



Boston Scientific Corporation

Gamera

FCC 95I:2013

FCC 15.109:2013

FCC 15.107:2013

Report #: BSTN0412



Report Prepared By Northwest EMC Inc.

NORTHWEST EMC – (888) 364-2378 – www.nwemc.com

California – Minnesota – Oregon – New York – Washington

**Last Date of Test: March 01, 2013
Boston Scientific Corporation
Model: Gamera**

Emissions

Test Description	Specification	Test Method	Pass/Fail
Field Strength of Fundamental	FCC 95I:2013, FCC 2.1046:2013	ANSI/TIA/EIA-603-C:2004	Pass
Emission Mask	FCC 95I:2013, FCC 2.1049:2013	ANSI/TIA/EIA-603-C:2004	Pass
Emission Bandwidth	FCC 95I:2013, FCC 2.1049:2013	ANSI/TIA/EIA-603-C:2004	Pass
Output Power	FCC 95I:2013, FCC 2.1046:2013	ANSI/TIA/EIA-603-C:2004	Pass
Frequency Stability	FCC 95I:2013, FCC 2.1055:2013	ANSI/TIA/EIA-603-C:2004	Pass
Spurious Radiated Emissions	FCC 95I:2013, FCC 2.1053:2013	ANSI/TIA/EIA-603-C:2004	Pass
Receiver Spurious Emissions	FCC 15.109:2013 Class B	ANSI C63.4:2009	Pass
AC Powerline Conducted Emissions - Receiver	FCC 15.107:2013	ANSI C63.10:2009	Pass

Deviations From Test Standards

None

Approved By:



Tim O'Shea, Operations Manager



NVLAP Lab Code: 200881-0

Test Facility

The measurement facility used to collect the data is located at:

Northwest EMC, Inc.
9349 W Broadway Ave.
Brooklyn Park, MN 55445

Phone: (763) 425-2281 Fax: (763) 424-3469

This site has been fully described in a report filed with and accepted by the FCC (Federal Communications Commission) and Industry Canada (Site filing #2834E-1).

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America.

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. This Report may only be duplicated in its entirety. 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.

REVISION HISTORY

Revision Number	Description	Date	Page Number
00	None		

Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

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 Guide 65 as a product certifier. This allows Northwest EMC to certify transmitters to FCC and IC specifications.

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

Canada

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

European Union

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

Australia/New Zealand

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

Korea

KCC / 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.

Hong Kong

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

Vietnam

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

Russia

GOST – Accredited by Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC to perform EMC and Hygienic testing for Information Technology products to GOST standards.

SCOPE

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

<http://www.nwemc.com/accreditations/>

Measurement Uncertainty

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

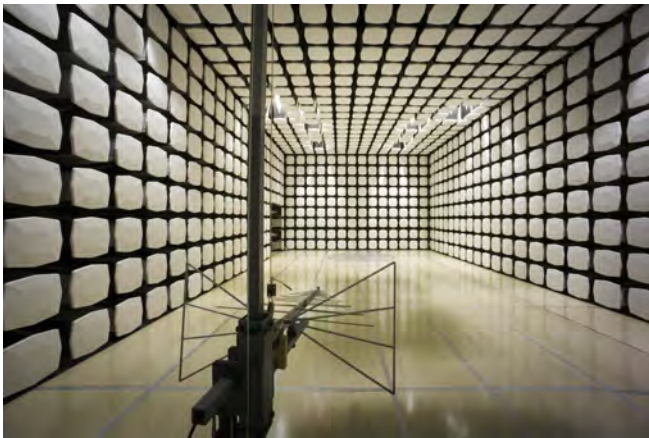
A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) for each test is listed below. Our measurement 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 16-4-1 as applicable), and are available upon request.

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

Test	+ MU	- MU
Frequency Accuracy (Hz)	0.12	-0.01
Amplitude Accuracy (dB)	0.49	-0.49
Conducted Power (dB)	0.41	-0.41
Radiated Power via Substitution (dB)	0.69	-0.68
Temperature (degrees C)	0.81	-0.81
Humidity (% RH)	2.89	-2.89
Field Strength (dB)	3.80	-3.80
AC Powerline Conducted Emissions (dB)	2.94	-2.94



Oregon Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	California Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	New York Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 685-0796	Minnesota Labs MN01-08 9349 W Broadway Ave. Brooklyn Park, MN 55445 (763) 425-2281	Washington Labs NC01-05, SU02, SU07 19201 120 th Ave. NE Bothell, WA 98011 (425) 984-6600
VCCI				
A-0108	A-0029		A-0109	A-0110
Industry Canada				
2834D-1, 2834D-2	2834B-1, 2834B-2, 2834B-3		2834E-1	2834C-1
NVLAP				
NVLAP Lab Code: 200630-0	NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200629-0



Client and Equipment Under Test (EUT) Information

Company Name:	Boston Scientific Corporation
Address:	4100 Hamline Avenue North
City, State, Zip:	St. Paul, MN 55112-5798
Test Requested By:	Pete Musto
Model:	Gamera
First Date of Test:	February 20, 2013
Last Date of Test:	March 01, 2013
Receipt Date of Samples:	February 20, 2013
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):

The Gamera device consists of a base module that is powered by the 3120 Programmer USB port (5V/500mA). The device must be connected to the programmer for testing. A standard 2m USB cable will be supplied with the device. The device has two internal PCB embedded antennas (antenna efficiency ~ -2dBi) that are switched to a single embedded transceiver. No allowance for an external antenna. The device has one transceiver that will use one antenna at a time for TX and RX and switch to the other antenna if link quality is poor. Follows LBT requirements but does not use the alternate channel allowance.

Other Device Radio Specifications:

- 402-405 MHz
- 10 channels
- 300kHz channel spacing
- FSK modulation
- TX data rate = 64 kbps
- RX data rate = 128 kbps
- TX frequency deviation = 32 kHz
- RX frequency deviation = 64 kHz
- TX power ~-16 dBm
- Temperature range: 10 – 35 degrees C.

Testing Objective:

Seeking FCC authorization for the MICS transmitter, FCC Part 95.

Configuration BSTN0412- 1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Gamera	Boston Scientific Corporation	3140	1000021

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Programmer	Boston Scientific Corporation	3120	060849
Keyboard	Dell	SK-8135	CD-ODJ425-71616-6BJ-06Z0

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
USB	Yes	2.0m	Yes	Gamera	Programmer
AC Power	No	2.4m	No	Programmer	AC Mains
USB	Yes	1.9m	Yes	Programmer	Keyboard

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2/20/2013	Field Strength of Fundamental	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	2/22/2013	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	2/22/2013	Receiver Spurious Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
4	2/27/2013	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
5	2/27/2013	Emission Mask	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
6	2/27/2013	Emission Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
7	2/28/2013	AC Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
8	3/1/2013	Frequency Stability	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

Field Strength of Fundamental

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 MICS, All ones (CW), Ant B, Ch: Low, Mid, High @ 402.15, 403.35, 404.85 MHz (See Comments)

Transmitting MICS, All ones (CW), Ant A, Ch: Low, Mid, High @ 402.15, 403.35, 404.85 MHz (See Comments)

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

BSTN0412 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	402 MHz	Stop Frequency	405 MHz
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SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Antenna, Bilog	Teseq	CBL 6141B	AYD	12/17/2012	12 mo
MN05 Cables	ESM Cable Corp.	Bilog Cables	MNH	5/31/2012	12 mo
Spectrum Analyzer	Agilent	E4446A	AAT	6/28/2012	24 mo

MEASUREMENT BANDWIDTHS

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

TEST DESCRIPTION

Per 95.627(g)(3), the maximum radiated field strength for a MICS transmitter is 18.2 mV/m. This is equivalent to a radiated field strength of 85.2 dBuV/m at 3 meters when measured over a reference ground plane. $85.2 = 20 * \text{LOG}(18.2 * 1000)$

The Field Strength of the Fundamental was measured in the far-field at an FCC Listed 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 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.

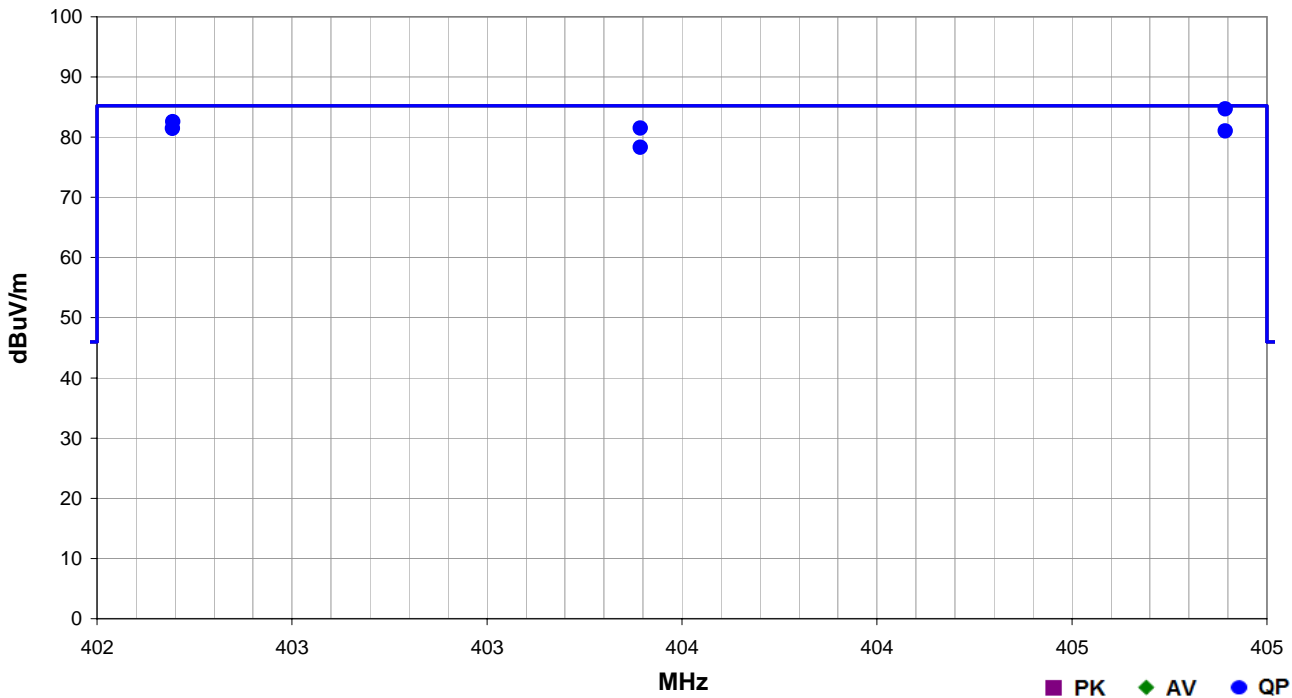


Field Strength of Fundamental

Work Order:	BSTN0412	Date:	02/20/13	<i>Trevor Buls</i>	
Project:	None	Temperature:	24.5 °C		
Job Site:	MN05	Humidity:	8.8% RH		
Serial Number:	1000021	Barometric Pres.:	1033.7 mbar		
EUT:				Tested by:	Trevor Buls
Configuration: 1					
Customer: Boston Scientific Corporation					
Attendees: None					
EUT Power: 110VAC/60Hz					
Operating Mode: Transmitting MICS, All ones (CW), Ant A, Ch: Low, Mid, High @ 402.15, 403.35, 404.85 MHz (See Comments)					
Deviations: None					
Comments: Per customer, the EUT was only tested in one position because this is how it will always be used during normal operation.					

Test Specifications	Test Method
FCC 95I:2013	ANSI/TIA/EIA-603-C:2004

Run #	1	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
404.894	62.7	22.0	1.2	254.0	3.0	0.0	Vert	QP	0.0	84.7	85.2	-0.5	High Ch
402.194	60.7	21.8	1.2	252.0	3.0	0.0	Vert	QP	0.0	82.5	85.2	-2.7	Low Ch
403.394	59.6	21.9	1.2	93.0	3.0	0.0	Vert	QP	0.0	81.5	85.2	-3.7	Mid Ch
402.194	59.6	21.8	1.9	281.0	3.0	0.0	Horz	QP	0.0	81.4	85.2	-3.8	Low Ch
404.894	59.0	22.0	1.7	210.0	3.0	0.0	Horz	QP	0.0	81.0	85.2	-4.2	High Ch
403.394	56.4	21.9	1.8	209.0	3.0	0.0	Horz	QP	0.0	78.3	85.2	-6.9	Mid Ch

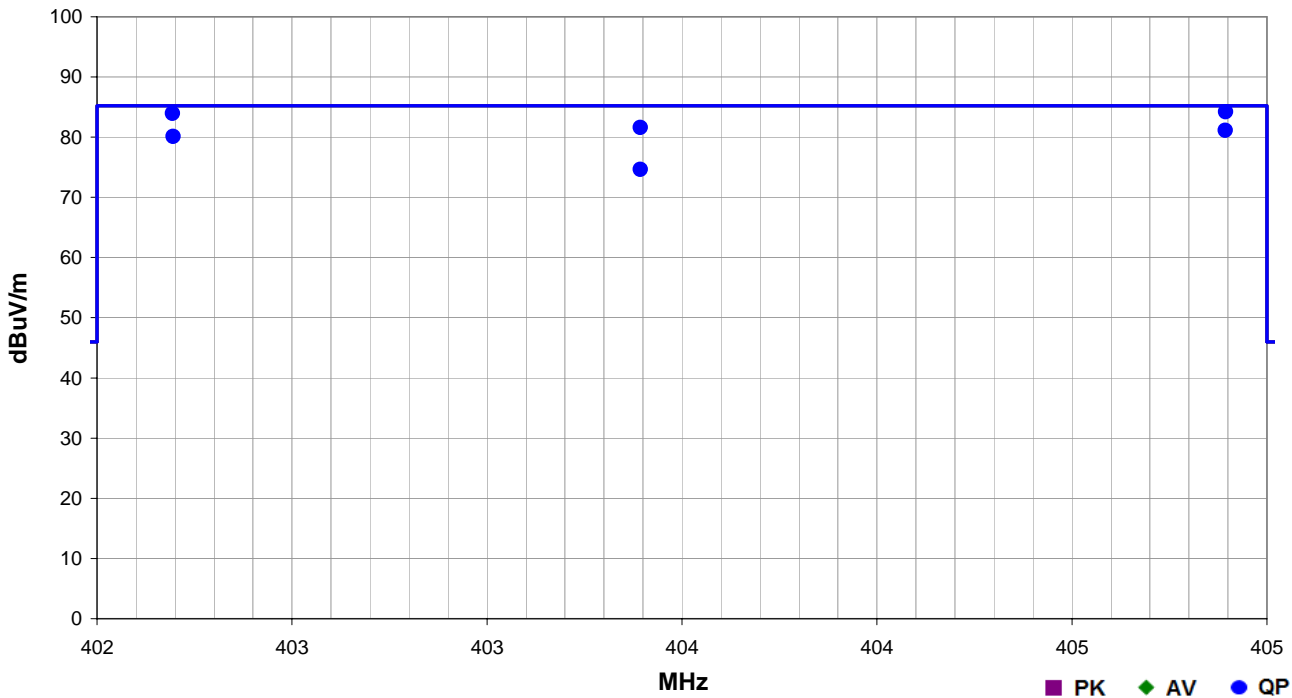


Field Strength of Fundamental

Work Order:	BSTN0412	Date:	02/20/13	<i>Trevor Buls</i>	
Project:	None	Temperature:	24.5 °C		
Job Site:	MN05	Humidity:	8.8% RH		
Serial Number:	1000021	Barometric Pres.:	1033.7 mbar		
EUT:				Tested by:	Trevor Buls
Configuration: 1					
Customer: Boston Scientific Corporation					
Attendees: None					
EUT Power: 110VAC/60Hz					
Operating Mode: Transmitting MICS, All ones (CW), Ant B, Ch: Low, Mid, High @ 402.15, 403.35, 404.85 MHz (See Comments)					
Deviations: None					
Comments: Per customer, the EUT was only tested in one position because this is how it will always be used during normal operation.					

Test Specifications	Test Method
FCC 95I:2013	ANSI/TIA/EIA-603-C:2004

Run #	2	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
404.894	62.2	22.0	1.2	250.0	3.0	0.0	Vert	QP	0.0	84.2	85.2	-1.0	High Ch
402.194	62.1	21.8	1.2	252.0	3.0	0.0	Vert	QP	0.0	83.9	85.2	-1.3	Low Ch
403.394	59.7	21.9	1.1	257.0	3.0	0.0	Vert	QP	0.0	81.6	85.2	-3.6	Mid Ch
404.894	59.1	22.0	1.9	213.0	3.0	0.0	Horz	QP	0.0	81.1	85.2	-4.1	High Ch
402.195	58.3	21.8	1.9	213.0	3.0	0.0	Horz	QP	0.0	80.1	85.2	-5.1	Low Ch
403.394	52.7	21.9	1.6	139.0	3.0	0.0	Horz	QP	0.0	74.6	85.2	-10.6	Mid Ch

Emissions Mask

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	4/19/2012	12
40 GHz DC block	Fairview Microwave	SD3379	AMI	10/5/2012	12
Signal Generator MXG	Agilent	N5183A	TIK	6/7/2012	36
Spectrum Analyzer	Agilent	E4440A	AAX	5/15/2012	24

TEST DESCRIPTION

Per 47 CFR 95.635(d)(4) 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 95.633(e)(1). 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.



Emissions Mask

XMit 2012.09.20
PsaTx 2013.02.27

EUT: Gamera	Work Order: BSTN0412
Serial Number: 1000021	Date: 02/27/13
Customer: Boston Scientific Corporation	Temperature: 24.9°C
Attendees: None	Humidity: 17%
Project: None	Barometric Pres.: 1012.3
Tested by: Trevor Buls	Power: 110VAC/60Hz
	Job Site: MN08

TEST SPECIFICATIONS	
FCC 95:2013	Test Method: ANSI/TIA/EIA-603-C-2004

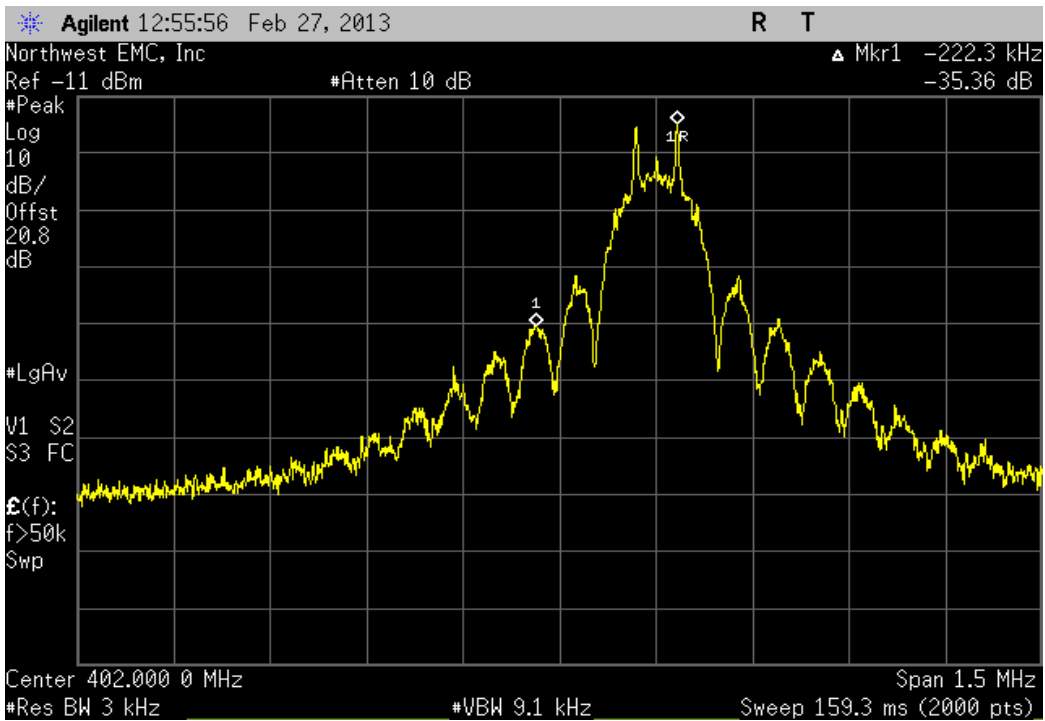
COMMENTS
Customer states that the results from both antenna ports are equivalent, so only Antenna A will be measured.

DEVIATIONS FROM TEST STANDARD
None

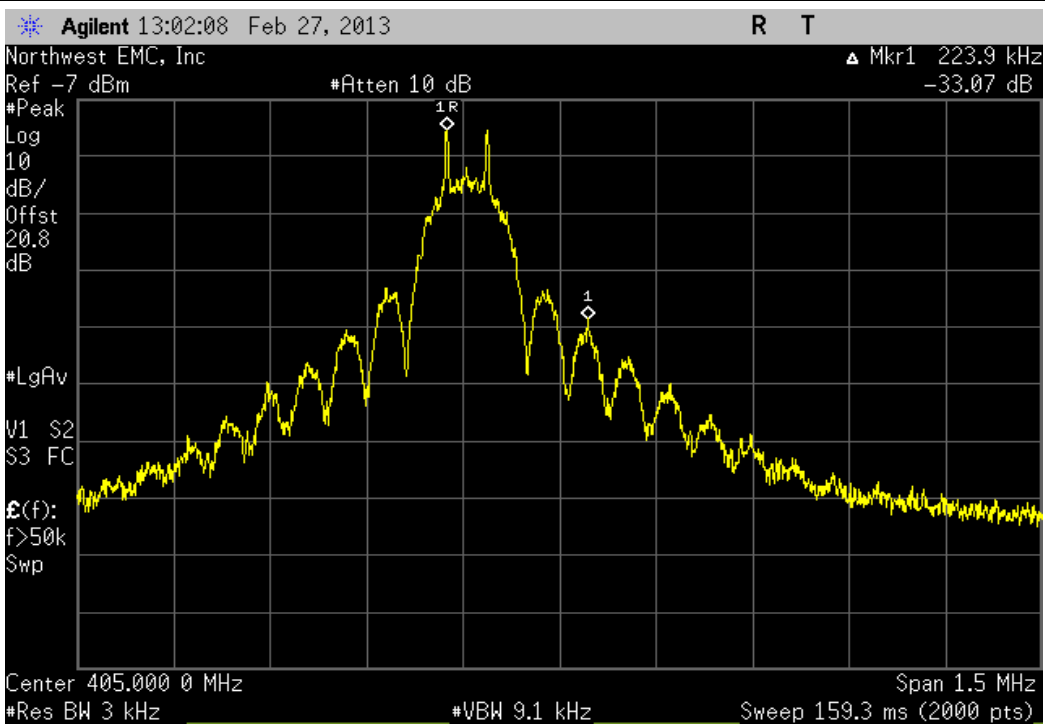
Configuration #	1	Signature	<i>Trevor Buls</i>
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	Value	Limit	Result
Low Channel, 402.15 MHz	-35.36 dBc	≤ -20 dBc	Pass
High Channel, 404.85 MHz	-33.07 dBc	≤ -20 dBc	Pass

Low Channel, 402.15 MHz			
	Value	Limit	Result
	-35.36 dBc	≤ -20 dBc	Pass



High Channel, 404.85 MHz			
	Value	Limit	Result
	-33.07 dBc	≤ -20 dBc	Pass



Emission Bandwidth

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	4/19/2012	12
40 GHz DC block	Fairview Microwave	SD3379	AMI	10/5/2012	12
Signal Generator MXG	Agilent	N5183A	TIK	6/7/2012	36
Spectrum Analyzer	Agilent	E4440A	AAX	5/15/2012	24

TEST DESCRIPTION

Per 47 CFR 95.633(e)(3), 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.



