

# **Axonics Modulation Technologies, Inc.**

Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)

EN 301 839 V2.1.1:2016

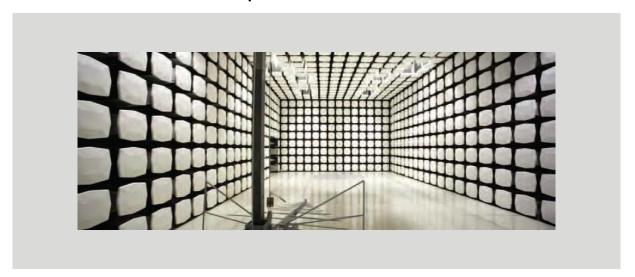
EN 302 537 V2.1.1:2016

FCC Part 95I:2017

RSS-243:2010

MedRadio

**Report # AXON0097.12** 







NVLAP Lab Code: 200676-0

# **CERTIFICATE OF TEST**



Last Date of Test: November 20, 2017 Axonics Modulation Technologies, Inc.

Model: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)

# **Radio Equipment Testing**

### Standards - MICS

Specification	Method
EN 301 839 V2.1.1:2016	
FCC Part 95I:2017	EN 301 839 V2.1.1:2016
RSS-243:2010	

### **Results - MICS**

Method Clause	Test Description	Applied	Results	Comments
5.3.7.1.3	LBT Threshold Power Level	Yes	Pass	
5.3.7.1.4	Monitoring System Bandwidth	Yes	Pass	
5.3.7.1.5.1.1	Monitoring System Scan Cycle Time	Yes	Pass	
5.3.7.1.5.1.2	Minimum Channel Monitoring Period	Yes	Pass	
5.3.7.1.6	Channel Access Based On Ambient Levels	Yes	Pass	
5.3.7.1.7	Discontinuation Of A MICS Session	Yes	Pass	
5.3.7.1.8	Use Of Pre-Scanned Alternative Channels	Yes	Pass	

### **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.

# **CERTIFICATE OF TEST**



Last Date of Test: November 20, 2017 Axonics Modulation Technologies, Inc.

Model: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)

# **Radio Equipment Testing**

### Standards - MEDS

Specification	Method
EN 302 537 V2.1.1:2016	
FCC Part 95I:2017	EN 302 537 V2.1.1:2016
RSS-243:2010	

### **Results - MEDS**

Method Clause	Test Description	Applied	Results	Comments
5.3.8.1.1	LBT Threshold Power Level	Yes	Pass	
5.3.8.1.2	Monitoring System Bandwidth	Yes	Pass	
5.3.8.1.3.1.1	Monitoring System Scan Cycle Time	Yes	Pass	
5.3.8.1.3.1.2	Minimum Channel Monitoring Period	Yes	Pass	
5.3.8.1.4	Channel Access Based On Ambient Levels	Yes	Pass	
5.3.8.1.5	Discontinuation Of A MICS Session	Yes	Pass	
5.3.8.1.6	Use Of Pre-Scanned Alternative Channels	Yes	Pass	

### **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
00	None		

# ACCREDITATIONS AND AUTHORIZATIONS



### **United States**

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

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

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

### Canada

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

### **European Union**

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

### Australia/New Zealand

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

#### Korea

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:

http://portlandcustomer.element.com/ts/scope/scope.htm http://gsi.nist.gov/global/docs/cabs/designations.html

# **FACILITIES**







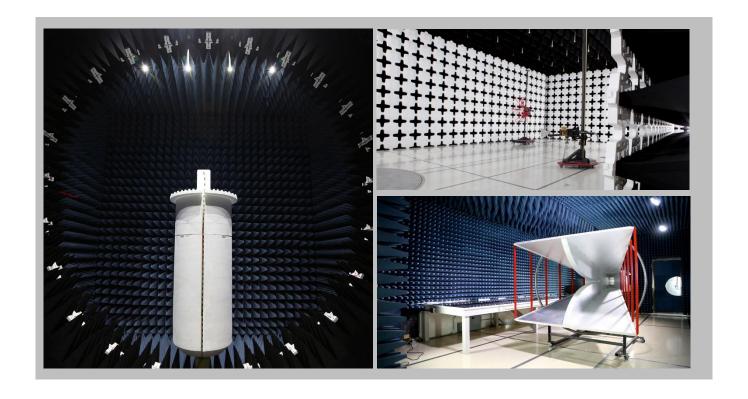
**California**Labs OC01-17
41 Tesla
Irvine, CA 92618
(949) 861-8918

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<sup>th</sup> Ave NE
Bothell, WA 98011
(425)984-6600

Irvine, CA 92618 (949) 861-8918	Brooklyn Park, MN 55445 (612)-638-5136	Elbridge, NY 13060 (315) 554-8214	Hillsboro, OR 97124 (503) 844-4066	Plano, TX 75074 (469) 304-5255	Bothell, WA 98011 (425)984-6600	
	NVLAP					
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	
	Innov	ation, Science and Eco	nomic Development Car	ada		
2834B-1, 2834B-3	2834E-1, 2834E-3	N/A	2834D-1, 2834D-2	2834G-1	2834F-1	
	вямі					
SL2-IN-E-1154R	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					
US0158	US0175	N/A	US0017	US0191	US0157	



# 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.

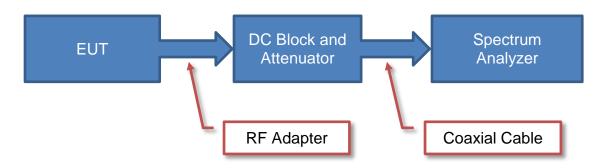
The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

Test	+ MU	- MU
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

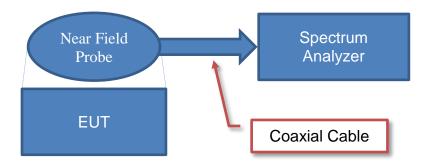
# **Test Setup Block Diagrams**



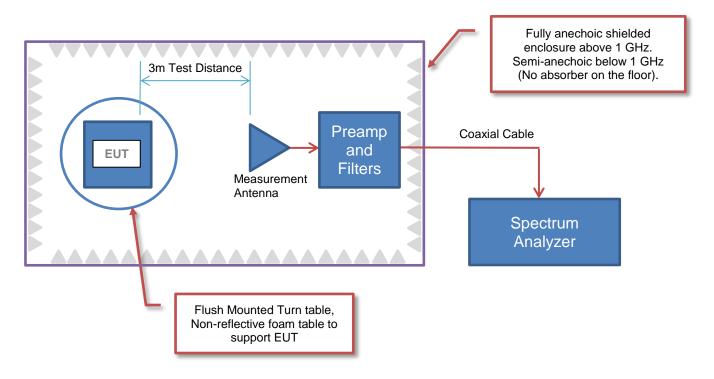
### **Antenna Port Conducted Measurements**



# **Near Field Test Fixture Measurements**



# **Spurious Radiated Emissions**



# PRODUCT DESCRIPTION



### Client and Equipment Under Test (EUT) Information

Company Name:	Axonics Modulation Technologies, Inc.
Address:	7575 Irvine Center Drive Suite 200
City, State, Zip:	Irvine, CA 92618
Test Requested By:	Franklin Portillo
Model:	Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)
First Date of Test:	November 20, 2017
Last Date of Test:	November 20, 2017
Receipt Date of Samples:	October 19, 2017
Equipment Design Stage:	Production
<b>Equipment Condition:</b>	No Damage
Purchase Authorization:	Verified

# Information Provided by the Party Requesting the Test

### **Functional Description of the EUT:**

Clinician Programmer (CP): a tablet computer (battery operated and wall outlet) used by a clinician to program the EPG/IPG The CP generates stimulation pulses which are transferred to the region of therapy by foramen needle via a J-clip or by a Quadripolar tined lead via a Stimulation Test cable.

### **Testing Objective:**

Seeing authorization for the spectrum access (LBT) function of the MedRadio transmitter to FCC Part 95I, RSS-243, EN 301 839 and EN 302 537.

# **CONFIGURATIONS**



# **Configuration AXON0097-30**

Software/Firmware Running during test			
Description	Version		
Firmware	CP-282-ST-48-RF-42		

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Clinician Programmer (SMA)	Axonics Modulation Technologies, Inc.	2501	AC1C870003

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
DC Power Source	HQ Power	PS3003U	DK10103872
IPG (SMA)	Axonics Modulation Technologies, Inc.	1101	AT1B000004

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Cable	No	3.0m	No	Clinician Programmer (SMA)	DC Power Source
DC Cable	No	2.0m	No	IPG (SMA)	DC Power Source
AC Cable	No	1.8m	No	AC Mains	DC Power Source

Report No. AXON0097.12

# **MODIFICATIONS**



# **Equipment Modifications**

Item	Date	Test	Modification	Note	Disposition of EUT
1	11/20/2017	Monitoring System Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
2	11/20/2017	Monitoring System Scan Cycle Time	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
3	11/20/2017	Minimum Channel Monitoring Period	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
4	11/20/2017	LBT Threshold Power Level	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
5	11/20/2017	Channel Access Based On Ambient Levels	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
6	11/20/2017	Discontinuation Of A MICS Session	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
7	11/20/2017	Use Of Pre-Scanned Alternative Channels	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.



XMit 2017.09.21

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

#### **TEST EQUIPMENT**

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	Agilent	E8257D	TGU	5-Feb-15	5-Feb-18
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Fairview Microwave	SD3379	AMV	28-Dec-17	28-Dec-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

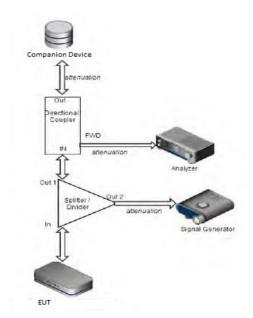
#### **TEST DESCRIPTION**

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. 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 bands of 401-402 and 405-406 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.

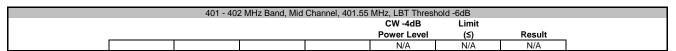
The signal generator amplitude at Fc was then measured and recorded with the spectrum analyzer.

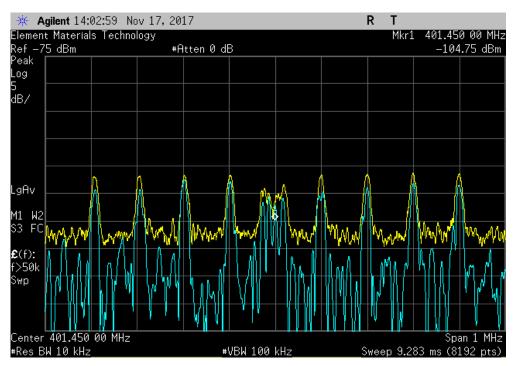


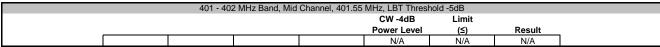


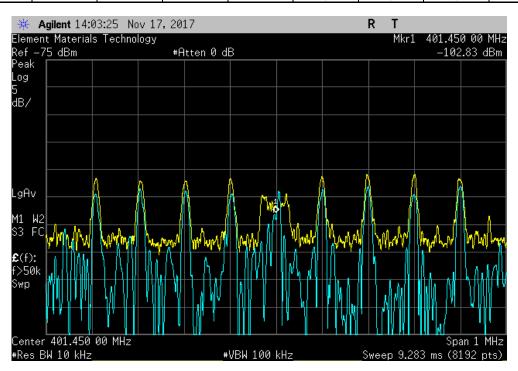
						AMIL 2017.U
		P) Model: 2501 (MICS/MEDS/MedRadi	(0)	Work Order:	AXON0097	
Serial Number: AC	1C870003				20-Nov-17	
	onics Modulation Tech	nnologies, Inc.		Temperature:		
Attendees: Fra				Humidity:		
Project: No				Barometric Pres.:		
Tested by: Joh			Power: 7.6VDC	Job Site:	DC13	
TEST SPECIFICATIONS			Test Method			
EN 302 537 V2.1.1:2016			EN 302 537 V2.1.1:2016			
001115150						
COMMENTS	-1-1 40 * 1 00/D	dath) 450 - Antonno Oolo - 00 75 d5	\			
		vidth) - 150 + Antenna Gain = -98.75 dE	sm.			
Emission Bandwidth =	82582 HZ, Antenna Ga	ain = 2.08dBi.				
DEVIATIONS FROM TE	ST STANDARD					
None						
			N. Colle			
Configuration #	30	The state of the s	a. Coller			
		Signature				
				CW -4dB	Limit	
				Power Level	(≤)	Result
401 - 402 MHz Band						
Mid	d Channel, 401.55 MHz					
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol	ld +3dB		-99.68 dBm	-98.75 dBm	Pass
405 - 406 MHz Band						
Mid	Channel, 405.55 MHz	II o ID		N1/A	21/2	
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol			N/A	N/A	N/A
	LBT Threshol	ld +3dB		-99.63 dBm	-98.75 dBm	Pass



