

# NORTHWEST EMC

## Sensogram Technologies, Inc.

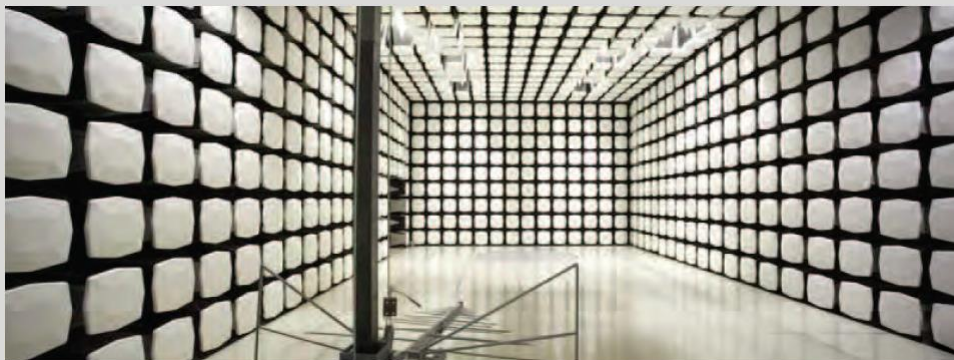
SensoSCAN

Model S-300

FCC 15.207:2015

FCC 15.247:2015

Report # SNSO0001.2



NVLAP Lab Code: 201049-0

*This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America. This Report may only be duplicated in its entirety*

# CERTIFICATE OF TEST

Last Date of Test: October 02, 2015  
Sensogram Technologies, Inc.  
Model: SensoSCAN

## Radio Equipment Testing

### Standards

Specification	Method
FCC 15.207:2015	ANSI C63.10:2013
FCC 15.247:2015	ANSI C63.10:2013

### Results

Method Clause	Test Description	Applied	Results	Comments
6.2	Powerline Conducted Emissions	Yes	Pass	
6.5, 6.6, 11.12.1, 11.13.2	Spurious Radiated Emissions	Yes	Pass	
6.10.4	Band Edge Compliance	Yes	Pass	
11.6	Duty Cycle	Yes	Pass	
11.8.2	Occupied Bandwidth	Yes	Pass	
11.9	Output Power	Yes	Pass	
11.10	Power Spectral Density	Yes	Pass	
11.11	Spurious Conducted Emissions	Yes	Pass	

### Deviations From Test Standards

None

### Approved By:



Jeremiah Darden, Operations Manager

*Product compliance is the responsibility of the client; therefore, the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test. This report reflects only those tests from the referenced standards shown in the certificate of test. It does not include inspection or verification of labels, identification, marking or user information.*

# REVISION HISTORY

Revision Number		Description	Date	Page Number
00		None		

# ACCREDITATIONS AND AUTHORIZATIONS

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## United States

**FCC** - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

**A2LA** - Accredited by A2LA to ISO / IEC 17065 as a product certifier. This allows Northwest EMC to certify transmitters to FCC and IC specifications.

**NVLAP** - Each laboratory is accredited by NVLAP to ISO 17025

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## Canada

**IC** - Recognized by Industry Canada as a Certification Body (CB). Certification chambers and Open Area Test Sites are filed with IC.

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## European Union

**European Commission** – Validated by the European Commission as a Conformity Assessment Body (CAB) under the EMC directive and as a Notified Body under the R&TTE Directive.

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## Australia/New Zealand

**ACMA** - Recognized by ACMA as a CAB for the acceptance of test data.

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## Korea

**MSIP / RRA** - Recognized by KCC's RRA as a CAB for the acceptance of test data.

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## Japan

**VCCI** - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

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## Taiwan

**BSMI** – Recognized by BSMI as a CAB for the acceptance of test data.

**NCC** - Recognized by NCC as a CAB for the acceptance of test data.

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## Singapore

**IDA** – Recognized by IDA as a CAB for the acceptance of test data.

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## Israel

**MOC** – Recognized by MOC as a CAB for the acceptance of test data.

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## Hong Kong

**OFCA** – Recognized by OFCA as a CAB for the acceptance of test data.

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## Vietnam

**MIC** – Recognized by MIC as a CAB for the acceptance of test data.

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## SCOPE

For details on the Scopes of our Accreditations, please visit:

<http://www.nwemc.com/accreditations/>  
<http://gsi.nist.gov/global/docs/cabs/designations.html>

# MEASUREMENT UNCERTAINTY

## Measurement Uncertainty

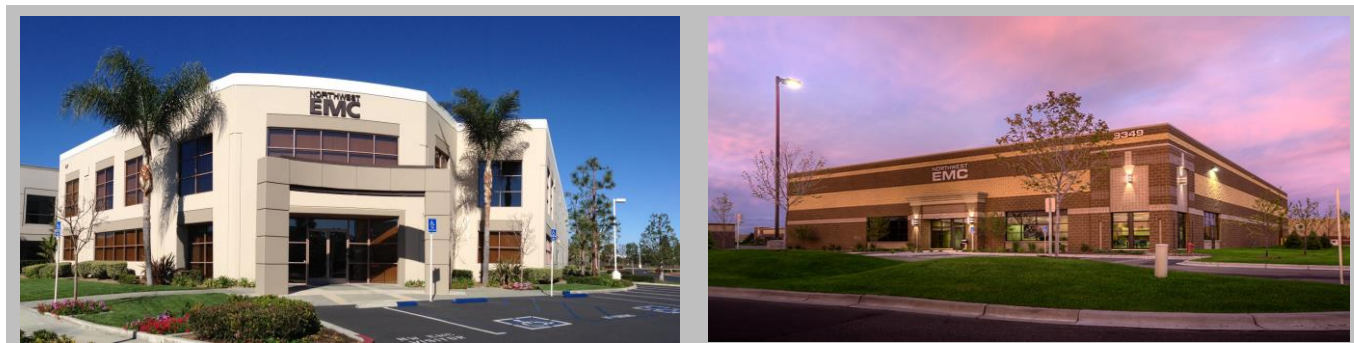
When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) for each test is on each data sheet. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-2 as applicable), and are available upon request.

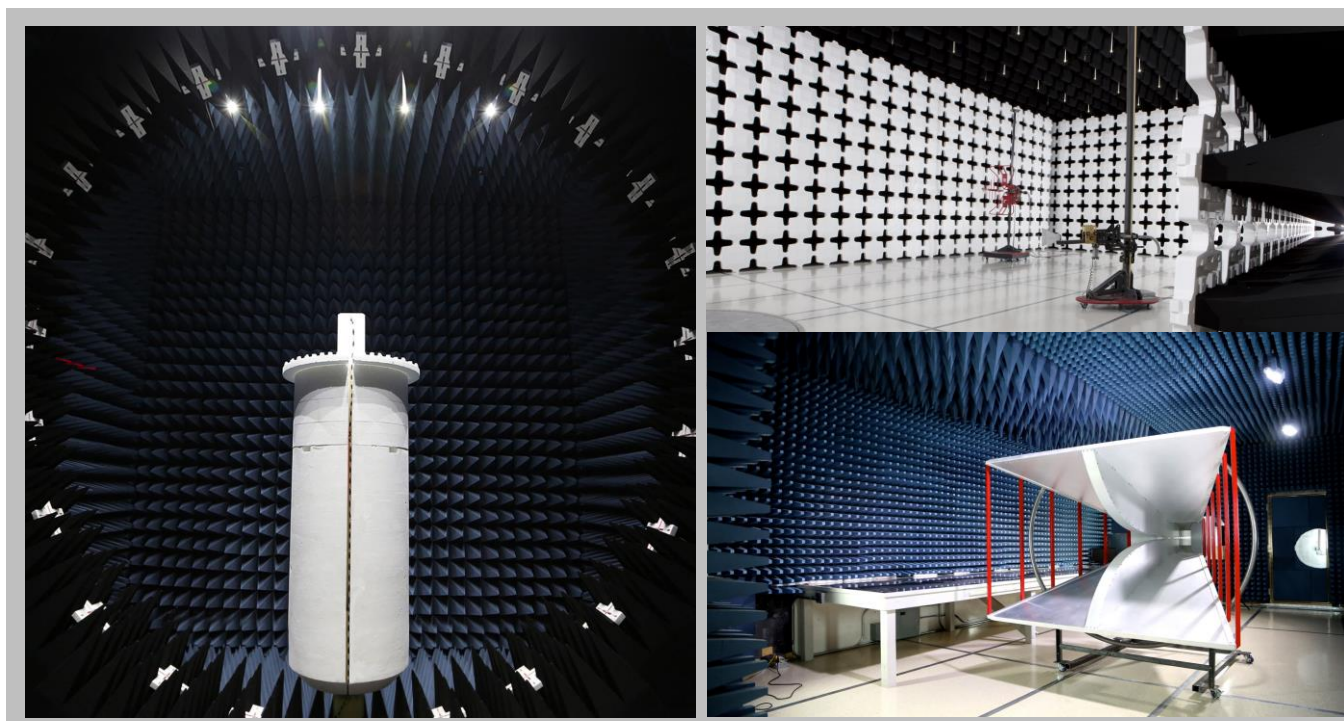
The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

<b>Test</b>	<b>+ MU</b>	<b>- MU</b>
Frequency Accuracy (Hz)	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	0.3 dB	-0.3 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%
Field Strength (dB)	4.9 dB	-4.9 dB
AC Powerline Conducted Emissions (dB)	2.4 dB	-2.4 dB

# FACILITIES



<b>California</b> Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	<b>Minnesota</b> Labs MN01-08, MN10 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	<b>New York</b> Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 554-8214	<b>Oregon</b> Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	<b>Texas</b> Labs TX01-09 3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255	<b>Washington</b> Labs NC01-05 19201 120 <sup>th</sup> Ave NE Bothell, WA 9801 (425)984-6600
<b>NVLAP</b>					
NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200630-0	NVLAP Lab Code:201049-0	NVLAP Lab Code: 200629-0
<b>Industry Canada</b>					
2834B-1, 2834B-3	2834E-1	N/A	2834D-1, 2834D-2	2834G-1	2834F-1
<b>BSMI</b>					
SL2-IN-E-1154R	SL2-IN-E-1152R	N/A	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R
<b>VCCI</b>					
A-0029	A-0109	N/A	A-0108	A-0201	A-0110
<b>Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRR, MIC, MOC, NCC, OFCA</b>					
US0158	US0175	N/A	US0017	US0191	US0157



# PRODUCT DESCRIPTION

## Client and Equipment Under Test (EUT) Information

<b>Company Name:</b>	Sensogram Technologies, Inc.
<b>Address:</b>	1400 Preston Road Suite 400
<b>City, State, Zip:</b>	Plano, TX 75093
<b>Test Requested By:</b>	Navin Bhandarkar
<b>Model:</b>	SensoSCAN
<b>First Date of Test:</b>	October 01, 2015
<b>Last Date of Test:</b>	October 02, 2015
<b>Receipt Date of Samples:</b>	October 01, 2015
<b>Equipment Design Stage:</b>	Production
<b>Equipment Condition:</b>	No Damage

## Information Provided by the Party Requesting the Test

<b>Functional Description of the EUT:</b>
Vital sensor with Bluetooth LE that provides continuous reading, transmitting, storing, and analysis of the following parameters: Blood pressure, Respiration rate, Oxygen saturation, Heart rate, and Skin temperature.
<b>Testing Objective:</b>
To demonstrate compliance of the Bluetooth LE radio to FCC 15.247 requirements.



# CONFIGURATIONS

## Configuration SNSO0001- 1

EUT					
Description	Manufacturer	Model/Part Number	Serial Number		
Finger Sensor	Sensogram Technologies, Inc.	SensoSCAN (S-300)	None		
Peripherals in test setup boundary					
Description	Manufacturer	Model/Part Number	Serial Number		
PC	Dell	Latitude E5440	GG6SVZ1		
AC/DC Adapter (PC)	Dell	LA65NM130	None		
Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Cable	No	0.7m	No	AC/DC Adapter (PC)	AC Mains
DC Cable	No	1.8m	No	PC	AC/DC Adapter (PC)
USB Cable	No	0.3m	No	Finger Sensor	PC

## Configuration SNSO0001- 4

EUT					
Description		Manufacturer	Model/Part Number	Serial Number	
Finger Sensor (Direct Connect)		Sensogram Technologies, Inc.	SensoSCAN (S-300)	None	
Peripherals in test setup boundary					
Description		Manufacturer	Model/Part Number	Serial Number	
PC		Dell	Latitude E5440	GG6SVZ1	
AC/DC Adapter (PC)		Dell	LA65NM130	None	
Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Cable	No	0.7m	No	AC/DC Adapter (PC)	AC Mains
DC Cable	No	1.8m	No	PC	AC/DC Adapter (PC)
USB Cable	No	0.3m	No	Finger Sensor	PC



# MODIFICATIONS

## Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	10/1/2015	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	10/2/2015	Spurious Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	10/2/2015	Duty Cycle	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
4	10/2/2015	Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
5	10/2/2015	Occupied Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
6	10/2/2015	Band Edge Compliance	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
7	10/2/2015	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
8	10/2/2015	Power Spectral Density	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

# POWERLINE CONDUCTED EMISSIONS

## TEST DESCRIPTION

The EUT will be powered either directly or indirectly from the AC power line. Therefore, conducted emissions measurements were made on the AC input of the EUT, or on the AC input of the device used to power the EUT. The AC power line conducted emissions were measured with the EUT operating at the lowest, the highest, and a middle channel in the operational band. The EUT was transmitting at its maximum data rate. For each mode, the spectrum was scanned from 150 kHz to 30 MHz. The test setup and procedures were in accordance with ANSI C63.10.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Receiver	Rohde & Schwarz	ESCI	ARF	6/9/2015	6/9/2016
Cable - Conducted Cable Assembly	Northwest EMC	TXA, HHZ, TQR	TXAA	5/27/2015	5/27/2016
LISN	Solar Electronics	9252-50-R-24-BNC	LJK	9/23/2015	9/23/2016

## MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	2.4 dB	-2.4 dB

## CONFIGURATIONS INVESTIGATED

SNSO0001-1

## MODES INVESTIGATED

Transmitting BLE High Channel @ 2480MHz  
Transmitting BLE Low Channel @ 2402MHz  
Transmitting BLE Mid Channel @ 2442MHz

# POWERLINE CONDUCTED EMISSIONS

EUT:	SensoSCAN	Work Order:	SNSO0001
Serial Number:	None	Date:	10/02/2015
Customer:	Sensogram Technologies, Inc.	Temperature:	23.9°C
Attendees:	None	Relative Humidity:	40.6%
Customer Project:	None	Bar. Pressure:	1022 mb
Tested By:	Frank Sun	Job Site:	TX01
Power:	USB via 110VAC/60Hz	Configuration:	SNSO0001-1

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2015	ANSI C63.10:2013

## TEST PARAMETERS

Run #:	4	Line:	High Line	Add. Ext. Attenuation (dB):	0
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## COMMENTS

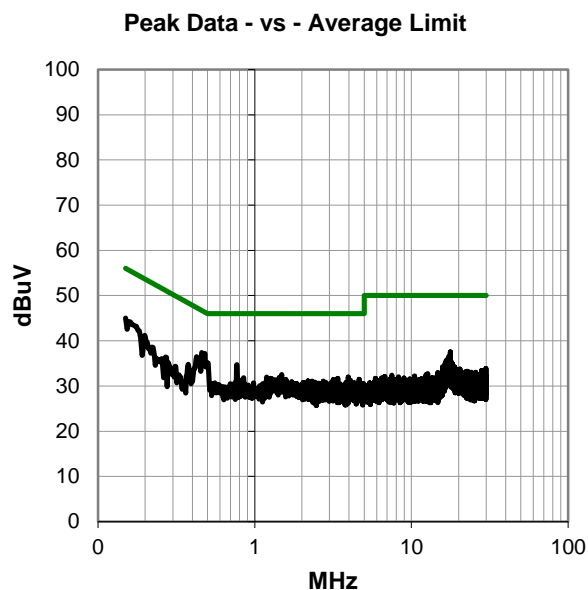
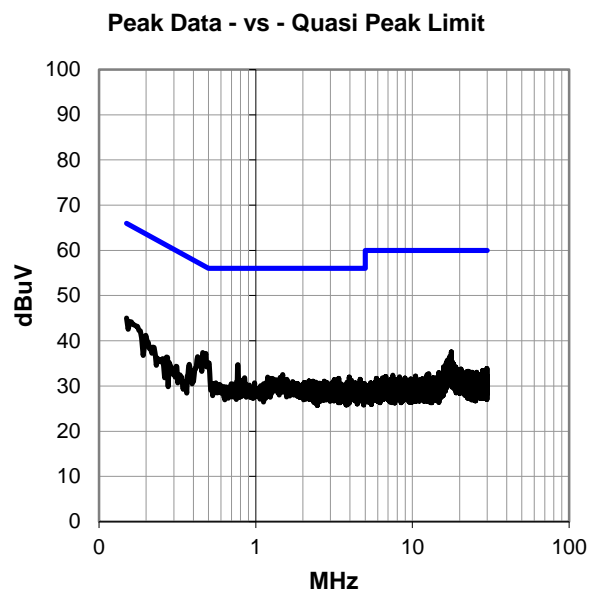
None

## EUT OPERATING MODES

Transmitting BLE Low Channel @ 2402MHz

## DEVIATIONS FROM TEST STANDARD

None



# POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #4

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.460	17.6	19.8	37.4	56.7	-19.3
0.426	16.6	19.9	36.5	57.3	-20.9
0.150	25.2	19.8	45.0	66.0	-21.0
0.769	14.9	19.8	34.7	56.0	-21.3
0.199	21.3	19.9	41.2	63.7	-22.5
17.770	16.8	20.7	37.5	60.0	-22.5
17.371	15.9	20.7	36.6	60.0	-23.4
1.486	12.7	19.8	32.5	56.0	-23.5
0.378	14.9	19.9	34.8	58.3	-23.6
1.195	12.2	19.8	32.0	56.0	-24.0
3.955	12.0	19.9	31.9	56.0	-24.1
1.433	12.1	19.8	31.9	56.0	-24.1
0.851	11.9	19.9	31.8	56.0	-24.2
16.871	15.1	20.7	35.8	60.0	-24.2
1.247	11.9	19.8	31.7	56.0	-24.3
1.280	11.9	19.8	31.7	56.0	-24.3
3.388	11.8	19.9	31.7	56.0	-24.3
1.221	11.7	19.8	31.5	56.0	-24.5
17.084	14.8	20.7	35.5	60.0	-24.5
1.583	11.7	19.8	31.5	56.0	-24.5
16.573	14.8	20.7	35.5	60.0	-24.5
17.927	14.7	20.7	35.4	60.0	-24.6
4.642	11.5	19.9	31.4	56.0	-24.6
3.172	11.5	19.9	31.4	56.0	-24.6
0.269	16.6	19.8	36.4	61.1	-24.7
0.803	11.4	19.9	31.3	56.0	-24.7

