Boston Scientific Corporation

G2 Communicator (Model 6476)

May 01, 2008

Report No. BSTN0221

Report Prepared By

www.nwemc.com
1-888-EMI-CERT

EMC Test Report

NORTHWEST EMC

22975 NW Evergreen Parkway
Suite 400
Hillsboro, Oregon 97124

Certificate of Test

Issue Date: May 01, 2008

Boston Scientific Corporation

Model: G2 Communicator (Model 6476)

Emissions			
Test Description	**Specification**	**Test Method**	**Pass/Fail**
Conducted Emissions	FCC 15.207:2007	ANSI C63.4:2003	**Pass**
Field Strength of Harmonics and Spurious Emissions	FCC 15.249:2007	ANSI C63.4:2003	**Pass**
Field Strength of Fundamental	FCC 15.249:2007	ANSI C63.4:2003	**Pass**
Field Strength of Spurious Emissions	FCC 15.205:2007	ANSI C63.4:2003	**Pass**

Modifications made to the product
See the Modifications section of this report

Approved By:
Dean Ghizzone, President

NVLAP

NVLAP Lab Code: 200676-0

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

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 Number	Description	Date	Page Number
00	None		

Accreditations and Authorizations

FCC: Accredited by NVLAP for performance of FCC radio, digital, and ISM device testing. Our Open Area Test Sites, certification chambers, and conducted measurement facilities have been fully described in reports filed with the FCC and accepted by the FCC in letters maintained in our files. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by the FCC as a Telecommunications Certification Body (TCB). This allows Northwest EMC to certify transmitters to FCC specifications in accordance with 47 CFR 2.960 and 2.962.

NVLAP: Northwest EMC, Inc. is accredited under the United States Department of Commerce, National Institute of Standards and Technology, and National Voluntary Laboratory Accreditation Program for satisfactory compliance with the requirements of ISO/IEC 17025 for Testing Laboratories. The NVLAP accreditation encompasses Electromagnetic Compatibility Testing in accordance with the European Union EMC Directive 2004/108/EC, and ANSI C63.4. Additionally, Northwest EMC is accredited by NVLAP to perform radio testing in accordance with the European Union R&TTE Directive 1999/5/EEC, the requirements of FCC, and the RSS radio standards for Industry Canada.

NVLAP LAB CODE 200629-0
NVLAP LAB CODE 200630-0
NVLAP LAB CODE 200676-0
NVLAP LAB CODE 200761-0

Industry Canada: Accredited by NVLAP for performance of Industry Canada RSS and ICES testing. Our Open Area Test Sites and certification chambers comply with RSS 212, Issue 1 (Provisional) and have been filed with Industry Canada and accepted. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by NIST and recognized by Industry Canada as a Certification Body (CB) per the APEC Mutual Recognition Arrangement (MRA). This allows Northwest EMC to certify transmitters to Industry Canada technical requirements.

CAB: Designated by NIST and validated by the European Commission as a Conformity Assessment Body (CAB) to conduct tests and approve products to the EMC directive and transmitters to the R&TTE directive, as described in the U.S. - EU Mutual Recognition Agreement.

TÜV Product Service: Included in TUV Product Service Group's Listing of Recognized Laboratories. It qualifies in connection with the TUV Certification after Recognition of Agent's Testing Program for the product categories and/or standards shown in TUV's current Listing of CARAT Laboratories, available from TUV. A certificate was issued to represent that this laboratory continues to meet TUV's CARAT Program requirements. Certificate No. USA0604C.

TÜV Rheinland: Authorized to carryout EMC tests by order and under supervision of TÜV Rheinland. This authorization is based on "Conditions for EMC-Subcontractors" of November 1992.

NEMKO: Assessed and accredited by NEMKO (Norwegian testing and certification body) for European emissions and immunity testing. As a result of NEMKO's laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification (Authorization No. ELA 119).

Australia/New Zealand: The National Association of Testing Authorities (NATA), Australia has been appointed by the ACA as an accreditation body to accredit test laboratories and competent bodies for EMC standards. Accredited test reports or assessments by competent bodies must carry the NATA logo. Test reports made by an overseas laboratory that has been accredited for the relevant standards by an overseas accreditation body that has a Mutual Recognition Agreement (MRA) with NATA are also accepted as technical grounds for product conformity. The report should be endorsed with the respective logo of the accreditation body (NVLAP).

VCCI: Accepted as an Associate Member to the VCCI, Acceptance No. 564. Conducted and radiated measurement facilities have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. *(Registration Numbers. - Hillsboro: C-1071, R-1025, C-2687, T-289, and R-2318, Irvine: R-1943, C-2766, and T-298, Sultan: R-871, C-1784, and T-294).*

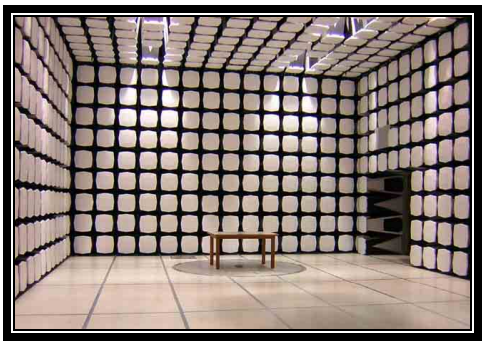
BSMI: Northwest EMC has been designated by NIST and validated by C-Taipei (BSMI) as a CAB to conduct tests as described in the APEC Mutual Recognition Agreement. License No.SL2-IN-E-1017.

GOST: Northwest EMC, Inc. has been assessed and accredited by the Russian Certification bodies Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC, to perform EMC and Hygienic testing for Information Technology Products. As a result of their laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification

MIC: Northwest EMC, Inc is a CAB designated by MRA partners and recognized by Korea. (*Assigned Lab Numbers: Hillsboro: US0017, Irvine: US0158, Sultan: US0157)*

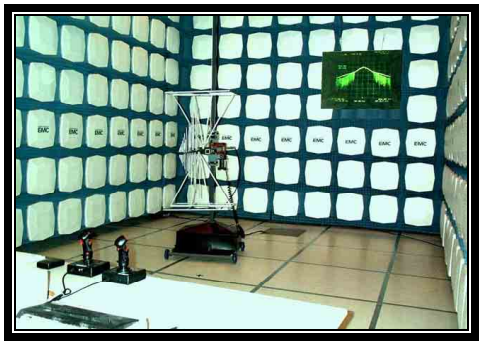
SCOPE

For details on the Scopes of our Accreditations, please visit:
http://www.nwemc.com/scope.asp



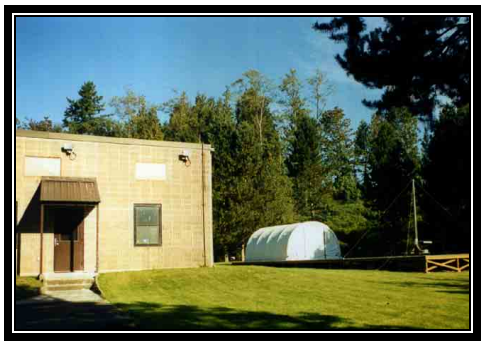
California – Orange County Facility
Labs OC01 – OC13

