

Axonics Modulation Technologies, Inc.

Charging Device (CD) Model - 1401 (MedRadio/MICS) FCC 95I:2019

Report # AXON0041.5 Rev. 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.

CERTIFICATE OF TEST



Last Date of Test: April 21, 2016 Axonics Modulation Technologies, Inc. Model: Charging Device (CD) Model - 1401 (MedRadio/MICS)

Radio Equipment Testing

Standards

Specification	Method
	ANSI C63.26:2015
FCC 95I:2019	FCC 95.2559:2019
	FCC 95.2579:2019

Results

Method Clause	Test Description	Applied	Results	Comments
ANSI C63.26 5.2.3.3	Output Power	Yes	Pass	
ANSI C63.26 5.2.3.3, 5.2.7	Radiated Power (EIRP)	Yes	Pass	
ANSI C63.26 5.4.3	Emissions Bandwidth	Yes	Pass	
ANSI C63.26 5.5.4	Spurious Radiated Emissions	Yes	Pass	
ANSI C63.26 5.6	Frequency Stability	Yes	Pass	
ANSI C63.26 5.7	Spurious Conducted Emissions	Yes	Pass	
FCC 95.2579(a)(1)	Emissions Mask	Yes	Pass	
FCC 95.2559(a)(3-4)	LBT Threshold Power Level	Yes	Pass	
FCC 95.2559(a)(1)	Monitoring System Bandwidth	Yes	Pass	
FCC 95.2559(a)(2)	Monitoring System Scan Cycle Time	Yes	Pass	
FCC 95.2559(a)(2)	Minimum Channel Monitoring Period	Yes	Pass	
FCC 95.2559(a)(5)	Channel Access Based on Ambient Levels	Yes	Pass	
FCC 95.2559(a)(5)	Discontinuation MICS Session	Yes	Pass	
FCC 95.2559(a)(6)	Use of pre-scanned alternative channel	No	N/A	Feature not implemented.

The FCC reorganized Part 95 after the testing was completed. A gap analysis was performed by the test lab to compare the original requirements and standard references with those in the newly organized rule part. The original test data continues to demonstrate compliance to the new requirements as summarized in the table above.

Deviations From Test Standards

None

Approved By:

Victor Ratinoff, Operations Manager

Product compliance is the responsibility of the client; therefore, the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test. This report reflects only those tests from the referenced standards shown in the certificate of test. It does not include inspection or verification of labels, identification, marking or user information.

REVISION HISTORY



Revision Number	Description	Date	Page Number
	Changed first date of test	2019-08-19	7
01	Added items 1 thru 6 to modifications	2019-08-19	9
	Fixed PDF bookmarks	2019-08-19	N/A

ACCREDITATIONS AND AUTHORIZATIONS



United States

FCC - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

A2LA - Accredited by A2LA to ISO / IEC 17065 as a product certifier. This allows Northwest EMC to certify transmitters to FCC and IC specifications.

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

Canada

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

European Union

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

Australia/New Zealand

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

Korea

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

Japan

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

Taiwan

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

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

Singapore

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

Israel

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

Hong Kong

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

Vietnam

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

SCOPE

For details on the Scopes of our Accreditations, please visit: <u>http://www.nwemc.com/accreditations/</u> http://gsi.nist.gov/global/docs/cabs/designations.html

MEASUREMENT UNCERTAINTY



Measurement Uncertainty

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

A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) can be found included as part of the applicable test description page. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-2 as applicable), and are available upon request.

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

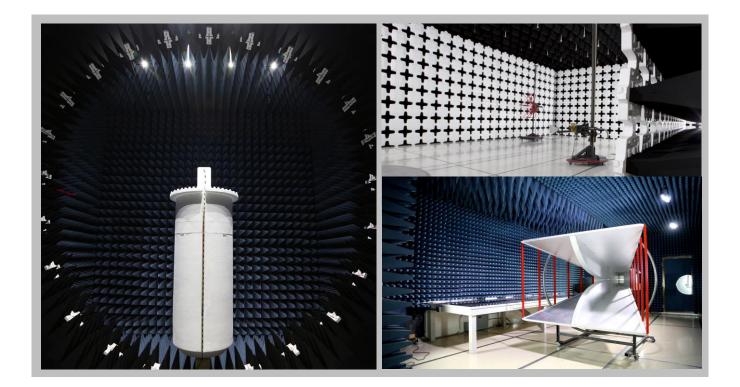
Test	+ MU	<u>- MU</u>
Frequency Accuracy (Hz)	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	0.3 dB	-0.3 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%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

FACILITIES





NVLAP	California Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	Minnesota Labs MN01-08, MN10 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	New York Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 554-8214	Oregon Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	Texas Labs TX01-09 3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255	Washington Labs NC01-05 19201 120 th Ave NE Bothell, WA 98011 (425)984-6600
NVLAP Lab Code: 200676-0 NVLAP Lab Code: 200881-0 NVLAP Lab Code: 200761-0 NVLAP Lab Code: 200630-0 NVLAP Lab Code: 201049-0 NVLAP Lab Code: 200629-0 Innovation, Science and Economic Development Canada 2834B-1, 2834B-3 2834E-1 N/A 2834D-1, 2834D-2 2834G-1 2834F-1 SL2-IN-E-1152R N/A 282-IN-E-1017 SL2-IN-E-1158R SL2-IN-E-1153R VCCI A-0029 A-0109 N/A A-0108 A-0201 A-0110 Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA						
Innovation, Science and Economic Development Canada 2834B-1, 2834B-3 2834E-1 N/A 2834D-1, 2834D-2 2834G-1 2834F-1 BSMI SL2-IN-E-1152R N/A SL2-IN-E-1017 SL2-IN-E-1158R SL2-IN-E-1153R VCCI A-0029 A-0109 N/A A-0108 A-0201 A-0110 Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA			IN V	LAP		
2834B-1, 2834B-3 2834E-1 N/A 2834D-1, 2834D-2 2834G-1 2834F-1 BSMI SL2-IN-E-1154R SL2-IN-E-1152R N/A SL2-IN-E-1017 SL2-IN-E-1158R SL2-IN-E-1153R VCCI VCCI A-0029 A-0109 N/A A-0108 A-0201 A-0110 Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA IDA ID	NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200630-0	NVLAP Lab Code:201049-0	NVLAP Lab Code: 200629-0
BSMI SL2-IN-E-1154R SL2-IN-E-1152R N/A SL2-IN-E-1017 SL2-IN-E-1158R SL2-IN-E-1153R VCCI VCCI A-0029 A-0109 N/A A-0108 A-0201 A-0110 Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA IDA IDA <td></td> <td colspan="5">Innovation, Science and Economic Development Canada</td>		Innovation, Science and Economic Development Canada				
SL2-IN-E-1154R SL2-IN-E-1152R N/A SL2-IN-E-1017 SL2-IN-E-1158R SL2-IN-E-1153R VCCI VCCI VCCI A-0029 A-0109 N/A A-0108 A-0201 A-0110 Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA IDA	2834B-1, 2834B-3	2834E-1	N/A	2834D-1, 2834D-2	2834G-1	2834F-1
VCCI A-0029 A-0109 N/A A-0108 A-0201 A-0110 Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA			BS	МІ		
A-0029 A-0109 N/A A-0108 A-0201 A-0110 Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA	SL2-IN-E-1154R	SL2-IN-E-1152R	N/A	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R
Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA		VCCI				
	A-0029	A-0109	N/A	A-0108	A-0201	A-0110
US0158 US0175 N/A US0017 US0191 US0157		Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA				
	US0158	US0175	N/A	US0017	US0191	US0157



PRODUCT DESCRIPTION



Client and Equipment Under Test (EUT) Information

Company Name:	Axonics Modulation Technologies, Inc.	
Address:	7575 Irvine Center Drive Suite 200	
City, State, Zip:	Irvine, CA 92618	
Test Requested By:	Franklin Portillo	
Model:	Charging Device (CD) Model - 1401 (MedRadio/MICS)	
First Date of Test:	March 8, 2016	
Last Date of Test:	April 21, 2016	
Receipt Date of Samples:	February 25, 2016	
Equipment Design Stage:	Production	
Equipment Condition:	No Damage	

Information Provided by the Party Requesting the Test

Functional Description of the EUT:

Charging Device

Testing Objective:

Seeking FCC authorization for the MedRadio transmitter radio to FCC Part 95I.

CONFIGURATIONS



Configuration AXON0041-3

Software/Firmware Running during test		
Description	Version	
IPG Link	1.0.1.75	

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Charging Device	Axonics Modulation Technologies, Inc.	1401	AD1D260006

Configuration AXON0041-6

Software/Firmware Running during test		
Description	Version	
IPG Link	1.0.1.75	

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Charging Device - Direct Connect	Axonics Modulation Technologies, Inc.	1401	AD1E360008

Peripherals in test setup boundary			
Description Manufacturer Model/Part Number Serial Number			
Bluetooth Dongle	Bluegiga	BLED112	0521-14-3402

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	Toshiba	Satellite C55D-B5102	ZE315927P
Laptop Power Supply	Toshiba	PA3822U-1ACA	T0214490011014A
DC Power Supply	GW INSTEK	GPD-3303S	GEO861981

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Cable	No	1.8m	No	AC Mains	Laptop Power Supply
DC Cable	No	1.5m	Yes	Laptop	Laptop Power Supply
DC Cable	No	3.0m	No	Charging Device	DC Power Supply
AC Cable	No	1.8m	No	AC Mains	DC Power Supply
USB Cable	No	3.0m	No	Laptop	Bluetooth Dongle

MODIFICATIONS



Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
		LBT Threshold	Tested as	No EMI suppression	EUT remained at
1	3/8/2016	Power Level	delivered to	devices were added or	Northwest EMC
		FOWEI Level	Test Station.	modified during this test.	following the test.
		Monitoring	Tested as	No EMI suppression	EUT remained at
2	3/8/2016	System	delivered to	devices were added or	Northwest EMC
		Bandwidth	Test Station.	modified during this test.	following the test.
		Monitoring	Tested as	No EMI suppression	EUT remained at
3	3/8/2016	System Scan	delivered to	devices were added or	Northwest EMC
		Cycle Time	Test Station.	modified during this test.	following the test.
		Minimum	Tested as		EUT remained at
4	3/8/2016	Channel	delivered to	No EMI suppression devices were added or	Northwest EMC
4	3/0/2010	Monitoring	Test Station.	modified during this test.	following the test.
		Period		mouned during this test.	Tonowing the test.
		Channel	Tested as	No EMI suppression	EUT remained at
5	3/8/2016	Access Based	delivered to	devices were added or	Northwest EMC
0	5/0/2010	on Ambient	Test Station.	modified during this test.	following the test.
		Levels		3	
		Discontinuation	Tested as	No EMI suppression	EUT remained at
6	3/8/2016	MICS Session	delivered to	devices were added or	Northwest EMC
			Test Station.	modified during this test.	following the test.
		Spurious	Tested as	No EMI suppression	EUT remained at
7	4/20/2016	Radiated	delivered to	devices were added or	Northwest EMC
		Emissions	Test Station.	modified during this test.	following the test.
		Radiated	Tested as	No EMI suppression	EUT remained at
8	4/20/2016	Power (EIRP)	delivered to	devices were added or	Northwest EMC
	-		Test Station.	modified during this test.	following the test.
			Tested as	No EMI suppression	EUT remained at
9	4/21/2016	Output Power	delivered to	devices were added or	Northwest EMC
	-		Test Station.	modified during this test.	following the test.
		Frequency	Tested as	No EMI suppression	EUT remained at
10	4/21/2016	Stability	delivered to	devices were added or	Northwest EMC
	-	Otability	Test Station.	modified during this test.	following the test.
		Emission	Tested as	No EMI suppression	EUT remained at
11	4/21/2016	Bandwidth	delivered to	devices were added or	Northwest EMC
	ļ		Test Station.	modified during this test.	following the test.
			Tested as	No EMI suppression	EUT remained at
12	4/21/2016	Emission Mask	delivered to	devices were added or	Northwest EMC
			Test Station.	modified during this test.	following the test.
		Spurious	Tested as	No EMI suppression	Scheduled testing
13	4/21/2016	Conducted	delivered to	devices were added or	was completed.
		Emissions	Test Station.	modified during this test.	



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

					Interval
Description	Manufacturer	Model	ID	Last Cal.	(mo)
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	36
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	0
Attenuator	Fairview Microwave	SA18E-10	TKS	4/4/2016	12
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	12
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	12

TEST DESCRIPTION

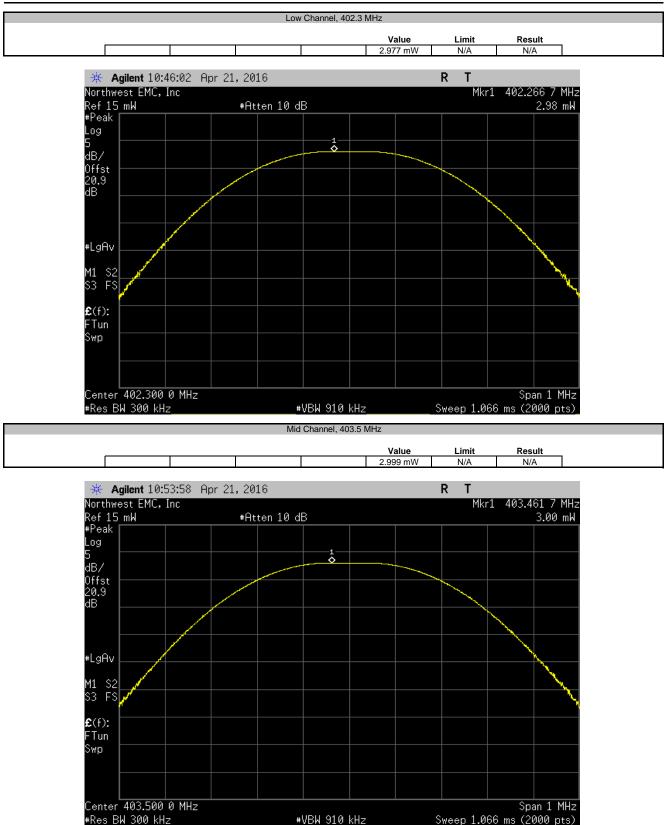
Per FCC Part 2.1046, RSS-GEN, the output power shall be measured at the RF terminal. The peak output power was measured with the EUT configured in the modes listed in the datasheet. The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The EUT was 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.

