Test Report

Curtis-Straus LLC, *a wholly owned subsidiary of BV CPS*

Report No	EQ1922-1
Client	Amazon Robotics LLC
Address	300 Riverpark Drive North Reading, MA 01864
Phone	(978) 276-2815
Items tested	SRBRS Badge Module
FCC ID	2AEZR-SRBRSBADGE
IC ID	10244A-SRBRSBADGE
FRN	0024656845
Equipment Type	Low Power Communication Device Transmitter
Equipment Code	DXX
Standards	CFR Title 47 FCC Part 15.249, RSS-210 Issue 9 Annex B.10
Test Dates	July 14 and 15, 2016
Results	As detailed within this report
Prepared by	Tuyen Truong – EMC Test Engineer
Authorized by	Yunus Faziloglu – Sr. EMC Engineer
Issue Date	10/25/2016
Conditions of Issue	This Test Report is issued subject to the conditions stated in the '*Conditions of Testing*' section on page 13 of this report.

Contents

Form Final Report REV 2-16-07 (DW)

Product Tested - Configuration Documentation

EUT Configuration			
Work Order:	Q1922		
Company:	Amazon Robotics LLC		
Company Address:	300 Riverpark Drive		
	North Reading, MA, 01864		
Contact:	Dao Keopadith		
	MN	**PN**	**SN**
EUT:	SRBRS Badge Module	600-00928	Production 1
EUT Description:	SRBRS Badge Module		
EUT TX Frequency:	925 MHz		
EUT TX Frequency:	0.125 MHz		

Support Equipment	**MN**	**SN**
Laptop Lenovo	Thinkpad W520	21442
Cerberus, Vest and Cable Assembly (Host)	610-01026	--

Port Label	Port Type	# ports	# populated	cable type	shielded	ferrites	length (m)	in/out	under test	comment
RJ45	other	1	1	other	Yes	No	1.5	in	yes	
USB maintenance port cable	USB	1	1	USB	Yes	No	3	in	no	only used to configure the EUT

Software Operating Mode Description:

EUT was set to transmit at 925 MHz and 125 KHz.
Normal mode: -10dBm TX power with 500mS interval.
Maximum transmit power is 10dBm. Firmware version V1.21-261CE42.

Summary and Test Methodology

On July 14-15, 2016 we tested the SRBRS Badge Module for compliance with the following requirements:

CFR Title 47 FCC Part 15.249, RSS-210 Issue 9 Annex B.10

EUT transmits at 925MHz. Emissions were maximized by rotating the device around 3 orthogonal planes. EUT has an integral antenna.

Radiated emission testing was performed according to the procedures specified in ANSI C63.10-2013 and RSS-Gen Issue 4.

AC mains conducted emission testing was not required because the EUT is battery powered.

EUT operating voltage is 15VDC.

The following bandwidths were used during radiated spurious emissions testing.

Frequency	RBW	VBW
30-1000MHz	120kHz	1MHz
1-25GHz	1MHz	3MHz

We found that the product met the above limits. The test sample was received in good condition.

Compliance Statement

RSS-GEN	RSP-100	RSS 210	Part 15	Comments
6.3			15.15(b)	There are no controls accessible to the user that vary the output power.
	3.1		15.19	The label is shown in the label exhibit.
	3.2		15.21	Information to the user is shown in the instruction manual exhibit.
			15.27	No special accessories are required for compliance.
6.1, 6.5			15.31	The EUT was tested in accordance with the measurement standards in this section.
			15.33	Frequency range was investigated according to this section, unless noted in specific rule section under which the equipment operates.
8.1			15.35	The EUT emissions were measured using the measurement detector and bandwidth specified in this section, unless noted in specific rule section under which the equipment operates.
8.3			15.203	The antenna for this device is an internal surface-mount antenna with 1.4dBi gain.
8.10			15.205 15.209	The fundamental is not in a Restricted band and the spurious and harmonic emissions in the Restricted bands comply with the general emission limits of 15.209 or RSS-Gen as applicable
8.8			15.207	Not applicable since EUT is battery powered.
		B.10(a)	15.249(a)	The fundamental and harmonics meet the limits in 15.249(a)
		B.10(b)	15.249(d)	Spurious emissions meet the limits in 15.209.
6.6				99% emissions bandwidth plot is provided.

Modifications Required for Compliance

None.