Emission Bandwidth

XMit 2012.09.20
PsaTx 2013.02.27

EUT: Gamera	Work Order: BSTN0412
Serial Number: 1000021	Date: 02/27/13
Customer: Boston Scientific Corporation	Temperature: 24.9°C
Attendees: None	Humidity: 17%
Project: None	Barometric Pres.: 1012.3
Tested by: Trevor Buls	Power: 110VAC/60Hz
	Job Site: MN08

TEST SPECIFICATIONS	
FCC 95:2013	ANSI/TIA/EIA-603-C-2004
Test Method	

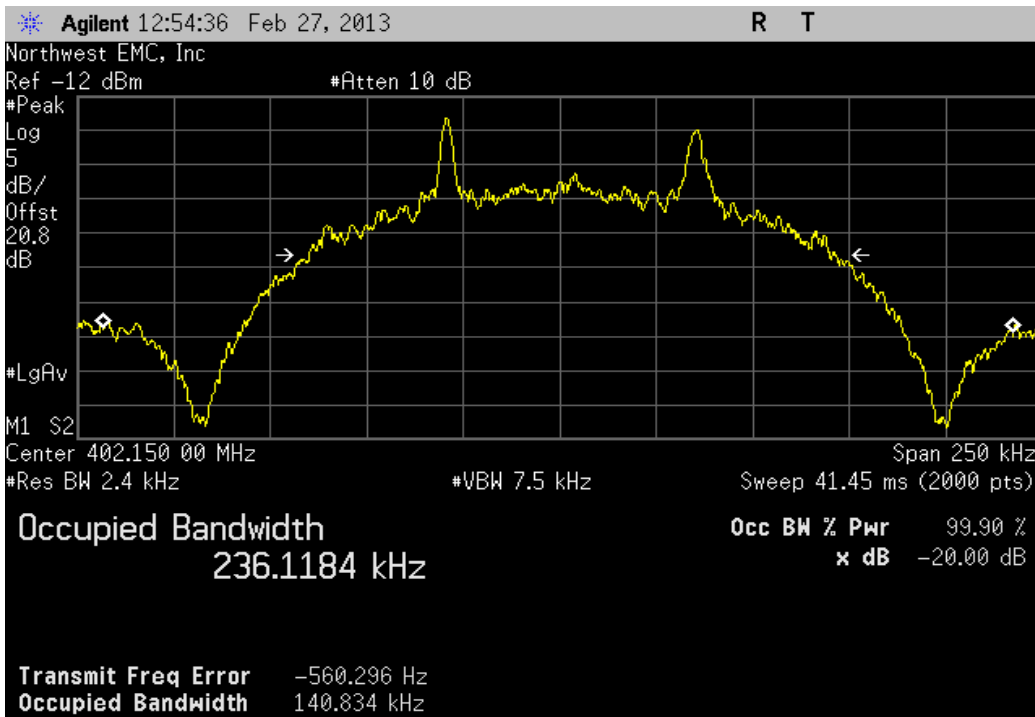
COMMENTS
Customer states that the results from both antenna ports are equivalent, so only Antenna A will be measured.

DEVIATIONS FROM TEST STANDARD
None

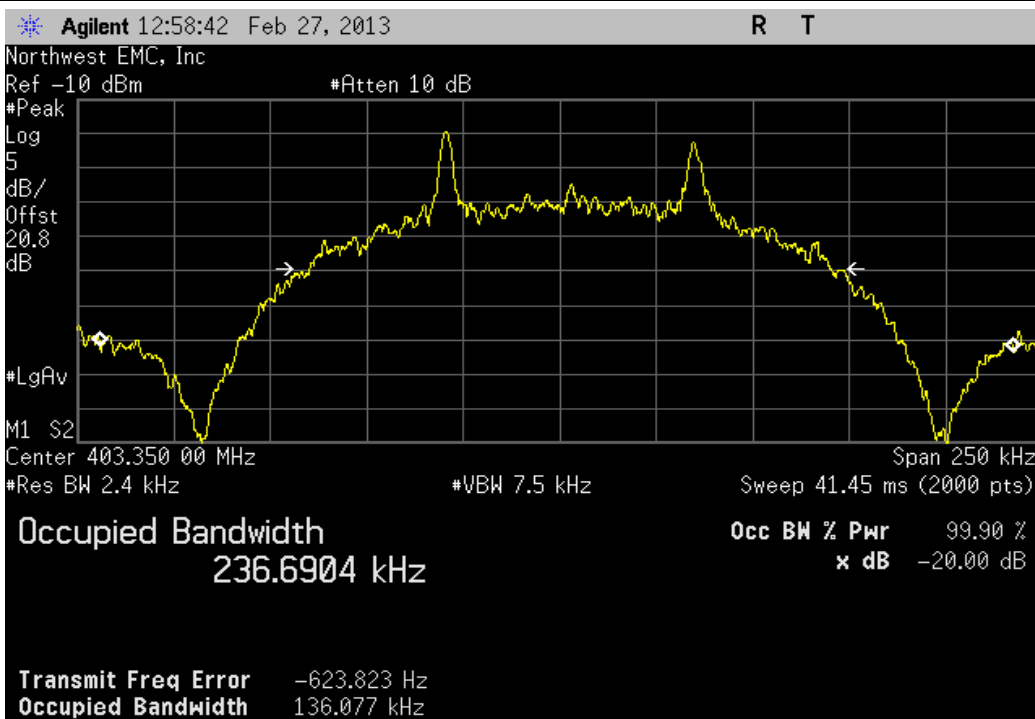
Configuration #	1	Signature <i>Trevor Buls</i>
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	Value	Limit	Result
Low Channel, 402.15 MHz	140.834 kHz	≤ 300 kHz	Pass
Mid Channel, 403.35 MHz	136.077 kHz	≤ 300 kHz	Pass
High Channel, 404.85 MHz	141.186 kHz	≤ 300 kHz	Pass

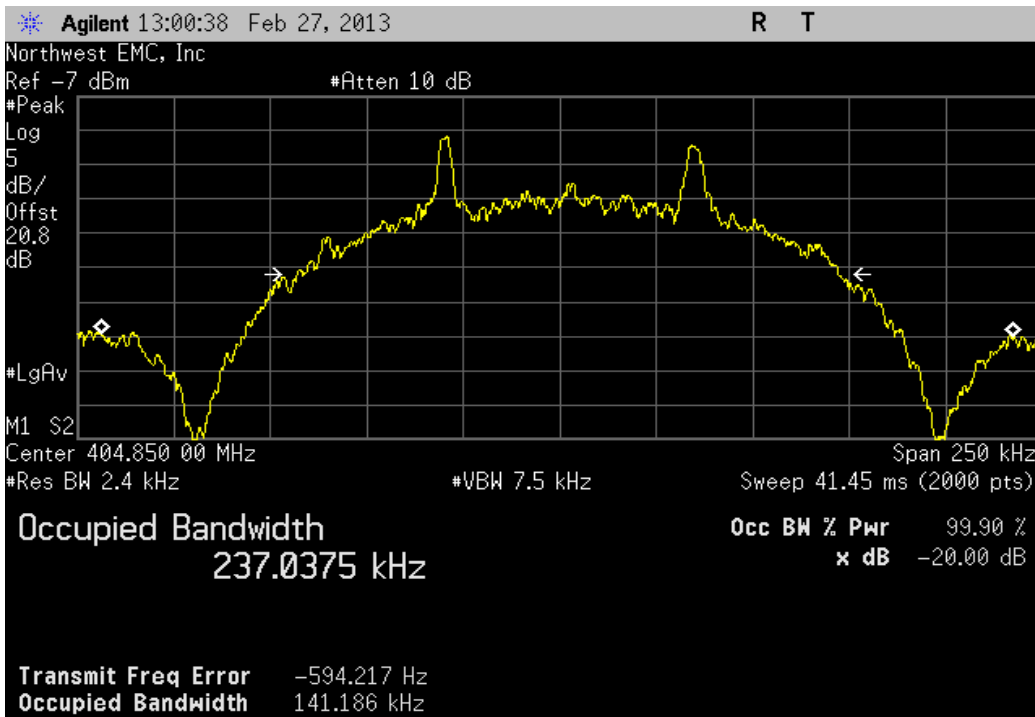
Low Channel, 402.15 MHz			
	Value	Limit	Result
	140.834 kHz	≤ 300 kHz	Pass



Mid Channel, 403.35 MHz			
	Value	Limit	Result
	136.077 kHz	≤ 300 kHz	Pass



High Channel, 404.85 MHz			
	Value	Limit	Result
	141.186 kHz	≤ 300 kHz	Pass



Output Power

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	4/19/2012	12
40 GHz DC block	Fairview Microwave	SD3379	AMI	10/5/2012	12
Signal Generator MXG	Agilent	N5183A	TIK	6/7/2012	36
Spectrum Analyzer	Agilent	E4440A	AAX	5/15/2012	24

TEST DESCRIPTION

Per FCC Part 2.1046, RSS-GEN, the output power shall be measured at the RF terminal. The peak output power was measured with the EUT set to low, medium and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The EUT was transmitting at its maximum data rate. FCC Part 95 and RSS-243 have no conducted output power limit. It is a requirement to characterize this information and that data is contained within this datasheet.



Output Power

XMit 2012.09.20
PsaTx 2013.02.27

EUT: Gamera	Work Order: BSTN0412
Serial Number: 1000021	Date: 02/27/13
Customer: Boston Scientific Corporation	Temperature: 24.9°C
Attendees: None	Humidity: 17%
Project: None	Barometric Pres.: 1012.3
Tested by: Trevor Buls	Power: 110VAC/60Hz
	Job Site: MN08

TEST SPECIFICATIONS	
FCC 95:2013	Test Method
	ANSI/TIA/EIA-603-C-2004

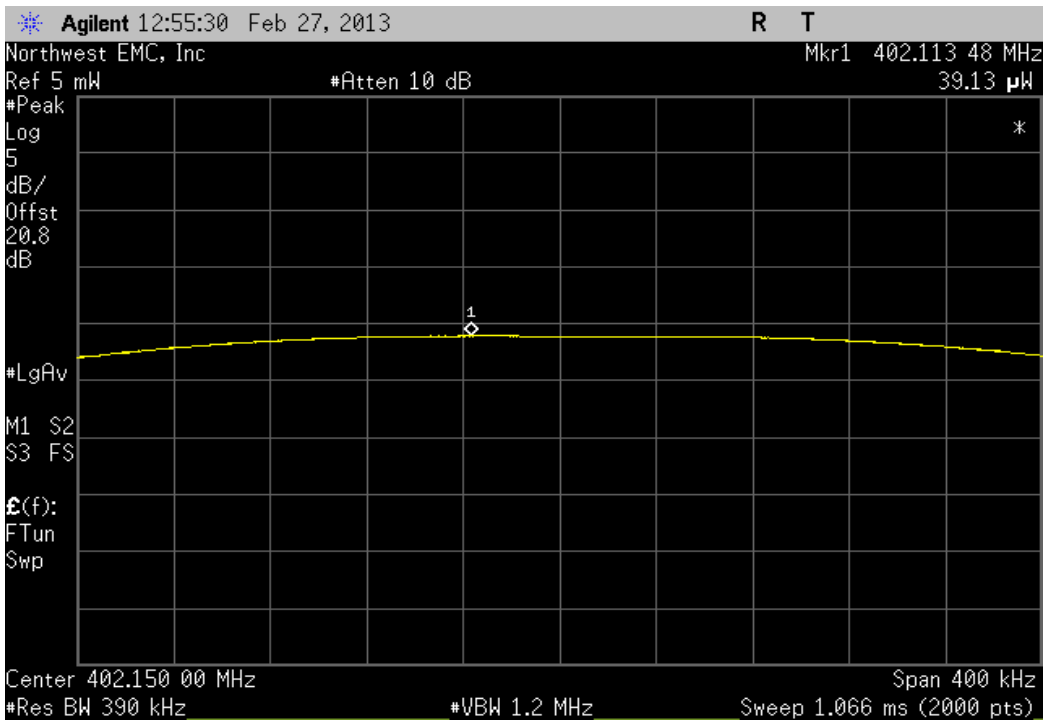
COMMENTS
Customer states that the results from both antenna ports are equivalent, so only Antenna A will be measured.

DEVIATIONS FROM TEST STANDARD
None

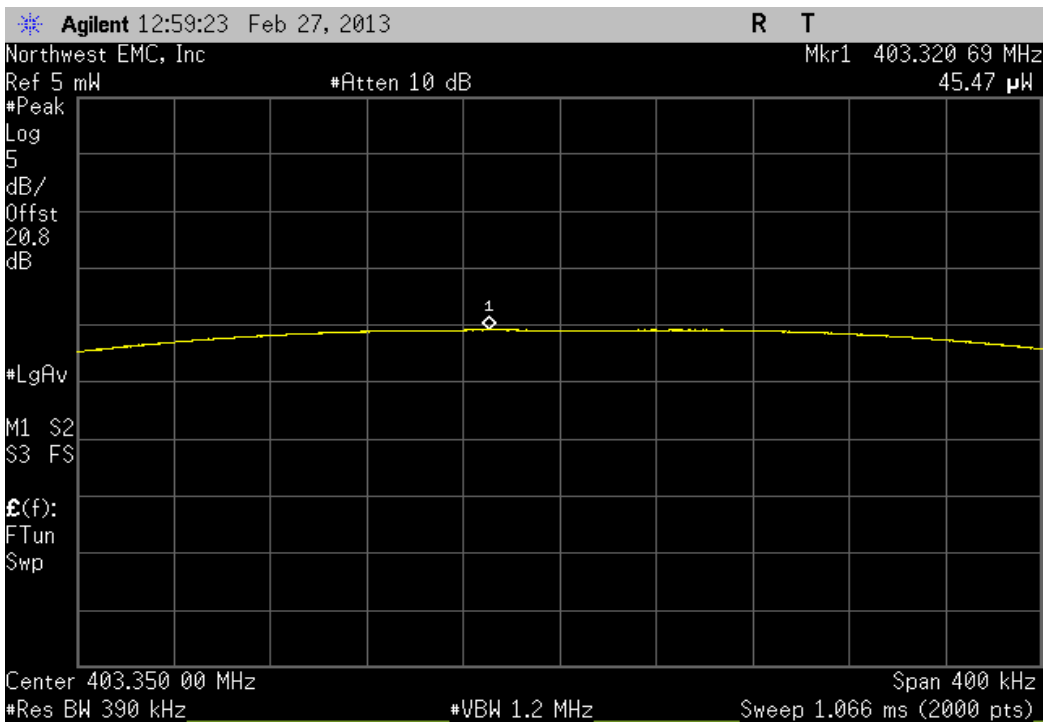
Configuration #	1	Signature	<i>Trevor Buls</i>
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	Value	Limit	Result
Low Channel, 402.15 MHz	39.129 uW	N/A	N/A
Mid Channel, 403.35 MHz	45.467 uW	N/A	N/A
High Channel, 404.85 MHz	86.596 uW	N/A	N/A

Low Channel, 402.15 MHz			
	Value	Limit	Result
	39.129 uW	N/A	N/A

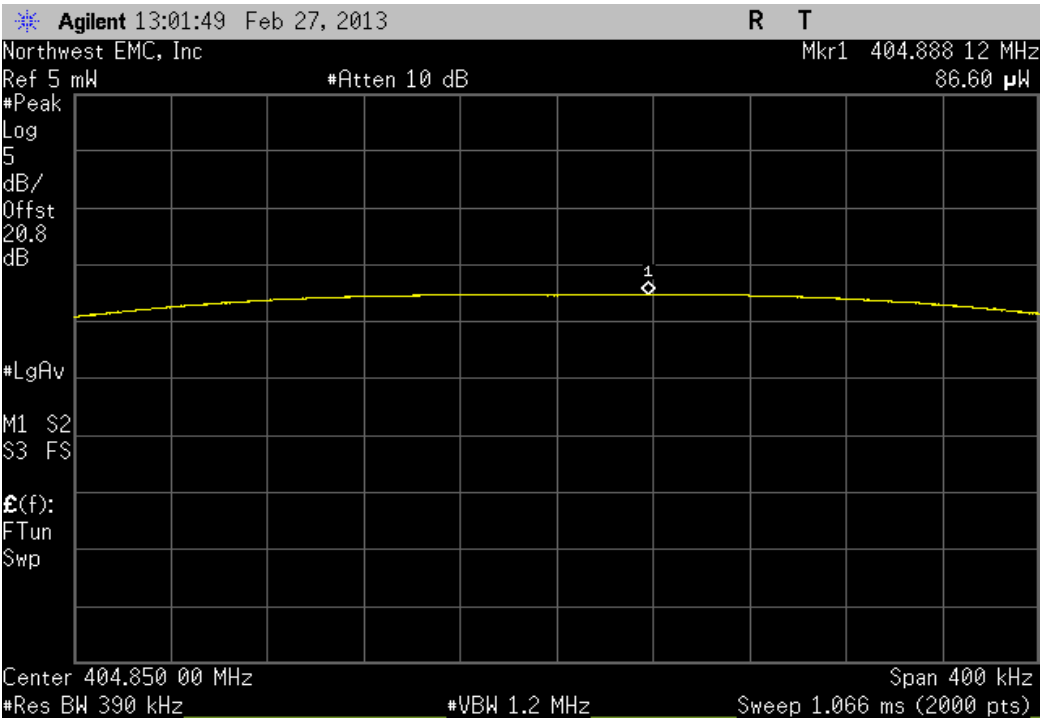


Mid Channel, 403.35 MHz			
	Value	Limit	Result
	45.467 uW	N/A	N/A



High Channel, 404.85 MHz

Value	Limit	Result
86.596 uW	N/A	N/A



Frequency Stability

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Variable Transformer	Powerstat	246	XFR	NCR	0
Multimeter	Fluke	114	MMU	7/8/2011	24
Humidity Temperature Meter	Omega Engineering, Inc.	HH31	DUB	10/25/2011	24
Temp./Humidity Chamber	Cincinnati Sub Zero (CSZ)	ZPH-32-3.5-SCT/AC	TBF	NCR	0
40 GHz DC block	Fairview Microwave	SD3379	AMI	10/5/2012	12
Attenuator - 20db, 'SMA'	SM Electronics	SA26B-20	RFW	4/19/2012	12
Spectrum Analyzer	Agilent	E4440A	AAX	5/15/2012	24

TEST DESCRIPTION

Variation of Supply Voltage

The primary supply voltage was varied from 85% to 115% of the nominal voltage. A variable AC transformer was used to vary the supply voltage.

Variation of Ambient Temperature

Using a temperature chamber, the transmit frequency was recorded at the extremes of the specified temperature range (+55°C to 0°C) in 10°C increments .

The Frequency Stability was measured using a direct connection to 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.

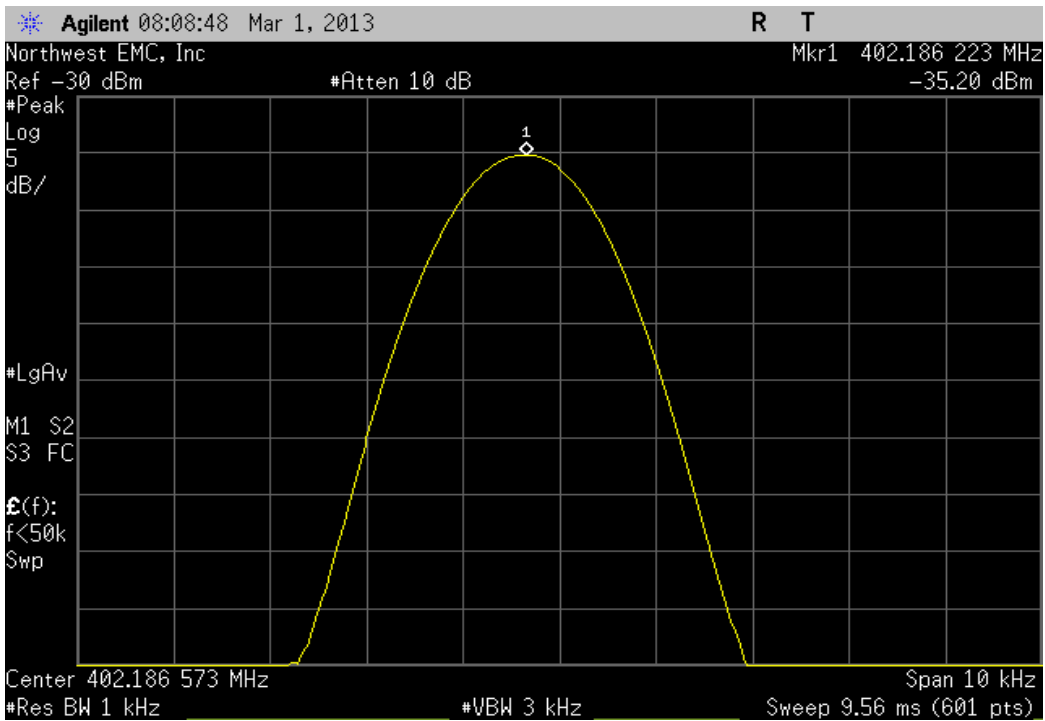


Frequency Stability

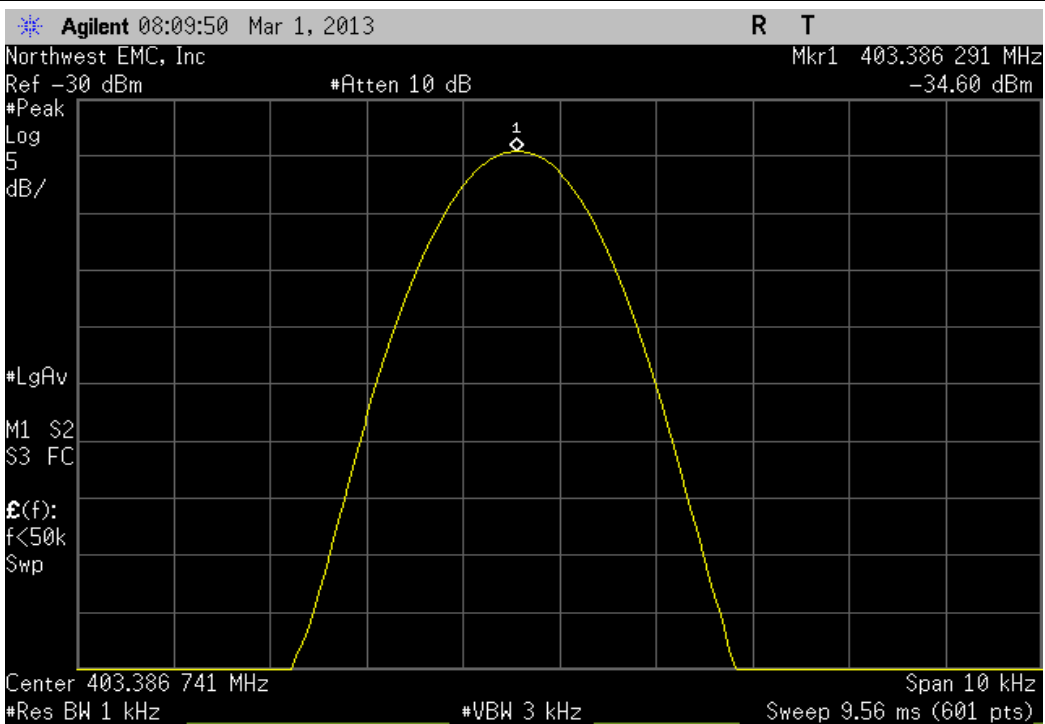
XMit 2013.02.28
PsaTx 2013.02.27

EUT: Gamera		Work Order: BSTN0412				
Serial Number: 1000021		Date: 03/01/13				
Customer: Boston Scientific Corporation		Temperature: 23.9°C				
Attendees: None		Humidity: 15%				
Project: None		Barometric Pres.: 1028.1				
Tested by: Trevor Buls		Power: 110VAC/60Hz		Job Site: MN08		
TEST SPECIFICATIONS		Test Method				
FCC 95:2013		ANSI/TIA/EIA-603-C-2004				
COMMENTS						
Customer states that the results from both antenna ports are equivalent, so only Antenna A will be measured. Voltage range varied from 93.5 VAC to 126.5 VAC.						
DEVIATIONS FROM TEST STANDARD						
None						
Configuration #	1	Signature <i>Trevor Buls</i>				
		Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result
Normal Voltage						
	Low Channel, 402.15 MHz	402.186223	402.15	90.1	100	Pass
	Mid Channel, 403.35 MHz	403.386291	403.35	90	100	Pass
	High Channel, 404.85 MHz	404.886041	404.85	89	100	Pass
Extreme Voltage +15%						
	Low Channel, 402.15 MHz	402.186073	402.15	89.7	100	Pass
	Mid Channel, 403.35 MHz	403.386206	403.35	89.8	100	Pass
	High Channel, 404.85 MHz	404.885958	404.85	88.8	100	Pass
Extreme Voltage -15%						
	Low Channel, 402.15 MHz	402.186023	402.15	89.6	100	Pass
	Mid Channel, 403.35 MHz	403.386175	403.35	89.7	100	Pass
	High Channel, 404.85 MHz	404.885924	404.85	88.7	100	Pass
Extreme Temperature +55°C						
	Low Channel, 402.15 MHz	402.181498	402.15	78.3	100	Pass
	Mid Channel, 403.35 MHz	403.381633	403.35	78.4	100	Pass
	High Channel, 404.85 MHz	404.881399	404.85	77.6	100	Pass
Extreme Temperature +50°C						
	Low Channel, 402.15 MHz	402.181882	402.15	79.3	100	Pass
	Mid Channel, 403.35 MHz	403.382017	403.35	79.4	100	Pass
	High Channel, 404.85 MHz	404.881783	404.85	78.5	100	Pass
Extreme Temperature +40°C						
	Low Channel, 402.15 MHz	402.183301	402.15	82.8	100	Pass
	Mid Channel, 403.35 MHz	403.383452	403.35	82.9	100	Pass
	High Channel, 404.85 MHz	404.883219	404.85	82	100	Pass
Extreme Temperature +30°C						
	Low Channel, 402.15 MHz	402.184603	402.15	86	100	Pass
	Mid Channel, 403.35 MHz	403.384737	403.35	86.1	100	Pass
	High Channel, 404.85 MHz	404.884539	404.85	85.3	100	Pass
Extreme Temperature +20°C						
	Low Channel, 402.15 MHz	402.186006	402.15	89.5	100	Pass
	Mid Channel, 403.35 MHz	403.386158	403.35	89.6	100	Pass
	High Channel, 404.85 MHz	404.885925	404.85	88.7	100	Pass
Extreme Temperature +10°C						
	Low Channel, 402.15 MHz	402.187224	402.15	92.6	100	Pass
	Mid Channel, 403.35 MHz	403.38736	403.35	92.6	100	Pass
	High Channel, 404.85 MHz	404.887145	404.85	91.8	100	Pass
Extreme Temperature 0°C						
	Low Channel, 402.15 MHz	402.187992	402.15	94.5	100	Pass
	Mid Channel, 403.35 MHz	403.388127	403.35	94.5	100	Pass
	High Channel, 404.85 MHz	404.887912	404.85	93.6	100	Pass

