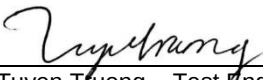
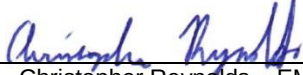




BUREAU
VERITAS

Test Report

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

Report No	EQ3466-1
Client	BioSensics LLC Jackson Maier
Address	42 Pleasant Street - Suite 2 Watertown, MA 02472
Phone	(888) 589-6213
Items tested	Physical Activity and Movement Monitor (M/N: PamSYS V2)
FCC ID	2AA5HPM002
IC ID	22184-PM002
FRN	0023017569
Equipment Type	Low Power Communication Device Transmitter
Equipment Code	DXX
Standards	47CFR 15.249, RSS 210 Issue 9 - Annex B.10
Test Dates	December 8 to 15, 2016
Results	As detailed within this report
Prepared by	 Tuyen Truong – Test Engineer
Authorized by	 Christopher Reynolds – EMC Supervisor
Issue Date	1/30/2017
Conditions of Issue	This Test Report is issued subject to the conditions stated in the 'Conditions of Testing' section on page 21 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.



Curtis-Straus LLC, a wholly owned subsidiary of BV CPS
One Distribution Center Circle, #1 • Littleton, MA • TEL (978) 486-8880 • FAX (978) 486-8828



Contents

Contents.....	2
Product Tested - Configuration Documentation	3
Summary	4
Test Methodology	5
Compliance Statement.....	6
Modifications Required for Compliance	6
Test Results	7
<i>Fundamental Measurements</i>	7
Radiated Spurious Emissions	10
AC Line Conducted Emissions.....	16
<i>Occupied Bandwidth</i>	17
Measurement Uncertainty.....	20
Conditions Of Testing	21

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



Product Tested - Configuration Documentation

EUT Configuration										
Work Order:	Q3466									
Company:	BioSensics LLC									
Company Address:	42 Pleasant St. Suite 2									
	Watertown, MA, 02472									
Contact:	Jackson Maier									
	MN			PN			SN			
EUT:	PamSYS V2			PCA-03-51-0011-002_REV02			20			
EUT Description:	Physical Activity and Movement Monitor									
EUT Max Frequency:	24 MHz (associated circuitry)									
EUT TX Frequency:	2480 MHz									
Port Label	Port Type	# ports	# populated	cable type	shielded	ferrites	length (m)	max length (m)	in/out	comment
USB	USB	1	1	USB	Yes	No	5	5	in	
Support Equipment										
	MN			PN			SN			
Samsung AC to USB Converter	ETAP11X						1			
Dell Inspiron Laptop	15-7559						B2YK1D1			
Software Operating Mode Description:										
EUT is set to transmit on 2402MHz, 2440MHz and 2480MHz .										

Issue No.	Reason for change	Date Issued
1	Original Release	January 30, 2017



Curtis-Straus LLC, a wholly owned subsidiary of BV CPS
 One Distribution Center Circle, #1 • Littleton, MA • TEL (978) 486-8880 • FAX (978) 486-8828



Summary

This test report supports an application for certification of a transmitter operating pursuant to CFR 47 FCC 15.249, RSS 210 Annex B.10 Issue 9.

The product operates in the range from 2402 to 2480MHz. EUT model tested is PamSYS V2.

We found that the product met the above requirements without modifications. The test sample was received in good condition.

Issue No.	Reason for change	Date Issued
1	Original Release	January 30, 2017



Curtis-Straus LLC, a wholly owned subsidiary of BV CPS
One Distribution Center Circle, #1 • Littleton, MA • TEL (978) 486-8880 • FAX (978) 486-8828



Test Methodology

Radiated emission testing was performed according to the procedures specified in ANSI C63.10 (2013) and RSS-GEN. Radiated Emissions were maximized in the orientation at final installation. Also the device antenna is integral so that it cannot be maximized separately.

AC Mains side of Supply - Conducted Emission was tested with a 50 Ω /50 μ H because the EUT is DC powered.

The product was tested with modulation on and the readings were compared against the limit presented in section CFR 15.249.

The EUT operating voltage is 3.0Vdc powered (battery)

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

Frequency	RBW	VBW
0.15-30MHz	9kHz	30kHz
30-1000MHz	120kHz	1MHz
1-25GHz	1MHz	3MHz

Issue No.	Reason for change	Date Issued
1	Original Release	January 30, 2017



Curtis-Straus LLC, a wholly owned subsidiary of BV CPS
One Distribution Center Circle, #1 • Littleton, MA • TEL (978) 486-8880 • FAX (978) 486-8828



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 chip antenna with 1.5dBi 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	AC side of DC Supply meets the limits in 15.207
		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

Field Strength of Fundamental

Radiated Emissions Table														
Date: 08-Dec-16			Company: BioSensics			Work Order: Q3466								
Engineer: Yunus Faziloglu & Zachary Johnson			EUT Desc: PamSYS V2			EUT Operating Voltage/Frequency: 3V DC								
Temp: 22.8°C			Humidity: 25%			Pressure: 1005mBar			Battery					
Frequency Range: Worst Case Orientation									Measurement Distance: 3 m					
Notes: Power Setting 0 all 3 orientations were checked; only the worst case (X) recorded.									EUT Max Freq: 2480MHz					
Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dBuV)	Average Reading (dBuV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Peak Reading (dBuV/m)	Adjusted Avg Reading (dBuV/m)	FCC 15.249 - Peak			FCC 15.249 - Average		
									Limit (dBuV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBuV/m)	Margin (dB)	Result (Pass/Fail)
H	2402.0	70.6	50.6	0.0	28.0	3.2	101.8	81.8	114.0	-12.2	Pass	94.0	-12.2	Pass
V	2402.0	63.3	43.3	0.0	28.0	3.2	94.5	74.5	114.0	-19.5	Pass	94.0	-19.5	Pass
H	2440.0	69.1	49.1	0.0	28.1	3.2	100.4	80.4	114.0	-13.6	Pass	94.0	-13.6	Pass
V	2440.0	66.0	46.0	0.0	28.1	3.2	97.3	77.3	114.0	-16.7	Pass	94.0	-16.7	Pass
H	2480.0	65.8	45.8	0.0	28.2	3.3	97.3	77.3	114.0	-16.7	Pass	94.0	-16.7	Pass
V	2480.0	62.5	42.5	0.0	28.2	3.3	94.0	74.0	114.0	-20.0	Pass	94.0	-20.0	Pass
Table Result: Pass by -12.2 dB Worst Freq: 2402.0 MHz														
Test Site: EMI Chamber 2			Cable 1: Asset #2052			Cable 2: Asset #2053			Cable 3: ---					
Analyzer: Gold			Preamp: none			Antenna: Orange Horn			Preselector: ---					
CSsoft Radiated Emissions Calculator v 1.017.178 Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor Copyright Curtis-Straus LLC 2000														

