

FCC TEST REPORT

FCC 47 CFR Part 15C Industry Canada RSS-210

Frequency hopping systems operating within the 2400 - 2483.5 MHz band

Report Reference No..... G0M-1408-4062-TFC247BT79-V01

Testing Laboratory Eurofins Product Service GmbH

Address...... Storkower Str. 38c

15526 Reichenwalde

Germany

Accreditation:



A2LA Accredited Testing Laboratory, Certificate No.: 1983.01

FCC Filed Test Laboratory, Reg.-No.: 96970

IC OATS Filing assigned code: 3470A

Applicant's name...... Sonetics Corporation

OR 97224 Portland

USA

Test specification:

Standard 47 CFR Part 15C

RSS-210, Issue 8, 2010-12 RSS-Gen, Issue 3, 2010-12

ANSI C63.4:2009

Test scope.....: complete Radio compliance test

Equipment under test (EUT):

Product description Communication Headsets

Model No. APX379

Additional Model(s) None

Brand Name(s) Sonetics

Hardware version APX379 Rev A (See Additional Information)

Firmware / Software version Revision A (See Additional Information)

FCC-ID: V9N950325200V1 IC: 7895A-95032520

Test result Passed



				2007 CT-200700 AND ROOM 204	
Possi	INIA	toct	0200	MARC	Inte:
L 033		16.51	Last	VEIL	11.15.

- neither assessed nor tested N/N

- required by standard but not appl. to test object......: N/A

- required by standard but not tested...... N/T

- not required by standard for the test object N/R

- test object does not meet the requirement...... F (Fail)

Testing:

Test Lab Temperature...... 20 – 23 °C

Test Lab Humidity 32 – 38 %

Compiled by: Antje Bartusch

Tested by (+ signature)...... Wilfried Treffke

(Responsible for Test)

Approved by (+ signature): Christian Weber

Date of issue: 2014-12-18

Total number of pages: 90

General remarks:

The test results presented in this report relate only to the object tested.

The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

C. Weber



Product Service

Additional comments:

Page 1 of 2



Subject: Hardware Software/Firmware Declaration

Date: December 01, 2014

Model Number: APX379 DECT & Bluetooth Headset, Revision A

The APX379 Headset shares the same common hardware and software as represented in table A

Table A: Common and Un-common Communication Headset Ear	300 Seri	es Model I	Number
Muff Features	APX379	APX377	APX375
Convertible Design: Overhead and Underhelmet	х	х	х
Identical Materials and Headset Muff Design	Х	Х	Х
Waterproof Design	Х	Х	Х
Wired Aux Line In	Х	Х	Х
Internal Sound Dosimeter	Х	Х	Х
Stereo Listen Thru	Х	Х	Х
Automatic Noise Gate	Х	Х	Х
Passive Noise Reduction	Х	Х	Х
Automatic Active Noise Reduction	Х	Х	Х
Voice Prompts	Х	Х	Х
Wireless Bluetooth (Line in)	Х		Х
Wireless DECT (2 way radio)	Х	Х	

Sonetics Corporation hereby declares that the above referenced model, submitted to Eurofins for FCC and IC testing, has the following firmware and hardware installed.

APX379 DECT & Blue	etooth Headset Revision A	(No Headband P/N: 950-3257-00 Revision A)			
Item Reference	PartNumber	Description	Qty	BOM Version Revision	Firmware Radio Related?
10	490-4006-00	Firmware, GEN-3 BOOT LOADER	1	A	No
15	490-4016-00	Firmware, APX379, DECT, BT	1	A	Yes
20	490-4009-00	Firmware, BLUETOOTH CONFIG	1	A	Yes
25	490-4012-00	Firmware, RTX1040 RADIO RTX Release Ver 7.0	1	A	Yes
35	490-4015-00	Firmware, VOICEPROMPTS, PP, ENGLISH-	1	A	No
40	490-4017-00	Firmware, APX379, CONFIGURATION	1	A	No
5	121-4030-G1	PCBA, APX379, HS, MAIN BOARD	1	G	Hardware
0	121-4031-J1	PCBA,HS-7X,BATTERYBOARD	1	J	Hardware

The above is declares accurate and true as of 12 01, 2014. Sincerely,

Michael Heade

Quality Assurance Engineer Regulatory & Product Compliance Engineer

Sonetics Corporation Phone: 800-833-4558 ext. 122 Direct: 503-608-3422

7340 SW Durham Road. Portland, Oregon U.S.A. 97224 • 503/684-7080 • Fax 503/620-2943



Version History

Version	Issue Date	Remarks	Revised by
01	2014-12-18	Initial Release	



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1 Equipment (Test item) Description

Description	Communication	Headsets		
Model	APX379			
Additional Model(s)	None			
Brand Name(s)	Sonetics			
Serial number	None			
Hardware version	APX379 Rev A ((See Additional Information)		
Software / Firmware version	Revision A (See Additional Information)			
FCC-ID	V9N950325200\	V1		
IC	7895A-9503252	0		
Equipment type	Radio module			
Radio type	Transceiver			
Radio technology	Bluetooth			
Operating frequency range	2402 - 2480 MH	Z		
Assigned frequency band	2400 - 2483.5 MHz			
	F _{LOW} 2402 MHz			
Main test frequencies	F _{MID}	2441 MHz		
	F _{HIGH} 2480 MHz			
Spreading	FHSS			
Modulations	GFSK			
Number of channels	79 hopping char	nnels at all		
Channel spacing	1 MHz			
Number of antennas	1			
	Туре	integrated		
Antenna	Model	W3008		
Antonia	Manufacturer	Pulse		
	Gain	1.7		
Manufacturer	Sonetics Corporation 7340 SW Durham Road OR 97224 Portland USA			
	V _{NOM} 3.7 VDC			
Power supply	V _{MIN}	N/R		
	V _{MIN} N/R			
	Model	YMC06-3U		
AC/DC-Adaptor	Vendor	Ji Ming		
AO/DO-Adaptol	Input	100-240 VAC		
	Output	12.0 VDC / 0.5A		



