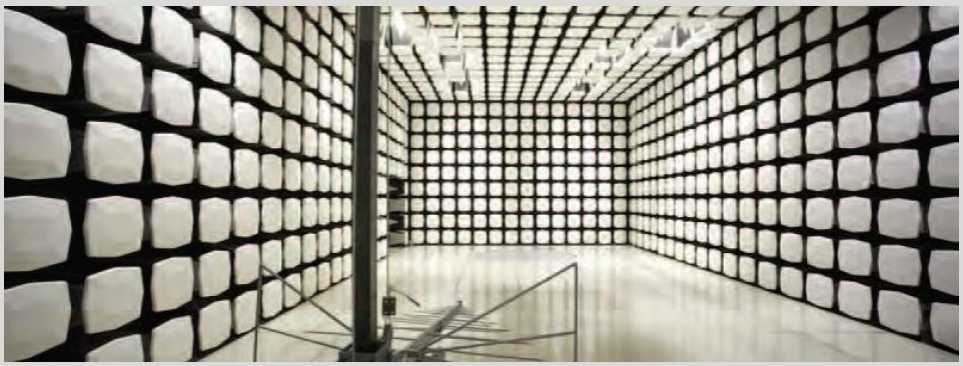
IntriCon

FOB - Remote Control for Hearing Devices

FCC 15.247:2017

Bluetooth Radio

Report # INCN0006.1



NVLAP Lab Code: 200881-0

CERTIFICATE OF TEST

2017-1-25

Last Date of Test: April 14, 2017
IntriCon

EUT: FOB - Remote Control for Hearing Devices

Radio Equipment Testing

Standards

Specification	Method
FCC 15.247:2017	ANSI C63.10:2013

Results

Method Clause	Test Description	Applied	Results	Comments
6.2	Powerline Conducted Emissions	No	N/A	Not required for a battery powered EUT.
6.5, 6.6 11.12.1, 11.13.2	Spurious Radiated Emissions	Yes	Pass	
11.6	Duty Cycle	Yes	Pass	
11.8.2	Occupied Bandwidth	Yes	Pass	
11.9.1.1	Output Power	Yes	Pass	
11.10.2	Power Spectral Density	Yes	Pass	
11.11	Band Edge Compliance	Yes	Pass	
11.11	Spurious Conducted Emissions	Yes	Pass	

Deviations From Test Standards

None

Approved By:

Matt Nuernberg, 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.

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REVISION HISTORY

Revision Number	Description	Date	Page Number
00	None		

ACCREDITATIONS AND AUTHORIZATIONS

2017.1.25

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 Element to certify transmitters to FCC and IC specifications.

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

Canada

ISED - Recognized by Innovation, Science and Economic Development Canada as a Certification Body (CB). Certification chambers and Open Area Test Sites are filed with ISED.

European Union

European Commission – Validated by the European Commission as a Notified Body under the R&TTE Directive.

Australia/New Zealand

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

Korea

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

Japan

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

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.

Singapore

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

Israel

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

Hong Kong

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

Vietnam

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

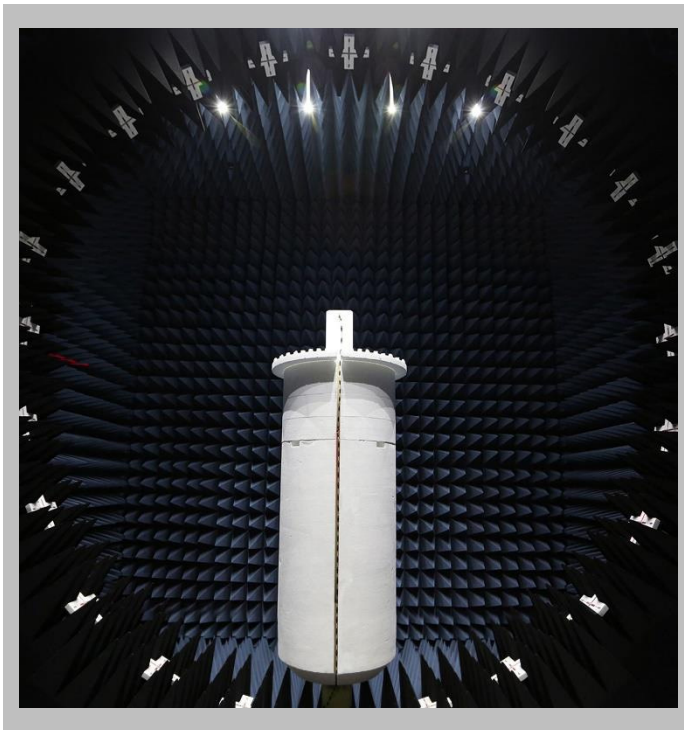
SCOPE

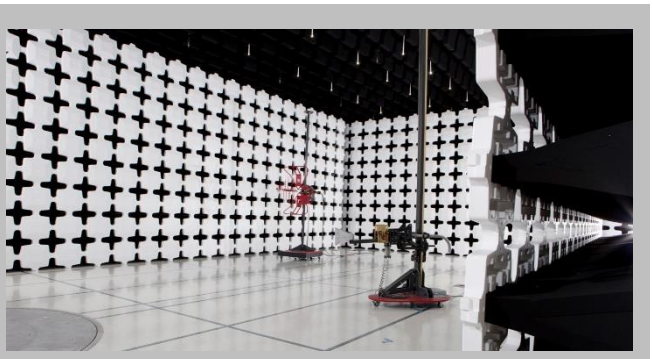
For details on the Scopes of our Accreditations, please visit:
http://portlandcustomer.element.com/ts/scope/scope.htm
http://gsi.nist.gov/global/docs/cabs/designations.html

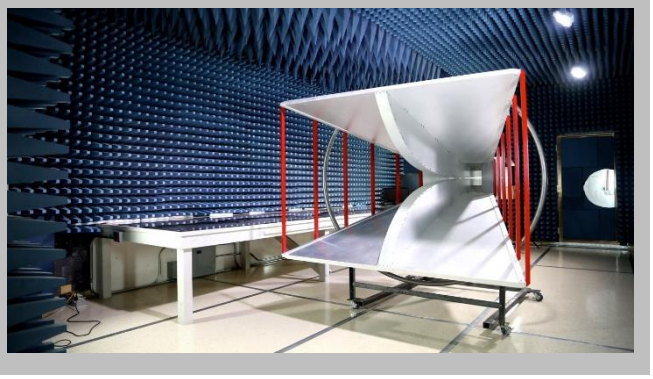
FACILITIES

2017.3.2

California	Minnesota	New York	Oregon	Texas	Washington
Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	Labs MN01-08, MN10 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 554-8214	Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	Labs TX01-09 3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255	Labs NC01-05 19201 120th Ave NE Bothell, WA 98011 (425)984-6600
NVLAP					
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
Innovation, Science and Economic Development Canada					
2834B-1, 2834B-3	2834E-1	N/A	2834D-1, 2834D-*2*	2834G-1	2834F-1
BSMI					
SL2-IN-E-1154R	SL2-IN-E-1152R	N/A	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R
VCCI					
A-0029	A-0109	N/A	A-0108	A-0201	A-0110
Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA					
US0158	US0175	N/A	US0017	US0191	US0157







MEASUREMENT UNCERTAINTY

TMU.2015.07.10

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.

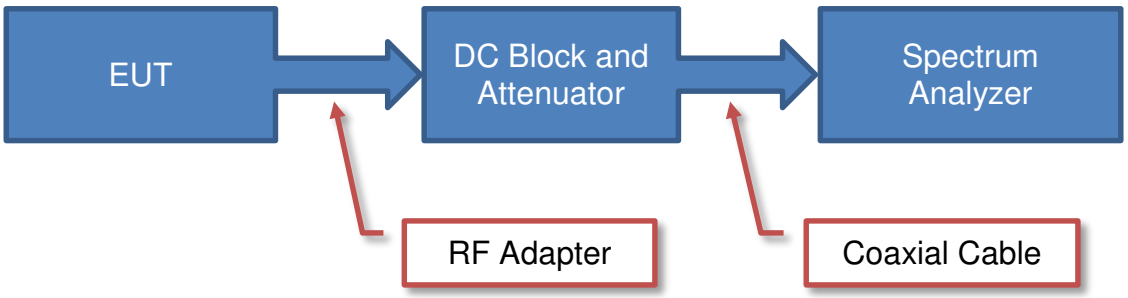
A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) can be found included as part of the applicable test description page. 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.

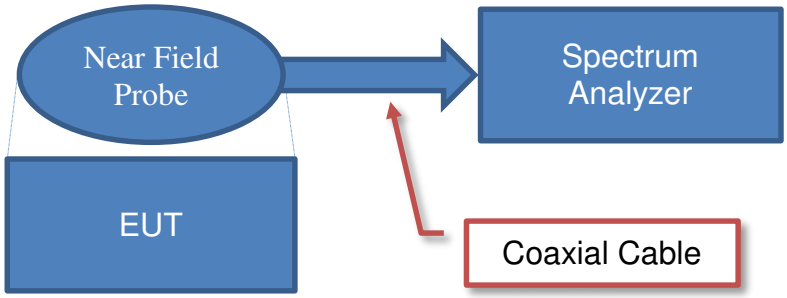
Test	+ MU	- MU
Frequency Accuracy (Hz)	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	0.3 dB	-0.3 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%
Field Strength (dB)	5.2 dB	-5.2 dB
AC Powerline Conducted Emissions (dB)	2.4 dB	-2.4 dB

Test Setup Block Diagrams

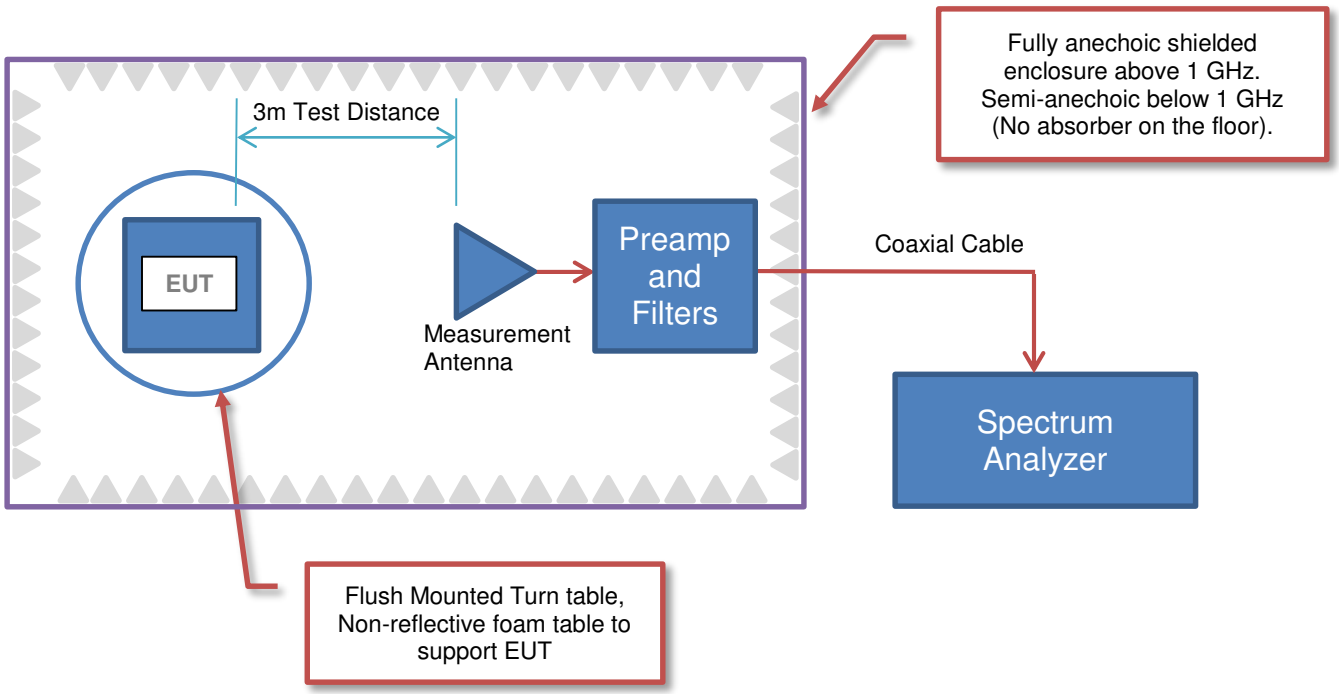
Antenna Port Conducted Measurements



Near Field Test Fixture Measurements



Spurious Radiated Emissions



PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	IntriCon
Address:	1260 Red Fox Road
City, State, Zip:	Arden Hills, MN 55112
Test Requested By:	Rick Fackler
EUT:	FOB - Remote Control for Hearing Devices
First Date of Test:	April 11, 2017
Last Date of Test:	April 14, 2017
Receipt Date of Samples:	April 5, 2017
Equipment Design Stage:	Production
Equipment Condition:	No Damage
Purchase Authorization:	Verified

Information Provided by the Party Requesting the Test

Functional Description of the EUT:
Remote Control with BLE

Testing Objective:
To demonstrate compliance of the Bluetooth radio to FCC 15.247 requirements.