Spectrum Analyzers / Receivers / Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Gold	100Hz-26.5 GHz	E4407B	Agilent	MY45113816	1284	I	1/13/2017	1/13/2016
Radiated Emissions Sites	FCC Code	IC Code	VCCI Code	Range		Cat	Calibration Due	Calibrated on
EMI Chamber 2	719150	2762A-7	A-0015	1-18GHz		I	4/29/2017	4/29/2015
Antennas	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Orange Horn	1-18GHz	3115	EMCO	0004-6123	390	I	10/13/2018	10/13/2016
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#2081		HTC-1	HDE		2081	II	4/5/2017	4/5/2016
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #2052	9kHz - 18GHz		Florida RF			II	3/2/2017	3/2/2016
Asset #2053	9kHz - 18GHz		Florida RF			II	10/1/2017	10/30/2016

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



Field Strength of Harmonics

Radiated Emissions Table

Date: 08-Dec-16				Company: BioSensics				Work Order: Q3466							
Engineer: Yunus Faziloglu & Zachary Johnson				EUT Desc: PamSYS V2				EUT Operating Voltage/Frequency: 3V DC							
Temp: 22.8C				Humidity: 25%				Pressure: 1005mbar		Battery					
Frequency Range: Harmonics 1-8GHz								Measurement Distance: 3 m							
Notes: Power Setting 0, worst case orientation Y DCCF = -20dB								EUT Max Freq: 2480MHz							
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 15.249 High Frequency - Peak			FCC 15.249 High Frequency - Average			
									Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	
2nd Harmonic				---	---	---									
H - Y	4804.0	19.5	-0.5	0.0	33.0	4.7	57.2	37.2	74.0	-16.8	Pass	54.0	-16.8	Pass	
V - Y	4804.0	18.4	-1.6	0.0	33.0	4.7	56.1	36.1	74.0	-17.9	Pass	54.0	-17.9	Pass	
Table Result:				Pass		by		-16.8 dB		Worst Freq:				4804.0 MHz	
Test Site: EMI Chamber 2				Cable 1: Asset #2052				Cable 2: Asset #2053				Cable 3: ---			
Analyzer: Gold				Preamp: none				Antenna: Orange Horn				Preselector: ---			
CSsoft Radiated Emissions Calculator v 1.017.178															
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor															
Copyright Curtis-Straus LLC 2000															

Rev. 11/27/2016

Spectrum Analyzers / Receivers /Preselectors

Gold	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
	100Hz-26.5 GHz	E4407B	Agilent	MY45113816	1284	I	1/13/2017	1/13/2016
Radiated Emissions Sites	FCC Code	IC Code	VCCI Code	Range		Cat	Calibration Due	Calibrated on
EMI Chamber 2	719150	2762A-7	A-0015	1-18GHz		I	4/29/2017	4/29/2015
Antennas	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Orange Horn	1-18GHz	3115	EMCO	0004-6123	390	I	10/13/2018	10/13/2016
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#2081		HTC-1	HDE		2081	II	4/5/2017	4/5/2016
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #2052	9kHz - 18GHz		Florida RF			II	3/2/2017	3/2/2016
Asset #2053	9kHz - 18GHz		Florida RF			II	10/1/3017	10/30/2016

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

Radiated Emissions Table

Date: 08-Dec-16		Company: BioSensics LLC							Work Order: Q3466					
Engineer: Chris Bramley		EUT Desc: PamSYS V2							EUT Operating Voltage/Frequency: 3Vdc					
Temp: 24.4°C		Humidity: 24%							Pressure: 1000mBar					
Frequency Range: 8-18GHz									Measurement Distance: 1 m					
Notes: EUT at 1.5m Height, Harmonics and Spurious Emissions scan - X orientation All channels checked for Harmonics									EUT Max Freq: 2480MHz					
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 15.249 High Frequency - Peak			FCC 15.249 High Frequency - Average		
									Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)
h	9608.0	38.33	18.3	17.5	38.2	6.4	65.4	45.4	83.5	-18.1	Pass	63.5	-18.1	Pass
h	9760.0	37.57	17.6	17.7	38.3	6.5	64.7	44.7	83.5	-18.8	Pass	63.5	-18.8	Pass
h	9920.0	37.04	17.0	17.8	38.4	6.6	64.2	44.2	83.5	-19.3	Pass	63.5	-19.3	Pass
Table Result:		Pass		by		-18.1 dB		Worst Freq: 9608.0 MHz						
Test Site: EMI Chamber 2				Cable 1: Asset #2052				Cable 2: Asset #2053						
Analyzer: Gold				Preamp: Asset #1517				Antenna: Orange Horn						
CSsoft Radiated Emissions Calculator v 1.017.178														
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor														
Copyright Curtis-Straus LLC 2000														

