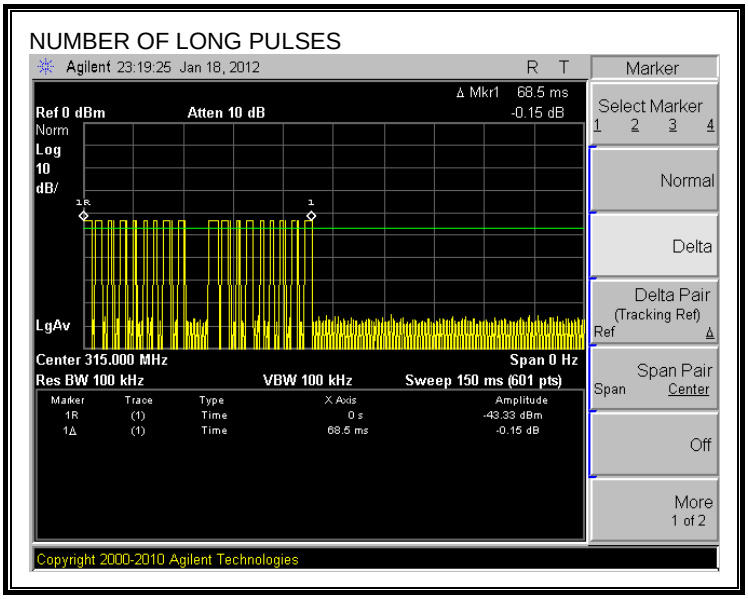
**ONE PERIOD**



**LONG PULSE WIDTH**

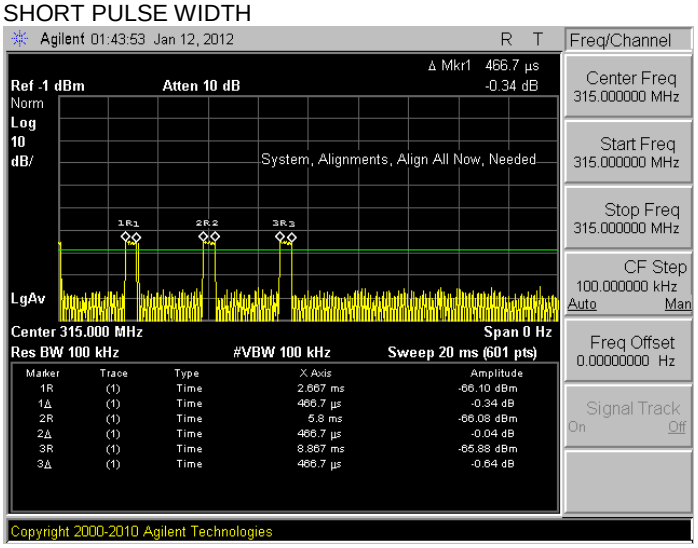


**NUMBER OF LONG PULSES**

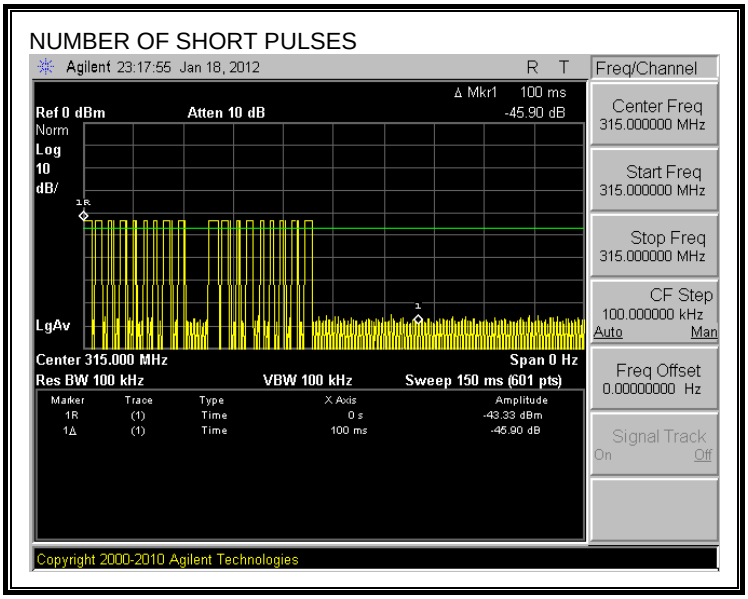


**SHORT PULSE WIDTH**

SHORT PULSE WIDTH



**NUMBER OF SHORT PULSES**



## 6.1. TRANSMISSION TIME

**LIMITS**

FCC §15.231 (a) (2)