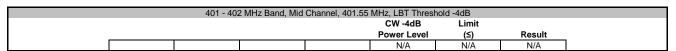


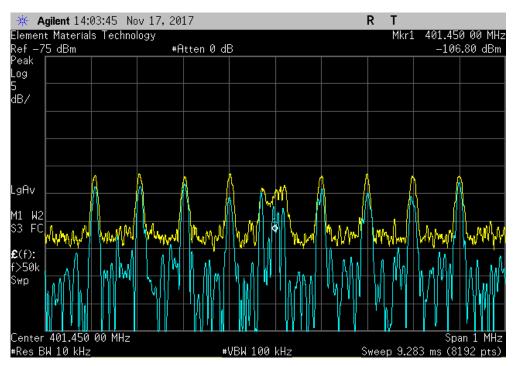


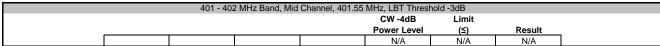


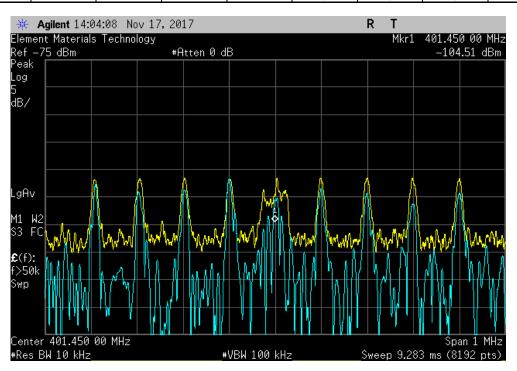






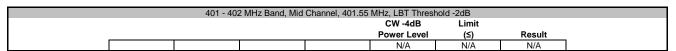


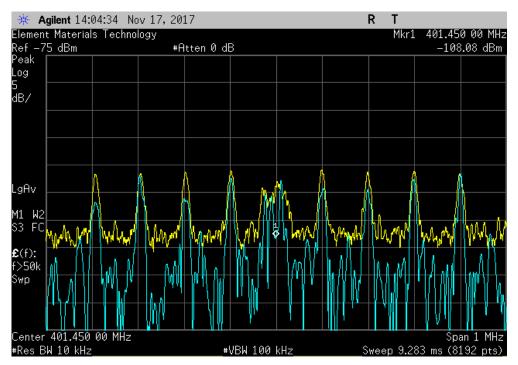


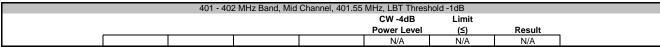


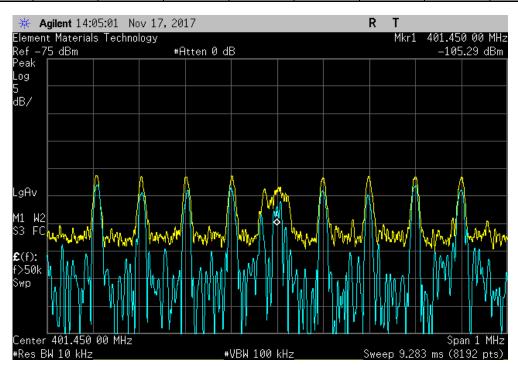


YM9 2017 00 21



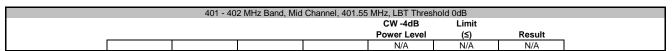


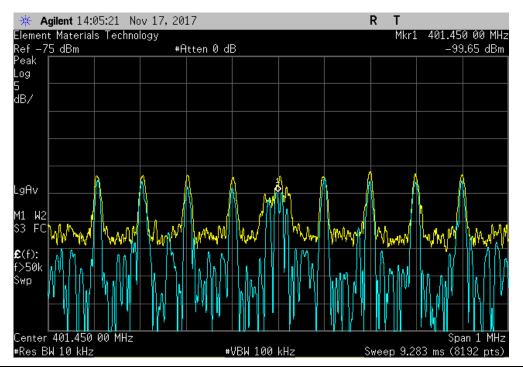


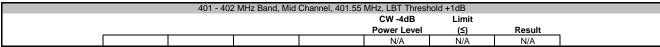


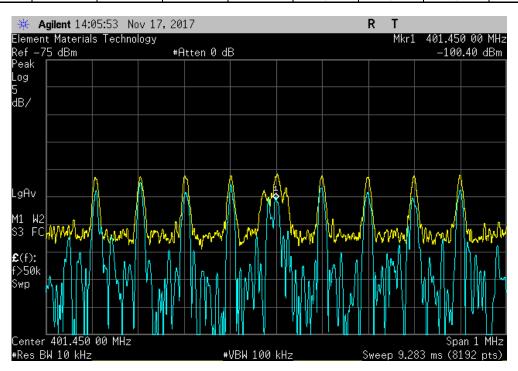


XMit 2017.09.2

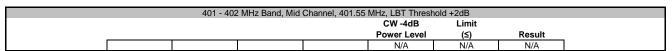


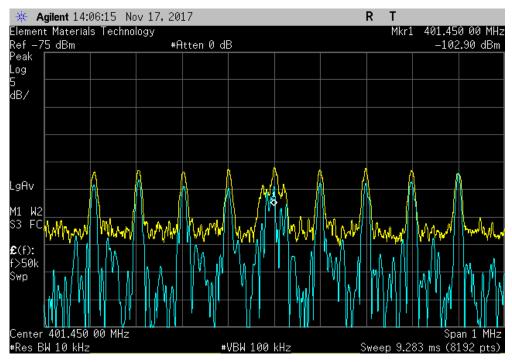


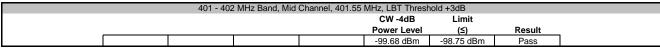


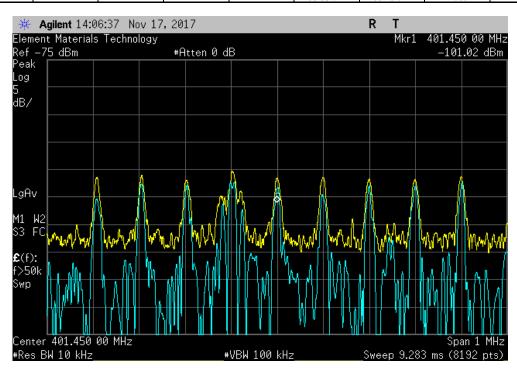










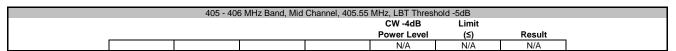


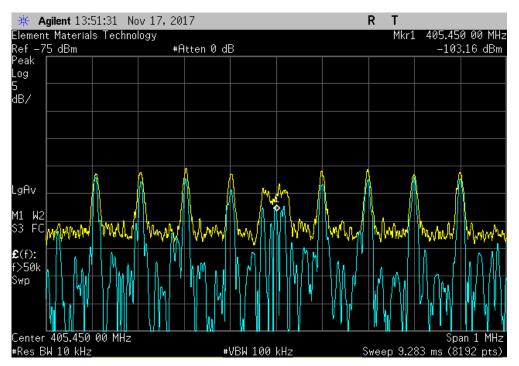


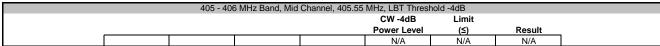
Intentionally Left Blank

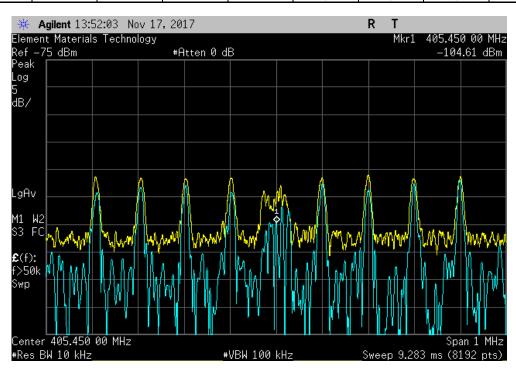
Report No. AXON0097.12



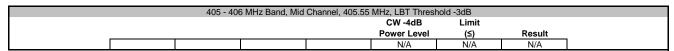


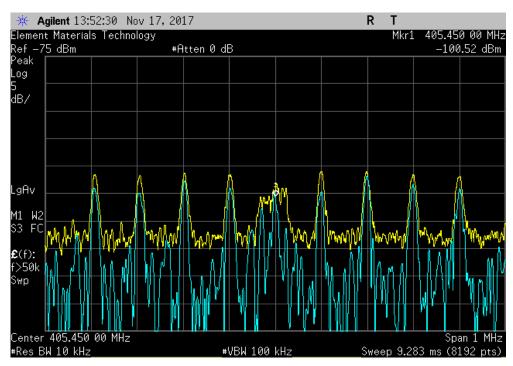


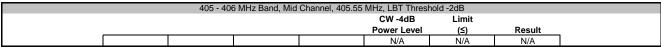


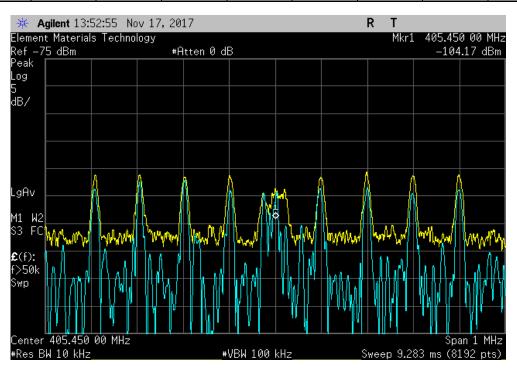






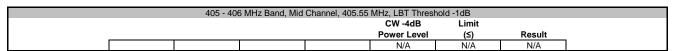


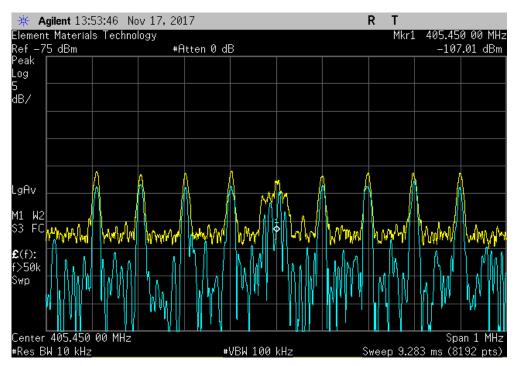


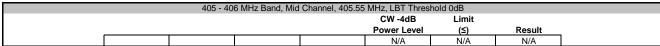


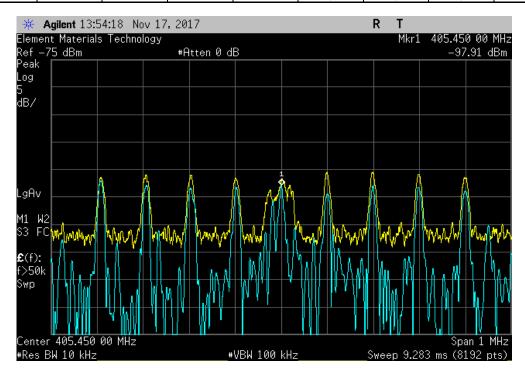


YM9 2017 00 21

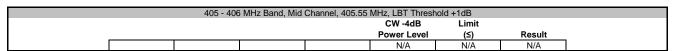




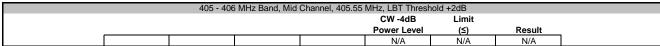


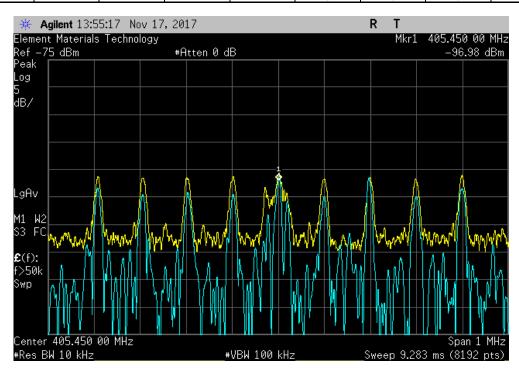






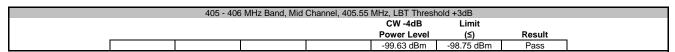


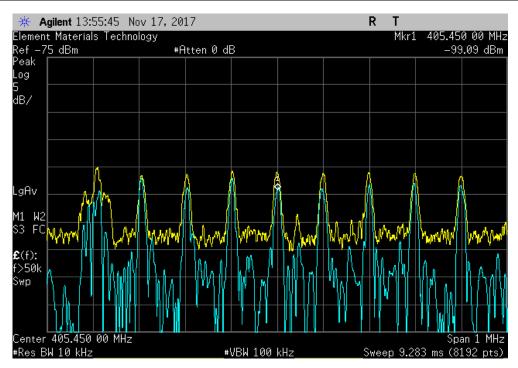






YM9 2017 00 21





Report No. AXON0097.12



XMit 2017.09.21

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

#### **TEST EQUIPMENT**

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	Agilent	E8257D	TGU	5-Feb-15	5-Feb-18
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Fairview Microwave	SD3379	AMV	28-Dec-17	28-Dec-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

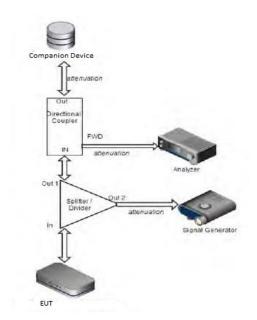
#### **TEST DESCRIPTION**

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. 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 monitor the EUT communications channel in 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.

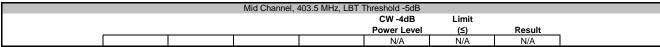


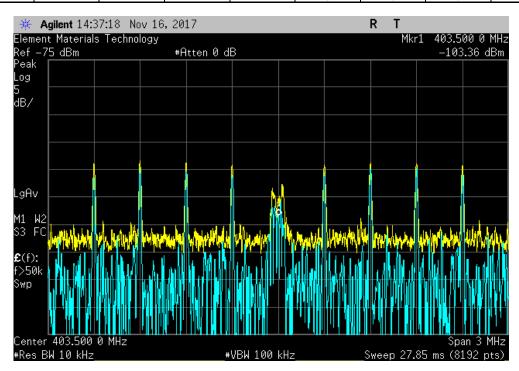


							XMit 2017.09
		P) Model: 2501 (MICS/MEDS/MedRadio	0)		Work Order:		
Serial Number:						20-Nov-17	
	Axonics Modulation Tech	nnologies, Inc.			Temperature:		
	Franklin Portillo					45.7% RH	
Project:	None				Barometric Pres.:	1018 mbar	
	Johnny Candelas		Power:	7.6VDC	Job Site:	OC13	
EST SPECIFICAT	IONS			Test Method			
EN 301 839 V2.1.1:	2016			EN 301 839 V2.1.1:2016			
COMMENTS	<u> </u>		<u> </u>				
Calculated LBT Th	reshold = 10 * LOG(Bandv	ridth) - 150 + Antenna Gain = -96.87 dB	m.				
	th = 127432 Hz, Antenna 0						
	,						
DEVIATIONS FROM	II TEST STANDARD						
None							
		P	1.6				
Configuration #	30	- Juli	1. 1	there .			
		Signature					
					CW -4dB	Limit	
					Power Level	(≤)	Result
Mid Channel, 403.5	MHz						
	LBT Threshold -6dB				N/A	N/A	N/A
	LBT Threshold -5dB				N/A	N/A	N/A
	LBT Threshold -4dB				N/A	N/A	N/A
	LBT Threshold -3dB				N/A	N/A	N/A
	LBT Threshold -2dB				N/A	N/A	N/A
	LBT Threshold -1dB				N/A	N/A	N/A
	LBT Threshold 0dB				N/A	N/A	N/A
	LBT Threshold +1dB				N/A	N/A	N/A
	LBT Threshold +2dB				N/A	N/A	N/A
	LBT Threshold +3dB				-99.68 dBm	-96.87 dBm	Pass





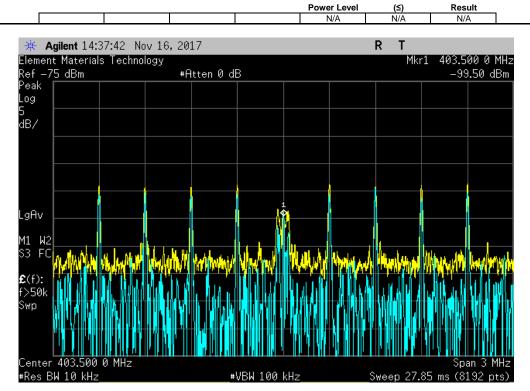


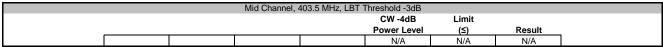


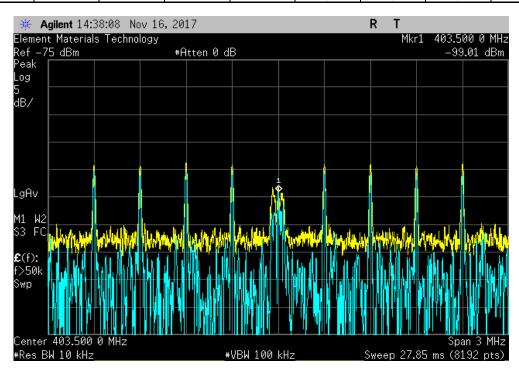
Report No. AXON0097.12



Mid Channel, 403.5 MHz, LBT Threshold -4dB CW -4dB Limit Power Level (≤) Result

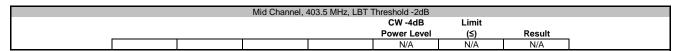


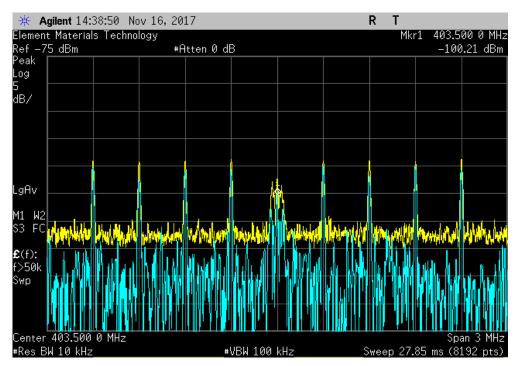




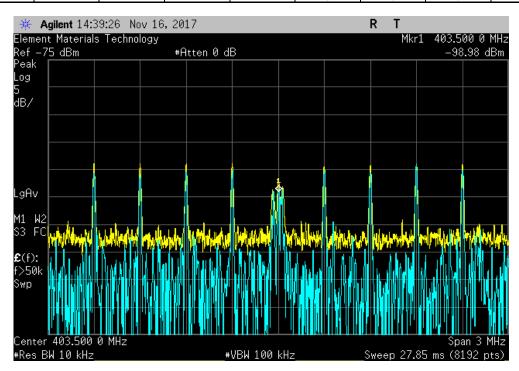
Report No. AXON0097.12



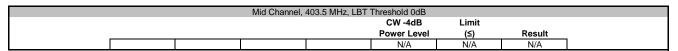


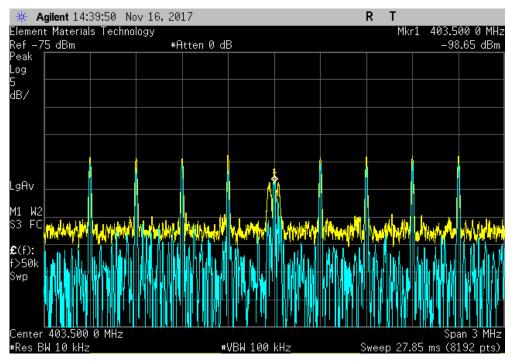


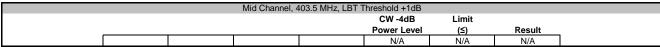
Mid Channel, 403.5 MHz, LBT Threshold -1dB								
				CW -4dB	Limit			
				Power Level	(≤)	Result		
				N/A	N/A	N/A		

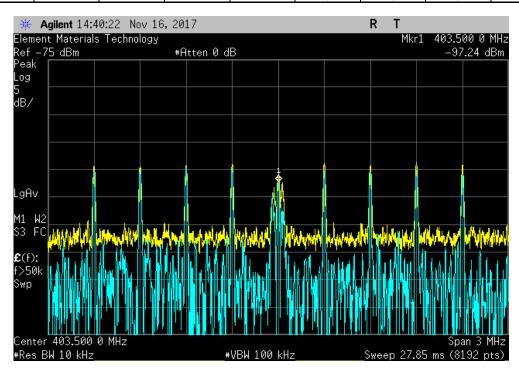




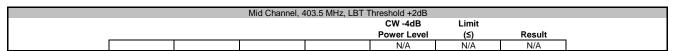


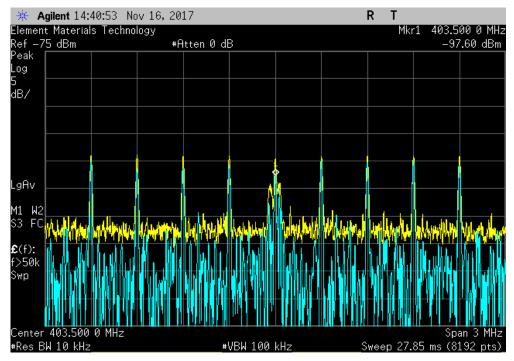


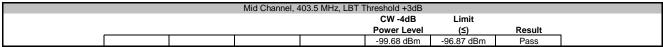


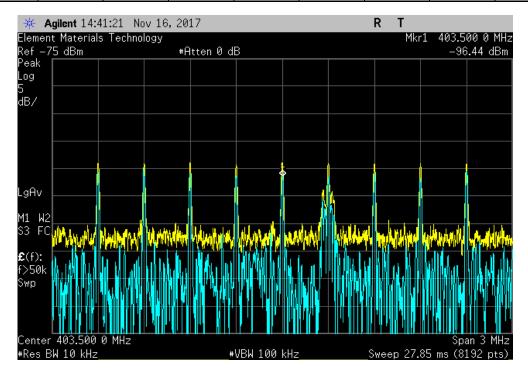














XMit 2017.09.21

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

#### **TEST EQUIPMENT**

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	Agilent	E8257D	TGU	5-Feb-15	5-Feb-18
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Fairview Microwave	SD3379	AMV	28-Dec-17	28-Dec-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

#### **TEST DESCRIPTION**

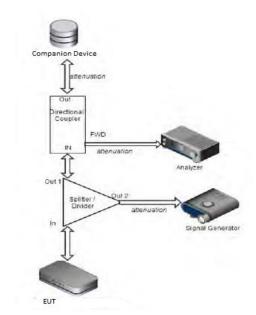
The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The EUT was configured according to the following block diagram:

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 bands of 401-402 and 405-406 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 measured at each point.