Rev. 11/27/2016

Spectrum Analyzers / Receivers /Preselectors

Gold	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
	100Hz-26.5 GHz	E4407B	Agilent	MY45113816	1284	I	1/13/2017	1/13/2016
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
1517 HF Preamp	1-20GHz	CS	CS	N/A	1517	II	8/14/2017	8/14/2016
Antennas	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Orange Horn	1-18GHz	3115	EMCO	0004-6123	390	I	10/13/2018	10/13/2016
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#2081		HTC-1	HDE		2081	II	4/5/2017	4/5/2016
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #2052	9kHz - 18GHz		Florida RF			II	3/2/2017	3/2/2016
Asset #2053	9kHz - 18GHz		Florida RF			II	10/1/3017	10/30/2016

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



Curtis-Straus LLC, a wholly owned subsidiary of BV CPS
One Distribution Center Circle, #1 • Littleton, MA • TEL (978) 486-8880 • FAX (978) 486-8828



page 8 of 22

Radiated Emissions Table

Date: 08-Dec-16		Company: BioSensics LLC							Work Order: Q3466						
Engineer: Chris Bramley		EUT Desc: PamSYS V2							EUT Operating Voltage/Frequency: 3Vdc						
Temp: 24.4°C		Humidity: 24%							Pressure: 1000mBar						
Frequency Range: 18-25GHz									Measurement Distance: 0.1 m						
Notes: EUT at 1.5m Height, Harmonics and Spurious Emissions scan - X Orientation									EUT Max Freq: 2480MHz						
All channels checked for Harmonics															
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 15.249 High Frequency - Peak			FCC 15.249 High Frequency - Average			
									Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBμV/m)	Margin (dB)	Result (Pass/Fail)	
h/v	19216.0	52.02	32.0	42.0	40.3	5.8	56.1	36.1	103.5	-47.4	Pass	83.5	-47.4	Pass	
h/v	19520.0	53.56	33.6	42.0	40.3	5.8	57.7	37.7	103.5	-45.8	Pass	83.5	-45.8	Pass	
h/v	19840.0	50.46	30.5	42.4	40.3	5.9	54.3	34.3	103.5	-49.2	Pass	83.5	-49.2	Pass	
Table Result:				Pass		by		-45.8 dB		Worst Freq: 19520.0 MHz					
Test Site: EMI Chamber 2				Cable 1: EMIR-HIGH-06											
Analyzer: Gold				Preamp: 18-26.5GHz											
Antenna: 18-26.5GHz Horn															
CSsoft Radiated Emissions Calculator v 1.017.178															
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor															
Copyright Curtis-Straus LLC 2000															

Spectrum Analyzers / Receivers / Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Gold	100Hz-26.5 GHz	E4407B	Agilent	MY45113816	1284	I	1/13/2017	1/13/2016
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
HF (Yellow)	18-26.5GHz	AFS4-18002650-60-8P-4	CS	467559	1266	II	9/16/2017	9/16/2016
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
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#2081		HTC-1	HDE		2081	II	4/5/2017	4/5/2016
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
REMI-High-06	1 - 26.5GHz	TRU-21B0707-120	TRU			II	8/14/2017	8/14/2016

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

BUREAU
VERITAS

Curtis-Straus LLC, a wholly owned subsidiary of BV CPS
 One Distribution Center Circle, #1 • Littleton, MA • TEL (978) 486-8880 • FAX (978) 486-8828



page 9 of 22

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

Band Edges

Radiated Emissions Table														
Date: 08-Dec-16			Company: BioSensics						Work Order: Q3466					
Engineer: YF & ZJ			EUT Desc: PamSYS V2						EUT Operating Voltage/Frequency: 3V DC					
Temp: 22.8°C			Humidity: 25%						Pressure: 1005mBar			Battery		
Frequency Range: Bandedges									Measurement Distance: 3 m					
Notes: Power Setting 0, worst case orientation X NF: Noise Floor									EUT Max Freq: 2480MHz					
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)
X Orientation				---	---	---	---	---	---	---	---	---	---	---
H	2400.0	39.5	19.5	0.0	28.0	3.2	70.7	50.7	74.0	-3.3	Pass	54.0	-3.3	Pass
V	2400.0	35.1	15.1	0.0	28.0	3.2	66.3	46.3	74.0	-7.7	Pass	54.0	-7.7	Pass
H - NF	2483.5	25.9	13.1	0.0	28.2	3.3	57.4	44.6	74.0	-16.6	Pass	54.0	-9.4	Pass
V - NF	2483.5	26.2	13.2	0.0	28.2	3.3	57.7	44.7	74.0	-16.3	Pass	54.0	-9.3	Pass
Table Result:		Pass		by		-3.3 dB				Worst Freq:		2400.0 MHz		
Test Site: EMI Chamber 2			Cable 1: Asset #2052						Cable 2: Asset #2053			Cable 3: ---		
Analyzer: Gold			Preamp: none						Antenna: Orange Horn			Preselector: ---		
CSsoft Radiated Emissions Calculator v 1.017.178														
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor														
Copyright Curtis-Straus LLC 200														

Rev. 11/27/2016

Spectrum Analyzers / Receivers / Preselectors		Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Gold		100Hz-26.5 GHz	E4407B	Agilent	MY45113816	1284	I	1/13/2017	1/13/2016
Radiated Emissions Sites		FCC Code	IC Code	VCCI Code	Range		Cat	Calibration Due	Calibrated on
EMI Chamber 2		719150	2762A-7	A-0015	1-18GHz		I	4/29/2017	4/29/2015
Antennas		Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Orange Horn		1-18GHz	3115	EMCO	0004-6123	390	I	10/13/2018	10/13/2016
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#2081			HTC-1	HDE		2081	II	4/5/2017	4/5/2016
Cables		Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #2052		9kHz - 18GHz		Florida RF			II	3/2/2017	3/2/2016
Asset #2053		9kHz - 18GHz		Florida RF			II	10/1/2017	10/30/2016