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.460	17.6	19.8	37.4	46.7	-9.3
0.426	16.6	19.9	36.5	47.3	-10.9
0.150	25.2	19.8	45.0	56.0	-11.0
0.769	14.9	19.8	34.7	46.0	-11.3
0.199	21.3	19.9	41.2	53.7	-12.5
17.770	16.8	20.7	37.5	50.0	-12.5
17.371	15.9	20.7	36.6	50.0	-13.4
1.486	12.7	19.8	32.5	46.0	-13.5
0.378	14.9	19.9	34.8	48.3	-13.6
1.195	12.2	19.8	32.0	46.0	-14.0
3.955	12.0	19.9	31.9	46.0	-14.1
1.433	12.1	19.8	31.9	46.0	-14.1
0.851	11.9	19.9	31.8	46.0	-14.2
16.871	15.1	20.7	35.8	50.0	-14.2
1.247	11.9	19.8	31.7	46.0	-14.3
1.280	11.9	19.8	31.7	46.0	-14.3
3.388	11.8	19.9	31.7	46.0	-14.3
1.221	11.7	19.8	31.5	46.0	-14.5
17.084	14.8	20.7	35.5	50.0	-14.5
1.583	11.7	19.8	31.5	46.0	-14.5
16.573	14.8	20.7	35.5	50.0	-14.5
17.927	14.7	20.7	35.4	50.0	-14.6
4.642	11.5	19.9	31.4	46.0	-14.6
3.172	11.5	19.9	31.4	46.0	-14.6
0.269	16.6	19.8	36.4	51.1	-14.7
0.803	11.4	19.9	31.3	46.0	-14.7

## CONCLUSION

Pass



Tested By

# POWERLINE CONDUCTED EMISSIONS

EUT:	SensoSCAN	Work Order:	SNSO0001
Serial Number:	None	Date:	10/02/2015
Customer:	Sensogram Technologies, Inc.	Temperature:	23.9°C
Attendees:	None	Relative Humidity:	40.6%
Customer Project:	None	Bar. Pressure:	1022 mb
Tested By:	Frank Sun	Job Site:	TX01
Power:	USB via 110VAC/60Hz	Configuration:	SNSO0001-1

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2015	ANSI C63.10:2013

## TEST PARAMETERS

Run #:	5	Line:	Neutral	Add. Ext. Attenuation (dB):	0
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## COMMENTS

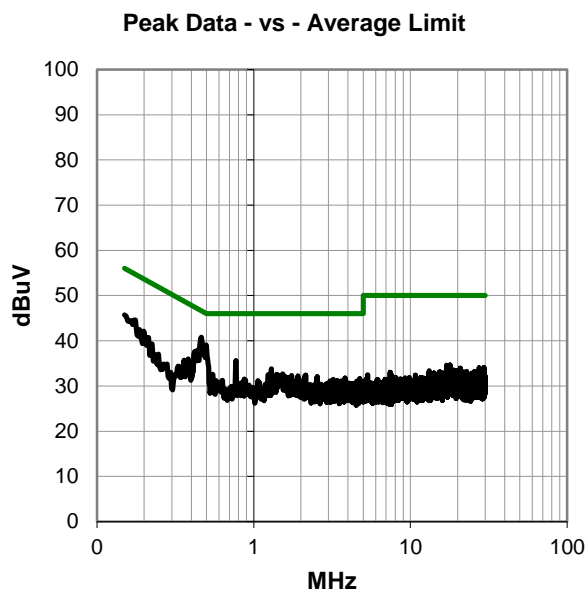
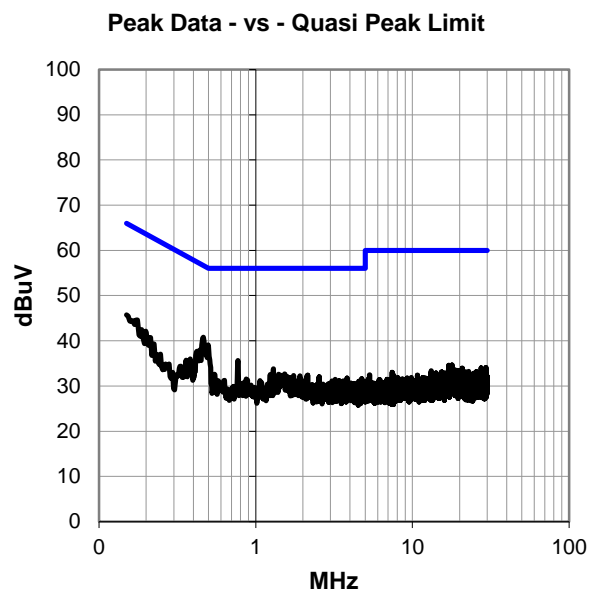
None

## EUT OPERATING MODES

Transmitting BLE Low Channel @ 2402MHz

## DEVIATIONS FROM TEST STANDARD

None



# POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #5

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.463	21.0	19.8	40.8	56.6	-15.9
0.150	25.9	19.8	45.7	66.0	-20.3
0.769	15.8	19.8	35.6	56.0	-20.4
1.295	14.0	19.8	33.8	56.0	-22.2
0.381	16.1	19.9	36.0	58.3	-22.3
0.359	15.8	19.9	35.7	58.8	-23.1
1.530	12.9	19.8	32.7	56.0	-23.3
1.400	12.8	19.8	32.6	56.0	-23.4
0.545	12.8	19.8	32.6	56.0	-23.4
1.236	12.7	19.8	32.5	56.0	-23.5
2.146	12.5	19.9	32.4	56.0	-23.6
1.747	12.5	19.8	32.3	56.0	-23.7
1.915	12.4	19.8	32.2	56.0	-23.8
2.120	12.3	19.9	32.2	56.0	-23.8
1.269	12.3	19.8	32.1	56.0	-23.9
2.541	12.2	19.9	32.1	56.0	-24.0
1.683	12.1	19.8	31.9	56.0	-24.1
3.829	11.8	19.9	31.7	56.0	-24.3
2.523	11.8	19.9	31.7	56.0	-24.4
4.750	11.7	19.9	31.6	56.0	-24.4
0.870	11.6	19.9	31.5	56.0	-24.5
3.213	11.6	19.9	31.5	56.0	-24.5
1.948	11.6	19.8	31.4	56.0	-24.6
0.631	11.5	19.8	31.3	56.0	-24.7
3.407	11.3	19.9	31.2	56.0	-24.8
1.064	11.4	19.8	31.2	56.0	-24.8

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.463	21.0	19.8	40.8	46.6	-5.9
0.150	25.9	19.8	45.7	56.0	-10.3
0.769	15.8	19.8	35.6	46.0	-10.4
1.295	14.0	19.8	33.8	46.0	-12.2
0.381	16.1	19.9	36.0	48.3	-12.3
0.359	15.8	19.9	35.7	48.8	-13.1
1.530	12.9	19.8	32.7	46.0	-13.3
1.400	12.8	19.8	32.6	46.0	-13.4
0.545	12.8	19.8	32.6	46.0	-13.4
1.236	12.7	19.8	32.5	46.0	-13.5
2.146	12.5	19.9	32.4	46.0	-13.6
1.747	12.5	19.8	32.3	46.0	-13.7
1.915	12.4	19.8	32.2	46.0	-13.8
2.120	12.3	19.9	32.2	46.0	-13.8
1.269	12.3	19.8	32.1	46.0	-13.9
2.541	12.2	19.9	32.1	46.0	-14.0
1.683	12.1	19.8	31.9	46.0	-14.1
3.829	11.8	19.9	31.7	46.0	-14.3
2.523	11.8	19.9	31.7	46.0	-14.4
4.750	11.7	19.9	31.6	46.0	-14.4
0.870	11.6	19.9	31.5	46.0	-14.5
3.213	11.6	19.9	31.5	46.0	-14.5
1.948	11.6	19.8	31.4	46.0	-14.6
0.631	11.5	19.8	31.3	46.0	-14.7
3.407	11.3	19.9	31.2	46.0	-14.8
1.064	11.4	19.8	31.2	46.0	-14.8

## CONCLUSION

Pass



Tested By

# POWERLINE CONDUCTED EMISSIONS

EUT:	SensoSCAN	Work Order:	SNSO0001
Serial Number:	None	Date:	10/02/2015
Customer:	Sensogram Technologies, Inc.	Temperature:	23.9°C
Attendees:	None	Relative Humidity:	40.6%
Customer Project:	None	Bar. Pressure:	1022 mb
Tested By:	Frank Sun	Job Site:	TX01
Power:	USB via 110VAC/60Hz	Configuration:	SNSO0001-1

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2015	ANSI C63.10:2013

## TEST PARAMETERS

Run #:	6	Line:	High Line	Add. Ext. Attenuation (dB):	0
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## COMMENTS

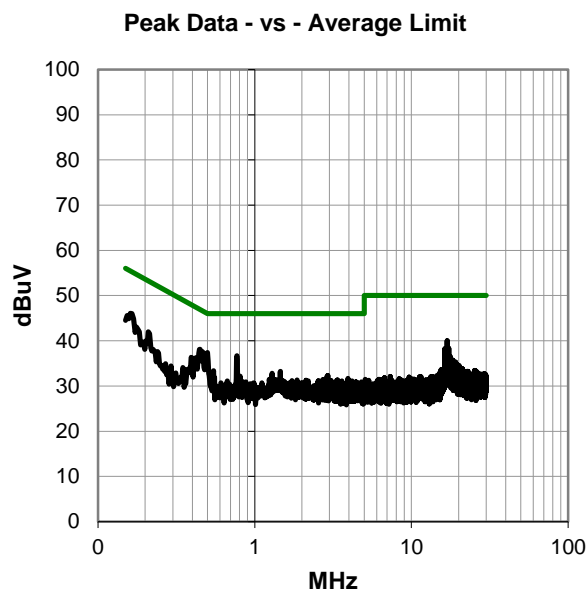
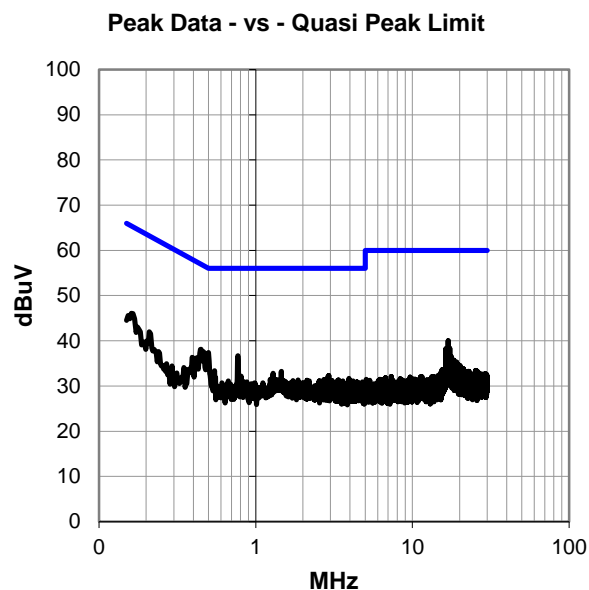
None

## EUT OPERATING MODES

Transmitting BLE Mid Channel @ 2442MHz

## DEVIATIONS FROM TEST STANDARD

None





# POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #6

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.501	17.6	19.8	37.4	56.0	-18.6
0.445	18.3	19.8	38.1	57.0	-18.9
0.769	16.9	19.8	36.7	56.0	-19.3
0.161	26.2	19.9	46.1	65.4	-19.3
16.927	19.3	20.7	40.0	60.0	-20.0
0.210	22.1	19.9	42.0	63.2	-21.2
0.393	16.5	19.9	36.4	58.0	-21.7
17.338	17.6	20.7	38.3	60.0	-21.7
16.364	17.6	20.6	38.2	60.0	-21.8
17.017	16.9	20.7	37.6	60.0	-22.4
0.545	13.6	19.8	33.4	56.0	-22.6
1.460	13.4	19.8	33.2	56.0	-22.8
1.292	13.0	19.8	32.8	56.0	-23.2
17.129	16.0	20.7	36.7	60.0	-23.3
17.640	15.8	20.7	36.5	60.0	-23.5
16.509	15.7	20.7	36.4	60.0	-23.6
2.929	12.4	19.9	32.3	56.0	-23.7
16.894	15.5	20.7	36.2	60.0	-23.8
0.807	12.3	19.9	32.2	56.0	-23.8
17.614	15.4	20.7	36.1	60.0	-23.9
17.420	15.3	20.7	36.0	60.0	-24.0
2.870	12.1	19.9	32.0	56.0	-24.0
17.528	15.1	20.7	35.8	60.0	-24.2
16.304	15.1	20.6	35.7	60.0	-24.3
17.360	15.0	20.7	35.7	60.0	-24.3
17.192	15.0	20.7	35.7	60.0	-24.3

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.501	17.6	19.8	37.4	46.0	-8.6
0.445	18.3	19.8	38.1	47.0	-8.9
0.769	16.9	19.8	36.7	46.0	-9.3
0.161	26.2	19.9	46.1	55.4	-9.3
16.927	19.3	20.7	40.0	50.0	-10.0
0.210	22.1	19.9	42.0	53.2	-11.2
0.393	16.5	19.9	36.4	48.0	-11.7
17.338	17.6	20.7	38.3	50.0	-11.7
16.364	17.6	20.6	38.2	50.0	-11.8
17.017	16.9	20.7	37.6	50.0	-12.4
0.545	13.6	19.8	33.4	46.0	-12.6
1.460	13.4	19.8	33.2	46.0	-12.8
1.292	13.0	19.8	32.8	46.0	-13.2
17.129	16.0	20.7	36.7	50.0	-13.3
17.640	15.8	20.7	36.5	50.0	-13.5
16.509	15.7	20.7	36.4	50.0	-13.6
2.929	12.4	19.9	32.3	46.0	-13.7
16.894	15.5	20.7	36.2	50.0	-13.8
0.807	12.3	19.9	32.2	46.0	-13.8
17.614	15.4	20.7	36.1	50.0	-13.9
17.420	15.3	20.7	36.0	50.0	-14.0
2.870	12.1	19.9	32.0	46.0	-14.0
17.528	15.1	20.7	35.8	50.0	-14.2
16.304	15.1	20.6	35.7	50.0	-14.3
17.360	15.0	20.7	35.7	50.0	-14.3
17.192	15.0	20.7	35.7	50.0	-14.3

## CONCLUSION

Pass



Tested By

# POWERLINE CONDUCTED EMISSIONS

EUT:	SensoSCAN	Work Order:	SNSO0001
Serial Number:	None	Date:	10/02/2015
Customer:	Sensogram Technologies, Inc.	Temperature:	23.9°C
Attendees:	None	Relative Humidity:	40.6%
Customer Project:	None	Bar. Pressure:	1022 mb
Tested By:	Frank Sun	Job Site:	TX01
Power:	USB via 110VAC/60Hz	Configuration:	SNSO0001-1

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2015	ANSI C63.10:2013

## TEST PARAMETERS

Run #:	7	Line:	Neutral	Add. Ext. Attenuation (dB):	0
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## COMMENTS

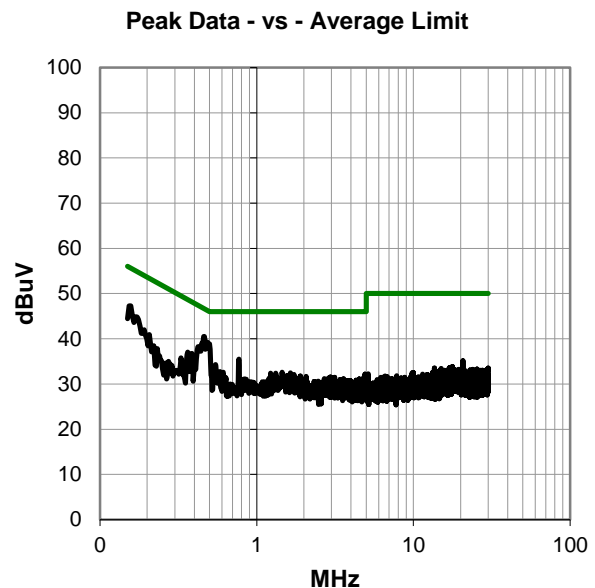
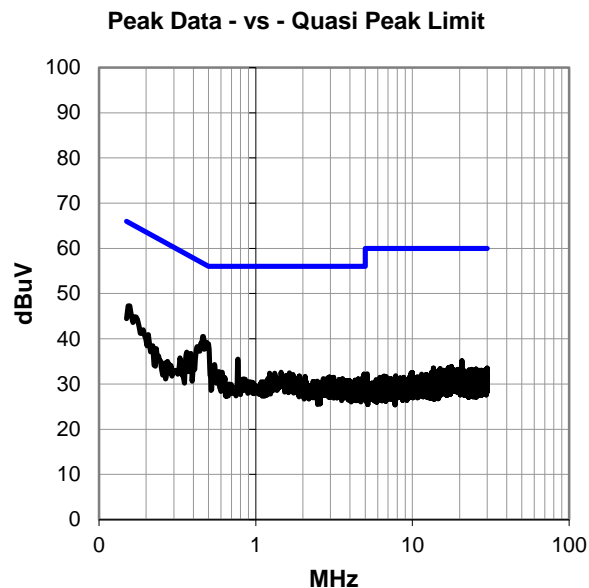
None

