



Axonics Modulation Technologies, Inc.

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

EN 301 839 V2.1.1:2016

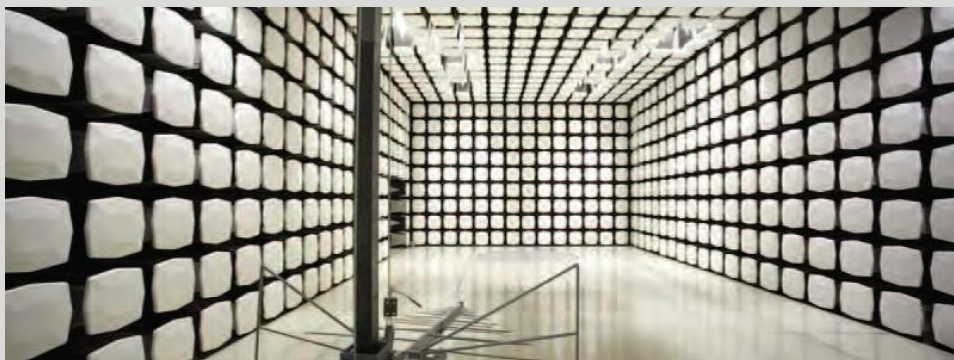
EN 302 537 V2.1.1:2016

FCC Part 95I:2017

RSS-243:2010

MedRadio

Report # AXON0097.12



NVLAP Lab Code: 200676-0



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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	EN 301 839 V2.1.1:2016
FCC Part 95I:2017	
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	EN 302 537 V2.1.1:2016
FCC Part 95I:2017	
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 Ratnoff, 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:

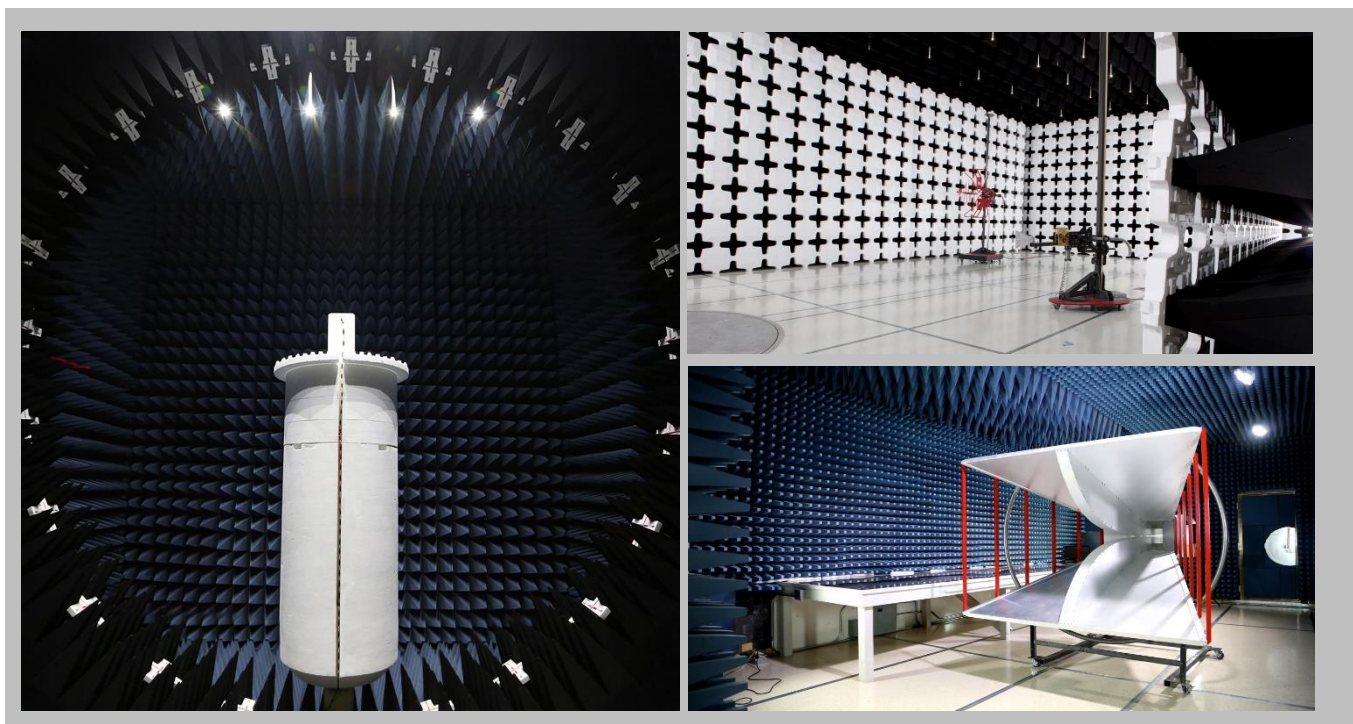
<http://portlandcustomer.element.com/ts/scope/scope.htm>

<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 th Ave NE 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
Innovation, Science and Economic Development Canada					
2834B-1, 2834B-3	2834E-1, 2834E-3	N/A	2834D-1, 2834D-2	2834G-1	2834F-1
BSMI					
SL2-IN-E-1154R	SL2-IN-E-1152R	N/A	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R
VCCI					
A-0029	A-0109	N/A	A-0108	A-0201	A-0110
Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRR, 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.

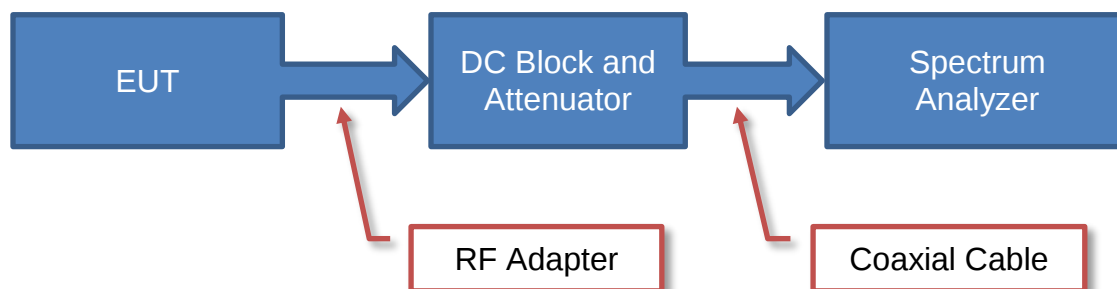
A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) can be found included as part of the applicable 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.

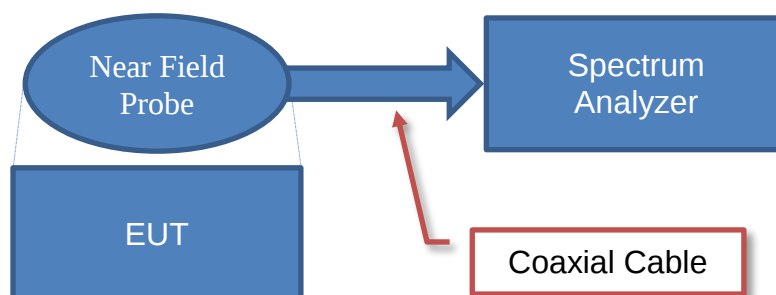
Test	+ MU	- MU
Frequency Accuracy (Hz)	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	0.3 dB	-0.3 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%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

Test Setup Block Diagrams

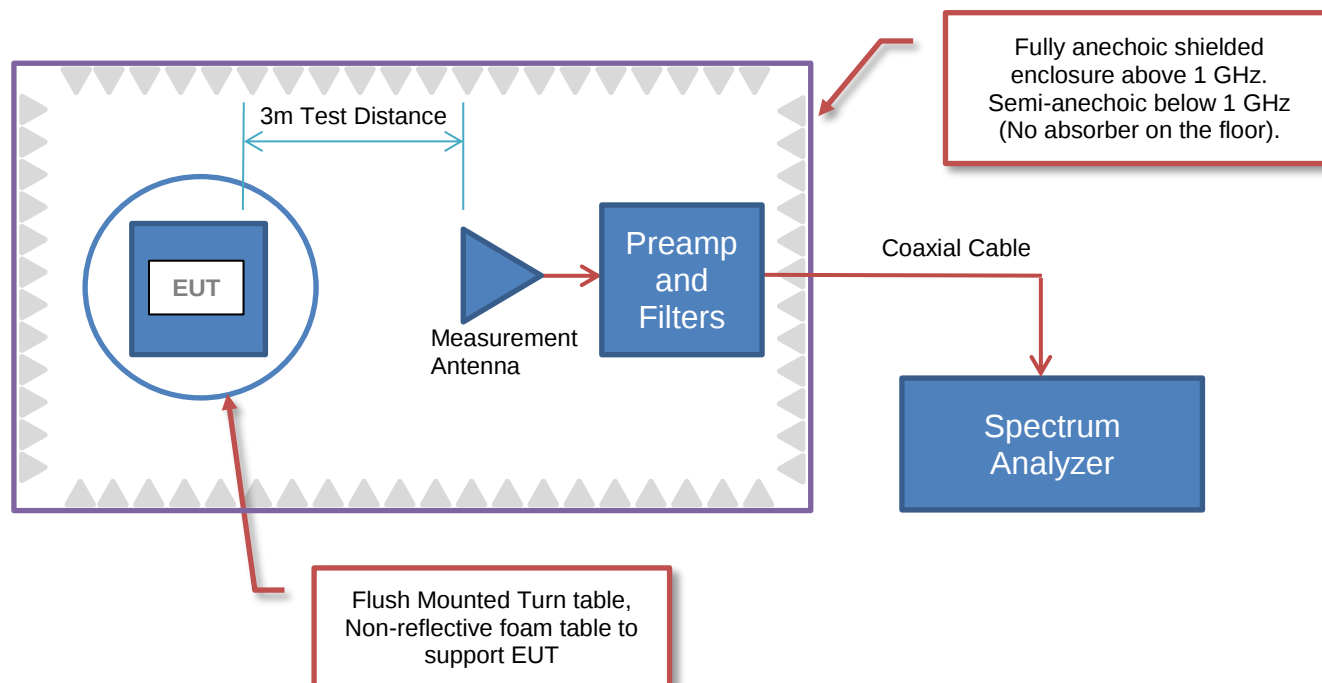
Antenna Port Conducted Measurements



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
Equipment Condition:	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

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.

LBT THRESHOLD POWER LEVEL



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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

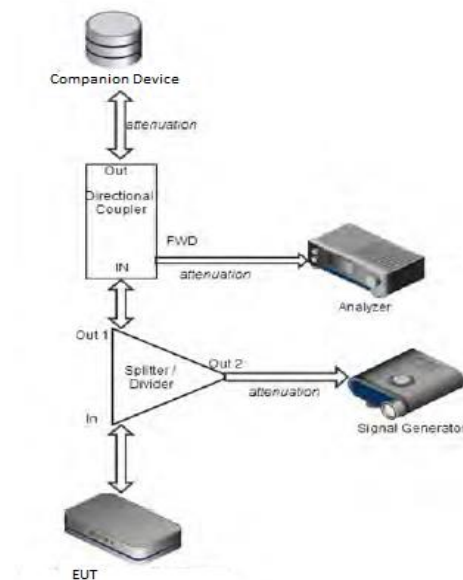
TEST DESCRIPTION

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 interference across the entire band. The amplitude of the multitone signals (out of operation region) were set to the LBT threshold of $10 \cdot \log(\text{Bandwidth}) - 150 + \text{Antenna Gain} + 3 \text{ dB}$.

The spectrum analyzer was set to measure the transmit bands of 401-402 and 405-406 MHz. The multitone signal of the intended frequency (F_c) 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 F_c was then measured and recorded with the spectrum analyzer.



LBT THRESHOLD POWER LEVEL



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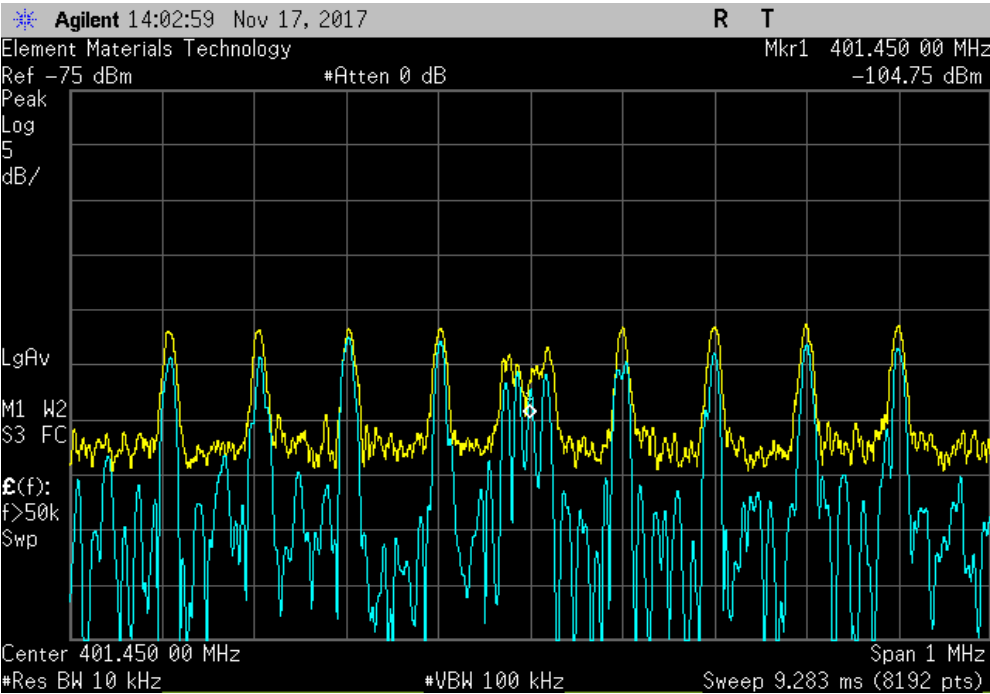
EUT: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)		Work Order: AXON0097	
Serial Number: AC1C870003		Date: 20-Nov-17	
Customer: Axonics Modulation Technologies, Inc.		Temperature: 21.4 °C	
Attendees: Franklin Portillo		Humidity: 45.7% RH	
Project: None		Barometric Pres.: 1018 mbar	
Tested by: Johnny Candelas		Power: 7.6VDC	
		Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
EN 302 537 V2.1.1:2016		EN 302 537 V2.1.1:2016	
COMMENTS			
Calculated LBT Threshold = $10 \cdot \text{LOG}(\text{Bandwidth}) - 150 + \text{Antenna Gain} = -98.75 \text{ dBm}$. Emission Bandwidth = 82582 Hz, Antenna Gain = 2.08dBi.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	30	Signature 	
		CW -4dB Power Level	Limit (s) Result
401 - 402 MHz Band			
Mid Channel, 401.55 MHz			
	LBT Threshold -6dB	N/A	N/A
	LBT Threshold -5dB	N/A	N/A
	LBT Threshold -4dB	N/A	N/A
	LBT Threshold -3dB	N/A	N/A
	LBT Threshold -2dB	N/A	N/A
	LBT Threshold -1dB	N/A	N/A
	LBT Threshold 0dB	N/A	N/A
	LBT Threshold +1dB	N/A	N/A
	LBT Threshold +2dB	N/A	N/A
	LBT Threshold +3dB	-99.68 dBm	-98.75 dBm
405 - 406 MHz Band			
Mid Channel, 405.55 MHz			
	LBT Threshold -6dB	N/A	N/A
	LBT Threshold -5dB	N/A	N/A
	LBT Threshold -4dB	N/A	N/A
	LBT Threshold -3dB	N/A	N/A
	LBT Threshold -2dB	N/A	N/A
	LBT Threshold -1dB	N/A	N/A
	LBT Threshold 0dB	N/A	N/A
	LBT Threshold +1dB	N/A	N/A
	LBT Threshold +2dB	N/A	N/A
	LBT Threshold +3dB	-99.63 dBm	-98.75 dBm

LBT THRESHOLD POWER LEVEL

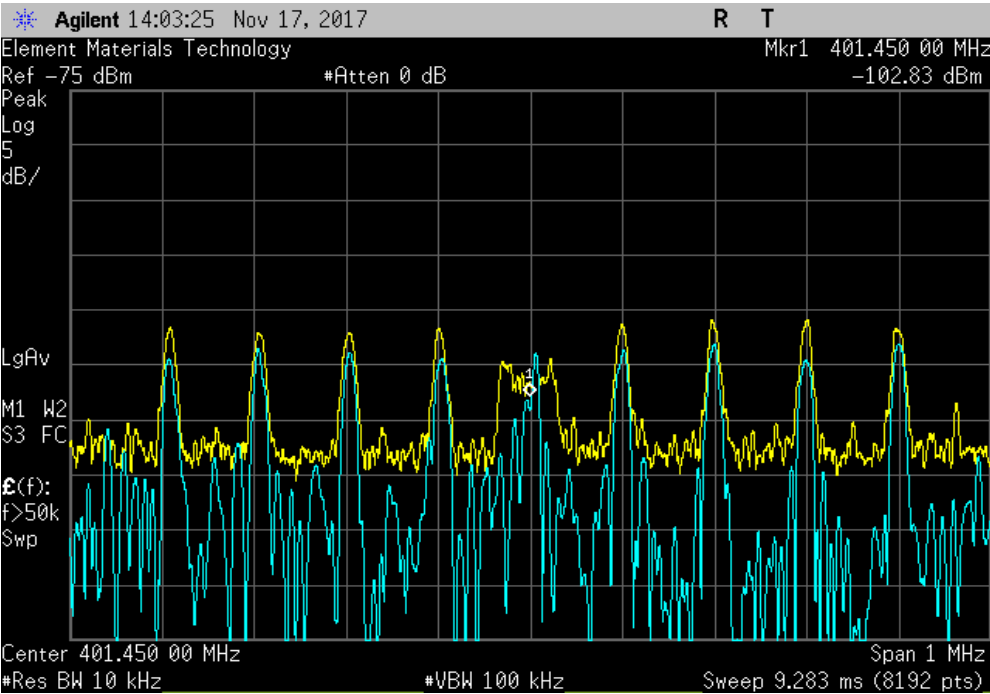


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401 - 402 MHz Band, Mid Channel, 401.55 MHz, LBT Threshold -6dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	



401 - 402 MHz Band, Mid Channel, 401.55 MHz, LBT Threshold -5dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	

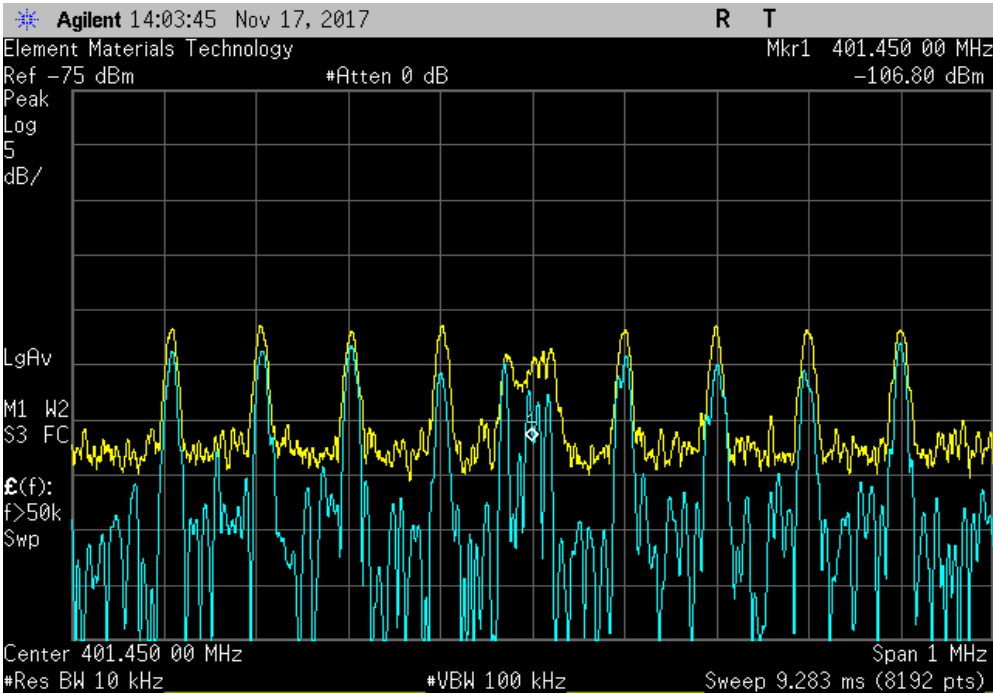


LBT THRESHOLD POWER LEVEL

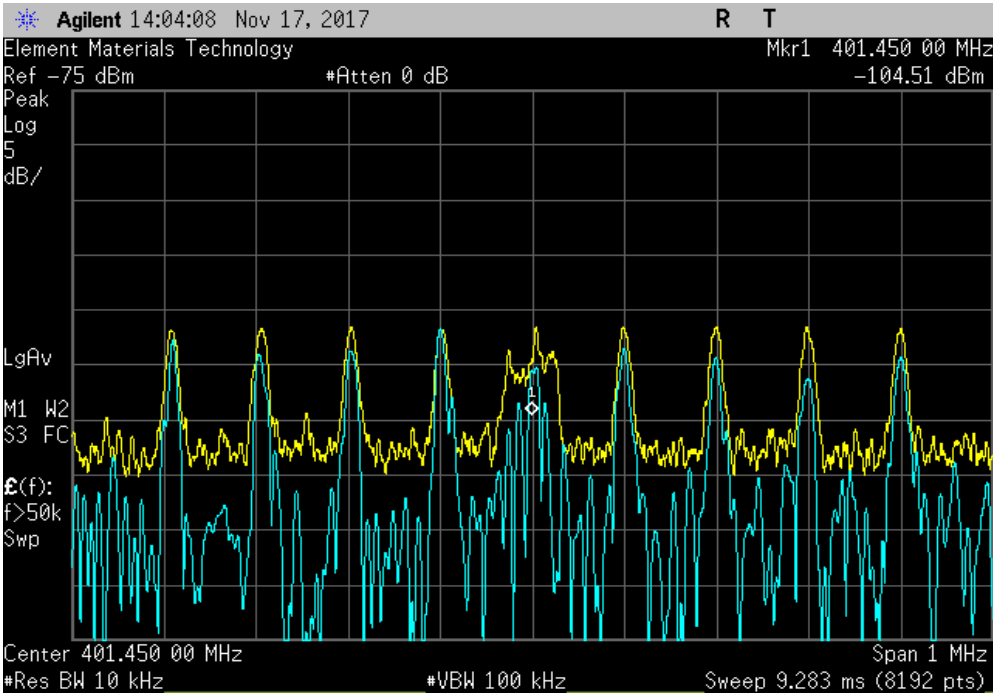


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401 - 402 MHz Band, Mid Channel, 401.55 MHz, LBT Threshold -4dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	



401 - 402 MHz Band, Mid Channel, 401.55 MHz, LBT Threshold -3dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	

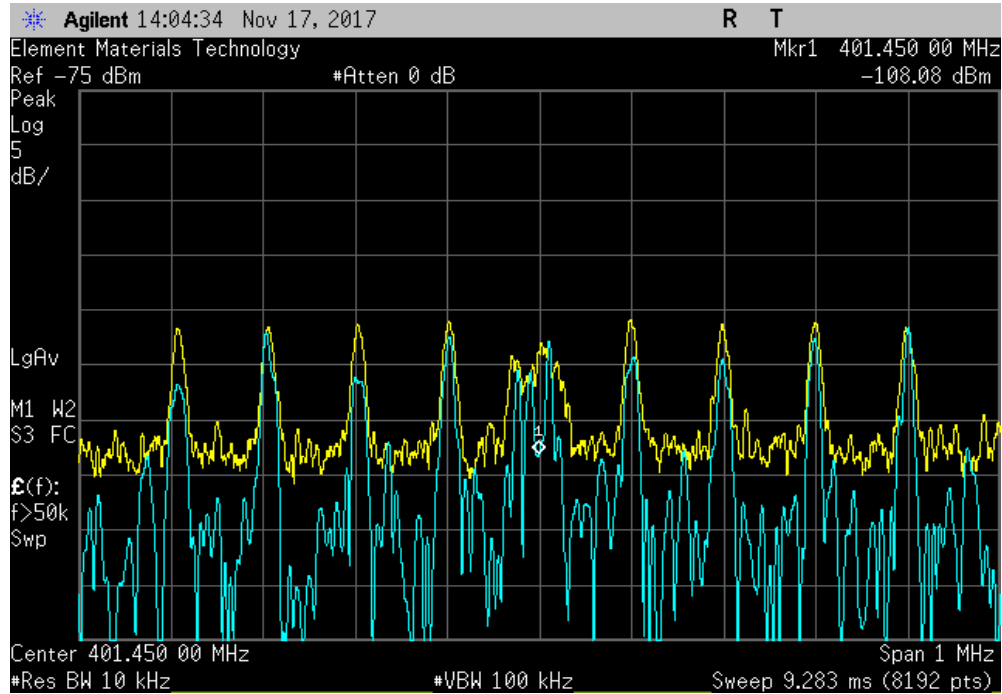


LBT THRESHOLD POWER LEVEL

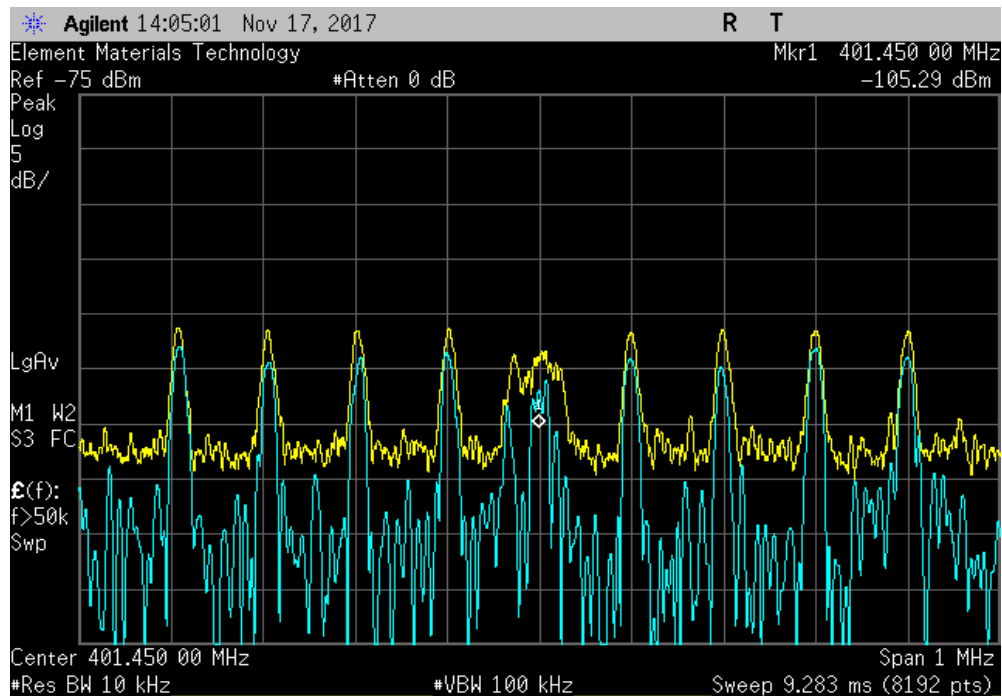


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401 - 402 MHz Band, Mid Channel, 401.55 MHz, LBT Threshold -2dB						
CW -4dB				Limit		
Power Level				(S)	Result	
N/A				N/A	N/A	



401 - 402 MHz Band, Mid Channel, 401.55 MHz, LBT Threshold -1dB						
CW -4dB				Limit		
Power Level				(S)	Result	
N/A				N/A	N/A	

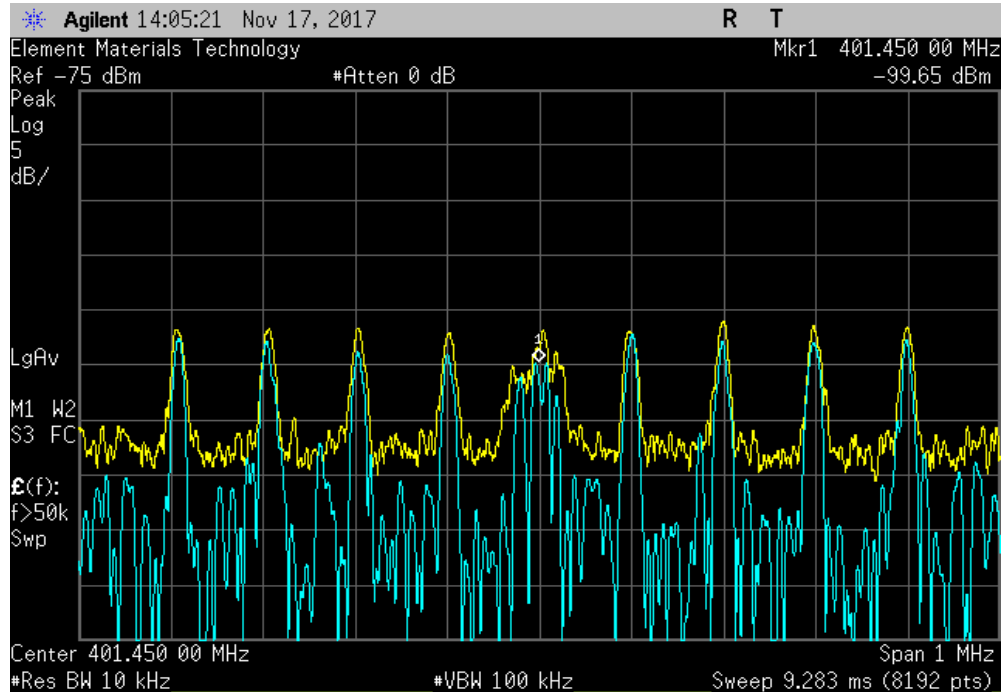


LBT THRESHOLD POWER LEVEL

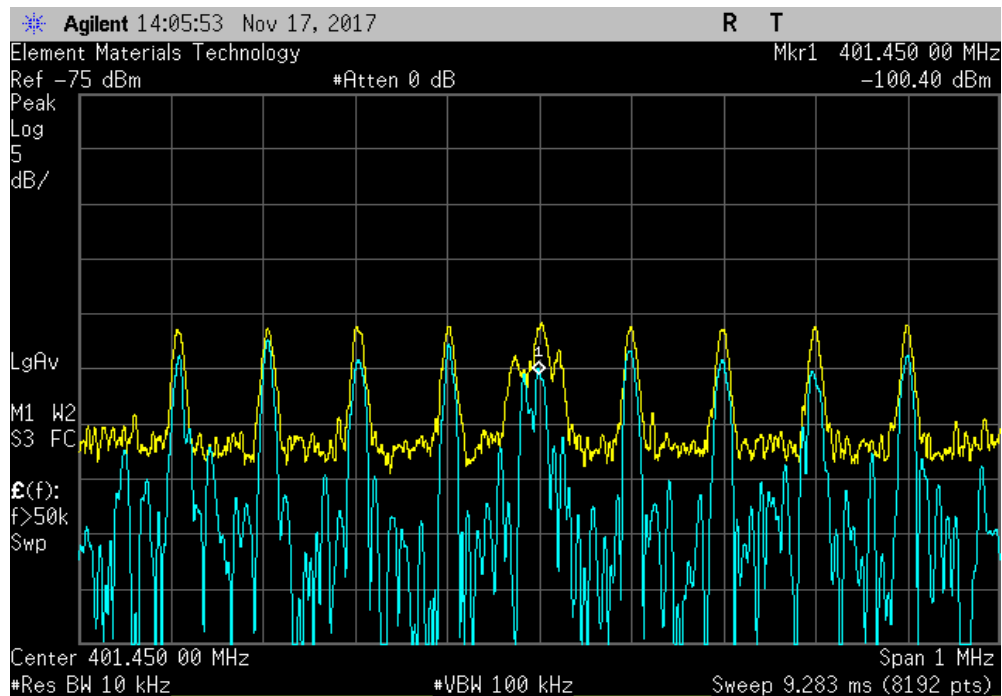


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401 - 402 MHz Band, Mid Channel, 401.55 MHz, LBT Threshold 0dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	



401 - 402 MHz Band, Mid Channel, 401.55 MHz, LBT Threshold +1dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	

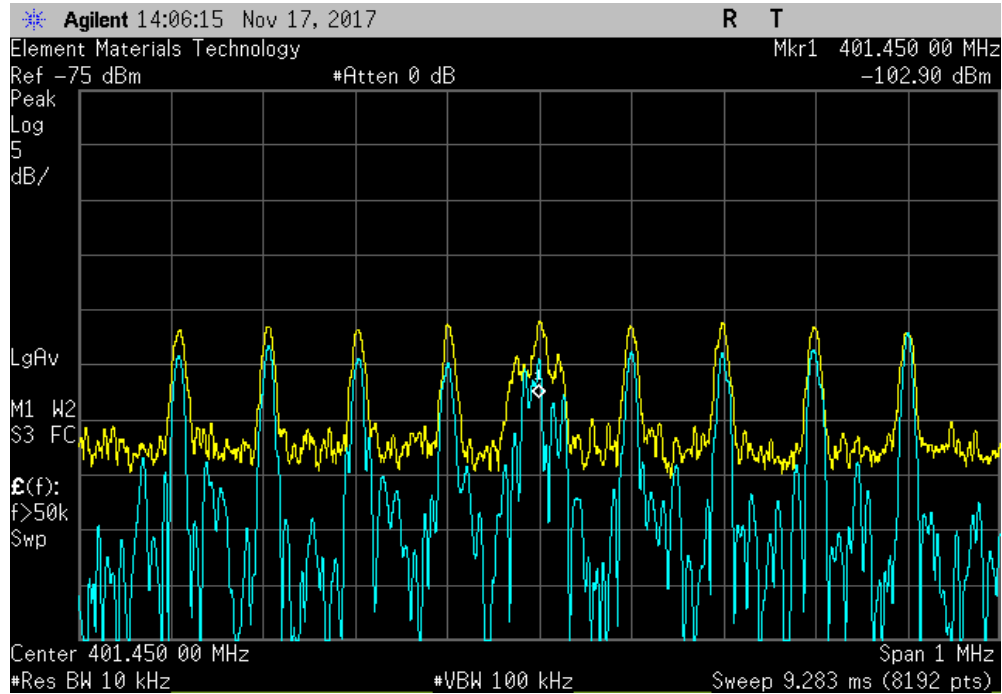


LBT THRESHOLD POWER LEVEL

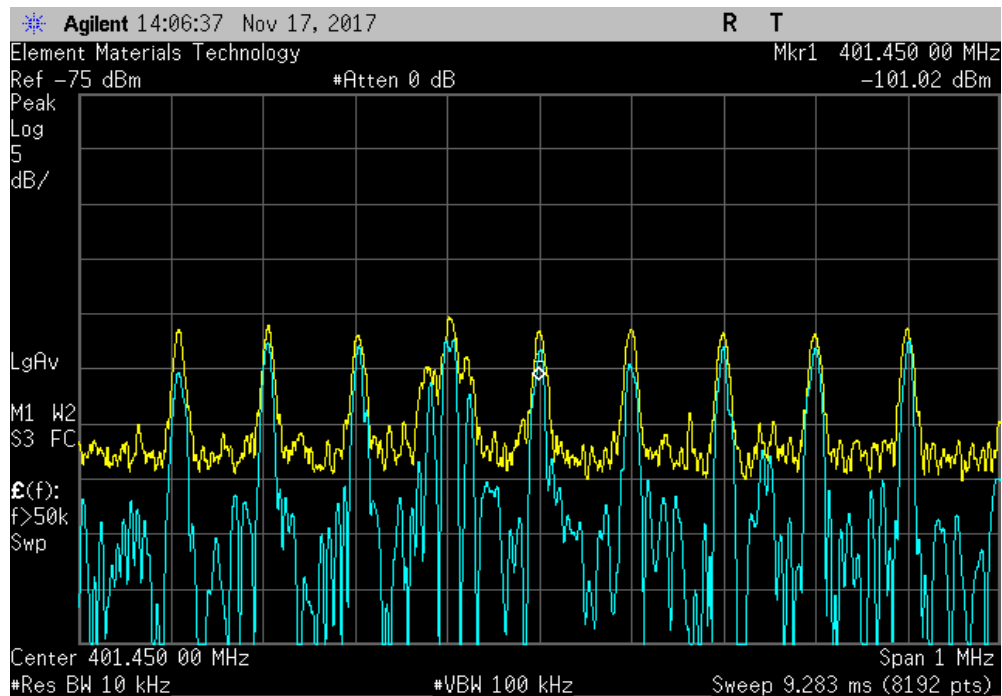


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401 - 402 MHz Band, Mid Channel, 401.55 MHz, LBT Threshold +2dB						
CW -4dB				Limit		
Power Level				(S)	Result	
N/A				N/A	N/A	



401 - 402 MHz Band, Mid Channel, 401.55 MHz, LBT Threshold +3dB						
CW -4dB				Limit		
Power Level				(S)	Result	
-99.68 dBm				-98.75 dBm	Pass	



LBT THRESHOLD POWER LEVEL



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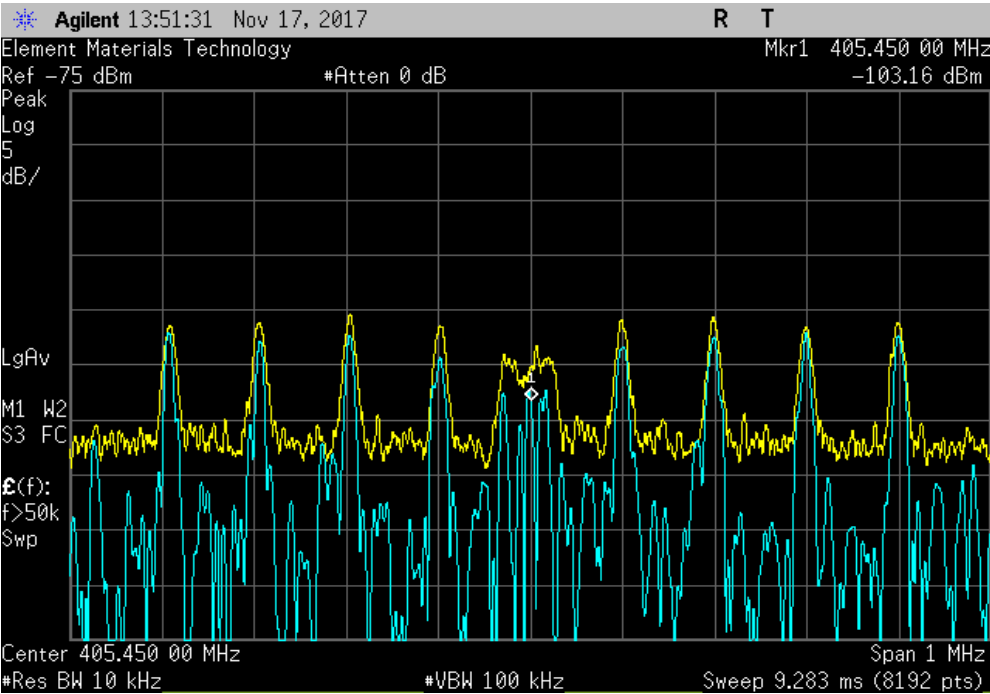
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LBT THRESHOLD POWER LEVEL