CONFIGURATIONS

Configuration INCN0006- 4

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
FOB	IntriCon	93153-000	17000061

Configuration INCN0006- 5

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
FOB	IntriCon	93153-000	17000057

MODIFICATIONS

2017-1-25

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	4/11/2017	Duty Cycle	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
2	4/11/2017	Occupied Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
3	4/11/2017	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
4	4/11/2017	Power Spectral Density	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
5	4/11/2017	Band Edge Compliance	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
6	4/11/2017	Spurious Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
7	4/14/2017	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

SPURIOUS RADIATED EMISSIONS

PSA-ESCI 2017.01.26

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 at High Ch. (2480) MHz.
Transmitting at Mid Ch. (2442) MHz.
Transmitting at Low Ch. (2402) MHz.

POWER SETTINGS INVESTIGATED

Battery

CONFIGURATIONS INVESTIGATED

INCN0006 - 5

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26000 MHz

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
Cable	Element	18-26GHz Standard Gain Horn Cable	MNP	9/15/2016	12 mo
Cable	ESM Cable Corp.	Standard Gain Horn Cables	MNJ	7/29/2016	12 mo
Cable	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	12/1/2016	12 mo
Cable	ESM Cable Corp.	Bilog Cables	MNH	12/1/2016	12 mo
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFI	1/6/2017	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVW	2/14/2017	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVV	2/14/2017	12 mo
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	AVO	12/1/2016	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVT	2/14/2017	12 mo
Amplifier - Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	9/15/2016	12 mo
Antenna - Standard Gain	ETS Lindgren	3160-09	AHG	NCR	0 mo
Antenna - Standard Gain	ETS Lindgren	3160-07	AXP	NCR	0 mo
Antenna - Standard Gain	ETS Lindgren	3160-08	AIQ	NCR	0 mo
Antenna - Double Ridge	ETS Lindgren	3115	AJA	6/23/2016	24 mo
Antenna - Biconilog	Teseq	CBL 6141B	AYD	1/6/2016	24 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 antenna of each type to be used with the EUT was tested. The EUT was configured for the required transmit frequencies and the modes as showed in the data sheets.

For each configuration, the spectrum was scanned throughout the specified range as part of the exploratory investigation of the emissions. These “pre-scans” are not included in the report. Final measurements on individual emissions were then made and included in this test report.

The individual emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis if required, and adjusting the measurement antenna height and polarization (per ANSI C63.10). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

QP = Quasi-Peak Detector
PK = Peak Detector
AV = RMS Detector

Measurements were made to satisfy the specific requirements of the test specification for out of band emissions as well as the restricted band requirements.

If there are no detectable emissions above the noise floor, the data included may show noise floor measurements for reference only.

Measurements at the edges of the allowable band may be presented in an alternative method as provided for in the ANSI C63.10 Marker-Delta method. This method involves performing an in-band fundamental measurement followed by a screen capture of the fundamental and out-of-band emission using reduced measurement instrumentation bandwidths. The amplitude delta measured on this screen capture is applied to the fundamental emission value to show the out-of-band emission level as applied to the limit.

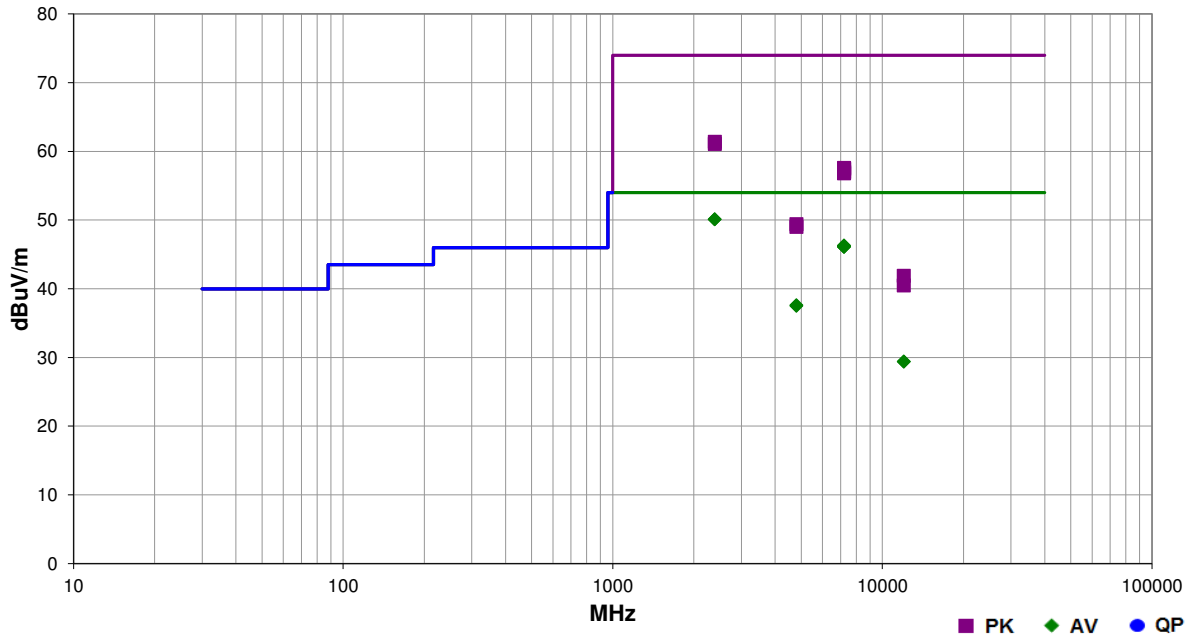
SPURIOUS RADIATED EMISSIONS

EmiR5 2017.01.25 PSA-ESCI 2017.01.26

Work Order:	INCN0006	**Date:**	04/14/17		
Project:	None	**Temperature:**	22.5 °C		
Job Site:	MN05	**Humidity:**	36.3% RH		
Serial Number:	17000057	**Barometric Pres.:**	1022 mbar	**Tested by:**	Cole Ghizzone, Chris Patterson
EUT:	FOB				
Configuration:	5				
Customer:	IntriCon				
Attendees:	Andrew Albing				
EUT Power:	Battery				
Operating Mode:	Transmitting at Low Ch. (2402) MHz.				
Deviations:	None				
Comments:	None				

Test Specifications	**Test Method**
FCC 15.247:2017	ANSI C63.10:2013

Run #	32	**Test Distance (m)**	3	**Antenna Height(s)**	1 to 4(m)	**Results**	Pass



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
2389.477	32.4	-2.3	1.0	258.9	3.0	20.0	Horz	AV	0.0	50.1	54.0	-3.9	EUT on Side, Low Ch, BLE
2388.825	32.4	-2.3	1.0	355.9	3.0	20.0	Vert	AV	0.0	50.1	54.0	-3.9	EUT on Side, Low Ch, BLE
7207.408	30.8	15.5	1.0	149.1	3.0	0.0	Vert	AV	0.0	46.3	54.0	-7.7	EUT on Side, Low Ch, BLE
7208.342	30.7	15.5	1.0	134.1	3.0	0.0	Horz	AV	0.0	46.2	54.0	-7.8	EUT on Side, Low Ch, BLE
7208.492	30.7	15.5	1.0	308.9	3.0	0.0	Horz	AV	0.0	46.2	54.0	-7.8	EUT Vert, Low Ch, BLE
7208.383	30.6	15.5	1.0	44.1	3.0	0.0	Vert	AV	0.0	46.1	54.0	-7.9	EUT Vert, Low Ch, BLE
7208.008	30.6	15.5	2.4	310.0	3.0	0.0	Horz	AV	0.0	46.1	54.0	-7.9	EUT Horz, Low Ch, BLE
7208.275	30.6	15.5	1.0	96.0	3.0	0.0	Vert	AV	0.0	46.1	54.0	-7.9	EUT Horz, Low Ch, BLE
2389.242	43.7	-2.3	1.0	355.9	3.0	20.0	Vert	PK	0.0	61.4	74.0	-12.6	EUT on Side, Low Ch, BLE
2389.073	43.4	-2.3	1.0	258.9	3.0	20.0	Horz	PK	0.0	61.1	74.0	-12.9	EUT on Side, Low Ch, BLE
4801.708	31.0	6.6	1.0	89.0	3.0	0.0	Vert	AV	0.0	37.6	54.0	-16.4	EUT on Side, Low Ch, BLE
7204.008	42.1	15.5	2.4	310.0	3.0	0.0	Horz	PK	0.0	57.6	74.0	-16.4	EUT Horz, Low Ch, BLE
4801.725	30.9	6.6	3.9	264.9	3.0	0.0	Horz	AV	0.0	37.5	54.0	-16.5	EUT on Side, Low Ch, BLE
7207.892	42.0	15.5	1.0	134.1	3.0	0.0	Horz	PK	0.0	57.5	74.0	-16.5	EUT on Side, Low Ch, BLE
7205.758	41.9	15.5	1.0	308.9	3.0	0.0	Horz	PK	0.0	57.4	74.0	-16.6	EUT Vert, Low Ch, BLE
7208.308	41.5	15.5	1.0	149.1	3.0	0.0	Vert	PK	0.0	57.0	74.0	-17.0	EUT on Side, Low Ch, BLE
7203.708	41.5	15.5	1.0	44.1	3.0	0.0	Vert	PK	0.0	57.0	74.0	-17.0	EUT Vert, Low Ch, BLE
7203.858	41.3	15.5	1.0	96.0	3.0	0.0	Vert	PK	0.0	56.8	74.0	-17.2	EUT Horz, Low Ch, BLE

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
4802.233	42.8	6.6	3.9	264.9	3.0	0.0	Horz	PK	0.0	49.4	74.0	-24.6	EUT on Side, Low Ch, BLE
12012.410	30.4	-1.0	2.6	182.0	3.0	0.0	Horz	AV	0.0	29.4	54.0	-24.6	EUT on Side, Low Ch, BLE
12010.050	30.4	-1.0	1.6	28.0	3.0	0.0	Vert	AV	0.0	29.4	54.0	-24.6	EUT on Side, Low Ch, BLE
4801.583	42.4	6.6	1.0	89.0	3.0	0.0	Vert	PK	0.0	49.0	74.0	-25.0	EUT on Side, Low Ch, BLE
12010.580	42.9	-1.0	1.6	28.0	3.0	0.0	Vert	PK	0.0	41.9	74.0	-32.1	EUT on Side, Low Ch, BLE
12010.130	41.5	-1.0	2.6	182.0	3.0	0.0	Horz	PK	0.0	40.5	74.0	-33.5	EUT on Side, Low Ch, BLE

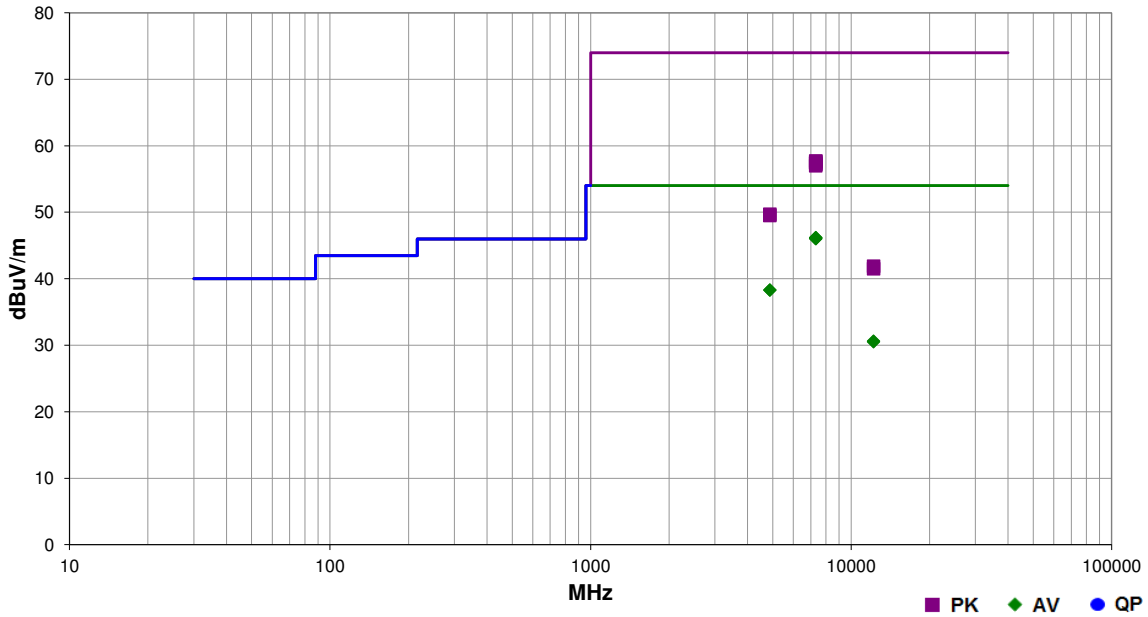
SPURIOUS RADIATED EMISSIONS

EmiR5 2017.01.25 PSA-ESCI 2017.01.26

Work Order:	INCN0006	**Date:**	04/14/17		
Project:	None	**Temperature:**	22.5 °C		
Job Site:	MN05	**Humidity:**	36.3% RH		
Serial Number:	17000057	**Barometric Pres.:**	1022 mbar	**Tested by:**	Cole Ghizzone, Chris Patterson
EUT:	FOB				
Configuration:	5				
Customer:	IntriCon				
Attendees:	Andrew Albing				
EUT Power:	Battery				
Operating Mode:	Transmitting at Mid Ch. (2442) MHz.				
Deviations:	None				
Comments:	None				

