



Boston Scientific Corporation

ICD/CRT-D

FCC 95I:2025

MedRadio

Report: BSTN1346.1 Rev. 01, Issue Date: December 8, 2025



This report must not be used to claim product certification, approval, or endorsement by A2LA or any agency of the U.S. Government. This Report shall not be reproduced, except in full without written approval of the laboratory.

TABLE OF CONTENTS

Section	Page Number
Certificate of Test	3
Revision History	4
Accreditations.....	5
Facilities	6
Measurement Uncertainty	7
Test Setup Block Diagrams.....	8
Product Description.....	11
Power Settings and Antenna Information.....	12
Configurations.....	13
Modifications	18
Emission Bandwidth.....	19
Emission Mask.....	23
Duty Cycle Characterization.....	26
Conducted Output Power	27
Frequency Stability.....	30
Spurious Radiated Emissions	35
Spurious Radiated Emissions (Band Edge)	47
Radiated Power (EIRP).....	55
End of Report.....	62

CERTIFICATE OF TEST

Last Date of Test: December 4, 2024
Boston Scientific Corporation
EUT: ICD/CRT-D

Radio Equipment Testing

Standards

Specification	Method
FCC 95I:2025	ANSI C63.26:2015

Results

Test Description	Result	Specification Section(s)	Method Section(s)	Comments
Emission Bandwidth	Pass	FCC 95.2573(a), 2.1049	ANSI C63.26 5.4.3	
Emission Mask	Pass	FCC 95.2579(a)(1), (c)(2)	ANSI C63.26 5.7	
Duty Cycle Characterization	N/A	FCC 2.1046	ANSI C63.26 5.2.4	No limit, needed to support conducted output power and characterize the operation of the radio.
Conducted Output Power	N/A	FCC 2.1046	ANSI C63.26 5.2.4	No limit, characterization only.
Frequency Stability	Pass	FCC 95.2565, 2.1055	ANSI C63.26 5.6	
Spurious Radiated Emissions	Pass	FCC 95.2579 (a), 2.1053	ANSI C63.26 5.5.4	
Spurious Conducted Emissions	N/A	FCC 2.1051	ANSI C63.26 5.7	No limit, characterization only. Not Requested
Radiated Power (EIRP)	Pass	FCC 95.2567(a)(2), 95.2569	ANSI C63.26 5.2.3.3, 5.2.7	
Channel Access Requirements	N/A	FCC 95.2559	FCC 95.2559	Not required. Implantable device does not support LBT/AFA capabilities.

Deviations From Test Standards

None

Approved By:



Jeff Alcock, Senior EMC Test Engineer
 Signed for and on behalf of Element

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	Changing report approver.	2025-10-10	3
	Removed AC Powerline Conducted Emissions from MU, this is a battery device that doesn't connect to mains and this wasn't tested.	2025-11-06	7
	Added duty cycle.	2025-11-06	18
	Updated test equipment.	2025-11-06	27
	Updated result to N/A, as there is no limit.	2025-11-06	28
	Added temp chamber and DMM.	2025-11-06	30
	Updated test equipment.	2025-11-06	55
	Added signal substitution to test equipment.	2025-11-06	60
	Removed Spurious Conducted Emissions data.	2025-12-04	N/A
	Update modifications to remove Spurious Conducted Emissions.	2025-12-04	18

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 - Each laboratory is accredited by A2LA to ISO / IEC 17025, and as a product certifier to ISO / IEC 17065 which allows Element to certify transmitters to FCC and IC specifications.

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 – Recognized as an EU Notified Body validated for the EMCD and RED Directives.

United Kingdom

BEIS – Recognized by the UK as an Approved Body under the UK Radio Equipment and UK EMC Regulations.

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:

[California](#)

[Minnesota](#)

[Oregon](#)

[Texas](#)

[Washington](#)

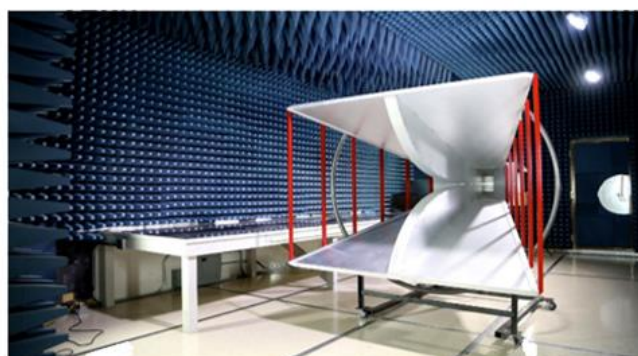
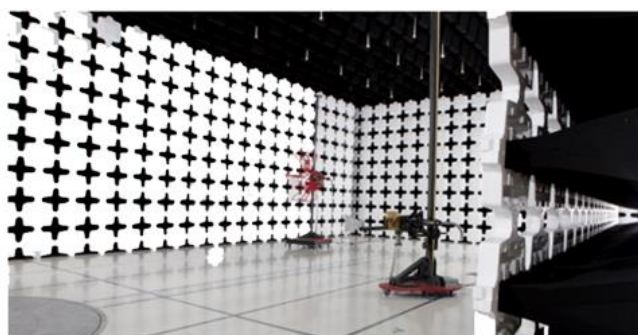
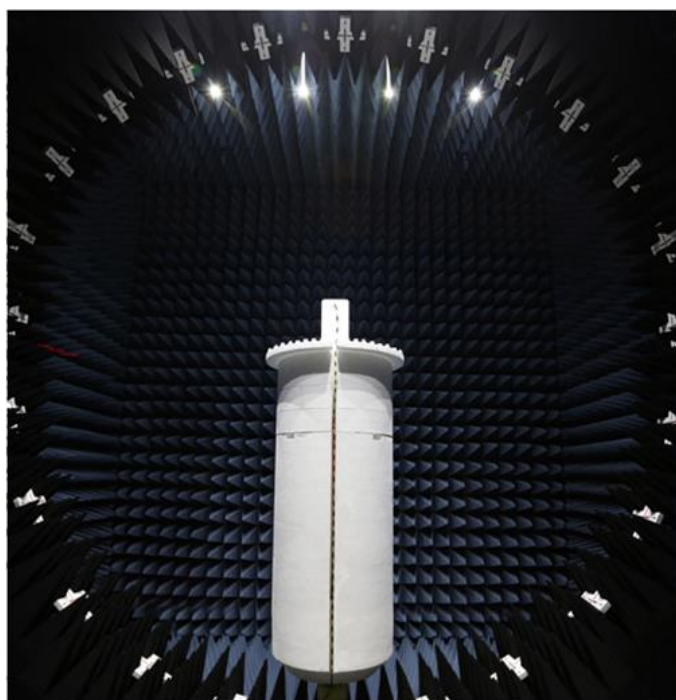
FACILITIES

Testing was performed at the following location(s)

	Location	Labs ⁽¹⁾	Address	A2LA ⁽²⁾	ISED ⁽³⁾	BSMI ⁽⁴⁾	VCCI ⁽⁵⁾	CAB ⁽⁶⁾	FDA ⁽⁷⁾
☐	California	OC01-17	41 Tesla Irvine, CA 92618 (949) 861-8918	3310.04	2834B	SL2-IN-E-1154R	A-0029	US0158	TL-55
☒	Minnesota	MN01-11	9349 W Broadway Ave. Brooklyn Park, MN 55445 (612) 638-5136	3310.05	2834E	SL2-IN-E-1152R	A-0109	US0175	TL-57
☐	Oregon	EV01-12	6775 NE Evergreen Pkwy #400 Hillsboro, OR 97124 (503) 844-4066	3310.02	2834D	SL2-IN-E-1017	A-0108	US0017	TL-56
☐	Plano Texas	PT01-15	1701 E Plano Pkwy, Ste 150 Plano, TX 75074 (972) 509-2566	214.19	32637	SL2-IN-E-057R	A-0426	US0054	TL-137
☐	Washington	NC01-05	19201 120th Ave NE Bothell, WA 98011 (425) 984-6600	3310.06	2834F	SL2-IN-E-1153R	A-0110	US0157	TL-67
☐	Offsite	N/A	See Product Description	N/A	N/A	N/A	N/A	N/A	N/A

See data sheets for specific labs

- (1) The lab designations denote individual rooms within each location. (OC01, OC02, OC03, etc.)
- (2) A2LA Certificate No.
- (3) ISED Company No.
- (4) BSMI No.
- (5) VCCI Site Filing No.
- (6) CAB Identifier. Recognized Phase I CAB for ISED, ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA
- (7) FDA ASCA No.



MEASUREMENT UNCERTAINTY

Measurement Uncertainty

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

A measurement uncertainty estimation reported is based on statistical analysis that was performed by the laboratory. 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 in the table below. A lab specific value may also be found in the applicable test description section. 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.

Various Measurements

Test	All Labs (+/-)
Frequency Accuracy (%)	0.0007
Amplitude Accuracy (dB)	1.2
Conducted Power (dB)	1.2
Radiated Power via Substitution (dB)	0.7
Temperature (degrees C)	0.7
Humidity (% RH)	2.5
Voltage (AC) (%)	1
Voltage (DC) (%)	0.7

Field Strength Measurements (dB)

Range	MN05 (+/-)	MN11 (+/-)
10kHz-30MHz	1.8	N/A
30MHz-1GHz 3m	4.6	N/A
1GHz-6GHz	5.1	N/A
6GHz-40GHz	5.2	N/A

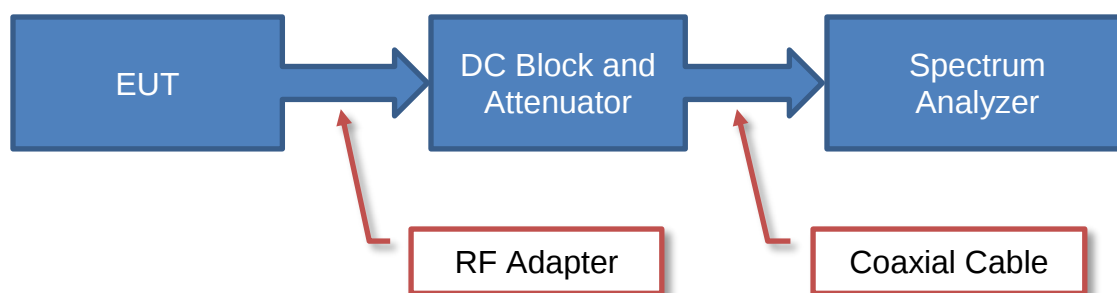
TEST SETUP BLOCK DIAGRAMS

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

Unless otherwise stated, measurements were made using the bandwidths and detectors specified. No video filter was used.

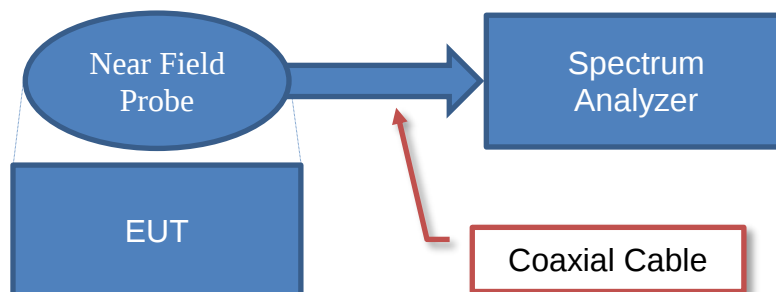
Antenna Port Conducted Measurements



Sample Calculation (logarithmic units)

Measured Value	=	Measured Level	+	Reference Level Offset
71.2		42.6		28.6

Near Field Test Fixture Measurements

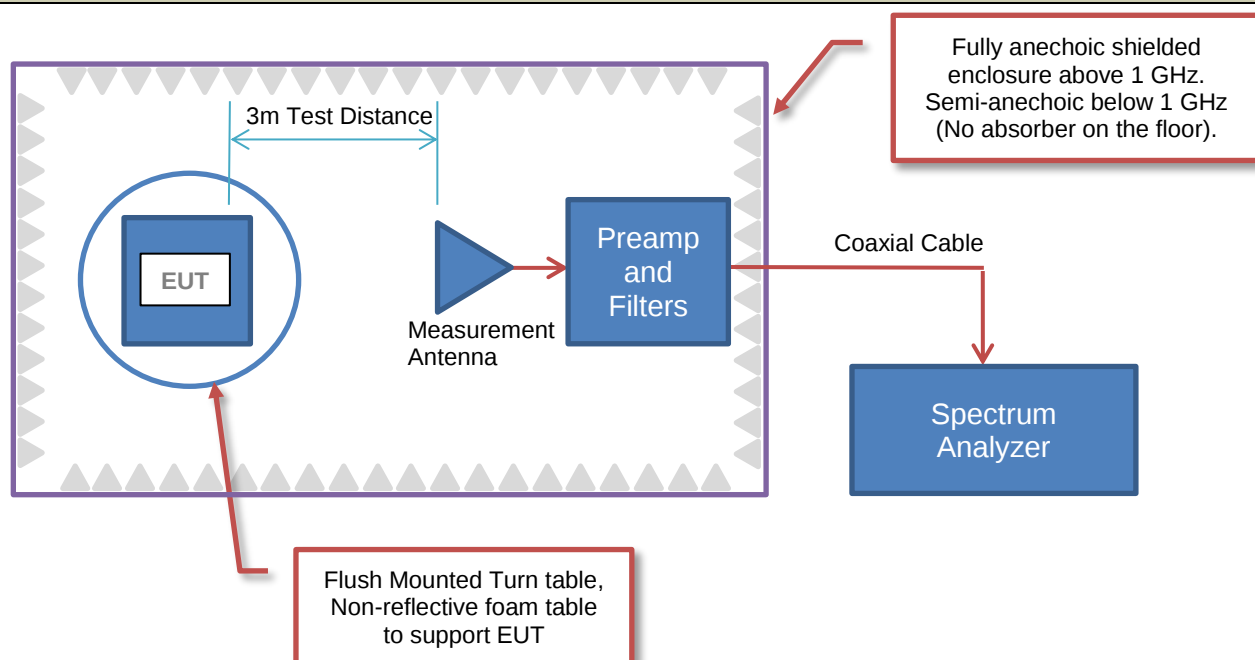


Sample Calculation (logarithmic units)

Measured Value	=	Measured Level	+	Reference Level Offset
71.2		42.6		28.6

TEST SETUP BLOCK DIAGRAMS

Emissions Measurements



Sample Calculation (logarithmic units)

Radiated Emissions:

Measured Level (Amplitude)	Factor			Distance Adjustment Factor	External Attenuation	Field Strength
	Antenna Factor	Cable Factor	Amplifier Gain			
42.6	28.6	3.1	40.8	0.0	0.0	33.5

Conducted Emissions:

Measured Level (Amplitude)	Factor		External Attenuation	Adjusted Level
	Transducer Factor	Cable Factor		
26.7	0.3	0.1	20.0	47.1

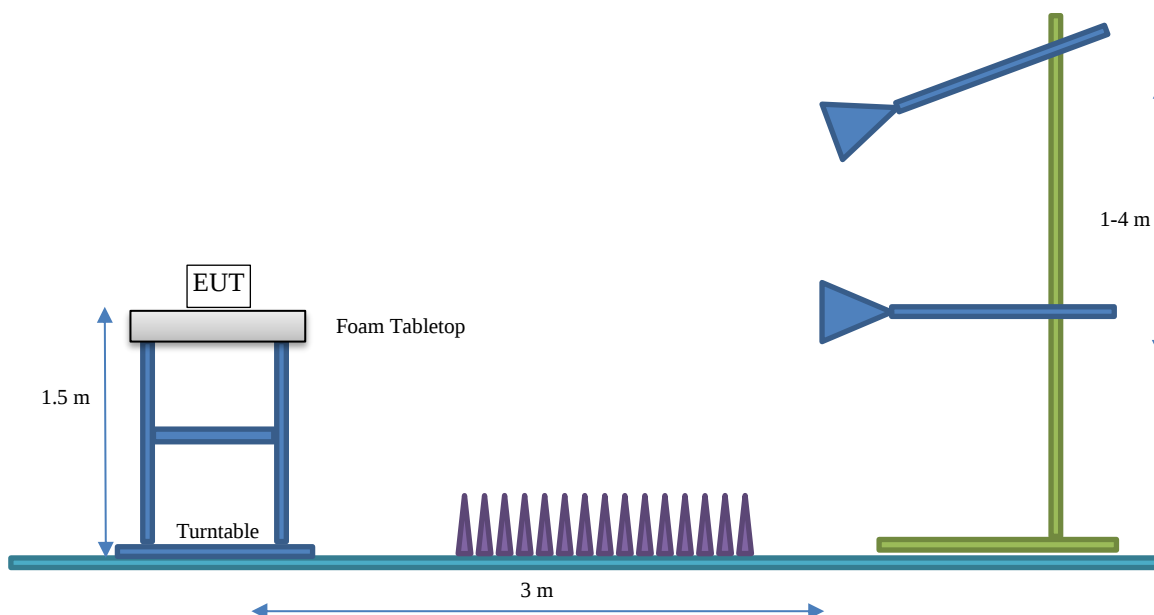
Radiated Power (ERP/EIRP) – Substitution Method:

Measured Level into Substitution Antenna (Amplitude dBm)	Substitution Antenna Factor (dBi)	EIRP to ERP (if applicable)	Measured power (dBm ERP/EIRP)
10.0	6.0	2.15	13.9/16.0

TEST SETUP BLOCK DIAGRAMS

Bore Sighting (>1GHz)

The diameter of the illumination area is the dimension of the line tangent to the EUT formed by 3 dB beamwidth of the measurement antenna at the measurement distance. At a 3 meter test distance, the diameter of the illumination area was 3.8 meters at 1 GHz and greater than 2.1 meters up to 6 GHz. Above 1 GHz, when required by the measurement standard, the antenna is pointed for both azimuth and elevation to maintain the receive antenna within the cone of radiation from the EUT. The specified measurement detectors were used for comparison of the emissions to the peak and average specification limits.



PRODUCT DESCRIPTION



Client and Equipment under Test (EUT) Information

Company Name:	Boston Scientific Corporation
Address:	4100 Hamline Avenue North
City, State, Zip:	Saint Paul, MN 55112-5798
Test Requested By:	Neal Peterson
EUT:	ICD/CRT-D
First Date of Test:	November 18, 2024
Last Date of Test:	December 4, 2024
Receipt Date of Samples:	November 18, 2024
Equipment Design Stage:	Prototype
Equipment Condition:	No Damage
Purchase Authorization:	Verified

Information Provided by the Party Requesting the Test

Functional Description of the EUT:
Defibrillator
Testing Objective:
Seeking FCC authorization for the MedRadio transmitter to FCC Part 95I.