IC A1.1.1 (b)

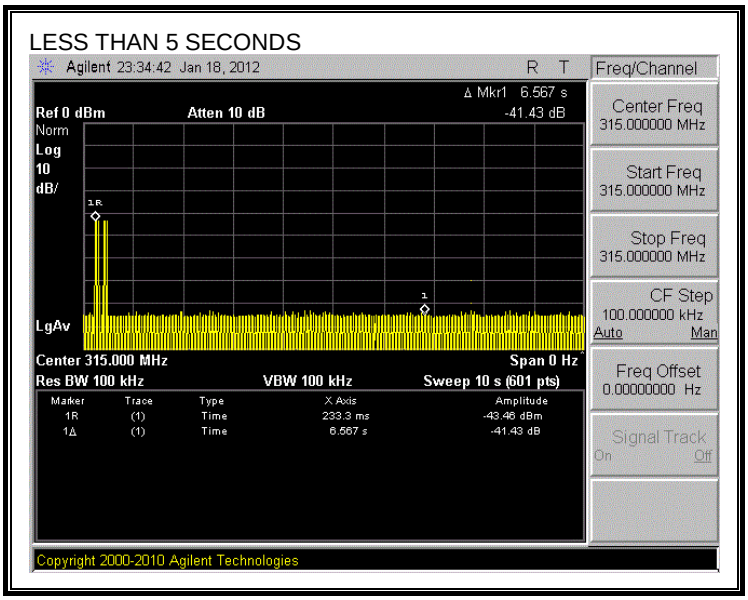
A transmitter activated automatically shall cease transmission within 5 seconds after activation.

**TEST PROCEDURE**

The transmitter output is connected to a spectrum analyzer or radiated field strength. The RBW is set to 100 kHz and the VBW is set to 100 kHz. The sweep time is set to 10 seconds and the span is set to 0 Hz.

**RESULTS**

No non-compliance noted:



# 7. RADIATED EMISSION TEST RESULTS

## 7.1. 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. The EUT is set to transmit in a continuous mode.

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

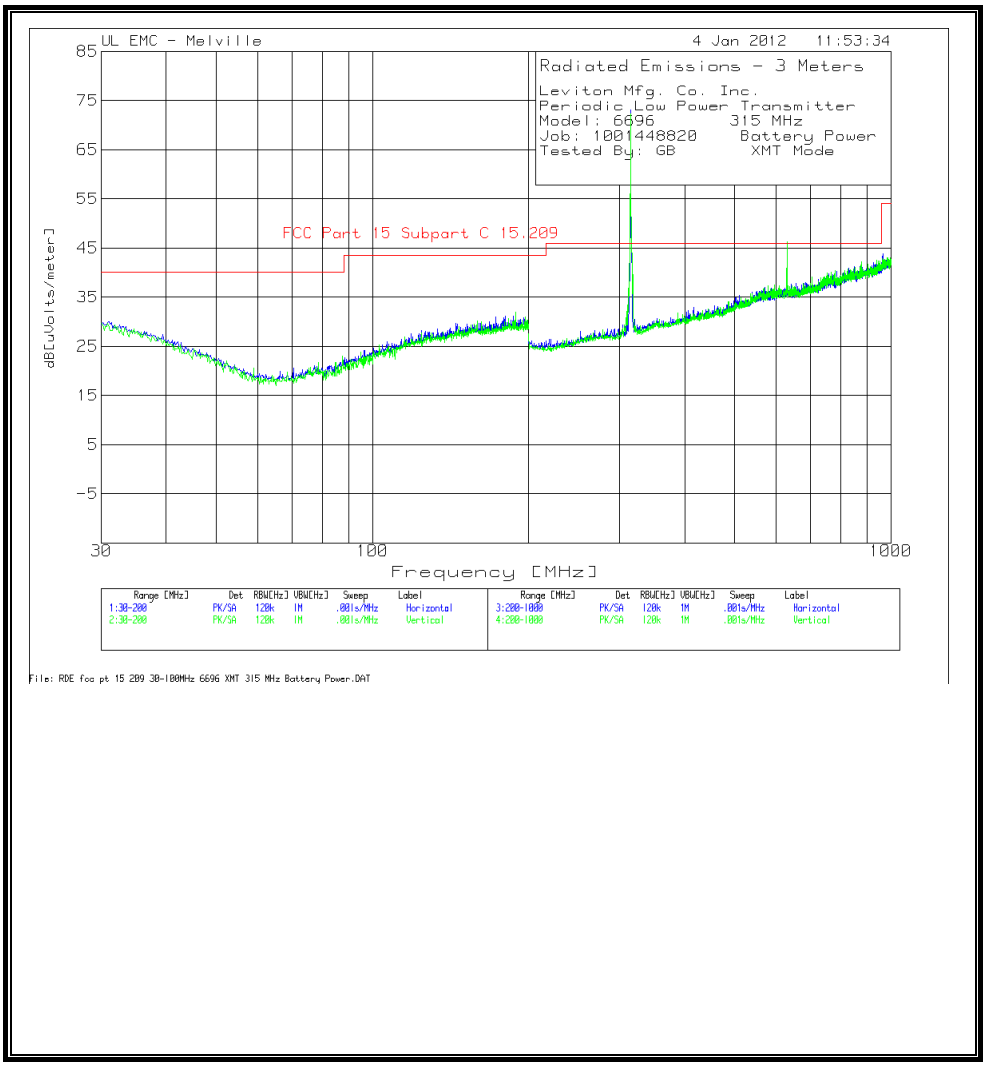
For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