Test Specifications	**Test Method**
FCC 15.247:2017	ANSI C63.10:2013

Run #	38	**Test Distance (m)**	3	**Antenna Height(s)**	1 to 4(m)	**Results**	Pass



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
7321.517	31.2	15.0	1.0	40.1	3.0	0.0	Horz	AV	0.0	46.2	54.0	-7.8	EUT on Side, Mid Ch, BLE
7317.658	31.0	15.1	2.4	296.0	3.0	0.0	Vert	AV	0.0	46.1	54.0	-7.9	EUT on Side, Mid Ch, BLE
7320.025	31.0	15.1	1.0	84.1	3.0	0.0	Horz	AV	0.0	46.1	54.0	-7.9	EUT Vert, Mid Ch, BLE
7318.875	31.0	15.1	1.0	175.0	3.0	0.0	Horz	AV	0.0	46.1	54.0	-7.9	EUT Horz, Mid Ch, BLE
7320.158	31.0	15.1	1.2	137.1	3.0	0.0	Vert	AV	0.0	46.1	54.0	-7.9	EUT Horz, Mid Ch, BLE
7320.792	30.9	15.1	1.0	173.1	3.0	0.0	Vert	AV	0.0	46.0	54.0	-8.0	EUT Vert, Mid Ch, BLE
4881.600	31.6	6.7	1.4	160.1	3.0	0.0	Horz	AV	0.0	38.3	54.0	-15.7	EUT on Side, Mid Ch, BLE
4882.017	31.6	6.7	1.3	285.0	3.0	0.0	Vert	AV	0.0	38.3	54.0	-15.7	EUT on Side, Mid Ch, BLE
7320.200	42.6	15.1	2.4	296.0	3.0	0.0	Vert	PK	0.0	57.7	74.0	-16.3	EUT on Side, Mid Ch, BLE
7321.667	42.7	15.0	1.2	137.1	3.0	0.0	Vert	PK	0.0	57.7	74.0	-16.3	EUT Horz, Mid Ch, BLE
7320.500	42.3	15.1	1.0	84.1	3.0	0.0	Horz	PK	0.0	57.4	74.0	-16.6	EUT Vert, Mid Ch, BLE
7318.967	42.3	15.1	1.0	173.1	3.0	0.0	Vert	PK	0.0	57.4	74.0	-16.6	EUT Vert, Mid Ch, BLE
7321.983	42.2	15.0	1.0	40.1	3.0	0.0	Horz	PK	0.0	57.2	74.0	-16.8	EUT on Side, Mid Ch, BLE
7319.475	41.9	15.1	1.0	175.0	3.0	0.0	Horz	PK	0.0	57.0	74.0	-17.0	EUT Horz, Mid Ch, BLE
12198.630	30.6	0.0	1.3	315.9	3.0	0.0	Horz	AV	0.0	30.6	54.0	-23.4	EUT on Side, Mid Ch, BLE
12199.420	30.5	0.0	3.3	58.1	3.0	0.0	Vert	AV	0.0	30.5	54.0	-23.5	EUT on Side, Mid Ch, BLE
4879.617	43.0	6.7	1.3	285.0	3.0	0.0	Vert	PK	0.0	49.7	74.0	-24.3	EUT on Side, Mid Ch, BLE
4877.833	42.8	6.7	1.4	160.1	3.0	0.0	Horz	PK	0.0	49.5	74.0	-24.5	EUT on Side, Mid Ch, BLE
12200.240	41.9	0.0	1.3	315.9	3.0	0.0	Horz	PK	0.0	41.9	74.0	-32.1	EUT on Side, Mid Ch, BLE
12201.840	41.5	0.0	3.3	58.1	3.0	0.0	Vert	PK	0.0	41.5	74.0	-32.5	EUT on Side, Mid Ch, BLE

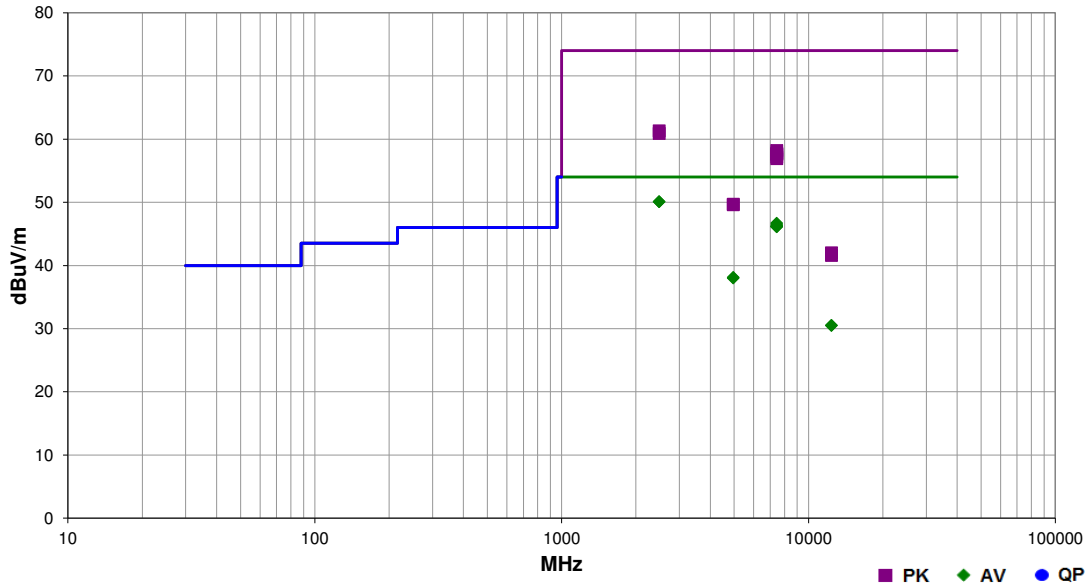
SPURIOUS RADIATED EMISSIONS

EmiR5 2017.01.25 PSA-ESCI 2017.01.26

Work Order:	INCN0006	**Date:**	04/14/17		
Project:	None	**Temperature:**	22.5 °C		
Job Site:	MN05	**Humidity:**	36.3% RH		
Serial Number:	17000057	**Barometric Pres.:**	1022 mbar	**Tested by:**	Cole Ghizzone, Chris Patterson
EUT:	FOB				
Configuration:	5				
Customer:	IntriCon				
Attendees:	Andrew Albing				
EUT Power:	Battery				
Operating Mode:	Transmitting at High Ch. (2480) MHz.				
Deviations:	None				
Comments:	None				

Test Specifications	**Test Method**
FCC 15.247:2017	ANSI C63.10:2013

Run #	43	**Test Distance (m)**	3	**Antenna Height(s)**	1 to 4(m)	**Results**	Pass



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
2484.398	32.6	-2.5	1.0	60.0	3.0	20.0	Horz	AV	0.0	50.1	54.0	-3.9	EUT on Side, High Ch, BLE
2484.650	32.6	-2.5	1.0	121.0	3.0	20.0	Vert	AV	0.0	50.1	54.0	-3.9	EUT on Side, High Ch, BLE
7440.383	31.7	15.0	2.2	250.9	3.0	0.0	Vert	AV	0.0	46.7	54.0	-7.3	EUT on Side, High Ch, BLE
7440.075	31.4	15.0	2.1	183.0	3.0	0.0	Vert	AV	0.0	46.4	54.0	-7.6	EUT Vert, High Ch, BLE
7439.433	31.2	15.0	2.7	360.0	3.0	0.0	Horz	AV	0.0	46.2	54.0	-7.8	EUT on Side, High Ch, BLE
7440.292	31.2	15.0	2.1	318.0	3.0	0.0	Horz	AV	0.0	46.2	54.0	-7.8	EUT Horz, High Ch, BLE
7440.533	31.2	15.0	2.9	329.9	3.0	0.0	Horz	AV	0.0	46.2	54.0	-7.8	EUT Vert, High Ch, BLE
7439.925	31.1	15.0	1.1	325.9	3.0	0.0	Vert	AV	0.0	46.1	54.0	-7.9	EUT Horz, High Ch, BLE
2484.367	43.8	-2.5	1.0	60.0	3.0	20.0	Horz	PK	0.0	61.3	74.0	-12.7	EUT on Side, High Ch, BLE
2484.600	43.4	-2.5	1.0	121.0	3.0	20.0	Vert	PK	0.0	60.9	74.0	-13.1	EUT on Side, High Ch, BLE
7439.625	43.2	15.0	2.2	250.9	3.0	0.0	Vert	PK	0.0	58.2	74.0	-15.8	EUT on Side, High Ch, BLE
4959.867	31.3	6.8	1.1	336.9	3.0	0.0	Horz	AV	0.0	38.1	54.0	-15.9	EUT on Side, High Ch, BLE
4962.417	31.2	6.8	1.0	26.1	3.0	0.0	Vert	AV	0.0	38.0	54.0	-16.0	EUT on Side, High Ch, BLE
7439.092	42.8	15.0	2.1	183.0	3.0	0.0	Vert	PK	0.0	57.8	74.0	-16.2	EUT Vert, High Ch, BLE
7441.467	42.6	15.0	2.7	360.0	3.0	0.0	Horz	PK	0.0	57.6	74.0	-16.4	EUT on Side, High Ch, BLE
7440.933	42.6	15.0	2.1	318.0	3.0	0.0	Horz	PK	0.0	57.6	74.0	-16.4	EUT Horz, High Ch, BLE
7440.667	42.2	15.0	1.1	325.9	3.0	0.0	Vert	PK	0.0	57.2	74.0	-16.8	EUT Horz, High Ch, BLE
7441.025	41.9	15.0	2.9	329.9	3.0	0.0	Horz	PK	0.0	56.9	74.0	-17.1	EUT Vert, High Ch, BLE
12399.430	29.6	0.9	1.0	132.0	3.0	0.0	Horz	AV	0.0	30.5	54.0	-23.5	EUT on Side, High Ch, BLE
12399.290	29.6	0.9	1.0	242.0	3.0	0.0	Vert	AV	0.0	30.5	54.0	-23.5	EUT on Side, High Ch, BLE
4958.317	42.9	6.8	1.0	26.1	3.0	0.0	Vert	PK	0.0	49.7	74.0	-24.3	EUT on Side, High Ch, BLE
4962.258	42.8	6.8	1.1	336.9	3.0	0.0	Horz	PK	0.0	49.6	74.0	-24.4	EUT on Side, High Ch, BLE
12398.370	41.1	0.9	1.0	132.0	3.0	0.0	Horz	PK	0.0	42.0	74.0	-32.0	EUT on Side, High Ch, BLE
12397.600	40.7	0.9	1.0	242.0	3.0	0.0	Vert	PK	0.0	41.6	74.0	-32.4	EUT on Side, High Ch, BLE

DUTY CYCLE

XMit 2017.01.26

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.	Cal. Due
Generator - Signal	Agilent	E4422B	TGQ	3/17/2015	3/17/2018
Attenuator	S.M. Electronics	SA26B-20	RFW	2/14/2017	2/14/2018
Block - DC	Fairview Microwave	SD3379	AMI	9/15/2016	9/15/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAX	3/16/2017	3/16/2018

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. 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.

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

TbtTx 2017.01.27 XMit 2017.01.26

EUT:	FOB			**Work Order:**	INCN0006
Serial Number:	17000061			**Date:**	04/11/17
Customer:	IntriCon			**Temperature:**	22.1 °C
Attendees:	Andrew Albing			**Humidity:**	27.4% RH
Project:	None			**Barometric Pres.:**	1026 mbar
Tested by:	Dustin Sparks	**Power:**	Battery	**Job Site:**	MN08

TEST SPECIFICATIONS	Test Method
FCC 15.247:2017	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

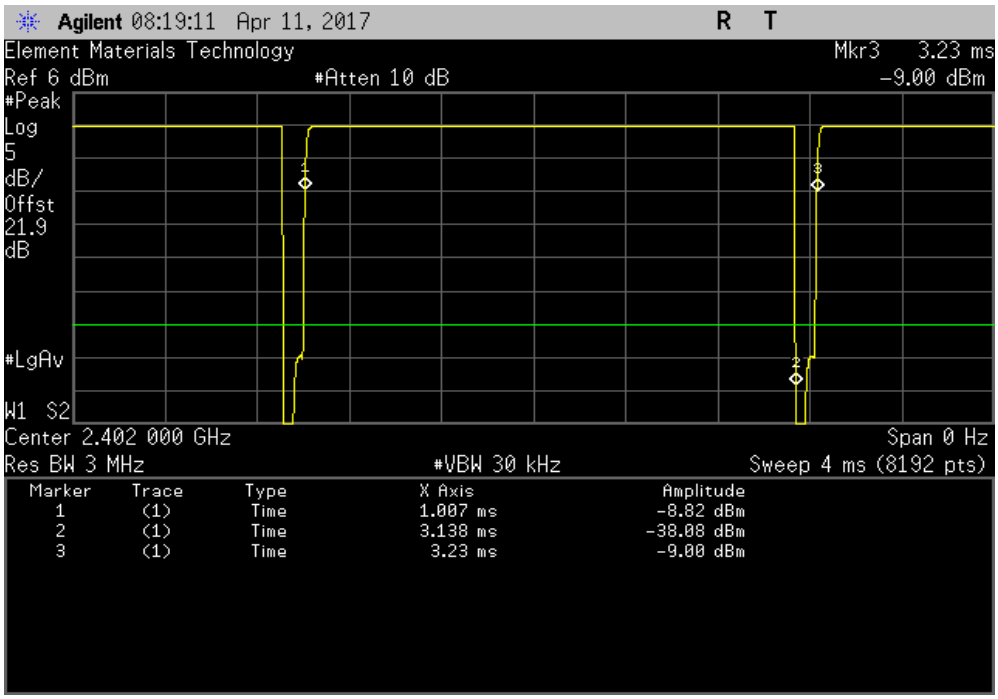
Configuration #	4	Signature

	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
BLE/GFSK Low Channel, 2402 MHz	2.13 ms	2.223 ms	1	95.8	N/A	N/A
BLE/GFSK Low Channel, 2402 MHz	N/A	N/A	5	N/A	N/A	N/A
BLE/GFSK Mid Channel, 2442 MHz	2.13 ms	2.223 ms	1	95.8	N/A	N/A
BLE/GFSK Mid Channel, 2442 MHz	N/A	N/A	5	N/A	N/A	N/A
BLE/GFSK High Channel, 2480 MHz	2.13 ms	2.223 ms	1	95.8	N/A	N/A
BLE/GFSK High Channel, 2480 MHz	N/A	N/A	5	N/A	N/A	N/A