EUT: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)
Serial Number: AC1C870003
Customer: Axonics Modulation Technologies, Inc.
Attendees: Franklin Portillo
Project: None Work Order: AXON0097
Date: 20-Nov-17
Temperature: 21.4 °C Humidity: 45.7% RH
Barometric Pres.: 1018 mbar Project: None
Tested by: Johnny Candelas
TEST SPECIFICATIONS Power: 7.6VDC Test Method Job Site: OC13 EN 302 537 V2.1.1:2016 EN 302 537 V2.1.1:2016 COMMENTS Calculated LBT Threshold = 10 \* LOG(Bandwidth) - 150 + Antenna Gain = -98.75 dBm. Emission Bandwidth = 82582 Hz, Antenna Gain = 2.08dBi. DEVIATIONS FROM TEST STANDARD Configuration # 30 Signature Limit (dB) Result Value (dBm) (dB) Mid Channel (Fc), 401.55 MHz

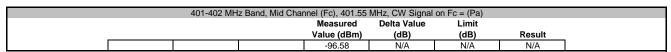
CW Signal on Fc = (Pa)

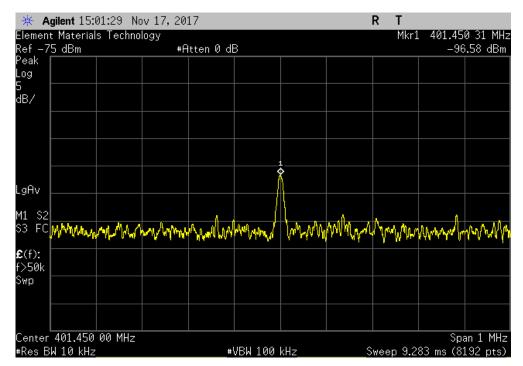
CW Signal on Fc - EBW/2 = (Pb)

CW Signal on Fc + EBW/2 = (Pc) N/A N/A N/A N/A N/A -96.58 N/A N/A -96 40 -96.90 N/A 405-406 MHz Band CW Signal on Fc = (Pa) CW Signal on Fc - EBW/2 = (Pb) -96.41 -96.79 N/A N/A N/A N/A N/A N/A CW Signal on Fc + EBW/2 = (Pc) -96 67 N/A N/A N/A Calculation: Mid Channel (Fc), 401.55 MHz (Pa) - (Pb) = D1 (Pa) - (Pc) = D2 Mid Channel (Fc), 405.55 MHz N/A N/A Pass 0.18 0.32 < 20 < 20 Pass (Pa) - (Pb) = D1 (Pa) - (Pc) = D2 Pass Pass 0.38 < 20 < 20

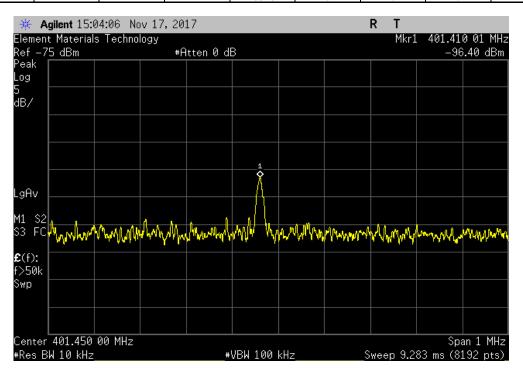


Mir 2017 00 21



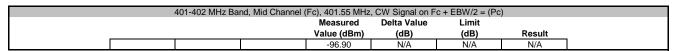


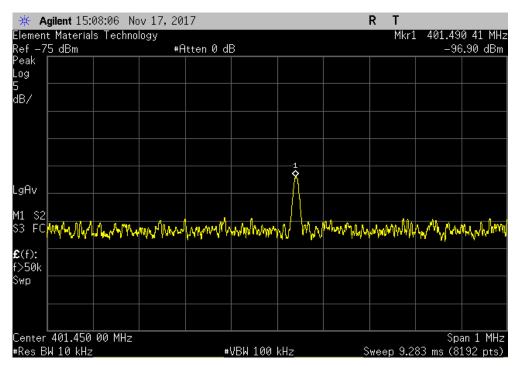
	401-402 MHz Ban	d, Mid Channel (	(Fc), 401.55 MHz	, CW Signal on F	c - EBW/2 = (Pb)		
			Measured	Delta Value	Limit		
			Value (dBm)	(dB)	(dB)	Result	
			-96.40	N/A	N/A	N/A	



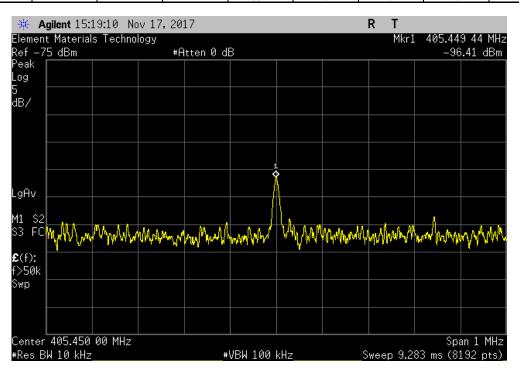


(Mi) 2017 00 21





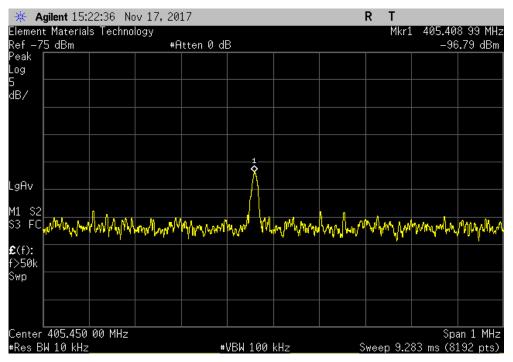
	405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, CW Signal on Fc = (Pa)									
	Measured Delta Value Lim					Limit				
				Value (dBm)	(dB)	(dB)	Result			
i				-96.41	N/A	N/A	N/A			



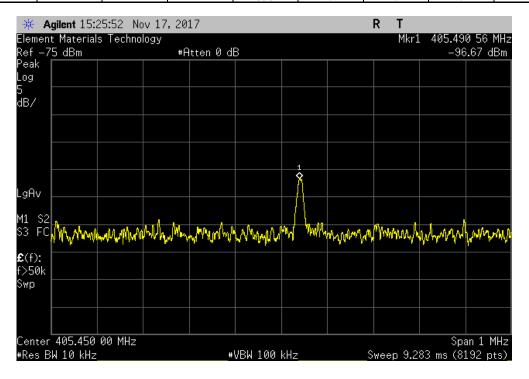


(Mit 2017 09 21





405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, CW Signal on Fc + EBW/2 = (Pc)									
			Measured	Delta Value	Limit				
			Value (dBm)	(dB)	(dB)	Result			
			-96.67	N/A	N/A	N/A			





XMit 2017.09.2

Calculation:, Mid Channel (Fc), 401.55 MHz, (Pa) - (Pb) = D1									
	Measured Delta Value Limit								
			Value (dBm)	(dB)	(dB)	Result			
			N/A	0.18	< 20	Pass			

	Calc	ulation:, Mid Cha	nnel (Fc), 401.55	MHz, (Pa) - (Pc)	= D2	
			Measured	Delta Value	Limit	
			Value (dBm)	(dB)	(dB)	Result
			N/A	0.32	< 20	Pass

	Calcu	ulation:, Mid Char	nnel (Fc), 405.55	MHz, (Pa) - (Pb)	= D1		
			Measured	Delta Value	Limit		
			Value (dBm)	(dB)	(dB)	Result	
•			N/A	0.38	< 20	Pass	ĺ

Calculation:, Mid Channel (Fc), 405.55 MHz, (Pa) - (Pc) = D2									
	Measured Delta Value Limit								
				Value (dBm)	(dB)	(dB)	Result		
	N/A 0.26 < 20 Pass								



XMit 2017.09.21

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

#### **TEST EQUIPMENT**

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	Agilent	E8257D	TGU	5-Feb-15	5-Feb-18
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Fairview Microwave	SD3379	AMV	28-Dec-17	28-Dec-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

#### **TEST DESCRIPTION**

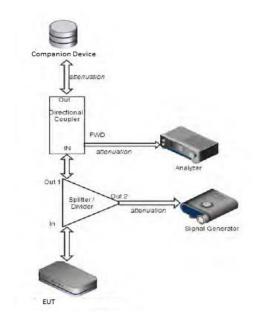
The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The EUT was configured according to the following block diagram.

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 measured at each point.

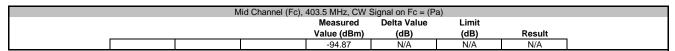


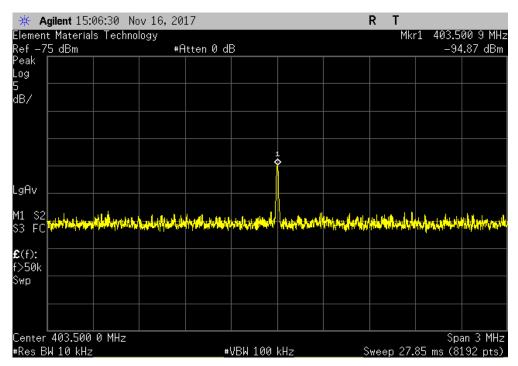


								XMit 2017.09.21
		P) Model: 2501 (MICS/MEDS/MedRad	io)			Work Order:	AXON0097	
Serial Number:	AC1C870003						20-Nov-17	
Customer:	Axonics Modulation Tech	hnologies, Inc.				Temperature:	21.4 °C	
Attendees:	Franklin Portillo						45.7% RH	
Project:	None					<b>Barometric Pres.:</b>	1018 mbar	
Tested by:	Johnny Candelas		Power:	7.6VDC		Job Site:	OC13	
TEST SPECIFICATI	ONS			Test Method				
EN 301 839 V2.1.1:2	2016			EN 301 839 V2.1.1:2016				
		<u> </u>						
COMMENTS								
Calculated LBT Thi	reshold = 10 * LOG(Bandv	vidth) - 150 + Antenna Gain = -96.87 dE	Bm.					
Emission Bandwid	th = 127432 Hz, Antenna (	Gain = 2.08dBi.						
DEVIATIONS FROM	I TEST STANDARD							
None								
Configuration #	30	Signature	1.6					
					Measured	Delta Value	Limit	
					Value (dBm)	(dB)	(dB)	Result
Mid Channel (Fc), 40	03.5 MHz							
	CW Signal on Fc = (Pa)				-94.87	N/A	N/A	N/A
	CW Signal on Fc - EBW/2				-94.76	N/A	N/A	N/A
	CW Signal on Fc + EBW/2	2 = (Pc)			-94.69	N/A	N/A	N/A
	Calculation: (Pa) - (Pb) = [				N/A	1.30	< 20	Pass
	Calculation: (Pa) - (Pc) = D	02			N/A	1.26	< 20	Pass

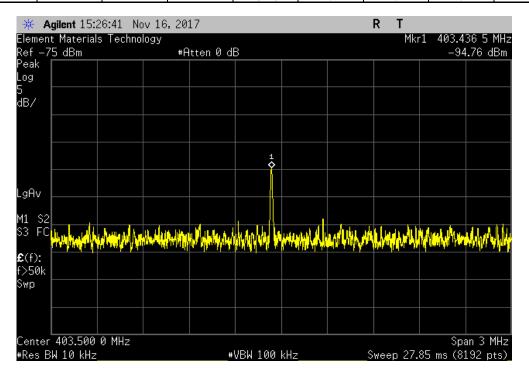


VMR 2017 00 2



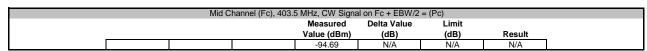


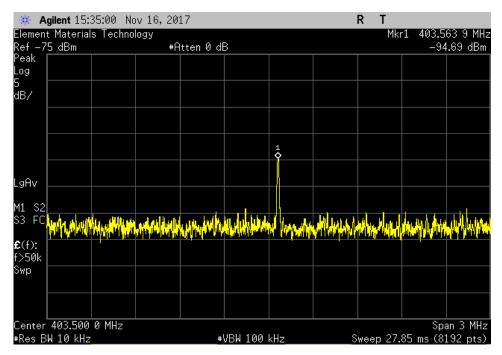
	Mid C	hannel (Fc), 403.	5 MHz, CW Signa	al on Fc - EBW/2	= (Pb)	
			Measured	Delta Value	Limit	
			Value (dBm)	(dB)	(dB)	Result
			-94.76	N/A	N/A	N/A





Mit 2017.09.21





	Calcu	ılation: (Pa) - (Pb)	= D1			
		Measured	Delta Value	Limit		
		Value (dBm)	(dB)	(dB)	Result	_
		N/A	1.30	< 20	Pass	
	Calcu	ılation: (Pa) - (Pc)	= D2			
		Measured	Delta Value	Limit		
		Value (dBm)	(dB)	(dB)	Result	
		N/A	1.26	< 20	Pass	



XMit 2017.09.21

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

### **TEST EQUIPMENT**

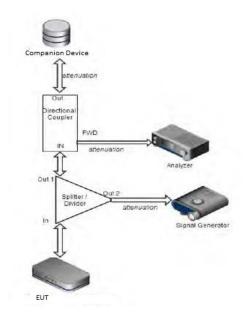
Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	Agilent	E8257D	TGU	5-Feb-15	5-Feb-18
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Fairview Microwave	SD3379	AMV	28-Dec-17	28-Dec-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