Test Results

Fundamental Measurements

LIMITS

The field strength from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental Frequency	Field Strength of Fundamental (millivolts/meter)	Field Strength of Harmonics (microvolts/meter)
902 - 928 MHz	50	500
2400 - 2483.5 MHz	50	500
5725 - 5875 MHz	50	500
24.0 - 24.25 GHz	250	2500

[15.249(a)]

MEASUREMENTS / RESULTS

Peak Output Power

Date: 14-Jul-16 **Company:** Amazon Robotics LLC **Work Order:** Q1922
Engineer: Jason Haley **EUT Desc:** SRBRS Badge Module **EUT Operating Voltage/Frequency:** 15VDC Battery
Temp: 22°C **Humidity:** 36% **Pressure:** 1005mBar
Frequency Range: 30-1000MHz **Measurement Distance:** 3m
Notes: EUT power settings are -10dB and 10dB **EUT Max Freq:** 925MHz

Antenna Polarization (H / V)	Frequency (MHz)	Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Reading (dBµV/m)	--- Limit (dBµV/m)	--- Margin (dB)	--- Result (Pass/Fail)	FCC 15.249/RSS-210 Limit (dBµV/m)	FCC 15.249/RSS-210 Margin (dB)	FCC 15.249/RSS-210 Result (Pass/Fail)
V eut at -10	925.0	76.2	25.8	22.5	2.1	75.0	---	---	---	94.0	-19.0	Pass
H eut at -10	925.0	78.2	25.8	22.5	2.1	77.0	---	---	---	94.0	-17.0	Pass
V eut at 10	925.0	84.4	25.8	22.5	2.1	83.2	---	---	---	94.0	-10.8	Pass
H eut at 10	925.0	88.2	25.8	22.5	2.1	87.0	---	---	---	94.0	-7.0	Pass

Table Result: Pass by -7.0 dB ***Worst Freq:*** 925.0 MHz

Test Site: EMI Chamber 1 **Cable 1:** Asset #1784 **Cable 2:** Asset #2051 **Cable 3:** ---
Analyzer: MXE 2093 **Preamp:** Green **Antenna:** Red-Brown **Preselector:** ---
CSsoft Radiated Emissions Calculator v 1.017.165

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

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Spectrum Analyzers / Receivers /Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
MXE EMI Receiver	20Hz-26.5GHz	N9038A	Agilent	MY51210181	2093	I	7/21/2016	7/21/2015

Radiated Emissions Sites	FCC Code	IC Code	VCCI Code	Range	Cat	Calibration Due	Calibrated on
EMI Chamber 1	719150	2762A-6	A-0015	30-1000MHz	II	3/21/2017	3/21/2015

Preamps /Couplers Attenuators / Filters	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Green	0.009-2000MHz	ZFL-1000-LN	CS	N/A	802	II	9/17/2016	9/17/2015

Antennas	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Red-Brown Bilog	30-2000MHz	JB1	Sunol	A0032406	1218	I	12/4/2016	12/4/2014

Meteorological Meters	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)	BA928	Oregon Scientific	C3166-1	831	I	4/28/2018	4/28/2016
TH A#2080	HTC-1	HDE		2080	II	4/5/2017	4/5/2016

Cables	Range	Mfr	Cat	Calibration Due	Calibrated on
Asset #1784	9kHz - 18GHz	Florida RF	II	3/7/2017	3/7/2016
Asset #2051	9kHz - 18GHz	Florida RF	II	3/2/2017	3/2/2016

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Radiated Spurious Emissions

LIMITS

15.249 (d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.

MEASUREMENTS / RESULTS

Radiated Emissions Table

Date: 14-Jul-16 **Company:** Amazon Robotics LLC **Work Order:** Q1922
Engineer: Jason Haley **EUT Desc:** SRBRS Badge Module **EUT Operating Voltage/Frequency:** 15VDC Battery
Temp: 22°C **Humidity:** 36% **Pressure:** 1005mB
Frequency Range: 30-1000MHz **Measurement Distance:** 3m
Notes: Quasi-peak readings **EUT Max Freq:** 925MHz
EUT transmiting in normal mode