POWER SETTINGS AND ANTENNAS



The power settings, antenna gain value(s) and cable loss (if applicable) used for the testing contained in this report were provided by the customer and will affect the validity of the results. Element assumes no responsibility for the accuracy of this information. The power settings below reflect the maximum power that the EUT is allowed to transmit at during normal operation.

ANTENNA GAIN (dBi)

Type	Provided by:	Frequency Range (MHz)	Gain (dBi)
Monopole	Boston Scientific	400-406	-29.4

The EUT was tested using the power settings provided by the manufacturer which were based upon:

- ☒ Test software settings Software / firmware used for testing: FRRP v3.1.4.1
☐ Rated power settings

SETTINGS FOR ALL TESTS IN THIS REPORT

Modulation Types	Channel	Position	Frequency (MHz)	Power Setting
FSK Modulation, 128 kbps	0 or 1	Low Channel	402.15	0x61
	4 or 5	Mid Channel	403.35	0x61
	9 or 10	High Channel	404.85	0x61

CONFIGURATIONS



Configuration BSTN1346-1

Software/Firmware Running During Test	
Description	Version
Programming Software: FRRP	3.1.4.1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Autogen IPB (Dev Board)	Boston Scientific Corporation	ICD/CRT-D	305513491

Peripherals in Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	HP	HP Z-Book G10	5CD4071193
Telemetry Test Module	Guidant	SE11345-104	TTM2097
Telemetry Coil	Boston Scientific Corporation	None	None

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
HP Power Brick	HP	M85394-003	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Power Leads (+,-)	No	0.9 m	No	DC Mains	Dev Board
Telemetry Wand Cable (Model 6577)	No	3 m	No	Telemetry Test Module	Telemetry Wand (Integrated)
Telemetry Coil Cable	No	0.5 m	No	Dev Board	Telemetry Coil
USB	Yes	1.8 m	No	Laptop	Telemetry Test Module
AC Cable (Laptop)	No	1 m	No	AC Mains	HP Power Brick
AC Cable (Guidant)	No	1.8 m	No	AC Mains	Telemetry Test Module
DC Cable (Laptop)	No	1.8 m	No	HP Power Brick	Laptop

CONFIGURATIONS



Configuration BSTN1346-3

Software/Firmware Running During Test	
Description	Version
Programming Software: FRRP	3.1.4.1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
ICD	Boston Scientific Corporation	G448	396686
Lead – Endotak	Boston Scientific Corporation	0159	103396
Lead – IS1 BI	Boston Scientific Corporation	7741	1018117
Lead – DF4-LLHH	Boston Scientific Corporation	0695	100423

Peripherals in Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	HP	HP Z-Book G10	5CD4071193
Telemetry Test Module	Guidant	SE11345-104	TTM2097

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
HP Power Brick	HP	M85394-003	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Telemetry Wand Cable (Model 6577)	No	3 m	No	Telemetry Test Module	Telemetry Wand (Integrated)
USB	Yes	1.8 m	No	Laptop	Telemetry Test Module
AC Cable (Laptop)	No	1 m	No	AC Mains	HP Power Brick
AC Cable (Guidant)	No	1.8 m	No	AC Mains	Telemetry Test Module
DC Cable (Laptop)	No	1.8 m	No	HP Power Brick	Laptop

CONFIGURATIONS



Configuration BSTN1346-4

Software/Firmware Running During Test	
Description	Version
Programming Software: FRRP	3.1.4.1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Lead - Endotak	Boston Scientific Corporation	0159	103396
ICD	Boston Scientific Corporation	D420	222735

Peripherals in Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	HP	HP Z-Book G10	5CD4071193
Telemetry Test Module	Guidant	SE11345-104	TTM2097

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
HP Power Brick	HP	M85394-003	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Telemetry Wand Cable (Model 6577)	No	3 m	No	Telemetry Test Module	Telemetry Wand (Integrated)
USB	Yes	1.8 m	No	Laptop	Telemetry Test Module
AC Cable (Laptop)	No	1 m	No	AC Mains	HP Power Brick
AC Cable (Guidant)	No	1.8 m	No	AC Mains	Telemetry Test Module
DC Cable (Laptop)	No	1.8 m	No	HP Power Brick	Laptop

CONFIGURATIONS



Configuration BSTN1346-6

Software/Firmware Running During Test	
Description	Version
Programming Software: FRRP	3.1.4.1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Lead - IS1 BI	Boston Scientific Corporation	7741	1018117
Lead - IS-4-LLLL	Boston Scientific Corporation	4674	123350
Lead - DF4-LLHH	Boston Scientific Corporation	0695	100423
ICD	Boston Scientific Corporation	G447	344830

Peripherals in Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	HP	HP Z-Book G10	5CD4071193
Telemetry Test Module	Guidant	SE11345-104	TTM2097

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
HP Power Brick	HP	M85394-003	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Telemetry Wand Cable (Model 6577)	No	3 m	No	Telemetry Test Module	Telemetry Wand (Integrated)
USB	Yes	1.8 m	No	Laptop	Telemetry Test Module
AC Cable (Laptop)	No	1 m	No	AC Mains	HP Power Brick
AC Cable (Guidant)	No	1.8 m	No	AC Mains	Telemetry Test Module
DC Cable (Laptop)	No	1.8 m	No	HP Power Brick	Laptop

CONFIGURATIONS



Configuration BSTN1346-7

Software/Firmware Running During Test	
Description	Version
Programming Software: FRRP	3.1.4.1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Lead - DF4-LLHH	Boston Scientific Corporation	0695	100423
ICD	Boston Scientific Corporation	D432	346139

Peripherals in Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	HP	HP Z-Book G10	5CD4071193
Telemetry Test Module	Guidant	SE11345-104	TTM2097

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
HP Power Brick	HP	M85394-003	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Telemetry Wand Cable (Model 6577)	No	3 m	No	Telemetry Test Module	Telemetry Wand (Integrated)
USB	Yes	1.8 m	No	Laptop	Telemetry Test Module
AC Cable (Laptop)	No	1 m	No	AC Mains	HP Power Brick
AC Cable (Guidant)	No	1.8 m	No	AC Mains	Telemetry Test Module
DC Cable (Laptop)	No	1.8 m	No	HP Power Brick	Laptop

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2024-11-18	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	2024-11-18	Conducted 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.
3	2024-11-18	Frequency Stability	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	2024-11-20	Emission 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.
5	2024-11-20	Emission Mask	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	2024-11-27	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.
7	2024-12-02	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.
8	2024-12-04	Spurious Radiated Emissions (Band Edge)	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

EMISSION BANDWIDTH

TEST DESCRIPTION

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

Per 47 CFR 95.2573(a), the emission bandwidth was determined by measuring the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that are 20 dB down relative to the maximum level of the modulated carrier. A spectrum analyzer using a peak detector with no video filtering was used with a resolution bandwidth equal to approximately 1.0 percent of the emission bandwidth of the EUT.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2024-05-22	2025-05-22
Generator - Signal	Keysight	N5171B (EXG)	TEY	2024-01-11	2027-01-11
Block - DC	Fairview Microwave	SD3379	ANH	2024-08-28	2025-08-28
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2024-08-28	2025-08-28
Probe - Near Field Set	ETS Lindgren	7405	IPO	NCR	NCR

EMISSION BANDWIDTH

EUT:	ICD/CRT-D	Work Order:	BSTN1346
Serial Number:	396686,222735	Date:	2024-11-20
Customer:	Boston Scientific Corporation	Temperature:	22°C
Attendees:	Dustin Sparks	Relative Humidity:	32.5%
Customer Project:	None	Bar. Pressure (PMSL):	1006 mbar
Tested By:	Christopher Heintzelman	Job Site:	MN11
Power:	3.0 VDC	Configuration:	BSTN1346-1

COMMENTS

No reference level offset was applied because this is a near field probe measurement.
Sample 2 is model G448.
Sample 3 is model D420.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

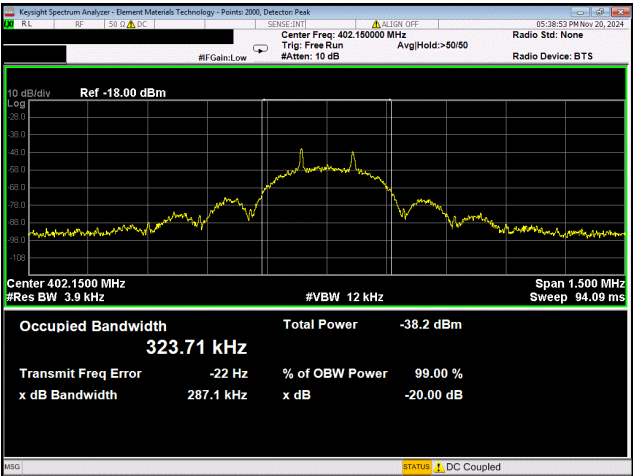


Tested By

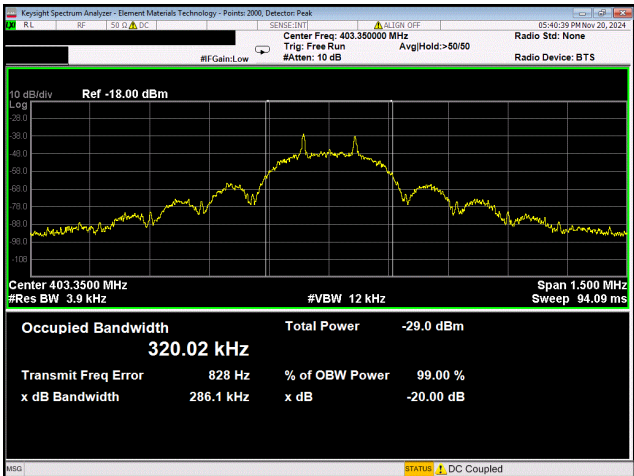
TEST RESULTS

	Value	Limit (s)	Result
Sample 2, Low Channel, 402.15 MHz	284.065 kHz	300 kHz	Pass
Sample 2, Mid Channel, 403.35 MHz	286.136 kHz	300 kHz	Pass
Sample 2, High Channel, 404.85 MHz	286.434 kHz	300 kHz	Pass
Sample 3, Low Channel, 402.15 MHz	287.869 kHz	300 kHz	Pass
Sample 3, Mid Channel, 403.35 MHz	286.177 kHz	300 kHz	Pass
Sample 3, High Channel, 404.85 MHz	285.797 kHz	300 kHz	Pass

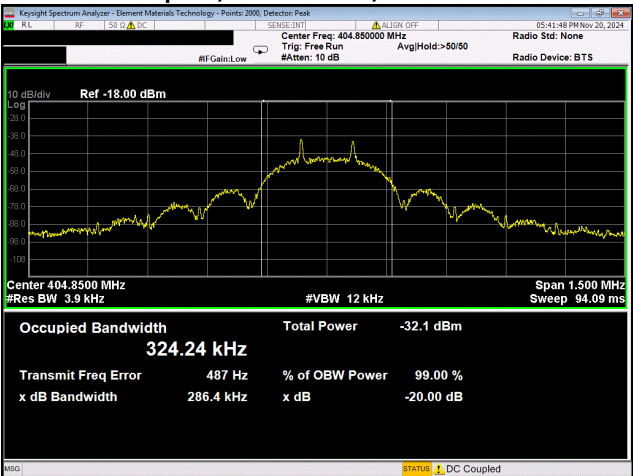
EMISSION BANDWIDTH



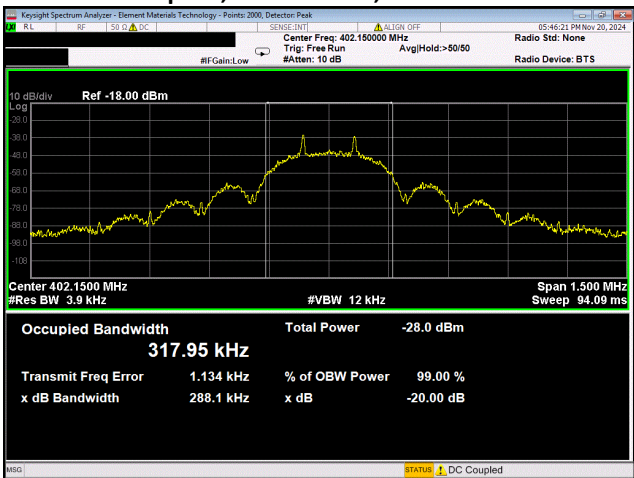
Sample 2, Low Channel, 402.15 MHz



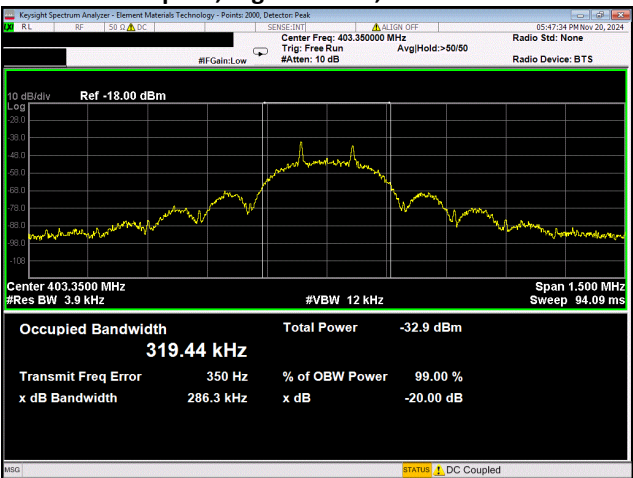
Sample 2, Mid Channel, 403.35 MHz



Sample 2, High Channel, 404.85 MHz

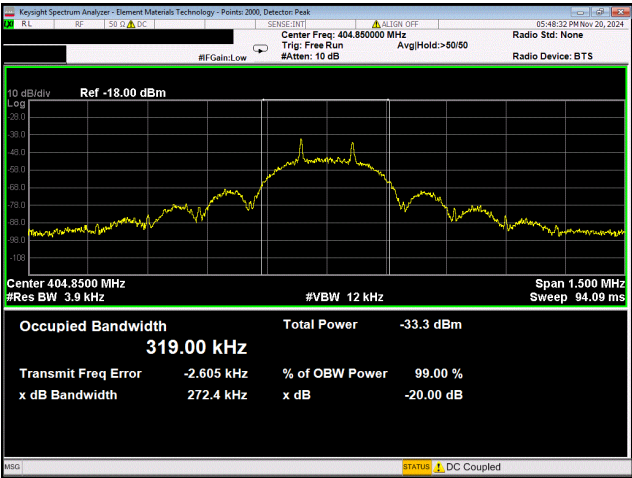


Sample 3, Low Channel, 402.15 MHz



Sample 3, Mid Channel, 403.35 MHz

EMISSION BANDWIDTH



Sample 3, High Channel, 404.85 MHz

EMISSION MASK

TEST DESCRIPTION

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.

A near-field probe was placed near the transmitter. A low-loss coaxial cable was used to connect the near-field probe to the spectrum analyzer.

Per 47 CFR 95.2579(a)(1) the emission mask was measured. Emissions more than 150 kHz away from the center frequency must be attenuated below the transmitter output power by at least 20 dB. This was evaluated by the Occupied Bandwidth measurement according to 47 CFR 95.2573(a). In addition, emissions 250 kHz or less above and below the MICS band (402-405 MHz) must be attenuated below the maximum permitted output power by at least 20 dB.

A spectrum analyzer was used to measure the emission mask. A spectrum analyzer using a peak detector with no video filtering was used with a resolution bandwidth equal to approximately 1.0 percent of the emission bandwidth of the EUT. However, various plots were made using different frequency spans and resolution bandwidths in an attempt to not only satisfy the measurement criteria, but to also show that all emissions outside of the occupied band are greatly attenuated.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2024-05-22	2025-05-22
Generator - Signal	Keysight	N5171B (EXG)	TEY	2024-01-11	2027-01-11
Block - DC	Fairview Microwave	SD3379	ANH	2024-08-28	2025-08-28
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2024-08-28	2025-08-28
Probe - Near Field Set	ETS Lindgren	7405	IPO	NCR	NCR

EMISSION MASK



EUT:	ICD/CRT-D	Work Order:	BSTN1346
Serial Number:	222735, 396686	Date:	2024-11-20
Customer:	Boston Scientific Corporation	Temperature:	22°C
Attendees:	Dustin Sparks	Relative Humidity:	32.5%
Customer Project:	None	Bar. Pressure (PMSL):	1006 mbar
Tested By:	Christopher Heintzelman	Job Site:	MN11
Power:	Battery	Configuration:	BSTN1346-3 BSTN1346-4

COMMENTS

No reference level offset was applied because this is a near field probe measurement.
Sample 2 is model G448.
Sample 3 is model D420.