### **TEST DESCRIPTION**

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





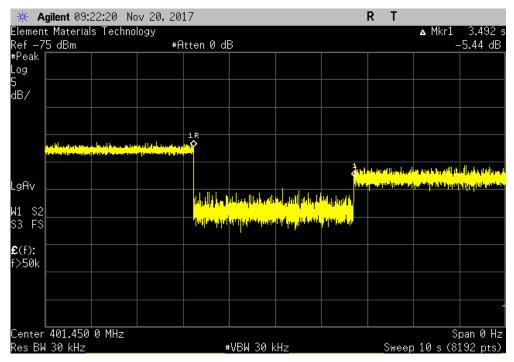
EUE   OU   1   D   (OD)   11   1   0504 (		100		V-011000=	
EUT: Clinician Programmer (CP) Model: 2501 ( Serial Number: AC1C870003	MICS/MEDS/Medkadio)	W	ork Order: A	XON0097 0-Nov-17	
Customer: Axonics Modulation Technologies, Inc.		Ton	nperature: 2		
Attendees: Franklin Portillo			Humidity: 4		
Project: None			etric Pres.: 1		
Tested by: Johnny Candelas	Power: 7.6VDC	Baronie	Job Site: C		
EST SPECIFICATIONS	Test Method		JOD Site. JO	013	
N 302 537 V2.1.1:2016	EN 302 537 V2.1	1.1:2016			
	E14 302 307 42.	1.1.2010			
COMMENTS					
Calculated LBT Threshold = 10 * LOG(Bandwidth) - 150 + Ant	enna Gain = -98.75 dBm.				
mission Bandwidth = 82582 Hz, Antenna Gain = 2.08dBi.					
DEVIATIONS FROM TEST STANDARD					
lone					
	for de latter				
Configuration # 30					
Sign	gnature	V	alue	Limit	
			aiue conds)	(Seconds)	Result
01-402 MHz Band		(00)	Jonasj	(Occorias)	resuit
Mid Channel (Fc), 401.55 MHz		3	492	< 5	Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1			.492 .398	≤ 5 ≤ 5	Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2		3	.398	≤ 5	Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3		3 3	.398 .448	≤ 5 ≤ 5	Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4		3 3 2	.398 .448 .928	≤ 5 ≤ 5 ≤ 5	Pass Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 4		3 3 2 3	.398 .448 .928 .121	≤ 5 ≤ 5 ≤ 5 ≤ 5	Pass Pass Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 5 Scan Cycle Time, Sample 5		3 3 2 3 2	.398 .448 .928 .121 .858	≤ 5 ≤ 5 ≤ 5 ≤ 5 ≤ 5	Pass Pass Pass Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 5 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 7		3 2 3 2 2	.398 .448 .928 .121 .858	≤ 5 ≤ 5 ≤ 5 ≤ 5 ≤ 5 ≤ 5	Pass Pass Pass Pass Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 5 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 7		3 2 3 2 3 2	.398 .448 .928 .121 .858 .028	<pre> 5 5 45 45 45 45 45 45 45 45 45 55</pre>	Pass Pass Pass Pass Pass Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 8 Scan Cycle Time, Sample 8		3 2 3 2 3 2 2 2 2	.398 .448 .928 .121 .858	≤ 5 ≤ 5 ≤ 5 ≤ 5 ≤ 5 ≤ 5	Pass Pass Pass Pass Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 5 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 7		3 2 3 2 3 2 2 2 2	.398 .448 .928 .121 .858 .028 .727	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Pass Pass Pass Pass Pass Pass Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 5 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 8 Scan Cycle Time, Sample 8 Scan Cycle Time, Sample 9 Scan Cycle Time, Sample 10		3 2 3 2 3 2 2 2 2	.398 .448 .928 .121 .858 .028 .727	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Pass Pass Pass Pass Pass Pass Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 5 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 9 Scan Cycle Time, Sample 9 Scan Cycle Time, Sample 10		3 3 2 3 2 3 2 2 2 2	.398 .448 .928 .121 .858 .028 .727	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Pass Pass Pass Pass Pass Pass Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 9 Scan Cycle Time, Sample 10 05-406 MHz Band Mid Channel (Fc), 405.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 1		3 3 2 3 2 3 2 2 2 2	.398 .448 .928 .121 .858 .028 .727 .880 .805	≤ 5 ≤ 5 ≤ 5 ≤ 5 ≤ 5 ≤ 5 ≤ 5 ≤ 5 ≤ 5 ≤ 5	Pass Pass Pass Pass Pass Pass Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 5 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 8 Scan Cycle Time, Sample 9 Scan Cycle Time, Sample 10 05-406 MHz Band Mid Channel (Fc), 405.55 MHz Scan Cycle Time, Sample 1		3 3 2 3 3 2 2 2 2 2	.398 .448 .928 .121 .858 .028 .727 .880 .805	<pre></pre>	Pass Pass Pass Pass Pass Pass Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 9 Scan Cycle Time, Sample 10 D5-406 MHz Band Mid Channel (Fc), 405.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 1		3 2 3 2 3 2 2 2 2 2 2 3	.398 .448 .928 .121 .858 .028 .727 .880 .805	\$ 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Pass Pass Pass Pass Pass Pass Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 9 Scan Cycle Time, Sample 10 05-406 MHz Band Mid Channel (Fc), 405.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 2		3 3 2 3 2 3 2 2 2 2 2 3 3 2 2 3 2 2 3 2 2 3 2	.398 .448 .928 .121 .858 .028 .727 .880 .805	4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Pass Pass Pass Pass Pass Pass Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 9 Scan Cycle Time, Sample 10 05-406 MHz Band Mid Channel (Fc), 405.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 4		3 3 2 3 3 2 2 2 2 2	.398 .448 .928 .121 .858 .028 .727 .880 .805	\$ 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Pass Pass Pass Pass Pass Pass Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 9 Scan Cycle Time, Sample 10 D5-406 MHz Band Mid Channel (Fc), 405.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 5 Scan Cycle Time, Sample 5		3 3 2 3 3 2 2 2 2 2 3 3 2 2 2 2 2 2 2 2	.398 .448 .928 .121 .858 .028 .727 .880 .805 .899 .012 .707 .786 .9929	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Pass Pass Pass Pass Pass Pass Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 8 Scan Cycle Time, Sample 9 Scan Cycle Time, Sample 10 05-406 MHz Band Mid Channel (Fc), 405.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 5 Scan Cycle Time, Sample 5 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 6		3 3 2 3 3 2 2 2 2 2 3 3 2 2 2 2 2 2 2 2	.398 .448 .928 .121 .858 .028 .727 .880 .805 .899 .012 .707 .786 .929 .727 .982	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Pass Pass Pass Pass Pass Pass Pass Pass
Mid Channel (Fc), 401.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 2 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 6 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 7 Scan Cycle Time, Sample 9 Scan Cycle Time, Sample 10 05-406 MHz Band Mid Channel (Fc), 405.55 MHz Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 1 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 3 Scan Cycle Time, Sample 4 Scan Cycle Time, Sample 5 Scan Cycle Time, Sample 5		3 3 2 3 3 2 2 2 2 2 3 3 2 2 2 2 2 2 2 2	.398 .448 .928 .121 .858 .028 .727 .880 .805 .899 .012 .707 .786 .9929	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Pass Pass Pass Pass Pass Pass Pass Pass

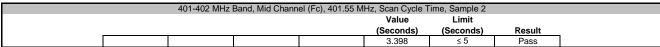


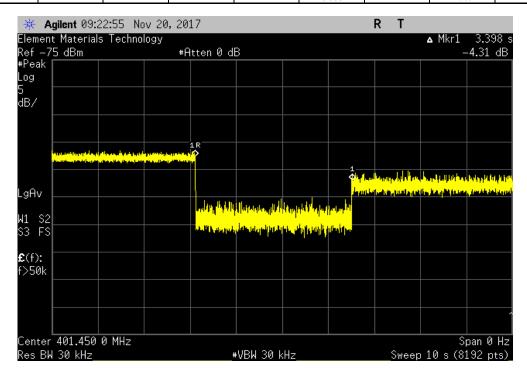
401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Scan Cycle Time, Sample 1

Value Limit
(Seconds) (Seconds) Result

3.492 ≤ 5 Pass





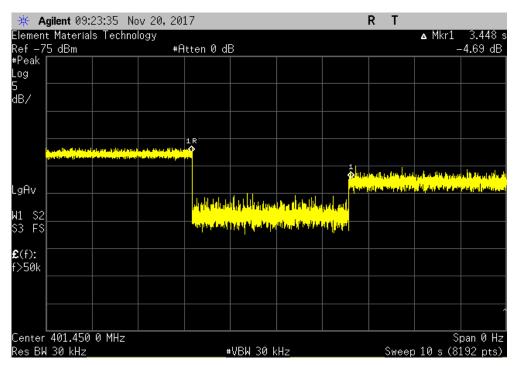


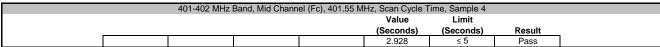


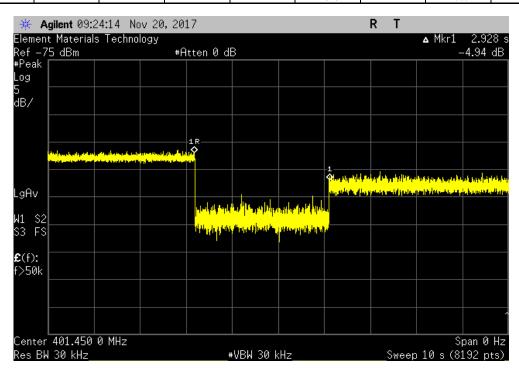
Pass

401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Scan Cycle Time, Sample 3
Value Limit
(Seconds) (Seconds) Result

3,448

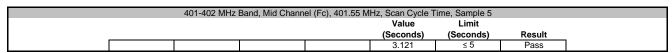


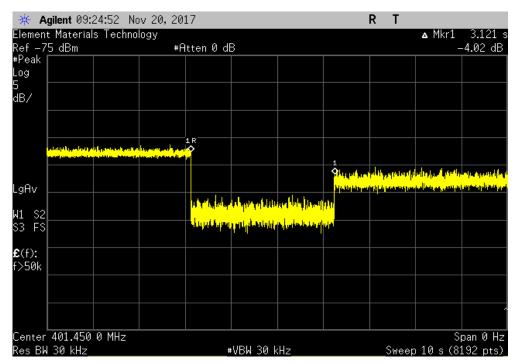


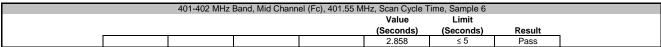


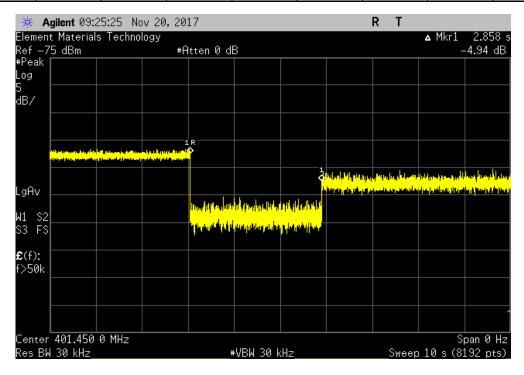


YMR 2017 00 2







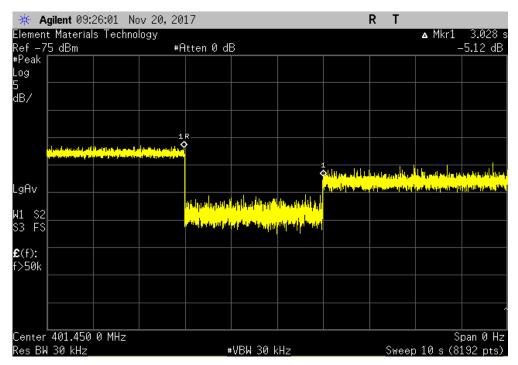


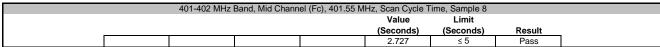


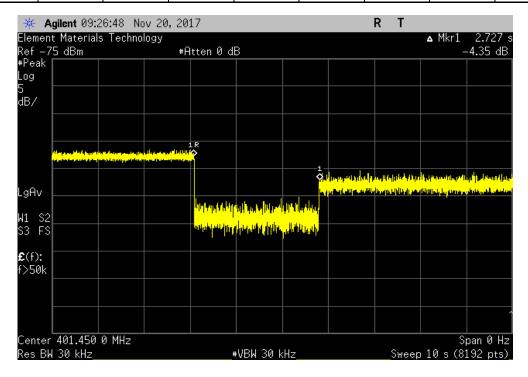
401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Scan Cycle Time, Sample 7

Value Limit
(Seconds) (Seconds) Result

3.028 ≤ 5 Pass





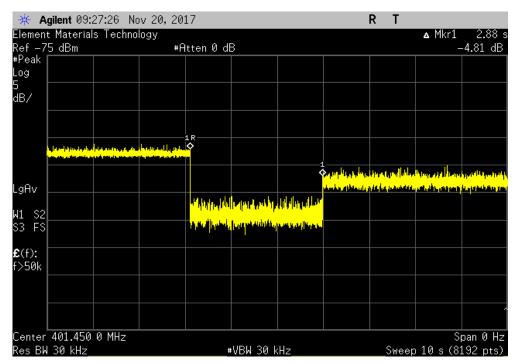


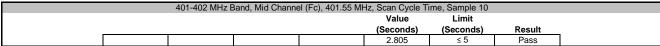


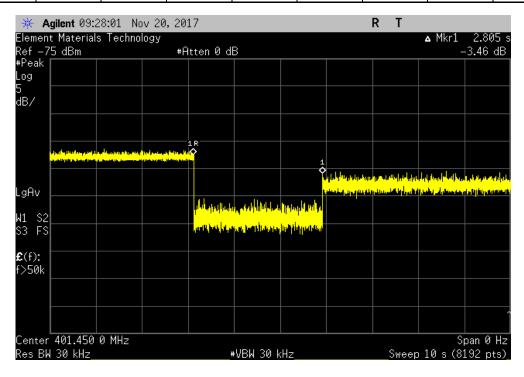
401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Scan Cycle Time, Sample 9

Value Limit
(Seconds) (Seconds) Result

2.880 ≤ 5 Pass

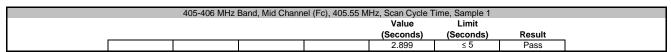


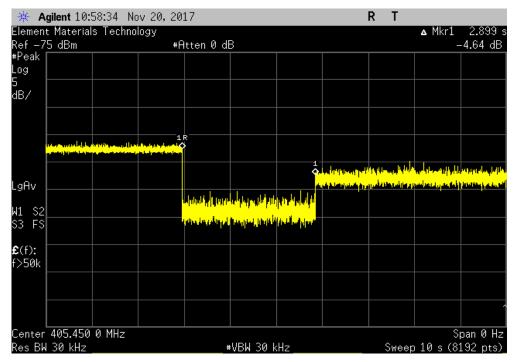


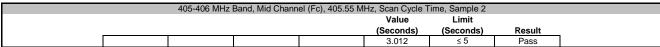


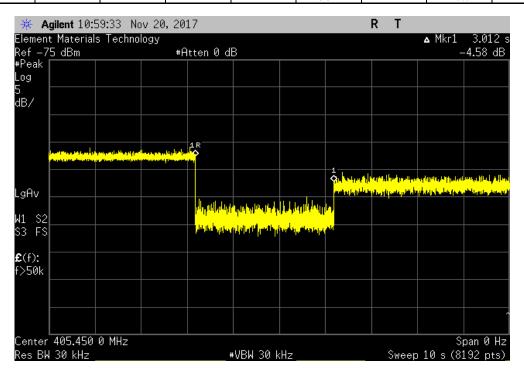


YMR 2017 00 2



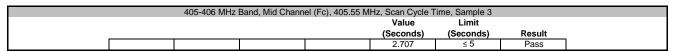


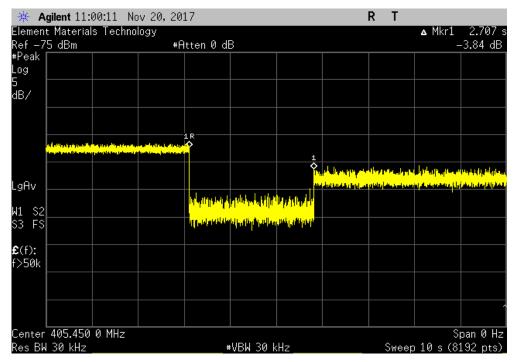


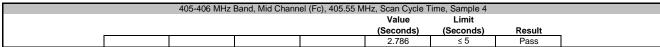


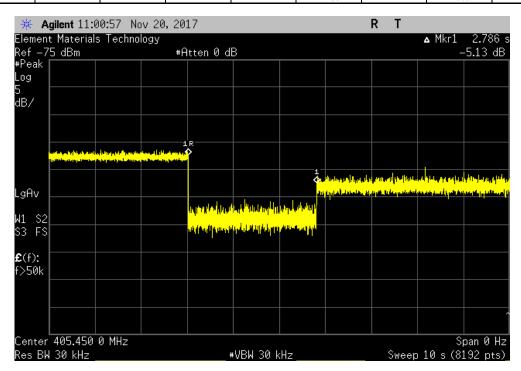


YMR 2017 00 2







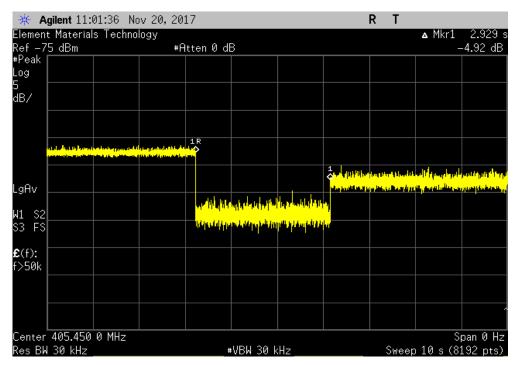


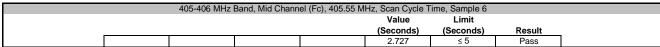


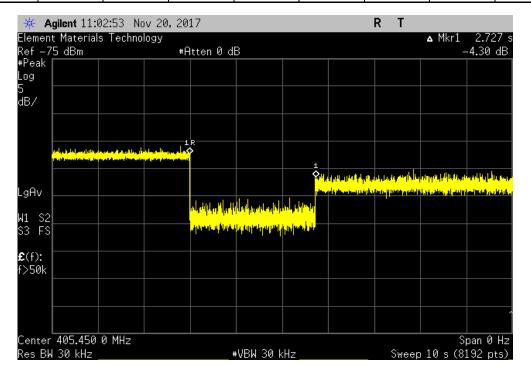
405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Scan Cycle Time, Sample 5

Value Limit
(Seconds) (Seconds) Result

2.929 ≤ 5 Pass







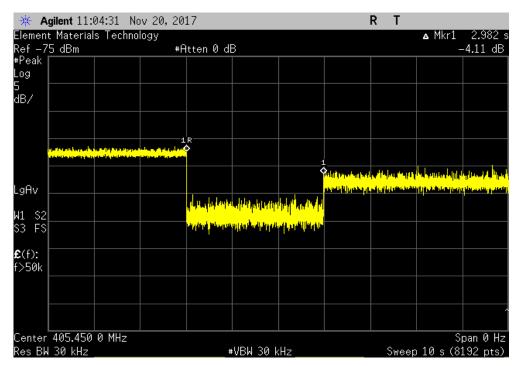


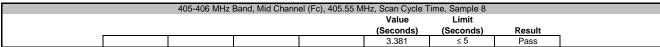
405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Scan Cycle Time, Sample 7

