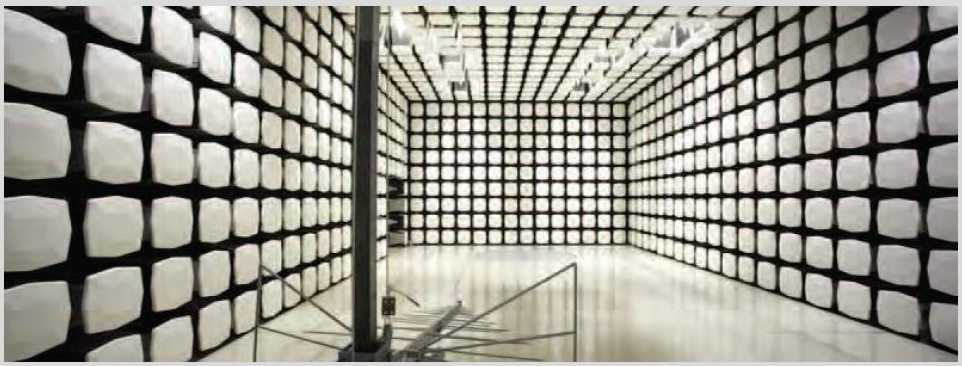
Inspire Medical Systems

New Telemetry Cable

FCC 15.247:2020

Bluetooth Low Energy (DTS) Radio

Report: INSP0011.1 Rev. 1, Issue Date: January 13, 2021



NVLAP LAB CODE: 200881-0

CERTIFICATE OF TEST

Last Date of Test: June 5, 2020
Inspire Medical Systems
EUT: New Telemetry Cable

Radio Equipment Testing

Standards

Specification	Method
FCC 15.207:2020	ANSI C63.10:2013, KDB 558074
FCC 15.247:2020	

Results

Method Clause	Test Description	Applied	Results	Comments
6.2	Powerline Conducted Emissions	Yes	Pass	
11.12.1, 11.13.2, 6.5, 6.6	Spurious Radiated Emissions	Yes	Pass	
11.6	Duty Cycle	Yes	N/A	Characterization of radio operation.
11.8.2	Occupied Bandwidth	Yes	Pass	
11.9.2.2.4	Output Power	Yes	Pass	
11.9.2.2.4	Equivalent Isotropic Radiated 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:

David Schaefer, 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. As indicated in the Statement of Work sent with the quotation, Element's standard process is to always use the latest published version of the test methods even when earlier versions are cited in the test specification. Issuance of a purchase order was de facto acceptance of this approach. Otherwise, the client would have advised Element in writing of the specific version of the test methods they wanted applied to the subject testing.

REVISION HISTORY

Revision Number	Description	Date (yyyy-mm-dd)	Page Number
01	Power settings table added.	2020-08-05	11
	Equivalent Isotropic Radiated Power data sheet added.	2020-08-05	30-33
	Equivalent Isotropic Radiated Power added to Certificate of test and modifications pages.	2020-08-05	2, 10
	Correct antenna gain	2021-01-13	31-33

ACCREDITATIONS AND AUTHORIZATIONS

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) and as a CAB for the acceptance of test data.

European Union

European Commission – Within Element, we have a EU Notified Body validated for the EMCD and RED Directives.

Australia/New Zealand

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

Korea

MSIT / 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

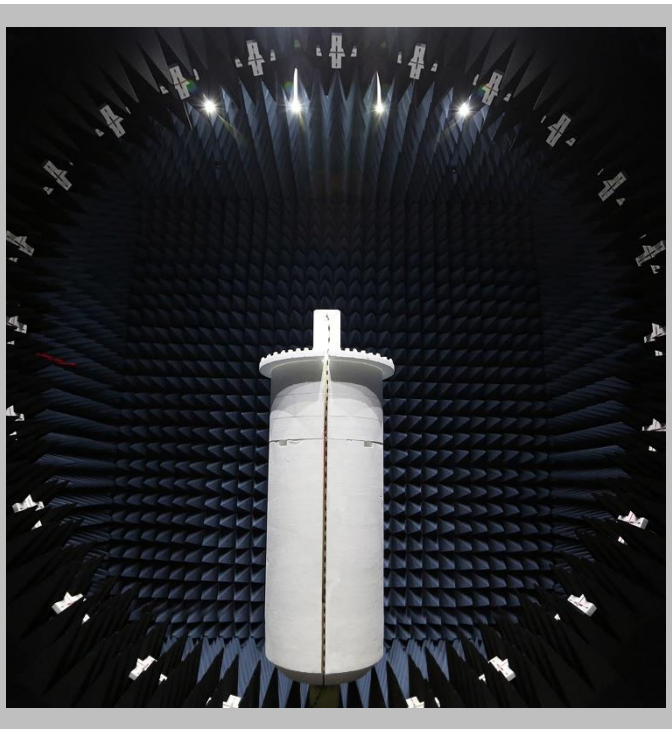
MIC – Recognized by MIC as a CAB for the acceptance of test data.

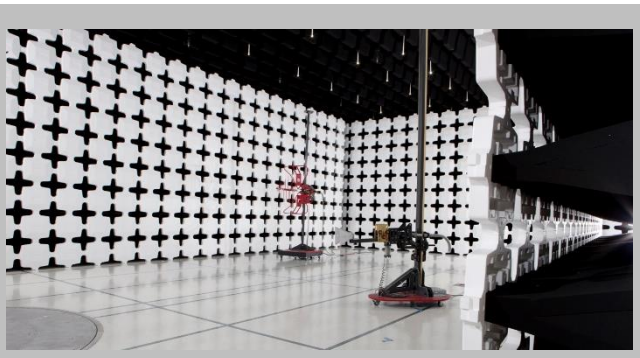
SCOPE

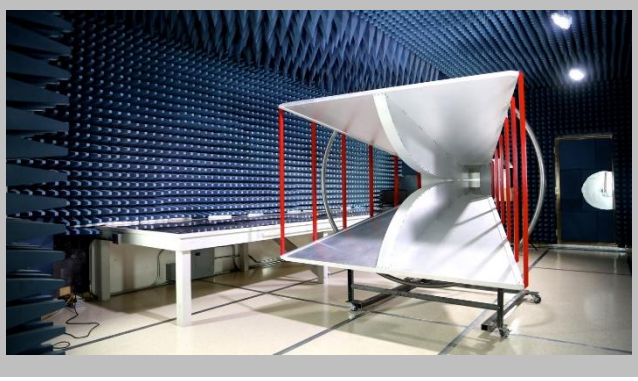
For details on the Scopes of our Accreditations, please visit:
https://www.nwemc.com/emc-testing-accreditations

FACILITIES

California	Minnesota	Oregon	Texas	Washington
Labs OC01-17 41 Tesla Irvine, CA 92618 (949) 861-8918	Labs MN01-10 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	Labs EV01-12 6775 NE Evergreen Pkwy #400 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: 200630-0	NVLAP Lab Code:201049-0	NVLAP Lab Code: 200629-0
Innovation, Science and Economic Development Canada				
2834B-1, 2834B-3	2834E-1, 2834E-3	2834D-1	2834G-1	2834F-1
BSMI				
SL2-IN-E-1154R	SL2-IN-E-1152R	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R
VCCI				
A-0029	A-0109	A-0108	A-0201	A-0110
Recognized Phase I CAB for ISED, ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA				
US0158	US0175	US0017	US0191	US0157







MEASUREMENT UNCERTAINTY

element
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.

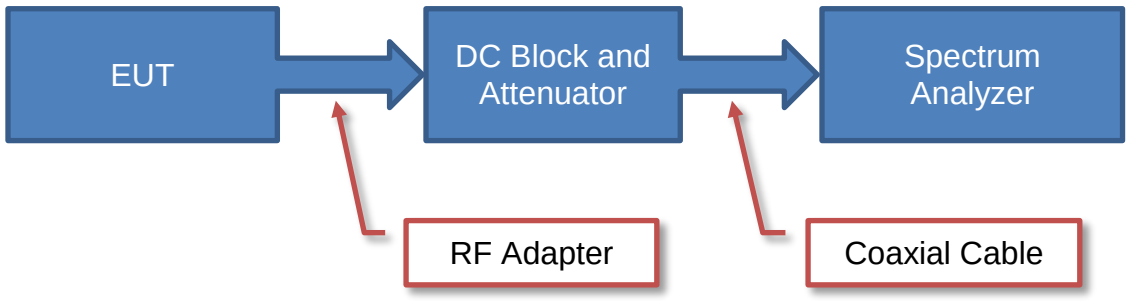
A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) can be found included as part of the applicable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

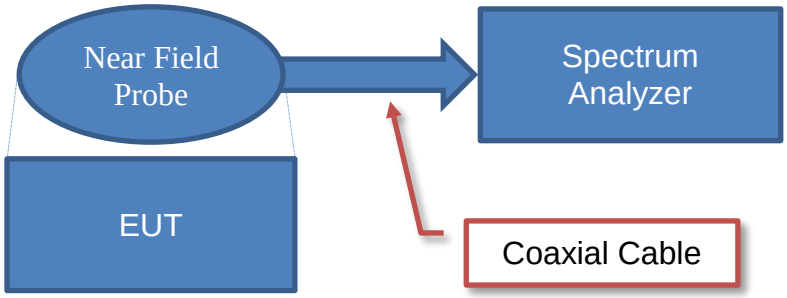
Test	+ MU	- MU
Frequency Accuracy	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	1.2 dB	-1.2 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%
Field Strength (dB)	5.2 dB	-5.2 dB
AC Powerline Conducted Emissions (dB)	2.6 dB	-2.6 dB

Test Setup Block Diagrams

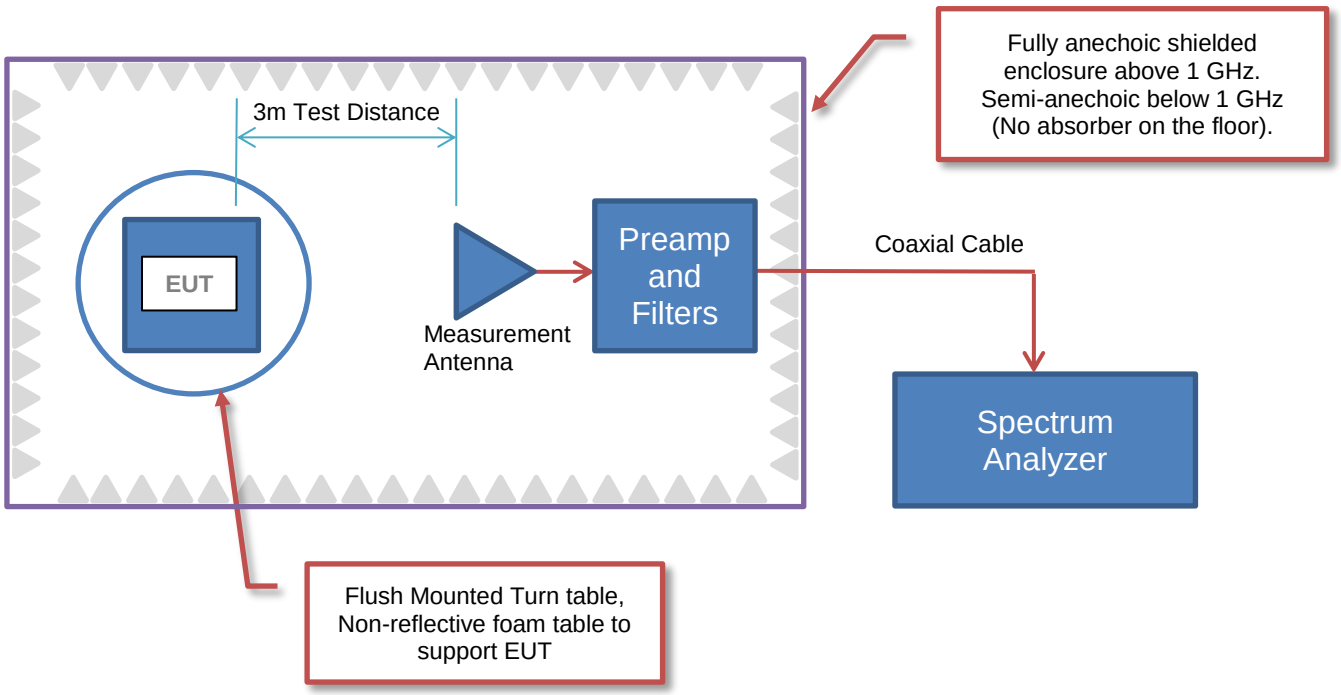
Antenna Port Conducted Measurements



Near Field Test Fixture Measurements



Spurious Radiated Emissions



PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	Inspire Medical Systems
Address:	1600 Wayzata Blvd, Suite 1600
City, State, Zip:	Golden Valley, MN
Test Requested By:	Jordan McIver
EUT:	Programmer Cable
First Date of Test:	May 26, 2020
Last Date of Test:	June 5, 2020
Receipt Date of Samples:	May 26, 2020
Equipment Design Stage:	Production
Equipment Condition:	No Damage
Purchase Authorization:	Verified

Information Provided by the Party Requesting the Test

Functional Description of the EUT:
Attachment for the tablet programmer containing inductive and Bluetooth Low Energy and 802.11bgn (2.4 GHz only) radios.