DEVIATIONS FROM TEST STANDARD

None

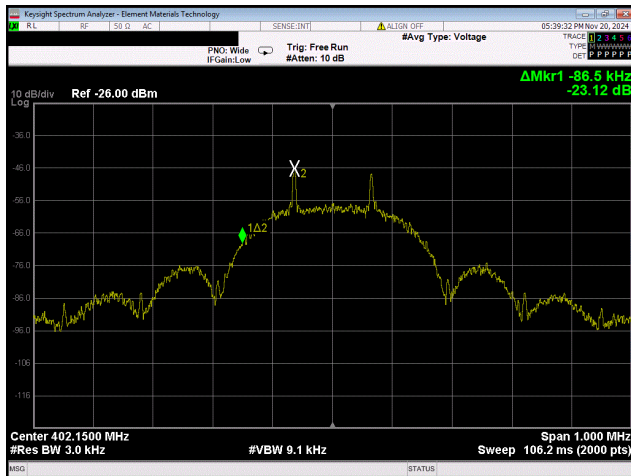
CONCLUSION

Pass	
	Tested By

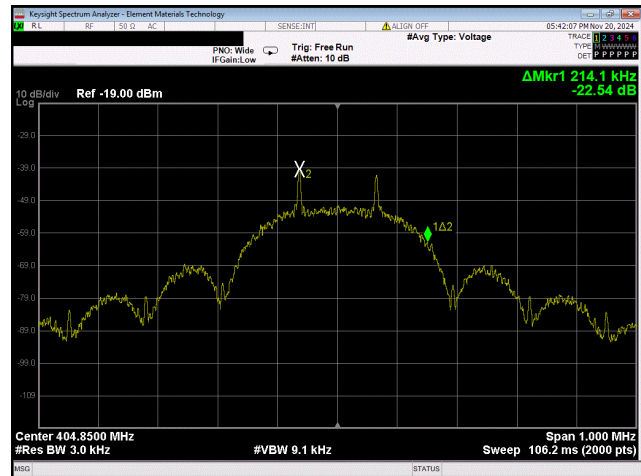
TEST RESULTS

	Value (dBc)	Limit ≤ (dBc)	Result
Sample 2, Low Channel, 402.15 MHz	-23.12	-20	Pass
Sample 2, High Channel, 404.85 MHz	-22.54	-20	Pass
Sample 3, Low Channel, 402.15 MHz	-23.14	-20	Pass
Sample 3, High Channel, 404.85 MHz	-22.89	-20	Pass

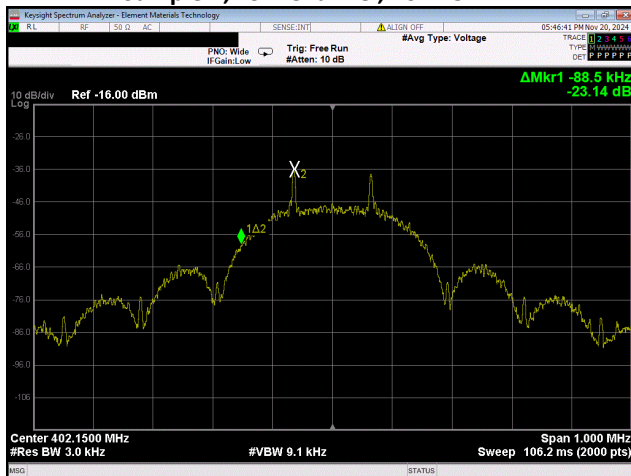
EMISSION MASK



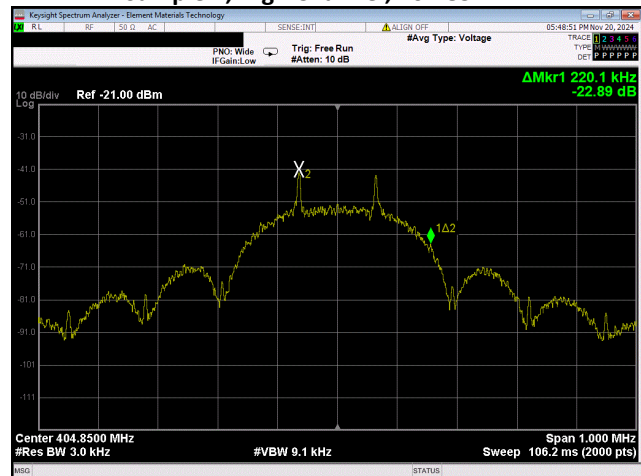
Sample 2, Low Channel, 402.15 MHz



Sample 2, High Channel, 404.85 MHz



Sample 3, Low Channel, 402.15 MHz



Sample 3, High Channel, 404.85 MHz

DUTY CYCLE



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.

CONDUCTED OUTPUT POWER

TEST DESCRIPTION

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

Per FCC Part 2.1046, the output power shall be measured at the RF terminal. The RMS output power was measured with the EUT configured in the modes listed in the datasheet. The EUT was transmitting at its maximum data rate.

FCC Part 95 does not have a conducted output power limit. It is a requirement to characterize this information and that data is contained within this datasheet.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2024-05-22	2025-05-22
Generator - Signal	Keysight	N5171B (EXG)	TEY	2024-01-11	2027-01-11
Block - DC	Fairview Microwave	SD3379	ANH	2024-08-28	2025-08-28
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2024-08-28	2025-08-28
Attenuator	S.M. Electronics	SA26B-20	RFW	2024-01-31	2025-01-31
Power Supply - DC	Agilent	U8002A	TPZ	NCR	NCR

CONDUCTED OUTPUT POWER



EUT:	ICD/CRT-D	Work Order:	BSTN1346
Serial Number:	305513491	Date:	2024-11-18
Customer:	Boston Scientific Corporation	Temperature:	21.8°C
Attendees:	Dustin Sparks	Relative Humidity:	35.5%
Customer Project:	None	Bar. Pressure (PMSL):	1008 mbar
Tested By:	Christopher Heintzelman	Job Site:	MN11
Power:	3.0 VDC	Configuration:	BSTN1346-1

COMMENTS

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

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

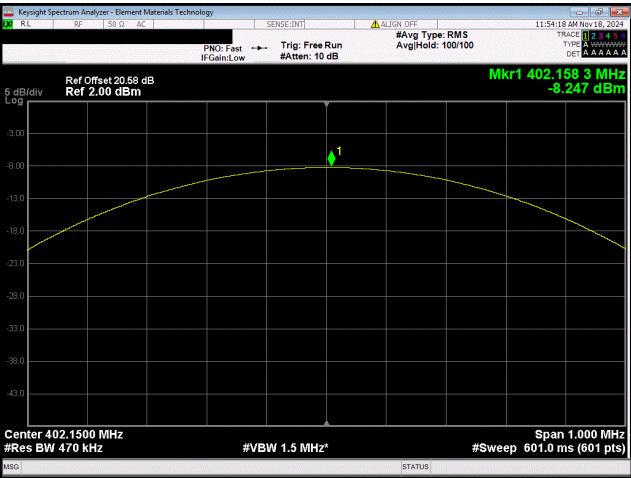
N/A

Tested By

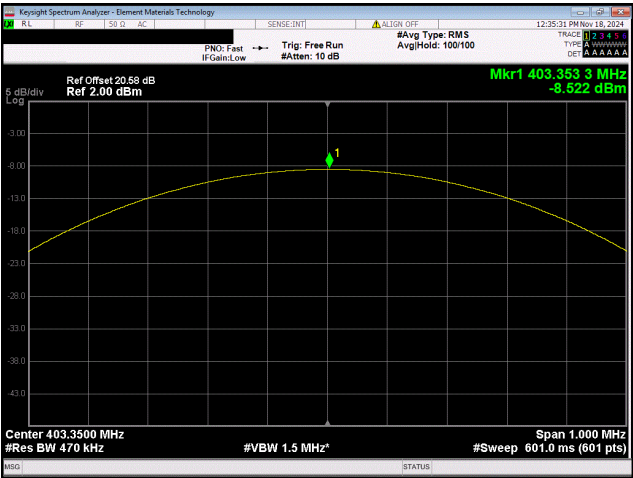
TEST RESULTS

	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Value (dBm)	Limit (dBm)	Results
Low Channel, 402.15 MHz	-8.247	0	-8.2	N/A	N/A
Mid Channel, 403.35 MHz	-8.522	0	-8.5	N/A	N/A
High Channel, 404.85 MHz	-9.459	0	-9.5	N/A	N/A

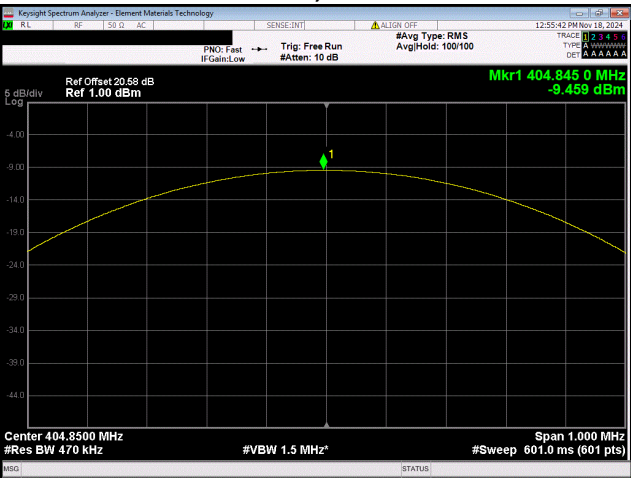
CONDUCTED OUTPUT POWER



Low Channel, 402.15 MHz



Mid Channel, 403.35 MHz



High Channel, 404.85 MHz

FREQUENCY STABILITY

TEST DESCRIPTION

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

The spectrum analyzer is configured with a precision frequency reference that exceeds the stability requirement of the transmitter. The EUT was placed inside a temperature / humidity chamber.

Variation of Supply Voltage

The primary supply voltage was varied over the range specified by the client. Per the client, the device only works over this voltage range; it will shut off if the voltage is outside the specified range.

Variation of Ambient Temperature

Using a temperature chamber, the transmit frequency was recorded at the extremes of the specified temperature range (+25°, +35°C and +45° C).

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Keysight	N5171B (EXG)	TEY	2024-01-11	2027-01-11
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2024-05-22	2025-05-22
Block - DC	Fairview Microwave	SD3379	ANH	2024-08-28	2025-08-28
Attenuator	S.M. Electronics	SA26B-20	RFW	2024-01-31	2025-01-31
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2024-08-28	2025-08-28
Power Supply - DC	Agilent	U8002A	TPZ	NCR	NCR
Thermometer	Omegaette	HH311	DUY	2024-04-09	2025-04-09
Meter - Multimeter	Fluke	114	MM U	2024-01-26	2025-01-26
Chamber – Temperature Humidity	Weiss Technik	MCBH-1.2-.33-.33-H/AC	MTC	NCR	NCR

FREQUENCY STABILITY

EUT:	ICD/CRT-D	Work Order:	BSTN1346
Serial Number:	305513491	Date:	2024-11-18
Customer:	Boston Scientific Corporation	Temperature:	22.1°C
Attendees:	Dustin Sparks	Relative Humidity:	33.8%
Customer Project:	None	Bar. Pressure (PMSL):	1007 mbar
Tested By:	Christopher Heintzelman	Job Site:	MN11
Power:	3.0 VDC	Configuration:	BSTN1346-1

COMMENTS

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

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

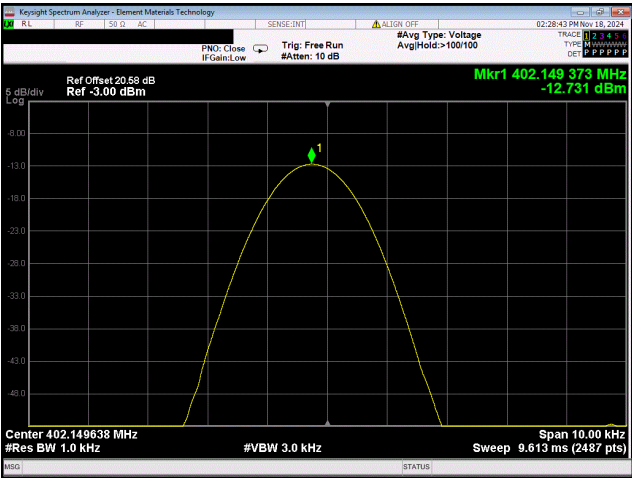


Tested By

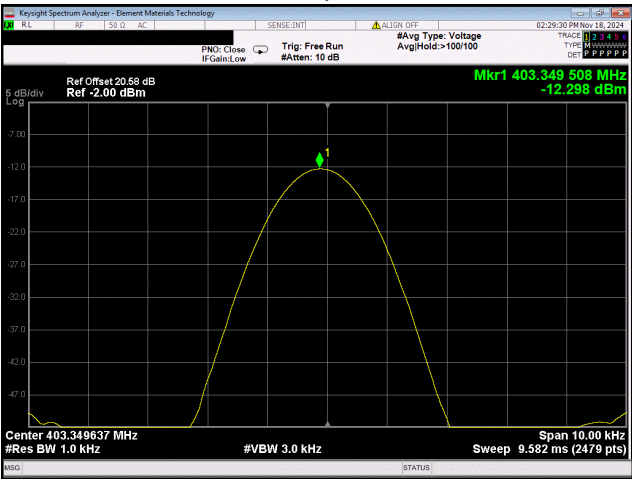
TEST RESULTS

	Measured Value (MHz)	Nominal Value (MHz)	Error (ppm)	Limit (ppm)	Results
45C					
Low Channel, 402.15 MHz	402.1493725	402.15	1.56	100	Pass
Mid Channel, 403.35 MHz	403.3495079	403.35	1.22	100	Pass
High Channel, 404.85 MHz	404.8492687	404.85	1.81	100	Pass
35C					
Low Channel, 402.15 MHz	402.1501166	402.15	0.29	100	Pass
Mid Channel, 403.35 MHz	403.3502503	403.35	0.62	100	Pass
High Channel, 404.85 MHz	404.8500134	404.85	0.03	100	Pass
25C, 115% Voltage (3.45VDC)					
Low Channel, 402.15 MHz	402.1507644	402.15	1.9	100	Pass
Mid Channel, 403.35 MHz	403.3509077	403.35	2.25	100	Pass
High Channel, 404.85 MHz	404.8506736	404.85	1.66	100	Pass
25C, 100% Voltage (3.00VDC)					
Low Channel, 402.15 MHz	402.1507477	402.15	1.86	100	Pass
Mid Channel, 403.35 MHz	403.3509084	403.35	2.25	100	Pass
High Channel, 404.85 MHz	404.8506543	404.85	1.62	100	Pass
25C, 85% Voltage (2.55VDC)					
Low Channel, 402.15 MHz	402.1507516	402.15	1.87	100	Pass
Mid Channel, 403.35 MHz	403.3509047	403.35	2.24	100	Pass
High Channel, 404.85 MHz	404.8506493	404.85	1.6	100	Pass