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

Radiated Spurious Emissions

Radiated Emissions Table

Date: 08-Dec-16			Company: BioSensics LLC				Work Order: Q3466					
Engineer: Chris Bramley			EUT Desc: PamSYS V2				EUT Operating Voltage/Frequency: 3Vdc					
Temp: 24.4°C			Humidity: 24%		Pressure: 1000mBar							
Frequency Range: 30-1000MHz							Measurement Distance: 3 m					
Notes: EUT in Charging Mode							EUT Max Freq: 2480MHz					
Peak Readings - Worst Case X orientation												
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)
v	31.4	33.8	25.4	20.3	0.3	29.0				40.0	-11.0	Pass
v	52.0	28.3	25.3	7.5	0.4	10.9				40.0	-29.1	Pass
v	75.0	35.7	25.3	8.5	0.5	19.4				40.0	-20.6	Pass
v	86.0	34.2	25.3	7.6	0.5	17.0				40.0	-23.0	Pass
v	139.0	29.9	25.3	13.5	0.8	18.9				43.5	-24.6	Pass
v	183.0	29.8	25.2	11.3	1.0	16.9				43.5	-26.6	Pass
v	194.0	30.8	25.2	12.1	1.0	18.7				43.5	-24.8	Pass
Table Result: Pass by -11.0 dB											Worst Freq: 31.4 MHz	
Test Site: EMI Chamber 2			Cable 1: Asset #2052				Cable 2: Asset #2053					
Analyzer: Gold			Preamp: Red				Antenna: Red-White					
CSsoft Radiated Emissions Calculator v 1.017.178											Copyright Curtis-Straus LLC 2000	
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor												

Rev. 11/27/2016

Spectrum Analyzers / Receivers / Preselectors		Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Gold		100Hz-26.5 GHz	E4407B	Agilent	MY45113816	1284	I	1/13/2017	1/13/2016
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
Red		0.009-2000MHz	ZFL-1000-LN	CS	N/A	798	II	1/29/2017	1/29/2016
Antennas		Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Red-White Bilog		30-2000MHz	JB1	Sunol	A091604-1	1105	I	8/12/2017	8/12/2015
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#2081			HTC-1	HDE		2081	II	4/5/2017	4/5/2016
Cables		Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #2052		9kHz - 18GHz		Florida RF			II	3/2/2017	3/2/2016
Asset #2053		9kHz - 18GHz		Florida RF			II	10/1/3017	10/30/2016

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

Radiated Emissions Table

Date: 08-Dec-16		Company: BioSensics LLC							Work Order: Q3466					
Engineer: Chris Bramley		EUT Desc: PamSYS V2							EUT Operating Voltage/Frequency: 3Vdc					
Temp: 24.4°C		Humidity: 24%							Pressure: 1000mBar					
Frequency Range: 1-8GHz									Measurement Distance: 3 m					
Notes: EUT at 1.5m Height, Tx at center channel(2440MHz) Spurious Emissions Scan only									EUT Max Freq: 2480MHz					
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, Noise floor readings recorded														
h	1127.0	34.95	21.6	20.9	25.1	2.2	41.4	28.0	74.0	-32.6	Pass	54.0	-26.0	Pass
h	3075.0	36.26	20.9	20.7	30.4	3.5	49.5	34.1	74.0	-24.5	Pass	54.0	-19.9	Pass
h	5627.0	32.44	19.0	18.3	33.8	5.0	52.9	39.5	74.0	-21.1	Pass	54.0	-14.5	Pass
Table Result:				Pass		by		-14.5 dB		Worst Freq: 5627.0 MHz				
Test Site: EMI Chamber 2				Cable 1: Asset #2052				Cable 2: Asset #2053						
Analyzer: Gold				Preamp: Asset #1517				Antenna: Orange Horn						
CSsoft Radiated Emissions Calculator v1.017.178														
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor														
Copyright Curtis-Straus LLC 2000														



Radiated Emissions Table

Date: 08-Dec-16				Company: BioSensics LLC				Work Order: Q3466						
Engineer: Chris Bramley				EUT Desc: PamSYS V2				EUT Operating Voltage/Frequency: 3Vdc						
Temp: 24.4°C				Humidity: 24%				Pressure: 1000mBar						
Frequency Range: 8-18GHz								Measurement Distance: 1 m						
Notes: EUT at 1.5m Height, Harmonics and Spurious Emissions scan All channels checked for Harmonics								EUT Max Freq: 2480MHz						
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 Spurious Emissions found in this range other than the harmonics.				See Fundamental Measurement section for details.										
Table Result:				by dB				Worst Freq:				MHz		
Test Site: EMI Chamber 2				Cable 1: Asset #2052				Cable 2: Asset #2053						
Analyzer: Gold				Preamp: Asset #1517				Antenna: Orange Horn						
CSsoft Radiated Emissions Calculator v 1.017.178												Copyright Curtis-Straus LLC 2000		
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor														
Rev. 11/27/2016														

Spectrum Analyzers / Receivers / Preselectors		Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Gold		100Hz-26.5 GHz	E4407B	Agilent	MY45113816	1284	I	1/13/2017	1/13/2016
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
1517 HF Preamp		1-20GHz	CS	CS	N/A	1517	II	8/14/2017	8/14/2016
Antennas		Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Orange Horn		1-18GHz	3115	EMCO	0004-6123	390	I	10/13/2018	10/13/2016
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#2081			HTC-1	HDE		2081	II	4/5/2017	4/5/2016
Cables		Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #2052		9kHz - 18GHz		Florida RF			II	3/2/2017	3/2/2016
Asset #2053		9kHz - 18GHz		Florida RF			II	10/1/3017	10/30/2016