Testing Objective:
To demonstrate compliance of the Bluetooth Low Energy (DTS) radio to FCC 15.247 requirements.

CONFIGURATIONS

Configuration INSP0011- 1

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Programmer Cable	Inspire Medical Systems	2740	P000051

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Power Supply	GlobTek, Inc.	TR9CE1500CCP-IMR6B	020056138/18

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
Programmer Cable	No	2.1 m	No	Power Supply	Wand
AC Cable	No	2.4 m	No	AC Mains	Power Supply
DC Cable	No	1.2 m	No	Power Supply	Programmer Cable

Configuration INSP0011- 2

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Programmer Cable	Inspire Medical Systems	2740	P000026

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Power Supply	GlobTek, Inc.	TR9CE1500CCP-IMR6B	020056138/18

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
Programmer Cable	No	2.1 m	No	Power Supply	Wand
AC Cable	No	2.4 m	No	AC Mains	Power Supply
DC Cable	No	1.2 m	No	Power Supply	Programmer Cable

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2020-05-26	Spurious Radiated 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.
2	2020-05-29	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	2020-05-29	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	2020-05-29	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	2020-05-29	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	2020-05-29	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	2020-05-29	Equivalent Isotropic Radiated Power (EIRP)	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
8	2020-06-05	Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

POWER SETTINGS

No adjustable power settings were provided. The EUT was tested using power settings pre-defined by the manufacturer.

POWERLINE CONDUCTED EMISSIONS

element
WTD.2020.03.25.0

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Per the standard, an insulating material was also added to ground plane between the EUT's power and remote I/O cables. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50ohm measuring port is terminated by a 50ohm EMI meter or a 50ohm resistive load. All 50ohm measuring ports of the LISN are terminated by 50ohm. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
LISN	Solar Electronics	9252-50-R-24-BNC	LIY	2020-03-15	2021-03-15
Receiver	Rohde & Schwarz	ESR7	ARI	2019-07-08	2020-07-08
Cable - Conducted Cable Assembly	Northwest EMC	MNC, HGN, TYK	MNCA	2020-03-11	2021-03-11

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	2.6 dB	-2.6 dB

CONFIGURATIONS INVESTIGATED

INSP0011-1

MODES INVESTIGATED

Transmitting on Bluetooth midchannel 2442 MHz mode

POWERLINE CONDUCTED EMISSIONS

element
WTD.2020.03.25.0

EUT:	New Telemetry Cable	Work Order:	INSP0011
Serial Number:	P000051	Date:	2020-06-05
Customer:	Inspire Medical Systems	Temperature:	24.1°C
Attendees:	Charlie Kellerman	Relative Humidity:	47%
Customer Project:	None	Bar. Pressure:	1015 mb
Tested By:	William Hoffa	Job Site:	MN03
Power:	110VAC/60Hz	Configuration:	INSP0011-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2020	ANSI C63.10:2013

TEST PARAMETERS

Run #:	10	Line:	Neutral	Add. Ext. Attenuation (dB):	0

COMMENTS

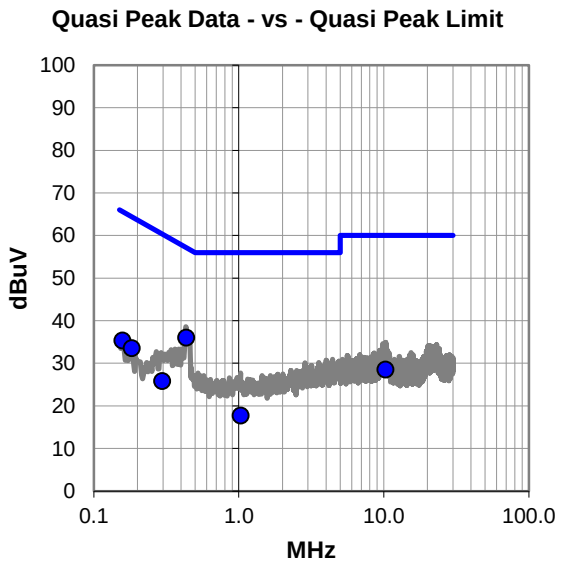
None

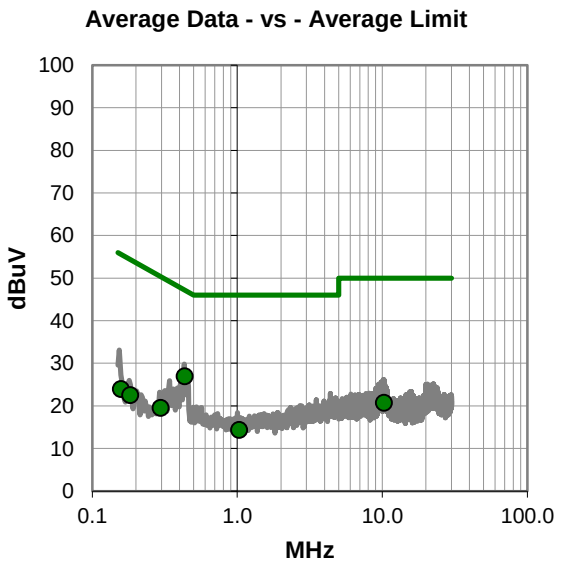
EUT OPERATING MODES

Transmitting on Bluetooth midchannel 2442 MHz mode

DEVIATIONS FROM TEST STANDARD

None





POWERLINE CONDUCTED EMISSIONS

element
WTD.2020.03.25.0

RESULTS - Run #10

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.434	15.5	20.5	36.0	57.2	-21.2
0.158	14.4	20.9	35.3	65.6	-30.3
0.182	12.7	20.8	33.5	64.4	-30.9
10.308	7.6	20.9	28.5	60.0	-31.5
0.296	5.3	20.5	25.8	60.3	-34.5
1.032	-2.8	20.5	17.7	56.0	-38.3

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.434	6.4	20.5	26.9	47.2	-20.3
10.308	-0.2	20.9	20.7	50.0	-29.3
0.296	-1.0	20.5	19.5	50.3	-30.8
0.158	3.0	20.9	23.9	55.6	-31.7
1.032	-6.2	20.5	14.3	46.0	-31.7
0.182	1.7	20.8	22.5	54.4	-31.9

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

element
WTD.2020.03.25.0

EUT:	New Telemetry Cable	Work Order:	INSP0011
Serial Number:	P000051	Date:	2020-06-05
Customer:	Inspire Medical Systems	Temperature:	24.1°C
Attendees:	Charlie Kellerman	Relative Humidity:	47%
Customer Project:	None	Bar. Pressure:	1015 mb
Tested By:	William Hoffa	Job Site:	MN03
Power:	110VAC/60Hz	Configuration:	INSP0011-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2020	ANSI C63.10:2013

TEST PARAMETERS

Run #:	11	Line:	High Line	Add. Ext. Attenuation (dB):	0

COMMENTS

None

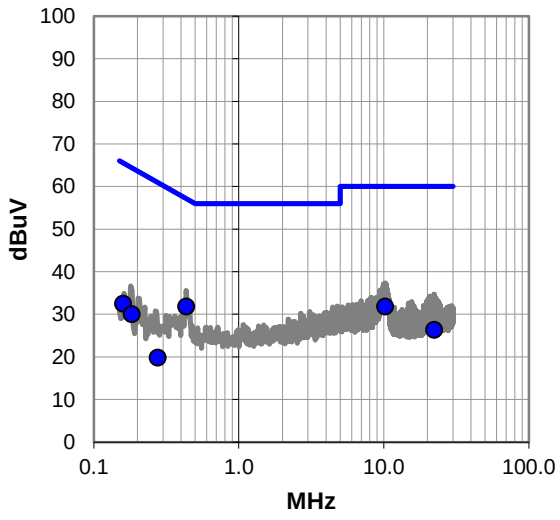
EUT OPERATING MODES

Transmitting on Bluetooth midchannel 2442 MHz mode

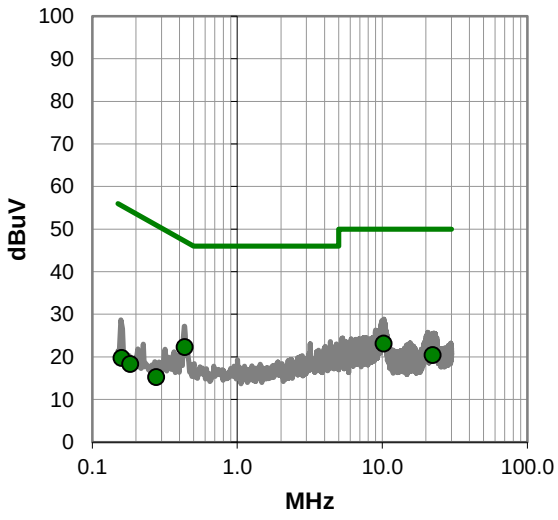
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



POWERLINE CONDUCTED EMISSIONS

element
WTD.2020.03.25.0

RESULTS - Run #11

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.434	11.3	20.5	31.8	57.2	-25.4
10.224	10.9	20.9	31.8	60.0	-28.2
0.159	11.6	20.9	32.5	65.5	-33.0
22.238	5.1	21.2	26.3	60.0	-33.7
0.183	9.2	20.8	30.0	64.3	-34.3
0.275	-0.8	20.6	19.8	61.0	-41.2

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.434	1.8	20.5	22.3	47.2	-24.9
10.224	2.2	20.9	23.1	50.0	-26.9
22.238	-0.8	21.2	20.4	50.0	-29.6
0.159	-1.2	20.9	19.7	55.5	-35.8
0.275	-5.4	20.6	15.2	51.0	-35.8
0.183	-2.5	20.8	18.3	54.3	-36.0

CONCLUSION

Pass

Tested By

SPURIOUS RADIATED EMISSIONS

PSA-ESCI 2020.04.03.0

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 on Low channel (2402 MHz), Mid channel (2442 MHz), and High channel (2480 MHz); Bluetooth Low Energy

POWER SETTINGS INVESTIGATED

120VAC/60Hz

CONFIGURATIONS INVESTIGATED

INSP0011 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26500 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
Attenuator	Coaxicom	3910-20	AXY	2019-09-17	12 mo
Filter - High Pass	Micro-Tronics	HPM50111	HFM	2019-09-18	12 mo
Amplifier - Pre-Amplifier	Miteq	AM-1064-9079 and SA18E-10	AOO	2020-02-18	12 mo
Cable	Element	Biconilog Cable	MNX	2020-02-18	12 mo
Antenna - Biconilog	Ametek	CBL 6141B	AYS	2019-03-19	24 mo
Amplifier - Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	2019-09-11	12 mo
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNP	2019-09-11	12 mo
Antenna - Standard Gain	ETS Lindgren	3160-09	AHG	NCR	0 mo
Amplifier - Pre-Amplifier	L-3 Narda-MITEQ	AMF-6F-12001800-30-10P	PAP	2020-02-18	12 mo
Antenna - Standard Gain	ETS-Lindgren	3160-08	AJP	NCR	0 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVC	2020-02-18	12 mo
Cable	Element	Standard Gain Cable	MNW	2020-02-18	12 mo
Antenna - Standard Gain	ETS-Lindgren	3160-07	AJJ	NCR	0 mo
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVX	2020-02-18	12 mo
Cable	Element	Double Ridge Guide Horn Cables	MNV	2020-02-18	12 mo
Antenna - Double Ridge	ETS Lindgren	3115	AIB	2018-08-27	24 mo
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2020-04-14	12 mo

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 within 2 MHz of the allowable band may have been taken using the integration method from ANSI C63.10 clause 11.13.3. This procedure uses the channel power feature of the spectrum analyzer to integrate the power of the emission within a 1 MHz bandwidth.

Where the radio test software does not provide for a duty cycle at continuous transmit conditions (> 98%) and the RMS (power average) measurements were made across the on and off times of the EUT transmissions, a duty cycle correction is added to the measurements using the formula of 10*log(1/dc).

