

# **Axonics Modulation Technologies, Inc.**

External Pulse Generator (EPG) Model 1601 FCC 95I:2018 MedRadio

Report # AXON0105.1







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#### Last Date of Test: January 8, 2018 Axonics Modulation Technologies, Inc. Model: External Pulse Generator (EPG) Model 1601

# **Radio Equipment Testing**

Standards	
Specification	Method
FCC 95I:2018	ANSI C63.26:2015

Results

Method Clause	Test Description	Applied	Results	Comments
ANSI C63.26 5.4.3	Emission Bandwidth	Yes	Pass	
FCC 95.2579(a)(1)	Emission Mask	Yes	Pass	
ANSI C63.26 5.2.3.3	Conducted Output Power	Yes	Pass	
ANSI C63.26 5.6	Frequency Stability	Yes	Pass	
ANSI C63.26 5.5.4	Spurious Radiated Emissions	Yes	Pass	
ANSI C63.26 5.7	Spurious Conducted Emissions	Yes	Pass	
ANSI C63.26 5.2.3.3, 5.2.7	Radiated Power (EIRP)	Yes	Pass	

#### **Deviations From Test Standards**

None

**Approved By:** 

Victor Ratinoff, Operations Manager

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

# **REVISION HISTORY**



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

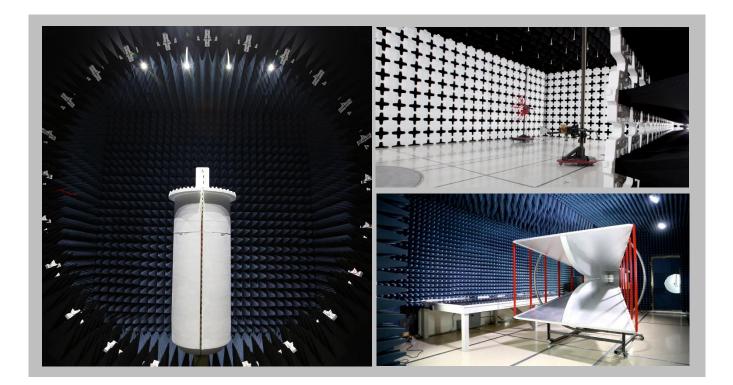
# FACILITIES







			<b>F -</b>	_		
California	Minnesota	New York	Oregon	Texas	Washington	
Labs OC01-17	Labs MN01-10	Labs NY01-04	Labs EV01-12	Labs TX01-09	Labs NC01-05	
41 Tesla	9349 W Broadway Ave.	4939 Jordan Rd.	6775 NE Evergreen Pkwy #400	3801 E Plano Pkwy	19201 120 <sup>th</sup> Ave NE	
Irvine, CA 92618	Brooklyn Park, MN 55445	Elbridge, NY 13060	Hillsboro, OR 97124	Plano, TX 75074	Bothell, WA 98011	
(949) 861-8918	(612)-638-5136	(315) 554-8214	(503) 844-4066	(469) 304-5255	(425)984-6600	
		NV	LAP			
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	
		BS	МІ			
SL2-IN-E-1154R	SL2-IN-E-1152R	N/A	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R	
	VCCI					
A-0029	A-0109	N/A	A-0108	A-0201	A-0110	
Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA						
US0158	US0175	N/A	US0017	US0191	US0157	



# **MEASUREMENT UNCERTAINTY**



#### **Measurement Uncertainty**

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

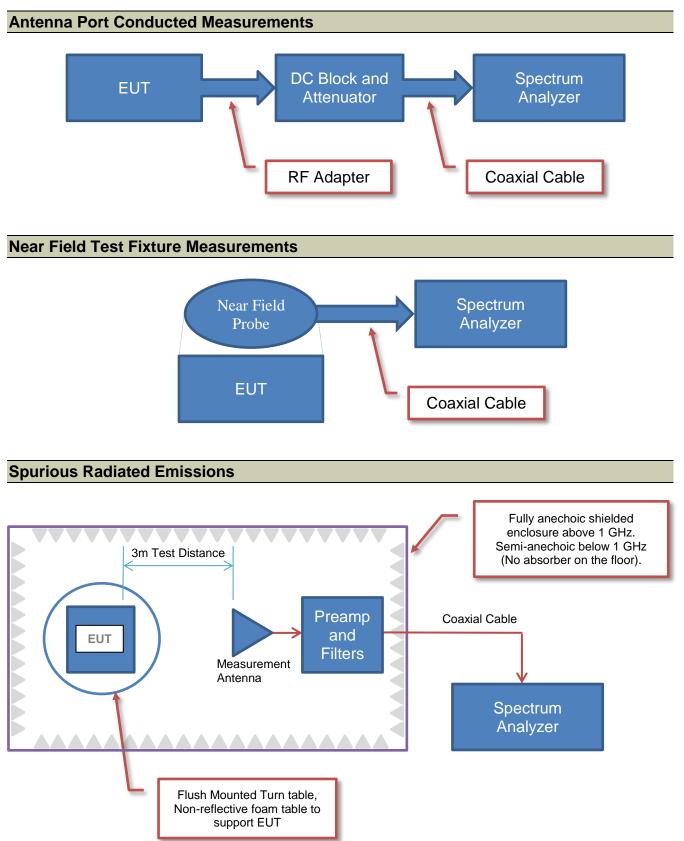
A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) can be found included as part of the applicable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

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

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

# **Test Setup Block Diagrams**





# **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:	External Pulse Generator (EPG) Model 1601	
First Date of Test:	January 3, 2018	
Last Date of Test:	January 8, 2018	
Receipt Date of Samples:	January 3, 2018	
Equipment Design Stage:	Production	
Equipment Condition:	No Damage	
Purchase Authorization:	Verified	

#### Information Provided by the Party Requesting the Test

#### Functional Description of the EUT:

The EPG Model - 1601 (MEDS) is a Battery operated External Pulse Generator (EPG). Tined Lead: stimulation lead with four (4) electrode contacts to provide stimulation. The distal tip is implanted through the applicable foramen near the sacral nerve (S3) with the proximal end connected to EPG. Operating in the MEDS Bands (MedRadio-WingBand) (401-402 MHz and 405-406 MHz)

#### **Testing Objective:**

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

# **CONFIGURATIONS**



### Configuration AXON0105-4

Software/Firmware Running during test			
Description	Version		
EPG Software	34		

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
External Pulse Generator (EPG)	Axonics	1601	AE1GC70009

Peripherals in test setup boundary					
Description	Manufacturer	Model/Part Number	Serial Number		
Patient Remote (PR)	Axonics	2301	AP1BA70024		

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Tined Lead (Lot# AL1G160008, Model 1201)	No	1.2m	No	External Pulse Generator (EPG)	Unterminated

### Configuration AXON0105-5

Software/Firmware Running during test	
Description	Version
EPG Software	34

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
External Pulse Generator (EPG)	Axonics	1601	AE1GC70009

Peripherals in test setup boundary						
Description Manufacturer Model/Part Number Serial Number						
Patient Remote (PR)	Axonics	2301	AP1BA70024			

Cables								
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2			
BTC Cable (Lot# L2017- 0546) with PNE Leads (Lot# AK2BA70001)	No	1.0m	No	External Pulse Generator (EPG)	Unterminated			

# **CONFIGURATIONS**



### Configuration AXON0105-6

Software/Firmware Running during test	
Description	Version
EPG Software	34

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
External Pulse Generator (EPG)	Axonics	1601	AT1B000003

Peripherals in test setup boundary							
Description Manufacturer Model/Part Number Serial Number							
Patient Remote (PR)	Axonics	2301	AP1BA70024				
DC Power Supply	HQ Power	PS3003U	DK10103872				

Cables								
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2			
AC Cable	No	1.8m	No	DC Power Supply	AC Mains			
DC Cable	No	3.0m	No	DC Power Supply	External Pulse Generator (EPG)			

# **MODIFICATIONS**



### **Equipment Modifications**

Item	Date	Test	Modification	Note	Disposition of EUT
		Spurious	Tested as	No EMI suppression	EUT remained at
1	1/3/2018	Radiated	delivered to	devices were added or	Element following
		Emissions	Test Station.	modified during this test.	the test.
		Radiated	Tested as	No EMI suppression	EUT remained at
2	1/3/2018	Power (EIRP)	delivered to	devices were added or	Element following
			Test Station.	modified during this test.	the test.
	Emission	Emission	Tested as	No EMI suppression	EUT remained at
3	1/5/2018	Bandwidth	delivered to	devices were added or	Element following
		Danuwidth	Test Station.	modified during this test.	the test.
		Emission	Tested as	No EMI suppression	EUT remained at
4	1/5/2018	Mask	delivered to	devices were added or	Element following
		Wask	Test Station.	modified during this test.	the test.
		Conducted	Tested as	No EMI suppression	EUT remained at
5	1/5/2018	Output Power	delivered to	devices were added or	Element following
			Test Station.	modified during this test.	the test.
		Spurious	Tested as	No EMI suppression	EUT remained at
6	1/5/2018	Conducted	delivered to	devices were added or	Element following
		Emissions	Test Station.	modified during this test.	the test.
		Frequency	Tested as	No EMI suppression	Scheduled testing
7	1/8/2018	Stability	delivered to	devices were added or	was completed.
		Clabinty	Test Station.	modified during this test.	nae completed.

# **EMISSIONS BANDWIDTH**



XMit 2017.12.13

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
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Aeroflex	INMET 8535	AMO	27-Mar-17	27-Mar-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. Per 47 CFR 95.2573(a), the emission bandwidth was determined by measuring the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that are 20 dB down relative to the maximum level of the modulated carrier. A spectrum analyzer using a peak detector with no video filtering was used with a resolution bandwidth equal to approximately 1.0 percent of the emission bandwidth of the EUT.

