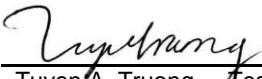
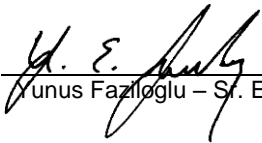




Test Report

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

Report No	EQ2141-1
Client	LumiraDx John MacLean
Address	221 Crescent Street Suite 502 Waltham, MA 02453
Phone	(617) 621 - 9775
Items tested	LumiraDx Wireless Module
FCC ID	2AI9JRFM
IC ID	N/A
FRN	0025763137
Equipment Type	Digital Transmission System
Equipment Code	DTS
FCC/IC Rule Parts	47 CFR 15.247, RSS-247 Issue 1,
Test Dates	August 5, 17 and 19, 2016
Results	As detailed within this report
Prepared by	 Tuyen A. Truong – Test Engineer
Authorized by	 Yunus Faziloglu – Sr. EMC Engineer
Issue Date	9/19/2016
Conditions of Issue	This Test Report is issued subject to the conditions stated in the 'Conditions of Testing' section on page 24 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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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 and RSS-247. The product is the LumiraDx Wireless Module. It is a digitally modulated transmitter that operates in the range 2402-2480MHz. Product was tested with a PCB trace antenna with a gain of -0.5dBi.

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

Issue No.	Reason for change	Date Issued
1	Original Release	September 19, 2016

page 3 of 25



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Test Methodology

All testing was performed according to the following rules/procedures/documents;
CFR 47 Part 15.247, RSS-247 Issue 1, RSS-Gen Issue 4, FCC KDB 558074 D01 DTS
Measurement Guidance v03r05 and ANSI C63.10-2013. Radiated emissions were maximized
by rotating the device around its 3 orthogonal axes as well as varying the test antenna's height
and polarity. The device antenna could not be maximized separately.

Conducted emissions testing at the antenna port was not performed as the EUT has a non-
removable integral antenna. AC line conducted emissions testing was not applicable since the
EUT is battery powered only.

3 channels (low, middle and high) were tested as follows;

Low channel = 2402MHz

Middle channel = 2426MHz

High channel = 2480MHz

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

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

Product Tested - Configuration Documentation

EUT Configuration			
Work Order:	Q2141		
Company:	LumiraDx		
Company Address:	221 Crescent Street Suite 502		
	Waltham, MA, 02453		
Contact:	John MacLean		
	MN	PN	SN
EUT:	420-00057-02	--	NKET-32767-00023
EUT Description:	LumiraDx Wireless Module		
EUT TX Frequency:	2402 to 2480 MHz		
Support Equipment	MN	SN	
None			
Software Operating Mode Description:			
EUT is set to consecutively transmit on Low (2402 MHz), Mid (2426 MHz) and High (2480 MHz) channels when power applied.			



BUREAU
VERITAS

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Statement of Conformity

The LumiraDx Wireless Module has been found to conform to the following parts of 47 CFR and as detailed below:

RSS-GEN	RSP-100	RSS 247	Part 15	Comments
6.3			15.15(b)	There are no controls accessible to the user that varies the output power to operate in violation of the regulatory requirements.
	3.1		15.19	The label is shown in the label exhibit.
	4		15.21	Information to the user is shown in the instruction manual exhibit.
			15.27	No special accessories are required for compliance.
3, 6.1			15.31	The EUT was tested in accordance with the measurement standards in this section.
6.13			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	EUT employs a PCB trace antenna with a gain of -0.5dBi.
8.10			15.205 15.209	The fundamental is not in a Restricted band and the spurious and harmonic emissions in the Restricted bands comply with the general emission limits of 15.209 or RSS-Gen as applicable
8.8			15.207	Not applicable since EUT is battery powered.
			15.247	The EUT complies with the requirements of 15.247
		RSS 247		The EUT complies with the requirements of RSS-247
6.6				Occupied Bandwidth measurements were made.

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

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

MEASUREMENTS / RESULTS

6dB BANDWIDTH						
Date: 05-Aug-16		Company: LumiraDx		Work Order: Q2141		
Engineer: Tuyen Truong		EUT Desc: LumiraDx Wireless Module		EUT Operating Voltage/Frequency: 3Vdc		
Temp: 22.4°C		Humidity: 44%		Pressure: 1005mbar		
Frequency Range: 2402 to 2480 MHz				Measurement Distance: 3m		
Notes: LumiraDx Wireless Module (M/N: 420-00057-02/ S/N: NKET-32767-00023)						
Antenna Polarization (H/V)	Frequency (MHz)	6dB Bandwidth				
		Reading (KHz)	Limit (KHz)	Margin (KHz)	Result (Pass/Fail)	
V	2402	747.641	≥500	+247.641	Pass	
V	2426	760.038	≥500	+260.038	Pass	
V	2480	743.707	≥500	+243.707	Pass	
Test Site: EMI Chamber 2		Cable 1: Asset #2052		Cable 2: Asset #1507		Cable 3: ---
Analyzer: Gold		Preamp: Asset #1517		Antenna: Blue Horn		Preselector: ---
CSsoft Radiated Emissions Calculator v 1.017.165						
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor						
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Rev. 8/4/2016

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
Preamps / Couplers Attenuators / Filters		Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
1517 HF Preamp		1-20GHz	CS	CS	N/A	1517	II	8/6/2016	8/6/2015
Antennas		Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Blue Horn		1-18GHz	3117	ETS	157647	1861	I	2/8/2017	2/8/2015
Meteorological Meters			MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)			BA928	Oregon Scientific	C3166-1	831	I	4/28/2018	4/28/2016
TH A#2081			HTC-1	HDE		2081	II	4/5/2017	4/5/2016
Cables		Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #1507		9kHz - 18GHz		Florida RF			II	2/14/2017	2/14/2016
Asset #2052		9kHz - 18GHz		Florida RF			II	3/2/2017	3/2/2016

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



PLOT(s)