1.4 Supporting Equipment Used During Testing

Product Type*	Device	Manufacturer	Model No.	Comments			
None							
*Note: Use the following abbreviations:							
AE : Auxiliary/Associated Equipment, or							
SIM : Simulator (Not Subjected to Test)							
CABL : C	CABL: Connecting cables						



1.5 Test Modes

Mode #		Description
	General conditions:	EUT powered by laboratory power supply.
DH5-Sngl	Radio conditions:	Mode = standalone transmit Spreading = Hopping stopped (single hopping channel) Modulation = GFSK Packet type = DH5 Data rate = 1 Mbps Duty cycle = 78 % Power level = Maximum
General conditions:		EUT powered by laboratory power supply.
DH5-Hop	Radio conditions:	Mode = standalone transmit Spreading = Hopping Modulation = GFSK Packet type = DH5 Data rate = 1 Mbps Duty cycle = 78 % Power level = Maximum
	General conditions:	EUT powered by laboratory power supply.
Receive	Radio conditions:	Mode = standalone receive Spreading = Hopping
General conditions:		EUT powered by commercial AC/DC-Adapter
AC-Powerline Radio conditions:		Mode = standalone transmit Spreading = Hopping Power level = Maximum



1.6 Test Equipment Used During Testing

Measurement Software					
Description Manufacturer Name Version					
EMC Test Software Dare Instruments Radimation 2014.1.15					

20dB Bandwidth						
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due	
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02	

Number of hopping frequencies					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02

Time of occupancy					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02

Maximum peak conducted power						
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due	
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02	

Band edge compliance						
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due	
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02	

Conducted spurious emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSP 30	EF00312	2014-02	2015-02

Radiated spurious emissions								
Description Manufacturer Model Identifier Cal. Date Cal. [
Semi-anechoic chamber	Frankonia	AC 1	EF00062	2013-01	2015-01			
Spectrum Analyzer	R&S	FSIQ26	EF00242	2014-03	2015-03			
Biconical Antenna	R&S	HK 116	EF00012	2013-02	2016-02			
LPD Antenna	R&S	HL 223	EF00187	2014-03	2017-03			
LPD Antenna	R&S	HL 025	EF00327	2013-02	2016-02			



AC powerline conducted emissions						
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due	
AMN	R&S	ESH2-Z5	EF00182	2012-10	2014-10	
EMI Test Receiver	R&S	ESCS 30	EF00295	2014-10	2015-10	



1.7 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyzer in dBµV. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyzer. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

Reading on Analyzer (dB μ V) + A.F. (dB) = Net field strength (dB μ V/m)

Net:

This is the net field strength measurement (as shown above).

Limit:

This is the FCC Class B radiated emission limit (in units of $dB\mu V/m$). The FCC limits are given in units of $\mu V/m$. The following formula is used to convert the units of $\mu V/m$ to $dB\mu V/m$:

Limit (dB μ V/m) = 20*log (μ V/m)

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A negative margin indicates the emission was below the limit. A positive margin indicates that the emission exceeds the limit.

Example only:

Reading + AF = Net Reading : Net reading - FCC limit = Margin 21.5 dB μ V + 26 dB = 47.5 dB μ V/m : 47.5 dB μ V/m - 57.0 dB μ V/m = -9.5 dB



2 Result Summary

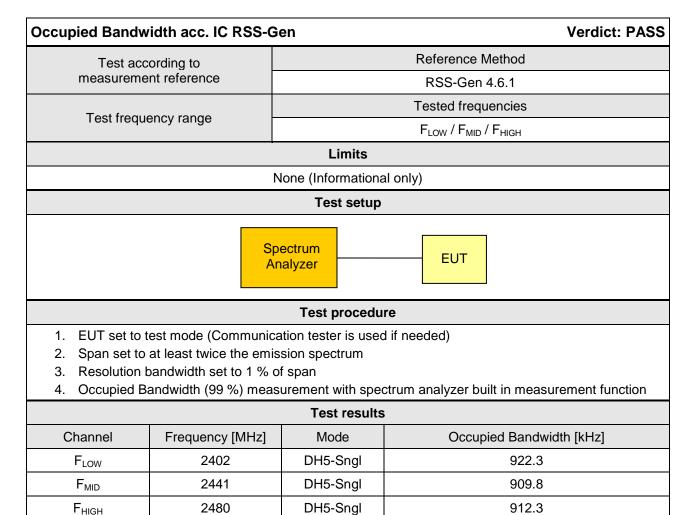
FCC 47 CFR Part 15C, IC RSS-210						
Product Specific Standard Section	Requirement – Test	Reference Method	Result	Remarks		
RSS-Gen 4.6.1	Occupied Bandwidth	RSS-Gen 4.6.1	N/R	Informational only		
FCC § 15.247(a)(1) IC RSS-210 § A8.1	20 dB Bandwidth	Public notice DA 00-705	PASS			
FCC § 15.247(a)(1)(iii) IC RSS-210 § A8.1	Number of hopping frequencies	Public notice DA 00-705	PASS			
FCC § 15.247(a)(1) IC RSS-210 § A8.1	Frequency hopping channel separation	Public notice DA 00-705	PASS			
FCC § 15.247(a)(1)(iii) IC RSS-210 § A8.1	Time of occupancy (Dwell time)	Public notice DA 00-705	PASS			
FCC § 15.247(b)(1) IC RSS-210 § A8.4	Maximum peak conducted power	Public notice DA 00-705	PASS			
47 CFR 15.207 RSS-Gen 7.2.4	AC power line conducted emissions	ANSI C63.4	PASS			
FCC § 15.247(d) IC RSS-210 § A8.5	Band edge compliance	Public notice DA 00-705	PASS			
FCC § 15.247(d) IC RSS-210 § A8.5	Conducted spurious emissions	Public notice DA 00-705	PASS			
FCC § 15.247(d) FCC § 15.209 IC RSS-210 A8.5 IC RSS-Gen 4.9 IC RSS-Gen 7.2.5	Transmitter radiated spurious emissions	Public notice DA 00-705 / ANSI C 63.4	PASS			
IC RSS-Gen 4.10 IC RSS-Gen 6.1	Receiver radiated spurious emissions	ANSI C 63.4	PASS			
Remarks:		·				



