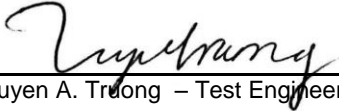
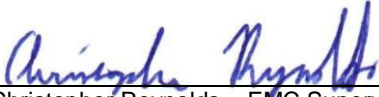




Test Report

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

Report No	EP2231-2
Client	ecoVent Robert Kim
Address	24 Cambridge St, Suite 6 Charlestown, MA 02129
Phone	857-204-4466
Items tested FCC ID	WALL SENSOR 2AFTLSS1
FRN	0024870743
Equipment Type Equipment Code	Part 15.247 Digitally Modulated DTS
FCC/IC Rule Parts	47 CFR 15.247, RSS-247 Issue 1
Test Dates	August 21, 26, 27 and September 4 and 24, 2015
Results	As detailed within this report
Prepared by	 Tuyen A. Truong – Test Engineer
Authorized by	 Christopher Reynolds – EMC Supervisor
Issue Date	9/28/2015
Conditions of Issue	This Test Report is issued subject to the conditions stated in the 'Conditions of Testing' section on page 23 of this report.

Curtis-Straus LLC is accredited by the American Association for Laboratory Accreditation for the specific scope of accreditation under Certificate Number 1627-01. This report may contain data which is not covered by the A2LA accreditation.



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Contents

Contents.....	2
Summary.....	3
Test Methodology.....	4
Product Tested - Configuration Documentation	5
Statement of Conformity.....	6
Modifications Required for Compliance	7
Test Results	8
<i>Bandwidth</i>	8
Fundamental Emission Output Power	11
<i>Radiated Spurious Emissions</i>	14
Power Spectral Density.....	18
AC Line Conducted Emissions.....	21
Occupied Bandwidth	22
Measurement Uncertainty	25
Conditions Of Testing.....	26

Form Final Report REV 7-20-07 (DW)



Summary

This test report supports an application for certification of a transmitter operating pursuant to 47 CFR 15.247. The product is the WALL SENSOR. It is a digitally modulated transmitter that operates in the range 2402 – 2480MHz. Product was tested with an on board antenna with a gain of +1.7dBi.

We found that the product met the above requirements with modification (see Modification Required for Compliance section on page 7 for details). The test sample was received in good condition.

Issue No.	Reason for change	Date Issued
1	Original Release	November 10, 2015

page 3 of 27



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Test Methodology

Radiated emission testing were performed according to DTS guidance document 558074D01 v03r03 specified in FCC Guidance for performing compliance measurement on DTS operating under section 15.247, April 19, 2013 and ANSI C63.10 (2009). Radiated Emissions were maximized by rotating the device around its axes as well as varying the test antenna's height and polarity. The device antenna was not maximized separately.

Conducted emissions at the antenna port were not performed since the EUT antenna was permanently attached.

AC Main conducted emission was performed with a 50 Ω /50 μ H.

Low Operating channel frequency = 2402MHz

Mid Operating channel frequency = 2440MHz

High Operating channel frequency = 2480MHz

The following bandwidths were used during radiated spurious and line conducted emissions.

Frequency	RBW	VBW
0.15-30MHz	9kHz	30kHz
30-1000MHz	120kHz	1MHz
1-10GHz	1MHz	3MHz

Product Tested - Configuration Documentation

EUT Configuration												
Work Order:	P2231											
Company:	ecoVent											
Company Address:	24 Cambridge St, Suite 6											
	Charlestown, MA 02129											
Contact:	Robert Kim											
	MN			PN			SN					
EUT:	SS1			901-00002			Sample 1					
EUT Description:	Wall Sensor											
EUT TX Frequency:	2402- 2480 MHz											
Support Equipment	MN						SN					
Laptop (set up only)												
Port Label	Port Type	# ports	# populated	cable type	shielded	ferrites	length (m)	max length (m)	in/out	under test	comment	
AC prongs	Power AC	1	1	other	No	No	0.05		in	yes		
AC output	Power AC	2	2	3-wire	No	No	1		in	yes		
USB	USB	2	2	USB	Yes	Yes	1	5	in	yes		
Software Operating Mode Description:												
EUT is set to transmit with a gain of +1.7dBi at Low, Mid and High Channels in the range of 2402 to 2480MHz.												

Statement of Conformity

The WALL SENSOR has been found to conform to the following parts of 47 CFR and as detailed below:

RSS-GEN	RSS 247	Part 15	Comments
5.3		15.15(b)	There are no controls accessible to the user that varies the output power above specified limits.
5.2		15.19	The label is shown in the label exhibit.
8.4		15.21	Information to the user is shown in the instruction manual exhibit.
		15.27	No special accessories are required for compliance.
		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.
		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.
6.7		15.203	EUT employs a permanently connected antenna with +1.7dBi gain.
	5.5	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.
8.8		15.207	EUT AC Main was tested.
		15.247	The unit complies with the requirements of 15.247
	RSS-247		The unit complies with the requirements of RSS-247
6.6		15.247	Occupied Bandwidth measurements were made.

Modifications Required for Compliance

Modifications were required for the following tests:

- Radiated Spurious Emissions: ground wire was added between two ground prongs from earth ground. Also two looped ferrites (FAIRITE VO, P/N: 0443164151) were added to support USB cables. (see Modification photo exhibit)

Test Results**Bandwidth****LIMIT**

The minimum 6 dB bandwidth shall be at least 500 kHz. [15.247(a) (2)]

MEASUREMENTS / RESULTS

6dB BANDWIDTH									
Date: 21-Aug-15		Company: Ecovent Systems				Work Order: P2231			
Engineer: Ryan Brown		EUT Desc: Wall Sensor				EUT Operating Voltage/Frequency: 120Vac/60Hz			
Temp: 24°C		Humidity: 57%		Pressure: 1012mBar					
Frequency Range: Fundamental						Measurement Distance: 3 m			
Notes: M/N: 901-00002									
Antenna Polarization (H/V)	Frequency (MHz)	Reading (KHz)				6dB BW			
						Limit (KHz)	Margin (KHz)	Result (Pass/Fail)	
H	2402.0	694.989	---	---	---	≥500	+194.989	Pass	
H	2440.0	700.385	---	---	---	≥500	+200.385	Pass	
V	2480.0	675.763	---	---	---	≥500	+175.763	Pass	
Test Site: EMI Chamber 1		Cable 1: Asset #2051		Cable 2: Asset #2054			Cable 3: ---		
Analyzer: Rental SA#2		Preamp: Asset #1517		Antenna: Blue Horn			Preselector: ---		
v 1.017.146									
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor									
						CSsoft Radiated Emissions Calculator Copyright Curtis-Straus LLC 2000			