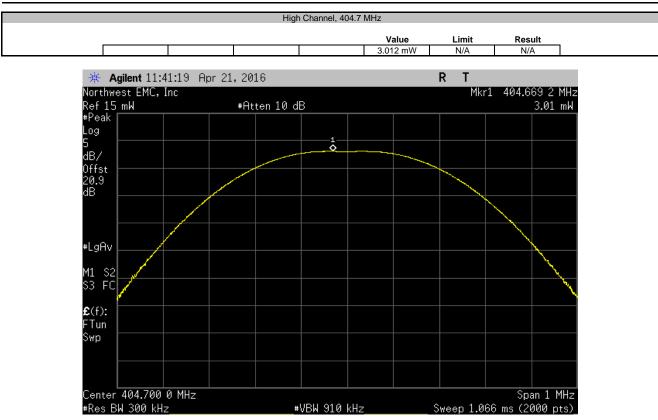


EUT: Charging Device (CD) Model - 1401 (MedRadio/MICS)		Work Order:	AXON0041	
Serial Number: AD1E360008		Date:	04/21/16	
Customer: Axonics Modulation Technologies, Inc.		Temperature:	22.8°C	
Attendees: Franklin Portillo		Humidity:	37%	
Project: None		Barometric Pres.:	1012	
Tested by: Johnny Candelas	Power: 3.8VDC	Job Site:	OC13	
TEST SPECIFICATIONS	Test Method			
FCC 95I:2016	ANSI/TIA/EIA-603-D-2010			
COMMENTS				
DC Block + 20dB Attenuator + Coax Cable = 20.93dB Total Offset				
DEVIATIONS FROM TEST STANDARD				
None				
Configuration # 6 Signature	for d. later			
		Value	Limit	Result
Low Channel, 402.3 MHz		2.977 mW	N/A	N/A
Mid Channel, 403.5 MHz		2.999 mW	N/A	N/A
High Channel, 404.7 MHz		3.012 mW	N/A	N/A









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RADIATED POWER (EIRP)

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MODES OF OPERATION

Continuous Transmit Mode: Mid Channel (403.5MHz)

POWER SETTINGS INVESTIGATED

Battery

CONFIGURATIONS INVESTIGATED

AXON0041 - 3

FREQUENCY RANGE INVESTIGATED

Start Frequency 402 MHz

Stop Frequency 405 MHz

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	36 mo
Power Sensor	Agilent	E4412A	SQE	2/4/2016	12 mo
Meter - Power	Hewlett Packard	E4418A	SPA	2/4/2016	12 mo
Antenna - Dipole	EMCO	3121C-DB1,DB2,DB3,DB4	ADC	5/17/2013	36 mo
Amplifier - Pre-Amplifier	Miteq	AM-1064-9079	AOO	3/3/2016	12 mo
Cable	Northwest EMC	10kHz-1GHz RE Cables	OCH	3/3/2016	12 mo
Antenna - Biconilog	EMCO	3142B	AXK	10/6/2014	24 mo
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFJ	2/9/2016	12 mo

TEST DESCRIPTION

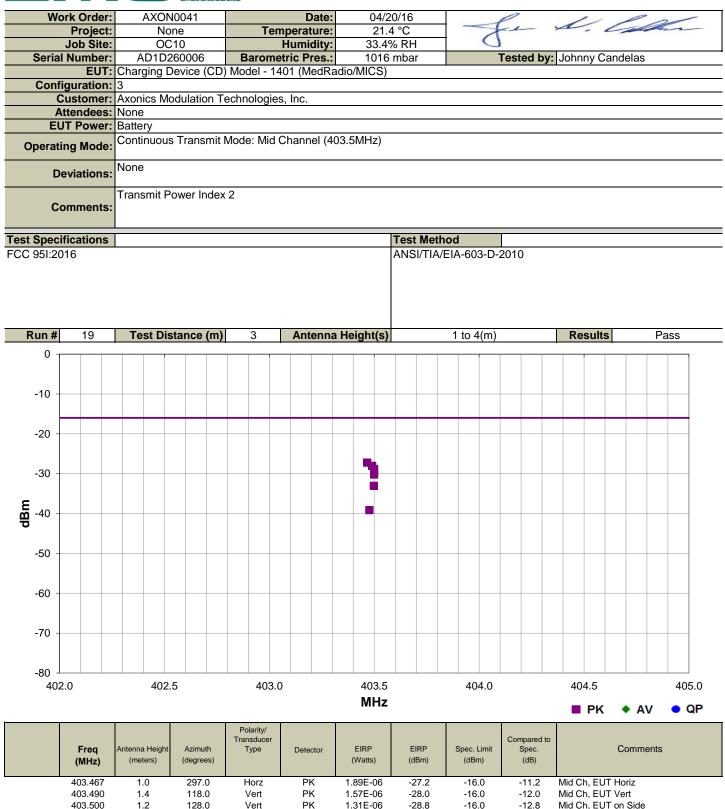
Per 95.627(g)(3), the maximum radiated field strength for a MICS transmitter is 25uW EIRP. The Field Strength of the Fundamental data was converted to EIRP with the formula based upon the Friis transmission equation with 6 dB removed due to reflections from the ground plane: EIRP = $((E/2)^*d)^2/30$ where E is V/m and d = distance = 3m, and EIRP = W.

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.

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RADIATED POWER (EIRP)



1.0

1.0

2.6

193.0

208.0

330.0

403.500

403.498

403.477

Horz

Horz

Vert

PK

ΡK

ΡK

9.49E-07

4.98E-07

1.22E-07

-30.2

-33.0

-39.1

-16.0

-16.0

-16.0

-14.2

-17.0

-23.1

Mid Ch, EUT on Side

Mid Ch, EUT Vert

Mid Ch, EUT Horiz



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

					Interval
Description	Manufacturer	Model	ID	Last Cal.	(mo)
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	36
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	0
Attenuator	Fairview Microwave	SA18E-10	TKS	4/4/2016	12
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	12
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	12

TEST DESCRIPTION

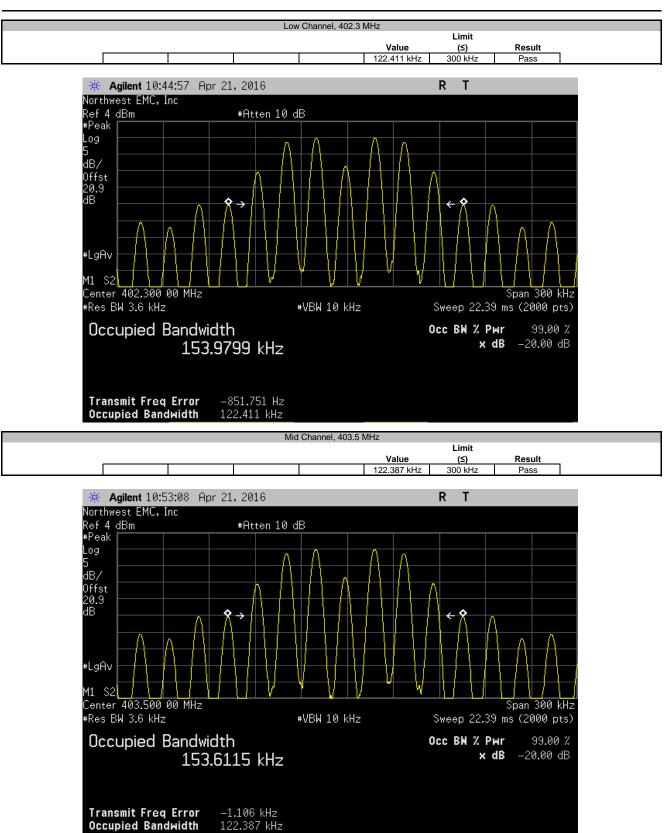
Per 47 CFR 95.633(e)(3), the emission bandwidth was determined by measuring the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that are 20 dB down relative to the maximum level of the modulated carrier. A spectrum analyzer using 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.



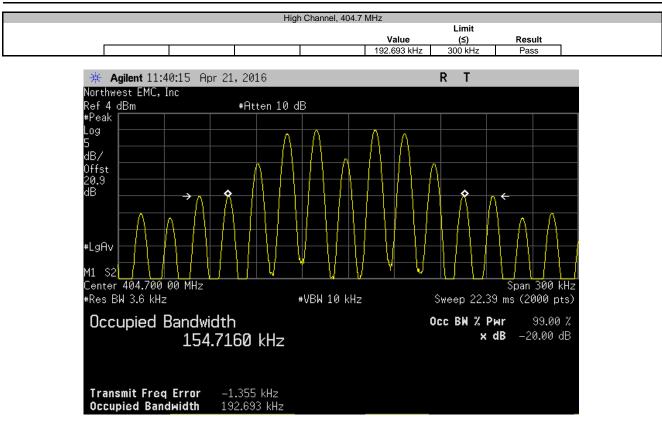
EUT: Charging Device (CD) Model - 1401 (MedRadio/MICS)		Work Order:	AXON0041	
Serial Number: AD1E360008		Date:	04/21/16	
Customer: Axonics Modulation Technologies, Inc.		Temperature:	22.8°C	
Attendees: Franklin Portillo		Humidity:	37%	
Project: None		Barometric Pres.:	1012	
Tested by: Johnny Candelas	Power: 3.8VDC	Job Site:	OC13	
TEST SPECIFICATIONS	Test Method			
FCC 95I:2016	FCC 95.633(e)(3):2016			
COMMENTS				
DC Block + 20dB Attenuator + Coax Cable = 20.93dB Total Offset				
DEVIATIONS FROM TEST STANDARD				
None				
Configuration # 6 Signature	for d. later			
			Limit	
		Value	(≤)	Result
Low Channel, 402.3 MHz		122.411 kHz	300 kHz	Pass
Mid Channel, 403.5 MHz		122.387 kHz	300 kHz	Pass
High Channel, 404.7 MHz		192.693 kHz	300 kHz	Pass

Report No. AXON0041.5 Rev. 1









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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

Continuous Transmit Mode: Mid Channel (403.5MHz)

POWER SETTINGS INVESTIGATED

Battery

CONFIGURATIONS INVESTIGATED

AXON0041 - 3

FREQUENCY RANGE INVESTIGATED

Start Frequency 30 MHz

Stop Frequency 5000 MHz

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Amplifier - Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	8/26/2015	12 mo
Cable	Northwest EMC	1-8GHz RE Cables	OCJ	8/26/2015	12 mo
Antenna - Double Ridge	EMCO	3115	AHB	3/21/2016	24 mo
Amplifier - Pre-Amplifier	Miteq	AM-1064-9079	AOO	3/3/2016	12 mo
Cable	Northwest EMC	10kHz-1GHz RE Cables	OCH	3/3/2016	12 mo
Antenna - Biconilog	EMCO	3142B	AXK	10/6/2014	24 mo
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFJ	2/9/2016	12 mo

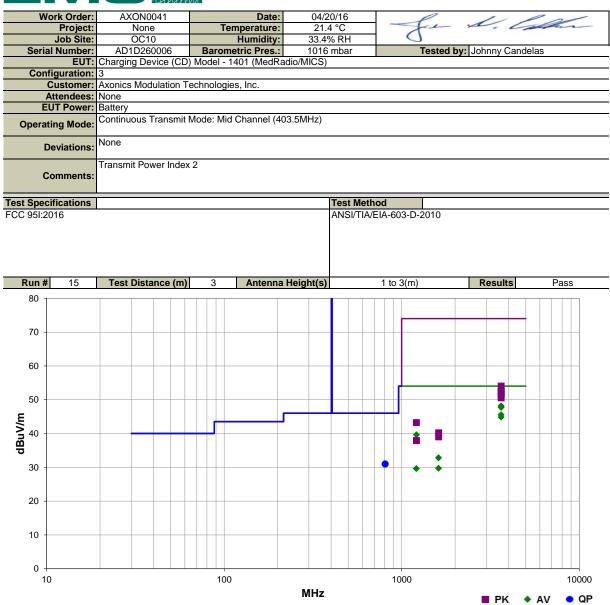
TEST DESCRIPTION

The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured in the modes listed in the datasheet. For each configuration, the spectrum was scanned throughout the specified range. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes (per ANSI C63.10). A preamp was used for this test in order to provide sufficient measurement sensitivity.



PSA-ESCI 2016.03.11 EmiR5 2016.03.11

SPURIOUS RADIATED EMISSIONS



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
3631.433	43.6	6.9	2.1	146.0	3.0	0.0	Horz	AV	0.0	50.5	54.0	-3.5	Mid Ch, EUT Horiz
3631.467	41.2	6.9	2.4	108.0	3.0	0.0	Vert	AV	0.0	48.1	54.0	-5.9	Mid Ch, EUT Horiz
3631.467	41.2	6.9	1.4	183.0	3.0	0.0	Horz	AV	0.0	48.1	54.0	-5.9	Mid Ch, EUT on Side
3631.458	40.8	6.9	1.2	133.0	3.0	0.0	Vert	AV	0.0	47.7	54.0	-6.3	Mid Ch, EUT on Side
3631.483	38.6	6.9	1.4	249.0	3.0	0.0	Horz	AV	0.0	45.5	54.0	-8.5	Mid Ch, EUT Vert
3631.467	37.9	6.9	2.4	158.0	3.0	0.0	Vert	AV	0.0	44.8	54.0	-9.2	Mid Ch, EUT Vert
1210.517	43.1	-3.5	1.6	293.0	3.0	0.0	Horz	AV	0.0	39.6	54.0	-14.4	Mid Ch, EUT Horiz
807.037	19.4	11.6	1.0	211.0	3.0	0.0	Horz	QP	0.0	31.0	46.0	-15.0	Mid Ch, EUT Horiz
806.808	19.3	11.6	1.0	97.0	3.0	0.0	Vert	QP	0.0	30.9	46.0	-15.1	Mid Ch, EUT Horiz
3631.417	47.1	6.9	2.1	146.0	3.0	0.0	Horz	PK	0.0	54.0	74.0	-20.0	Mid Ch, EUT Horiz
1613.983	34.6	-1.8	1.0	359.0	3.0	0.0	Vert	AV	0.0	32.8	54.0	-21.2	Mid Ch, EUT Horiz
3631.617	45.5	6.9	2.4	108.0	3.0	0.0	Vert	PK	0.0	52.4	74.0	-21.6	Mid Ch, EUT Horiz
3631.458	45.5	6.9	1.4	183.0	3.0	0.0	Horz	PK	0.0	52.4	74.0	-21.6	Mid Ch, EUT on Side
3631.533	45.3	6.9	1.2	133.0	3.0	0.0	Vert	PK	0.0	52.2	74.0	-21.8	Mid Ch, EUT on Side
3631.658	44.4	6.9	1.4	249.0	3.0	0.0	Horz	PK	0.0	51.3	74.0	-22.7	Mid Ch, EUT Vert
3631.583	43.6	6.9	2.4	158.0	3.0	0.0	Vert	PK	0.0	50.5	74.0	-23.5	Mid Ch, EUT Vert
1613.967	31.5	-1.8	1.0	121.0	3.0	0.0	Horz	AV	0.0	29.7	54.0	-24.3	Mid Ch, EUT Horiz
1210.458	33.1	-3.5	1.3	81.0	3.0	0.0	Vert	AV	0.0	29.6	54.0	-24.4	Mid Ch, EUT Horiz
1210.467	46.7	-3.5	1.6	293.0	3.0	0.0	Horz	PK	0.0	43.2	74.0	-30.8	Mid Ch, EUT Horiz
1614.167	42.0	-1.8	1.0	359.0	3.0	0.0	Vert	PK	0.0	40.2	74.0	-33.8	Mid Ch, EUT Horiz
1614.233	40.8	-1.8	1.0	121.0	3.0	0.0	Horz	PK	0.0	39.0	74.0	-35.0	Mid Ch, EUT Horiz
1210.642	41.4	-3.5	1.3	81.0	3.0	0.0	Vert	PK	0.0	37.9	74.0	-36.1	Mid Ch, EUT Horiz



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

					Interval
Description	Manufacturer	Model	ID	Last Cal.	(mo)
Meter - Multimeter	Fluke	79 III	MMD	2/11/2016	36
Thermometer	Omega Engineering, Inc.	HH311	DUC	10/3/2014	36
Chamber - Temperature/Humidity	Cincinnati Sub Zero (CSZ)	ZPHS-32-3.5-SCT/AC	TBE	NCR	0
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	36
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	0
Attenuator	Fairview Microwave	SA18E-10	TKS	4/4/2016	12
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	12
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	12

TEST DESCRIPTION

Variation of Supply Voltage

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

Variation of Ambient Temperature

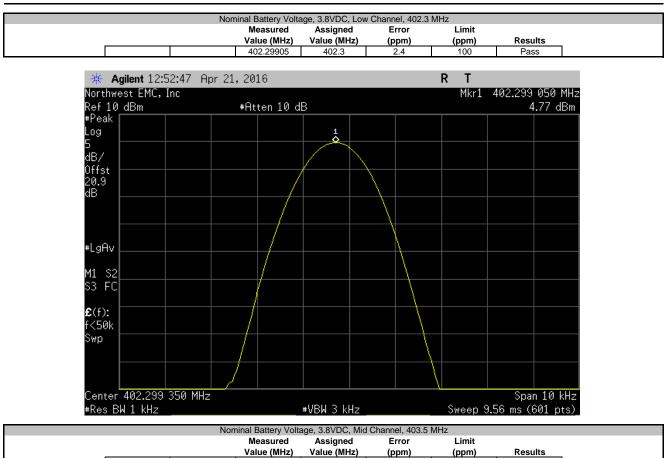
Using a temperature chamber, the transmit frequency was recorded at the extremes of the specified temperature range (0° to +55°C, in 10° increments).