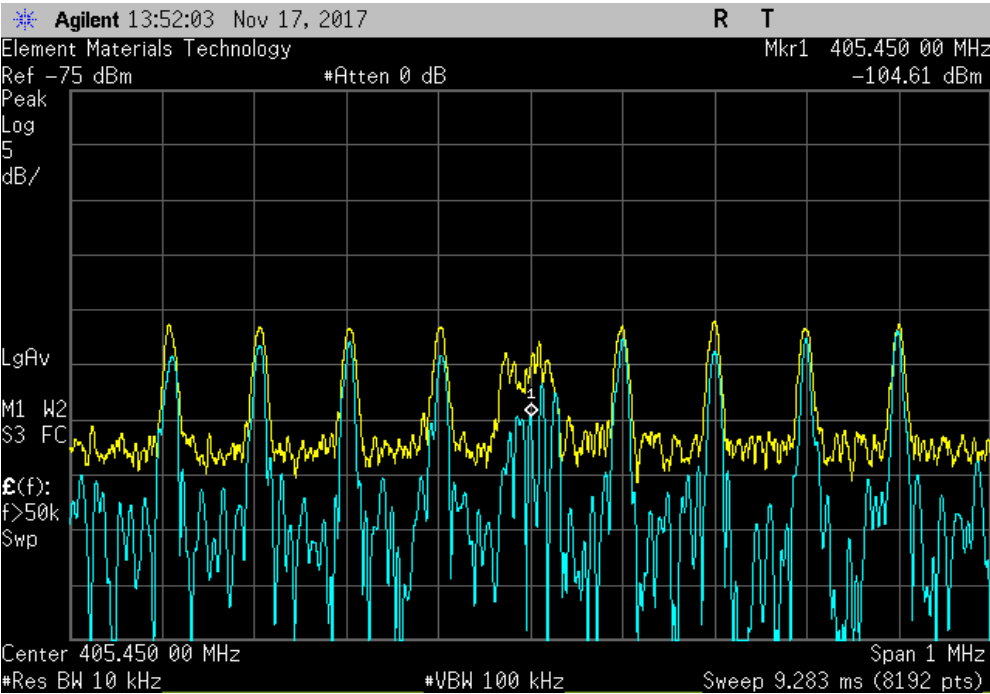


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405 - 406 MHz Band, Mid Channel, 405.55 MHz, LBT Threshold -5dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	



405 - 406 MHz Band, Mid Channel, 405.55 MHz, LBT Threshold -4dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	

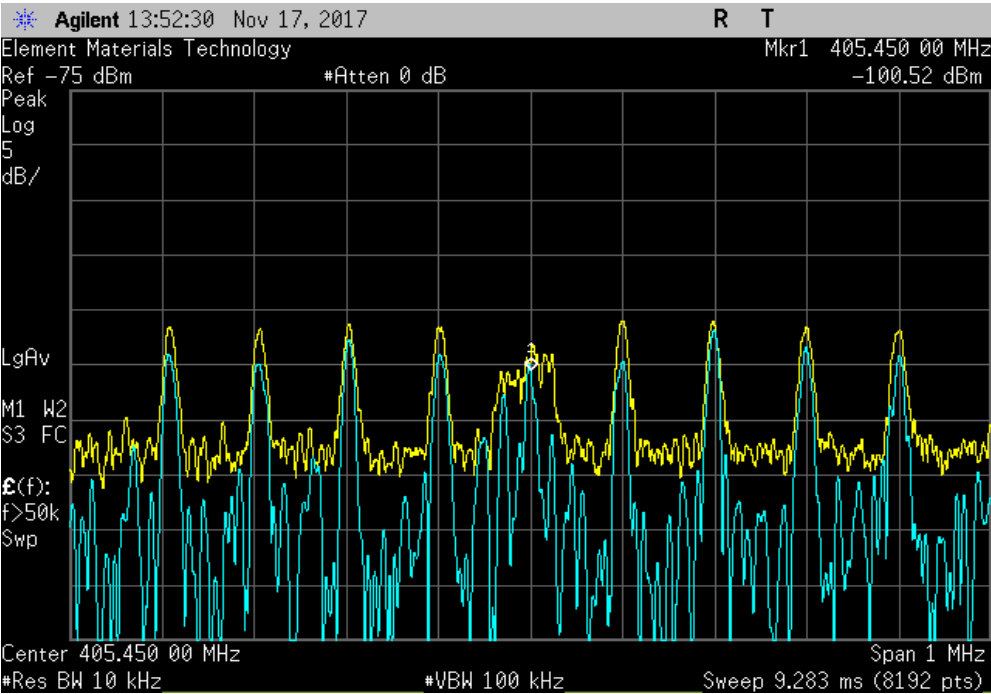


LBT THRESHOLD POWER LEVEL

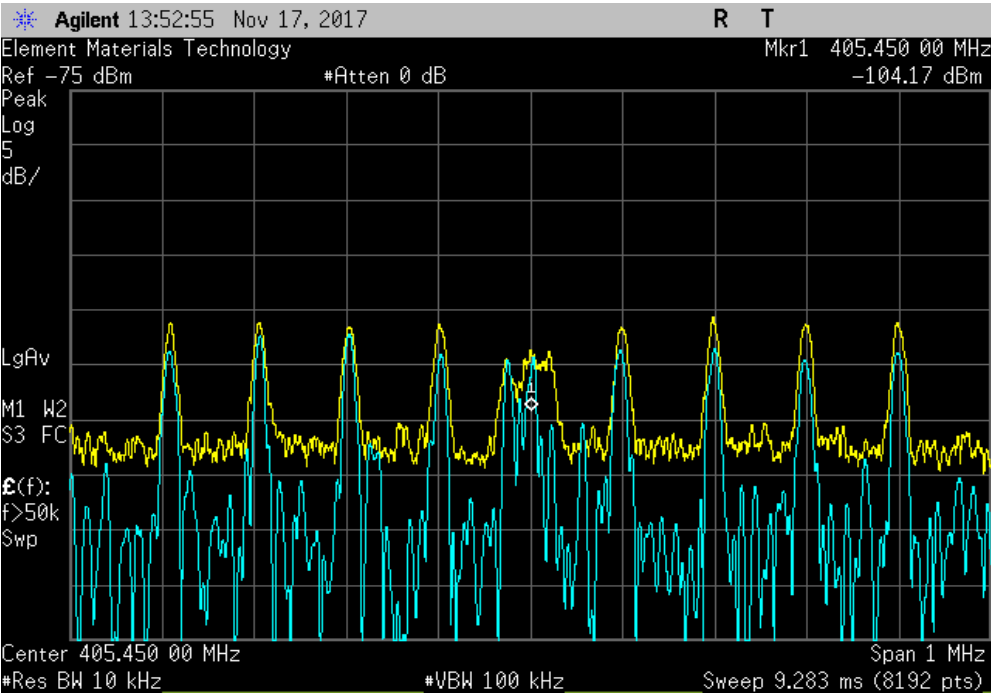


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405 - 406 MHz Band, Mid Channel, 405.55 MHz, LBT Threshold -3dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	



405 - 406 MHz Band, Mid Channel, 405.55 MHz, LBT Threshold -2dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	

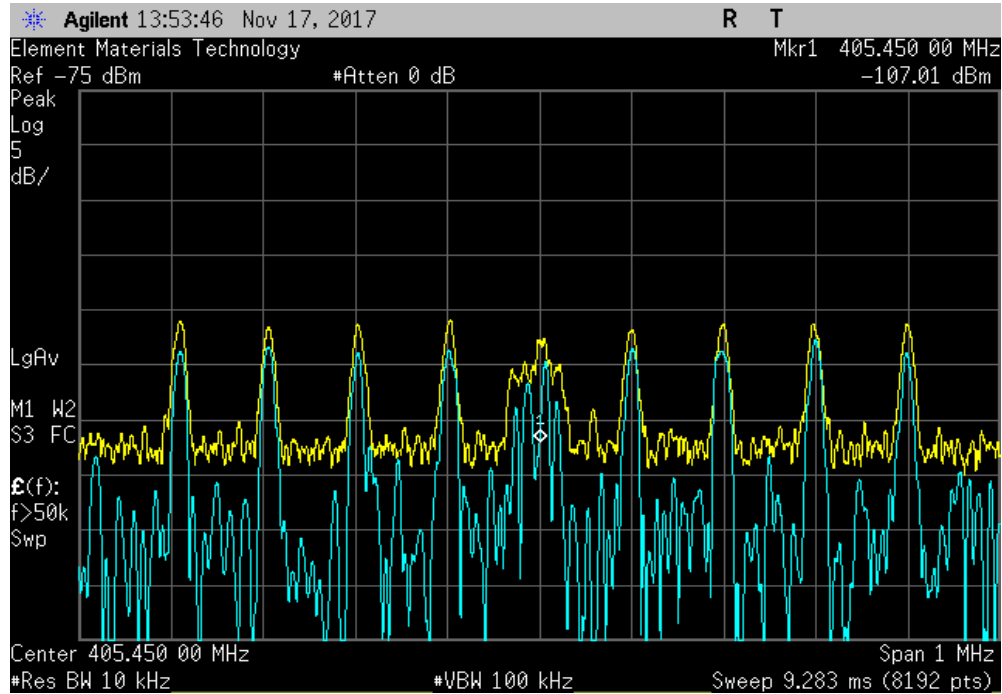


LBT THRESHOLD POWER LEVEL

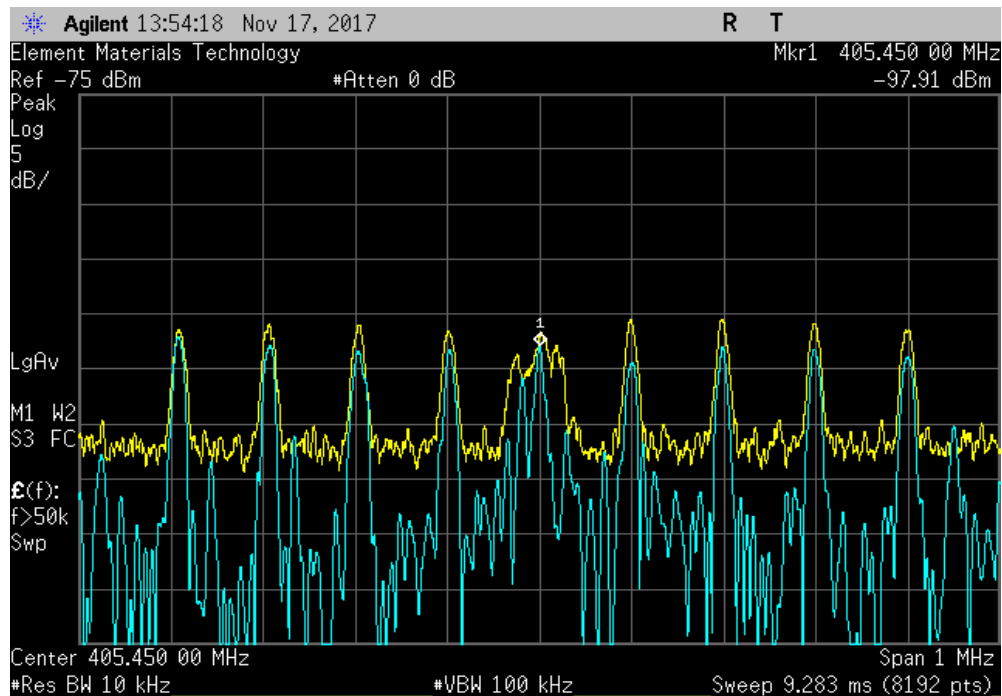


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405 - 406 MHz Band, Mid Channel, 405.55 MHz, LBT Threshold -1dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	



405 - 406 MHz Band, Mid Channel, 405.55 MHz, LBT Threshold 0dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	

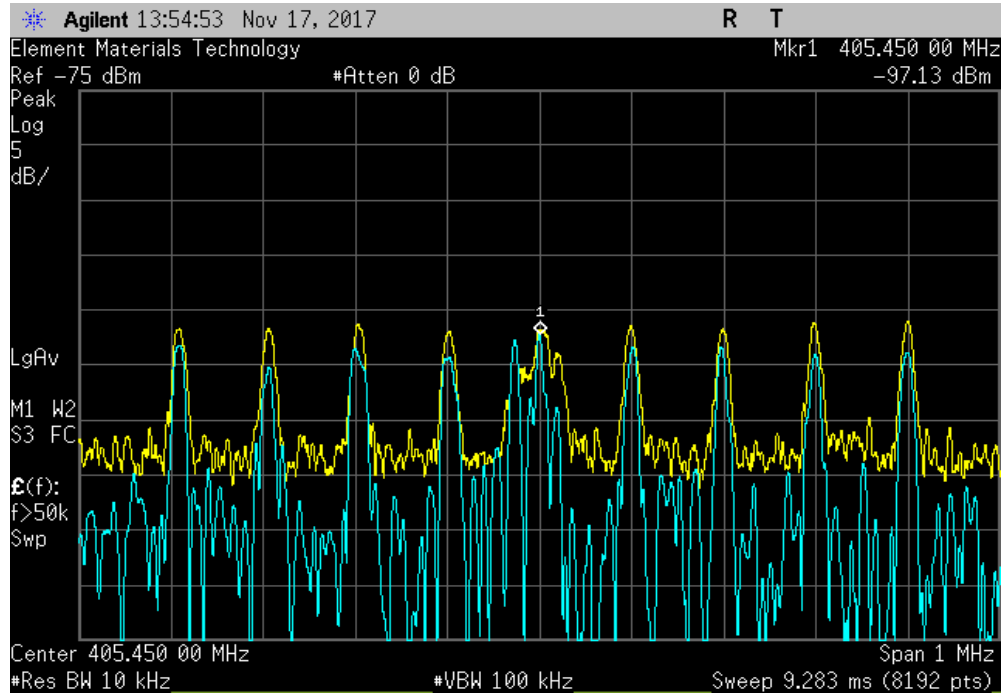


LBT THRESHOLD POWER LEVEL

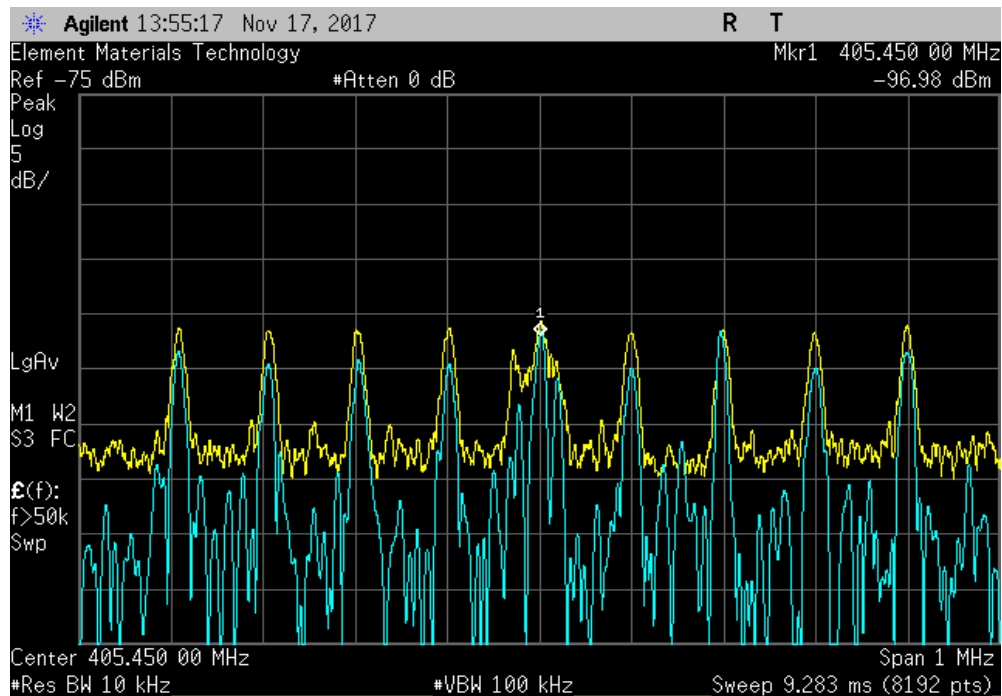


XMM 2017.09.21

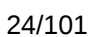
405 - 406 MHz Band, Mid Channel, 405.55 MHz, LBT Threshold +1dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	



405 - 406 MHz Band, Mid Channel, 405.55 MHz, LBT Threshold +2dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	



CW -4dB Power Level	Limit (≤)	Result
-99.63 dBm	-98.75 dBm	Pass



LBT THRESHOLD POWER LEVEL



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

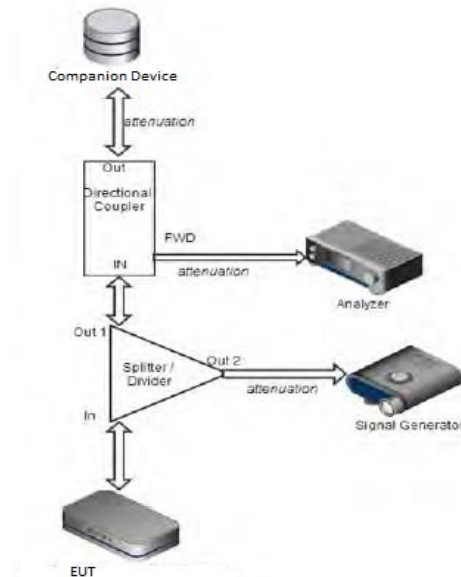
TEST DESCRIPTION

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 interference across the entire band. The amplitude of the multitone signals (out of operation region) were set to the LBT threshold of $10 \cdot \log(\text{Bandwidth}) - 150 + \text{Antenna Gain} + 3 \text{ dB}$.

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 (F_c) 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 F_c was then measured and recorded with the spectrum analyzer.



LBT THRESHOLD POWER LEVEL



XMM 2017.09.21

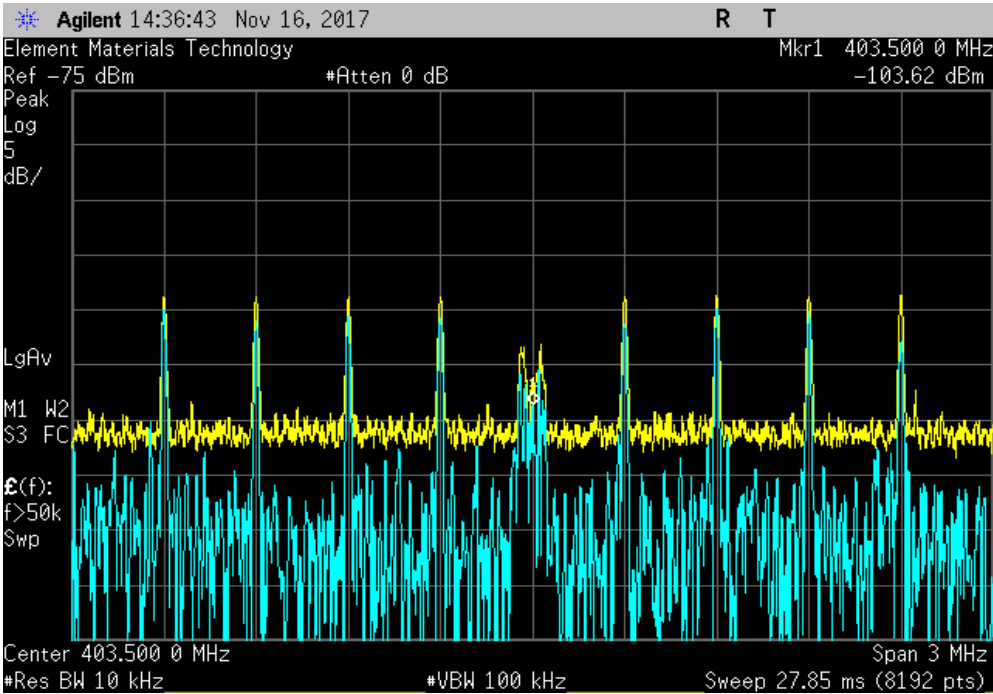
EUT: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)		Work Order: AXON0097	
Serial Number: AC1C870003		Date: 20-Nov-17	
Customer: Axonics Modulation Technologies, Inc.		Temperature: 21.4 °C	
Attendees: Franklin Portillo		Humidity: 45.7% RH	
Project: None		Barometric Pres.: 1018 mbar	
Tested by: Johnny Candelas	Power: 7.6VDC	Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
EN 301 839 V2.1.1:2016		EN 301 839 V2.1.1:2016	
COMMENTS			
Calculated LBT Threshold = $10 * \text{LOG}(\text{Bandwidth}) - 150 + \text{Antenna Gain} = -96.87 \text{ dBm}$. Emission Bandwidth = 127432 Hz, Antenna Gain = 2.08dBi.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	30	Signature	
		CW -4dB Power Level	Limit (s) Result
Mid Channel, 403.5 MHz			
LBT Threshold -6dB		N/A	N/A
LBT Threshold -5dB		N/A	N/A
LBT Threshold -4dB		N/A	N/A
LBT Threshold -3dB		N/A	N/A
LBT Threshold -2dB		N/A	N/A
LBT Threshold -1dB		N/A	N/A
LBT Threshold 0dB		N/A	N/A
LBT Threshold +1dB		N/A	N/A
LBT Threshold +2dB		N/A	N/A
LBT Threshold +3dB		-99.68 dBm	-96.87 dBm Pass

LBT THRESHOLD POWER LEVEL

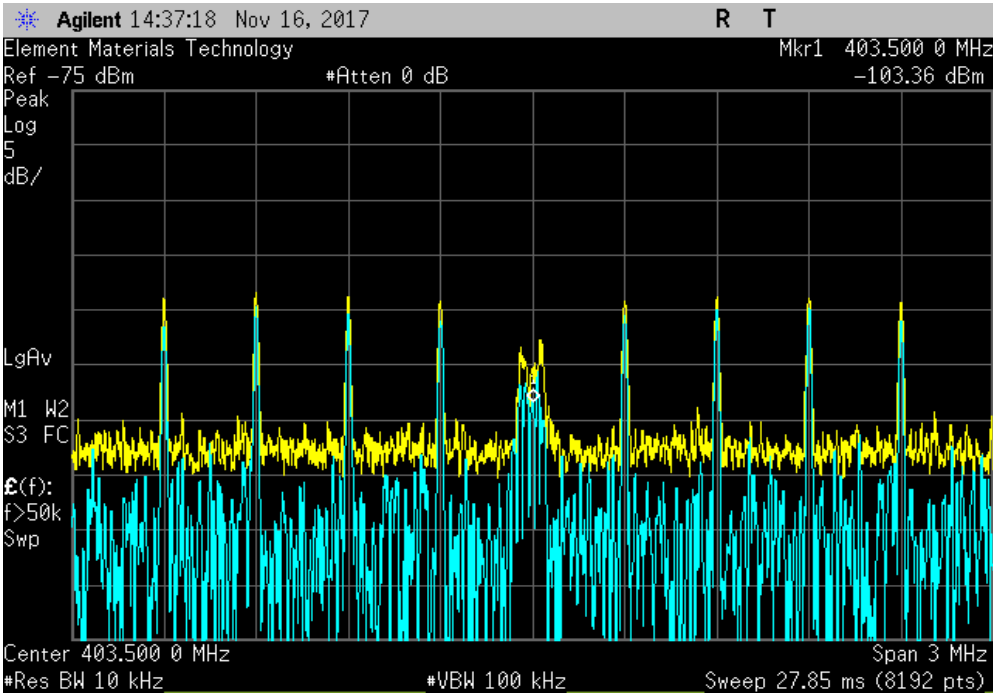


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Mid Channel, 403.5 MHz, LBT Threshold -6dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	



Mid Channel, 403.5 MHz, LBT Threshold -5dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	

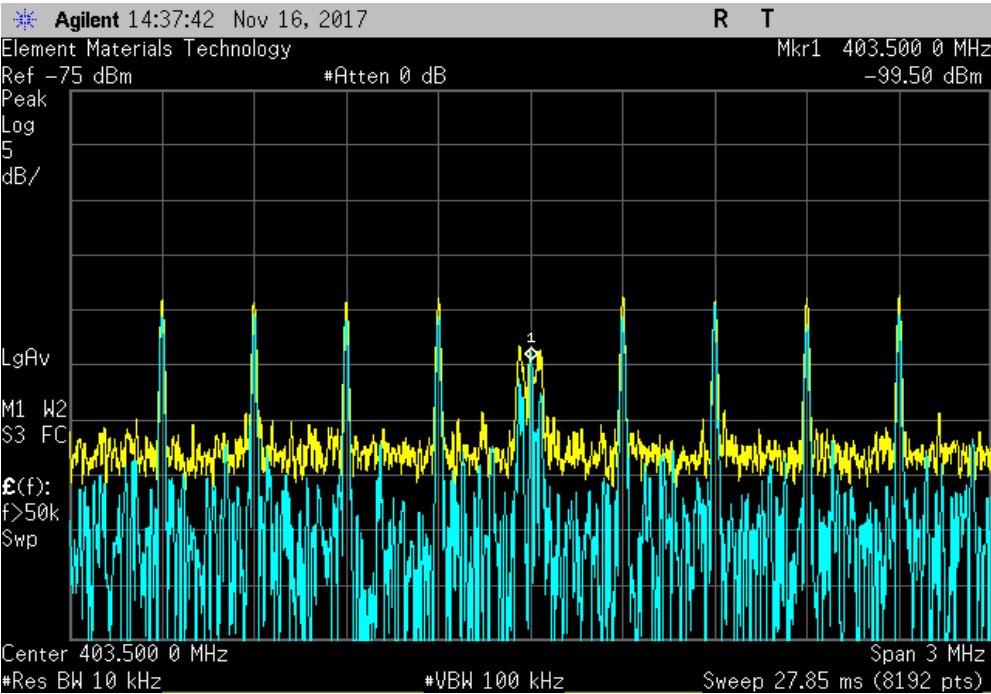


LBT THRESHOLD POWER LEVEL

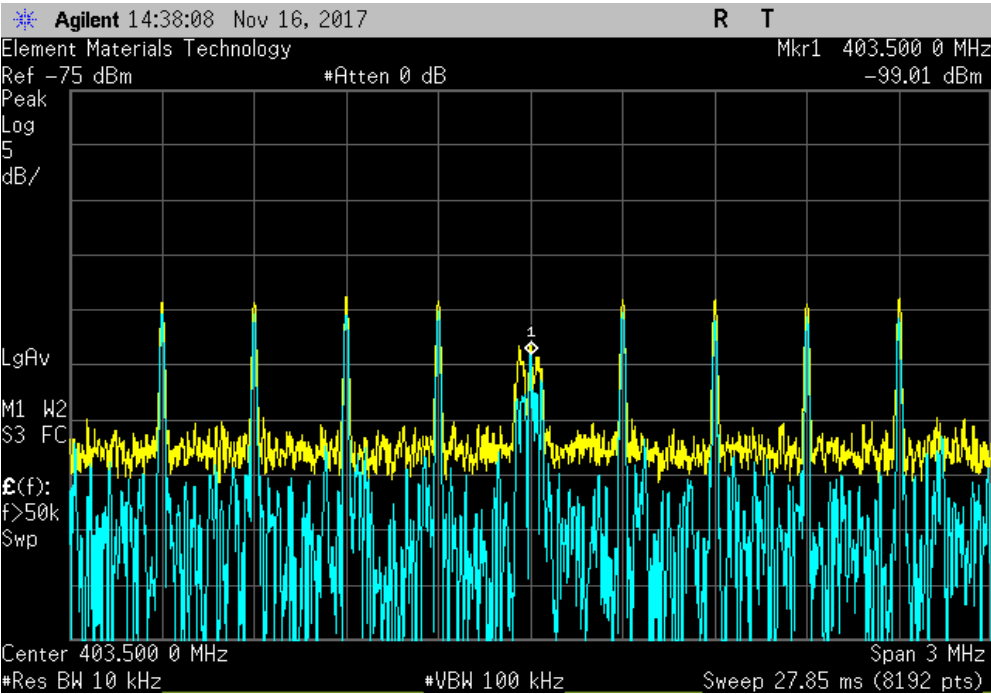


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Mid Channel, 403.5 MHz, LBT Threshold -4dB						
				CW -4dB Power Level	Limit (S)	Result
				N/A	N/A	N/A



Mid Channel, 403.5 MHz, LBT Threshold -3dB						
				CW -4dB Power Level	Limit (S)	Result
				N/A	N/A	N/A

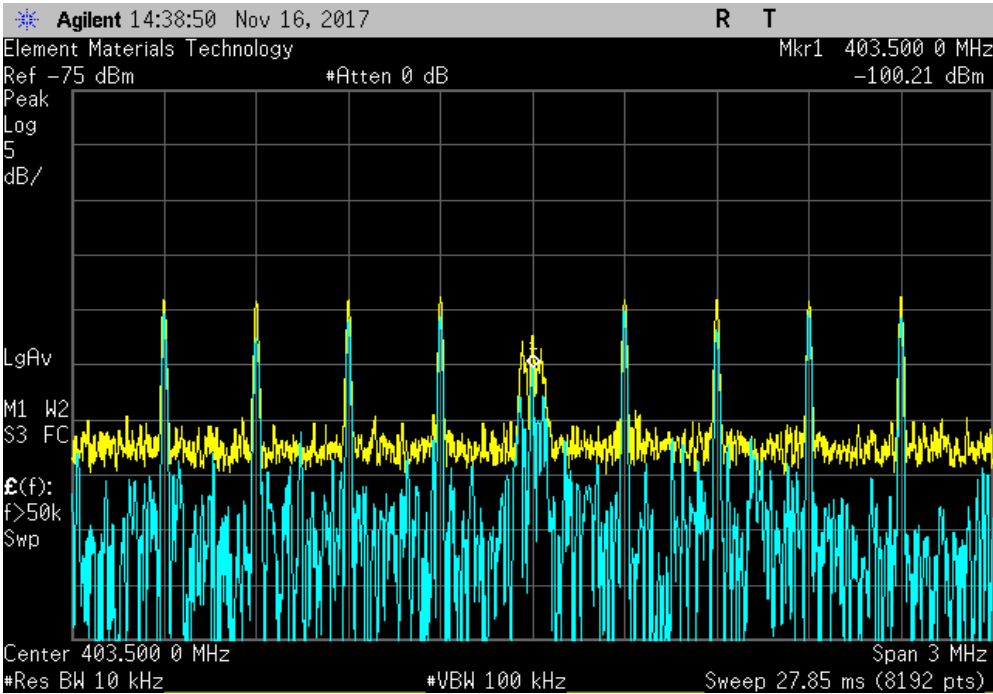


LBT THRESHOLD POWER LEVEL

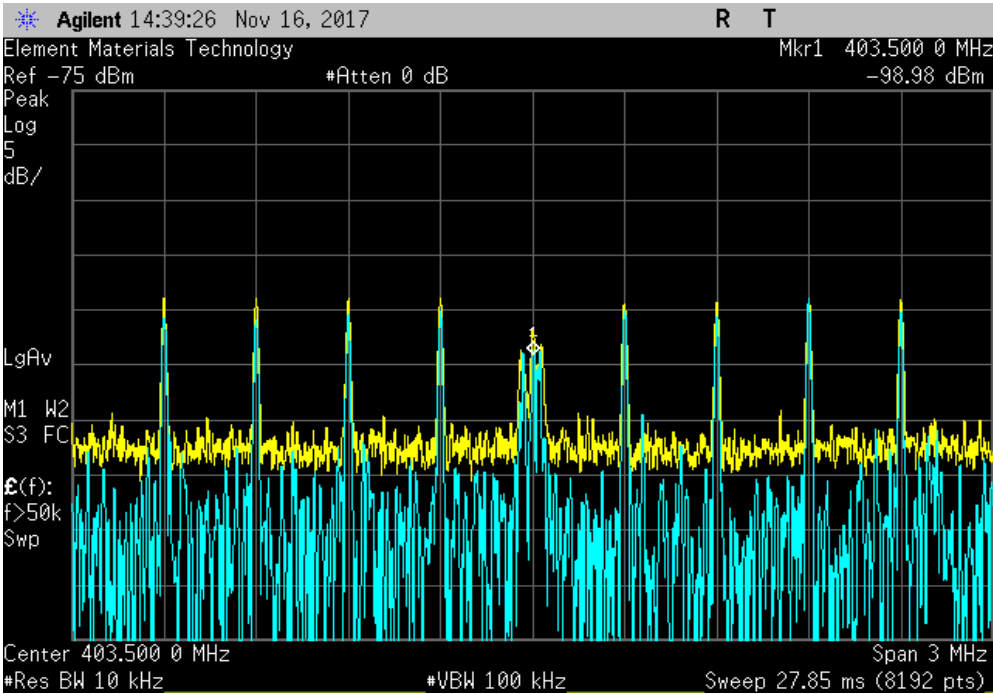


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Mid Channel, 403.5 MHz, LBT Threshold -2dB						
				CW -4dB Power Level	Limit (S)	Result
				N/A	N/A	N/A



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

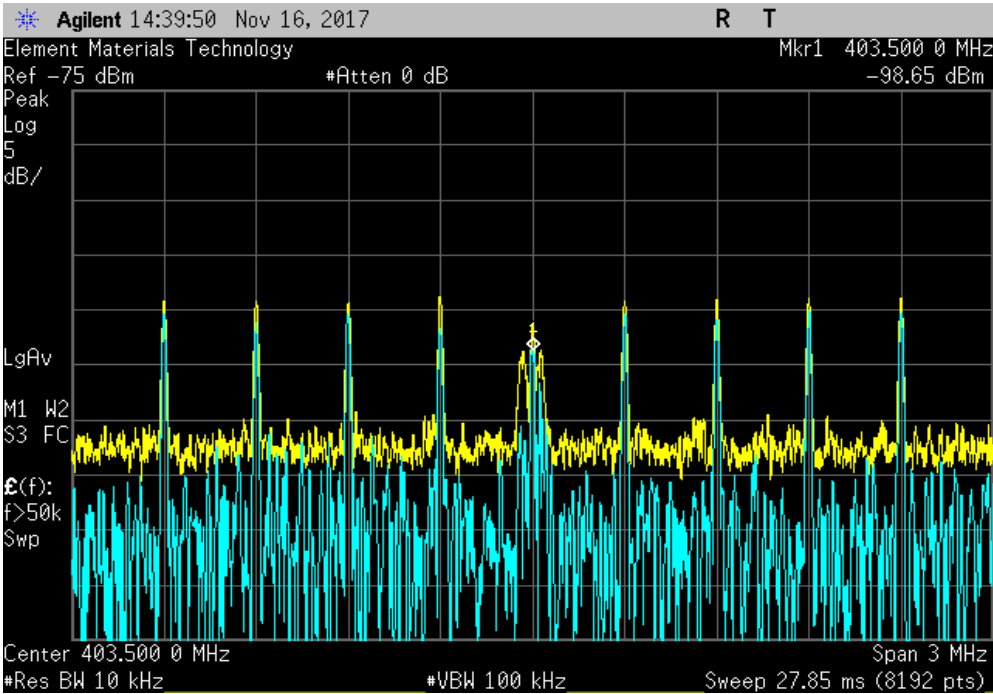


LBT THRESHOLD POWER LEVEL

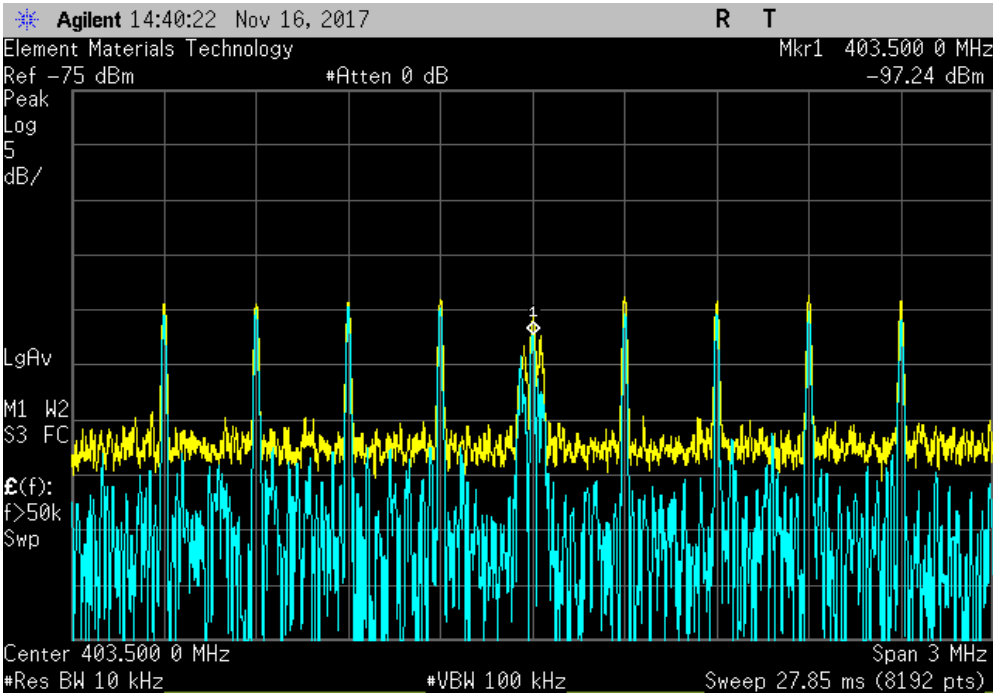


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Mid Channel, 403.5 MHz, LBT Threshold 0dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	



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

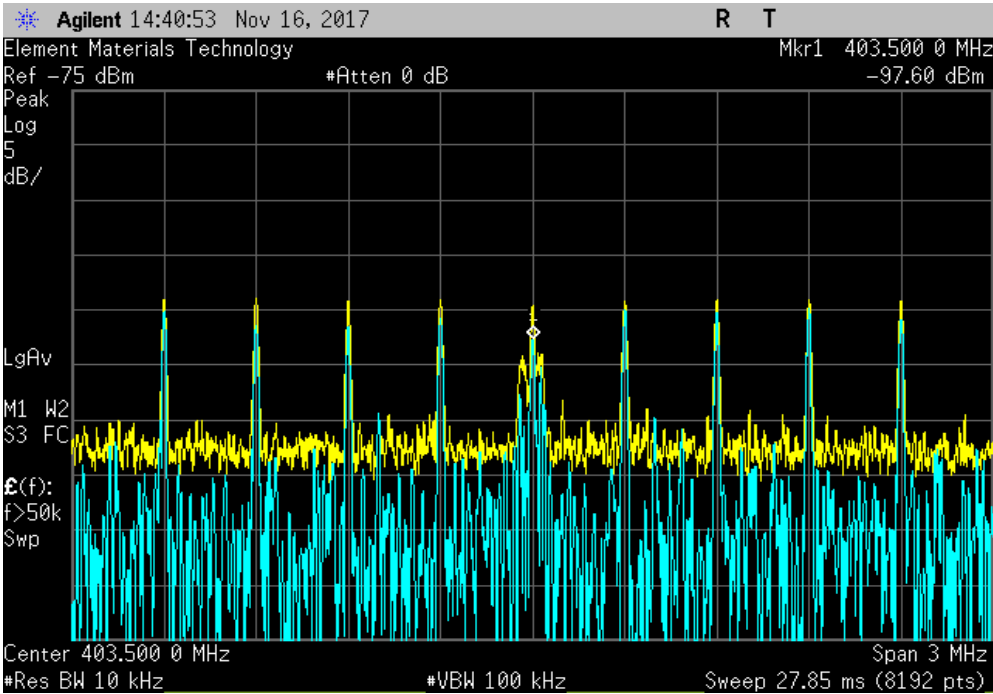


LBT THRESHOLD POWER LEVEL

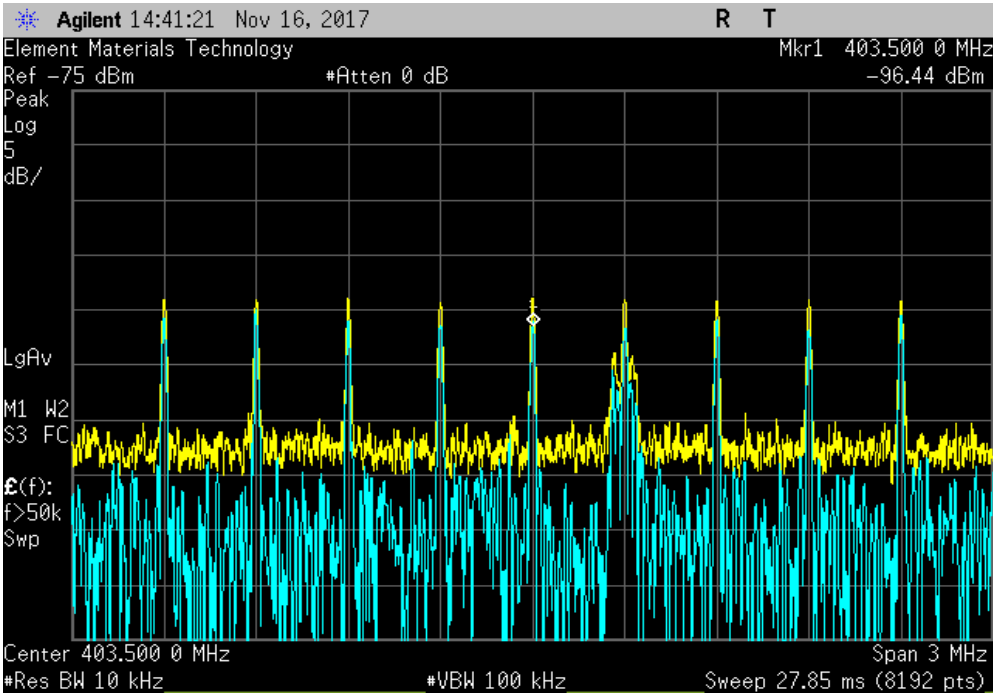


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Mid Channel, 403.5 MHz, LBT Threshold +2dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				N/A	N/A	



Mid Channel, 403.5 MHz, LBT Threshold +3dB						
CW -4dB				Limit		
Power Level				(S)	Result	
				-99.68 dBm	-96.87 dBm	
					Pass	



MONITORING SYSTEM BANDWIDTH



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

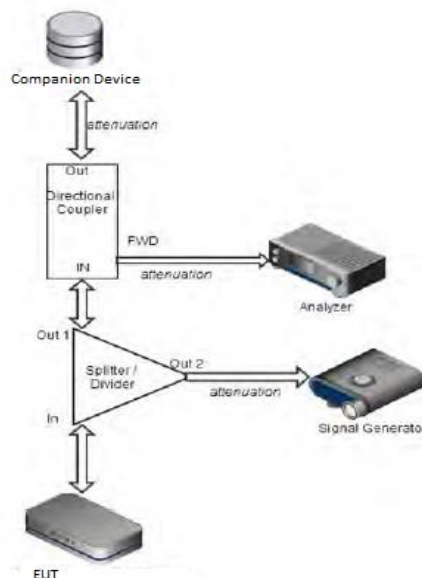
The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The EUT was configured according to the following block diagram:

The signal generator was set to multitone operation to cause equal interference across the entire band. The amplitude of the multitone signals (out of operation region) were set to the LBT threshold of $10 \cdot \log(\text{Bandwidth}) - 150 + \text{Antenna Gain} + 3 \text{ dB}$.