The 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)**



Leviton Mfg. Co. Inc.
Periodic Low Power Transmitter
Model: 6696 315 MHz
Job: 1001448820 Battery Power
Tested By: GB XMT Mode

Horizontal
200 - 1000MHz

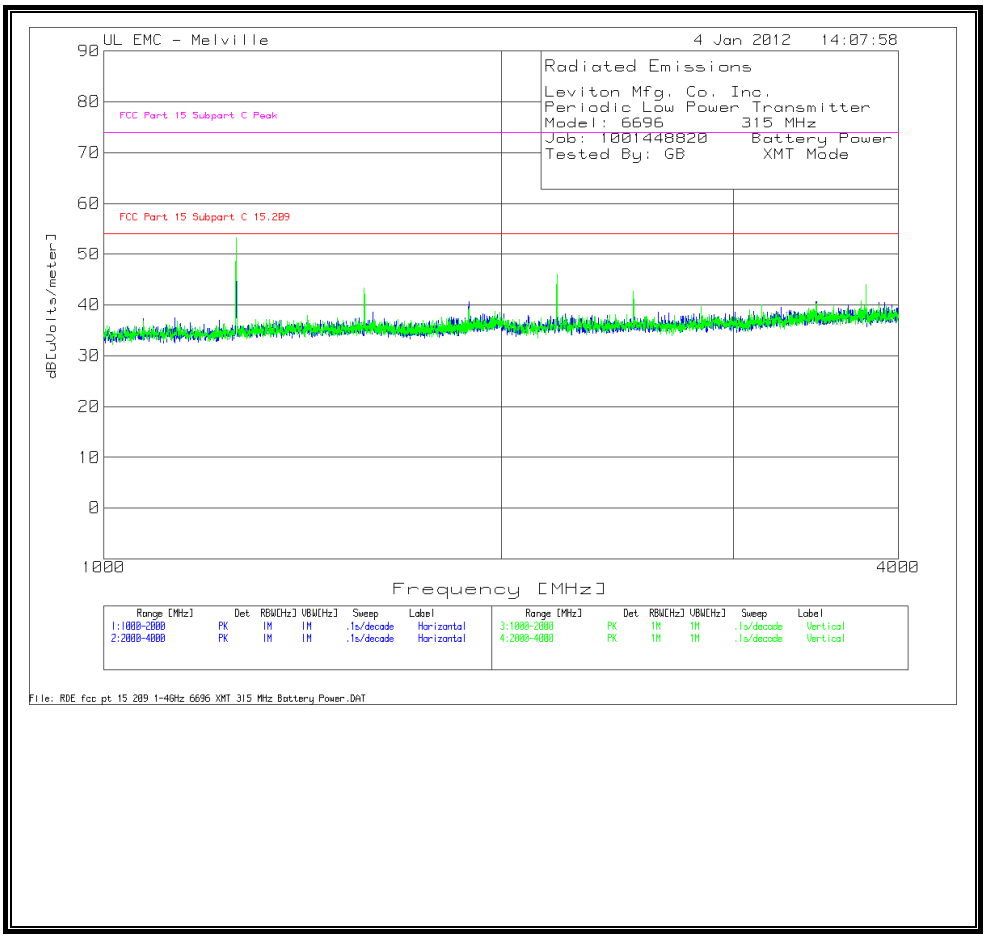
| Test Frequency | Meter Reading | Detector | AF-44067 [dB] | GL-3M [dB] | dB[uVolts/meter] | DCF | Corrected dB[uVolts/meter] | FCC Part 15 Subpart C 15.209 | Margin | FCC Part 15 Subpart C 15.231 | Margin | FCC Part 15 Subpart C 15.231 Peak | Margin | Azimuth [Degs] | Height [cm] | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 314.995 | 59.68 | PK | 14.3 | 1.9 | 75.88 | -7.09 | 68.79 | - | - | 75.6 | -5.93 | 95.6 | -25.93 | 360 | 240 | Horz |
| 630.015 | 26.88 | PK | 20.4 | 2.8 | 50.08 | -7.09 | 42.99 | - | - | 55.6 | -11.73 | 75.6 | -31.73 | 359 | 106 | Horz |
| 964 | 14.87 | PK | 24.3 | 3.6 | 42.77 | | | 54 | -11.23 | - | - | - | - | 205 | 204 | Horz |