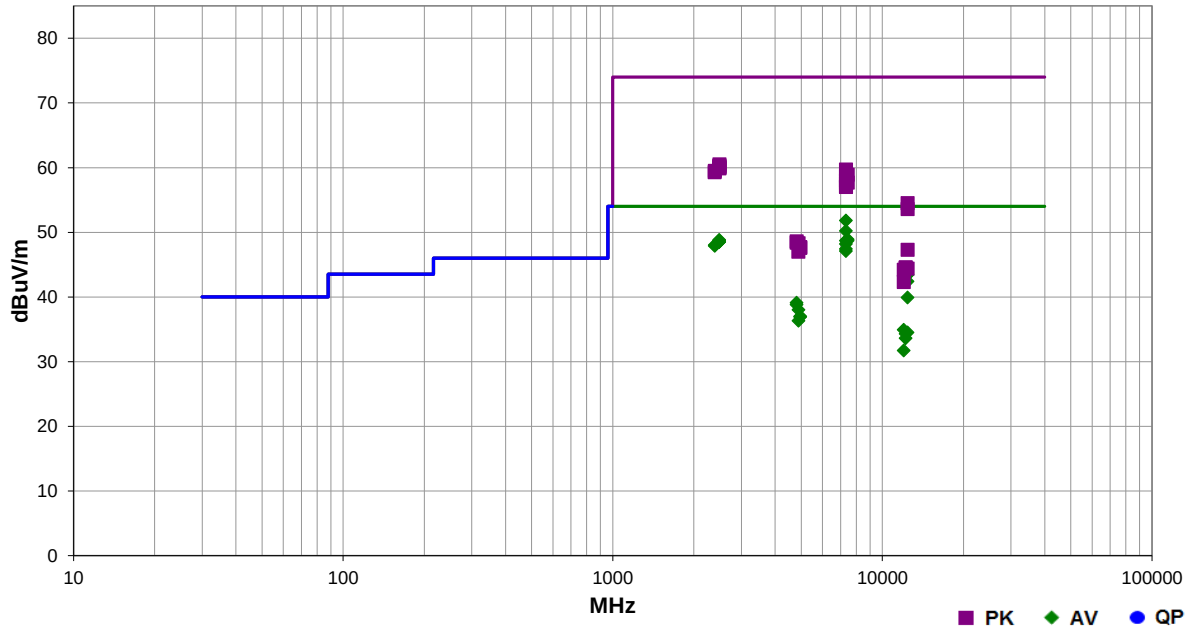
SPURIOUS RADIATED EMISSIONS

EmiR5 2020.04.20.0 PSA-ESCI 2020.04.03.0

Work Order:	INSP0011	**Date:**	2020-05-26		
Project:	None	**Temperature:**	23.5 °C		
Job Site:	MN09	**Humidity:**	60.6% RH		
Serial Number:	P000051	**Barometric Pres.:**	1013 mbar	**Tested by:**	Andrew Rogstad
EUT:	New Telemetry Cable				
Configuration:	1				
Customer:	Inspire Medical Systems				
Attendees:	Darrell Wagner				
EUT Power:	120VAC/60Hz				
Operating Mode:	Transmitting on Low channel (2402 MHz), Mid channel (2442 MHz), and High channel (2480 MHz); Bluetooth Low Energy				
Deviations:	None				
Comments:	See data comments for EUT orientation and transmit channel.				

Test Specifications	**Test Method**
FCC 15.247:2020	ANSI C63.10:2013

Run #	27	**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
7325.425	37.8	14.0	2.8	277.0	3.0	0.0	Vert	AV	0.0	51.8	54.0	-2.2	EUT horz, Mid ch.
7325.442	36.2	14.0	3.9	274.0	3.0	0.0	Horz	AV	0.0	50.2	54.0	-3.8	EUT on side, Mid ch.
7440.575	34.4	14.5	1.5	338.0	3.0	0.0	Vert	AV	0.0	48.9	54.0	-5.1	EUT horz, High ch.
2484.673	31.7	-2.9	1.5	218.0	3.0	20.0	Horz	AV	0.0	48.8	54.0	-5.2	EUT horz, High ch.
7325.458	34.7	14.0	1.1	173.0	3.0	0.0	Vert	AV	0.0	48.7	54.0	-5.3	EUT on side, Mid ch.
7440.683	34.2	14.5	1.2	192.0	3.0	0.0	Horz	AV	0.0	48.7	54.0	-5.3	EUT on side, High ch.
2483.500	31.6	-2.9	4.0	351.0	3.0	20.0	Horz	AV	0.0	48.7	54.0	-5.3	EUT vert, High ch.
2484.547	31.5	-2.9	1.5	290.0	3.0	20.0	Horz	AV	0.0	48.6	54.0	-5.4	EUT on side, High ch.
2483.967	31.4	-2.9	1.5	199.0	3.0	20.0	Vert	AV	0.0	48.5	54.0	-5.5	EUT horz, High ch.
2483.533	31.4	-2.9	3.9	162.0	3.0	20.0	Vert	AV	0.0	48.5	54.0	-5.5	EUT on side, High ch.
2483.927	31.4	-2.9	3.1	120.0	3.0	20.0	Vert	AV	0.0	48.5	54.0	-5.5	EUT vert, High ch.
7325.450	34.2	14.0	2.0	254.0	3.0	0.0	Horz	AV	0.0	48.2	54.0	-5.8	EUT horz, Mid ch.
2389.780	31.2	-3.2	1.5	153.0	3.0	20.0	Horz	AV	0.0	48.0	54.0	-6.0	EUT horz, Low ch.
2389.947	31.1	-3.2	1.5	162.0	3.0	20.0	Vert	AV	0.0	47.9	54.0	-6.1	EUT horz, Low ch.
7325.408	33.4	14.0	1.5	241.0	3.0	0.0	Horz	AV	0.0	47.4	54.0	-6.6	EUT vert, Mid ch.
7325.392	33.1	14.0	1.5	51.0	3.0	0.0	Vert	AV	0.0	47.1	54.0	-6.9	EUT vert, Mid ch.
12401.320	29.3	14.1	1.6	18.0	3.0	0.0	Vert	AV	0.0	43.4	54.0	-10.6	EUT horz, High ch.
12401.160	28.3	14.1	1.5	82.0	3.0	0.0	Horz	AV	0.0	42.4	54.0	-11.6	EUT on side, High ch.

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
2485.653	43.4	-2.9	3.1	120.0	3.0	20.0	Vert	PK	0.0	60.5	74.0	-13.5	EUT vert, High ch.
2486.973	43.2	-2.9	1.5	290.0	3.0	20.0	Horz	PK	0.0	60.3	74.0	-13.7	EUT on side, High ch.
2483.673	43.1	-2.9	1.5	218.0	3.0	20.0	Horz	PK	0.0	60.2	74.0	-13.8	EUT horz, High ch.
2485.967	43.0	-2.9	4.0	351.0	3.0	20.0	Horz	PK	0.0	60.1	74.0	-13.9	EUT vert, High ch.
2485.067	42.9	-2.9	3.9	162.0	3.0	20.0	Vert	PK	0.0	60.0	74.0	-14.0	EUT on side, High ch.
12398.910	40.2	-0.3	1.9	128.0	3.0	0.0	Horz	AV	0.0	39.9	54.0	-14.1	EUT on side, High ch.
2487.073	42.8	-2.9	1.5	199.0	3.0	20.0	Vert	PK	0.0	59.9	74.0	-14.1	EUT horz, High ch.
7326.417	45.7	14.0	2.8	277.0	3.0	0.0	Vert	PK	0.0	59.7	74.0	-14.3	EUT horz, Mid ch.
2389.887	42.7	-3.2	1.5	153.0	3.0	20.0	Horz	PK	0.0	59.5	74.0	-14.5	EUT horz, Low ch.
2387.933	42.5	-3.2	1.5	162.0	3.0	20.0	Vert	PK	0.0	59.3	74.0	-14.7	EUT horz, Low ch.
4803.900	33.9	5.2	1.0	233.0	3.0	0.0	Horz	AV	0.0	39.1	54.0	-14.9	EUT on side, Low ch.
7440.742	44.4	14.5	1.5	338.0	3.0	0.0	Vert	PK	0.0	58.9	74.0	-15.1	EUT horz, High ch.
4804.008	33.6	5.2	1.2	159.0	3.0	0.0	Vert	AV	0.0	38.8	54.0	-15.2	EUT horz, Low ch.
7326.358	44.7	14.0	3.9	274.0	3.0	0.0	Horz	PK	0.0	58.7	74.0	-15.3	EUT on side, Mid ch.
7326.783	44.0	14.0	2.0	254.0	3.0	0.0	Horz	PK	0.0	58.0	74.0	-16.0	EUT horz, Mid ch.
4883.992	32.7	5.3	1.5	218.0	3.0	0.0	Horz	AV	0.0	38.0	54.0	-16.0	EUT on side, Mid ch.
7440.742	43.2	14.5	1.2	192.0	3.0	0.0	Horz	PK	0.0	57.7	74.0	-16.3	EUT on side, High ch.
7326.300	43.6	14.0	1.1	173.0	3.0	0.0	Vert	PK	0.0	57.6	74.0	-16.4	EUT on side, Mid ch.
7326.850	43.1	14.0	1.5	51.0	3.0	0.0	Vert	PK	0.0	57.1	74.0	-16.9	EUT vert, Mid ch.
7326.650	43.0	14.0	1.5	241.0	3.0	0.0	Horz	PK	0.0	57.0	74.0	-17.0	EUT vert, Mid ch.
4960.233	31.5	5.5	1.5	341.0	3.0	0.0	Vert	AV	0.0	37.0	54.0	-17.0	EUT horz, High ch.
4960.075	31.4	5.5	1.5	228.0	3.0	0.0	Horz	AV	0.0	36.9	54.0	-17.1	EUT on side, High ch.
4884.225	31.0	5.3	1.5	344.0	3.0	0.0	Vert	AV	0.0	36.3	54.0	-17.7	EUT horz, Mid ch.
12008.910	36.6	-1.7	1.0	225.0	3.0	0.0	Vert	AV	0.0	34.9	54.0	-19.1	EUT horz, Low ch.
12398.880	34.8	-0.3	1.5	215.0	3.0	0.0	Vert	AV	0.0	34.5	54.0	-19.5	EUT horz, High ch.
12401.670	40.4	14.1	1.6	18.0	3.0	0.0	Vert	PK	0.0	54.5	74.0	-19.5	EUT horz, High ch.
12208.920	34.5	-0.2	1.5	112.0	3.0	0.0	Horz	AV	0.0	34.3	54.0	-19.7	EUT on side, Mid ch.
12208.740	33.8	-0.2	1.7	29.0	3.0	0.0	Vert	AV	0.0	33.6	54.0	-20.4	EUT horz, Mid ch.
12400.890	39.5	14.1	1.5	82.0	3.0	0.0	Horz	PK	0.0	53.6	74.0	-20.4	EUT on side, High ch.
12011.320	33.4	-1.7	1.0	190.0	3.0	0.0	Horz	AV	0.0	31.7	54.0	-22.3	EUT on side, Low ch.
4803.842	43.4	5.2	1.2	159.0	3.0	0.0	Vert	PK	0.0	48.6	74.0	-25.4	EUT horz, Low ch.
4803.975	43.2	5.2	1.0	233.0	3.0	0.0	Horz	PK	0.0	48.4	74.0	-25.6	EUT on side, Low ch.
4884.783	43.0	5.3	1.5	218.0	3.0	0.0	Horz	PK	0.0	48.3	74.0	-25.7	EUT on side, Mid ch.
4958.092	42.3	5.4	1.5	228.0	3.0	0.0	Horz	PK	0.0	47.7	74.0	-26.3	EUT on side, High ch.
4960.767	42.1	5.5	1.5	341.0	3.0	0.0	Vert	PK	0.0	47.6	74.0	-26.4	EUT horz, High ch.
12398.610	47.6	-0.3	1.9	128.0	3.0	0.0	Horz	PK	0.0	47.3	74.0	-26.7	EUT on side, High ch.
4882.883	41.7	5.3	1.5	344.0	3.0	0.0	Vert	PK	0.0	47.0	74.0	-27.0	EUT horz, Mid ch.
12208.770	44.8	-0.2	1.5	112.0	3.0	0.0	Horz	PK	0.0	44.6	74.0	-29.4	EUT on side, Mid ch.
12208.820	44.7	-0.2	1.7	29.0	3.0	0.0	Vert	PK	0.0	44.5	74.0	-29.5	EUT horz, Mid ch.
12399.210	44.7	-0.3	1.5	215.0	3.0	0.0	Vert	PK	0.0	44.4	74.0	-29.6	EUT horz, High ch.
12008.440	45.9	-1.7	1.0	225.0	3.0	0.0	Vert	PK	0.0	44.2	74.0	-29.8	EUT horz, Low ch.
12009.440	44.0	-1.7	1.0	190.0	3.0	0.0	Horz	PK	0.0	42.3	74.0	-31.7	EUT on side, Low ch.