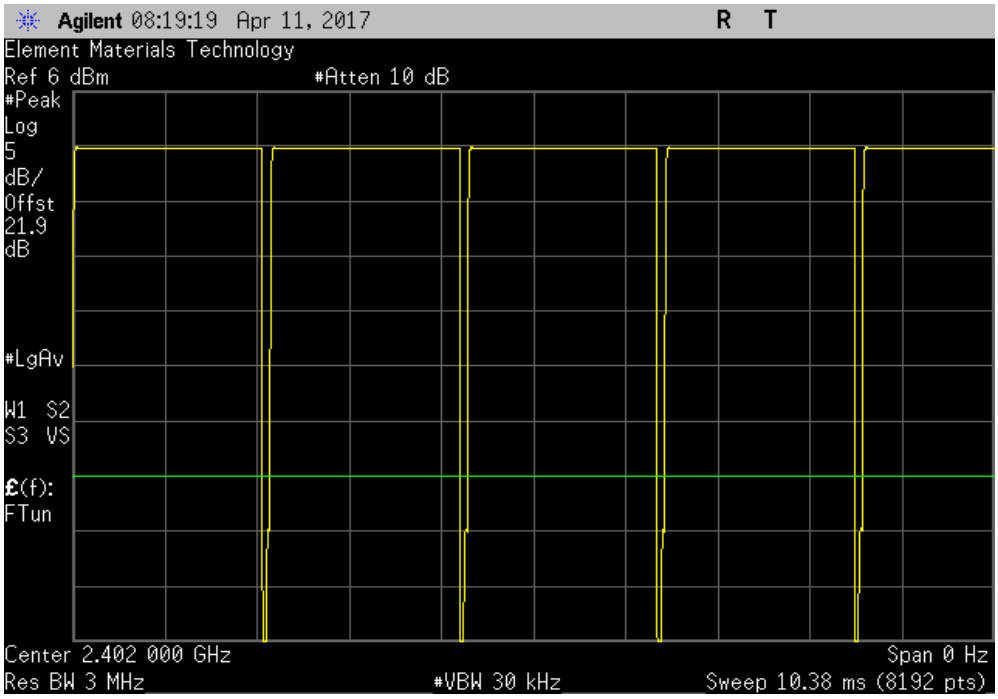
DUTY CYCLE

TbtTx 2017.01.27 XMit 2017.01.26

BLE/GFSK Low Channel, 2402 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	2.13 ms	2.223 ms	1	95.8	N/A	N/A



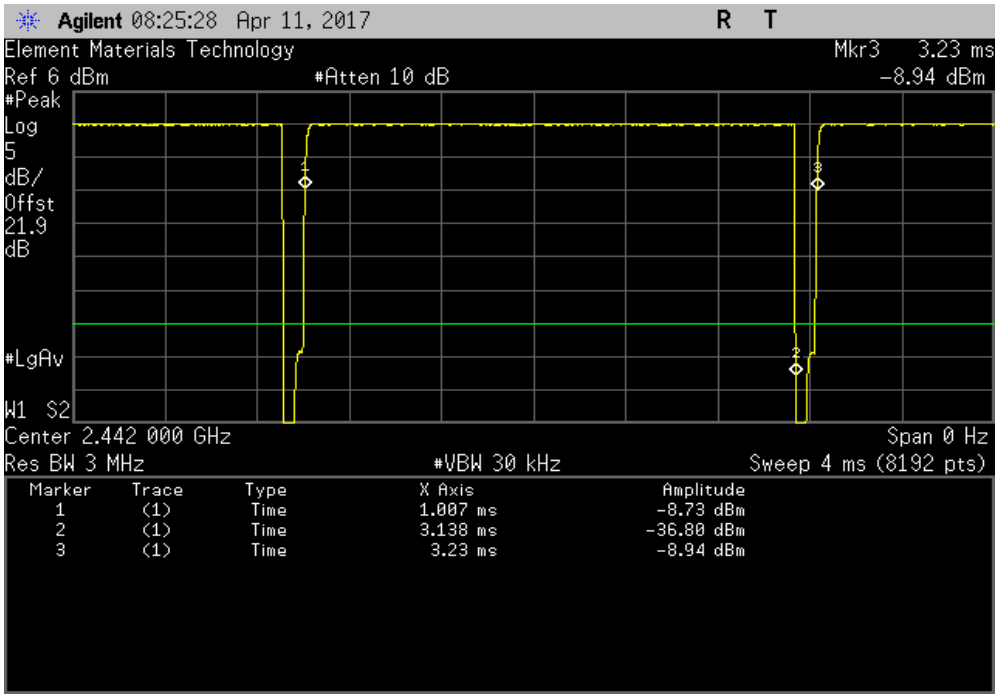
BLE/GFSK Low Channel, 2402 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A



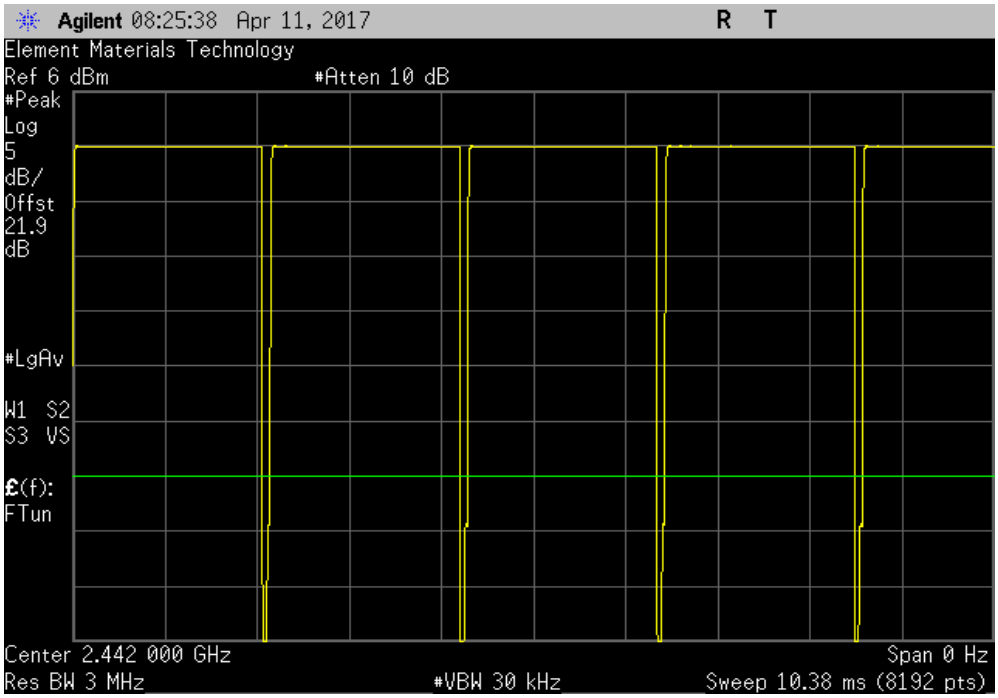
DUTY CYCLE

TbtTx 2017.01.27 XMit 2017.01.26

BLE/GFSK Mid Channel, 2442 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	2.13 ms	2.223 ms	1	95.8	N/A	N/A



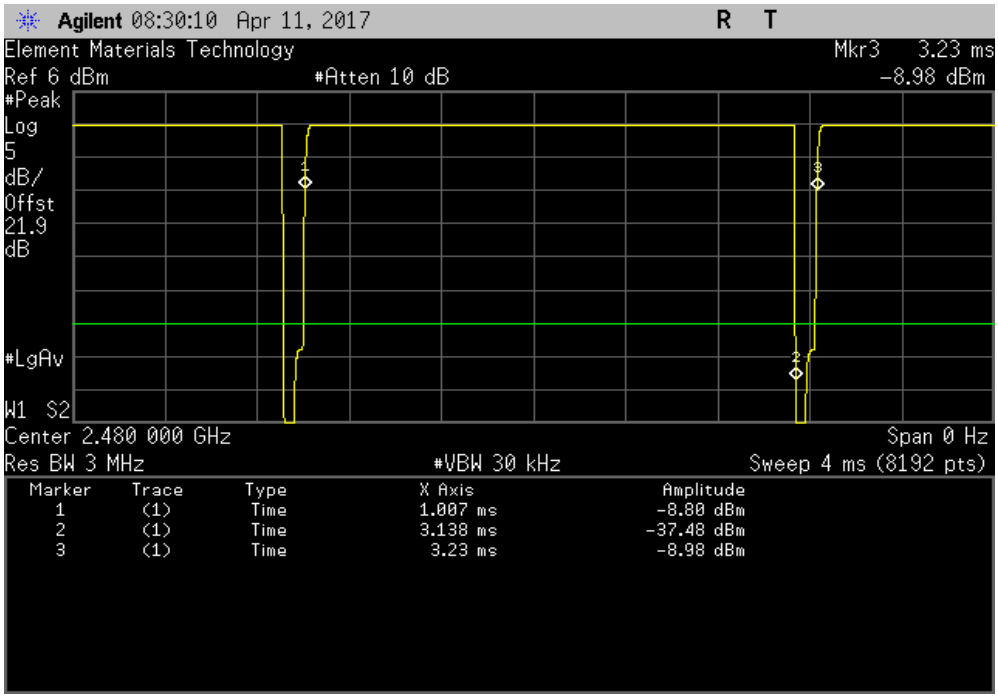
BLE/GFSK Mid Channel, 2442 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A



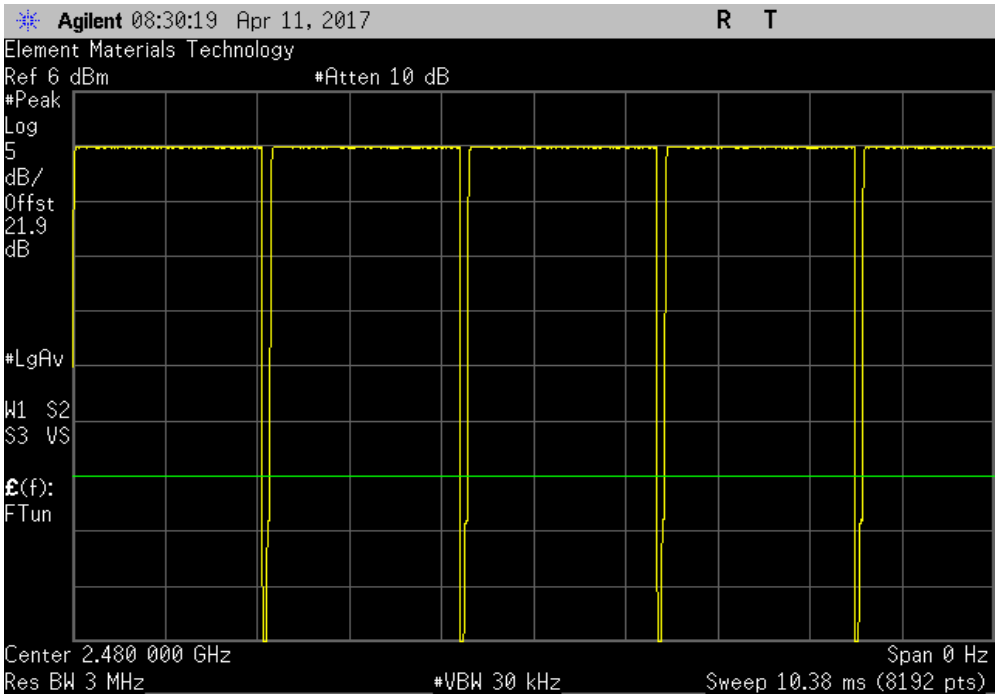
DUTY CYCLE

TbtTx 2017.01.27 XMit 2017.01.26

BLE/GFSK High Channel, 2480 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	2.13 ms	2.223 ms	1	95.8	N/A	N/A



BLE/GFSK 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

XMit 2017.01.26

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.	Cal. Due
Generator - Signal	Agilent	E4422B	TGQ	3/17/2015	3/17/2018
Attenuator	S.M. Electronics	SA26B-20	RFW	2/14/2017	2/14/2018
Block - DC	Fairview Microwave	SD3379	AMI	9/15/2016	9/15/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAX	3/16/2017	3/16/2018

TEST DESCRIPTION

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

The 6dB occupied bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The 99.0% occupied bandwidth was also measured at the same time which can be needed during Output Power depending on the applicable method.