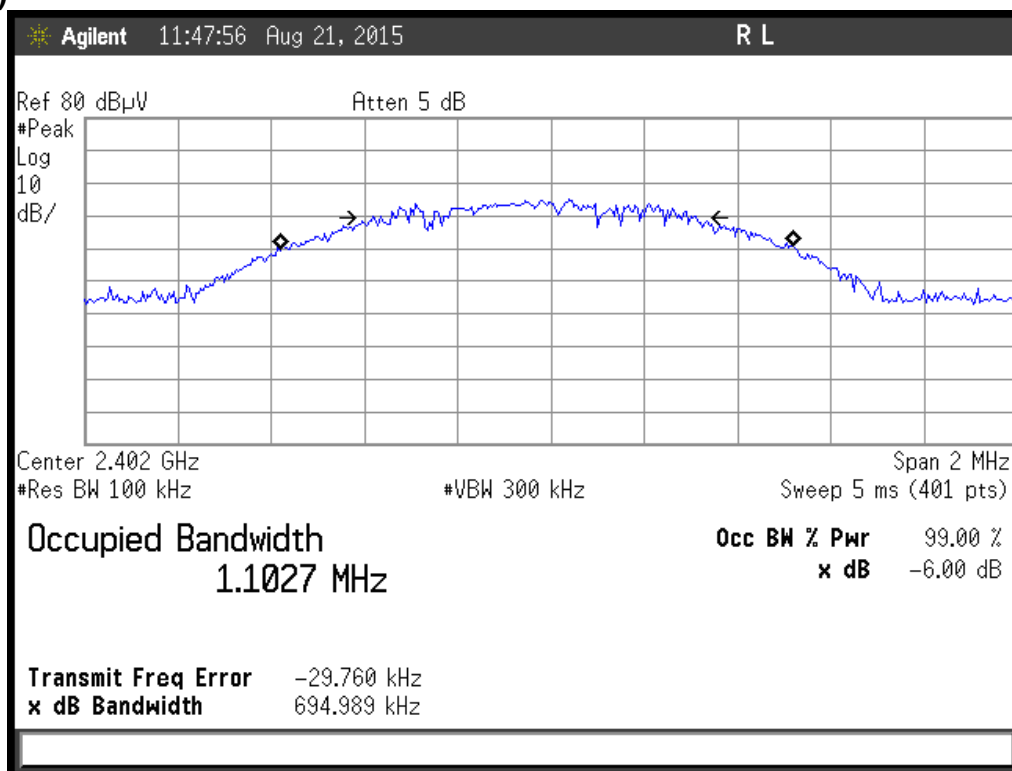
Rev.8/24/2015

Spectrum Analyzers / Receivers / Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
SA #2 (1860)	9kHz-26.5 GHz	E7405A	Agilent	MY45104916	1860	I	7/30/2016	
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
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
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #2051	9kHz - 18GHz		Florida RF			II	3/8/2016	3/8/2015
Asset #2054	9kHz - 18GHz		Florida RF			II	3/8/2016	3/8/2015
Meteorological Meters		MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	3/19/2016	3/19/2014
TH A#2080		HTC-1	HDE		2080	II	4/2/2016	4/2/2015

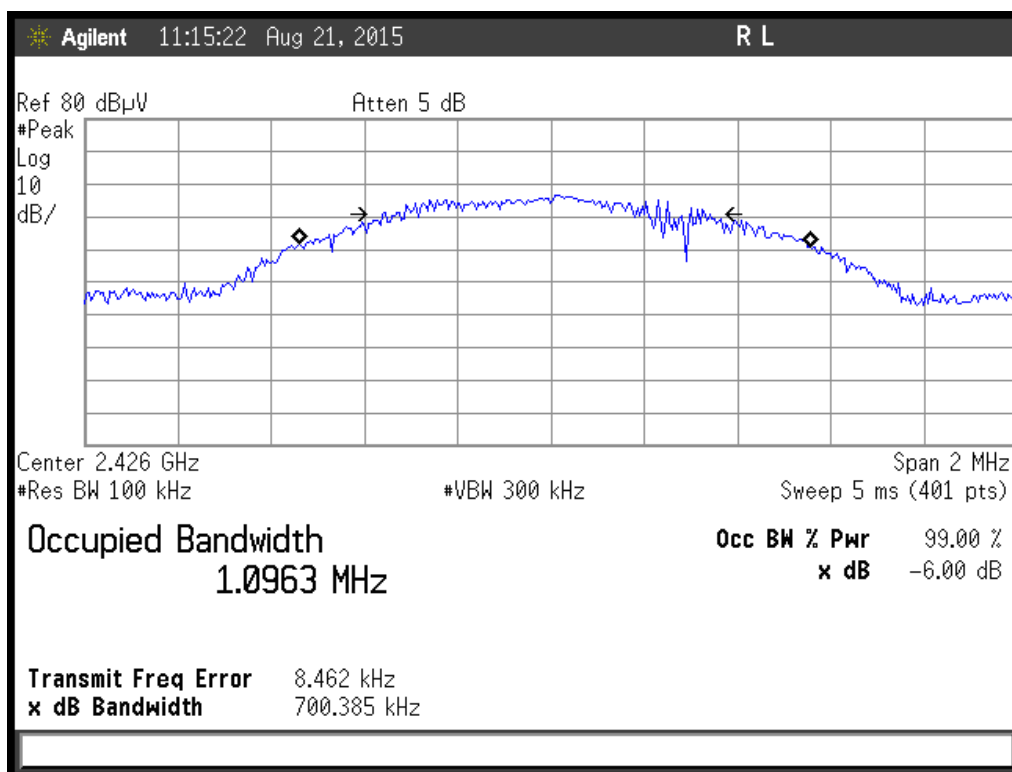
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.