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

Radiated Emissions Table

Date: 08-Dec-16		Company: BioSensics LLC				Work Order: Q3466								
Engineer: Chris Bramley		EUT Desc: PamSYS V2				EUT Operating Voltage/Frequency: 3Vdc								
Temp: 24.4°C		Humidity: 24%				Pressure: 1000mBar								
Frequency Range: 18-25GHz						Measurement Distance: 0.1 m								
Notes: EUT at 1.5m Height, Harmonics and Spurious Emissions scan All channels checked for Harmonics						EUT Max Freq: 2480MHz								
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 Spurious Emissions found in this range other than the harmonics. See Fundamental Measurement section for details.														
Table Result: by dB Worst Freq: MHz														
Test Site: EMI Chamber 2					Cable 1: EMIR-HIGH-06									
Analyzer: Gold					Preamp: 18-26.5GHz Antenna: 18-26.5GHz Horn									
CSsoft Radiated Emissions Calculator v 1.017.178														
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor														
Copyright Curtis-Straus LLC 2006														

Spectrum Analyzers / Receivers / Preselectors		Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Gold		100Hz-26.5 GHz	E4407B	Agilent	MY45113816	1284	I	1/13/2017	1/13/2016
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
HF (Yellow)		18-26.5GHz	AFS4-18002650-60-8P-4	CS	467559	1266	II	9/16/2017	9/16/2016
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
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#2081			HTC-1	HDE		2081	II	4/5/2017	4/5/2016
Cables		Range		Mfr			Cat	Calibration Due	Calibrated on
REMI-High-06		1 - 26.5GHz	TRU-21B0707-120	TRU			II	8/14/2017	8/14/2016