OCCUPIED BANDWIDTH

TbtTx 2017.01.27 XMit 2017.01.26

EUT:	**FOB**			**Work Order:**	**INCN0006**
Serial Number:	**17000061**			**Date:**	**04/11/17**
Customer:	**IntriCon**			**Temperature:**	**22.1 °C**
Attendees:	**Andrew Albing**			**Humidity:**	**27.6% RH**
Project:	**None**			**Barometric Pres.:**	**1027 mbar**
Tested by:	**Dustin Sparks**	**Power:**	**Battery**	**Job Site:**	**MN08**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2017	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

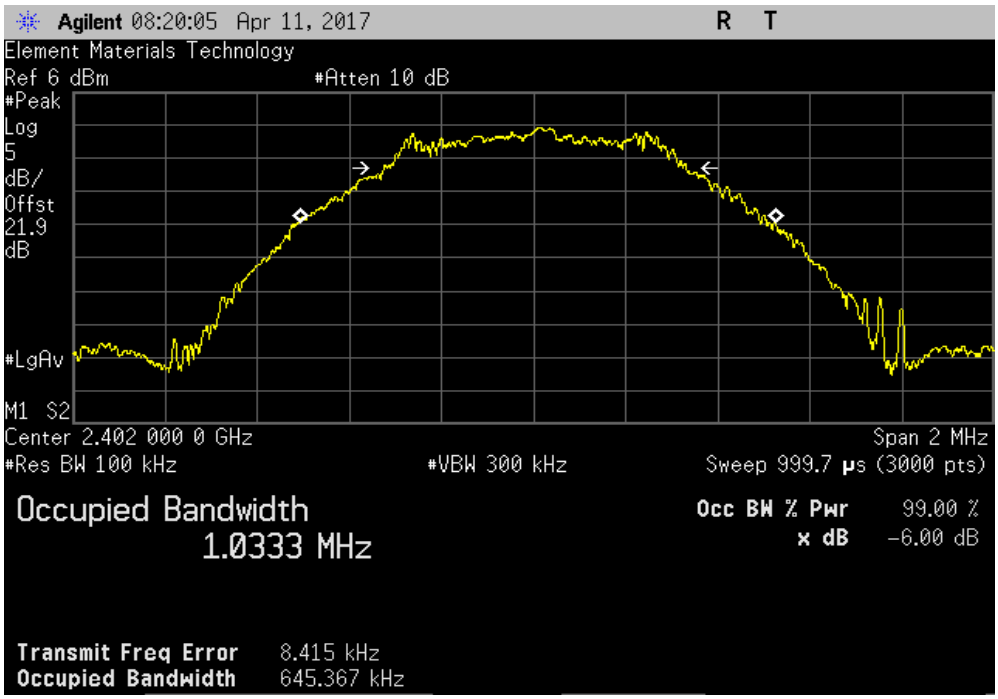
Configuration #	**4**	*Signature* Dustin Sparks

	Value	**Limit (≥)**	**Result**
BLE/GFSK Low Channel, 2402 MHz	645.367 kHz	500 kHz	Pass
BLE/GFSK Mid Channel, 2442 MHz	636.049 kHz	500 kHz	Pass
BLE/GFSK High Channel, 2480 MHz	640.557 kHz	500 kHz	Pass

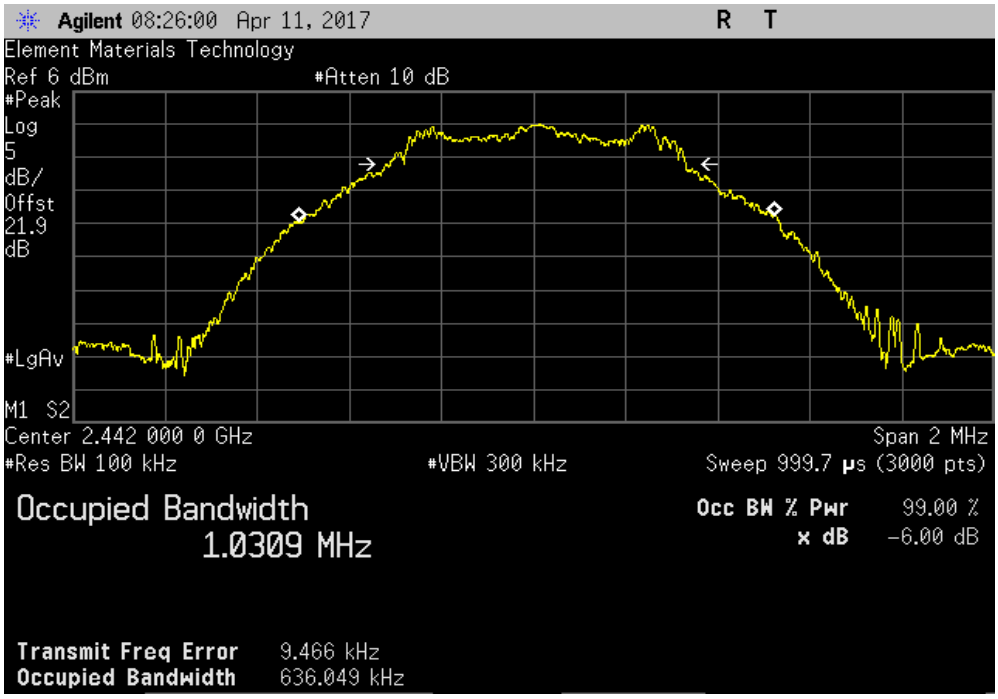
OCCUPIED BANDWIDTH

TbtTx 2017.01.27 XMit 2017.01.26

BLE/GFSK Low Channel, 2402 MHz						
				Value	Limit (≥)	Result
				645.367 kHz	500 kHz	Pass



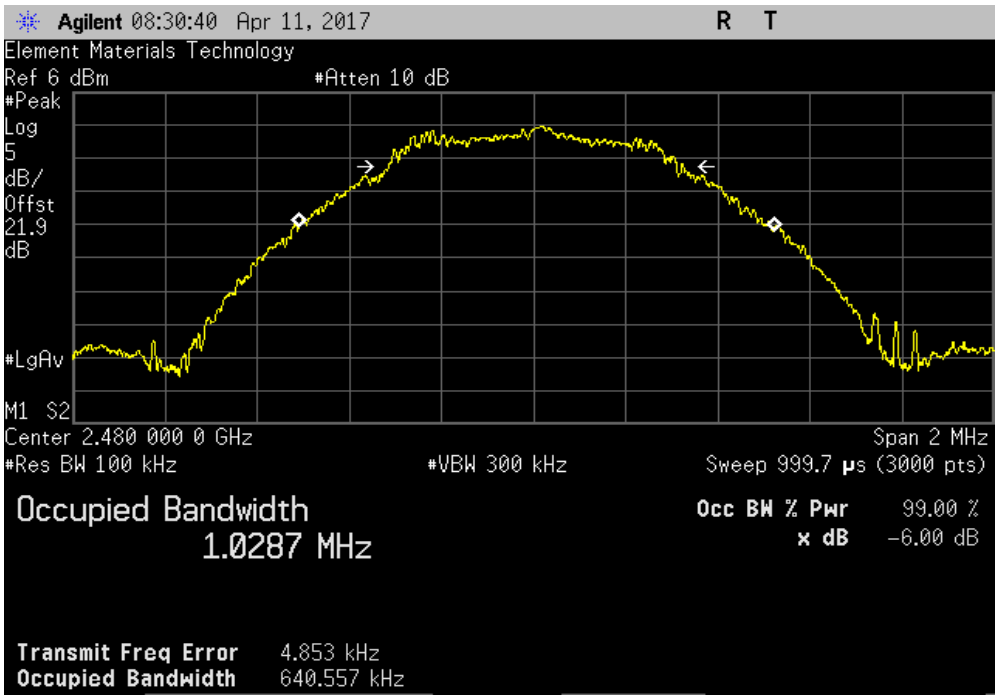
BLE/GFSK Mid Channel, 2442 MHz						
				Value	Limit (≥)	Result
				636.049 kHz	500 kHz	Pass



OCCUPIED BANDWIDTH

TbtTx 2017.01.27 XMit 2017.01.26

BLE/GFSK High Channel, 2480 MHz						
				Value	Limit (≥)	Result
				640.557 kHz	500 kHz	Pass



OUTPUT POWER

XMit 2017.01.26

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.	Cal. Due
Generator - Signal	Agilent	E4422B	TGQ	3/17/2015	3/17/2018
Attenuator	S.M. Electronics	SA26B-20	RFW	2/14/2017	2/14/2018
Block - DC	Fairview Microwave	SD3379	AMI	9/15/2016	9/15/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAX	3/16/2017	3/16/2018

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The transmit frequency was set to the required channels in each band. The transmit power was set to its default maximum.

Prior to measuring peak transmit power the DTS bandwidth (B) was measured.

The method found in ANSI C63.10:2013 Section 11.9.1.1 was used because the RBW on the analyzer was greater than the DTS Bandwidth of the radio.

De Facto EIRP Limit: The EUT meets the de facto EIRP limit of +36 dBm.

OUTPUT POWER

TbtTx 2017.01.27 XMit 2017.01.26

EUT:	**FOB**			**Work Order:**	**INCN0006**
Serial Number:	**17000061**			**Date:**	**04/11/17**
Customer:	**IntriCon**			**Temperature:**	**22.1 °C**
Attendees:	**Andrew Albing**			**Humidity:**	**27.6% RH**
Project:	**None**			**Barometric Pres.:**	**1027 mbar**
Tested by:	**Dustin Sparks**	**Power:**	**Battery**	**Job Site:**	**MN08**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2017	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

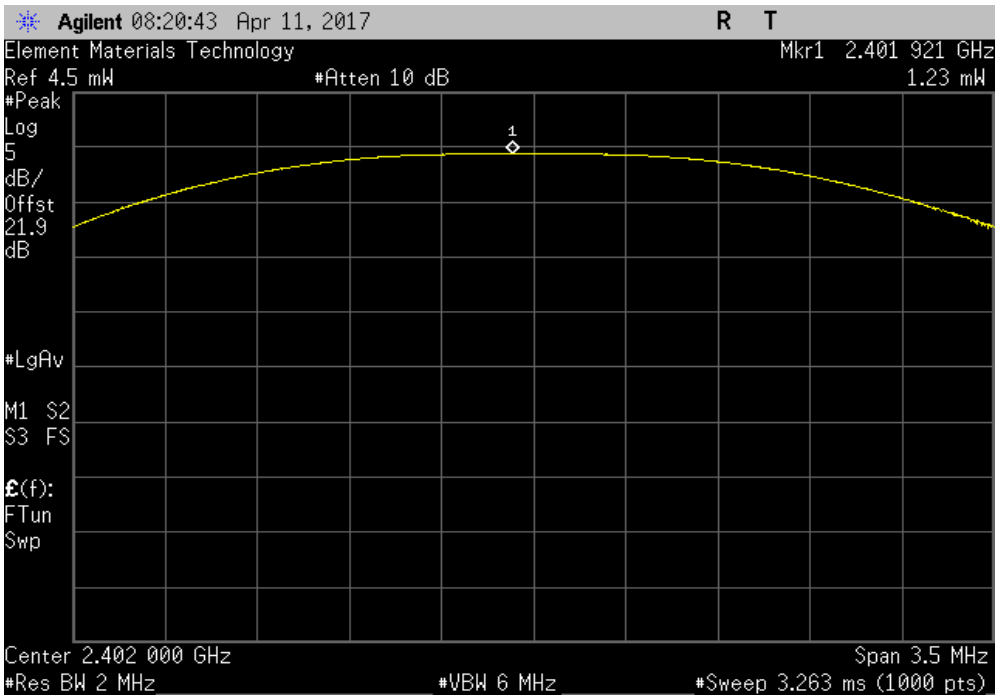
Configuration #	**4**	*Signature* Dustin Sparks

	Value	**Limit (<)**	**Result**
BLE/GFSK Low Channel, 2402 MHz	1.228 mW	1 W	Pass
BLE/GFSK Mid Channel, 2442 MHz	1.271 mW	1 W	Pass
BLE/GFSK High Channel, 2480 MHz	1.252 mW	1 W	Pass