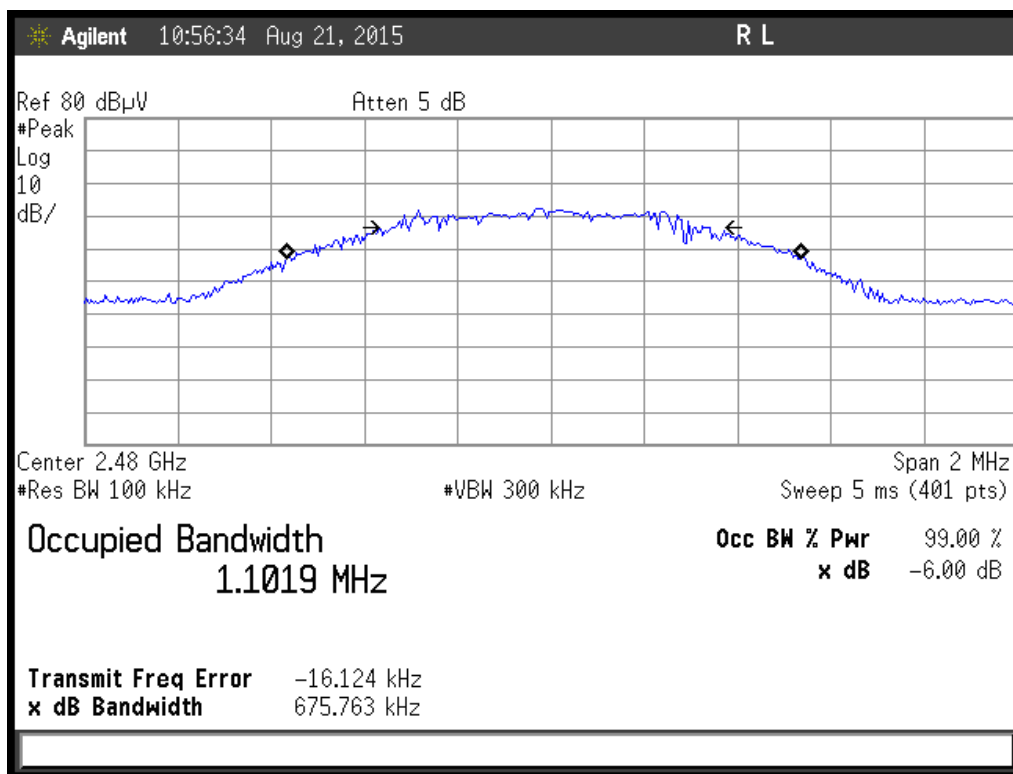
PLOT(s)



Low Channel – 6dB Bandwidth



Mid Channel – 6dB Bandwidth



High Channel - 6dB Bandwidth

Fundamental Emission Output Power

LIMIT

Conducted Output Power

1 Watt

[15.247(b) (3)]

Per 558074 D01 DTS Measurement Guidance v0303 Section 9.1.1 (Maximum Peak Conducted Output Power)

MEASUREMENTS / RESULTS

Radiated Emissions Table													
Date: 26-Aug-15			Company: Ecovent Systems					Work Order: P2231					
Engineer: Tuyen Truong			EUT Desc: Wall Sensor					EUT Operating Voltage/Frequency: 120Vac/60Hz					
Temp: 23.5°C			Humidity: 59%			Pressure: 1004mBar							
Frequency Range: 2402 - 2480 MHz							Measurement Distance: 3 m						
Notes:													
Antenna Polarization (H/V)	Frequency (MHz)	Reading (dBuV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Reading (dBuV/m)	---			FCC 15.247			
							Conducted ERP (dBm)			Limit (dBm)	Margin (dB)	Result (Pass/Fail)	
h	2402.0	60.2	19.9	32.3	3.3	75.9	-21.0	---	---	30.0	-51.0	Pass	
h	2426.0	60.3	20.0	32.3	3.3	75.9	-21.0	---	---	30.0	-51.0	Pass	
h	2480.0	59.3	20.2	32.4	3.4	74.9	-22.0	---	---	30.0	-52.0	Pass	
Table Result:			Pass		by		-51.0 dB		Worst Freq:		2426.0 MHz		
Test Site: EMI Chamber 1			Cable 1: Asset #2051					Cable 2: Asset #2054			Cable 3: ---		
Analyzer: Rental SA#2			Preamp: Asset #1517					Antenna: Blue Horn			Preselector: ---		
v 1.017.146													
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor													
CSsoft Radiated Emissions Calculator Copyright Curtis-Straus LLC 2000													

Rev.8/24/2015

Spectrum Analyzers / Receivers / Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
SA #2 (1860)	9kHz-26.5 GHz	E7405A	Agilent	MY45104916	1860	I	7/30/2016	
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
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
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #2051	9kHz - 18GHz		Florida RF			II	3/8/2016	3/8/2015
Asset #2054	9kHz - 18GHz		Florida RF			II	3/8/2016	3/8/2015
Meteorological Meters		MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	3/19/2016	3/19/2014
TH A#2080		HTC-1	HDE		2080	II	4/2/2016	4/2/2015

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PLOTS

Agilent 13:18:44 Aug 26, 2015

R T

Mkr1 2.4020000 GHz

60.19 dBμV

Ref 81.99 dBμV

Atten 5 dB

#Peak
Log
10
dB/

DC Coupled

M1 S2
S3 FC

Center 2.402 GHz

#Res BW 1 MHz

#VBW 3 MHz

Span 5 MHz
Sweep 5 ms (401 pts)

C:\temp.gif file saved

Low Channel – Channel Power

Agilent 12:41:15 Aug 26, 2015

R T

Mkr1 2.4260125 GHz

60.37 dBμV

Ref 81.99 dBμV

Atten 5 dB

#Peak
Log
10
dB/

DC Coupled

M1 S2
S3 FC

Center 2.426 GHz

#Res BW 1 MHz

#VBW 3 MHz

Span 5 MHz
Sweep 5 ms (401 pts)

C:\temp.gif file saved

Mid Channel – Channel Power

Agilent 13:00:22 Aug 26, 2015

R T

Mkr1 2.4800000 GHz

59.38 dBμV

Ref 81.99 dBμV

Atten 5 dB

#Peak
Log
10
dB/

DC Coupled

M1 S2
S3 FC

Center 2.48 GHz

#Res BW 1 MHz

#VBW 3 MHz

Span 5 MHz

Sweep 5 ms (401 pts)

C:\temp.gif file saved

High Channel – Channel Power

Radiated Spurious Emissions

LIMITS

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).
[15.247(d)]

MEASUREMENTS / RESULTS

Radiated Band Edge (2400 – 2483.5 MHz)