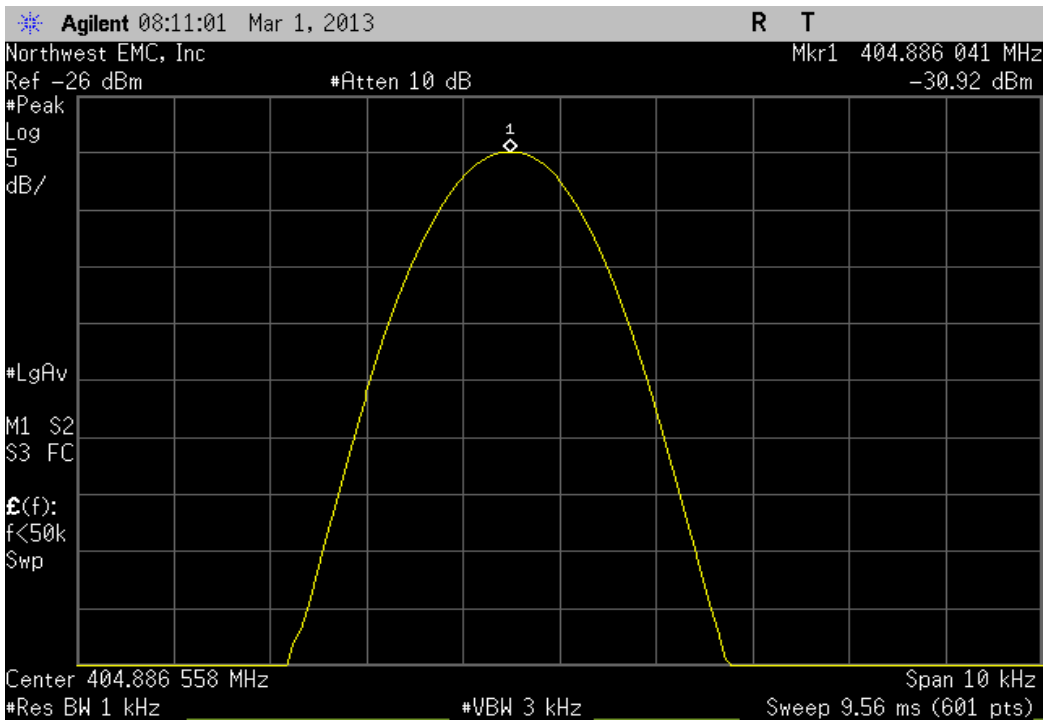
Normal Voltage, Low Channel, 402.15 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
402.186223	402.15	90.1	100	Pass	



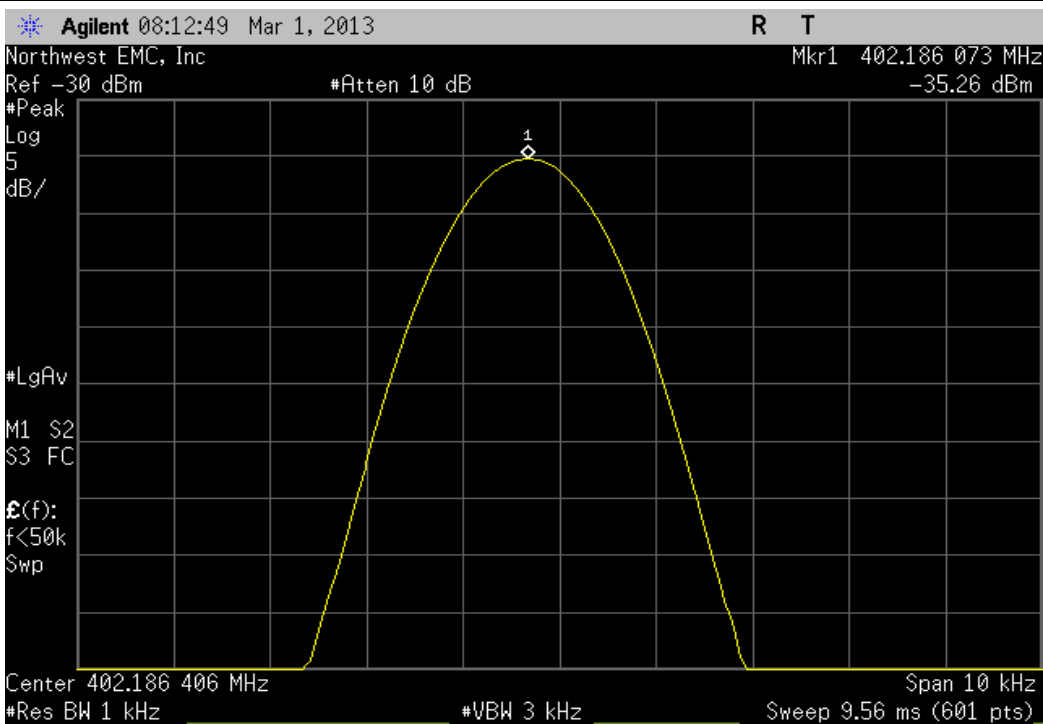
Normal Voltage, Mid Channel, 403.35 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
403.386291	403.35	90	100	Pass	



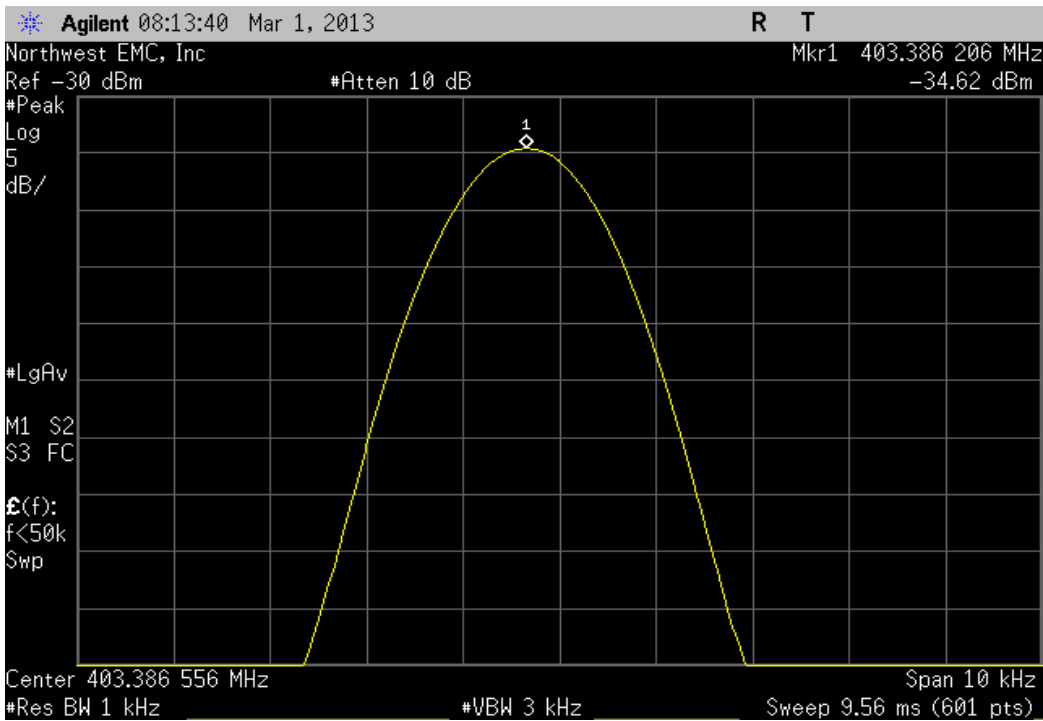
Normal Voltage, High Channel, 404.85 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
404.886041	404.85	89	100	Pass	



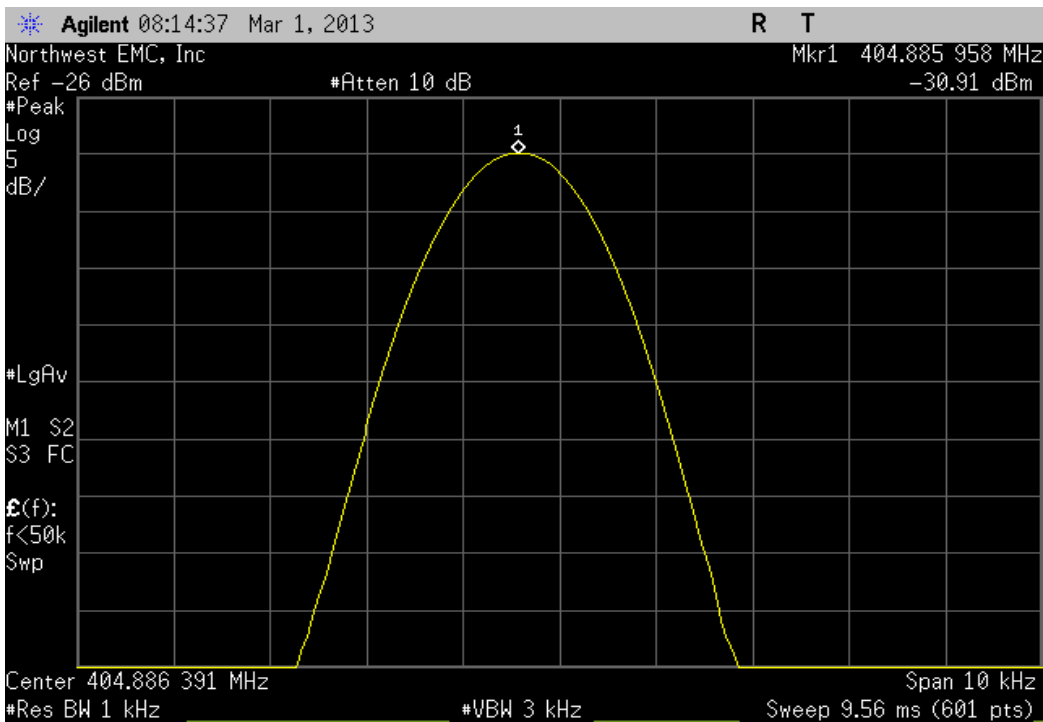
Extreme Voltage +15%, Low Channel, 402.15 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
402.186073	402.15	89.7	100	Pass	



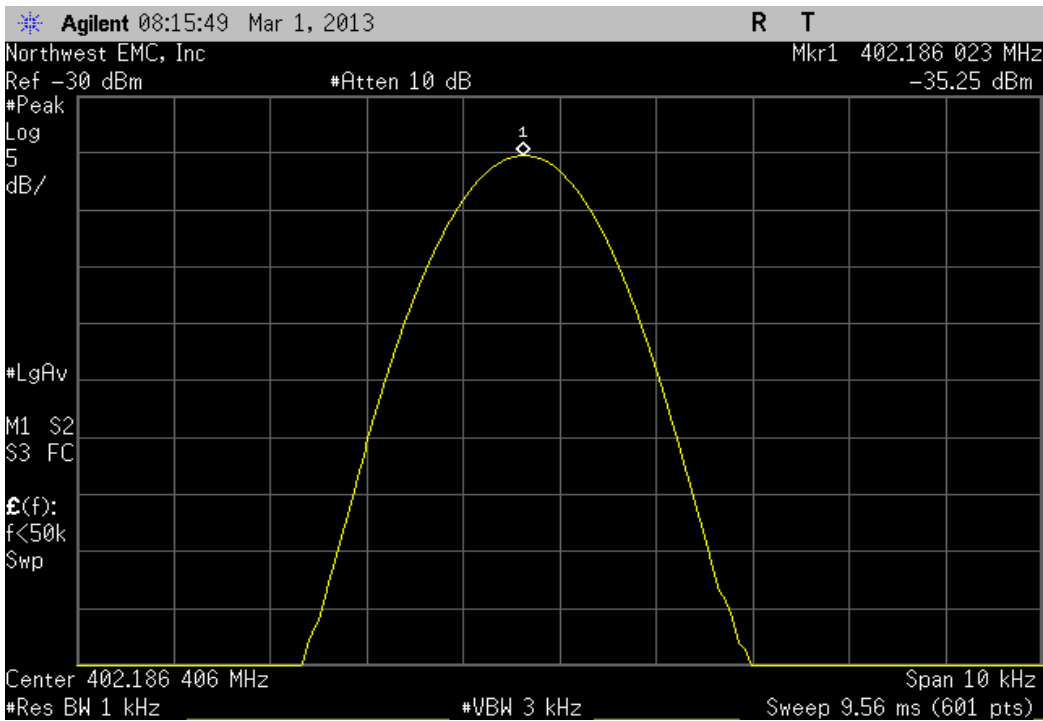
Extreme Voltage +15%, Mid Channel, 403.35 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
403.386206	403.35	89.8	100	Pass	



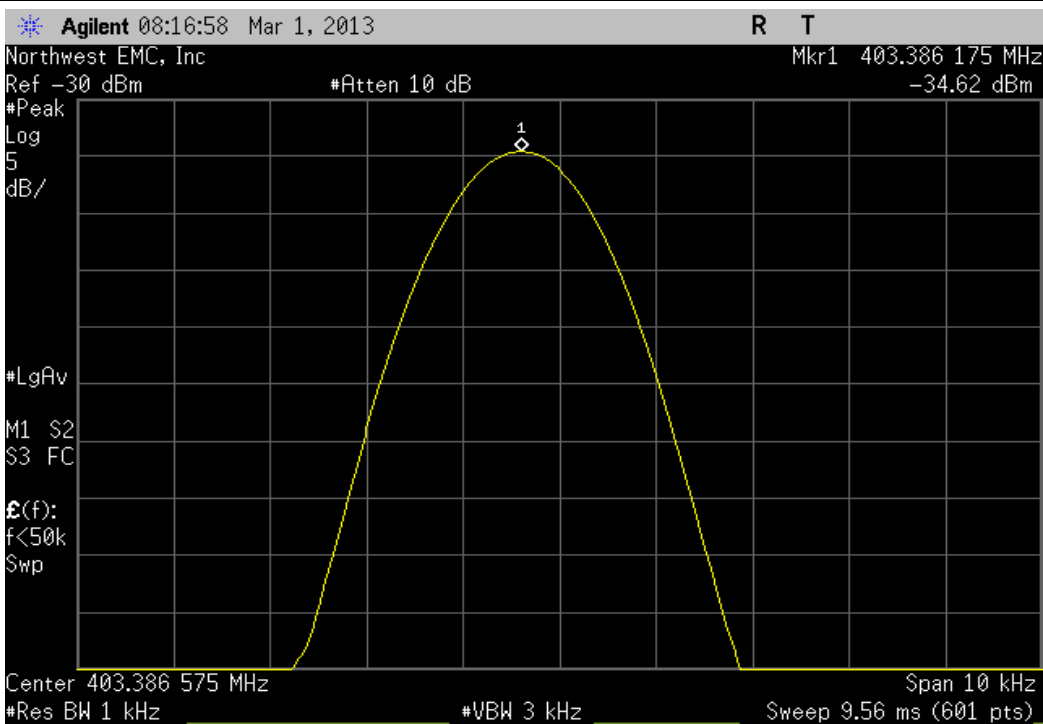
Extreme Voltage +15%, High Channel, 404.85 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
404.885958	404.85	88.8	100	Pass	



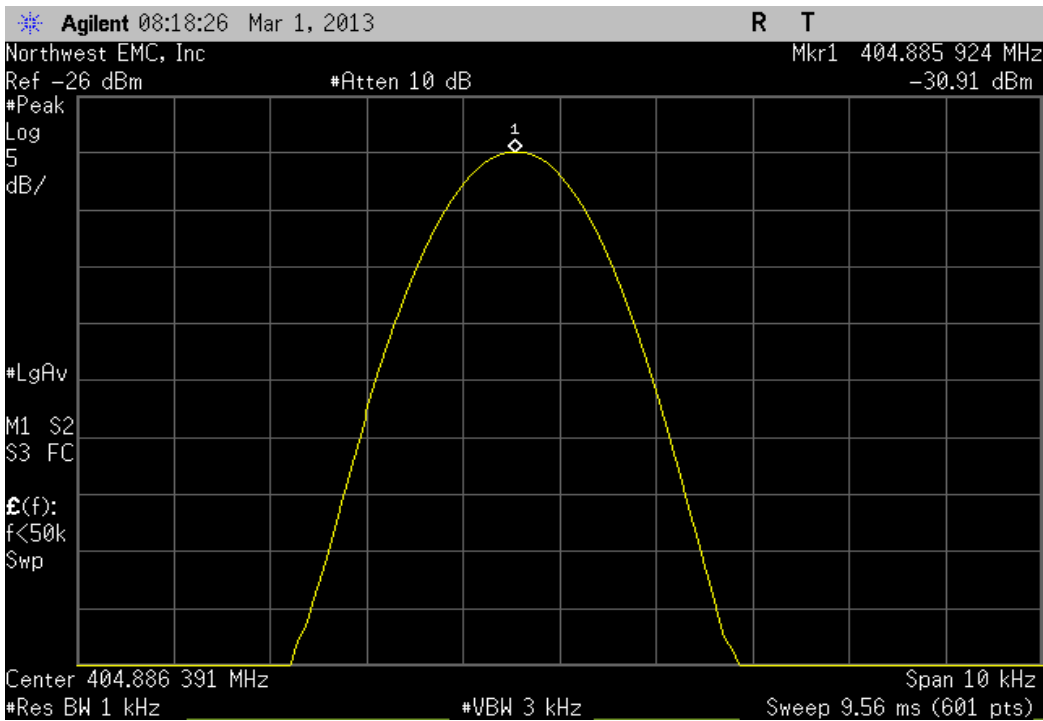
Extreme Voltage -15%, Low Channel, 402.15 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
402.186023	402.15	89.6	100	Pass	



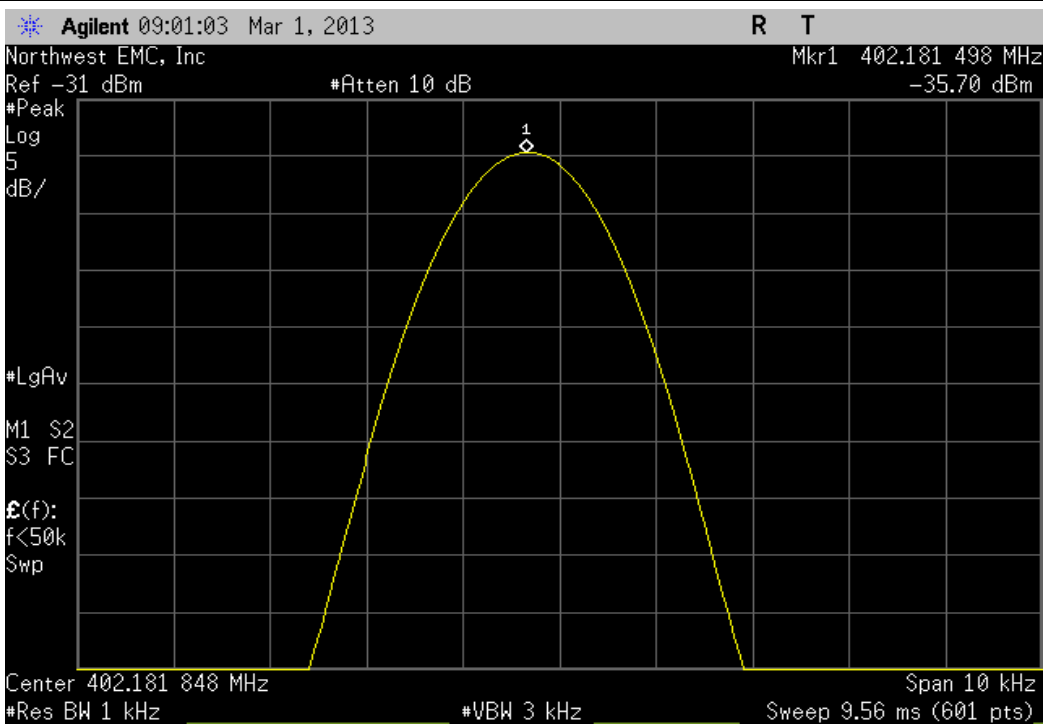
Extreme Voltage -15%, Mid Channel, 403.35 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
403.386175	403.35	89.7	100	Pass	



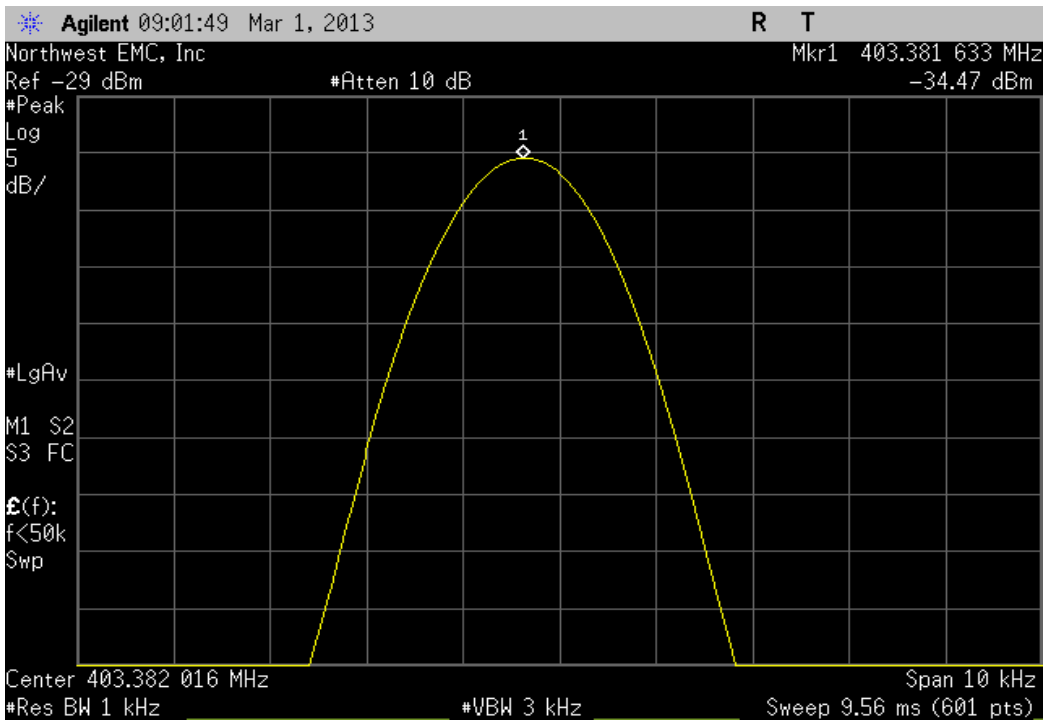
Extreme Voltage -15%, High Channel, 404.85 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
404.885924	404.85	88.7	100	Pass	



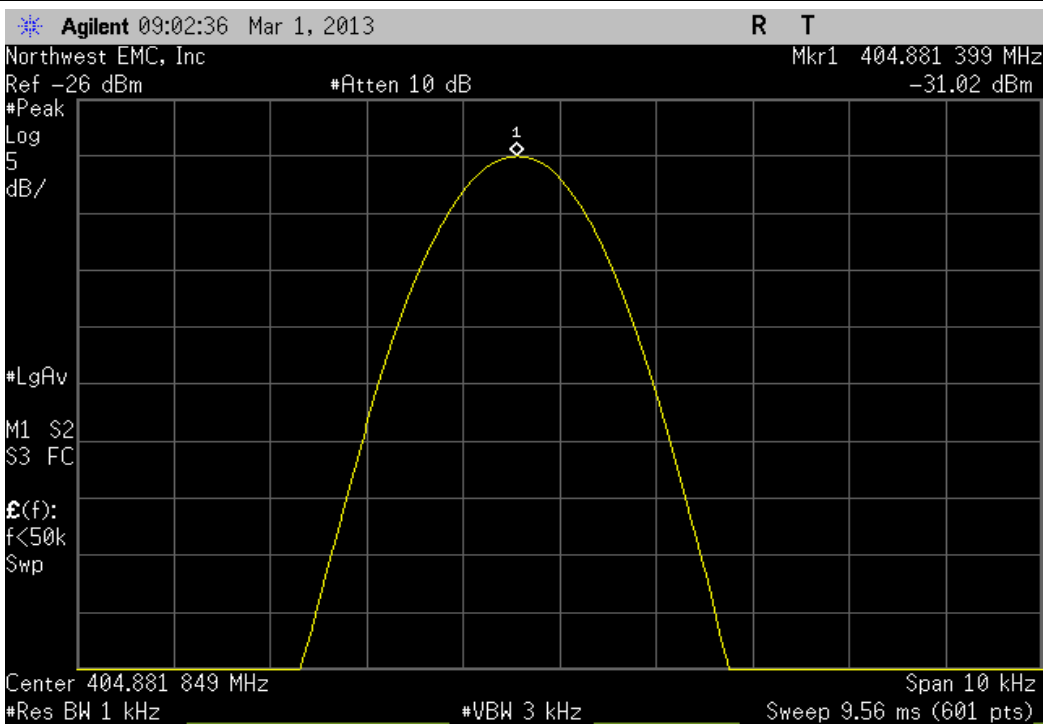
Extreme Temperature +55°C, Low Channel, 402.15 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
402.181498	402.15	78.3	100	Pass	