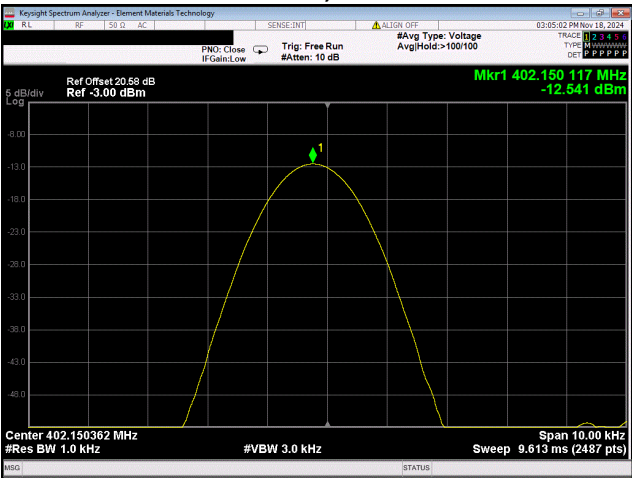
FREQUENCY STABILITY



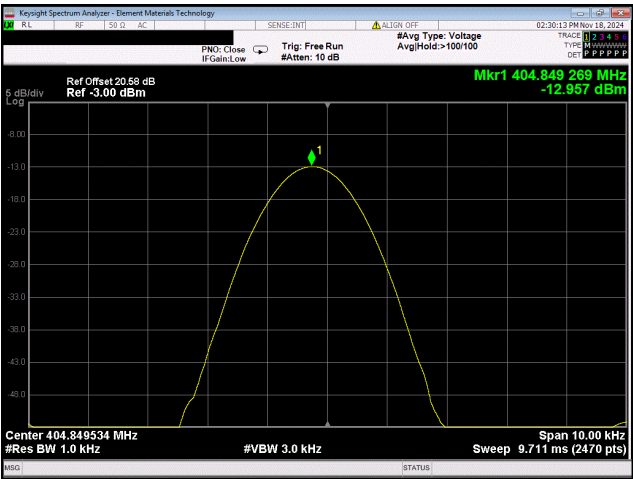
45C
Low Channel, 402.15 MHz



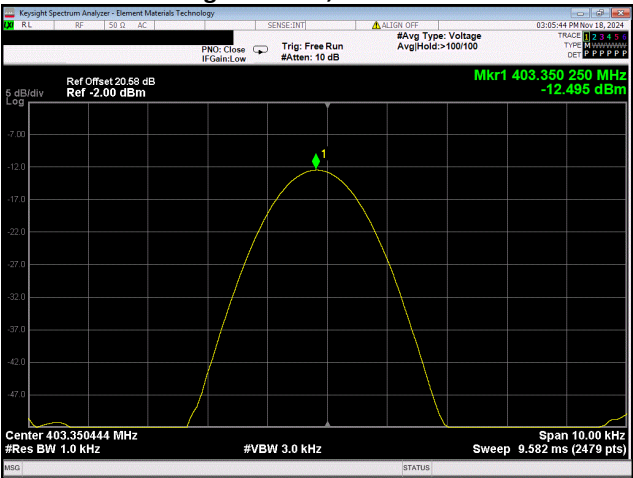
45C
Mid Channel, 403.35 MHz



35C
Low Channel, 402.15 MHz

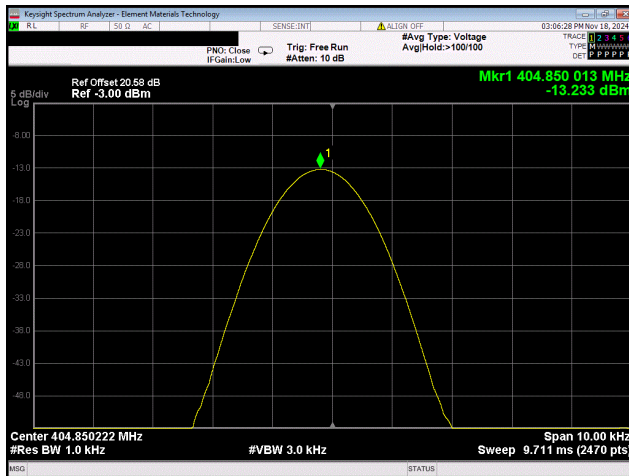


45C
High Channel, 404.85 MHz

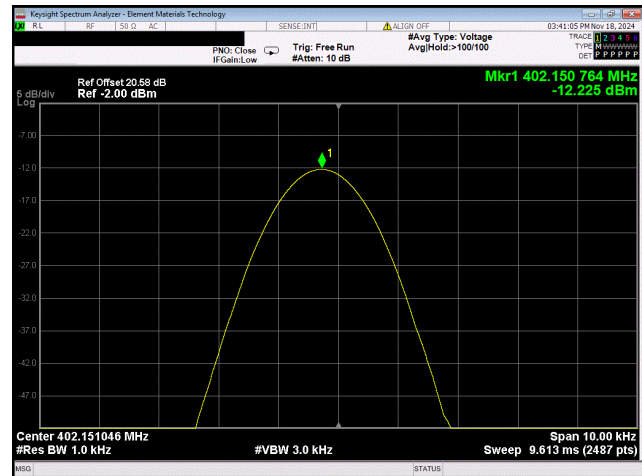


35C
Mid Channel, 403.35 MHz

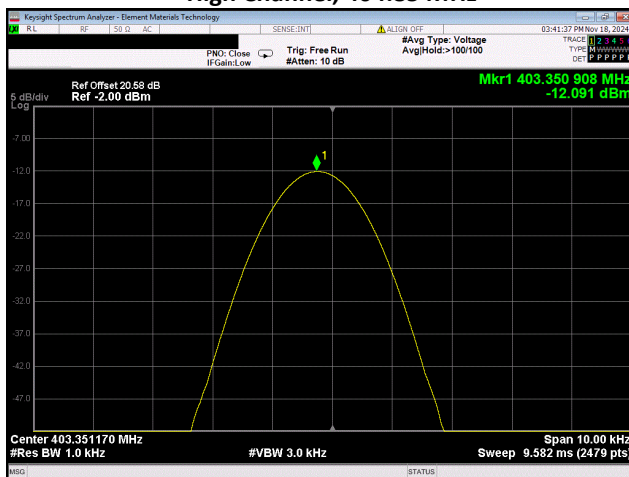
FREQUENCY STABILITY



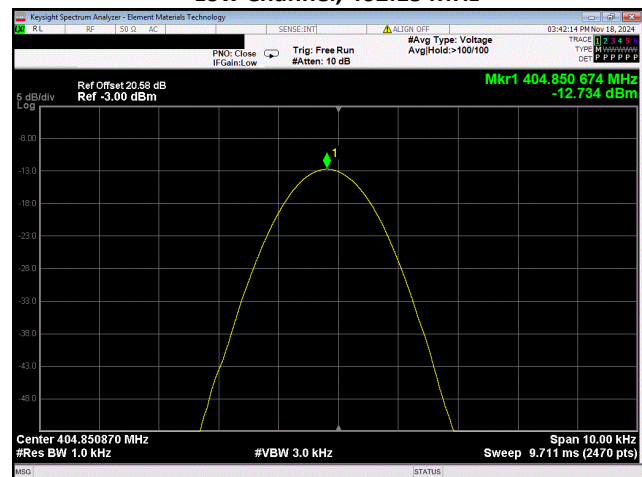
35C
High Channel, 404.85 MHz



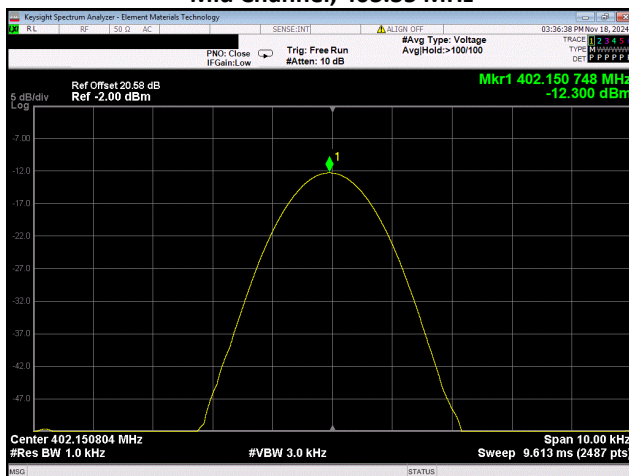
25C, 115% Voltage (3.45VDC)
Low Channel, 402.15 MHz



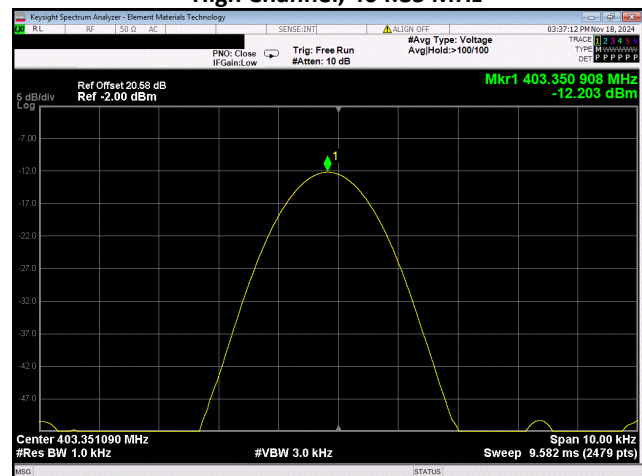
25C, 115% Voltage (3.45VDC)
Mid Channel, 403.35 MHz



25C, 115% Voltage (3.45VDC)
High Channel, 404.85 MHz

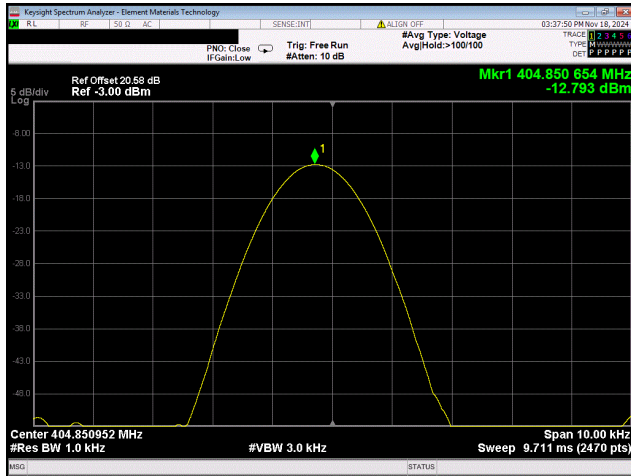


25C, 100% Voltage (3.00VDC)
Low Channel, 402.15 MHz

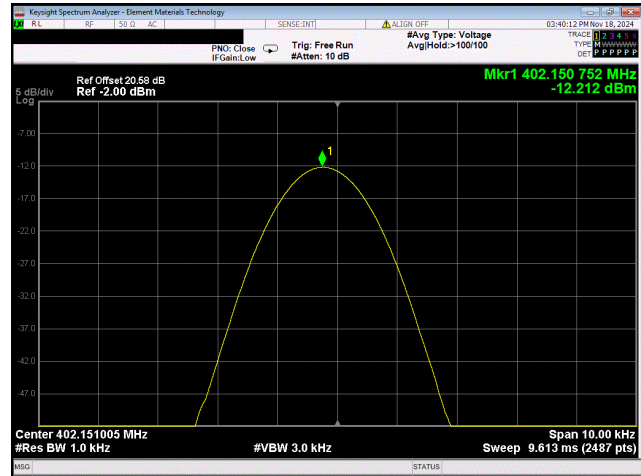


25C, 100% Voltage (3.00VDC)
Mid Channel, 403.35 MHz

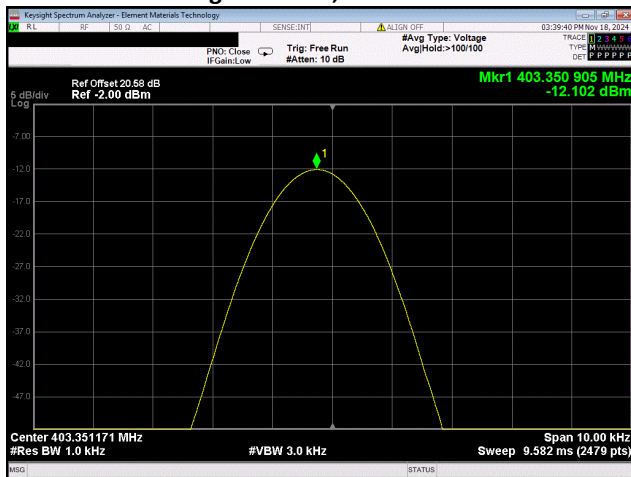
FREQUENCY STABILITY



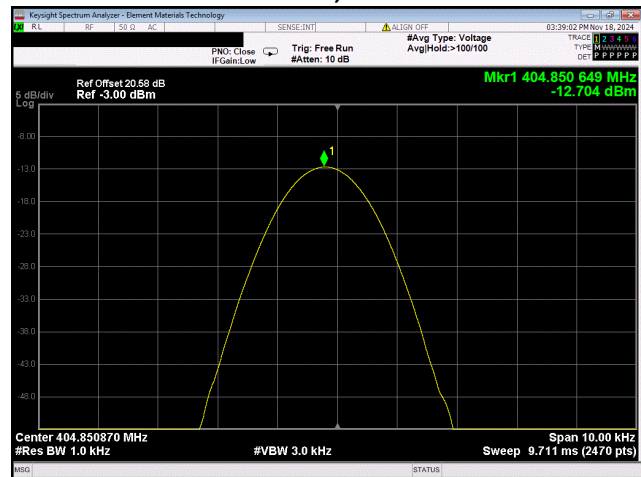
25C, 100% Voltage (3.00VDC)
High Channel, 404.85 MHz



25C, 85% Voltage (2.55VDC)
Low Channel, 402.15 MHz



25C, 85% Voltage (2.55VDC)
Mid Channel, 403.35 MHz



25C, 85% Voltage (2.55VDC)
High Channel, 404.85 MHz

SPURIOUS RADIATED EMISSIONS

TEST DESCRIPTION

The highest gain of each type of antenna to be used with the EUT was tested. For each configuration, the spectrum was scanned throughout the specified range. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes (per ANSI C63.26). A preamp was used for this test in order to provide sufficient measurement sensitivity.

Per CFR 47 95.2579(a), field strength measurements were performed and compared to the specified limits.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Biconilog	ETS Lindgren	3142D	AXO	2023-10-02	2025-10-02
Cable	ESM Cable Corp.	Bilog Cables	MNH	2024-11-26	2025-11-26
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	AVO	2024-10-09	2025-10-09
Filter - Low Pass	Micro-Tronics	LPM50004	LFK	2024-08-25	2025-08-25
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAQ	2024-03-13	2025-03-13
Antenna - Double Ridge	ETS Lindgren	3115	AIP	2024-08-02	2026-08-02
Cable	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	2024-11-26	2025-11-26
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVT	2024-01-08	2025-01-08

FREQUENCY RANGE INVESTIGATED

30 MHz TO 4000 MHz

POWER INVESTIGATED

Internal Battery

CONFIGURATIONS INVESTIGATED

BSTN1346-4
BSTN1346-6
BSTN1346-7

MODES INVESTIGATED

Transmitting MICS Low, Mid, and High Chs (402.15, 403.35, and 404.85 MHz), CW

SPURIOUS RADIATED EMISSIONS



EUT:	ICD/CRT-D	Work Order:	BSTN1346
Serial Number:	222735	Date:	2024-12-02
Customer:	Boston Scientific Corporation	Temperature:	22.5°C
Attendees:	Dustin Sparks	Relative Humidity:	20.5%
Customer Project:	None	Bar. Pressure (PMSL):	1030 mb
Tested By:	Christopher Heintzelman	Job Site:	MN05
Power:	Internal Battery	Configuration:	BSTN1346-4

TEST PARAMETERS

Run #:	16	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
--------	----	--------------------	---	---------------------	-----------

COMMENTS

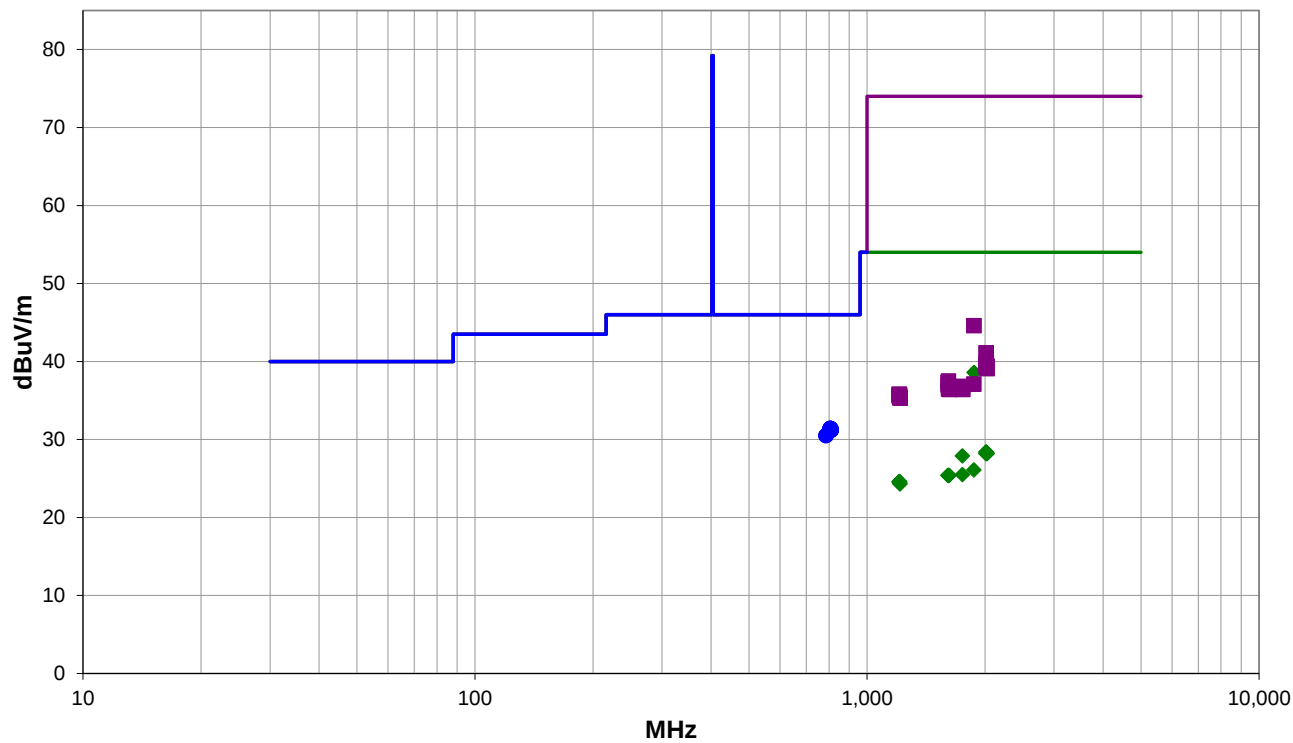
None

EUT OPERATING MODES

Transmitting MICS Low, Mid, and High Chs (402.15, 403.35, and 404.85 MHz), CW

DEVIATIONS FROM TEST STANDARD

None



Run #: 16

PK AV QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #16

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
806.526	16.9	14.5	1.7	253.0	3.0	0.0	Horz	QP	0.0	31.4	46.0	-14.6	EUT Horz, High Ch
806.808	16.9	14.5	1.0	157.9	3.0	0.0	Vert	QP	0.0	31.4	46.0	-14.6	EUT Horz, High Ch
806.893	16.9	14.5	1.0	357.0	3.0	0.0	Horz	QP	0.0	31.4	46.0	-14.6	EUT Horz, Mid Ch
804.778	16.8	14.6	1.5	326.9	3.0	0.0	Horz	QP	0.0	31.4	46.0	-14.6	EUT Horz, Low Ch
804.429	16.8	14.6	3.7	5.9	3.0	0.0	Vert	QP	0.0	31.4	46.0	-14.6	EUT Horz, Low Ch
809.986	16.9	14.4	1.0	315.0	3.0	0.0	Vert	QP	0.0	31.3	46.0	-14.7	EUT Horz, High Ch
806.252	16.8	14.5	1.0	257.0	3.0	0.0	Vert	QP	0.0	31.3	46.0	-14.7	EUT Horz, Mid Ch
809.620	16.8	14.4	3.7	181.9	3.0	0.0	Horz	QP	0.0	31.2	46.0	-14.8	EUT Horz, High Ch
809.927	16.8	14.4	1.0	1.9	3.0	0.0	Horz	QP	0.0	31.2	46.0	-14.8	EUT Vert, High Ch
809.667	16.8	14.4	1.0	192.9	3.0	0.0	Vert	QP	0.0	31.2	46.0	-14.8	EUT Vert, High Ch
809.353	16.8	14.4	2.2	11.0	3.0	0.0	Horz	QP	0.0	31.2	46.0	-14.8	EUT On Side, High Ch
809.162	16.8	14.4	1.1	306.0	3.0	0.0	Vert	QP	0.0	31.2	46.0	-14.8	EUT On Side, High Ch
1875.108	43.2	-4.6	2.4	33.0	3.0	0.0	Horz	AV	0.0	38.6	54.0	-15.4	EUT Horz, High Ch
785.986	16.9	13.6	1.0	225.9	3.0	0.0	Horz	QP	0.0	30.5	46.0	-15.5	EUT Horz, High Ch
785.725	16.9	13.6	1.0	65.0	3.0	0.0	Vert	QP	0.0	30.5	46.0	-15.5	EUT Horz, High Ch
2011.242	30.9	-2.5	1.5	97.0	3.0	0.0	Horz	AV	0.0	28.4	54.0	-25.6	EUT Horz, Low Ch
2014.617	30.9	-2.5	1.5	294.9	3.0	0.0	Horz	AV	0.0	28.4	54.0	-25.6	EUT Horz, Mid Ch
2018.092	30.8	-2.5	1.5	198.0	3.0	0.0	Vert	AV	0.0	28.3	54.0	-25.7	EUT Horz, Mid Ch
2009.292	30.9	-2.7	1.5	47.0	3.0	0.0	Vert	AV	0.0	28.2	54.0	-25.8	EUT Horz, Low Ch
2022.692	30.6	-2.4	3.6	193.9	3.0	0.0	Horz	AV	0.0	28.2	54.0	-25.8	EUT Horz, High Ch
2023.900	30.6	-2.4	1.5	209.0	3.0	0.0	Vert	AV	0.0	28.2	54.0	-25.8	EUT Horz, High Ch
1750.733	33.0	-5.1	1.5	321.0	3.0	0.0	Vert	AV	0.0	27.9	54.0	-26.1	EUT Horz, High Ch
1872.808	30.7	-4.6	1.5	23.9	3.0	0.0	Vert	AV	0.0	26.1	54.0	-27.9	EUT Horz, High Ch
1751.192	30.6	-5.1	1.5	29.0	3.0	0.0	Horz	AV	0.0	25.5	54.0	-28.5	EUT Horz, High Ch
1609.375	30.7	-5.3	1.5	300.0	3.0	0.0	Horz	AV	0.0	25.4	54.0	-28.6	EUT Horz, Low Ch
1610.258	30.7	-5.3	1.7	95.9	3.0	0.0	Vert	AV	0.0	25.4	54.0	-28.6	EUT Horz, Low Ch
1613.767	30.7	-5.3	3.1	351.9	3.0	0.0	Horz	AV	0.0	25.4	54.0	-28.6	EUT Horz, Mid Ch
1613.450	30.7	-5.3	1.5	163.0	3.0	0.0	Vert	AV	0.0	25.4	54.0	-28.6	EUT Horz, Mid Ch
1617.708	30.7	-5.3	1.5	297.9	3.0	0.0	Horz	AV	0.0	25.4	54.0	-28.6	EUT Horz, High Ch
1618.308	30.7	-5.3	1.5	30.9	3.0	0.0	Vert	AV	0.0	25.4	54.0	-28.6	EUT Horz, High Ch
1208.458	31.2	-6.6	3.5	80.0	3.0	0.0	Horz	AV	0.0	24.6	54.0	-29.4	EUT Horz, Low Ch
1208.342	31.2	-6.6	1.5	221.9	3.0	0.0	Vert	AV	0.0	24.6	54.0	-29.4	EUT Horz, Low Ch
1211.025	31.2	-6.6	1.5	261.0	3.0	0.0	Horz	AV	0.0	24.6	54.0	-29.4	EUT Horz, Mid Ch
1874.592	49.2	-4.6	2.4	33.0	3.0	0.0	Horz	PK	0.0	44.6	74.0	-29.4	EUT Horz, High Ch
1208.892	31.1	-6.6	1.5	242.0	3.0	0.0	Vert	AV	0.0	24.5	54.0	-29.5	EUT Horz, Mid Ch
1212.550	31.2	-6.8	2.2	112.0	3.0	0.0	Horz	AV	0.0	24.4	54.0	-29.6	EUT Horz, High Ch
1213.375	31.1	-6.8	1.5	214.9	3.0	0.0	Vert	AV	0.0	24.3	54.0	-29.7	EUT Horz, High Ch
2011.633	43.6	-2.5	1.5	97.0	3.0	0.0	Horz	PK	0.0	41.1	74.0	-32.9	EUT Horz, Low Ch
2014.925	42.4	-2.5	1.5	294.9	3.0	0.0	Horz	PK	0.0	39.9	74.0	-34.1	EUT Horz, Mid Ch
2008.542	42.2	-2.7	1.5	47.0	3.0	0.0	Vert	PK	0.0	39.5	74.0	-34.5	EUT Horz, Low Ch