Radiated Emissions Table														
Date: 26-Aug-15			Company: ecoVent						Work Order: P2231					
Engineer: Tuyen Truong			EUT Desc: Wall Sensor						EUT Operating Voltage/Frequency: 120Vac/60Hz					
Temp: 23.5°C			Humidity: 59%						Pressure: 1004 mBar					
Frequency Range: Band Edge									Measurement Distance: 3 m					
Notes:									EUT Tx Freq: 2402 - 2480 MHz, 915 MHz					
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			FCC 15.209 High Frequency - Average		
									Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)
h	2391.62	25.31	25.3	19.9	32.3	3.3	41.0	41.0	74.0	-33.0	Pass	54.0	-13.0	Pass
h	2400.0	23.71	23.7	19.9	32.3	3.3	39.4	39.4	74.0	-34.6	Pass	54.0	-14.6	Pass
h	2483.5	23.5	23.5	20.2	32.4	3.4	39.1	39.1	74.0	-34.9	Pass	54.0	-14.9	Pass
h	2490.49	24.67	24.7	20.2	32.4	3.4	40.3	40.3	74.0	-33.7	Pass	54.0	-13.7	Pass
Table Result: Pass by -13.0 dB									Worst Freq: 2391.62 MHz					
Test Site: EMI Chamber 1			Cable 1: Asset #2051						Cable 2: Asset #2054			Cable 3: ---		
Analyzer: SA #2 (1860)			Preamp: Asset #1517						Antenna: Blue Horn			Preselector: ---		
CSsoft Radiated Emissions Calculator v 1.017.148														
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor														
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Rev.8/14/2015

Spectrum Analyzers / Receivers /Preselectors SA #2 (1860)	Range 9kHz-26.5 GHz	MN E7405A	Mfr Agilent	SN MY45104916	Asset 1860	Cat I	Calibration Due 7/30/2016	Calibrated on 7/30/2015
Radiated Emissions Sites EMI Chamber 1	FCC Code 719150	IC Code 2762A-6	VCCI Code A-0015	Range 30-1000MHz		Cat II	Calibration Due 3/21/2017	Calibrated on 3/21/2015
Preamps /Couplers Attenuators / Filters 1517 HF Preamp	Range 1-20GHz	MN CS	Mfr CS	SN N/A	Asset 1517	Cat II	Calibration Due 8/6/2016	Calibrated on 8/6/2015
Antennas Blue Horn	Range 1-18Ghz	MN 3117	Mfr ETS	SN 157647	Asset 1861	Cat I	Calibration Due 2/8/2017	Calibrated on 2/8/2015
Cables Asset #2051 Asset #2054	Range 9kHz - 18GHz 9kHz - 18GHz		Mfr Florida RF Florida RF			Cat II II	Calibration Due 3/8/2016 3/8/2016	Calibrated on 3/8/2015 3/8/2015
Meteorological Meters Weather Clock (Pressure Only) TH A#2080		MN BA928 HTC-1	Mfr Oregon Scientific HDE	SN C3166-1	Asset 831 2080	Cat I II	Calibration Due 3/19/2016 4/2/2016	Calibrated on 3/19/2014

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



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Radiated Spurious EMI (30 to 25000 MHz)

Radiated Emissions Table												
Date: 04-Sep-15			Company: Ecovent						Work Order: P2231			
Engineer: Tuyen Truong			EUT Desc: Wall sensor						EUT Operating Voltage/Frequency: 120Vac / 60Hz			
Temp: 22°C			Humidity: 51%			Pressure: 1014mBar						
Frequency Range: 30 to 1000 MHz								Measurement Distance: 3 m				
Notes:			EUT TX Freq: 2402-2480MHz, 915MHz									
			Modifications: 1) Added ground wire between two ground prongs from earth ground. 2) Added two looped ferrites to support USB cable (PN: 0443164151)									
Antenna Polarization (H/ V)	Frequency (MHz)	Reading (dBμV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Reading (dBμV/m)	---			FCC 15.209		
							Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)
v	46.64	46.6	25.3	9.8	0.4	31.5	---	---	---	40.0	-8.5	Pass
v	52.0	45.1	25.4	7.8	0.4	27.9	---	---	---	40.0	-12.1	Pass
v	55.14	49.6	25.4	7.4	0.5	32.1	---	---	---	40.0	-7.9	Pass
v	258.6	33.3	25.2	11.8	1.0	20.9	---	---	---	46.0	-25.1	Pass
v	607.5	48.1	25.2	18.7	1.5	43.1	---	---	---	46.0	-2.9	Pass
v	608.6	48.0	25.2	18.7	1.5	43.0	---	---	---	46.0	-3.0	Pass
h	609.7	40.5	25.2	18.8	1.5	35.6	---	---	---	46.0	-10.4	Pass
v	611.0	47.8	25.3	18.9	1.5	42.9	---	---	---	46.0	-3.1	Pass
v	634.5	37.5	25.7	19.7	1.4	32.9	---	---	---	46.0	-13.1	Pass
v	902.0	28.6	25.5	22.6	1.7	27.4	---	---	---	46.0	-18.6	Pass
v	928.0	27.6	24.9	22.7	1.6	27.0	---	---	---	46.0	-19.0	Pass
Table Result: Pass by -2.9 dB Worst Freq: 607.5 MHz												
Test Site: EMI Chamber 2			Cable 1: Asset #2052					Cable 2: Asset #2053			Cable 3: ---	
Analyzer: Asset #1327			Preamp: Blue-Blk					Antenna: Red-Black			Preselector: ---	
CSsoft Radiated Emissions Calculator v 1.017.146												
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor												
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Note: The 915MHz transmitter was on during the spurious emissions scan

Rev. 8/27/2015

Spectrum Analyzers / Receivers / Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
SA EMI Chamber (1327)	9kHz-13.2 GHz	E4405B	Agilent	MY45103416	1327	I	7/10/2016	7/10/2015
Radiated Emissions Sites	FCC Code	IC Code	VCCI Code	Range		Cat	Calibration Due	Calibrated on
EMI Chamber 2	719150	2762A-7	A-0015	30-1000MHz		II	3/22/2017	3/22/2015
Antennas	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Red-Black Bilog	30-2000MHz	JB1	Sunol	A091604-2	1106	I	2/9/2017	2/9/2015
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #2052	9kHz - 18GHz		Florida RF			II	3/8/2016	3/8/2015
Asset #2053	9kHz - 18GHz		Florida RF			II	3/8/2016	3/8/2015
Meteorological Meters		MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	3/19/2016	3/19/2014
TH A#2081		HTC-1	HDE		2081	II	4/2/2016	4/2/2015
Preamps / Couplers Attenuators / Filters	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Blue-Black	0.009-2000MHz ZFL-1000-LN		CS	N/A	800	II	12/26/2015	12/26/2014