3 Test Conditions and Results

Comments:

3.1 Test Conditions and Results - Occupied Bandwidth





Occupied Bandwidth - DH5-Sngl F_{Low}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Wilfried Treffke Test Conditions: Tnom / Vnom

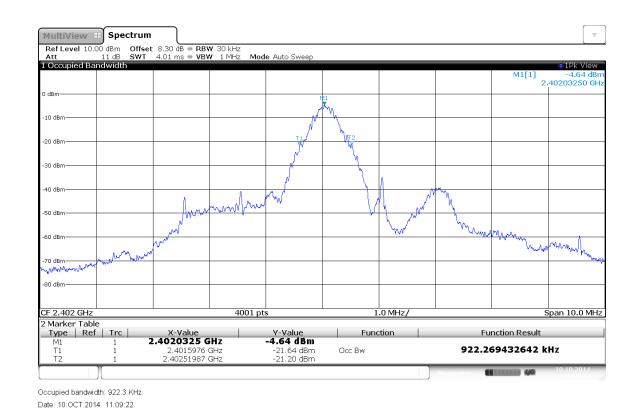
Mode: Tx, GFSK, 2402 MHz, modulated

Test Date: 2014-10-10

Verdict: NONE (INFORMATION ONLY)

Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used

Note 2: conducted measurement





Occupied Bandwidth - DH5-Sngl F_{MID}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Wilfried Treffke Test Conditions: Tnom / Vnom

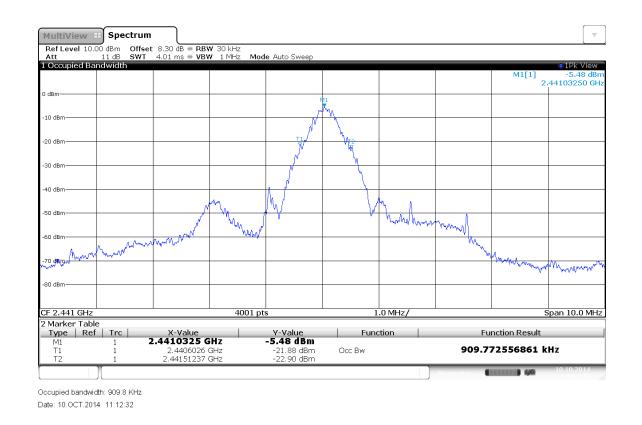
Mode: Tx, GFSK, 2441 MHz, modulated

Test Date: 2014-10-10

Verdict: NONE (INFORMATION ONLY)

Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used

Note 2: conducted measurement





Occupied Bandwidth - DH5-Sngl F_{HIGH}

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Wilfried Treffke
Test Conditions: Tnom / Vnom

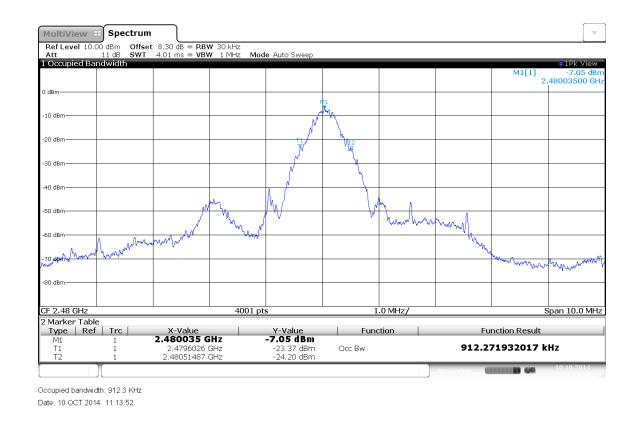
Mode: Tx, GFSK, 2480 MHz, modulated

Test Date: 2014-10-10

Verdict: NONE (INFORMATION ONLY)

Note 1: A spectrum analyzer with an integrated 99% power bandwidth function is used

Note 2: conducted measurement





3.2 Test Conditions and Results - 20 dB Bandwidth

20 dB Bandwidth acc. FCC 15.24	47 / IC F	RSS-210 Verdict: PA	ISS	
EUT requirement		Reference		
rule parts and clause		FCC 15.247(a)(1) / IC RSS-210 A8.1		
Test according to		Reference Method		
measurement reference		FCC Public Notice DA 00-705		
Toot frequency ronge		Tested frequencies		
Test frequency range		F _{LOW} / F _{MID} / F _{HIGH}		
Limits				
Limit		Condition		
1.5 · Carrier spacing		Output power ≤ 125 mW / 21 dBm		
1.0 · Carrier spacing		125 mW / 21 dBm < Output power ≤ 1 W / 30 dBm		
		Test setup		
	Spectr Analy:			

Test procedure

- 1. EUT set to test mode (Communication tester is used if needed)
- 2. Span set to at least twice the emission spectrum
- 3. Detector set to peak and max hold
- 4. Envelope peak value of emission spectrum is selected
- 5. Marker on envelope of spectrum is set to level of -20 dB to the left of the peak
- 6. Marker on envelope of spectrum is set to level of -20 dB to the right of the peak
- 7. 20dB Bandwidth is determined by marker frequency separation

Test results							
Channel	nnel Frequency [MHz] Mode 20 dB Bandwidth [MHz] Limit [MHz]						
F _{LOW}	2402	DH5-Sngl	0.923	1.5	PASS		
F _{MID}	2441	DH5-Sngl	0.925	1.5	PASS		
F _{HIGH}	2480	DH5-Sngl	0.923	1.5	PASS		
Comments:							