SPURIOUS RADIATED EMISSIONS

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2024.875	41.8	-2.4	1.5	209.0	3.0	0.0	Vert	PK	0.0	39.4	74.0	-34.6	EUT Horz, High Ch
2015.150	41.8	-2.6	1.5	198.0	3.0	0.0	Vert	PK	0.0	39.2	74.0	-34.8	EUT Horz, Mid Ch
2024.458	41.5	-2.4	3.6	193.9	3.0	0.0	Horz	PK	0.0	39.1	74.0	-34.9	EUT Horz, High Ch
1613.592	42.8	-5.3	3.1	351.9	3.0	0.0	Horz	PK	0.0	37.5	74.0	-36.5	EUT Horz, Mid Ch
1609.833	42.6	-5.3	1.5	300.0	3.0	0.0	Horz	PK	0.0	37.3	74.0	-36.7	EUT Horz, Low Ch
1872.958	41.7	-4.6	1.5	23.9	3.0	0.0	Vert	PK	0.0	37.1	74.0	-36.9	EUT Horz, High Ch
1609.058	42.3	-5.3	1.7	95.9	3.0	0.0	Vert	PK	0.0	37.0	74.0	-37.0	EUT Horz, Low Ch
1750.675	41.9	-5.1	1.5	321.0	3.0	0.0	Vert	PK	0.0	36.8	74.0	-37.2	EUT Horz, High Ch
1613.283	41.8	-5.3	1.5	163.0	3.0	0.0	Vert	PK	0.0	36.5	74.0	-37.5	EUT Horz, Mid Ch
1617.183	41.8	-5.3	1.5	297.9	3.0	0.0	Horz	PK	0.0	36.5	74.0	-37.5	EUT Horz, High Ch
1621.350	41.7	-5.3	1.5	30.9	3.0	0.0	Vert	PK	0.0	36.4	74.0	-37.6	EUT Horz, High Ch
1755.075	41.5	-5.1	1.5	29.0	3.0	0.0	Horz	PK	0.0	36.4	74.0	-37.6	EUT Horz, High Ch
1208.008	42.4	-6.6	3.5	80.0	3.0	0.0	Horz	PK	0.0	35.8	74.0	-38.2	EUT Horz, Low Ch
1208.375	42.4	-6.6	1.5	242.0	3.0	0.0	Vert	PK	0.0	35.8	74.0	-38.2	EUT Horz, Mid Ch
1206.425	42.2	-6.6	1.5	221.9	3.0	0.0	Vert	PK	0.0	35.6	74.0	-38.4	EUT Horz, Low Ch
1211.850	42.2	-6.6	1.5	261.0	3.0	0.0	Horz	PK	0.0	35.6	74.0	-38.4	EUT Horz, Mid Ch
1213.092	42.2	-6.8	1.5	214.9	3.0	0.0	Vert	PK	0.0	35.4	74.0	-38.6	EUT Horz, High Ch
1214.300	42.1	-6.8	2.2	112.0	3.0	0.0	Horz	PK	0.0	35.3	74.0	-38.7	EUT Horz, High Ch

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS



EUT:	ICD/CRT-D	Work Order:	BSTN1346
Serial Number:	344830	Date:	2024-12-02
Customer:	Boston Scientific Corporation	Temperature:	22.5°C
Attendees:	Dustin Sparks	Relative Humidity:	20.5%
Customer Project:	None	Bar. Pressure (PMSL):	1030 mb
Tested By:	Christopher Heintzelman	Job Site:	MN05
Power:	Internal Battery	Configuration:	BSTN1346-6

TEST PARAMETERS

Run #:	13	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
--------	----	--------------------	---	---------------------	-----------

COMMENTS

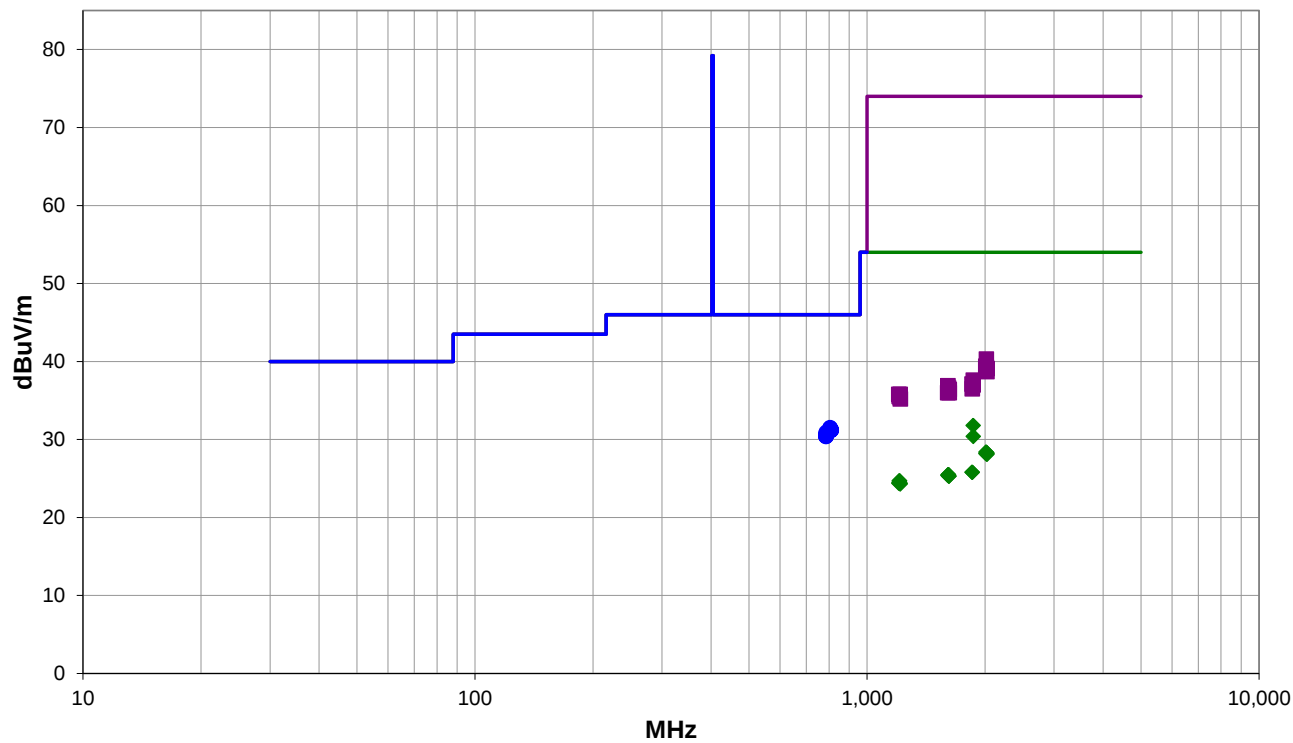
None

EUT OPERATING MODES

Transmitting MICS Low, Mid, and High Chs (402.15, 403.35, and 404.85 MHz), CW

DEVIATIONS FROM TEST STANDARD

None



Run #: 13

PK AV QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #13

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
804.645	16.9	14.6	1.0	160.0	3.0	0.0	Horz	QP	0.0	31.5	46.0	-14.5	EUT On Side, Low Ch
806.583	16.9	14.5	1.0	207.9	3.0	0.0	Vert	QP	0.0	31.4	46.0	-14.6	EUT On Side, Mid Ch
804.540	16.8	14.6	3.5	308.9	3.0	0.0	Vert	QP	0.0	31.4	46.0	-14.6	EUT On Side, Low Ch
806.861	16.8	14.5	1.0	137.0	3.0	0.0	Horz	QP	0.0	31.3	46.0	-14.7	EUT On Side, Mid Ch
809.126	16.8	14.4	2.0	91.0	3.0	0.0	Horz	QP	0.0	31.2	46.0	-14.8	EUT Vert, High Ch
809.873	16.8	14.4	3.3	196.9	3.0	0.0	Vert	QP	0.0	31.2	46.0	-14.8	EUT Vert, High Ch
809.722	16.8	14.4	1.0	267.0	3.0	0.0	Horz	QP	0.0	31.2	46.0	-14.8	EUT Horz, High Ch
809.291	16.8	14.4	2.3	275.9	3.0	0.0	Vert	QP	0.0	31.2	46.0	-14.8	EUT Horz, High Ch
810.222	16.8	14.4	1.0	276.9	3.0	0.0	Horz	QP	0.0	31.2	46.0	-14.8	EUT On Side, High Ch
809.007	16.8	14.4	1.3	300.9	3.0	0.0	Vert	QP	0.0	31.2	46.0	-14.8	EUT On Side, High Ch
786.441	17.3	13.6	1.0	98.0	3.0	0.0	Horz	QP	0.0	30.9	46.0	-15.1	EUT On Side, Mid Ch
785.574	17.1	13.6	1.0	225.9	3.0	0.0	Vert	QP	0.0	30.7	46.0	-15.3	EUT On Side, Low Ch
785.595	16.9	13.6	1.4	196.9	3.0	0.0	Horz	QP	0.0	30.5	46.0	-15.5	EUT Vert, High Ch
785.822	16.9	13.6	1.0	228.9	3.0	0.0	Vert	QP	0.0	30.5	46.0	-15.5	EUT Vert, High Ch
786.464	16.9	13.6	2.6	119.0	3.0	0.0	Horz	QP	0.0	30.5	46.0	-15.5	EUT On Side, High Ch
786.070	16.9	13.6	1.0	203.9	3.0	0.0	Vert	QP	0.0	30.5	46.0	-15.5	EUT On Side, High Ch
785.459	16.9	13.6	1.0	282.0	3.0	0.0	Vert	QP	0.0	30.5	46.0	-15.5	EUT On Side, Mid Ch
786.422	16.9	13.6	1.0	293.9	3.0	0.0	Horz	QP	0.0	30.5	46.0	-15.5	EUT On Side, Low Ch
785.801	16.8	13.6	1.0	213.0	3.0	0.0	Horz	QP	0.0	30.4	46.0	-15.6	EUT Horz, High Ch
785.983	16.8	13.6	1.0	210.0	3.0	0.0	Vert	QP	0.0	30.4	46.0	-15.6	EUT Horz, High Ch
1865.175	36.6	-4.8	1.5	325.9	3.0	0.0	Vert	AV	0.0	31.8	54.0	-22.2	EUT Vert, High Ch
1866.150	35.2	-4.8	2.4	351.0	3.0	0.0	Horz	AV	0.0	30.4	54.0	-23.6	EUT Vert, High Ch
2011.825	30.9	-2.5	1.5	193.9	3.0	0.0	Horz	AV	0.0	28.4	54.0	-25.6	EUT Vert, Low Ch
2017.658	30.8	-2.5	1.5	214.9	3.0	0.0	Horz	AV	0.0	28.3	54.0	-25.7	EUT Vert, Mid Ch
2019.033	30.8	-2.5	1.2	333.0	3.0	0.0	Vert	AV	0.0	28.3	54.0	-25.7	EUT Vert, Mid Ch
2009.917	30.9	-2.7	1.5	83.0	3.0	0.0	Vert	AV	0.0	28.2	54.0	-25.8	EUT Vert, Low Ch
2022.533	30.6	-2.4	1.5	282.0	3.0	0.0	Horz	AV	0.0	28.2	54.0	-25.8	EUT Vert, High Ch
2021.950	30.6	-2.5	1.5	304.0	3.0	0.0	Vert	AV	0.0	28.1	54.0	-25.9	EUT Vert, High Ch
1854.325	30.6	-4.8	3.3	95.0	3.0	0.0	Horz	AV	0.0	25.8	54.0	-28.2	EUT Vert, Mid Ch
1854.575	30.6	-4.8	1.5	315.0	3.0	0.0	Vert	AV	0.0	25.8	54.0	-28.2	EUT Vert, Mid Ch
1611.075	30.8	-5.3	1.5	29.0	3.0	0.0	Horz	AV	0.0	25.5	54.0	-28.5	EUT Vert, Mid Ch
1613.408	30.8	-5.3	1.5	227.0	3.0	0.0	Vert	AV	0.0	25.5	54.0	-28.5	EUT Vert, Mid Ch
1609.783	30.7	-5.3	1.5	9.0	3.0	0.0	Horz	AV	0.0	25.4	54.0	-28.6	EUT Vert, Low Ch
1610.017	30.7	-5.3	2.6	297.0	3.0	0.0	Vert	AV	0.0	25.4	54.0	-28.6	EUT Vert, Low Ch
1617.450	30.6	-5.3	1.5	224.0	3.0	0.0	Horz	AV	0.0	25.3	54.0	-28.7	EUT Vert, High Ch
1617.767	30.6	-5.3	2.2	234.0	3.0	0.0	Vert	AV	0.0	25.3	54.0	-28.7	EUT Vert, High Ch
1208.425	31.3	-6.6	1.5	16.0	3.0	0.0	Horz	AV	0.0	24.7	54.0	-29.3	EUT Vert, Mid Ch
1210.700	31.3	-6.6	1.5	34.9	3.0	0.0	Vert	AV	0.0	24.7	54.0	-29.3	EUT Vert, Mid Ch
1207.958	31.1	-6.6	1.5	127.0	3.0	0.0	Vert	AV	0.0	24.5	54.0	-29.5	EUT Vert, Low Ch
1205.100	31.1	-6.7	2.0	22.0	3.0	0.0	Horz	AV	0.0	24.4	54.0	-29.6	EUT Vert, Low Ch

SPURIOUS RADIATED EMISSIONS

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
1214.325	31.2	-6.8	1.5	26.0	3.0	0.0	Horz	AV	0.0	24.4	54.0	-29.6	EUT Vert, High Ch
1214.958	31.1	-6.8	1.5	40.0	3.0	0.0	Vert	AV	0.0	24.3	54.0	-29.7	EUT Vert, High Ch
2015.767	42.9	-2.6	1.2	333.0	3.0	0.0	Vert	PK	0.0	40.3	74.0	-33.7	EUT Vert, Mid Ch
2009.842	42.1	-2.7	1.5	193.9	3.0	0.0	Horz	PK	0.0	39.4	74.0	-34.6	EUT Vert, Low Ch
2016.150	41.9	-2.6	1.5	214.9	3.0	0.0	Horz	PK	0.0	39.3	74.0	-34.7	EUT Vert, Mid Ch
2023.225	41.5	-2.4	1.5	282.0	3.0	0.0	Horz	PK	0.0	39.1	74.0	-34.9	EUT Vert, High Ch
2008.942	41.7	-2.7	1.5	83.0	3.0	0.0	Vert	PK	0.0	39.0	74.0	-35.0	EUT Vert, Low Ch
2022.158	41.2	-2.5	1.5	304.0	3.0	0.0	Vert	PK	0.0	38.7	74.0	-35.3	EUT Vert, High Ch
1866.392	42.4	-4.8	2.4	351.0	3.0	0.0	Horz	PK	0.0	37.6	74.0	-36.4	EUT Vert, High Ch
1853.642	41.9	-4.8	1.5	315.0	3.0	0.0	Vert	PK	0.0	37.1	74.0	-36.9	EUT Vert, Mid Ch
1865.992	41.8	-4.8	1.5	325.9	3.0	0.0	Vert	PK	0.0	37.0	74.0	-37.0	EUT Vert, High Ch
1608.558	42.2	-5.3	1.5	9.0	3.0	0.0	Horz	PK	0.0	36.9	74.0	-37.1	EUT Vert, Low Ch
1614.983	41.9	-5.3	1.5	227.0	3.0	0.0	Vert	PK	0.0	36.6	74.0	-37.4	EUT Vert, Mid Ch
1855.675	41.4	-4.9	3.3	95.0	3.0	0.0	Horz	PK	0.0	36.5	74.0	-37.5	EUT Vert, Mid Ch
1619.825	41.7	-5.3	2.2	234.0	3.0	0.0	Vert	PK	0.0	36.4	74.0	-37.6	EUT Vert, High Ch
1611.708	41.6	-5.3	1.5	29.0	3.0	0.0	Horz	PK	0.0	36.3	74.0	-37.7	EUT Vert, Mid Ch
1606.342	41.3	-5.3	2.6	297.0	3.0	0.0	Vert	PK	0.0	36.0	74.0	-38.0	EUT Vert, Low Ch
1620.883	41.3	-5.3	1.5	224.0	3.0	0.0	Horz	PK	0.0	36.0	74.0	-38.0	EUT Vert, High Ch
1204.308	42.4	-6.6	1.5	127.0	3.0	0.0	Vert	PK	0.0	35.8	74.0	-38.2	EUT Vert, Low Ch
1215.258	42.6	-6.8	1.5	26.0	3.0	0.0	Horz	PK	0.0	35.8	74.0	-38.2	EUT Vert, High Ch
1208.858	42.3	-6.6	2.0	22.0	3.0	0.0	Horz	PK	0.0	35.7	74.0	-38.3	EUT Vert, Low Ch
1209.358	42.1	-6.6	1.5	16.0	3.0	0.0	Horz	PK	0.0	35.5	74.0	-38.5	EUT Vert, Mid Ch
1209.025	42.1	-6.6	1.5	34.9	3.0	0.0	Vert	PK	0.0	35.5	74.0	-38.5	EUT Vert, Mid Ch
1215.825	42.0	-6.8	1.5	40.0	3.0	0.0	Vert	PK	0.0	35.2	74.0	-38.8	EUT Vert, High Ch