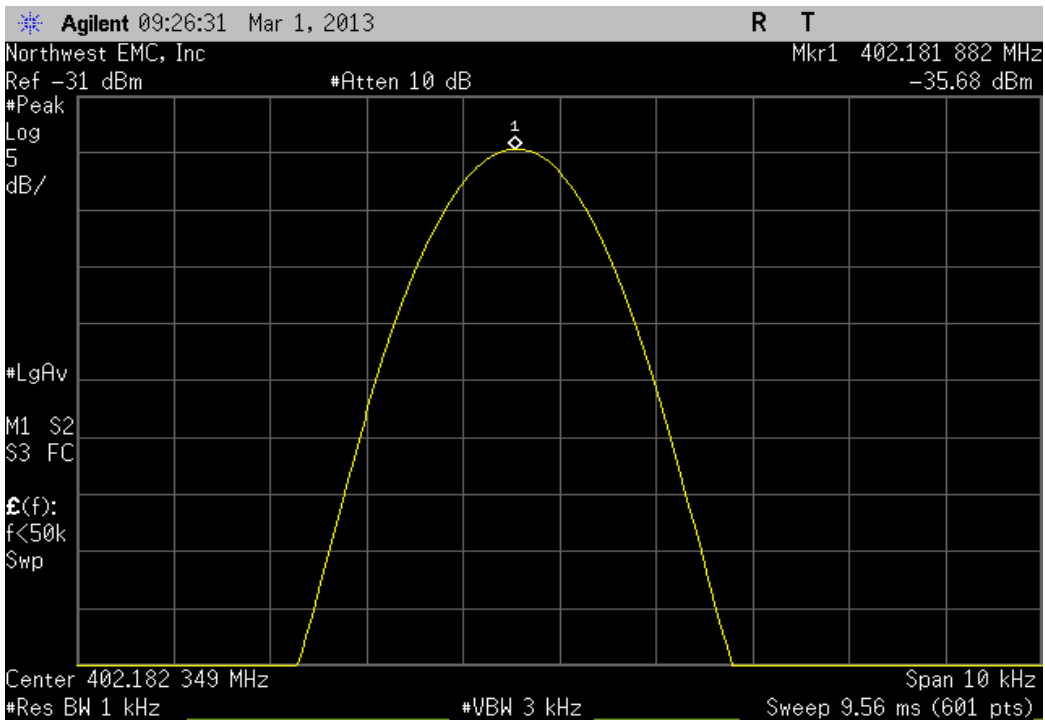
Extreme Temperature +55°C, Mid Channel, 403.35 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
403.381633	403.35	78.4	100	Pass	



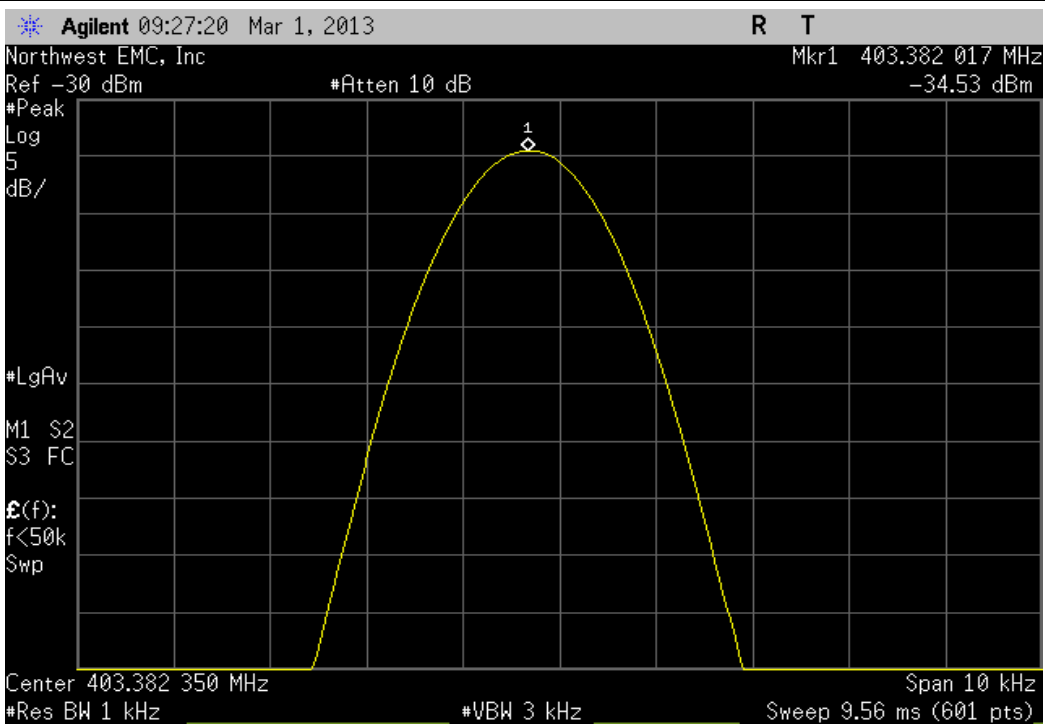
Extreme Temperature +55°C, High Channel, 404.85 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
404.881399	404.85	77.6	100	Pass	



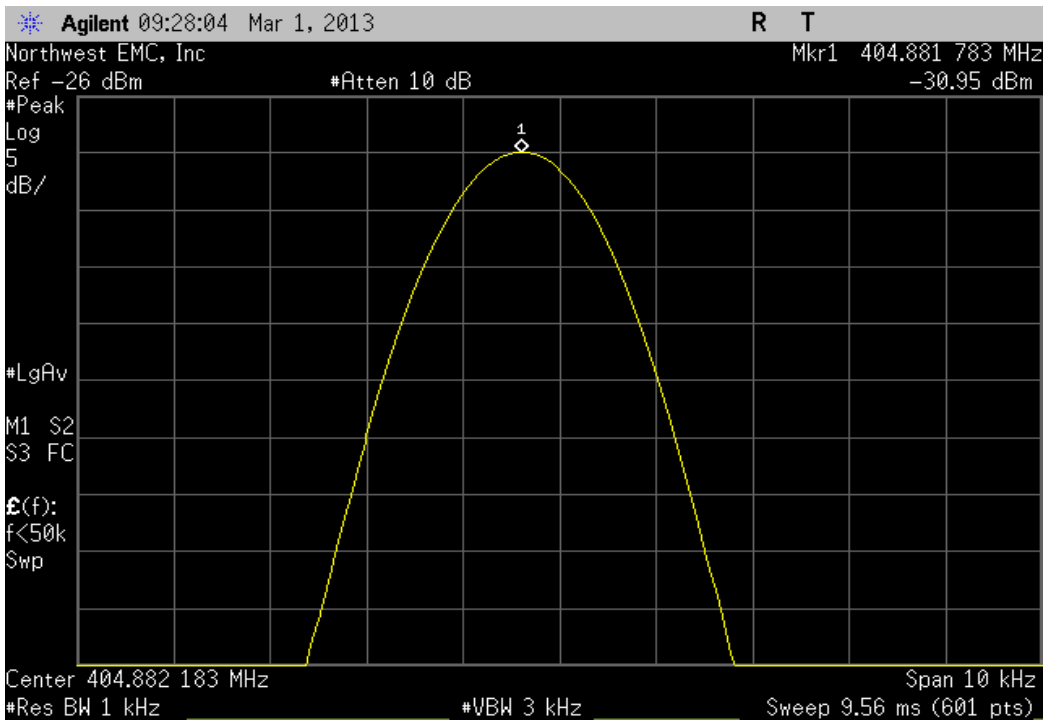
Extreme Temperature +50°C, Low Channel, 402.15 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
402.181882	402.15	79.3	100	Pass	



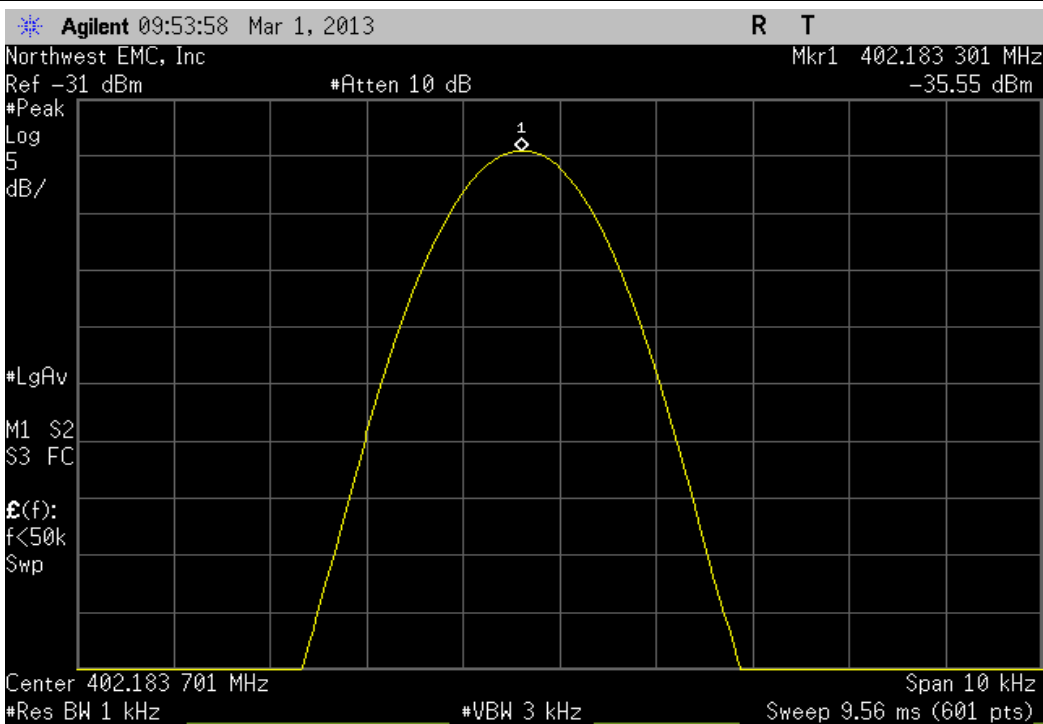
Extreme Temperature +50°C, Mid Channel, 403.35 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
403.382017	403.35	79.4	100	Pass	



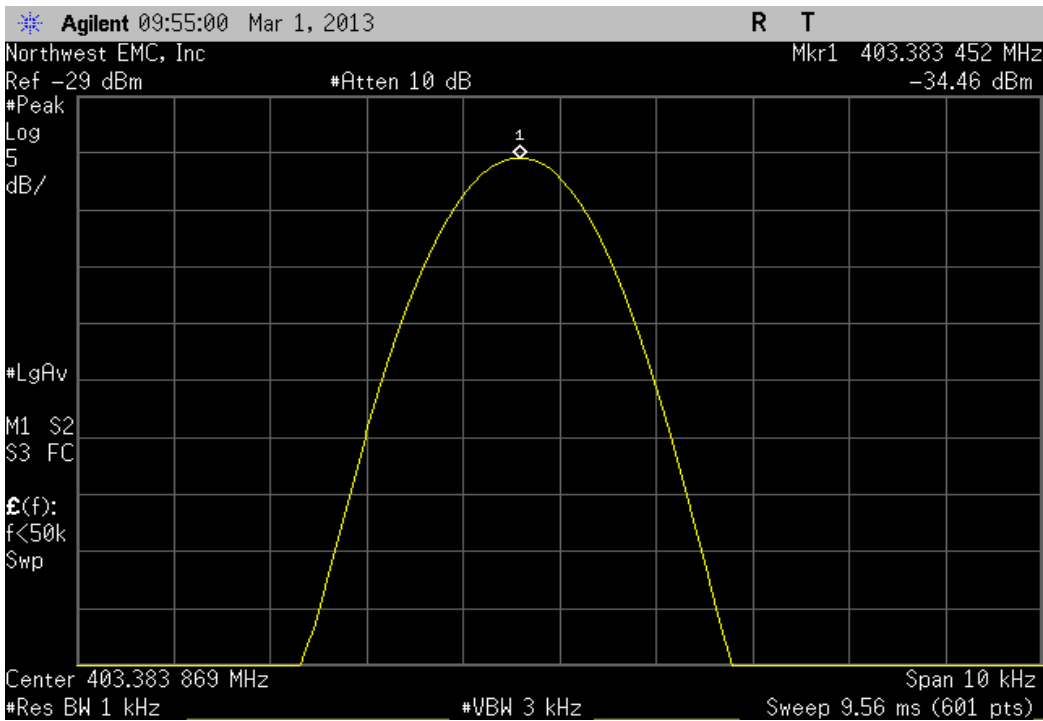
Extreme Temperature +50°C, High Channel, 404.85 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
404.881783	404.85	78.5	100	Pass	



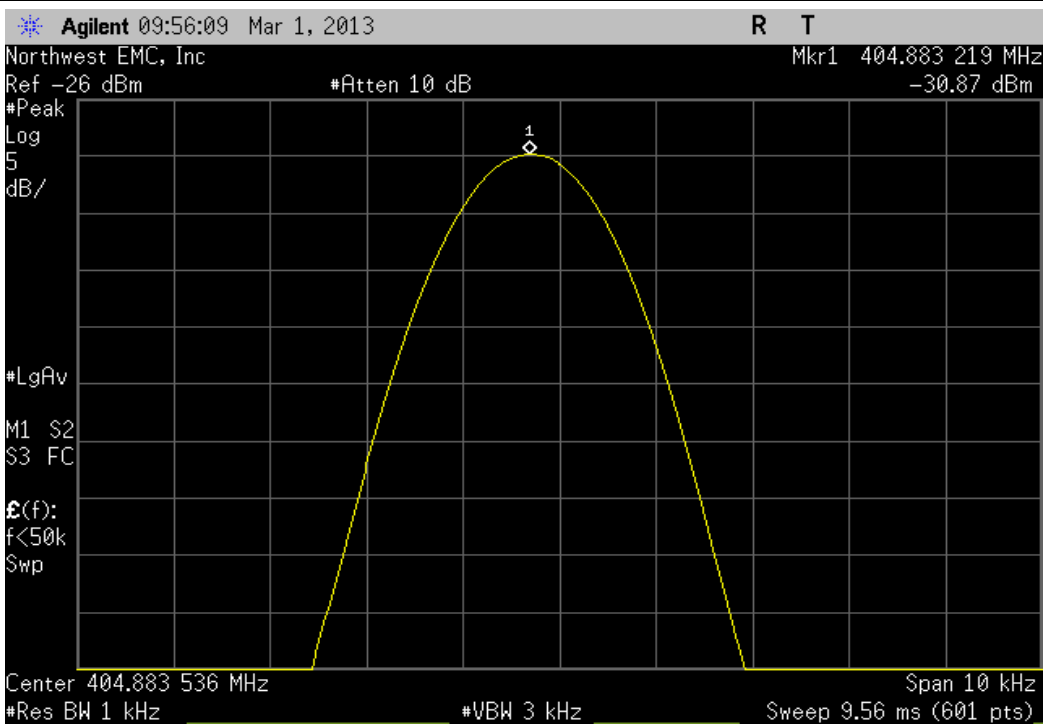
Extreme Temperature +40°C, Low Channel, 402.15 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
402.183301	402.15	82.8	100	Pass	



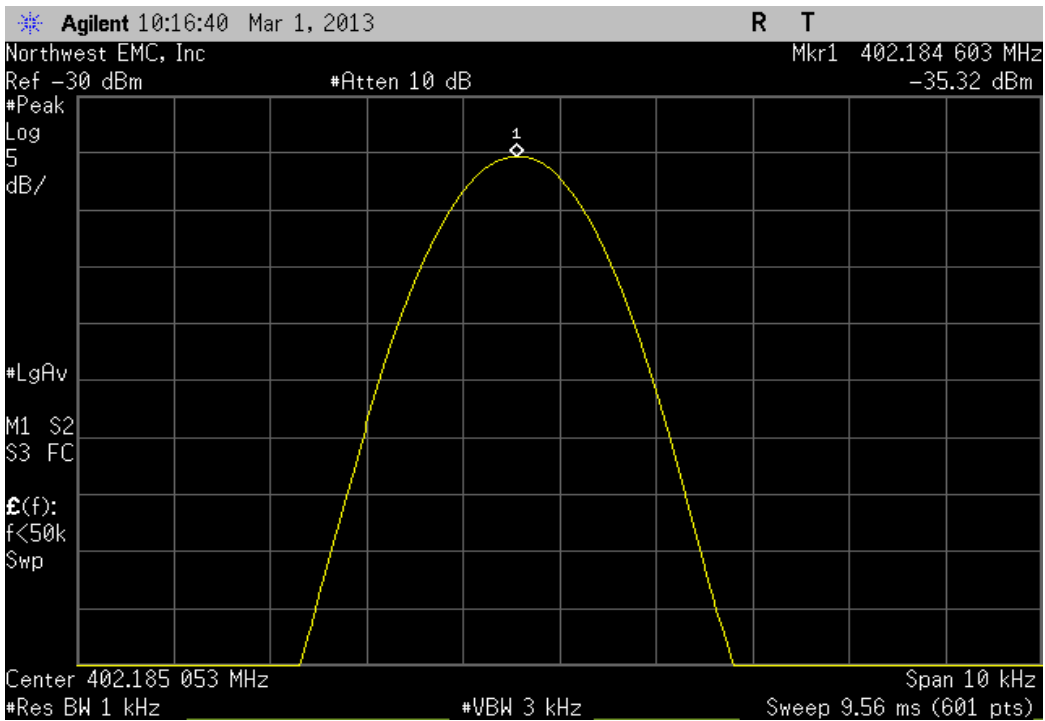
Extreme Temperature +40°C, Mid Channel, 403.35 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
403.383452	403.35	82.9	100	Pass	



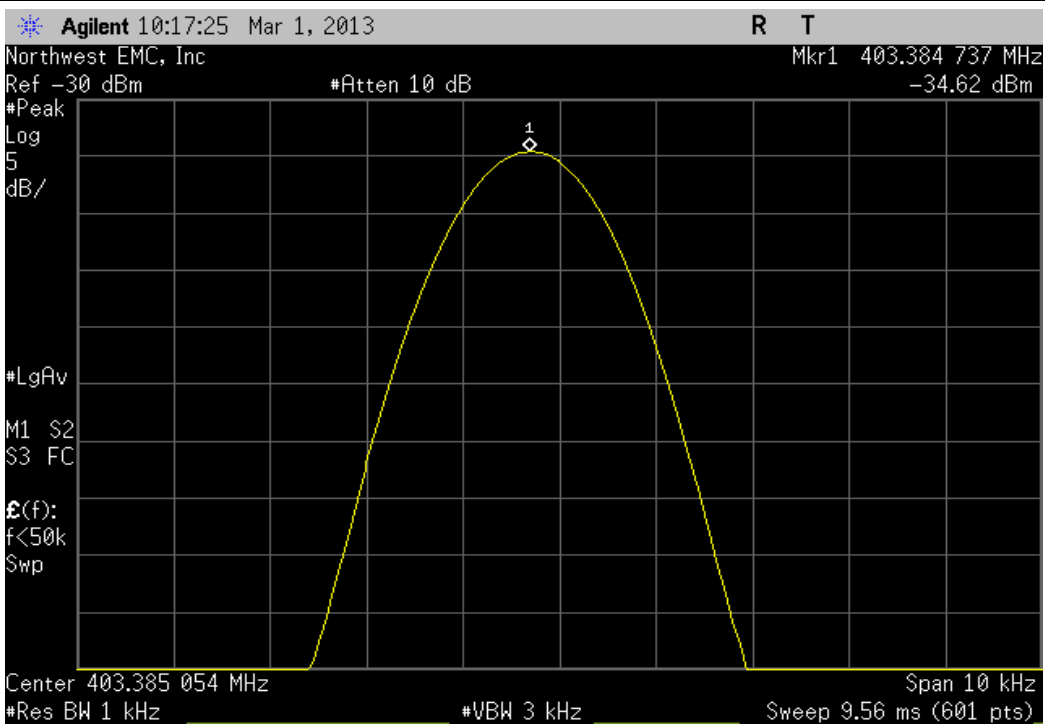
Extreme Temperature +40°C, High Channel, 404.85 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
404.883219	404.85	82	100	Pass	



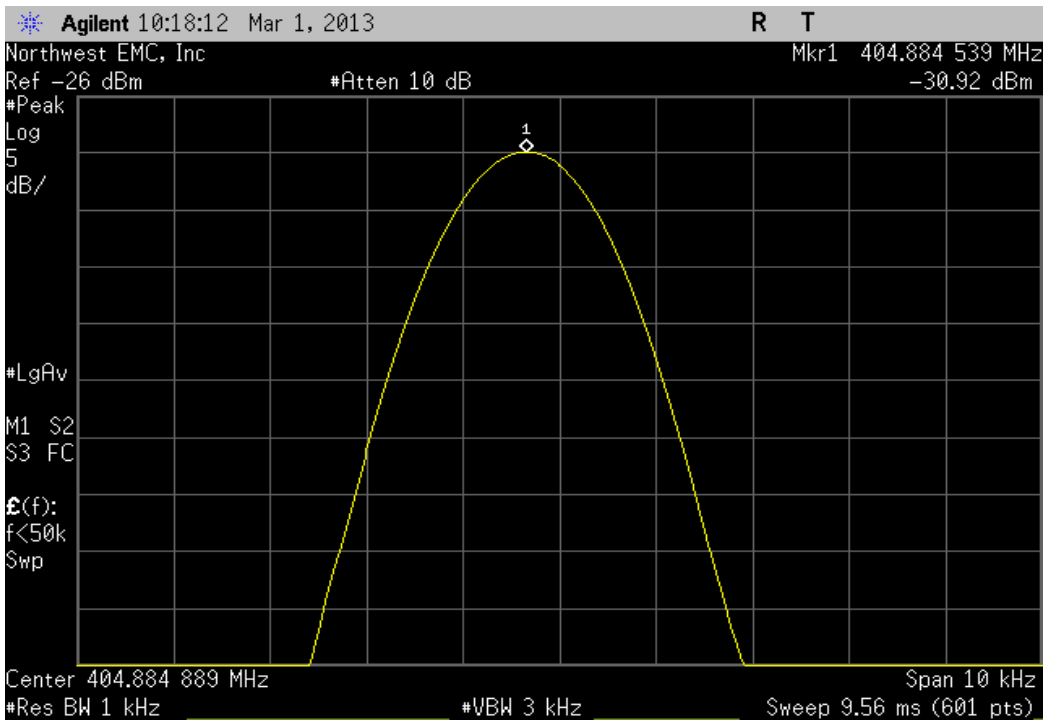
Extreme Temperature +30°C, Low Channel, 402.15 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
402.184603	402.15	86	100	Pass	