The spectrum analyzer was set to measure the transmit bands of 401-402 and 405-406 MHz. The multitone signal of the intended frequency (F_c) was set to a level above the LBT threshold, and lowered by 1 dB increments until the EUT chooses the intended frequency (F_c) to start a session on.

The blocking frequency at F_c was then lowered to $F_c - \text{Bandwidth} / 2$. The amplitude was then raised until the EUT chooses a channel other than F_c . This was repeated with the blocking frequency raised to $F_c + \text{Bandwidth} / 2$.

The signal generator amplitude at F_c was measured at each point.



MONITORING SYSTEM BANDWIDTH



XMM 2017.09.21

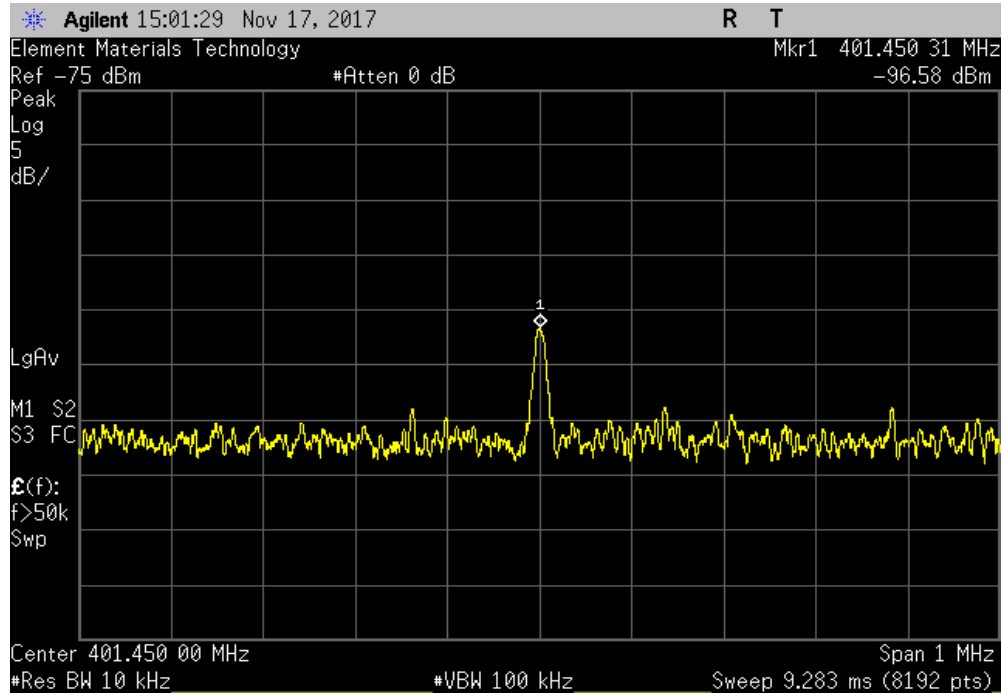
EUT: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)		Work Order: AXON0097	
Serial Number: AC1C870003		Date: 20-Nov-17	
Customer: Axonics Modulation Technologies, Inc.		Temperature: 21.4 °C	
Attendees: Franklin Portillo		Humidity: 45.7% RH	
Project: None		Barometric Pres.: 1018 mbar	
Tested by: Johnny Candelas		Power: 7.6VDC	
		Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
EN 302 537 V2.1.1:2016		EN 302 537 V2.1.1:2016	
COMMENTS			
Calculated LBT Threshold = $10 \cdot \text{LOG}(\text{Bandwidth}) - 150 + \text{Antenna Gain} = -98.75 \text{ dBm}$. Emission Bandwidth = 82582 Hz, Antenna Gain = 2.08dBi.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	30	Signature 	
		Measured Value (dBm)	Delta Value (dB)
401-402 MHz Band			Limit (dB)
Mid Channel (Fc), 401.55 MHz			Result
CW Signal on Fc = (Pa)		-96.58	N/A
CW Signal on Fc - EBW/2 = (Pb)		-96.40	N/A
CW Signal on Fc + EBW/2 = (Pc)		-96.90	N/A
405-406 MHz Band			
Mid Channel (Fc), 405.55 MHz			
CW Signal on Fc = (Pa)		-96.41	N/A
CW Signal on Fc - EBW/2 = (Pb)		-96.79	N/A
CW Signal on Fc + EBW/2 = (Pc)		-96.67	N/A
Calculation:			
Mid Channel (Fc), 401.55 MHz			
(Pa) - (Pb) = D1		N/A	0.18
(Pa) - (Pc) = D2		N/A	0.32
Mid Channel (Fc), 405.55 MHz			
(Pa) - (Pb) = D1		N/A	0.38
(Pa) - (Pc) = D2		N/A	0.26

MONITORING SYSTEM BANDWIDTH

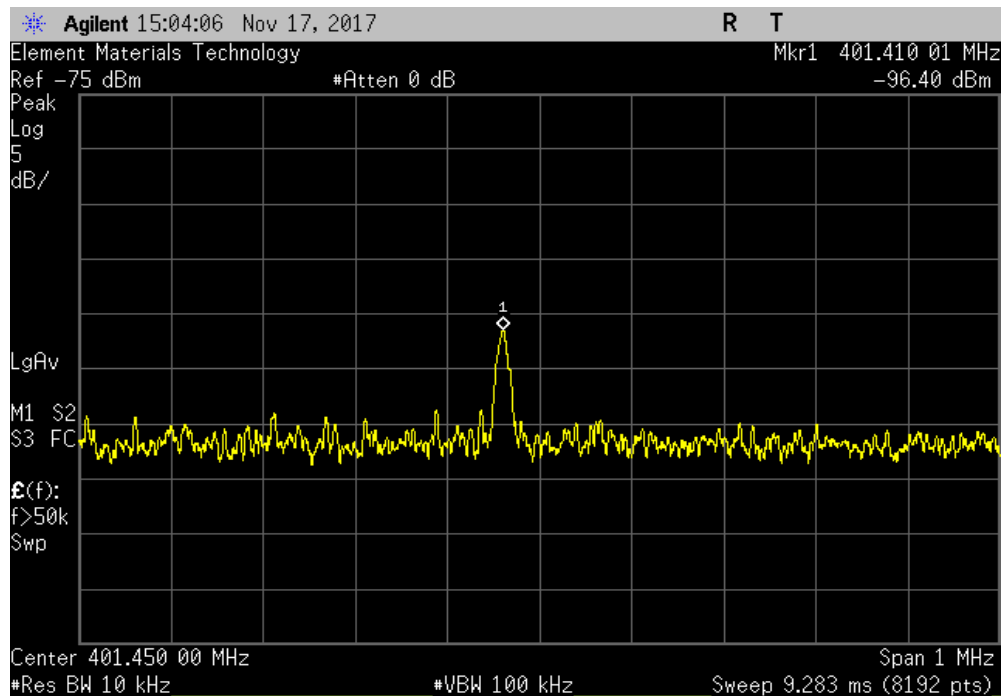


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401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, CW Signal on Fc = (Pa)						
	Measured Value (dBm)	Delta Value (dB)	Limit (dB)	Result		
	-96.58	N/A	N/A	N/A		



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

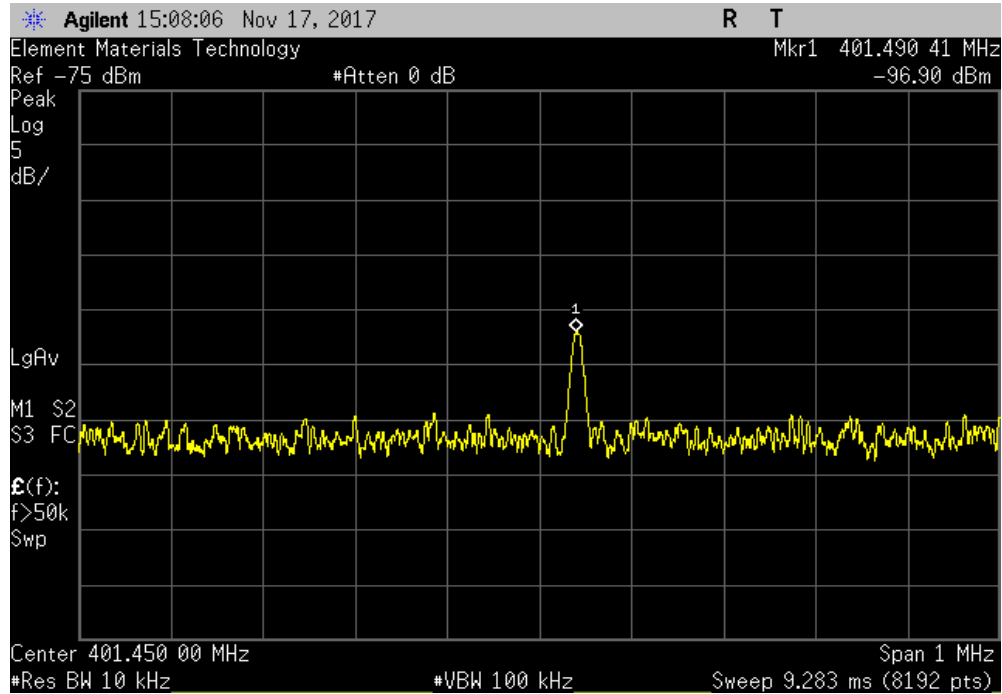


MONITORING SYSTEM BANDWIDTH

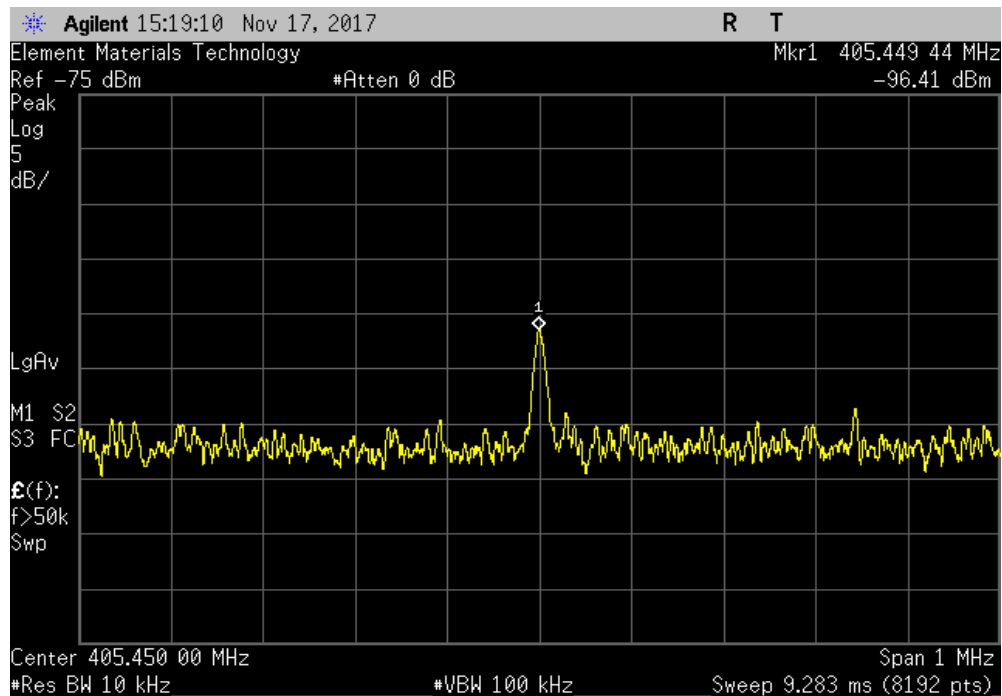


XMM 2017.09.21

401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, CW Signal on Fc + EBW/2 = (Pc)						
	Measured Value (dBm)	Delta Value (dB)	Limit (dB)	Result		
	-96.90	N/A	N/A	N/A		



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

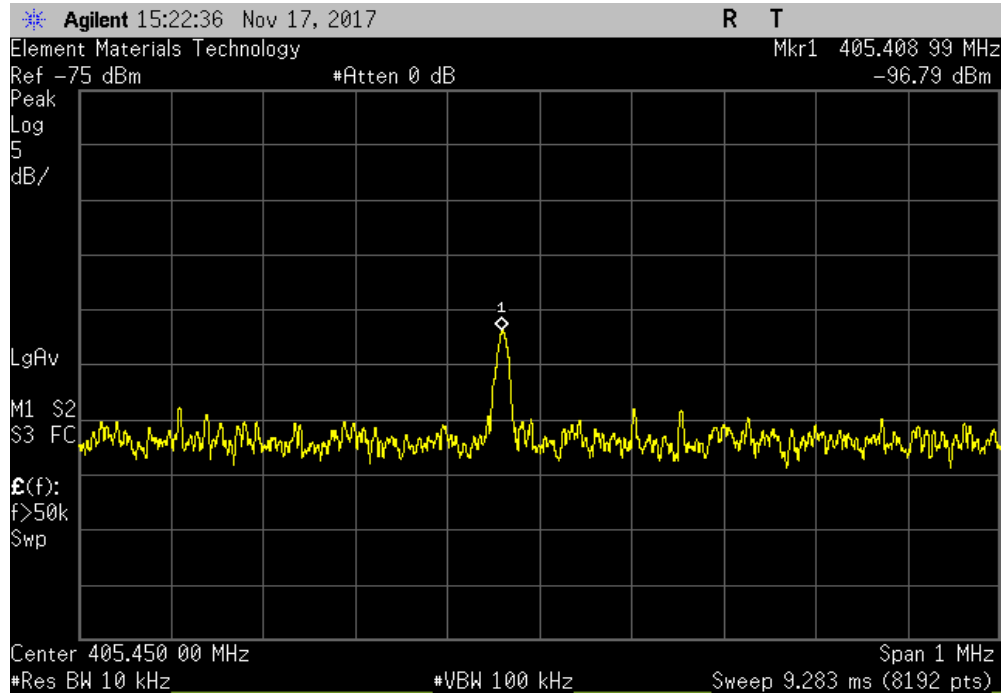


MONITORING SYSTEM BANDWIDTH

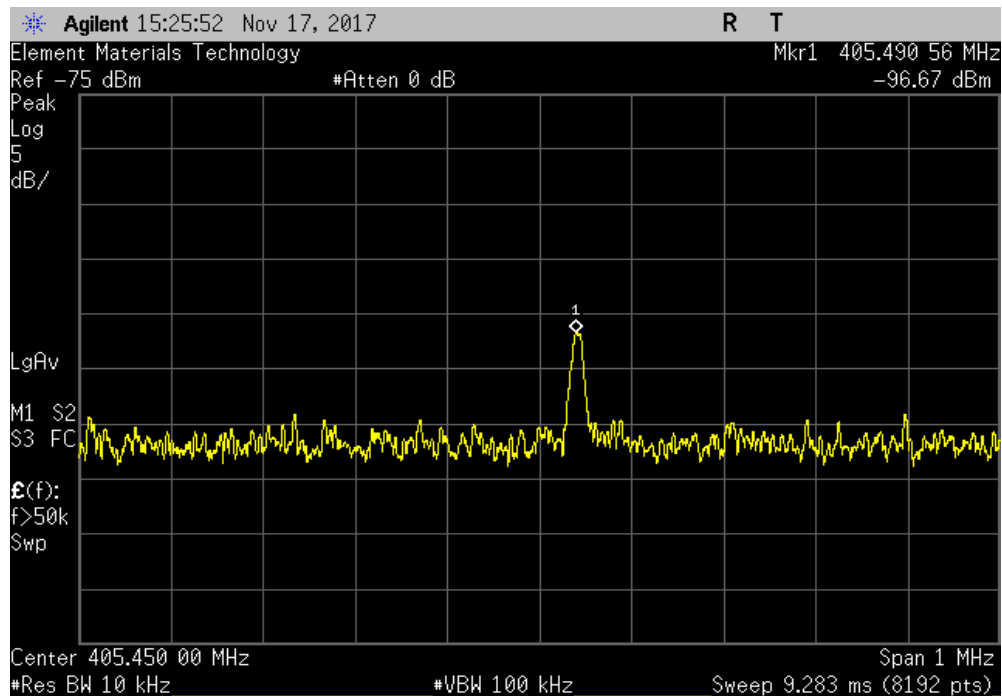


XMM 2017.09.21

405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, CW Signal on Fc - EBW/2 = (Pb)						
	Measured Value (dBm)	Delta Value (dB)	Limit (dB)	Result		
	-96.79	N/A	N/A	N/A		



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



MONITORING SYSTEM BANDWIDTH



XMR 2017.09.21

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

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

Calculation:, Mid Channel (Fc), 405.55 MHz, (Pa) - (Pb) = D1							
				Measured Value (dBm)	Delta Value (dB)	Limit (dB)	Result
				N/A	0.38	< 20	Pass

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

MONITORING SYSTEM BANDWIDTH



XMI 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

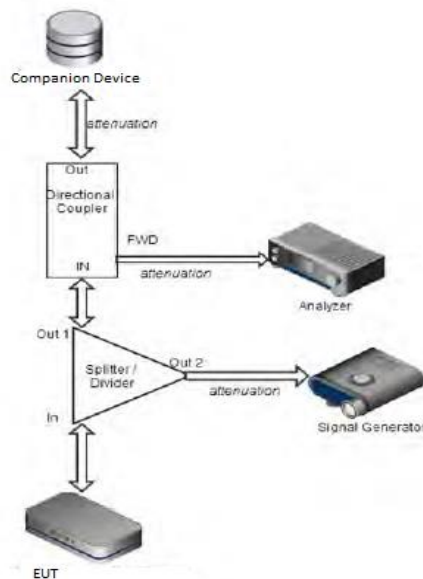
The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The EUT was configured according to the following block diagram.

The signal generator was set to multitone operation to cause equal interference across the entire band. The amplitude of the multitone signals (out of operation region) were set to the LBT threshold of $10 \cdot \log(\text{Bandwidth}) - 150 + \text{Antenna Gain} + 3 \text{ dB}$.

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

The blocking frequency at F_c was then lowered to $F_c - \text{Bandwidth} / 2$. The amplitude was then raised until the EUT chooses a channel other than F_c . This was repeated with the blocking frequency raised to $F_c + \text{Bandwidth} / 2$.

The signal generator amplitude at F_c was measured at each point.



MONITORING SYSTEM BANDWIDTH



XMI 2017.09.21

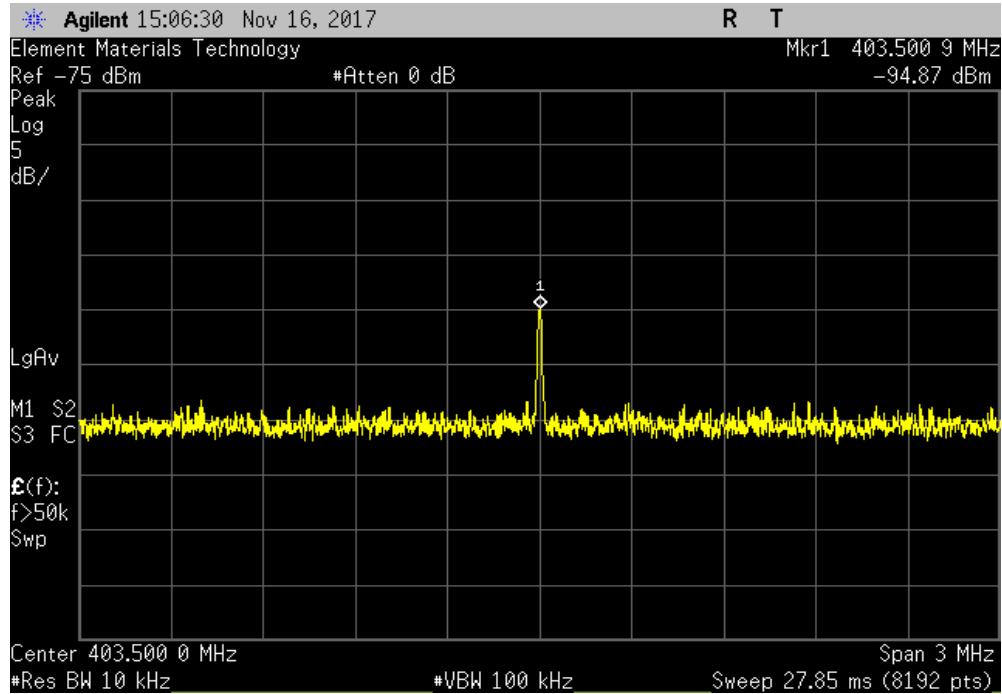
EUT: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)		Work Order: AXON0097	
Serial Number: AC1C870003		Date: 20-Nov-17	
Customer: Axonics Modulation Technologies, Inc.		Temperature: 21.4 °C	
Attendees: Franklin Portillo		Humidity: 45.7% RH	
Project: None		Barometric Pres.: 1018 mbar	
Tested by: Johnny Candelas		Power: 7.6VDC	
Job Site: OC13			
TEST SPECIFICATIONS		Test Method	
EN 301 839 V2.1.1:2016		EN 301 839 V2.1.1:2016	
COMMENTS			
Calculated LBT Threshold = $10 \cdot \log(\text{Bandwidth}) - 150 + \text{Antenna Gain} = -96.87 \text{ dBm}$. Emission Bandwidth = 127432 Hz, Antenna Gain = 2.08dBi.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	30	Signature	
		Measured Value (dBm)	Delta Value (dB)
		Limit (dB)	Result
Mid Channel (Fc), 403.5 MHz			
CW Signal on Fc = (Pa)		-94.87	N/A
CW Signal on Fc - EBW/2 = (Pb)		-94.76	N/A
CW Signal on Fc + EBW/2 = (Pc)		-94.69	N/A
Calculation: (Pa) - (Pb) = D1		N/A	1.30
Calculation: (Pa) - (Pc) = D2		N/A	1.26
			< 20
			Pass

MONITORING SYSTEM BANDWIDTH

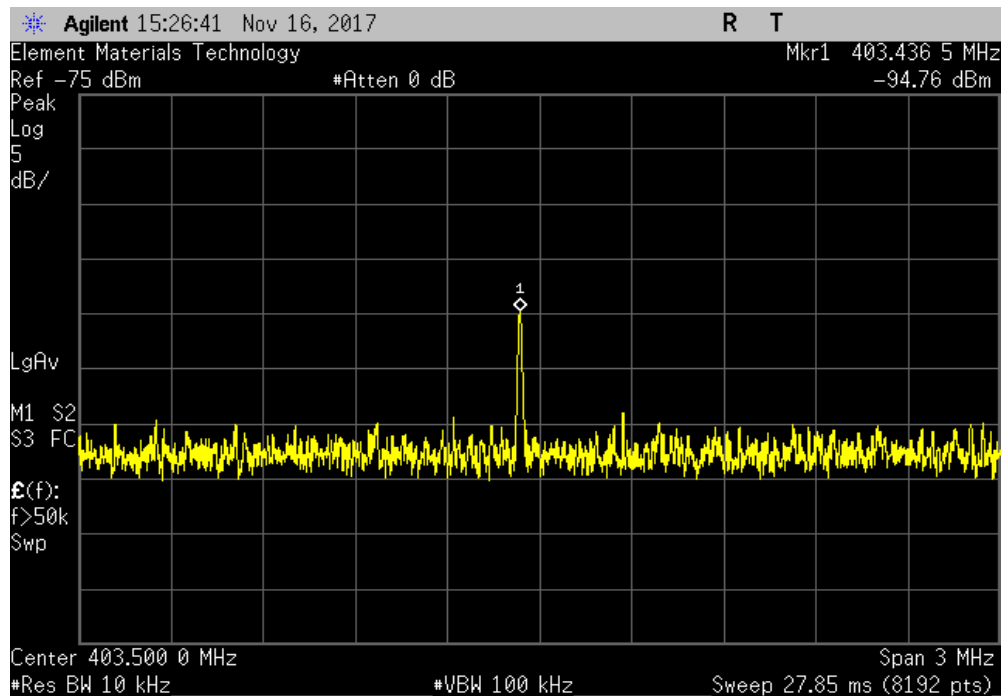


XMM 2017.09.21

Mid Channel (Fc), 403.5 MHz, CW Signal on Fc = (Pa)						
	Measured Value (dBm)	Delta Value (dB)	Limit (dB)	Result		
	-94.87	N/A	N/A	N/A		



Mid Channel (Fc), 403.5 MHz, CW Signal on Fc - EBW/2 = (Pb)						
	Measured Value (dBm)	Delta Value (dB)	Limit (dB)	Result		
	-94.76	N/A	N/A	N/A		

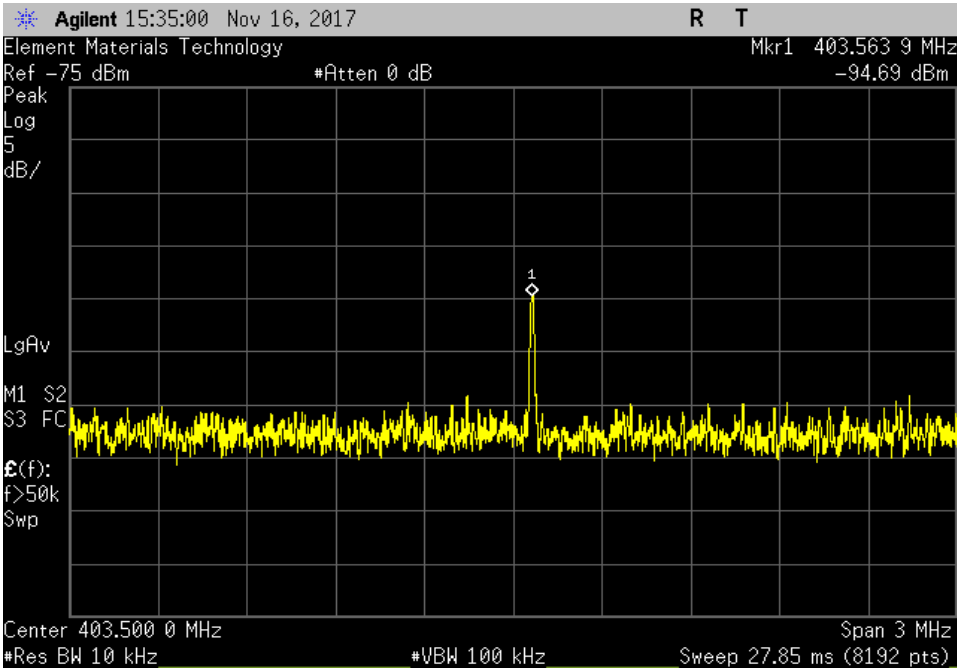


MONITORING SYSTEM BANDWIDTH



XMM 2017.09.21

Mid Channel (Fc), 403.5 MHz, CW Signal on Fc + EBW/2 = (Pc)							
	Measured Value (dBm)	Delta Value (dB)	Limit (dB)	Result			
	-94.69	N/A	N/A	N/A			



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

MONITORING SYSTEM SCAN CYCLE TIME



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

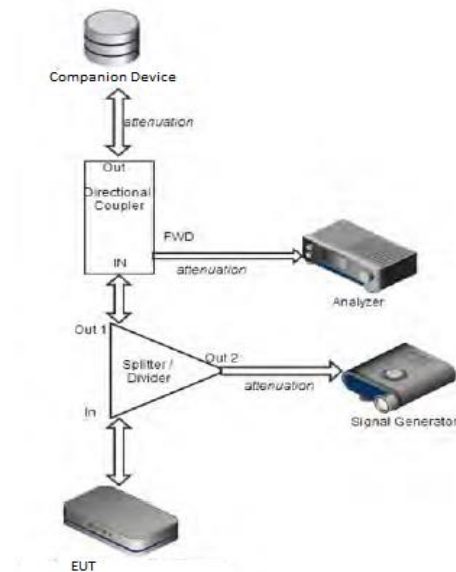
Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	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	AF4	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 interference 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 (F_c) was removed. At the same time, the EUT was set to seek a session with the implantable device. The delay between F_c becoming available and the EUT establishing a session was measured.





MONITORING SYSTEM SCAN CYCLE TIME

XMI 2017.09.21

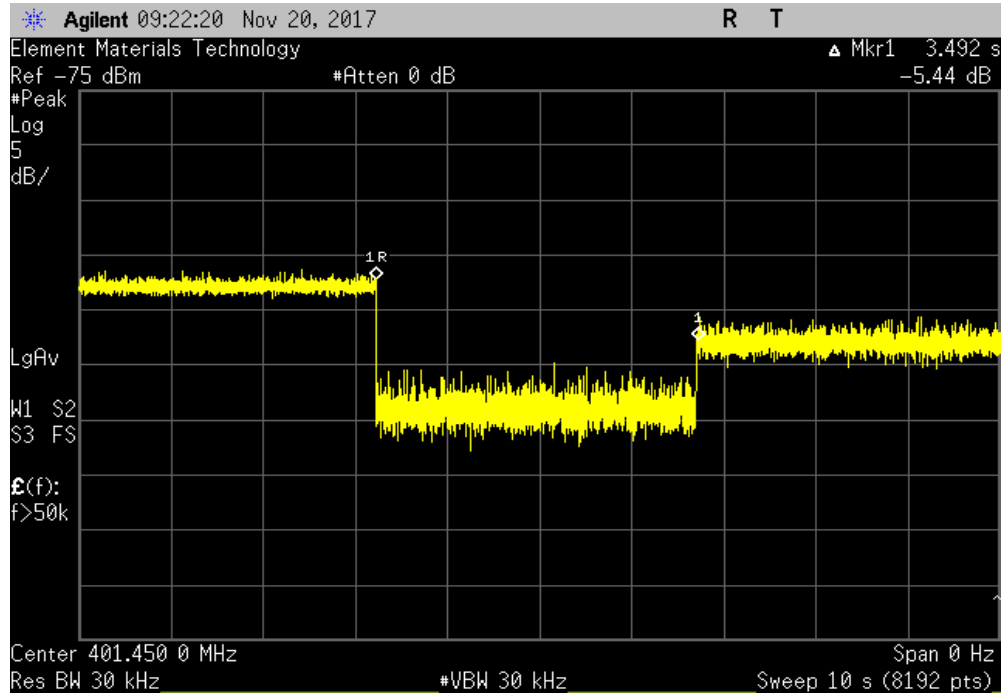
EUT: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)		Work Order: AXON0097					
Serial Number: AC1C870003		Date: 20-Nov-17					
Customer: Axonics Modulation Technologies, Inc.		Temperature: 21.4 °C					
Attendees: Franklin Portillo		Humidity: 45.7% RH					
Project: None		Barometric Pres.: 1018 mbar					
Tested by: Johnny Candelas		Power: 7.6VDC					
		Job Site: OC13					
TEST SPECIFICATIONS		Test Method					
EN 302 537 V2.1.1:2016		EN 302 537 V2.1.1:2016					
COMMENTS							
Calculated LBT Threshold = $10 * \text{LOG}(\text{Bandwidth}) - 150 + \text{Antenna Gain} = -98.75 \text{ dBm}$. Emission Bandwidth = 82582 Hz, Antenna Gain = 2.08dBi.							
DEVIATIONS FROM TEST STANDARD							
None							
Configuration #	30	Signature 					
		Value (Seconds)	Limit (Seconds)	Result			
401-402 MHz Band							
Mid Channel (Fc), 401.55 MHz							
Scan Cycle Time, Sample 1					3.492	≤ 5	Pass
Scan Cycle Time, Sample 2					3.398	≤ 5	Pass
Scan Cycle Time, Sample 3					3.448	≤ 5	Pass
Scan Cycle Time, Sample 4					2.928	≤ 5	Pass
Scan Cycle Time, Sample 5					3.121	≤ 5	Pass
Scan Cycle Time, Sample 6					2.858	≤ 5	Pass
Scan Cycle Time, Sample 7					3.028	≤ 5	Pass
Scan Cycle Time, Sample 8					2.727	≤ 5	Pass
Scan Cycle Time, Sample 9					2.880	≤ 5	Pass
Scan Cycle Time, Sample 10					2.805	≤ 5	Pass
405-406 MHz Band							
Mid Channel (Fc), 405.55 MHz							
Scan Cycle Time, Sample 1					2.899	≤ 5	Pass
Scan Cycle Time, Sample 2					3.012	≤ 5	Pass
Scan Cycle Time, Sample 3					2.707	≤ 5	Pass
Scan Cycle Time, Sample 4					2.786	≤ 5	Pass
Scan Cycle Time, Sample 5					2.929	≤ 5	Pass
Scan Cycle Time, Sample 6					2.727	≤ 5	Pass
Scan Cycle Time, Sample 7					2.982	≤ 5	Pass
Scan Cycle Time, Sample 8					3.381	≤ 5	Pass
Scan Cycle Time, Sample 9					3.239	≤ 5	Pass
Scan Cycle Time, Sample 10					3.098	≤ 5	Pass

MONITORING SYSTEM SCAN CYCLE TIME

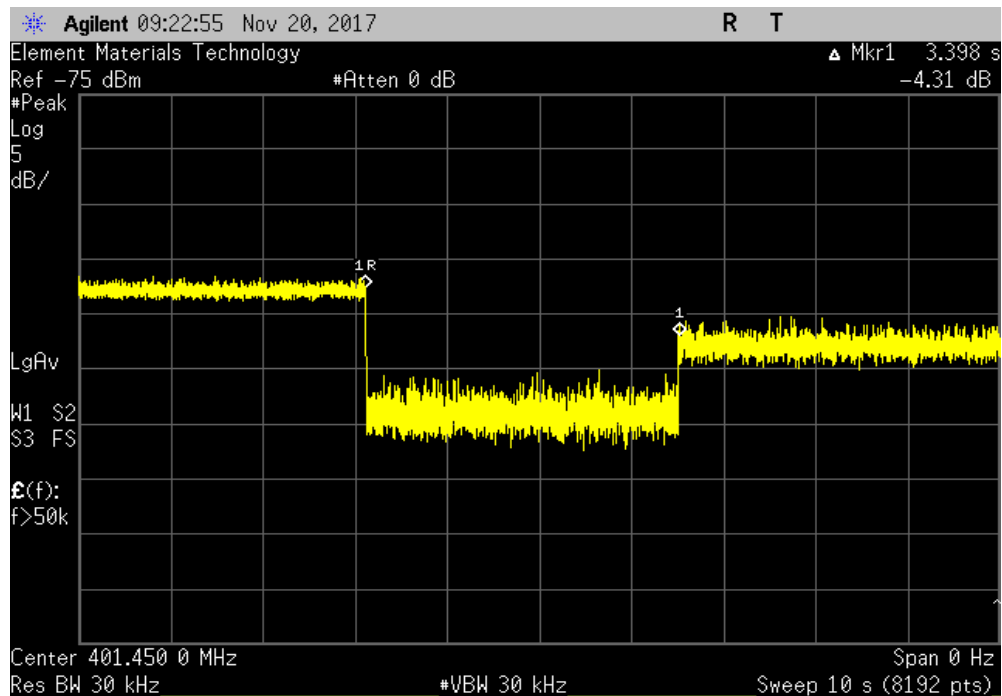


XMM 2017.09.21

401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Scan Cycle Time, Sample 1						
				Value (Seconds)	Limit (Seconds)	Result
				3.492	≤ 5	Pass