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS



EUT:	ICD/CRT-D	Work Order:	BSTN1346
Serial Number:	346139	Date:	2024-12-02
Customer:	Boston Scientific Corporation	Temperature:	22.5°C
Attendees:	Dustin Sparks	Relative Humidity:	20.5%
Customer Project:	None	Bar. Pressure (PMSL):	1030 mb
Tested By:	Christopher Heintzelman	Job Site:	MN05
Power:	Internal Battery	Configuration:	BSTN1346-7

TEST PARAMETERS

Run #:	10	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
--------	----	--------------------	---	---------------------	-----------

COMMENTS

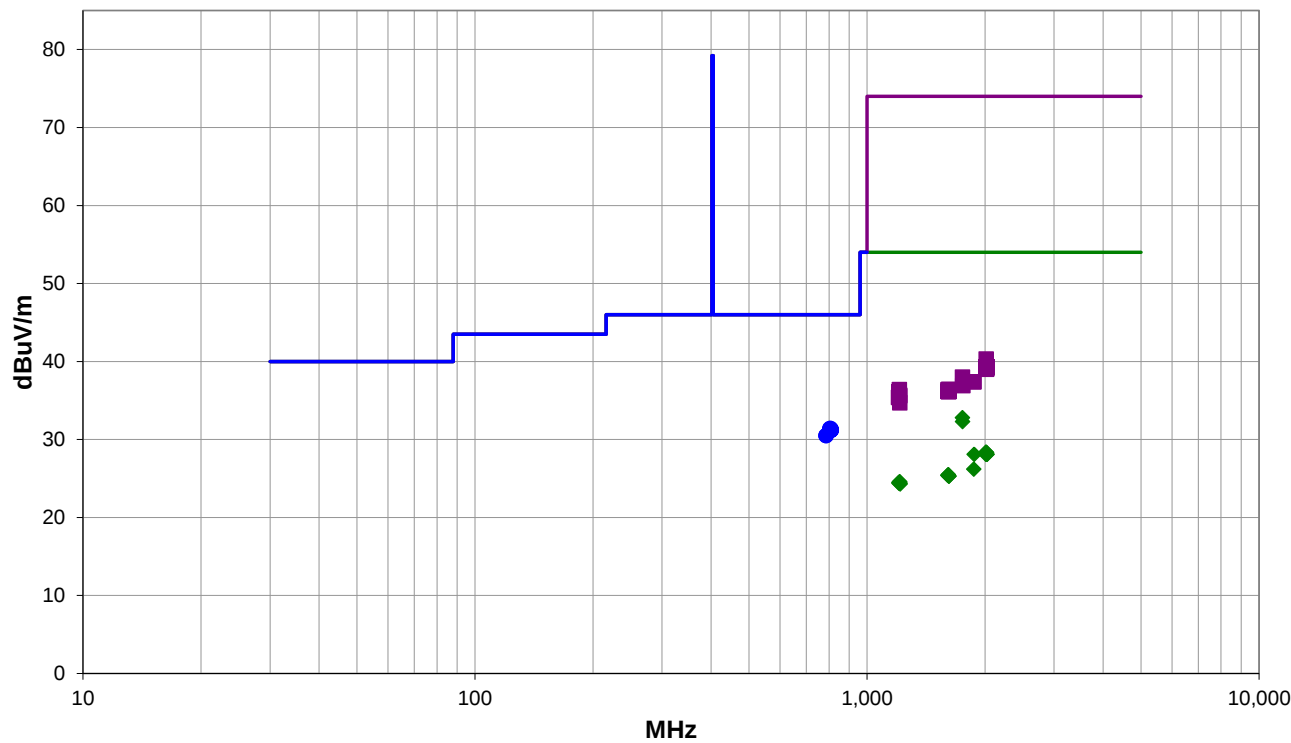
None

EUT OPERATING MODES

Transmitting MICS Low, Mid, and High Chs (402.15, 403.35, and 404.85 MHz), CW

DEVIATIONS FROM TEST STANDARD

None



Run #: 10

PK AV QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #10

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
806.696	16.9	14.5	2.7	153.0	3.0	0.0	Vert	QP	0.0	31.4	46.0	-14.6	EUT On Side, Mid Ch
803.886	16.9	14.5	1.0	290.9	3.0	0.0	Vert	QP	0.0	31.4	46.0	-14.6	EUT On Side, Low Ch
809.504	16.9	14.4	2.2	41.0	3.0	0.0	Vert	QP	0.0	31.3	46.0	-14.7	EUT On Side, High Ch
807.152	16.8	14.5	2.9	144.0	3.0	0.0	Horz	QP	0.0	31.3	46.0	-14.7	EUT On Side, Mid Ch
803.893	16.8	14.5	1.1	225.0	3.0	0.0	Horz	QP	0.0	31.3	46.0	-14.7	EUT On Side, Low Ch
810.238	16.8	14.4	1.0	76.0	3.0	0.0	Vert	QP	0.0	31.2	46.0	-14.8	EUT Vert, High Ch
809.226	16.8	14.4	1.0	206.0	3.0	0.0	Vert	QP	0.0	31.2	46.0	-14.8	EUT Vert, High Ch
809.753	16.8	14.4	1.0	167.9	3.0	0.0	Horz	QP	0.0	31.2	46.0	-14.8	EUT On Side, High Ch
809.502	16.8	14.4	3.1	66.9	3.0	0.0	Horz	QP	0.0	31.2	46.0	-14.8	EUT Horz, High Ch
809.273	16.8	14.4	1.0	120.9	3.0	0.0	Vert	QP	0.0	31.2	46.0	-14.8	EUT Horz, High Ch
785.929	16.9	13.6	1.0	178.0	3.0	0.0	Horz	QP	0.0	30.5	46.0	-15.5	EUT Vert, High Ch
786.189	16.9	13.6	1.0	145.0	3.0	0.0	Vert	QP	0.0	30.5	46.0	-15.5	EUT Vert, High Ch
1751.258	37.9	-5.1	1.5	342.0	3.0	0.0	Vert	AV	0.0	32.8	54.0	-21.2	EUT On Side, Mid Ch
1752.458	37.4	-5.1	1.5	279.9	3.0	0.0	Horz	AV	0.0	32.3	54.0	-21.7	EUT On Side, Mid Ch
2011.708	30.9	-2.5	1.5	346.0	3.0	0.0	Vert	AV	0.0	28.4	54.0	-25.6	EUT On Side, Low Ch
2016.675	30.8	-2.5	1.5	105.0	3.0	0.0	Horz	AV	0.0	28.3	54.0	-25.7	EUT On Side, Mid Ch
2016.767	30.8	-2.5	1.5	66.9	3.0	0.0	Vert	AV	0.0	28.3	54.0	-25.7	EUT On Side, Mid Ch
2010.158	30.8	-2.7	1.5	99.9	3.0	0.0	Horz	AV	0.0	28.1	54.0	-25.9	EUT On Side, Low Ch
1875.800	32.7	-4.6	2.5	36.0	3.0	0.0	Vert	AV	0.0	28.1	54.0	-25.9	EUT On Side, High Ch
2022.325	30.6	-2.5	1.5	0.0	3.0	0.0	Horz	AV	0.0	28.1	54.0	-25.9	EUT On Side, High Ch
2022.417	30.6	-2.5	1.5	228.9	3.0	0.0	Vert	AV	0.0	28.1	54.0	-25.9	EUT On Side, High Ch
1871.992	30.8	-4.6	1.5	271.0	3.0	0.0	Horz	AV	0.0	26.2	54.0	-27.8	EUT On Side, High Ch
1612.033	30.8	-5.3	3.5	188.0	3.0	0.0	Vert	AV	0.0	25.5	54.0	-28.5	EUT On Side, Mid Ch
1608.408	30.7	-5.3	1.5	267.0	3.0	0.0	Horz	AV	0.0	25.4	54.0	-28.6	EUT On Side, Low Ch
1610.417	30.7	-5.3	1.5	84.9	3.0	0.0	Vert	AV	0.0	25.4	54.0	-28.6	EUT On Side, Low Ch
1612.150	30.7	-5.3	1.5	289.0	3.0	0.0	Horz	AV	0.0	25.4	54.0	-28.6	EUT On Side, Mid Ch
1618.267	30.6	-5.3	1.5	335.0	3.0	0.0	Horz	AV	0.0	25.3	54.0	-28.7	EUT On Side, High Ch
1617.033	30.6	-5.3	1.5	206.0	3.0	0.0	Vert	AV	0.0	25.3	54.0	-28.7	EUT On Side, High Ch
1211.258	31.2	-6.6	2.4	121.9	3.0	0.0	Horz	AV	0.0	24.6	54.0	-29.4	EUT On Side, Mid Ch
1206.183	31.1	-6.6	1.5	54.0	3.0	0.0	Horz	AV	0.0	24.5	54.0	-29.5	EUT On Side, Low Ch
1211.208	31.1	-6.6	1.5	303.0	3.0	0.0	Vert	AV	0.0	24.5	54.0	-29.5	EUT On Side, Mid Ch
1205.933	31.1	-6.7	1.5	83.0	3.0	0.0	Vert	AV	0.0	24.4	54.0	-29.6	EUT On Side, Low Ch
1212.058	31.2	-6.8	1.5	138.9	3.0	0.0	Horz	AV	0.0	24.4	54.0	-29.6	EUT On Side, High Ch
1214.725	31.1	-6.8	3.4	5.9	3.0	0.0	Vert	AV	0.0	24.3	54.0	-29.7	EUT On Side, High Ch
2013.208	42.8	-2.5	1.5	99.9	3.0	0.0	Horz	PK	0.0	40.3	74.0	-33.7	EUT On Side, Low Ch
2010.900	41.8	-2.5	1.5	346.0	3.0	0.0	Vert	PK	0.0	39.3	74.0	-34.7	EUT On Side, Low Ch
2024.475	41.7	-2.4	1.5	228.9	3.0	0.0	Vert	PK	0.0	39.3	74.0	-34.7	EUT On Side, High Ch
2025.075	41.6	-2.4	1.5	0.0	3.0	0.0	Horz	PK	0.0	39.2	74.0	-34.8	EUT On Side, High Ch
2017.292	41.6	-2.5	1.5	66.9	3.0	0.0	Vert	PK	0.0	39.1	74.0	-34.9	EUT On Side, Mid Ch
2018.000	41.5	-2.5	1.5	105.0	3.0	0.0	Horz	PK	0.0	39.0	74.0	-35.0	EUT On Side, Mid Ch

SPURIOUS RADIATED EMISSIONS

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
1751.750	43.1	-5.1	1.5	342.0	3.0	0.0	Vert	PK	0.0	38.0	74.0	-36.0	EUT On Side, Mid Ch
1872.392	42.0	-4.6	1.5	271.0	3.0	0.0	Horz	PK	0.0	37.4	74.0	-36.6	EUT On Side, High Ch
1872.850	42.0	-4.6	2.5	36.0	3.0	0.0	Vert	PK	0.0	37.4	74.0	-36.6	EUT On Side, High Ch
1755.008	42.0	-5.1	1.5	279.9	3.0	0.0	Horz	PK	0.0	36.9	74.0	-37.1	EUT On Side, Mid Ch
1609.600	41.7	-5.3	1.5	84.9	3.0	0.0	Vert	PK	0.0	36.4	74.0	-37.6	EUT On Side, Low Ch
1209.017	43.0	-6.6	2.4	121.9	3.0	0.0	Horz	PK	0.0	36.4	74.0	-37.6	EUT On Side, Mid Ch
1613.758	41.7	-5.3	3.5	188.0	3.0	0.0	Vert	PK	0.0	36.4	74.0	-37.6	EUT On Side, Mid Ch
1617.408	41.7	-5.3	1.5	206.0	3.0	0.0	Vert	PK	0.0	36.4	74.0	-37.6	EUT On Side, High Ch
1608.017	41.5	-5.3	1.5	267.0	3.0	0.0	Horz	PK	0.0	36.2	74.0	-37.8	EUT On Side, Low Ch
1617.967	41.5	-5.3	1.5	335.0	3.0	0.0	Horz	PK	0.0	36.2	74.0	-37.8	EUT On Side, High Ch
1205.817	42.8	-6.7	1.5	83.0	3.0	0.0	Vert	PK	0.0	36.1	74.0	-37.9	EUT On Side, Low Ch
1614.733	41.4	-5.3	1.5	289.0	3.0	0.0	Horz	PK	0.0	36.1	74.0	-37.9	EUT On Side, Mid Ch
1209.408	42.3	-6.6	1.5	303.0	3.0	0.0	Vert	PK	0.0	35.7	74.0	-38.3	EUT On Side, Mid Ch
1212.142	42.4	-6.8	3.4	5.9	3.0	0.0	Vert	PK	0.0	35.6	74.0	-38.4	EUT On Side, High Ch
1204.125	42.0	-6.6	1.5	54.0	3.0	0.0	Horz	PK	0.0	35.4	74.0	-38.6	EUT On Side, Low Ch
1212.167	41.5	-6.8	1.5	138.9	3.0	0.0	Horz	PK	0.0	34.7	74.0	-39.3	EUT On Side, High Ch

CONCLUSION

Pass



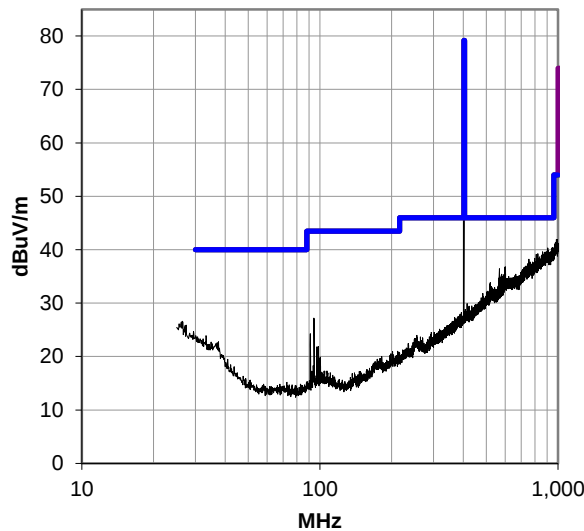
Tested By

SPURIOUS RADIATED EMISSIONS

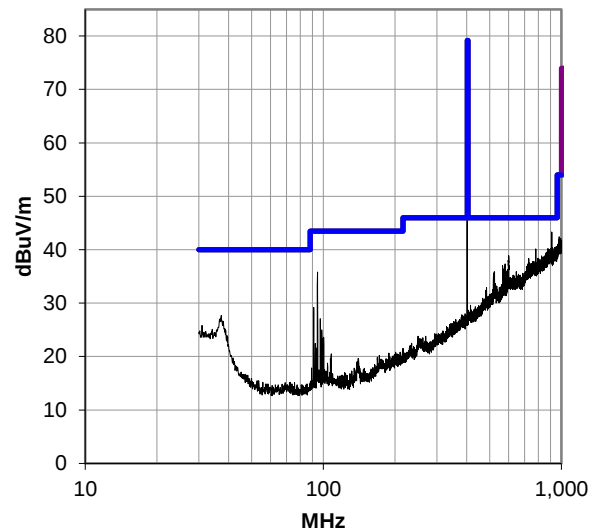
PRESCAN DATA

Radiated spurious emissions from the EUT are initially reviewed with Pre-scans (Preview scans). Pre-scans are performed, with the EUT transmitting on the lowest applicable data rate, for both vertical and horizontal polarizations. The Pre-scan plots below are shown with a peak detector and RBW for the following frequency ranges: 9 kHz RBW (< 30 MHz); 120 kHz RBW (30 - 1000 MHz); 1 MHz RBW (> 1 GHz). In the case where unintentional emissions are observed, an ambient or idle pre-scan with the radio off, will be shown for comparison.