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

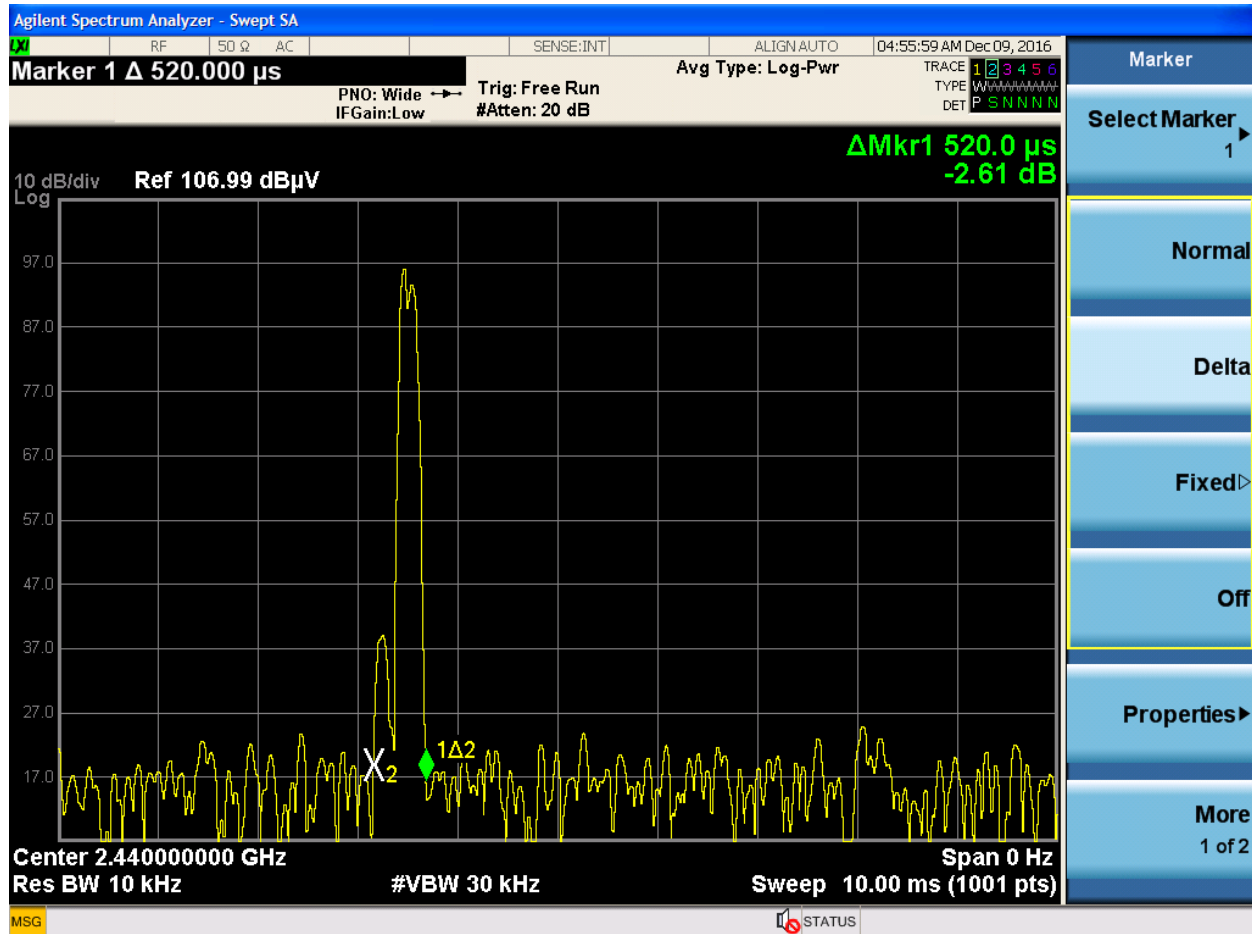


Curtis-Straus LLC, a wholly owned subsidiary of BV CPS

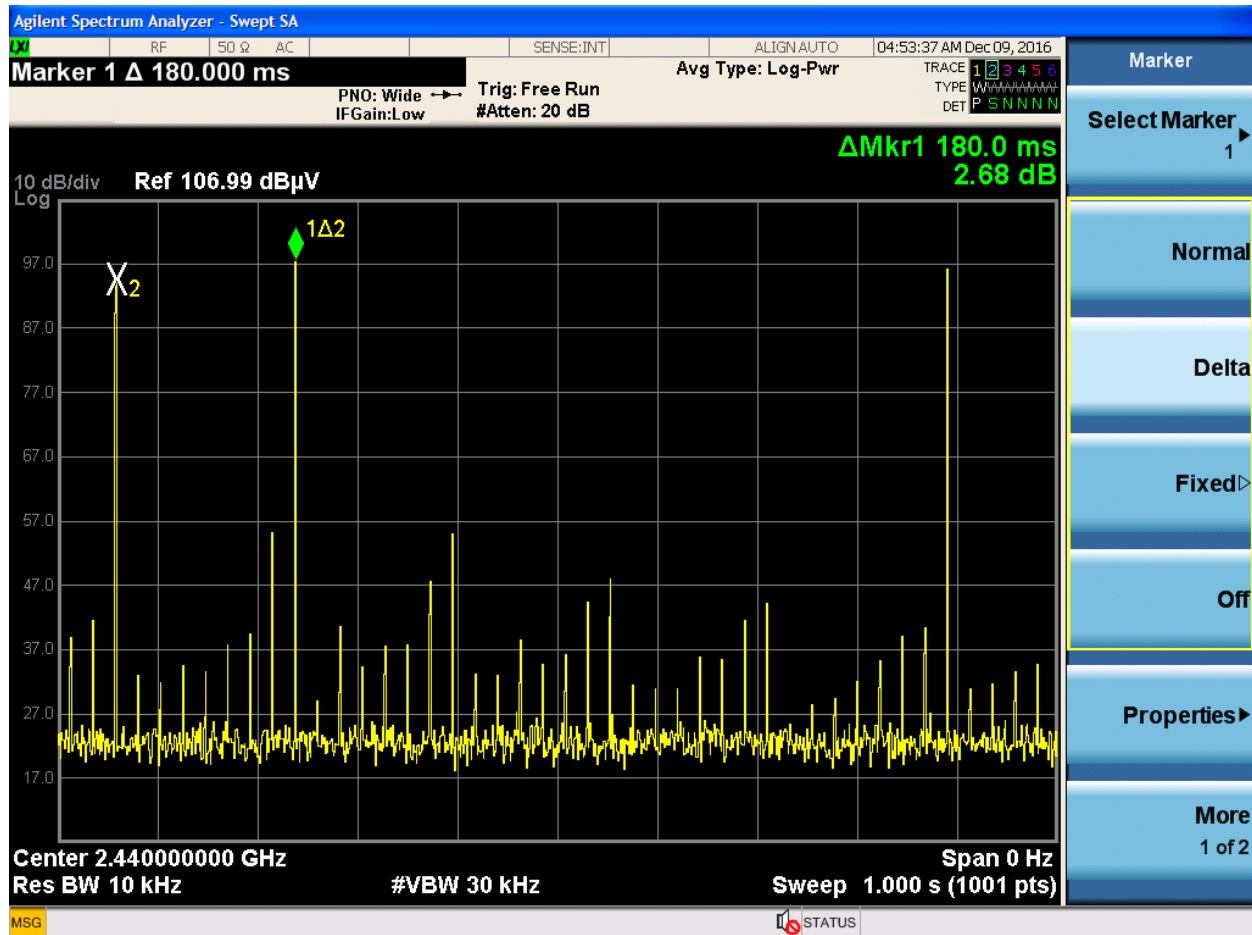
One Distribution Center Circle, #1 • Littleton, MA • TEL (978) 486-8880 • FAX (978) 486-8828



Duty Cycle Correction Factor



Duration of a single pulse = 520uS



Duration in a 100mS window

$$\text{DCCF} = 20 \cdot \text{LOG}(0.520/100) = -45.7\text{dB}$$

Note: a DCCF of -20dB is used throughout this report as a conservative estimate.



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)]

Note: Tested Ac side of USB power supply as well as ac side of client's laptop during USB data offload mode. In either mode USB delivers 5V DC to unit which is stepped down to 3V DC within the EUT.

MEASUREMENTS / RESULTS

AC Side of a DC Supply Conducted Emissions														
Date: 15-Dec-16 Engineer: Zac Johnson Temp: 23.1 °C Notes: USB DC Supply, Peak Readings Used					Company: BioSensics EUT Desc: PamSYS Humidity: 25%					Work Order: Q3466 Pressure: 997 mBar				
Frequency Range: 0.15-30MHz EUT Input Voltage/Frequency: 5V DC														
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)
0.15	15.5	17.3	10.3	14.2	-0.1	-0.1	0.0	-20.0	66.0	-28.6	Pass	56.0	-21.7	Pass
3.73	16.9	21.0	3.8	11.0	0.0	0.0	-0.1	-20.0	56.0	-14.9	Pass	46.0	-14.9	Pass
6.94	16.5	20.1	3.3	10.3	0.0	-0.1	-0.1	-20.0	60.0	-19.8	Pass	50.0	-19.6	Pass
9.78	18.5	19.4	3.2	10.3	-0.1	-0.1	-0.1	-20.0	60.0	-20.5	Pass	50.0	-19.6	Pass
10.75	19.1	20.0	5.0	10.0	-0.1	-0.1	-0.1	-20.0	60.0	-19.8	Pass	50.0	-19.8	Pass
17.00	15.9	13.4	2.3	7.0	-0.1	-0.1	-0.2	-20.0	60.0	-23.9	Pass	50.0	-22.8	Pass
Result: Pass					Worst Margin: -14.9 dB					Frequency: 3.730 MHz				
Measurement Device: LISN ASSET 1726(Line 1) LISN ASSET 1727(Line 2)					Cable: CEMI-12 Attenuator: 20dB ATTN-03					Spectrum Analyzer: Gold Site: CEMI 5				
C-S CEMI Calculator Version 3.0.14 Adjusted Reading = Raw Reading + LISN Insertion Loss + Cable Loss + Attenuation					Equipment Factor Sheet rev: 11/6/2016									