20 dB Bandwidth - DH5-Sngl F_{LOW}

20 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

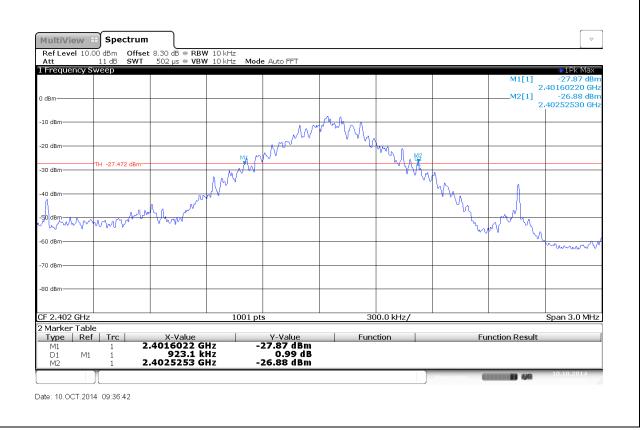
Operator: Wilfried Treffke Test Conditions: Tnom / Vnom

Mode: Tx, BT, 2402 MHz, modulated

Test Date: 2014-10-10 Verdict: PASS

Note 1: FCC part 15 section 247 (a)

Note 2: GFSK





20 dB Bandwidth - DH5-Sngl F_{MID}

20 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

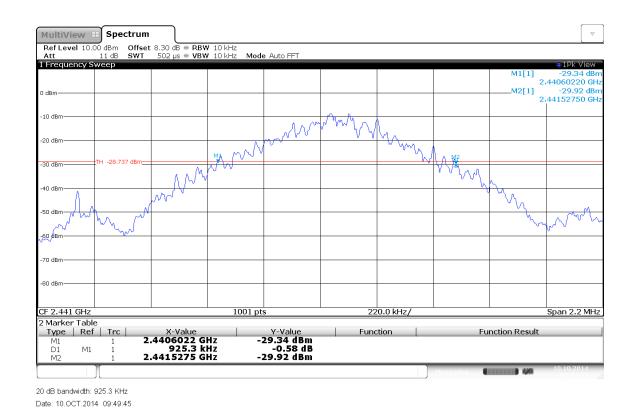
Operator: Wilfried Treffke Test Conditions: Tnom / Vnom

Mode: Tx, BT, 2440 MHz, modulated

Test Date: 2014-10-10 Verdict: PASS

Note 1: FCC part 15 section 247 (a)

Note 2: GFSK





20 dB Bandwidth - DH5-Sngl F_{HIGH}

20 dB Bandwidth acc. to FCC 15.247

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

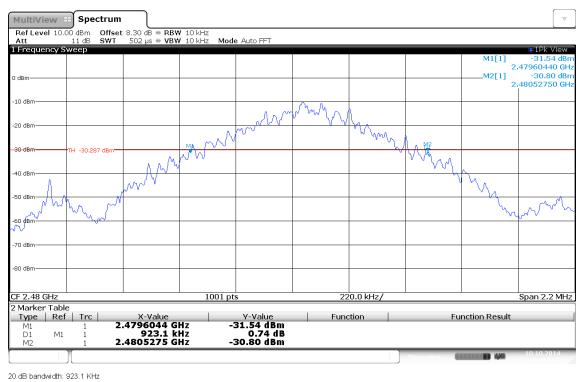
Operator: Wilfried Treffke Test Conditions: Tnom / Vnom

Mode: Tx, BT, 2480 MHz, modulated

Test Date: 2014-10-10 Verdict: PASS

Note 1: FCC part 15 section 247 (a)

Note 2: GFSK



Date: 10.0CT.2014 09:52:42



3.3 Test Conditions and Results – Number of hopping frequencies

Number of hopping frequencies acc. FCC 15.247 / IC RSS-210 Verdict: PASS					
EUT requirement	Reference				
rule parts and clause	Limits ≥ 15 ≥ 75 Test setu Spectrum Analyzer Test procect nication tester is usuency range hold all enough to resolved to determine num Test resul	FCC 15.247(a)(1)(iii) / IC RSS-210 A	3.1		
Test according to		Reference Method			
measurement reference		FCC Public Notice DA 00-705			
,		Tested frequencies			
Test frequency range		F _{LOW} - F _{HIGH}			
EUT test mode		DH5-Hop			
	Limi	ts			
Limit		Condition			
Number of hopping channels ≥	15	Output power ≤ 125 mW / 21 dBm			
Number of hopping channels ≥	75	5 125 mW / 21 dBm < Output power ≤ 1 W / 30 dB			
Test setup					
		EUT			
	Test prod	cedure			
 EUT set to test mode (Communication tester is used if needed) Span set to measurement frequency range Detector set to peak and max hold Resolution bandwidth is set small enough to resolve hopping channel emission spectra The number of peaks is counted to determine number of hopping frequencies 					
	Test re	sults			
Number of hopping frequence	eies	Limit	Result		
79		≥ 15	PASS		
Comments:		•			



Number of hopping frequencies - Range A

Number of Hopping Frequencies acc. to FCC 15.247

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

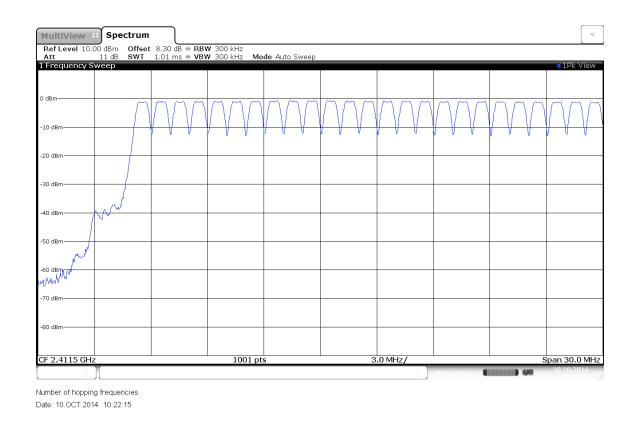
Operator: Wilfried Treffke Test Conditions: Tnom / Vnom