### **EMISSIONS BANDWIDTH**

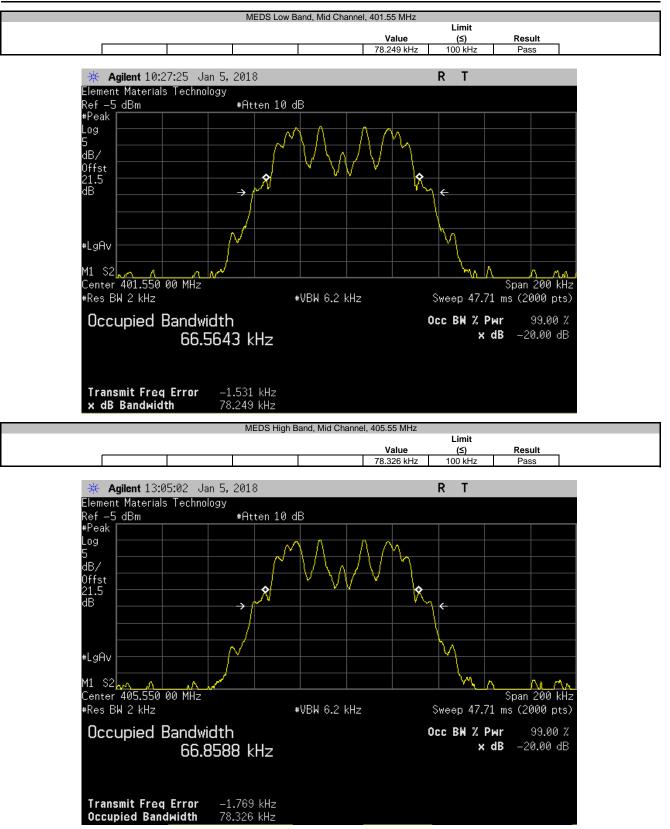


				TbtTx 2017.10.04	
	se Generator (EPG) Model 1601		Work Order:		
Serial Number: AT1B000003			Date:	5-Jan-18	
Customer: Axonics Mod	lulation Technologies, Inc.		Temperature:	22.1 °C	
Attendees: Franklin Port	illo			53.5% RH	
Project: None			Barometric Pres.:	1022 mbar	
Tested by: Johnny Cand	ielas	Power: 3.0VDC	Job Site:	OC13	
TEST SPECIFICATIONS		Test Method			
FCC 95I:2018		ANSI C63.26:2015			
COMMENTS		•			
DC Block + 20dB Attenuator + Co	nax Cable = 21.5dB Total Offset				
Power Index = 40					
DEVIATIONS FROM TEST STAND	DARD				
None					
None		l IIIN			
		for de later			
	Signature	for S. Com		L'au la	
	Signature	for the later	Velue	Limit	Desult
Configuration # 6	Signature	fr d. l.d.	Value	(≤)	Result
	1.55 MHz	f. d. lat.	<b>Value</b> 78.249 kHz 78.326 kHz		Result Pass Pass

### **EMISSIONS BANDWIDTH**



TbtTx 2017.10.04 XMit 2017.12.13





XMit 2017.12.13

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
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Aeroflex	INMET 8535	AMO	27-Mar-17	27-Mar-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

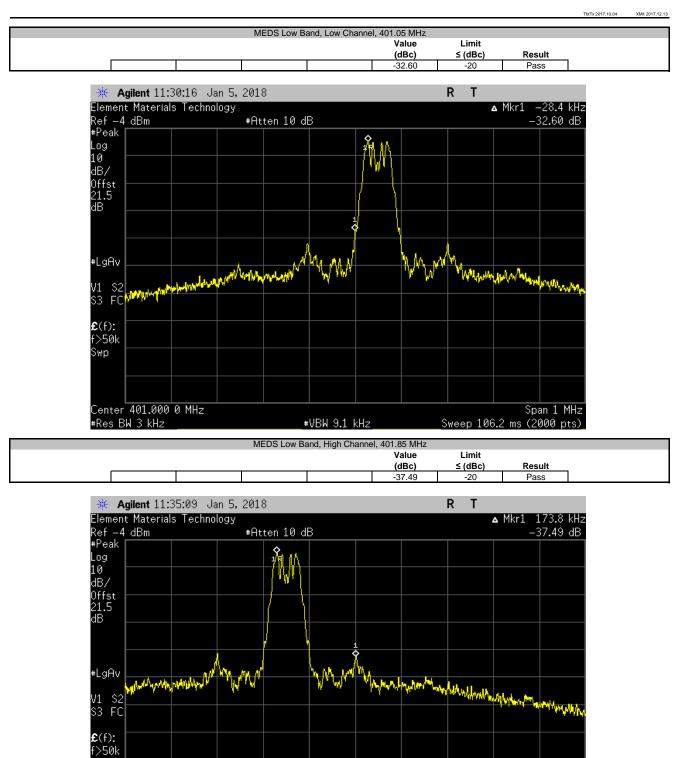
#### **TEST DESCRIPTION**

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. Per 47 CFR 95.2579(a)(1) the emission mask was measured. Emissions more than 150 kHz away from the center frequency must be attenuated below the transmitter output power by at least 20 dB. This was evaluated by the Occupied Bandwidth measurement according to 47 CFR 95.2573(a). In addition, emissions 250 kHz or less above and below the MICS band (402-405 MHz) must be attenuated below the maximum permitted output power by at least 20 dB.

A spectrum analyzer was used to measure the emission mask. A spectrum analyzer using a peak detector with no video filtering was used with a resolution bandwidth equal to approximately 1.0 percent of the emission bandwidth of the EUT. However, various plots were made using different frequency spans and resolution bandwidths in an attempt to not only satisfy the measurement criteria, but to also show that all emissions outside of the occupied band are greatly attenuated.



						TbtTx 2017.10.04	XMit 2017.1
	ernal Pulse Generator (I	EPG) Model 1601			Work Order:		
Serial Number: AT1	B000003					5-Jan-18	
Customer: Axo	Axonics Modulation Technologies, Inc.				Temperature:	22.1 °C	
Attendees: Fran	nklin Portillo				Humidity:	53.5% RH	
Project: Non	e				Barometric Pres.:	1022 mbar	
Tested by: Joh	nny Candelas		Pow	er: 3.0VDC	Job Site:	OC13	
TEST SPECIFICATIONS				Test Method			
FCC 95I:2018				ANSI C63.26:2015			
00 00.12010				7 1101 00012012010			
COMMENTS							
	ator + Coax Cable = 21	.5dB Total Offset					
Power Index = 40							
DEVIATIONS FROM TES	ST STANDARD						
None							
			1	1. 1. 1			
Configuration #	6		-fe d	1. Colla			
		Signature	0				
					Value	Limit	
					(dBc)	≤ (dBc)	Result
MEDS Low Band, Low Ch	hannel. 401.05 MHz				-32.60	-20	Pass
MEDS Low Band, High C					-37.49	-20	Pass
IEDS High Band, Low C					-32.47	-20	Pass
MEDS High Band, High C					-37.20	-20	Pass



₩VBW 9.1 kHz

Swp

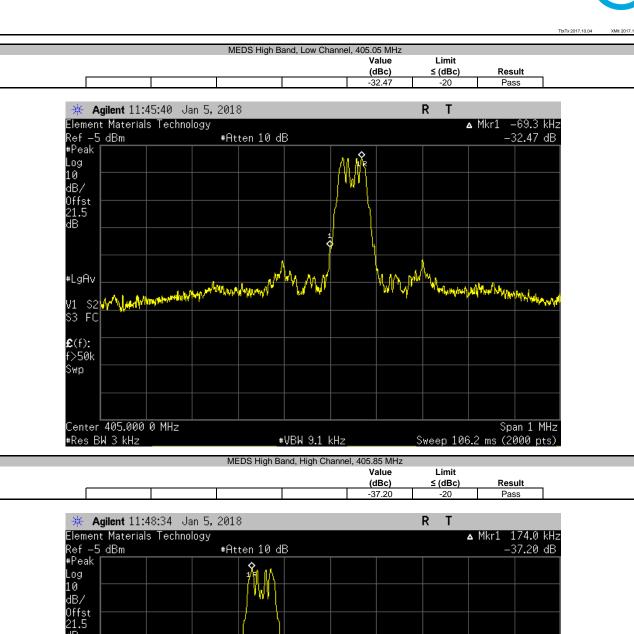
Center 402.000 0 MHz

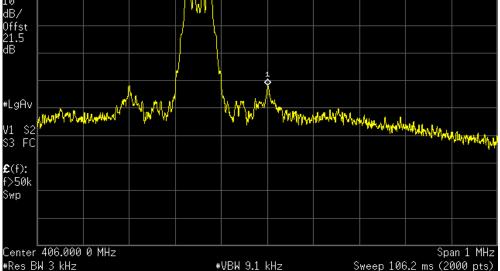
#Res BW 3 kHz

Span 1 MHz

Sweep 106.2 ms (2000 pts)







Report No. AXON0105.1

# **CONDUCTED OUTPUT POWER**



XMit 2017.12.13

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
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Aeroflex	INMET 8535	AMO	27-Mar-17	27-Mar-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. Per FCC Part 2.1046, RSS-GEN, the output power shall be measured at the RF terminal. The peak output power was measured with the EUT configured in the modes listed in the datasheet. The EUT was transmitting at its maximum data rate.

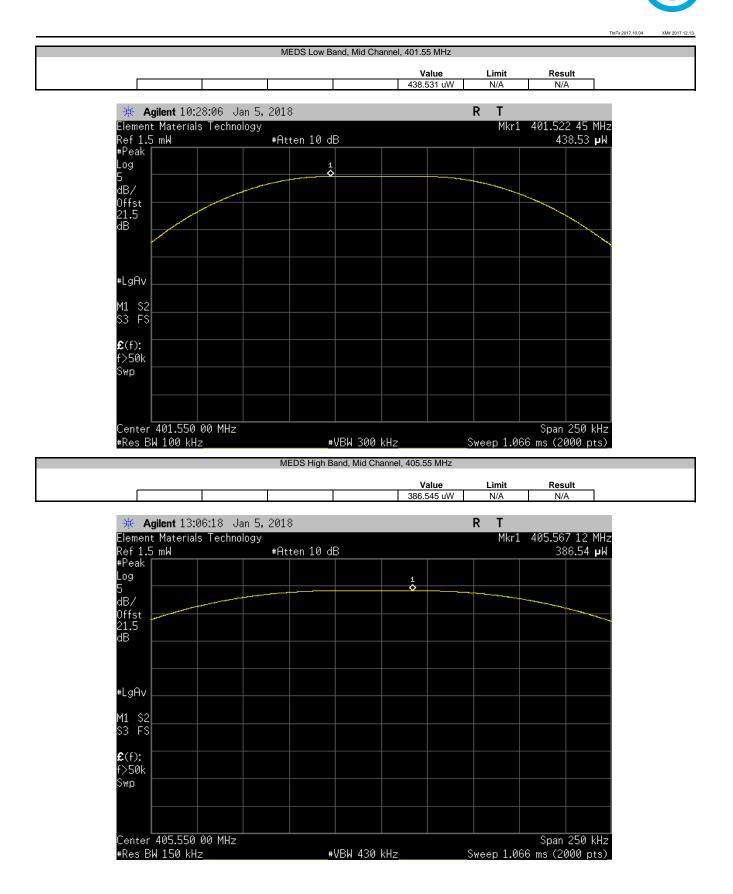
FCC Part 95 and RSS-243 have no conducted output power limit. It is a requirement to characterize this information and that data is contained within this datasheet.