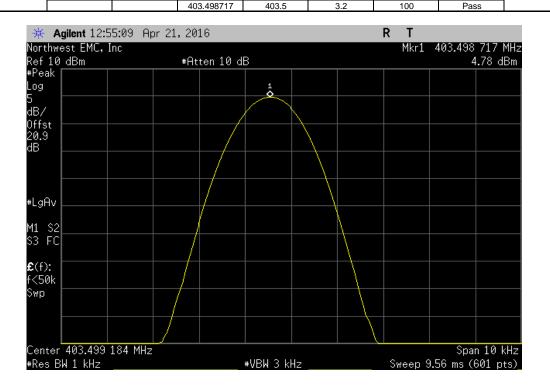
The Frequency Stability was measured using a direct connection between the EUT and a spectrum analyzer. The spectrum analyzer is configured with a precision frequency reference that exceeds the stability requirement of the transmitter. The EUT was placed inside a temperature / humidity chamber.

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	XMit	2015.01.14

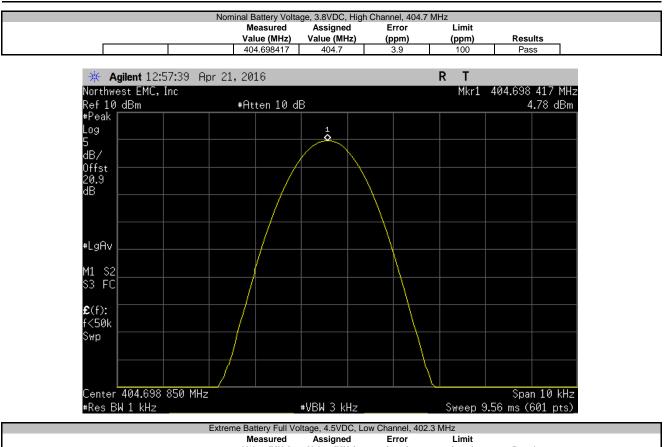
EUT:	Charging Device (CD) Mode	I - 1401 (MedRadio/MICS)					Work Order:	AXON0041	
Serial Number:								04/21/16	
	Axonics Modulation Techno	logics Inc					Temperature:		
	Franklin Portillo	logies, inc.					Humidity:		
Project:							Barometric Pres.:		
	Johnny Candelas		De	ower: 3.8VDC			Job Site:		
			PC				Job Site:	0013	
EST SPECIFICATI	UNS			Test Method					
CC 95I:2016				ANSI/TIA/EIA-603-D-	2010				
OMMENTS									
C Block + 20dB A	ttenuator + Coax Cable = 20.	93dB Total Offset							
DEVIATIONS FROM	I TEST STANDARD								
lone									
			P	U. Colta					
Configuration #	6		Te x	. Caller					
		Signature	C						
		¥			Measured	Assigned	Error	Limit	
					Value (MHz)	Value (MHz)	(ppm)	(ppm)	Result
Nominal Battery Volt	age, 3.8VDC				. /	. /	<u></u>	<u></u>	
	Low Channel, 402.3 MHz				402.29905	402.3	2.4	100	Pass
	Mid Channel, 403.5 MHz				403.498717	403.5	3.2	100	Pass
	High Channel, 404.7 MHz				404.698417	404.7	3.9	100	Pass
Extreme Battery Full					104.030417		0.0	100	1 455
	Low Channel, 402.3 MHz				402.299034	402.3	2.4	100	Pass
	Mid Channel, 403.5 MHz				402.299034	402.3	3.2	100	
									Pass
	High Channel, 404.7 MHz				404.698417	404.7	3.9	100	Pass
	tdown Voltage, 3.3VDC					100.0		100	
	Low Channel, 402.3 MHz				402.299017	402.3	2.4	100	Pass
	Mid Channel, 403.5 MHz				403.498717	403.5	3.2	100	Pass
	High Channel, 404.7 MHz				404.6984	404.7	4	100	Pass
Extreme Temperatur									
	Low Channel, 402.3 MHz				402.297998	402.3	5	100	Pass
	Mid Channel, 403.5 MHz				403.497697	403.5	5.7	100	Pass
	High Channel, 404.7 MHz				404.697399	404.7	6.4	100	Pass
Extreme Temperatur	re +50°C								
	Low Channel, 402.3 MHz				402.297881	402.3	5.3	100	Pass
	Mid Channel, 403.5 MHz				403.497598	403.5	6	100	Pass
	High Channel, 404.7 MHz				404.697297	404.7	6.7	100	Pass
Extreme Temperatur	re +40°C								
	Low Channel, 402.3 MHz				402.298065	402.3	4.8	100	Pass
	Mid Channel, 403.5 MHz				403.497764	403.5	5.5	100	Pass
	High Channel, 404.7 MHz				404.697464	404.7	6.3	100	Pass
Extreme Temperatur									
	Low Channel, 402.3 MHz				402.298599	402.3	3.5	100	Pass
	Mid Channel, 403.5 MHz				403.4983	403.5	4.2	100	Pass
	High Channel, 404.7 MHz				404.698015	404.7	4.9	100	Pass
Extreme Temperatur									. 400
	Low Channel, 402.3 MHz				402.29915	402.3	2.1	100	Pass
	Mid Channel, 403.5 MHz				403.498817	403.5	2.9	100	Pass
	High Channel, 404.7 MHz				404.698517	404.7	3.7	100	Pass
xtreme Temperatur					-04.030017	404.7	5.1	100	1 455
	Low Channel, 402.3 MHz				402,29955	402.3	1.1	100	Pass
						402.3			Pass
	Mid Channel, 403.5 MHz High Channel, 404.7 MHz				403.499268 404.698968	403.5	1.8 2.6	100 100	Pass
					404.098968	404.7	2.0	100	Pass
Extreme Temperatur					100 00005	100.0		100	_
	Low Channel, 402.3 MHz				402.29965	402.3	0.9	100	Pass
	Mid Channel, 403.5 MHz				403.499368	403.5	1.6	100	Pass
	High Channel, 404.7 MHz				404.699051	404.7	2.3	100	Pass

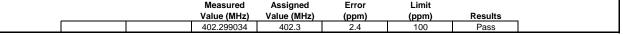


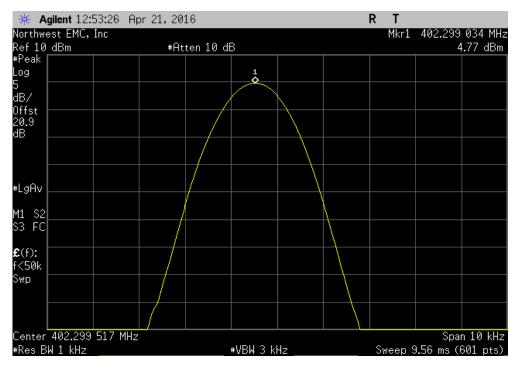




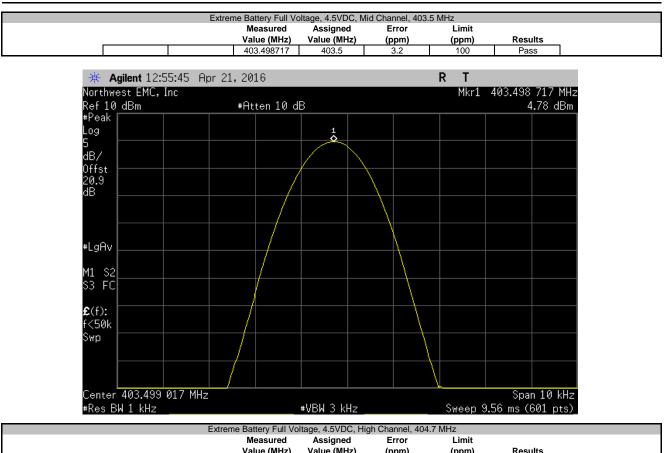




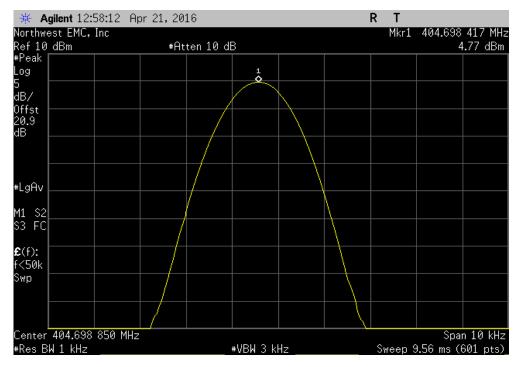




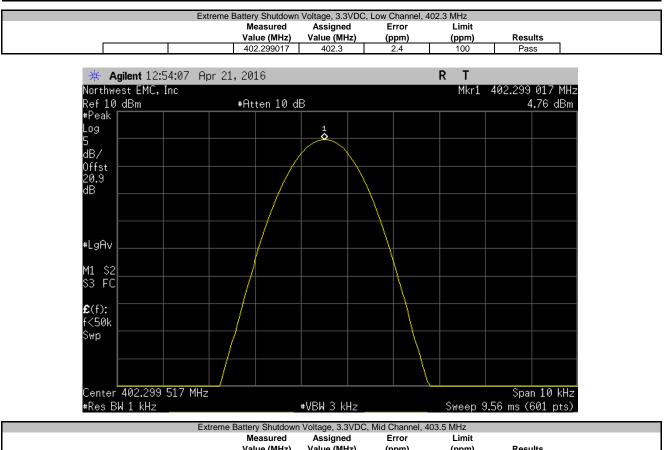




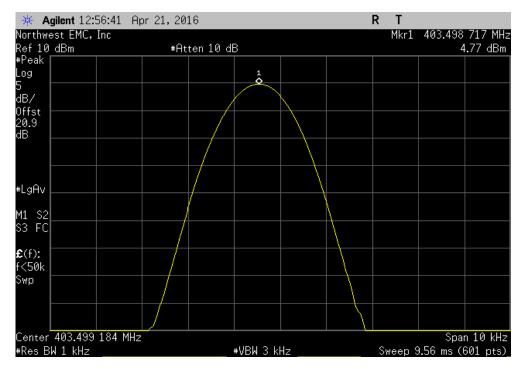
	Measured	Assigned	Error	Limit	
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
	404.698417	404.7	3.9	100	Pass



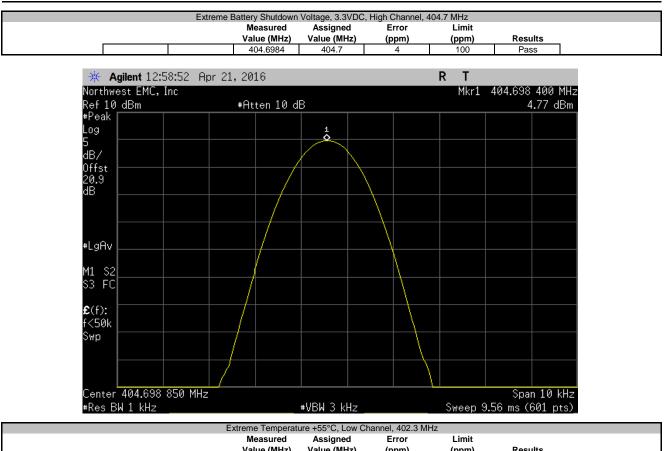


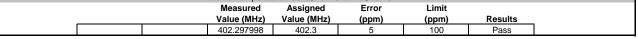


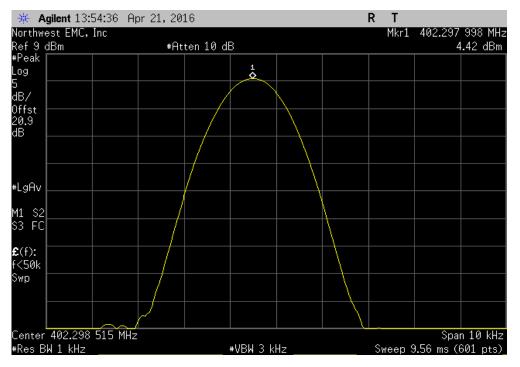
	Measured	Assigned	Error	Limit	
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
	403.498717	403.5	3.2	100	Pass



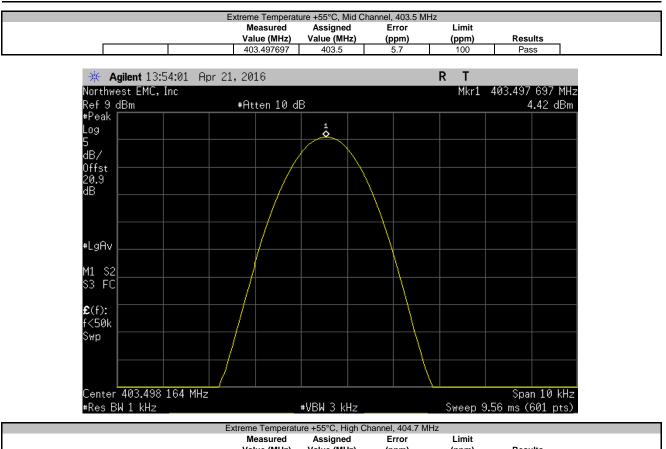


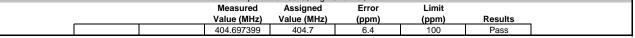


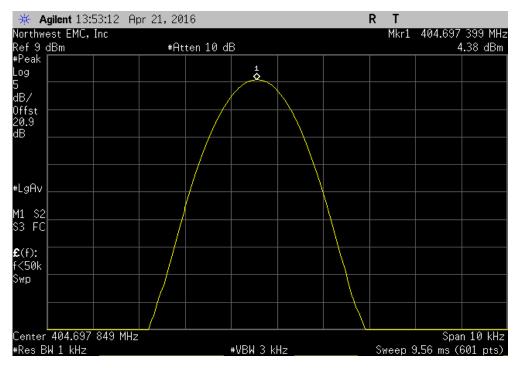




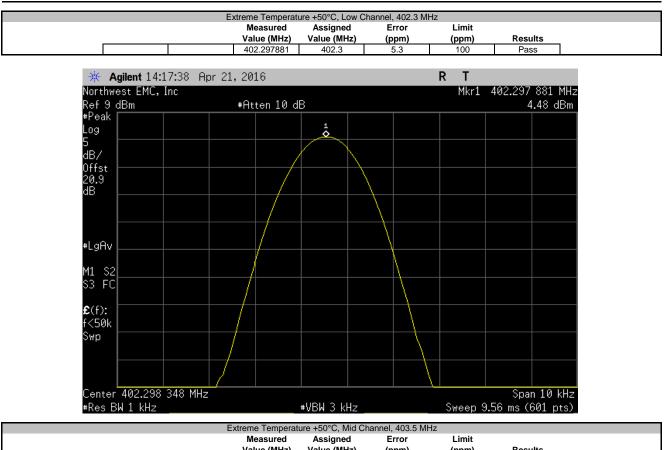




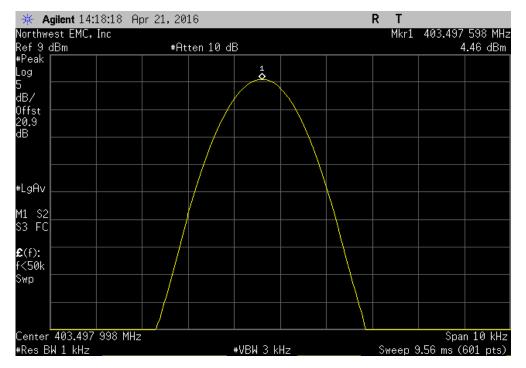




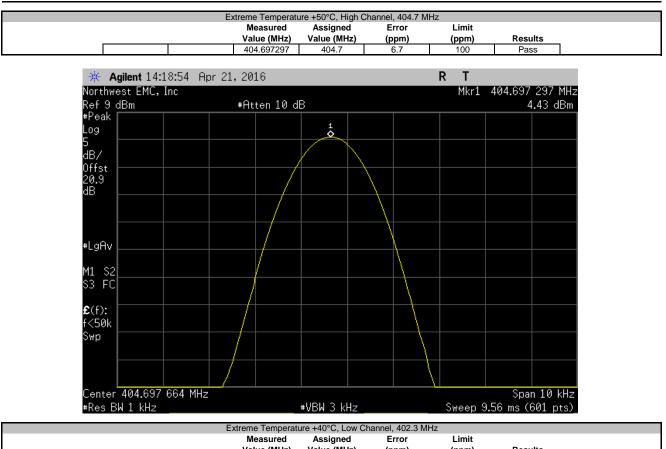


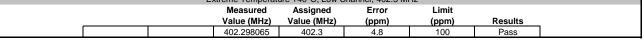


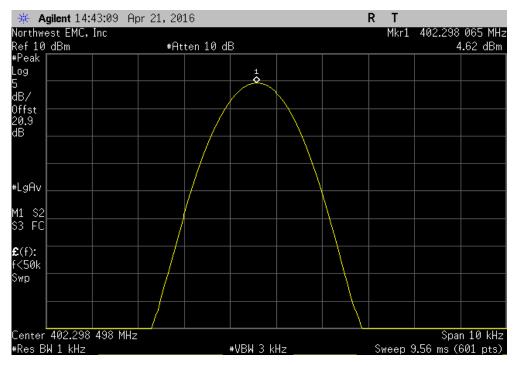
	Measured	Assigned	Error	Limit	
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
	403.497598	403.5	6	100	Pass