DUTY CYCLE

XMit 2020.03.25.0

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	15-Mar-18	15-Mar-21
Analyzer - Spectrum Analyzer	Keysight	N9010A (EXA)	AFQ	21-Dec-19	21-Dec-20
Block - DC	Fairview Microwave	SD3379	AMI	6-Aug-19	6-Aug-20
Attenuator	S.M. Electronics	SA26B-20	RFW	10-Feb-20	10-Feb-21
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	15-Sep-19	15-Sep-20

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.

The test software provided for operation in a fixed, single channel mode allows the EUT to operate continuously at 100% Duty Cycle.

OCCUPIED BANDWIDTH

XMit 2020.03.25.0

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	15-Mar-18	15-Mar-21
Analyzer - Spectrum Analyzer	Keysight	N9010A (EXA)	AFQ	21-Dec-19	21-Dec-20
Block - DC	Fairview Microwave	SD3379	AMI	6-Aug-19	6-Aug-20
Attenuator	S.M. Electronics	SA26B-20	RFW	10-Feb-20	10-Feb-21
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	15-Sep-19	15-Sep-20

TEST DESCRIPTION

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 2019.08.30.0 XMit 2020.03.25.0

EUT:	**New Telemetry Cable**			**Work Order:**	**INSP0011**
Serial Number:	**P000026**			**Date:**	**29-May-20**
Customer:	**Inspire Medical Systems**			**Temperature:**	**24.3 °C**
Attendees:	**Darrell Wagner**			**Humidity:**	**40.5% RH**
Project:	**None**			**Barometric Pres.:**	**1022 mbar**
Tested by:	**Andrew Rogstad**	**Power:**	**120VAC/60Hz**	**Job Site:**	**MN08**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2020	ANSI C63.10:2013

COMMENTS

Reference level offset includes measurement cable, DC block, and 20 dB attenuator.

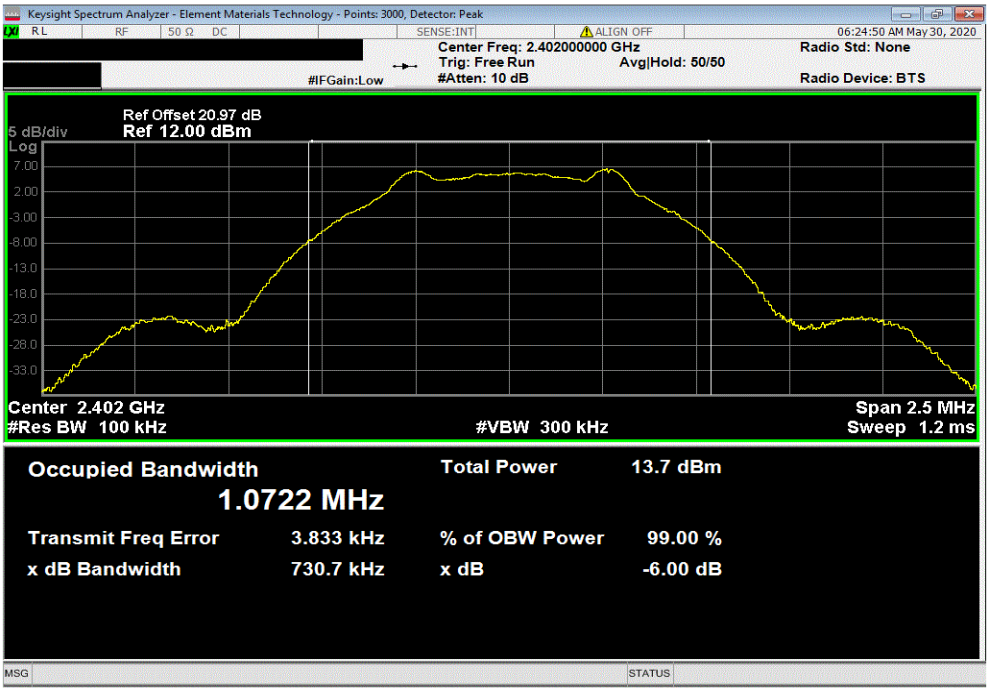
DEVIATIONS FROM TEST STANDARD

None

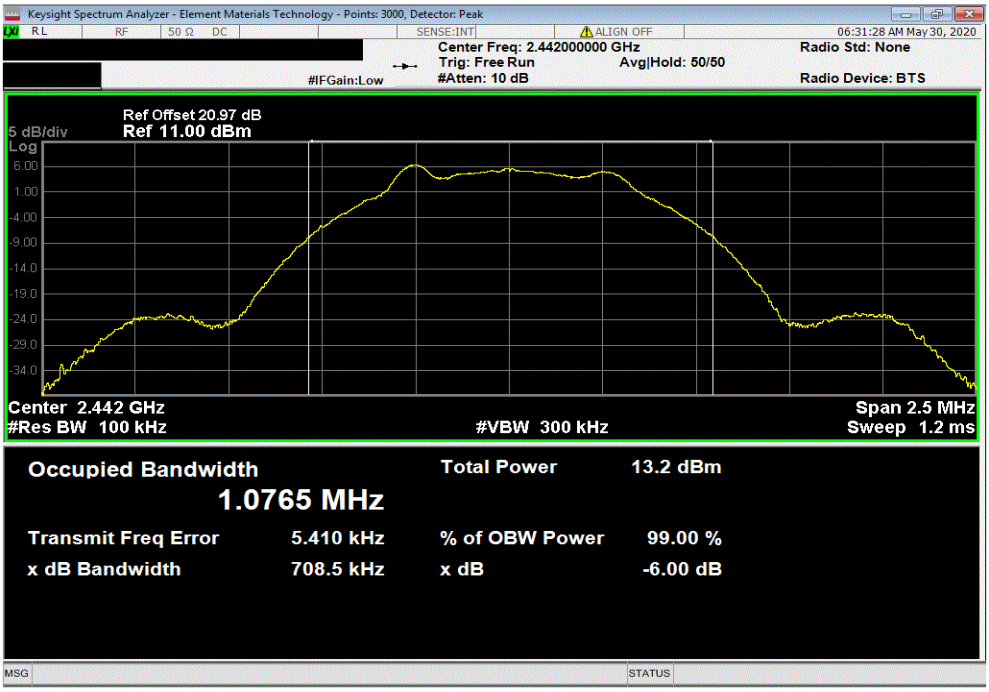
Configuration #	**2**	*Signature*

	Value	**Limit (≥)**	**Result**
BLE/GFSK 1 Mbps Low Channel, 2402 MHz	730.658 kHz	500 kHz	Pass
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz	708.484 kHz	500 kHz	Pass
BLE/GFSK 1 Mbps High Channel, 2480 MHz	742.993 kHz	500 kHz	Pass

BLE/GFSK 1 Mbps Low Channel, 2402 MHz							
					Value	Limit (≥)	Result
					730.658 kHz	500 kHz	Pass



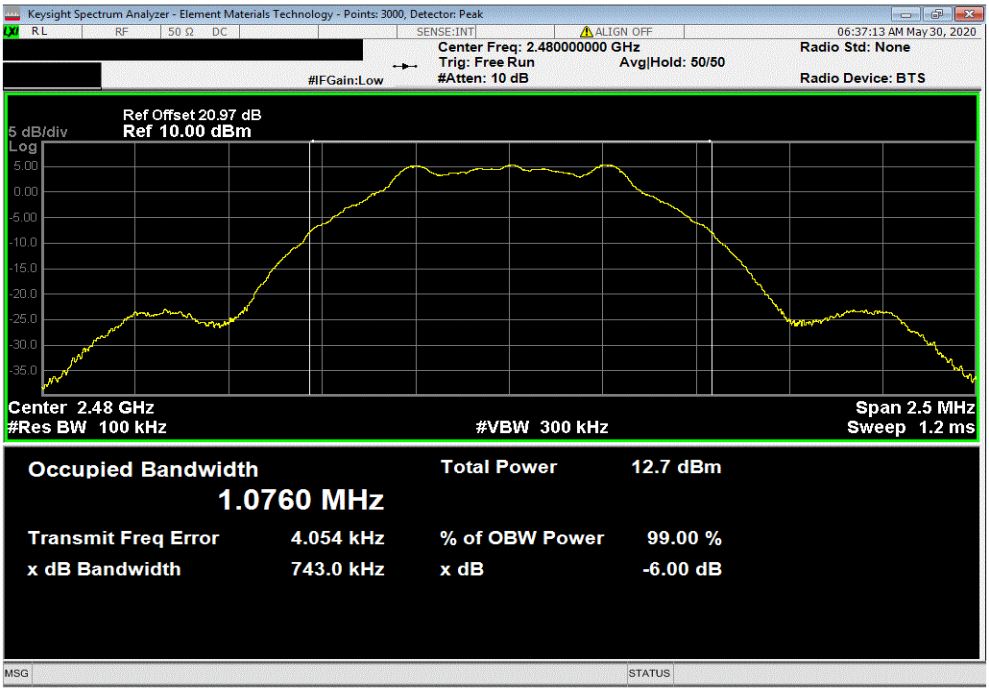
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz							
					Value	Limit (≥)	Result
					708.484 kHz	500 kHz	Pass



OCCUPIED BANDWIDTH

TbtTx 2019.08.30.0 XMit 2020.03.25.0

BLE/GFSK 1 Mbps High Channel, 2480 MHz							
					Value	Limit (≥)	Result
					742.993 kHz	500 kHz	Pass



OUTPUT POWER

XMit 2020.03.25.0

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	15-Mar-18	15-Mar-21
Analyzer - Spectrum Analyzer	Keysight	N9010A (EXA)	AFQ	21-Dec-19	21-Dec-20
Block - DC	Fairview Microwave	SD3379	AMI	6-Aug-19	6-Aug-20
Attenuator	S.M. Electronics	SA26B-20	RFW	10-Feb-20	10-Feb-21
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	15-Sep-19	15-Sep-20

TEST DESCRIPTION

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.

OUTPUT POWER

TbtTx 2019.08.30.0 XMit 2020.03.25.0

EUT:	**New Telemetry Cable**			**Work Order:**	**INSP0011**
Serial Number:	**P000026**			**Date:**	**29-May-20**
Customer:	**Inspire Medical Systems**			**Temperature:**	**24.3 °C**
Attendees:	**Darrell Wagner**			**Humidity:**	**40.6% RH**
Project:	**None**			**Barometric Pres.:**	**1022 mbar**
Tested by:	**Andrew Rogstad**	**Power:**	**120VAC/60Hz**	**Job Site:**	**MN08**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2020	ANSI C63.10:2013

COMMENTS

Reference level offset includes measurement cable, DC block, and 20 dB attenuator.