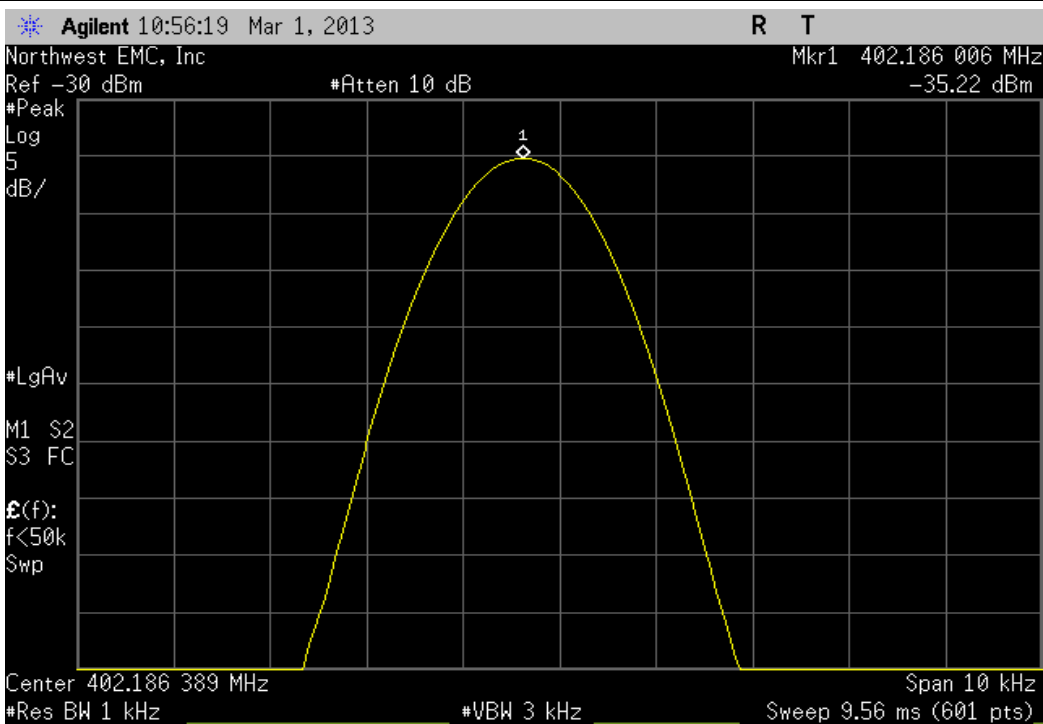
Extreme Temperature +30°C, Mid Channel, 403.35 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
403.384737	403.35	86.1	100	Pass	



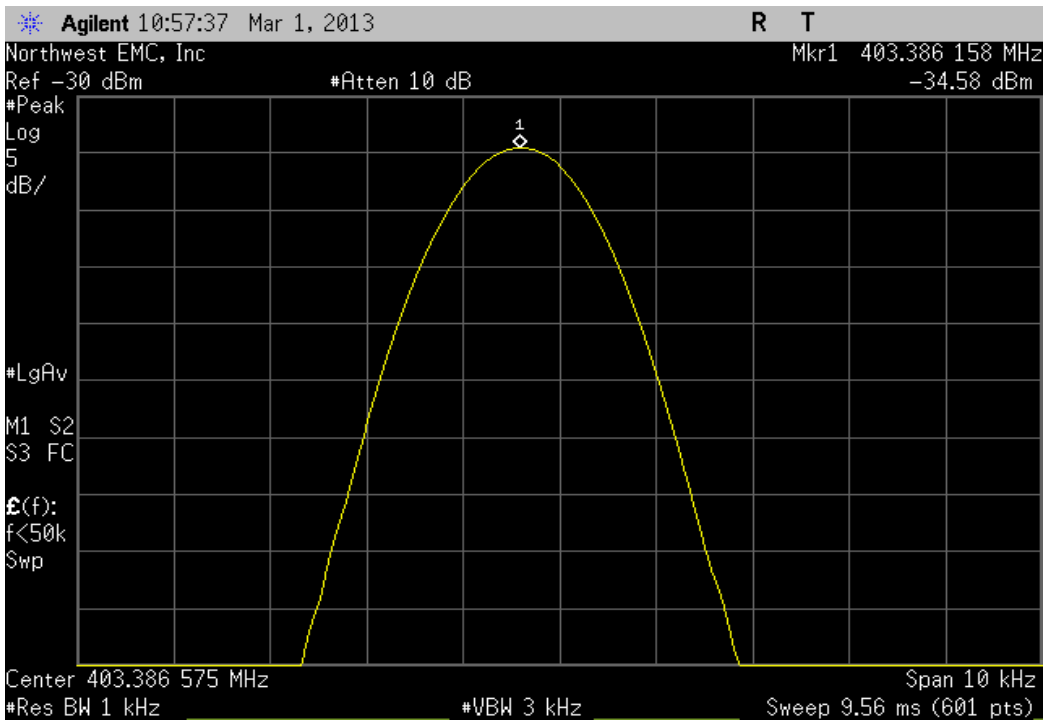
Extreme Temperature +30°C, High Channel, 404.85 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
404.884539	404.85	85.3	100	Pass	



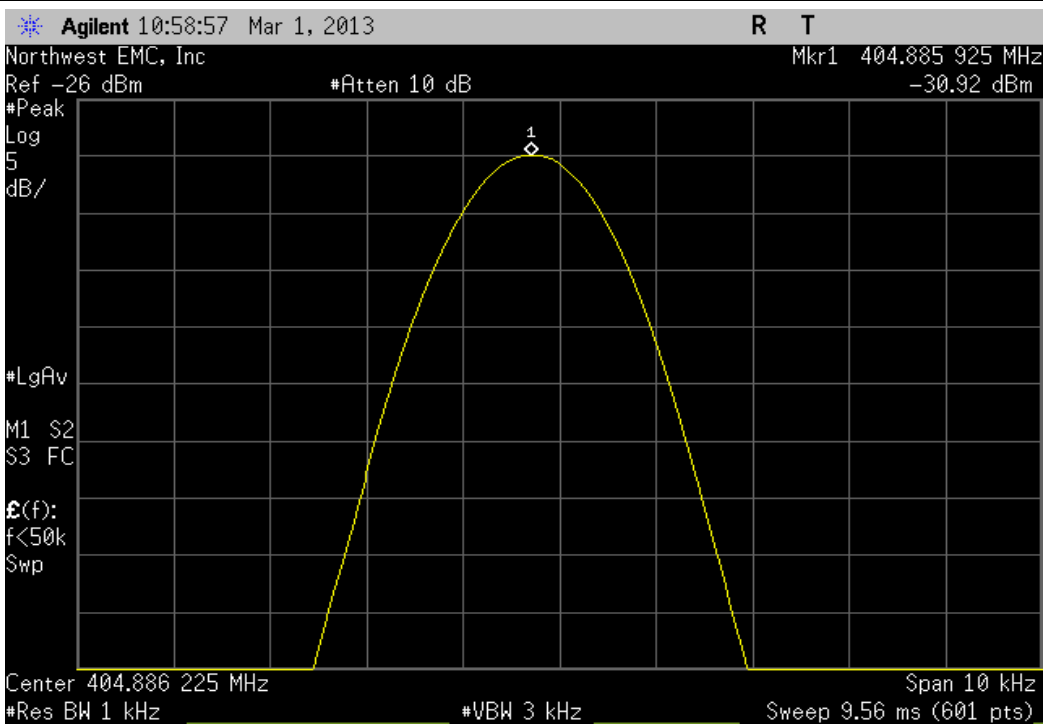
Extreme Temperature +20°C, Low Channel, 402.15 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
402.186006	402.15	89.5	100	Pass	



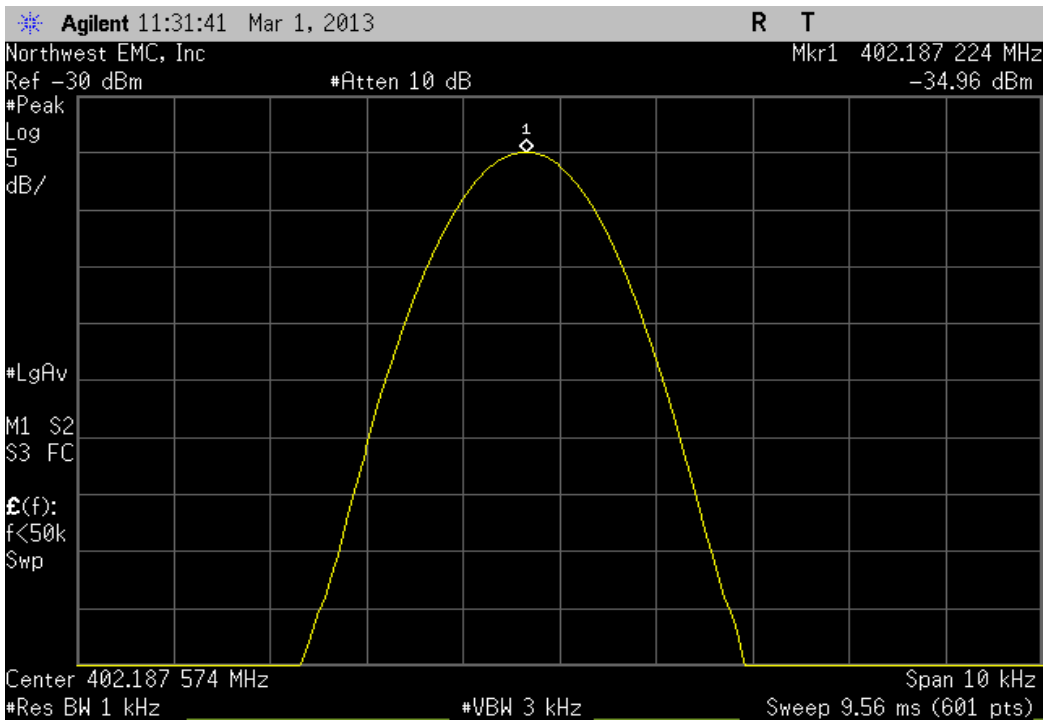
Extreme Temperature +20°C, Mid Channel, 403.35 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
403.386158	403.35	89.6	100	Pass	



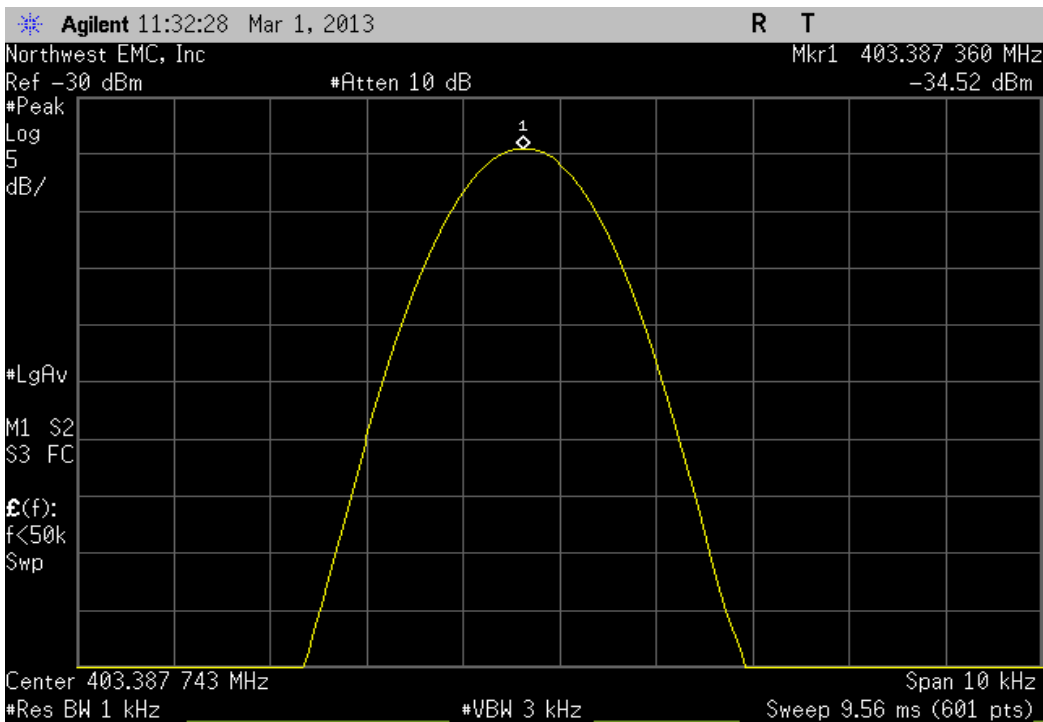
Extreme Temperature +20°C, High Channel, 404.85 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
404.885925	404.85	88.7	100	Pass	



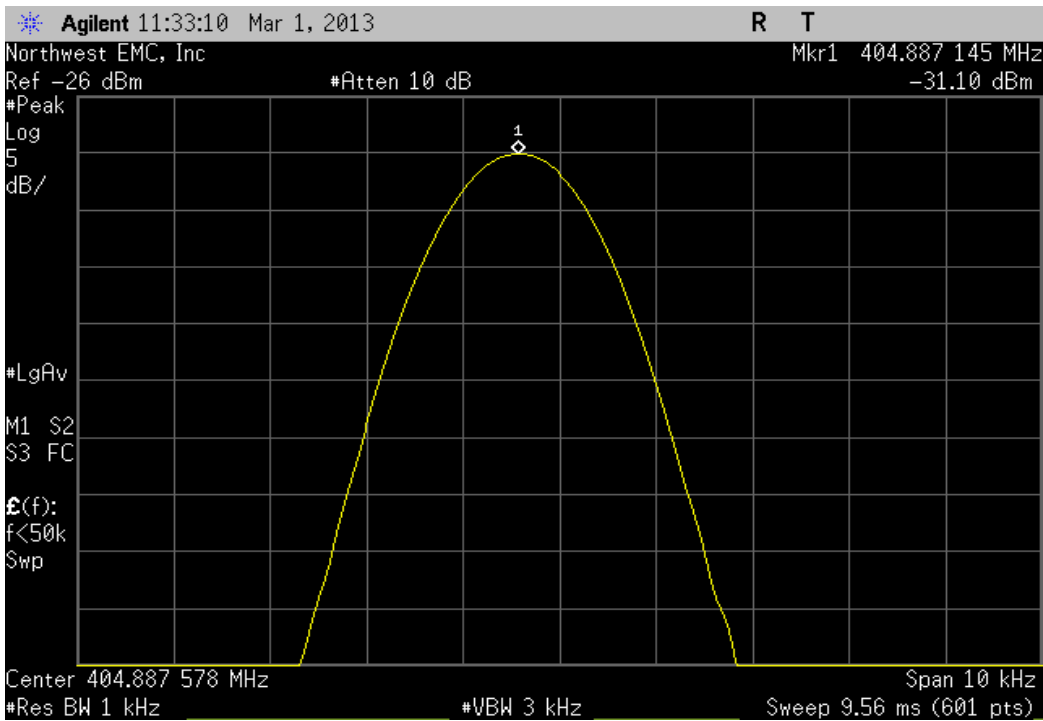
Extreme Temperature +10°C, Low Channel, 402.15 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
402.187224	402.15	92.6	100	Pass	



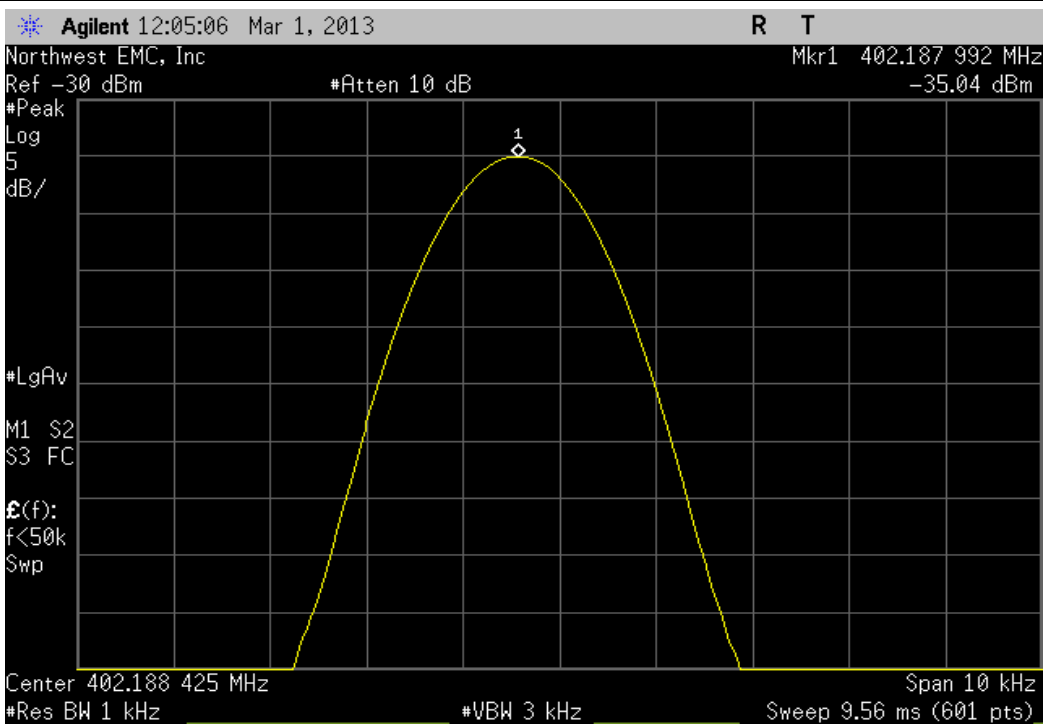
Extreme Temperature +10°C, Mid Channel, 403.35 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
403.38736	403.35	92.6	100	Pass	



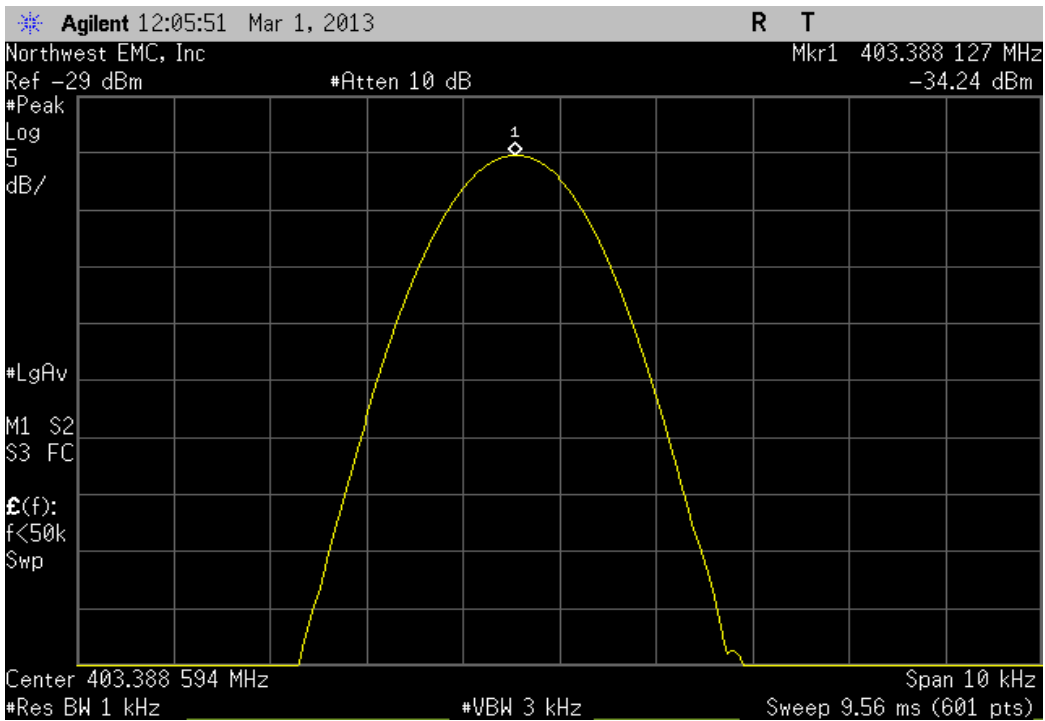
Extreme Temperature +10°C, High Channel, 404.85 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
404.887145	404.85	91.8	100	Pass	



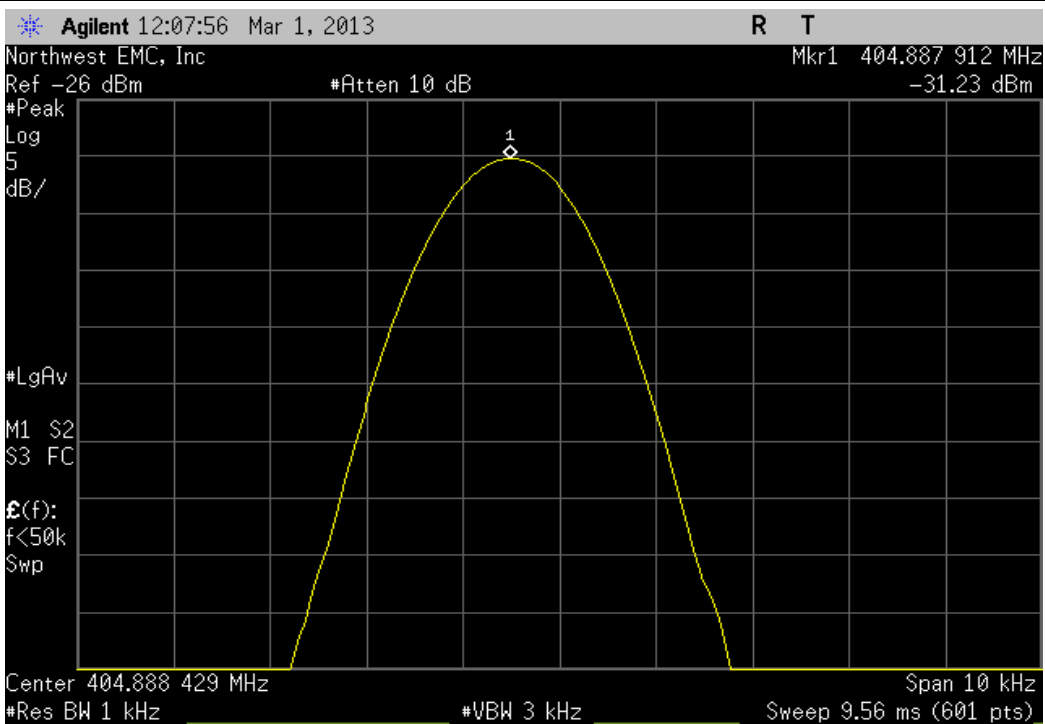
Extreme Temperature 0°C, Low Channel, 402.15 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
402.187992	402.15	94.5	100	Pass	



Extreme Temperature 0°C, Mid Channel, 403.35 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
403.388127	403.35	94.5	100	Pass	



Extreme Temperature 0°C, High Channel, 404.85 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Result	
404.887912	404.85	93.6	100	Pass	



Receiver Spurious Emissions

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

MODES OF OPERATION

Receiving MICS, Ant B, Ch: Low, Mid, High @ 402.15, 403.35, 404.85 MHz (See Comments)

Receiving MICS, Ant A, Ch: Low, Mid, High @ 402.15, 403.35, 404.85 MHz (See Comments)

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

BSTN0412 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	5 GHz
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SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
MN05 Cables	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	5/30/2012	12 mo
Antenna, Horn (DRG)	ETS Lindgren	3115	AIP	6/29/2011	24 mo
Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVX	5/30/2012	12 mo
Pre-Amplifier	Miteq	AM-1616-1000	PAD	8/28/2012	12 mo
MN05 Cables	ESM Cable Corp.	Bilog Cables	MNH	5/31/2012	12 mo
Antenna, Bilog	Teseq	CBL 6141B	AYD	12/17/2012	12 mo
Spectrum Analyzer	Agilent	E4446A	AAT	6/28/2012	24 mo

MEASUREMENT BANDWIDTHS

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

TEST DESCRIPTION

The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band receive frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify compliance. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes (per ANSI C63.10). A preamp was used for this test in order to provide sufficient measurement sensitivity.

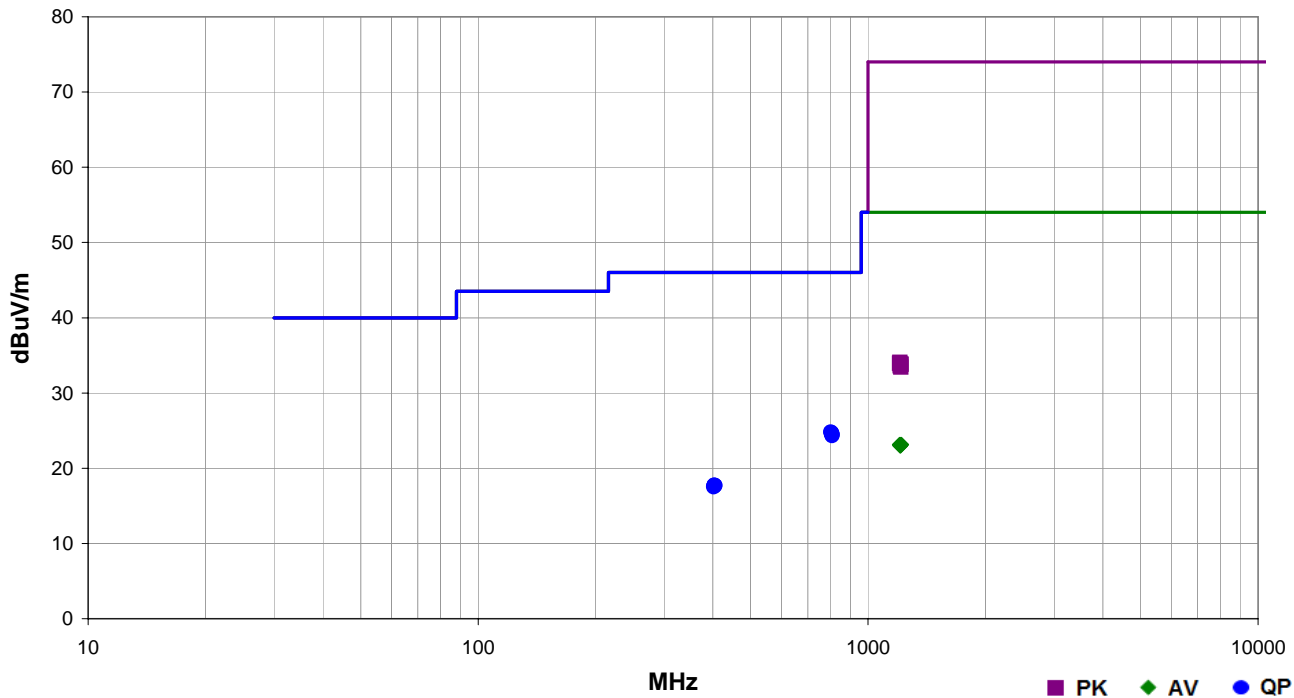


Receiver Spurious Emissions

Work Order:	BSTN0412	Date:	02/22/13	<i>Trevor Buls</i>
Project:	None	Temperature:	24.2 °C	
Job Site:	MN05	Humidity:	12% RH	
Serial Number:	1000021	Barometric Pres.:	1015 mbar	
EUT:	Gamera			
Configuration:	1			
Customer:	Boston Scientific Corporation			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Receiving MICS, Ant A, Ch: Low, Mid, High @ 402.15, 403.35, 404.85 MHz (See Comments)			
Deviations:	None			
Comments:	Per customer, the EUT was only tested in one position because this is how it will always be used during normal operation.			