41 Tesla Ave. Irvine, CA 92618
(888) 364-2378 Fax: (503) 844-3826



Oregon – Evergreen Facility
Labs EV01 – EV11

22975 NW Evergreen Pkwy. Suite 400 Hillsboro, OR 97124
(503) 844-4066 Fax: (503) 844-3826



Washington – Sultan Facility
Labs SU01 – SU07

14128 339th Ave. SE Sultan, WA 98294
(888) 364-2378

Party Requesting the Test

Company Name:	Boston Scientific Corporation
Address:	4100 Hamline Avenue North
City, State, Zip:	St. Paul, MN 55112-5798
Test Requested By:	Larry Canady
Model:	G2 Communicator (Model 6476)
First Date of Test:	April 8, 2008
Last Date of Test:	April 10, 2008
Receipt Date of Samples:	April 8, 2008
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 Boston Scientific Cardiac Rhythm Management, hereinafter referred to as BSC, Model 6476 LATITUDE™ Communicator is an in-home monitor for use with radio frequency (RF) enabled BSC implantable pulse generators. The Model 6476 Communicator has two RF antennas connected to an RF transceiver. Only one antenna can be used at a time. The antenna to be used is selected via software control of a board level integrated circuit RF switch.

The RF transceiver is tuned to 916.5MHz during production and operates within the assigned ISM frequency band of 902-928MHz. The center frequency during field use is adjusted to align with the implantable device center frequency plus a fixed offset to account for a post-implant frequency shift. The Communicator frequency consisting of the implantable frequency plus the fixed shift is acquired from the LATITUDE™ server and downloaded on to the Communicator when it calls in to acquire configuration information during initial setup. By design, the absolute center frequency of the Communicator transceiver cannot exceed the range of 916.0MHz to 917.0MHz.

Testing Objective:

Meet the requirements for FCC authorization as a part 15 intentional radiator as described in the BSC test protocol 100032-978, Rev A located in Appendix A of BSTN0221.1.

EUT Photo

CONFIGURATION 1 BSTN0221

Software/Firmware Running during test	
Description	**Version**
G2 Communicator Firmware	0.11.00

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
G2 Communicator	Boston Scientific Corp	6476 / 402101-011	000580

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
Telephone	No	1.5	No	EUT	Unterminated
Telephone	No	1.5	No	EUT	Unterminated
DC Power Cable	No	2.0	No	G2 Communicator	AC Main
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
AC Adapter	GlobTek, Inc	GTM21089-1305-W2 / GS-1225L	ROHS0019300108/08

Equipment modifications					
Item	Date	Test	Modification	Note	Disposition of EUT
1	4/8/2008	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	4/8/2008	Field Strength of Harmonics	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	4/10/2008	Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

CONDUCTED EMISSIONS

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

MODES OF OPERATION

Mode 2 - Randon

POWER SETTINGS INVESTIGATED

120VAC/60Hz

CONFIGURATIONS INVESTIGATED

1

SAMPLE CALCULATIONS

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Receiver	Rohde & Schwarz	ESCI	ARF	12/14/2007	13 mo
OC06 Cables B and C			OCM	1/10/2008	13 mo
LISN	Solar	9252-50-R-24-BNC	LIC	2/6/2008	13 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

Measurements were made using the bandwidths and detectors specified. No video filter was used.

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

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

NORTHWEST

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CONDUCTED EMISSIONS

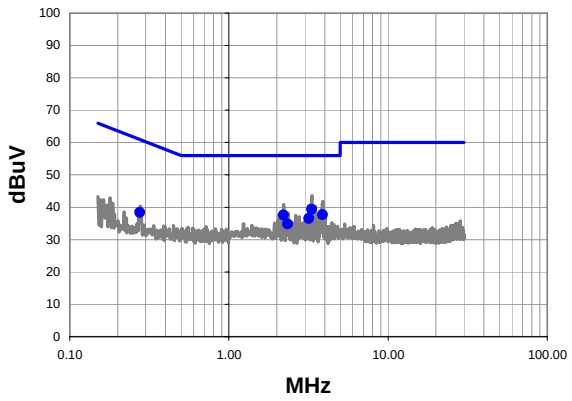
Version 2008.3.31
PSA-ESCI 2008.02.20

Work Order:	BSTN0221	**Date:**	04/10/08	
Project:	None	**Temperature:**	21.82 °C	
Job Site:	OC06	**Humidity:**	41.17	
Serial Number:	580	**Barometric Pres.:**	1016.8	**Tested by:** Andrey Marcus
EUT:	G2 Communicator (Model 6476)			
Configuration:	1			
Customer:	Boston Scientific Corporation			
Attendees:	None			
EUT Power:	120VAC/60Hz			
Operating Mode:	Mode 2 Random			
Deviations:	No deviations.			
Comments:	None			

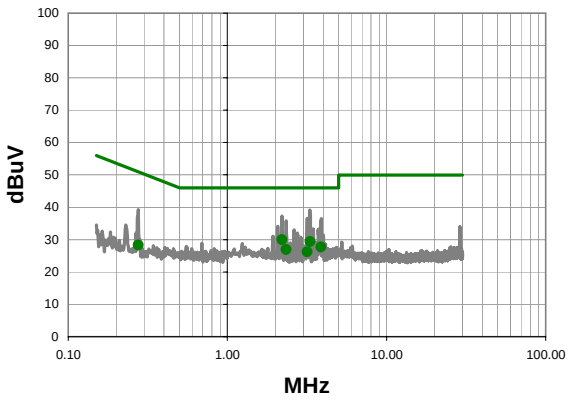
Test Specifications	**Test Method**
FCC 15.207:2007	ANSI C63.4:2003

Run #	1	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
3.308	18.7	20.7	39.4	56.0	-16.6
3.876	17.0	20.7	37.7	56.0	-18.3
2.204	17.0	20.6	37.6	56.0	-18.4
3.172	15.9	20.6	36.5	56.0	-19.5
2.340	14.2	20.6	34.8	56.0	-21.2
0.276	17.2	21.1	38.3	60.9	-22.6

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
2.204	9.4	20.6	30.0	46.0	-16.0
3.308	8.7	20.7	29.4	46.0	-16.6
3.876	7.0	20.7	27.7	46.0	-18.3
2.340	6.3	20.6	26.9	46.0	-19.1
3.172	5.6	20.6	26.2	46.0	-19.8
0.276	7.2	21.1	28.3	50.9	-22.6