DEVIATIONS FROM TEST STANDARD

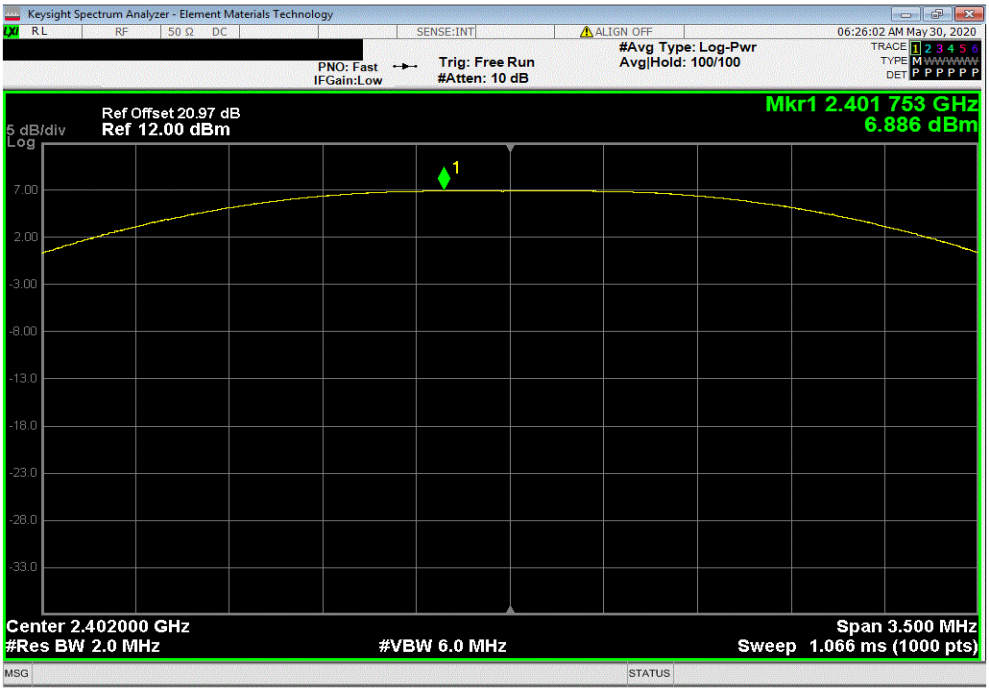
None

Configuration #	**2**	*Signature* Andrew Rogstad

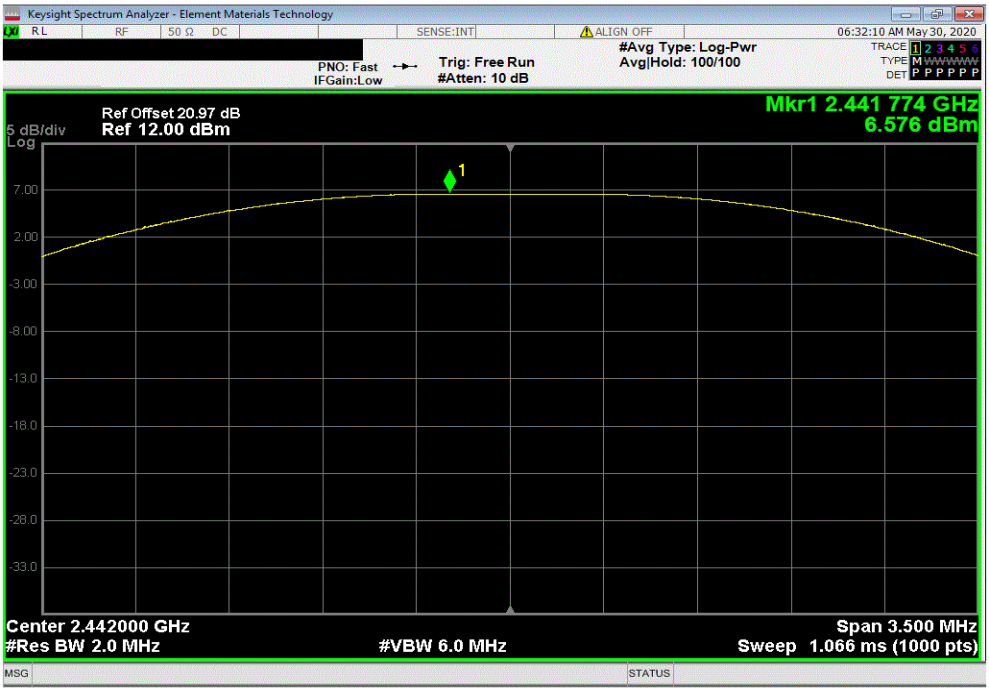
	Out Pwr (dBm)	**Limit (dBm)**	**Result**
BLE/GFSK 1 Mbps Low Channel, 2402 MHz	6.886	30	Pass
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz	6.576	30	Pass
BLE/GFSK 1 Mbps High Channel, 2480 MHz	6.047	30	Pass

OUTPUT POWER

BLE/GFSK 1 Mbps Low Channel, 2402 MHz						
				Out Pwr (dBm)	Limit (dBm)	Result
				6.886	30	Pass

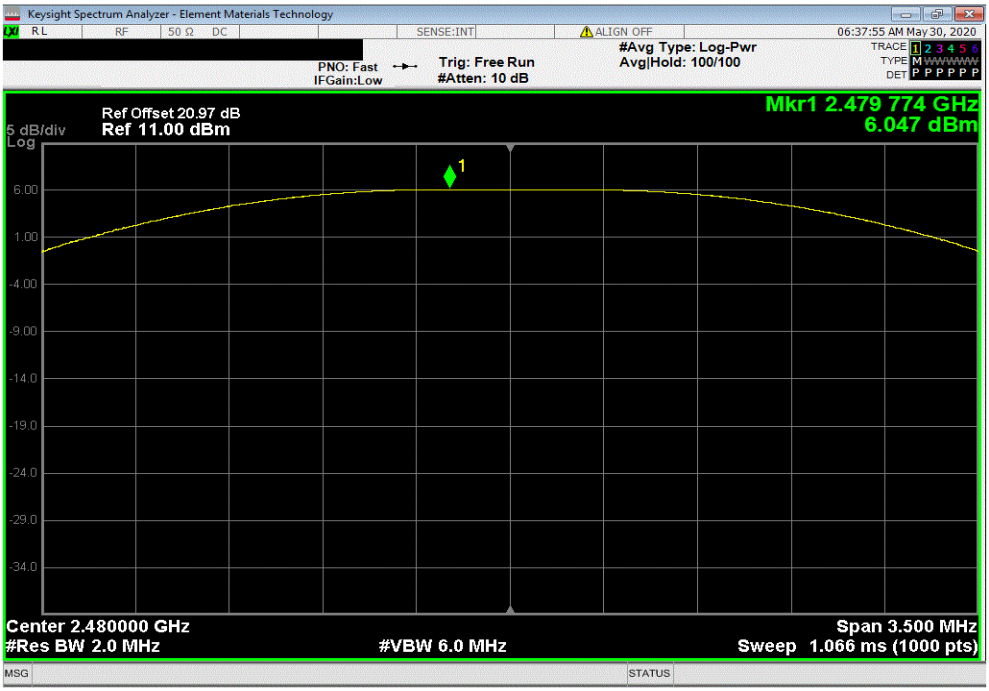


BLE/GFSK 1 Mbps Mid Channel, 2442 MHz						
				Out Pwr (dBm)	Limit (dBm)	Result
				6.576	30	Pass



OUTPUT POWER

BLE/GFSK 1 Mbps High Channel, 2480 MHz						
				Out Pwr (dBm)	Limit (dBm)	Result
				6.047	30	Pass



EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

XMit 2020.03.25.0

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	15-Mar-18	15-Mar-21
Analyzer - Spectrum Analyzer	Keysight	N9010A (EXA)	AFQ	21-Dec-19	21-Dec-20
Block - DC	Fairview Microwave	SD3379	AMI	6-Aug-19	6-Aug-20
Attenuator	S.M. Electronics	SA26B-20	RFW	10-Feb-20	10-Feb-21
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	15-Sep-19	15-Sep-20

TEST DESCRIPTION

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.

Equivalent Isotropic Radiated Power (EIRP) = Max Measured Power + Antenna gain (dBi)

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

TbtTx 2019.08.30.0 XMit 2020.03.25.0

EUT:	New Telemetry Cable			**Work Order:**	INSP0011
Serial Number:	P000026			**Date:**	29-May-20
Customer:	Inspire Medical Systems			**Temperature:**	24.3 °C
Attendees:	Darrell Wagner			**Humidity:**	40.6% RH
Project:	None			**Barometric Pres.:**	1022 mbar
Tested by:	Andrew Rogstad	**Power:**	120VAC/60Hz	**Job Site:**	MN08

TEST SPECIFICATIONS	Test Method
FCC 15.247:2020	ANSI C63.10:2013

COMMENTS

Reference level offset includes measurement cable, DC block, and 20 dB attenuator.

DEVIATIONS FROM TEST STANDARD

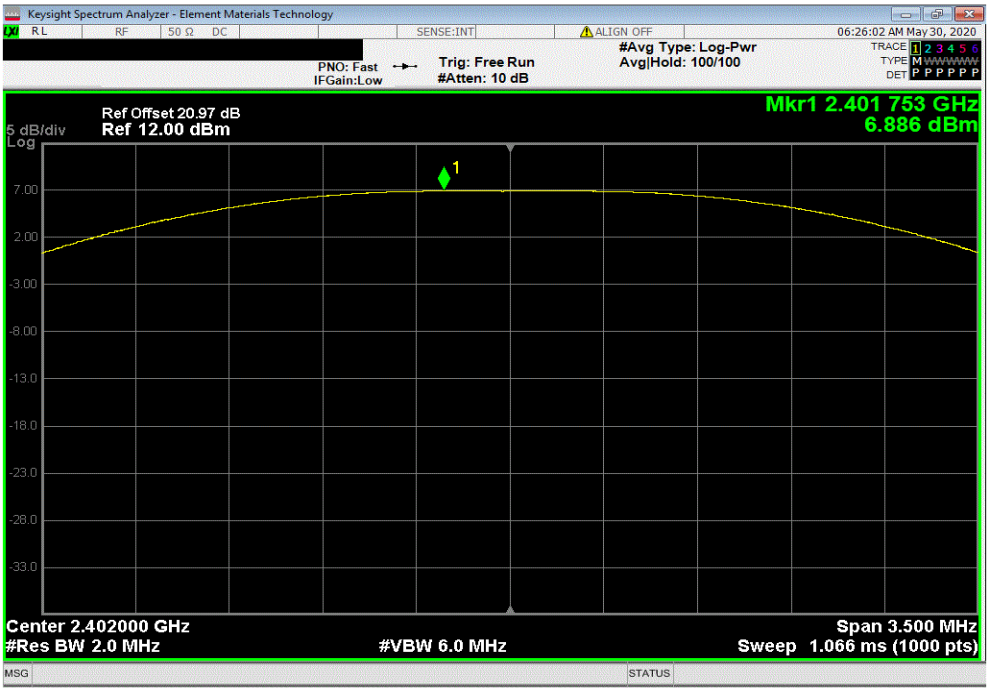
None

Configuration #	2	Signature

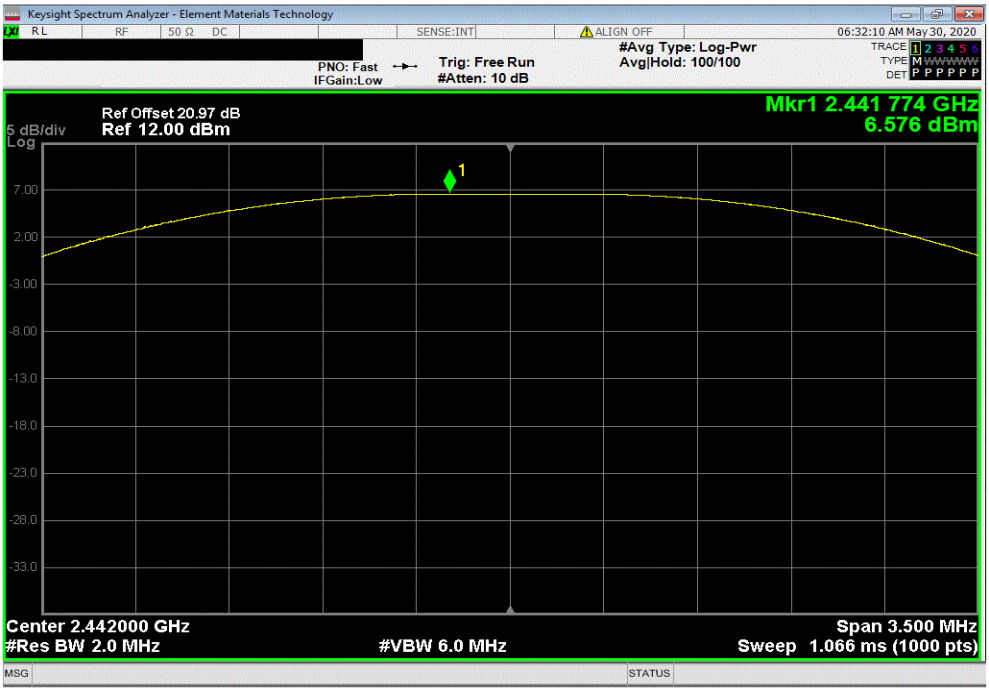
	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
BLE/GFSK 1 Mbps Low Channel, 2402 MHz	6.886	2.5	9.386	36	Pass
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz	6.576	2.5	9.076	36	Pass
BLE/GFSK 1 Mbps High Channel, 2480 MHz	6.047	2.5	8.547	36	Pass

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

BLE/GFSK 1 Mbps Low Channel, 2402 MHz						
		Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
		6.886	2.5	9.386	36	Pass