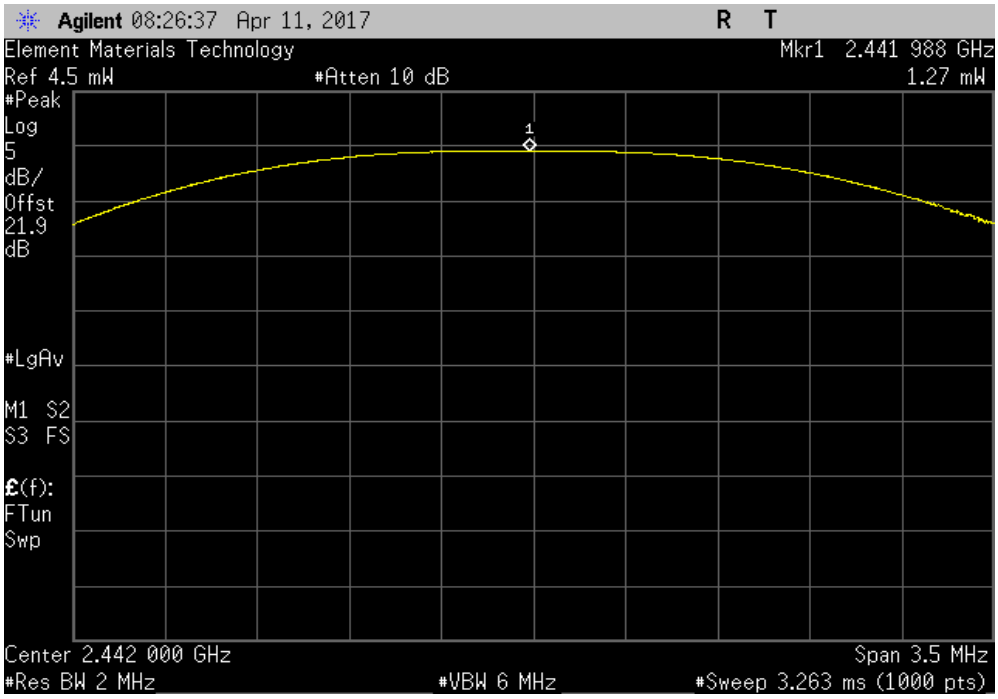
OUTPUT POWER

TbtTx 2017.01.27 XMit 2017.01.26

BLE/GFSK Low Channel, 2402 MHz						
				Value	Limit (<)	Result
				1.228 mW	1 W	Pass



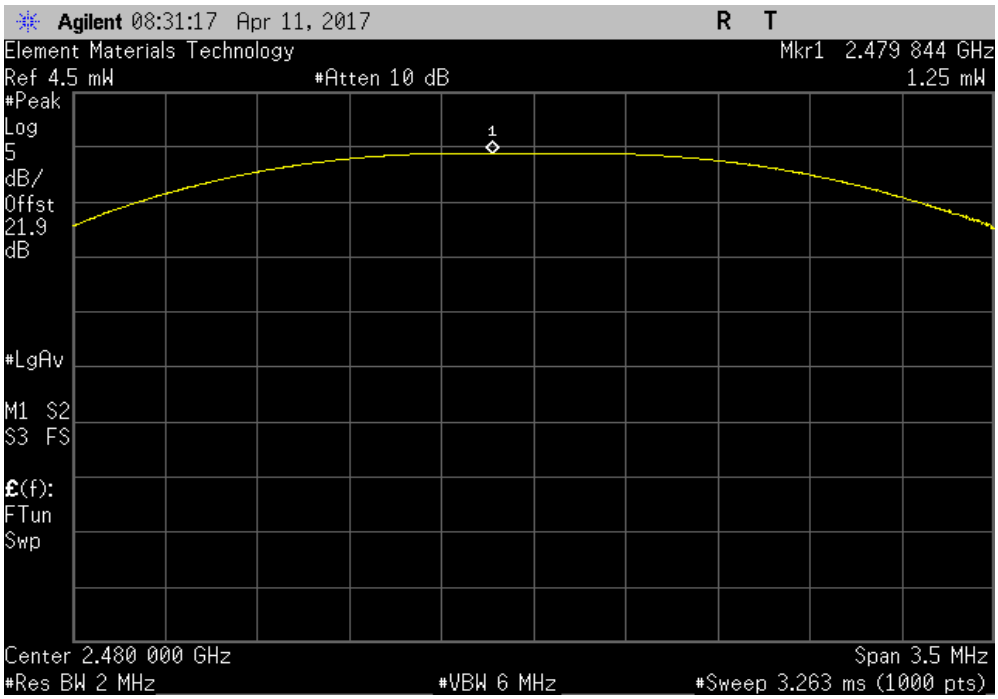
BLE/GFSK Mid Channel, 2442 MHz						
				Value	Limit (<)	Result
				1.271 mW	1 W	Pass



OUTPUT POWER

TbtTx 2017.01.27 XMit 2017.01.26

BLE/GFSK High Channel, 2480 MHz						
				Value	Limit (<)	Result
				1.252 mW	1 W	Pass



POWER SPECTRAL DENSITY

XMit 2017.01.26

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.	Cal. Due
Generator - Signal	Agilent	E4422B	TGQ	3/17/2015	3/17/2018
Attenuator	S.M. Electronics	SA26B-20	RFW	2/14/2017	2/14/2018
Block - DC	Fairview Microwave	SD3379	AMI	9/15/2016	9/15/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAX	3/16/2017	3/16/2018

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The maximum power spectral density measurements was measured using the channels and modes as called out on the following data sheets.

Per the procedure outlined in ANSI C63.10 the peak power spectral density was measured in a 3 kHz RBW.

POWER SPECTRAL DENSITY

TbtTx 2017.01.27 XMit 2017.01.26

EUT:	**FOB**			**Work Order:**	**INCN0006**
Serial Number:	**17000061**			**Date:**	**04/11/17**
Customer:	**IntriCon**			**Temperature:**	**22.1 °C**
Attendees:	**Andrew Albing**			**Humidity:**	**27.4% RH**
Project:	**None**			**Barometric Pres.:**	**1026 mbar**
Tested by:	**Dustin Sparks**	**Power:**	**Battery**	**Job Site:**	**MN08**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2017	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

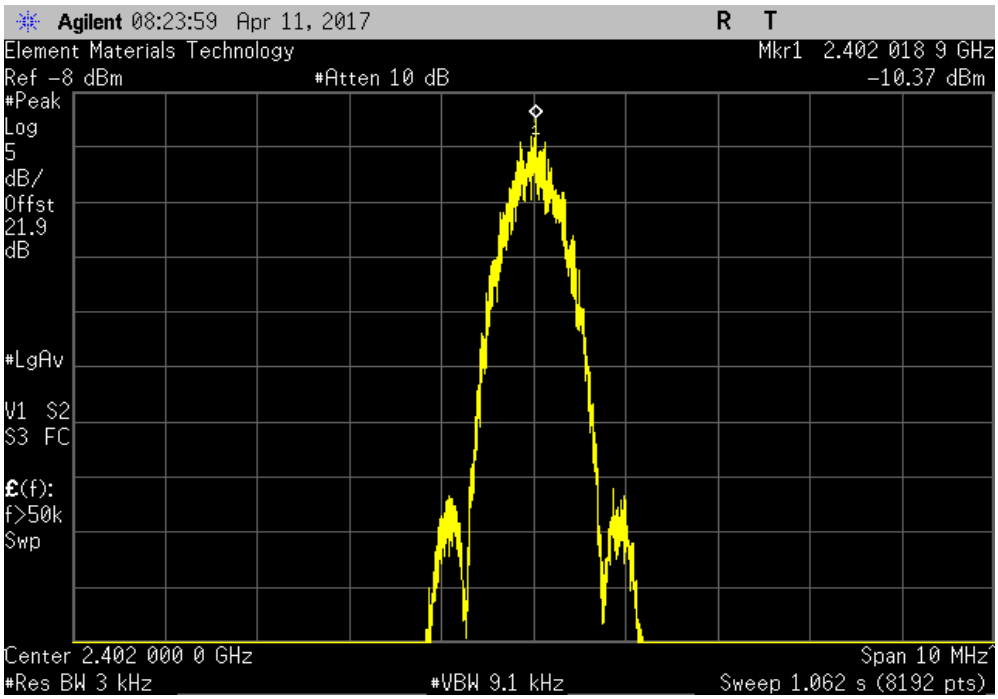
Configuration #	**4**	*Signature* Dustin Sparks

	Value dBm/3kHz	**Limit < dBm/3kHz**	**Results**
BLE/GFSK Low Channel, 2402 MHz	-10.37	8	Pass
BLE/GFSK Mid Channel, 2442 MHz	-12.118	8	Pass
BLE/GFSK High Channel, 2480 MHz	-10.28	8	Pass

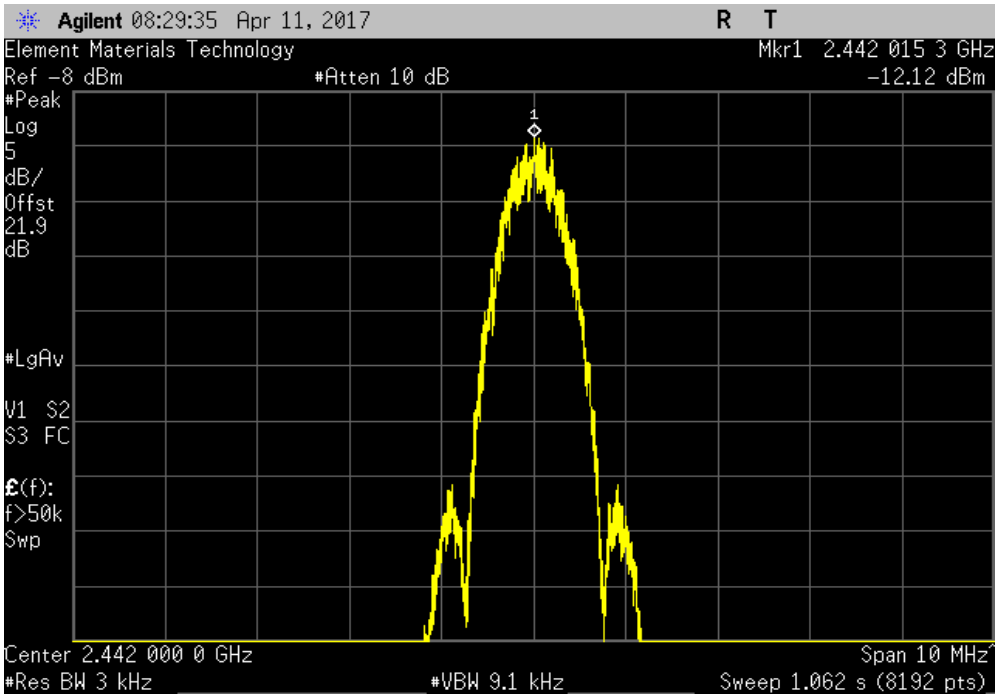
POWER SPECTRAL DENSITY

TbtTx 2017.01.27 XMit 2017.01.26

BLE/GFSK Low Channel, 2402 MHz						
				Value dBm/3kHz	Limit < dBm/3kHz	Results
				-10.37	8	Pass

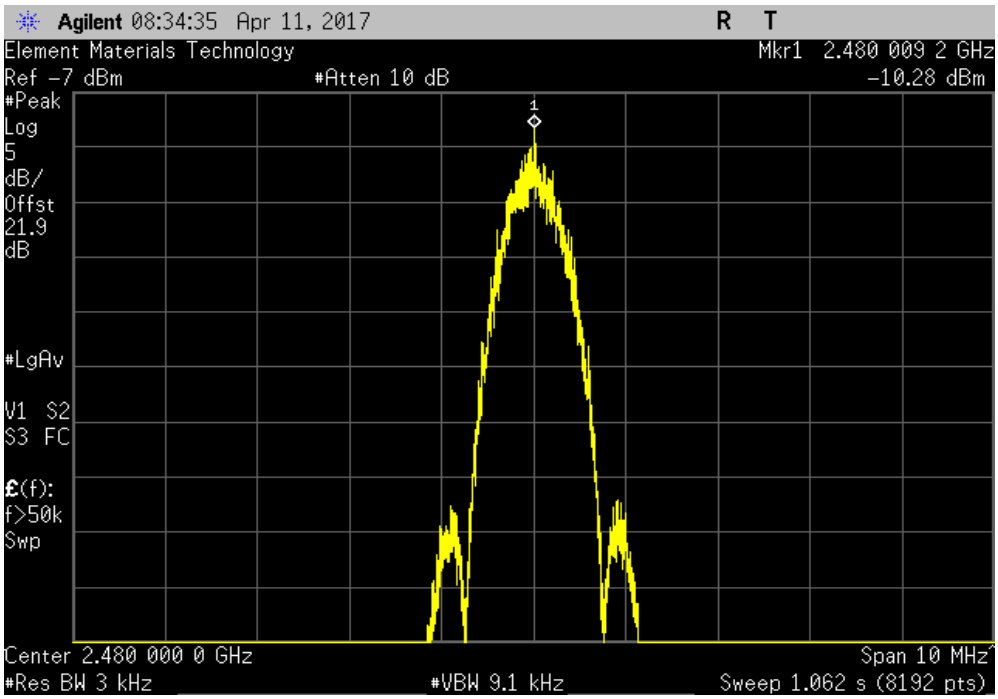


BLE/GFSK Mid Channel, 2442 MHz						
				Value dBm/3kHz	Limit < dBm/3kHz	Results
				-12.118	8	Pass



POWER SPECTRAL DENSITY

BLE/GFSK High Channel, 2480 MHz						
				Value dBm/3kHz	Limit < dBm/3kHz	Results
				-10.28	8	Pass



BAND EDGE COMPLIANCE

XMit 2017.01.26

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.	Cal. Due
Generator - Signal	Agilent	E4422B	TGQ	3/17/2015	3/17/2018
Attenuator	S.M. Electronics	SA26B-20	RFW	2/14/2017	2/14/2018
Block - DC	Fairview Microwave	SD3379	AMI	9/15/2016	9/15/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAX	3/16/2017	3/16/2018

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. 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 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