Mode: Tx, GFSK, hopping mode

Test Date: 2014-10-10 Verdict: PASS

Note 1: Number of Hopping Frequencies (DA 00-705 Meas Guidance)

Note 2: conducted measurement, channel 0-24





Number of hopping frequencies - Range B

Number of Hopping Frequencies acc. to FCC 15.247

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

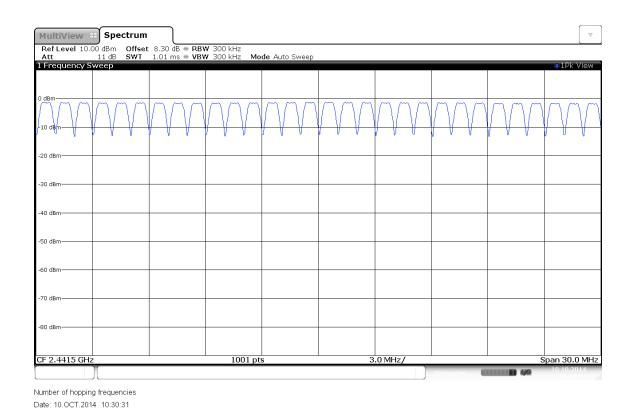
Operator: Wilfried Treffke Test Conditions: Tnom / Vnom

Mode: Tx, GFSK, hopping mode

Test Date: 2014-10-10 Verdict: PASS

Note 1: Number of Hopping Frequencies (DA 00-705 Meas Guidance)

Note 2: conducted measurement, channel 25-54





Number of hopping frequencies - Range C

Number of Hopping Frequencies acc. to FCC 15.247

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

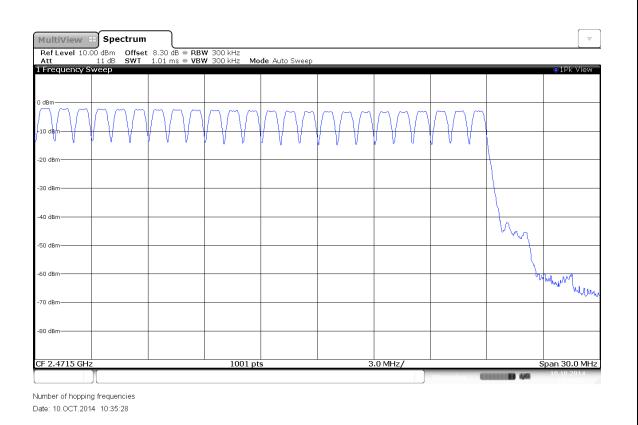
Operator: Wilfried Treffke Test Conditions: Tnom / Vnom

Mode: Tx, GFSK, hopping mode

Test Date: 2014-10-10 Verdict: PASS

Note 1: Number of Hopping Frequencies (DA 00-705 Meas Guidance)

Note 2: conducted measurement, channel 55-78





3.4 Test Conditions and Results – Frequency hopping channel separation

Frequency hopping channel separa	ation acc. F	FCC 15.247 / IC RSS-210 Verdict: PASS			
EUT requirement		Reference			
rule parts and clause	FCC 15.247(a)(1) / IC RSS-210 A Reference Method FCC Public Notice DA 00-705 Tested frequencies 2441 & 2442 MHz DH5-Hop Limits Condition vidth Output power ≤ 125 mW /	FCC 15.247(a)(1) / IC RSS-210 A8.1			
Test according to		Reference Method			
measurement reference	Reference FCC 15.247(a)(1) / IC RSS-210 A8.1 Reference Method FCC Public Notice DA 00-705 Tested frequencies 2441 & 2442 MHz DH5-Hop Limits Condition vidth Output power ≤ 125 mW / 21 dBm th 125 mW / 21 dBm < Output power ≤ 1 W / 3 Test setup Spectrum Analyzer EUT	FCC Public Notice DA 00-705			
Toot fraguency range		Tested frequencies			
Test frequency range	2441 & 2442 MHz DH5-Hop Limits				
EUT test mode		DH5-Hop			
Limits					
Limit		Condition			
≥ 25 kHz or ¾ of 20 dB bandwid	dth	Output power ≤ 125 mW / 21 dBm			
≥ 25 kHz or 20 dB bandwidth		125 mW / 21 dBm < Output power ≤ 1 W / 30 dBm			
	Test	setup			
		EUT			
	Toot pr	a a dura			

Test procedure

- 1. EUT set to test mode (Communication tester is used if needed)
- 2. Span set to measurement frequency range
- 3. Detector set to peak and max hold
- 4. Resolution bandwidth is set small enough to resolve hopping channel emission spectra
- 5. The two adjacent channel peaks are marked
- 6. Channel separation is determined from frequency separation of markers

Test results					
Channel separation [kHz]	Limit [kHz]	Result			
1002.20	≥ ⅔ · 925 = 616.66	PASS			
Comments:					



Frequency hopping channel separation

Carrier Frequency Separation acc. to FCC 15.247

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

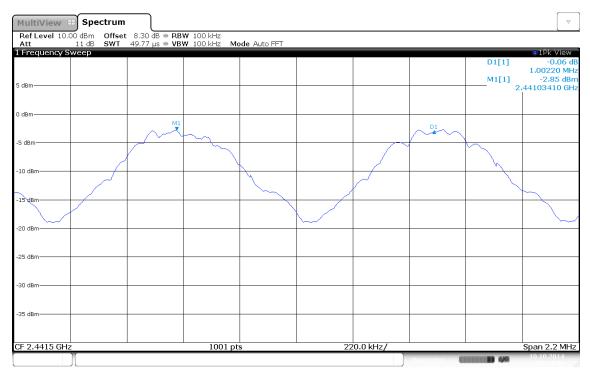
Operator: Wilfried Treffke Test Conditions: Tnom / Vnom