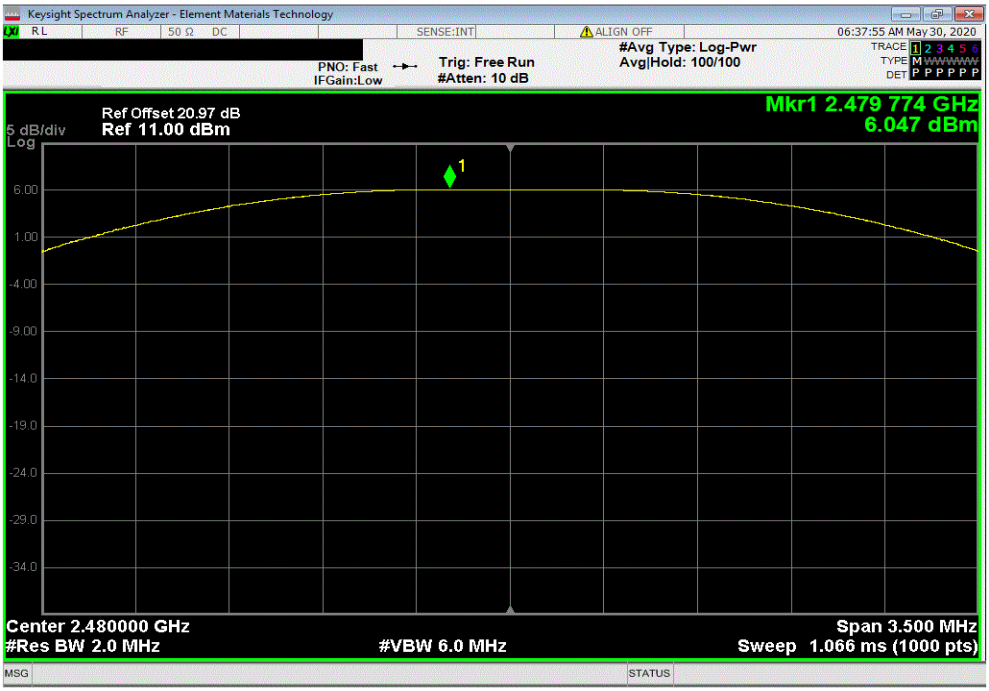


BLE/GFSK 1 Mbps Mid Channel, 2442 MHz						
		Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
		6.576	2.5	9.076	36	Pass



EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

BLE/GFSK 1 Mbps High Channel, 2480 MHz						
		Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
		6.047	2.5	8.547	36	Pass



POWER SPECTRAL DENSITY

XMit 2020.03.25.0

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	15-Mar-18	15-Mar-21
Analyzer - Spectrum Analyzer	Keysight	N9010A (EXA)	AFQ	21-Dec-19	21-Dec-20
Block - DC	Fairview Microwave	SD3379	AMI	6-Aug-19	6-Aug-20
Attenuator	S.M. Electronics	SA26B-20	RFW	10-Feb-20	10-Feb-21
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	15-Sep-19	15-Sep-20

TEST DESCRIPTION

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 2019.08.30.0 XMit 2020.03.25.0

EUT:	**New Telemetry Cable**			**Work Order:**	**INSP0011**
Serial Number:	**P000026**			**Date:**	**29-May-20**
Customer:	**Inspire Medical Systems**			**Temperature:**	**24.4 °C**
Attendees:	**Darrell Wagner**			**Humidity:**	**40.5% RH**
Project:	**None**			**Barometric Pres.:**	**1022 mbar**
Tested by:	**Andrew Rogstad**	**Power:**	**120VAC/60Hz**	**Job Site:**	**MN08**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2020	ANSI C63.10:2013

COMMENTS

Reference level offset includes measurement cable, DC block, and 20 dB attenuator.

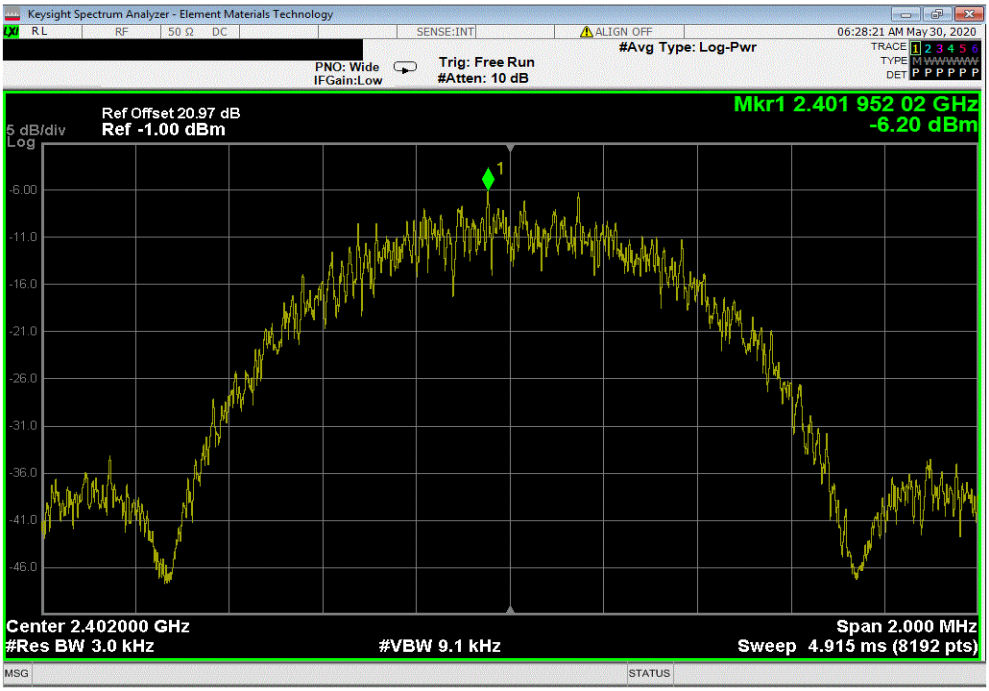
DEVIATIONS FROM TEST STANDARD

None

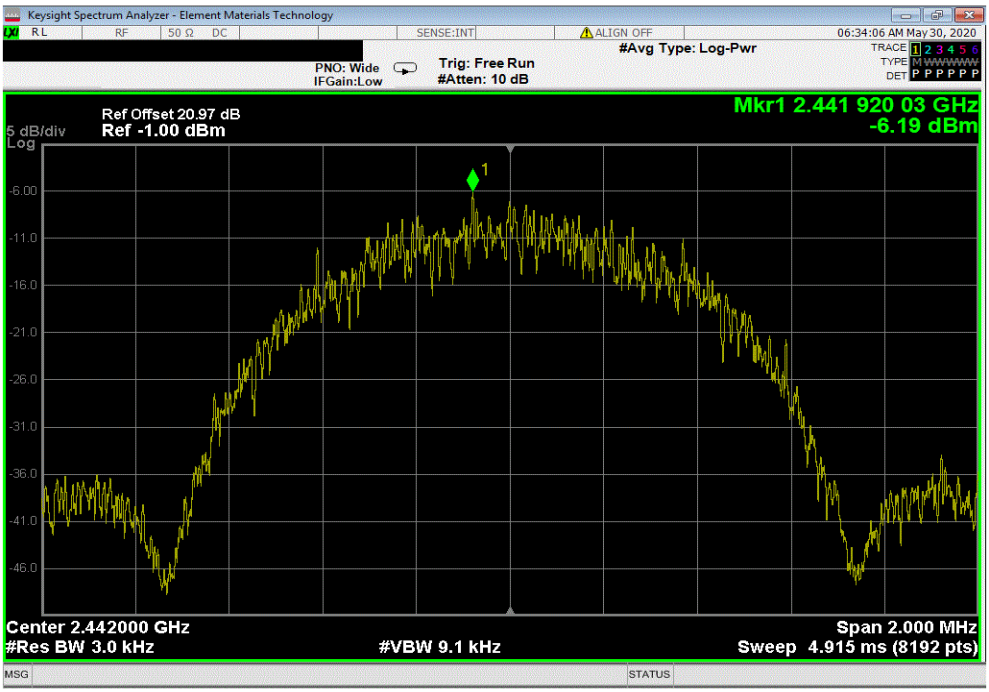
Configuration #	**2**	*Signature* 

	Value dBm/3kHz	**Limit < dBm/3kHz**	**Results**
BLE/GFSK 1 Mbps Low Channel, 2402 MHz	-6.196	8	Pass
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz	-6.194	8	Pass
BLE/GFSK 1 Mbps High Channel, 2480 MHz	-6.66	8	Pass

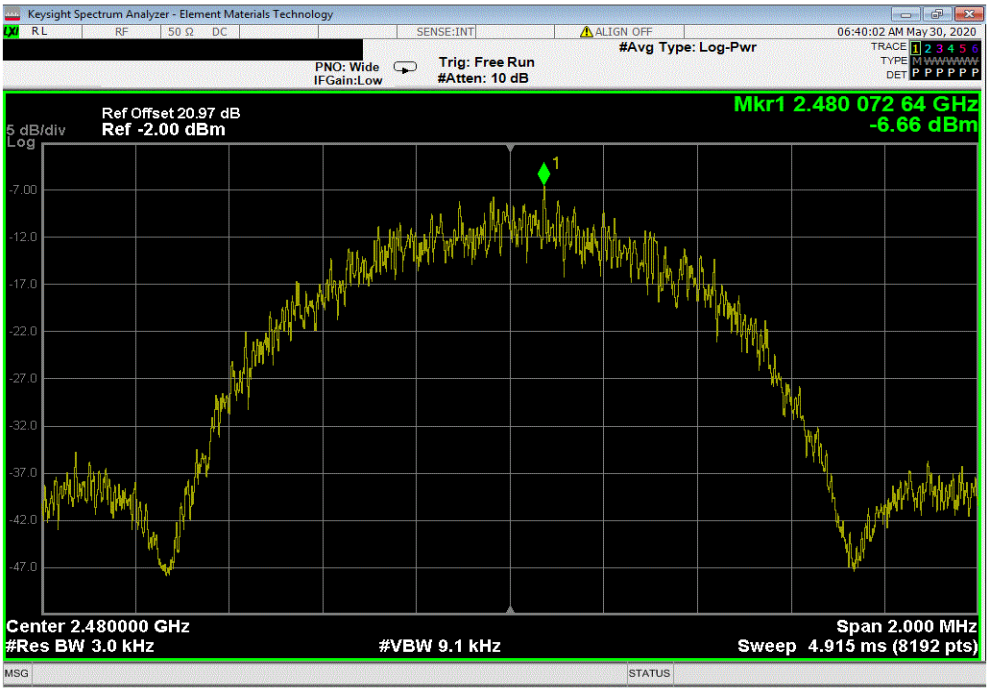
BLE/GFSK 1 Mbps Low Channel, 2402 MHz						
				Value dBm/3kHz	Limit < dBm/3kHz	Results
				-6.196	8	Pass



BLE/GFSK 1 Mbps Mid Channel, 2442 MHz						
				Value dBm/3kHz	Limit < dBm/3kHz	Results
				-6.194	8	Pass



BLE/GFSK 1 Mbps High Channel, 2480 MHz							
					Value dBm/3kHz	Limit < dBm/3kHz	Results
					-6.66	8	Pass



BAND EDGE COMPLIANCE

XMit 2020.03.25.0

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TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	E4422B	TGQ	15-Mar-18	15-Mar-21
Analyzer - Spectrum Analyzer	Keysight	N9010A (EXA)	AFQ	21-Dec-19	21-Dec-20
Block - DC	Fairview Microwave	SD3379	AMI	6-Aug-19	6-Aug-20
Attenuator	S.M. Electronics	SA26B-20	RFW	10-Feb-20	10-Feb-21
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	15-Sep-19	15-Sep-20

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 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 2019.08.30.0 XMit 2020.03.25.0

EUT:	**New Telemetry Cable**			**Work Order:**	**INSP0011**
Serial Number:	**P000026**			**Date:**	**29-May-20**
Customer:	**Inspire Medical Systems**			**Temperature:**	**24.2 °C**
Attendees:	**Darrell Wagner**			**Humidity:**	**40.7% RH**
Project:	**None**			**Barometric Pres.:**	**1022 mbar**
Tested by:	**Andrew Rogstad**	**Power:**	**120VAC/60Hz**	**Job Site:**	**MN08**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2020	ANSI C63.10:2013

COMMENTS

Reference level offset inclueds measurement cable, DC block, and 20 dB attenuator.