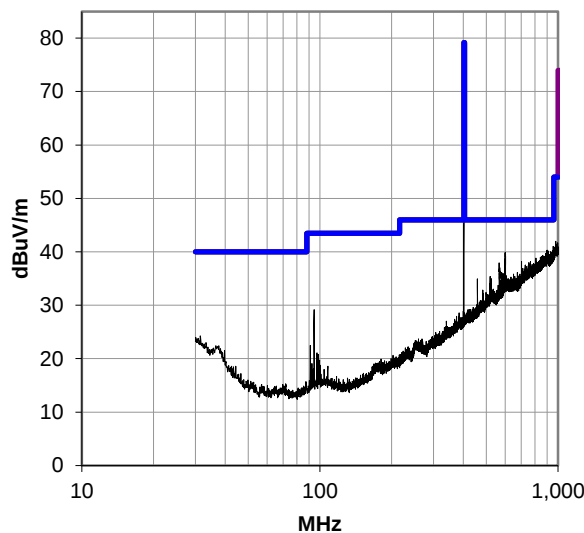
25-1000 MHz, Run 7 (D432)



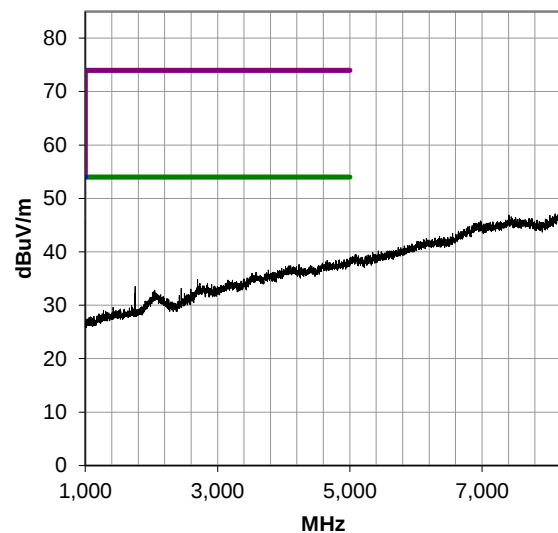
30-1000 MHz, Run 11 (G447)



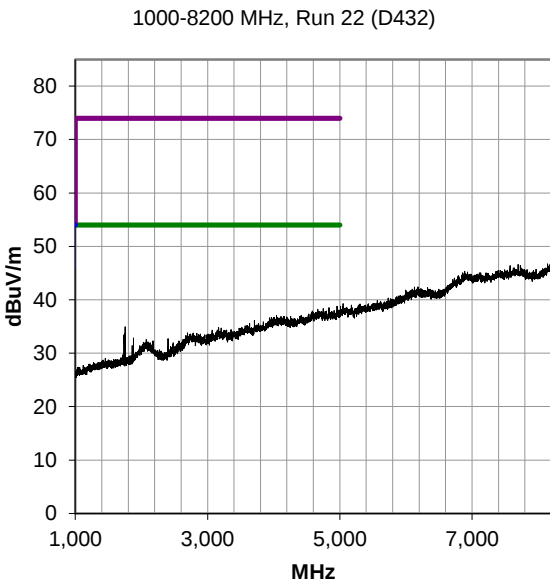
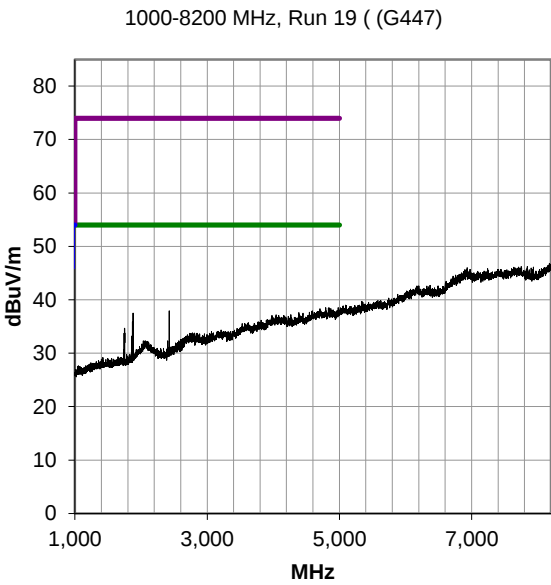
30-1000 MHz, Run 14 (D420)



1000-8200 MHz, Run 17 (D420)



SPURIOUS RADIATED EMISSIONS



SPURIOUS RADIATED EMISSIONS

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. A reference preview scan (pre-scan) is 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 $10 \cdot \log(1/dc)$.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Cable	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	2024-11-26	2025-11-26
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAQ	2024-03-13	2025-03-13
Antenna - Biconilog	ETS Lindgren	3142D	AXO	2023-10-02	2025-10-02
Cable	ESM Cable Corp.	Bilog Cables	MNH	2024-11-26	2025-11-26
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	AVO	2024-10-09	2025-10-09
Filter - Low Pass	Micro-Tronics	LPM50004	LFK	2024-08-25	2025-08-25

SPURIOUS RADIATED EMISSIONS



FREQUENCY RANGE INVESTIGATED

400 MHz TO 410 MHz

POWER INVESTIGATED

Internal Battery

CONFIGURATIONS INVESTIGATED

BSTN1346-4
BSTN1346-6
BSTN1346-7

MODES INVESTIGATED

Transmitting Low and High Chs (402.15 and 404.85 MHz), modulated.

SPURIOUS RADIATED EMISSIONS



EUT:	ICD/CRT-D	Work Order:	BSTN1346
Serial Number:	346139	Date:	2024-12-04
Customer:	Boston Scientific Corporation	Temperature:	22.7°C
Attendees:	Dustin Sparks	Relative Humidity:	24.2%
Customer Project:	None	Bar. Pressure (PMSL):	1007 mb
Tested By:	Christopher Heintzelman	Job Site:	MN05
Power:	Internal Battery	Configuration:	BSTN1346-7

TEST PARAMETERS

Run #:	43	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
--------	----	--------------------	---	---------------------	-----------

COMMENTS

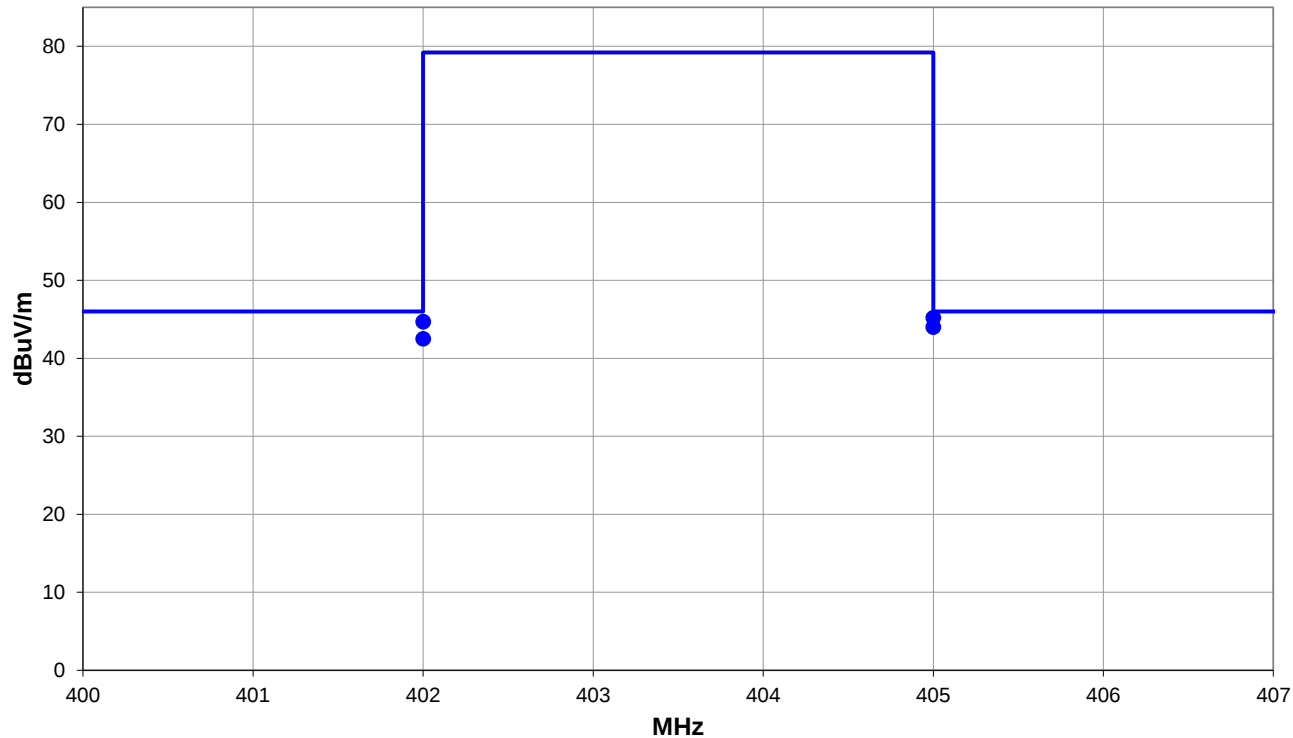
The maximized positions as found during EIRP testing were used for the band edge measurements.
--

EUT OPERATING MODES

Transmitting Low and High Chs (402.15 and 404.85 MHz), modulated.

DEVIATIONS FROM TEST STANDARD

None



Run #: 43

PK AV QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #43

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
405.000	41.0	4.2	1.22	181.9	3.0	0.0	Horz	QP	0.0	45.2	46.0	-0.8	EUT Horz, High Ch
402.000	40.6	4.1	1.23	196.9	3.0	0.0	Horz	QP	0.0	44.7	46.0	-1.3	EUT Horz, Low Ch
405.000	39.8	4.2	1.59	105.0	3.0	0.0	Vert	QP	0.0	44.0	46.0	-2.0	EUT Vert, High Ch
402.000	38.4	4.1	1.0	33.0	3.0	0.0	Vert	QP	0.0	42.5	46.0	-3.5	EUT Vert, Low Ch

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

EUT:	ICD/CRT-D	Work Order:	BSTN1346
Serial Number:	222735	Date:	2024-12-04
Customer:	Boston Scientific Corporation	Temperature:	22.7°C
Attendees:	Dustin Sparks	Relative Humidity:	24.2%
Customer Project:	None	Bar. Pressure (PMSL):	1007 mb
Tested By:	Christopher Heintzelman	Job Site:	MN05
Power:	Internal Battery	Configuration:	BSTN1346-4

TEST PARAMETERS

Run #:	44	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
--------	----	--------------------	---	---------------------	-----------

COMMENTS

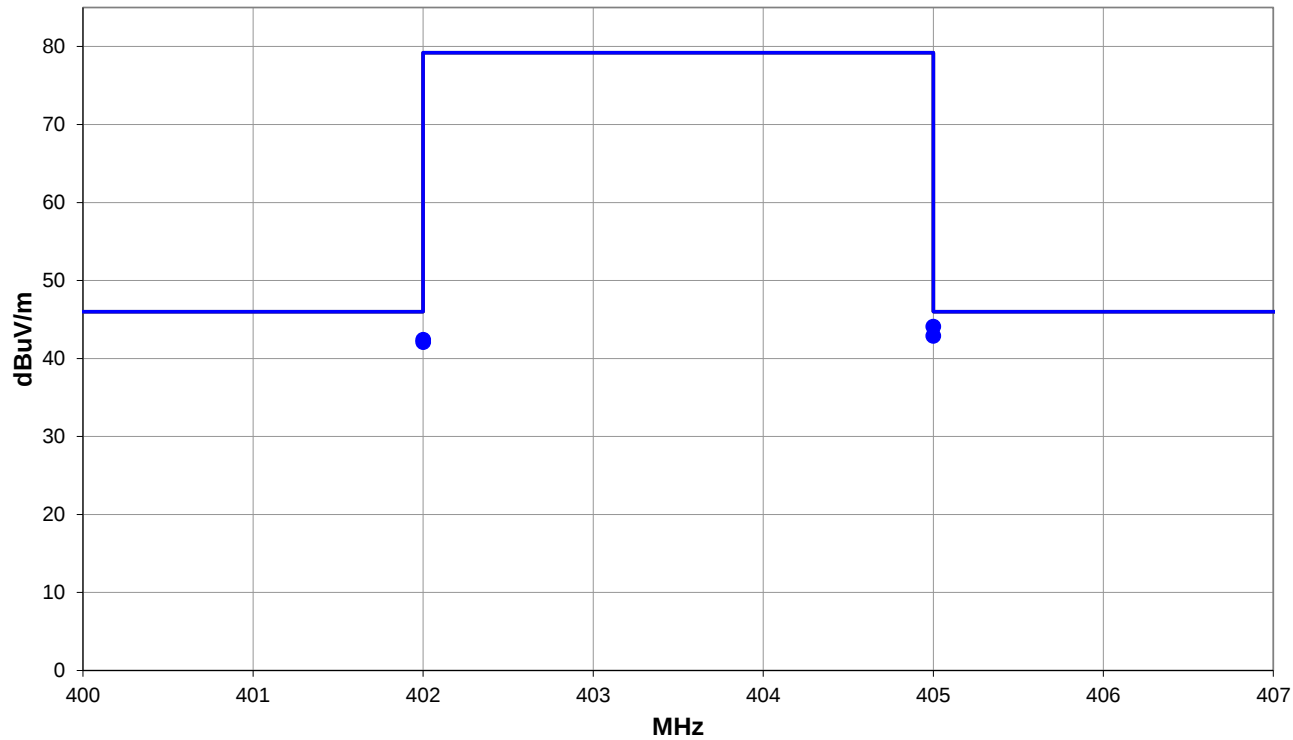
The maximized positions as found during EIRP testing were used for the band edge measurements.
--

EUT OPERATING MODES

Transmitting Low and High Chs (402.15 and 404.85 MHz), modulated.

DEVIATIONS FROM TEST STANDARD

None



Run #: 44

PK AV QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #44

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
405.000	39.9	4.2	1.59	159.0	3.0	0.0	Vert	QP	0.0	44.1	46.0	-1.9	EUT Vert, High Ch
405.000	38.7	4.2	1.19	135.9	3.0	0.0	Horz	QP	0.0	42.9	46.0	-3.1	EUT On Side, High Ch
402.000	38.3	4.1	1.23	146.9	3.0	0.0	Horz	QP	0.0	42.4	46.0	-3.6	EUT On Side, Low Ch
402.000	38.0	4.1	1.0	31.9	3.0	0.0	Vert	QP	0.0	42.1	46.0	-3.9	EUT Vert, Low Ch

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS



EUT:	ICD/CRT-D	Work Order:	BSTN1346
Serial Number:	344830	Date:	2024-12-04
Customer:	Boston Scientific Corporation	Temperature:	22.7°C
Attendees:	Dustin Sparks	Relative Humidity:	24.2%
Customer Project:	None	Bar. Pressure (PMSL):	1007 mb
Tested By:	Christopher Heintzelman	Job Site:	MN05
Power:	Internal Battery	Configuration:	BSTN1346-6

TEST PARAMETERS

Run #:	45	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
--------	----	--------------------	---	---------------------	-----------

COMMENTS

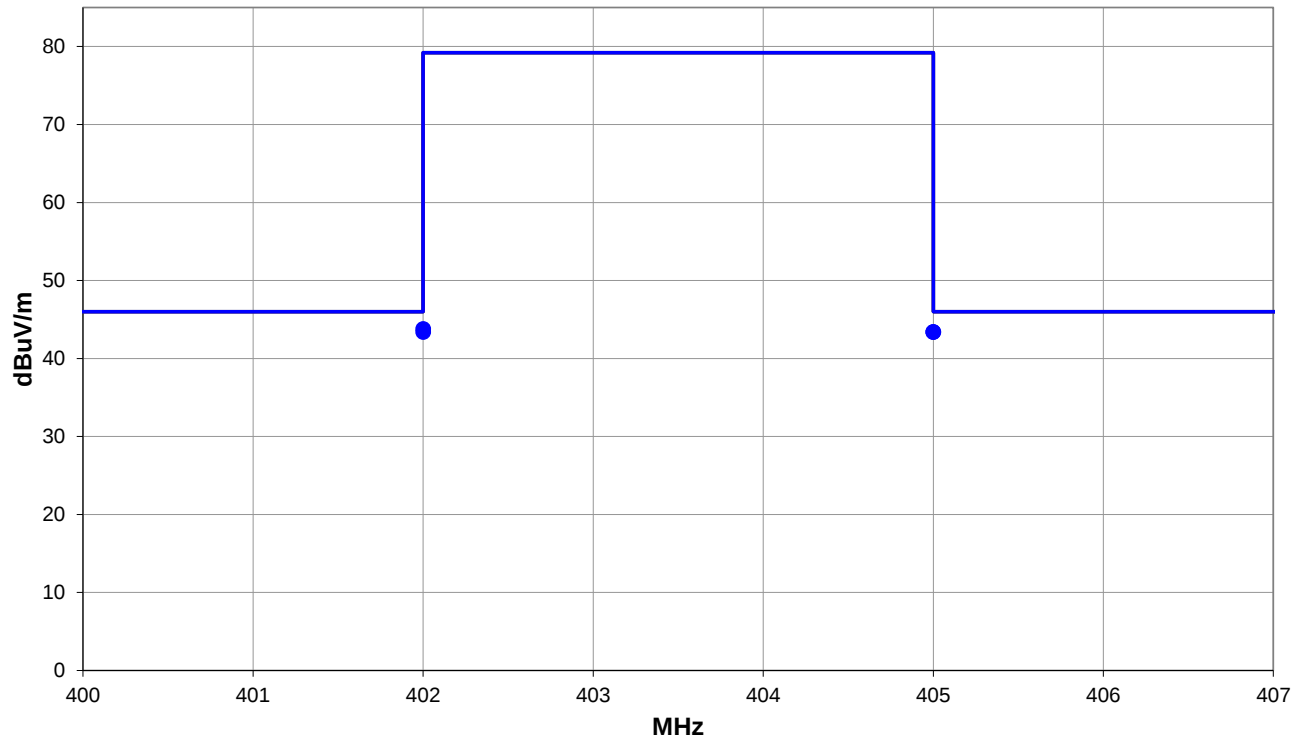
The maximized positions as found during EIRP testing were used for the band edge measurements.

EUT OPERATING MODES

Transmitting Low and High Chs (402.15 and 404.85 MHz), modulated.

DEVIATIONS FROM TEST STANDARD

None



Run #: 45

PK AV QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #45

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
402.000	39.7	4.1	1.23	189.9	3.0	0.0	Horz	QP	0.0	43.8	46.0	-2.2	EUT On Side, Low Ch
405.000	39.2	4.2	1.0	37.0	3.0	0.0	Vert	QP	0.0	43.4	46.0	-2.6	EUT Vert, High CH
405.000	39.2	4.2	1.21	185.0	3.0	0.0	Horz	QP	0.0	43.4	46.0	-2.6	EUT On Side, High Ch
402.000	39.3	4.1	1.0	30.0	3.0	0.0	Vert	QP	0.0	43.4	46.0	-2.6	EUT Vert, Low Ch

CONCLUSION

Pass



Tested By

RADIATED POWER (EIRP)

TEST DESCRIPTION

The Field Strength of the Fundamental was measured in the far-field at a semi-anechoic Chamber. Spectrum analyzer and linearly polarized antennas were used to measure the radiated field strength of the fundamental.

The orientation of the EUT, and the measurement antenna were manipulated to maximize the level of emissions. The turntable azimuth was varied to maximize the level of radiated emissions. The height of the measurement antenna was also varied from 1 to 4 meters. The amplitude and frequency of the emissions were noted.

The EUT was then replaced with a substitution antenna that varies depending on the frequency range of the emission. A $\frac{1}{2}$ wave dipole that is successively tuned to each of the highest spurious emissions is utilized from 400-1000 MHz. Below 400 MHz, a small biconical antenna is utilized due to the increasing size of the dipole to match the $\frac{1}{2}$ wavelength. Above 1 GHz, a horn antenna is utilized.

A signal generator is then connected to the substitution antenna and its output is adjusted to match the level previously noted for each frequency. The output of the signal generator is recorded, and by factoring in the cable loss to the substitution antenna and its gain (dBi); the radiated power (dBm) for each radiated spurious emission is determined.