NORTHWEST

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CONDUCTED EMISSIONS

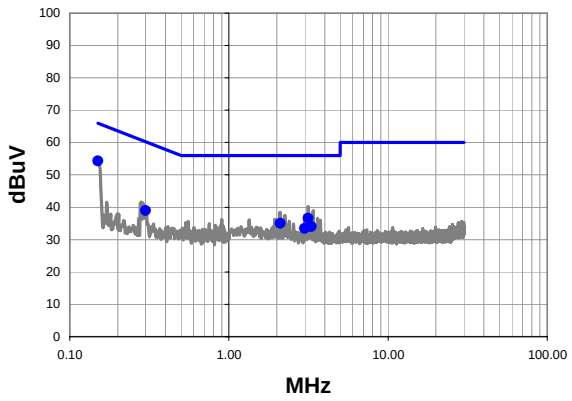
Version 2008.3.31
PSA-ESCI 2008.02.20

Work Order:	BSTN0221	**Date:**	04/10/08		
Project:	None	**Temperature:**	21.82 °C		
Job Site:	OC06	**Humidity:**	41.17		
Serial Number:	580	**Barometric Pres.:**	1016.8	**Tested by:**	Andrey Marcus
EUT:	G2 Communicator (Model 6476)				
Configuration:	1				
Customer:	Boston Scientific Corporation				
Attendees:	None				
EUT Power:	120VAC/60Hz				
Operating Mode:	Mode 2 Random				
Deviations:	No deviations.				
Comments:	None				

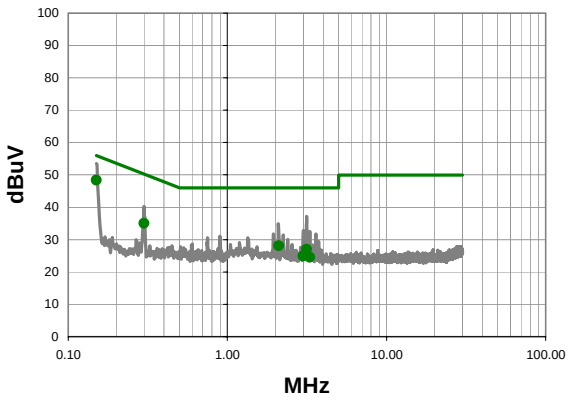
Test Specifications	**Test Method**
FCC 15.207:2007	ANSI C63.4:2003

Run #	6	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.150	31.9	22.4	54.3	66.0	-11.7
3.148	16.0	20.6	36.6	56.0	-19.4
2.100	14.4	20.6	35.0	56.0	-21.0
0.300	17.9	21.1	39.0	60.2	-21.2
3.304	13.4	20.7	34.1	56.0	-21.9
2.996	12.8	20.6	33.4	56.0	-22.6

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.150	25.9	22.4	48.3	56.0	-7.7
0.300	13.9	21.1	35.0	50.2	-15.2
2.100	7.5	20.6	28.1	46.0	-17.9
3.148	6.4	20.6	27.0	46.0	-19.0
2.996	4.3	20.6	24.9	46.0	-21.1
3.304	3.9	20.7	24.6	46.0	-21.4

FIELD STRENGTH OF FUNDEMENTAL

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.

MODES OF OPERATION
Mode 2 antenna 1 Internal
Mode 2 antenna 2 External

POWER SETTINGS INVESTIGATED
120VAC/60Hz

POWER SETTINGS USED FOR FINAL DATA
120VAC/60Hz

FREQUENCY RANGE INVESTIGATED			
Start Frequency	916.5MHz	Stop Frequency	916.5MHz

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
Spectrum Analyzer	Agilent	E4446A	AAQ	12/14/2007	13
Antenna, Biconilog	EMCO	3142	AXJ	2/25/2008	24
OC10 cables a,b,c,d Bilog			OCH	1/7/2008	13

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
Measurements were made using the bandwidths and detectors specified. No video filter was used.				

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, a final radiated emissions test was performed. The frequency range investigated (scanned), is also noted in this report. Radiated emissions measurements were made at the EUT azimuth and antenna height such that the maximum radiated emissions level will be detected. This requires the use of a turntable and an antenna positioner. The preferred method of a continuous azimuth search is utilized for frequency scans of the EUT field strength with both polarities of the measuring antenna. A calibrated, linearly polarized antenna was positioned at the specified distance from the periphery of the EUT.

Tests were made with the antenna positioned in both the horizontal and vertical planes of polarization. The antenna was varied in height above the conducting ground plane to obtain the maximum signal strength. Though specified in the report, the measurement distance shall be 3 meters or 10 meters. At any measurement distance, the antenna height was varied from 1 meter to 4 meters. These height scans apply for both horizontal and vertical polarization, except that for vertical polarization the minimum height of the center of the antenna shall be increased so that the lowest point of the bottom of the antenna clears the ground surface by at least 25 cm.

NORTHWEST EMC

FIELD STRENGTH OF FUNDAMENTAL

PSA 2007.05.07
EMI 2006.4.26

EUT:	G2 Communicator (Model 6476)			Work Order:	BSTN0221
Serial Number:	00580			Date:	04/08/08
Customer:	Boston Scientific Corporation			Temperature:	21.82 °C
Attendees:	Larry Canady			Humidity:	41%
Project:	None			Barometric Pres.:	1016.8
Tested by:	Andrey Marcus	Power:	120VAC/60Hz	Job Site:	OC10

TEST SPECIFICATIONS	Test Method
FCC 15.249: 2006	ANSI C63.4: 2003

TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS

None

EUT OPERATING MODES

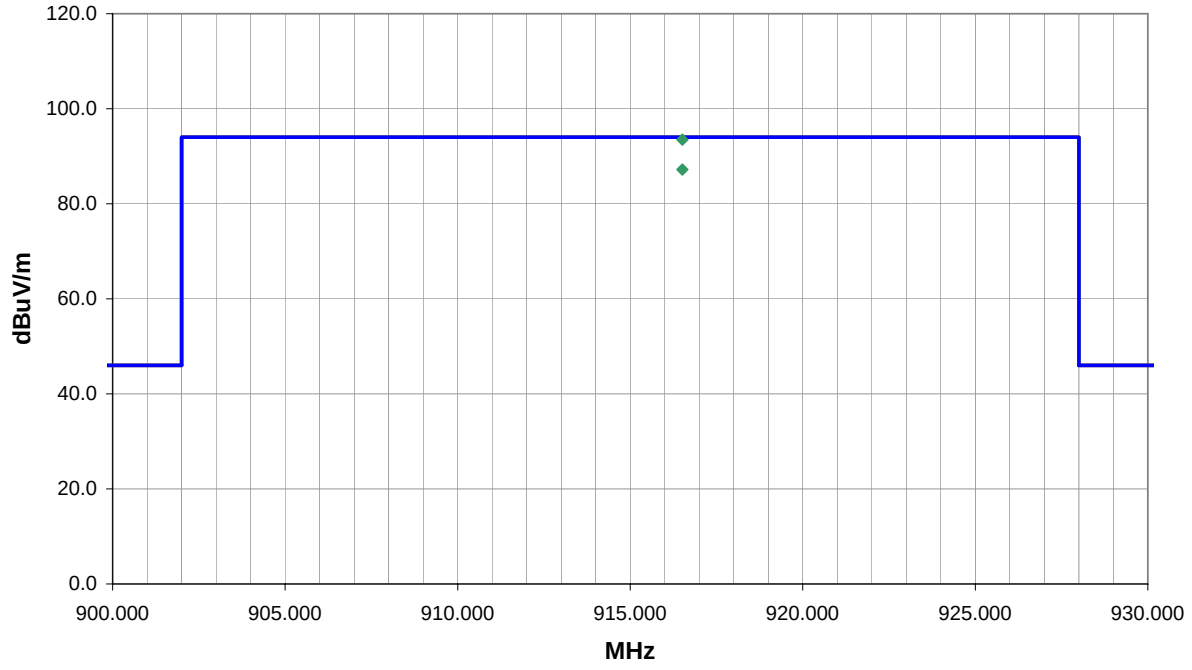
Mode 2 antenna 2 external

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	3
Configuration #	1
Results	Pass

Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
916.512	61.4	32.1	192.0	1.2	3.0	0.0	V-Bilog	QP	0.0	93.5	94.0	-0.5
916.512	55.1	32.1	6.0	1.7	3.0	0.0	H-Bilog	QP	0.0	87.2	94.0	-6.8

NORTHWEST EMC

FIELD STRENGTH OF FUNDAMENTAL

PSA 2007.05.07
EMI 2006.4.26

EUT:	G2 Communicator (Model 6476)			Work Order:	BSTN0221
Serial Number:	00580			Date:	04/08/08
Customer:	Boston Scientific Corporation			Temperature:	21.82 °C
Attendees:	Larry Canady			Humidity:	41%
Project:	None			Barometric Pres.:	1016.8
Tested by:	Andrey Marcus	Power:	120VAC/60Hz	Job Site:	OC10

TEST SPECIFICATIONS	Test Method
FCC 15.249: 2006	ANSI C63.4: 2003

TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS

None

EUT OPERATING MODES

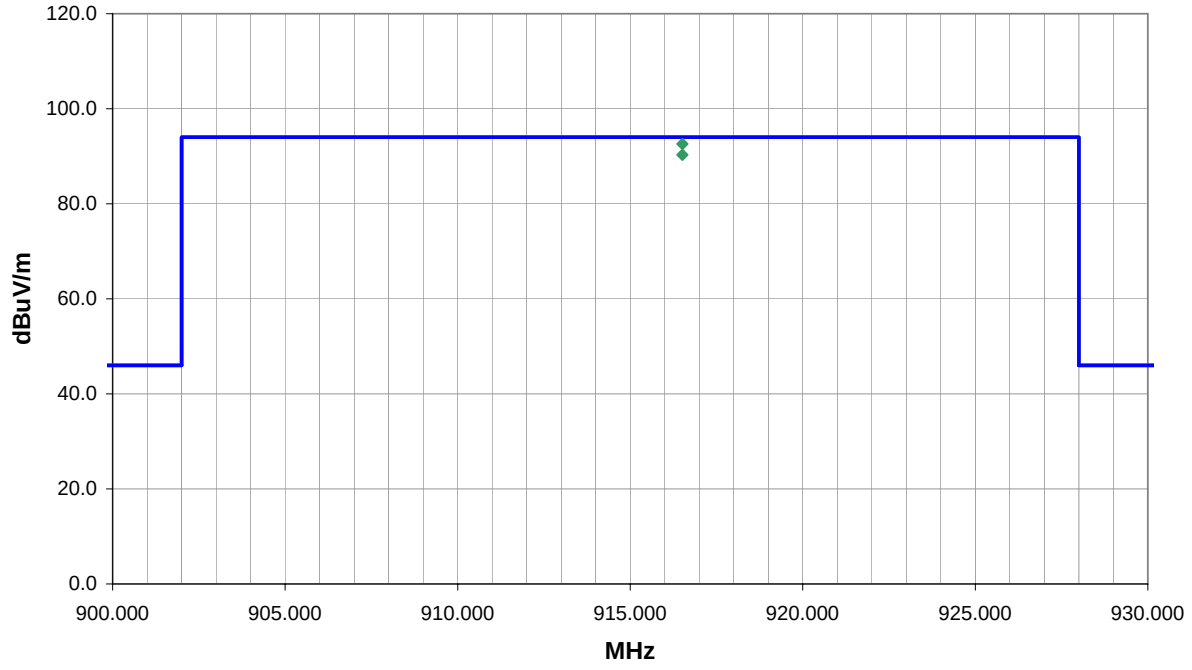
Mode 2 antenna 1 internal

DEVIATIONS FROM TEST STANDARD

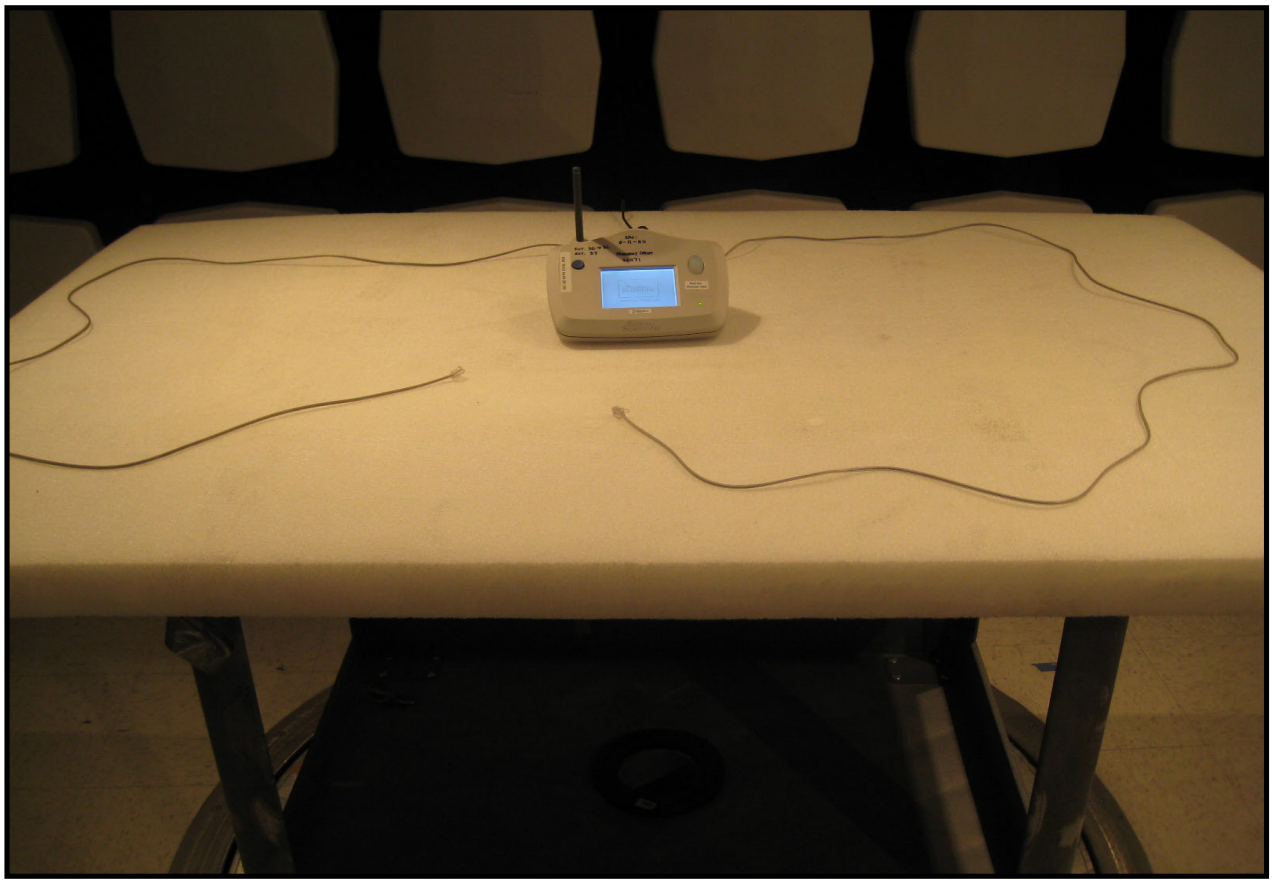
No deviations.