Mode: Tx, GFSK, hopping mode

Test Date: 2014-10-10 Verdict: PASS

Note 1: Carrier Frequency Separation (DA 00-705 Meas Guidance)

Note 2: conducted measurement



Limit: > two-thirds of the 20 dB bandwidth; Result: Pass

Date: 10.OCT.2014 10:18:51



3.5 Test Conditions and Results – Time of occupancy (Dwell Time)

Time of occupancy (D	me of occupancy (Dwell time) acc. FCC 15.247 / IC RSS-210 Verdict: PASS						
EUT requirem	ent		Reference				
rule parts and c	lause	FCC 15.	247(a)(1)(iii) / IC RSS-21	I0 A8.1			
Test accordin	g to		Reference Method				
measurement ref		FC	C Public Notice DA 00-70	05			
T			Tested frequencies				
Test frequency	range		2441 MHz				
EUT test mo	de		DH5-Hop				
Limits							
Limit							
Time of occupancy ≤ 0.4 s within 0.4 s · Number of hopping channels							
		Test setup					
		Spectrum Analyzer	EUT				
		Test procedure					
 Center frequency Span set to zero Resolution bandy 	set to test cha span and dete vidth is set to 1	ication tester is used if it innel center frequency ctor to peak and max house time on number of peaks not be included.	old	well time			
Test results							
Observation period [s]	No. of hops	Dwell time/hop [s]	Time of occupancy [s]	Limit [s]	Result		
31.6	92	0.002877	0.264	≤ 0.4	PASS		
Comments:					ı		



Time of occupancy

Time of Occupancy acc. to FCC 15.247

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

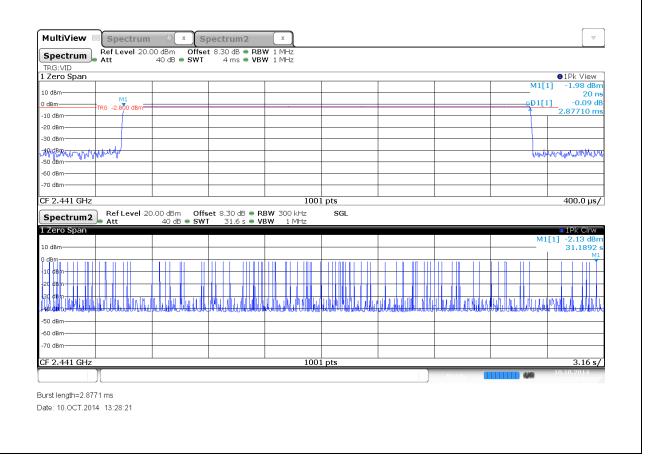
Test Site: Eurofins Product Service GmbH

Operator: Wilfried Treffke Test Conditions: Tnom / Vnom

Mode: Tx, GFSK, channel 2441MHz, hopping mode

Test Date: 2014-10-10 Verdict: PASS

Note 1: 92 events * 2.877ms; Result: 264.7ms Limit<0.4s Note 2: conducted measurement, (DA 00-705 Meas Guidance)

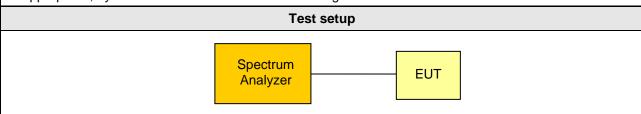




3.6 Test Conditions and Results - Maximum peak conducted power

Maximum peak conducted power acc. FCC 15.247 / IC RSS-210 Verdict: PASS						
EUT requirement rule parts and clause	Reference					
	FCC 15.247(b)(1) / IC RSS-210 A8.4					
Test according to measurement reference	Reference Method					
	FCC Public Notice DA 00-705					
Test frequency range	Tested frequencies					
	F _{LOW} / F _{MID} / F _{HIGH}					
Measurement mode						
Maximum antenna gain	1.7 dBi ⇒ Limit correction = 0 dB					
Limits						
Limit		Condition				
1 W (30 dBm)		Number of hopping channels ≥ 75				
0.125 W (21 dBm)		75 > Number of hopping channels ≥ 15				

The conducted output power limit specified above is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in the table, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.



Test procedure

- 1. EUT set to test mode (Communication tester is used if needed)
- 2. Center frequency set to test channel center frequency
- 3. Span set to twice the 20 dB bandwidth and detector to peak and max hold
- 4. Resolution bandwidth is set to 3 MHz
- 5. Peak conducted power is determined from peak of spectrum envelope



Test results								
Channel	Frequency [MHz]	Voltage	Mode	Peak power [dbm]	Peak power [W]	Limit [dBm]	Margin [dB]	Result
F_{LOW}	2402	3.7 VDC	DH5-Sngl	-0.8	0.0008	30	-30.80	PASS
F _{MID}	2441	3.7 VDC	DH5-Sngl	-1.9	0.0006	30	-31.90	PASS
F _{HIGH}	2480	3.7 VDC	DH5-Sngl	-3.4	0.0005	30	-33.40	PASS
Comments:								



3.7 Test Conditions and Results – AC power line conducted emissions

Power line conducte	Verdict: PASS							
Test according referenced standards		Reference Method						
		ANSI C63.4						
Fully configured sample scanned over the following frequency range		Frequency range						
		0.15 MHz to 30 MHz						
Points of Application			Application Interface					
AC Mains		LISN						
EUT test mode		AC-Power line						
Limits and results								
Frequency [MHz]	Quasi-Peak [dBµV]		Result	Average [dBµV]	Result			
0.15 to 5	66 to 56*		PASS	56 to 46*	PASS			
0.5 to 5	56		PASS	46	PASS			
5 to 30	60		PASS	50	PASS			
Comments: * Limit decreases linearly with the logarithm of the frequency.								