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



Radiated Emissions Table

Date: 26-Aug-15		Company: Ecovent Systems				Work Order: P2231									
Engineer: Tuyen Truong		EUT Desc: Wall Sensor				EUT Operating Voltage/Frequency: 120Vac/60Hz									
Temp: 23.5°C		Humidity: 59%				Pressure: 1004mBar									
Frequency Range: 1-6GHz						Measurement Distance: 3 m									
Notes:						EUT TX Freq: 2402-2480MHz, 915MHz									
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			FCC 15.209 High Frequency - Average			
									Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	
h	4804.0	29.85	20.7	17.9	34.4	4.6	51.0	41.8	74.0	-23.0	Pass	54.0	-12.2	Pass	
h	4852.0	29.69	20.3	17.9	34.4	4.7	50.9	41.5	74.0	-23.1	Pass	54.0	-12.5	Pass	
h	4960.0	30.86	21.0	17.9	34.4	4.7	52.1	42.2	74.0	-21.9	Pass	54.0	-11.8	Pass	
Table Result:		Pass		by		-11.8 dB				Worst Freq:		4960.0 MHz			
Test Site: EMI Chamber 1				Cable 1: Asset #2051				Cable 2: Asset #2054				Cable 3: ---			
Analyzer: Rental SA#2				Preamp: Asset #1517				Antenna: Blue Horn				Preselector: ---			
v1.017.146															
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor															
CSoft Radiated Emissions Calculator Copyright Curtis-Straus LLC 2000															

Note: The 915MHz transmitter was on during the spurious emissions scan

Radiated Emissions Table

Date: 27-Aug-15		Company: Ecovent Systems				Work Order: P2231								
Engineer: Tuyen Truong		EUT Desc: Wall Sensor				EUT Operating Voltage/Frequency: 120Vac/60Hz								
Temp: 23°C		Humidity: 47%				Pressure: 1009mBar								
Frequency Range: 6 - 18 GHz						Measurement Distance: 1 m								
Notes:						EUT TX Freq: 2402-2480MHz, 915MHz								
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			FCC 15.209 High Frequency - Average		
									Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)
NO EMISSIONS FOUND WITHIN 10dB OF THE LIMIT														
Table Result:		---	by	---	dB		Worst Freq: --- MHz							
Test Site: EMI Chamber 1		Cable 1: Asset #2051				Cable 2: Asset #2054				Cable 3: ---				
Analyzer: Rental SA#2		Preamp: Asset #1517				Antenna: Blue Horn				Preselector: ---				
v1.017.146														
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
SA #2 (1860)	9kHz-26.5 GHz	E7405A	Agilent	MY45104916	1860	I	7/30/2016	
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
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
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #2051	9kHz - 18GHz		Florida RF			II	3/8/2016	3/8/2015
Asset #2054	9kHz - 18GHz		Florida RF			II	3/8/2016	3/8/2015
Meteorological Meters		MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	3/19/2016	3/19/2014
TH A#2080		HTC-1	HDE		2080	II	4/2/2016	4/2/2015

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



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Radiated Emissions Table

Date: 27-Aug-15				Company: Ecovent Systems				Work Order: P2231													
Engineer: Tuyen Truong				EUT Desc: Wall Sensor				EUT Operating Voltage/Frequency: 120Vac/60Hz													
Temp: 23°C				Humidity: 47%				Pressure: 1009mBar													
Frequency Range: 18 - 25 GHz								Measurement Distance: 0.1 m													
Notes:								EUT TX Freq: 2402-2480MHz, 915MHz													
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			FCC 15.209 High Frequency - Average									
									Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)							
NO EMISSIONS FOUND WITHIN 10dB OF THE LIMIT																					
Table Result:				---				by		---		dB		Worst Freq:		---		MHz			
Test Site: EMI Chamber 1				Cable 1: Asset #2051				Cable 2: Asset #2054				Cable 3: ---									
Analyzer: Brown				Preamp: 18-26.5GHz				Antenna: 18-26.5GHz Horn				Preselector: ---									
v1.017.146																		CSoft Radiated Emissions Calculator		Copyright Curtis-Straus LLC 2000	
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
Brown	9kHz-26.5GHz	E4407B	Agilent	SG44210511	1510	I	6/30/2016	
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
HF (Yellow)	18-26.5GHz	AFS4-18002650-60-8P-4	CS	467559	1266	II	3/13/2016	3/13/2015
Antennas	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
HF (White) Horn	18-26.5GHz	801-WLM	Waveline	758	758	III	Verify before Use	date of test
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #2051	9kHz - 18GHz		Florida RF			II	3/8/2016	3/8/2015
Asset #2054	9kHz - 18GHz		Florida RF			II	3/8/2016	3/8/2015
Meteorological Meters		MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	3/19/2016	3/19/2014
TH A#2080		HTC-1	HDE		2080	II	4/2/2016	4/2/2015

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Power Spectral Density

LIMIT

...the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission.
[15.247(e)]

Per 558074 D01 DTS Measurement Guidance v0303 Section 10.2 Method PKPSD (Peak PSD)

MEASUREMENTS / RESULTS

Radiated Emissions Table													
Date: 04-Sep-15			Company: Ecovent Systems						Work Order: P2231				
Engineer: Tuyen Truong			EUT Desc: Wall Sensor						EUT Operating Voltage/Frequency: 120Vac/60Hz				
Temp: 22°C			Humidity: 51%			Pressure: 1014mBar							
Frequency Range: Fundamental							Measurement Distance: 3 m						
Notes: 100% duty cycle - constant transmission with GFSK modulation													
Antenna Polarization (H/V)	Frequency (MHz)	Reading (dBμV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Reading (dBμV/m)	---			FCC 15.247			
							Conducted ERP (dBm)			Limit (dBm)	Margin (dB)	Result (Pass/Fail)	
h	2402.0	46.7	18.8	32.3	3.3	63.5	-33.4	---	---	8.0	-41.4	Pass	
h	2426.0	45.3	18.8	32.3	3.3	62.1	-34.8	---	---	8.0	-42.8	Pass	
h	2480.0	46.5	18.9	32.4	3.3	63.3	-33.6	---	---	8.0	-41.6	Pass	
Table Result: Pass							by		-41.4 dB		Worst Freq: 2402.0 MHz		
Test Site: EMI Chamber 2			Cable 1: Asset #2052						Cable 2: Asset #2053			Cable 3: ---	
Analyzer: Asset #1327			Preamp: Brown						Antenna: Blue Horn			Preselector: ---	
CSsoft Radiated Emissions Calculator			v 1.017.146										
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
SA EMI Chamber (1327)	9kHz-13.2 GHz	E4405B	Agilent	MY45103416	1327	I	7/10/2016	7/10/2015
Radiated Emissions Sites	FCC Code	IC Code	VCCI Code	Range		Cat	Calibration Due	Calibrated on
EMI Chamber 2	719150	2762A-7	A-0015	30-1000MHz		II	3/22/2017	3/22/2015
Preamps / Couplers Attenuators / Filters	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Brown	1-10GHz	CS	CS	N/A	1523	II	4/9/2016	4/9/2015
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
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #2052	9kHz - 18GHz		Florida RF			II	3/8/2016	3/8/2015
Asset #2053	9kHz - 18GHz		Florida RF			II	3/8/2016	3/8/2015
Meteorological Meters		MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	3/19/2016	3/19/2014
TH A#2081		HTC-1	HDE		2081	II	4/2/2016	4/2/2015