# CONDUCTED OUTPUT POWER



						TbtTx 2017.10.04	XMit 2017.12.13
EUT:	External Pulse Generator	(EPG) Model 1601			Work Order:	AXON0105	
Serial Number:	AT1B000003				Date:	5-Jan-18	
Customer:	Axonics Modulation Tech	nologies, Inc.			Temperature:	22.1 °C	
Attendees:	Franklin Portillo				Humidity:	53.5% RH	
Project:	None				Barometric Pres.:	1022 mbar	
Tested by:	Johnny Candelas		Power: 3.0VDC		Job Site:	OC13	
TEST SPECIFICAT	IONS		Test Method				
FCC 95I:2018			ANSI C63.26:2015	5			
COMMENTS			•				
DC Block + 20dB A	ttenuator + Coax Cable = 2	21.5dB Total Offset					
Power Index = 40							
DEVIATIONS FROM	M TEST STANDARD						
None							
Configuration #	6	Signature	for d. lat.				
					Value	Limit	Result
	lid Channel, 401.55 MHz				438.531 uW	N/A	N/A
MEDS High Band, N	/lid Channel, 405.55 MHz				386.545 uW	N/A	N/A

### **CONDUCTED OUTPUT POWER**





XMit 2017.12.13

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
Meter - Multimeter	Fluke	79 III	MMD	11-Feb-16	11-Feb-19
Thermometer	Omega Engineering, Inc.	HH311	DUC	8-Nov-17	8-Nov-20
Chamber - Temperature/Humidity	Cincinnati Sub Zero (CSZ)	ZPHS-32-3.5-SCT/AC	TBE	27-Oct-17	27-Oct-18
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Aeroflex	INMET 8535	AMO	27-Mar-17	27-Mar-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 spectrum analyzer is configured with a precision frequency reference that exceeds the stability requirement of the transmitter. The EUT was placed inside a temperature / humidity chamber.

#### Variation of Supply Voltage

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

#### Variation of Ambient Temperature

Using a temperature chamber, the transmit frequency was recorded at the extremes of the specified temperature range (+5°C, +20°C and +40° C).



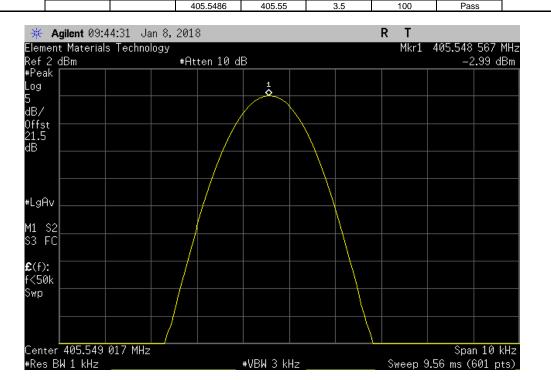
EUT	External Pulse Generator	(FPG) Model 1601					Work Order:	TbiTx 2017.10.04	XMit 20
Serial Number:								8-Jan-18	
	Axonics Modulation Tech	nologies Inc					Temperature:		
Attendees:		mologies, inc.						62.8% RH	
Project:							Barometric Pres.:		
	Johnny Candelas			Power: 3.0VDC			Job Site:		
EST SPECIFICATIO				Test Method			Job Site:	0013	
CC 951:2018	5113								
-00 951:2018				ANSI C63.26:2015					
COMMENTS									
	tenuator + Coax Cable = 2	21.5dB Total Offset							
Power Index = 40									
DEVIATIONS FROM	TEAT ATANDADD								
	TEST STANDARD								
None									
Sanfiguration #	6		-l.	L. Lat.					
Configuration #	6	O'rear a farra	5						
		Signature			Manager	Analassad	Error	1.114	
					Measured Value (MHz)	Assigned Value (MHz)		Limit	Result
					value (IVIFIZ)	value (IVIEZ)	(ppm)	(ppm)	Result
Battery Nominal Volta					404 5 400	404 55	0.0	400	Deer
	MEDS Low Band, Mid Cha				401.5488	401.55	2.9	100	Pass
	MEDS High Band, Mid Cha	annel, 405.55 MHz			405.5486	405.55	3.5	100	Pass
Extreme Battery Full					101 5100			400	
	MEDS Low Band, Mid Cha				401.5488	401.55	3.0	100	Pass
	MEDS High Band, Mid Cha	annei, 405.55 MHZ			405.5486	405.55	3.5	100	Pass
	tdown Voltage 2.3VDC				404 5 400	404 55	0.0	400	Deer
	MEDS Low Band, Mid Cha				401.5488	401.55	3.0 3.5	100 100	Pass
Extreme Temperature	MEDS High Band, Mid Cha	annei, 405.55 MHZ			405.5486	405.55	3.5	100	Pass
	e +55°C MEDS Low Band, Mid Cha	anal 401 EE Mila			401.5458	401.55	10.6	100	Pass
								100	
	MEDS High Band, Mid Cha	annei, 405.55 MHZ			405.5453	405.55	11.5	100	Pass
Extreme Temperature		anal 401 EE Milla			404 5459	401.55	10.5	100	Pass
	MEDS Low Band, Mid Cha				401.5458			100	
Extreme Temperature	MEDS High Band, Mid Cha	annei, 405.55 MHZ			405.5456	405.55	11.0	100	Pass
	MEDS Low Band, Mid Cha	anal 401 EE Milla			401.5466	401.55	8.5	100	Pass
	MEDS Low Band, Mid Cha MEDS High Band, Mid Cha				405.5464	405.55	8.5 9.0	100	Pass
Extreme Temperature		annei, 405.55 MHZ			405.5464	405.55	9.0	100	Pass
	MEDS Low Band, Mid Cha	ppol 401 EE MHz			401.5476	401.55	5.9	100	Pass
	MEDS High Band, Mid Cha				405.5475	401.55	6.3	100	Pass
Extreme Temperature		annei, 405.55 MHz			405.5475	405.55	0.3	100	F d55
	HEDS Low Band, Mid Cha	ppel 401 55 MHz			401.5487	401.55	3.2	100	Pass
	MEDS High Band, Mid Cha				405.5486	401.55	3.6	100	Pass
Extreme Temperature	- <b>J</b> /				400.0400	400.00	3.0	100	r dSS
zueme remperature	MEDS Low Band, Mid Cha	ppel 401 55 MHz			401.5496	401.55	1.0	100	Pass
1	IVILUO LUW Dariu, IVIIU Ulia				405.5494	401.55	1.4	100	Pass
	MEDS High Bond Mid Cho	nonol 405 55 MHz							
	MEDS High Band, Mid Cha	annel, 405.55 MHz			405.5494	403.33	1.4	100	1 400
Extreme Temperature					405.5494	401.55	0.1	100	Pass



XMit 2017.12.13

TbtTx 2017.10.04

Battery Nominal Voltage 3.0VDC, MEDS Low Band, Mid Channel, 401.55 MHz Measured Assigned Error Limit Value (MHz) Value (MHz) (ppm) (ppm) Results 401.5488 401.55 2.9 100 Pass Agilent 09:16:50 Jan 8, 2018 R Т ₩. Mkr1 401.548 833 MHz Element Materials Technology Ref 2 dBm #Peak #Atten 10 dB -2.97 dBm Log 5 dB/ 0ffst 21.5 dB #LgAv M1 S2 S3 FC £(f): f<50k Swp Center 401.549 200 MHz Span 10 kHz #Res BW 1 kHz ₩VBW 3 kHz Sweep 9.56 ms (601 pts) Battery Nominal Voltage 3.0VDC, MEDS High Band, Mid Channel, 405.55 MHz Measured Assigned Error Limit Value (MHz) Value (MHz) (ppm) (ppm) Results

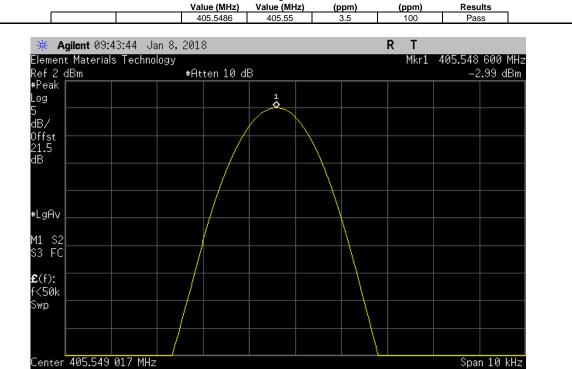




XMit 2017.12.13

TbtTx 2017.10.04

Extreme Battery Full Voltage 3.6VDC, MEDS Low Band, Mid Channel, 401.55 MHz Measured Assigned Error Limit Value (MHz) Value (MHz) (ppm) (ppm) Results 401.5488 401.55 3.0 100 Pass Agilent 09:17:37 Jan 8, 2018 R Т ₩. Mkr1 401.548 816 MHz Element Materials Technology Ref 2 dBm #Peak #Atten 10 dB -2.98 dBm Log 5 dB/ 0ffst 21.5 dB #LgAv S2 FC M1 S3 £(f): f<50k Swp Center 401.549 183 MHz Span 10 kHz #Res BW 1 kHz ₩VBW 3 kHz Sweep 9.56 ms (601 pts) Extreme Battery Full Voltage 3.6VDC, MEDS High Band, Mid Channel, 405.55 MHz Measured Assigned Error Limit



₩VBW 3 kHz

#Res BW 1 kHz

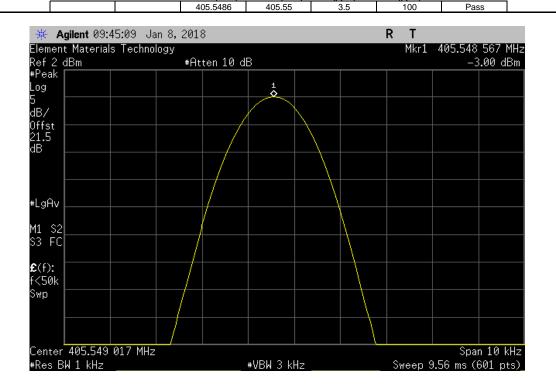
Sweep 9.56 ms (601 pts)



XMit 2017.12.13

TbtTx 2017.10.04

Extreme Battery Shutdown Voltage 2.3VDC, MEDS Low Band, Mid Channel, 401.55 MHz Measured Assigned Error Limit Value (MHz) Value (MHz) (ppm) (ppm) Results 401.5488 401.55 3.0 100 Pass Agilent 09:18:18 Jan 8, 2018 R ₩. Т Mkr1 401.548 783 MHz Element Materials Technology Ref 2 dBm #Peak #Atten 10 dB -2.98 dBm 1 Log 5 dB/ 0ffst 21.5 dB #LgAv S2 FC M1 S3 £(f): f<50k Swp Center 401.549 183 MHz Span 10 kHz #Res BW 1 kHz ₩VBW 3 kHz Sweep 9.56 ms (601 pts) Extreme Battery Shutdown Voltage 2.3VDC, MEDS High Band, Mid Channel, 405.55 MHz Assigned Error Limit Measured Value (MHz) Value (MHz) (ppm) (ppm) Results