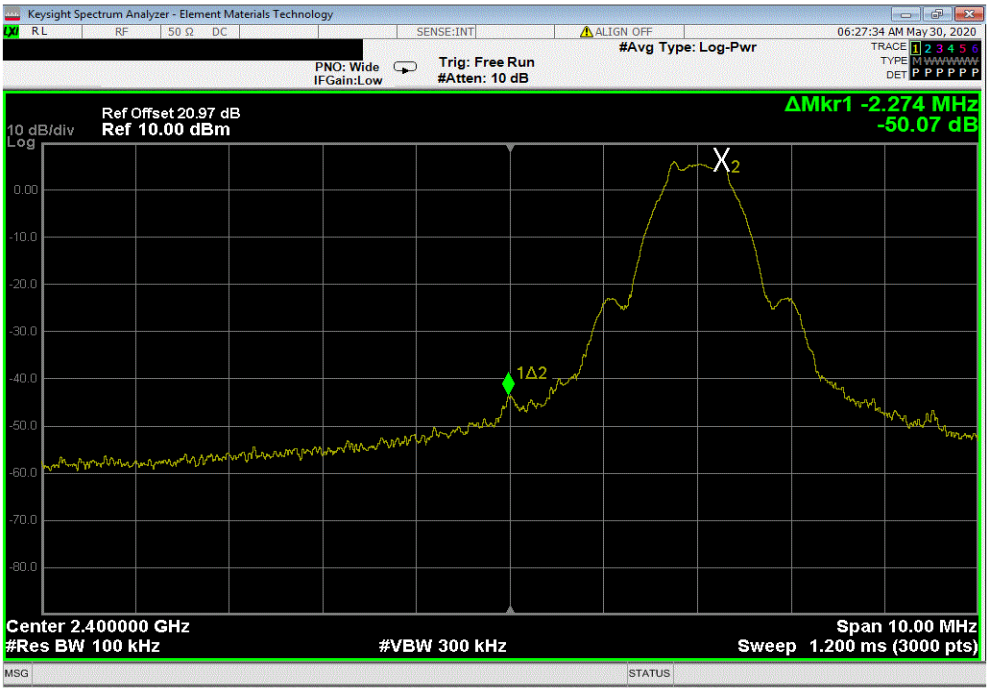
DEVIATIONS FROM TEST STANDARD

None

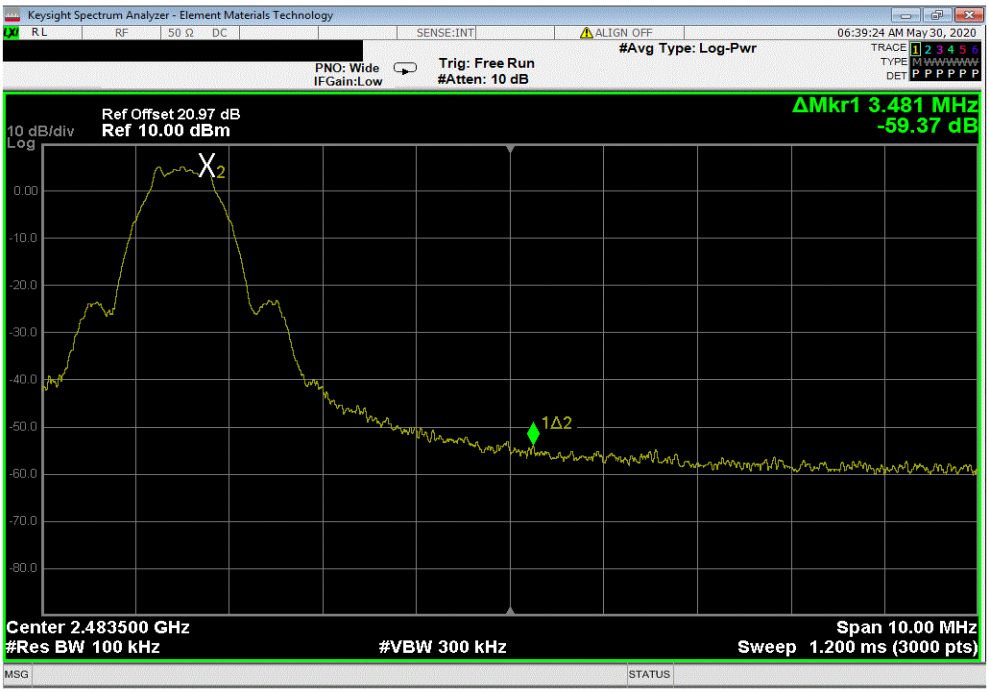
Configuration #	**2**	*Signature* 

	Value (dBc)	**Limit ≤ (dBc)**	**Result**
BLE/GFSK 1 Mbps Low Channel, 2402 MHz	-50.07	-20	Pass
BLE/GFSK 1 Mbps High Channel, 2480 MHz	-59.37	-20	Pass

BLE/GFSK 1 Mbps Low Channel, 2402 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-50.07	-20	Pass



BLE/GFSK 1 Mbps High Channel, 2480 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-59.37	-20	Pass



SPURIOUS CONDUCTED EMISSIONS

XMit 2020.03.25.0

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	15-Mar-18	15-Mar-21
Analyzer - Spectrum Analyzer	Keysight	N9010A (EXA)	AFQ	21-Dec-19	21-Dec-20
Block - DC	Fairview Microwave	SD3379	AMI	6-Aug-19	6-Aug-20
Attenuator	S.M. Electronics	SA26B-20	RFW	10-Feb-20	10-Feb-21
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	15-Sep-19	15-Sep-20

TEST DESCRIPTION

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 2019.08.30.0 XMit 2020.03.25.0

EUT:	New Telemetry Cable			**Work Order:**	INSP0011
Serial Number:	P000026			**Date:**	29-May-20
Customer:	Inspire Medical Systems			**Temperature:**	24.4 °C
Attendees:	Darrell Wagner			**Humidity:**	40.2% RH
Project:	None			**Barometric Pres.:**	1022 mbar
Tested by:	Andrew Rogstad	**Power:**	120VAC/60Hz	**Job Site:**	MN08

TEST SPECIFICATIONS	Test Method
FCC 15.247:2020	ANSI C63.10:2013

COMMENTS

Reference level offset includes measurement cable, DC block, and 20 dB attenuator.

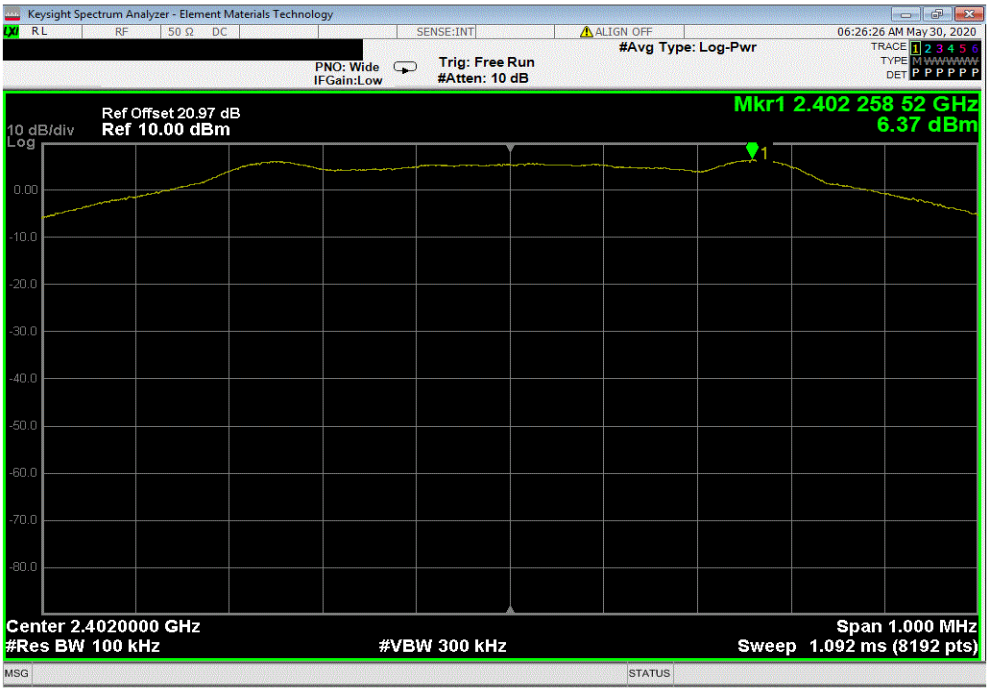
DEVIATIONS FROM TEST STANDARD

None

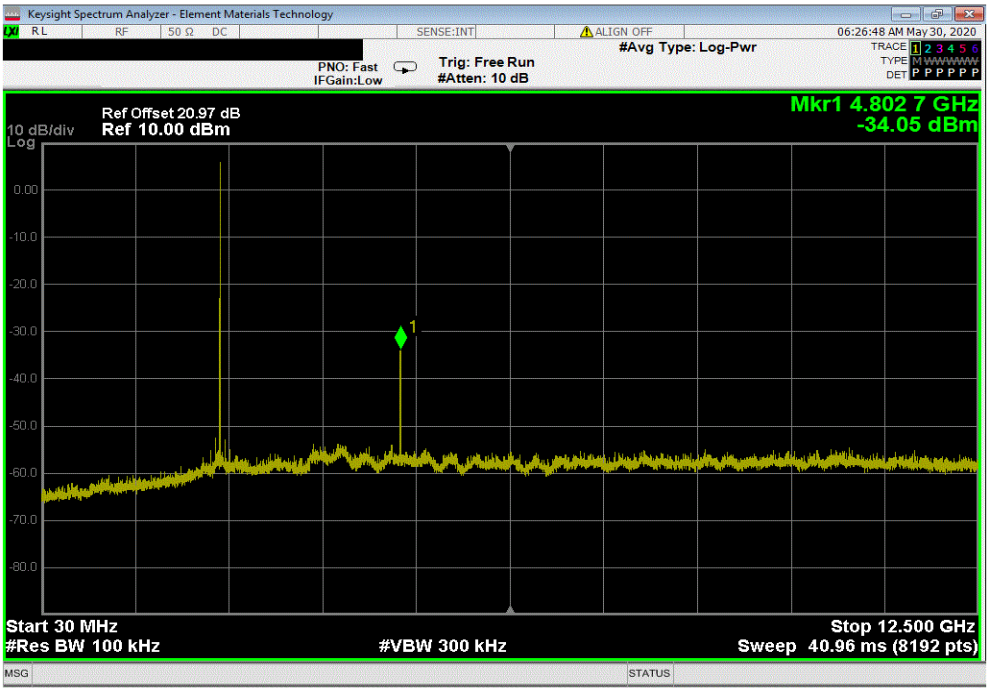
Configuration #	2	Signature

	Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
BLE/GFSK 1 Mbps Low Channel, 2402 MHz	Fundamental	2402.26	N/A	N/A	N/A
BLE/GFSK 1 Mbps Low Channel, 2402 MHz	30 MHz - 12.5 GHz	4802.73	-40.42	-20	Pass
BLE/GFSK 1 Mbps Low Channel, 2402 MHz	12.5 GHz - 25 GHz	23632.65	-57.07	-20	Pass
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz	Fundamental	2441.75	N/A	N/A	N/A
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz	30 MHz - 12.5 GHz	4883.42	-43.71	-20	Pass
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz	12.5 GHz - 25 GHz	24980.16	-57.29	-20	Pass
BLE/GFSK 1 Mbps High Channel, 2480 MHz	Fundamental	2480.26	N/A	N/A	N/A
BLE/GFSK 1 Mbps High Channel, 2480 MHz	30 MHz - 12.5 GHz	4959.54	-44.65	-20	Pass
BLE/GFSK 1 Mbps High Channel, 2480 MHz	12.5 GHz - 25 GHz	24102.67	-56.42	-20	Pass

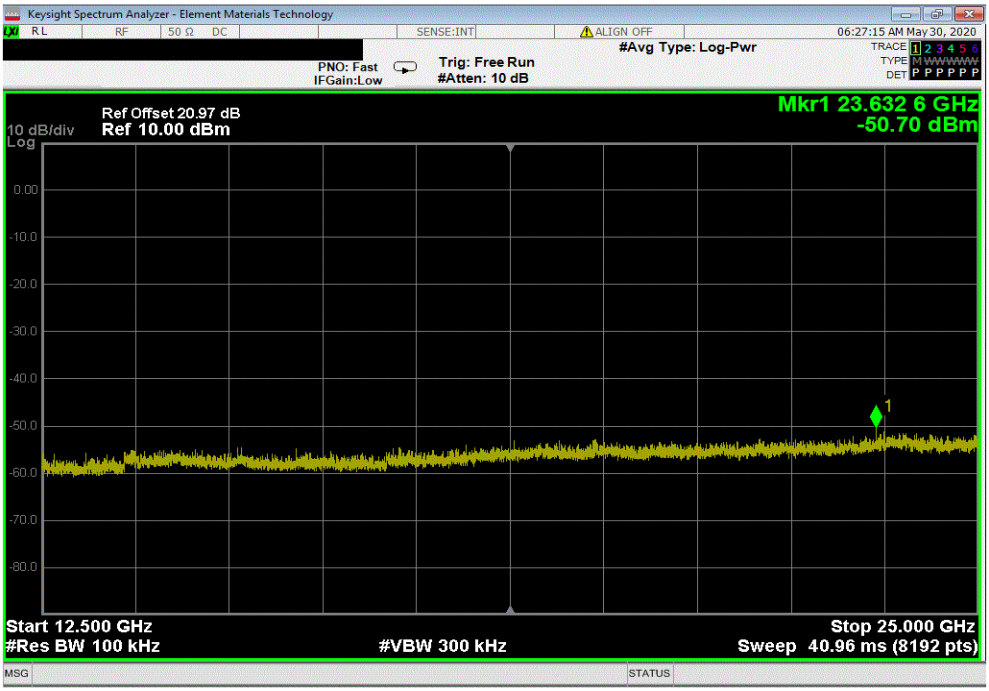
BLE/GFSK 1 Mbps Low Channel, 2402 MHz					
Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental	2402.26	N/A	N/A	N/A