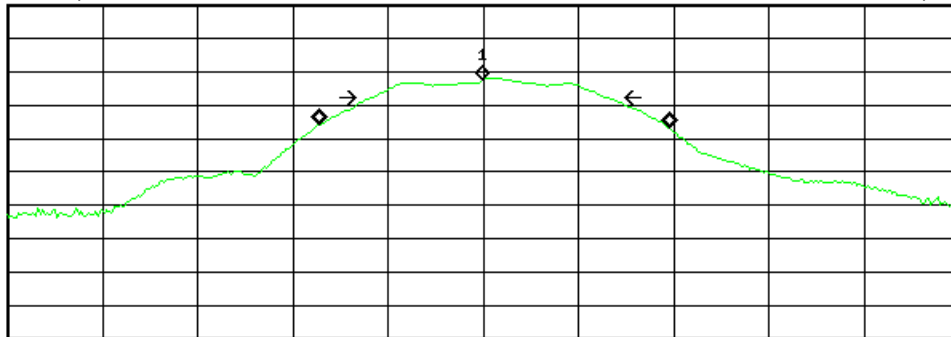
Agilent 14:56:20 Aug 5, 2016

R T

Mkr1 2.4020000 GHz
71.59 dBμV

Ref 93.99 dBμV

Atten 5 dB

#Peak
Log
10
dB/

Center 2.402 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 3 MHz

Sweep 5 ms (401 pts)

Occupied Bandwidth
1.1006 MHzOcc BW % Pwr 99.00 %
x dB -6.00 dBTransmit Freq Error 31.874 kHz
x dB Bandwidth 747.641 kHz

C:\temp.gif file saved

6dB Bandwidth – Low Channel

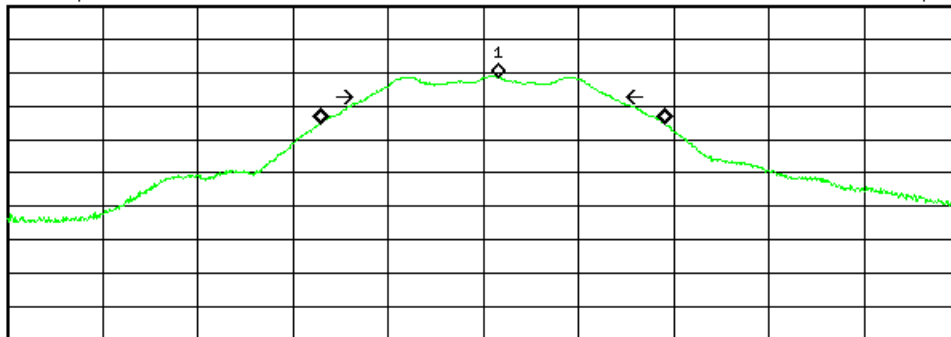
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R T

Mkr1 2.426048 GHz
72.66 dBμV

Ref 93.99 dBμV

Atten 5 dB

#Peak
Log
10
dB/

Center 2.426 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 3 MHz

Sweep 10 ms (1001 pts)

Occupied Bandwidth
1.0860 MHzOcc BW % Pwr 99.00 %
x dB -6.00 dBTransmit Freq Error 30.561 kHz
x dB Bandwidth 760.038 kHz

C:\temp.gif file saved

6dB Bandwidth – Mid Channel

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Agilent 15:59:44 Aug 5, 2016

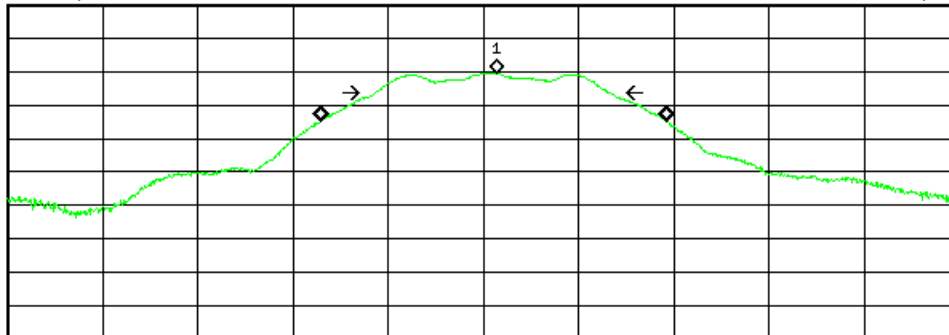
R T

Mkr1 2.480042 GHz
73.46 dBμV

Ref 93.99 dBμV

Atten 5 dB

#Peak
Log
10
dB/



Center 2.48 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 3 MHz
Sweep 10 ms (1001 pts)

Occupied Bandwidth
1.0863 MHz

Occ BW % Pwr 99.00 %
x dB -6.00 dB

Transmit Freq Error 33.631 kHz
x dB Bandwidth 743.707 kHz

C:\temp.gif file saved

6 dB Bandwidth – High Channel

Fundamental Emission Output Power**LIMIT**

Conducted Output Power

1 Watt

[15.247(b) (3)]

Per 558074 D01 DTS Measurement Guidance v03r05 Section 9.1.1 (Maximum Peak Conducted Output Power)

MEASUREMENTS / RESULTS

Radiated Emissions Table												
Date: 05-Aug-16			Company: LumiraDx						Work Order: Q2141			
Engineer: Tuyen Truong			EUT Desc: LumiraDx Wireless Module						EUT Operating Voltage/Frequency: 3Vdc			
Temp: 22.4°C			Humidity: 44%			Pressure: 1005mbar						
Frequency Range: 2402 to 2480 MHz								Measurement Distance: 3m				
Notes: LumiraDx Wireless Module (M/N: 420-00057-02/ S/N: NKET-32767-00023)												
Antenna Polarization (H / V)	Frequency (MHz)	Reading (dBμV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Reading (dBμV/m)	Adjusted ERP Reading (dBm)	Antenna Gain (dbi)	Final Reading (dBm)	FCC 15.247		
										Limit (dBm)	Margin (dB)	Result (Pass/Fail)
h	2402.0	74.3	19.9	32.3	3.6	90.3	-4.9	-0.5	-4.4	30.0	-34.4	Pass
h	2426.0	74.8	20.0	32.3	3.6	90.7	-4.5	-0.5	-4.0	30.0	-34.0	Pass
h	2480.0	75.6	20.2	32.4	3.6	91.4	-3.8	-0.5	-3.3	30.0	-33.3	Pass
Table Result: Pass by -33.3 dB Worst Freq: 2480.0 MHz												
Test Site: EMI Chamber 2			Cable 1: Asset #2052			Cable 2: Asset #1507			Cable 3: ---			
Analyzer: Gold			Preamp: Asset #1517			Antenna: Blue Horn			Preselector: ---			
CSsoft Radiated Emissions Calculator v 1.017.165												
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor												
Copyright Curtis-Straus LLC 2000												