Vertical
200 - 1000MHz

| Test Frequency | Meter Reading | Detector | AF-44067 [dB] | GL-3M [dB] | dB[uVolts/meter] | | | FCC Part 15 Subpart C 15.209 | Margin | | | | | Azimuth [Degs] | Height [cm] | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 315.005 | 64.63 | PK | 14.3 | 1.9 | 80.83 | -7.09 | 73.74 | - | - | 75.6 | -1.86 | 95.6 | -21.86 | 280 | 185 | Vert |
| 317.2 | 17.22 | QP | 14.3 | 2 | 33.52 | - | - | 46 | -12.48 | - | - | - | - | 133 | 208 | Vert |
| 630.0251 | 24.3 | PK | 20.3 | 2.8 | 47.4 | -7.09 | 40.31 | - | - | 55.6 | -15.29 | 75.6 | -35.29 | 99 | 113 | Vert |
| 964 | 15.94 | PK | 24.3 | 3.6 | 43.84 | - | - | 54 | -10.16 | - | - | - | - | 262 | 331 | Vert |

DCF- Duty Cycle Factor
PK - Peak detector
QP - Quasi-Peak detector
LnAv - Linear Average detector
LgAv - Log Average detector
Av - Average detector

**HARMONICS AND TX SPURIOUS EMISSIONS ABOVE 1GHz**



Leviton Mfg. Co. Inc.
Periodic Low Power Transmitter
Model: 6696 315 MHz
Job: 1001448820 Battery Power
Tested By: GB XMT Mode

Horizontal 1000 - 2000MHz

| Test Frequency | Meter Reading | Detector | AF-51442 [dB] | BOMS Factor [dB] | dB[uVolts/meter] | FCC Part 15 Subpart C 15.209 | Margin | FCC Part 15 Subpart C Peak | Margin | Azimuth [Degs] | Height [cm] | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1260.03 | 77.06 | PK | 20.2 | -44.36 | 52.9 | 54 | -1.1 | 74 | -21.1 | 187 | 129 | Horz |
| 1574.895 | 71.55 | PK | 21.1 | -44.23 | 48.42 | 54 | -5.58 | 74 | -25.58 | 200 | 293 | Horz |
| 1890.035 | 68.01 | PK | 21.5 | -43.85 | 45.66 | 54 | -8.34 | 74 | -28.34 | 177 | 299 | Horz |

Horizontal 2000 - 4000MHz

| Test Frequency | Meter Reading | Detector | AF-48107 [dB] | BOMS Factor [dB] | dB[uVolts/meter] | FCC Part 15 Subpart C 15.209 | Margin | FCC Part 15 Subpart C Peak | Margin | Azimuth [Degs] | Height [cm] | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2205.06 | 67.12 | PK | 21.5 | -43.09 | 45.53 | 54 | -8.47 | 74 | -28.47 | 152 | 209 | Horz |
| 2520.075 | 67.15 | PK | 21.4 | -42.77 | 45.78 | 54 | -8.22 | 74 | -28.22 | 343 | 234 | Horz |
| 2835.14 | 69.59 | PK | 21.8 | -42.24 | 49.15 | 54 | -4.85 | 74 | -24.85 | 18 | 234 | Horz |
| 3150.35 | 70.24 | PK | 21.9 | -42.21 | 49.93 | 54 | -4.07 | 74 | -24.07 | 281 | 286 | Horz |
| 3465.125 | 69.89 | PK | 22.2 | -41.81 | 50.28 | 54 | -3.72 | 74 | -23.72 | 206 | 248 | Horz |
| 3779.875 | 70.05 | PK | 22.4 | -41.88 | 50.57 | 54 | -3.43 | 74 | -23.43 | 179 | 238 | Horz |