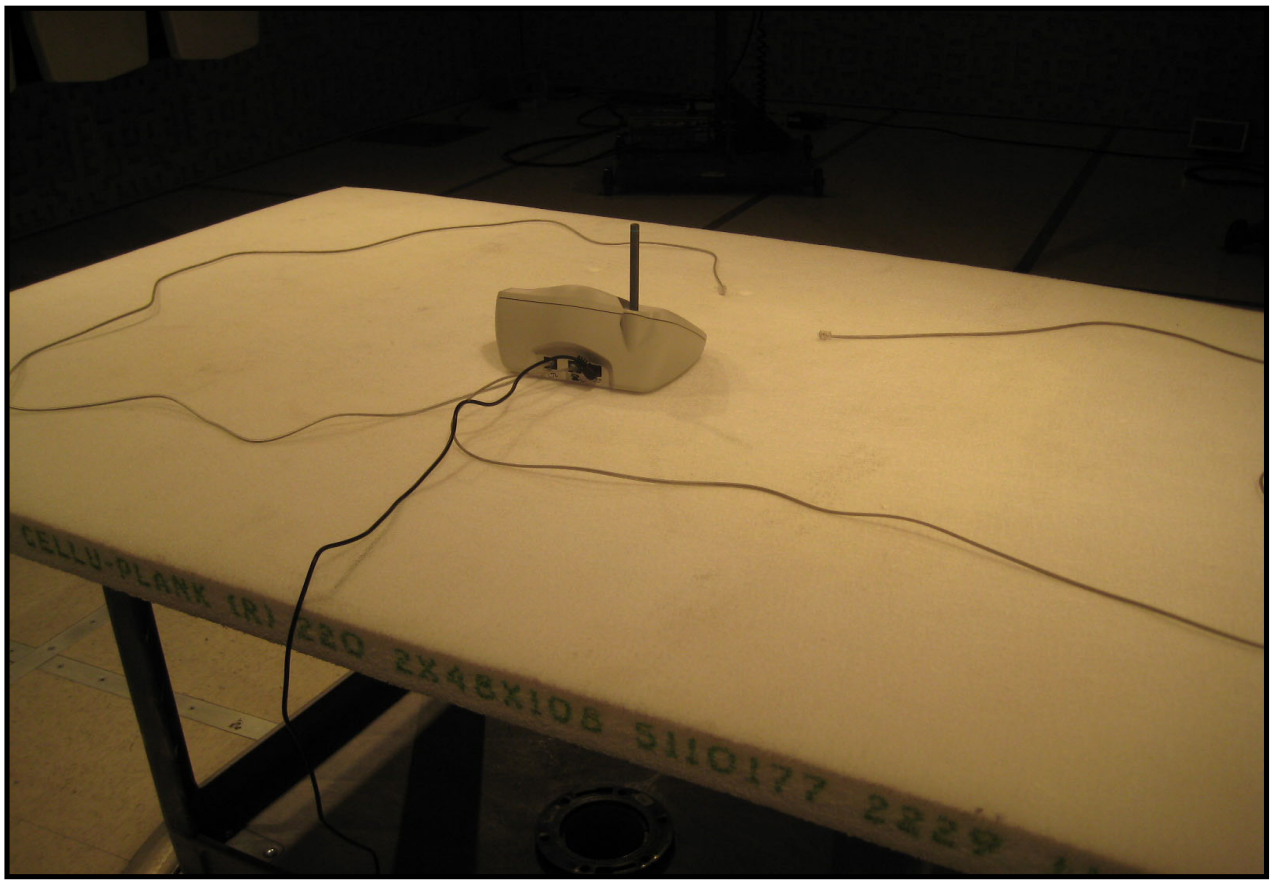
Run #	3
Configuration #	1
Results	Pass

Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
916.512	60.5	32.1	176.0	1.3	3.0	0.0	H-Bilog	QP	0.0	92.6	94.0	-1.4
916.511	58.2	32.1	10.0	1.3	3.0	0.0	V-Bilog	QP	0.0	90.3	94.0	-3.7




CELLU-PLANK (R) 220 2X48X108 5110177 2229

FIELD STRENGTH OF HARMONICS AND 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.

MODES OF OPERATION
Mode 2 antenna 1 internal
Mode 2 antenna 2 external

POWER SETTINGS INVESTIGATED
120VAC/60Hz

POWER SETTINGS USED FOR FINAL DATA
120VAC/60Hz

FREQUENCY RANGE INVESTIGATED			
Start Frequency	30MHz	Stop Frequency	10000MHz

CLOCKS AND OSCILLATORS
916.5MHz

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
Spectrum Analyzer	Agilent	E4446A	AAQ	12/14/2007	13
OC 10 Cables a, b, c, I Cables			OCO	2/2/2008	13
Antenna, Horn	EMCO	3115	AHB	8/31/2007	24
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	2/2/2008	13
High Pass Filter 1.2-18 GHz	Micro-Tronics	HPM50108	HFW	1/7/2008	13
.5-1GHz Notch Filter	K&L Microwave	3TNF-500/1000-N/N	HFR	8/21/2007	13
Low Pass Filter 0-425 MHz	Micro-Tronics	LPM50003	LFA	8/21/2007	13
OC10 cables a,b,c,e,f Horn Cables			OCJ	2/2/2008	13
Antenna, Horn	EMCO	3115	AHB	8/31/2007	24
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	2/2/2008	13
OC 10 Cables a, b, c, I Cables			OCO	2/2/2008	13
Antenna, Horn	ETS	3160-07	AHR	NCR	0
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOE	10/13/2006	24

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

Measurements were made using the bandwidths and detectors specified. No video filter was used.

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, a final radiated emissions test was performed. The frequency range investigated (scanned), is also noted in this report. Radiated emissions measurements were made at the EUT azimuth and antenna height such that the maximum radiated emissions level will be detected. This requires the use of a turntable and an antenna positioner. The preferred method of a continuous azimuth search is utilized for frequency scans of the EUT field strength with both polarities of the measuring antenna. A calibrated, linearly polarized antenna was positioned at the specified distance from the periphery of the EUT. A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

Tests were made with the antenna positioned in both the horizontal and vertical planes of polarization. The antenna was varied in height above the conducting ground plane to obtain the maximum signal strength. Though specified in the report, the measurement distance shall be 3 meters or 10 meters. At any measurement distance, the antenna height was varied from 1 meter to 4 meters. These height scans apply for both horizontal and vertical polarization, except that for vertical polarization the minimum height of the center of the antenna shall be increased so that the lowest point of the bottom of the antenna clears the ground surface by at least 25 cm.