401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Scan Cycle Time, Sample 2						
				Value (Seconds)	Limit (Seconds)	Result
				3.398	≤ 5	Pass

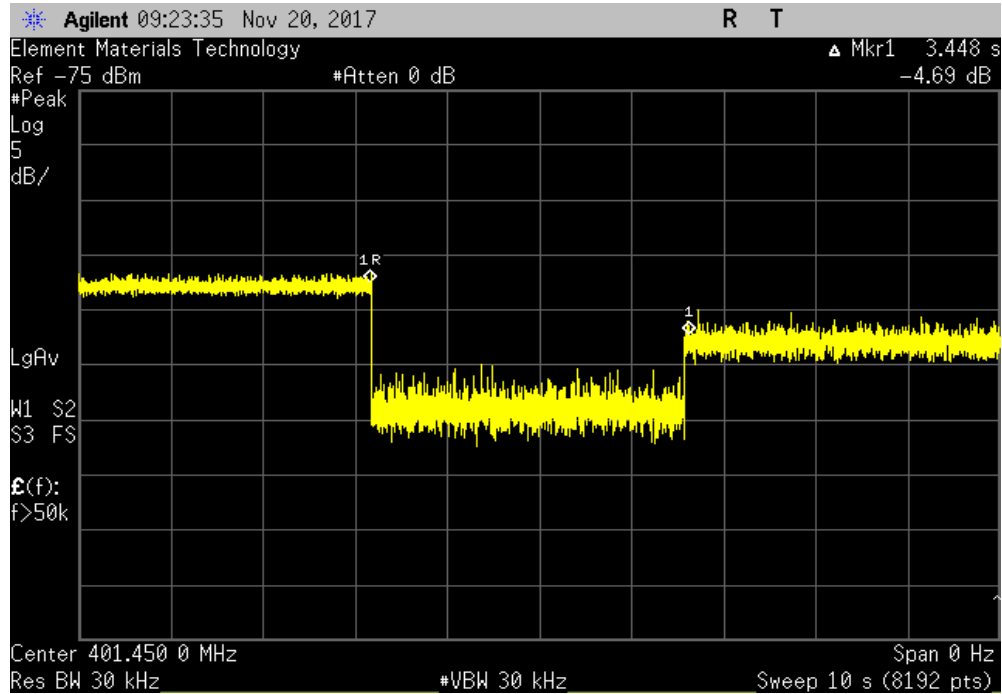


MONITORING SYSTEM SCAN CYCLE TIME

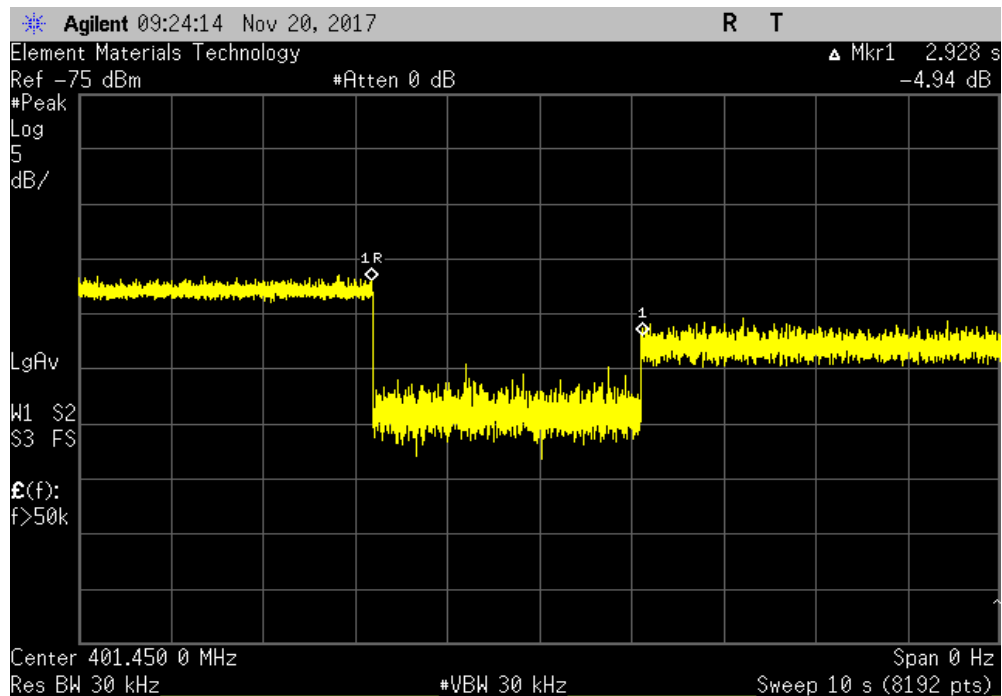


XMM 2017.09.21

401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Scan Cycle Time, Sample 3						
				Value (Seconds)	Limit (Seconds)	Result
				3.448	≤ 5	Pass



401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Scan Cycle Time, Sample 4						
				Value (Seconds)	Limit (Seconds)	Result
				2.928	≤ 5	Pass

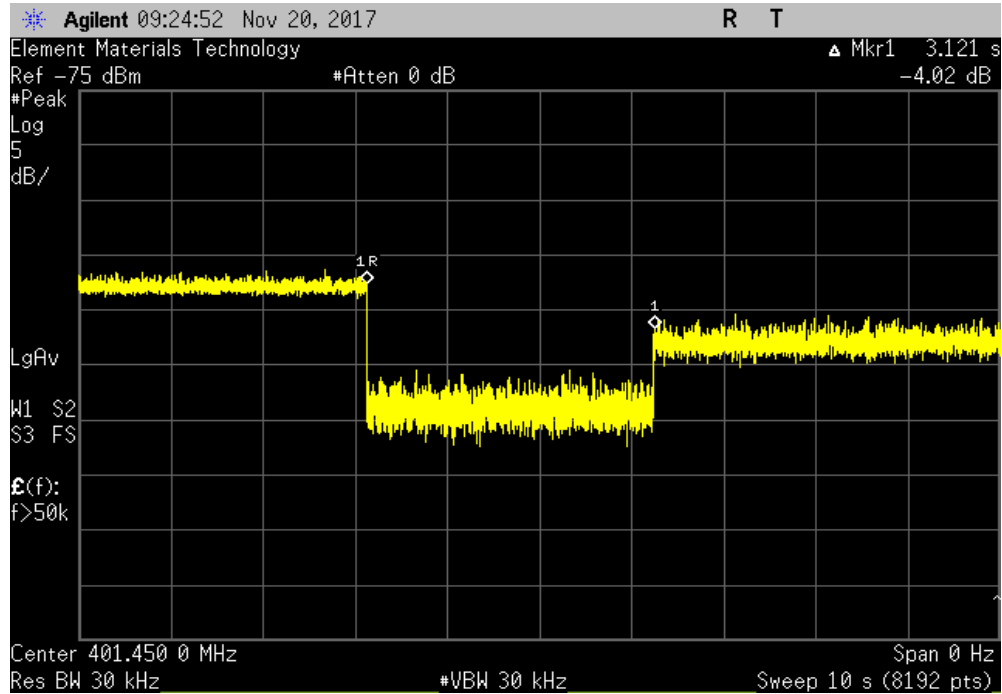


MONITORING SYSTEM SCAN CYCLE TIME

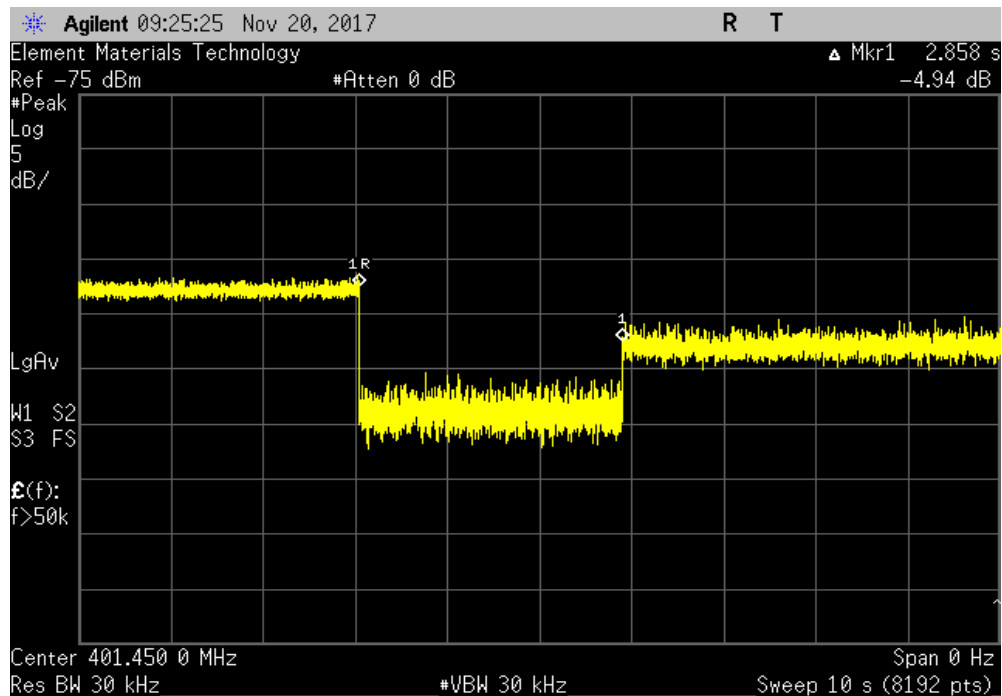


XMM 2017.09.21

401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Scan Cycle Time, Sample 5						
				Value (Seconds)	Limit (Seconds)	Result
				3.121	≤ 5	Pass



401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Scan Cycle Time, Sample 6						
				Value (Seconds)	Limit (Seconds)	Result
				2.858	≤ 5	Pass

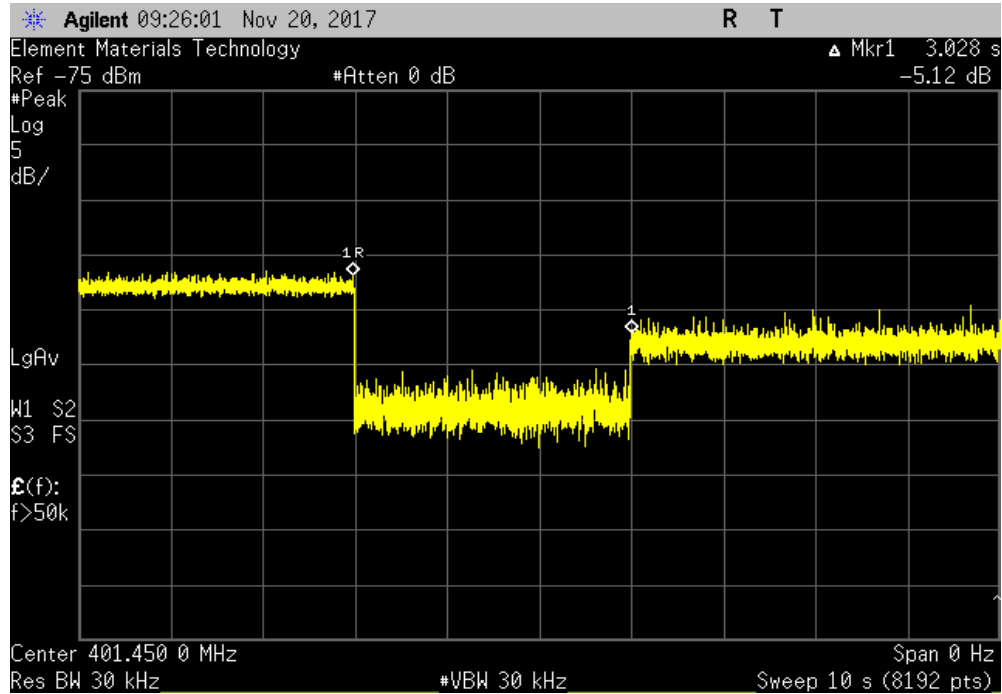


MONITORING SYSTEM SCAN CYCLE TIME

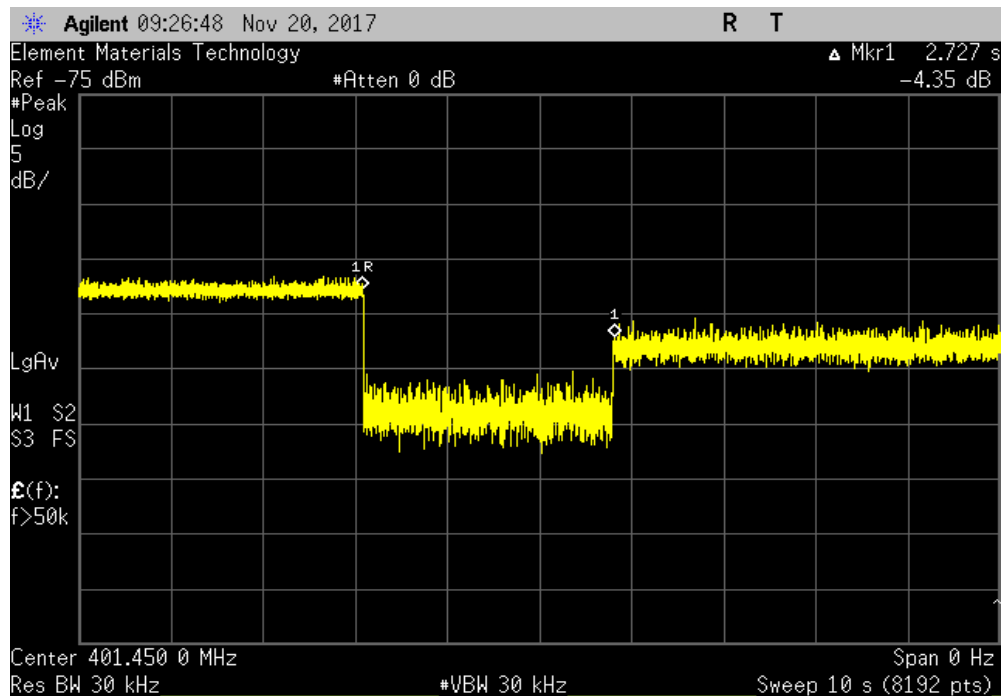


XMM 2017.09.21

401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Scan Cycle Time, Sample 7						
				Value (Seconds)	Limit (Seconds)	Result
				3.028	≤ 5	Pass



401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Scan Cycle Time, Sample 8						
				Value (Seconds)	Limit (Seconds)	Result
				2.727	≤ 5	Pass

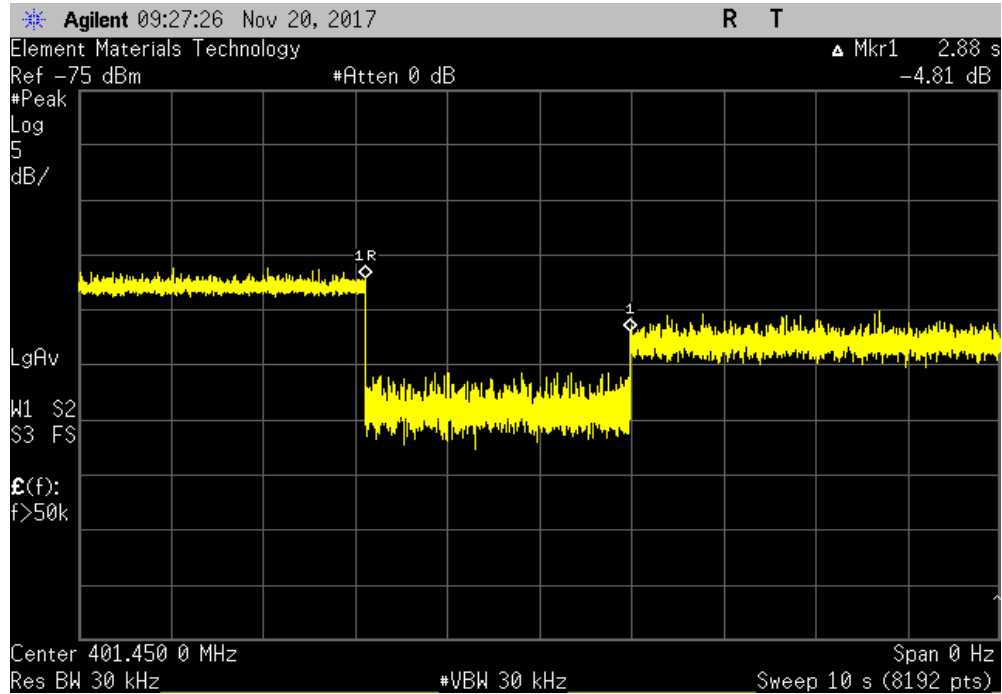


MONITORING SYSTEM SCAN CYCLE TIME

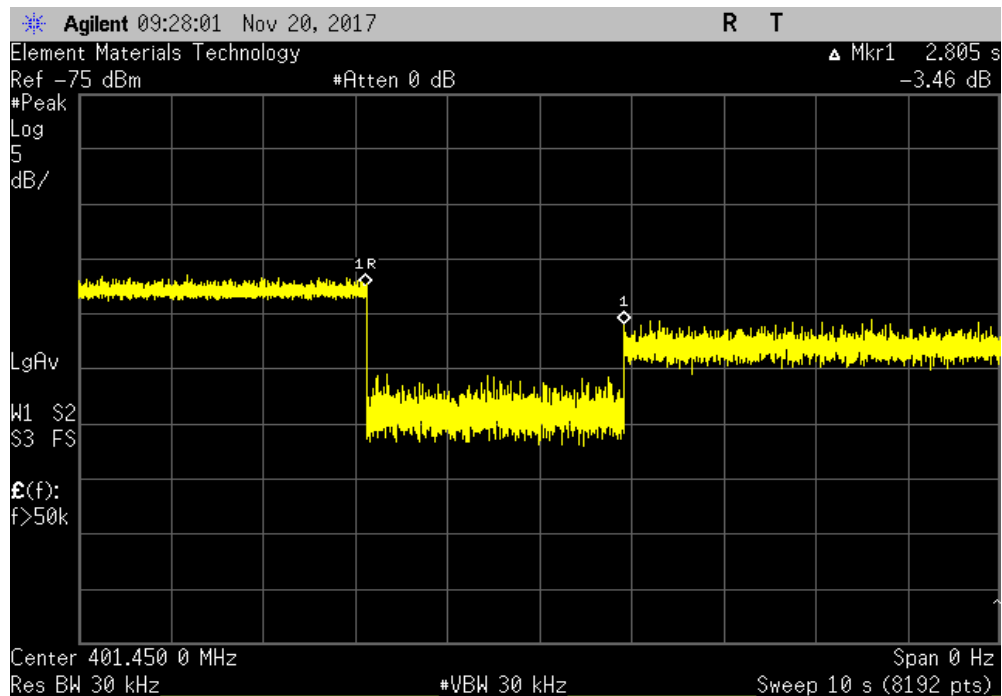


XMM 2017.09.21

401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Scan Cycle Time, Sample 9						
				Value (Seconds)	Limit (Seconds)	Result
				2.880	≤ 5	Pass



401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Scan Cycle Time, Sample 10						
				Value (Seconds)	Limit (Seconds)	Result
				2.805	≤ 5	Pass

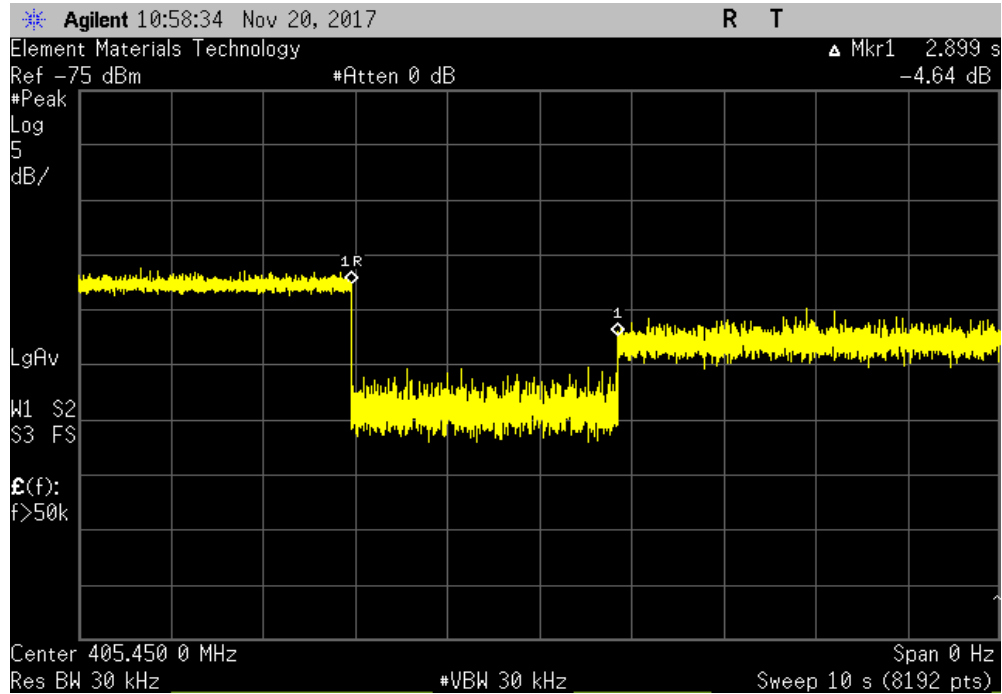


MONITORING SYSTEM SCAN CYCLE TIME

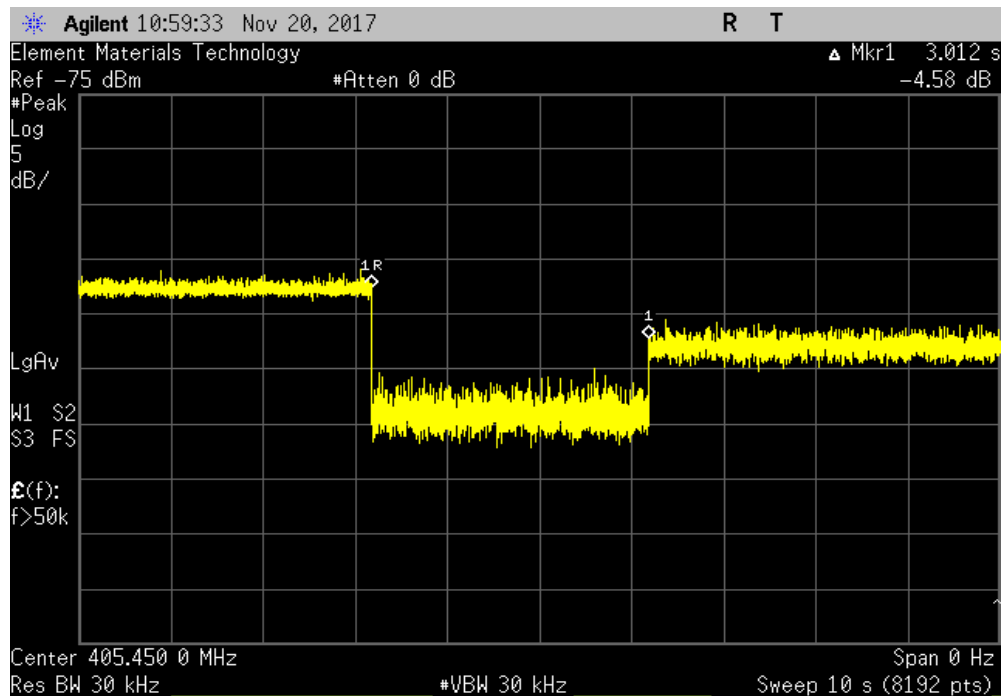


XMM 2017.09.21

405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Scan Cycle Time, Sample 1						
				Value (Seconds)	Limit (Seconds)	Result
				2.899	≤ 5	Pass



405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Scan Cycle Time, Sample 2						
				Value (Seconds)	Limit (Seconds)	Result
				3.012	≤ 5	Pass

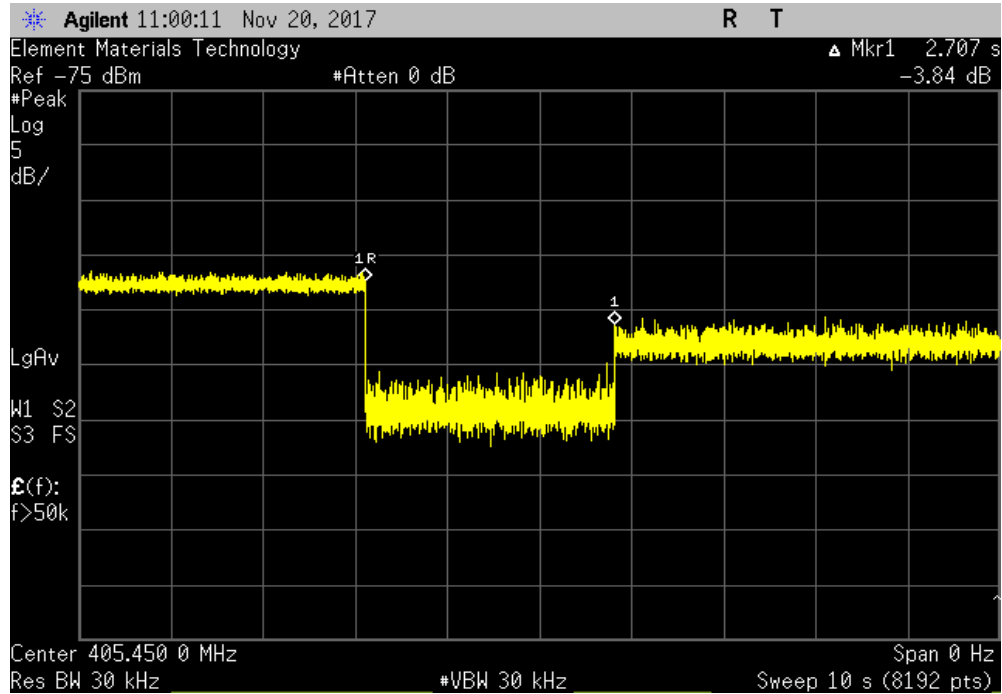


MONITORING SYSTEM SCAN CYCLE TIME

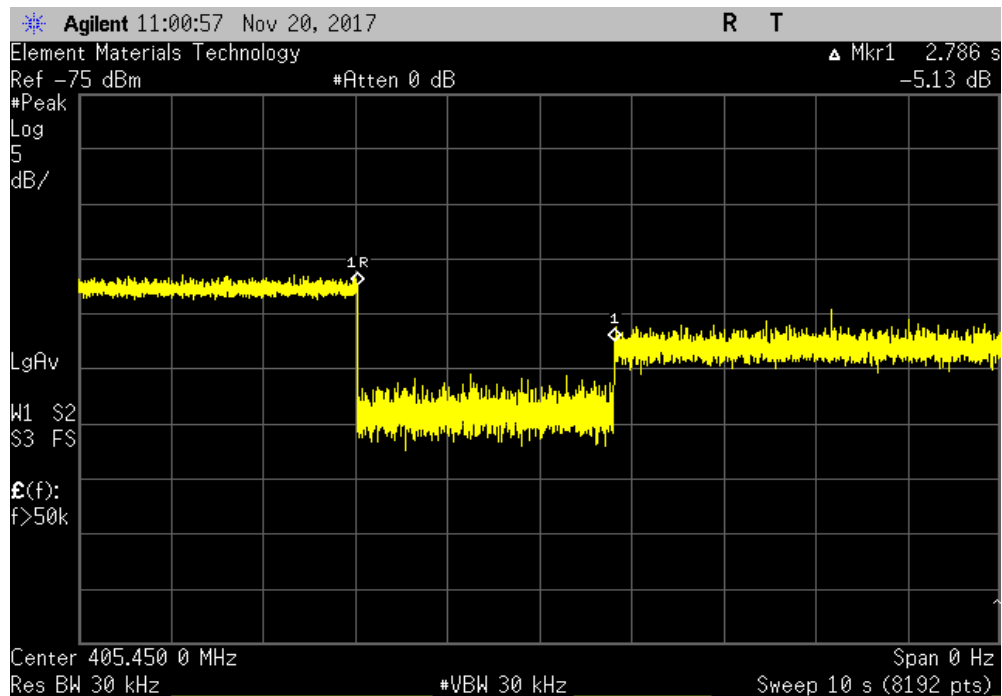


XMM 2017.09.21

405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Scan Cycle Time, Sample 3						
				Value (Seconds)	Limit (Seconds)	Result
				2.707	≤ 5	Pass



405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Scan Cycle Time, Sample 4						
				Value (Seconds)	Limit (Seconds)	Result
				2.786	≤ 5	Pass

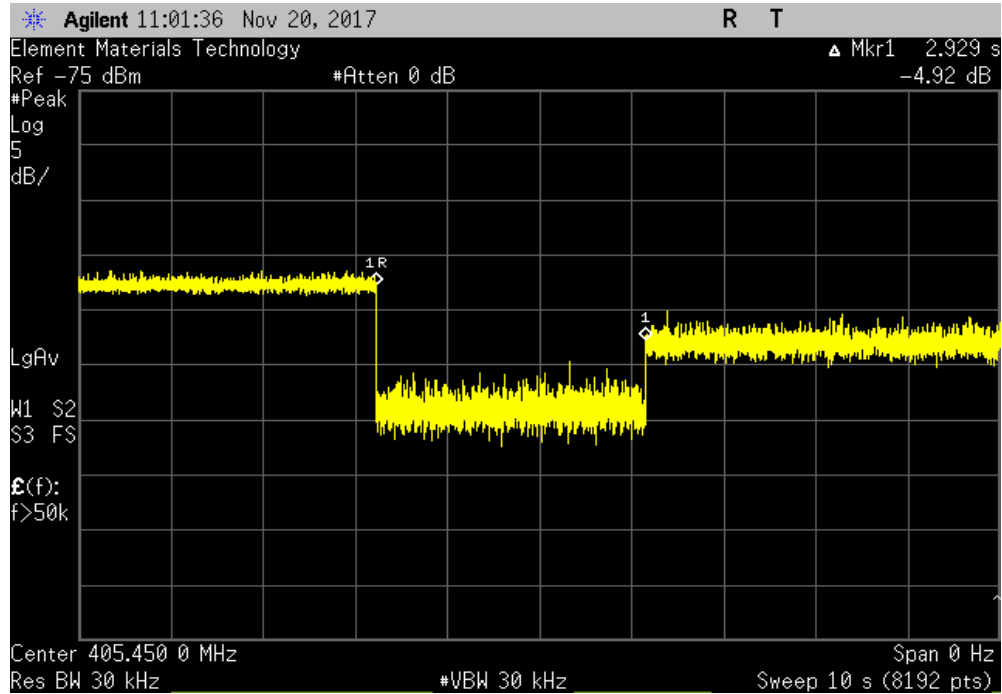


MONITORING SYSTEM SCAN CYCLE TIME

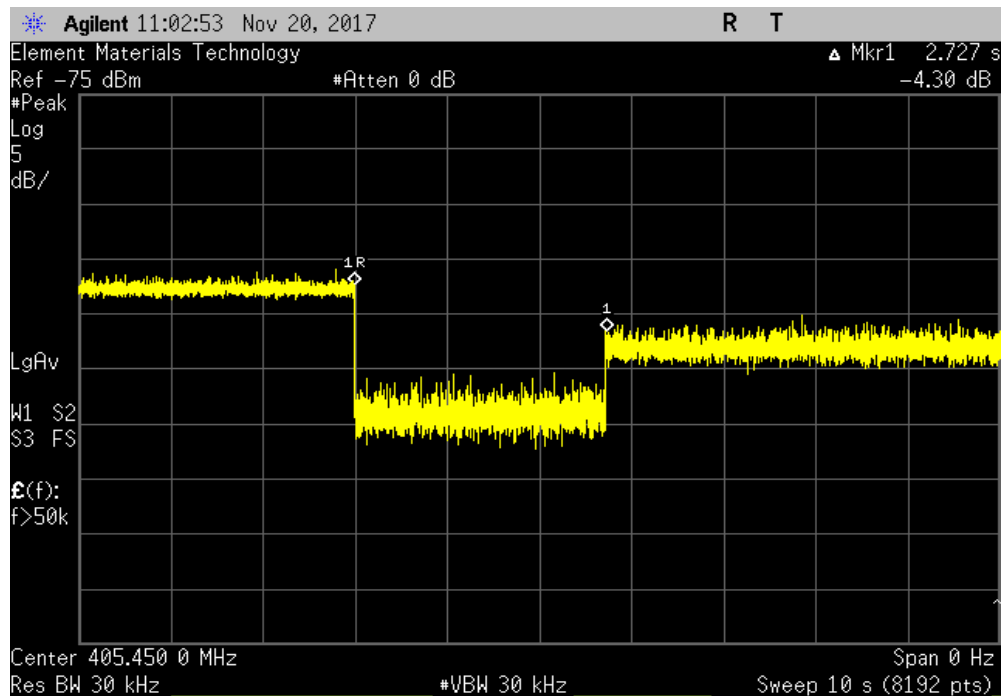


XMI 2017.09.21

405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Scan Cycle Time, Sample 5						
				Value (Seconds)	Limit (Seconds)	Result
				2.929	≤ 5	Pass



405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Scan Cycle Time, Sample 6						
				Value (Seconds)	Limit (Seconds)	Result
				2.727	≤ 5	Pass

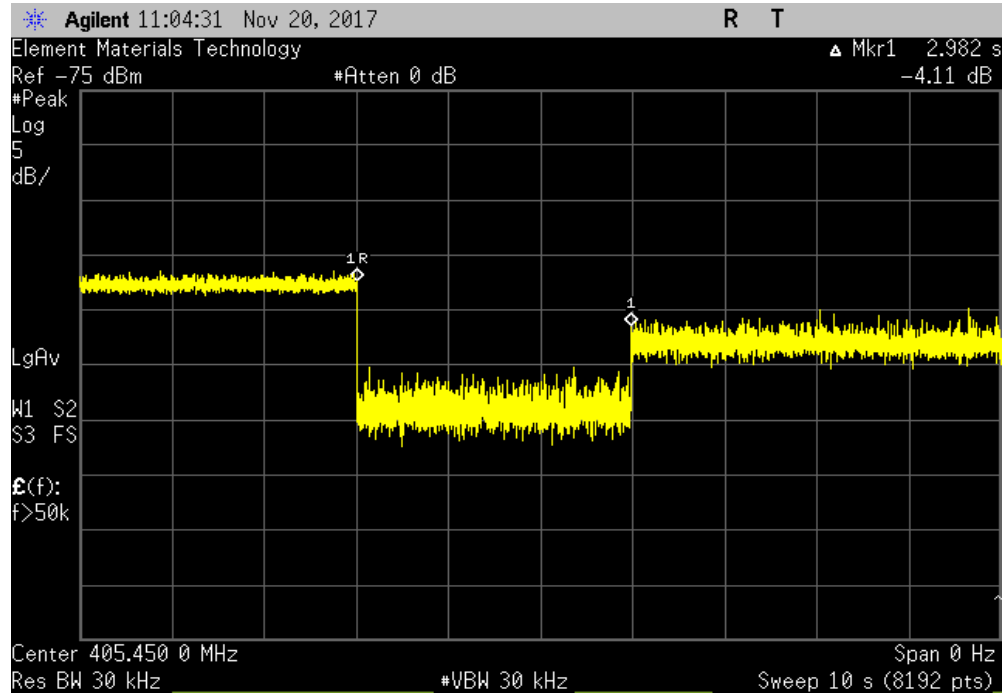


MONITORING SYSTEM SCAN CYCLE TIME

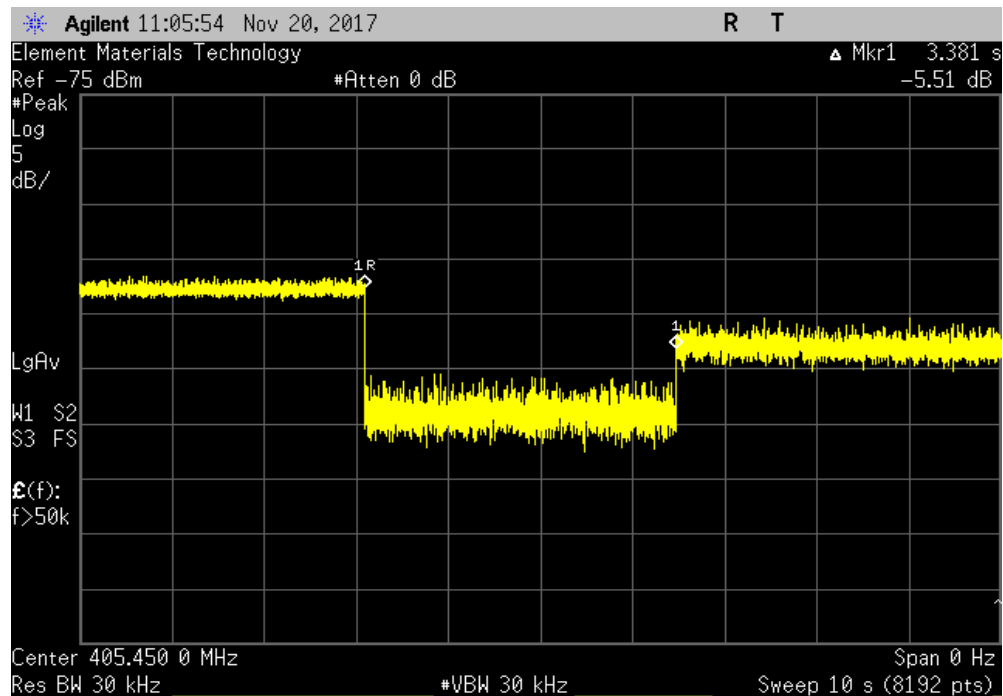


XMI 2017.09.21

405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Scan Cycle Time, Sample 7						
				Value (Seconds)	Limit (Seconds)	Result
				2.982	≤ 5	Pass



405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Scan Cycle Time, Sample 8						
				Value (Seconds)	Limit (Seconds)	Result
				3.381	≤ 5	Pass



MONITORING SYSTEM SCAN CYCLE TIME



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

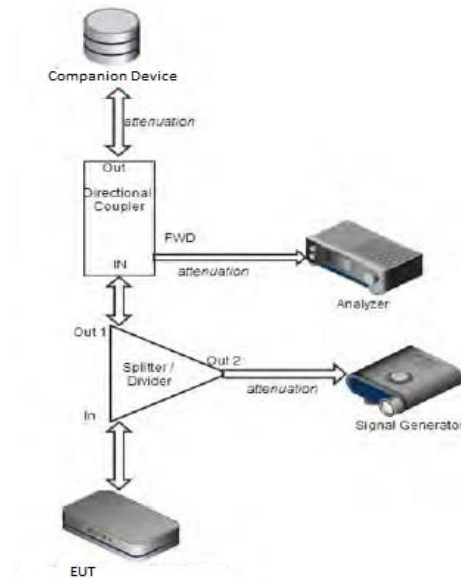
Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	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 interference 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 (F_c) was removed. At the same time, the EUT was set to seek a session with the implantable device. The delay between F_c becoming available and the EUT establishing a session was measured.