## EUT OPERATING MODES

Transmitting BLE Mid Channel @ 2442MHz

## DEVIATIONS FROM TEST STANDARD

None



# POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #7

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.460	20.7	19.8	40.5	56.7	-16.2
0.157	27.4	19.9	47.3	65.6	-18.3
0.769	15.7	19.8	35.5	56.0	-20.5
0.385	16.9	19.9	36.8	58.2	-21.4
0.363	17.2	19.9	37.1	58.7	-21.6
0.545	14.5	19.8	34.3	56.0	-21.7
1.452	12.8	19.8	32.6	56.0	-23.4
0.613	12.8	19.8	32.6	56.0	-23.4
1.642	12.7	19.8	32.5	56.0	-23.5
1.325	12.6	19.8	32.4	56.0	-23.6
1.228	12.6	19.8	32.4	56.0	-23.6
0.329	15.9	19.9	35.8	59.5	-23.7
4.910	12.2	19.9	32.1	56.0	-23.9
1.732	12.3	19.8	32.1	56.0	-23.9
1.560	12.1	19.8	31.9	56.0	-24.1
1.900	11.9	19.8	31.7	56.0	-24.3
2.064	11.8	19.9	31.7	56.0	-24.3
4.847	11.6	19.9	31.5	56.0	-24.5
2.959	11.6	19.9	31.5	56.0	-24.5
3.146	11.6	19.9	31.5	56.0	-24.5
0.232	18.0	19.8	37.8	62.4	-24.6
1.780	11.6	19.8	31.4	56.0	-24.6
2.870	11.5	19.9	31.4	56.0	-24.6
1.198	11.5	19.8	31.3	56.0	-24.7
2.698	11.4	19.8	31.2	56.0	-24.8
3.582	11.3	19.9	31.2	56.0	-24.8

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.460	20.7	19.8	40.5	46.7	-6.2
0.157	27.4	19.9	47.3	55.6	-8.3
0.769	15.7	19.8	35.5	46.0	-10.5
0.385	16.9	19.9	36.8	48.2	-11.4
0.363	17.2	19.9	37.1	48.7	-11.6
0.545	14.5	19.8	34.3	46.0	-11.7
1.452	12.8	19.8	32.6	46.0	-13.4
0.613	12.8	19.8	32.6	46.0	-13.4
1.642	12.7	19.8	32.5	46.0	-13.5
1.325	12.6	19.8	32.4	46.0	-13.6
1.228	12.6	19.8	32.4	46.0	-13.6
0.329	15.9	19.9	35.8	49.5	-13.7
4.910	12.2	19.9	32.1	46.0	-13.9
1.732	12.3	19.8	32.1	46.0	-13.9
1.560	12.1	19.8	31.9	46.0	-14.1
1.900	11.9	19.8	31.7	46.0	-14.3
2.064	11.8	19.9	31.7	46.0	-14.3
4.847	11.6	19.9	31.5	46.0	-14.5
2.959	11.6	19.9	31.5	46.0	-14.5
3.146	11.6	19.9	31.5	46.0	-14.5
0.232	18.0	19.8	37.8	52.4	-14.6
1.780	11.6	19.8	31.4	46.0	-14.6
2.870	11.5	19.9	31.4	46.0	-14.6
1.198	11.5	19.8	31.3	46.0	-14.7
2.698	11.4	19.8	31.2	46.0	-14.8
3.582	11.3	19.9	31.2	46.0	-14.8

## CONCLUSION

Pass



Tested By

# POWERLINE CONDUCTED EMISSIONS

EUT:	SensoSCAN	Work Order:	SNSO0001
Serial Number:	None	Date:	10/02/2015
Customer:	Sensogram Technologies, Inc.	Temperature:	23.9°C
Attendees:	None	Relative Humidity:	40.6%
Customer Project:	None	Bar. Pressure:	1022 mb
Tested By:	Frank Sun	Job Site:	TX01
Power:	USB via 110VAC/60Hz	Configuration:	SNSO0001-1

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2015	ANSI C63.10:2013

## TEST PARAMETERS

Run #:	8	Line:	High Line	Add. Ext. Attenuation (dB):	0
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## COMMENTS

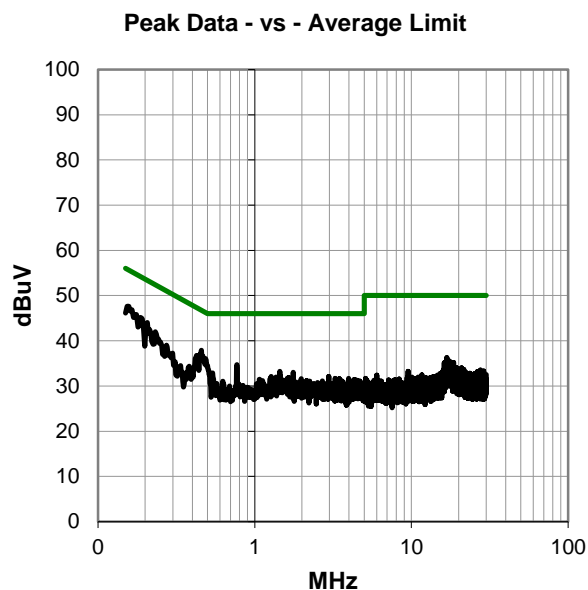
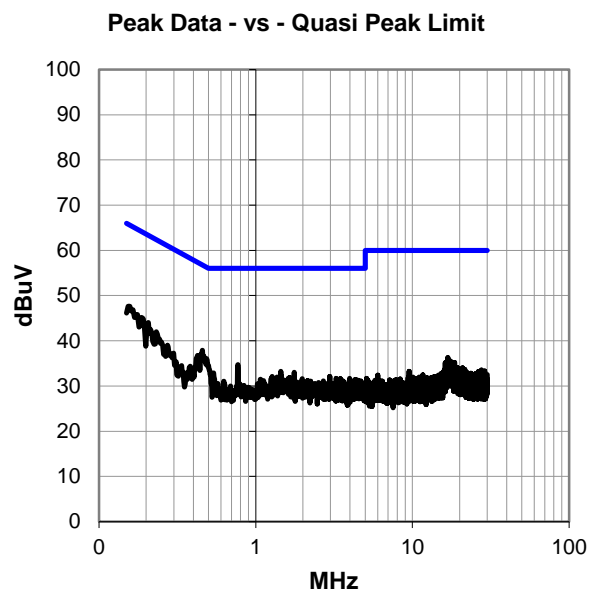
None

## EUT OPERATING MODES

Transmitting BLE High Channel @ 2480MHz

## DEVIATIONS FROM TEST STANDARD

None



# POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #8

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.157	27.8	19.9	47.7	65.6	-17.9
0.456	18.1	19.8	37.9	56.8	-18.9
0.206	24.1	19.9	44.0	63.4	-19.4
0.426	16.9	19.9	36.8	57.3	-20.6
0.769	14.9	19.8	34.7	56.0	-21.3
1.448	13.4	19.8	33.2	56.0	-22.8
1.765	13.2	19.8	33.0	56.0	-23.0
0.538	13.1	19.8	32.9	56.0	-23.1
16.815	15.6	20.7	36.3	60.0	-23.7
1.460	12.4	19.8	32.2	56.0	-23.8
2.970	12.2	19.9	32.1	56.0	-23.9
1.277	12.3	19.8	32.1	56.0	-23.9
1.366	12.2	19.8	32.0	56.0	-24.0
1.650	12.1	19.8	31.9	56.0	-24.1
1.385	12.0	19.8	31.8	56.0	-24.2
16.972	15.1	20.7	35.8	60.0	-24.2
1.258	11.9	19.8	31.7	56.0	-24.3
3.265	11.8	19.9	31.7	56.0	-24.3
1.609	11.9	19.8	31.7	56.0	-24.3
3.967	11.7	19.9	31.6	56.0	-24.4
1.978	11.8	19.8	31.6	56.0	-24.4
3.467	11.7	19.9	31.6	56.0	-24.4
16.868	14.9	20.7	35.6	60.0	-24.4
17.521	14.8	20.7	35.5	60.0	-24.5
1.075	11.7	19.8	31.5	56.0	-24.5
4.362	11.5	19.9	31.4	56.0	-24.6

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.157	27.8	19.9	47.7	55.6	-7.9
0.456	18.1	19.8	37.9	46.8	-8.9
0.206	24.1	19.9	44.0	53.4	-9.4
0.426	16.9	19.9	36.8	47.3	-10.6
0.769	14.9	19.8	34.7	46.0	-11.3
1.448	13.4	19.8	33.2	46.0	-12.8
1.765	13.2	19.8	33.0	46.0	-13.0
0.538	13.1	19.8	32.9	46.0	-13.1
16.815	15.6	20.7	36.3	50.0	-13.7
1.460	12.4	19.8	32.2	46.0	-13.8
2.970	12.2	19.9	32.1	46.0	-13.9
1.277	12.3	19.8	32.1	46.0	-13.9
1.366	12.2	19.8	32.0	46.0	-14.0
1.650	12.1	19.8	31.9	46.0	-14.1
1.385	12.0	19.8	31.8	46.0	-14.2
16.972	15.1	20.7	35.8	50.0	-14.2
1.258	11.9	19.8	31.7	46.0	-14.3
3.265	11.8	19.9	31.7	46.0	-14.3
1.609	11.9	19.8	31.7	46.0	-14.3
3.967	11.7	19.9	31.6	46.0	-14.4
1.978	11.8	19.8	31.6	46.0	-14.4
3.467	11.7	19.9	31.6	46.0	-14.4
16.868	14.9	20.7	35.6	50.0	-14.4
17.521	14.8	20.7	35.5	50.0	-14.5
1.075	11.7	19.8	31.5	46.0	-14.5
4.362	11.5	19.9	31.4	46.0	-14.6

## CONCLUSION

Pass



Tested By

# POWERLINE CONDUCTED EMISSIONS

EUT:	SensoSCAN	Work Order:	SNSO0001
Serial Number:	None	Date:	10/02/2015
Customer:	Sensogram Technologies, Inc.	Temperature:	23.9°C
Attendees:	None	Relative Humidity:	40.6%
Customer Project:	None	Bar. Pressure:	1022 mb
Tested By:	Frank Sun	Job Site:	TX01
Power:	USB via 110VAC/60Hz	Configuration:	SNSO0001-1

## TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2015	ANSI C63.10:2013

## TEST PARAMETERS

Run #:	9	Line:	Neutral	Add. Ext. Attenuation (dB):	0
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## COMMENTS

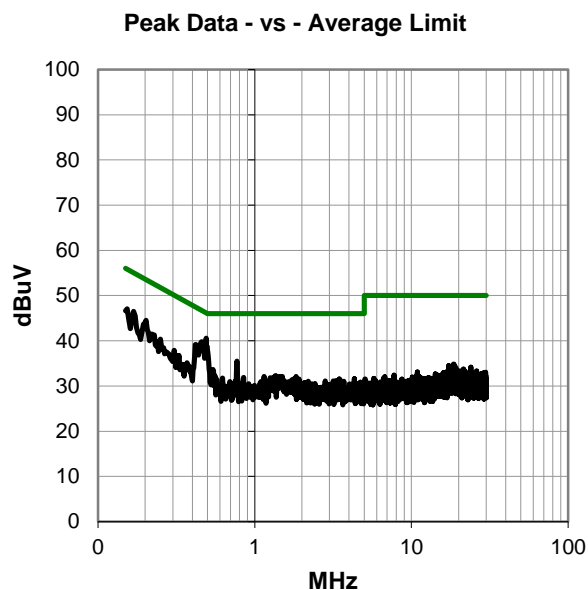
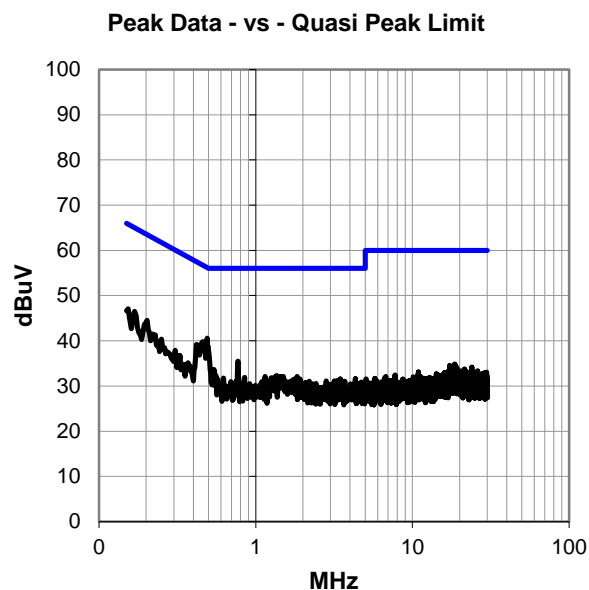
None

## EUT OPERATING MODES

Transmitting BLE High Channel @ 2480MHz

## DEVIATIONS FROM TEST STANDARD

None



# POWERLINE CONDUCTED EMISSIONS

## RESULTS - Run #9

Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.490	20.8	19.8	40.6	56.2	-15.6
0.460	20.0	19.8	39.8	56.7	-16.9
0.169	26.6	19.9	46.5	65.0	-18.5
0.154	27.2	19.9	47.1	65.8	-18.7
0.202	24.6	19.9	44.5	63.5	-19.0
0.769	15.7	19.8	35.5	56.0	-20.5
0.542	13.9	19.8	33.7	56.0	-22.3
1.359	12.5	19.8	32.3	56.0	-23.7
1.836	12.3	19.8	32.1	56.0	-23.9
1.504	12.3	19.8	32.1	56.0	-23.9
1.146	12.3	19.8	32.1	56.0	-23.9
0.851	12.0	19.9	31.9	56.0	-24.1
0.624	12.0	19.8	31.8	56.0	-24.2
4.328	11.7	19.9	31.6	56.0	-24.4
1.915	11.7	19.8	31.5	56.0	-24.5
1.769	11.7	19.8	31.5	56.0	-24.5
3.470	11.6	19.9	31.5	56.0	-24.5
0.572	11.7	19.8	31.5	56.0	-24.5
3.441	11.4	19.9	31.3	56.0	-24.7
3.538	11.3	19.9	31.2	56.0	-24.8
3.508	11.3	19.9	31.2	56.0	-24.8
3.288	11.3	19.9	31.2	56.0	-24.8
1.881	11.3	19.8	31.1	56.0	-24.9
2.814	11.3	19.8	31.1	56.0	-24.9
3.168	11.2	19.9	31.1	56.0	-24.9
2.202	11.2	19.8	31.0	56.0	-25.0

Peak Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.490	20.8	19.8	40.6	46.2	-5.6
0.460	20.0	19.8	39.8	46.7	-6.9
0.169	26.6	19.9	46.5	55.0	-8.5
0.154	27.2	19.9	47.1	55.8	-8.7
0.202	24.6	19.9	44.5	53.5	-9.0
0.769	15.7	19.8	35.5	46.0	-10.5
0.542	13.9	19.8	33.7	46.0	-12.3
1.359	12.5	19.8	32.3	46.0	-13.7
1.836	12.3	19.8	32.1	46.0	-13.9
1.504	12.3	19.8	32.1	46.0	-13.9
1.146	12.3	19.8	32.1	46.0	-13.9
0.851	12.0	19.9	31.9	46.0	-14.1
0.624	12.0	19.8	31.8	46.0	-14.2
4.328	11.7	19.9	31.6	46.0	-14.4
1.915	11.7	19.8	31.5	46.0	-14.5
1.769	11.7	19.8	31.5	46.0	-14.5
3.470	11.6	19.9	31.5	46.0	-14.5
0.572	11.7	19.8	31.5	46.0	-14.5
3.441	11.4	19.9	31.3	46.0	-14.7
3.538	11.3	19.9	31.2	46.0	-14.8
3.508	11.3	19.9	31.2	46.0	-14.8
3.288	11.3	19.9	31.2	46.0	-14.8
1.881	11.3	19.8	31.1	46.0	-14.9
2.814	11.3	19.8	31.1	46.0	-14.9
3.168	11.2	19.9	31.1	46.0	-14.9
2.202	11.2	19.8	31.0	46.0	-15.0

## CONCLUSION

Pass



Tested By



Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

## MODES OF OPERATION

Transmitting BLE Low, Mid, High Channel @ 2402, 2442, 2480MHz

## POWER SETTINGS INVESTIGATED

USB via 110VAC/60Hz

## CONFIGURATIONS INVESTIGATED

SNSO0001 - 1

## FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26000 MHz
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## SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

## TEST EQUIPMENT


Description	Manufacturer	Model	ID	Last Cal.	Interval
Filter - High Pass	Micro-Tronics	HPM50111	HHX	8/11/2015	12 mo
Filter - Low Pass	Micro-Tronics	LPM50004	HHV	8/11/2015	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	PAK	10/27/2014	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	PAL	10/27/2014	12 mo
Cable	Northwest EMC	8-18GHz	TXD	10/27/2014	12 mo
Amplifier - Pre-Amplifier	Miteq	JSDQK42-18004000-60-5P	PAM	11/21/2014	12 mo
Cable	Northwest EMC	18-40GHz	TXE	11/21/2014	12 mo
Antenna - Double Ridge	A.H. Systems, Inc.	SAS-574	AXW	4/23/2014	24 mo
Antenna - Standard Gain	ETS Lindgren	3160-08	AJG	NCR	0 mo
Antenna - Standard Gain	ETS Lindgren	3160-07	AJF	NCR	0 mo
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAJ	9/18/2015	12 mo
Cable	Northwest EMC	1-8.2 GHz	TXC	9/18/2015	12 mo
Antenna - Double Ridge	ETS Lindgren	3115	AJL	9/15/2014	24 mo
Amplifier - Pre-Amplifier	Miteq	AM-1551	PAH	9/18/2015	12 mo
Cable	Northwest EMC	RE 9kHz - 1GHz	TXB	9/18/2015	12 mo
Antenna - Biconilog	ETS Lindgren	3143B	AYF	4/7/2014	24 mo
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	1/28/2015	12 mo

## MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

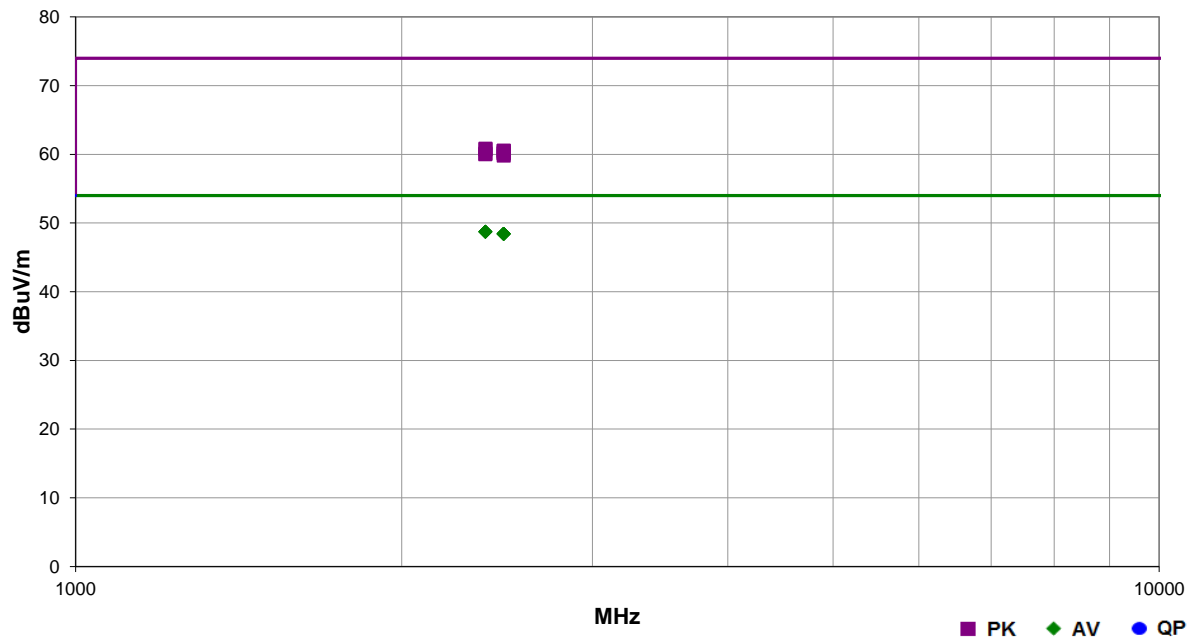
## TEST DESCRIPTION

The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify compliance. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization. A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity. A duty cycle correction was used based on the actual operating mode during normal use. A calculation is provided within the comment section of the datasheet.