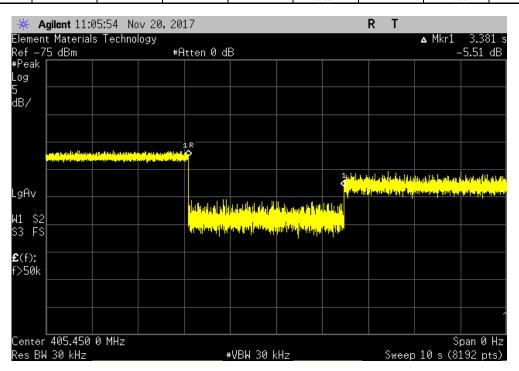
Value Limit

(Seconds) (Seconds) Result

2.982 ≤ 5 Pass

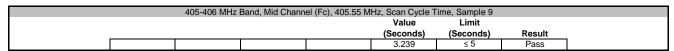


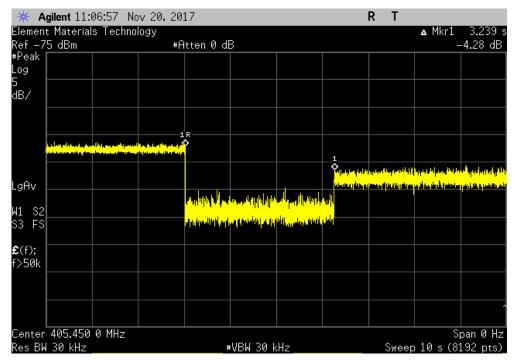


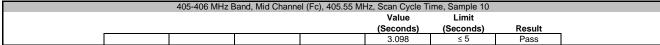


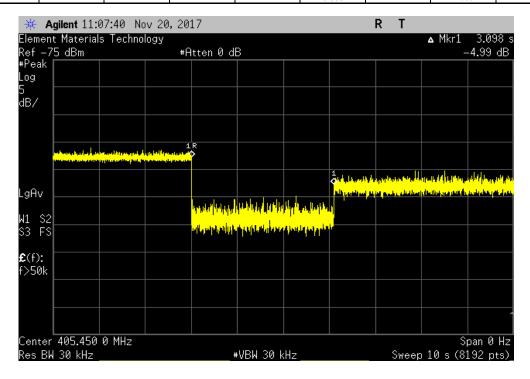


YMR 2017 09 21











XMit 2017.09.21

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

#### **TEST EQUIPMENT**

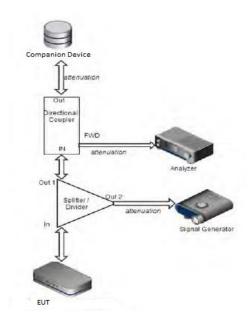
Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	Agilent	E8257D	TGU	5-Feb-15	5-Feb-18
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Fairview Microwave	SD3379	AMV	28-Dec-17	28-Dec-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

### **TEST DESCRIPTION**

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





							XMit 2017.
		CP) Model: 2501 (MICS/MEDS/MedRad	io)		Work Order:		
Serial Number:	AC1C870003					20-Nov-17	
Customer:	Axonics Modulation Tec	hnologies, Inc.		Temperature:	21.4 °C		
	Franklin Portillo			Humidity:	45.7% RH		
Project:					Barometric Pres.:		
	Johnny Candelas		Power:	7.6VDC	Job Site:	OC13	
EST SPECIFICAT	TONS			Test Method			
EN 301 839 V2.1.1:	2016			EN 301 839 V2.1.1:2016			
COMMENTS							
alculated LBT Th	reshold = 10 * LOG(Bandy	width) - 150 + Antenna Gain = -96.87 dE	Bm.				
mission Bandwid	ith = 127432 Hz, Antenna (	Gain = 2.08dBi.					
	•						
EVIATIONS FROM	M TEST STANDARD						
lone							
Configuration #	30	Signature	1.6				
					Value (Seconds)	Limit (Seconds)	Result
lid Channel (Fc), 4	03.5 MHz						
	Scan Cycle Time, Sample				2.620	≤ 5	Pass
	Scan Cycle Time, Sample				2.548	≤ 5	Pass
	Scan Cycle Time, Sample				3.347	≤ 5	Pass
	Scan Cycle Time, Sample				3.162	≤ 5	Pass
	Scan Cycle Time, Sample				2.755	≤ 5	Pass
	Scan Cycle Time, Sample	6			2.617	≤ 5	Pass
	Scan Cycle Time, Sample	7			2.572	≤ 5	Pass
					2.372	≥ 0	Pass
	Scan Cycle Time, Sample				2.228	≤ 5	Pass
		8					

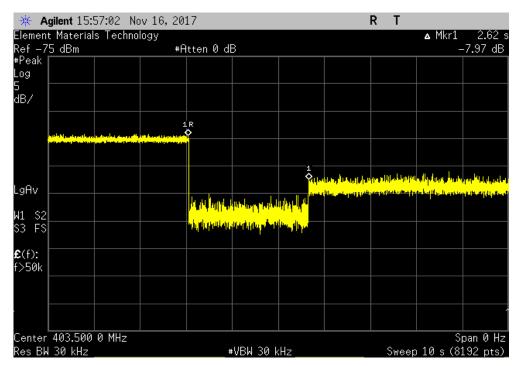


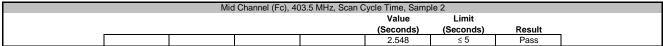
 Mid Channel (Fc), 403.5 MHz, Scan Cycle Time, Sample 1

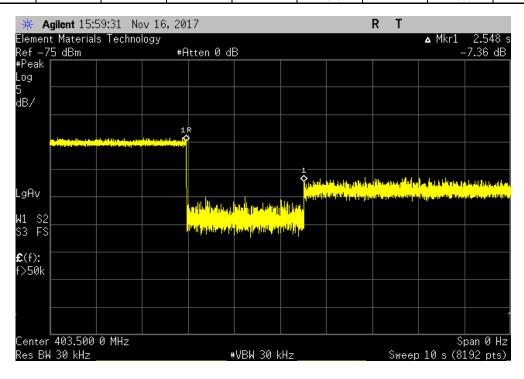
 Value
 Limit

 (Seconds)
 (Seconds)
 Result

 2.620
 ≤ 5
 Pass







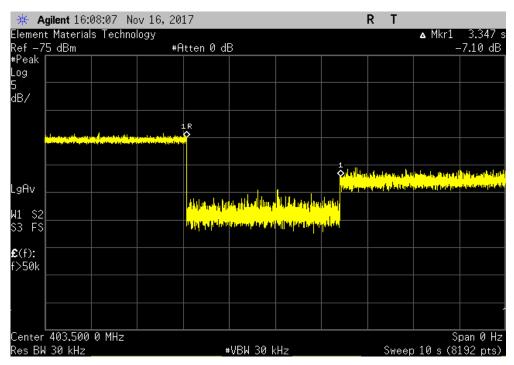


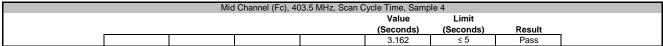
 Mid Channel (Fc), 403.5 MHz, Scan Cycle Time, Sample 3

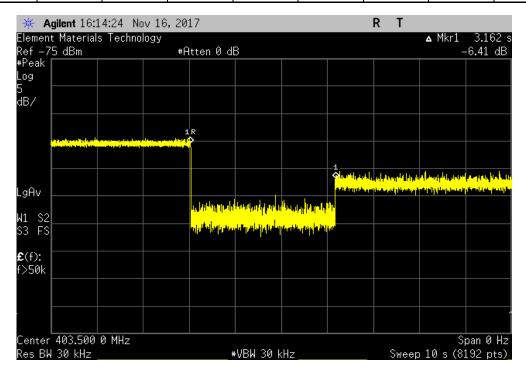
 Value
 Limit

 (Seconds)
 (Seconds)
 Result

 3.347
 ≤ 5
 Pass







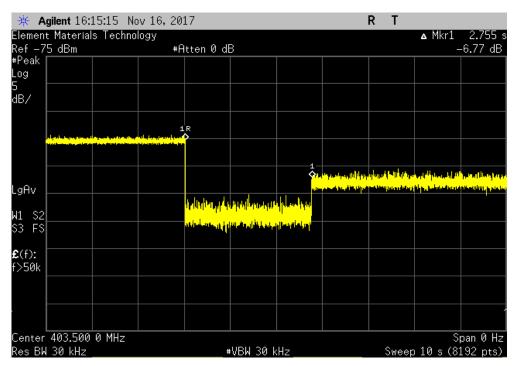


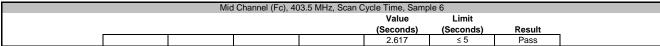
Pass

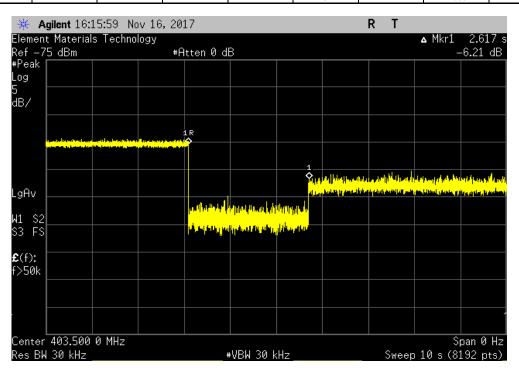
Mid Channel (Fc), 403.5 MHz, Scan Cycle Time, Sample 5

Value Limit
(Seconds) (Seconds) Result

2.755







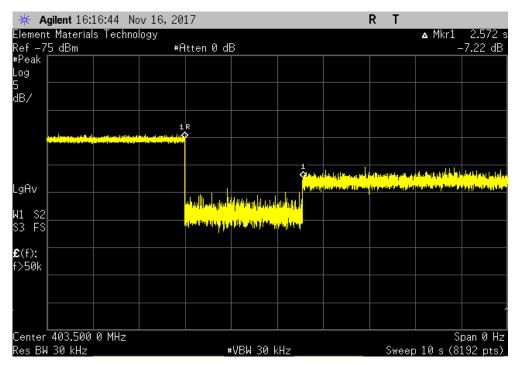


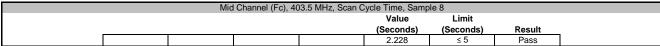
 Mid Channel (Fc), 403.5 MHz, Scan Cycle Time, Sample 7

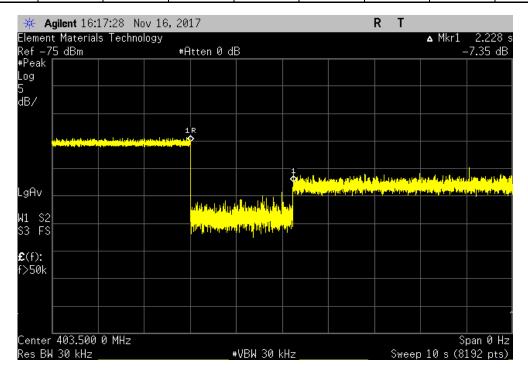
 Value
 Limit

 (Seconds)
 (Seconds)
 Result

 2.572
 ≤ 5
 Pass





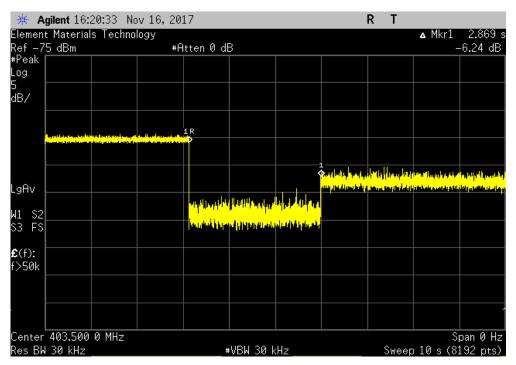


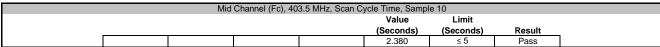


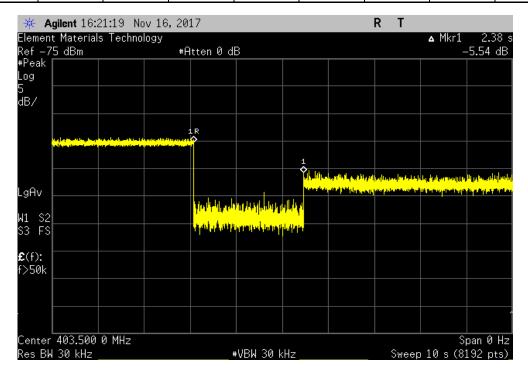
Mid Channel (Fc), 403.5 MHz, Scan Cycle Time, Sample 9

Value Limit
(Seconds) (Seconds) Result

2.869 ≤ 5 Pass









XMit 2017.09.21

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

#### **TEST EQUIPMENT**

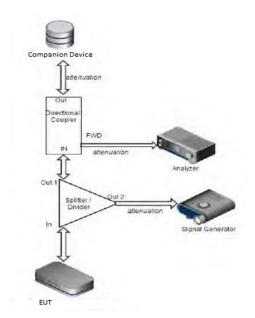
Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	Agilent	E8257D	TGU	5-Feb-15	5-Feb-18
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Fairview Microwave	SD3379	AMV	28-Dec-17	28-Dec-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

#### **TEST DESCRIPTION**

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. 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 0.3 mS. The spectrum analyzer was set to measure the transmit bands of 401-402 and 405-406 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.





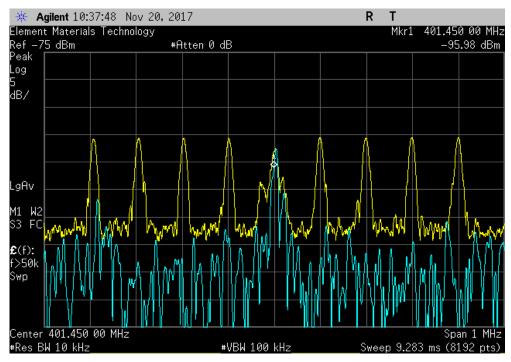
				XMit 2017.09.		
	EUT: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)			Work Order: AXON0097		
Serial Number: AC1C870003  Customer: Axonics Modulation Technologies, Inc.			Date: 20-Nov-17 Temperature: 21.4 °C			
						Attendees: Franklin Portillo
Project: None			Barometric Pres.: 1018 mbar			
Tested by: Johnny Candelas	Power: 7.6\		Job Site: OC13			
TEST SPECIFICATIONS	Tes	t Method				
EN 302 537 V2.1.1:2016	EN	302 537 V2.1.1:2016				
COMMENTS						
Calculated LBT Threshold = 10 * LOG(Bandwidth) - 150 + Anter	nna Gain = -98.75 dBm.					
Emission Bandwidth = 82582 Hz, Antenna Gain = 2.08dBi.						
DEVIATIONS FROM TEST STANDARD						
None						
Configuration # 30	for d. la					
	nature d					
			Does EUT Initiate			
			Communications on Fc? (Y/N)	Result		
401-402 MHz Band Mid Channel (Fc), 401.55 MHz						
Monitoring Period Sample 1				Pass		
Monitoring Period Sample 2				Pass		
Monitoring Period Sample 3				Pass		
Monitoring Period Sample 4			Yes Yes	Pass		
Monitoring Period Sample 5			Yes	Pass		
Monitoring Period Sample 6			Yes	Pass		
Monitoring Period Sample 7			Yes	Pass		
Monitoring Period Sample 8			Yes	Pass		
Monitoring Period Sample 9			Yes	Pass		
Monitoring Period Sample 10			Yes	Pass		
405-406 MHz Band						
Mid Channel (Fc), 405.55 MHz						
Monitoring Period Sample 1			Yes	Pass		
Monitoring Period Sample 2			Yes	Pass		
Monitoring Period Sample 3			Yes	Pass		
Monitoring Period Sample 4			Yes	Pass		
Monitoring Period Sample 5			Yes	Pass		
Monitoring Period Sample 6			Yes	Pass		
Monitoring Period Sample 7			Yes	Pass		
Monitoring Period Sample 8			Yes	Pass		
Monitoring Period Sample 9			Yes	Pass		
Monitoring Period Sample 10			Yes	Pass		

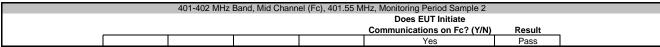


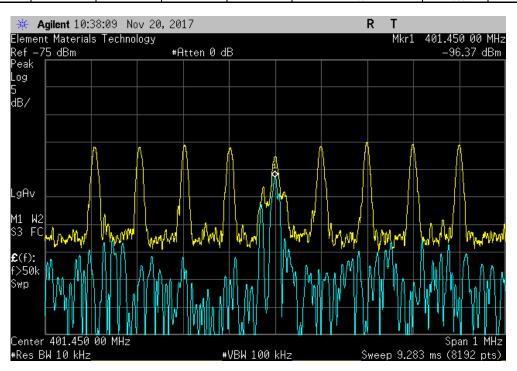
401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Monitoring Period Sample 1

Does EUT Initiate

Communications on Fc? (Y/N) Result







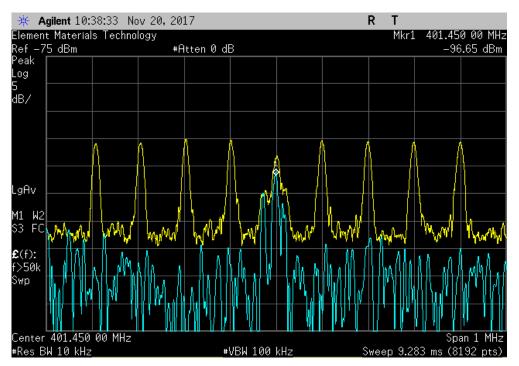


401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Monitoring Period Sample 3