Antenna Polarization (H / V)	Frequency (MHz)	Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Reading (dBµV/m)	--- Limit (dBµV/m)	--- Margin (dB)	--- Result (Pass/Fail)	FCC 15.209/RSS-GEN Limit (dBµV/m)	FCC 15.209/RSS-GEN Margin (dB)	FCC 15.209/RSS-GEN Result (Pass/Fail)
V eut at -10	31.357	29.6	25.5	20.4	0.4	24.9	---	---	---	40.0	-15.1	Pass
H eut at -10	79.96	45.1	25.5	7.7	0.6	27.9	---	---	---	40.0	-12.1	Pass
V eut at -10	80.044	45.3	25.5	7.7	0.6	28.1	---	---	---	40.0	-11.9	Pass
H eut at -10	80.474	41.8	25.5	7.7	0.6	24.6	---	---	---	40.0	-15.4	Pass
V eut at -10	82.238	42.5	25.5	7.6	0.6	25.2	---	---	---	40.0	-14.8	Pass
H eut at -10	86.574	34.0	25.5	7.5	0.6	16.6	---	---	---	40.0	-23.4	Pass
V eut at -10	161.523	30.4	25.5	12.2	1.0	18.1	---	---	---	43.5	-25.4	Pass
H eut at -10	161.956	31.6	25.5	12.2	1.0	19.3	---	---	---	43.5	-24.2	Pass
H eut at -10	221.968	37.1	25.7	10.8	1.1	23.3	---	---	---	46.0	-22.7	Pass
V eut at -10	226.995	47.8	25.7	11.0	1.2	34.3	---	---	---	46.0	-11.7	Pass
V eut at -10	633.934	31.0	25.5	19.8	1.8	27.1	---	---	---	46.0	-18.9	Pass
V eut at -10	902.0	35.0	25.8	22.5	2.1	33.8	---	---	---	46.0	-12.2	Pass
H eut at -10	902.0	25.9	25.8	22.5	2.1	24.7	---	---	---	46.0	-21.3	Pass
V eut at -10	928.0	35.2	25.8	22.5	2.1	34.0	---	---	---	46.0	-12.0	Pass
H eut at -10	928.0	25.8	25.8	22.5	2.1	24.6	---	---	---	46.0	-21.4	Pass
V eut at 10	30.127	29.7	25.5	21.3	0.4	25.9	---	---	---	40.0	-14.1	Pass
V eut at 10	79.975	43.6	25.5	7.7	0.6	26.4	---	---	---	40.0	-13.6	Pass
V eut at 10	81.771	41.0	25.5	7.6	0.6	23.7	---	---	---	40.0	-16.3	Pass
V eut at 10	222.109	47.9	25.7	10.8	1.1	34.1	---	---	---	46.0	-11.9	Pass
V eut at 10	226.901	48.3	25.7	11.0	1.2	34.8	---	---	---	46.0	-11.2	Pass
V eut at 10	231.274	48.0	25.7	11.2	1.2	34.7	---	---	---	46.0	-11.3	Pass
H eut at 10	74.148	33.4	25.5	8.2	0.6	16.7	---	---	---	40.0	-23.3	Pass
H eut at 10	80.062	42.1	25.5	7.7	0.6	24.9	---	---	---	40.0	-15.1	Pass
H eut at 10	85.73	32.8	25.5	7.5	0.6	15.4	---	---	---	40.0	-24.6	Pass
H eut at 10	207.491	38.0	25.7	10.7	1.0	24.0	---	---	---	43.5	-19.5	Pass
H eut at 10	226.986	41.3	25.7	11.0	1.2	27.8	---	---	---	46.0	-18.2	Pass
V eut at 10	902.0	35.6	25.8	22.5	2.1	34.4	---	---	---	46.0	-11.6	Pass
H eut at 10	902.0	30.6	25.8	22.5	2.1	29.4	---	---	---	46.0	-16.6	Pass
V eut at 10	928.0	29.4	25.8	22.5	2.1	28.2	---	---	---	46.0	-17.8	Pass
H eut at 10	928.0	29.6	25.8	22.5	2.1	28.4	---	---	---	46.0	-17.6	Pass
H eut at 10	846.684	30.4	25.7	21.8	2.1	28.6	---	---	---	46.0	-17.4	Pass

Table Result: Pass by -11.2 dB ***Worst Freq:*** 226.9 MHz

Test Site: EMI Chamber 1 **Cable 1:** Asset #1784 **Cable 2:** Asset #2051 **Cable 3:** ---
Analyzer: MXE 2093 **Preamp:** Green **Antenna:** Red-Brown **Preselector:** ---
CSsoft Radiated Emissions Calculator v 1.017.165

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

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Spectrum Analyzers / Receivers /Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
MXE EMI Receiver	20Hz-26.5GHz	N9038A	Agilent	MY51210181	2093	I	7/21/2016	7/21/2015
Radiated Emissions Sites	**FCC Code**	**IC Code**	**VCCI Code**	**Range**		**Cat**	**Calibration Due**	**Calibrated on**
EMI Chamber 1	719150	2762A-6	A-0015	30-1000MHz		II	3/21/2017	3/21/2015
Preamps /Couplers Attenuators / Filters	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
Green	0.009-2000MHz	ZFL-1000-LN	CS	N/A	802	II	9/17/2016	9/17/2015
Antennas	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
Red-Brown Bilog	30-2000MHz	JB1	Sunol	A0032406	1218	I	12/4/2016	12/4/2014
Meteorological Meters		**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	4/28/2018	4/28/2016
TH A#2080		HTC-1	HDE		2080	II	4/5/2017	4/5/2016
Cables	**Range**		**Mfr**			**Cat**	**Calibration Due**	**Calibrated on**
Asset #1784	9kHz - 18GHz		Florida RF			II	3/7/2017	3/7/2016
Asset #2051	9kHz - 18GHz		Florida RF			II	3/2/2017	3/2/2016