Vertical 1000 - 2000MHz

| Test Frequency | Meter Reading | Detector | AF-51442 [dB] | BOMS Factor [dB] | dB[uVolts/meter] | FCC Part 15 Subpart C 15.209 | Margin | FCC Part 15 Subpart C Peak | Margin | Azimuth [Degs] | Height [cm] | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1260.03 | 73.96 | PK | 20.2 | -44.36 | 49.8 | 54 | -4.2 | 74 | -24.2 | 127 | 242 | Horz |
| 1575.135 | 70.83 | PK | 21.1 | -44.23 | 47.7 | 54 | -6.3 | 74 | -26.3 | 189 | 120 | Horz |
| 1890.105 | 68.06 | PK | 21.5 | -43.85 | 45.71 | 54 | -8.29 | 74 | -28.29 | 171 | 288 | 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

Leviton Mfg. Co. Inc.
Periodic Low Power Transmitter
Model: 6696 315 MHz
Job: 1001448820 Battery Power
Tested By: GB XMT Mode

Vertical 2000 - 4000MHz

| Test Frequency | Meter Reading | Detector | AF-48107 [dB] | BOMS Factor [dB] | dB[uVolts/meter] | FCC Part 15 Subpart C 15.209 | Margin | FCC Part 15 Subpart C Peak | Margin | Azimuth [Degs] | Height [cm] | Polarity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2205.05 | 70.99 | PK | 21.3 | -43.09 | 49.2 | 54 | -4.8 | 74 | -24.8 | 355 | 391 | Vert |
| 2520.05 | 65.28 | PK | 21.7 | -42.77 | 44.21 | 54 | -9.79 | 74 | -29.79 | 330 | 378 | Vert |
| 2835.07 | 69.26 | PK | 21.8 | -42.24 | 48.82 | 54 | -5.18 | 74 | -25.18 | 337 | 342 | Vert |
| 3150.165 | 70.04 | PK | 22 | -42.21 | 49.83 | 54 | -4.17 | 74 | -24.17 | 172 | 288 | Vert |
| 3465 | 71.09 | PK | 22.3 | -41.81 | 51.58 | 54 | -2.42 | 74 | -22.42 | 120 | 196 | Vert |
| 3780.05 | 70.18 | PK | 22.5 | -41.89 | 50.79 | 54 | -3.21 | 74 | -23.21 | 123 | 230 | 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