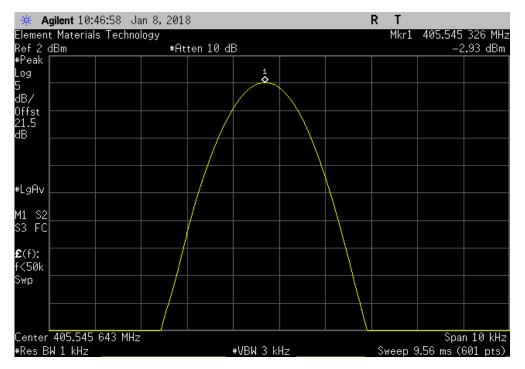




XMit 2017.12.13

TbtTx 2017.10.04 Extreme Temperature +55°C, MEDS Low Band, Mid Channel, 401.55 MHz Measured Assigned Error Limit Value (MHz) Value (MHz) (ppm) (ppm) Results 401.5458 401.55 10.6 100 Pass Agilent 10:52:56 Jan 8, 2018 R Т \* Mkr1 401.545 762 MHz Element Materials Technology Ref 1 dBm #Peak #Atten 10 dB -4.24 dBm Log 5 dB/ 0ffst 21.5 dB #LgAv M1 S2 S3 FC £(f): f<50k Swp Center 401.546 145 MHz Span 10 kHz #Res BW 1 kHz ₩VBW 3 kHz Sweep 9.56 ms (601 pts) Extreme Temperature +55°C, MEDS High Band, Mid Channel, 405.55 MHz

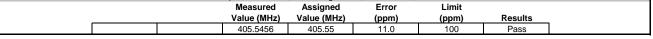
	Measured	Assigned	Error	Limit	
	Value (MHz)	Value (MHz)	(ppm)	(ppm)	Results
	405.5453	405.55	11.5	100	Pass

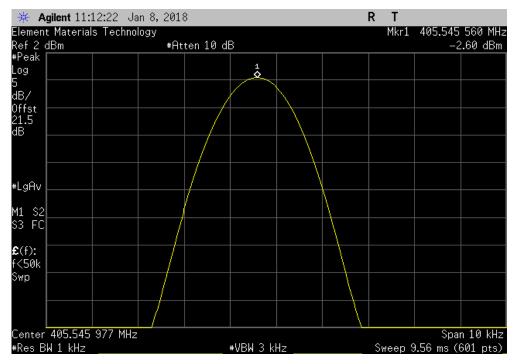




XMit 2017.12.13

TbtTx 2017.10.04 Extreme Temperature +50°C, MEDS Low Band, Mid Channel, 401.55 MHz Measured Assigned Error Limit Value (MHz) Value (MHz) (ppm) (ppm) Results 401.5458 401.55 10.5 100 Pass Agilent 11:08:42 Jan 8, 2018 R Т \* Mkr1 401.545 779 MHz Element Materials Technology Ref 1 dBm #Peak #Atten 10 dB -4.18 dBm Log 5 dB/ 0ffst 21.5 dB #LgAv M1 S2 S3 FC £(f): f<50k Swp Center 401.546 162 MHz Span 10 kHz #Res BW 1 kHz ₩VBW 3 kHz Sweep 9.56 ms (601 pts) Extreme Temperature +50°C, MEDS High Band, Mid Channel, 405.55 MHz Assigned Limit Measured Error

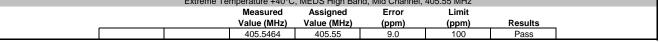


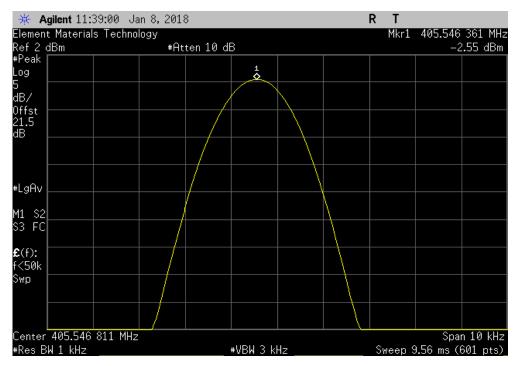




XMit 2017.12.13

TbtTx 2017.10.04 Extreme Temperature +40°C, MEDS Low Band, Mid Channel, 401.55 MHz Measured Assigned Error Limit Value (MHz) Value (MHz) (ppm) (ppm) Results 401.5466 401.55 8.5 100 Pass Agilent 11:45:31 Jan 8, 2018 R Т \*\* Mkr1 401.546 580 MHz Element Materials Technology Ref 1 dBm #Peak #Atten 10 dB -4.04 dBm Log 1 5 dB/ 0ffst 21.5 dB #LgAv M1 S2 S3 FC £(f): f<50k Swp Center 401.547 013 MHz Span 10 kHz #Res BW 1 kHz ₩VBW 3 kHz Sweep 9.56 ms (601 pts) Extreme Temperature +40°C, MEDS High Band, Mid Channel, 405.55 MHz Assigned Error Limit Measured





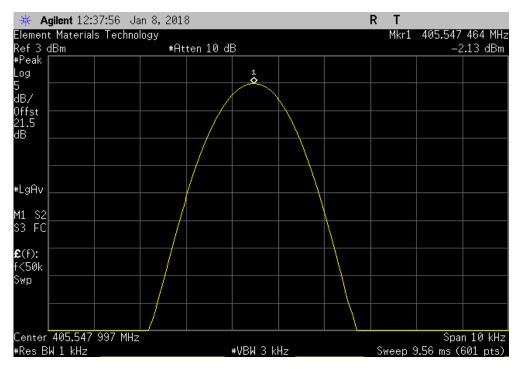


XMit 2017.12.13

TbtTx 2017.10.04

Extreme Temperature +30°C, MEDS Low Band, Mid Channel, 401.55 MHz Measured Assigned Error Limit Value (MHz) Value (MHz) (ppm) (ppm) Results 401.5476 401.55 5.9 100 Pass Agilent 12:33:57 Jan 8, 2018 R Т \* Mkr1 401.547 648 MHz Element Materials Technology Ref 1 dBm #Peak #Atten 10 dB -3.73 dBm Log 5 dB/ 0ffst 21.5 dB #LgAv M1 S2 S3 FC £(f): f<50k Swp Center 401.548 015 MHz Span 10 kHz #Res BW 1 kHz ₩VBW 3 kHz Sweep 9.56 ms (601 pts) Extreme Temperature +30°C, MEDS High Band, Mid Channel, 405.55 MHz Assigned Error Limit Measured



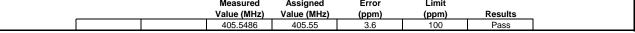


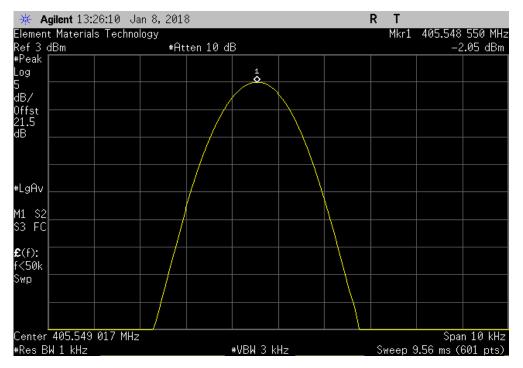


XMit 2017.12.13

TbtTx 2017.10.04

Extreme Temperature +20°C, MEDS Low Band, Mid Channel, 401.55 MHz Measured Assigned Error Limit Value (MHz) Value (MHz) (ppm) (ppm) Results 401.5487 401.55 3.2 100 Pass Agilent 13:28:44 Jan 8, 2018 R Т \* Mkr1 401.548 733 MHz Element Materials Technology Ref 1 dBm #Peak #Atten 10 dB -3.71 dBm Log 1 5 dB/ 0ffst 21.5 dB #LgAv M1 S2 S3 FC £(f): f<50k Swp Center 401.549 183 MHz Span 10 kHz #Res BW 1 kHz ₩VBW 3 kHz Sweep 9.56 ms (601 pts) Extreme Temperature +20°C, MEDS High Band, Mid Channel, 405.55 MHz Assigned Limit Measured Error

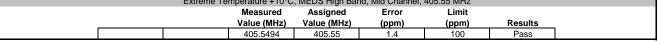


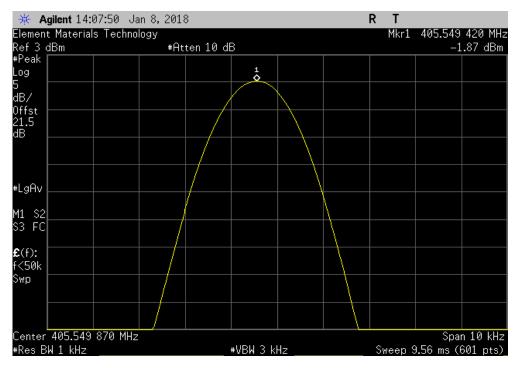




XMit 2017.12.13

TbtTx 2017.10.04 Extreme Temperature +10°C, MEDS Low Band, Mid Channel, 401.55 MHz Measured Assigned Error Limit Value (MHz) Value (MHz) (ppm) (ppm) Results 401.5496 401.55 1.0 100 Pass Agilent 14:04:18 Jan 8, 2018 R Т ₩. Mkr1 401.549 585 MHz Element Materials Technology Ref 2 dBm #Peak #Atten 10 dB -3.38 dBm Log 5 dB/ 0ffst 21.5 dB #LgAv M1 S2 S3 FC £(f): f<50k Swp Center 401.550 035 MHz Span 10 kHz #Res BW 1 kHz ₩VBW 3 kHz Sweep 9.56 ms (601 pts) Extreme Temperature +10°C, MEDS High Band, Mid Channel, 405.55 MHz Assigned Limit Measured Error