MONITORING SYSTEM SCAN CYCLE TIME



XMM 2017.09.21

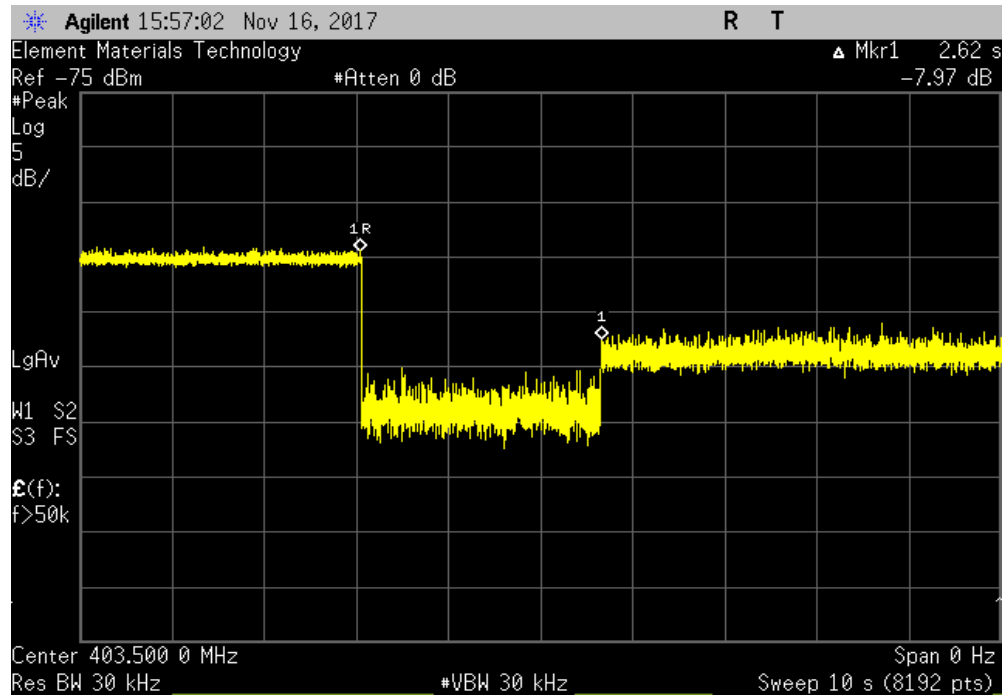
EUT: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)		Work Order: AXON0097	
Serial Number: AC1C870003		Date: 20-Nov-17	
Customer: Axonics Modulation Technologies, Inc.		Temperature: 21.4 °C	
Attendees: Franklin Portillo		Humidity: 45.7% RH	
Project: None		Barometric Pres.: 1018 mbar	
Tested by: Johnny Candelas		Power: 7.6VDC	
		Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
EN 301 839 V2.1.1:2016		EN 301 839 V2.1.1:2016	
COMMENTS			
Calculated LBT Threshold = $10 * \text{LOG}(\text{Bandwidth}) - 150 + \text{Antenna Gain} = -96.87 \text{ dBm}$. Emission Bandwidth = 127432 Hz, Antenna Gain = 2.08dBi.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	30	Signature 	
		Value (Seconds)	Limit (Seconds)
Mid Channel (Fc), 403.5 MHz			
Scan Cycle Time, Sample 1		2.620	≤ 5
Scan Cycle Time, Sample 2		2.548	≤ 5
Scan Cycle Time, Sample 3		3.347	≤ 5
Scan Cycle Time, Sample 4		3.162	≤ 5
Scan Cycle Time, Sample 5		2.755	≤ 5
Scan Cycle Time, Sample 6		2.617	≤ 5
Scan Cycle Time, Sample 7		2.572	≤ 5
Scan Cycle Time, Sample 8		2.228	≤ 5
Scan Cycle Time, Sample 9		2.869	≤ 5
Scan Cycle Time, Sample 10		2.380	≤ 5
			Result
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass

MONITORING SYSTEM SCAN CYCLE TIME

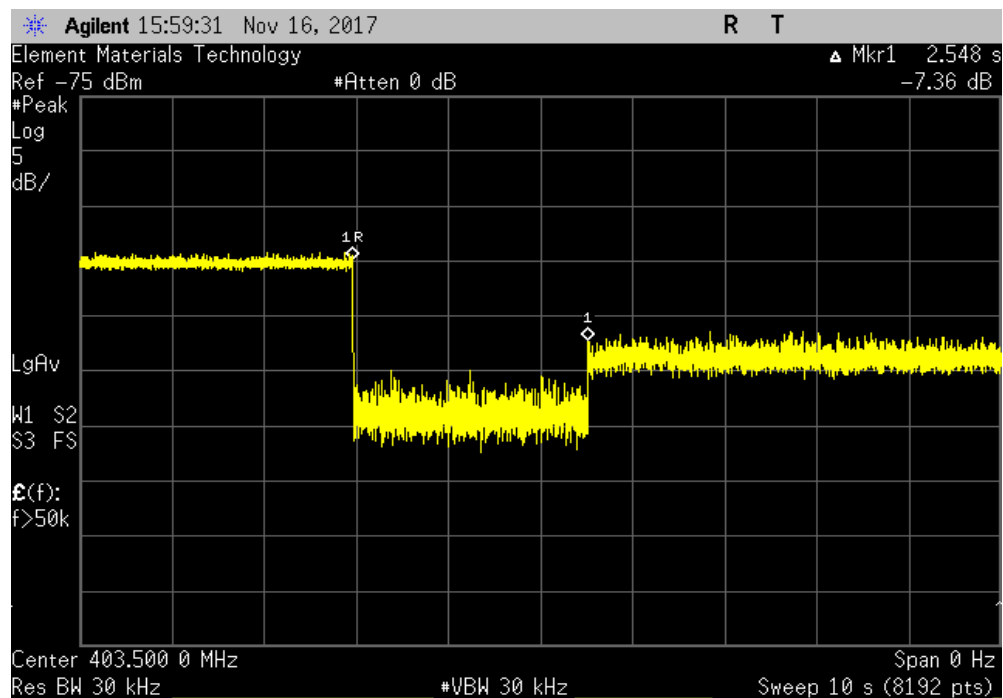


XMI 2017.09.21

Mid Channel (Fc), 403.5 MHz, Scan Cycle Time, Sample 1						
				Value (Seconds)	Limit (Seconds)	Result
				2.620	≤ 5	Pass



Mid Channel (Fc), 403.5 MHz, Scan Cycle Time, Sample 2						
				Value (Seconds)	Limit (Seconds)	Result
				2.548	≤ 5	Pass

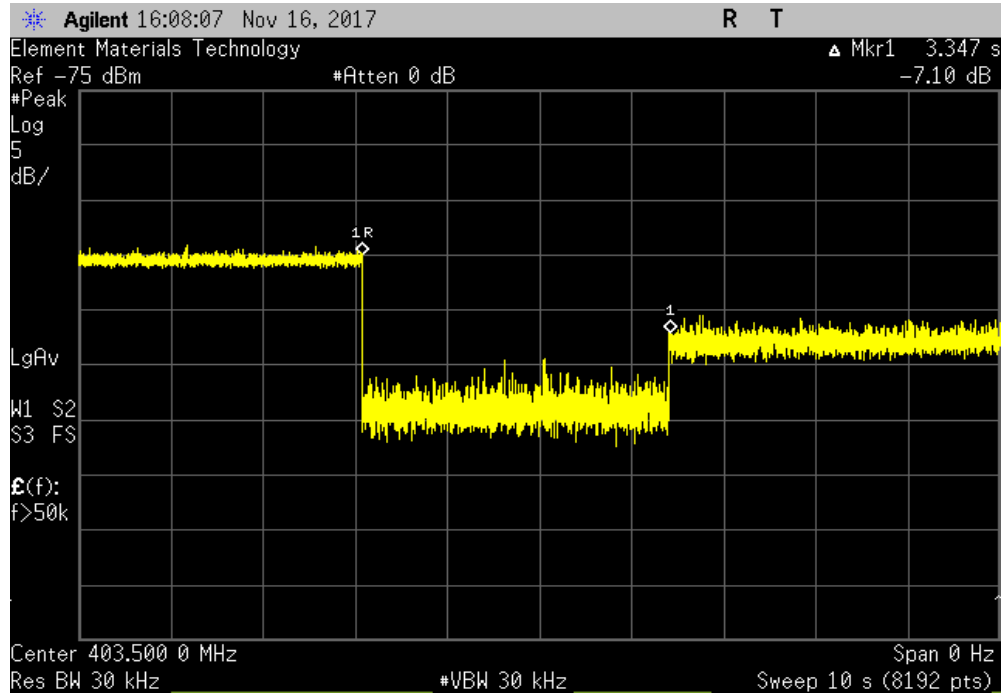


MONITORING SYSTEM SCAN CYCLE TIME

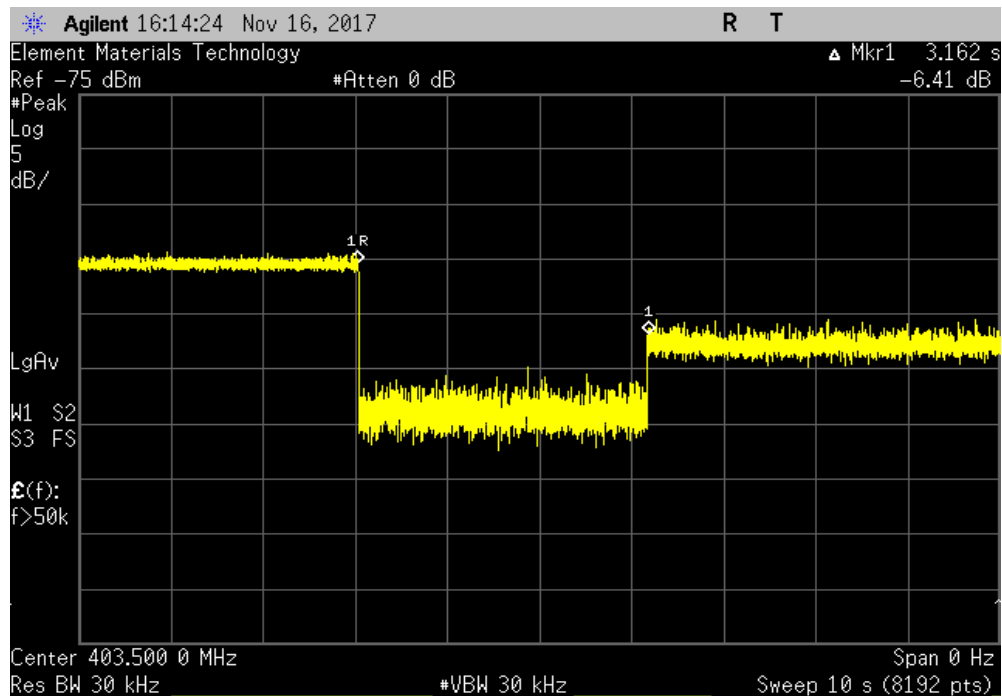


XMM 2017.09.21

Mid Channel (Fc), 403.5 MHz, Scan Cycle Time, Sample 3						
				Value (Seconds)	Limit (Seconds)	Result
				3.347	≤ 5	Pass



Mid Channel (Fc), 403.5 MHz, Scan Cycle Time, Sample 4						
				Value (Seconds)	Limit (Seconds)	Result
				3.162	≤ 5	Pass

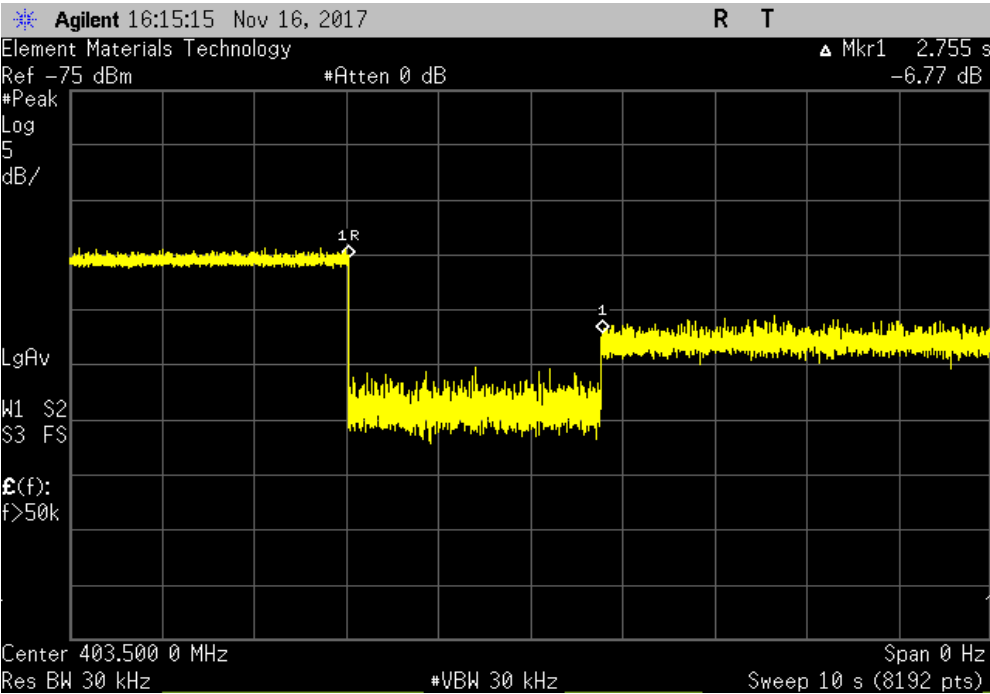


MONITORING SYSTEM SCAN CYCLE TIME

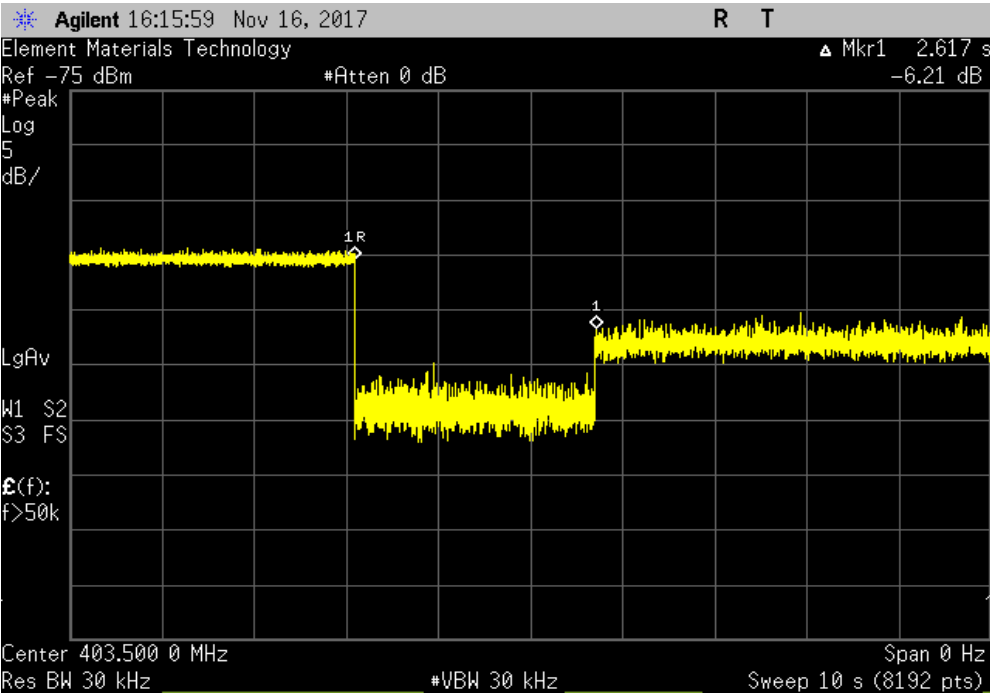


XMM 2017.09.21

Mid Channel (Fc), 403.5 MHz, Scan Cycle Time, Sample 5						
				Value (Seconds)	Limit (Seconds)	Result
				2.755	≤ 5	Pass



Mid Channel (Fc), 403.5 MHz, Scan Cycle Time, Sample 6						
				Value (Seconds)	Limit (Seconds)	Result
				2.617	≤ 5	Pass

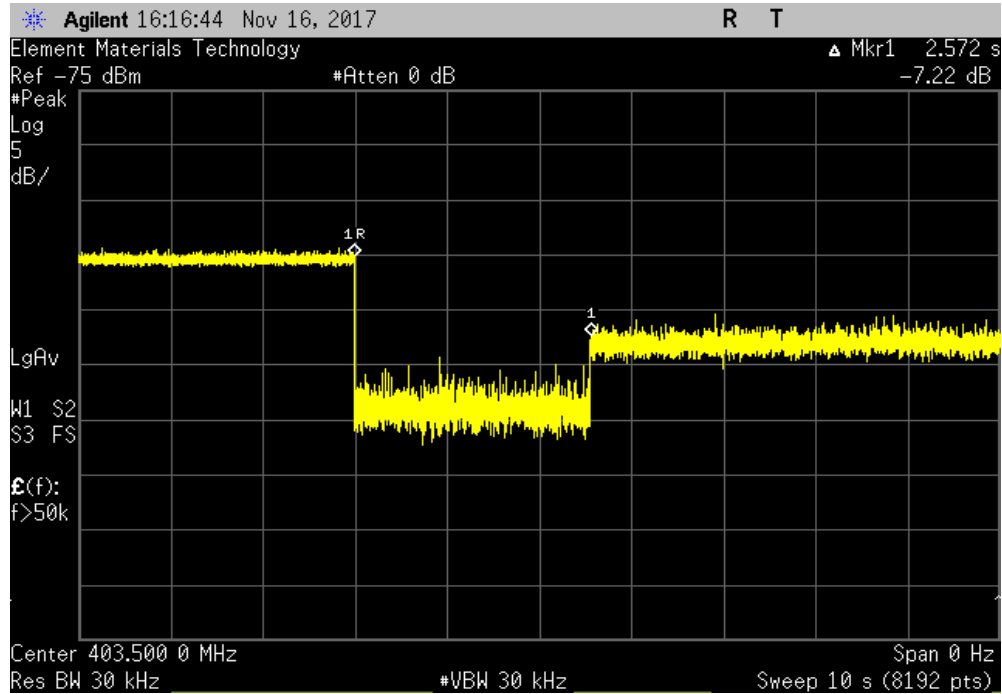


MONITORING SYSTEM SCAN CYCLE TIME

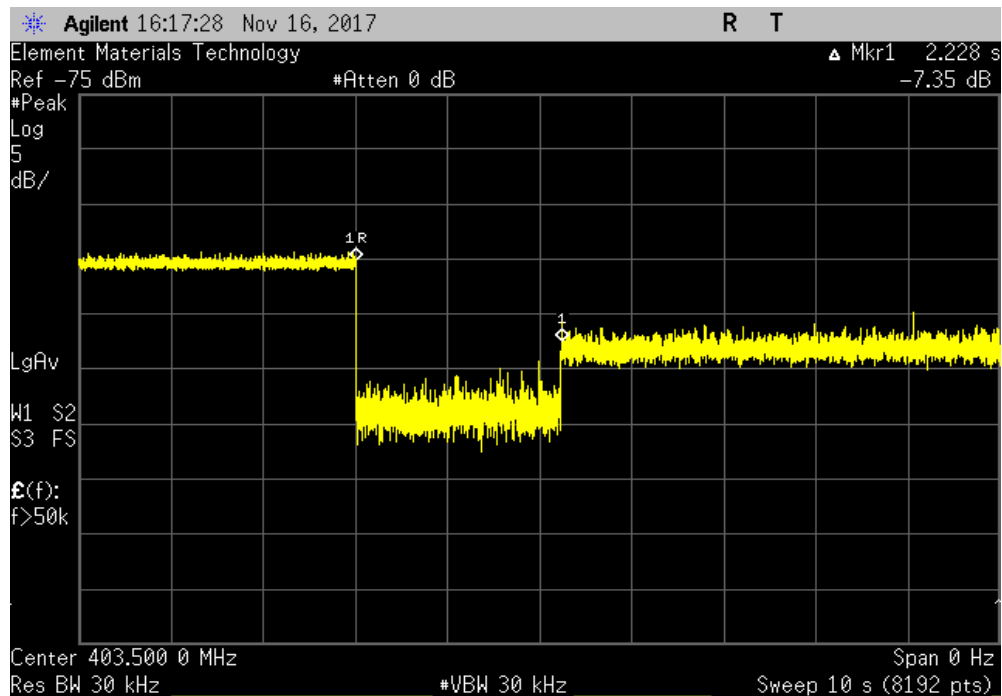


XMI 2017.09.21

Mid Channel (Fc), 403.5 MHz, Scan Cycle Time, Sample 7						
				Value (Seconds)	Limit (Seconds)	Result
				2.572	≤ 5	Pass



Mid Channel (Fc), 403.5 MHz, Scan Cycle Time, Sample 8						
				Value (Seconds)	Limit (Seconds)	Result
				2.228	≤ 5	Pass

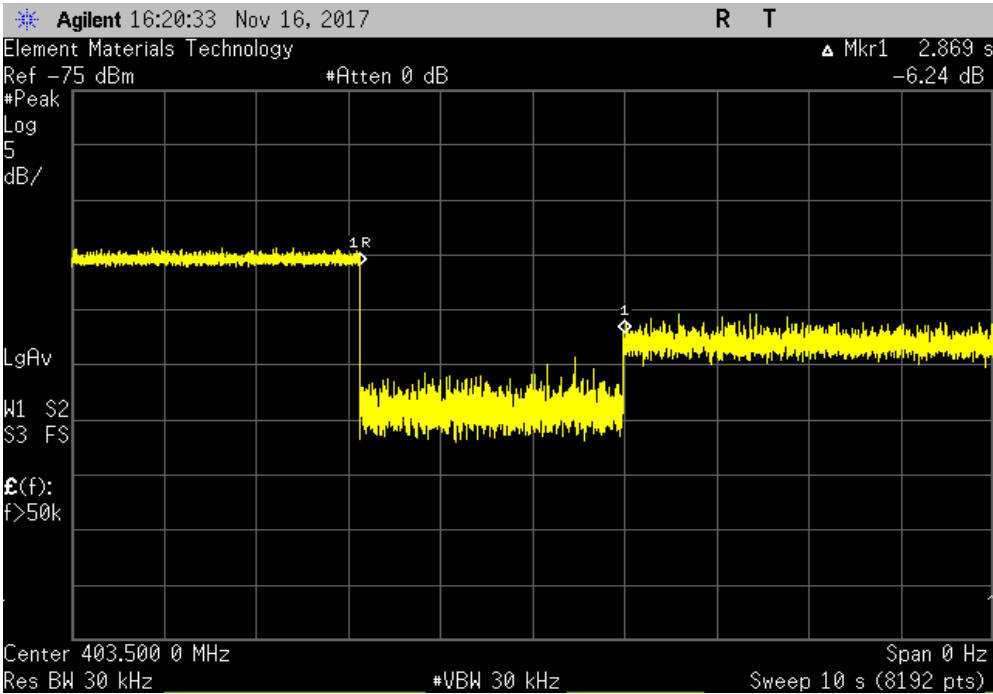


MONITORING SYSTEM SCAN CYCLE TIME

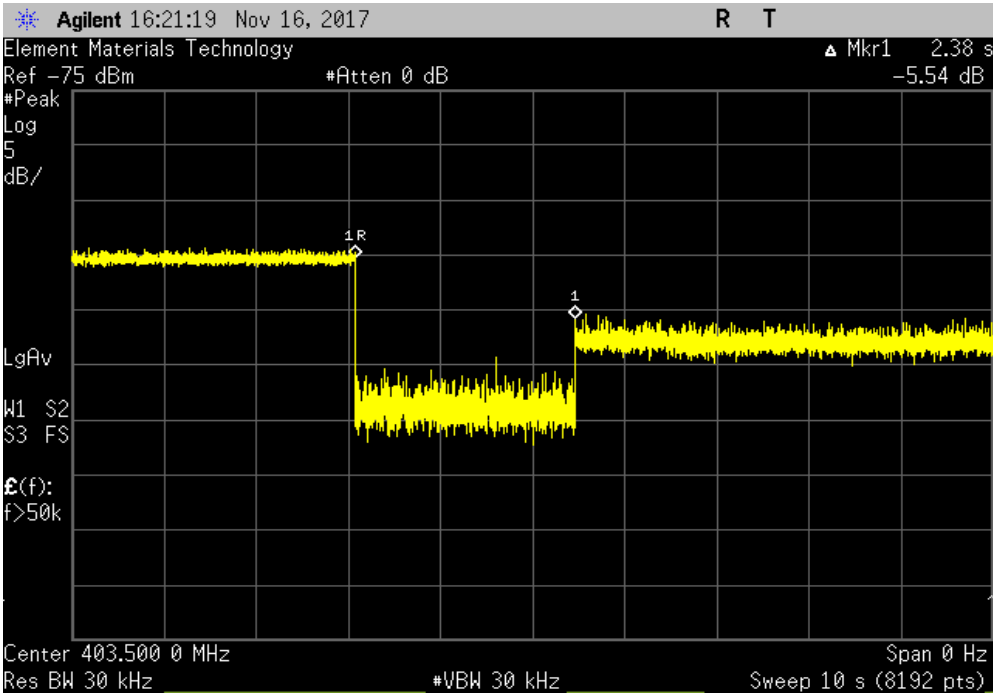


XMM 2017.09.21

Mid Channel (Fc), 403.5 MHz, Scan Cycle Time, Sample 9						
				Value (Seconds)	Limit (Seconds)	Result
				2.869	≤ 5	Pass



Mid Channel (Fc), 403.5 MHz, Scan Cycle Time, Sample 10						
				Value (Seconds)	Limit (Seconds)	Result
				2.380	≤ 5	Pass



MINIMUM CHANNEL MONITORING PERIOD



XMH 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

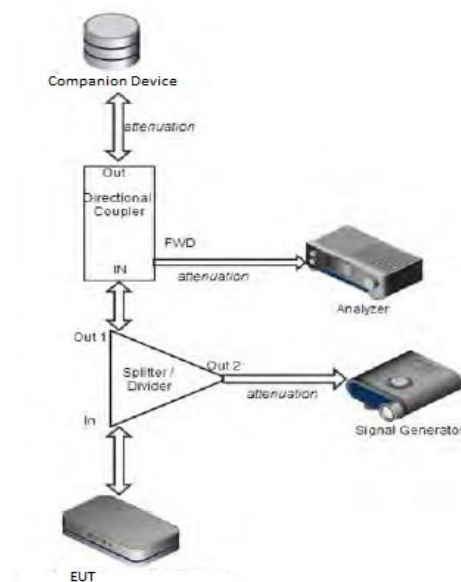
Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	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 interference 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.





MINIMUM CHANNEL MONITORING PERIOD

XMI 2017.09.21

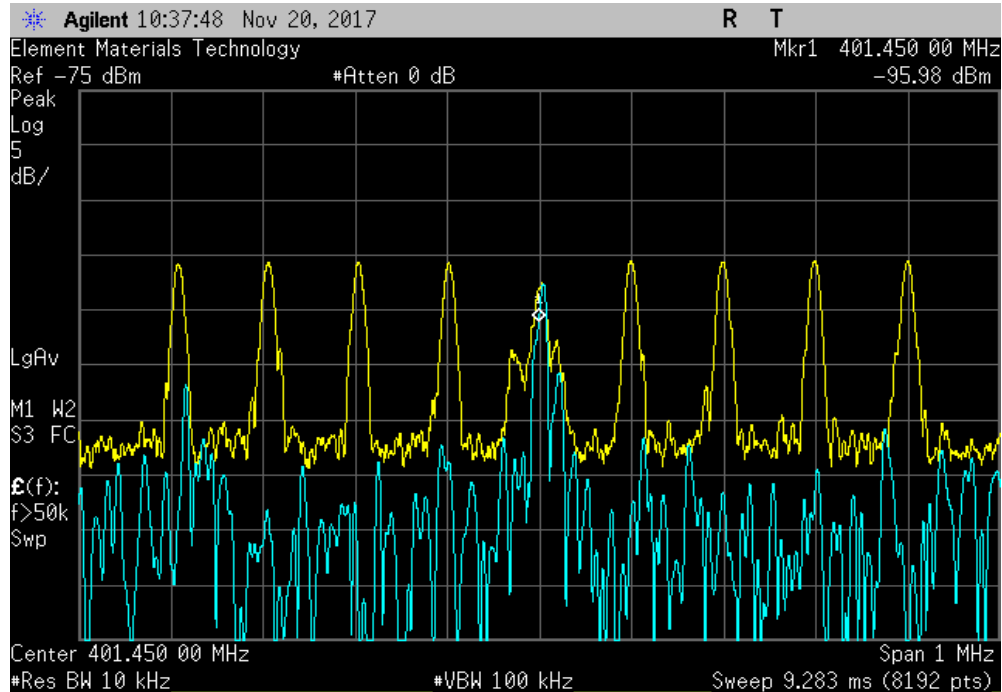
EUT: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)		Work Order: AXON0097	
Serial Number: AC1C870003		Date: 20-Nov-17	
Customer: Axonics Modulation Technologies, Inc.		Temperature: 21.4 °C	
Attendees: Franklin Portillo		Humidity: 45.7% RH	
Project: None		Barometric Pres.: 1018 mbar	
Tested by: Johnny Candelas		Power: 7.6VDC	
		Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
EN 302 537 V2.1.1:2016		EN 302 537 V2.1.1:2016	
COMMENTS			
Calculated LBT Threshold = $10 \cdot \text{LOG}(\text{Bandwidth}) - 150 + \text{Antenna Gain} = -98.75 \text{ dBm}$. Emission Bandwidth = 82582 Hz, Antenna Gain = 2.08dBi.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	30	Signature 	
		Does EUT Initiate Communications on Fc? (Y/N)	Result
401-402 MHz Band			
Mid Channel (Fc), 401.55 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
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

MINIMUM CHANNEL MONITORING PERIOD

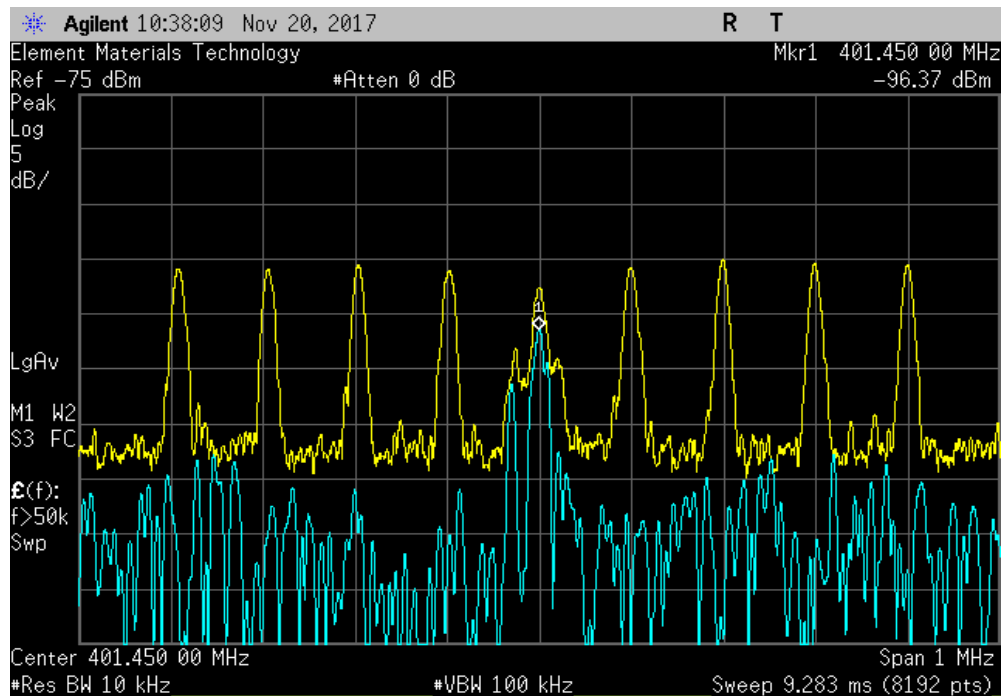


XMM 2017.09.21

401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Monitoring Period Sample 1					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass



401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Monitoring Period Sample 2					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass

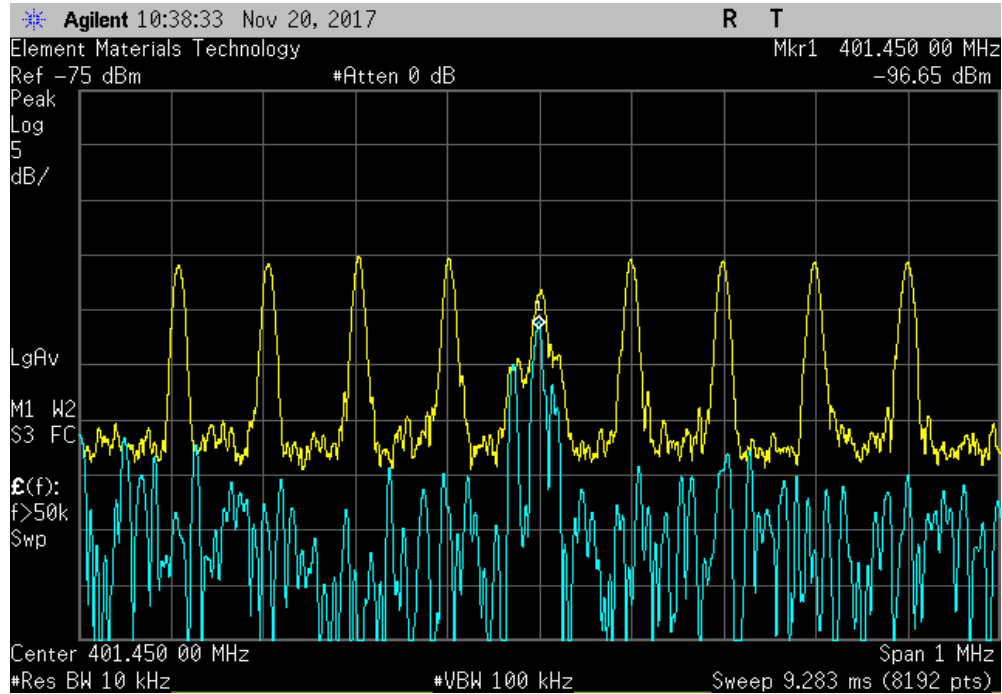


MINIMUM CHANNEL MONITORING PERIOD

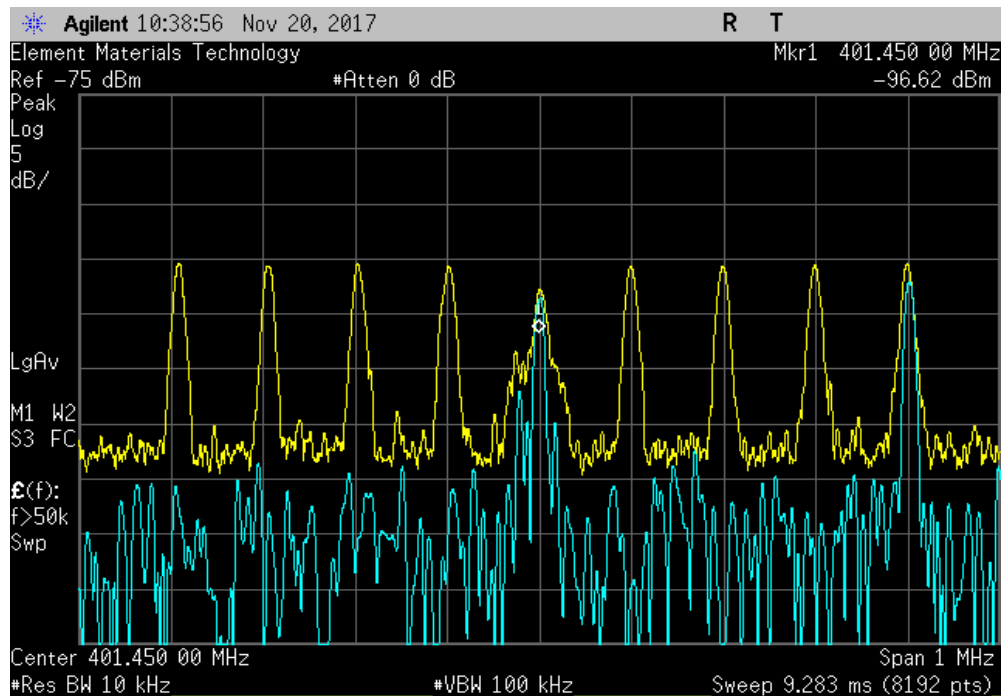


XMI 2017.09.21

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

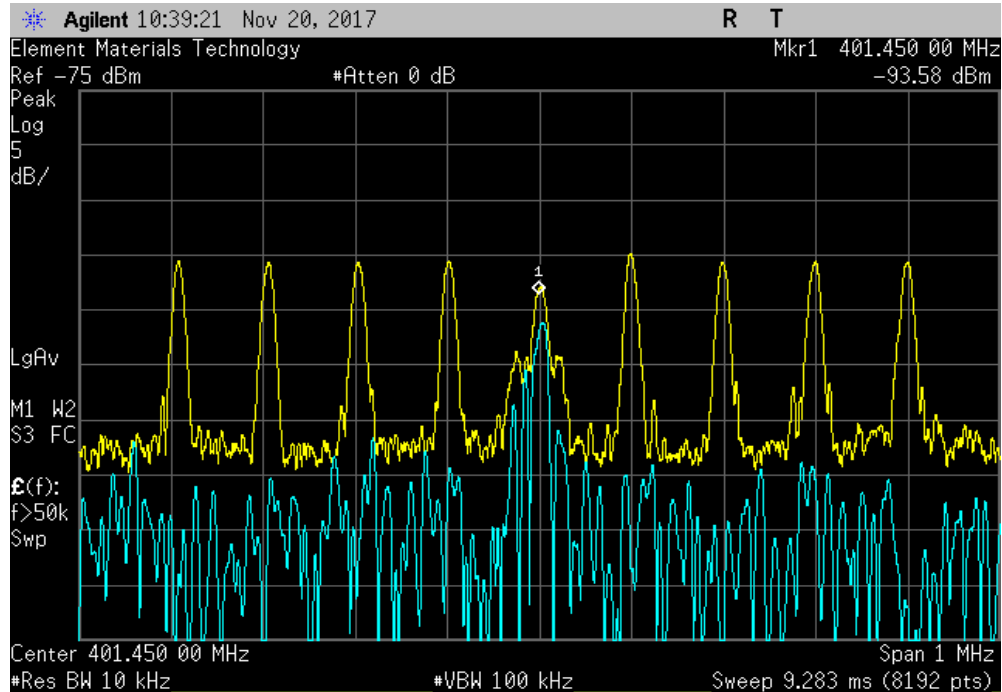


MINIMUM CHANNEL MONITORING PERIOD

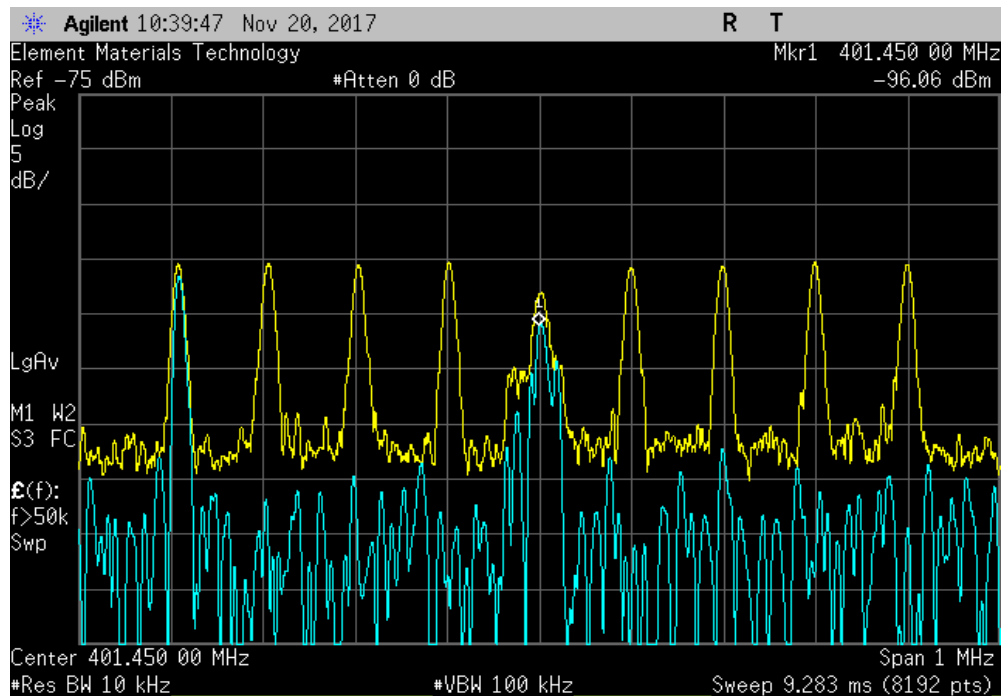


XMM 2017.09.21

401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Monitoring Period Sample 5					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass



401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Monitoring Period Sample 6					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass

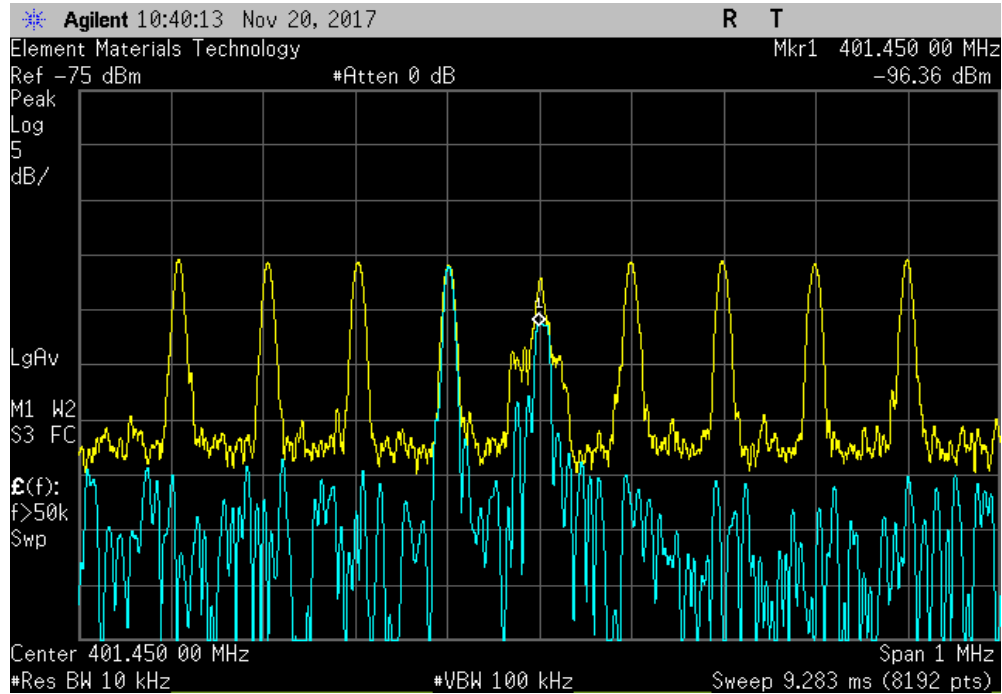


MINIMUM CHANNEL MONITORING PERIOD

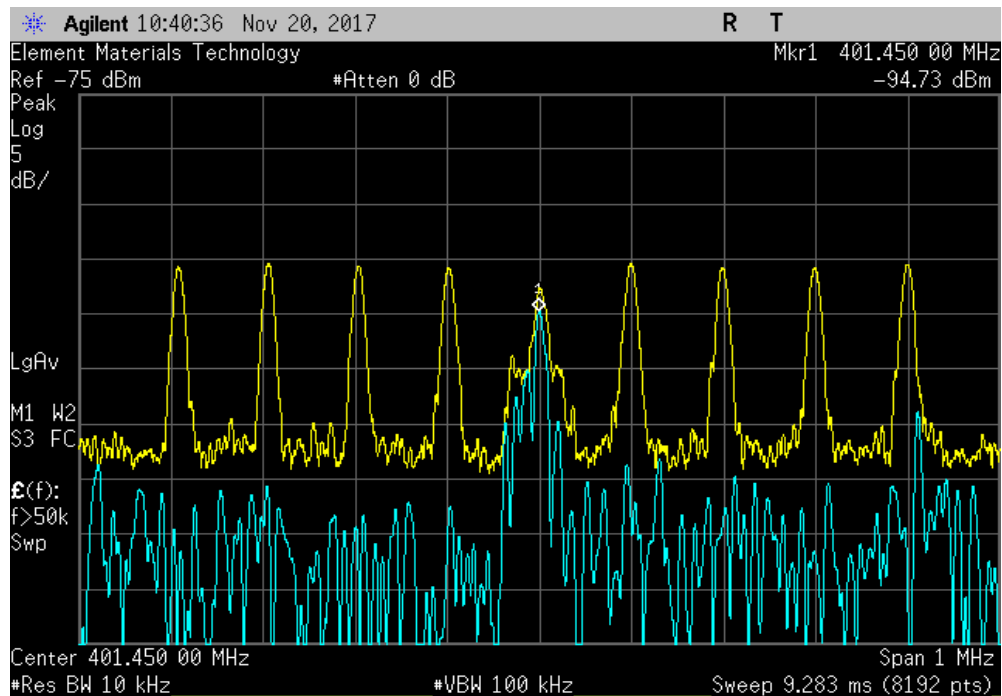


XMM 2017.09.21

401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Monitoring Period Sample 7					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass



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

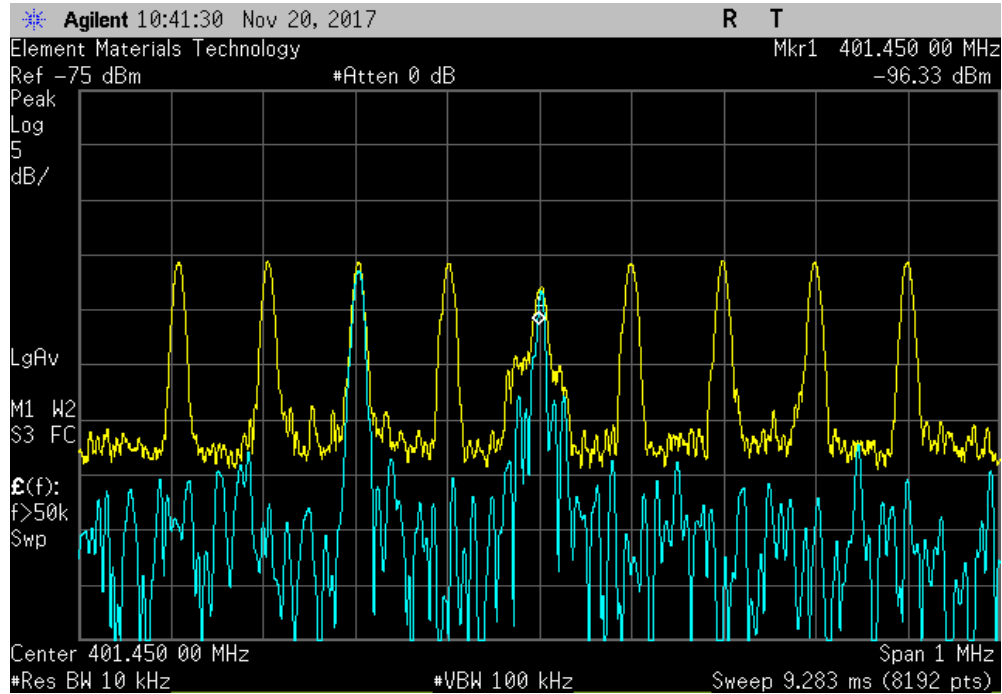


MINIMUM CHANNEL MONITORING PERIOD

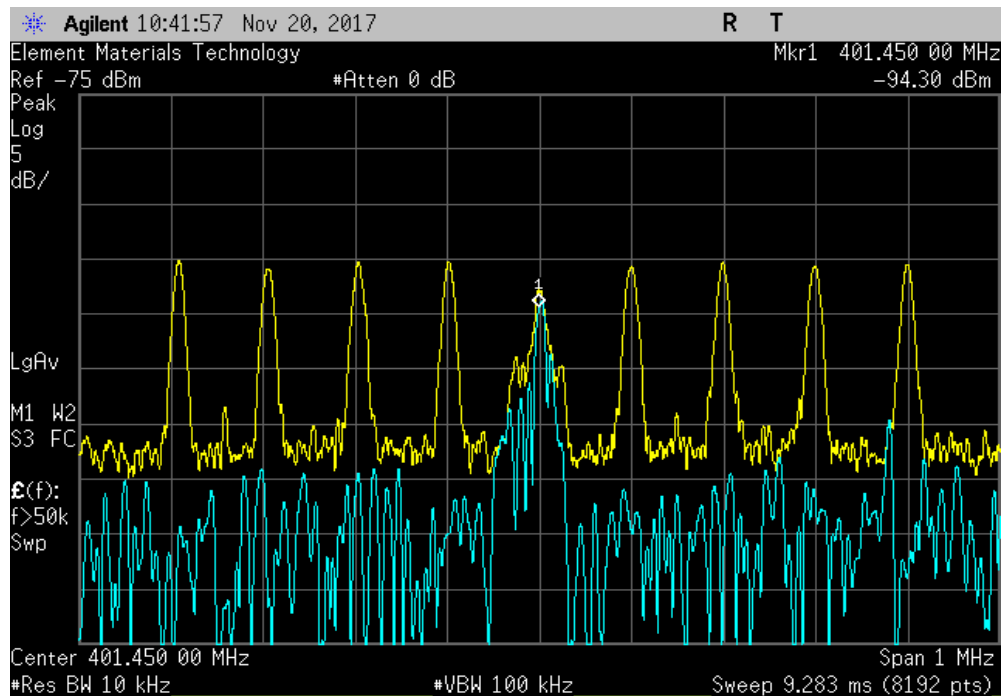


XMM 2017.09.21

401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Monitoring Period Sample 9					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass



401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Monitoring Period Sample 10					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass

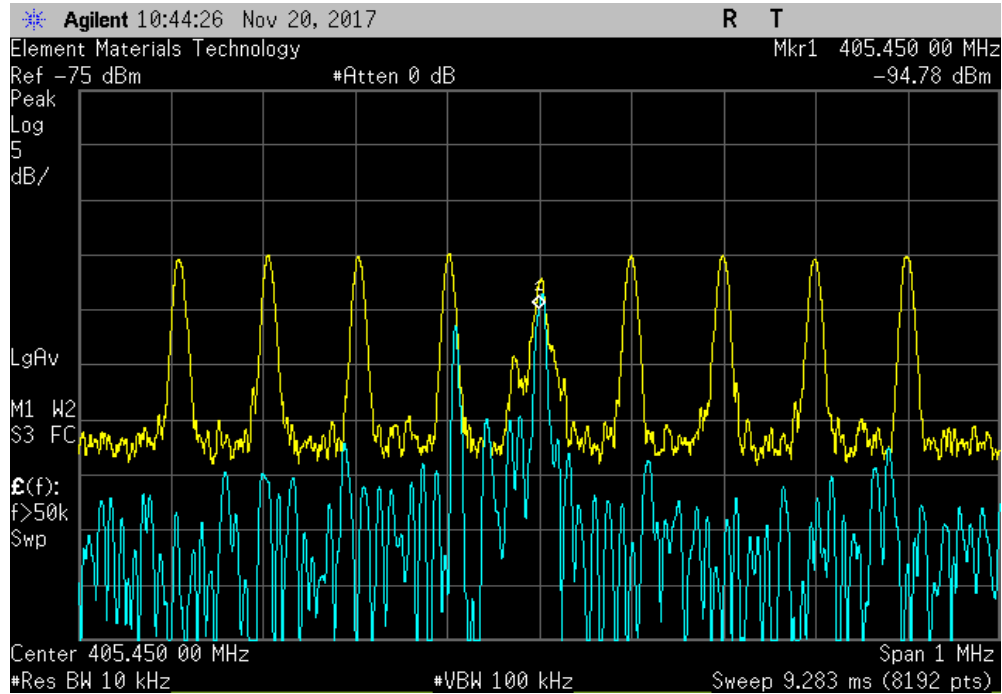


MINIMUM CHANNEL MONITORING PERIOD

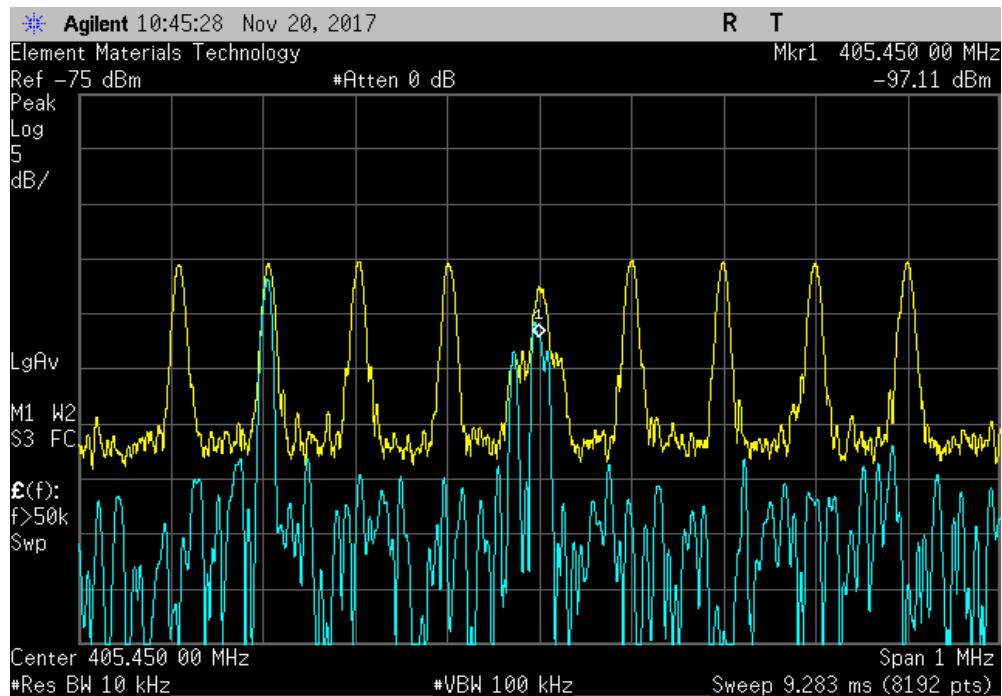


XMM 2017.09.21

405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Monitoring Period Sample 1					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass



405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Monitoring Period Sample 2					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass

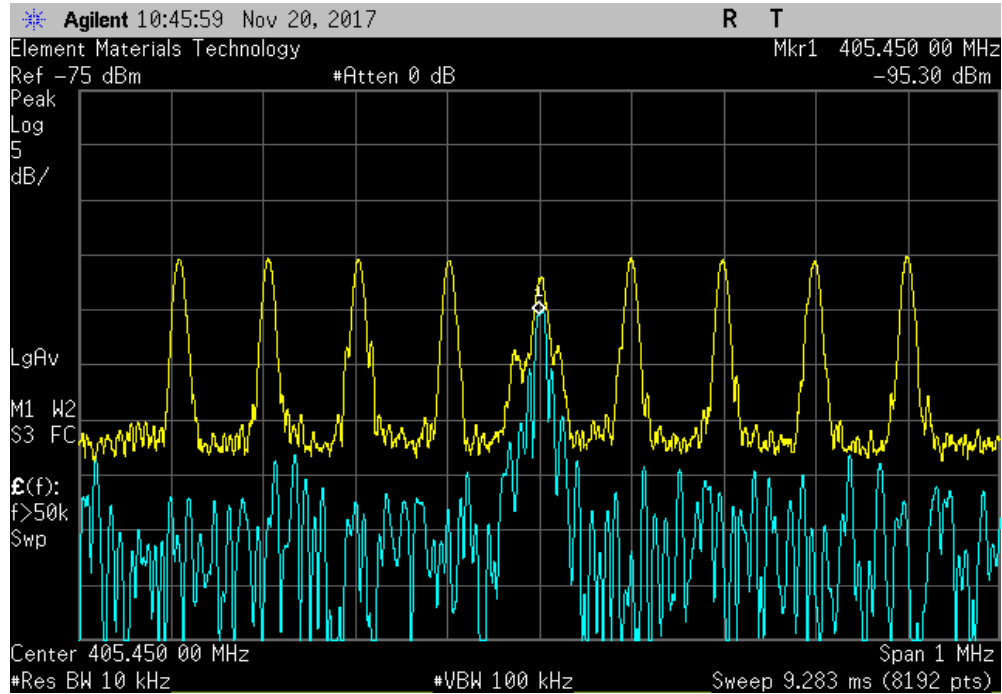


MINIMUM CHANNEL MONITORING PERIOD

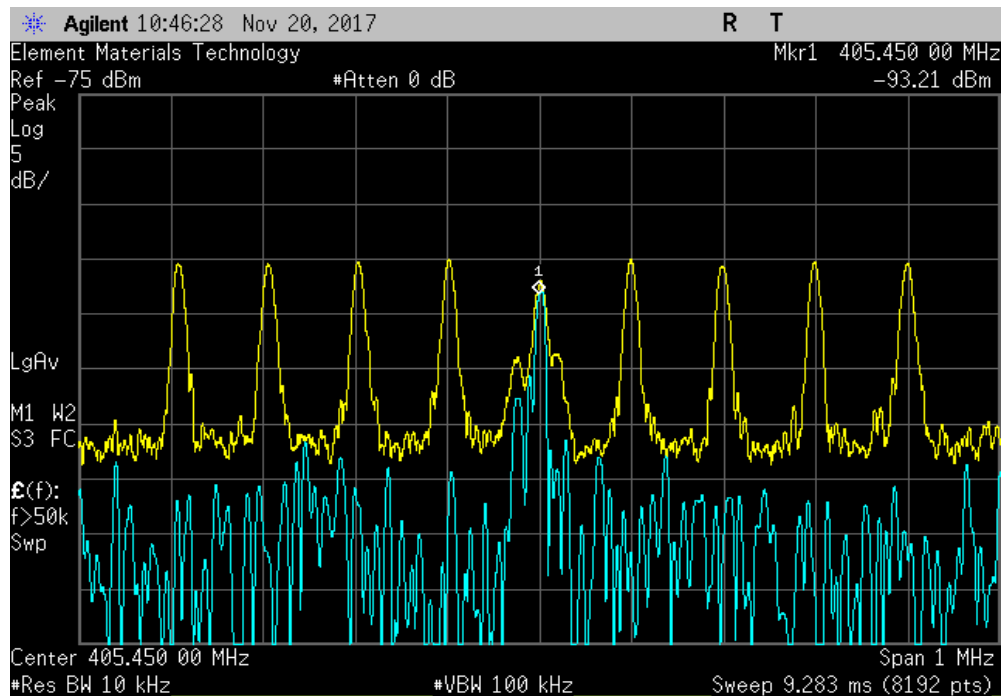


XMM 2017.09.21

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

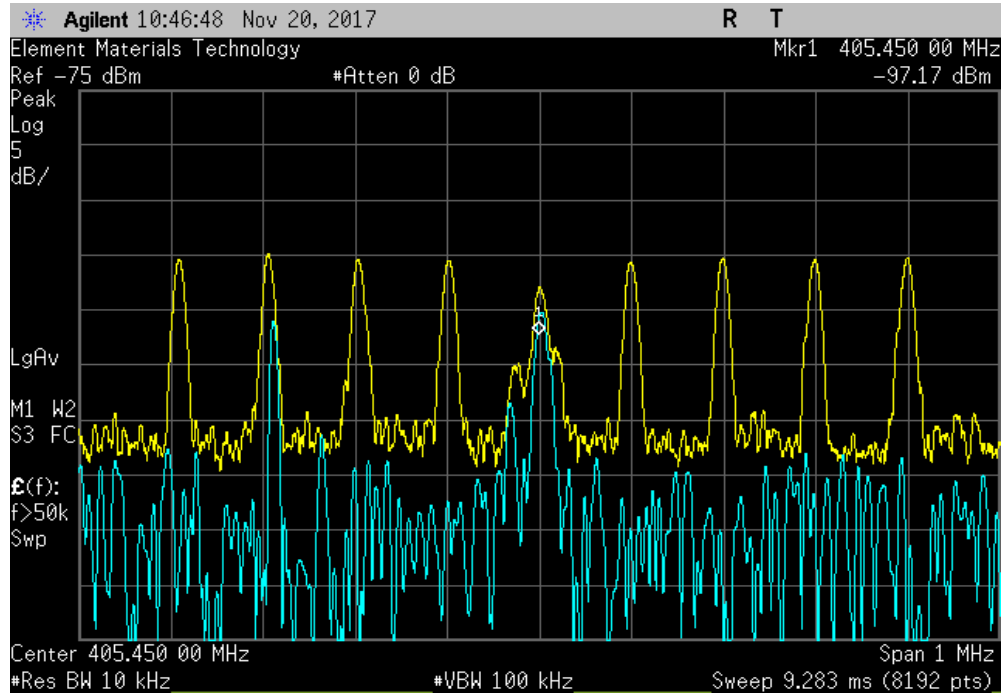


MINIMUM CHANNEL MONITORING PERIOD

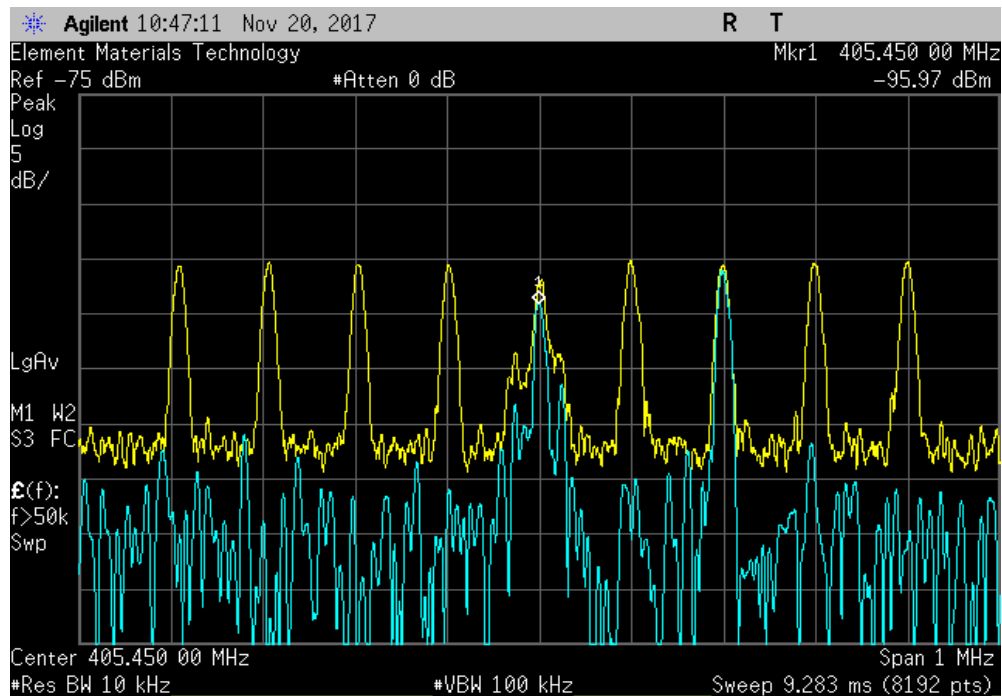


XMM 2017.09.21

405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Monitoring Period Sample 5					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass



405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Monitoring Period Sample 6					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass

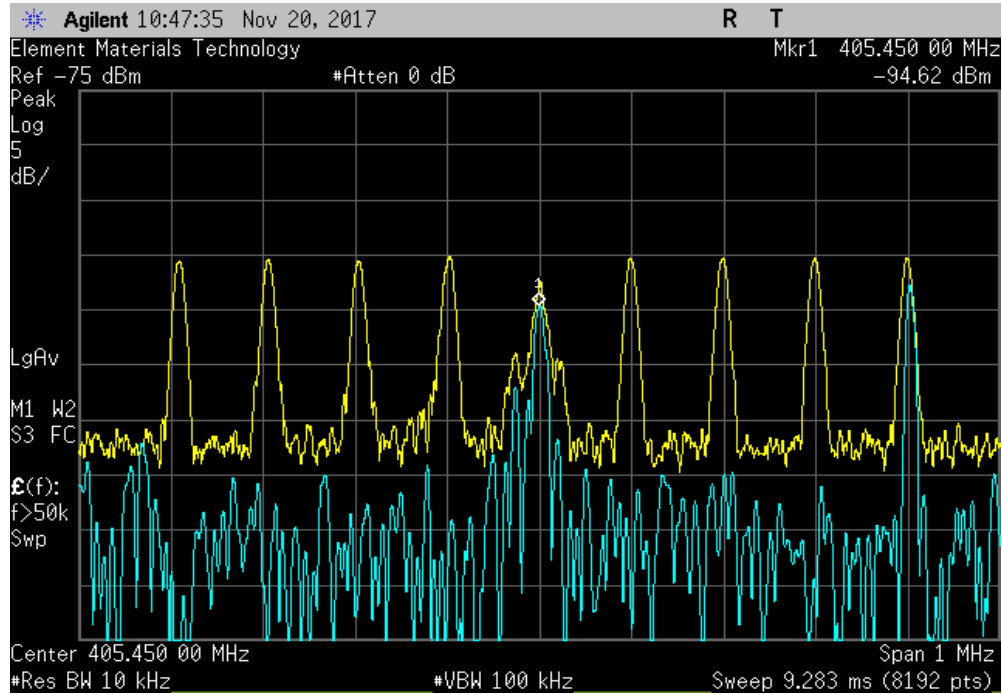


MINIMUM CHANNEL MONITORING PERIOD

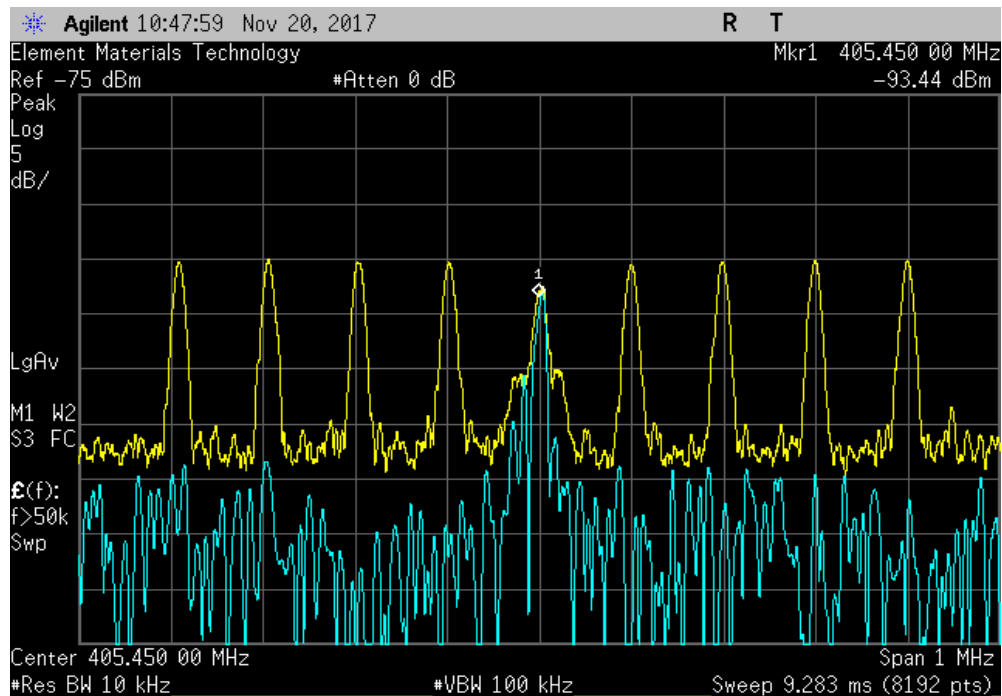


XMM 2017.09.21

405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Monitoring Period Sample 7					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass



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

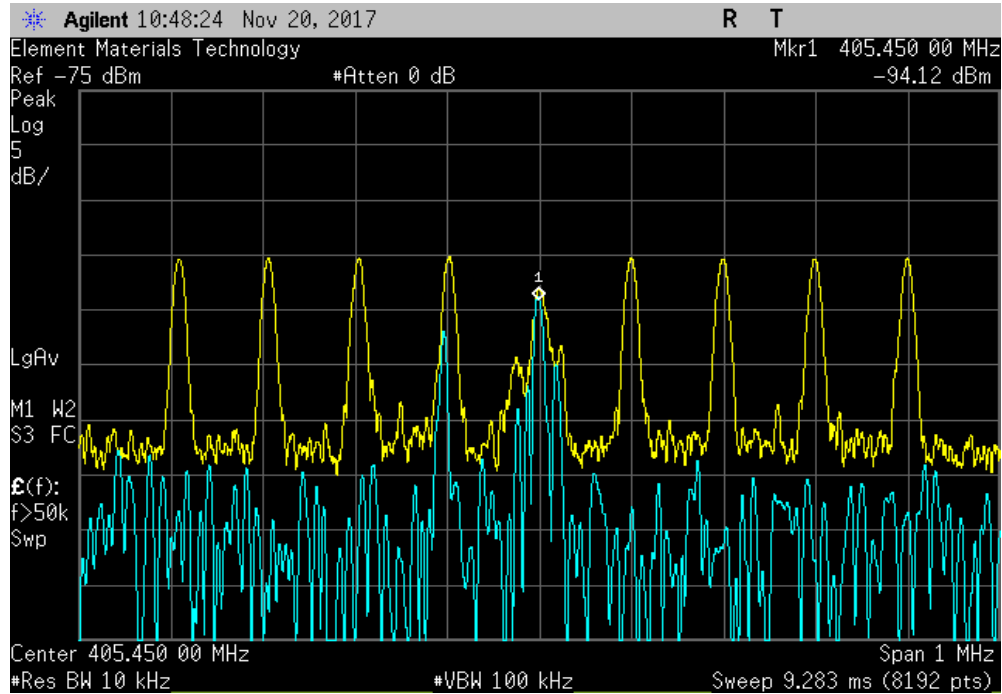


MINIMUM CHANNEL MONITORING PERIOD

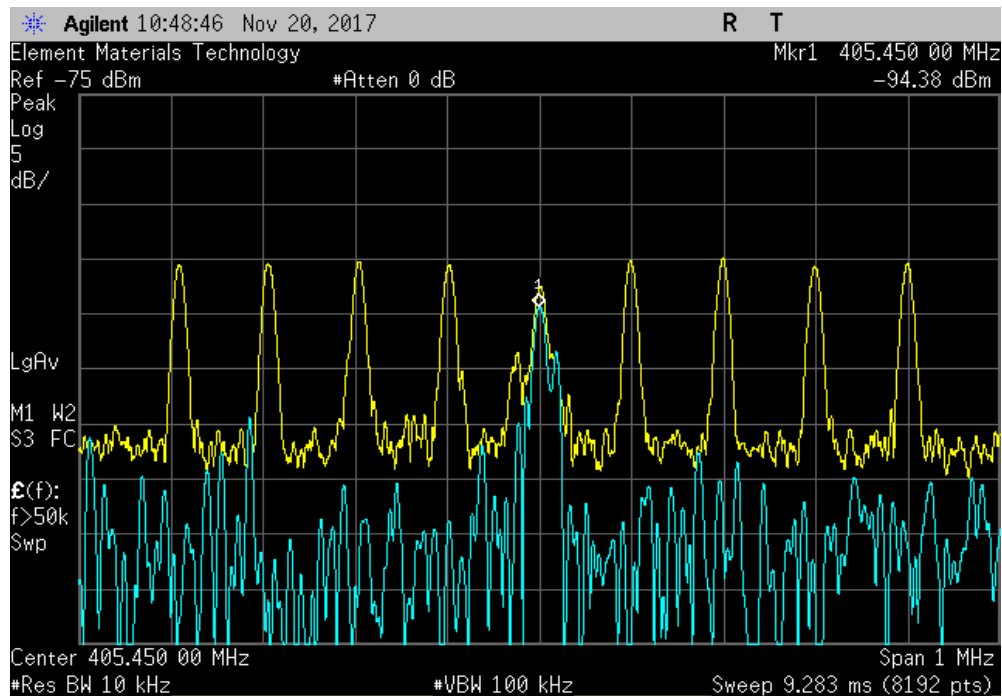


XMM 2017.09.21

405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Monitoring Period Sample 9					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass



405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Monitoring Period Sample 10					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass



MINIMUM CHANNEL MONITORING PERIOD



XMR 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

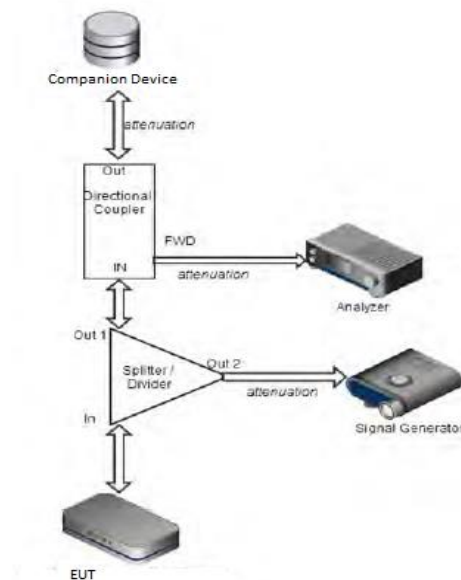
Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	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 interference 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).