Work Order:	SNSO0001	Date:	10/01/15	
Project:	None	Temperature:	24.1 °C	
Job Site:	TX02	Humidity:	43.9% RH	
Serial Number:	None	Barometric Pres.:	1021 mbar	
EUT:	SensoSCAN			
Configuration:	1			
Customer:	Sensogram Technologies, Inc.			
Attendees:	None			
EUT Power:	USB via 110VAC/60Hz			
Operating Mode:	Transmitting BLE Low, High Channel @ 2402, 2480MHz			
Deviations:	None			
Comments:	Band Edge			

Test Specifications	Test Method
FCC 15.247:2015	ANSI C63.10:2013

Run #	8	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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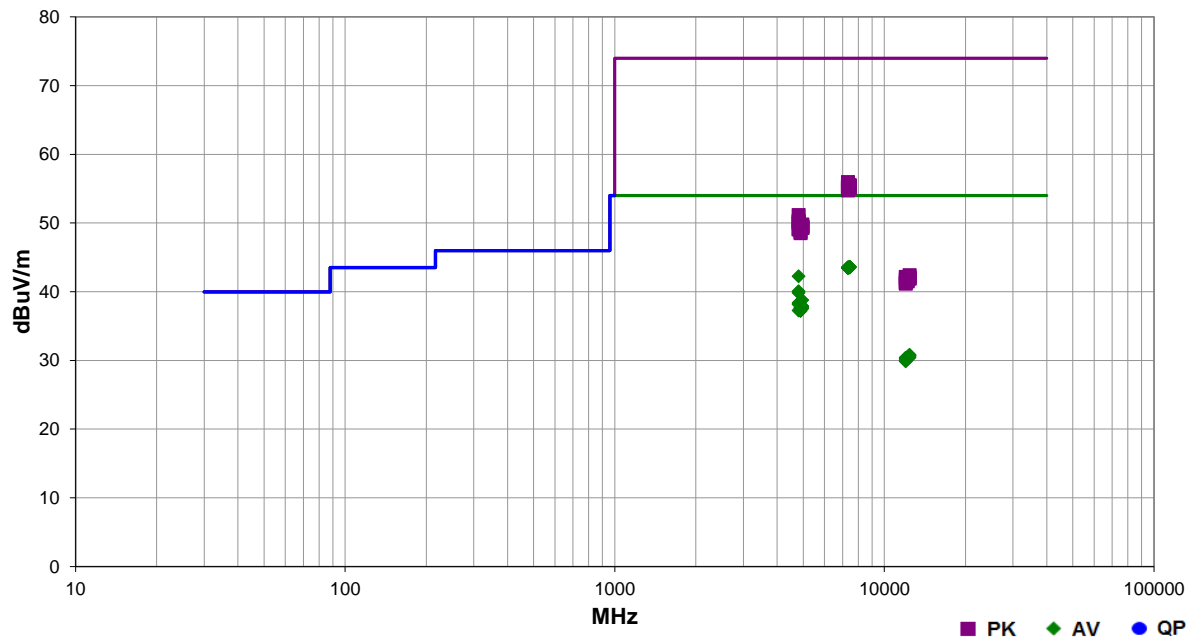


Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2389.610	33.1	-4.4	1.0	132.0	3.0	20.0	Vert	AV	0.0	48.7	54.0	-5.3	Low Ch, EUT Horz
2389.738	33.1	-4.4	1.0	130.9	3.0	20.0	Vert	AV	0.0	48.7	54.0	-5.3	Low Ch, EUT Side
2389.773	33.1	-4.4	2.2	193.0	3.0	20.0	Vert	AV	0.0	48.7	54.0	-5.3	Low Ch, EUT Horz
2389.225	33.1	-4.4	1.0	277.0	3.0	20.0	Horz	AV	0.0	48.7	54.0	-5.3	Low Ch, EUT Side
2483.580	32.8	-4.4	1.0	274.9	3.0	20.0	Horz	AV	0.0	48.4	54.0	-5.6	High Ch, EUT Vert
2484.258	32.8	-4.4	3.9	39.9	3.0	20.0	Vert	AV	0.0	48.4	54.0	-5.6	High Ch, EUT Side
2483.513	32.8	-4.4	1.0	240.0	3.0	20.0	Horz	AV	0.0	48.4	54.0	-5.6	High Ch, EUT Horz
2484.028	32.8	-4.4	1.0	126.0	3.0	20.0	Horz	AV	0.0	48.4	54.0	-5.6	High Ch, EUT Side
2483.535	32.8	-4.4	2.4	120.0	3.0	20.0	Vert	AV	0.0	48.4	54.0	-5.6	High Ch, EUT Vert
2483.555	32.8	-4.4	1.0	289.0	3.0	20.0	Vert	AV	0.0	48.4	54.0	-5.6	High Ch, EUT Horz
2389.933	45.2	-4.4	1.0	132.0	3.0	20.0	Vert	PK	0.0	60.8	74.0	-13.2	Low Ch, EUT Horz
2389.870	45.1	-4.4	1.0	277.0	3.0	20.0	Horz	PK	0.0	60.7	74.0	-13.3	Low Ch, EUT Side
2484.077	44.9	-4.4	1.0	240.0	3.0	20.0	Horz	PK	0.0	60.5	74.0	-13.5	High Ch, EUT Horz
2484.117	44.9	-4.4	1.0	126.0	3.0	20.0	Horz	PK	0.0	60.5	74.0	-13.5	High Ch, EUT Side
2484.148	44.7	-4.4	3.9	39.9	3.0	20.0	Vert	PK	0.0	60.3	74.0	-13.7	High Ch, EUT Side
2483.707	44.5	-4.4	1.0	274.9	3.0	20.0	Horz	PK	0.0	60.1	74.0	-13.9	High Ch, EUT Vert
2484.253	44.5	-4.4	1.0	289.0	3.0	20.0	Vert	PK	0.0	60.1	74.0	-13.9	High Ch, EUT Horz
2389.882	44.5	-4.4	1.0	130.9	3.0	20.0	Vert	PK	0.0	60.1	74.0	-13.9	Low Ch, EUT Side
2389.062	44.4	-4.4	2.2	193.0	3.0	20.0	Vert	PK	0.0	60.0	74.0	-14.0	Low Ch, EUT Horz
2483.960	44.2	-4.4	2.4	120.0	3.0	20.0	Vert	PK	0.0	59.8	74.0	-14.2	High Ch, EUT Vert

Work Order:	SNSO0001	Date:	10/01/15	
Project:	None	Temperature:	24.1 °C	
Job Site:	TX02	Humidity:	43.9% RH	
Serial Number:	None	Barometric Pres.:	1021 mbar	
EUT:	SensoSCAN			
Configuration:	1			
Customer:	Sensogram Technologies, Inc.			
Attendees:	None			
EUT Power:	USB via 110VAC/60Hz			
Operating Mode:	Transmitting BLE Low, Mid, High Channel @ 2402, 2442, 2480MHz			
Deviations:	None			
Comments:	None			

Test Specifications	N/A	Test Method	
FCC 15.247:2015		ANSI C63.10:2013	

Run #	11	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7441.410	30.2	13.4	1.0	67.0	3.0	0.0	Horz	AV	0.0	43.6	54.0	-10.4	High Ch, EUT Vert
7441.295	30.2	13.4	3.0	108.0	3.0	0.0	Vert	AV	0.0	43.6	54.0	-10.4	High Ch, EUT Horz
7441.110	30.2	13.4	1.0	315.0	3.0	0.0	Vert	AV	0.0	43.6	54.0	-10.4	High Ch, EUT Side
7440.825	30.2	13.4	1.0	90.0	3.0	0.0	Horz	AV	0.0	43.6	54.0	-10.4	High Ch, EUT Horz
7440.650	30.2	13.4	2.3	0.0	3.0	0.0	Vert	AV	0.0	43.6	54.0	-10.4	High Ch, EUT Vert
7326.480	30.3	13.3	1.0	68.0	3.0	0.0	Vert	AV	0.0	43.6	54.0	-10.4	Mid Ch, EUT Horz
7441.270	30.1	13.4	3.0	328.9	3.0	0.0	Horz	AV	0.0	43.5	54.0	-10.5	High Ch, EUT Side
7327.200	30.2	13.3	1.0	144.0	3.0	0.0	Horz	AV	0.0	43.5	54.0	-10.5	Mid Ch, EUT Vert
7326.920	30.2	13.3	1.0	0.0	3.0	0.0	Vert	AV	0.0	43.5	54.0	-10.5	Mid Ch, EUT Vert
7326.790	30.2	13.3	1.0	358.9	3.0	0.0	Horz	AV	0.0	43.5	54.0	-10.5	Mid Ch, EUT Side
7326.655	30.2	13.3	1.0	175.0	3.0	0.0	Horz	AV	0.0	43.5	54.0	-10.5	Mid Ch, EUT Horz
7326.315	30.2	13.3	1.0	315.9	3.0	0.0	Vert	AV	0.0	43.5	54.0	-10.5	Mid Ch, EUT Side
4803.960	35.1	7.2	1.7	309.0	3.0	0.0	Vert	AV	0.0	42.3	54.0	-11.7	Low Ch, EUT Horz
4803.940	32.9	7.2	1.6	345.0	3.0	0.0	Horz	AV	0.0	40.1	54.0	-13.9	Low Ch, EUT Vert
4804.060	32.7	7.2	2.0	256.9	3.0	0.0	Horz	AV	0.0	39.9	54.0	-14.1	Low Ch, EUT Horz
4960.070	31.1	7.7	2.6	249.9	3.0	0.0	Horz	AV	0.0	38.8	54.0	-15.2	High Ch, EUT Horz
4804.130	31.2	7.2	1.0	206.0	3.0	0.0	Vert	AV	0.0	38.4	54.0	-15.6	Low Ch, EUT Side
4804.040	31.0	7.2	1.0	315.9	3.0	0.0	Vert	AV	0.0	38.2	54.0	-15.8	Low Ch, EUT Vert
4960.105	30.2	7.7	1.0	189.0	3.0	0.0	Vert	AV	0.0	37.9	54.0	-16.1	High Ch, EUT Vert
4959.745	30.2	7.7	2.7	170.0	3.0	0.0	Horz	AV	0.0	37.9	54.0	-16.1	High Ch, EUT Vert
4960.105	30.0	7.7	1.0	67.0	3.0	0.0	Vert	AV	0.0	37.7	54.0	-16.3	High Ch, EUT Side
4883.885	30.2	7.4	1.0	337.0	3.0	0.0	Horz	AV	0.0	37.6	54.0	-16.4	Mid Ch, EUT Vert

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4883.785	30.2	7.4	1.0	273.9	3.0	0.0	Vert	AV	0.0	37.6	54.0	-16.4	Mid Ch, EUT Horz
4961.315	29.9	7.7	1.0	79.0	3.0	0.0	Vert	AV	0.0	37.6	54.0	-16.4	High Ch, EUT Horz
4960.080	29.9	7.7	1.0	306.0	3.0	0.0	Horz	AV	0.0	37.6	54.0	-16.4	High Ch, EUT Side
4883.995	30.0	7.4	1.0	81.9	3.0	0.0	Horz	AV	0.0	37.4	54.0	-16.6	Mid Ch, EUT Horz
4883.805	30.0	7.4	1.0	8.0	3.0	0.0	Vert	AV	0.0	37.4	54.0	-16.6	Mid Ch, EUT Vert
4804.840	30.1	7.2	1.0	352.9	3.0	0.0	Horz	AV	0.0	37.3	54.0	-16.7	Low Ch, EUT Side
4883.875	29.8	7.4	1.0	309.9	3.0	0.0	Vert	AV	0.0	37.2	54.0	-16.8	Mid Ch, EUT Side
4883.295	29.8	7.4	1.0	30.0	3.0	0.0	Horz	AV	0.0	37.2	54.0	-16.8	Mid Ch, EUT Side
7324.920	42.7	13.3	1.0	0.0	3.0	0.0	Vert	PK	0.0	56.0	74.0	-18.0	Mid Ch, EUT Vert
7440.045	42.1	13.4	2.3	0.0	3.0	0.0	Vert	PK	0.0	55.5	74.0	-18.5	High Ch, EUT Vert
7440.895	42.0	13.4	1.0	90.0	3.0	0.0	Horz	PK	0.0	55.4	74.0	-18.6	High Ch, EUT Horz
7327.230	42.1	13.3	1.0	144.0	3.0	0.0	Horz	PK	0.0	55.4	74.0	-18.6	Mid Ch, EUT Vert
7326.660	42.0	13.3	1.0	315.9	3.0	0.0	Vert	PK	0.0	55.3	74.0	-18.7	Mid Ch, EUT Side
7440.470	41.8	13.4	3.0	328.9	3.0	0.0	Horz	PK	0.0	55.2	74.0	-18.8	High Ch, EUT Side
7440.100	41.8	13.4	1.0	67.0	3.0	0.0	Horz	PK	0.0	55.2	74.0	-18.8	High Ch, EUT Vert
7438.675	41.8	13.4	3.0	108.0	3.0	0.0	Vert	PK	0.0	55.2	74.0	-18.8	High Ch, EUT Horz
7326.720	41.9	13.3	1.0	175.0	3.0	0.0	Horz	PK	0.0	55.2	74.0	-18.8	Mid Ch, EUT Horz
7324.865	41.9	13.3	1.0	68.0	3.0	0.0	Vert	PK	0.0	55.2	74.0	-18.8	Mid Ch, EUT Horz
7441.035	41.7	13.4	1.0	315.0	3.0	0.0	Vert	PK	0.0	55.1	74.0	-18.9	High Ch, EUT Side
7324.520	41.5	13.3	1.0	358.9	3.0	0.0	Horz	PK	0.0	54.8	74.0	-19.2	Mid Ch, EUT Side
4804.460	44.0	7.2	1.7	309.0	3.0	0.0	Vert	PK	0.0	51.2	74.0	-22.8	Low Ch, EUT Horz
12399.230	31.2	-0.4	1.0	31.0	3.0	0.0	Vert	AV	0.0	30.8	54.0	-23.2	High Ch, EUT Horz
12399.040	31.1	-0.4	1.0	358.9	3.0	0.0	Vert	AV	0.0	30.7	54.0	-23.3	High Ch, EUT Vert
12399.390	31.0	-0.4	1.0	103.0	3.0	0.0	Horz	AV	0.0	30.6	54.0	-23.4	High Ch, EUT Vert
12210.600	31.3	-0.8	1.0	303.0	3.0	0.0	Vert	AV	0.0	30.5	54.0	-23.5	Mid Ch, EUT Horz
12399.240	30.8	-0.4	1.0	153.0	3.0	0.0	Horz	AV	0.0	30.4	54.0	-23.6	High Ch, EUT Horz
12010.700	31.7	-1.3	1.0	8.0	3.0	0.0	Vert	AV	0.0	30.4	54.0	-23.6	Low Ch, EUT Horz
12009.940	31.7	-1.3	1.0	13.0	3.0	0.0	Vert	AV	0.0	30.4	54.0	-23.6	Low Ch, EUT Vert
4803.895	43.2	7.1	1.0	206.0	3.0	0.0	Vert	PK	0.0	50.3	74.0	-23.7	Low Ch, EUT Side
12210.550	31.0	-0.8	1.0	321.9	3.0	0.0	Horz	AV	0.0	30.2	54.0	-23.8	Mid Ch, EUT Horz
4804.210	43.0	7.2	2.0	256.9	3.0	0.0	Horz	PK	0.0	50.2	74.0	-23.8	Low Ch, EUT Horz
12011.230	31.4	-1.3	1.0	145.0	3.0	0.0	Horz	AV	0.0	30.1	54.0	-23.9	Low Ch, EUT Vert
4804.520	42.8	7.2	1.6	345.0	3.0	0.0	Horz	PK	0.0	50.0	74.0	-24.0	Low Ch, EUT Vert
12011.450	31.2	-1.3	1.0	9.0	3.0	0.0	Horz	AV	0.0	29.9	54.0	-24.1	Low Ch, EUT Horz
4960.550	42.1	7.7	2.7	170.0	3.0	0.0	Horz	PK	0.0	49.8	74.0	-24.2	High Ch, EUT Vert
4960.630	41.8	7.7	1.0	189.0	3.0	0.0	Vert	PK	0.0	49.5	74.0	-24.5	High Ch, EUT Vert
4959.650	41.8	7.7	2.6	249.9	3.0	0.0	Horz	PK	0.0	49.5	74.0	-24.5	High Ch, EUT Horz
4959.625	41.8	7.7	1.0	306.0	3.0	0.0	Horz	PK	0.0	49.5	74.0	-24.5	High Ch, EUT Side
4884.680	41.9	7.4	1.0	337.0	3.0	0.0	Horz	PK	0.0	49.3	74.0	-24.7	Mid Ch, EUT Vert
4884.565	41.9	7.4	1.0	273.9	3.0	0.0	Vert	PK	0.0	49.3	74.0	-24.7	Mid Ch, EUT Horz
4883.675	41.9	7.4	1.0	30.0	3.0	0.0	Horz	PK	0.0	49.3	74.0	-24.7	Mid Ch, EUT Side
4883.510	41.9	7.4	1.0	8.0	3.0	0.0	Vert	PK	0.0	49.3	74.0	-24.7	Mid Ch, EUT Vert
4961.095	41.6	7.7	1.0	67.0	3.0	0.0	Vert	PK	0.0	49.3	74.0	-24.7	High Ch, EUT Side
4960.000	41.6	7.7	1.0	79.0	3.0	0.0	Vert	PK	0.0	49.3	74.0	-24.7	High Ch, EUT Horz
4805.335	42.0	7.2	1.0	352.9	3.0	0.0	Horz	PK	0.0	49.2	74.0	-24.8	Low Ch, EUT Side
4804.710	41.9	7.2	1.0	315.9	3.0	0.0	Vert	PK	0.0	49.1	74.0	-24.9	Low Ch, EUT Vert
4883.380	41.3	7.4	1.0	309.9	3.0	0.0	Vert	PK	0.0	48.7	74.0	-25.3	Mid Ch, EUT Side
4884.560	41.1	7.4	1.0	81.9	3.0	0.0	Horz	PK	0.0	48.5	74.0	-25.5	Mid Ch, EUT Horz
12398.600	42.8	-0.4	1.0	103.0	3.0	0.0	Horz	PK	0.0	42.4	74.0	-31.6	High Ch, EUT Vert
12008.910	43.5	-1.3	1.0	8.0	3.0	0.0	Vert	PK	0.0	42.2	74.0	-31.8	Low Ch, EUT Horz
12399.150	42.5	-0.4	1.0	31.0	3.0	0.0	Vert	PK	0.0	42.1	74.0	-31.9	High Ch, EUT Horz
12399.910	42.3	-0.4	1.0	358.9	3.0	0.0	Vert	PK	0.0	41.9	74.0	-32.1	High Ch, EUT Vert
12398.910	42.3	-0.4	1.0	153.0	3.0	0.0	Horz	PK	0.0	41.9	74.0	-32.1	High Ch, EUT Horz
12009.510	43.1	-1.3	1.0	13.0	3.0	0.0	Vert	PK	0.0	41.8	74.0	-32.2	Low Ch, EUT Vert
12209.290	42.5	-0.8	1.0	303.0	3.0	0.0	Vert	PK	0.0	41.7	74.0	-32.3	Mid Ch, EUT Horz
12208.750	42.3	-0.8	1.0	321.9	3.0	0.0	Horz	PK	0.0	41.5	74.0	-32.5	Mid Ch, EUT Horz
12011.260	42.7	-1.3	1.0	145.0	3.0	0.0	Horz	PK	0.0	41.4	74.0	-32.6	Low Ch, EUT Vert
12010.910	42.5	-1.3	1.0	9.0	3.0	0.0	Horz	PK	0.0	41.2	74.0	-32.8	Low Ch, EUT Horz