TbtTx 2017.01.27 XMit 2017.01.26

EUT:	FOB			**Work Order:**	INCN0006
Serial Number:	17000061			**Date:**	04/11/17
Customer:	IntriCon			**Temperature:**	22.1 °C
Attendees:	Andrew Albing			**Humidity:**	27.6% RH
Project:	None			**Barometric Pres.:**	1027 mbar
Tested by:	Dustin Sparks	**Power:**	Battery	**Job Site:**	MN08

TEST SPECIFICATIONS	Test Method
FCC 15.247:2017	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

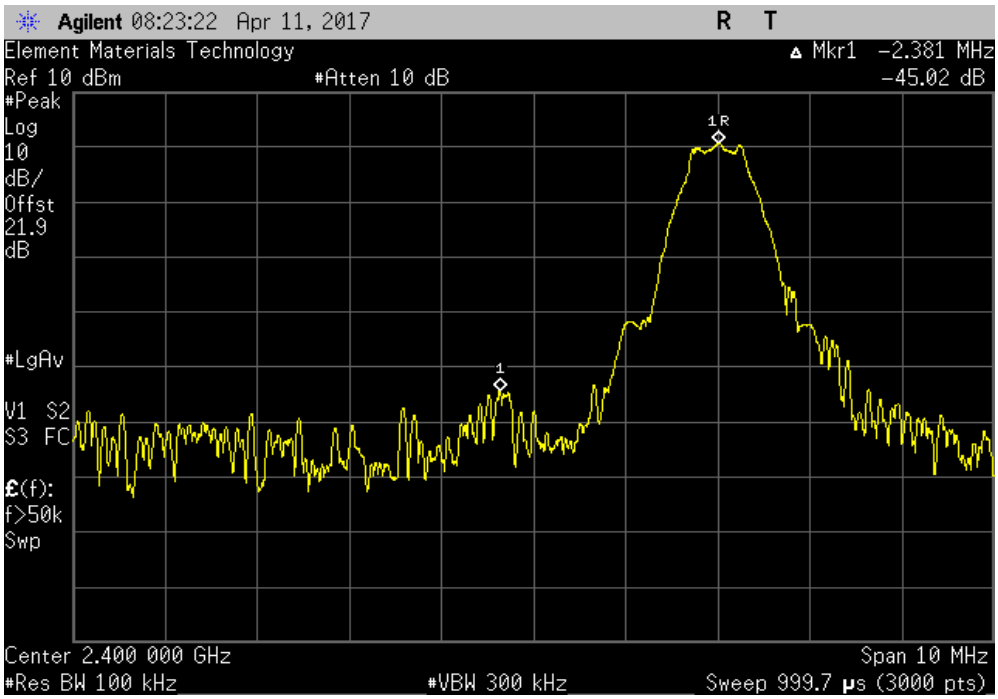
Configuration #	4	Signature

	Value (dBc)	Limit ≤ (dBc)	Result
BLE/GFSK Low Channel, 2402 MHz	-45.02	-20	Pass
BLE/GFSK High Channel, 2480 MHz	-53.45	-20	Pass

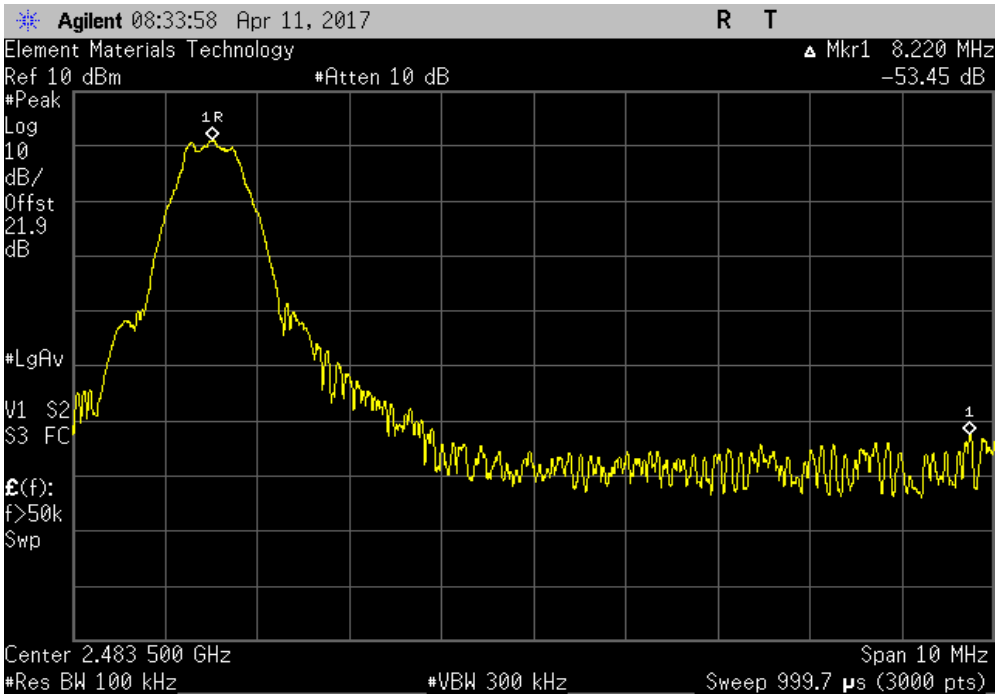
BAND EDGE COMPLIANCE

TbtTx 2017.01.27 XMit 2017.01.26

BLE/GFSK Low Channel, 2402 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-45.02	-20	Pass



BLE/GFSK High Channel, 2480 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-53.45	-20	Pass



SPURIOUS CONDUCTED EMISSIONS

XMit 2017.01.26

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.	Cal. Due
Generator - Signal	Agilent	E4422B	TGQ	3/17/2015	3/17/2018
Attenuator	S.M. Electronics	SA26B-20	RFW	2/14/2017	2/14/2018
Block - DC	Fairview Microwave	SD3379	AMI	9/15/2016	9/15/2017
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAX	3/16/2017	3/16/2018

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The spurious RF conducted emissions were measured with the EUT set to low, medium and high transmit frequencies. 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

TbtTx 2017.01.27 XMit 2017.01.26

EUT:	FOB			**Work Order:**	INCN0006
Serial Number:	17000061			**Date:**	04/11/17
Customer:	IntriCon			**Temperature:**	22.1 °C
Attendees:	Andrew Albing			**Humidity:**	27.4% RH
Project:	None			**Barometric Pres.:**	1026 mbar
Tested by:	Dustin Sparks	**Power:**	Battery	**Job Site:**	MN08

TEST SPECIFICATIONS	Test Method
FCC 15.247:2017	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

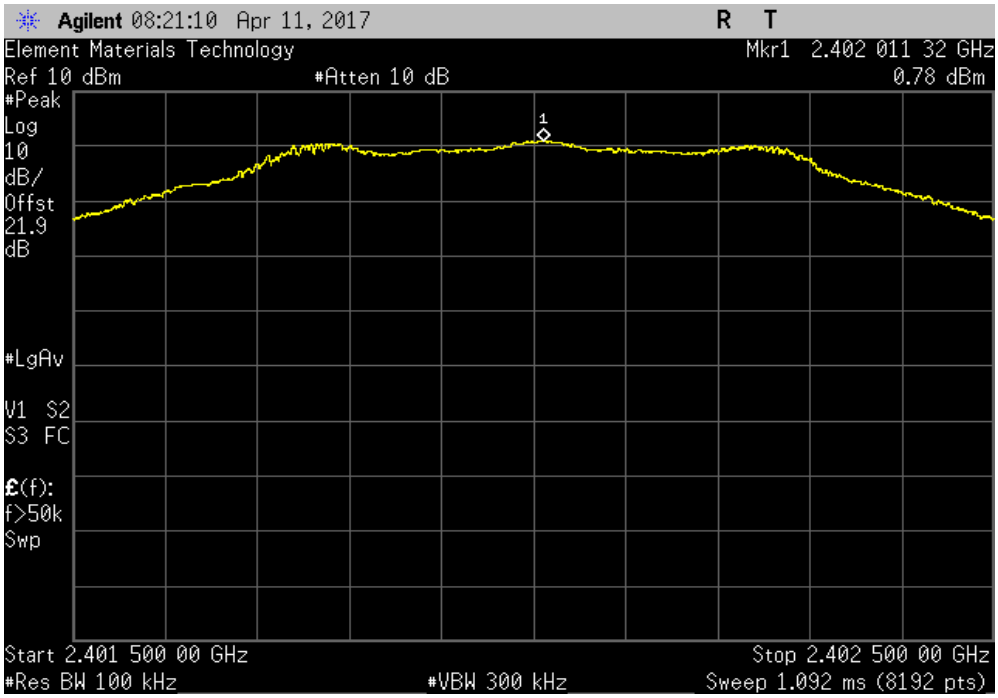
Configuration #	4	Signature Dustin Sparks

	Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result
BLE/GFSK Low Channel, 2402 MHz	Fundamental	N/A	N/A	N/A
BLE/GFSK Low Channel, 2402 MHz	30 MHz - 12.5 GHz	-50.51	-20	Pass
BLE/GFSK Low Channel, 2402 MHz	12.5 GHz - 25 GHz	-53.27	-20	Pass
BLE/GFSK Mid Channel, 2442 MHz	Fundamental	N/A	N/A	N/A
BLE/GFSK Mid Channel, 2442 MHz	30 MHz - 12.5 GHz	-41.8	-20	Pass
BLE/GFSK Mid Channel, 2442 MHz	12.5 GHz - 25 GHz	-53.32	-20	Pass
BLE/GFSK High Channel, 2480 MHz	Fundamental	N/A	N/A	N/A
BLE/GFSK High Channel, 2480 MHz	30 MHz - 12.5 GHz	-35.33	-20	Pass
BLE/GFSK High Channel, 2480 MHz	12.5 GHz - 25 GHz	-53.3	-20	Pass

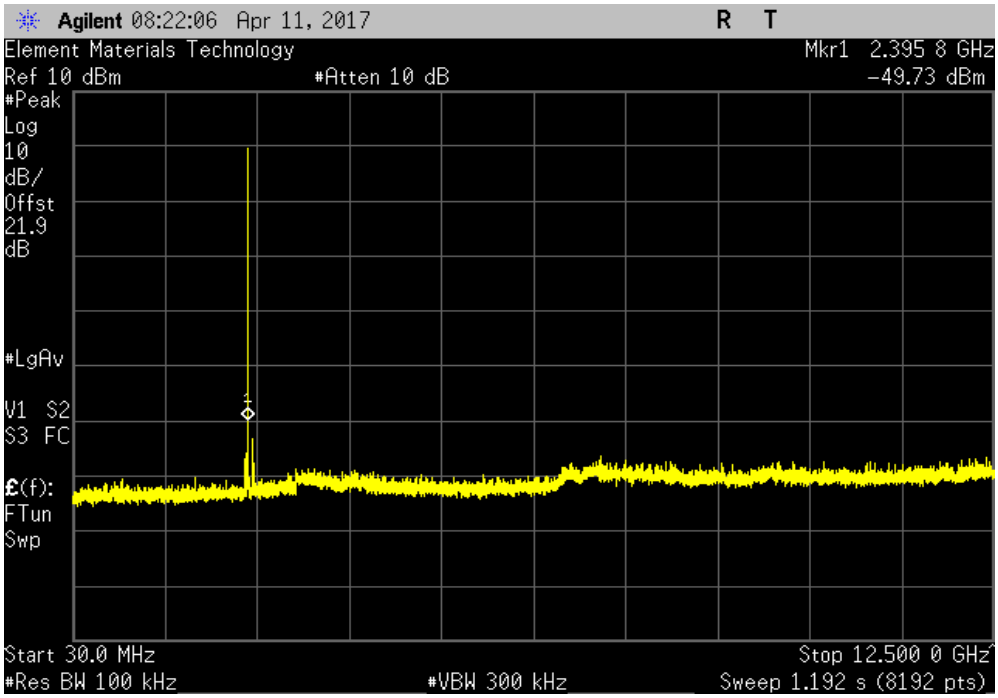
SPURIOUS CONDUCTED EMISSIONS

TbtTx 2017.01.27 XMit 2017.01.26

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



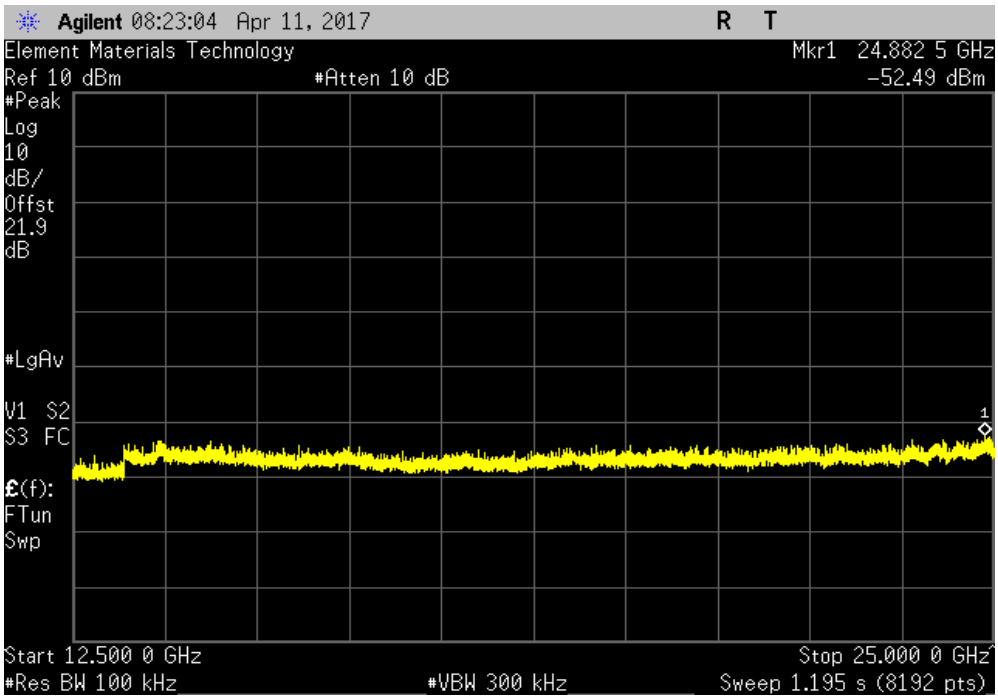
BLE/GFSK Low Channel, 2402 MHz					
Frequency Range			Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz			-50.51	-20	Pass