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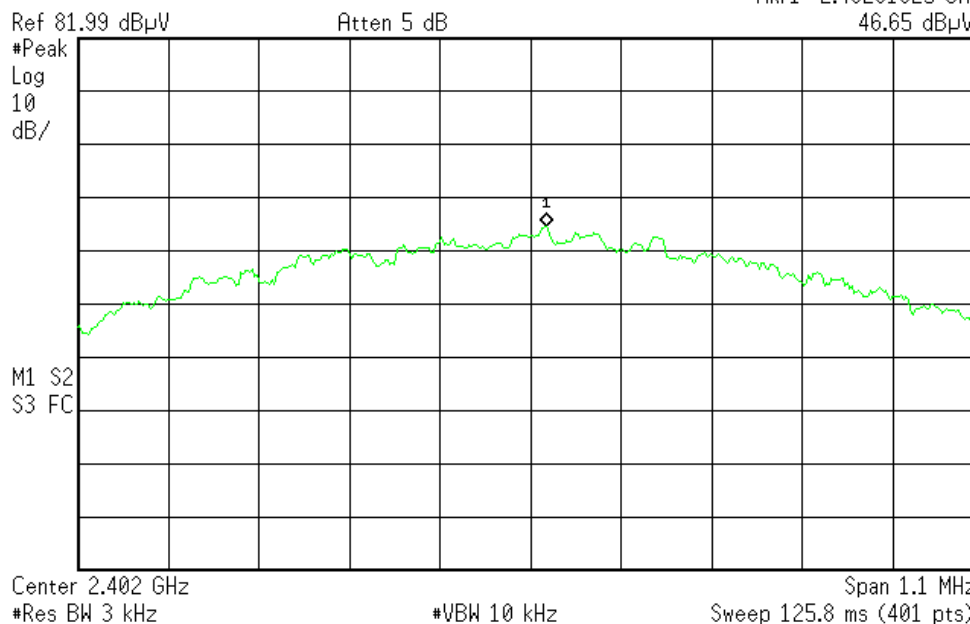
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PLOTS

* Agilent 10:52:02 Sep 4, 2015

R T

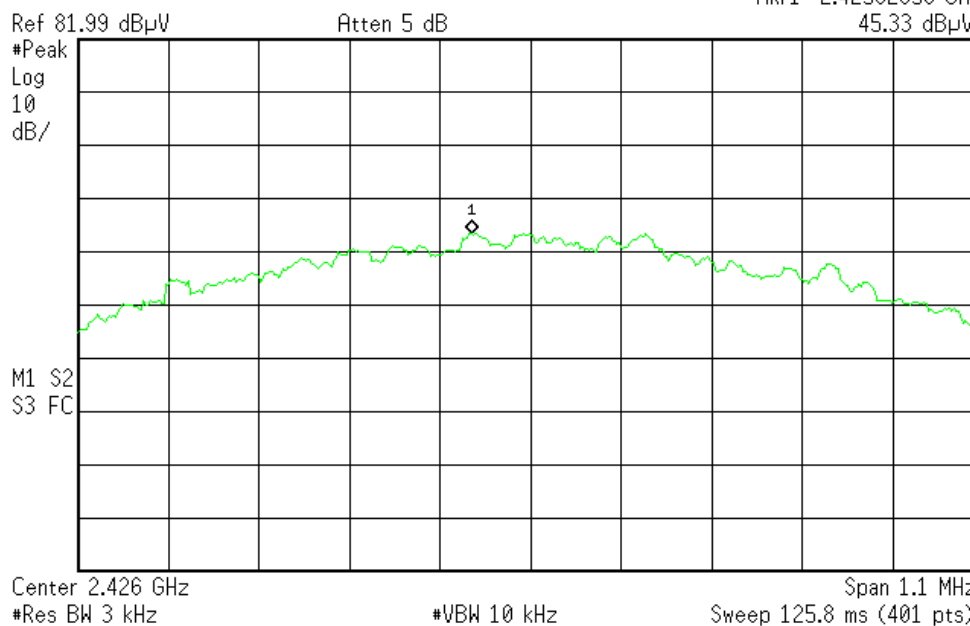
Mkr1 2.40201925 GHz
46.65 dB μ V

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Low Channel – PSD

* Agilent 10:46:49 Sep 4, 2015

R T

Mkr1 2.42592850 GHz
45.33 dB μ V

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Mid Channel – PSD

Agilent 11:07:53 Sep 4, 2015

R T

Mkr1 2.47999450 GHz

46.54 dBμV

Ref 81.99 dBμV

Atten 5 dB

#Peak
Log
10
dB/

M1 S2
S3 FC

Center 2.48 GHz

#Res BW 3 kHz

#VBW 10 kHz

Span 1.1 MHz

Sweep 125.8 ms (401 pts)

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High Channel – PSD

AC Line Conducted Emissions LIMITS

Frequency of emission (MHz)	Quasi-peak limit (dBμV)	Average limit (dBμV)
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

[47 CFR 15.207(a)]