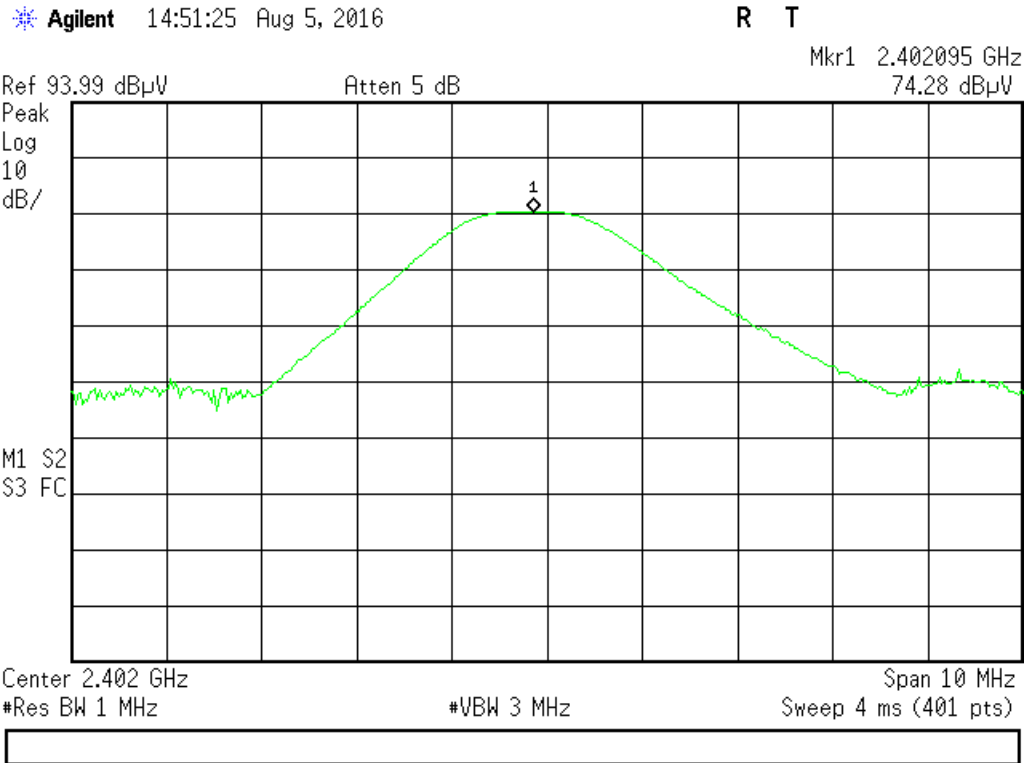
Rev. 8/4/2016

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
Preamps / Couplers Attenuators / Filters	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
1517 HF Preamp	1-20GHz	CS	CS	N/A	1517	II	8/6/2016	8/6/2015
Antennas	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Blue Horn	1-18Ghz	3117	ETS	157647	1861	I	2/8/2017	2/8/2015
Meteorological Meters		MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	4/28/2018	4/28/2016
TH A#2081		HTC-1	HDE		2081	II	4/5/2017	4/5/2016
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #1507	9kHz - 18GHz		Florida RF			II	2/14/2017	2/14/2016
Asset #2052	9kHz - 18GHz		Florida RF			II	3/2/2017	3/2/2016

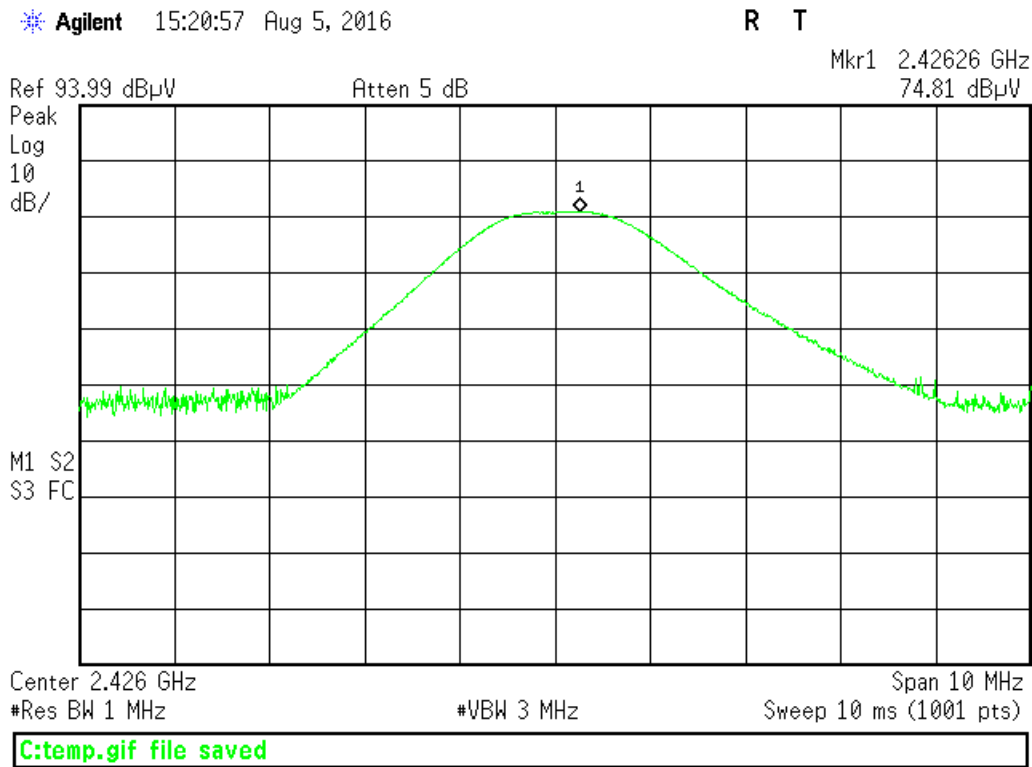
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.