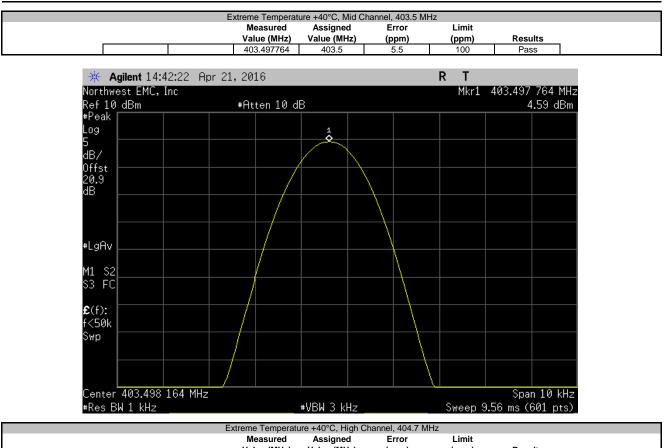


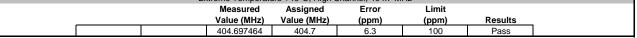


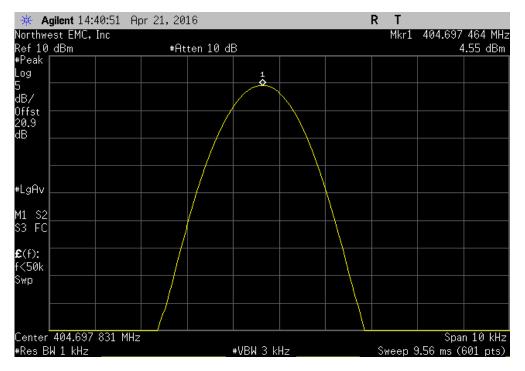




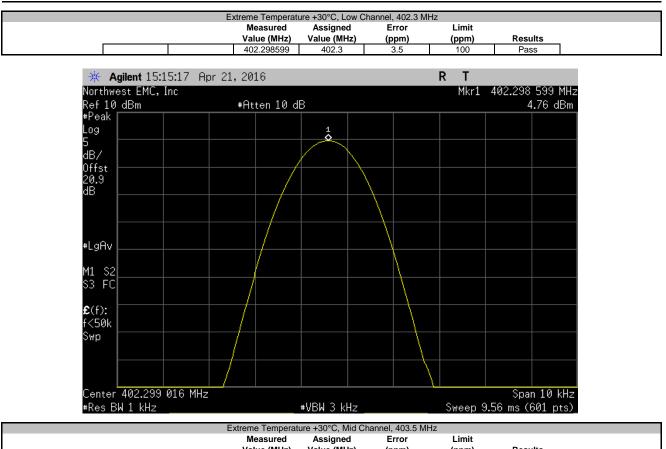


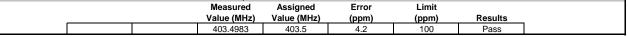


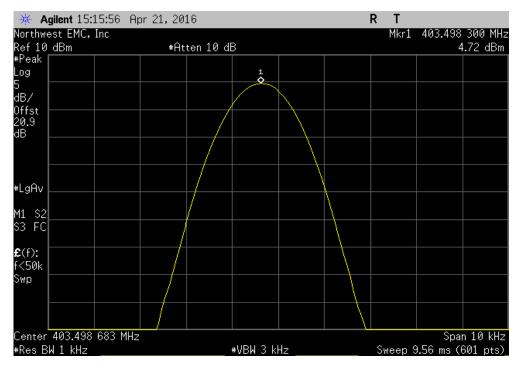




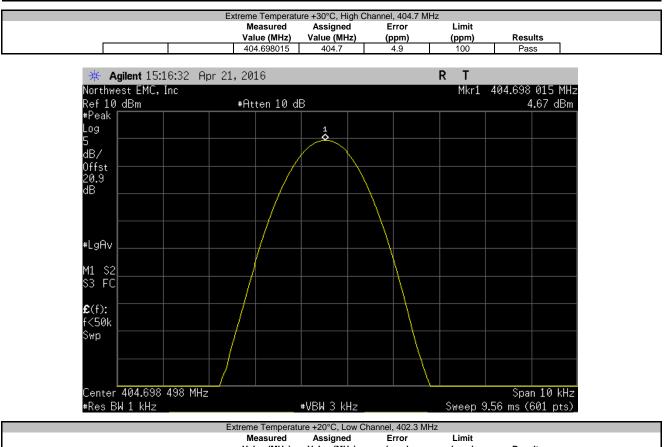


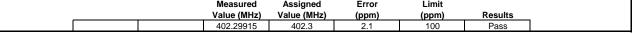


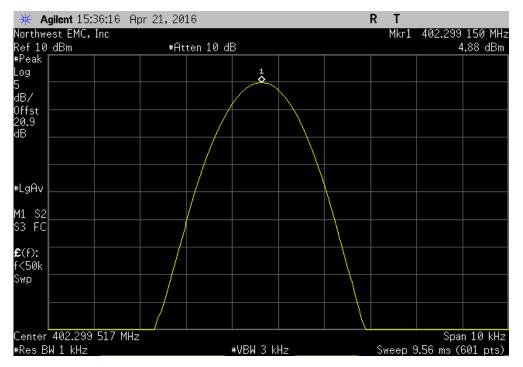




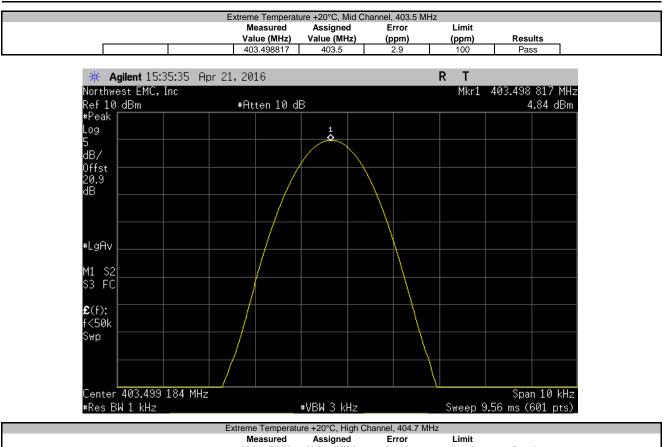




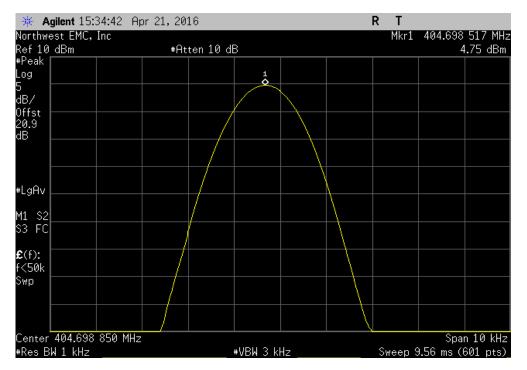




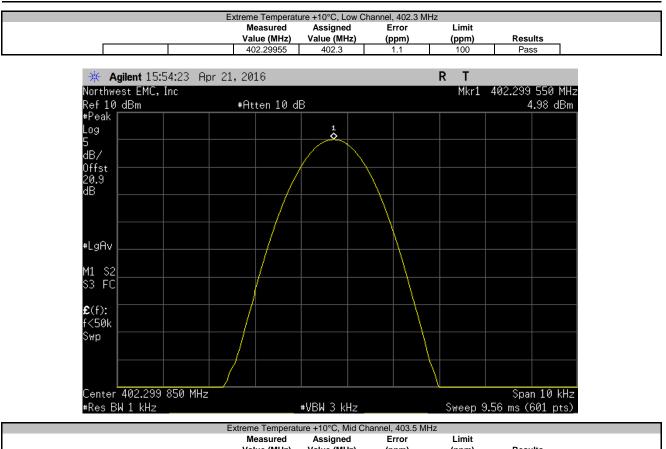


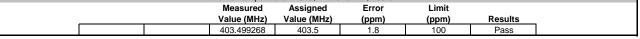


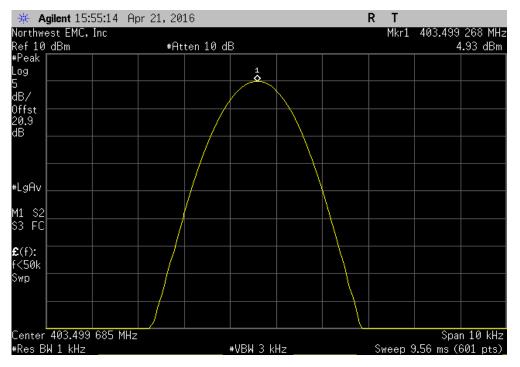
	Measured	Assigned	Error	Limit	
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
	404.698517	404.7	3.7	100	Pass





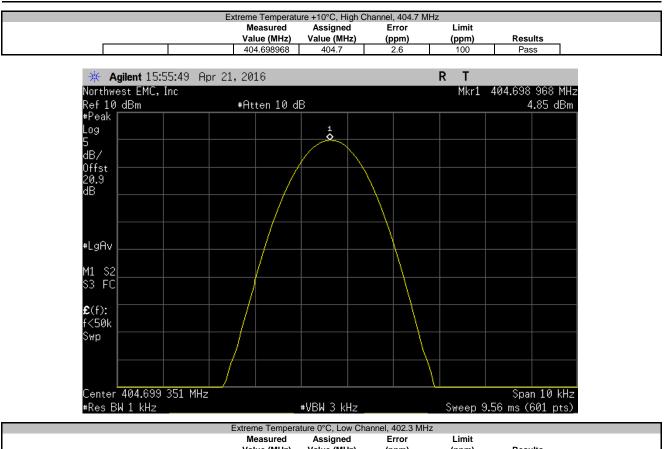


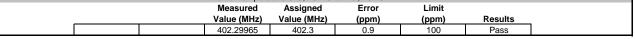


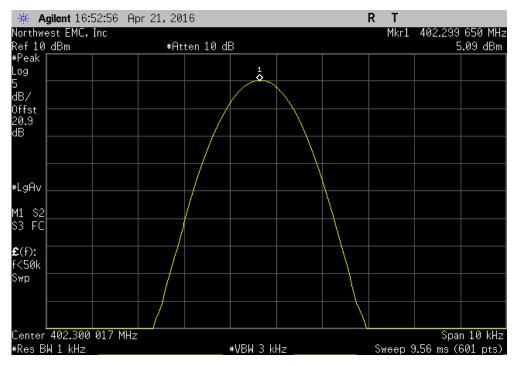


FREQUENCY STABILITY



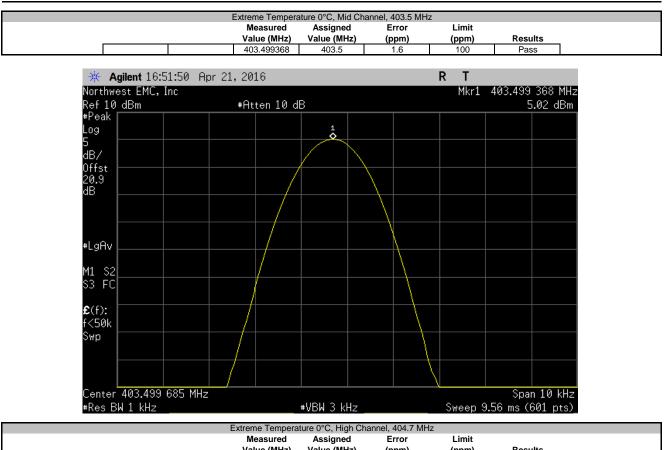


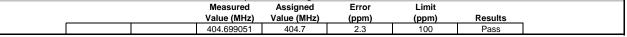


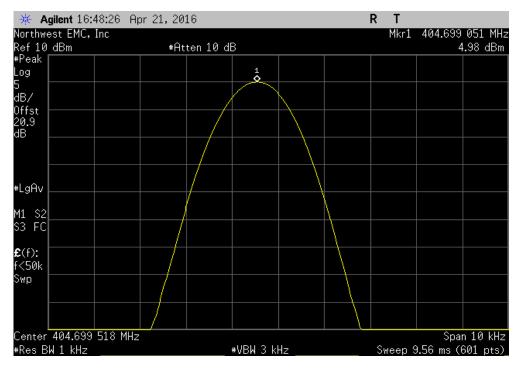


FREQUENCY STABILITY











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

					Interval
Description	Manufacturer	Model	ID	Last Cal.	(mo)
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	36
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	0
Attenuator	Fairview Microwave	SA18E-10	TKS	4/4/2016	12
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	12
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	12

TEST DESCRIPTION

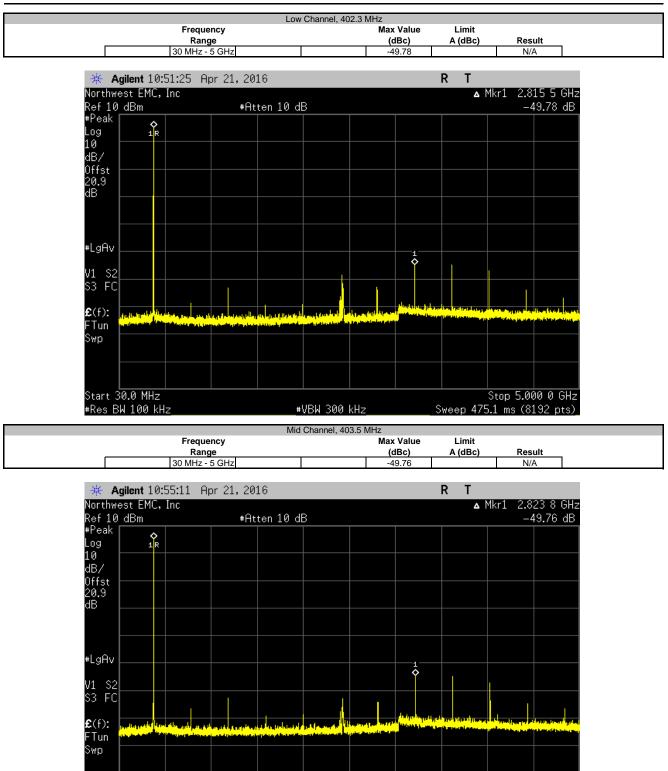
Per FCC Part 2.1051, RSS-GEN, the spurious emissions shall be measured at the RF terminal. The peak spurious emissions were measured with the EUT configured to the modes listed in the datasheet. The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The EUT was transmitting at its maximum data rate.

FCC Part 95 and RSS-243 have no conducted spurious emissions limit. It is a requirement to characterize this information and that data is contained within this datasheet.