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Radiated Emissions Table

Date: 14-Jul-16 **Company:** Amazon Robotics LLC **Work Order:** Q1922
Engineer: Jason Haley **EUT Desc:** SRBRS Badge Module **EUT Operating Voltage/Frequency:** 15VDC Battery
Temp: 22°C **Humidity:** 36% **Pressure:** 1005mB
Frequency Range: 1-6GHz **Measurement Distance:** 3m
Notes: Noise Floor Readings **EUT Max Freq:** 925MHz
EUT transmiting in normal mode at level 10.

Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dBµV)	Average Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Peak Reading (dBµV/m)	Adjusted Avg Reading (dBµV/m)	FCC 15.209 High Frequency - Peak Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	FCC 15.209 High Frequency - Average Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)
Horizontal	1850.0	26.0	16.6	18.8	30.8	3.2	41.2	31.8	74.0	-32.8	Pass	54.0	-22.2	Pass
Horizontal	2775.0	28.5	18.4	20.1	33.0	4.5	45.9	35.8	74.0	-28.1	Pass	54.0	-18.2	Pass
Horizontal	3700.0	25.0	16.9	19.1	33.4	5.5	44.8	36.7	74.0	-29.2	Pass	54.0	-17.3	Pass
Horizontal	4625.0	25.1	15.7	17.9	34.3	6.0	47.5	38.1	74.0	-26.5	Pass	54.0	-15.9	Pass
Horizontal	5550.0	25.2	15.1	17.6	34.9	6.8	49.3	39.2	74.0	-24.7	Pass	54.0	-14.8	Pass

Table Result: Pass by -14.8 dB ***Worst Freq:*** 5550.0 MHz

Test Site: EMI Chamber 1 **Cable 1:** Asset #1784 **Cable 2:** Asset #2051 **Cable 3:** ---
Analyzer: Rental SA#5 **Preamp:** Asset #1517 **Antenna:** Blue Horn **Preselector:** ---
CSsoft Radiated Emissions Calculator v 1.017.165

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

Radiated Emissions Table

Date: 15-Jul-16 **Company:** Amazon Robotics LLC **Work Order:** Q1922
Engineer: Jason Haley **EUT Desc:** SRBRS Badge Module **EUT Operating Voltage/Frequency:** 15VDC Battery
Temp: 22°C **Humidity:** 36% **Pressure:** 1002mB
Frequency Range: 6-10GHz **Measurement Distance:** 1m
Notes: Noise Floor readings **EUT Max Freq:** 925MHz
EUT transmiting in normal mode at level 10.

Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dBµV)	Average Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Peak Reading (dBµV/m)	Adjusted Avg Reading (dBµV/m)	FCC 15.209 High Frequency - Peak Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	FCC 15.209 High Frequency - Average Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)
Vert	6475.0	22.3	13.4	17.4	35.8	7.4	48.1	39.2	83.5	-35.4	Pass	63.5	-24.3	Pass
Vert	7400.0	21.4	13.2	17.2	36.0	7.7	47.9	39.7	83.5	-35.6	Pass	63.5	-23.8	Pass
Vert	8325.0	22.5	13.6	17.6	36.1	8.4	49.4	40.5	83.5	-34.1	Pass	63.5	-23.0	Pass
Vert	9250.0	23.9	13.5	17.4	36.8	8.5	51.8	41.4	83.5	-31.7	Pass	63.5	-22.1	Pass

Table Result: Pass by -22.1 dB ***Worst Freq:*** 9250.0 MHz

Test Site: EMI Chamber 1 **Cable 1:** Asset #2051 **Cable 2:** Asset #1784 **Cable 3:** ---
Analyzer: MXE 2093 **Preamp:** Asset #1517 **Antenna:** Blue Horn **Preselector:** ---
CSsoft Radiated Emissions Calculator v 1.017.165

Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor

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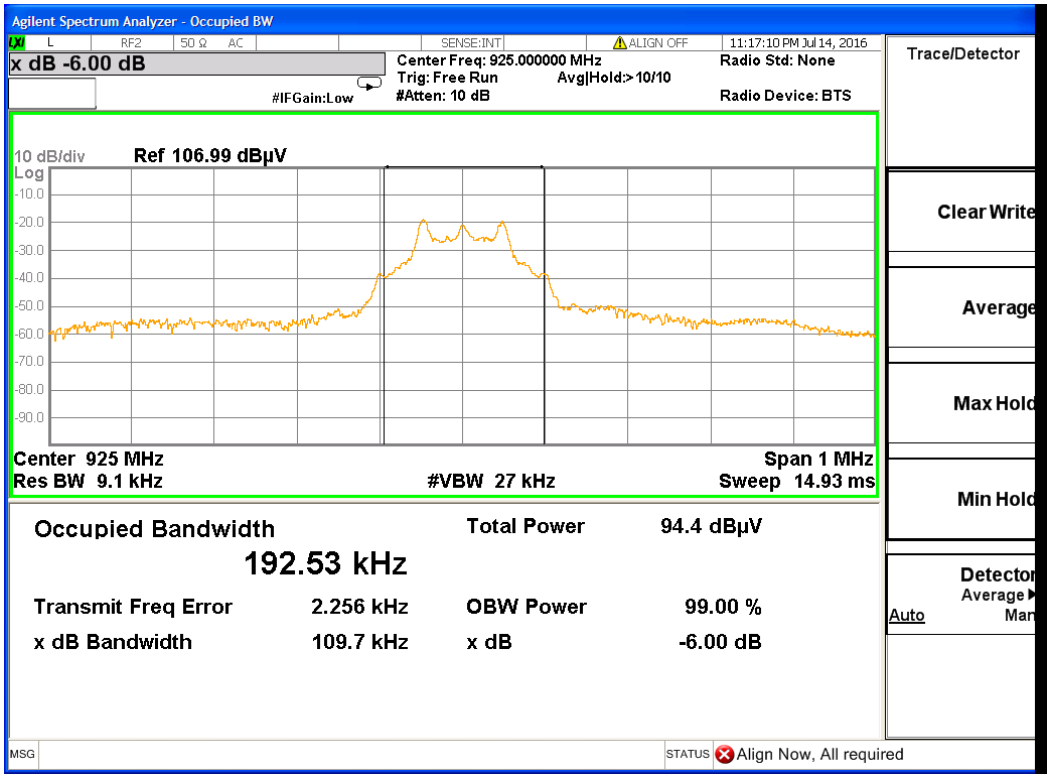
Spectrum Analyzers / Receivers /Preselectors	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
MXE EMI Receiver	20Hz-26.5GHz	N9038A	Agilent	MY51210181	2093	I	7/21/2016	7/21/2015
Radiated Emissions Sites	**FCC Code**	**IC Code**	**VCCI Code**	**Range**		**Cat**	**Calibration Due**	**Calibrated on**
EMI Chamber 1	719150	2762A-6	A-0015	1-18GHz		I	5/23/2017	5/23/2015
Preamps /Couplers Attenuators / Filters	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
1517 HF Preamp	1-20GHz	CS	CS	N/A	1517	II	8/6/2016	8/6/2015
Antennas	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
Blue Horn	1-18Ghz	3117	ETS	157647	1861	I	2/8/2017	2/8/2015
Meteorological Meters		**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**	**Calibrated on**
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	4/28/2018	4/28/2016
TH A#2080		HTC-1	HDE		2080	II	4/5/2017	4/5/2016
Cables	**Range**		**Mfr**			**Cat**	**Calibration Due**	**Calibrated on**
Asset #1784	9kHz - 18GHz		Florida RF			II	3/7/2017	3/7/2016
Asset #2051	9kHz - 18GHz		Florida RF			II	3/2/2017	3/2/2016