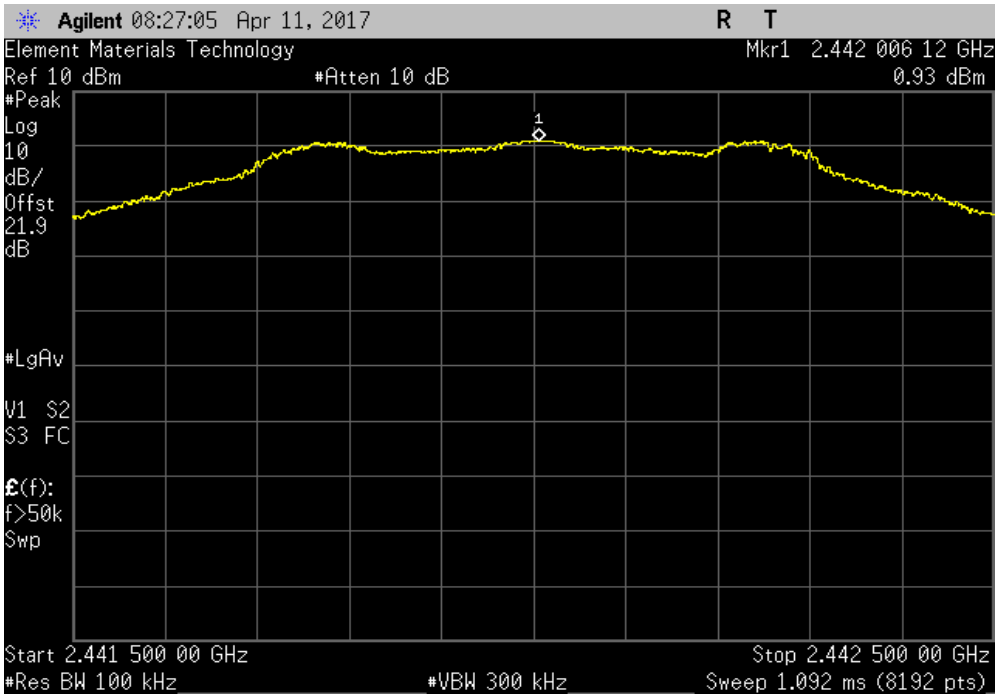
SPURIOUS CONDUCTED EMISSIONS

TbtTx 2017.01.27 XMit 2017.01.26

BLE/GFSK Low Channel, 2402 MHz				
Frequency Range		Max Value (dBc)	Limit ≤ (dBc)	Result
12.5 GHz - 25 GHz		-53.27	-20	Pass



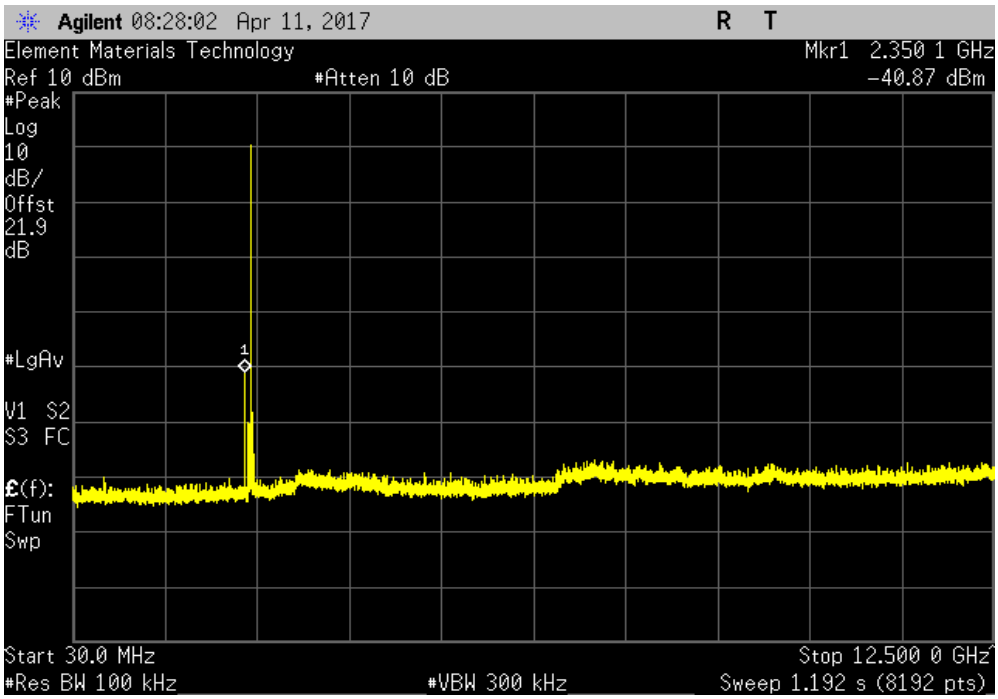
BLE/GFSK Mid Channel, 2442 MHz				
Frequency Range		Max Value (dBc)	Limit ≤ (dBc)	Result
Fundamental		N/A	N/A	N/A



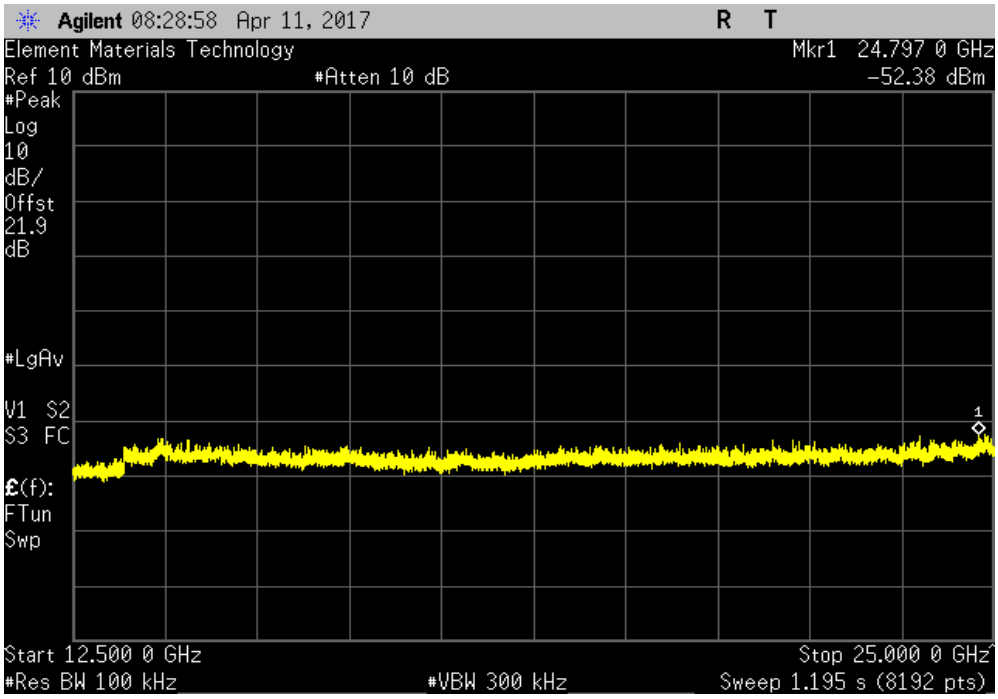
SPURIOUS CONDUCTED EMISSIONS

TbtTx 2017.01.27 XMit 2017.01.26

BLE/GFSK Mid Channel, 2442 MHz				
Frequency Range		**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
30 MHz - 12.5 GHz		-41.8	-20	Pass



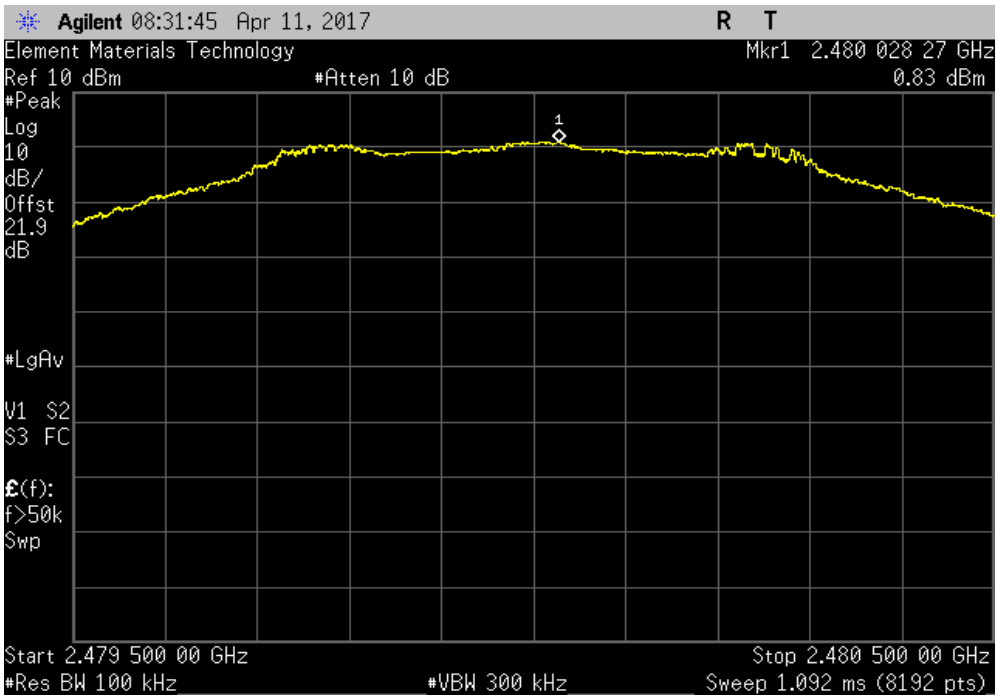
BLE/GFSK Mid Channel, 2442 MHz				
Frequency Range		**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz		-53.32	-20	Pass



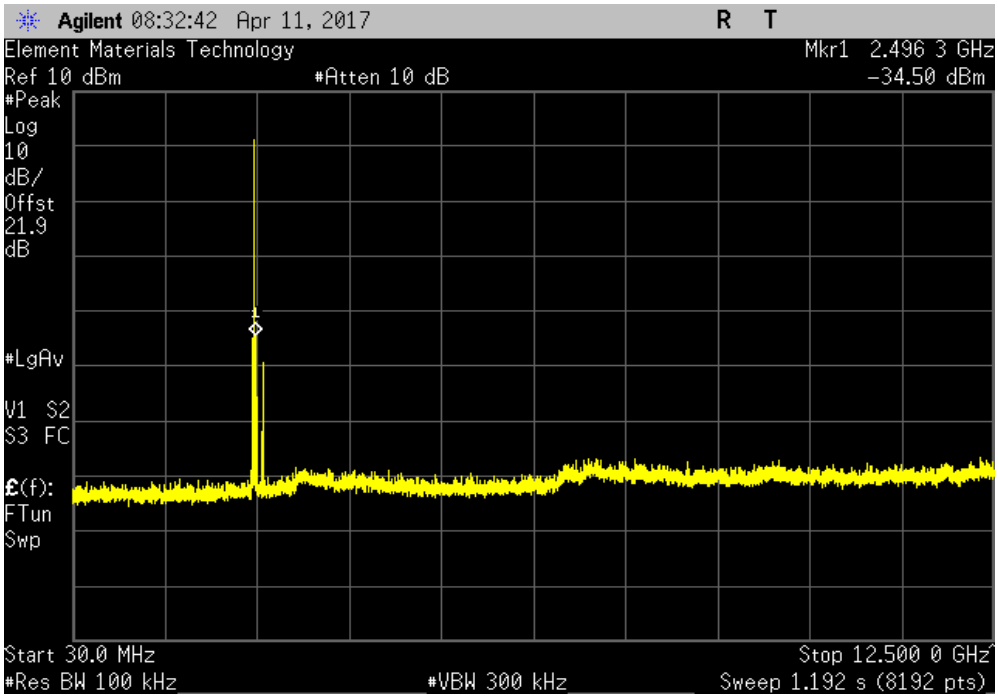
SPURIOUS CONDUCTED EMISSIONS

TbtTx 2017.01.27 XMit 2017.01.26

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



BLE/GFSK High Channel, 2480 MHz					
Frequency Range			Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz			-35.33	-20	Pass



BLE/GFSK High Channel, 2480 MHz				
Frequency Range		**Max Value (dBc)**	**Limit ≤ (dBc)**	**Result**
12.5 GHz - 25 GHz		-53.3	-20	Pass