# BAND EDGE COMPLIANCE

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT


Description	Manufacturer	Model	ID	Last Cal.	Interval (mo)
Attenuator	Fairview Microwave	SA4018-20	TQY	2/27/2015	12
Block - DC	Fairview Microwave	SD3379	AMM	2/27/2015	12
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	12
Signal Generator, 40 GHz	Agilent	N5173B	TIW	7/15/2014	36

## TEST DESCRIPTION

The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in each available band. The channels closest to the band edges were selected. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet.

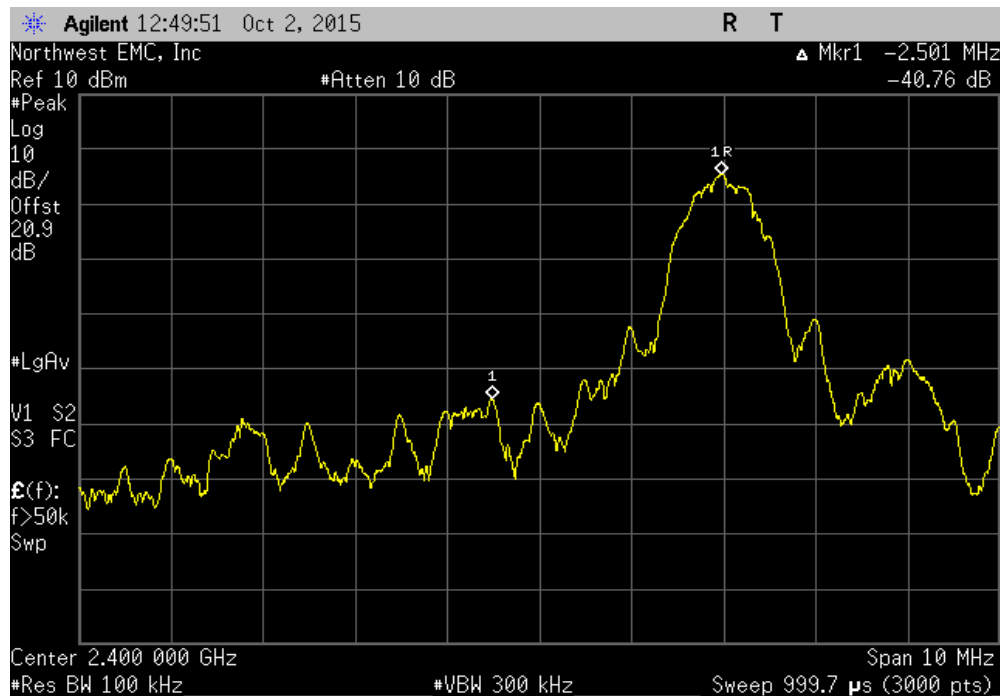
The spectrum was scanned below the lower band edge and above the higher band edge.

# BAND EDGE COMPLIANCE

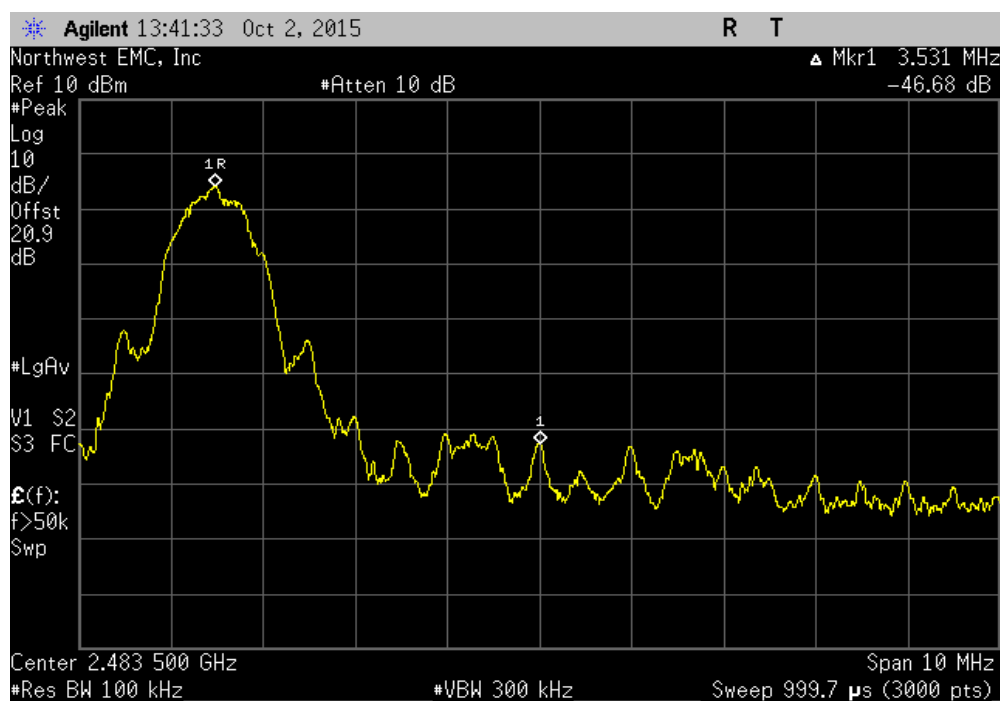
EUT: SensoSCAN		Work Order: SNSO0001	
Serial Number: None		Date: 10/02/15	
Customer: Sensogram Technologies, Inc.		Temperature: 24.3°C	
Attendees: None		Humidity: 39%	
Project: None		Barometric Pres.: 1023	
Tested by: Frank Sun	Power: USB via 110VAC/60Hz	Job Site: TX09	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2015		ANSI C63.10:2013	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	4	Signature 	
		Value (dBc)	Limit ≤ (dBc)
BLE - Advertising			Result
Low Channel, 2402 MHz		-40.76	-20 Pass
High Channel, 2480 MHz		-46.68	-20 Pass

# BAND EDGE COMPLIANCE

BLE - Advertising, Low Channel, 2402 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-40.76	-20	Pass



BLE - Advertising, High Channel, 2480 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-46.68	-20	Pass





# DUTY CYCLE

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo)
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	12
Attenuator	Fairview Microwave	SA4018-20	TQY	2/27/2015	12
Block - DC	Fairview Microwave	SD3379	AMM	2/27/2015	12
Signal Generator, 40 GHz	Agilent	N5173B	TIW	7/15/2014	36

## TEST DESCRIPTION

The Duty Cycle (x) of the single channel operation of the radio as controlled by the provided test software was measured for each of the EUT operating modes.

There is no compliance requirement to be met by this test, so therefore no Pass / Fail criteria.


The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain. The transmit power was set to its default maximum. A direct connection was made between the RF output of the EUT and a spectrum analyzer. Attenuation and a DC block were used.

The duty cycle was calculated by dividing the transmission pulse duration (T) by the total period of a single on and total off time.

If the transmit duty cycle < 98 percent, burst gating may have been used during some of the other tests in this report to only take the measurement during the burst duration.

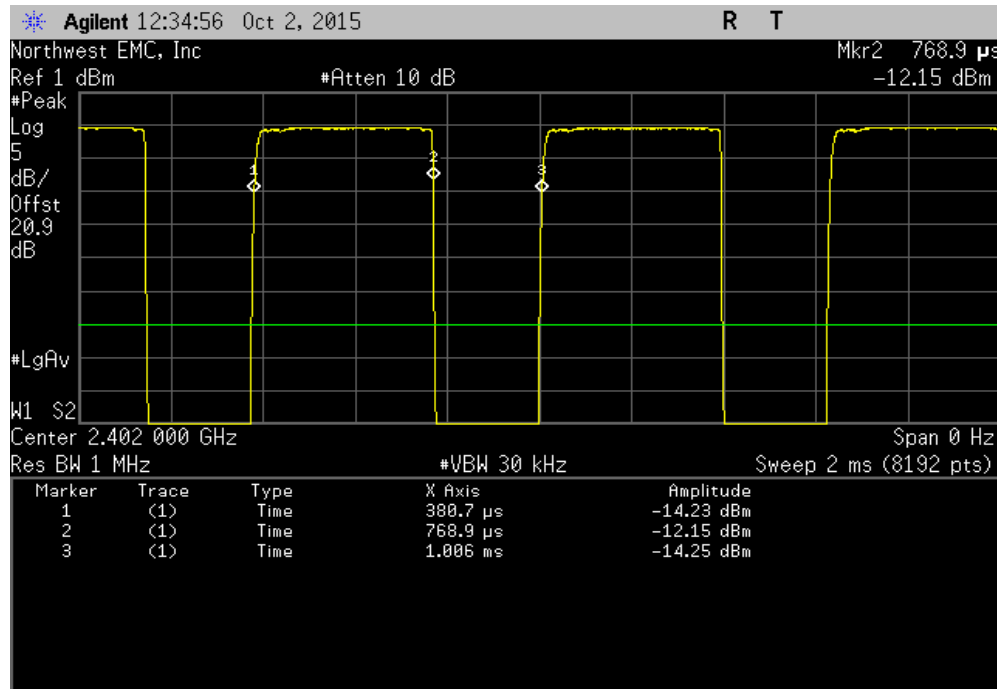
## DUTY CYCLE

XMIT 2015.01.14

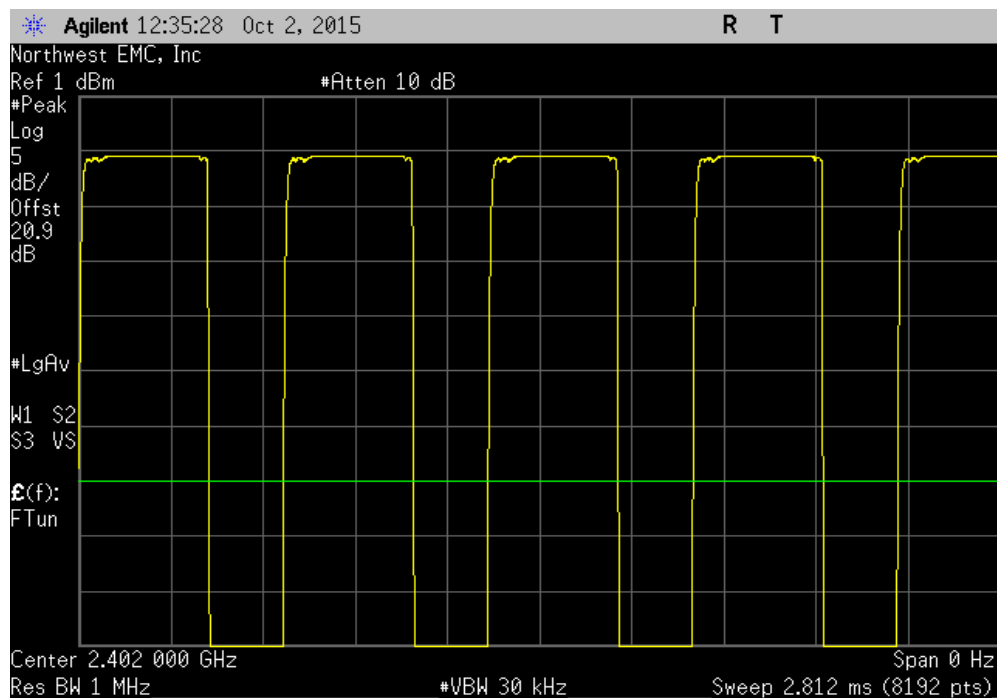
EUT: SensoSCAN			Work Order: SNSO0001					
Serial Number: None			Date: 10/02/15					
Customer: Sensogram Technologies, Inc.			Temperature: 24.3°C					
Attendees: None			Humidity: 38%					
Project: None			Barometric Pres.: 1020					
Tested by: Frank Sun		Power: USB via 110VAC/60Hz	Job Site: TX09					
TEST SPECIFICATIONS			Test Method					
FCC 15.247:2015			ANSI C63.10:2013					
COMMENTS								
None								
DEVIATIONS FROM TEST STANDARD								
None								
Configuration #	4							
			Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
BLE - Advertising								
Low Channel, 2402 MHz			388.172 us	625 us	1	62.1	N/A	N/A
Low Channel, 2402 MHz			N/A	N/A	5	N/A	N/A	N/A
Mid Channel, 2442 MHz			388.405 us	625 us	1	62.1	N/A	N/A
Mid Channel, 2442 MHz			N/A	N/A	5	N/A	N/A	N/A
High Channel, 2480 MHz			388.461 us	625.3 us	1	62.1	N/A	N/A
High Channel, 2480 MHz			N/A	N/A	5	N/A	N/A	N/A

# DUTY CYCLE

BLE - Advertising, Low Channel, 2402 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	388.172 us	625 us	1	62.1	N/A	N/A

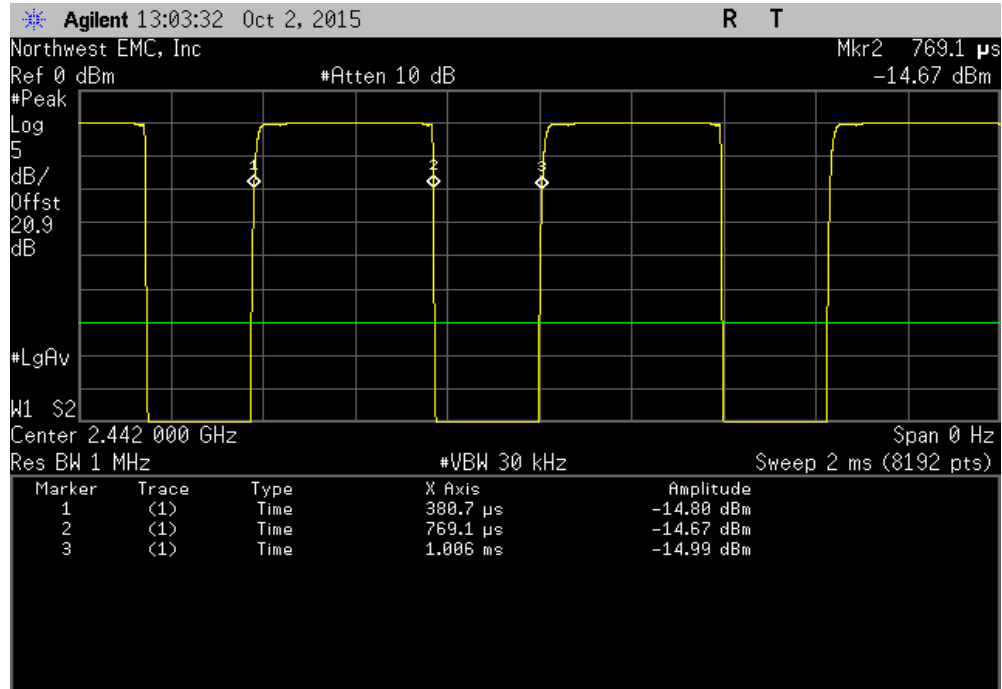


BLE - Advertising, Low Channel, 2402 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