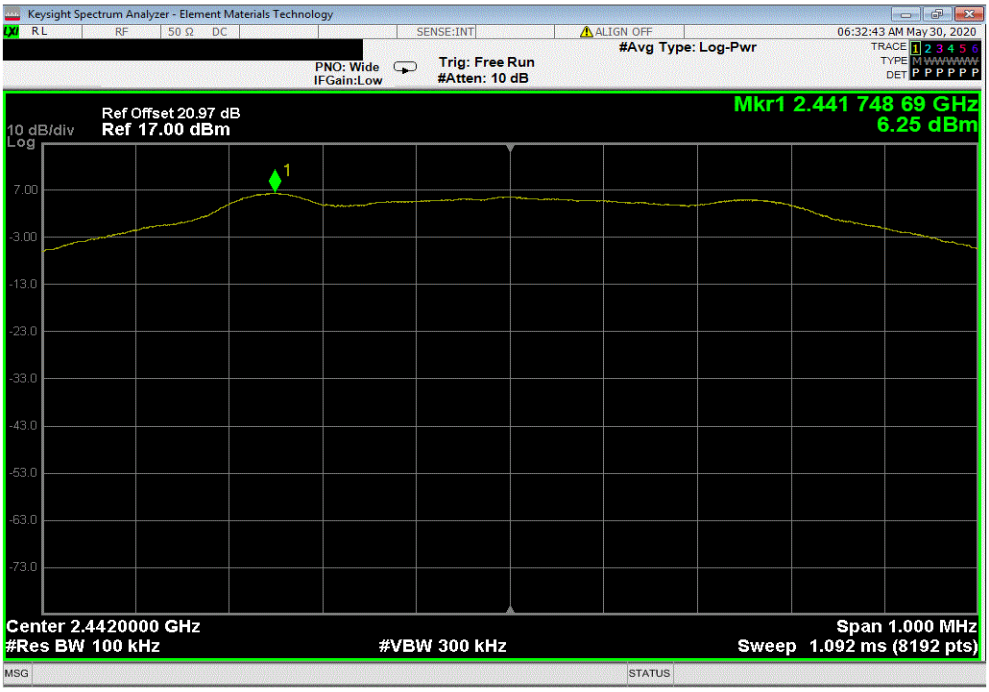
BLE/GFSK 1 Mbps Low Channel, 2402 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz	4802.73	-40.42	-20	Pass



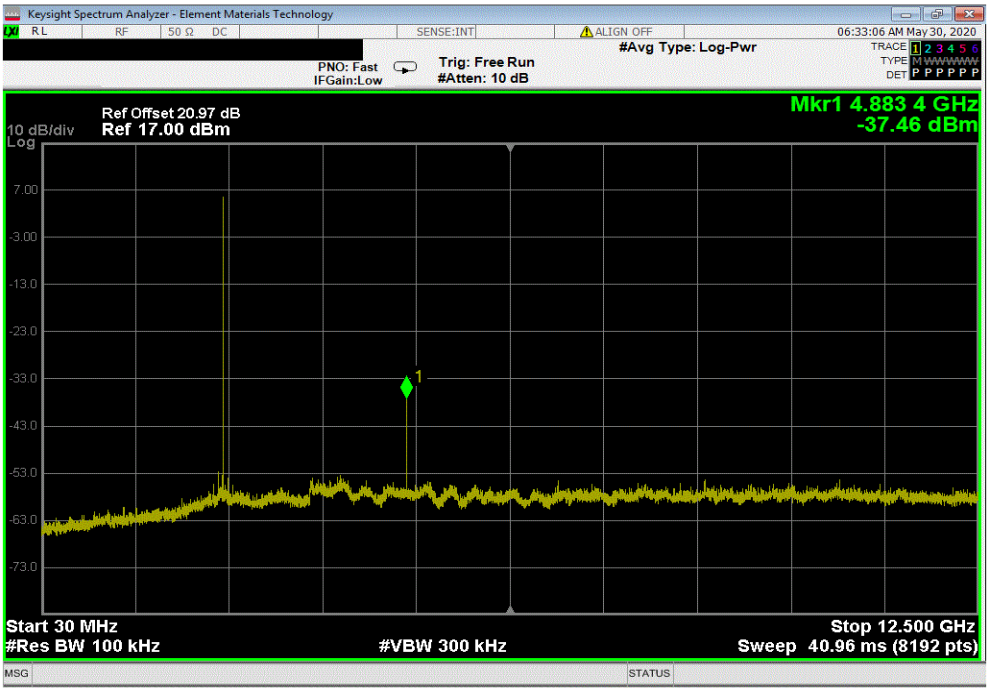
BLE/GFSK 1 Mbps Low Channel, 2402 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
12.5 GHz - 25 GHz	23632.65	-57.07	-20	Pass



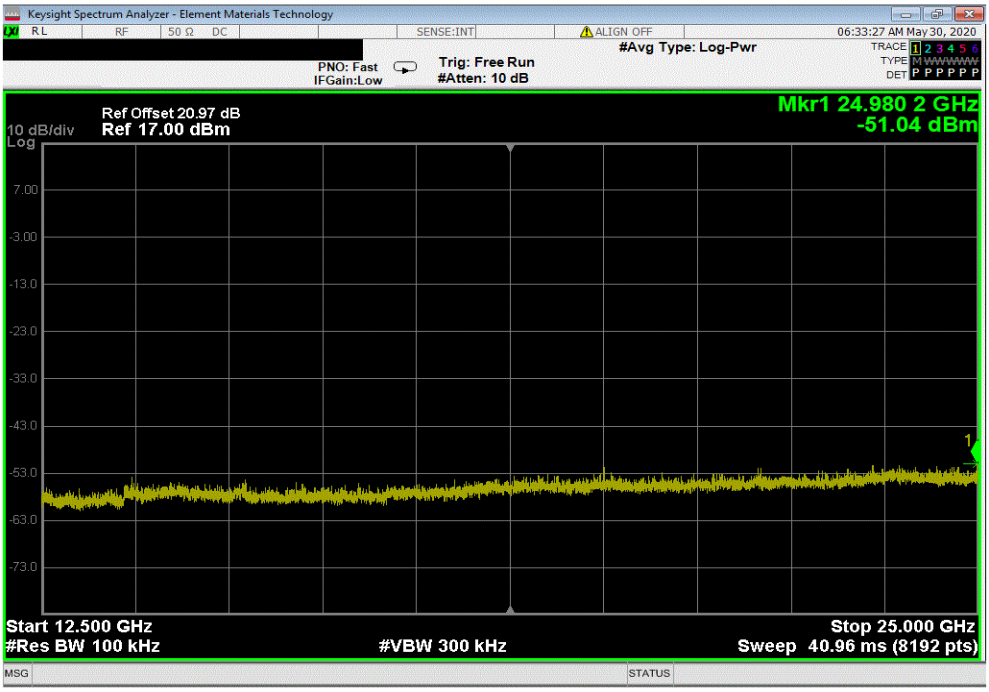
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
Fundamental	2441.75	N/A	N/A	N/A



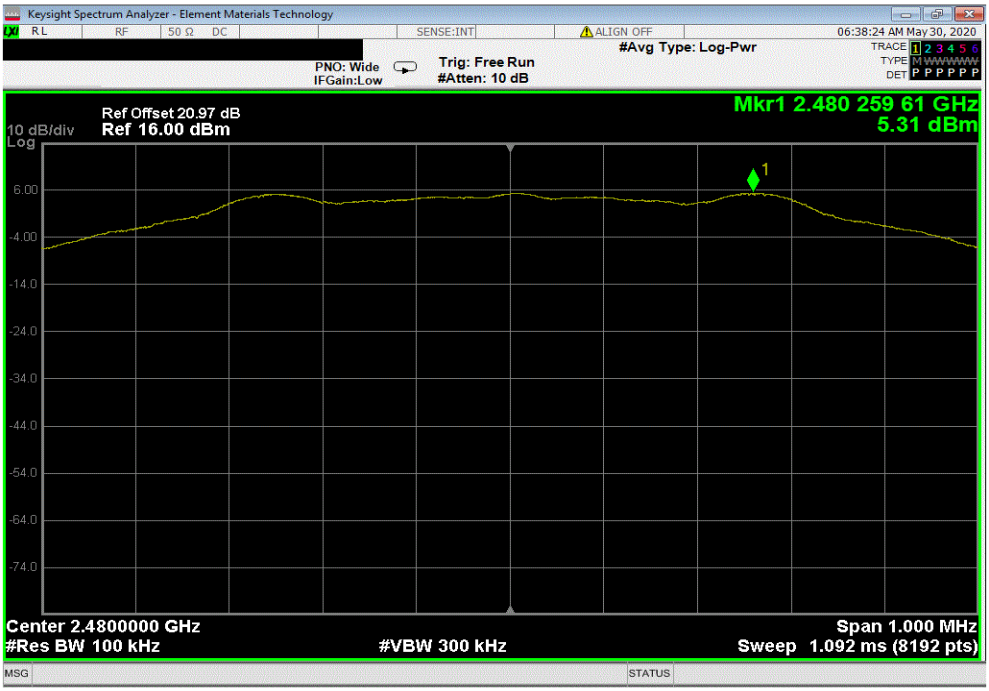
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz	4883.42	-43.71	-20	Pass



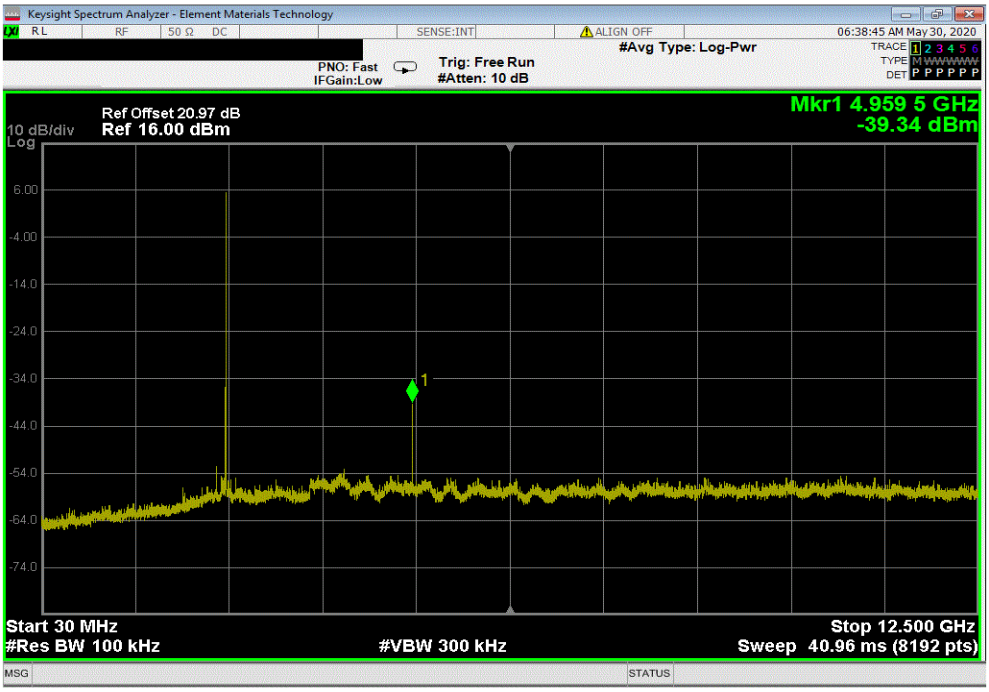
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
12.5 GHz - 25 GHz	24980.16	-57.29	-20	Pass



BLE/GFSK 1 Mbps High Channel, 2480 MHz					
Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental	2480.26	N/A	N/A	N/A



BLE/GFSK 1 Mbps High Channel, 2480 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12.5 GHz	4959.54	-44.65	-20	Pass



BLE/GFSK 1 Mbps High Channel, 2480 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
12.5 GHz - 25 GHz	24102.67	-56.42	-20	Pass