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

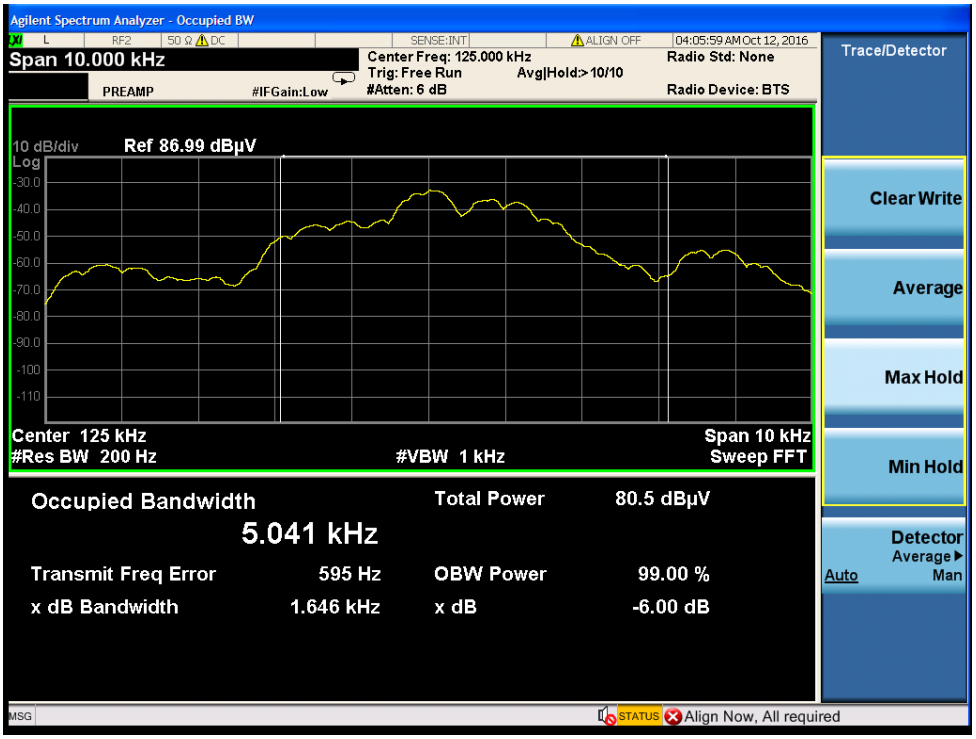
Occupied Bandwidth

REQUIREMENT

When an occupied bandwidth is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is its 99% emission bandwidth, as calculated or measured. [RSS-GEN 6.6]



Occupied Bandwidth 925MHz radio



Occupied Bandwidth 125kHz radio

Measurement Uncertainty

The listed uncertainties are the worst case uncertainty for the entire range of measurement. Please note that the uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results.

Measurement	Expanded Uncertainty k=2	Maximum allowable uncertainty
Radiated Emissions (30-1000MHz) NIST CISPR	 5.6dB 4.6dB	 N/A 5.2dB (Ucispr)
Radiated Emissions (1-26.5GHz)	4.6dB	N/A
Radiated Emissions (above 26.5GHz)	4.9dB	N/A
Magnetic Radiated Emissions	5.6dB	N/A
Conducted Emissions NIST CISPR	 3.9dB 3.6dB	 N/A 3.6dB (Ucispr)
Telco Conducted Emissions (Current)	2.9dB	N/A
Telco Conducted Emissions (Voltage)	4.4dB	N/A
Electrostatic Discharge	11.5%	N/A
Radiated RF Immunity (Uniform Field)	1.6dB	N/A
Electrical Fast Transients	23.1%	N/A
Surge	23.1%	N/A
Conducted RF Immunity	3dB	N/A
Magnetic Immunity	12.8%	N/A
Dips and Interrupts	2.3V	N/A
Harmonics	3.5%	N/A
Flicker	3.5%	N/A
Radio frequency (@ 2.4GHz)	3.23×10^{-8}	1×10^{-7}
RF power, conducted	0.40dB	0.75dB
Maximum frequency deviation: • Within 300Hz and 6kHz of audio frequency / Within 6kHz and 25kHz of audio frequency	 3.4% 0.3dB	 5% 3dB
Adjacent channel power	1.9dB	3dB
Conducted spurious emission of transmitter, valid up to 12.75GHz	2.39dB	3dB
Conducted emission of receivers	1.3dB	3dB
Radiated emission of transmitter, valid up to 26.5GHz	3.9dB	6dB
Radiated emission of transmitter, valid up to 80GHz	3.3dB	6dB
Radiated emission of receiver, valid up to 26.5GHz	3.9dB	6dB
Radiated emission of receiver, valid up to 80GHz	3.3dB	6dB
Humidity	2.37%	5%
Temperature	0.7°C	1.0°C
Time	4.1%	10%
RF Power Density, Conducted	0.4dB	3dB
DC and low frequency voltages	1.3%	3%
Voltage (AC, <10kHz)	1.3%	2%
Voltage (DC)	0.62%	1%
The above reflects a 95% confidence level		

Conditions Of Testing

[Bureau Veritas Consumer Products Services, Inc., a Massachusetts corporation], and/or its affiliates (collectively, the "Company") will conduct, at the request of the Submitter ("**Client**"), the tests specified on the submitted Test Request Form or equivalent in accordance with, and subject to, the following terms and conditions (collectively, "**Conditions**"):