EUT: Cha	rging Device (CD) Model - 1401 (N	ledRadio/MICS)		Work Order	AXON0041	
Serial Number: AD1	E360008			Date	04/21/16	
Customer: Axo	nics Modulation Technologies, In	с.		Temperature	22.8°C	
Attendees: Fran	nklin Portillo			Humidity	37%	
Project: Non	le			Barometric Pres.	1012	
Tested by: Joh	nny Candelas		Power: 3.8VDC	Job Site	OC13	
EST SPECIFICATIONS			Test Method			
CC 95I:2016			ANSI/TIA/EIA-603-D-2010			
OMMENTS						
	uator + Coax Cable = 20.93dB Tota	al Offset				
	uator + Coax Cable = 20.93dB Tota	al Offset				
	uator + Coax Cable = 20.93dB Tota	al Offset				
C Block + 20dB Atten		al Offset				
C Block + 20dB Attenu		al Offset				
C Block + 20dB Atten		al Offset				
C Block + 20dB Attenu		al Offset	l 11 l 2			
C Block + 20dB Attenu		al Offset	for S. Coller			
C Block + 20dB Attenu EVIATIONS FROM TES	ST STANDARD	al Offset	fe S. Com			
C Block + 20dB Attenu EVIATIONS FROM TES	ST STANDARD	-	D	Max Value	Limit	
C Block + 20dB Attent EVIATIONS FROM TES	ST STANDARD	-	Frequency Range	Max Value (dBc)	Limit A (dBc)	Result
C Block + 20dB Attent EVIATIONS FROM TES one onfiguration #	ST STANDARD	-	Frequency			Result N/A
C Block + 20dB Attenu EVIATIONS FROM TES	6	-	Frequency Range	(dBc)		





#VBW 300 kHz

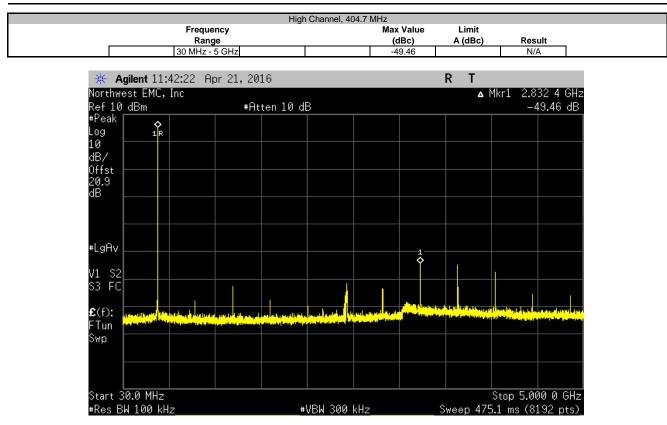
Start 3<mark>0.0 MH</mark>z

#Res BW 100 kHz

Stop 5.000 0 GHz

Sweep 475.1 ms (8192 pts)





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

					Interval
Description	Manufacturer	Model	ID	Last Cal.	(mo)
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	36
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	0
Attenuator	Fairview Microwave	SA18E-10	TKS	4/4/2016	12
Block - DC	Aeroflex	INMET 8535	AMO	4/4/2016	12
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	12

TEST DESCRIPTION

Per 47 CFR 95.635(d)(4-5) 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.

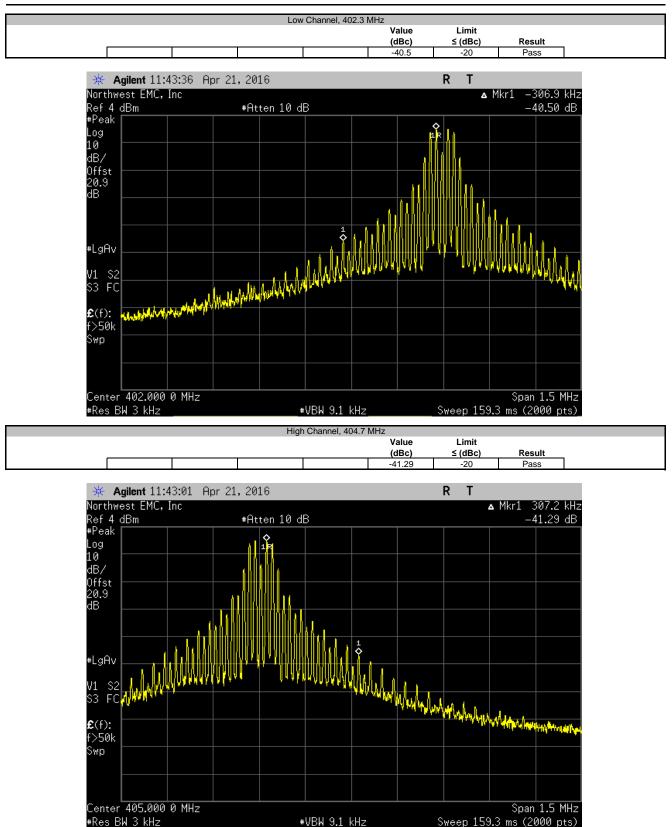
EMISSIONS MASK



EUT: Charging Device (CD) Model - 1401 (MedRadio/MICS)		Work Order:	AXON0041	
Serial Number: AD1E360008		Date:	04/21/16	
Customer: Axonics Modulation Technologies, Inc.		Temperature:	22.8°C	
Attendees: Franklin Portillo		Humidity:	37%	
Project: None		Barometric Pres.:	1012	
Tested by: Johnny Candelas	Power: 3.8VDC	Job Site:	OC13	
TEST SPECIFICATIONS	Test Method			
FCC 951:2016	FCC 95.635(d)(4-5):2016			
COMMENTS				
DC Block + 20dB Attenuator + Coax Cable = 20.93dB Total Offset				
DEVIATIONS FROM TEST STANDARD				
None				
Configuration # 6 Signature	for S. Color			
		Value	Limit	
		(dBc)	≤ (dBc)	Result
Low Channel, 402.3 MHz		-40.5	-20	Pass
High Channel, 404.7 MHz		-41.29	-20	Pass

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

					Interval
Description	Manufacturer	Model	ID	Last Cal.	(mos)
Generator - Signal	Keysight	N5182B	TFX	4/16/2015	36
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	36
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	0
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAN	NCR	0
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	0
Attenuator	Fairview Microwave	SA18E-10	TKS	4/8/2015	12
Block - DC	Aeroflex	INMET 8535	AMO	4/8/2015	12
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	12

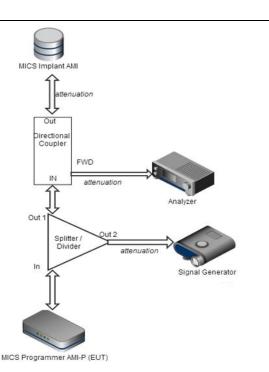
TEST DESCRIPTION

The EUT was configured according to the following block diagram:

The signal generator was set to multitone operation to cause equal interferance across the entire band. The amplitude of the multitone signals (out of operation region) were set to the LBT threshold of 10*LOG(Bandwidth) - 150 + Antenna Gain + 3 dB.

The spectrum analyzer was set to measure the transmit band of 402-405 MHz. The multitone signal of the intended frequency (Fc) was set to the LBT threshold - 6 dB, and raised by 1 dB increments until the EUT choose a different channel to start a session. Screen captures were provided to show the EUT behavior at the different LBT threshold levels.

The signal generator amplitude at Fc was then measured and recorded with the spectrum analyzer.

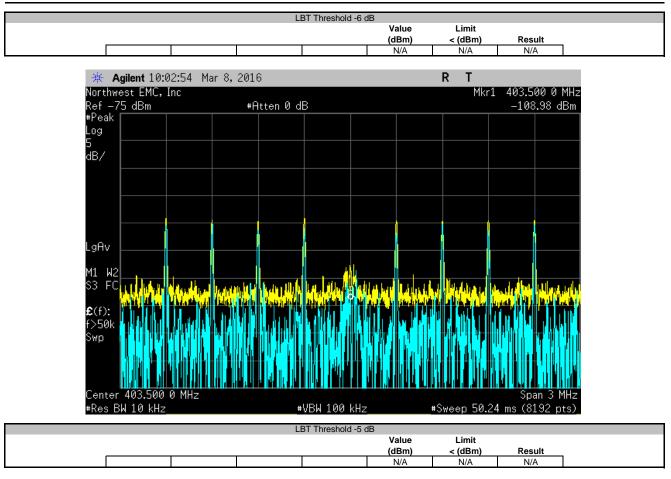


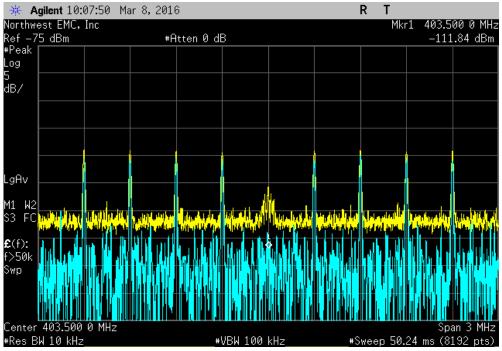
Report No. AXON0041.5 Rev. 1



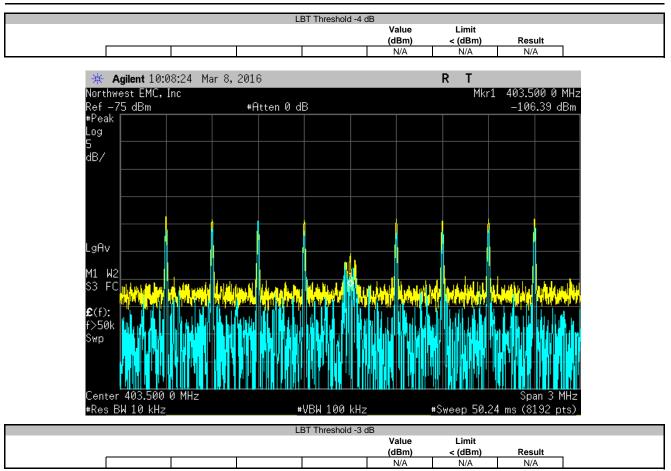
		1401 (MedRadio/MICS)		Work Order:		
Serial Number: AD1	ID260007				03/08/16	
Customer: Axo	nics Modulation Technolog	gies, Inc.		Temperature:	19.7°C	
Attendees: Fran	nklin Portillo			Humidity:	48%	
Project: Non	ie			Barometric Pres.:	1017	
Tested by: Joh	nny Candelas		Power: 3.8VDC	Job Site:	OC13	
ST SPECIFICATIONS	;		Test Method			
CC 95.627(a)			ANSI/TIA/EIA-603-C-2004			
OMMENTS						
Iculated LBT Thresh	old = 10 * LOG(Bandwidth)	- 150 + Antenna Gain, Ban	dwidth is 122kHz. Antenna gain is +2dBi.			
EVIATIONS FROM TES	ST STANDARD					
one						
			0 11 001			
onfiguration #	5		for d. later			
		Signature	U			
		Signature	U	Value	Limit	
		Signature	0	Value (dBm)	Limit < (dBm)	Result
T Threshold -6 dB		Signature	J			Result N/A
		Signature	J	(dBm)	< (dBm)	
T Threshold -5 dB		Signature	0	(dBm) N/A	< (dBm) N/A	N/A
3T Threshold -5 dB 3T Threshold -4 dB	I	Signature	J	(dBm) N/A N/A	< (dBm) N/A N/A	N/A N/A
3T Threshold -5 dB 3T Threshold -4 dB 3T Threshold -3 dB		Signature		(dBm) N/A N/A N/A	< (dBm) N/A N/A N/A	N/A N/A N/A
3T Threshold -5 dB 3T Threshold -4 dB 3T Threshold -3 dB 3T Threshold -2 dB	I	Signature		(dBm) N/A N/A N/A N/A	< (dBm) N/A N/A N/A N/A	N/A N/A N/A N/A
BT Threshold -5 dB BT Threshold -4 dB BT Threshold -3 dB BT Threshold -2 dB BT Threshold -1 dB	I	Signature		(dBm) N/A N/A N/A N/A N/A	< (dBm) N/A N/A N/A N/A N/A	N/A N/A N/A N/A
IT Threshold -5 dB IT Threshold -4 dB IT Threshold -3 dB IT Threshold -2 dB IT Threshold -1 dB IT Threshold -1 dB IT Threshold 0 dB		Signature		(dBm) N/A N/A N/A N/A N/A N/A N/A	< (dBm) N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A
T Threshold -5 dB T Threshold -4 dB T Threshold -3 dB T Threshold -2 dB T Threshold -1 dB T Threshold 0 dB T Threshold +1 dB	I	Signature		(dBm) N/A N/A N/A N/A N/A N/A	< (dBm) N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A
T Threshold -5 dB T Threshold -4 dB T Threshold -3 dB T Threshold -2 dB T Threshold -1 dB T Threshold 0 dB T Threshold +1 dB T Threshold +2 dB	I	Signature	0	(dBm) N/A N/A N/A N/A N/A N/A N/A N/A N/A	< (dBm) N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A
IT Threshold -5 dB IT Threshold -4 dB IT Threshold -3 dB IT Threshold -2 dB IT Threshold -1 dB IT Threshold 0 dB IT Threshold +1 dB IT Threshold +2 dB IT Threshold +3 dB		Signature	0	(dBm) N/A N/A N/A N/A N/A N/A N/A N/A N/A	< (dBm) N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A
8T Threshold -5 dB 8T Threshold -3 dB 8T Threshold -3 dB 8T Threshold -2 dB 8T Threshold -1 dB 8T Threshold -1 dB 8T Threshold +1 dB 8T Threshold +2 dB 8T Threshold +3 dB 8T Threshold +4 dB	I	Signature		(dBm) N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	< (dBm) N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A
BT Threshold -6 dB BT Threshold -5 dB BT Threshold -4 dB BT Threshold -2 dB BT Threshold -2 dB BT Threshold -1 dB BT Threshold +1 dB BT Threshold +2 dB BT Threshold +3 dB BT Threshold +3 dB BT Threshold +5 dB BT Threshold +6 dB BT Threshold +6 dB		Signature		(dBm) N/A N/A N/A N/A N/A N/A N/A N/A N/A	< (dBm) N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A