MEASUREMENTS / RESULTS

AC Conducted Emissions Data Table														
Date: 24-Sep-15 Engineer: Tuyen Truong Temp: 23.2 °C							Company: Ecovent Systems EUT Desc: Wall Sensor Humidity: 40%				Work Order: P2231 Pressure: 1019 mBar			
Notes:														
Frequency Range: 0.15 - 30 MHzEUT Input Voltage/Frequency: 120Vac/60Hz														
Frequency (MHz)	Quasi-Peak Readings		Average Readings		LISN Factors		Cable Factor (dB)	ATTN Factor (dB)	FCC 15.207			FCC 15.207		
	QP1 (dBµV)	QP2 (dBµV)	AVG1 (dBµV)	AVG2 (dBµV)	L1 (dB)	L2 (dB)			QP Limit (dBµV)	Margin (dB)	Result (Pass/Fail)	AVG Limit (dBµV)	Margin (dB)	Result (Pass/Fail)
	0.48	13.1	17.5	13.1	17.5	0.0	0.0	-0.1	-19.6	56.3	-19.1	Pass	46.3	-9.1
2.09	24.0	23.7	24.0	23.7	0.0	0.0	-0.1	-19.6	56.0	-12.3	Pass	46.0	-2.3	Pass
3.89	26.1	28.3	9.2	13.7	0.0	0.0	-0.2	-19.6	56.0	-8.0	Pass	46.0	-12.6	Pass
6.19	23.0	27.2	23.0	27.2	0.0	0.0	-0.2	-19.6	60.0	-13.0	Pass	50.0	-3.0	Pass
12.46	25.6	25.7	25.6	25.7	-0.1	-0.1	-0.2	-19.6	60.0	-14.4	Pass	50.0	-4.4	Pass
16.72	27.5	28.8	27.5	28.8	-0.1	-0.1	-0.2	-19.6	60.0	-11.3	Pass	50.0	-1.3	Pass
24.03	20.9	27.2	20.9	27.2	-0.1	-0.1	-0.3	-19.6	60.0	-12.8	Pass	50.0	-2.8	Pass
27.02	20.5	24.6	20.5	24.6	-0.1	-0.1	-0.3	-19.6	60.0	-15.4	Pass	50.0	-5.4	Pass
Result: Pass							Worst Margin: -1.3 dB				Frequency: 16.720 MHz			
Measurement Device: LISN ASSET 1728(Line 1) LISN ASSET 1729(Line 2)							Cable: CEMI-01 Attenuator: 20dB Attenuator-73				Spectrum Analyzer: Gold Site: CEMI 2			

Rev.9/17/2015

Spectrum Analyzers / Receivers /Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Gold	100Hz-26.5 GHz	E4407B	Agilent	MY45113816	1284	I	4/22/2016	4/22/2015
LISNs/Measurement Probes	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
LISN Asset 1728	150kHz-30MHz	LI-150A	Com-Power	201084	1728	I	4/7/2016	4/7/2015
LISN Asset 1729	150kHz-30MHz	LI-150A	Com-Power	201085	1729	I	4/7/2016	4/7/2015
Conducted Test Sites (Mains / Telco)	FCC Code		VCCI Code			Cat	Calibration Due	Calibrated on
CEMI 2	719150		A-0015			III	NA	N/A
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
CEMI-01	9kHz - 2GHz		C-S			II	9/11/2016	9/11/2015
Attenuators	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
20dB Attenuator-73	9kHz-2GHz			N/A		II	9/11/2016	9/11/2015
Meteorological Meters		MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	3/19/2016	3/19/2014
TH A#2078		HTC-1	HDE		2078	II	4/2/2016	4/2/2015

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Occupied Bandwidth

REQUIREMENT

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

MEASUREMENTS / RESULTS

99% OCCUPIED BANDWIDTH			
Date: 21-Aug-15		Company: Ecovent Systems	Work Order: P2231
Engineer: Ryan Brown		EUT Desc: Wall Sensor	EUT Operating Voltage/Frequency: 120Vac/60Hz
Temp: 24°C		Humidity: 57%	Pressure: 1012mBar
Frequency Range: Fundamental			Measurement Distance: 3 m
Notes: M/N: 901-00002			
Antenna Polarization (H/V)	Frequency (MHz)	99% Occupied BW (MHz)	
V	2402.0	1.6906	
V	2440.0	1.6427	
V	2480.0	1.7482	
Test Site: EMI Chamber 1		Cable 1: Asset #2051	Cable 2: Asset #2054
Analyzer: Rental SA#2		Preamp: Asset #1517	Cable 3: ---
v 1.017.146		Antenna: Blue Horn	
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor		CSsoft Radiated Emissions Calculator Copyright Curtis-Straus LLC 2000	

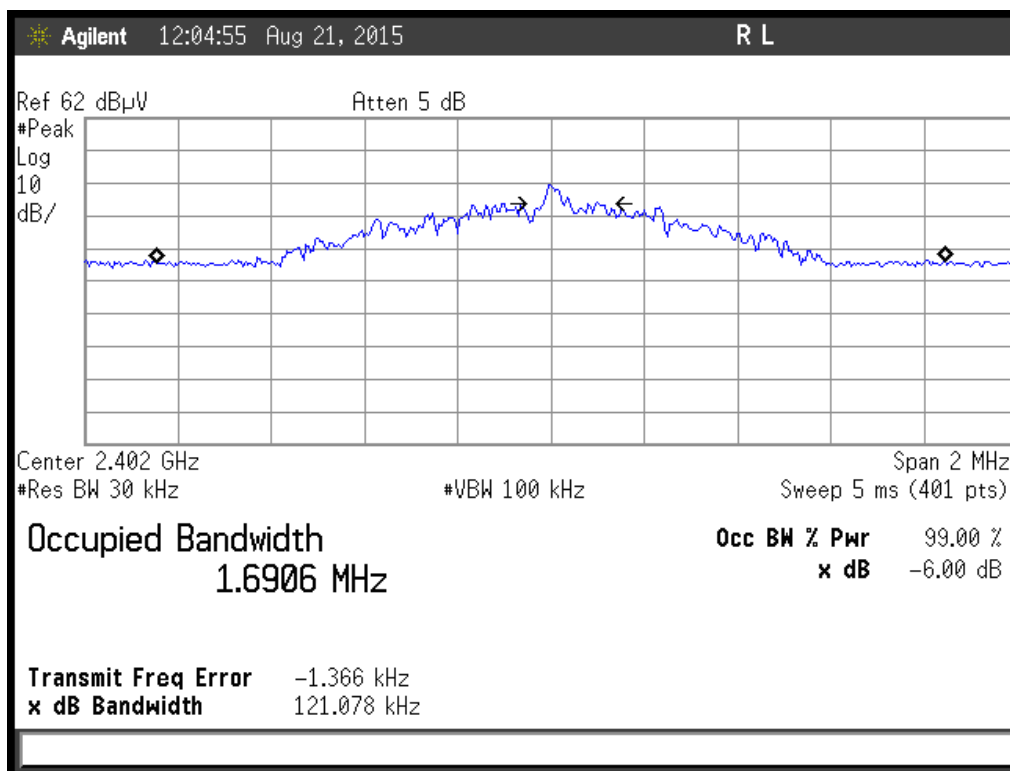
Rev.8/24/2015

Spectrum Analyzers / Receivers / Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
SA #2 (1860)	9kHz-26.5 GHz	E7405A	Agilent	MY45104916	1860	I	7/30/2016	
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
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
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #2051	9kHz - 18GHz		Florida RF			II	3/8/2016	3/8/2015
Asset #2054	9kHz - 18GHz		Florida RF			II	3/8/2016	3/8/2015
Meteorological Meters		MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	3/19/2016	3/19/2014
TH A#2080		HTC-1	HDE		2080	II	4/2/2016	4/2/2015