C-S CEMI Calculator Version 3.0.14

Adjusted Reading = Raw Reading + LISN Insertion Loss + Cable Loss + Attenuation

Rev. 12/29/2016

Spectrum Analyzers / Receivers /Preselectors Gold	Range 100Hz-26.5 GHz	MN E4407B	Mfr Agilent	SN MY45113816	Asset 1284	Cat I	Calibration Due 1/13/2017	Calibrated on 1/13/2016
LISNs/Measurement Probes	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
LISN Asset 1726	150kHz-30MHz	LI-150A	Com-Power	201092	1726	I	2/4/2017	2/4/2016
LISN Asset 1727	150kHz-30MHz	LI-150A	Com-Power	201093	1727	I	2/4/2017	2/4/2016
Conducted Test Sites (Mains / Telco) CEMI 5	FCC Code 719150		VCCI Code A-0015			Cat III	Calibration Due NA	Calibrated on N/A
Meteorological Meters Weather Clock (Pressure Only)		MN BA928	Mfr Oregon Scientific	SN C3166-1	Asset 831	Cat I	Calibration Due 4/28/2018	Calibrated on 4/28/2016
Cables CEMI-12	Range 9kHz - 2GHz		Mfr C-S			Cat II	Calibration Due 10/2/2017	Calibrated on 1/2/2016
Attenuators 20dB Attenuator-03	Range 9kHz-2GHz	MN	Mfr	SN N/A	Asset	Cat II	Calibration Due 10/2/2017	Calibrated on 10/2/2016

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



Curtis-Straus LLC, a wholly owned subsidiary of BV CPS
One Distribution Center Circle, #1 • Littleton, MA • TEL (978) 486-8880 • FAX (978) 486-8828



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: 09-Dec-16	Company: BioSensics LLC	Work Order: Q3466
Engineer: Yunus Faziloglu	EUT: PamSYS V2	EUT Operating Voltage/Frequency: 3VDC Battery
Temp: 22°C	Humidity: 29%	Pressure: 1005mBar
Frequency Range: 2402-2480 MHz		Measurement Type: Conducted
Measurement Method: RSS-Gen Issue 4 Section 6.6		
Notes: EUT powered by DC power supply during the test		
Frequency (MHz)	99% OBW (kHz)	
2402	1046.8	
2440	1059.2	
2480	1056.1	
Test Site: Chamber 2 Bench		Attenuator SW2-10-1
Analyzer: Gold SA		Copyright Curtis-Straus LLC 2000

Rev. 11/27/2016

Spectrum Analyzers / Receivers / Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Gold	100Hz-26.5 GHz	E4407B	Agilent	MY45113816	1284	I	1/13/2017	1/13/2016
Radiated Emissions Sites	FCC Code	IC Code	VCCI Code	Range		Cat	Calibration Due	Calibrated on
EMI Chamber 2	719150	2762A-7	A-0015	1-18GHz		I	4/29/2017	4/29/2015
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#2081		HTC-1	HDE		2081	II	4/5/2017	4/5/2016

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

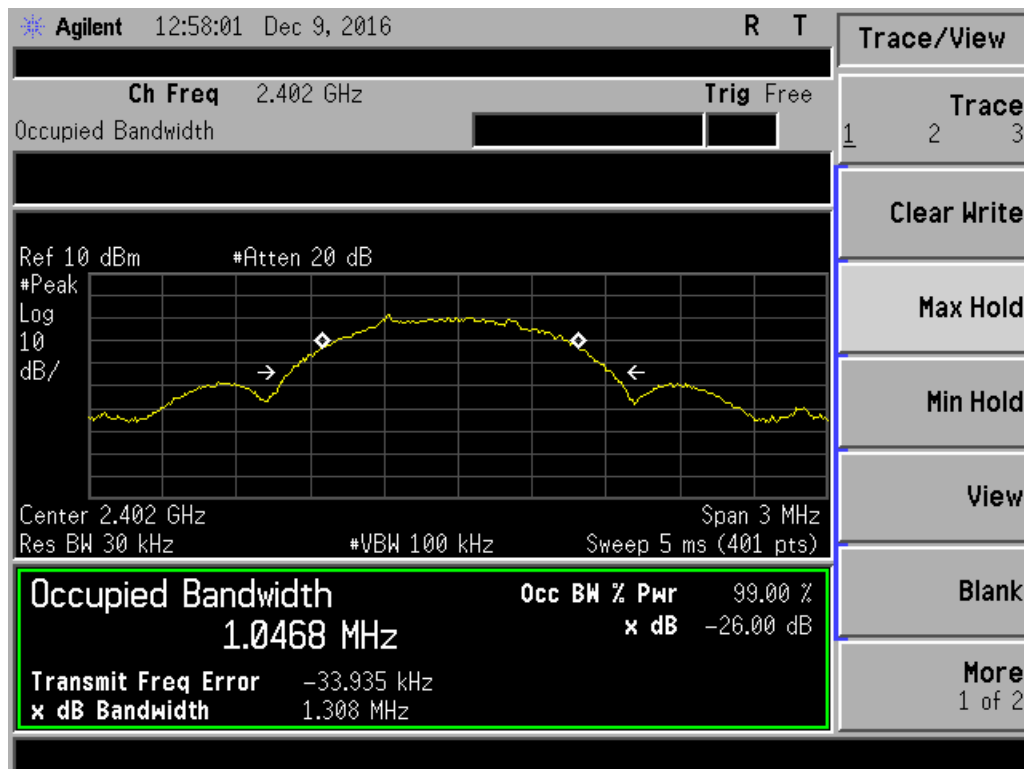
BUREAU
VERITAS

Curtis-Straus LLC, a wholly owned subsidiary of BV CPS
One Distribution Center Circle, #1 • Littleton, MA • TEL (978) 486-8880 • FAX (978) 486-8828