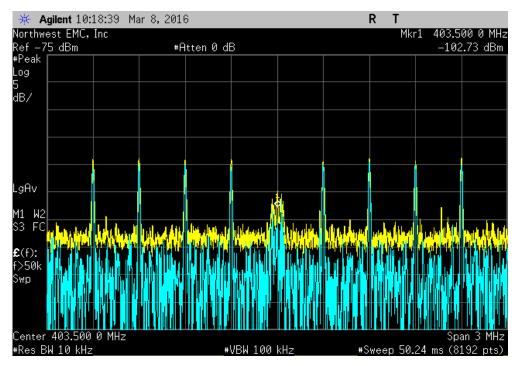




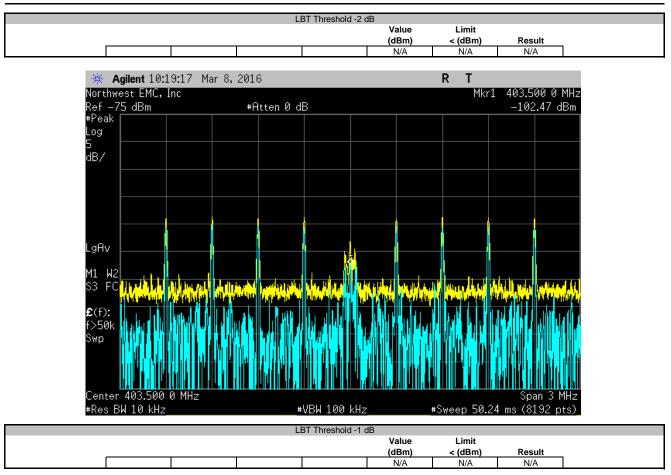


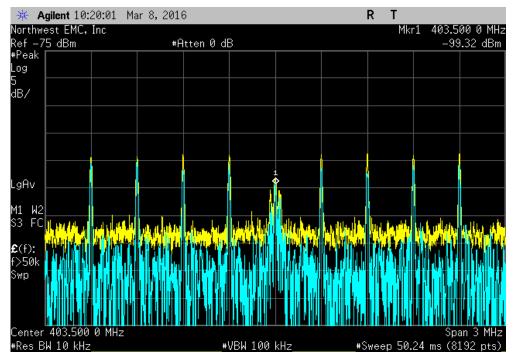




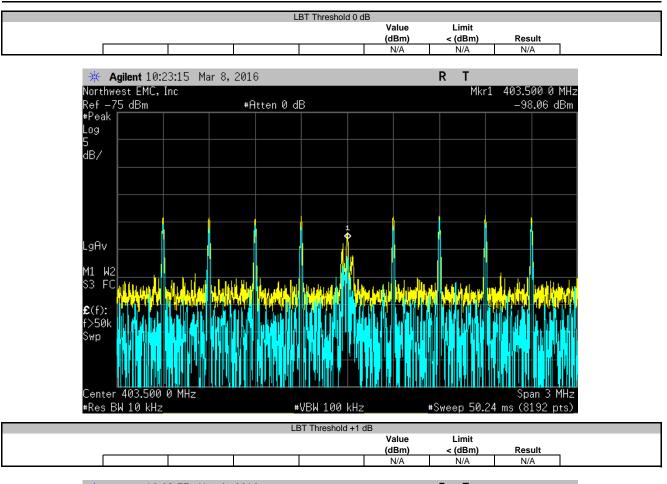


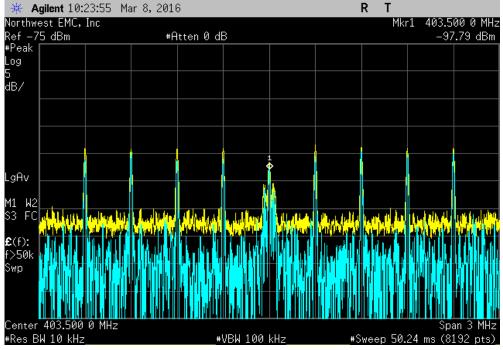




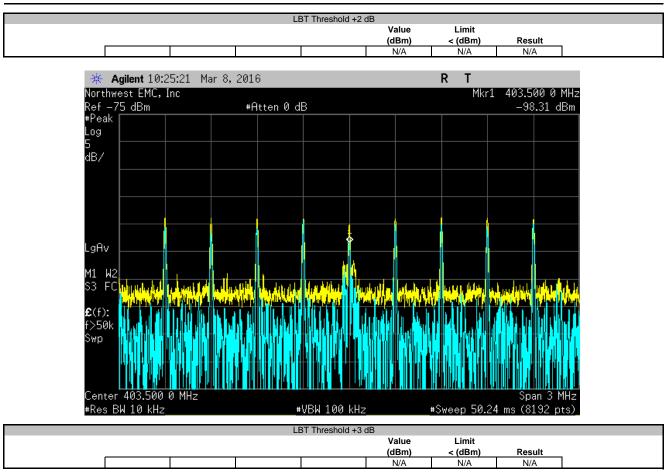


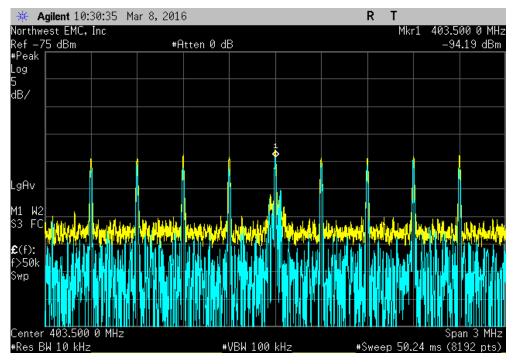




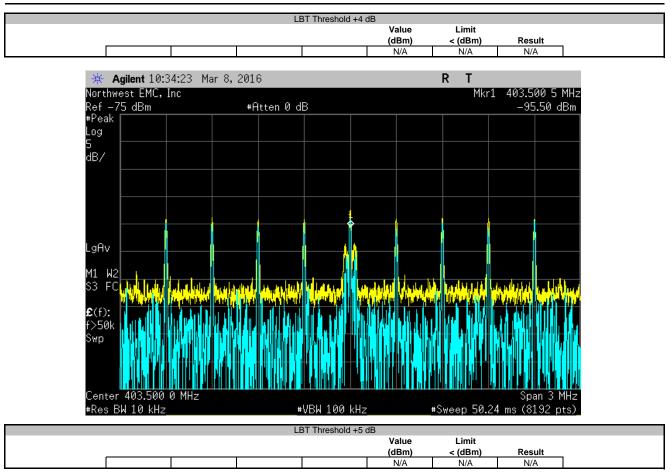


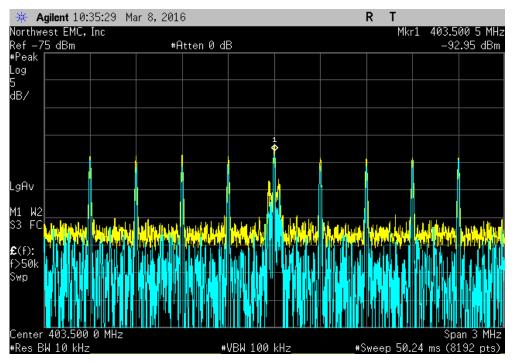




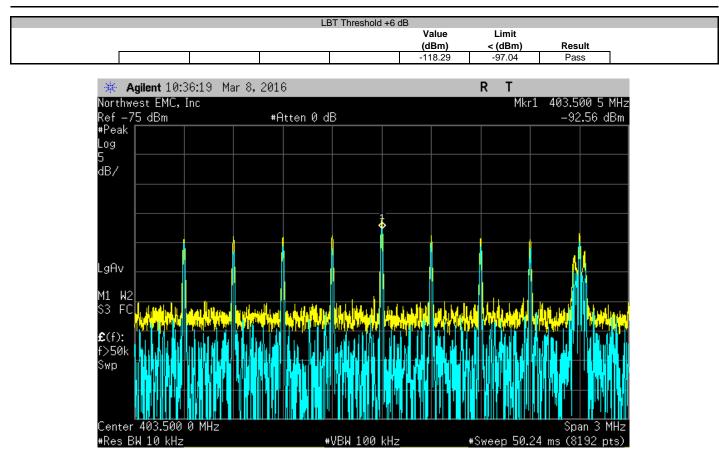














Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this 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

					Interval
Description	Manufacturer	Model	ID	Last Cal.	(mos)
Generator - Signal	Keysight	N5182B	TFX	4/16/2015	36
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	36
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	0
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAN	NCR	0
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	0
Attenuator	Fairview Microwave	SA18E-10	TKS	4/8/2015	12
Block - DC	Aeroflex	INMET 8535	AMO	4/8/2015	12
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	12

TEST DESCRIPTION

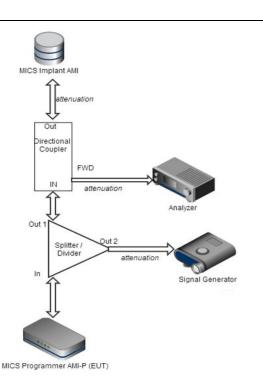
The EUT was configured according to the following block diagram:

The signal generator was set to multitone operation to cause equal interferance across the entire band. The amplitude of the multitone signals (out of operation region) were set to the LBT threshold of 10*LOG(Bandwidth) - 150 + Antenna Gain + 3 dB.

The spectrum analyzer was set to measure the transmit band of 402-405 MHz. The multitone signal of the intended frequency (Fc) was set to a level above the LBT threshold, and lowered by 1 dB increments until the EUT chooses the intended frequency (Fc) to start a session on.

The blocking frequency at Fc was then lowered to Fc - Bandwidth / 2. The amplitude was then raised until the EUT chooses a channel other than Fc. This was repeated with the blocking frequency raised to Fc + Bandwidth / 2.

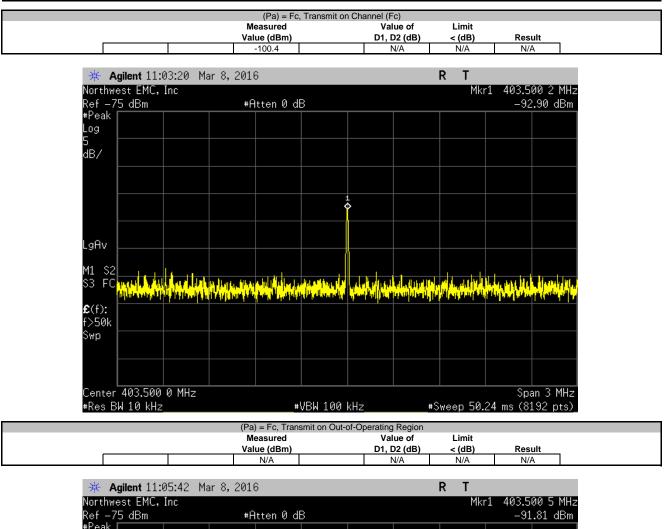
The signal generator amplitude at Fc was then measured and





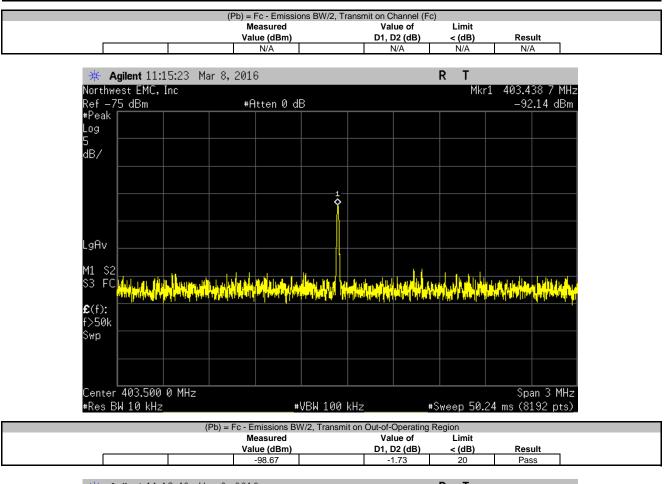
EUT:					Work Order:	A V ONIO044	
Serial Number:		odel - 1401 MedRadio/MICS)				03/08/16	
		handland an Inc.					
	Axonics Modulation Tech	nnologies, inc.			Temperature:		
	Franklin Portillo				Humidity:		
Project:				2.0	Barometric Pres.:		
	Johnny Candelas		Power: 3.8		Job Site:	0C13	
TEST SPECIFICAT	IONS			st Method			
FCC 95.627(a)			AN	SI/TIA/EIA-603-C-2004			
COMMENTS							
Calculated LBT Th	reshold = 10 * LOG(Bandw	vidth) - 150 + Antenna Gain. Bar	ndwidth is 122kHz. Antenna g	jain is +2dBi.			
			-				
DEVIATIONS FROM	M TEST STANDARD						
None							
None Configuration #	5	Signature	for d. c	the			
	5	Signature	for die	Measured	Value of	Limit	
	5	Signature	for d. c	Measured	Value of D1, D2 (dB)	Limit < (dB)	Result
Configuration #	5	Signature	for d. c		Value of D1, D2 (dB)	Limit < (dB)	Result
Configuration #		Signature	for d. c	Measured Value (dBm)	D1, D2 (dB)	< (dB)	
Configuration #	Transmit on Channel (Fc)		Je d. c	Measured Value (dBm) -100.4	D1, D2 (dB) N/A	< (dB) N/A	N/A
Configuration # (Pa) = Fc	Transmit on Channel (Fc) Transmit on Out-of-Operat		Ju d. c	Measured Value (dBm)	D1, D2 (dB)	< (dB)	
Configuration # (Pa) = Fc	Transmit on Channel (Fc) Transmit on Out-of-Operat ns BW/2		Je d. c	Measured Value (dBm) -100.4	D1, D2 (dB) N/A	< (dB) N/A	N/A
Configuration # (Pa) = Fc	Transmit on Channel (Fc) Transmit on Out-of-Operat ns BW/2 Transmit on Channel (Fc)	ing Region	Je d. c	Measured Value (dBm) -100.4 N/A	D1, D2 (dB) N/A N/A	< (dB) N/A N/A	N/A N/A
Configuration # (Pa) = Fc (Pb) = Fc - Emission	Transmit on Channel (Fc) Transmit on Out-of-Operat ns BW/2 Transmit on Channel (Fc) Transmit on Out-of-Operat	ing Region	Ju d. c	Measured Value (dBm) -100.4 N/A N/A	D1, D2 (dB) N/A N/A N/A	< (dB) N/A N/A	N/A N/A N/A
	Transmit on Channel (Fc) Transmit on Out-of-Operat ns BW/2 Transmit on Channel (Fc) Transmit on Out-of-Operat ns BW/2	ing Region	Je d. c	Measured Value (dBm) -100.4 N/A N/A	D1, D2 (dB) N/A N/A N/A	< (dB) N/A N/A	N/A N/A N/A
Configuration # (Pa) = Fc (Pb) = Fc - Emission	Transmit on Channel (Fc) Transmit on Out-of-Operat ns BW/2 Transmit on Channel (Fc) Transmit on Out-of-Operat	ing Region	Je d. c	Measured Value (dBm) -100.4 N/A N/A -98.67	D1, D2 (dB) N/A N/A -1.73	< (dB) N/A N/A 20	N/A N/A N/A Pass

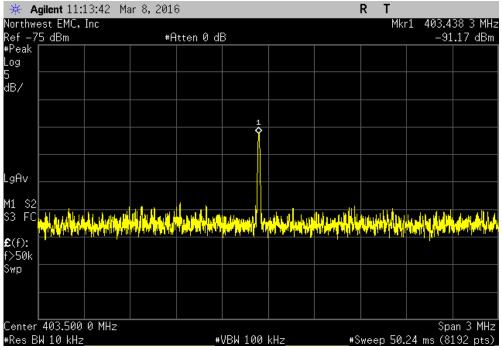




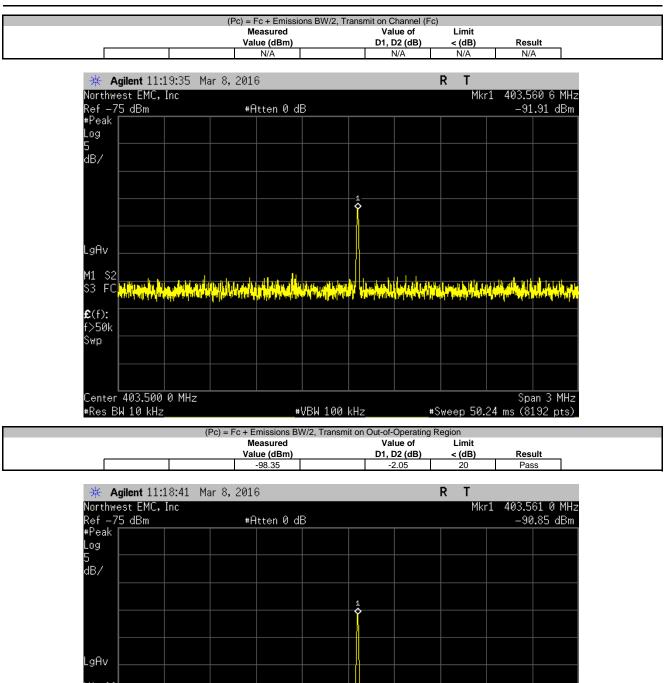
Ref -75 dBm	#Atten 0 d	В		-91.81 dBm
#Peak				
Log 5				
dB/				
		1 		
_gAv		├ ───		
M1 S2 S3 FC AAAAANAAAAAA	and at the state of the last o		مريقه بهجار والمحافظ المريك والمح	at his state in the state of the
£ (f):				
F>50k				
Swp				
Center 403.500 0 MHz				Span 3 MHz
#Res BW 10 kHz		VBW 100 kHz		24 ms (8192 pts)_











M1 S2		I							
S3 FC									i ni ni ni ni
£ (f):									
f>50k									
Swp									
Center	403.500	0 MHz							an 3 MHz
#Res B	W 10 kHz		#	VBW 100	kHz	#S	weep 50.	24 ms (81	.92 pts)_



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

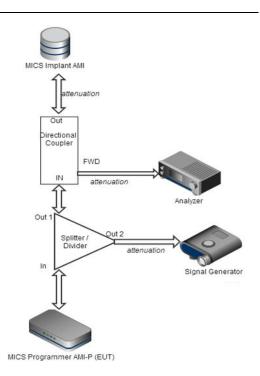
					Interval
Description	Manufacturer	Model	ID	Last Cal.	(mos)
Generator - Signal	Keysight	N5182B	TFX	4/16/2015	36
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	36
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	0
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAN	NCR	0
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	0
Attenuator	Fairview Microwave	SA18E-10	TKS	4/8/2015	12
Block - DC	Aeroflex	INMET 8535	AMO	4/8/2015	12
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	12

TEST DESCRIPTION

The EUT was configured according to the following block diagram:

The signal generator was set to multitone operation to cause equal interferance across the entire band. The spectrum analyzer was set to zero span with a sweep time equal to 10 seconds.