# 8. 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:

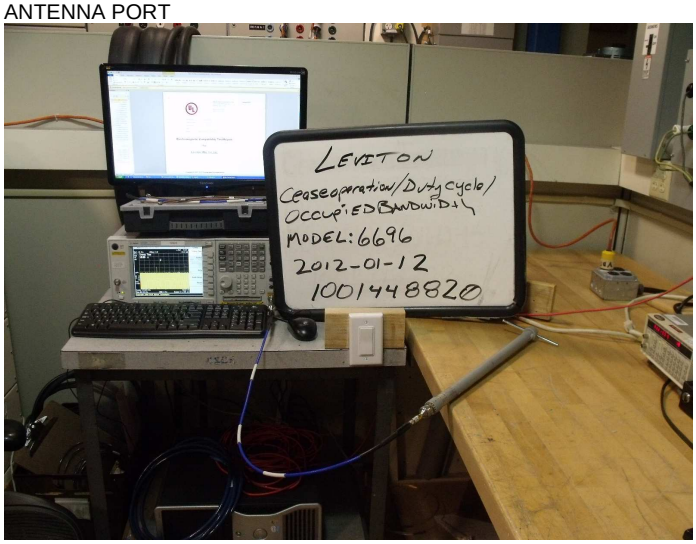
**6 WORST EMISSIONS**

Not Applicable equipment under test is battery power

## 9. SETUP PHOTOS

**ANTENNA PORT**

ANTENNA PORT



**RADIATED EMISSION FOR PORTABLE CONFIGURATION – X ORIENTATION**

RADIATED EMISSION FOR PORTABLE CONFIGURATION – X ORIENTATION

**RADIATED EMISSION FOR PORTABLE CONFIGURATION – Y ORIENTATION**

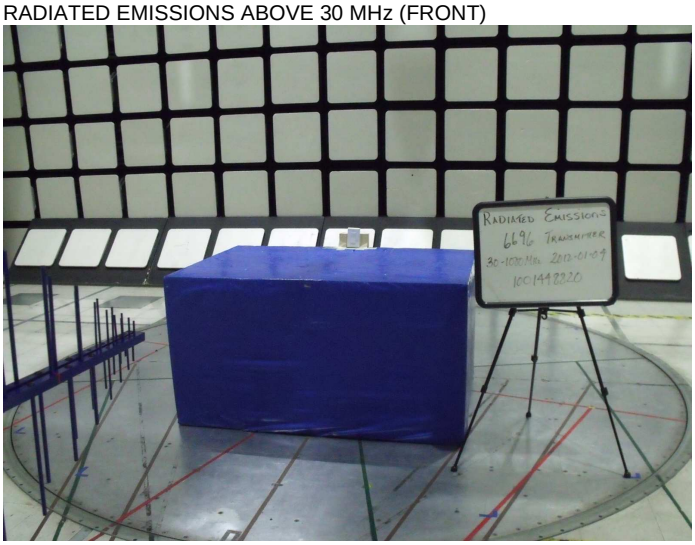
RADIATED EMISSION FOR PORTABLE CONFIGURATION – Y ORIENTATION

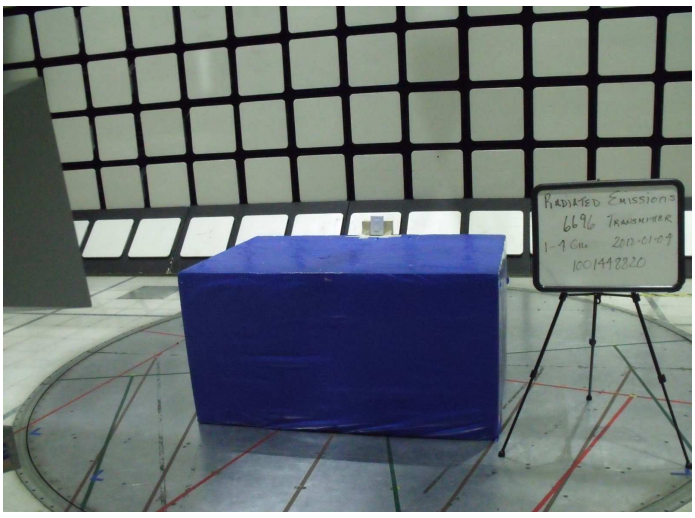
**RADIATED EMISSION FOR PORTABLE CONFIGURATION – Z ORIENTATION**

RADIATED EMISSION FOR PORTABLE CONFIGURATION – Z ORIENTATION

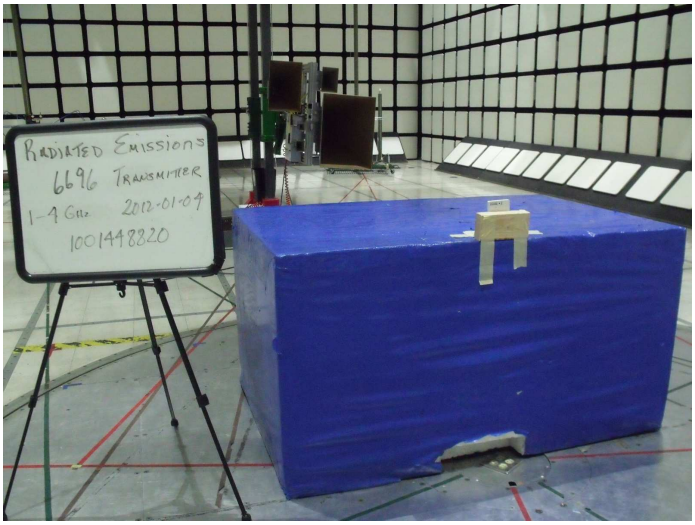
**RADIATED EMISSION ABOVE 30 MHz**

RADIATED EMISSIONS ABOVE 30 MHz (FRONT)



RADIATED EMISSIONS ABOVE 30 MHz (BACK)

**AC MAINS LINE CONDUCTED EMISSION**

Not Applicable equipment under test is battery power

**END OF REPORT**