Test Specifications	Class B	Test Method
FCC 15.109:2013		ANSI C63.4:2009

Run #	28	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
802.581	17.1	7.7	1.0	270.0	3.0	0.0	Horz	QP	0.0	24.8	46.0	-21.2	Low Ch
805.808	17.1	7.6	1.0	346.0	3.0	0.0	Vert	QP	0.0	24.7	46.0	-21.3	Low Ch
806.815	17.1	7.5	3.9	174.0	3.0	0.0	Vert	QP	0.0	24.6	46.0	-21.4	Mid Ch
807.883	17.1	7.4	2.8	165.0	3.0	0.0	Horz	QP	0.0	24.5	46.0	-21.5	Mid Ch
808.212	17.1	7.3	1.0	345.0	3.0	0.0	Vert	QP	0.0	24.4	46.0	-21.6	High Ch
809.400	17.1	7.2	1.0	227.0	3.0	0.0	Horz	QP	0.0	24.3	46.0	-21.7	High Ch
403.496	17.3	0.4	1.0	84.0	3.0	0.0	Horz	QP	0.0	17.7	46.0	-28.3	Mid Ch
403.328	17.3	0.4	1.0	317.0	3.0	0.0	Horz	QP	0.0	17.7	46.0	-28.3	Low Ch
404.752	17.2	0.5	1.0	286.0	3.0	0.0	Vert	QP	0.0	17.7	46.0	-28.3	Mid Ch
404.071	17.2	0.5	3.7	131.0	3.0	0.0	Vert	QP	0.0	17.7	46.0	-28.3	High Ch
403.598	17.2	0.4	1.0	192.0	3.0	0.0	Horz	QP	0.0	17.6	46.0	-28.4	High Ch
402.028	17.2	0.3	3.2	313.0	3.0	0.0	Vert	QP	0.0	17.5	46.0	-28.5	Low Ch
1204.908	30.6	-7.4	1.0	94.0	3.0	0.0	Vert	AV	0.0	23.2	54.0	-30.8	Low 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
1216.092	30.5	-7.4	3.7	143.0	3.0	0.0	Horz	AV	0.0	23.1	54.0	-30.9	High Ch
1214.042	30.5	-7.4	1.0	232.0	3.0	0.0	Vert	AV	0.0	23.1	54.0	-30.9	High Ch
1208.433	30.5	-7.4	1.0	294.0	3.0	0.0	Vert	AV	0.0	23.1	54.0	-30.9	Mid Ch
1207.992	30.5	-7.4	1.0	171.0	3.0	0.0	Horz	AV	0.0	23.1	54.0	-30.9	Low Ch
1209.483	30.4	-7.4	1.0	152.0	3.0	0.0	Horz	AV	0.0	23.0	54.0	-31.0	Mid Ch
1208.258	41.5	-7.4	1.0	171.0	3.0	0.0	Horz	PK	0.0	34.1	74.0	-39.9	Low Ch
1204.008	41.4	-7.5	1.0	94.0	3.0	0.0	Vert	PK	0.0	33.9	74.0	-40.1	Low Ch
1215.367	41.2	-7.4	1.0	232.0	3.0	0.0	Vert	PK	0.0	33.8	74.0	-40.2	High Ch
1211.500	41.2	-7.4	1.0	152.0	3.0	0.0	Horz	PK	0.0	33.8	74.0	-40.2	Mid Ch
1209.850	41.0	-7.4	1.0	294.0	3.0	0.0	Vert	PK	0.0	33.6	74.0	-40.4	Mid Ch
1213.850	40.8	-7.4	3.6	143.0	3.0	0.0	Horz	PK	0.0	33.4	74.0	-40.6	High Ch

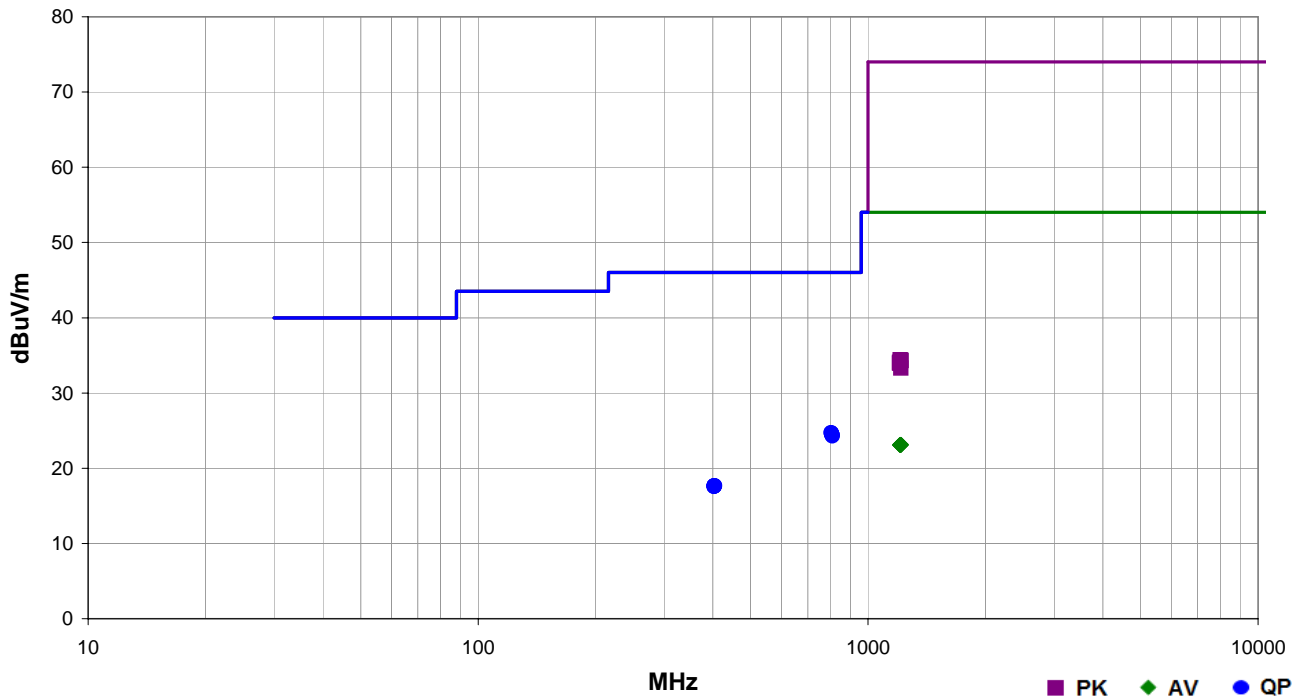


Receiver Spurious Emissions

Work Order:	BSTN0412	Date:	02/22/13	<i>Trevor Buls</i>
Project:	None	Temperature:	24.2 °C	
Job Site:	MN05	Humidity:	12% RH	
Serial Number:	1000021	Barometric Pres.:	1015 mbar	
EUT:	Gamera			
Configuration:	1			
Customer:	Boston Scientific Corporation			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Receiving MICS, Ant B, Ch: Low, Mid, High @ 402.15, 403.35, 404.85 MHz (See Comments)			
Deviations:	None			
Comments:	Per customer, the EUT was only tested in one position because this is how it will always be used during normal operation.			

Test Specifications	Class B	Test Method
FCC 15.109:2013		ANSI C63.4:2009

Run #	31	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
804.518	17.0	7.7	3.0	336.0	3.0	0.0	Horz	QP	0.0	24.7	46.0	-21.3	Low Ch
806.272	17.1	7.6	1.0	108.0	3.0	0.0	Vert	QP	0.0	24.7	46.0	-21.3	Low Ch
807.661	17.1	7.4	1.0	111.0	3.0	0.0	Vert	QP	0.0	24.5	46.0	-21.5	Mid Ch
807.728	17.1	7.4	3.5	338.0	3.0	0.0	Vert	QP	0.0	24.5	46.0	-21.5	High Ch
808.340	17.1	7.3	3.4	198.0	3.0	0.0	Horz	QP	0.0	24.4	46.0	-21.6	Mid Ch
809.537	17.1	7.2	1.0	226.0	3.0	0.0	Horz	QP	0.0	24.3	46.0	-21.7	High Ch
404.214	17.2	0.5	1.9	271.0	3.0	0.0	Vert	QP	0.0	17.7	46.0	-28.3	Mid Ch
403.786	17.2	0.4	1.2	120.0	3.0	0.0	Horz	QP	0.0	17.6	46.0	-28.4	Low Ch
403.743	17.2	0.4	1.8	76.0	3.0	0.0	Vert	QP	0.0	17.6	46.0	-28.4	High Ch
403.339	17.2	0.4	1.0	212.0	3.0	0.0	Horz	QP	0.0	17.6	46.0	-28.4	High Ch
403.138	17.2	0.4	1.0	14.0	3.0	0.0	Vert	QP	0.0	17.6	46.0	-28.4	Low Ch
402.807	17.2	0.4	1.0	2.0	3.0	0.0	Horz	QP	0.0	17.6	46.0	-28.4	Mid Ch
1215.033	30.5	-7.4	3.3	99.0	3.0	0.0	Vert	AV	0.0	23.1	54.0	-30.9	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
1213.242	30.5	-7.4	1.0	94.0	3.0	0.0	Horz	AV	0.0	23.1	54.0	-30.9	High Ch
1211.942	30.5	-7.4	1.0	26.0	3.0	0.0	Vert	AV	0.0	23.1	54.0	-30.9	Mid Ch
1208.325	30.5	-7.4	1.0	134.0	3.0	0.0	Horz	AV	0.0	23.1	54.0	-30.9	Mid Ch
1208.083	30.5	-7.4	1.3	80.0	3.0	0.0	Horz	AV	0.0	23.1	54.0	-30.9	Low Ch
1208.042	30.5	-7.4	1.0	80.0	3.0	0.0	Vert	AV	0.0	23.1	54.0	-30.9	Low Ch
1209.350	41.8	-7.4	1.0	134.0	3.0	0.0	Horz	PK	0.0	34.4	74.0	-39.6	Mid Ch
1216.150	41.7	-7.4	3.3	99.0	3.0	0.0	Vert	PK	0.0	34.3	74.0	-39.7	High Ch
1212.200	41.6	-7.4	1.0	26.0	3.0	0.0	Vert	PK	0.0	34.2	74.0	-39.8	Mid Ch
1204.467	41.5	-7.4	1.0	80.0	3.0	0.0	Vert	PK	0.0	34.1	74.0	-39.9	Low Ch
1204.925	41.4	-7.4	1.3	80.0	3.0	0.0	Horz	PK	0.0	34.0	74.0	-40.0	Low Ch
1214.383	40.7	-7.4	1.0	94.0	3.0	0.0	Horz	PK	0.0	33.3	74.0	-40.7	High Ch

Spurious Radiated Emissions

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data. 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 MICS, Pseudorandom, Ant B, Ch: Low, Mid, High @ 402.15, 403.35, 404.85 MHz (See Comments)

Transmitting MICS, Pseudorandom, Ant A, Ch: Low, Mid, High @ 402.15, 403.35, 404.85 MHz (See Comments)

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

BSTN0412 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	5 GHz
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SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Antenna, Horn (DRG)	ETS Lindgren	3115	AIP	6/29/2011	24 mo
MN05 Cables	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	5/30/2012	12 mo
Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVX	5/30/2012	12 mo
Pre-Amplifier	Miteq	AM-1616-1000	PAD	8/28/2012	12 mo
MN05 Cables	ESM Cable Corp.	Bilog Cables	MNH	5/31/2012	12 mo
Antenna, Bilog	Teseq	CBL 6141B	AYD	12/17/2012	12 mo
Spectrum Analyzer	Agilent	E4446A	AAT	6/28/2012	24 mo

MEASUREMENT BANDWIDTHS

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

TEST DESCRIPTION

The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization. A preamp was used for this test in order to provide sufficient measurement sensitivity.

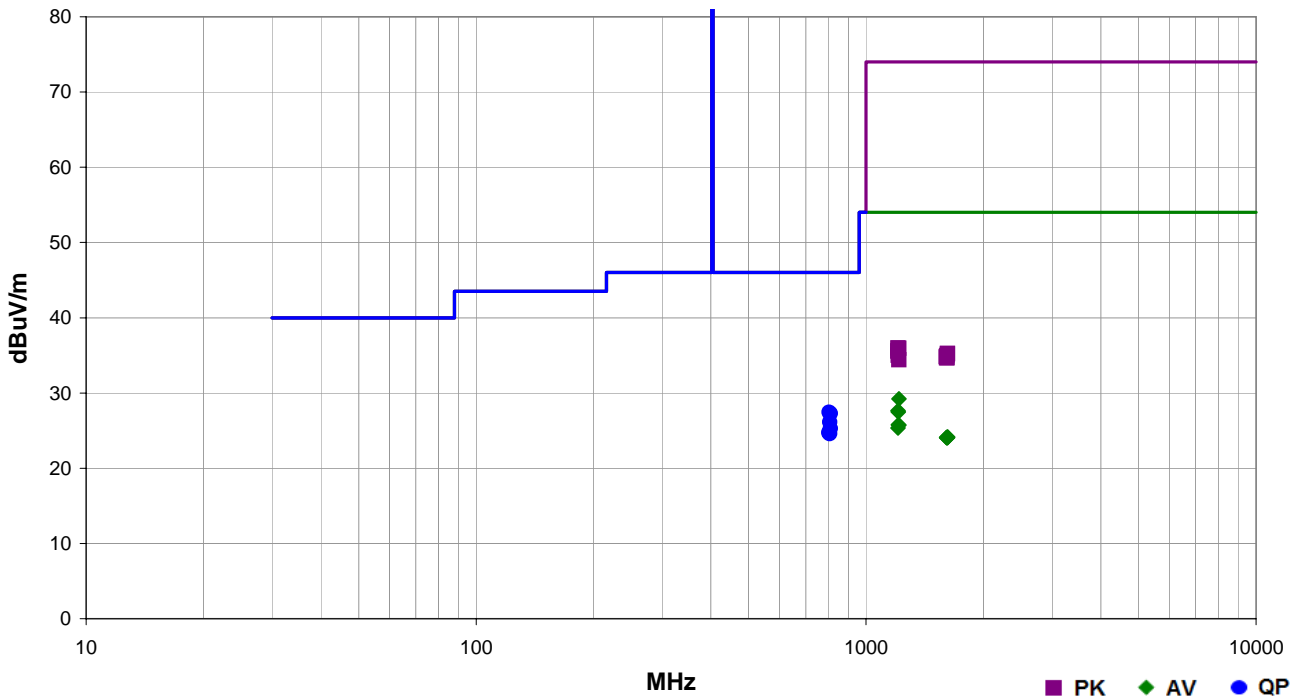


Spurious Radiated Emissions

Work Order:	BSTN0412	Date:	02/22/13	<i>Trevor Buls</i>
Project:	None	Temperature:	24.2 °C	
Job Site:	MN05	Humidity:	12% RH	
Serial Number:	1000021	Barometric Pres.:	1015 mbar	
EUT:	Gamera			
Configuration:	1			
Customer:	Boston Scientific Corporation			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting MICS, Pseudorandom, Ant A, Ch: Low, Mid, High @ 402.15, 403.35, 404.85 MHz (See Comments)			
Deviations:	None			
Comments:	Per customer, the EUT was only tested in one position because this is how it will always be used during normal operation.			

Test Specifications	Test Method
FCC 951:2013	ANSI/TIA/EIA-603-C:2004

Run #	21	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
804.377	19.7	7.7	1.0	249.0	3.0	0.0	Vert	QP	0.0	27.4	46.0	-18.6	Low Ch
809.775	20.1	7.2	1.0	258.0	3.0	0.0	Vert	QP	0.0	27.3	46.0	-18.7	High Ch
806.647	18.6	7.5	1.0	94.0	3.0	0.0	Vert	QP	0.0	26.1	46.0	-19.9	Mid Ch
809.778	18.1	7.2	1.6	63.0	3.0	0.0	Horz	QP	0.0	25.3	46.0	-20.7	High Ch
802.179	17.0	7.7	1.0	229.0	3.0	0.0	Horz	QP	0.0	24.7	46.0	-21.3	Low Ch
807.017	17.1	7.5	2.9	55.0	3.0	0.0	Horz	QP	0.0	24.6	46.0	-21.4	Mid Ch
1214.583	36.6	-7.4	1.0	11.0	3.0	0.0	Vert	AV	0.0	29.2	54.0	-24.8	High Ch
1206.417	35.1	-7.4	1.0	220.0	3.0	0.0	Vert	AV	0.0	27.7	54.0	-26.3	Low Ch
1210.033	34.9	-7.4	1.0	201.0	3.0	0.0	Vert	AV	0.0	27.5	54.0	-26.5	Mid Ch
1210.008	33.2	-7.4	1.0	87.0	3.0	0.0	Horz	AV	0.0	25.8	54.0	-28.2	Mid Ch
1214.625	33.1	-7.4	1.0	71.0	3.0	0.0	Horz	AV	0.0	25.7	54.0	-28.3	High Ch
1206.483	32.8	-7.4	1.0	82.0	3.0	0.0	Horz	AV	0.0	25.4	54.0	-28.6	Low Ch
1617.333	30.2	-6.0	3.6	68.0	3.0	0.0	Horz	AV	0.0	24.2	54.0	-29.8	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
1617.025	30.1	-6.0	3.6	271.0	3.0	0.0	Vert	AV	0.0	24.1	54.0	-29.9	High Ch
1613.900	30.1	-6.0	3.4	182.0	3.0	0.0	Horz	AV	0.0	24.1	54.0	-29.9	Mid Ch
1612.367	30.1	-6.0	3.2	62.0	3.0	0.0	Vert	AV	0.0	24.1	54.0	-29.9	Mid Ch
1609.942	30.1	-6.0	3.3	346.0	3.0	0.0	Vert	AV	0.0	24.1	54.0	-29.9	Low Ch
1607.467	30.1	-6.0	1.0	45.0	3.0	0.0	Horz	AV	0.0	24.1	54.0	-29.9	Low Ch
1206.625	43.4	-7.4	1.0	220.0	3.0	0.0	Vert	PK	0.0	36.0	74.0	-38.0	Low Ch
1214.808	43.3	-7.4	1.0	11.0	3.0	0.0	Vert	PK	0.0	35.9	74.0	-38.1	High Ch
1210.250	43.0	-7.4	1.0	201.0	3.0	0.0	Vert	PK	0.0	35.6	74.0	-38.4	Mid Ch
1206.750	43.0	-7.4	1.0	82.0	3.0	0.0	Horz	PK	0.0	35.6	74.0	-38.4	Low Ch
1618.158	41.3	-6.0	3.6	68.0	3.0	0.0	Horz	PK	0.0	35.3	74.0	-38.7	High Ch
1618.117	41.2	-6.0	3.6	271.0	3.0	0.0	Vert	PK	0.0	35.2	74.0	-38.8	High Ch
1210.183	42.4	-7.4	1.0	87.0	3.0	0.0	Horz	PK	0.0	35.0	74.0	-39.0	Mid Ch
1611.358	41.0	-6.0	3.2	62.0	3.0	0.0	Vert	PK	0.0	35.0	74.0	-39.0	Mid Ch
1606.758	40.9	-6.0	1.0	45.0	3.0	0.0	Horz	PK	0.0	34.9	74.0	-39.1	Low Ch
1615.058	40.7	-6.0	3.4	182.0	3.0	0.0	Horz	PK	0.0	34.7	74.0	-39.3	Mid Ch
1607.392	40.7	-6.0	3.3	346.0	3.0	0.0	Vert	PK	0.0	34.7	74.0	-39.3	Low Ch
1214.642	41.8	-7.4	1.0	71.0	3.0	0.0	Horz	PK	0.0	34.4	74.0	-39.6	High Ch

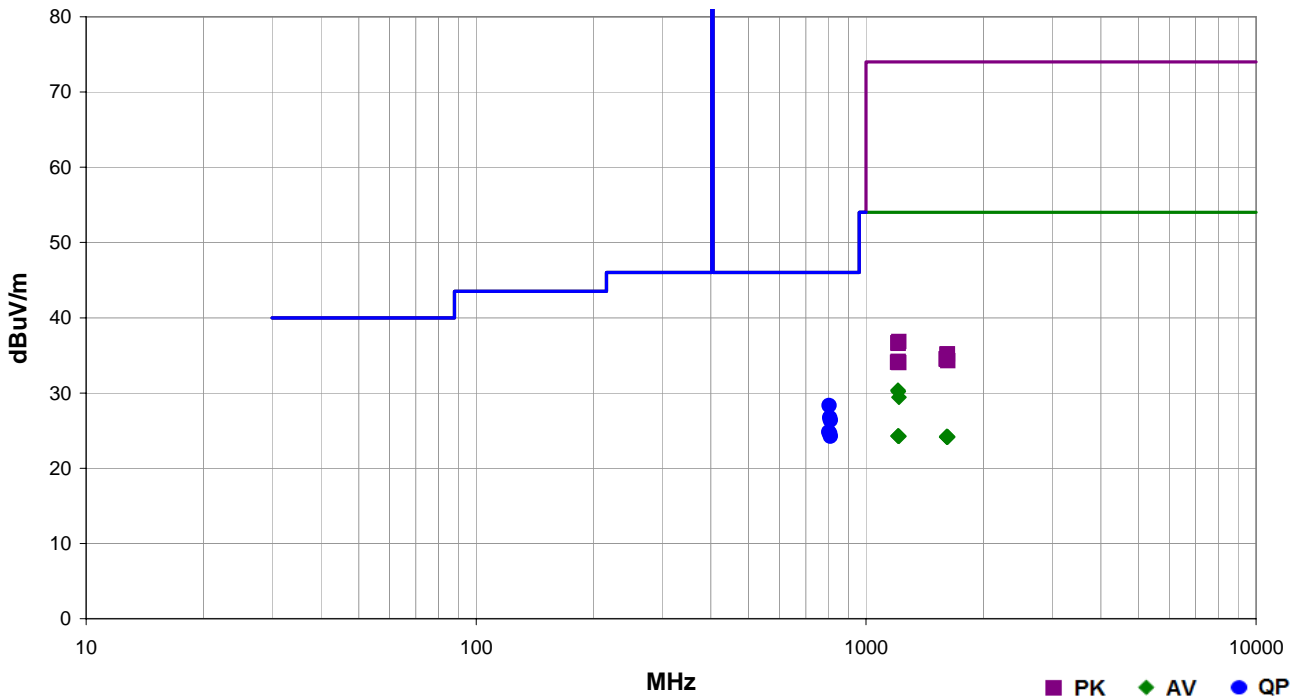


Spurious Radiated Emissions

Work Order:	BSTN0412	Date:	02/22/13	<i>Trevor Buls</i>
Project:	None	Temperature:	24.2 °C	
Job Site:	MN05	Humidity:	12% RH	
Serial Number:	1000021	Barometric Pres.:	1015 mbar	
EUT:	Gamera			
Configuration:	1			
Customer:	Boston Scientific Corporation			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting MICS, Pseudorandom, Ant B, Ch: Low, Mid, High @ 402.15, 403.35, 404.85 MHz (See Comments)			
Deviations:	None			
Comments:	Per customer, the EUT was only tested in one position because this is how it will always be used during normal operation.			