PLOTS



Fundamental Emission Output Power - Low Channel



Fundamental Emission Output Power – Mid Channel

Agilent 15:49:05 Aug 5, 2016

R T

Mkr1 2.48028 GHz
75.58 dBμV

Ref 93.99 dBμV

Atten 5 dB

Peak
Log
10
dB/M1 S2
S3 FC

Center 2.48 GHz

#Res BW 1 MHz

#VBW 3 MHz

Span 10 MHz

#Sweep 555 ms (1001 pts)

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Fundamental Emission Output Power – High Channel

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 Emissions Table - Band Edge														
Date: 05-Aug-16			Company: LumiraDx						Work Order: Q2141					
Engineer: Tuyen Truong			EUT Desc: LumiraDx Wireless Module						EUT Operating Voltage/Frequency: 3Vdc					
Temp: 22.4°C			Humidity: 44%						Pressure: 1005mbar					
Frequency Range: 2400 to 2483.5 MHz									Measurement Distance: 3m					
Notes: LumiraDx Wireless Module (M/N: 420-00057-02/ S/N: NKET-32767-00023)									EUT TX Freq: 2402 to 2480 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	2390.0	37.74	26.2	19.9	32.3	3.5	53.6	42.1	74.0	-20.4	Pass	54.0	-11.9	Pass
h	2400.0	52.32	31.4	19.9	32.3	3.6	68.3	47.4	74.0	-5.7	Pass	54.0	-6.6	Pass
h	2483.5	45.3	28.4	20.2	32.4	3.6	61.1	44.2	74.0	-12.9	Pass	54.0	-9.8	Pass
Table Result:				Pass				by		-5.7 dB		Worst Freq: 2400.0 MHz		
Test Site: EMI Chamber 2				Cable 1: Asset #2052				Cable 2: Asset #1507				Cable 3: ---		
Analyzer: Gold				Preamp: Asset #1517				Antenna: Blue Horn				Preselector: ---		
CSsoft Radiated Emissions Calculator v 1.017.165														
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor														
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Spectrum Analyzers / Receivers / Preselectors		Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
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
Preamps / Couplers Attenuators / Filters		Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
1517 HF Preamp		1-20GHz	CS	CS	N/A	1517	II	8/6/2016	8/6/2015
Antennas		Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Blue Horn		1-18GHz	3117	ETS	157647	1861	I	2/8/2017	2/8/2015
Meteorological Meters			MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)			BA928	Oregon Scientific	C3166-1	831	I	4/28/2018	4/28/2016
TH A#2081			HTC-1	HDE		2081	II	4/5/2017	4/5/2016
Cables		Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #1507		9kHz - 18GHz		Florida RF			II	2/14/2017	2/14/2016
Asset #2052		9kHz - 18GHz		Florida RF			II	3/2/2017	3/2/2016

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

Radiated Emissions Table												
Date: 17-Aug-16			Company: LumiraDx						Work Order: Q2141			
Engineer: Chris Bramley			EUT Desc: LumiraDx Wireless Module						EUT Operating Voltage/Frequency: 3Vdc			
Temp: 24.2°C			Humidity: 44%			Pressure: 1006mBar						
Frequency Range: 30-1000MHz								Measurement Distance: 3 m				
Notes: EUT is frequency hopping between Low(2402MHz), Mid(2426MHz), and High(2480MHz) Channels								EUT TX Freq: 2402 to 2480 MHz				
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	32.0	20.8	25.5	20.0	0.4	15.7				40.0	-24.3	Pass
v	48.0	22.9	25.5	9.2	0.4	7.0				40.0	-33.0	Pass
v	64.0	21.7	25.6	8.0	0.6	4.7				40.0	-35.3	Pass
v	75.0	22.4	25.5	9.1	0.6	6.6				40.0	-33.4	Pass
v	125.0	25.3	25.5	14.4	0.9	15.1				43.5	-28.4	Pass
h	212.0	25.6	25.7	10.6	1.0	11.5				43.5	-32.0	Pass
Table Result: Pass by -24.3 dB Worst Freq: 32.0 MHz												
Test Site: EMI Chamber 2			Cable 1: Asset #2052						Cable 2: Asset #1507			
Analyzer: Gold			Preamp: Green						Antenna: Red-Black			
CSsoft Radiated Emissions Calculator v 1.017.168												
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor												
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Rev. 8/14/2016

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
Radiated Emissions Sites EMI Chamber 2	FCC Code 719150	IC Code 2762A-7	VCCI Code A-0015	Range 30-1000MHz		Cat II	Calibration Due 3/22/2017	Calibrated on 3/22/2015
Preamps / Couplers Attenuators / Filters Green	Range 0.009-2000MHz	MN ZFL-1000-LN	Mfr CS	SN N/A	Asset 802	Cat II	Calibration Due 9/17/2016	Calibrated on 9/17/2015
Antennas Red-Black Bilog	Range 30-2000MHz	MN JB1	Mfr Sunol	SN A091604-2	Asset 1106	Cat I	Calibration Due 2/9/2017	Calibrated on 2/9/2015
Meteorological Meters Weather Clock (Pressure Only) TH A#2081		MN BA928 HTC-1	Mfr Oregon Scientific HDE	SN C3166-1	Asset 831 2081	Cat I II	Calibration Due 4/28/2018 4/5/2017	Calibrated on 4/28/2016 4/5/2016
Cables Asset #1507 Asset #2052	Range 9kHz - 18GHz 9kHz - 18GHz		Mfr Florida RF Florida RF			Cat II II	Calibration Due 2/14/2017 3/2/2017	Calibrated on 2/14/2016 3/2/2016