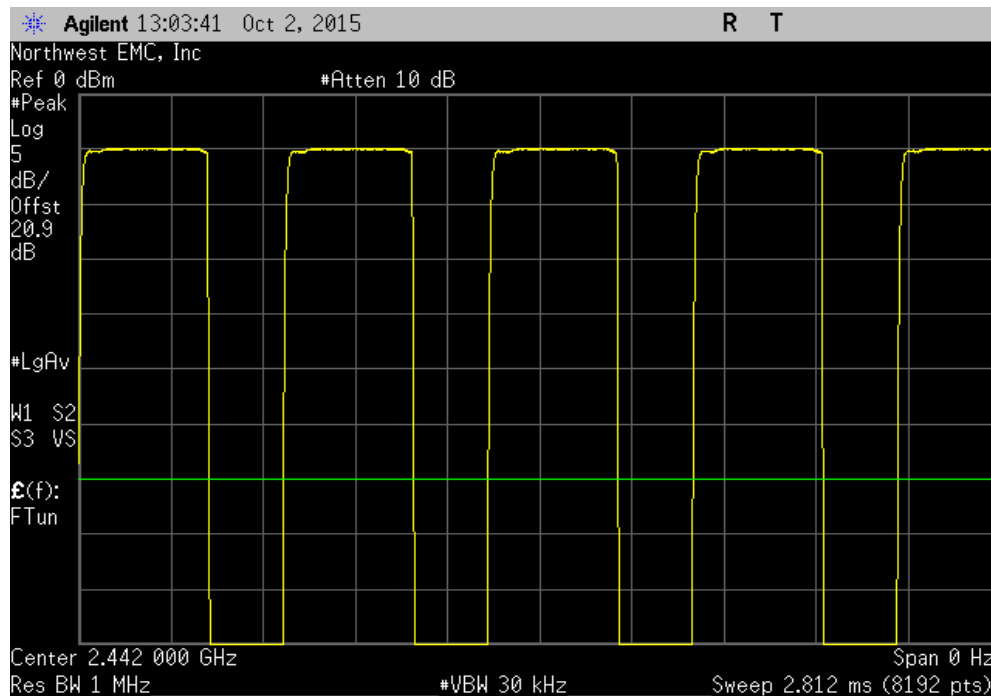


# DUTY CYCLE

BLE - Advertising, Mid Channel, 2442 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	388.405 us	625 us	1	62.1	N/A	N/A

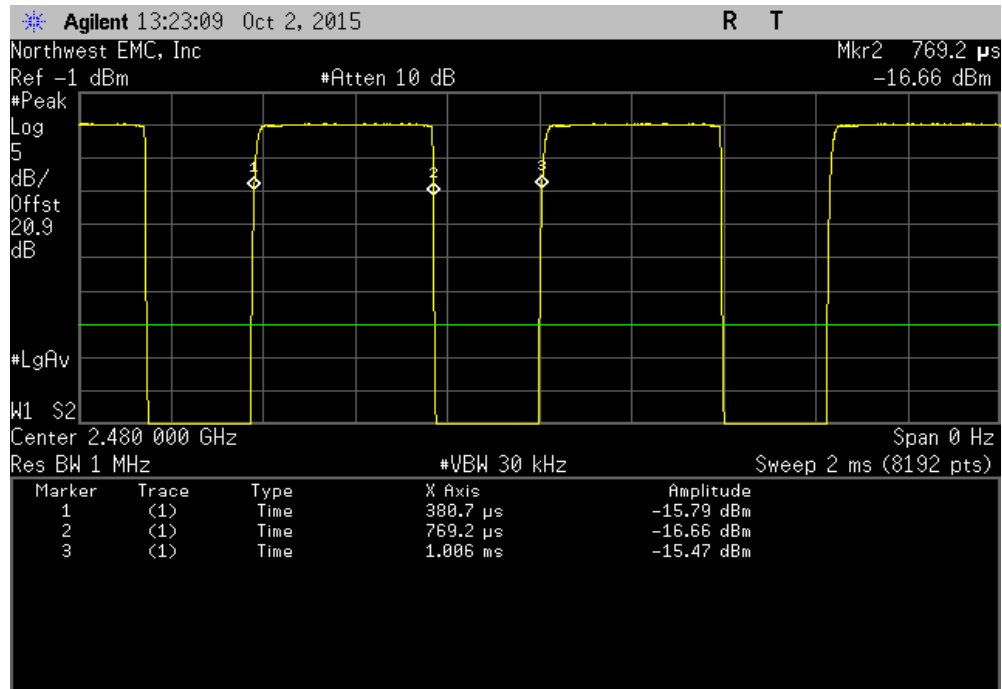


BLE - Advertising, Mid Channel, 2442 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

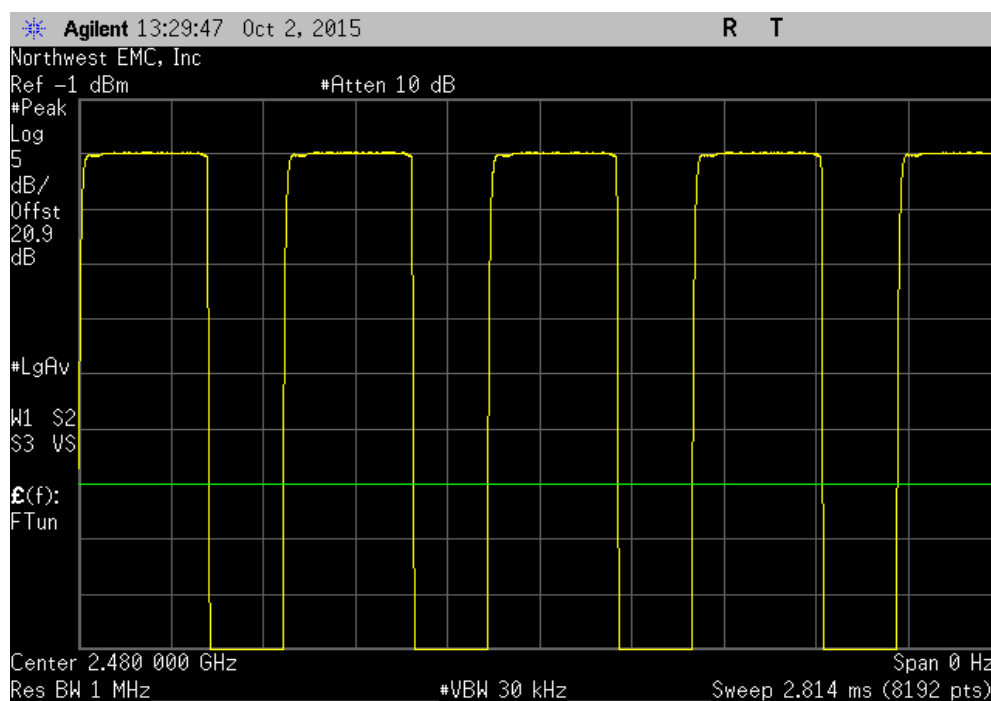


# DUTY CYCLE

BLE - Advertising, High Channel, 2480 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	388.461 us	625.3 us	1	62.1	N/A	N/A



BLE - Advertising, High Channel, 2480 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A



# OCCUPIED BANDWIDTH

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT


Description	Manufacturer	Model	ID	Last Cal.	Interval (mo)
Attenuator	Fairview Microwave	SA4018-20	TQY	2/27/2015	12
Block - DC	Fairview Microwave	SD3379	AMM	2/27/2015	12
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	12
Signal Generator, 40 GHz	Agilent	N5173B	TIW	7/15/2014	36

## TEST DESCRIPTION

The 6dB occupied bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The 99.9% (approximate 26 dB) emission bandwidth (EBW) was also measured at the same time.

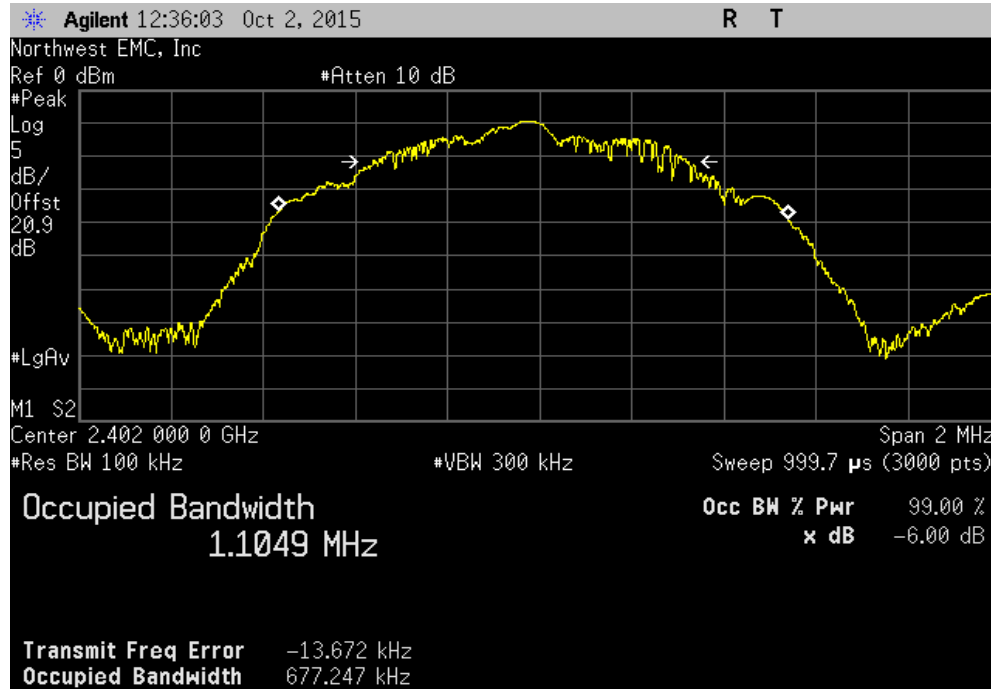
The EUT was set to the channels and modes listed in the datasheet. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer.

# OCCUPIED BANDWIDTH

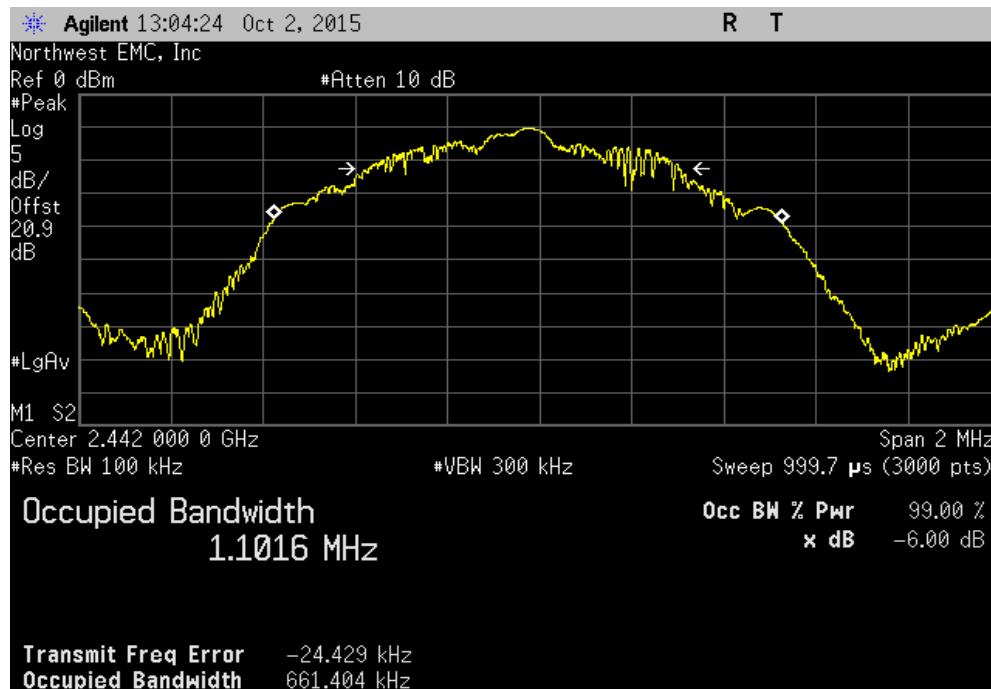
EUT: SensoSCAN		Work Order: SNSO0001	
Serial Number: None		Date: 10/02/15	
Customer: Sensogram Technologies, Inc.		Temperature: 24.2°C	
Attendees: None		Humidity: 38%	
Project: None		Barometric Pres.: 1020	
Tested by: Frank Sun	Power: USB via 110VAC/60Hz	Job Site: TX09	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2015		ANSI C63.10:2013	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	4	Signature 	
		Value	Limit (±)
BLE - Advertising			Result
Low Channel, 2402 MHz		677.247 kHz	500 kHz Pass
Mid Channel, 2442 MHz		661.404 kHz	500 kHz Pass
High Channel, 2480 MHz		674.803 kHz	500 kHz Pass

# OCCUPIED BANDWIDTH

BLE - Advertising, Low Channel, 2402 MHz						
				Value	Limit (≥)	Result
				677.247 kHz	500 kHz	Pass



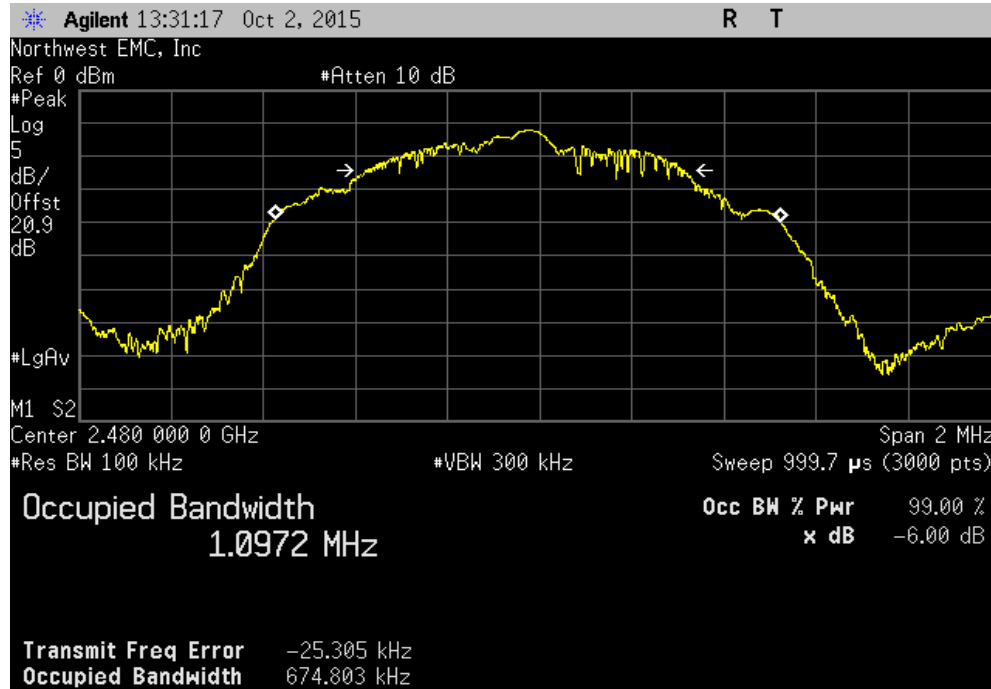
BLE - Advertising, Mid Channel, 2442 MHz						
				Value	Limit (≥)	Result
				661.404 kHz	500 kHz	Pass





# OCCUPIED BANDWIDTH

BLE - Advertising, High Channel, 2480 MHz						
Value				Limit (≥)	Result	
674.803 kHz				500 kHz	Pass	



# OUTPUT POWER

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT


Description	Manufacturer	Model	ID	Last Cal.	Interval (mo)
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	12
Attenuator	Fairview Microwave	SA4018-20	TQY	2/27/2015	12
Block - DC	Fairview Microwave	SD3379	AMM	2/27/2015	12
Signal Generator, 40 GHz	Agilent	N5173B	TIW	7/15/2014	36

## TEST DESCRIPTION

The peak output power was measured with the EUT set to low, medium and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The EUT was transmitting in a no hop mode at the data rate(s) listed in the datasheet.