Test Specifications	Test Method
FCC 951:2013	ANSI/TIA/EIA-603-C:2004

Run #	24	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
804.375	20.6	7.7	1.0	350.0	3.0	0.0	Vert	QP	0.0	28.3	46.0	-17.7	Low Ch
806.647	19.2	7.5	1.0	86.0	3.0	0.0	Vert	QP	0.0	26.7	46.0	-19.3	Mid Ch
809.780	19.2	7.2	1.0	350.0	3.0	0.0	Vert	QP	0.0	26.4	46.0	-19.6	High Ch
803.316	17.1	7.7	3.4	40.0	3.0	0.0	Horz	QP	0.0	24.8	46.0	-21.2	Low Ch
806.682	17.1	7.5	1.0	140.0	3.0	0.0	Horz	QP	0.0	24.6	46.0	-21.4	Mid Ch
809.885	17.1	7.2	4.0	180.0	3.0	0.0	Horz	QP	0.0	24.3	46.0	-21.7	High Ch
1206.492	37.8	-7.4	1.0	212.0	3.0	0.0	Vert	AV	0.0	30.4	54.0	-23.6	Low Ch
1210.058	37.6	-7.4	1.0	205.0	3.0	0.0	Vert	AV	0.0	30.2	54.0	-23.8	Mid Ch
1214.575	36.8	-7.4	1.0	191.0	3.0	0.0	Vert	AV	0.0	29.4	54.0	-24.6	High Ch
1209.975	31.7	-7.4	1.0	207.0	3.0	0.0	Horz	AV	0.0	24.3	54.0	-29.7	Mid Ch
1206.433	31.7	-7.4	1.0	212.0	3.0	0.0	Horz	AV	0.0	24.3	54.0	-29.7	Low Ch
1610.433	30.3	-6.0	2.7	179.0	3.0	0.0	Horz	AV	0.0	24.3	54.0	-29.7	Low Ch
1214.425	31.6	-7.4	1.0	72.0	3.0	0.0	Horz	AV	0.0	24.2	54.0	-29.8	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
1619.258	30.2	-6.0	1.0	170.0	3.0	0.0	Vert	AV	0.0	24.2	54.0	-29.8	High Ch
1617.233	30.2	-6.0	1.0	259.0	3.0	0.0	Horz	AV	0.0	24.2	54.0	-29.8	High Ch
1613.183	30.2	-6.0	1.0	254.0	3.0	0.0	Horz	AV	0.0	24.2	54.0	-29.8	Mid Ch
1610.900	30.2	-6.0	3.7	27.0	3.0	0.0	Vert	AV	0.0	24.2	54.0	-29.8	Mid Ch
1609.533	30.2	-6.0	3.1	192.0	3.0	0.0	Vert	AV	0.0	24.2	54.0	-29.8	Low Ch
1214.508	44.2	-7.4	1.0	191.0	3.0	0.0	Vert	PK	0.0	36.8	74.0	-37.2	High Ch
1206.200	44.1	-7.4	1.0	212.0	3.0	0.0	Vert	PK	0.0	36.7	74.0	-37.3	Low Ch
1210.075	44.0	-7.4	1.0	205.0	3.0	0.0	Vert	PK	0.0	36.6	74.0	-37.4	Mid Ch
1618.575	41.2	-6.0	1.0	259.0	3.0	0.0	Horz	PK	0.0	35.2	74.0	-38.8	High Ch
1615.825	41.2	-6.0	1.0	254.0	3.0	0.0	Horz	PK	0.0	35.2	74.0	-38.8	Mid Ch
1614.342	41.1	-6.0	3.6	27.0	3.0	0.0	Vert	PK	0.0	35.1	74.0	-38.9	Mid Ch
1606.133	40.6	-6.0	3.1	192.0	3.0	0.0	Vert	PK	0.0	34.6	74.0	-39.4	Low Ch
1609.700	40.5	-6.0	2.7	179.0	3.0	0.0	Horz	PK	0.0	34.5	74.0	-39.5	Low Ch
1620.508	40.3	-6.0	1.0	170.0	3.0	0.0	Vert	PK	0.0	34.3	74.0	-39.7	High Ch
1210.192	41.6	-7.4	1.0	207.0	3.0	0.0	Horz	PK	0.0	34.2	74.0	-39.8	Mid Ch
1204.658	41.5	-7.4	1.0	212.0	3.0	0.0	Horz	PK	0.0	34.1	74.0	-39.9	Low Ch
1214.133	41.4	-7.4	1.0	72.0	3.0	0.0	Horz	PK	0.0	34.0	74.0	-40.0	High Ch

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. 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 50 Ω measuring port is terminated by a 50 Ω EMI meter or a 50 Ω resistive load. All 50 Ω measuring ports of the LISN are terminated by 50Ω.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Receiver	Rohde & Schwarz	ESCI	ARG	03/22/2012	12 mo
High Pass Filter	TTE	H97-100K-50-720B	HGN	05/31/2012	24 mo
Attenuator 20dB, BNC	Fairview Microwave	SA01B-20	AQP	08/15/2012	12 mo
MN03 Cables	ESM Cable Corp.	Conducted Cables	MNC	01/17/2013	12 mo
LISN	Solar Electronics	9252-50-R-24-BNC	LIY	05/30/2012	12 mo

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	2.94 dB	-2.94 dB

CONFIGURATIONS INVESTIGATED

BSTN0412-1

MODES INVESTIGATED

Receiving, MICS, Ant A, High Channel @ 404.85 MHz
 Receiving, MICS, Ant A, Low Channel @ 402.15 MHz
 Receiving, MICS, Ant A, Mid Channel @ 403.35 MHz
 Receiving, MICS, Ant B, High Channel @ 404.85 MHz
 Receiving, MICS, Ant B, Low Channel @ 402.15 MHz
 Receiving, MICS, Ant B, Mid Channel @ 403.35 MHz

EUT:	Camera	Work Order:	BSTN0412
Serial Number:	1000021	Date:	02/28/2013
Customer:	Boston Scientific Corporation	Temperature:	23.6°C
Attendees:	None	Relative Humidity:	17.3%
Customer Project:	None	Bar. Pressure:	1019.9 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	110VAC/60Hz	Configuration:	BSTN0412-1

TEST SPECIFICATIONS

Specification: Equipment Class B	Method:
FCC 15.107:2013	ANSI C63.4:2009
ICES-003:2012	ANSI C63.4:2009

TEST PARAMETERS

Run #:	15	Line:	High Line	Ext. Attenuation (dB):	20
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COMMENTS

Data points taken below were determined to be from the EUT.

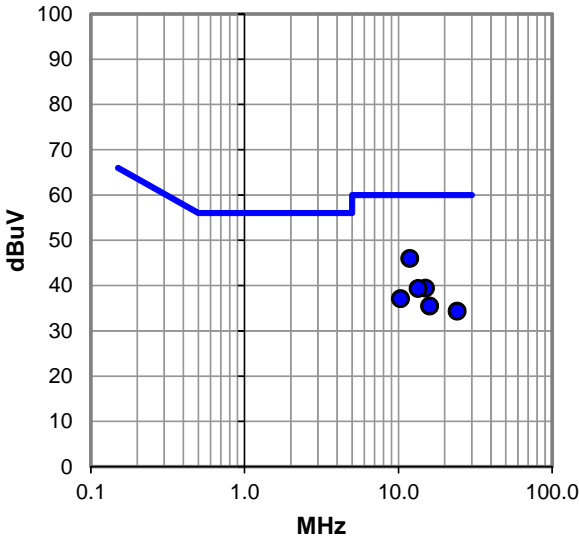
EUT OPERATING MODES

Receiving, MICS, Ant A, Low Channel @ 402.15 MHz

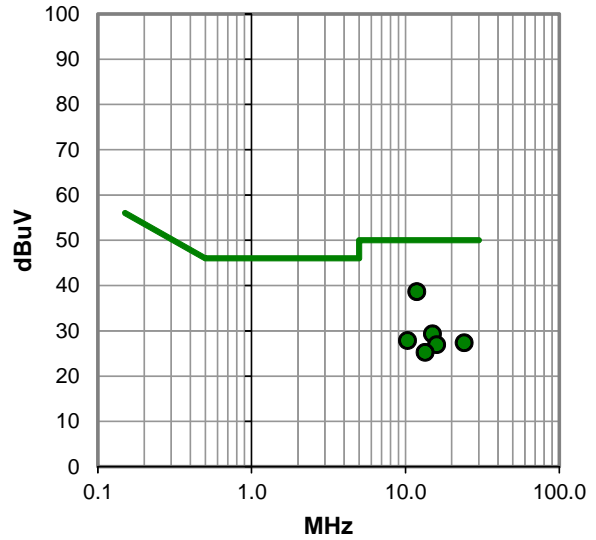
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



RESULTS - Run #15

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	25.2	20.8	46.0	60.0	-14.0
14.992	18.4	21.0	39.4	60.0	-20.6
13.450	18.4	20.9	39.3	60.0	-20.7
10.332	16.4	20.7	37.1	60.0	-22.9
16.000	14.4	21.1	35.5	60.0	-24.5
24.110	12.6	21.7	34.3	60.0	-25.7

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	17.8	20.8	38.6	50.0	-11.4
14.992	8.3	21.0	29.3	50.0	-20.7
10.332	7.1	20.7	27.8	50.0	-22.2
24.110	5.6	21.7	27.3	50.0	-22.7
16.000	5.9	21.1	27.0	50.0	-23.0
13.450	4.3	20.9	25.2	50.0	-24.8

CONCLUSION

Pass

Trevor Buls

Tested By

EUT:	Camera	Work Order:	BSTN0412
Serial Number:	1000021	Date:	02/28/2013
Customer:	Boston Scientific Corporation	Temperature:	23.6°C
Attendees:	None	Relative Humidity:	17.3%
Customer Project:	None	Bar. Pressure:	1019.9 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	110VAC/60Hz	Configuration:	BSTN0412-1

TEST SPECIFICATIONS

Specification: Equipment Class B	Method:
FCC 15.107:2013	ANSI C63.4:2009
ICES-003:2012	ANSI C63.4:2009

TEST PARAMETERS

Run #:	16	Line:	Neutral	Ext. Attenuation (dB):	20
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COMMENTS

Data points taken below were determined to be from the EUT.

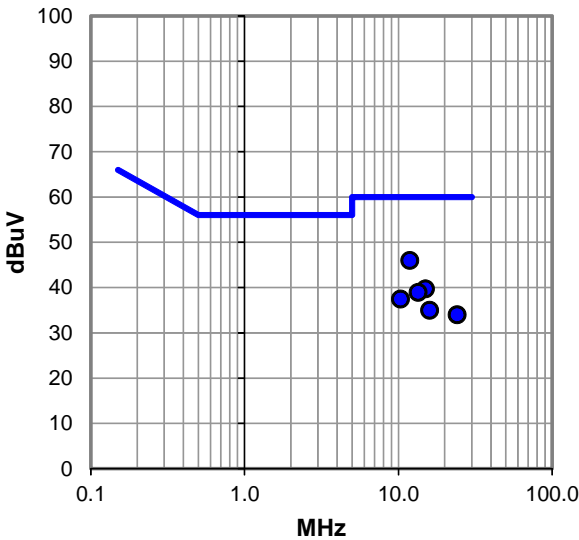
EUT OPERATING MODES

Receiving, MICS, Ant A, Low Channel @ 402.15 MHz

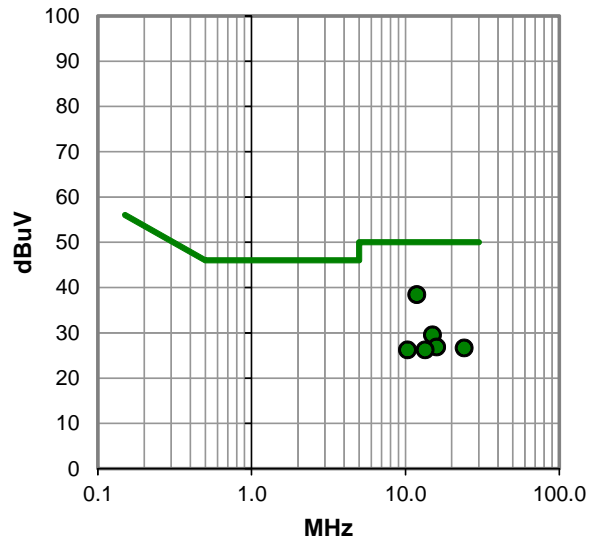
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



RESULTS - Run #16

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	25.2	20.8	46.0	60.0	-14.0
15.012	18.7	21.0	39.7	60.0	-20.3
13.454	18.0	20.9	38.9	60.0	-21.1
10.328	16.7	20.7	37.4	60.0	-22.6
16.004	13.9	21.1	35.0	60.0	-25.0
24.110	12.2	21.7	33.9	60.0	-26.1

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	17.6	20.8	38.4	50.0	-11.6
15.012	8.5	21.0	29.5	50.0	-20.5
16.004	5.8	21.1	26.9	50.0	-23.1
24.110	4.9	21.7	26.6	50.0	-23.4
13.454	5.3	20.9	26.2	50.0	-23.8
10.328	5.5	20.7	26.2	50.0	-23.8

CONCLUSION

Pass

Trevor Buls

Tested By

EUT:	Camera	Work Order:	BSTN0412
Serial Number:	1000021	Date:	02/28/2013
Customer:	Boston Scientific Corporation	Temperature:	23.6°C
Attendees:	None	Relative Humidity:	17.3%
Customer Project:	None	Bar. Pressure:	1019.9 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	110VAC/60Hz	Configuration:	BSTN0412-1

TEST SPECIFICATIONS

Specification: Equipment Class B	Method:
FCC 15.107:2013	ANSI C63.4:2009
ICES-003:2012	ANSI C63.4:2009

TEST PARAMETERS

Run #:	17	Line:	High Line	Ext. Attenuation (dB):	20
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COMMENTS

Data points taken below were determined to be from the EUT.

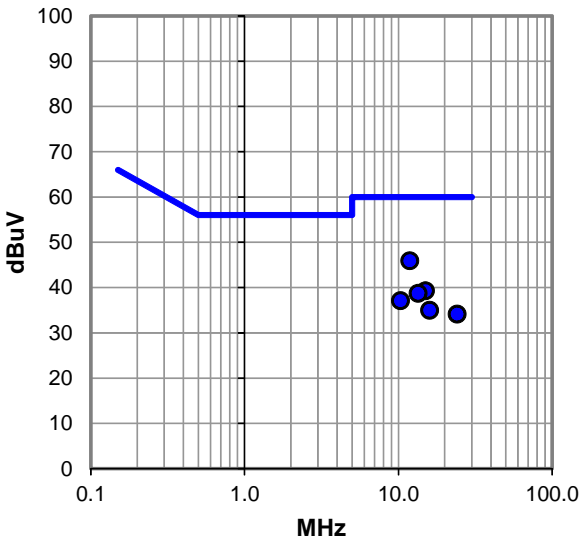
EUT OPERATING MODES

Receiving, MICS, Ant A, Mid Channel @ 403.35 MHz

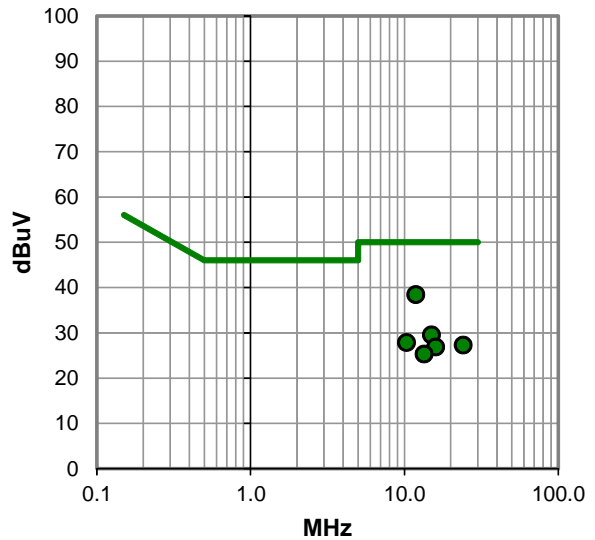
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



RESULTS - Run #17

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	25.1	20.8	45.9	60.0	-14.1
15.012	18.3	21.0	39.3	60.0	-20.7
13.454	17.8	20.9	38.7	60.0	-21.3
10.328	16.4	20.7	37.1	60.0	-22.9
16.004	13.9	21.1	35.0	60.0	-25.0
24.110	12.4	21.7	34.1	60.0	-25.9

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	17.6	20.8	38.4	50.0	-11.6
15.012	8.5	21.0	29.5	50.0	-20.5
10.328	7.1	20.7	27.8	50.0	-22.2
24.110	5.5	21.7	27.2	50.0	-22.8
16.004	5.8	21.1	26.9	50.0	-23.1
13.454	4.4	20.9	25.3	50.0	-24.7

CONCLUSION

Pass

Trevor Buls

Tested By

EUT:	Camera	Work Order:	BSTN0412
Serial Number:	1000021	Date:	02/28/2013
Customer:	Boston Scientific Corporation	Temperature:	23.6°C
Attendees:	None	Relative Humidity:	17.3%
Customer Project:	None	Bar. Pressure:	1019.9 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	110VAC/60Hz	Configuration:	BSTN0412-1

TEST SPECIFICATIONS

Specification: Equipment Class B	Method:
FCC 15.107:2013	ANSI C63.4:2009
ICES-003:2012	ANSI C63.4:2009

TEST PARAMETERS

Run #:	18	Line:	Neutral	Ext. Attenuation (dB):	20
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COMMENTS

Data points taken below were determined to be from the EUT.

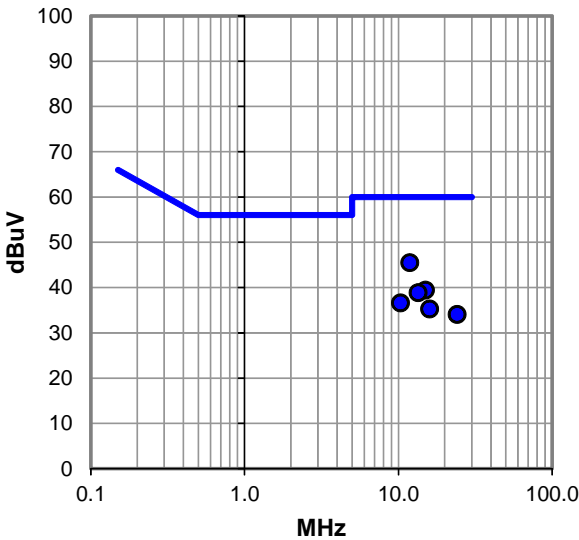
EUT OPERATING MODES

Receiving, MICS, Ant A, Mid Channel @ 403.35 MHz

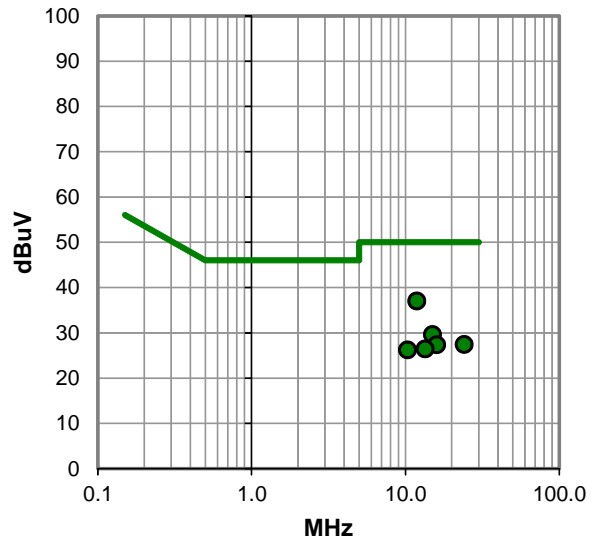
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



RESULTS - Run #18

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	24.7	20.8	45.5	60.0	-14.5
15.012	18.4	21.0	39.4	60.0	-20.6
13.454	17.9	20.9	38.8	60.0	-21.2
10.332	15.9	20.7	36.6	60.0	-23.4
16.004	14.2	21.1	35.3	60.0	-24.7
24.110	12.3	21.7	34.0	60.0	-26.0

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	16.2	20.8	37.0	50.0	-13.0
15.012	8.6	21.0	29.6	50.0	-20.4
24.110	5.7	21.7	27.4	50.0	-22.6
16.004	6.3	21.1	27.4	50.0	-22.6
13.454	5.5	20.9	26.4	50.0	-23.6
10.332	5.5	20.7	26.2	50.0	-23.8

CONCLUSION

Pass

Trevor Buls

Tested By

EUT:	Camera	Work Order:	BSTN0412
Serial Number:	1000021	Date:	02/28/2013
Customer:	Boston Scientific Corporation	Temperature:	23.6°C
Attendees:	None	Relative Humidity:	17.3%
Customer Project:	None	Bar. Pressure:	1019.9 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	110VAC/60Hz	Configuration:	BSTN0412-1

TEST SPECIFICATIONS

Specification: Equipment Class B	Method:
FCC 15.107:2013	ANSI C63.4:2009
ICES-003:2012	ANSI C63.4:2009

TEST PARAMETERS

Run #:	19	Line:	High Line	Ext. Attenuation (dB):	20
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COMMENTS

Data points taken below were determined to be from the EUT.

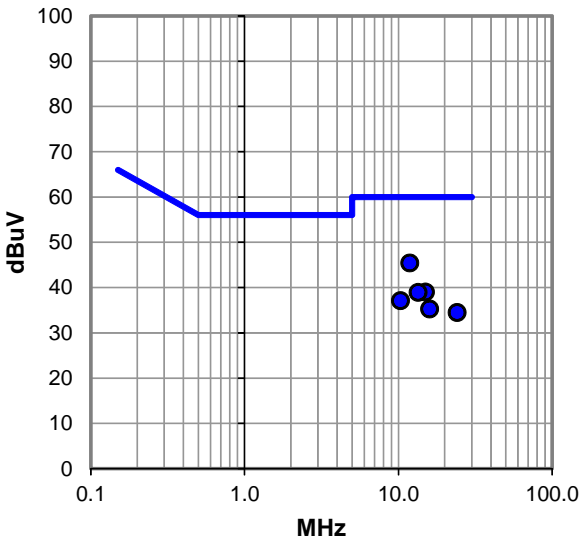
EUT OPERATING MODES

Receiving, MICS, Ant A, High Channel @ 404.85 MHz

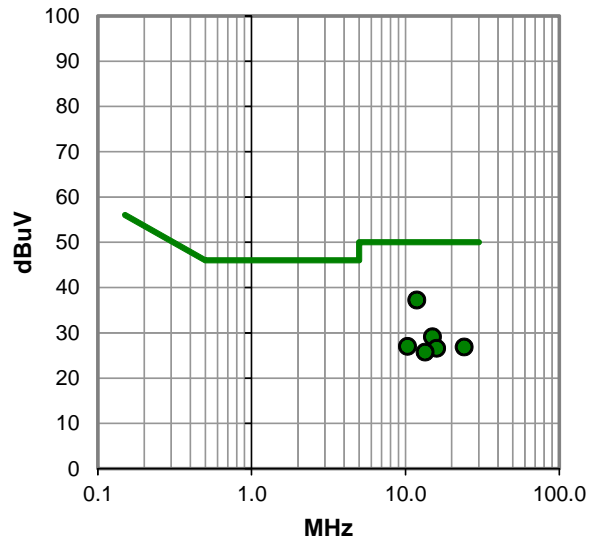
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



RESULTS - Run #19

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.890	24.6	20.8	45.4	60.0	-14.6
14.992	18.0	21.0	39.0	60.0	-21.0
13.450	18.0	20.9	38.9	60.0	-21.1
10.328	16.4	20.7	37.1	60.0	-22.9
16.004	14.2	21.1	35.3	60.0	-24.7
24.110	12.7	21.7	34.4	60.0	-25.6

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.890	16.4	20.8	37.2	50.0	-12.8
14.992	8.1	21.0	29.1	50.0	-20.9
10.328	6.3	20.7	27.0	50.0	-23.0
24.110	5.1	21.7	26.8	50.0	-23.2
16.004	5.5	21.1	26.6	50.0	-23.4
13.450	4.8	20.9	25.7	50.0	-24.3

CONCLUSION

Pass

Trevor Buls

Tested By

EUT:	Camera	Work Order:	BSTN0412
Serial Number:	1000021	Date:	02/28/2013
Customer:	Boston Scientific Corporation	Temperature:	23.6°C
Attendees:	None	Relative Humidity:	17.3%
Customer Project:	None	Bar. Pressure:	1019.9 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	110VAC/60Hz	Configuration:	BSTN0412-1

TEST SPECIFICATIONS

Specification: Equipment Class B	Method:
FCC 15.107:2013	ANSI C63.4:2009
ICES-003:2012	ANSI C63.4:2009

TEST PARAMETERS

Run #:	20	Line:	Neutral	Ext. Attenuation (dB):	20
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COMMENTS

Data points taken below were determined to be from the EUT.