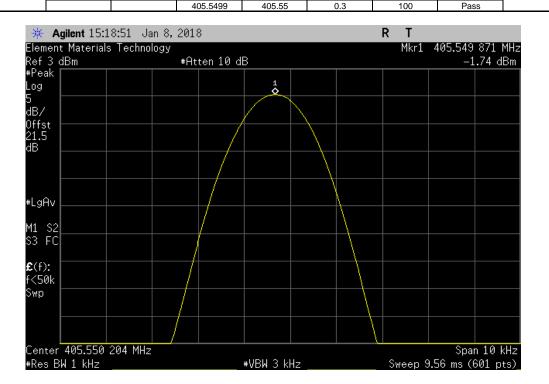




XMit 2017.12.13

TbtTx 2017.10.04

Extreme Temperature 0°C, MEDS Low Band, Mid Channel, 401.55 MHz Measured Assigned Error Limit Value (MHz) Value (MHz) (ppm) (ppm) Results 401.5500 401.55 0.1 100 Pass Agilent 15:16:30 Jan 8, 2018 R Т ₩. Mkr1 401.550 035 MHz Element Materials Technology Ref 2 dBm #Peak #Atten 10 dB -3.24 dBm Log 5 dB/ 0ffst 21.5 dB #LgAv M1 S2 S3 FC £(f): f<50k Swp Center 401.550 368 MHz Span 10 kHz #Res BW 1 kHz ₩VBW 3 kHz Sweep 9.56 ms (601 pts) Extreme Temperature 0°C, MEDS High Band, Mid Channel, 405.55 MHz Measured Assigned Error Limit Value (MHz) Value (MHz) (ppm) (ppm) Results



# SPURIOUS RADIATED EMISSIONS



PSA-ESCI 2017.09.18

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

#### MODES OF OPERATION

Transmitting Modulated at Mid Ch - MEDS Low Band = 401.55 MHz & Mid Ch - MEDS High Band = 405.55 MHz

#### POWER SETTINGS INVESTIGATED

Battery

#### CONFIGURATIONS INVESTIGATED

AXON0105 - 4 AXON0105 - 5

#### FREQUENCY RANGE INVESTIGATED

Start Frequency 30 MHz

Stop Frequency 5000 MHz

#### SAMPLE CALCULATIONS

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

#### **TEST EQUIPMENT**

Description	Manufacturer	Model	ID	Last Cal.	Interval
Cable	Northwest EMC	1-8GHz RE Cables	OCJ	13-Jul-2017	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	13-Jul-2017	12 mo
Antenna - Double Ridge	EMCO	3115	AHB	21-Mar-2016	24 mo
Cable	Northwest EMC	10kHz-1GHz RE Cables	OCH	1-Aug-2017	12 mo
Amplifier - Pre-Amplifier	Miteq	AM-1402	AOZ	1-Aug-2017	12 mo
Antenna - Biconilog	Teseq	CBL 6141A	AYE	7-Nov-2017	24 mo
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAY	21-Nov-2017	12 mo

#### **TEST DESCRIPTION**

The highest gain of each type of antenna to be used with the EUT was tested. For each configuration, the spectrum was scanned throughout the specified range. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes (per ANSI C63.26). A preamp was used for this test in order to provide sufficient measurement sensitivity.

Per CFR 47 95.2579(a), field strength measurements were performed and compared to the specified limits.

# SPURIOUS RADIATED EMISSIONS



	ork Order:	AXON				Date:	3-Jan-2018	0	11 -	0
	Project:	No			Te	emperature:	19.5 °C	Fe	- 1.6	aller .
	Job Site:					Humidity:	52.3% RH	0		-
Seria	al Number:					etric Pres.:	1020 mbar	Test	ted by: Johnny Cande	las
			ulse Ge	enerato	or (EPG	) Model 1601				
Con	figuration:	4								
(	Customer:	Axonics Mo	odulatio	on Tec	nnologi	es, Inc.				
		Franklin Po	ortillo							
E	UT Power:									
Operat	ting Mode:		ig Mod	ulated	at Mid (	Ch - MEDS Low	Band = 401.5	b MHz & Mid Ch - MI	EDS High Band = 405	.55 MHz
D	Deviations:	None								
С	comments:					r Index = 40 Y-Axis = EUT G	rey Face Out,	& Z-Axis = Grey Fac	e Out turned 90° so to	p is facing ou
st Spec	ifications						Test	Method		
C 951:20		!						C63.26:2015		
Run #	5	Test Dis	stance	(m)	3	Antenna He	eight(s)	1 to 3(m)	Results	Pass
Kull #	Ť									
Γ										
80										
Γ										
80										
Γ										
80										
80										
80 - 70 -										
80 - 70 - 60 -										
80 70 60										
80 70 60										
80 70 60										
80 - 70 - 60 -										
80 70 60										
80 70 60										
80 - 70 - 60 - 50 - <b>W/Ngp</b>										
80 - 70 - 60 - 50 - <b>W/Mgp</b> 30 -										
80 - 70 - 60 - 50 - <b>W/Ngp</b>										
80 - 70 - 60 - 50 - <b>W/Mgp</b> 30 -										
80 - 70 - 60 - 50 - 30 - 20 -										
80 - 70 - 60 - 50 - <b>W/Mgp</b> 30 -										
80 - 70 - 60 - 50 - 30 - 20 -										
80 - 70 - 60 - 50 - 30 - 20 - 10 - 0 -										
80 - 70 - 60 - 50 - 30 - 20 - 10 -										

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
3212.360	46.5	6.8	1.5	348.0	3.0	0.0	Horz	AV	0.0	53.3	54.0	-0.7	Low 401.55 MHz, EUT Y-Axis
3212.365	46.4	6.8	1.5	351.0	3.0	0.0	Horz	AV	0.0	53.2	54.0	-0.8	Low 401.55 MHz, EUT X-Axis
3212.375	45.8	6.8	1.2	333.0	3.0	0.0	Vert	AV	0.0	52.6	54.0	-1.4	Low 401.55 MHz, EUT Z-Axis
1606.185	51.0	0.1	1.5	354.0	3.0	0.0	Horz	AV	0.0	51.1	54.0	-2.9	Low 401.55 MHz, EUT Y-Axis
1606.180	49.8	0.1	1.5	340.0	3.0	0.0	Vert	AV	0.0	49.9	54.0	-4.1	Low 401.55 MHz, EUT Z-Axis
3212.415	39.8	6.8	1.5	9.0	3.0	0.0	Vert	AV	0.0	46.6	54.0	-7.4	Low 401.55 MHz, EUT X-Axis
3212.355	39.3	6.8	1.5	291.0	3.0	0.0	Vert	AV	0.0	46.1	54.0	-7.9	Low 401.55 MHz, EUT Y-Axis
4015.520	36.4	9.4	2.8	338.0	3.0	0.0	Vert	AV	0.0	45.8	54.0	-8.2	Low 401.55 MHz, EUT Z-Axis
4015.465	34.1	9.4	3.0	351.0	3.0	0.0	Horz	AV	0.0	43.5	54.0	-10.5	Low 401.55 MHz, EUT Y-Axis
3212.370	36.4	6.8	1.5	346.0	3.0	0.0	Horz	AV	0.0	43.2	54.0	-10.8	Low 401.55 MHz, EUT Z-Axis
2810.840	37.2	4.0	1.4	0.0	3.0	0.0	Horz	AV	0.0	41.2	54.0	-12.8	Low 401.55 MHz, EUT Y-Axis
803.191	16.4	16.0	1.5	2.0	3.0	0.0	Horz	QP	0.0	32.4	46.0	-13.6	Low 401.55 MHz, EUT Y-Axis
802.800	16.4	16.0	2.5	14.0	3.0	0.0	Vert	QP	0.0	32.4	46.0	-13.6	Low 401.55 MHz, EUT Z-Axis
2007.730	37.6	2.6	1.5	16.0	3.0	0.0	Horz	AV	0.0	40.2	54.0	-13.8	Low 401.55 MHz, EUT Y-Axis
2810.835	36.0	4.0	1.5	326.0	3.0	0.0	Vert	AV	0.0	40.0	54.0	-14.0	Low 401.55 MHz, EUT Z-Axis
2007.765	37.2	2.6	1.5	329.0	3.0	0.0	Vert	AV	0.0	39.8	54.0	-14.2	Low 401.55 MHz, EUT Z-Axis
3212.060	49.2	6.8	1.5	348.0	3.0	0.0	Horz	PK	0.0	56.0	74.0	-18.0	Low 401.55 MHz, EUT Y-Axis
3212.240	49.0	6.8	1.5	351.0	3.0	0.0	Horz	PK	0.0	55.8	74.0	-18.2	Low 401.55 MHz, EUT X-Axis
3212.085	48.6	6.8	1.2	333.0	3.0	0.0	Vert	PK	0.0	55.4	74.0	-18.6	Low 401.55 MHz, EUT Z-Axis
1606.260	52.6	0.1	1.5	354.0	3.0	0.0	Horz	PK	0.0	52.7	74.0	-21.3	Low 401.55 MHz, EUT Y-Axis
1606.390	51.7	0.1	1.5	340.0	3.0	0.0	Vert	PK	0.0	51.8	74.0	-22.2	Low 401.55 MHz, EUT Z-Axis
3212.150	44.9	6.8	1.5	291.0	3.0	0.0	Vert	PK	0.0	51.7	74.0	-22.3	Low 401.55 MHz, EUT Y-Axis

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
3211.935	44.8	6.8	1.5	9.0	3.0	0.0	Vert	PK	0.0	51.6	74.0	-22.4	Low 401.55 MHz, EUT X-Axis
4014.960	42.2	9.4	2.8	338.0	3.0	0.0	Vert	PK	0.0	51.6	74.0	-22.4	Low 401.55 MHz, EUT Z-Axis
4015.255	41.1	9.4	3.0	351.0	3.0	0.0	Horz	PK	0.0	50.5	74.0	-23.5	Low 401.55 MHz, EUT Y-Axis
3212.075	43.0	6.8	1.5	346.0	3.0	0.0	Horz	PK	0.0	49.8	74.0	-24.2	Low 401.55 MHz, EUT Z-Axis
2810.545	43.1	4.0	1.4	0.0	3.0	0.0	Horz	PK	0.0	47.1	74.0	-26.9	Low 401.55 MHz, EUT Y-Axis
2810.875	42.3	4.0	1.5	326.0	3.0	0.0	Vert	PK	0.0	46.3	74.0	-27.7	Low 401.55 MHz, EUT Z-Axis
2007.785	43.5	2.6	1.5	16.0	3.0	0.0	Horz	PK	0.0	46.1	74.0	-27.9	Low 401.55 MHz, EUT Y-Axis
2007.495	42.8	2.6	1.5	329.0	3.0	0.0	Vert	PK	0.0	45.4	74.0	-28.6	Low 401.55 MHz, EUT Z-Axis