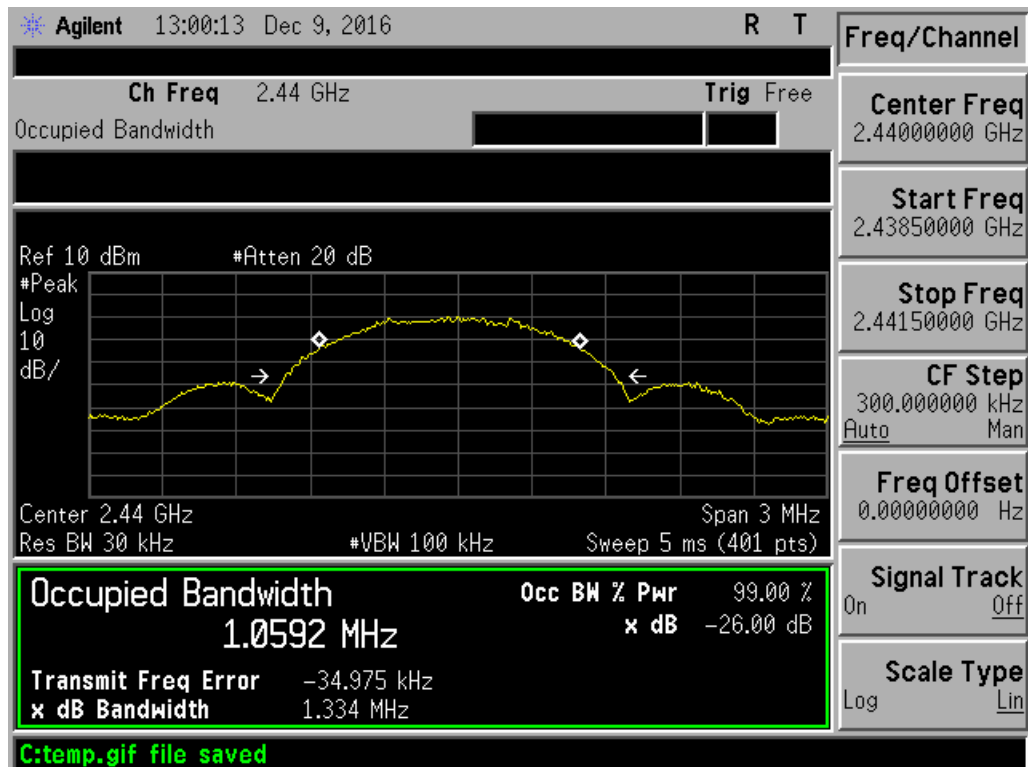


page 17 of 22

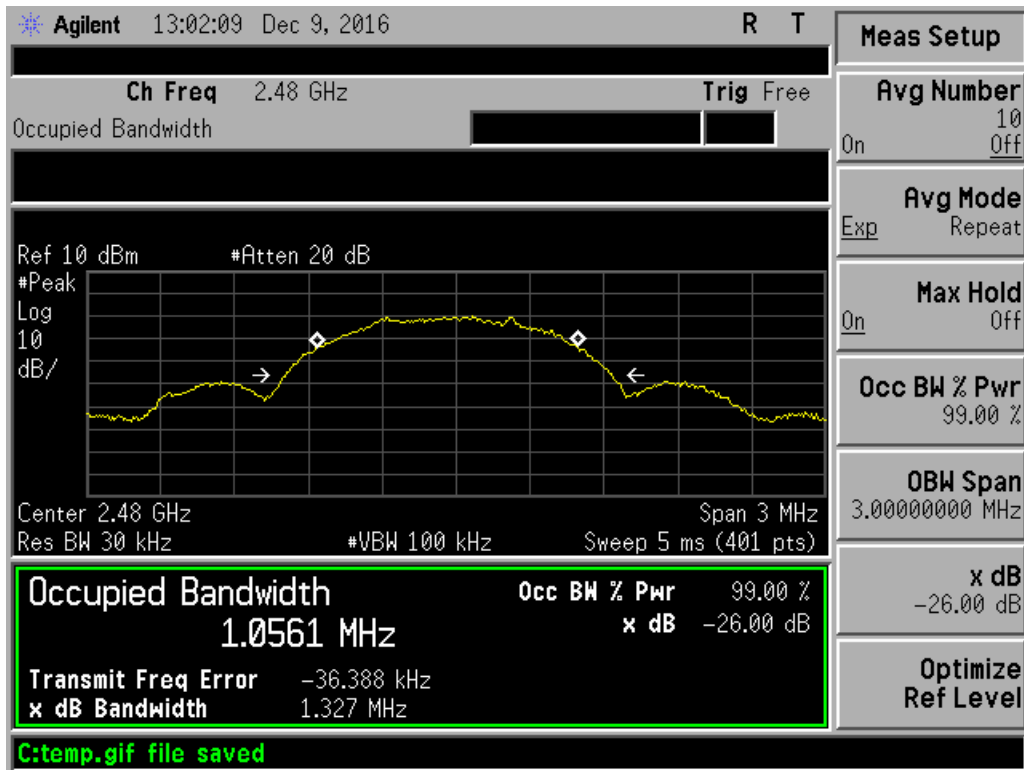
Plot(s)



Occupied Bandwidth - 2402 MHz



Occupied Bandwidth - 2440 MHz



Occupied Bandwidth - 2480 MHz

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 (Ucisprr)
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 (Ucisprr)
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		



BUREAU
VERITAS

Curtis-Straus LLC, a wholly owned subsidiary of BV CPS
One Distribution Center Circle, #1 • Littleton, MA • TEL (978) 486-8880 • FAX (978) 486-8828



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.



BUREAU
VERITAS

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

One Distribution Center Circle, #1 • Littleton, MA • TEL (978) 486-8880 • FAX (978) 486-8828



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.

Rev.160009121(2)_#684340 v13CS