1. All orders for tests are subject to acceptance by the Company, and no order will constitute a binding commitment of the Company unless and until such order is accepted by it, as evidenced by the issuance of a written report ("**Test Report**") by the Company. The Test Report is issued solely by the Company, is intended for the exclusive use of Client and shall not be published, used for advertising purposes, copied or replicated for distribution to any other person or entity or otherwise publicly disclosed without the prior written consent of the Company. By submitting a request for services to the Company, Client consents to the disclosure to accreditation bodies of those records of Client relevant to the accreditation body's assessment of the Company's competence and compliance with relevant accreditation criteria. The Company shall not be liable for any loss or damage whatsoever resulting from the failure of the Company to provide its services within any time period for completion estimated by the Company. If Client anticipates using the Test Report in any legal proceeding, arbitration, dispute resolution forum or other proceeding, it shall so notify the Company prior to submitting the Test Report in such proceeding. The Company has no obligation to provide a fact or expert witness at such proceeding unless the Company agrees in advance to do so for a separate and additional fee.
2. The Test Report will set forth the findings of the Company solely with respect to the test samples identified therein. Unless specifically and expressly indicated in the Test Report, the results set forth in such Test Report are not intended to be indicative or representative of the quality or characteristics of the lot from which a test sample is taken, and Client shall not rely upon the Test Report as being so indicative or representative of the lot or of the tested product in general. The Test Report will reflect the findings of the Company at the time of testing only, and the Company shall have no obligation to update the Test Report after its issuance. The Test Report will set forth the results of the tests performed by the Company based upon the written information provided to the Company. The Test Report will be based solely on the samples and written information submitted to the Company by Client, and the Company shall not be obligated to conduct any independent investigation or inquiry with respect thereto.
3. The Company may, in its sole discretion, destroy samples which have been furnished to the Company for testing and which have not been destroyed in the course of testing. The Company may delegate the performance of all or a portion of the services contemplated hereunder to an affiliate, agent or subcontractor of the Company, and Client consents to such delegation.
4. These Conditions and the Test Report represent the entire understanding of the parties hereto with respect to the subject matter hereof and of the Test Report, and no modification, variance or extrapolation with respect thereto shall be permitted without the prior written consent of the Company.
5. The names, service marks, trademarks and copyrights of the Company and its affiliates, including the names "**BUREAU VERITAS**," "**BUREAU VERITAS CONSUMER PRODUCTS SERVICES**," "**BVCPS**", "**MTL**", "**ACTS**", "**MTL-ACTS**" and **CURTIS-STRAUS** (collectively, the "**Marks**") are and shall remain the sole property of the Company or its affiliates and shall not be used by Client except solely to the extent that Client obtains the prior written approval of the Company and then only in the manner prescribed by the Company. Client shall not contest the validity of the Marks or take any action that might impair the value or goodwill associated with the Marks or the image or reputation of the Company or its affiliates.
6. Payment in full shall be due 30 days after the date of invoice. Interest shall be due on overdue amounts from the due date until paid at an interest rate of 1.5% per month or, if less, the maximum rate permitted by law. The Company reserves the right, at any time and from time to time, to revoke any credit extended to Client. Client shall reimburse the Company for any costs it incurs in collecting past due amounts, including court costs and fees and expenses of attorneys and collection agencies. The Test Report may not be used or relied upon by Client if and for so long as Client fails to pay when due any invoice issued by the Company or any affiliate of it to Client or any affiliate or subsidiary of Client together with interest and penalties, if any, accrued thereon.
7. The Company disclaims any and all responsibility or liability arising out of or in connection with e-mail transmissions of such information.
8. Client understands and agrees that the Company is neither an insurer nor a guarantor, that the Company does not take the place of Client or any designer, manufacturer, agent, buyer, distributor or transportation or shipping company, and that the Company disclaims all liability in such capacities. Client further understands that if it seeks assurance against loss or damage, it should obtain appropriate insurance.
9. Client agrees that the Company, by providing the services, does not take the place of Client nor any third party, nor does the Company release them from any of their obligations, nor does the Company otherwise assume, abridge, abrogate or undertake to discharge any duty of any third party to Client or any duty of Client or any third party to any other third party, and Client will not release any third party from its obligations and duties with respect to the tested goods.
10. Client shall, on a timely basis, (a) provide adequate instructions to the Company in order to enable the Company to perform properly its services, (b) provide, or cause Client's suppliers and contractors to provide, the Company with all documents necessary to enable the Company to perform its services, (c) furnish the Company with all relevant information regarding Client's intended use and purposes of the tested goods, (d) advise the Company of essential dates and deadlines relevant to the tested goods and (e) fully exercise all rights and remedies available to Client against third parties in respect of the tested goods.
11. The Company shall undertake due care and ordinary skill in the performance of its services to Client, and the Company shall accept responsibility only were such skill has not been exercised and, even in such event, only to the extent of the limitation of liability set forth herein.
12. If Client desires to assert a claim arising from or relating to (i) the performance, purported performance or non-performance of any services by the Company or (ii) the sale, resale, manufacture, distribution or use of any tested goods, it must submit that claim to the Company in a writing that sets forth with particularity the basis for such claim within 60 days from discovery of the potential claim and not more than six months after the date of issuance of the Test Report to Client. Client waives any and all such claims including, without limitation, claims that the Test Report is inaccurate, incomplete or misleading or that additional or different testing is required, unless and then only to the extent that Client submits a written claim to the Company within both such time periods.
13. CLIENT SHALL, EXCEPT TO THE EXTENT OF COMPANY'S LIABILITY TO CLIENT HEREUNDER (WHICH IN NO EVENT SHALL EXCEED THE LIMITATION OF LIABILITY HEREIN), HOLD HARMLESS AND INDEMNIFY THE COMPANY, ITS AFFILIATES AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND SUBCONTRACTORS AGAINST