# SPURIOUS RADIATED EMISSIONS



	ork Order:	AXONO			Date:	3-Jan-2018	0	1/ /	000
	Project:	Non		Те	emperature:	19.5 °C	te	- 1. 1.	aller.
	Job Site:	OC1			Humidity:	52.3% RH	0		
Seria	I Number:	AE1GC7	70009		netric Pres.:	1020 mbar	Teste	ed by: Johnny Cande	elas
			se Gene	rator (EPG	) Model 1601				
Conf	iguration:	5							
<u> </u>	Customer:	Axonics Mod	dulation 1	Fechnologi	es, Inc.				
		Franklin Por	tillo						
EL	JT Power:								
Operat	ing Mode:	Transmitting	Modulat	ted at Mid	Ch - MEDS Low	Band = 401.55	MHz & Mid Ch - ME	DS High Band = 405	5.55 MHz
D	eviations:	None							
C		PNE lead. E X-Axis = EU				rey Face Out, &	Z-Axis = Grey Face	e Out turned 90° so to	op is facing ou
st Speci	ifications					Test M	ethod		
C 951:20							63.26:2015		
Run #	9	Test Dist	ance (m	) 3	Antenna He	eight(s)	1 to 3(m)	Results	Pass
80 -									
80 70									
70 -									
70 - 60 - 50 -									
70 - 60 - 50 -									
70 - 60 - 50 -									
70 - 60 - 50 -									
70 - 60 - 50 -									
70 - 60 - 50 - m/Angp 40 -									
70 - 60 - 50 -									
70 - 60 - 50 - m/Angp 40 -									
70 - 60									
70 - 60 - 50 - m/Angp 40 -									
70 - 60 - 50 - <b>W/Ngp</b> 30 -									
70 - 60 - 50 - 40 - 30 - 20 -									
70 - 60 - 50 - <b>W/Ngp</b> 30 -									
70 - 60 - 50 - 40 - 30 - 20 -									
70 - 60 - 50 - 40 - 30 - 20 -									
70 - 60 - 50 - 40 - 30 - 20 - 10 -									

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
3244.400	46.5	6.8	1.5	343.0	3.0	0.0	Horz	AV	0.0	53.3	54.0	-0.7	High 405.55 MHz, EUT Y-Axis
3244.345	46.3	6.8	1.0	0.0	3.0	0.0	Vert	AV	0.0	53.1	54.0	-0.9	High 405.55 MHz, EUT Z-Axis
3244.370	45.8	6.8	1.5	354.0	3.0	0.0	Horz	AV	0.0	52.6	54.0	-1.4	High 405.55 MHz, EUT X-Axis
1622.200	51.8	0.1	1.4	344.0	3.0	0.0	Vert	AV	0.0	51.9	54.0	-2.1	High 405.55 MHz, EUT Z-Axis
3244.365	41.4	6.8	1.5	41.0	3.0	0.0	Vert	AV	0.0	48.2	54.0	-5.8	High 405.55 MHz, EUT Y-Axis
1622.195	47.6	0.1	1.4	360.0	3.0	0.0	Horz	AV	0.0	47.7	54.0	-6.3	High 405.55 MHz, EUT Y-Axis
3244.330	40.0	6.8	3.0	324.0	3.0	0.0	Horz	AV	0.0	46.8	54.0	-7.2	High 405.55 MHz, EUT Z-Axis
3244.340	39.3	6.8	1.5	22.0	3.0	0.0	Vert	AV	0.0	46.1	54.0	-7.9	High 405.55 MHz, EUT X-Axis
4055.425	35.5	9.5	1.0	0.0	3.0	0.0	Vert	AV	0.0	45.0	54.0	-9.0	High 405.55 MHz, EUT Z-Axis
4055.400	34.7	9.5	2.6	12.0	3.0	0.0	Horz	AV	0.0	44.2	54.0	-9.8	High 405.55 MHz, EUT Y-Axis
2027.720	40.1	2.5	2.0	337.0	3.0	0.0	Vert	AV	0.0	42.6	54.0	-11.4	High 405.55 MHz, EUT Z-Axis
2838.840	36.6	4.2	1.5	3.0	3.0	0.0	Horz	AV	0.0	40.8	54.0	-13.2	High 405.55 MHz, EUT Y-Axis
811.503	16.4	15.9	1.5	55.0	3.0	0.0	Vert	QP	0.0	32.3	46.0	-13.7	High 405.55 MHz, EUT Z-Axis
810.843	16.4	15.8	3.7	10.0	3.0	0.0	Horz	QP	0.0	32.2	46.0	-13.8	High 405.55 MHz, EUT Y-Axis
2027.000	35.1	2.5	1.5	352.0	3.0	0.0	Horz	AV	0.0	37.6	54.0	-16.4	High 405.55 MHz, EUT Y-Axis
2838.830	32.3	4.2	1.2	16.0	3.0	0.0	Vert	AV	0.0	36.5	54.0	-17.5	High 405.55 MHz, EUT Z-Axis
3244.440	48.7	6.8	1.5	343.0	3.0	0.0	Horz	PK	0.0	55.5	74.0	-18.5	High 405.55 MHz, EUT Y-Axis
3244.290	48.6	6.8	1.5	354.0	3.0	0.0	Horz	PK	0.0	55.4	74.0	-18.6	High 405.55 MHz, EUT X-Axis
3244.135	48.4	6.8	1.0	0.0	3.0	0.0	Vert	PK	0.0	55.2	74.0	-18.8	High 405.55 MHz, EUT Z-Axis
1622.120	53.0	0.1	1.4	344.0	3.0	0.0	Vert	PK	0.0	53.1	74.0	-20.9	High 405.55 MHz, EUT Z-Axis
3244.355	45.7	6.8	1.5	41.0	3.0	0.0	Vert	PK	0.0	52.5	74.0	-21.5	High 405.55 MHz, EUT Y-Axis
4055.565	42.7	9.5	2.6	12.0	3.0	0.0	Horz	PK	0.0	52.2	74.0	-21.8	High 405.55 MHz, EUT Y-Axis

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
3244.285	44.6	6.8	3.0	324.0	3.0	0.0	Horz	PK	0.0	51.4	74.0	-22.6	High 405.55 MHz, EUT Z-Axis
4055.725	41.8	9.5	1.0	0.0	3.0	0.0	Vert	PK	0.0	51.3	74.0	-22.7	High 405.55 MHz, EUT Z-Axis
3244.480	44.2	6.8	1.5	22.0	3.0	0.0	Vert	PK	0.0	51.0	74.0	-23.0	High 405.55 MHz, EUT X-Axis
1622.195	49.8	0.1	1.4	360.0	3.0	0.0	Horz	PK	0.0	49.9	74.0	-24.1	High 405.55 MHz, EUT Y-Axis
2027.595	44.4	2.5	2.0	337.0	3.0	0.0	Vert	PK	0.0	46.9	74.0	-27.1	High 405.55 MHz, EUT Z-Axis
2838.660	42.4	4.2	1.5	3.0	3.0	0.0	Horz	PK	0.0	46.6	74.0	-27.4	High 405.55 MHz, EUT Y-Axis
2027.500	42.7	2.5	1.5	352.0	3.0	0.0	Horz	PK	0.0	45.2	74.0	-28.8	High 405.55 MHz, EUT Y-Axis
2838.915	40.9	4.2	1.2	16.0	3.0	0.0	Vert	PK	0.0	45.1	74.0	-28.9	High 405.55 MHz, EUT Z-Axis



XMit 2017.12.13

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
Generator - Signal	Agilent	N5182A	TIF	23-Aug-17	23-Aug-20
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Aeroflex	INMET 8535	AMO	27-Mar-17	27-Mar-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. Per FCC Part 2.1051, RSS-GEN, the spurious emissions shall be measured at the RF terminal. The peak spurious emissions were measured with the EUT configured to the modes listed in the datasheet. The EUT was transmitting at its maximum data rate. FCC Part 95 and RSS-243 have no conducted spurious emissions limit. It is a requirement to characterize this information and that data is contained within this datasheet.



	External Pulse Generator (EP	G) Model 1601	Work Order:						
Serial Number:					Date: 5-Jan-18				
Customer:	: Axonics Modulation Technology	ogies, Inc.		Temperature:	22.1 °C				
Attendees:	: Franklin Portillo			Humidity:	53.5% RH				
Project:	None			Barometric Pres.:	1022 mbar				
Tested by:	: Johnny Candelas		Power: 3.0VDC	Job Site:	OC13				
EST SPECIFICAT	TONS		Test Method						
CC 95I:2018			ANSI C63.26:2015						
OMMENTS									
Block + 20dB A	Attenuator + Coax Cable = 21.5	dB Total Offset							
ower Index = 40									
EVIATIONS FROM	M TEST STANDARD								
EVIATIONS FROM	M TEST STANDARD								
	M TEST STANDARD	Signature	for d. later						
one		Signature	Frequency	Max Value (dBc)	Limit A (dBc)	Result			
one onfiguration #	6	Signature	Frequency Range	(dBc)	A (dBc)	Result			
one configuration # IEDS Low Band, M	6 /id Channel, 401.55 MHz	Signature	Frequency Range 9 kHz - 150 kHz	(dBc) -77.43	A (dBc) N/A	N/A			
one onfiguration # IEDS Low Band, M IEDS Low Band, M	6 Aid Channel, 401.55 MHz Aid Channel, 401.55 MHz	Signature	Frequency Range 9 kHz - 150 kHz 150 kHz - 30 MHz	(dBc) -77.43 -65.33	A (dBc) N/A N/A	N/A N/A			
one onfiguration # IEDS Low Band, N IEDS Low Band, N IEDS Low Band, N	6 /id Channel, 401.55 MHz	Signature	Frequency Range 9 kHz - 150 kHz	(dBc) -77.43	A (dBc) N/A	N/A			
one onfiguration # IEDS Low Band, N IEDS Low Band, N IEDS Low Band, N	6 Aid Channel, 401.55 MHz Aid Channel, 401.55 MHz Iid Channel, 401.55 MHz	Signature	Frequency Range 9 kHz - 150 kHz 150 kHz - 30 MHz 30 MHz - 1 GHz	(dBc) -77.43 -65.33 -53.99	A (dBc) N/A N/A N/A	N/A N/A N/A			
one onfiguration # EDS Low Band, N EDS Low Band, N EDS Low Band, N EDS Low Band, N	6 Aid Channel, 401.55 MHz Aid Channel, 401.55 MHz Iid Channel, 401.55 MHz	Signature	Frequency Range 9 kHz - 150 kHz 150 kHz - 150 kHz 30 MHz - 1 GHz 1 GHz - 5 GHz 9 kHz - 150 kHz	(dBc) -77.43 -65.33 -53.99	A (dBc) N/A N/A N/A	N/A N/A N/A			
one onfiguration # EDS Low Band, N EDS Low Band, N EDS Low Band, N EDS Low Band, N EDS High Band, N	6 Aid Channel, 401.55 MHz Aid Channel, 401.55 MHz Aid Channel, 401.55 MHz Aid Channel, 401.55 MHz	Signature	Frequency Range 9 kHz - 150 kHz 150 kHz - 30 MHz 30 MHz - 1 GHz 1 GHz - 5 GHz	(dBc) -77.43 -65.33 -53.99 -41.96	A (dBc) N/A N/A N/A N/A	N/A N/A N/A			
ione ionfiguration # IEDS Low Band, M IEDS Low Band, M IEDS Low Band, M IEDS High Band, N IEDS High Band, N	6 Aid Channel, 401.55 MHz Aid Channel, 401.55 MHz Aid Channel, 401.55 MHz Aid Channel, 401.55 MHz Mid Channel, 405.55 MHz	Signature	Frequency Range 9 kHz - 150 kHz 150 kHz - 150 kHz 30 MHz - 1 GHz 1 GHz - 5 GHz 9 kHz - 150 kHz	(dBc) -77.43 -65.33 -53.99 -41.96 -78.37	A (dBc) N/A N/A N/A N/A N/A	N/A N/A N/A N/A			