Does EUT Initiate

Communications on Fc? (Y/N) Result

Yes Pass

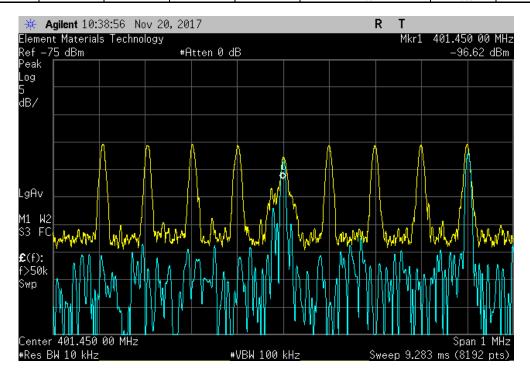


401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Monitoring Period Sample 4

Does EUT Initiate

Communications on Fc? (Y/N) Result

Yes Pass



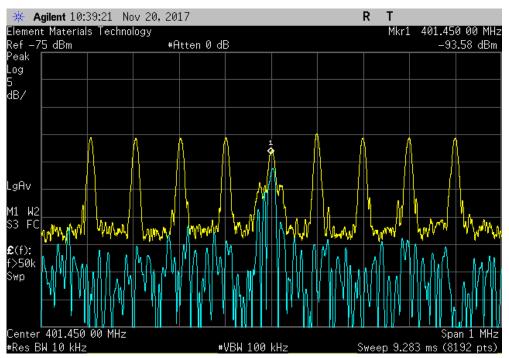


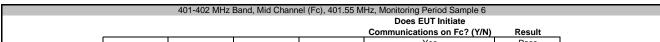
401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Monitoring Period Sample 5

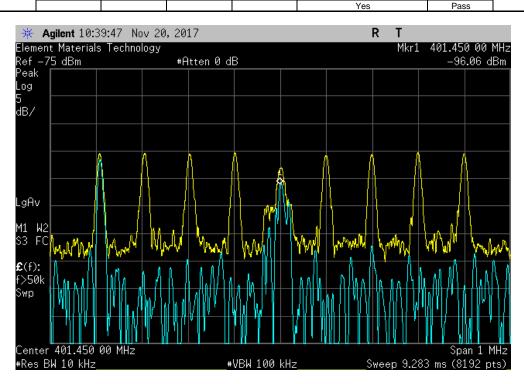
Does EUT Initiate

Communications on Fc? (Y/N)

Result





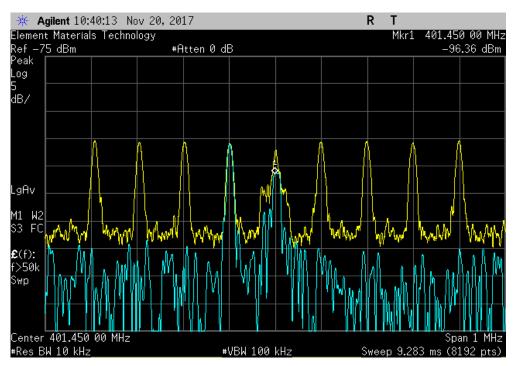




401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Monitoring Period Sample 7

Does EUT Initiate

Communications on Fc? (Y/N) Result

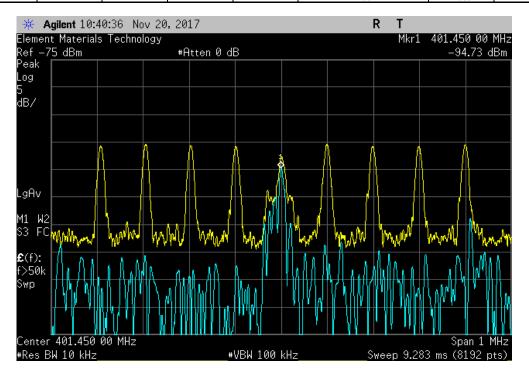


401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Monitoring Period Sample 8

Does EUT Initiate

Communications on Fc? (Y/N) Result

Yes Pass

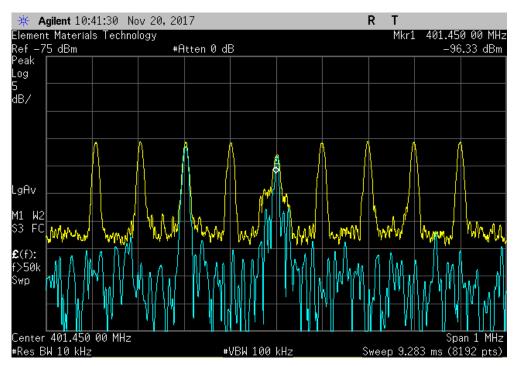




401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Monitoring Period Sample 9

Does EUT Initiate

Communications on Fc? (Y/N) Result



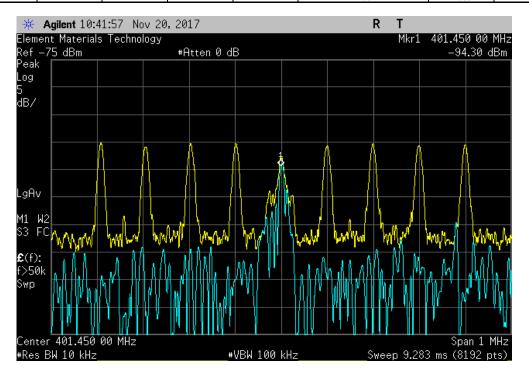
401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Monitoring Period Sample 10

Does EUT Initiate

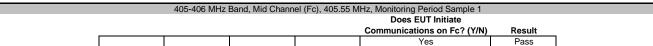
Communications on Fc? (Y/N)

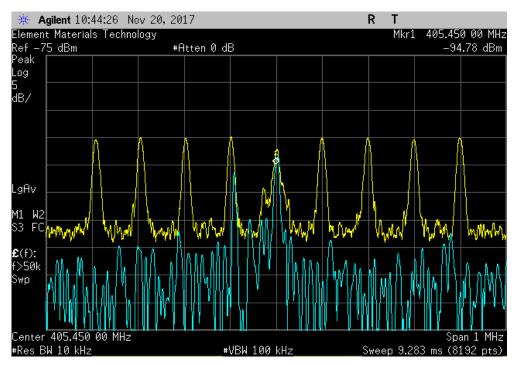
Yes

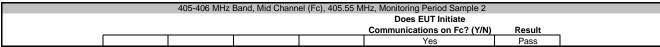
Pass

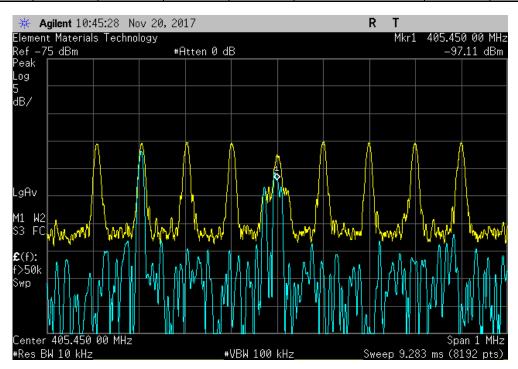












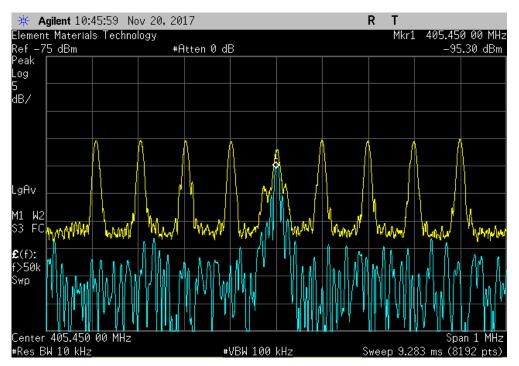


405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Monitoring Period Sample 3

Does EUT Initiate

Communications on Fc? (Y/N) Result

Yes Pass

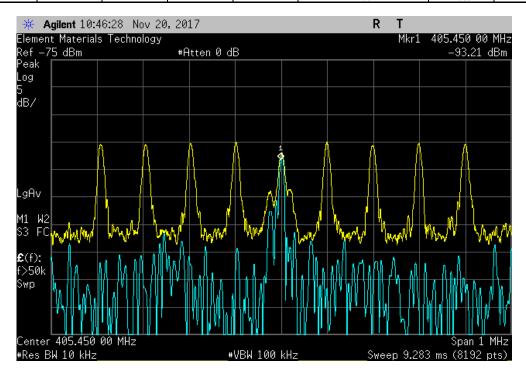


405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Monitoring Period Sample 4

Does EUT Initiate

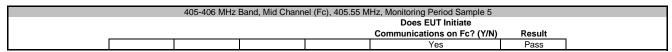
Communications on Fc? (Y/N) Result

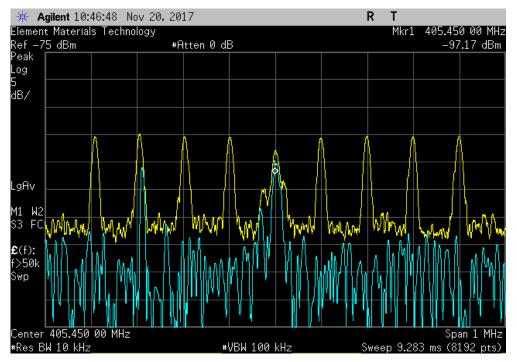
Yes Pass

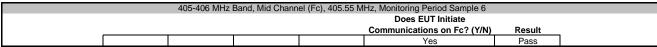


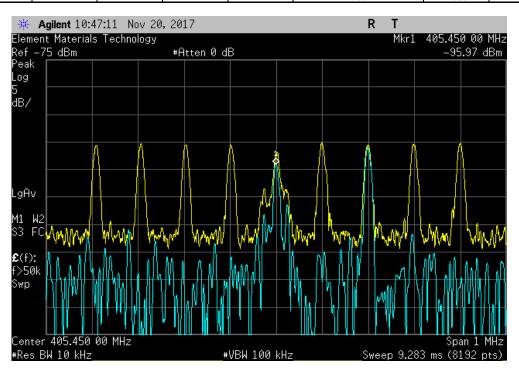


XMit 2017.09.2









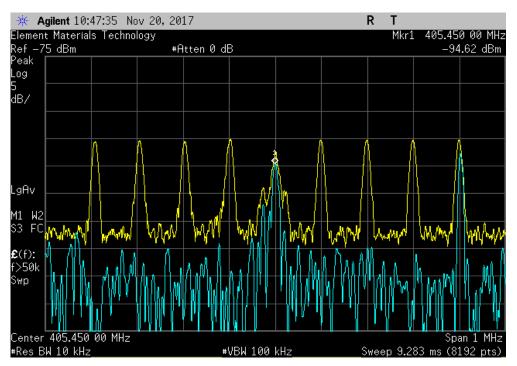


405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Monitoring Period Sample 7

Does EUT Initiate

Communications on Fc? (Y/N)

Result

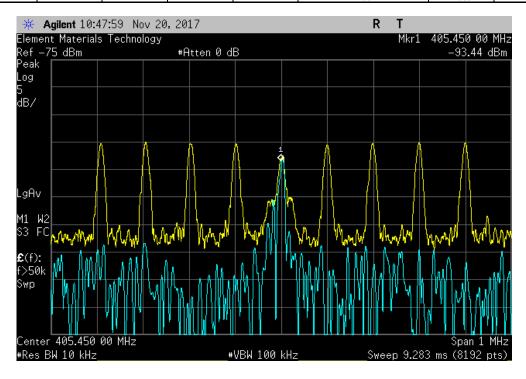


405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Monitoring Period Sample 8

Does EUT Initiate

Communications on Fc? (Y/N) Result

Yes Pass

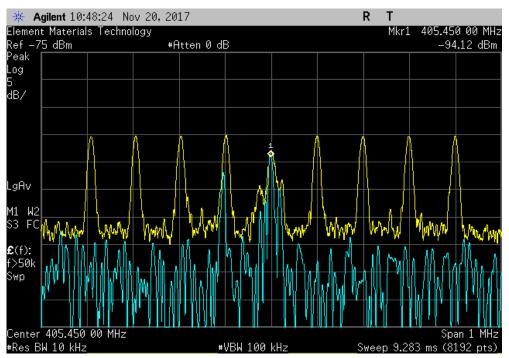


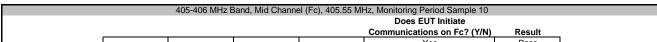


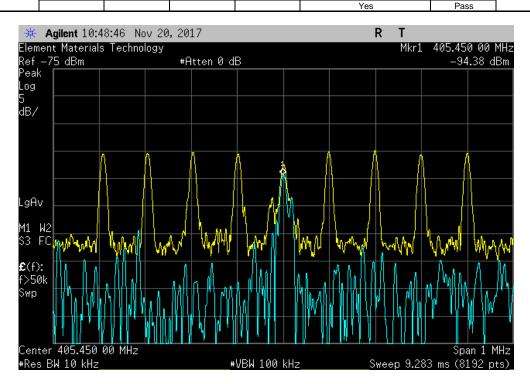
405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Monitoring Period Sample 9

Does EUT Initiate

Communications on Fc? (Y/N) Result









XMit 2017.09.21

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

### **TEST EQUIPMENT**

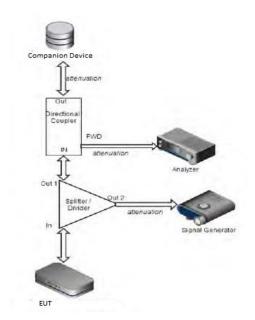
Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	Agilent	E8257D	TGU	5-Feb-15	5-Feb-18
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Fairview Microwave	SD3379	AMV	28-Dec-17	28-Dec-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

## TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. 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 0.1 mS.

The EUT was set to seek a session with the implantable device. The spectrum analyzer was set to measure the transmit band of 402-405 MHz and verify that the EUT was communicating on the available channel (Fc).





		P) Model: 2501 (MICS/MEDS/MedRadi	o)		Work Order:	AXON0097	
Serial Number:						20-Nov-17	
Customer:	Axonics Modulation Tech	nnologies, Inc.			Temperature:		
	Franklin Portillo					45.7% RH	
Project:					Barometric Pres.:		
	Johnny Candelas		Power:	7.6VDC	Job Site:	OC13	
TEST SPECIFICAT	IONS			Test Method			
EN 301 839 V2.1.1:	2016			EN 301 839 V2.1.1:2016			
COMMENTS							
Calculated LBT Th	reshold = 10 * LOG(Bandw	idth) - 150 + Antenna Gain = -96.87 dE	Bm.				
	lth = 127432 Hz, Antenna G						
	,						
<b>DEVIATIONS FROM</b>	M TEST STANDARD						
None							
			// /				
None Configuration #	30		1.6	Min			
	30	Signature	1.6	A.			
	30		1.6	M	Does EUT Initiate		
Configuration #			4.6	A.	Does EUT Initiate Communications on Fc?		Result
	03.5 MHz	Signature 🔾	1.6	A.			Result
Configuration #	03.5 MHz Monitoring Period Sample	Signature 1	1.6	the			<b>Result</b> Pass
Configuration #	03.5 MHz	Signature 1	1.6	A	Communications on Fc?		
Configuration #	03.5 MHz Monitoring Period Sample	Signature   1 2	d. C.	Alex-	Communications on Fc? Yes		Pass
Configuration #	03.5 MHz Monitoring Period Sample Monitoring Period Sample	Signature	d. C.	A.	Yes Yes		Pass Pass
Configuration #	03.5 MHz Monitoring Period Sample Monitoring Period Sample Monitoring Period Sample	Signature	d. C.		Yes Yes Yes Yes		Pass Pass Pass
Configuration #	03.5 MHz Monitoring Period Sample Monitoring Period Sample Monitoring Period Sample Monitoring Period Sample	Signature	A. C.		Yes Yes Yes Yes Yes Yes Yes		Pass Pass Pass Pass
Configuration #	03.5 MHz Monitoring Period Sample	Signature 1 2 3 4 5 6	A. C.	A	Yes Yes Yes Yes Yes Yes Yes		Pass Pass Pass Pass Pass
Configuration #	03.5 MHz Monitoring Period Sample	Signature 1 2 3 4 5 6 7	- d. l.		Yes		Pass Pass Pass Pass Pass Pass
Configuration #	03.5 MHz Monitoring Period Sample	Signature  1 2 3 4 4 5 6 7 7	A. C.		Yes		Pass Pass Pass Pass Pass Pass Pass
Configuration #	03.5 MHz Monitoring Period Sample	Signature  1 2 3 4 5 6 7 8 8 9	A. C.	A	Yes		Pass Pass Pass Pass Pass Pass Pass Pass

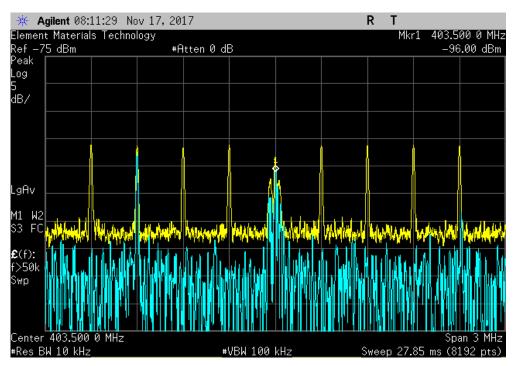


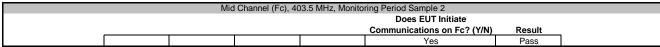
Mid Channel (Fc), 403.5 MHz, Monitoring Period Sample 1