NORTHWEST EMC

FIELD STRENGTH OF HARMONICS AND SPURIOUS EMISSIONS

PSA 2007.05.07
EMI 2006.4.26

EUT:	G2 Communicator (Model 6476)			Work Order:	BSTN0221
Serial Number:	00580			Date:	04/08/08
Customer:	Boston Scientific Corporation			Temperature:	21.82 °C
Attendees:	Larry Canady			Humidity:	41%
Project:	None			Barometric Pres.:	1016.8
Tested by:	Andrey Marcus	Power:	120VAC/60Hz	Job Site:	OC10

TEST SPECIFICATIONS	Test Method
FCC 15.249: 2006	ANSI C63.4: 2003

TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS

None

EUT OPERATING MODES

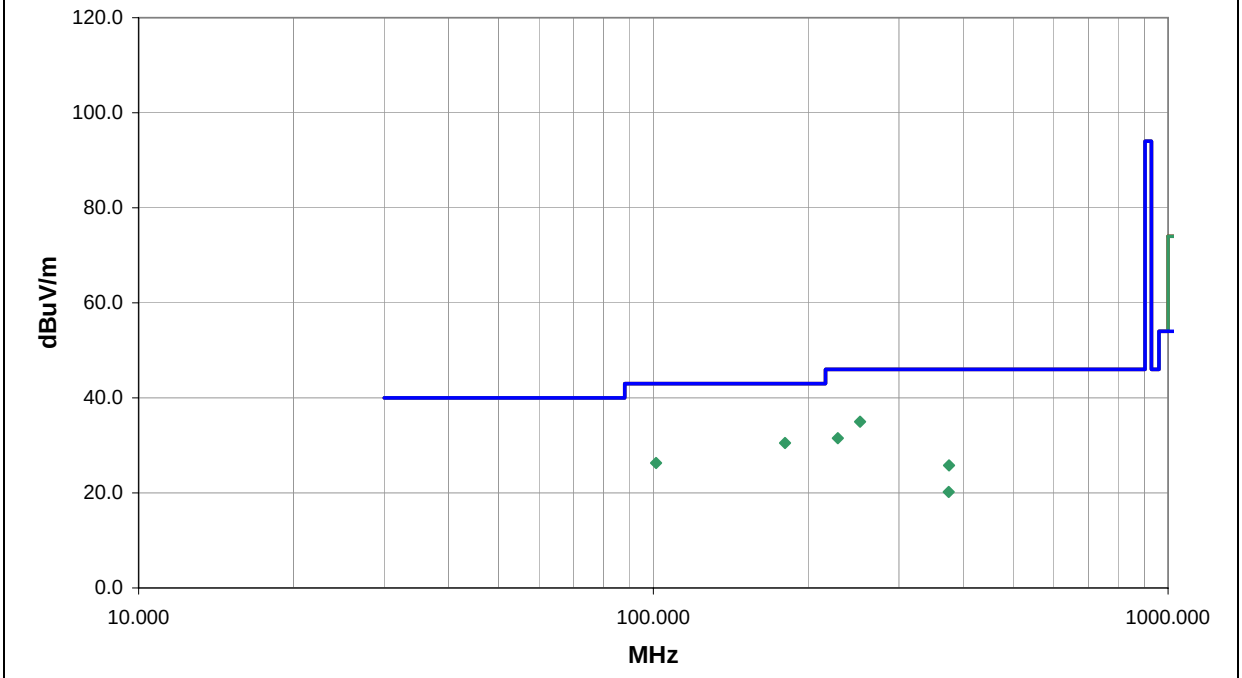
Mode 2 antenna 2 external

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	2
Configuration #	1
Results	Pass

Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
252.208	37.0	-2.0	282.0	1.0	3.0	0.0	H-Bilog	QP	0.0	35.0	46.0	-11.0
180.185	35.2	-4.7	325.0	1.4	3.0	0.0	H-Bilog	QP	0.0	30.5	43.0	-12.5
228.219	34.3	-2.8	338.0	1.0	3.0	0.0	H-Bilog	QP	0.0	31.5	46.0	-14.5
101.244	32.4	-6.1	170.0	1.0	3.0	0.0	V-Bilog	QP	0.0	26.3	43.0	-16.7
375.369	23.9	1.9	275.0	1.0	3.0	0.0	H-Bilog	QP	0.0	25.8	46.0	-20.2
374.725	18.3	1.9	360.0	2.2	3.0	0.0	H-Bilog	QP	0.0	20.2	46.0	-25.8

NORTHWEST EMC

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Tested by:	Andrey Marcus	Power:	120VAC/60Hz	Job Site:	OC10

TEST SPECIFICATIONS	Test Method
FCC 15.249: 2006	ANSI C63.4: 2003

TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS

None

EUT OPERATING MODES

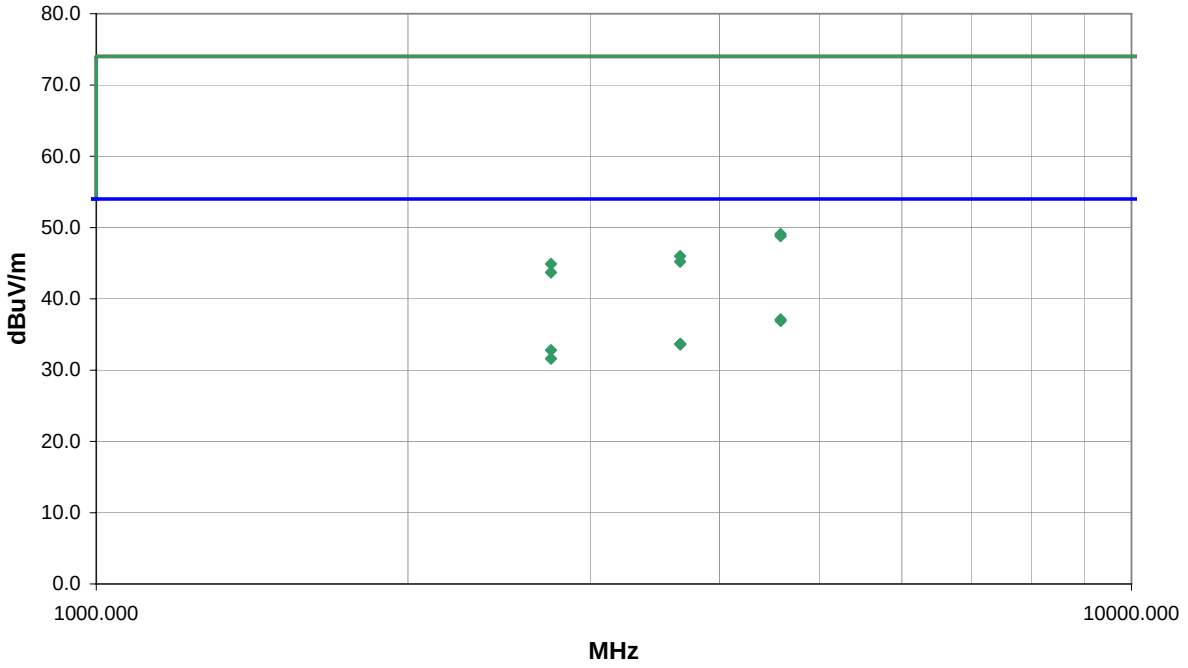
Mode 2 antenna 1 internal

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	4
Configuration #	1
Results	Pass

Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
4582.482	24.9	12.2	159.0	1.7	3.0	0.0	V-Horn	AV	0.0	37.1	54.0	-16.9
4583.263	24.7	12.2	260.0	1.0	3.0	0.0	H-Horn	AV	0.0	36.9	54.0	-17.1
3666.057	24.9	8.8	243.0	1.0	3.0	0.0	H-Horn	AV	0.0	33.7	54.0	-20.3
3665.002	24.8	8.8	38.0	1.0	3.0	0.0	V-Horn	AV	0.0	33.6	54.0	-20.4
2749.475	26.6	6.2	185.0	2.4	3.0	0.0	H-Horn	AV	0.0	32.8	54.0	-21.2
2749.533	25.4	6.2	272.0	1.0	3.0	0.0	V-Horn	AV	0.0	31.6	54.0	-22.4
4582.305	36.9	12.2	260.0	1.0	3.0	0.0	H-Horn	PK	0.0	49.1	74.0	-24.9
4581.523	36.6	12.2	159.0	1.7	3.0	0.0	V-Horn	PK	0.0	48.8	74.0	-25.2
3664.607	37.2	8.8	243.0	1.0	3.0	0.0	H-Horn	PK	0.0	46.0	74.0	-28.0
3664.484	36.4	8.8	38.0	1.0	3.0	0.0	V-Horn	PK	0.0	45.2	74.0	-28.8
2749.772	38.7	6.2	185.0	2.4	3.0	0.0	H-Horn	PK	0.0	44.9	74.0	-29.1
2749.162	37.5	6.2	272.0	1.0	3.0	0.0	V-Horn	PK	0.0	43.7	74.0	-30.3

NORTHWEST EMC

FIELD STRENGTH OF HARMONICS AND SPURIOUS EMISSIONS

PSA 2007.05.07
EMI 2006.4.26

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Tested by:	Andrey Marcus	Power:	120VAC/60Hz	Job Site:	OC10

TEST SPECIFICATIONS	Test Method
FCC 15.249: 2006	ANSI C63.4: 2003

TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS

None

EUT OPERATING MODES

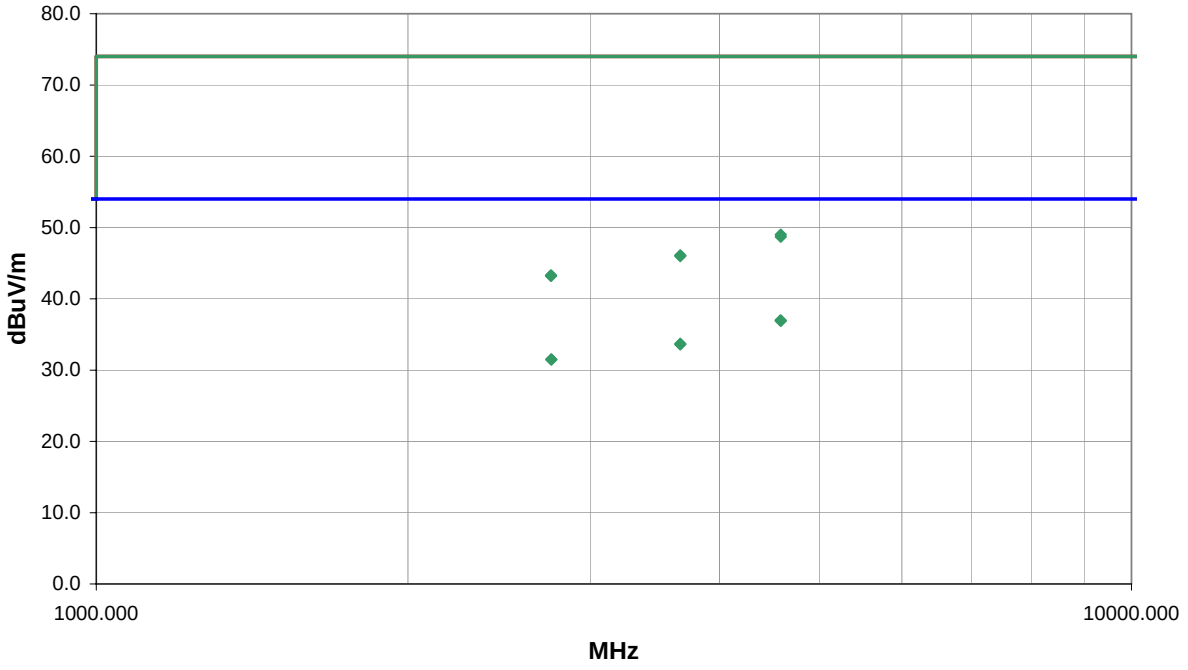
Mode 2 antenna 2 external

DEVIATIONS FROM TEST STANDARD

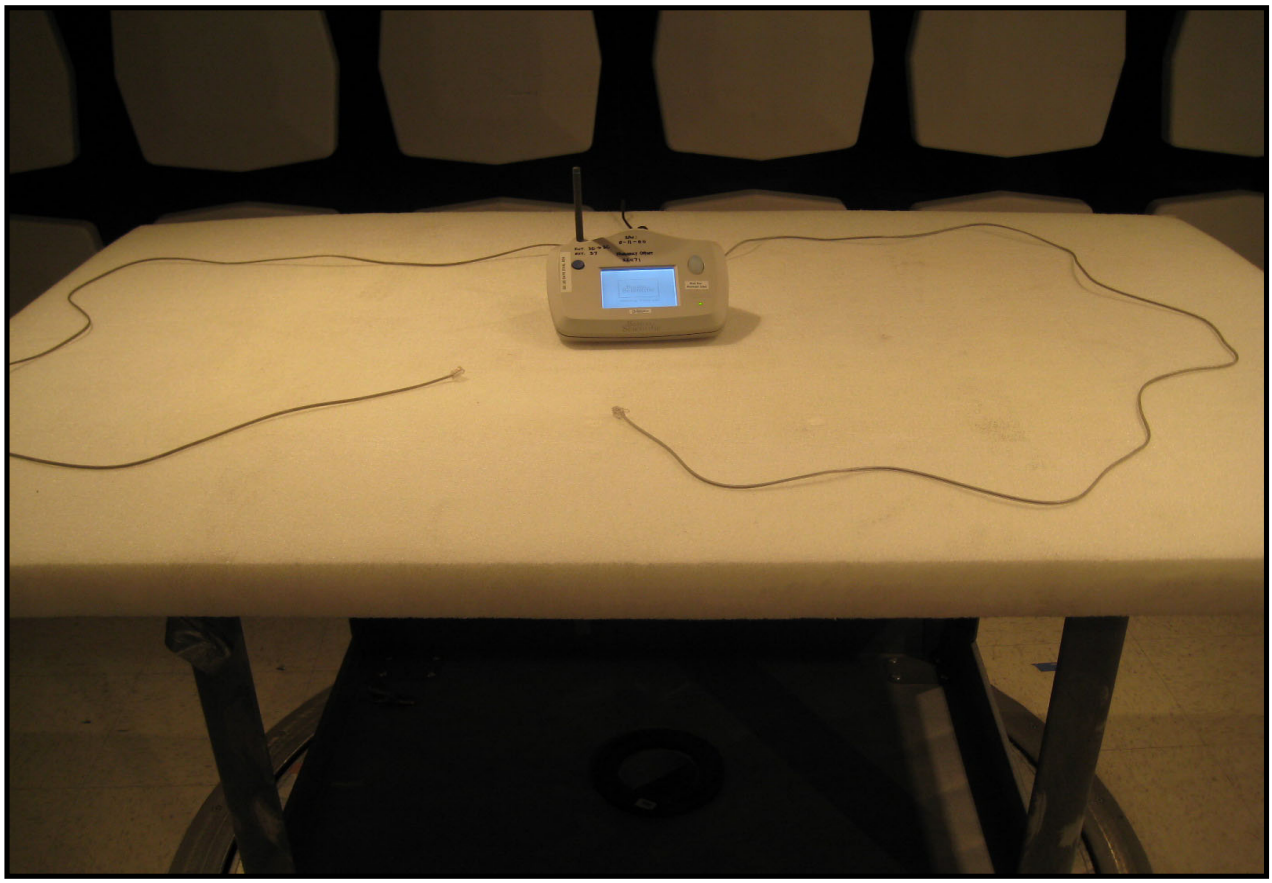
No deviations.