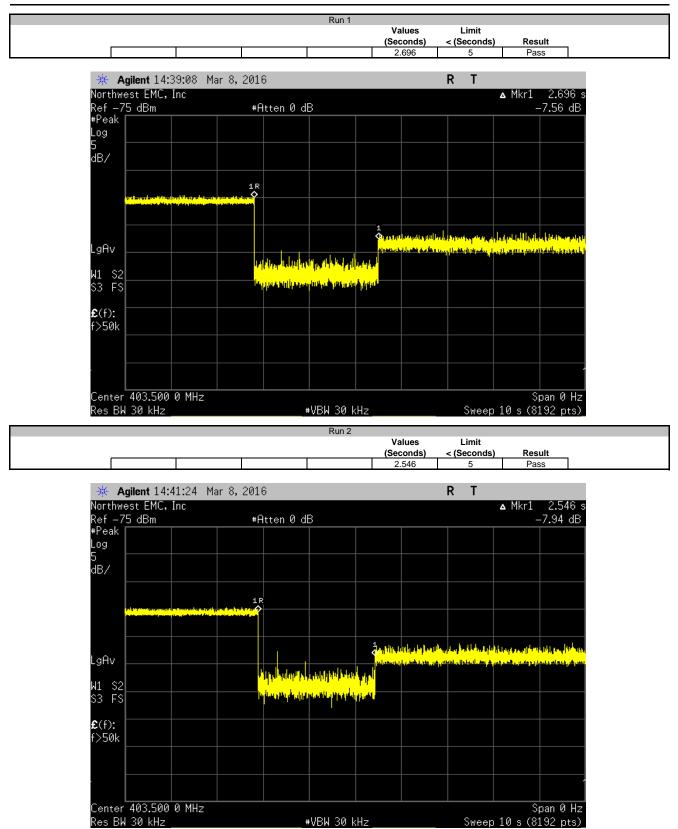
The CW signal on the intended frequency (Fc) was removed. At the same time, the EUT was set to seek a session with the implantable device. The delay between Fc becoming available and the EUT establishing a session was measured.



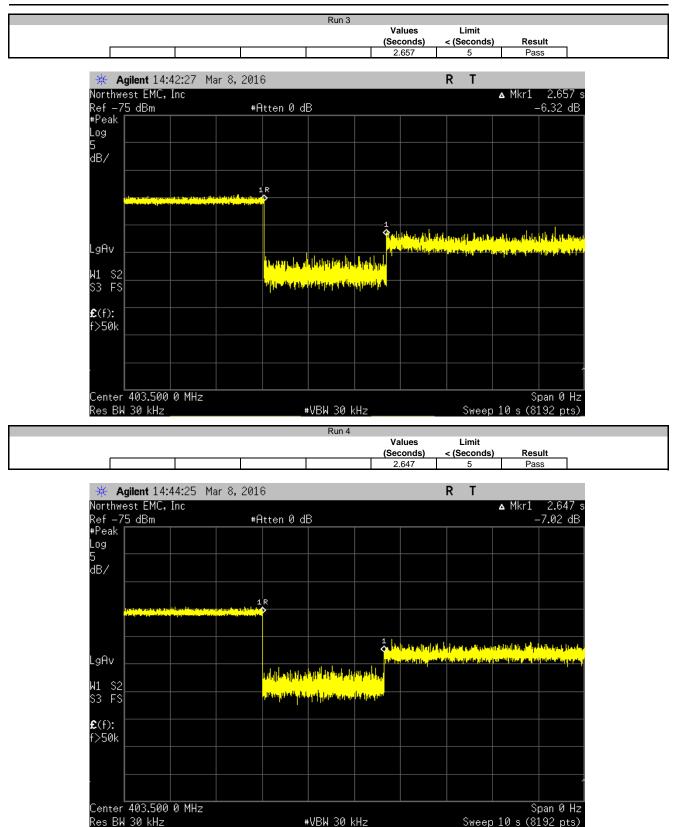


EUT: Cha	arging Device (CD) Mo	lel - 1401 (MedRadio/MICS)		Work Order:	AXON0041	
Serial Number: AD		•			Date:	03/08/16	
Customer: Axc	onics Modulation Tech	10logies, Inc.			Temperature:	19.7°C	
Attendees: Fra	anklin Portillo				Humidity:		
Project: Nor					Barometric Pres.:	1017	
Tested by: Joh			Р	ower: 3.8VDC	Job Site:	OC13	
EST SPECIFICATIONS	S			Test Method			
CC 95.627(a)				ANSI/TIA/EIA-603-C-2004			
OMMENTS							
culated LBT Thresh	old = 10 * LOG(Bandw	dth) - 150 + Antenna Gain.	Bandwidth is 122kHz.	Antenna gain is +2dBi.			
EVIATIONS FROM TE	ST STANDARD						
EVIATIONS FROM TE	ST STANDARD						
one			de-	V. f. lan			
one	ST STANDARD	Signature	fe .	V. Cother			
one		Signature	fr .	V. Cother	Values	Limit	
ne		Signature	fr .	V. Lahr	Values (Seconds)	Limit < (Seconds)	Result
ne		Signature	fe .	V. Lahr			Result Pass
ne nfiguration #		Signature	fe :	V. lather	 (Seconds)	< (Seconds)	
one onfiguration # Run 1		Signature	fe .	V. lake	(Seconds) 2.696	< (Seconds) 5	Pass
Run 1 Run 2		Signature	fe :	V. latta	(Seconds) 2.696 2.546	< (Seconds) 5	Pass Pass
Run 1 Run 2 Run 3		Signature	Je .	V. lather	 (Seconds) 2.696 2.546 2.657	< (Seconds) 5	Pass Pass Pass
nfiguration # Run 1 Run 2 Run 3 Run 4		Signature	Je .	V. latter	(Seconds) 2.696 2.546 2.657 2.647	< (Seconds) 5	Pass Pass Pass Pass
nnfiguration # Run 1 Run 2 Run 3 Run 4 Run 5		Signature	fe .	V. laka	(Seconds) 2.696 2.546 2.657 2.647 2.619	< (Seconds) 5	Pass Pass Pass Pass Pass
Run 1 Run 1 Run 2 Run 3 Run 4 Run 5 Run 6		Signature	Je .	V. lather	(Seconds) 2.696 2.546 2.657 2.647 2.619 2.740	< (Seconds) 5	Pass Pass Pass Pass Pass Pass
Run 1 Run 2 Run 3 Run 4 Run 5 Run 6 Run 7		Signature	Je .	V. latta	(Seconds) 2.696 2.546 2.657 2.647 2.619 2.740 2.813	< (Seconds) 5	Pass Pass Pass Pass Pass Pass Pass

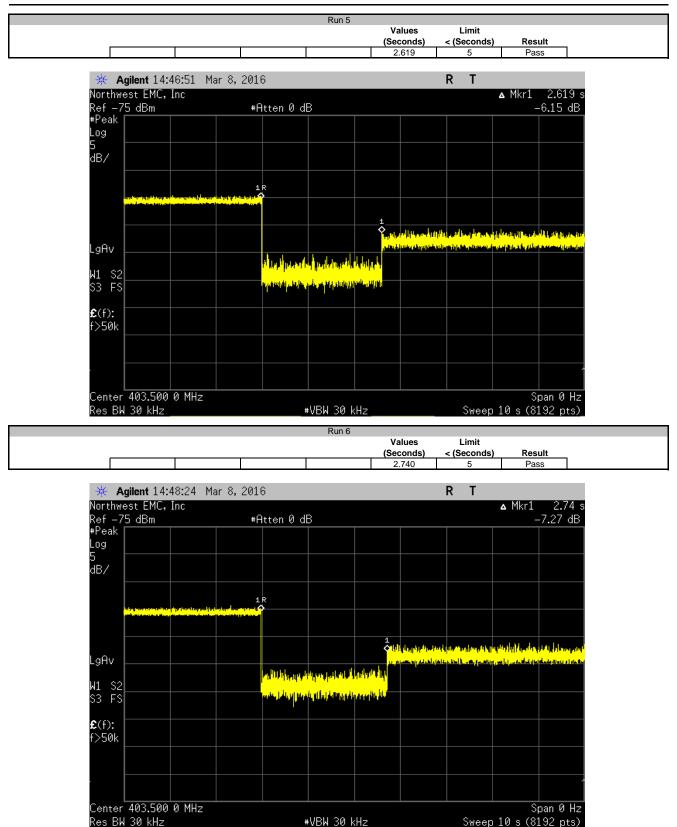




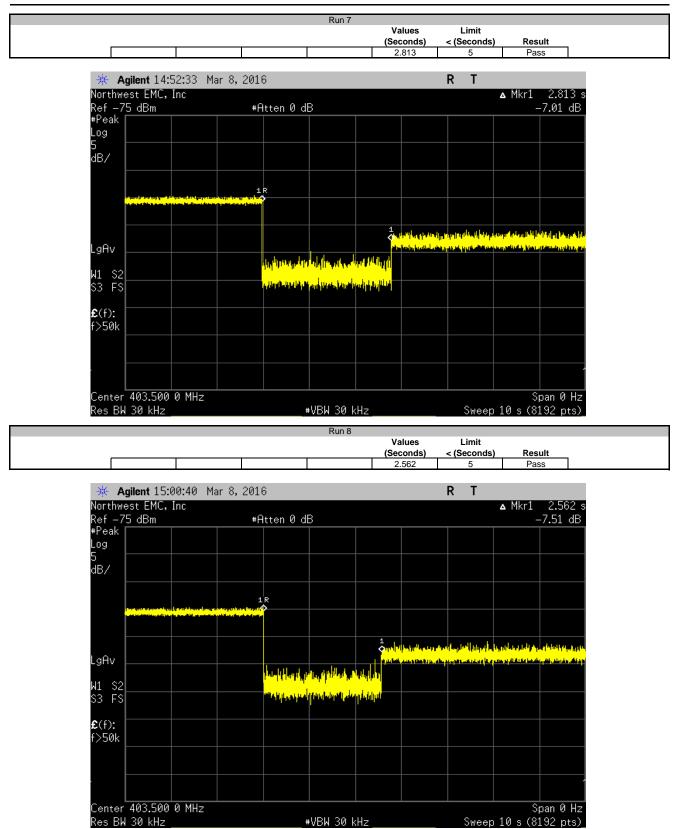




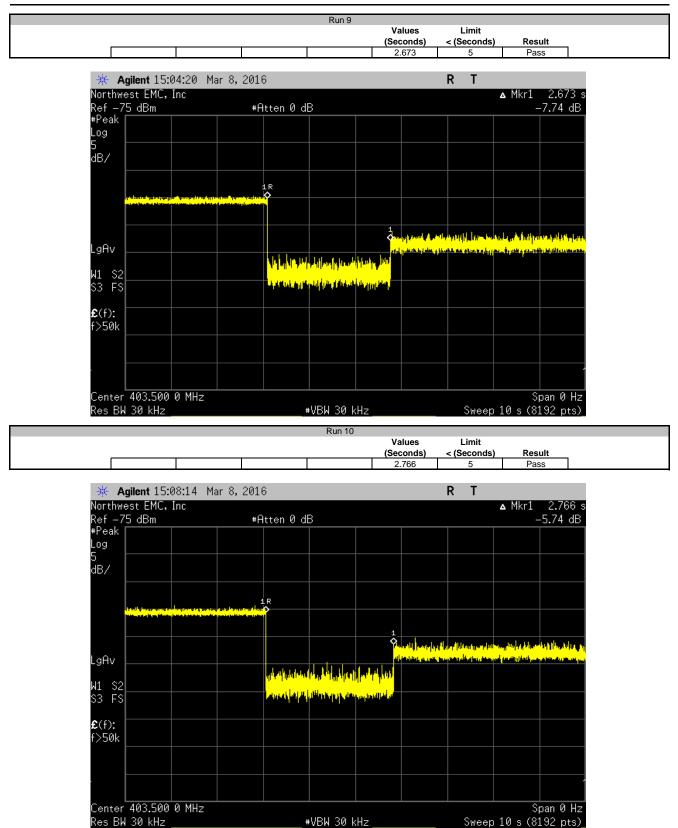














Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this 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

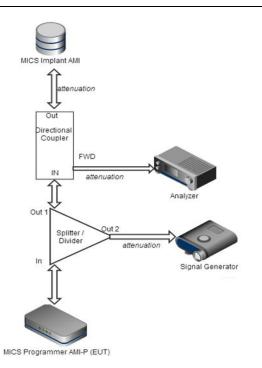
					Interval
Description	Manufacturer	Model	ID	Last Cal.	(mos)
Generator - Signal	Keysight	N5182B	TFX	4/16/2015	36
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	36
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	0
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAN	NCR	0
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	0
Attenuator	Fairview Microwave	SA18E-10	TKS	4/8/2015	12
Block - DC	Aeroflex	INMET 8535	AMO	4/8/2015	12
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	12

TEST DESCRIPTION

The EUT was configured according to the following block diagram:

The signal generator was set to multitone operation to cause equal interferance across the entire band, except one channel (Fc) was left available. The multitone operation (out of operation region) was also set to Pulse modulation with a Period of 10 mS, and a Pulse Width of 100 uS. The spectrum analyzer was set to measure the transmit band of 402-405 MHz.

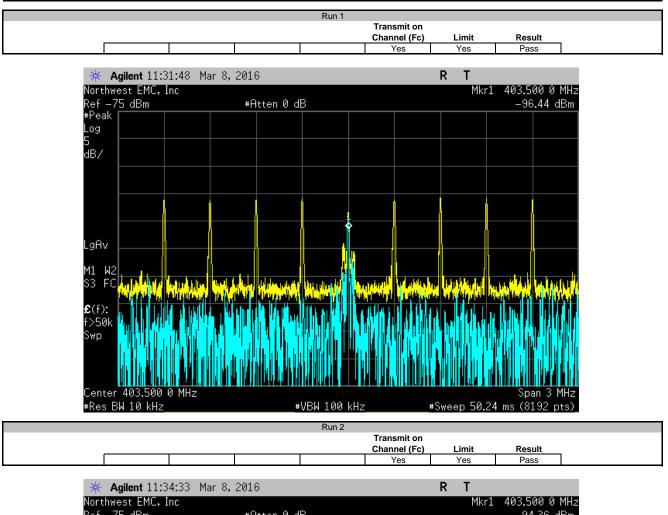
The EUT was set to seek a session with the implantable device. The EUT was verified to connect on the available channel with multiple screen captures.