MINIMUM CHANNEL MONITORING PERIOD



XMM 2017.09.21

EUT: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)		Work Order: AXON0097
Serial Number: AC1C870003		Date: 20-Nov-17
Customer: Axonics Modulation Technologies, 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 SPECIFICATIONS		
EN 301 839 V2.1.1:2016		Test Method
EN 301 839 V2.1.1:2016		
COMMENTS		
Calculated LBT Threshold = $10 * \text{LOG}(\text{Bandwidth}) - 150 + \text{Antenna Gain} = -96.87 \text{ dBm}$. Emission Bandwidth = 127432 Hz, Antenna Gain = 2.08dBi.		
DEVIATIONS FROM TEST STANDARD		
None		
Configuration #	30	Signature
		Does EUT Initiate Communications on Fc? (Y/N)
		Result

Mid Channel (Fc), 403.5 MHz

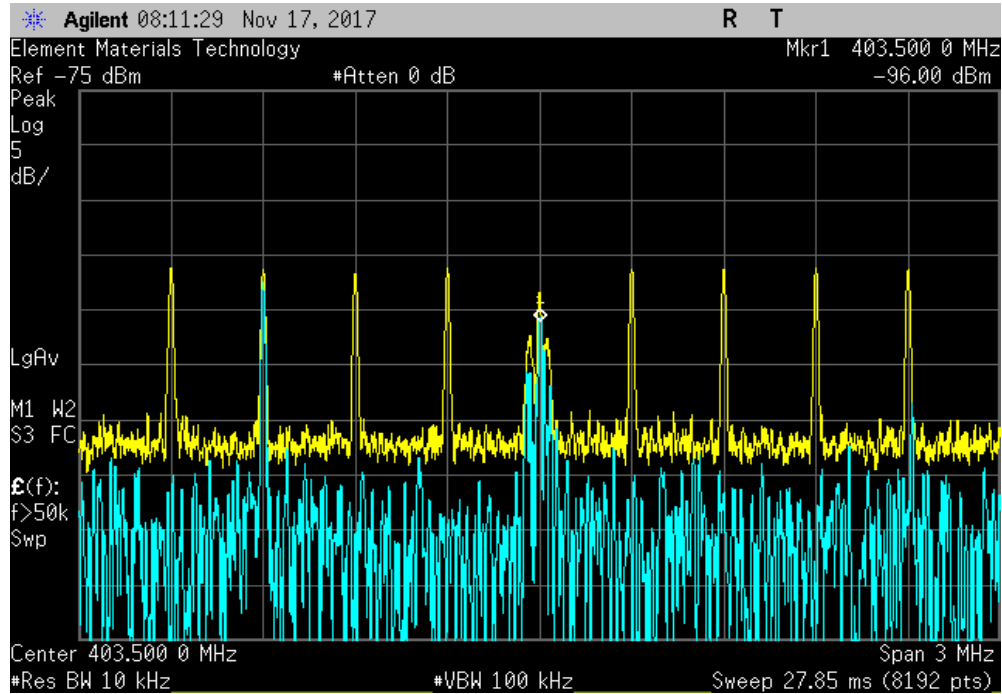
Monitoring Period Sample 1	Yes	Pass
Monitoring Period Sample 2	Yes	Pass
Monitoring Period Sample 3	Yes	Pass
Monitoring Period Sample 4	Yes	Pass
Monitoring Period Sample 5	Yes	Pass
Monitoring Period Sample 6	Yes	Pass
Monitoring Period Sample 7	Yes	Pass
Monitoring Period Sample 8	Yes	Pass
Monitoring Period Sample 9	Yes	Pass
Monitoring Period Sample 10	Yes	Pass

MINIMUM CHANNEL MONITORING PERIOD

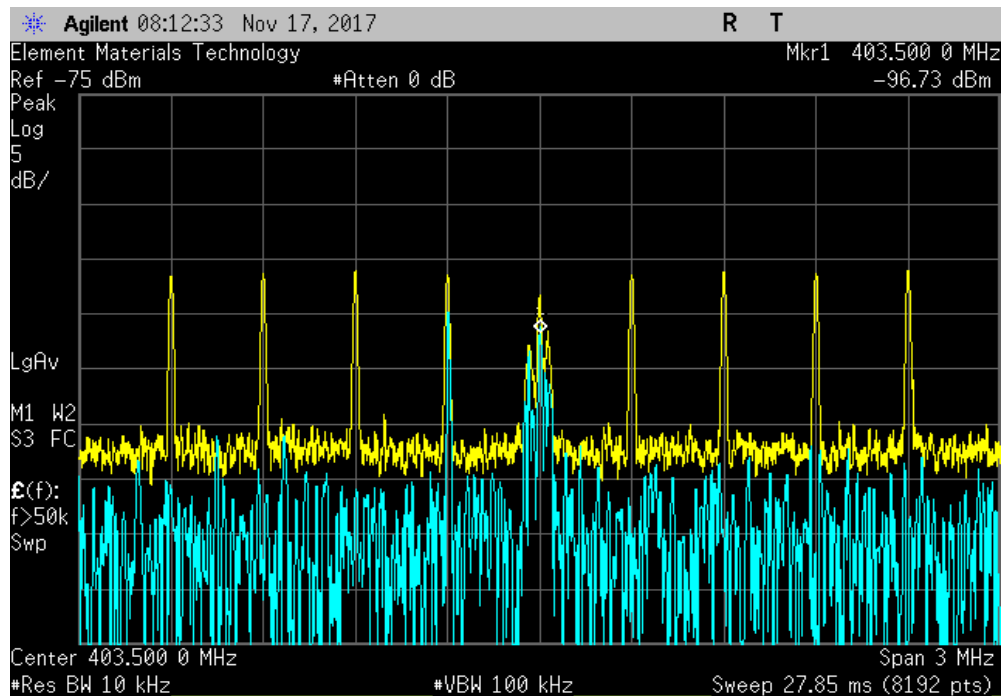


XMM 2017.09.21

Mid Channel (Fc), 403.5 MHz, Monitoring Period Sample 1					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass



Mid Channel (Fc), 403.5 MHz, Monitoring Period Sample 2					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass

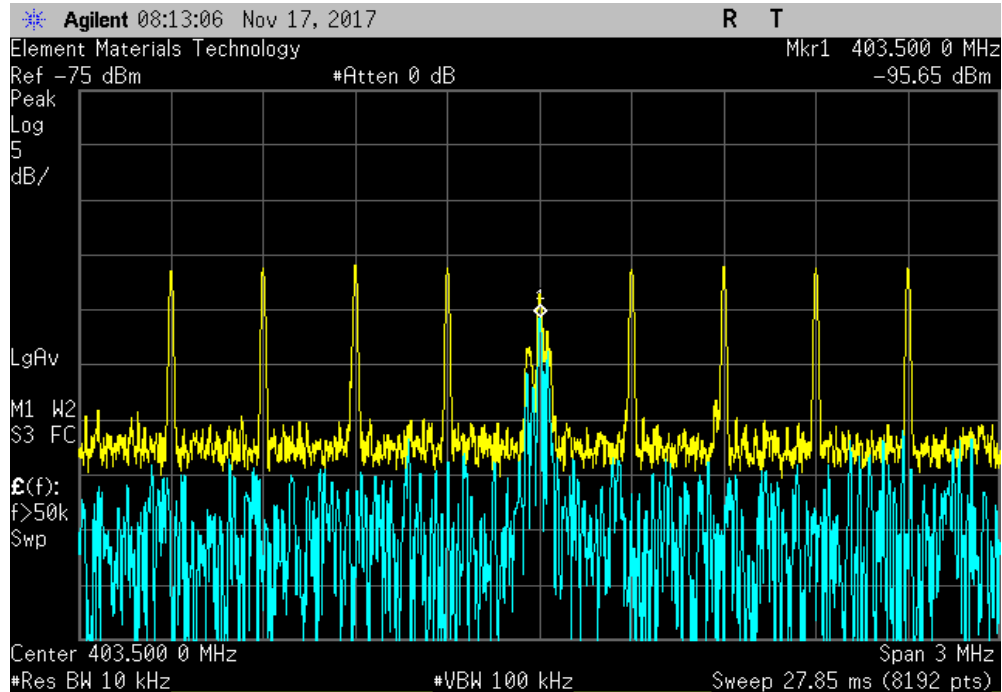


MINIMUM CHANNEL MONITORING PERIOD

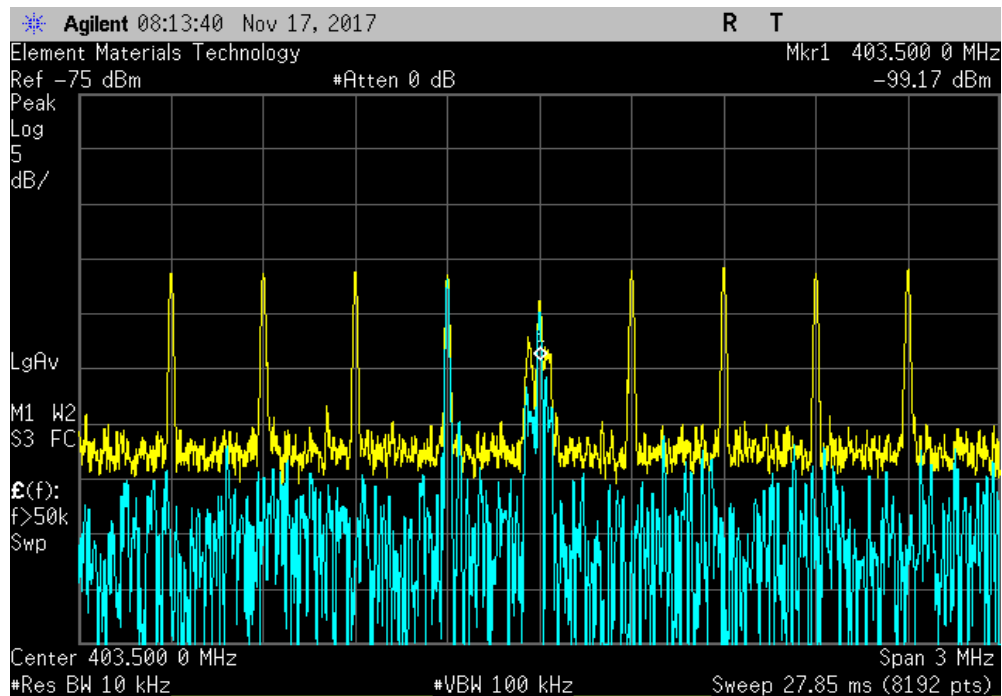


XMI 2017.09.21

Mid Channel (Fc), 403.5 MHz, Monitoring Period Sample 3					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass



Mid Channel (Fc), 403.5 MHz, Monitoring Period Sample 4					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass

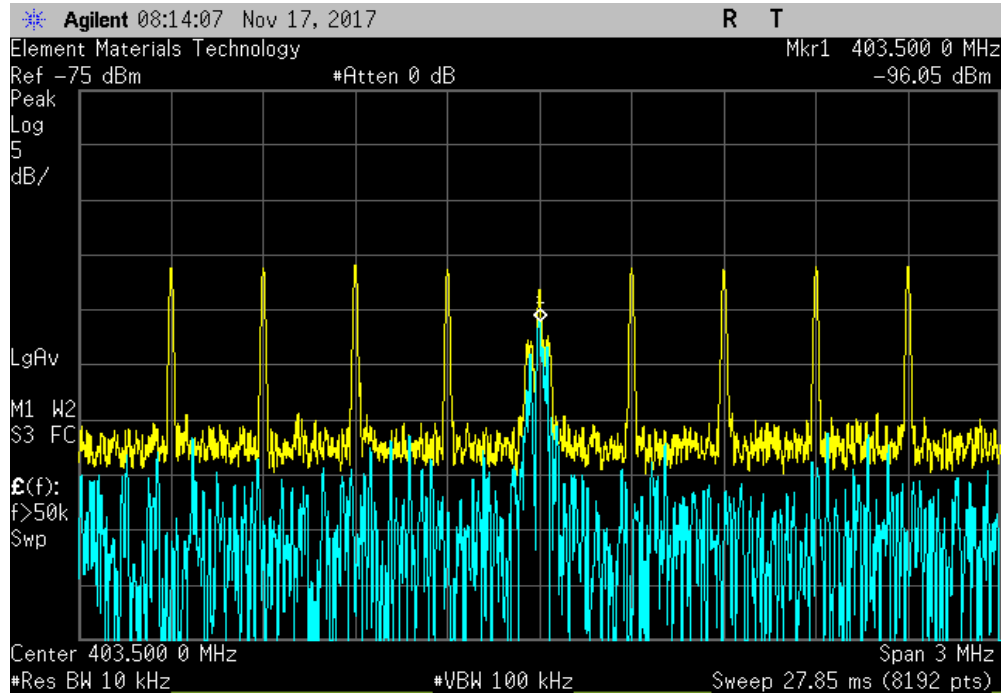


MINIMUM CHANNEL MONITORING PERIOD

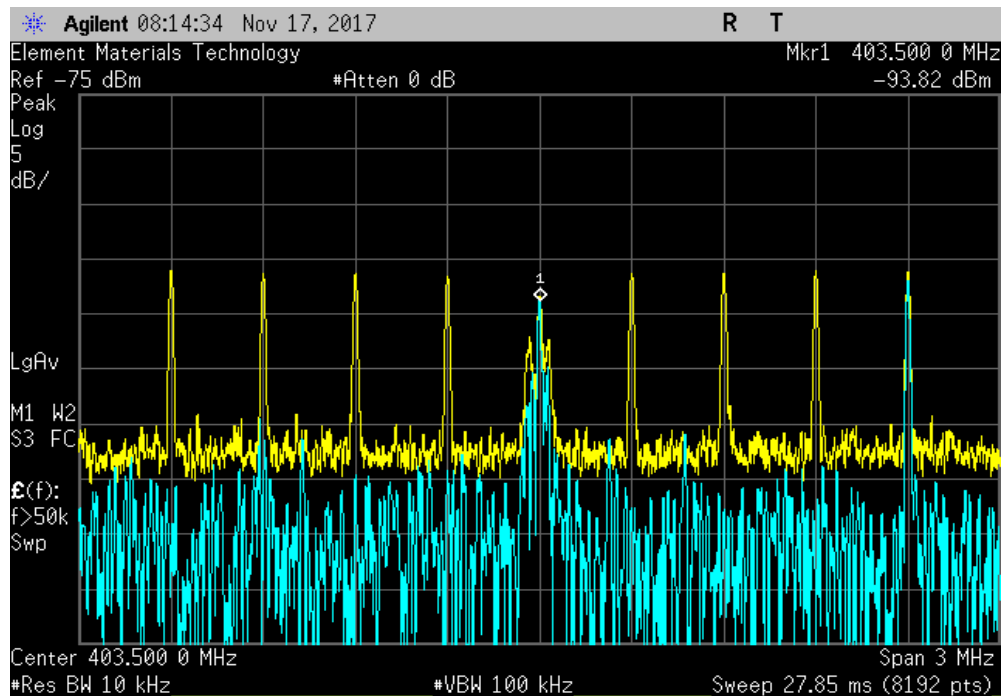


XMM 2017.09.21

Mid Channel (Fc), 403.5 MHz, Monitoring Period Sample 5					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass



Mid Channel (Fc), 403.5 MHz, Monitoring Period Sample 6					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass

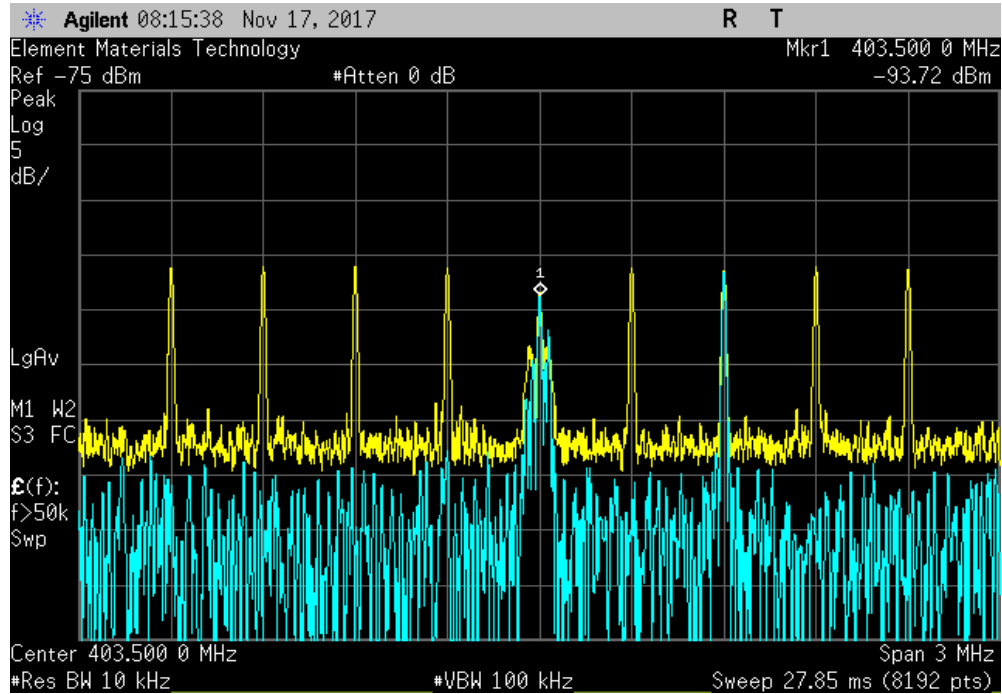


MINIMUM CHANNEL MONITORING PERIOD

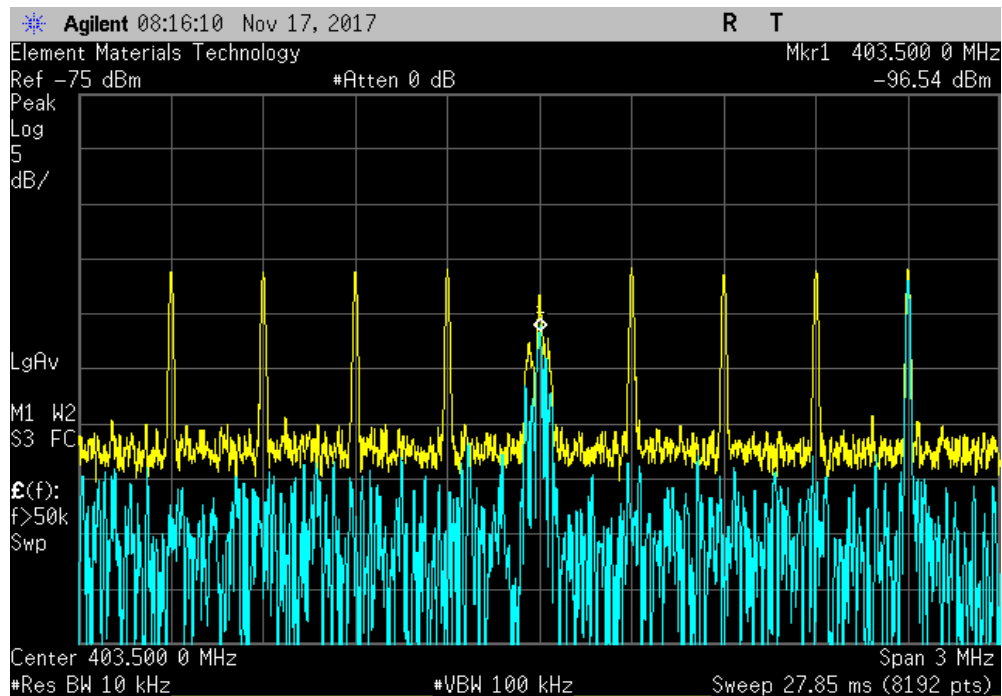


XMM 2017.09.21

Mid Channel (Fc), 403.5 MHz, Monitoring Period Sample 7					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass



Mid Channel (Fc), 403.5 MHz, Monitoring Period Sample 8					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass

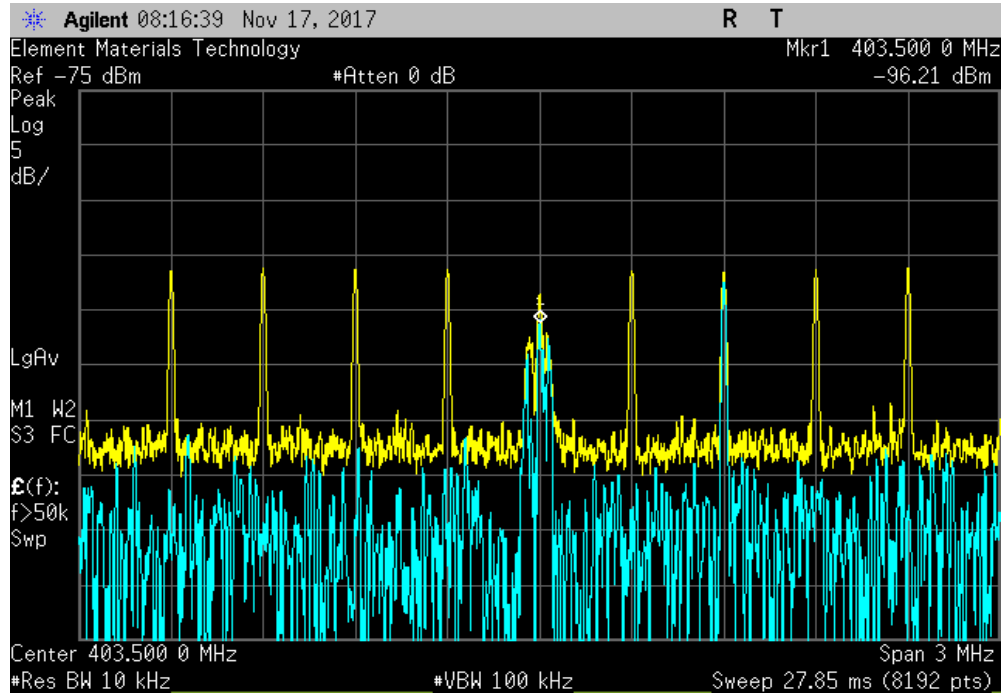


MINIMUM CHANNEL MONITORING PERIOD

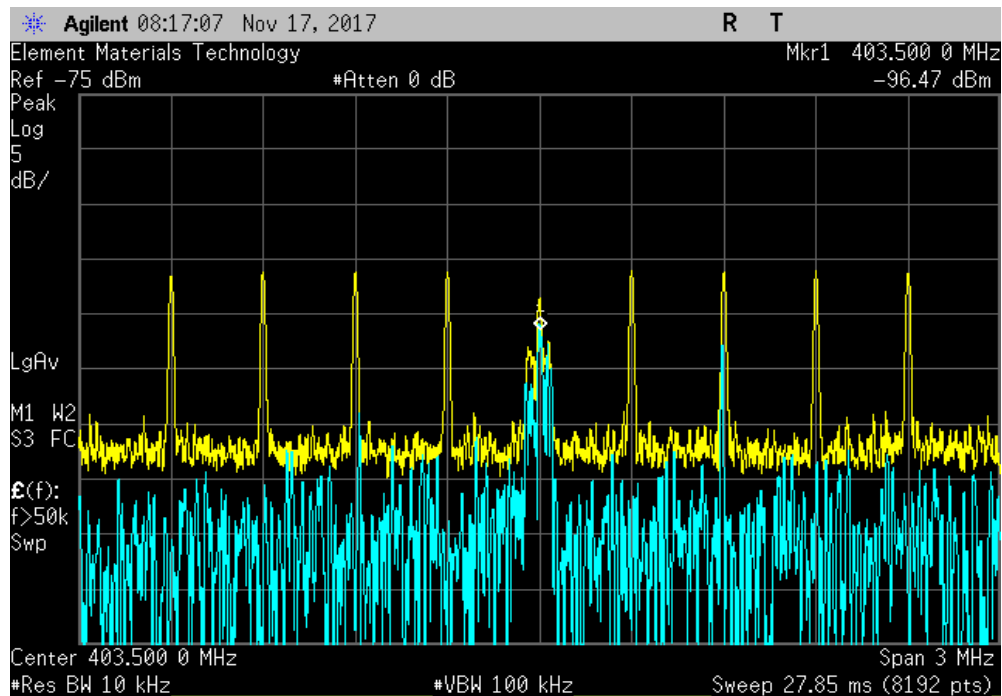


XMM 2017.09.21

Mid Channel (Fc), 403.5 MHz, Monitoring Period Sample 9					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass



Mid Channel (Fc), 403.5 MHz, Monitoring Period Sample 10					
Does EUT Initiate Communications on Fc? (Y/N)					Result
				Yes	Pass



CHANNEL ACCESS BASED ON AMBIENT LEVELS



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

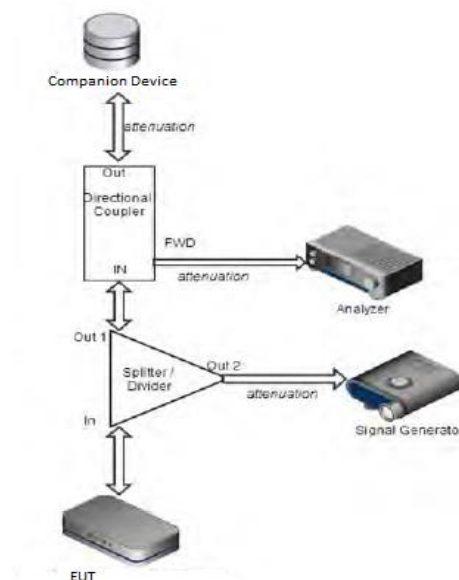
TEST DESCRIPTION

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 interference across the entire band. The amplitude of the multitone signals (out of operation region) were set to the LBT threshold of $10 \cdot \log(\text{Bandwidth}) - 150 + \text{Antenna Gain} + 10$ dB.

The intended frequency (F_c) was set to the LBT threshold - 3 dB. A least interfered channel (LIC) was set to the LBT threshold + 3 dB. The EUT was verified to transmit on F_c . The amplitude of F_c 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.



CHANNEL ACCESS BASED ON AMBIENT LEVELS



XMI 2017.09.21

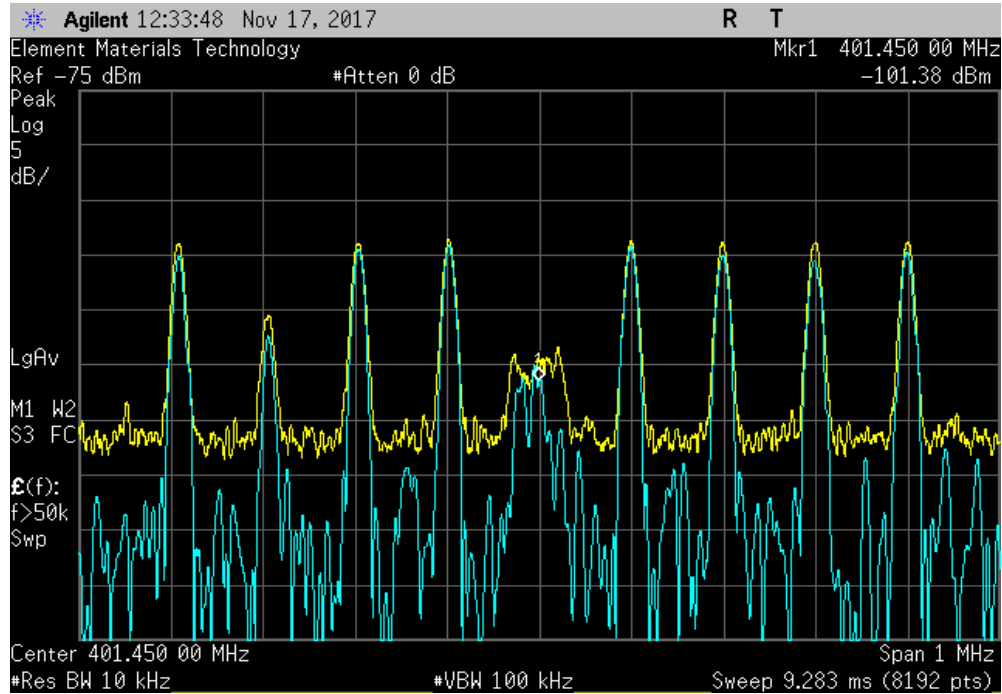
EUT: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)		Work Order: AXON0097	
Serial Number: AC1C870003		Date: 20-Nov-17	
Customer: Axonics Modulation Technologies, Inc.		Temperature: 21.4 °C	
Attendees: Franklin Portillo		Humidity: 45.7% RH	
Project: None		Barometric Pres.: 1018 mbar	
Tested by: Johnny Candelas	Power: 7.6VDC	Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
EN 302 537 V2.1.1:2016		EN 302 537 V2.1.1:2016	
COMMENTS			
Calculated LBT Threshold = $10 * \text{LOG}(\text{Bandwidth}) - 150 + \text{Antenna Gain} = -98.75 \text{ dBm}$. Emission Bandwidth = 82582 Hz, Antenna Gain = 2.08dBi.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	30	Signature 	
		Does EUT Transmit on Fc? (Y/N)	Does EUT Transmit on LIC? (Y/N)
401-402 MHz Band			
Mid Channel (Fc), 401.55 MHz			
Fc LBT Threshold -3dB		Yes	No
Fc LBT Threshold +6dB		No	Yes
405-406 MHz Band			
Mid Channel (Fc), 405.55 MHz			
Fc LBT Threshold -3dB		Yes	No
Fc LBT Threshold +6dB		No	Yes
			Result
			Pass
			Pass
			Pass
			Pass

CHANNEL ACCESS BASED ON AMBIENT LEVELS

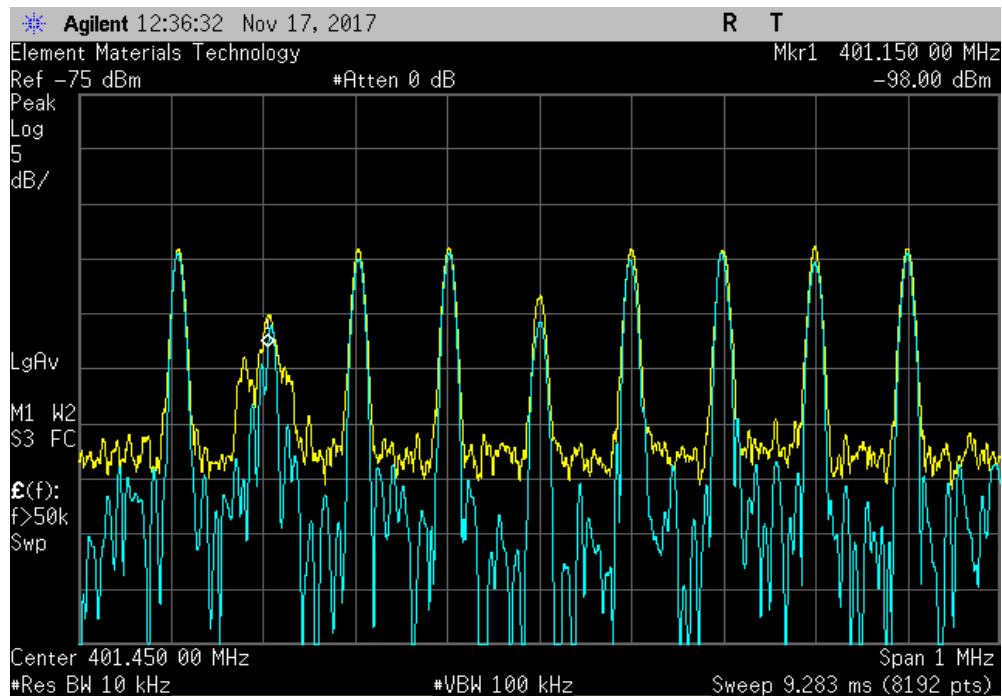


XMM 2017.09.21

401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Fc LBT Threshold -3dB				
Does EUT Transmit on Fc? (Y/N)		Does EUT Transmit on LIC? (Y/N)		Result
	Yes		No	Pass



401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Fc LBT Threshold +6dB				
Does EUT Transmit on Fc? (Y/N)		Does EUT Transmit on LIC? (Y/N)		Result
	No		Yes	Pass

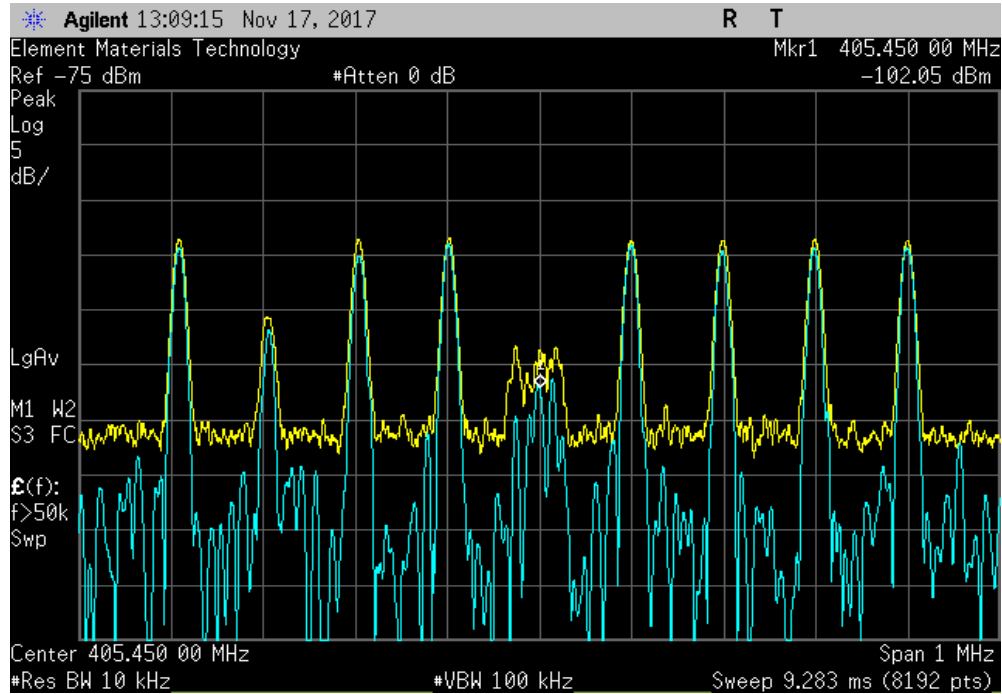


CHANNEL ACCESS BASED ON AMBIENT LEVELS

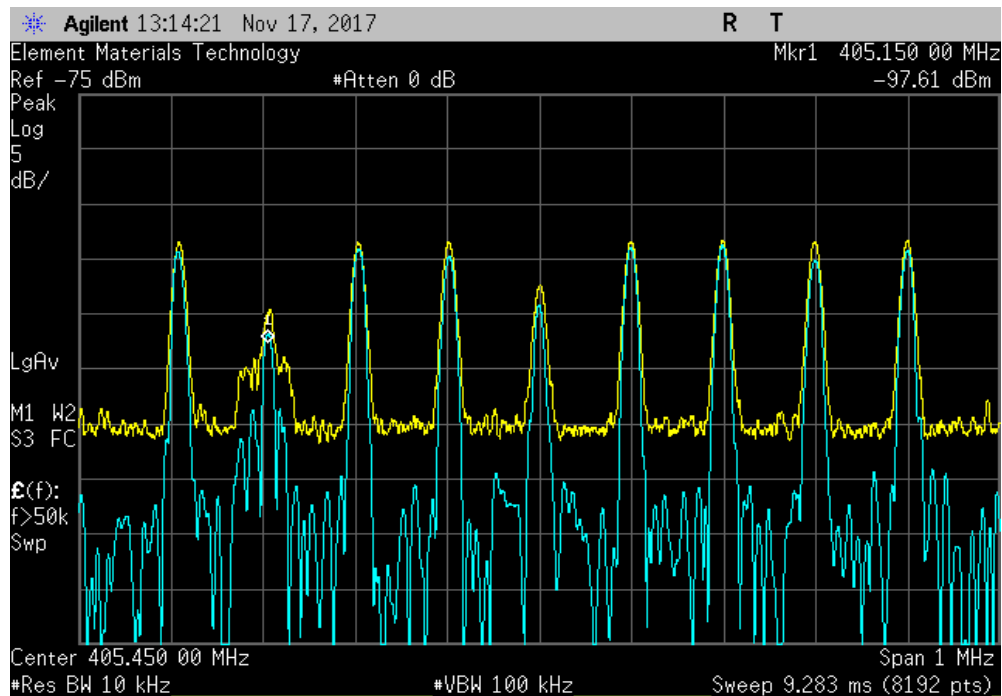


XMM 2017.09.21

405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Fc LBT Threshold -3dB				
Does EUT Transmit on Fc? (Y/N)		Does EUT Transmit on LIC? (Y/N)		Result
	Yes		No	Pass



405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Fc LBT Threshold +6dB				
Does EUT Transmit on Fc? (Y/N)		Does EUT Transmit on LIC? (Y/N)		Result
	No		Yes	Pass



CHANNEL ACCESS BASED ON AMBIENT LEVELS



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

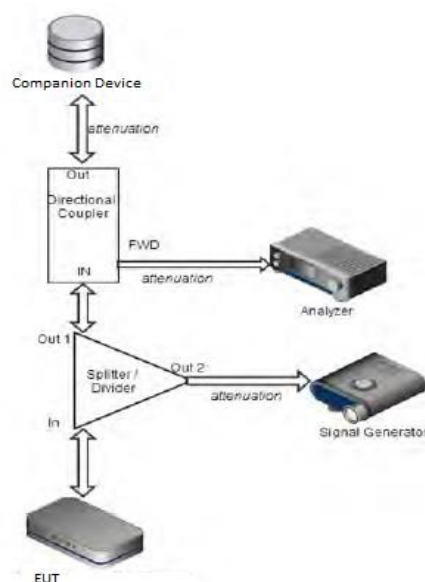
TEST DESCRIPTION

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 interference across the entire band. The amplitude of the multitone signals (out of operation region) were set to the LBT threshold of $10 \cdot \log(\text{Bandwidth}) - 150 + \text{Antenna Gain} + 10$ dB.

The intended frequency (F_c) was set to the LBT threshold - 3 dB. A least interfered channel (LIC) was set to the LBT threshold + 3 dB. The EUT was verified to transmit on F_c . The amplitude of F_c 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.