Conducted Emissions

EMI voltage test in the ac-mains according to FCC 15B

Project number: G0M-1408-4062

Manufacturer: Sonetics Corporation EUT Name: Communication Headsets

Model: APX379

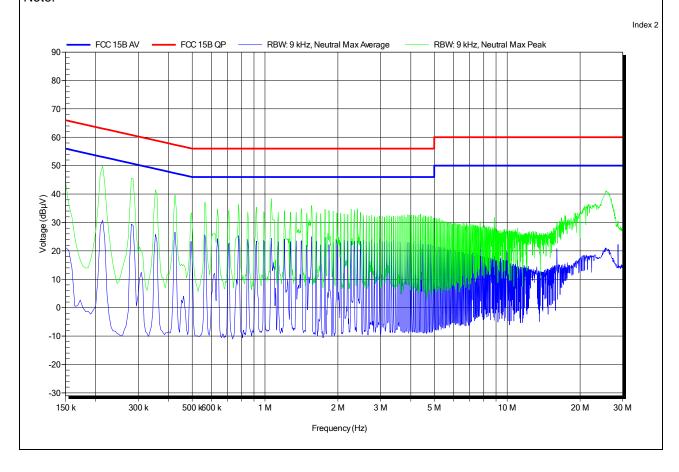
Test Site: Eurofins Product Service GmbH

Operator: Mr. Marquardt

Test Conditions: Tnom: 23°C, Unom: 120 VAC (AC/DC adapter)

LISN: ESH2-Z5 N Mode: charging Test Date: 2014-11-18

Note:





Conducted Emissions

EMI voltage test in the ac-mains according to FCC 15B

Project number: G0M-1408-4062

Manufacturer: Sonetics Corporation EUT Name: Communication Headsets

Model: APX379

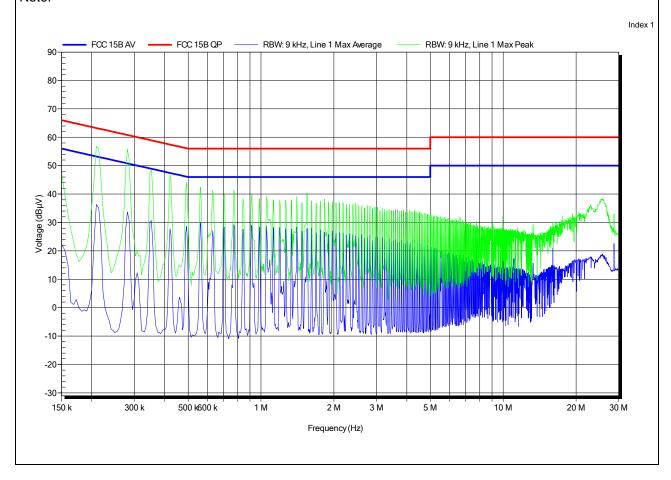
Test Site: Eurofins Product Service GmbH

Operator: Mr. Marquardt

Test Conditions: Tnom: 23°C, Unom: 120 VAC (AC/DC adapter)

LISN: ESH2-Z5 L Mode: charging Test Date: 2014-11-18

Note:





3.8 Test Conditions and Results – Band edge compliance

Band-edge compliance acc. FCC 15.247 / IC RSS-210 Verdict: PASS						
EUT requirement	Reference					
rule parts and clause	FCC 15.247(d) / IC RSS-210 A8.5					
Test according to	Reference Method					
measurement reference	FCC Public Notice DA 00-705					
Toot fraguency range	Tested frequencies					
Test frequency range	F _{LOW} / F _{HIGH}					
Measurement mode	Peak					
	Lin	nits				
Limit		Condition				
≤ -20 dB/100 kHz		Peak power measurement detector = Peak				
≤ -30 dB/100 kHz		Peak power measurement detector = RMS				
Test setup						
	pectrum Analyzer	EUT				

Test procedure

- 1. EUT set to test mode (Communication tester is used if needed)
- 2. Span set around lower band edge and detector is set to peak and max hold
- 3. Resolution bandwidth is set to 100 kHz
- 4. Markers are set to peak emission levels within frequency band and outside frequency band
- 5. Band edge attenuation is determined from level difference

Test results									
Channel	Frequency [MHz]	Mode	Level [dBc]	Limit [dBc]	Margin [dB]	Result			
F _{LOW}	2402	DH5-Sngl	-40.05	-20	-20.05	PASS			
F _{HIGH}	2480	DH5-Sngl	-60.09	-20	-40.09	PASS			
F _{LOW}	2402	DH5-Hop	-62.05	-20	-42.05	PASS			
F _{HIGH}	2480	DH5-Hop	-40.98	-20	-20.98	PASS			
Comments:									



Band-edge compliance - DH5-Sngl F_{LOW}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

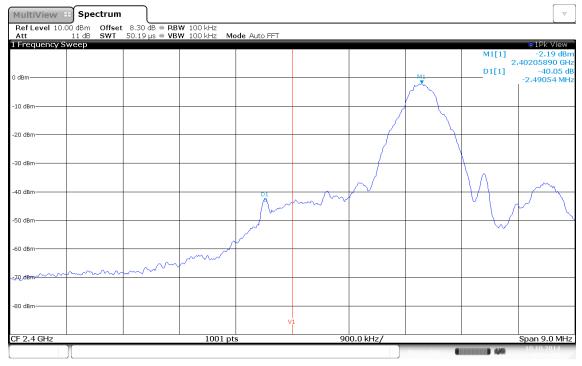
Operator: Wilfried Treffke Test Conditions: Tnom / Vnom