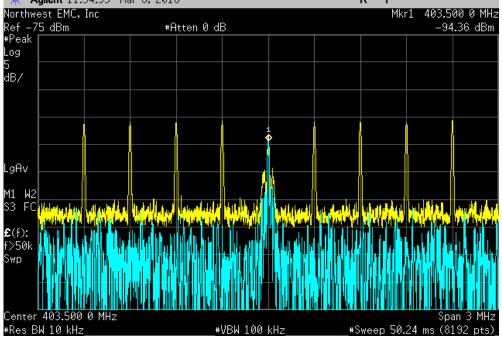




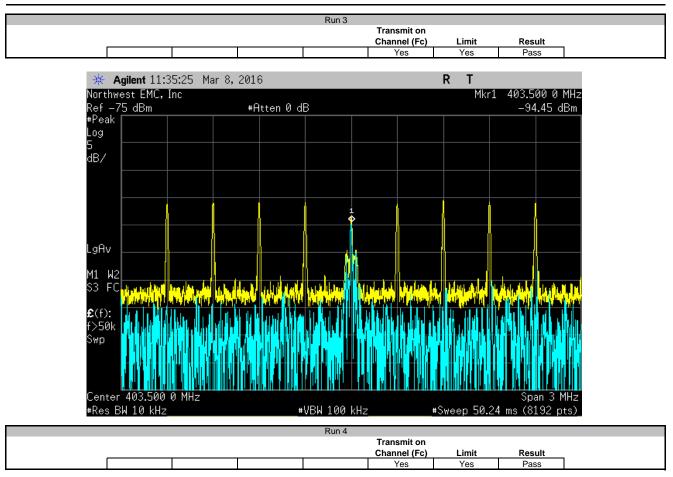
EUT: Cha	arging Device (CD) Mo	del - 1401 (MedRadio/MICS				er: AXON0041	
Serial Number: AD1D260007				Da	Date: 03/08/16		
Customer: Axonics Modulation Technologies, Inc.				Temperatu	Temperature: 19.7°C		
Attendees: Franklin Portillo					Humidity: 48%		
Project: Nor					Barometric Pre		
Tested by: Joh				Power: 3.8VDC	Job Si	e: OC13	
ST SPECIFICATIONS	5			Test Method			
C 95.627(a)				ANSI/TIA/EIA-603-C-2004			
MMENTS							
culated LBT Thresh	old = 10 * LOG(Bandv	ridth) - 150 + Antenna Gain.	Bandwidth is 122kHz	z. Antenna gain is +2dBi.			
VIATIONS FROM TE	ST STANDARD						
EVIATIONS FROM TE one	ST STANDARD						
one	ST STANDARD		fr	N. Colla			
		Signature	Fr	N. Colta			
ne		Signature	fr	V. lather	Transmit on		
ne		Signature	-J.	S. Cha	Transmit on Channel (Fc)	Limit	Result
ne		Signature	Ju	L. Com		Limit Yes	Result Pass
ne nfiguration #		Signature	J.	V. lather	Channel (Fc)		
ne nfiguration #		Signature	-J.	I. Cha	Channel (Fc) Yes	Yes	Pass
ne nfiguration # Run 1 Run 2 Run 3 Run 4		Signature	-J.	S. Cha	Channel (Fc) Yes Yes Yes Yes	Yes Yes Yes Yes	Pass Pass Pass Pass
ne nfiguration # Run 1 Run 2 Run 3		Signature	-J.	V. lather	Channel (Fc) Yes Yes Yes	Yes Yes Yes	Pass Pass Pass
nfiguration # Run 1 Run 2 Run 3 Run 4		Signature	Je	V. Colton	Channel (Fc) Yes Yes Yes Yes	Yes Yes Yes Yes	Pass Pass Pass Pass
ne nfiguration # Run 1 Run 2 Run 3 Run 4 Run 5		Signature	-J.	I. Catha	Channel (Fc) Yes Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes	Pass Pass Pass Pass Pass Pass Pass Pass
ne Run 1 Run 2 Run 3 Run 4 Run 5 Run 6		Signature	-J.	I. Catha	Channel (Fc) Yes Yes Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes	Pass Pass Pass Pass Pass Pass Pass
Run 1 Run 1 Run 2 Run 3 Run 4 Run 5 Run 6 Run 6 Run 7		Signature	Je	I. Colton	Channel (Fc) Yes Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes Yes	Pass Pass Pass Pass Pass Pass Pass

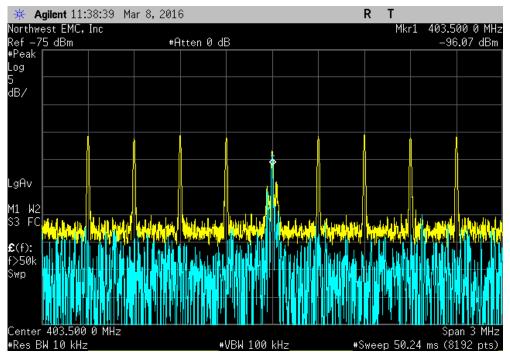




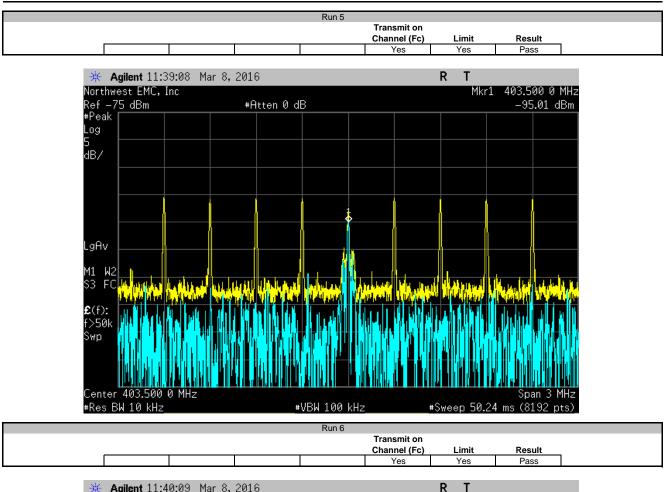


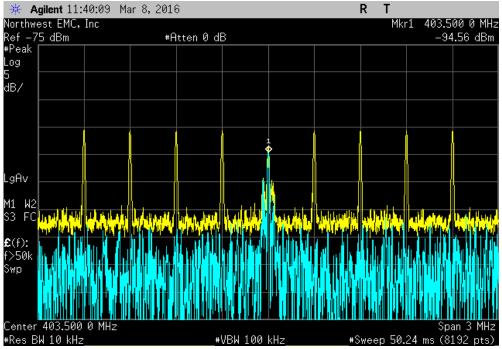




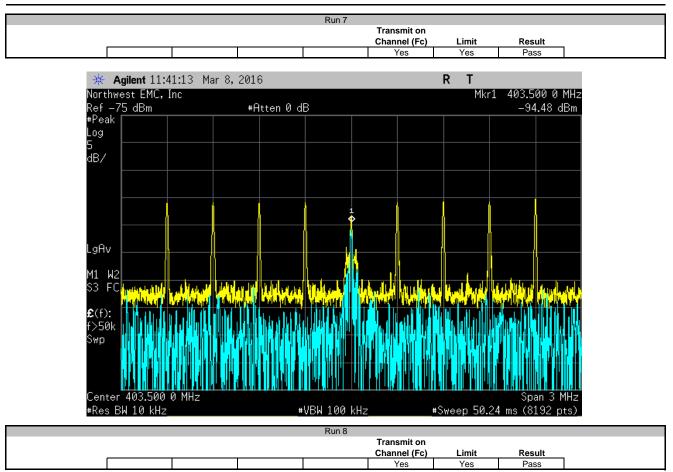


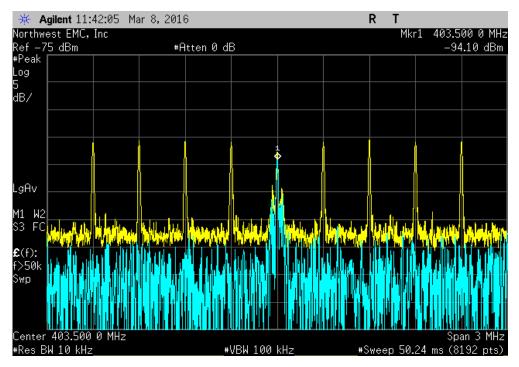




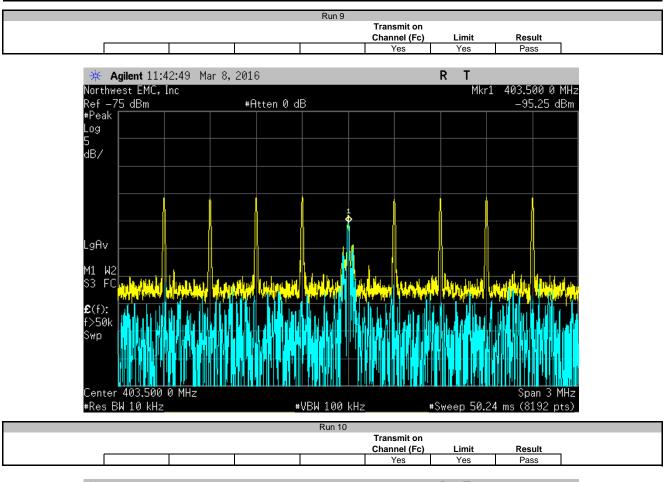


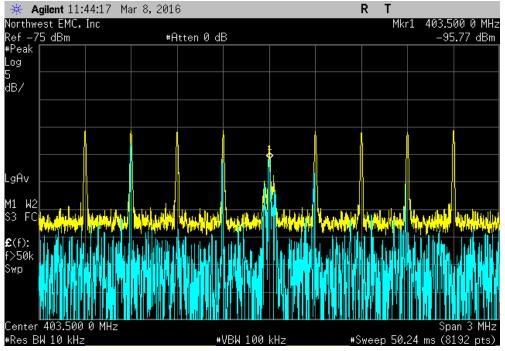












CHANNEL ACCESS BASED ON AMBIENT LEVELS



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

					Interval
Description	Manufacturer	Model	ID	Last Cal.	(mos)
Generator - Signal	Keysight	N5182B	TFX	4/16/2015	36
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	36
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	0
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAN	NCR	0
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	0
Attenuator	Fairview Microwave	SA18E-10	TKS	4/8/2015	12
Block - DC	Aeroflex	INMET 8535	AMO	4/8/2015	12
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	12

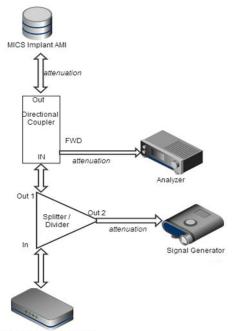
TEST DESCRIPTION

The EUT was configured according to the following block diagram:

The signal generator was set to multitone operation to cause equal interferance across the entire band. The amplitude of the multitone signals (out of operation region) were set to the LBT threshold of 10*LOG(Bandwidth) - 150 + Antenna Gain + 10 dB.

The intended frequency (Fc) was set to the LBT threshold - 3 dB. A least interferred channel (LIC) was set to the LBT threshold + 3 dB. The EUT was verified to transmit on Fc. The amplitude of Fc was then raised to the LBT threshold + 6 dB. The EUT was verified to transmit on LIC.

The spectrum analyzer was set to measure the transmit band of 402-405 MHz. Screen captures were provided to show the EUT behavior at the different LBT threshold levels.



MICS Programmer AMI-P (EUT)

CHANNEL ACCESS BASED ON AMBIENT LEVELS

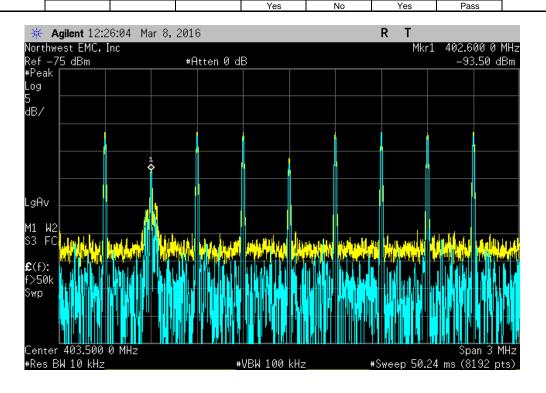


EUT: Charging Device (CD) Model - 1401 (MedRadio/MICS)	Charging Device (CD) Model - 1401 (MedRadio/MICS)				
Serial Number: AD1D260007	AD1D260007				
Customer: Axonics Modulation Technologies, Inc.			Temperature:	19.7°C	
Attendees: Franklin Portillo			Humidity:	48%	
Project: None			Barometric Pres.:	1017	
Tested by: Johnny Candelas	Power: 3.8VDC		Job Site:	OC13	
TEST SPECIFICATIONS	Test Method				
FCC 95.627(a)	ANSI/TIA/EIA-603-C-2004				
COMMENTS					
Calculated LBT Threshold = 10 * LOG(Bandwidth) - 150 + Antenna Gain. Bandwidth	h is 122kHz. Antenna gain is +2dBi.				
DEVIATIONS FROM TEST STANDARD					
None					
Configuration # 5 Signature	fe d. later				
		Transmit on	Transmit on	Limit	
		LIC	Fc	(LIC)	Result
Fc LBT Threshold -3		No	Yes	No	Pass
Fc LBT Threshold +6		Yes	No	Yes	Pass

CHANNEL ACCESS BASED ON AMBIENT LEVELS







DISCONTINUATION MICS SESSION



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

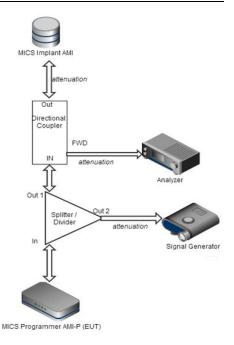
					Interval
Description	Manufacturer	Model	ID	Last Cal.	(mos)
Generator - Signal	Keysight	N5182B	TFX	4/16/2015	36
Generator - Signal	Agilent	E8257D	TGU	2/5/2015	36
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	0
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAN	NCR	0
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	0
Attenuator	Fairview Microwave	SA18E-10	TKS	4/8/2015	12
Block - DC	Aeroflex	INMET 8535	AMO	4/8/2015	12
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFD	7/23/2015	12

TEST DESCRIPTION

The EUT was configured according to the following block diagram:

The signal generator was set to multitone operation to cause equal interferance across the entire band. The amplitude of the multitone signals (out of operation region) were set to the LBT threshold of 10*LOG(Bandwidth) - 150 + Antenna Gain + 10 dB.

The intended frequency (Fc) was set to the LBT threshold + 6 dB. A least interferred channel (LIC) was set to the LBT threshold + 3 dB. The spectrum analyzer was set to measure the time between the removal of the MICS Implant AMI to when the EUT does not transmit on the LIC.

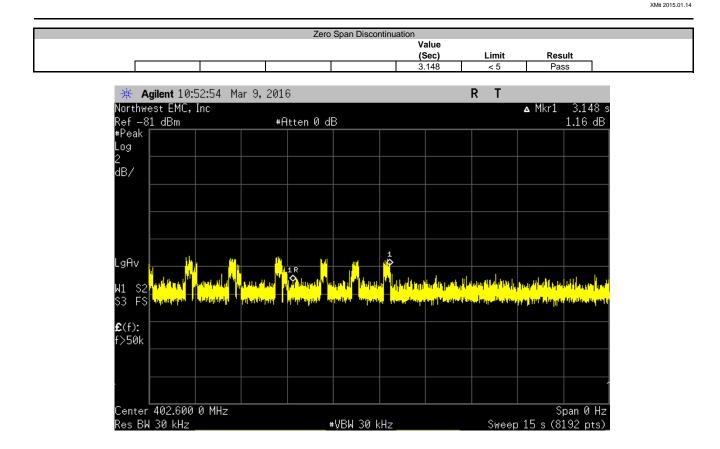


DISCONTINUATION MICS SESSION



	Charging Device (CD) Model - 1401 (MedRadio/MICS)	Work Order:				
Serial Number:	AD1D260007			Date:	03/08/16	
Customer:	Axonics Modulation Technologies, Inc.			Temperature:	19.7°C	
Attendees:	Franklin Portillo			Humidity:	48%	
Project:	None			Barometric Pres.:	1017	
Tested by:	Johnny Candelas	Power	3.8VDC	Job Site:	OC13	
TEST SPECIFICATI	ONS		Test Method			
FCC 95.627(a)			ANSI/TIA/EIA-603-C-2004			
COMMENTS			-			
LIC = 402.6 MHz. Ca	alculated LBT Threshold = 10 * LOG(Bandwidth) - 150 + Antenr	a Gain. Bandwidth	is 122kHz. Antenna gain is +2dBi.			
DEVIATIONS FROM	I TEST STANDARD					
None						
Configuration #	5 Signature	for d.	lat.			
				Value		
				(Sec)	Limit	Result
Zero Span Discontin	uation			3.148	< 5	Pass

DISCONTINUATION MICS SESSION



NORTHWEST