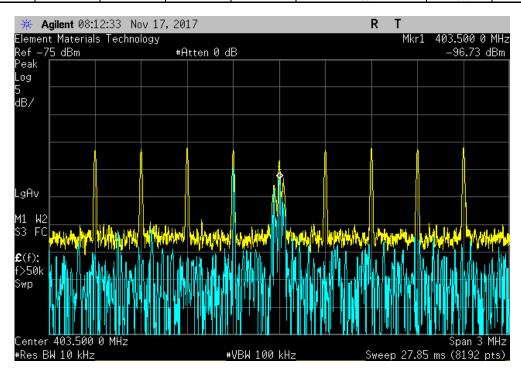
Does EUT Initiate

Communications on Fc? (Y/N)

Result





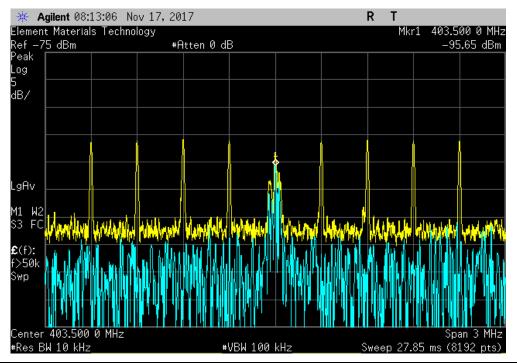


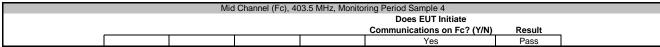


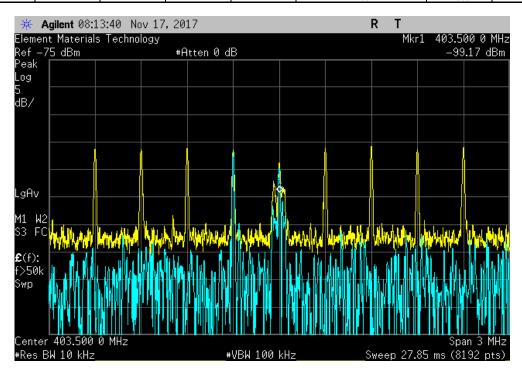
Mid Channel (Fc), 403.5 MHz, Monitoring Period Sample 3

Does EUT Initiate

Communications on Fc? (Y/N) Result

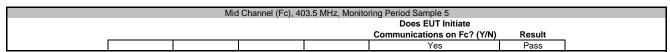


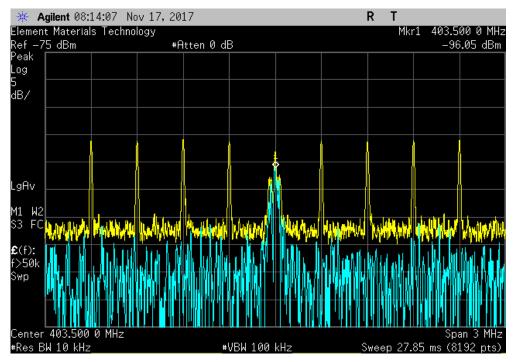


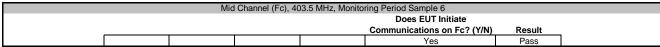


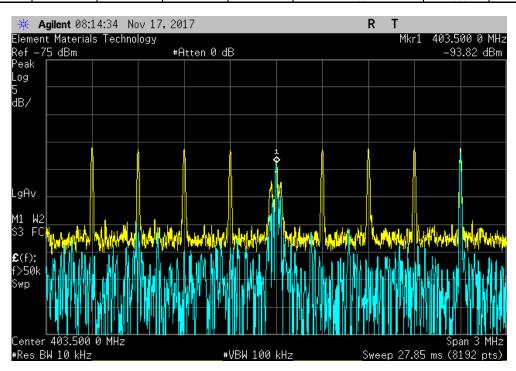


XMit 2017.09.2







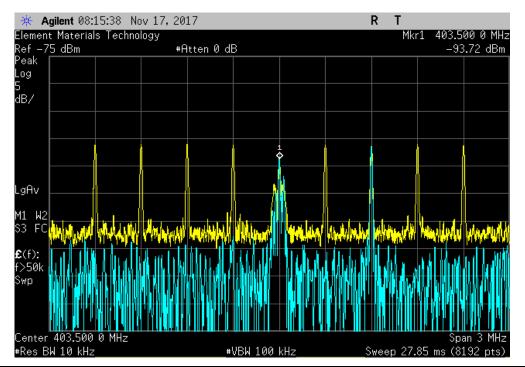


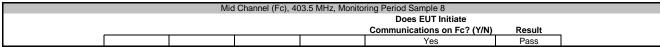


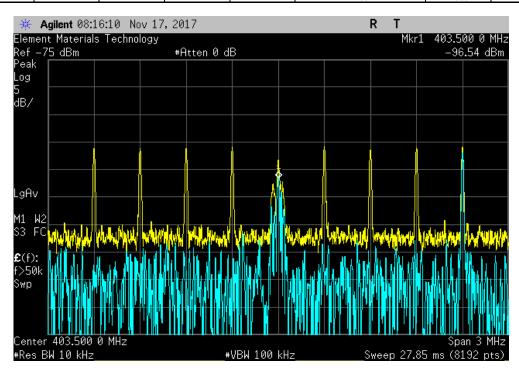
Mid Channel (Fc), 403.5 MHz, Monitoring Period Sample 7

Does EUT Initiate

Communications on Fc? (Y/N) Result

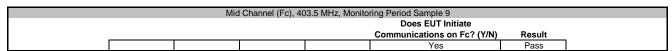


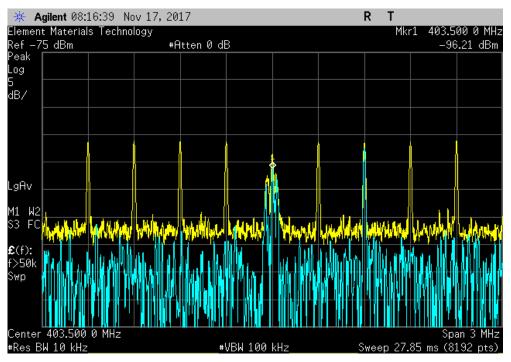


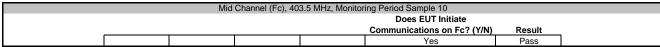


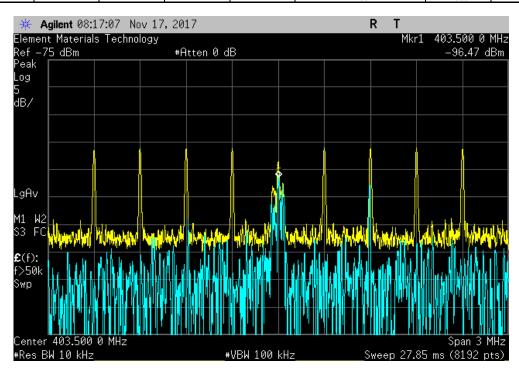


YMR 2017 00 2











XMit 2017.09.21

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

### **TEST EQUIPMENT**

Description	Manufacturer	Model	D	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	Agilent	E8257D	TGU	5-Feb-15	5-Feb-18
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Fairview Microwave	SD3379	AMV	28-Dec-17	28-Dec-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

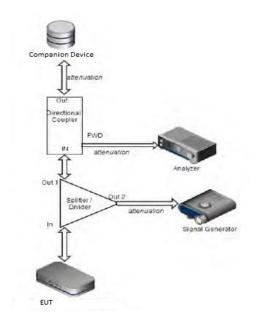
### **TEST DESCRIPTION**

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

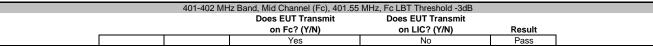
The spectrum analyzer was set to measure the transmit bands of 401-402 and 405-406 MHz. Screen captures were provided to show the EUT behavior at the different LBT threshold levels.

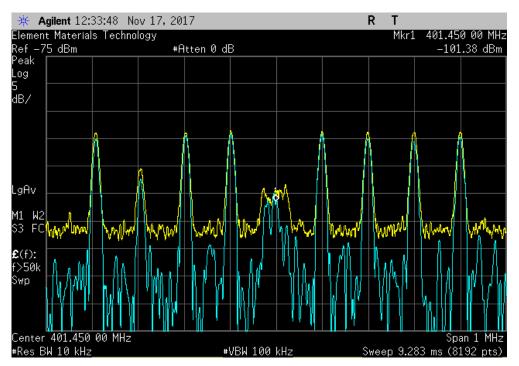


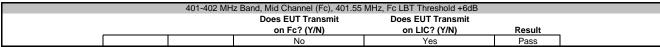


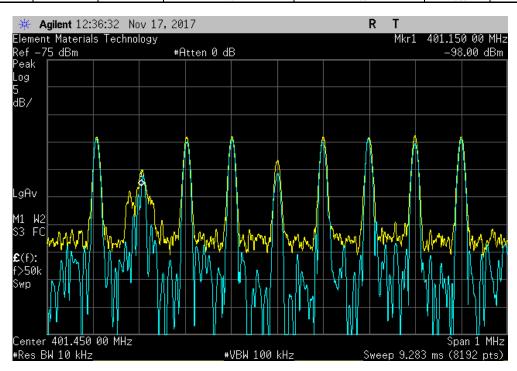
							XMit 2017.09.21
		P) Model: 2501 (MICS/MEDS/MedRadi	io)			Work Order: AXON0097	
Serial Number:						Date: 20-Nov-17	
Customer	Axonics Modulation Tech	hnologies, Inc.				Temperature: 21.4 °C	
	Franklin Portillo					Humidity: 45.7% RH	
Project:						Barometric Pres.: 1018 mbar	
Tested by:	Johnny Candelas		Power:	7.6VDC		Job Site: OC13	
TEST SPECIFICAT	TONS			Test Method			
EN 302 537 V2.1.1:	2016			EN 302 537 V2.1.1:2016			
COMMENTS							
Calculated LBT Th	reshold = 10 * LOG(Bandv	vidth) - 150 + Antenna Gain = -98.75 dE	3m.				
<b>Emission Bandwic</b>	ith = 82582 Hz, Antenna G	ain = 2.08dBi.					
	<u> </u>						
<b>DEVIATIONS FROM</b>	M TEST STANDARD						
None							
Configuration #	30		1.1	Man .			
		Signature					
					Does EUT Transmit	Does EUT Transmit	D !!
404 400 1411 15					on Fc? (Y/N)	on LIC? (Y/N)	Result
401-402 MHz Band		NALL-					
	Mid Channel (Fc), 401.55 I				.,	.,	
	Fc LBT Three				Yes	No	Pass
	Fc LBT Thres	shold +6dB			No	Yes	Pass
405-406 MHz Band		MI I-					
	Mid Channel (Fc), 405.55 I				.,		
	Fc LBT Three				Yes	No	Pass
	Fc LBT Thres	shold +6dB			No	Yes	Pass





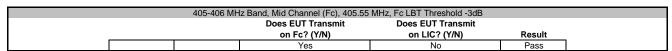


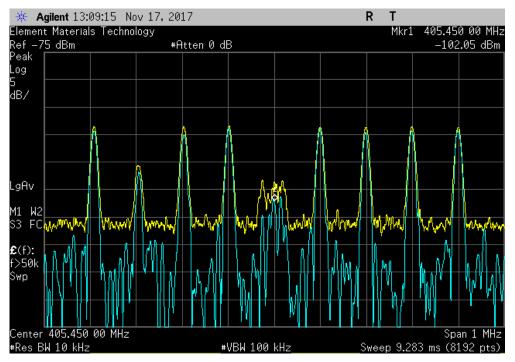


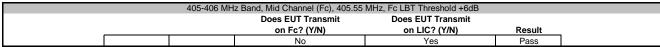


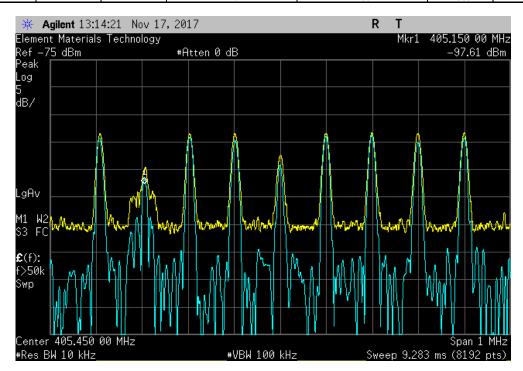


(Mit 2017 09 21











XMit 2017.09.21

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

### **TEST EQUIPMENT**

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	Agilent	E8257D	TGU	5-Feb-15	5-Feb-18
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Fairview Microwave	SD3379	AMV	28-Dec-17	28-Dec-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

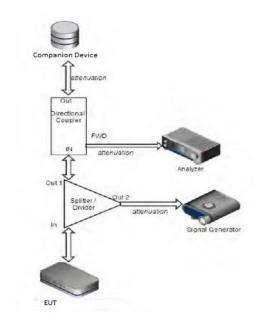
### **TEST DESCRIPTION**

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

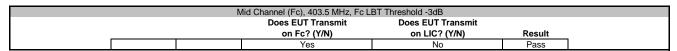




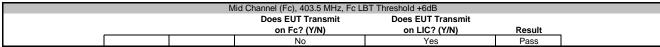
								XMit 2017.09.21
EUT:	Clinician Programmer (C	P) Model: 2501 (MICS/MEDS/MedRad	io)			Work Order:	AXON0097	
Serial Number:	AC1C870003					Date:	20-Nov-17	
Customer:	Axonics Modulation Tecl	hnologies, Inc.				Temperature:	21.4 °C	
Attendees:	Franklin Portillo					Humidity:	45.7% RH	
Project:	None					Barometric Pres.:	1018 mbar	
Tested by:	Johnny Candelas		Power:	7.6VDC		Job Site:	OC13	
TEST SPECIFICATI	IONS			Test Method				
EN 301 839 V2.1.1:2	2016			EN 301 839 V2.1.1:2016				
COMMENTS								
Calculated LBT The	reshold = 10 * LOG(Bandy	vidth) - 150 + Antenna Gain = -96.87 di	Bm.					
Emission Bandwid	th = 127432 Hz, Antenna (	Gain = 2.08dBi.						
DEVIATIONS FROM	M TEST STANDARD							
None								
Configuration #	30	Signature -	1.1.	Ma				
	•	•			Does EUT Transmit	Does EU1	Transmit	
					on Fc? (Y/N)	on LIC	? (Y/N)	Result
Mid Channel (Fc), 49	03.5 MHz			_				
	Fc LBT Threshold -3dB				Yes	N	lo	Pass
	Fc LBT Threshold +6dB				No	Y	es	Pass

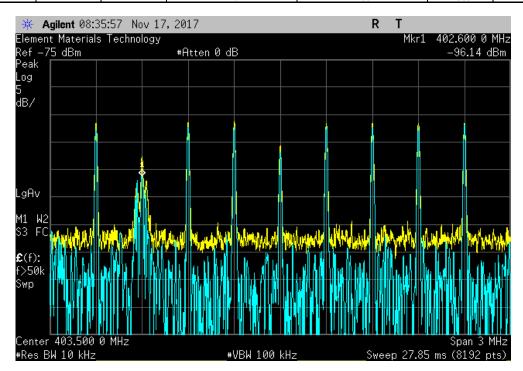


(Mit 2017 09 21









# **DISCONTINUATION OF A MEDS SESSION**



XMit 2017.09.21

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

### **TEST EQUIPMENT**

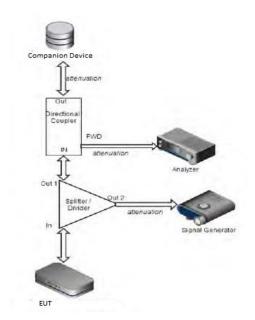
Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	Agilent	E8257D	TGU	5-Feb-15	5-Feb-18
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Fairview Microwave	SD3379	AMV	28-Dec-17	28-Dec-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

### **TEST DESCRIPTION**

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. 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 MEDS Implant AMI / reduction of the signal level on (Fc) to when the EUT does not transmit on the initial LIC.