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

Radiated Emissions Table										Work Order: Q2141				
Date: 19-Aug-16				Company: LumiraDx				EUT Operating Voltage/Frequency: Battery (3Vdc)						
Engineer: Tuyen Truong				EUT Desc: LumiraDx Wireless Module				Pressure: 1006mBar						
Temp: 24.5°C				Humidity: 44%				Measurement Distance: 3m(1 to 6GHz) & 1m(6 to 18 GHz)						
Frequency Range: 1 to 18 GHz								EUT Tx Freq: 2402 to 2480 MHz						
Notes: Low Channel														
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)
v	4804.0	37.2	22.5	18.6	34.4	5.9	58.9	44.2	74.0	-15.1	Pass	54.0	-9.8	Pass
Table Result:				Pass by -9.8 dB				Worst Freq: 4804.0 MHz						
Test Site: EMI Chamber 1				Cable 1: Asset #2051				Cable 2: Asset #1784				Cable 3: ---		
Analyzer: Gold				Preamp: Asset #1517				Antenna: Blue Horn				Preselector: ---		
CSsoft Radiated Emissions Calculator v 1.017.169														
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor														
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Radiated Emissions Table										Work Order: Q2141					
Date: 19-Aug-16				Company: LumiraDx				EUT Operating Voltage/Frequency: Battery (3Vdc)							
Engineer: Tuyen Truong				EUT Desc: LumiraDx Wireless Module				Pressure: 1006mBar							
Temp: 24.5°C				Humidity: 44%				Measurement Distance: 3m(1 to 6GHz) & 1m(6 to 18 GHz)							
Frequency Range: 1 to 18 GHz										EUT Tx Freq: 2402 to 2480 MHz					
Notes: Mid Channel															
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)	
v	4852.0	35.43	22.4	18.7	34.4	5.9	57.0	44.0	74.0	-17.0	Pass	54.0	-10.0	Pass	
Table Result:				Pass by -10.0 dB				Worst Freq:				4852.0 MHz			
Test Site: EMI Chamber 1				Cable 1: Asset #2051				Cable 2: Asset #1784				Cable 3: ---			
Analyzer: Gold				Preamp: Asset #1517				Antenna: Blue Horn				Preselector: ---			
CSsoft Radiated Emissions Calculator v 1.017.169															
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor															
Copyright Curtis-Straus LLC 2000															

Radiated Emissions Table										Work Order: Q2141					
Date: 19-Aug-16				Company: LumiraDx						EUT Operating Voltage/Frequency: Battery (3Vdc)					
Engineer: Tuyen Truong				EUT Desc: LumiraDx Wireless Module						Pressure: 1006mBar					
Temp: 24.5°C				Humidity: 44%						Measurement Distance: 3m(1 to 6GHz) & 1m(6 to 18 GHz)					
Frequency Range: 1 to 18 GHz										EUT Tx Freq: 2402 to 2480 MHz					
Notes: High channel															
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 15.209 High Frequency - Peak			FCC 15.209 High Frequency - Average			
									Limit (dBuV/m)	Margin (dB)	Result (Pass/Fail)	Limit (dBuV/m)	Margin (dB)	Result (Pass/Fail)	
v	4960.0	35.12	21.7	18.6	34.4	6.3	57.2	43.8	74.0	-16.8	Pass	54.0	-10.2	Pass	
Table Result:				Pass by -10.2 dB						Worst Freq: 4960.0 MHz					
Test Site: EMI Chamber 1				Cable 1: Asset #2051						Cable 2: Asset #1784			Cable 3: ---		
Analyzer: Gold				Preamp: Asset #1517						Antenna: Blue Horn			Preselector: ---		
CSsoft Radiated Emissions Calculator v 1.017.169															
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor															
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BUREAU
VERITAS

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Rev. 8/17/2016

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
Radiated Emissions Sites EMI Chamber 1	FCC Code 719150	IC Code 2762A-6	VCCI Code A-0015	Range 1-18GHz		Cat I	Calibration Due 5/23/2017	Calibrated on 5/23/2015
Preamps / Couplers Attenuators / Filters 1517 HF Preamp	Range 1-20GHz	MN CS	Mfr CS	SN N/A	Asset 1517	Cat II	Calibration Due 8/14/2017	Calibrated on 8/14/2016
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
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 4/28/2018 4/5/2017	Calibrated on 4/28/2016 4/5/2016
Cables Asset #1784 Asset #2051	Range 9kHz - 18GHz 9kHz - 18GHz		Mfr Florida RF Florida RF			Cat II II	Calibration Due 3/7/2017 3/2/2017	Calibrated on 3/7/2016 3/2/2016

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

Radiated Emissions Table

Date: 19-Aug-16		Company: LumiraDx		Work Order: Q2141								
Engineer: Tuyen Truong		EUT Desc: LumiraDx Wireless Module		EUT Operating Voltage/Frequency: Battery (3Vdc)								
Temp: 24.5°C		Humidity: 44%		Pressure: 1006mBar								
Frequency Range: 18 to 25 GHz				Measurement Distance: 5cm								
Notes:				EUT Tx Freq: 2402 to 2480 MHz								
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)
No emissions found in this range												
Table Result: --- by --- dB Worst Freq: --- MHz												
Test Site: EMI Chamber 1		Cable 1: High #7		Cable 2: --		Cable 3: ---						
Analyzer: Gold		Preamp: High Yellow PA		Antenna: High White Horn		Preselector: ---						
CSsoft Radiated Emissions Calculator v 1.017.169 Copyright Curtis-Straus LLC 2000												
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor												