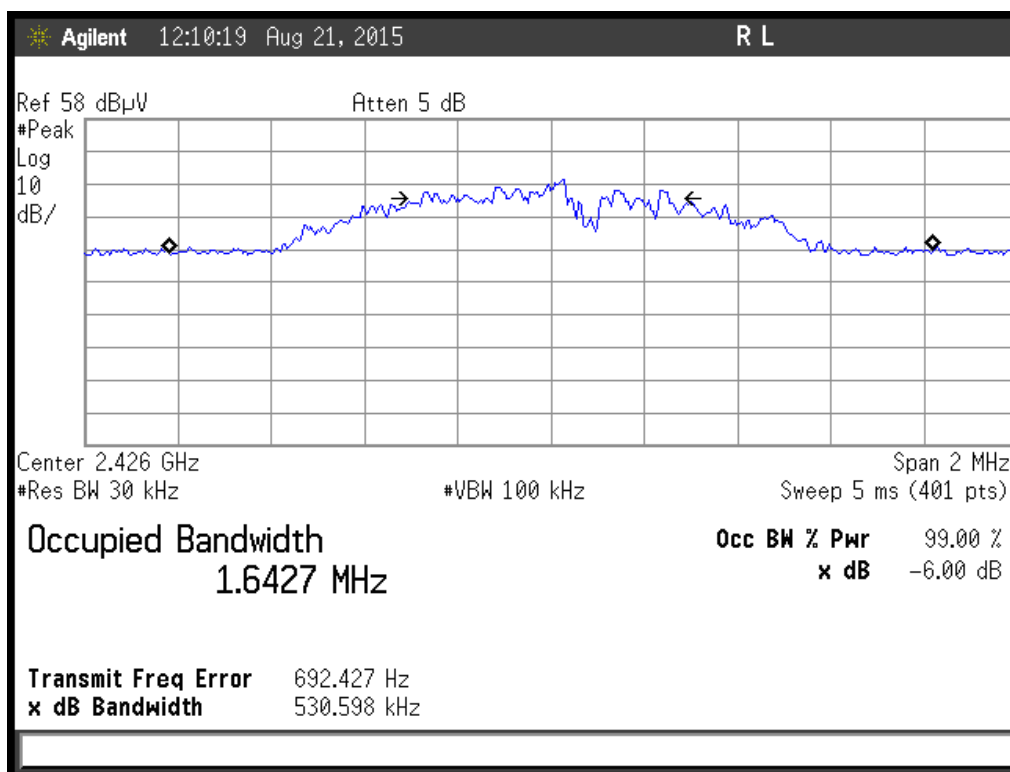
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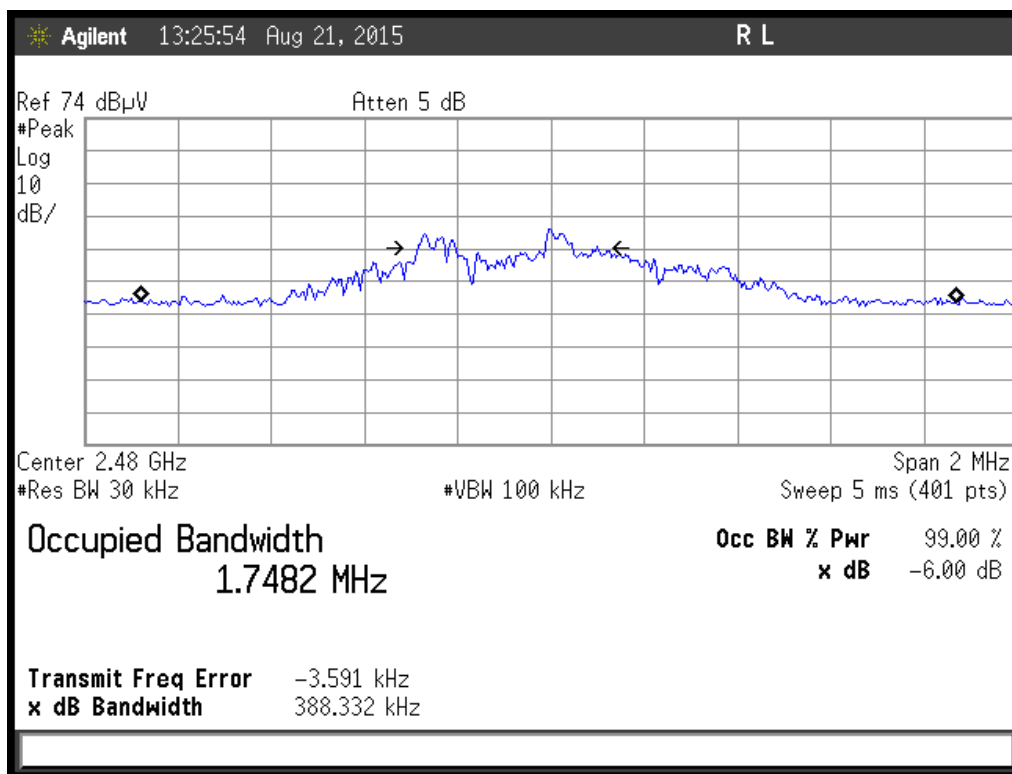
Plot(s)



Low Channel – Occupied Bandwidth



Mid Channel – Occupied Bandwidth



High Channel – Occupied Bandwidth

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	5.6dB	N/A
CISPR	4.6dB	5.2dB (Ucisp)
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	3.9dB	N/A
CISPR	3.6dB	3.6dB (Ucisp)
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 where 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.



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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.

The complete list of the Approved Subcontractors Curtis-Straus may use to delegate the performance of work can be provided upon request.
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