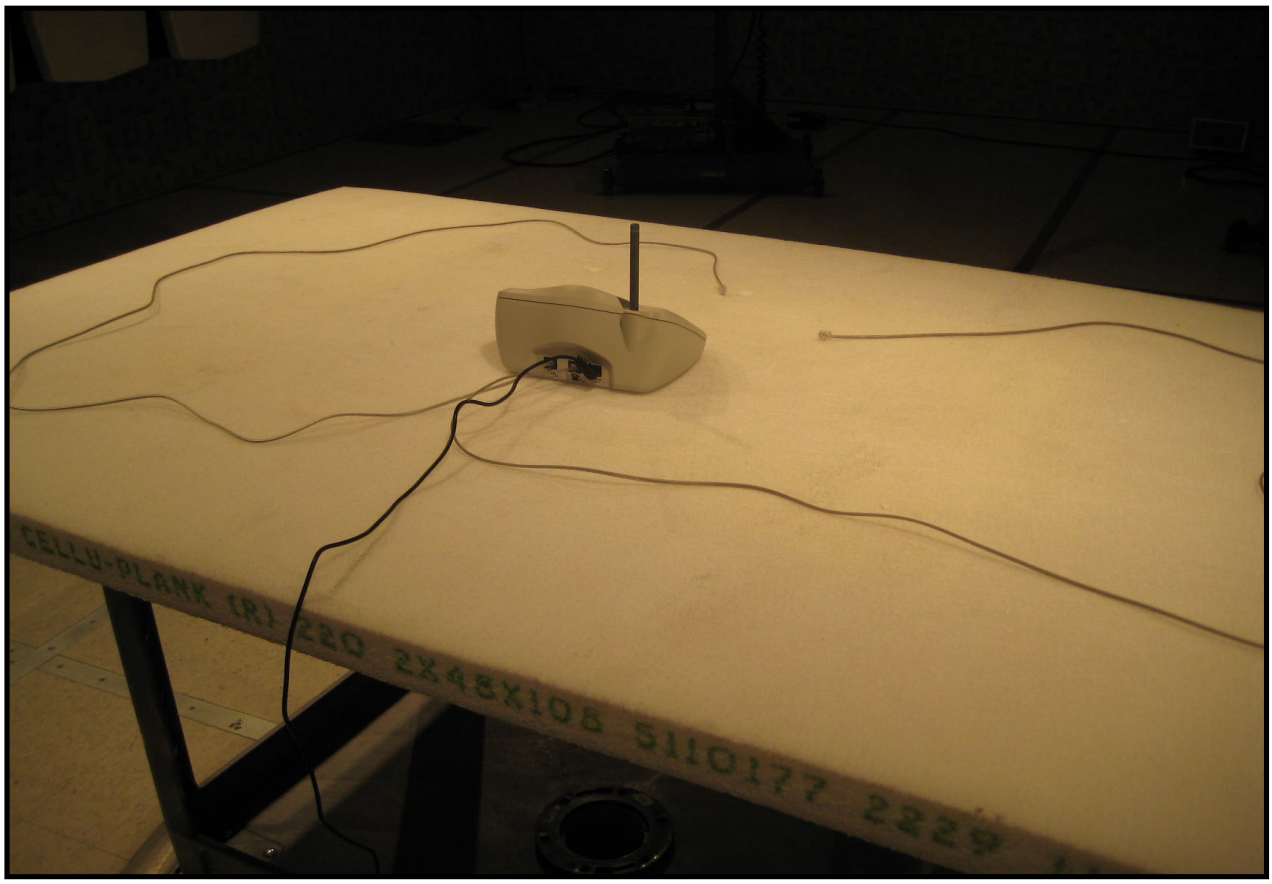
Run #	5
Configuration #	1
Results	Pass

Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
4582.397	24.8	12.2	297.0	1.0	3.0	0.0	V-Horn	AV	0.0	37.0	54.0	-17.0
4583.275	24.7	12.2	325.0	1.0	3.0	0.0	H-Horn	AV	0.0	36.9	54.0	-17.1
3666.035	24.9	8.8	323.0	1.0	3.0	0.0	V-Horn	AV	0.0	33.7	54.0	-20.3
3664.999	24.8	8.8	67.0	1.0	3.0	0.0	H-Horn	AV	0.0	33.6	54.0	-20.4
2751.110	25.3	6.2	296.0	1.0	3.0	0.0	H-Horn	AV	0.0	31.5	54.0	-22.5
2751.232	25.3	6.2	311.0	1.0	3.0	0.0	V-Horn	AV	0.0	31.5	54.0	-22.5
4582.860	36.8	12.2	297.0	1.0	3.0	0.0	V-Horn	PK	0.0	49.0	74.0	-25.0
4583.455	36.5	12.2	325.0	1.0	3.0	0.0	H-Horn	PK	0.0	48.7	74.0	-25.3
3666.151	37.3	8.8	67.0	1.0	3.0	0.0	H-Horn	PK	0.0	46.1	74.0	-27.9
3666.218	37.2	8.8	323.0	1.0	3.0	0.0	V-Horn	PK	0.0	46.0	74.0	-28.0
2749.647	37.1	6.2	311.0	1.0	3.0	0.0	V-Horn	PK	0.0	43.3	74.0	-30.7
2749.715	37.0	6.2	296.0	1.0	3.0	0.0	H-Horn	PK	0.0	43.2	74.0	-30.8

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