Rev. 8/21/2016

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
Radiated Emissions Sites EMI Chamber 1	FCC Code 719150	IC Code 2762A-6	VCCI Code A-0015	Range 1-18GHz		Cat I	Calibration Due 5/23/2017	Calibrated on 5/23/2015
Preamps / Couplers Attenuators / Filters HF (Yellow)	Range 18-26.5GHz	MN AFS4-18002650-60-8P-4	Mfr CS	SN 467559	Asset 1266	Cat II	Calibration Due 3/8/2017	Calibrated on 3/8/2016
Antennas HF (White) Horn	Range 18-26.5GHz	MN 801-WLM	Mfr Waveline	SN 758	Asset 758	Cat III	Calibration Due Verify before Use	Calibrated on date of test
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 4/28/2018 4/5/2017	Calibrated on 4/28/2016 4/5/2016
Cables REMI-High-07	Range 1 - 26.5GHz	MN TRU-21B0707-120	Mfr TRU			Cat II	Calibration Due 8/14/2017	Calibrated on 8/14/2016

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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 v03r05 Section 10.2 Method Peak PSD

MEASUREMENTS / RESULTS

Radiated Emissions Table												
Date: 05-Aug-16			Company: LumiraDx						Work Order: Q2141			
Engineer: Tuyen Truong			EUT Desc: LumiraDx Wireless Module						EUT Operating Voltage/Frequency: 3Vdc			
Temp: 22.4°C			Humidity: 44%			Pressure: 1005mbar						
Frequency Range: 2402 to 2480 MHz									Measurement Distance: 3m			
Notes: LumiraDx Wireless Module (M/N: 420-00057-02/ S/N: NKET-32767-00023)												
Antenna Polarization (H/V)	Frequency (MHz)	Reading (dBμV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Reading (dBμV/m)	Adjusted BRP Reading (dBm)	Antenna Gain (dbi)	Final Reading (dBm)	FCC 15.247		
										Lim it (dBm)	Margin (dB)	Result (Pass/Fail)
h	2402.0	61.3	19.9	32.3	3.6	77.3	-17.9	-0.5	-17.4	8.0	-25.4	Pass
h	2426.0	61.5	20.0	32.3	3.6	77.4	-17.8	-0.5	-17.3	8.0	-25.3	Pass
h	2480.0	62.3	20.2	32.4	3.6	78.1	-17.1	-0.5	-16.6	8.0	-24.6	Pass
Table Result: Pass by -24.6 dB Worst Freq: 2480.0 MHz												
Test Site: EMI Chamber 2			Cable 1: Asset #2052					Cable 2: Asset #1507		Cable 3: ---		
Analyzer: Gold			Preamp: Asset #1517					Antenna: Blue Horn		Preselector: ---		
CSsoft Radiated Emissions Calculator v 1.017.165												
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor												
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Rev. 8/4/2016

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
Preamps / Couplers Attenuators / Filters	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
1517 HF Preamp	1-20GHz	CS	CS	N/A	1517	II	8/6/2016	8/6/2015
Antennas	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Blue Horn	1-18GHz	3117	ETS	157647	1861	I	2/8/2017	2/8/2015
Meteorological Meters		MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	4/28/2018	4/28/2016
TH A#2081		HTC-1	HDE		2081	II	4/5/2017	4/5/2016
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #1507	9kHz - 18GHz		Florida RF			II	2/14/2017	2/14/2016
Asset #2052	9kHz - 18GHz		Florida RF			II	3/2/2017	3/2/2016

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



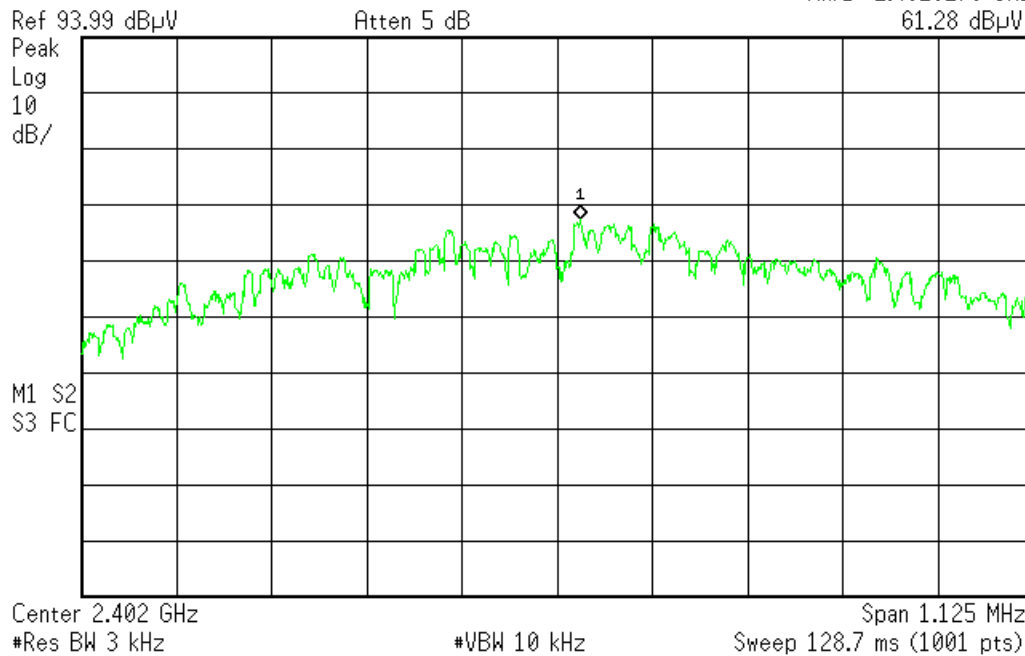
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PLOTS