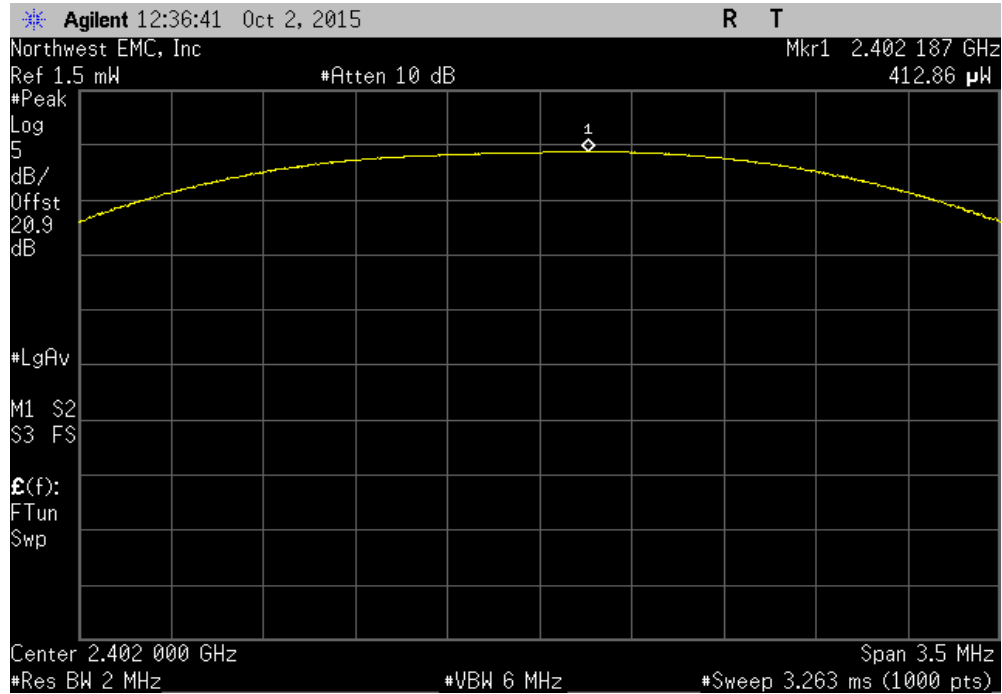
**De Facto EIRP Limit:** Per 47 CFR 15.247 (b)(1-3), the EUT meets the de facto EIRP limit of +36 dBm.

# OUTPUT POWER

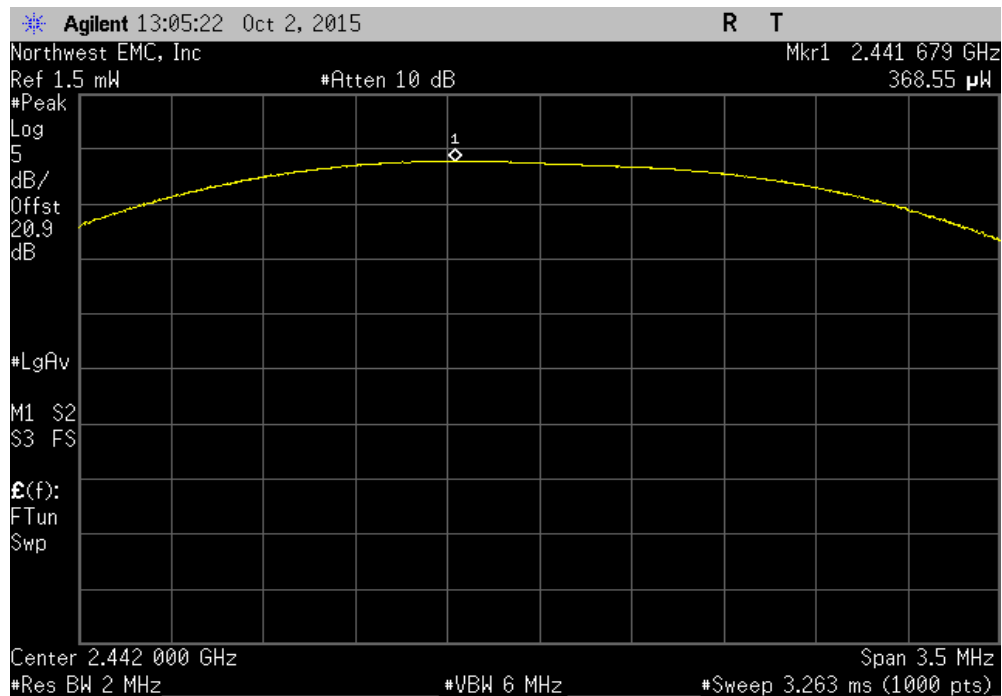
EUT: SensoSCAN		Work Order: SNSO0001	
Serial Number: None		Date: 10/02/15	
Customer: Sensogram Technologies, Inc.		Temperature: 24.4°C	
Attendees: None		Humidity: 39%	
Project: None		Barometric Pres.: 1020	
Tested by: Frank Sun	Power: USB via 110VAC/60Hz	Job Site: TX09	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2015		ANSI C63.10:2013	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	4	Signature 	
		Value	Limit (<) Result
BLE - Advertising			
Low Channel, 2402 MHz		412.857 uW	1 W Pass
Mid Channel, 2442 MHz		368.553 uW	1 W Pass
High Channel, 2480 MHz		301.856 uW	1 W Pass

# OUTPUT POWER

BLE - Advertising, Low Channel, 2402 MHz						
				Value	Limit (<)	Result
				412.857 uW	1 W	Pass

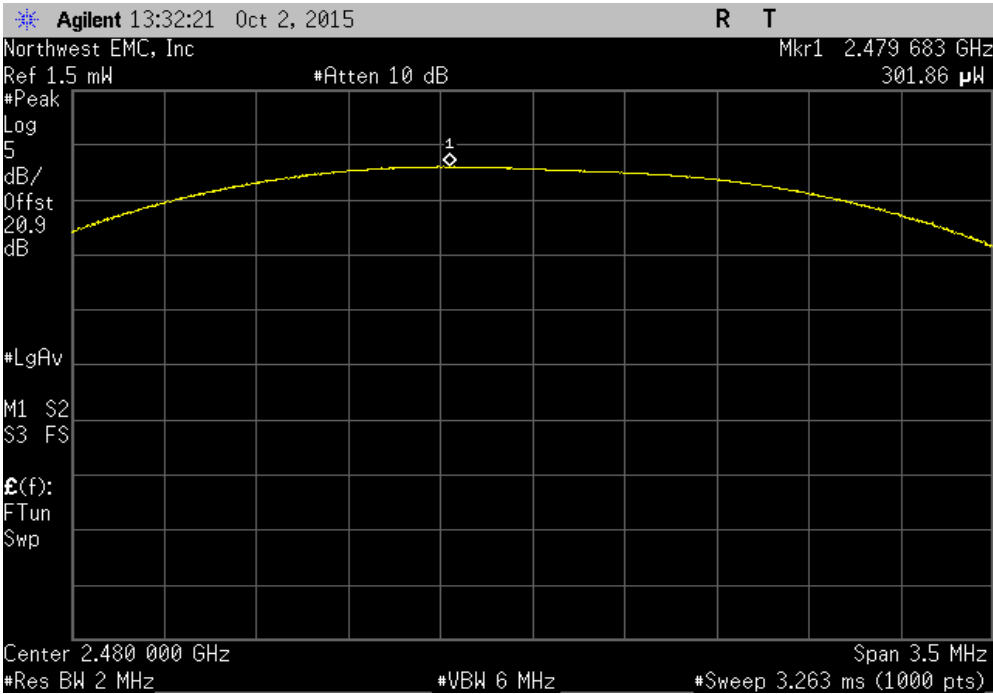


BLE - Advertising, Mid Channel, 2442 MHz						
				Value	Limit (<)	Result
				368.553 uW	1 W	Pass



OUTPUT POWER

BLE - Advertising, High Channel, 2480 MHz						
Value				Limit	Result	
				(<)		
301.856 uW				1 W	Pass	



# POWER SPECTRAL DENSITY

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo)
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	12
Attenuator	Fairview Microwave	SA4018-20	TQY	2/27/2015	12
Block - DC	Fairview Microwave	SD3379	AMM	2/27/2015	12
Signal Generator, 40 GHz	Agilent	N5173B	TIW	7/15/2014	36


## TEST DESCRIPTION

The maximum power spectral density measurements was measured using the channels and modes as called out on the following data sheets.

A direct connection was made between the RF output of the EUT and a spectrum analyzer. External attenuation and a DC block were used. The reference level offset on the spectrum analyzer was adjusted to compensate for cable loss and the external attenuation used between the RF output and the spectrum analyzer input.

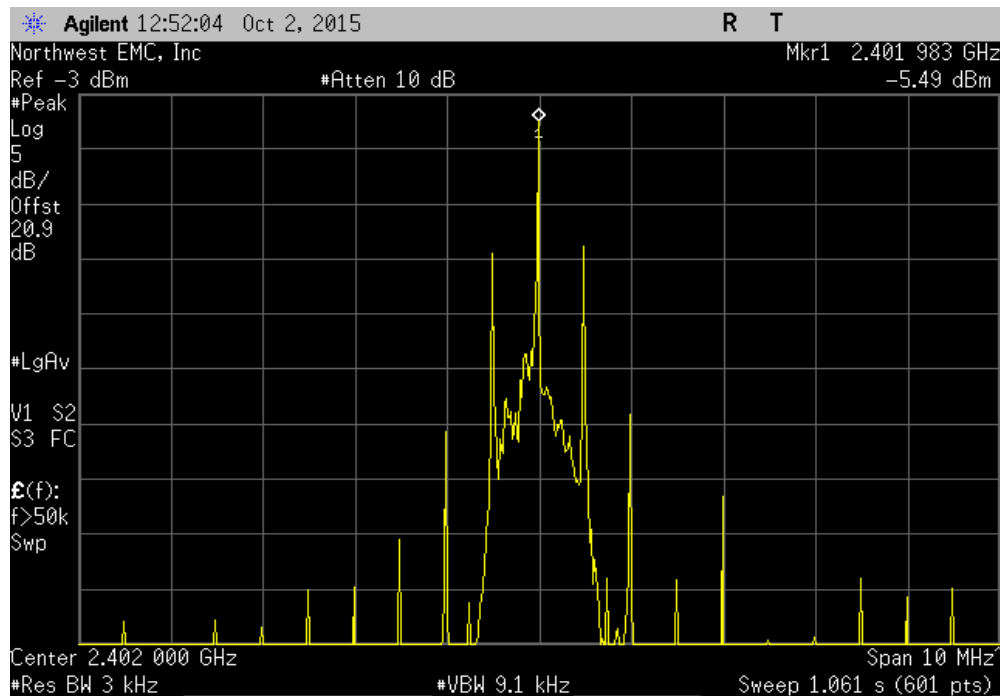
Per the procedure outlined in ANSI C63.10:2013 Section 11.10.2, the peak power spectral density was measured.

# POWER SPECTRAL DENSITY

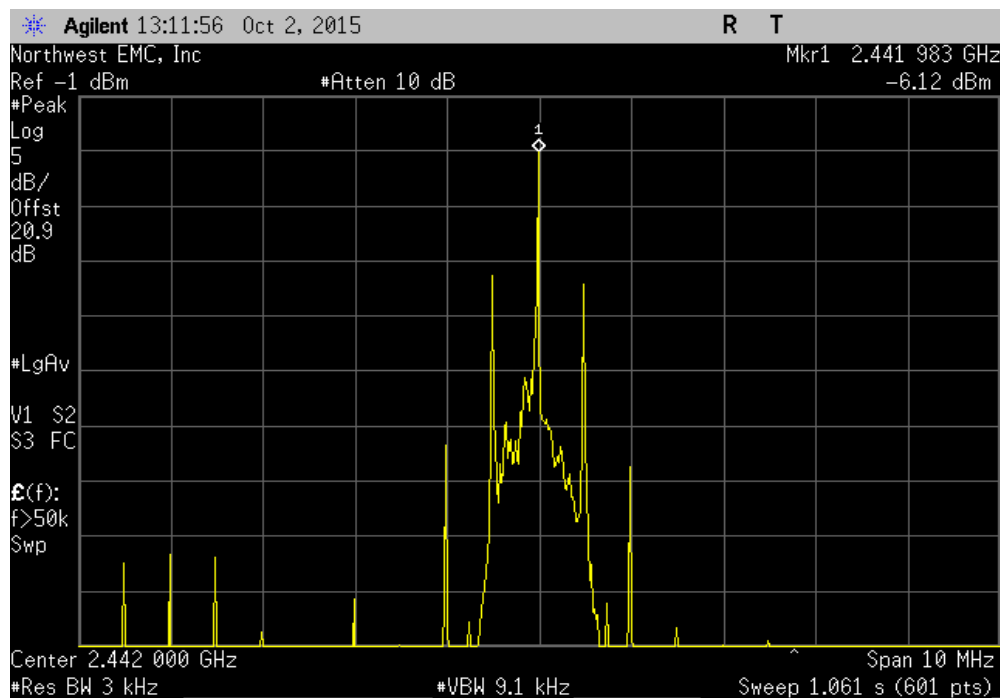
EUT: SensoSCAN		Work Order: SNSO0001	
Serial Number: None		Date: 10/02/15	
Customer: Sensogram Technologies, Inc.		Temperature: 24.3°C	
Attendees: None		Humidity: 38%	
Project: None		Barometric Pres.: 1020	
Tested by: Frank Sun	Power: USB via 110VAC/60Hz	Job Site: TX09	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2015		ANSI C63.10:2013	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	4	Signature 	
		Value dBm/3kHz	Limit < dBm/3kHz
BLE - Advertising			Results
Low Channel, 2402 MHz		-5.491	8 Pass
Mid Channel, 2442 MHz		-6.118	8 Pass
High Channel, 2480 MHz		-6.922	8 Pass

# POWER SPECTRAL DENSITY

BLE - Advertising, Low Channel, 2402 MHz						
				Value dBm/3kHz	Limit < dBm/3kHz	Results
				-5.491	8	Pass



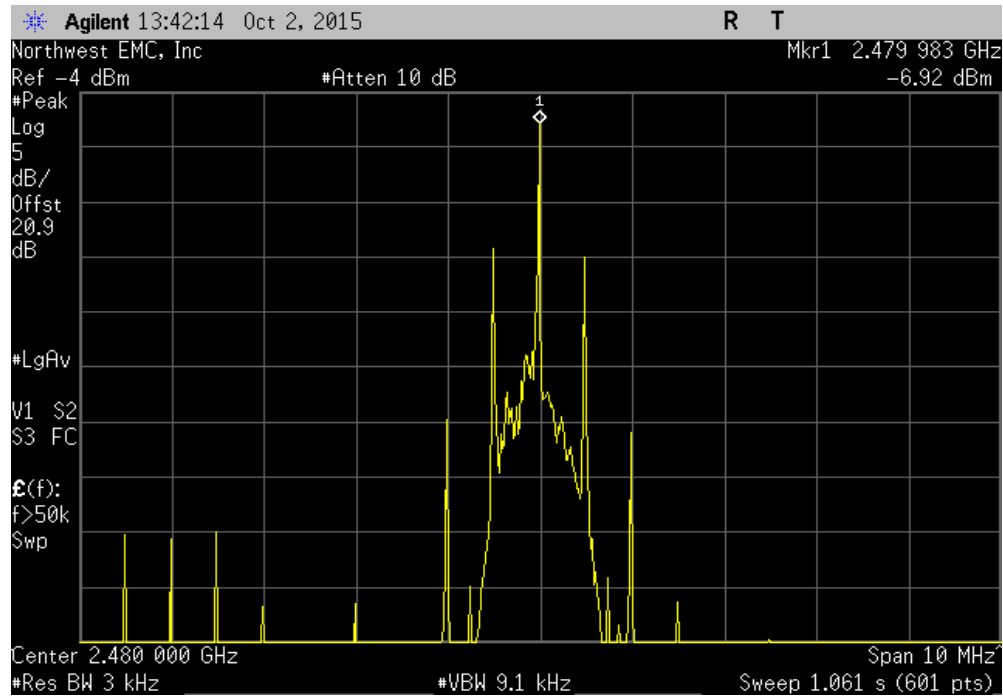
BLE - Advertising, Mid Channel, 2442 MHz						
				Value dBm/3kHz	Limit < dBm/3kHz	Results
				-6.118	8	Pass





# POWER SPECTRAL DENSITY

BLE - Advertising, High Channel, 2480 MHz						
				Value dBm/3kHz	Limit < dBm/3kHz	Results
				-6.922	8	Pass



# SPURIOUS CONDUCTED EMISSIONS

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.


## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval (mo)
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	12
Attenuator	Fairview Microwave	SA4018-20	TQY	2/27/2015	12
Block - DC	Fairview Microwave	SD3379	AMM	2/27/2015	12
Signal Generator, 40 GHz	Agilent	N5173B	TIW	7/15/2014	36

## TEST DESCRIPTION

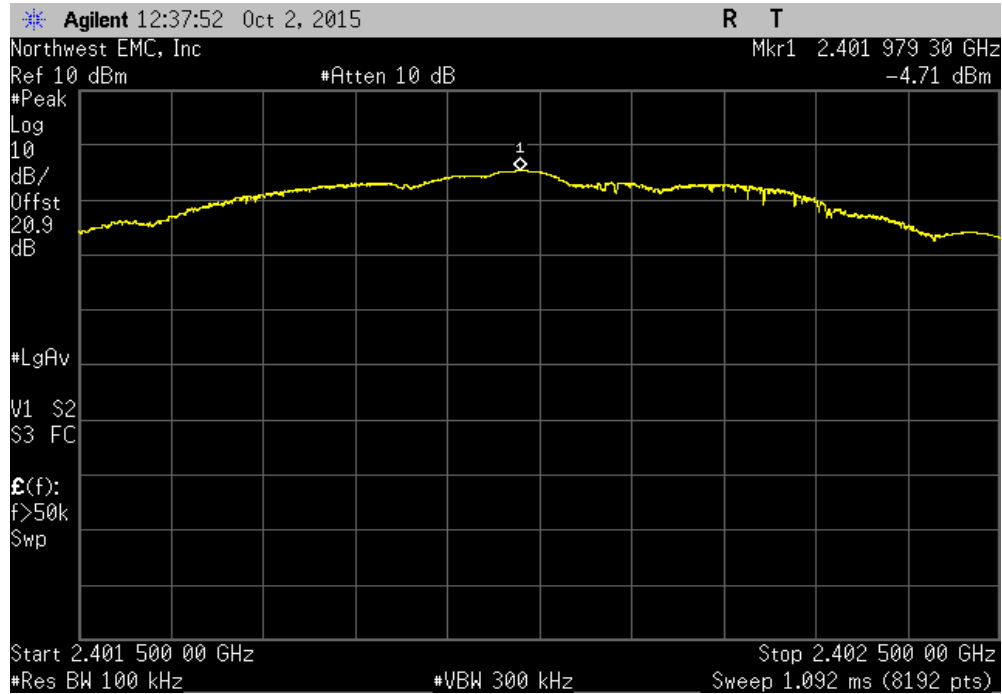
The spurious RF conducted emissions were measured with the EUT set to low, medium and high transmit frequencies. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

# SPURIOUS CONDUCTED EMISSIONS

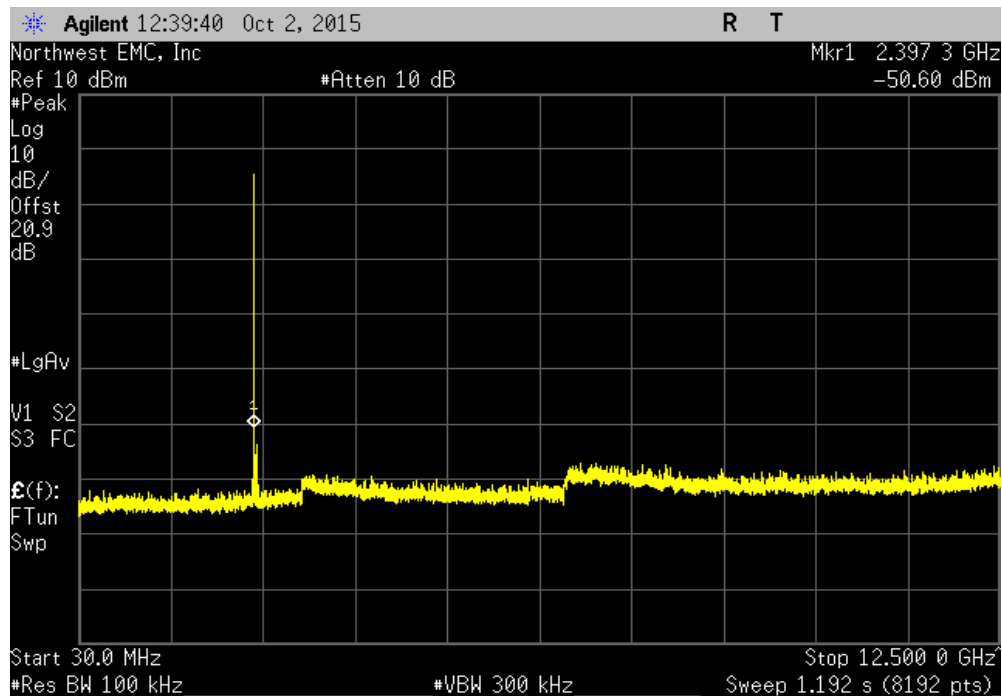
EUT: SensoSCAN		Work Order: SNSO0001	
Serial Number: None		Date: 10/02/15	
Customer: Sensogram Technologies, Inc.		Temperature: 24.3°C	
Attendees: None		Humidity: 38%	
Project: None		Barometric Pres.: 1020	
Tested by: Frank Sun	Power: USB via 110VAC/60Hz	Job Site: TX09	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2015		ANSI C63.10:2013	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	4	Signature 	
		Frequency Range	Max Value (dBc) Limit ≤ (dBc) Result
BLE - Advertising			
Low Channel, 2402 MHz		Fundamental	N/A N/A N/A
Low Channel, 2402 MHz		30 MHz - 12.5 GHz	-45.89 -20 Pass
Low Channel, 2402 MHz		12.5 GHz - 25 GHz	-49.43 -20 Pass
Mid Channel, 2442 MHz		Fundamental	N/A N/A N/A
Mid Channel, 2442 MHz		30 MHz - 12.5 GHz	-51.45 -20 Pass
Mid Channel, 2442 MHz		12.5 GHz - 25 GHz	-48.48 -20 Pass
High Channel, 2480 MHz		Fundamental	N/A N/A N/A
High Channel, 2480 MHz		30 MHz - 12.5 GHz	-49.81 -20 Pass
High Channel, 2480 MHz		12.5 GHz - 25 GHz	-47.66 -20 Pass

# SPURIOUS CONDUCTED EMISSIONS

BLE - Advertising, Low Channel, 2402 MHz						
Frequency Range		Max Value (dBc)		Limit ≤ (dBc)	Result	
Fundamental		N/A		N/A	N/A	

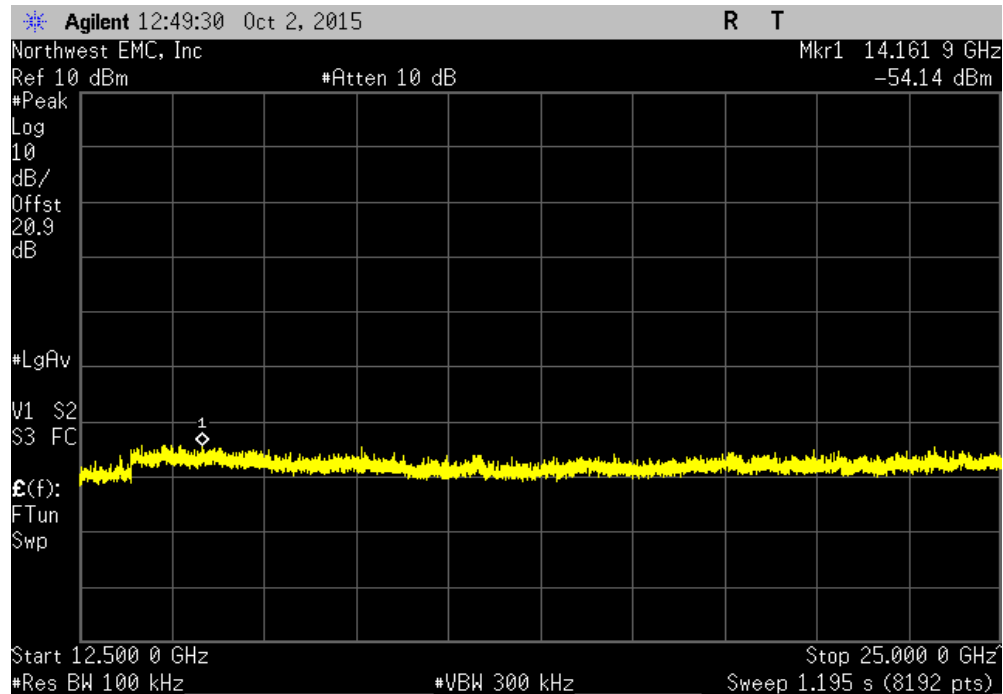


BLE - Advertising, Low Channel, 2402 MHz						
Frequency Range		Max Value (dBc)		Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz		-45.89		-20	Pass	

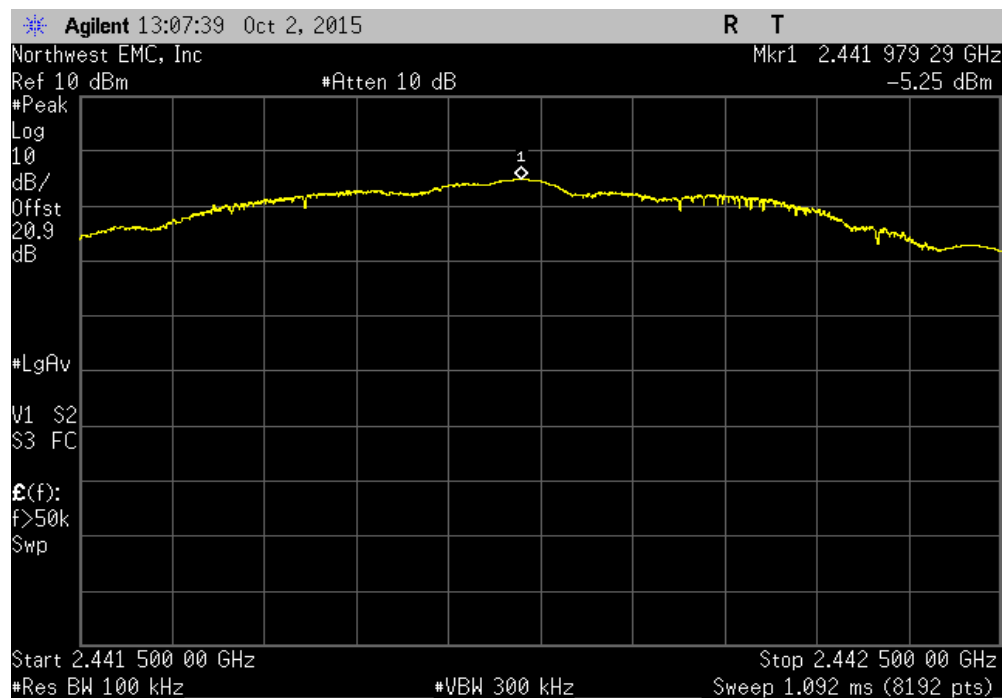


# SPURIOUS CONDUCTED EMISSIONS

BLE - Advertising, Low Channel, 2402 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-49.43	-20	Pass	

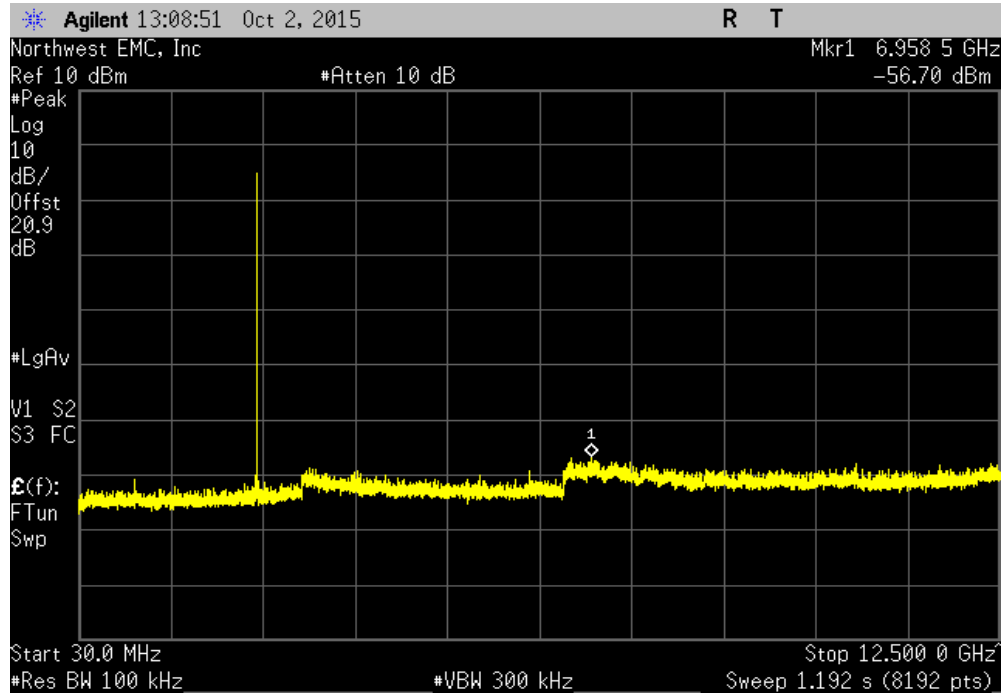


BLE - Advertising, Mid Channel, 2442 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	N/A	N/A	N/A	

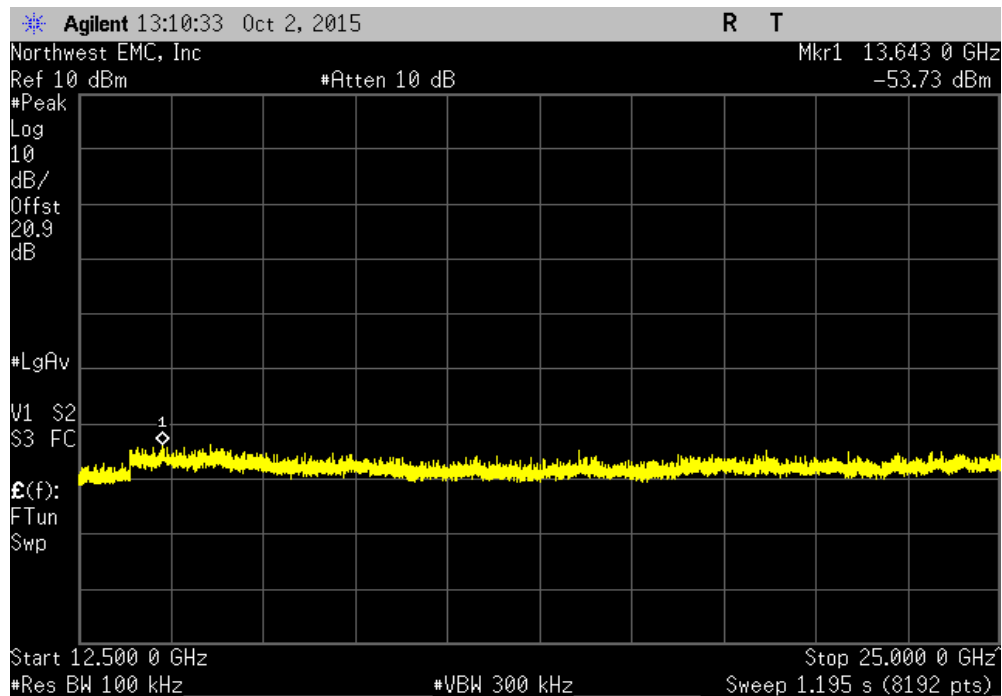


# SPURIOUS CONDUCTED EMISSIONS

BLE - Advertising, Mid Channel, 2442 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-51.45	-20	Pass	

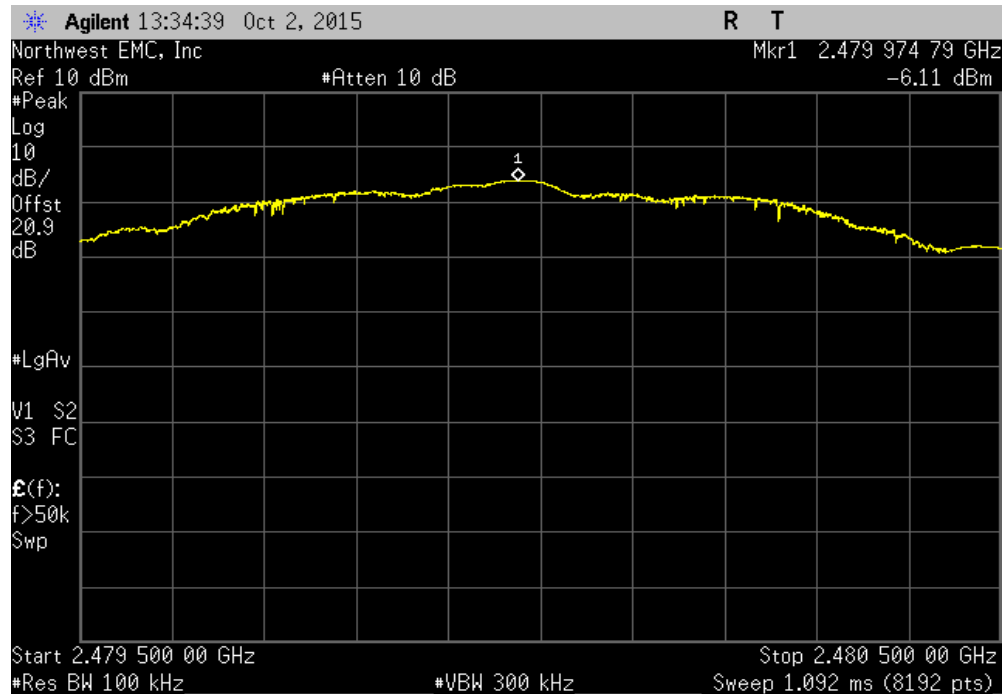


BLE - Advertising, Mid Channel, 2442 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-48.48	-20	Pass	

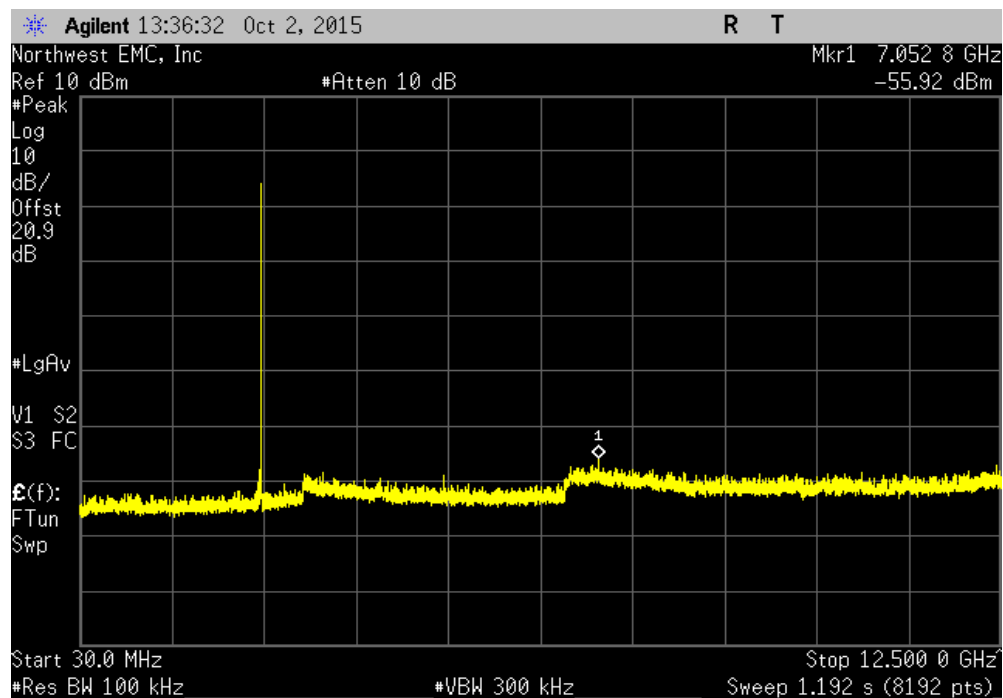


# SPURIOUS CONDUCTED EMISSIONS

BLE - Advertising, High Channel, 2480 MHz						
Frequency Range		Max Value (dBc)		Limit ≤ (dBc)	Result	
Fundamental		N/A		N/A	N/A	



BLE - Advertising, High Channel, 2480 MHz						
Frequency Range		Max Value (dBc)		Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz		-49.81		-20	Pass	



SPURIOUS CONDUCTED EMISSIONS

BLE - Advertising, High Channel, 2480 MHz				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-47.66	-20	Pass	