CHANNEL ACCESS BASED ON AMBIENT LEVELS



XMM 2017.09.21

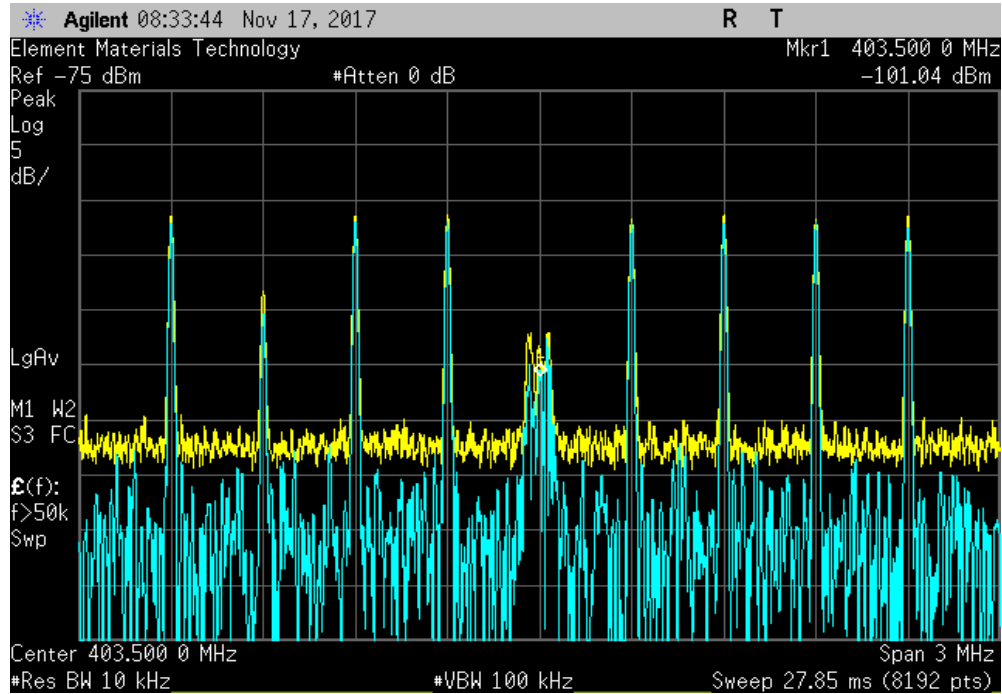
EUT: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)		Work Order: AXON0097	
Serial Number: AC1C870003		Date: 20-Nov-17	
Customer: Axonics Modulation Technologies, Inc.		Temperature: 21.4 °C	
Attendees: Franklin Portillo		Humidity: 45.7% RH	
Project: None		Barometric Pres.: 1018 mbar	
Tested by: Johnny Candelas		Power: 7.6VDC	
		Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
EN 301 839 V2.1.1:2016		EN 301 839 V2.1.1:2016	
COMMENTS			
Calculated LBT Threshold = $10 * \text{LOG}(\text{Bandwidth}) - 150 + \text{Antenna Gain} = -96.87 \text{ dBm}$. Emission Bandwidth = 127432 Hz, Antenna Gain = 2.08dBi.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	30	Signature 	
		Does EUT Transmit on Fc? (Y/N)	Does EUT Transmit on LIC? (Y/N)
Mid Channel (Fc), 403.5 MHz			
Fc LBT Threshold -3dB		Yes	No
Fc LBT Threshold +6dB		No	Yes
			Result
			Pass
			Pass

CHANNEL ACCESS BASED ON AMBIENT LEVELS

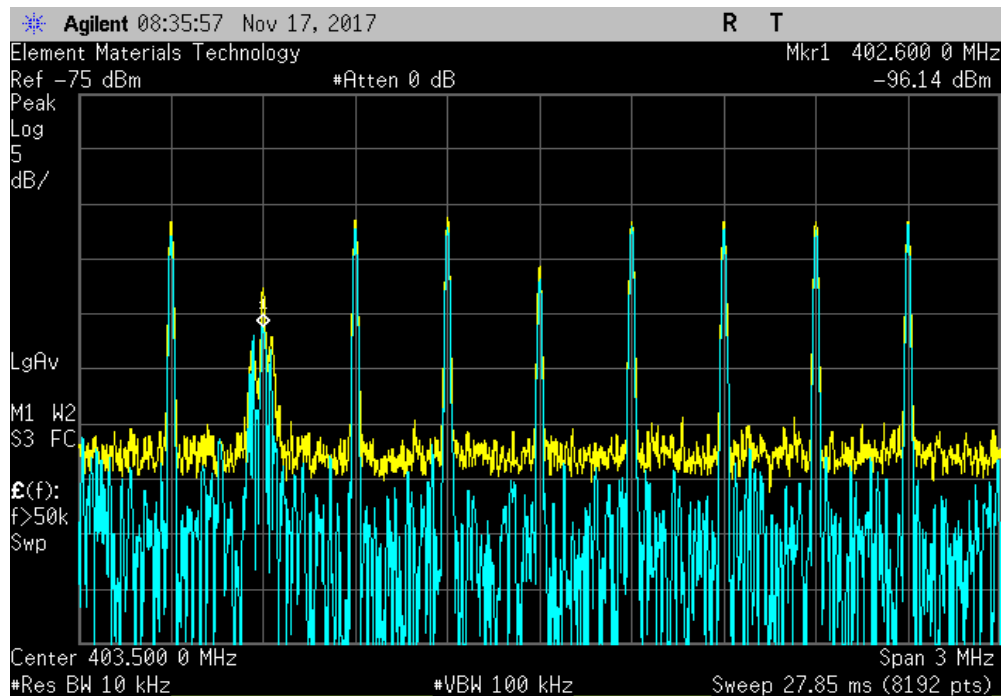


XMM 2017.09.21

Mid Channel (Fc), 403.5 MHz, Fc LBT Threshold -3dB				
Does EUT Transmit on Fc? (Y/N)		Does EUT Transmit on LIC? (Y/N)		Result
	Yes		No	Pass



Mid Channel (Fc), 403.5 MHz, Fc LBT Threshold +6dB				
Does EUT Transmit on Fc? (Y/N)		Does EUT Transmit on LIC? (Y/N)		Result
	No		Yes	Pass



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

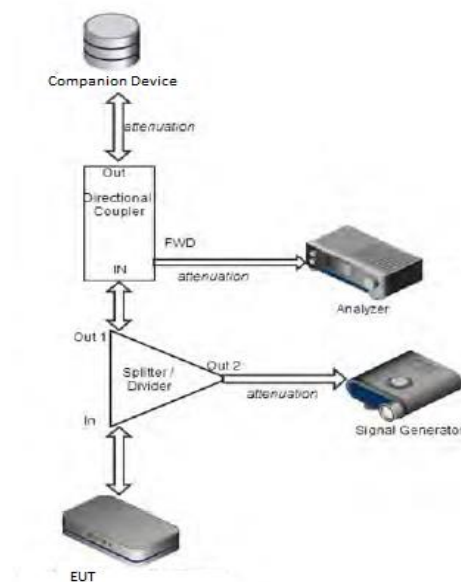
Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	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 interference across the entire band. The amplitude of the multitone signals (out of operation region) were set to the LBT threshold of $10 \cdot \log(\text{Bandwidth}) - 150 + \text{Antenna Gain} + 10$ dB.

The intended frequency (F_c) was set to the LBT threshold + 6 dB. A least interfered 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 (F_c) to when the EUT does not transmit on the initial LIC.



DISCONTINUATION OF A MEDS SESSION



XMI 2017.09.21

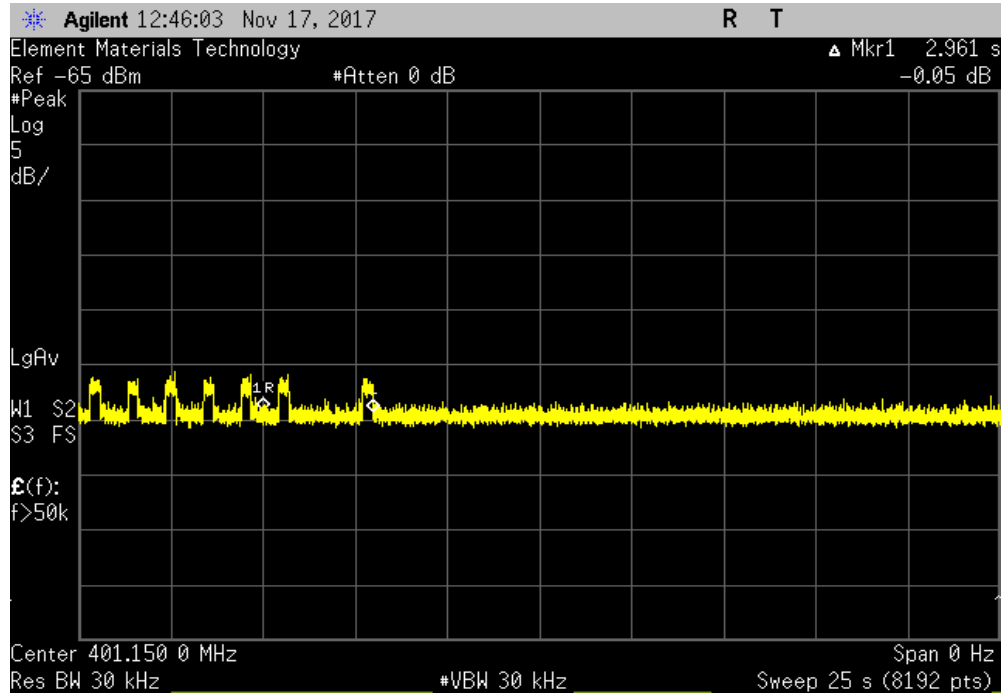
EUT: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)		Work Order: AXON0097	
Serial Number: AC1C870003		Date: 20-Nov-17	
Customer: Axonics Modulation Technologies, Inc.		Temperature: 21.4 °C	
Attendees: Franklin Portillo		Humidity: 45.7% RH	
Project: None		Barometric Pres.: 1018 mbar	
Tested by: Johnny Candelas		Power: 7.6VDC	
		Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
EN 302 537 V2.1.1:2016		EN 302 537 V2.1.1:2016	
COMMENTS			
Calculated LBT Threshold = $10 * \text{LOG}(\text{Bandwidth}) - 150 + \text{Antenna Gain} = -98.75 \text{ dBm}$. Emission Bandwidth = 82582 Hz, Antenna Gain = 2.08dBi.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	30	Signature 	
		Value (Seconds)	Limit (Seconds)
401-402 MHz Band			
LIC 25 Second Sweep, 401.25 MHz		2.961	≤ 5
405-406 MHz Band			
LIC 25 Second Sweep, 405.25 MHz		3.095	≤ 5
			Result
			Pass
			Pass

DISCONTINUATION OF A MEDS SESSION

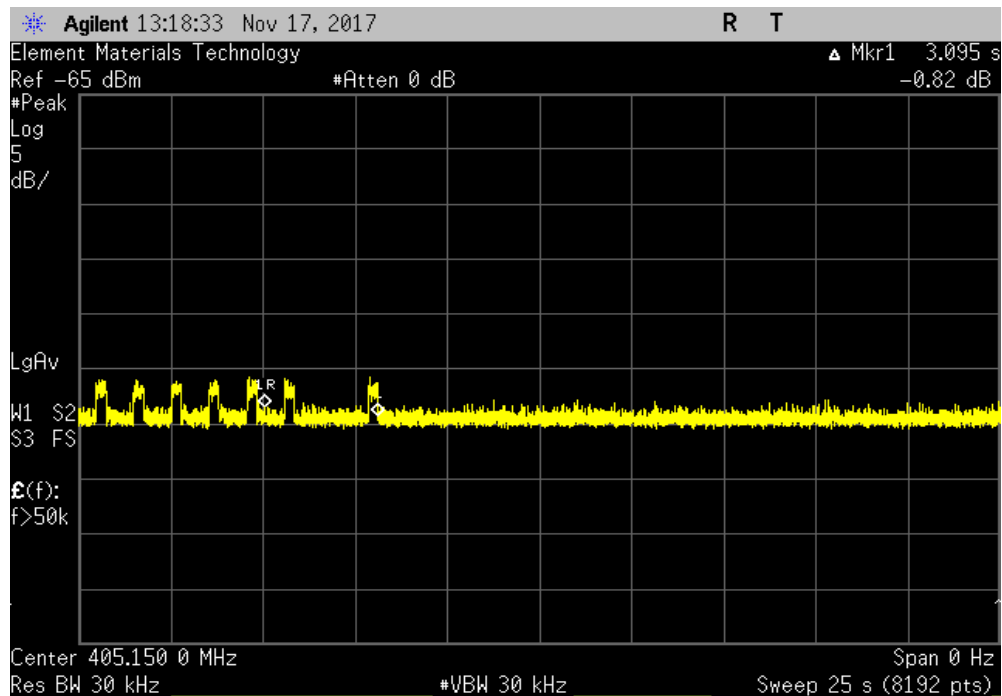


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401-402 MHz Band, LIC 25 Second Sweep, 401.25 MHz						
				Value (Seconds)	Limit (Seconds)	Result
				2.961	≤ 5	Pass



405-406 MHz Band, LIC 25 Second Sweep, 405.25 MHz						
				Value (Seconds)	Limit (Seconds)	Result
				3.095	≤ 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

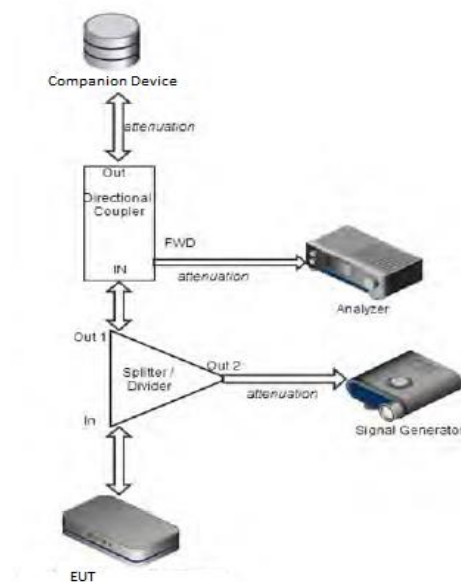
Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Power Divider/Combiner	Fairview Microwave	MP8451-2	IAO	NCR	NCR
Directional Coupler	Amplifier Research	DC3400A	IRL	NCR	NCR
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Generator - Signal	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 interference across the entire band. The amplitude of the multitone signals (out of operation region) were set to the LBT threshold of $10 \times \text{LOG}(\text{Bandwidth}) - 150 + \text{Antenna Gain} + 10 \text{ dB}$.

The intended frequency (F_c) was set to the LBT threshold + 6 dB. A least interfered 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 (F_c) to when the EUT ceases to transmit on the initial LIC.



DISCONTINUATION OF A MICS SESSION



XMI 2017.09.21

EUT: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)		Work Order: AXON0097	
Serial Number: AC1C870003		Date: 20-Nov-17	
Customer: Axonics Modulation Technologies, 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 SPECIFICATIONS			
EN 301 839 V2.1.1:2016		Test Method	
EN 301 839 V2.1.1:2016		EN 301 839 V2.1.1:2016	
COMMENTS			
Calculated LBT Threshold = $10 * \text{LOG}(\text{Bandwidth}) - 150 + \text{Antenna Gain} = -96.87 \text{ dBm}$. Emission Bandwidth = 127432 Hz, Antenna Gain = 2.08dBi.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	30	Signature 	
		Value (Seconds)	Limit (Seconds)
		3.415	≤ 5
			Result
			Pass

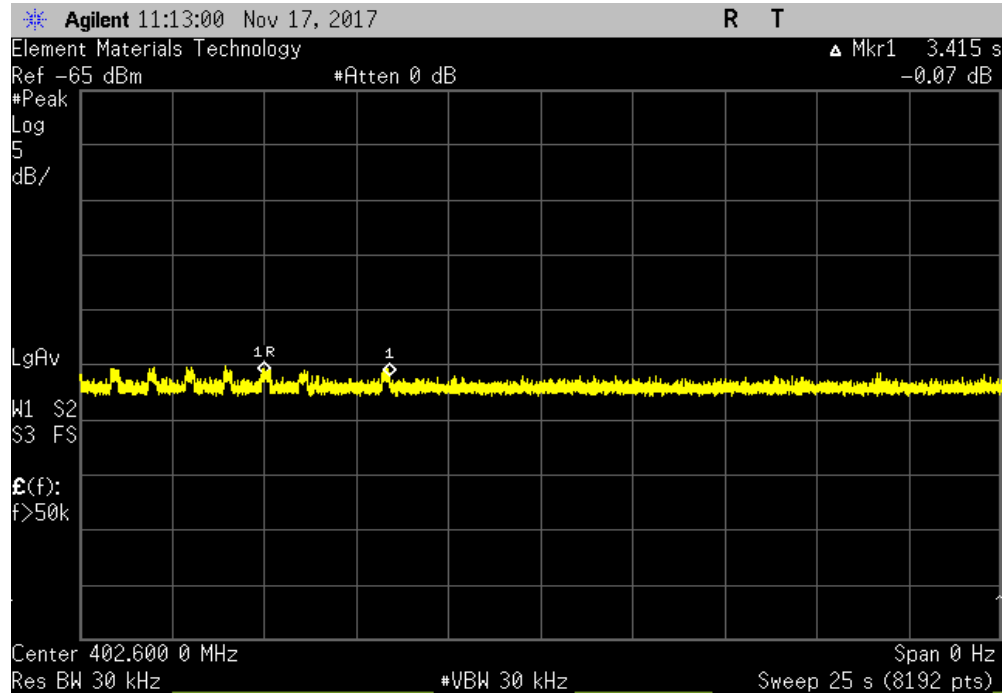
LIC 25 Second Sweep, 402.6 MHz

DISCONTINUATION OF A MICS SESSION



XMM 2017.09.21

LIC 25 Second Sweep, 402.6 MHz						
				Value (Seconds)	Limit (Seconds)	Result
				3.415	≤ 5	Pass



USE OF PRE-SCANNED ALTERNATIVE CHANNELS



XMR 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

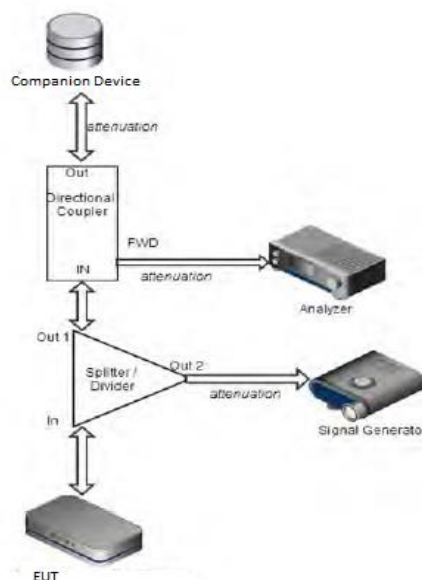
TEST DESCRIPTION

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 interference across the entire band. The amplitude of the multitone signals (out of operation region) were set to the LBT threshold of $10 \cdot \log(\text{Bandwidth}) - 150 + \text{Antenna Gain} + 10$ dB.

The intended frequency (F_c) was set to the LBT threshold - 3 dB. A least interfered channel (LIC) was set to the LBT threshold + 3 dB. The EUT was verified to transmit on F_c . While the session was still active a second least interfered channel (LIC2) was set to the LBT threshold - 2 dB. The amplitude of F_c 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 F_c which shows that the EUT does not use pre-scanned alternate channels.



USE OF PRE-SCANNED ALTERNATIVE CHANNELS



XMI 2017.09.21

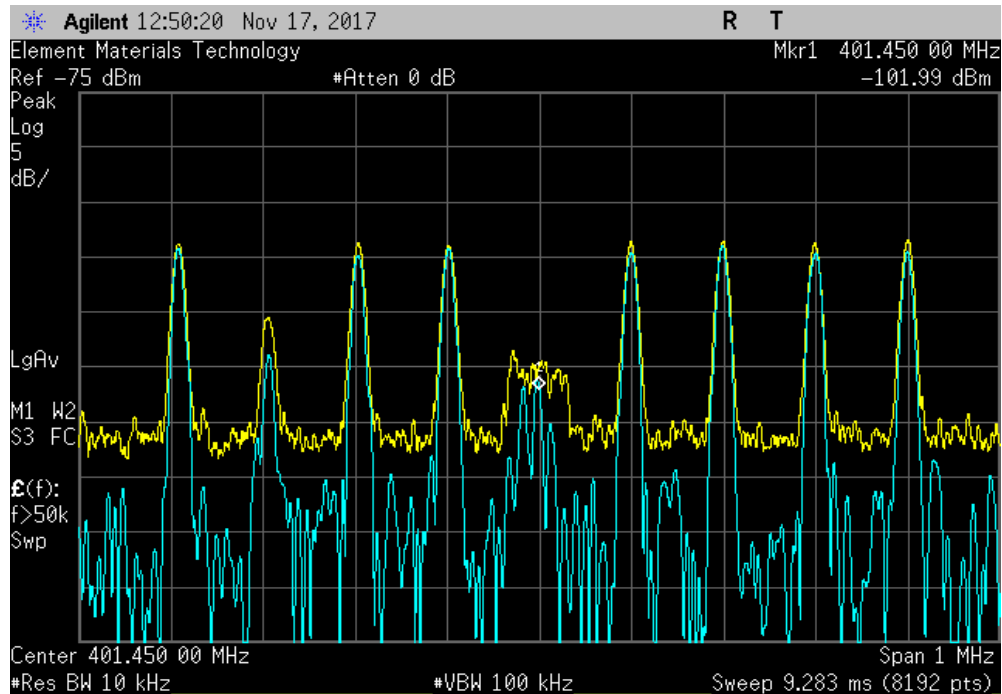
EUT: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)		Work Order: AXON0097	
Serial Number: AC1C870003		Date: 20-Nov-17	
Customer: Axonics Modulation Technologies, Inc.		Temperature: 21.4 °C	
Attendees: Franklin Portillo		Humidity: 45.7% RH	
Project: None		Barometric Pres.: 1018 mbar	
Tested by: Johnny Candelas		Power: 7.6VDC	
		Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
EN 302 537 V2.1.1:2016		EN 302 537 V2.1.1:2016	
COMMENTS			
Calculated LBT Threshold = $10 * \text{LOG}(\text{Bandwidth}) - 150 + \text{Antenna Gain} = -98.75 \text{ dBm}$. 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
LIC2 Available at Threshold -2dB		No	No
Final Setting, LIC2 Available, Fc at Threshold +6dB		No	No
405-406 MHz Band			
Mid Channel (Fc), 405.55 MHz			
Initial Setting, Fc at Threshold -3dB		No	No
LIC2 Available at Threshold -2dB		No	No
Final Setting, LIC2 Available, Fc at Threshold +6dB		No	No

USE OF PRE-SCANNED ALTERNATIVE CHANNELS

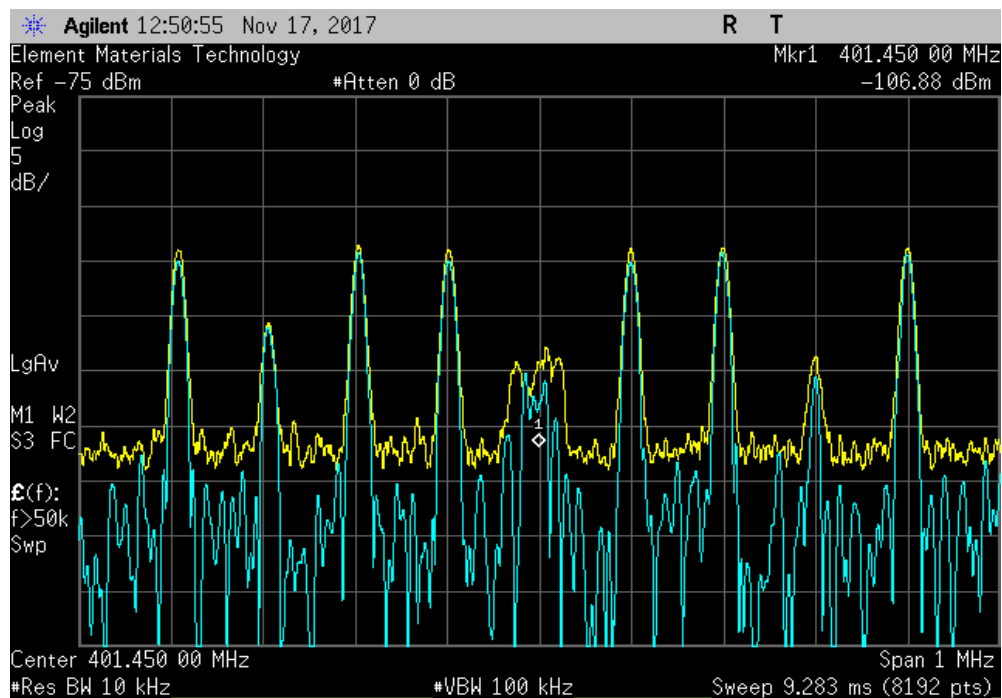


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401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Initial Setting, Fc at Threshold -3dB						
			Transmit on LIC1?	Transmit on LIC2?	Transmit on Fc?	Result
			No	No	Yes	N/A



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

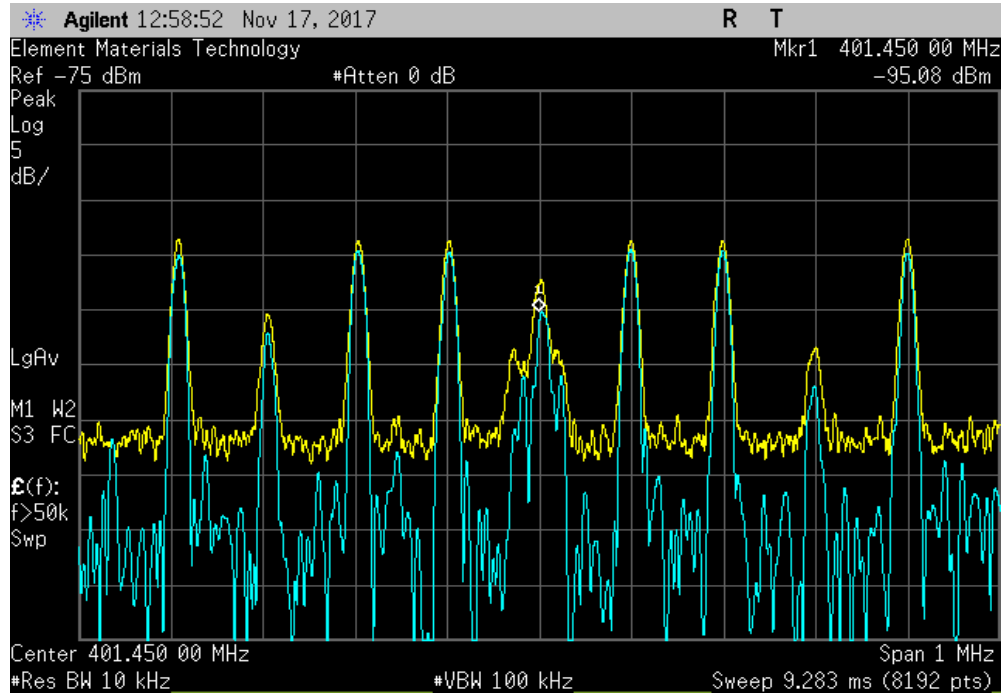


USE OF PRE-SCANNED ALTERNATIVE CHANNELS

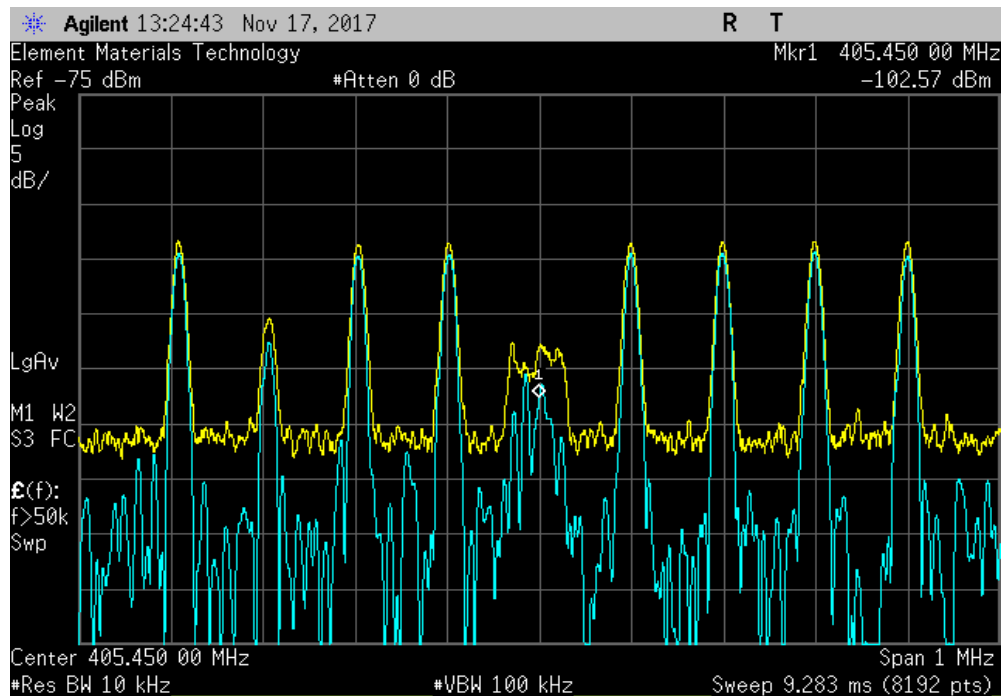


XMM 2017.09.21

401-402 MHz Band, Mid Channel (Fc), 401.55 MHz, Final Setting, LIC2 Available, Fc at Threshold +6dB						
			Transmit on LIC1?	Transmit on LIC2?	Transmit on Fc?	Result
			No	No	Yes	N/A



405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, Initial Setting, Fc at Threshold -3dB						
			Transmit on LIC1?	Transmit on LIC2?	Transmit on Fc?	Result
			No	No	Yes	N/A

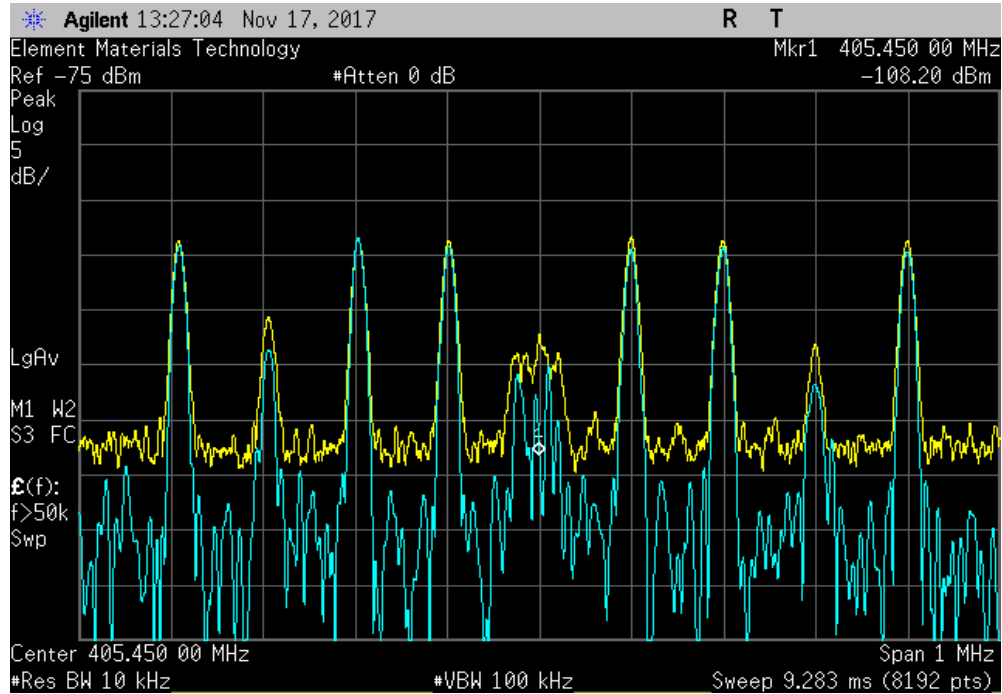


USE OF PRE-SCANNED ALTERNATIVE CHANNELS

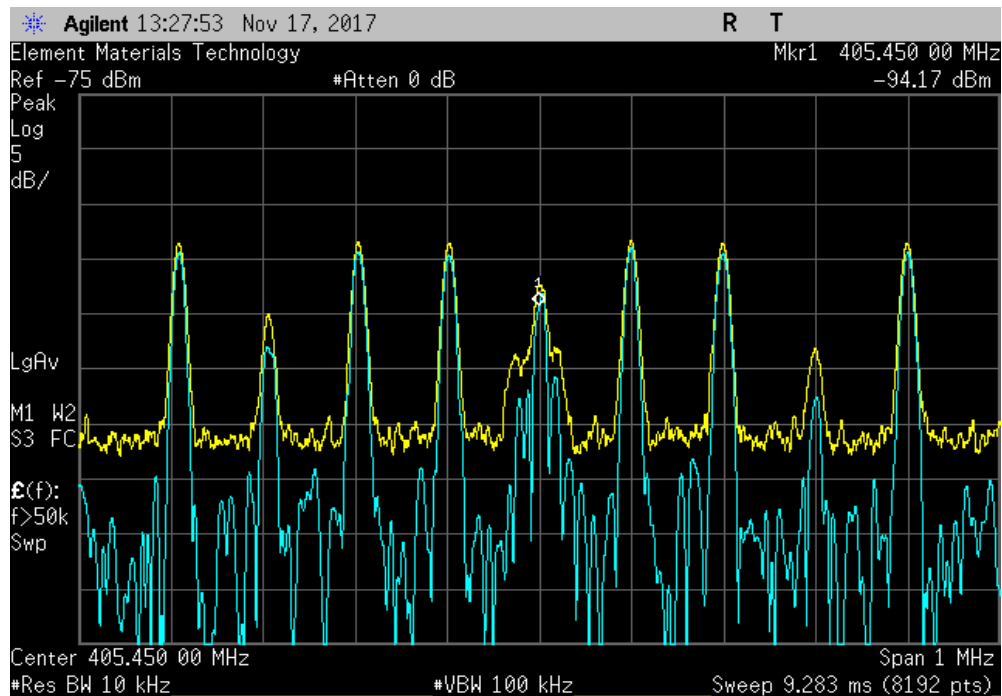


XMM 2017.09.21

405-406 MHz Band, Mid Channel (Fc), 405.55 MHz, LIC2 Available at Threshold -2dB						
			Transmit on LIC1?	Transmit on LIC2?	Transmit on Fc?	Result
			No	No	Yes	N/A



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



USE OF PRE-SCANNED ALTERNATIVE CHANNELS



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

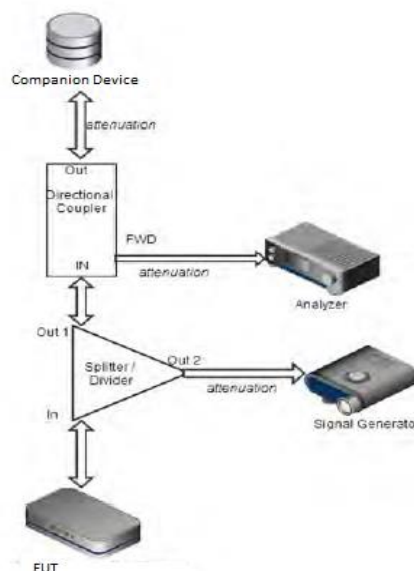
TEST DESCRIPTION

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 interference across the entire band. The amplitude of the multitone signals (out of operation region) were set to the LBT threshold of $10 \cdot \log(\text{Bandwidth}) - 150 + \text{Antenna Gain} + 10$ dB.

The intended frequency (F_c) was set to the LBT threshold - 3 dB. A least interfered channel (LIC) was set to the LBT threshold + 3 dB. The EUT was verified to transmit on F_c . While the session was still active a second least interfered channel (LIC2) was set to the LBT threshold - 2 dB. The amplitude of F_c 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 F_c which shows that the EUT does not use pre-scanned alternate channels.



USE OF PRE-SCANNED ALTERNATIVE CHANNELS



XMI 2017.09.21

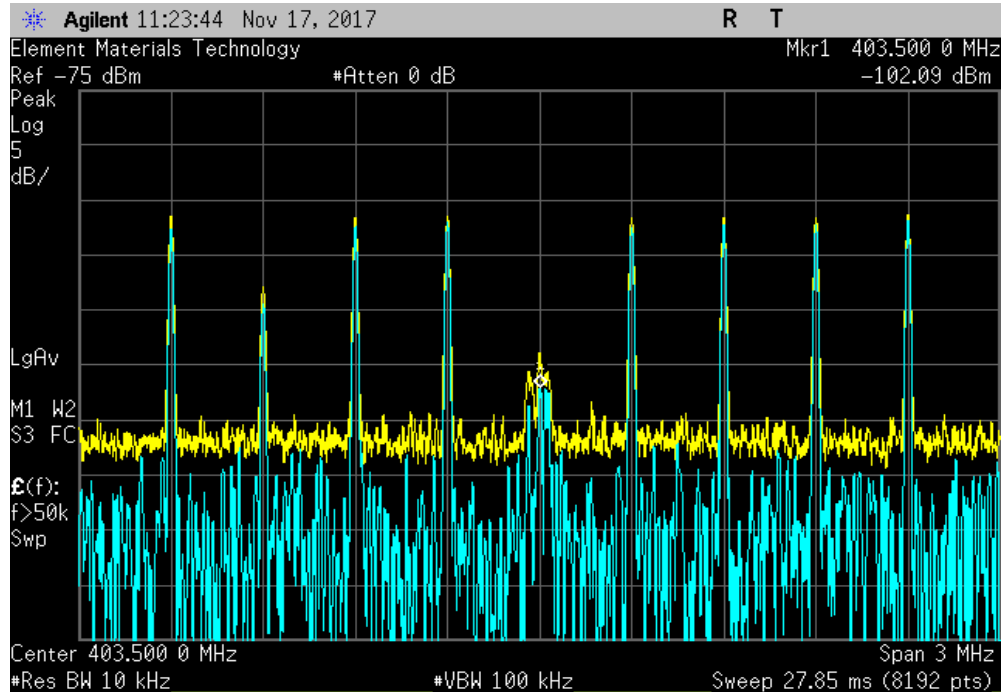
EUT: Clinician Programmer (CP) Model: 2501 (MICS/MEDS/MedRadio)		Work Order: AXON0097	
Serial Number: AC1C870003		Date: 20-Nov-17	
Customer: Axonics Modulation Technologies, Inc.		Temperature: 21.4 °C	
Attendees: Franklin Portillo		Humidity: 45.7% RH	
Project: None		Barometric Pres.: 1018 mbar	
Tested by: Johnny Candelas		Power: 7.6VDC	
		Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
EN 301 839-2 V1.3.1:2009		EN 301 839-1 V1.3.1:2009	
COMMENTS			
Calculated LBT Threshold = $10 * \text{LOG}(\text{Bandwidth}) - 150 + \text{Antenna Gain} = -96.87 \text{ dBm}$. Emission Bandwidth = 127432 Hz, Antenna Gain = 2.08dBi.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	30	Signature 	
		Transmit on LIC1?	Transmit on LIC2?
		Transmit on Fc?	Result
Mid Channel (Fc), 403.5 MHz			
Initial Setting, Fc at Threshold -3dB		No	No
LIC2 Available at Threshold -2dB		No	No
Final Setting, LIC2 Available, Fc at Threshold +6dB		No	No
		Yes	N/A
		Yes	N/A
		Yes	N/A

USE OF PRE-SCANNED ALTERNATIVE CHANNELS

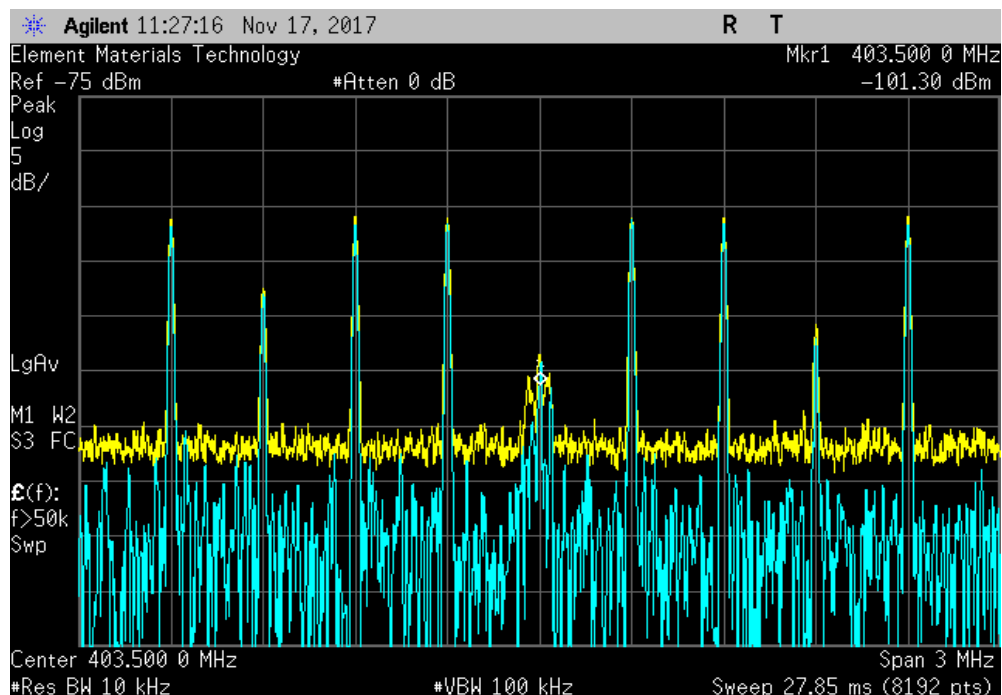


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Mid Channel (Fc), 403.5 MHz, Initial Setting, Fc at Threshold -3dB						
			Transmit on LIC1?	Transmit on LIC2?	Transmit on Fc?	Result
			No	No	Yes	N/A



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



USE OF PRE-SCANNED ALTERNATIVE CHANNELS



XMM 2017.09.21

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