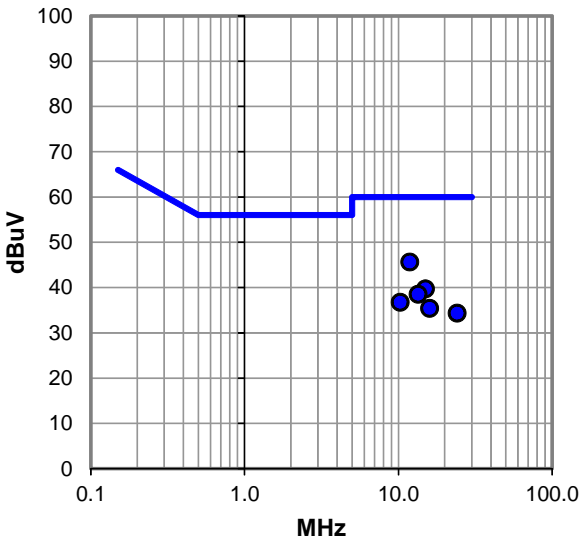
EUT OPERATING MODES

Receiving, MICS, Ant A, High Channel @ 404.85 MHz

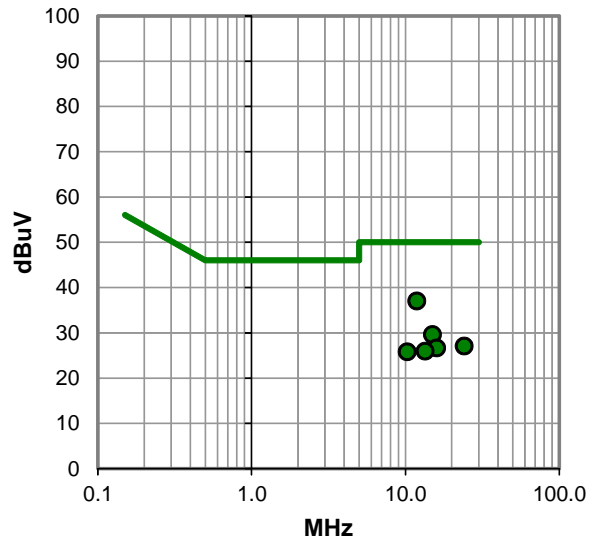
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



RESULTS - Run #20

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	24.8	20.8	45.6	60.0	-14.4
15.012	18.7	21.0	39.7	60.0	-20.3
13.454	17.6	20.9	38.5	60.0	-21.5
10.308	16.0	20.7	36.7	60.0	-23.3
16.008	14.3	21.1	35.4	60.0	-24.6
24.110	12.6	21.7	34.3	60.0	-25.7

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	16.2	20.8	37.0	50.0	-13.0
15.012	8.6	21.0	29.6	50.0	-20.4
24.110	5.3	21.7	27.0	50.0	-23.0
16.008	5.6	21.1	26.7	50.0	-23.3
13.454	5.0	20.9	25.9	50.0	-24.1
10.308	5.1	20.7	25.8	50.0	-24.2

CONCLUSION

Pass

Trevor Buls

Tested By

EUT:	Camera	Work Order:	BSTN0412
Serial Number:	1000021	Date:	02/28/2013
Customer:	Boston Scientific Corporation	Temperature:	23.6°C
Attendees:	None	Relative Humidity:	17.3%
Customer Project:	None	Bar. Pressure:	1019.9 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	110VAC/60Hz	Configuration:	BSTN0412-1

TEST SPECIFICATIONS

Specification: Equipment Class B	Method:
FCC 15.107:2013	ANSI C63.4:2009
ICES-003:2012	ANSI C63.4:2009

TEST PARAMETERS

Run #:	21	Line:	High Line	Ext. Attenuation (dB):	20
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COMMENTS

Data points taken below were determined to be from the EUT.

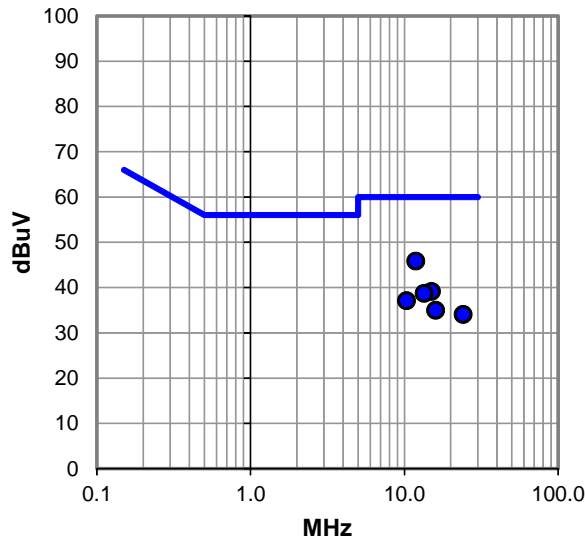
EUT OPERATING MODES

Receiving, MICS, Ant B, Low Channel @ 402.15 MHz

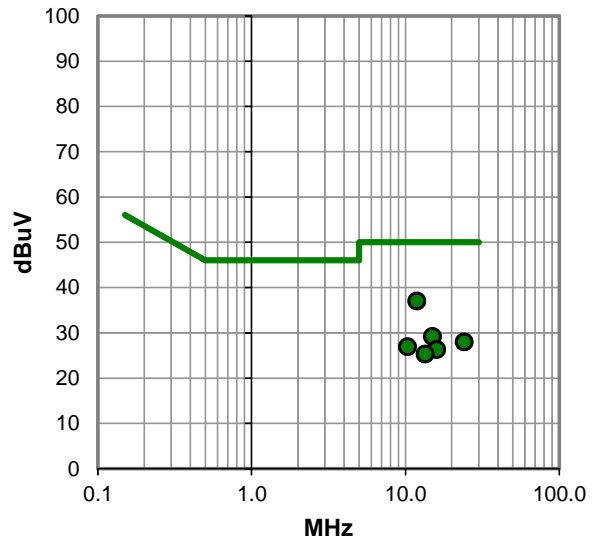
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



RESULTS - Run #21

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	25.0	20.8	45.8	60.0	-14.2
14.992	18.1	21.0	39.1	60.0	-20.9
13.454	17.8	20.9	38.7	60.0	-21.3
10.328	16.4	20.7	37.1	60.0	-22.9
16.004	13.9	21.1	35.0	60.0	-25.0
24.110	12.3	21.7	34.0	60.0	-26.0

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	16.2	20.8	37.0	50.0	-13.0
14.992	8.2	21.0	29.2	50.0	-20.8
24.110	6.2	21.7	27.9	50.0	-22.1
10.328	6.2	20.7	26.9	50.0	-23.1
16.004	5.2	21.1	26.3	50.0	-23.7
13.454	4.4	20.9	25.3	50.0	-24.7

CONCLUSION

Pass

Trevor Buls

Tested By

EUT:	Camera	Work Order:	BSTN0412
Serial Number:	1000021	Date:	02/28/2013
Customer:	Boston Scientific Corporation	Temperature:	23.6°C
Attendees:	None	Relative Humidity:	17.3%
Customer Project:	None	Bar. Pressure:	1019.9 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	110VAC/60Hz	Configuration:	BSTN0412-1

TEST SPECIFICATIONS

Specification: Equipment Class B	Method:
FCC 15.107:2013	ANSI C63.4:2009
ICES-003:2012	ANSI C63.4:2009

TEST PARAMETERS

Run #:	22	Line:	Neutral	Ext. Attenuation (dB):	20
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COMMENTS

Data points taken below were determined to be from the EUT.

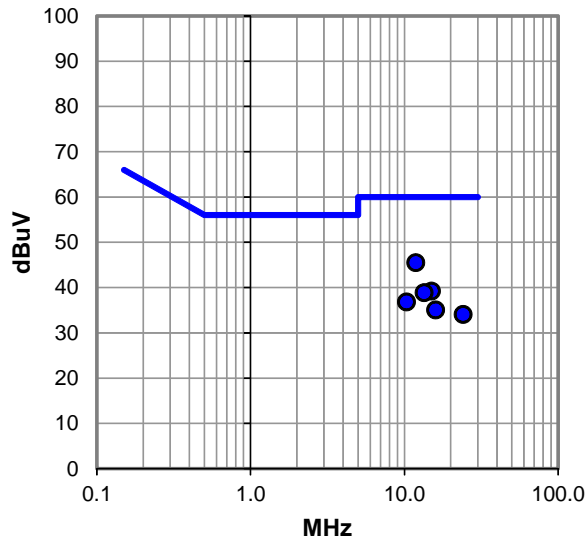
EUT OPERATING MODES

Receiving, MICS, Ant B, Low Channel @ 402.15 MHz

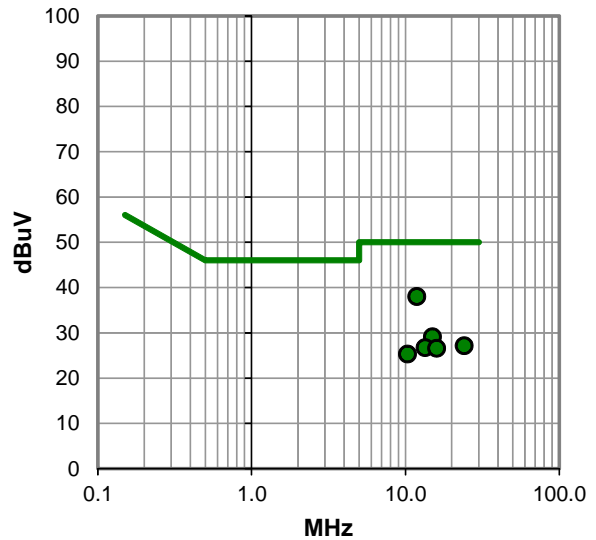
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



RESULTS - Run #22

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	24.7	20.8	45.5	60.0	-14.5
14.996	18.2	21.0	39.2	60.0	-20.8
13.454	17.9	20.9	38.8	60.0	-21.2
10.324	16.1	20.7	36.8	60.0	-23.2
16.012	14.0	21.1	35.1	60.0	-24.9
24.110	12.3	21.7	34.0	60.0	-26.0

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	17.2	20.8	38.0	50.0	-12.0
14.996	8.1	21.0	29.1	50.0	-20.9
24.110	5.4	21.7	27.1	50.0	-22.9
13.454	5.8	20.9	26.7	50.0	-23.3
16.012	5.5	21.1	26.6	50.0	-23.4
10.324	4.6	20.7	25.3	50.0	-24.7

CONCLUSION

Pass

Trevor Buls

Tested By

EUT:	Camera	Work Order:	BSTN0412
Serial Number:	1000021	Date:	02/28/2013
Customer:	Boston Scientific Corporation	Temperature:	23.6°C
Attendees:	None	Relative Humidity:	17.3%
Customer Project:	None	Bar. Pressure:	1019.9 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	110VAC/60Hz	Configuration:	BSTN0412-1

TEST SPECIFICATIONS

Specification: Equipment Class B	Method:
FCC 15.107:2013	ANSI C63.4:2009
ICES-003:2012	ANSI C63.4:2009

TEST PARAMETERS

Run #:	23	Line:	High Line	Ext. Attenuation (dB):	20
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COMMENTS

Data points taken below were determined to be from the EUT.

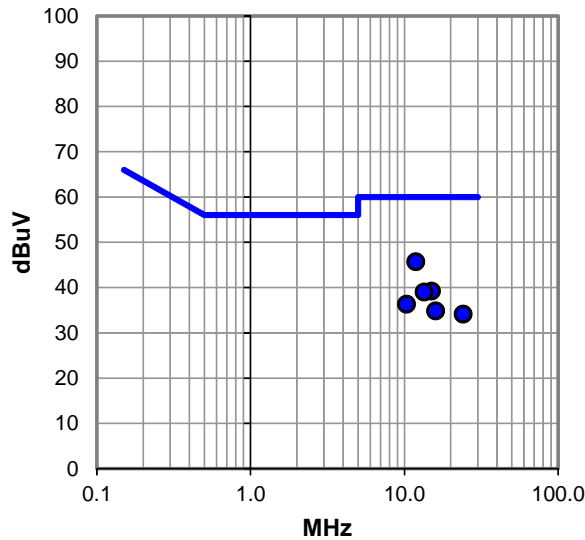
EUT OPERATING MODES

Receiving, MICS, Ant B, Mid Channel @ 403.35 MHz

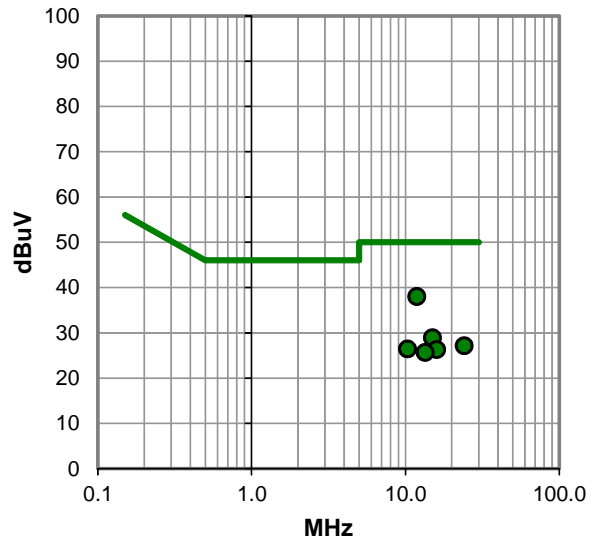
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



RESULTS - Run #23

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	24.9	20.8	45.7	60.0	-14.3
14.996	18.2	21.0	39.2	60.0	-20.8
13.454	18.1	20.9	39.0	60.0	-21.0
10.332	15.6	20.7	36.3	60.0	-23.7
16.012	13.8	21.1	34.9	60.0	-25.1
24.110	12.4	21.7	34.1	60.0	-25.9

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	17.2	20.8	38.0	50.0	-12.0
14.996	7.9	21.0	28.9	50.0	-21.1
24.110	5.4	21.7	27.1	50.0	-22.9
10.332	5.7	20.7	26.4	50.0	-23.6
16.012	5.2	21.1	26.3	50.0	-23.7
13.454	4.7	20.9	25.6	50.0	-24.4

CONCLUSION

Pass

Trevor Buls

Tested By

EUT:	Camera	Work Order:	BSTN0412
Serial Number:	1000021	Date:	02/28/2013
Customer:	Boston Scientific Corporation	Temperature:	23.6°C
Attendees:	None	Relative Humidity:	17.3%
Customer Project:	None	Bar. Pressure:	1019.9 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	110VAC/60Hz	Configuration:	BSTN0412-1

TEST SPECIFICATIONS

Specification: Equipment Class B	Method:
FCC 15.107:2013	ANSI C63.4:2009
ICES-003:2012	ANSI C63.4:2009

TEST PARAMETERS

Run #:	24	Line:	Neutral	Ext. Attenuation (dB):	20
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COMMENTS

Data points taken below were determined to be from the EUT.

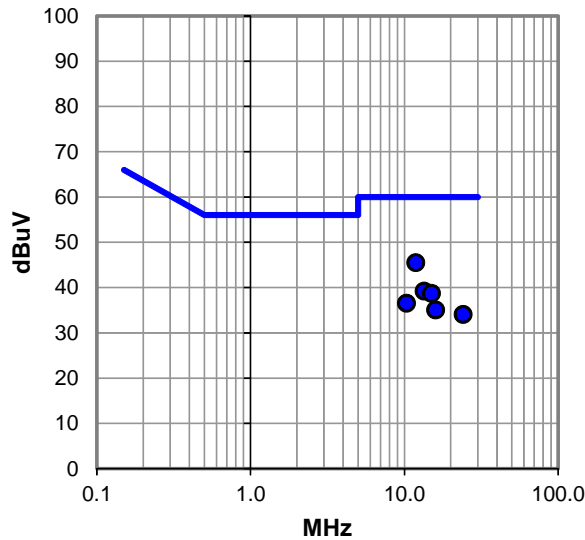
EUT OPERATING MODES

Receiving, MICS, Ant B, Mid Channel @ 403.35 MHz

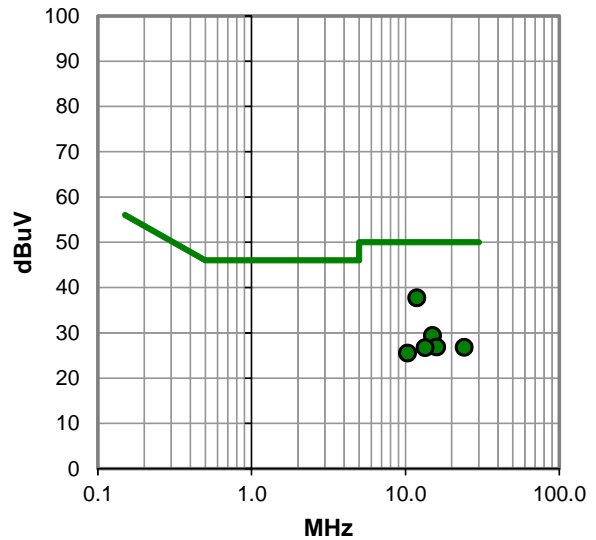
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



RESULTS - Run #24

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	24.7	20.8	45.5	60.0	-14.5
13.454	18.3	20.9	39.2	60.0	-20.8
14.992	17.7	21.0	38.7	60.0	-21.3
10.328	15.8	20.7	36.5	60.0	-23.5
16.004	14.0	21.1	35.1	60.0	-24.9
24.110	12.3	21.7	34.0	60.0	-26.0

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	16.9	20.8	37.7	50.0	-12.3
14.992	8.4	21.0	29.4	50.0	-20.6
16.004	5.8	21.1	26.9	50.0	-23.1
24.110	5.0	21.7	26.7	50.0	-23.3
13.454	5.8	20.9	26.7	50.0	-23.3
10.328	4.8	20.7	25.5	50.0	-24.5

CONCLUSION

Pass

Trevor Buls

Tested By

EUT:	Camera	Work Order:	BSTN0412
Serial Number:	1000021	Date:	02/28/2013
Customer:	Boston Scientific Corporation	Temperature:	23.6°C
Attendees:	None	Relative Humidity:	17.3%
Customer Project:	None	Bar. Pressure:	1019.9 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	110VAC/60Hz	Configuration:	BSTN0412-1

TEST SPECIFICATIONS

Specification: Equipment Class B	Method:
FCC 15.107:2013	ANSI C63.4:2009
ICES-003:2012	ANSI C63.4:2009

TEST PARAMETERS

Run #:	25	Line:	High Line	Ext. Attenuation (dB):	20
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COMMENTS

Data points taken below were determined to be from the EUT.

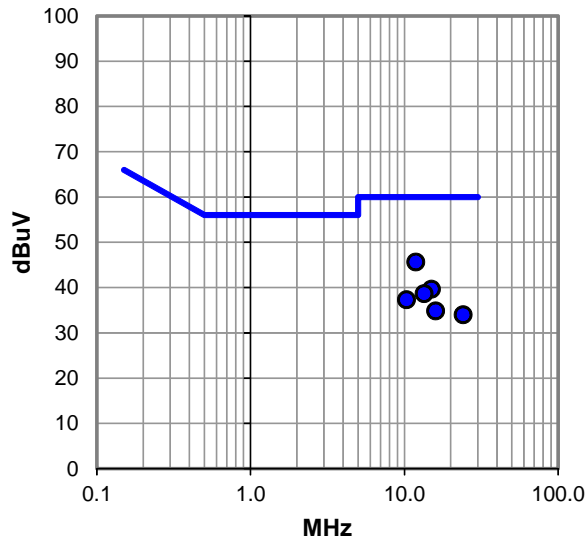
EUT OPERATING MODES

Receiving, MICS, Ant B, High Channel @ 404.85 MHz

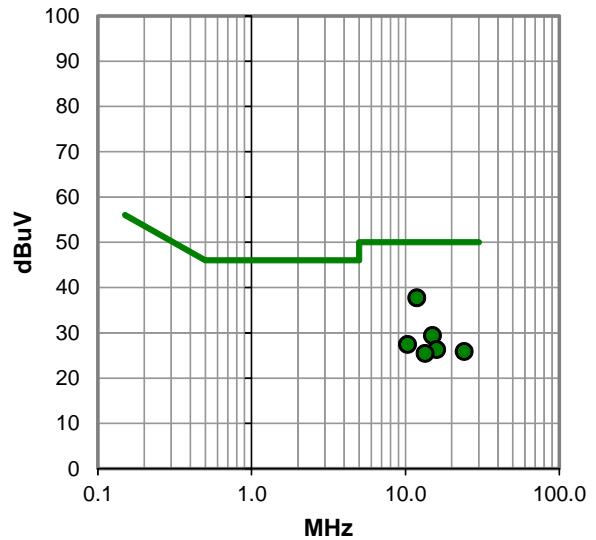
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



RESULTS - Run #25

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.890	24.8	20.8	45.6	60.0	-14.4
15.012	18.6	21.0	39.6	60.0	-20.4
13.454	17.7	20.9	38.6	60.0	-21.4
10.328	16.6	20.7	37.3	60.0	-22.7
16.004	13.8	21.1	34.9	60.0	-25.1
24.110	12.2	21.7	33.9	60.0	-26.1

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.890	16.9	20.8	37.7	50.0	-12.3
15.012	8.4	21.0	29.4	50.0	-20.6
10.328	6.7	20.7	27.4	50.0	-22.6
16.004	5.2	21.1	26.3	50.0	-23.7
24.110	4.1	21.7	25.8	50.0	-24.2
13.454	4.5	20.9	25.4	50.0	-24.6

CONCLUSION

Pass

Trevor Buls

Tested By

EUT:	Camera	Work Order:	BSTN0412
Serial Number:	1000021	Date:	02/28/2013
Customer:	Boston Scientific Corporation	Temperature:	23.6°C
Attendees:	None	Relative Humidity:	17.3%
Customer Project:	None	Bar. Pressure:	1019.9 mb
Tested By:	Trevor Buls	Job Site:	MN03
Power:	110VAC/60Hz	Configuration:	BSTN0412-1

TEST SPECIFICATIONS

Specification: Equipment Class B	Method:
FCC 15.107:2013	ANSI C63.4:2009
ICES-003:2012	ANSI C63.4:2009

TEST PARAMETERS

Run #:	26	Line:	Neutral	Ext. Attenuation (dB):	20
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COMMENTS

Data points taken below were determined to be from the EUT.

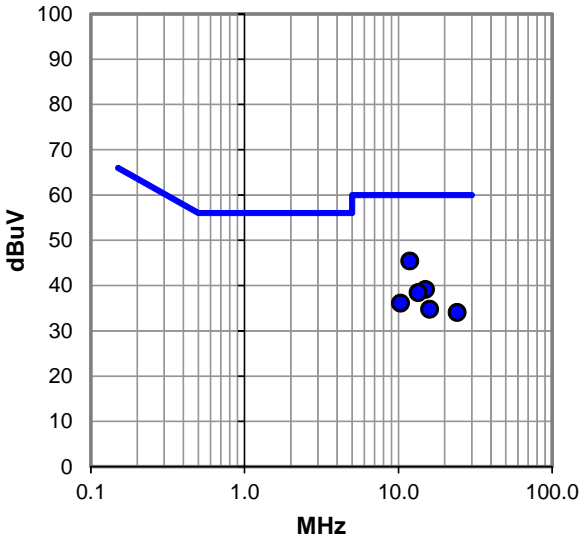
EUT OPERATING MODES

Receiving, MICS, Ant B, High Channel @ 404.85 MHz

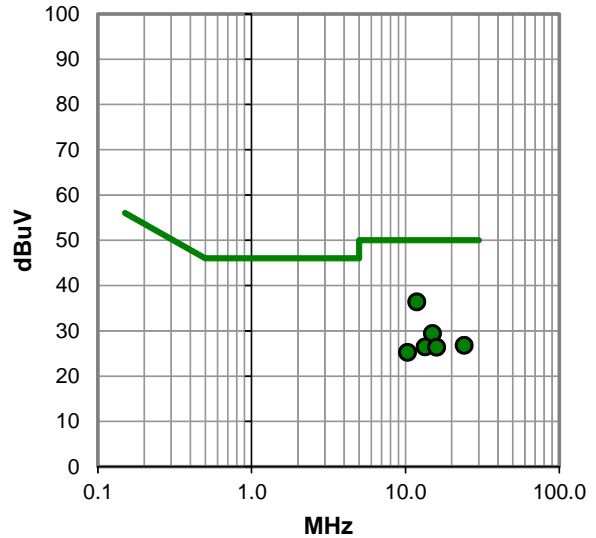
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



RESULTS - Run #26

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	24.6	20.8	45.4	60.0	-14.6
14.992	18.1	21.0	39.1	60.0	-20.9
13.450	17.5	20.9	38.4	60.0	-21.6
10.328	15.4	20.7	36.1	60.0	-23.9
16.012	13.7	21.1	34.8	60.0	-25.2
24.110	12.3	21.7	34.0	60.0	-26.0

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
11.894	15.6	20.8	36.4	50.0	-13.6
14.992	8.4	21.0	29.4	50.0	-20.6
24.110	5.0	21.7	26.7	50.0	-23.3
13.450	5.5	20.9	26.4	50.0	-23.6
16.012	5.3	21.1	26.4	50.0	-23.6
10.328	4.5	20.7	25.2	50.0	-24.8

CONCLUSION

Pass

Trevor Buls

Tested By