ALL ACTUAL OR ALLEGED THIRD PARTY CLAIMS FOR LOSS, DAMAGE OR EXPENSE OF WHATSOEVER NATURE AND HOWSOEVER ARISING FROM OR RELATING TO (i) THE PERFORMANCE, PURPORTED PERFORMANCE OR NON-PERFORMANCE OF ANY SERVICES BY THE COMPANY OR (ii) THE SALE, RESALE, MANUFACTURE, DISTRIBUTION OR USE OF ANY TESTED GOODS.

14. EXCEPT AS MAY OTHERWISE BE EXPRESSLY AGREED TO IN WRITING BY THE COMPANY AND NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN OR IN ANY TEST REPORT, NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, IS MADE.

15. (A) IN NO EVENT WHATSOEVER SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL, INCIDENTAL, EXEMPLARY OR PUNITIVE DAMAGES IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE TEST REPORT OR THE SERVICES PROVIDED BY THE COMPANY HEREUNDER, INCLUDING WITHOUT LIMITATION LOSS OF OR DAMAGE TO PROPERTY; LOSS OF INCOME, PROFIT OR USE; OR ANY CLAIMS OR DEMANDS MADE AGAINST CLIENT OR ANY OTHER PERSON BY ANY THIRD PARTY IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE SERVICES PROVIDED BY THE COMPANY HEREUNDER.

(B)NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN, AND IN RECOGNITION OF THE RELATIVE RISKS AND BENEFITS TO CLIENT AND THE COMPANY ASSOCIATED WITH THE TESTING SERVICES CONTEMPLATED HEREBY, THE RISKS HAVE BEEN ALLOCATED SUCH THAT UNDER NO CIRCUMSTANCES WHATSOEVER SHALL THE LIABILITY OF THE COMPANY TO CLIENT OR ANY THIRD PARTY IN RESPECT OF ANY CLAIM FOR LOSS, DAMAGE OR EXPENSE, OF WHATSOEVER NATURE OR MAGNITUDE, AND HOWSOEVER ARISING, EXCEED AN AMOUNT EQUAL TO FIVE (5) TIMES THE AMOUNT OF THE FEES PAID TO THE COMPANY FOR THE SPECIFIC SERVICES WHICH GAVE RISE TO SUCH CLAIM OR U.S.$10,000, WHICHEVER IS THE LESSER AMOUNT.

16. The Company shall not be liable for any loss or damage resulting from any delay or failure in performance of its obligations hereunder resulting directly or indirectly from any event of force majeure or any event outside the control of the Company. If any such event occurs, the Company may immediately cancel or suspend its performance hereunder without incurring any liability whatsoever to Client.

17. Company's services, including these Conditions, shall be governed by, and construed in accordance with, the local laws of the country where the Company performs the tests or, in the case of tests performed in the United States of America, the laws of Massachusetts without regard to conflicts of laws principles. If any aspect(s) of these Conditions is found to be illegal or unenforceable, the validity, legality and enforceability of all remaining aspects of these Conditions shall not in any way be affected or impaired thereby. Any proceeding related to the subject matter hereof shall be brought, if at all, in the courts of the country where the Company performs the tests or, in the case of tests performed in the United States of America, in the courts of Massachusetts. Client waives the right to interpose any counterclaim or setoffs of any nature in any litigation arising hereunder.

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