* Agilent 15:08:11 Aug 5, 2016

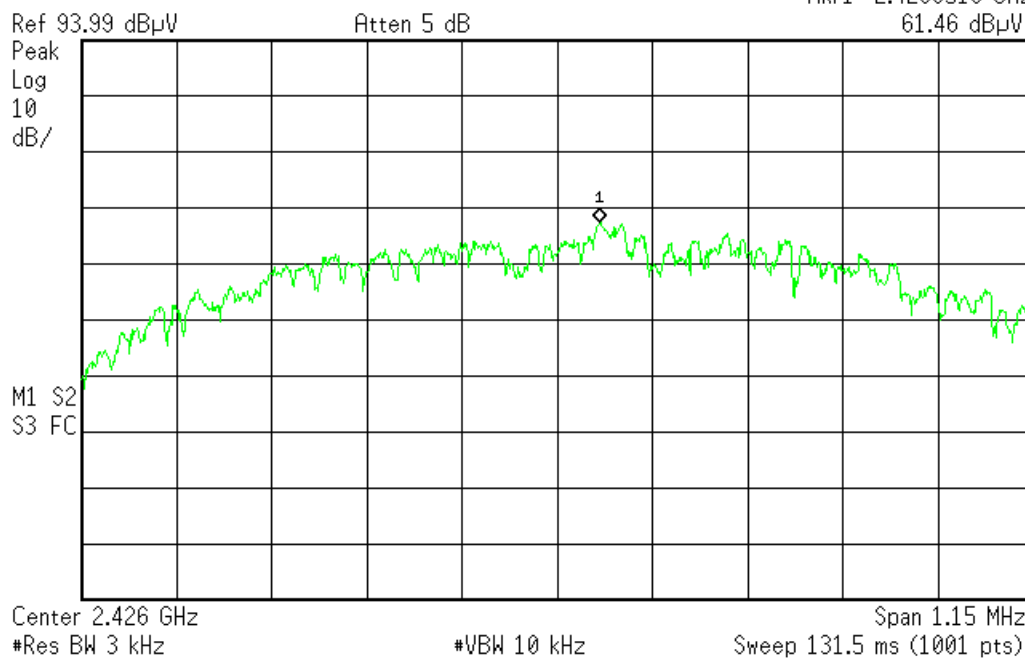
R T

Mkr1 2.4020270 GHz
61.28 dBμV

Power Spectral Density – Low Channel

* Agilent 15:33:55 Aug 5, 2016

R T

Mkr1 2.4260518 GHz
61.46 dBμV

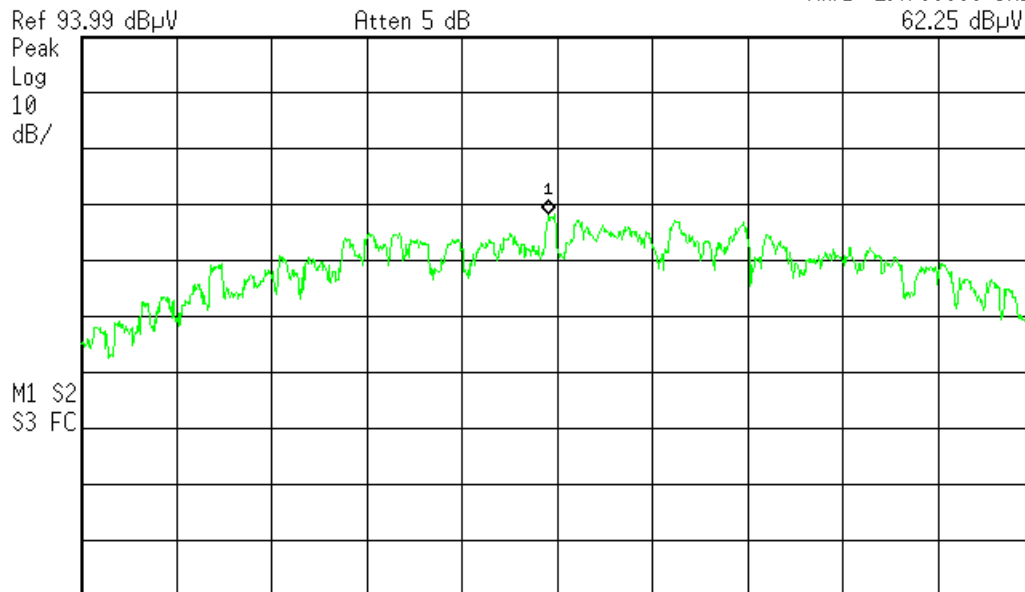
Power Spectral Density – Mid Channel



Agilent 16:06:44 Aug 5, 2016

R T

Mkr1 2.4799888 GHz
62.25 dBμV



Center 2.48 GHz Span 1.125 MHz
#Res BW 3 kHz #VBW 10 kHz Sweep 128.7 ms (1001 pts)

C:\temp.gif file saved

Power Spectral Density – High Channel

AC Line Conducted Emissions LIMITS

Frequency of emission (MHz)	Quasi-peak limit (dB μ V)	Average limit (dB μ V)
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

N/A since the EUT is battery powered.

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: 05-Aug-16		Company: LumiraDx		Work Order: Q2141
Engineer: Tuyen Truong		EUT Desc: LumiraDx Wireless Module		EUT Operating Voltage/Frequency: 3Vdc
Temp: 22.4°C		Humidity: 44%	Pressure: 1005mbar	
Frequency Range: 2402 to 2480 MHz			Measurement Distance: 3m	
Notes: LumiraDx Wireless Module (M/N: 420-00057-02/ S/N: NKET-32767-00023)				
Antenna Polarization (H / V)	Frequency (MHz)	Occupied Bandwidth Reading (KHz)		
V	2402	1034.1		
V	2426	1015.6		
V	2480	1011.2		
Test Site: EMI Chamber 2		Cable 1: Asset #2052	Cable 2: Asset #1507	Cable 3: ---
Analyzer: Gold		Preamp: Asset #1517	Antenna: Blue Horn	Preselector: ---
CSsoft Radiated Emissions Calculator v 1.017.165		Copyright Curtis-Straus LLC 2000		
Adjusted Reading = Reading - Preamp Factor + Antenna Factor + Cable Factor				