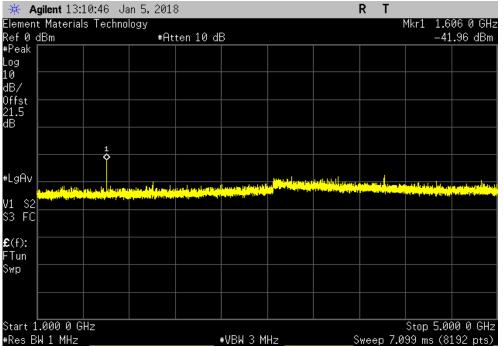


MEDS Low Band, Mid Channel, 401.55 MHz Frequency Max Value Limit Range 9 kHz - 150 kHz (dBc) A (dBc) Result 77.43 N/A N/A R T Agilent 11:01:51 Jan 5, 2018 \* Mkr1 9.000 kHz Element Materials Technology RefØdBm #Peak #Atten 10 dB -77.43 dBm Log 10 dB/ Offst 21.5 dB DC Coupled #LgAv S2 FC V1 S3 £(†). f<50k Ø £(f): Start 9.000 kHz Stop 150.000 kHz #Res BW 200 Hz #VBW 620 Hz Sweep 2.279 s (8192 pts) MEDS Low Band, Mid Channel, 401.55 MHz Frequency Max Value Limit Range (dBc) A (dBc) Result 150 kHz - 30 MHz -65.33 N/A N/A ☀ Agilent 11:04:37 Jan 5, 2018 R Т

	nt Materials Technology dBm #Atten 10 dB								
ef0dBm Deele	#Htt	en 10 dt:	5				-65	5.33 dBn	
Peak									
og									
0								Country	
B/								Couple	
ffst									
1.5									
B									
_gAv									
1 S2									
3 FC									
							Ĭ		
(f): Killingelagett		not set on		to ball a fe	. Laddar				
Tun Tun				n an an the sector of the s		na panta maga papa py Manga di Junio	alle des des al des alle des Alle des alle des all		
wp dw									
tart 150 kHz							Stop 30		
Res BW 9.1 kHz		#	•VBW 30 k	:Hz	S	weep 342	2 <b>.4</b> ms (81	192 pts	



MEDS Low Band, Mid Channel, 401.55 MHz Frequency Max Value Limit Range (dBc) A (dBc) Result 30 MHz - 1 GHz 53.99 N/A N/A Agilent 13:10:14 Jan 5, 2018 R T ₩. ▲ Mkr1 401.57 MHz Element Materials Technology Ref Ø dBm #Peak #Atten 10 dB -53.99 dB ♦ 1 R Log 10 dB/ 0ffst 21.5 dB #LgAv 10 V1 S3 S2 FC والتلوية المحمد والتوالي أي فاللقانين أحمل مستحسد a supeling and an a start of the start of th وأفلوبال وتواريسها والألوهيمان لرويرة £(f): FTun Swp Start 30.00 MHz Stop 1.000 00 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 92.83 ms (8192 pts) MEDS Low Band, Mid Channel, 401,55 MHz Frequency Max Value Limit (dBc) A (dBc) Range Result 1 GHz - 5 GHz -41.96 N/A N/A





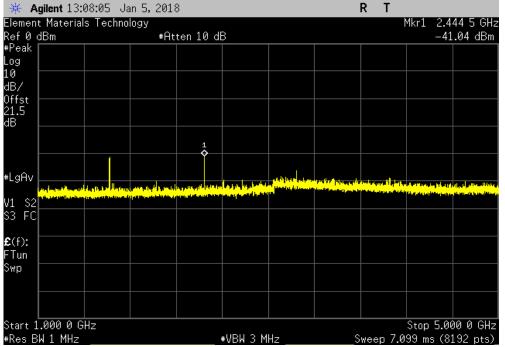
MEDS High Band, Mid Channel, 405.55 MHz Frequency Max Value Limit Range 9 kHz - 150 kHz A (dBc) (dBc) Result -78.37 N/A N/A Agilent 13:13:51 Jan 5, 2018 R T \* Mkr1 14.904 kHz Element Materials Technology RefØdBm #Peak #Atten 10 dB -78.37 dBm Log 10 dB/ Offst 21.5 dB DC Coupled #LgAv S2 FC V1 S3 **£**(f): f<50k \*\*\*\*//www.ang/winters.com//www.intersection/wi FFT Start 9.000 kHz #Res BW 200 Hz Stop 150.000 kHz #VBW 620 Hz Sweep 2.279 s (8192 pts)

MEDS High B	and, Mid Channel, 405.55 MHz		
Frequency	Max Value	Limit	
Range	(dBc)	A (dBc)	Result
150 kHz - 30 MHz	-65.76	N/A	N/A

ement Materials Te	echnology						Mkr1 2	
∍f0,dBm	#At	ten 10 dB	3				-65	5.76 dBm
Peak								
a 🛛								
) 3/							n n	Couple
fst								
.5								
3								
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. S2								
FC								
(f): Mitchington		all official states	tali a tila at 1 <sub>00</sub>	and a second state	و أله للساط أن روح و	Upper line book and	للأحد ألبيل وبأرار وقا	illu tabla la la
an .			a, lista parta p	الاختلط فعاتبانا	And the state of the state	add and the state of the	ار دناسته کر س	and a state of the second
qı								
art 150 kHz							Stop 30	LOOO MU



MEDS High Band, Mid Channel, 405.55 MHz Frequency Max Value Limit Range (dBc) A (dBc) Result 30 MHz - 1 GHz 53.74 N/A N/A Agilent 13:07:44 Jan 5, 2018 R T ₩. ▲ Mkr1 405.60 MHz Element Materials Technology Ref Ø dBm #Peak #Atten 10 dB -53.74 dB ♦ 1 R Log 10 dB/ 0ffst 21.5 dB #LgAv 1 S2 FC V1 S3 ويطور ويريال والتبار وخارة والمرحان وال ومتحصين بالمادي والمتحر ومحمد وأراد والاربيان ويرده and a shall بالالترافيك المراط وأداعكم وترتبه ساليا واللاف والسواب £(f): FTun Swp Start 30.00 MHz Stop 1.000 00 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 92.83 ms (8192 pts) MEDS High Band, Mid Channel, 405.55 MHz Frequency Max Value Limit (dBc) A (dBc) Range Result 1 GHz - 5 GHz -41.04 N/A N/A



# **RADIATED POWER (EIRP)**



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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. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

#### MODES OF OPERATION

#### POWER SETTINGS INVESTIGATED

Battery

#### **CONFIGURATIONS INVESTIGATED**

AXON0105 - 4 AXON0105 - 5

#### FREQUENCY RANGE INVESTIGATED

Start Frequency 401 MHz St	top Frequency 406 MHz	
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#### SAMPLE CALCULATIONS

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

#### **TEST EQUIPMENT**

Description	Manufacturer	Model	ID	Last Cal.	Interval
Power Sensor	Agilent	E4412A	SQE	26-Jan-2017	12 mo
Meter - Power	Hewlett Packard	E4418A	SPA	26-Jan-2017	12 mo
Cable	Fairview Microwave	SCA1814-0505-72	OC2	15-May-2017	12 mo
Generator - Signal	Agilent	E8257D	TGU	5-Feb-2015	36 mo
Antenna - Dipole	A.H. Systems, Inc.	FCC-4	ADCA	NCR	0 mo
Cable	Northwest EMC	10kHz-1GHz RE Cables	OCH	1-Aug-2017	12 mo
Antenna - Biconilog	Teseq	CBL 6141A	AYE	7-Nov-2017	24 mo
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAY	21-Nov-2017	12 mo

#### TEST DESCRIPTION

Per 95.2567(b)(1), the maximum radiated field strength for a MEDS transmitter is 25uW EIRP. The Field Strength of the Fundamental data was converted to EIRP with the formula based upon the Friis transmission equation with 6 dB removed due to reflections from the ground plane: EIRP =  $((E/2)*d)^2/30$  where E is V/m and d = distance = 3m, and EIRP = W (Reference 95.2569(a)).

The Field Strength of the Fundamental was measured in the far-field at an FCC Listed Semi-anechoic Chamber. Spectrum analyzer and linearly polarized antennas were used to measure the radiated field strength of the fundamental.

The orientation of the EUT and measurement antenna were manipulated to maximize the level of emissions. The turntable azimuth was varied to maximize the level of radiated emissions. The height of the measurement antenna was also varied from 1 to 4 meters. The amplitude and frequency of the emissions were noted.

The EUT was configured to transmit in a fixture that simulates the human torso. The dimensions of the test fixture and the characteristics of the tissue substitute material met the requirements 95.2569(c) and FCC KDB 617965. The height of the transmitter was 1.5-meter above the reference ground plane.