# **DISCONTINUATION OF A MEDS SESSION**



							XMit 2017.09.21
EUT	Clinician Programmer (C	P) Model: 2501 (MICS/MEDS/MedRadi	io)	_	Work Order:	AXON0097	
Serial Number	AC1C870003				Date:	20-Nov-17	
Customer	Axonics Modulation Tecl	hnologies, Inc.			Temperature:	21.4 °C	
Attendees	Franklin Portillo				Humidity:	45.7% RH	
Project	None				Barometric Pres.:	1018 mbar	
Tested by	Johnny Candelas		Power:	7.6VDC	Job Site:	OC13	
TEST SPECIFICAT	TONS			Test Method			
EN 302 537 V2.1.1:	2016			EN 302 537 V2.1.1:2016			
COMMENTS							
Calculated LBT Th	reshold = 10 * LOG(Bandy	vidth) - 150 + Antenna Gain = -98.75 dB	3m.				
	ith = 82582 Hz, Antenna Ga						
	,						
DEVIATIONS FRO	M TEST STANDARD						
None							
			///				
Configuration #	30	The state of the s	1.6	The contract of the contract o			
		Signature 🔾					
					Value	Limit	
					(Seconds)	(Seconds)	Result
401-402 MHz Band							
	LIC 25 Second Sweep, 40	1.25 MHz			2.961	≤ 5	Pass
405-406 MHz Band							
	LIC 25 Second Sweep, 405	5.25 MHz			3.095	≤ 5	Pass

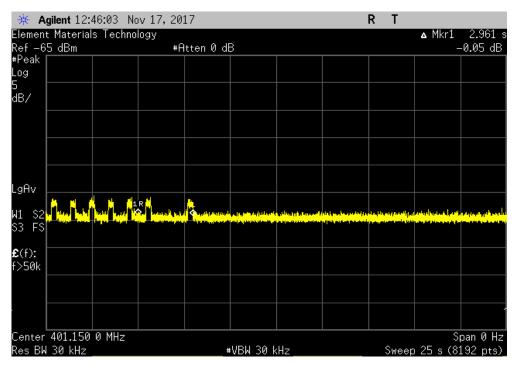
## **DISCONTINUATION OF A MEDS SESSION**

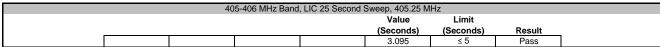


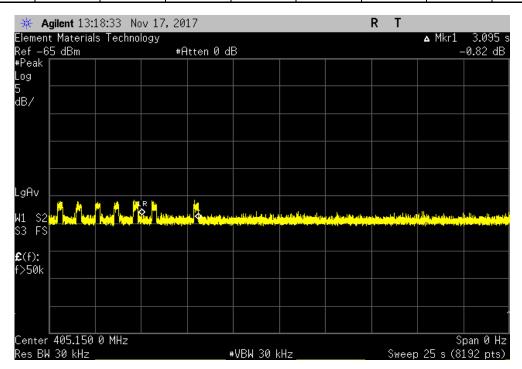
401-402 MHz Band, LIC 25 Second Sweep, 401.25 MHz

Value Limit
(Seconds) (Seconds) Result

2.961 ≤ 5 Pass







# **DISCONTINUATION OF A MICS SESSION**



XMit 2017.09.21

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

### **TEST EQUIPMENT**

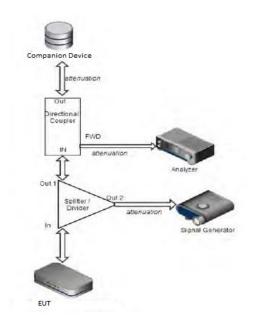
Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	Agilent	E8257D	TGU	5-Feb-15	5-Feb-18
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Fairview Microwave	SD3379	AMV	28-Dec-17	28-Dec-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

### **TEST DESCRIPTION**

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. 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 / reduction of the signal level on (Fc) to when the EUT ceases to transmit on the initial LIC.



# **DISCONTINUATION OF A MICS SESSION**



							XMit 2017.09.21
EUT:	Clinician Programmer (C	P) Model: 2501 (MICS/MEDS/MedRadi	o)		Work Order:	AXON0097	
Serial Number:	AC1C870003				Date:	20-Nov-17	
Customer:	Axonics Modulation Tech	hnologies, Inc.			Temperature:	21.4 °C	
Attendees:	Franklin Portillo				Humidity:	45.7% RH	
Project:	None				Barometric Pres.:	1018 mbar	
Tested by:	Johnny Candelas		Power:	7.6VDC	Job Site:	OC13	
TEST SPECIFICATION	ONS			Test Method			
EN 301 839 V2.1.1:2	2016			EN 301 839 V2.1.1:2016			
COMMENTS							
	reshold = 10 * LOG(Bandv th = 127432 Hz, Antenna C	vidth) - 150 + Antenna Gain = -96.87 dE Gain = 2.08dBi.	im.				
<b>DEVIATIONS FROM</b>	1 TEST STANDARD						
None							
Configuration #	30	Signature	1.6	M.			
					Value (Seconds)	Limit (Seconds)	Result
LIC 25 Second Swee	en 402 6 MHz				3.415	< 5	Pass

## **DISCONTINUATION OF A MICS SESSION**

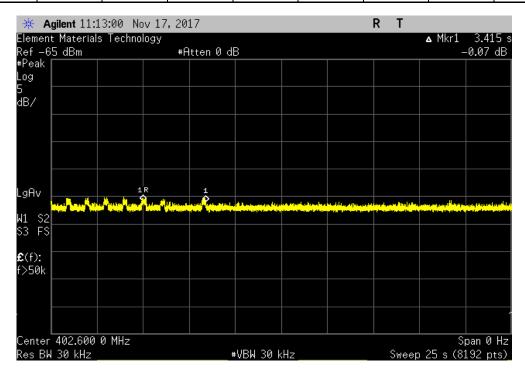


 LIC 25 Second Sweep, 402.6 MHz

 Value
 Limit

 (Seconds)
 (Seconds)
 Result

 3.415
 ≤ 5
 Pass





XMit 2017.09.21

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

### **TEST EQUIPMENT**

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	Agilent	E8257D	TGU	5-Feb-15	5-Feb-18
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Fairview Microwave	SD3379	AMV	28-Dec-17	28-Dec-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

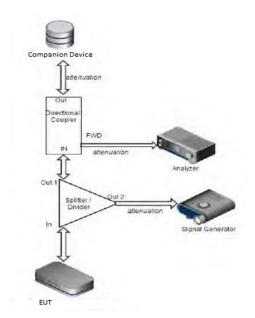
### **TEST DESCRIPTION**

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. 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. While the session was still active a second least interferred channel (LIC2) was set to the LBT threshold - 2 dB. The amplitude of Fc was then raised to the LBT threshold + 6 dB.

The spectrum analyzer was set to measure the transmit bands of 401-402 and 405-406 MHz. Screen captures were provided to show the EUT behavior at the different LBT threshold levels. The EUT was verified to transmit on Fc which shows that the EUT does not use pre-scanned alternate channels.

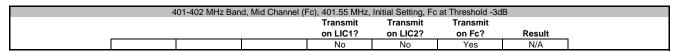


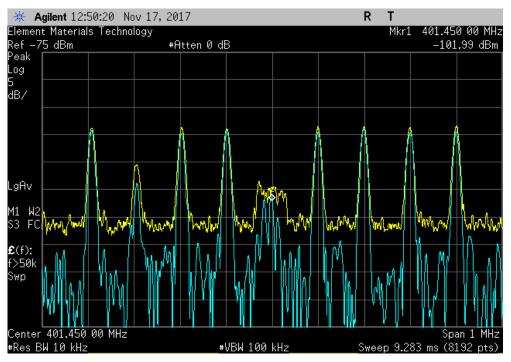


				XMit 2017.0
EUT: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)		Work Order:		
Serial Number: AC1C870003			20-Nov-17	
Customer: Axonics Modulation Technologies, Inc.		Temperature:		
Attendees: Franklin Portillo			45.7% RH	
Project: None		Barometric Pres.:		
Tested by: Johnny Candelas Power: 7.6VDC		Job Site:	OC13	
TEST SPECIFICATIONS Test Method				
EN 302 537 V2.1.1:2016 EN 302 537 V2.1.	1:2016			
COMMENTS				
Calculated LBT Threshold = 10 * LOG(Bandwidth) - 150 + Antenna Gain = -98.75 dBm.				
Emission Bandwidth = 82582 Hz, Antenna Gain = 2.08dBi.				
DEVIATIONS FROM TEST STANDARD				
None				
Configuration # 30 Signature				
	Transmit on LIC1?	Transmit on LIC2?	Transmit on Fc?	Result
401-402 MHz Band				
Mid Channel (Fc), 401.55 MHz				
Initial Setting, Fc at Threshold -3dB	No	No	Yes	N/A
	No No	No No	Yes Yes	N/A N/A
Initial Setting, Fc at Threshold -3dB				
Initial Setting, Fc at Threshold -3dB LIC2 Available at Threshold -2dB Final Setting, LIC2 Available, Fc at Threshold +6dB	No	No	Yes	N/A
Initial Setting, Fc at Threshold -3dB LIC2 Available at Threshold -2dB Final Setting, LIC2 Available, Fc at Threshold +6dB	No	No	Yes	N/A
Initial Setting, Fc at Threshold -3dB LIC2 Available at Threshold -2dB LIC2 Available at Threshold -2dB Final Setting, LIC2 Available, Fc at Threshold +6dB 405-406 MHz Band Mid Channel (Fc), 405.55 MHz Initial Setting, Fc at Threshold -3dB	No	No	Yes	N/A
Initial Setting, Fc at Threshold -3dB LIC2 Available at Threshold -2dB Final Setting, LIC2 Available, Fc at Threshold +6dB 405-406 MHz Band Mid Channel (Fc), 405.55 MHz	No No	No No	Yes Yes	N/A N/A

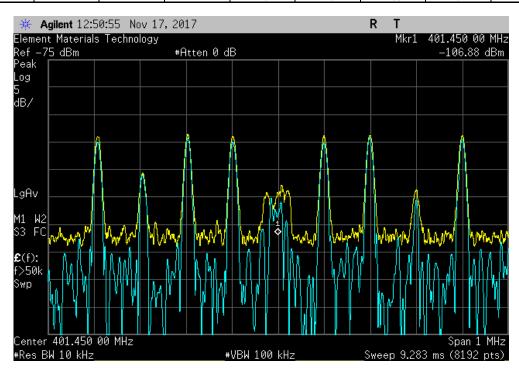


(Mit 2017 09 21



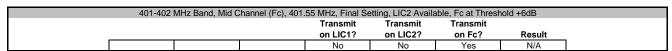


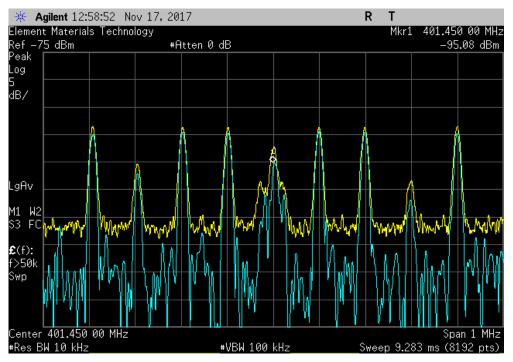
401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, LIC2 Available at Threshold -2dB									
			Transmit	Transmit	Transmit				
			on LIC1?	on LIC2?	on Fc?	Result			
			No	No	Yes	N/A			

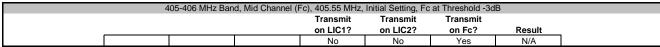


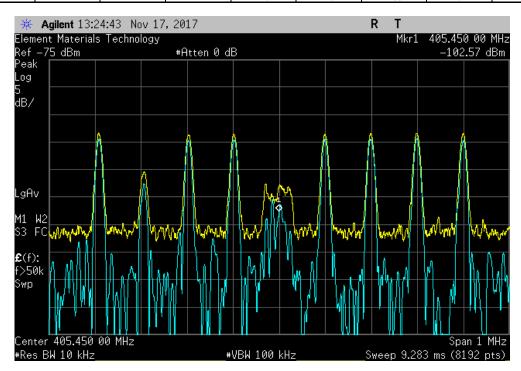


(Mi) 2017 00 21



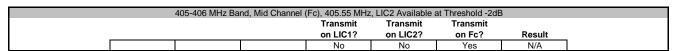


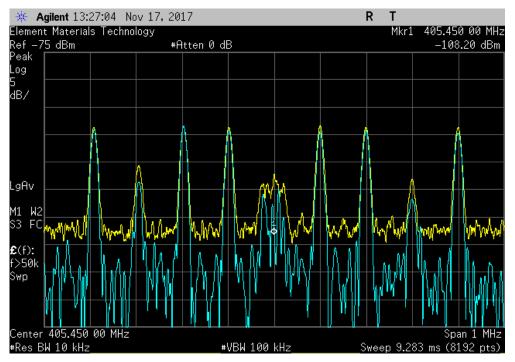




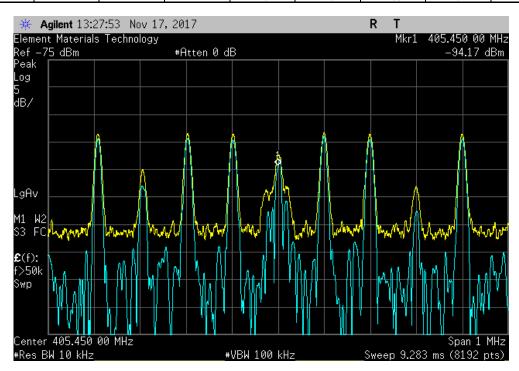


(Mit 2017 09 21





	405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Final Setting, LIC2 Available, Fc at Threshold +6dB								
				Transmit	Transmit	Transmit			
				on LIC1?	on LIC2?	on Fc?	Result		
1				No	No	Yes	N/A		





XMit 2017.09.21

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

### **TEST EQUIPMENT**

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	Agilent	E8257D	TGU	5-Feb-15	5-Feb-18
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Fairview Microwave	SD3379	AMV	28-Dec-17	28-Dec-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

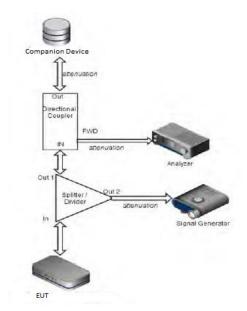
### **TEST DESCRIPTION**

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. 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. While the session was still active a second least interferred channel (LIC2) was set to the LBT threshold - 2 dB. The amplitude of Fc was then raised to the LBT threshold + 6 dB.

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. The EUT was verified to transmit on Fc which shows that the EUT does not use pre-scanned alternate channels.

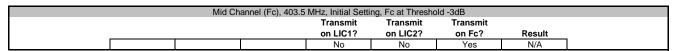


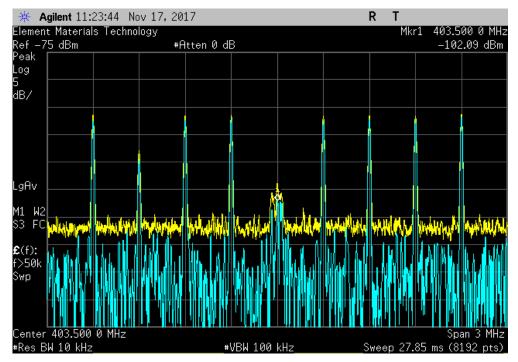


								XMit 2017.09.21
EUT	Clinician Programmer (C	P) Model: 2501 (MICS/MEDS/MedRad		Work Order:	AXON0097			
Serial Number	r: AC1C870003			Date:	20-Nov-17			
Customer	Customer: Axonics Modulation Technologies, Inc.						21.4 °C	
Attendees	: Franklin Portillo		Humidity:	45.7% RH				
Project	t: None			Barometric Pres.:	1018 mbar			
Tested by	/: Johnny Candelas	Candelas Power: 7.6VDC				Job Site:	OC13	
TEST SPECIFICAT	TIONS							
EN 301 839-2 V1.3	3.1:2009							
COMMENTS								
Calculated LBT T	hreshold = 10 * LOG(Bandy	vidth) - 150 + Antenna Gain = -96.87 dl	Bm.					
	dth = 127432 Hz, Antenna (							
Ziiiiooioii Zaiiaiii	a = 121 102 112, 7 aoa 1	- 2100a211						
<b>DEVIATIONS FRO</b>	M TEST STANDARD							
None								
Configuration #	30	Signature F						
		Signature			Transmit	Transmit	Transmit	
					on LIC1?	on LIC2?	on Fc?	Result
Mid Channel (Fc),	403.5 MHz							
Initial Setting, Fc at Threshold -3dB						No	Yes	N/A
LIC2 Available at Threshold -2dB						No	Yes	N/A
Final Setting, LIC2 Available, Fc at Threshold +6dB						No	Yes	N/A
	3,							

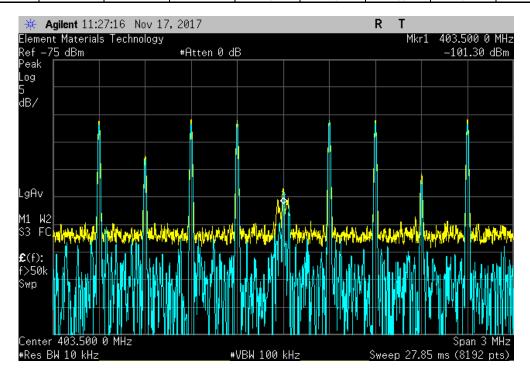


(Mit 2017 09 21





	Mid Channel (Fc), 403.5 MHz, LIC2 Available at Threshold -2dB									
				Transmit	Transmit	Transmit				
				on LIC1?	on LIC2?	on Fc?	Result			
İ				No	No	Yes	N/A			





YMR 2017 00 2

Mid Channel (Fc), 403.5 MHz, Final Setting, LIC2 Available, Fc at Threshold +6dB										
	Transmit Transmit Transmit									
				on LIC1?	on LIC2?	on Fc?	Result	_		
				No	No	Yes	N/A			