Rev. 8/4/2016

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
Preamps/Couplers Attenuators / Filters	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
1517 HF Preamp	1-20GHz	CS	CS	N/A	1517	II	8/6/2016	8/6/2015
Antennas	Range	MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Blue Horn	1-18Ghz	3117	ETS	157647	1861	I	2/8/2017	2/8/2015
Meteorological Meters		MN	Mfr	SN	Asset	Cat	Calibration Due	Calibrated on
Weather Clock (Pressure Only)		BA928	Oregon Scientific	C3166-1	831	I	4/28/2018	4/28/2016
TH A#2081		HTC-1	HDE		2081	II	4/5/2017	4/5/2016
Cables	Range		Mfr			Cat	Calibration Due	Calibrated on
Asset #1507	9kHz - 18GHz		Florida RF			II	2/14/2017	2/14/2016
Asset #2052	9kHz - 18GHz		Florida RF			II	3/2/2017	3/2/2016

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



Plot(s)

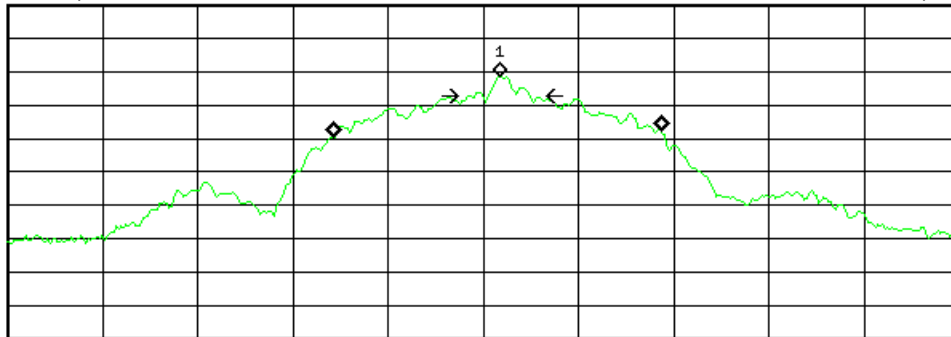
Agilent 15:00:11 Aug 5, 2016

R T

Mkr1 2.4020525 GHz
72.67 dBμV

Ref 93.99 dBμV

Atten 5 dB

#Peak
Log
10
dB/

Center 2.402 GHz

#Res BW 30 kHz

#VBW 100 kHz

Span 3 MHz

Sweep 5 ms (401 pts)

Occupied Bandwidth
1.0341 MHzOcc BW % Pwr 99.00 %
x dB -6.00 dBTransmit Freq Error 43.891 kHz
x dB Bandwidth 175.983 kHz

C:\temp.gif file saved

Occupied BW - Low Channel

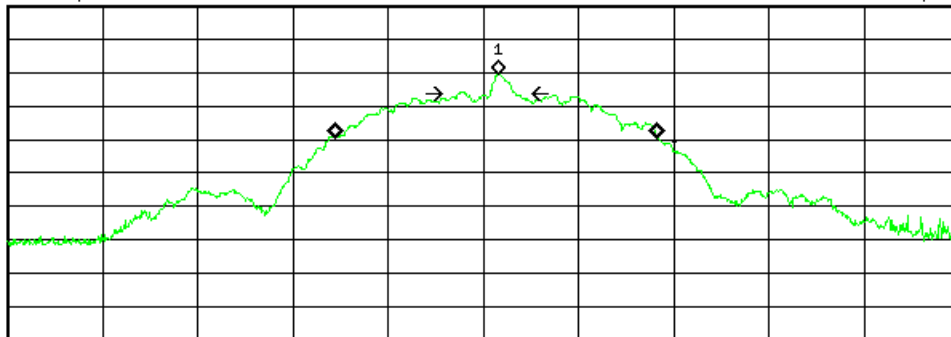
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R T

Mkr1 2.426048 GHz
73.51 dBμV

Ref 93.99 dBμV

Atten 5 dB

#Peak
Log
10
dB/

Center 2.426 GHz

#Res BW 30 kHz

#VBW 100 kHz

Span 3 MHz

#Sweep 1 s (1001 pts)

Occupied Bandwidth
1.0156 MHzOcc BW % Pwr 99.00 %
x dB -6.00 dBTransmit Freq Error 40.890 kHz
x dB Bandwidth 179.317 kHz

C:\temp.gif file saved

Occupied BW - Mid Channel

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✱ Agilent 15:55:00 Aug 5, 2016

R T

Mkr1 2.480042 GHz
73.64 dBμV

Ref 93.99 dBμV

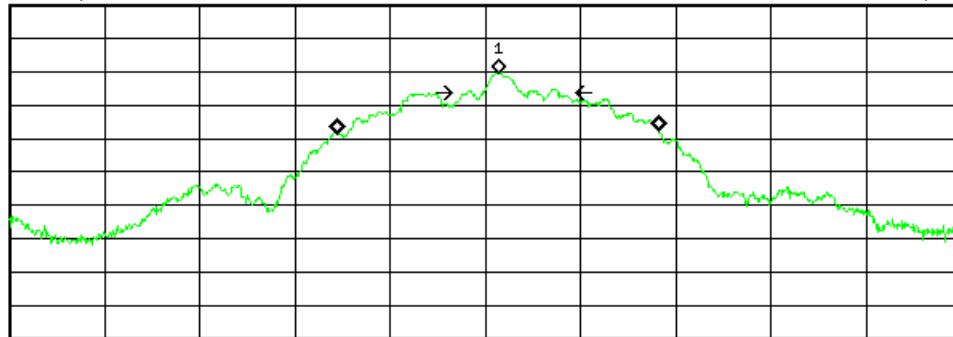
Atten 5 dB

#Peak

Log

10

dB/



Center 2.48 GHz

#Res BW 30 kHz

#VBW 100 kHz

Span 3 MHz

Sweep 10 ms (1001 pts)

Occupied Bandwidth
1.0112 MHzOcc BW % Pwr 99.00 %
x dB -6.00 dBTransmit Freq Error 41.579 kHz
x dB Bandwidth 289.475 kHz

C:\temp.gif file saved

Occupied BW - High Channel

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)	5.6dB	N/A
NIST	4.6dB	5.2dB (Ucisp)
CISPR		
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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