The EUT was configured to transmit in a fixture that simulates the human torso. The dimensions of the test fixture and the characteristics of the tissue substitute material met the requirements 95.2569(c) and FCC KDB 617965. The height of the transmitter was 1.5-meter above the reference ground plane.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Biconilog	ETS Lindgren	3142D	AXO	2023-10-02	2025-10-02
Cable	ESM Cable Corp.	Bilog Cables	MNH	2024-11-26	2025-11-26
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	AVO	2024-10-09	2025-10-09
Filter - Low Pass	Micro-Tronics	LPM50004	LFK	2024-08-25	2025-08-25
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAQ	2024-03-13	2025-03-13
Antenna – Dipole	EMCO	3121C-DB4	ADI	2023-05-23	2025-05-23
Power Meter	Agilent	N1913A	SQL	2024-07-17	2025-07-17
Power Sensor	Agilent	N8481A	SQN	2024-07-17	2025-07-17
Signal Generator	Keysight	N5182B	TFX	2023-05-14	2026-05-14

FREQUENCY RANGE INVESTIGATED

402 MHz TO 405 MHz

POWER INVESTIGATED

Internal Battery

CONFIGURATIONS INVESTIGATED

BSTN1346-4
BSTN1346-6
BSTN1346-7

MODES INVESTIGATED

Transmitting MICS Low, Mid, and High Channels (402.15, 403.35, and 404.85 MHz), CW

RADIATED POWER (EIRP)



EUT:	ICD/CRT-D	Work Order:	BSTN1346
Serial Number:	344830	Date:	2024-11-26
Customer:	Boston Scientific Corporation	Temperature:	22°C
Attendees:	Dustin Sparks	Relative Humidity:	25.4%
Customer Project:	None	Bar. Pressure (PMSL):	1018 mb
Tested By:	Christopher Heintzelman	Job Site:	MN05
Power:	Internal Battery	Configuration:	BSTN1346-6

TEST PARAMETERS

Run #:	3	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
--------	---	--------------------	---	---------------------	-----------

COMMENTS

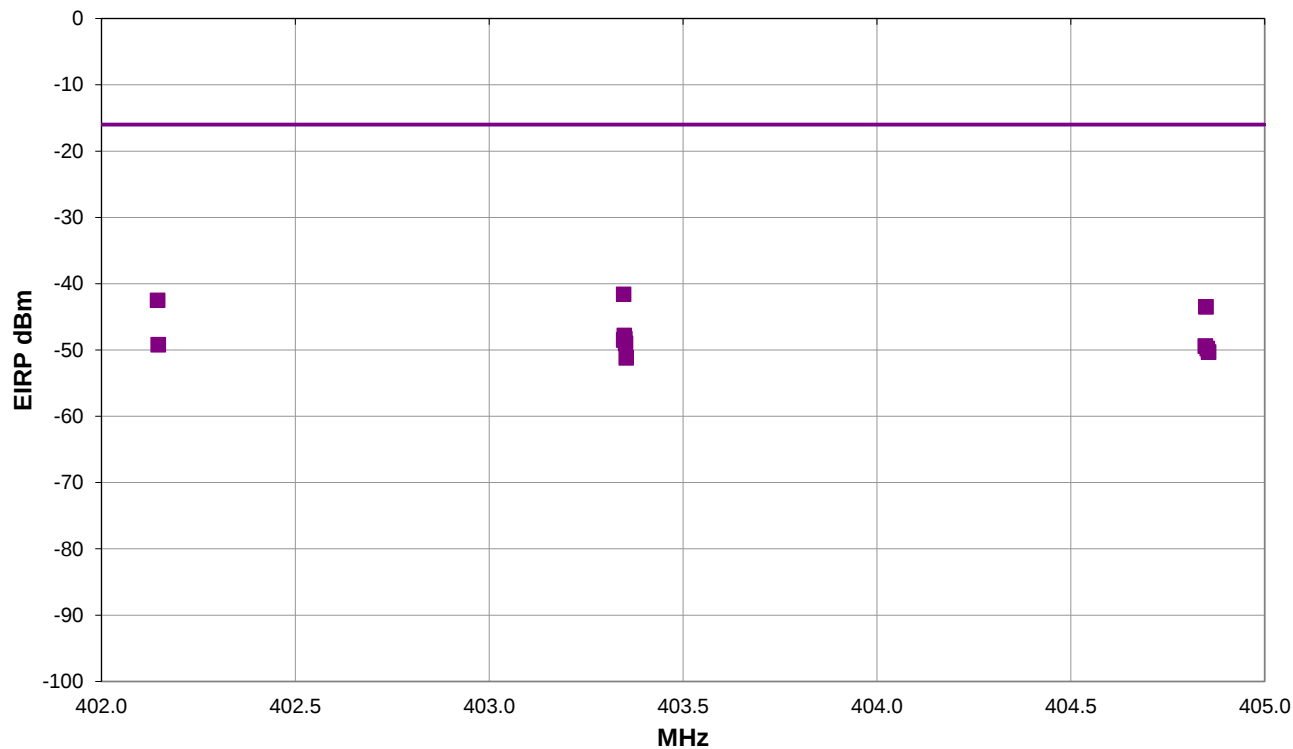
None

EUT OPERATING MODES

Transmitting MICS Low, Mid, and High Channels (402.15, 403.35, and 404.85 MHz), CW.

DEVIATIONS FROM TEST STANDARD

None



Run #: 3

PK AV QP

RADIATED POWER (EIRP)

RESULTS - Run #3

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
403.347	1.62	8.0	Vert	PK	69.2E-9	-41.6	-16.0	-25.6	EUT Vert, Mid Ch
402.145	1.61	16.0	Vert	PK	56.2E-9	-42.5	-16.0	-26.5	EUT Vert, Low Ch
404.848	1.61	9.0	Vert	PK	44.7E-9	-43.5	-16.0	-27.5	EUT Vert, High Ch
403.348	1.59	312.9	Vert	PK	16.6E-9	-47.8	-16.0	-31.8	EUT On Side, Mid Ch
403.350	1.23	360.0	Horz	PK	14.8E-9	-48.3	-16.0	-32.3	EUT Horz, Mid Ch
403.347	1.22	275.9	Horz	PK	14.1E-9	-48.5	-16.0	-32.5	EUT Vert, Mid Ch
403.352	1.22	318.0	Horz	PK	12.6E-9	-49.0	-16.0	-33.0	EUT On Side, Mid Ch
402.147	1.23	351.9	Horz	PK	12.0E-9	-49.2	-16.0	-33.2	EUT Horz, Low Ch
404.847	1.23	6.9	Horz	PK	11.5E-9	-49.4	-16.0	-33.4	EUT Horz, High Ch
404.852	1.0	325.9	Vert	PK	10.5E-9	-49.8	-16.0	-33.8	EUT Horz, High Ch
404.855	1.93	232.0	Horz	PK	9.3E-9	-50.3	-16.0	-34.3	EUT Vert, High Ch
403.353	1.0	325.9	Vert	PK	7.6E-9	-51.2	-16.0	-35.2	EUT Horz, Mid Ch

CONCLUSION

Pass



Tested By

RADIATED POWER (EIRP)



EUT:	ICD/CRT-D	Work Order:	BSTN1346
Serial Number:	222735	Date:	2024-11-27
Customer:	Boston Scientific Corporation	Temperature:	22.5°C
Attendees:	Dustin Sparks	Relative Humidity:	25%
Customer Project:	None	Bar. Pressure (PMSL):	1016 mb
Tested By:	Christopher Heintzelman	Job Site:	MN05
Power:	Internal Battery	Configuration:	BSTN1346-4

TEST PARAMETERS

Run #:	5	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
--------	---	--------------------	---	---------------------	-----------

COMMENTS

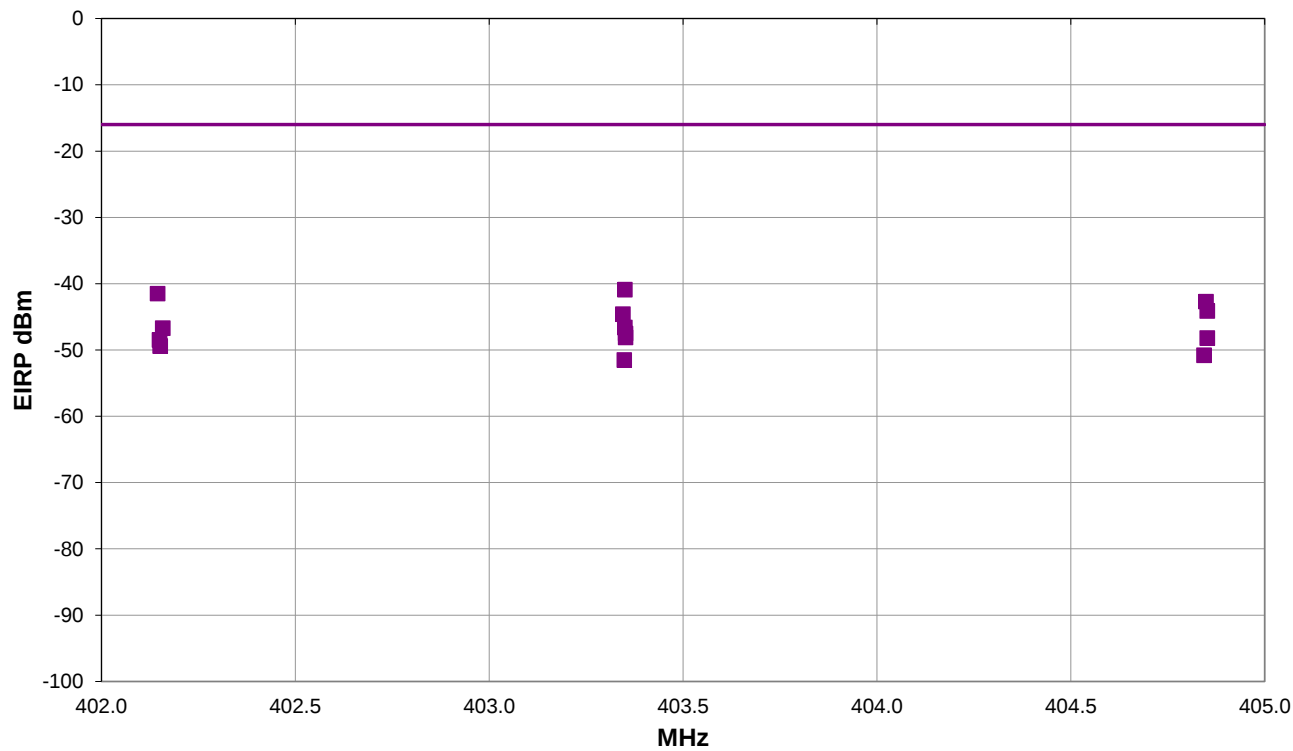
None

EUT OPERATING MODES

Transmitting MICS Low, Mid, and High Channels (402.15, 403.35, and 404.85 MHz), CW.

DEVIATIONS FROM TEST STANDARD

None



Run #: 5

■ PK ◆ AV ● QP

RADIATED POWER (EIRP)

RESULTS - Run #5

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
403.350	1.61	9.9	Vert	PK	81.3E-9	-40.9	-16.0	-24.9	EUT Vert, Mid Ch
402.145	1.56	358.0	Vert	PK	70.8E-9	-41.5	-16.0	-25.5	EUT Vert, Low Ch
404.848	1.57	13.9	Vert	PK	53.7E-9	-42.7	-16.0	-26.7	EUT Vert, High Ch
404.852	1.59	1.0	Vert	PK	38.9E-9	-44.1	-16.0	-28.1	EUT On Side, High Ch
403.345	1.59	293.0	Vert	PK	34.7E-9	-44.6	-16.0	-28.6	EUT On Side, Mid Ch
403.350	1.23	63.0	Horz	PK	21.9E-9	-46.6	-16.0	-30.6	EUT On Side, Mid Ch
402.158	1.57	348.9	Vert	PK	21.4E-9	-46.7	-16.0	-30.7	EUT On Side, Low Ch
403.352	1.22	347.0	Horz	PK	17.8E-9	-47.5	-16.0	-31.5	EUT Horz, Mid Ch
403.352	1.22	285.0	Horz	PK	15.5E-9	-48.1	-16.0	-32.1	EUT Vert, Mid Ch
404.852	1.19	272.9	Horz	PK	15.1E-9	-48.2	-16.0	-32.2	EUT On Side, High Ch
402.150	1.22	303.0	Horz	PK	14.1E-9	-48.5	-16.0	-32.5	EUT Vert, Low Ch
402.152	1.22	260.0	Horz	PK	11.5E-9	-49.4	-16.0	-33.4	EUT On Side, Low Ch
404.843	1.2	297.0	Horz	PK	8.3E-9	-50.8	-16.0	-34.8	EUT Vert, High Ch
403.348	1.0	300.9	Vert	PK	7.1E-9	-51.5	-16.0	-35.5	EUT Horz, Mid Ch

CONCLUSION

Pass



Tested By

RADIATED POWER (EIRP)



EUT:	ICD/CRT-D	Work Order:	BSTN1346
Serial Number:	346139	Date:	2024-11-27
Customer:	Boston Scientific Corporation	Temperature:	22.5°C
Attendees:	Dustin Sparks	Relative Humidity:	25%
Customer Project:	None	Bar. Pressure (PMSL):	1016 mb
Tested By:	Christopher Heintzelman	Job Site:	MN05
Power:	Internal Battery	Configuration:	BSTN1346-7

TEST PARAMETERS

Run #:	6	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
--------	---	--------------------	---	---------------------	-----------

COMMENTS

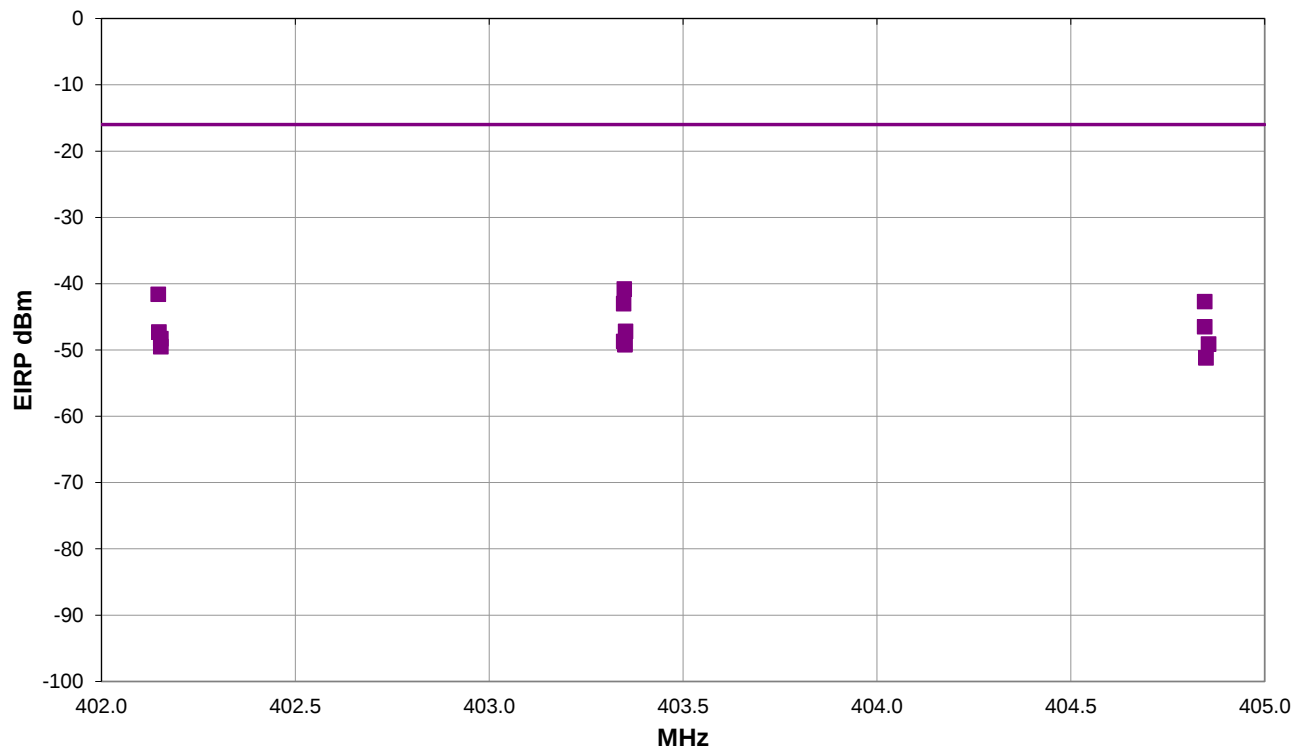
None

EUT OPERATING MODES

Transmitting MICS Low, Mid, and High Channels (402.15, 403.35, and 404.85 MHz), CW
--

DEVIATIONS FROM TEST STANDARD

None



Run #: 6

■ PK ◆ AV ● QP

RADIATED POWER (EIRP)

RESULTS - Run #6

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
403.348	1.61	2.9	Vert	PK	83.2E-9	-40.8	-16.0	-24.8	EUT Vert, Mid Ch
402.147	1.57	355.9	Vert	PK	69.2E-9	-41.6	-16.0	-25.6	EUT Vert, Low Ch
404.845	1.55	5.9	Vert	PK	53.7E-9	-42.7	-16.0	-26.7	EUT Vert, High Ch
403.347	1.6	318.9	Vert	PK	50.1E-9	-43.0	-16.0	-27.0	EUT On Side, Mid Ch
404.845	1.62	282.0	Vert	PK	22.4E-9	-46.5	-16.0	-30.5	EUT On Side, High Ch
403.352	1.24	62.0	Horz	PK	19.1E-9	-47.2	-16.0	-31.2	EUT On Side, Mid Ch
402.148	1.24	351.9	Horz	PK	18.6E-9	-47.3	-16.0	-31.3	EUT On Side, Mid Ch
402.153	1.59	304.9	Vert	PK	14.8E-9	-48.3	-16.0	-32.3	EUT On Side, Mid Ch
403.347	1.0	330.9	Vert	PK	13.5E-9	-48.7	-16.0	-32.7	EUT Horz, Mid Ch
404.855	1.22	51.0	Horz	PK	12.3E-9	-49.1	-16.0	-33.1	EUT On Side, High Ch
403.350	1.22	24.9	Horz	PK	12.3E-9	-49.1	-16.0	-33.1	EUT Horz, Mid Ch
403.350	1.21	274.0	Horz	PK	12.0E-9	-49.2	-16.0	-33.2	EUT Vert, Mid Ch
402.153	1.11	250.0	Horz	PK	11.2E-9	-49.5	-16.0	-33.5	EUT Vert, Low Ch
404.848	1.13	289.0	Horz	PK	7.6E-9	-51.2	-16.0	-35.2	EUT Vert, High Ch

CONCLUSION

Pass



Tested By

End of Test Report