# **RADIATED POWER (EIRP)**



Wo	rk Order		N0105		Date:		-2018		0	EmiR5 2017.09.18.2	PSA-ESCI 201
	Project		ne	Ter	nperature:		5 °C	1		1.6	le la
	Job Site				Humidity:			0	i		
Serial	Number				etric Pres.:		mbar		Tested by:	Johnny Candela	as
		External P	ulse Gener	ator (EPG)	Model 1601	1					
	iguration										
С	ustomer	Axonics M	odulation T	echnologie	s, Inc.						
A	ttendees	Franklin Po	ortillo								
	IT Power										
		Continuou	sly Transmi	itting at Mic	Ch - MEDS	S Low Band	= 401.55	MHz & Mid	Ch - MEDS	6 High Band = 40	5.55 MHz
operati	ng Mode										
De	eviations	None									
Co	omments			cal. Power Face Out. Y		r Grev Face	e Out. & Z-/	Axis = Grev	Face Out	turned 90° so top	is facing out
					/ 0.10 = 201	-	-	-			
	fications						Test Meth				
951:20	18						ANSI C63	.26:2015			
Run #	7	Tast Die	stance (m)	3	Antonno	ı Height(s)		1 to 4(m)		Results	Pass
Null #	1	Test Dis	stance (III)	<u>ں</u>	Antenna	neight(S)		1 (0 4(11)		Nesults	F 055
Г											
-5 +											
-											
-15											
-25 +											
-											
-35 +											
-45 -											
-45 +											
-55 +											
-65 +											
-75 +											
0.5											
-85 ⊥	•	404 5	400.0	400 5	400.0	400 -	10.1	0 10		05.0 405.5	
401	.0	401.5	402.0	402.5	403.0	403.5 <b>MHz</b>	404.	u 40	4.5 4	05.0 405.8 ■ <b>PK</b> ◆	5 406.0 AV • QF
										•	
				Polarity/ Transducer					Compared to		
				Tansuucel		FIDD	EIRP	Spec. Limit	Spec.	Com	ments
	Freq	Antenna Height	Azimuth	Туре	Detector	EIRP				COIII	
		Antenna Height (meters)	Azimuth (degrees)	Туре	Detector	(Watts)	(dBm)	(dBm)	(dB)	Com	ments
	(MHz)	(meters)	(degrees)			(Watts)	(dBm)	(dBm)	(dB)		
	(MHz) 401.547	(meters) 2.3	(degrees) 139.0	Horz	PK	(Watts) 5.46E-07	(dBm) -32.6	(dBm) -16.0	(dB) -16.6	Low 401.55 MHz, E	EUT Y-Axis
	(MHz) 401.547 401.550	(meters) 2.3 1.7	(degrees) 139.0 80.0	Horz Vert	PK PK	(Watts) 5.46E-07 3.95E-07	(dBm) -32.6 -34.0	(dBm) -16.0 -16.0	(dB) -16.6 -18.0	Low 401.55 MHz, E Low 401.55 MHz, E	EUT Y-Axis EUT Z-Axis
	(MHz) 401.547 401.550 401.547	(meters) 2.3 1.7 1.6	(degrees) 139.0 80.0 327.0	Horz Vert Vert	PK PK PK	(Watts) 5.46E-07 3.95E-07 3.78E-07	(dBm) -32.6 -34.0 -34.2	(dBm) -16.0 -16.0 -16.0	(dB) -16.6 -18.0 -18.2	Low 401.55 MHz, E Low 401.55 MHz, E Low 401.55 MHz, E	EUT Y-Axis EUT Z-Axis EUT Y-Axis
	(MHz) 401.547 401.550 401.547 401.526	(meters) 2.3 1.7 1.6 2.6	(degrees) 139.0 80.0 327.0 81.0	Horz Vert Vert Horz	РК РК РК РК	(Watts) 5.46E-07 3.95E-07 3.78E-07 2.38E-07	(dBm) -32.6 -34.0 -34.2 -36.2	(dBm) -16.0 -16.0 -16.0 -16.0	(dB) -16.6 -18.0 -18.2 -20.2	Low 401.55 MHz, F Low 401.55 MHz, F Low 401.55 MHz, F Low 401.55 MHz, F Low 401.55 MHz, F	EUT Y-Axis EUT Z-Axis EUT Y-Axis EUT X-Axis
	(MHz) 401.547 401.550 401.547	(meters) 2.3 1.7 1.6	(degrees) 139.0 80.0 327.0	Horz Vert Vert	PK PK PK	(Watts) 5.46E-07 3.95E-07 3.78E-07	(dBm) -32.6 -34.0 -34.2	(dBm) -16.0 -16.0 -16.0	(dB) -16.6 -18.0 -18.2	Low 401.55 MHz, E Low 401.55 MHz, E Low 401.55 MHz, E	EUT Y-Axis EUT Z-Axis EUT Y-Axis EUT X-Axis EUT Z-Axis

1.73E-07

-37.6

-16.0

-21.6

401.562

1.5

318.0

Vert

Low 401.55 MHz, EUT X-Axis

# **RADIATED POWER (EIRP)**



										EmiR5 2017.09.18.2	PSA-ESCI 2017.
Wo	rk Order:		N0105	<b>T</b>	Date:	3-Jan-			0	1.6	
	Project:		one		nperature:	19.5		d	ser s	2. 02	
	Job Site: Number:		C10 C70009		Humidity: tric Pres.:	52.3% 1020 r		9	ootod by	Johnny Condol	~
Serial			ulse Genera			1020 1	nbar		ested by:	Johnny Candel	as
Canfi			uise Genera	ator (EPG)	viodel 1601						
	guration:		a dudatian T								
			odulation To	echnologies	s, inc.						
		Franklin P	ortilio								
EU	T Power:						101 55 1				
Operati	ng Mode:		siy Transmi	tting at iviid	Cn - MEDS	Low Band	= 401.55 N	VIHZ & IVIIO	JN - MEDS	High Band = 4	05.55 MHZ
De	eviations:	None									
Co	omments:		EUT Vertic UT White F			Grey Face	Out, & Z-/	Axis = Grey	Face Out t	urned 90° so to	op is facing out
st Speci	fications	1					est Meth	bo			
C 951:20							ANSI C63.				
Run #	8	Test Dis	stance (m)	3	Antenna	Height(s)		1 to 4(m)		Results	Pass
г											
-5											
-15											
-25 -											
-35 + Egg -45 +											
<b>9</b> -45 +											
-55											
-65											
-75											
-85											
401	.0 4	101.5	402.0	402.5	403.0	403.5 <b>MHz</b>	404.0	0 404	.5 40	05.0 405.	5 406.0 AV <b>QP</b>
	Fred	Antenna	Azimuth	Polarity/ Transducer		EIPP	EIRD		Compared to		nmente

Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments	
405.545	1.6	21.0	Vert	PK	9.06E-07	-30.4	-16.0	-14.4	High 405.55 MHz, EUT X-Axis	
405.550	1.7	59.0	Vert	PK	7.20E-07	-31.4	-16.0	-15.4	High 405.55 MHz, EUT Z-Axis	
405.553	1.7	76.0	Vert	PK	2.80E-07	-35.5	-16.0	-19.5	High 405.55 MHz, EUT Y-Axis	
405.526	1.8	334.0	Horz	PK	1.50E-07	-38.2	-16.0	-22.2	High 405.55 MHz, EUT Z-Axis	
405.542	2.5	47.0	Horz	PK	1.22E-07	-39.1	-16.0	-23.1	High 405.55 MHz, EUT X-Axis	
405.555	1.5	237.0	Horz	PK	3.37E-08	-44.7	-16.0	-28.7	High 405.55 MHz, EUT Y-Axis	
	(MHz) 405.545 405.550 405.553 405.526 405.542	Freq (MHz) Height (meters)   405.545 1.6   405.550 1.7   405.553 1.7   405.526 1.8   405.542 2.5	Freq (MHz) Height (meters) Azimuth (degrees)   405.545 1.6 21.0   405.550 1.7 59.0   405.526 1.8 334.0   405.542 2.5 47.0	Freq (MHz) Antenna Height (meters) Azimuth (degrees) Transducer Type   405.5545 1.6 21.0 Vert   405.555 1.7 59.0 Vert   405.553 1.7 76.0 Vert   405.526 1.8 334.0 Horz   405.542 2.5 47.0 Horz	Freq (MHz) Antenna Height (meters) Azimuth (degrees) Transducer Type Detector   405.545 1.6 21.0 Vert PK   405.550 1.7 59.0 Vert PK   405.552 1.7 76.0 Vert PK   405.526 1.8 334.0 Horz PK   405.542 2.5 47.0 Horz PK	Freq (MHz) Antenna Height (meters) Azimuth (degrees) Transducer Type Detector EIRP (Watts)   405.545 1.6 21.0 Vert PK 9.06E-07   405.550 1.7 59.0 Vert PK 7.20E-07   405.553 1.7 76.0 Vert PK 2.80E-07   405.526 1.8 334.0 Horz PK 1.50E-07   405.542 2.5 47.0 Horz PK 1.22E-07	Freq (MHz) Antenna Height (meters) Azimuth (degrees) Transducer Type Detector EIRP (Watts) EIRP (dBm)   405.545 1.6 21.0 Vert PK 9.06E-07 -30.4   405.550 1.7 59.0 Vert PK 7.20E-07 -31.4   405.553 1.7 76.0 Vert PK 2.80E-07 -35.5   405.526 1.8 334.0 Horz PK 1.50E-07 -38.2   405.542 2.5 47.0 Horz PK 1.22E-07 -39.1	Freq (MHz) Antenna Height (meters) Azimuth (degrees) Transducer Type Detector EIRP (Watts) EIRP (dBm) Spec. Limit (dBm)   405.545 1.6 21.0 Vert PK 9.06E-07 -30.4 -16.0   405.550 1.7 59.0 Vert PK 7.20E-07 -31.4 -16.0   405.553 1.7 76.0 Vert PK 2.80E-07 -35.5 -16.0   405.526 1.8 334.0 Horz PK 1.50E-07 -38.2 -16.0   405.542 2.5 47.0 Horz PK 1.22E-07 -39.1 -16.0	Freq (MHz) Antenna Height (meters) Azimuth (degrees) Transducer Type Detector EIRP (Watts) EIRP (dBm) Spec. Limit (dBm) Compared to Spec. (dB)   405.545 1.6 21.0 Vert PK 9.06E-07 -30.4 -16.0 -14.4   405.550 1.7 59.0 Vert PK 7.20E-07 -31.4 -16.0 -15.4   405.552 1.7 76.0 Vert PK 2.80E-07 -35.5 -16.0 -19.5   405.526 1.8 334.0 Horz PK 1.50E-07 -38.2 -16.0 -22.2   405.542 2.5 47.0 Horz PK 1.22E-07 -39.1 -16.0 -23.1	Freq (MHz) Antenna Height (meters) Azimuth (degrees) Transducer Type Detector EIRP (Watts) EIRP (dBm) Spec. Limit (dBm) Compared to Spec. (dB) Compared to Spec. (dB)   405.554 1.6 21.0 Vert PK 9.06E-07 -30.4 -16.0 -14.4 High 405.55 MHz, EUT X-Axis   405.550 1.7 59.0 Vert PK 7.20E-07 -31.4 -16.0 -15.4 High 405.55 MHz, EUT X-Axis   405.552 1.7 76.0 Vert PK 2.80E-07 -35.5 -16.0 -19.5 High 405.55 MHz, EUT Z-Axis   405.552 1.8 334.0 Horz PK 1.50E-07 -38.2 -16.0 -22.2 High 405.55 MHz, EUT Z-Axis   405.542 2.5 47.0 Horz PK 1.22E-07 -39.1 -16.0 -23.1 High 405.55 MHz, EUT X-Axis