Mode: Tx, GFSK, 2402 MHz, single frequency

Test Date: 2014-10-10 Verdict: PASS

Note 1: Marker-delta method (DA 00-705 Meas Guidance)

Note 2: lower Band-edge, conducted measurement



Limit: Marker Delta value >20 dB; Result: PASS

Date: 10.OCT.2014 09:54:53



Band-edge compliance - DH5-Sngl F_{HIGH}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

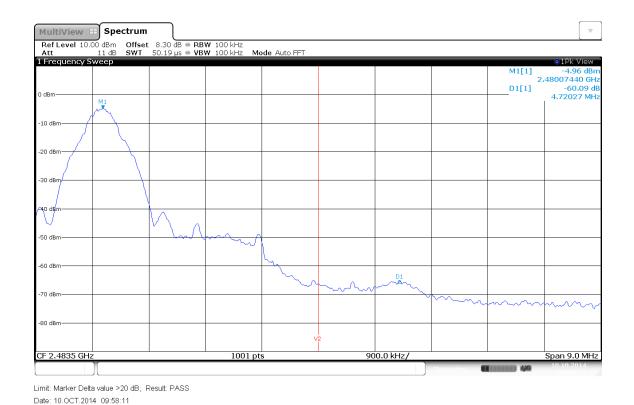
Test Site: Eurofins Product Service GmbH

Operator: Wilfried Treffke Test Conditions: Tnom / Vnom

Mode: Tx, GFSK, 2480 MHz, single frequency

Test Date: 2014-10-10 Verdict: PASS

Note 1: Marker-delta method (DA 00-705 Meas Guidance)
Note 2: upper Band-edge, conducted measurement





Band-edge compliance - DH5-Hop F_{LOW}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

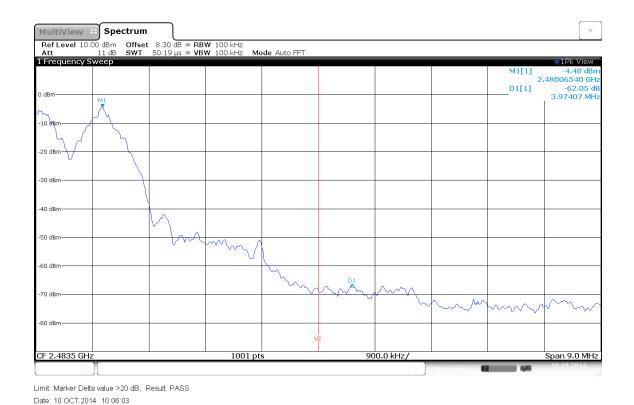
Test Site: Eurofins Product Service GmbH

Operator: Wilfried Treffke Test Conditions: Tnom / Vnom

Mode: Tx, GFSK, hopping mode

Test Date: 2014-10-10 Verdict: PASS

Note 1: Marker-delta method (DA 00-705 Meas Guidance)
Note 2: upper Band-edge, conducted measurement



Test Report No.: G0M-1408-4062-TFC247BT79-V01



Band-edge compliance - DH5-Hop F_{HIGH}

Band-edge compliance acc. to FCC 15.247

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

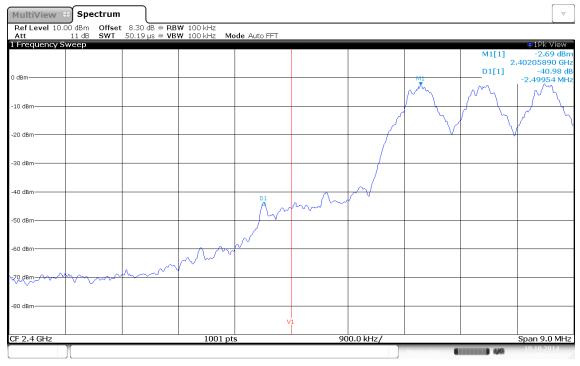
Operator: Wilfried Treffke Test Conditions: Tnom / Vnom

Mode: Tx, GFSK, hopping mode

Test Date: 2014-10-10 Verdict: PASS

Note 1: Marker-delta method (DA 00-705 Meas Guidance)

Note 2: lower Band-edge, conducted measurement



Limit: Marker Delta value >20 dB; Result: PASS

Date: 10.OCT.2014 10:01:31



3.9 Test Conditions and Results - Conducted spurious emissions

Conducted spurious emissions acc. FCC 15.247 / IC RSS-210 Verdict: PASS						
EUT requirement	Reference					
rule parts and clause	FCC 15.247(d) / IC RSS-210 A8.5					
Test according to		Reference Method				
measurement reference		FCC Public Notice DA 00-705				
Took fragues and rooms		Tested frequencies				
Test frequency range	10 MHz – 10 th Harmonic					
Measurement mode	Peak					
	Limit	ts				
Limit		Condition				
≤ -20 dB/100 kHz		Peak power measurement detector = Peak				
≤ -30 dB/100 kHz		Peak power measurement detector = RMS				
	Test se	etup				
	pectrum nalyzer	EUT				

Test procedure

- 1. EUT set to test mode (Communication tester is used if needed)
- 2. Span it set according to measurement range
- 3. Resolution bandwidth is set to 100 kHz and detector to peak and max hold
- 4. Markers are set to peak emission levels within frequency band
- 5. Emission level is determined by second marker on emission peak
- 6. Attenuation is determined from level difference

Test results								
Channel	Frequency [MHz]	Mode	Emission [MHz]	Emission Level [dbm]	Peak power [dBm]	Limit [dBm]	Margin [dB]	Result
F _{LOW}	2402	DH5-Sngl	4804	-48.17	-1.9	-21.9	-26.27	PASS
F _{MID}	2441	DH5-Sngl	4882	-57.89	-2.9	-22.9	-34.99	PASS
F _{HIGH}	2480	DH5-Sngl	4960	-56.53	-4.2	-24.2	-32.33	PASS
Comments:								

Test Report No.: G0M-1408-4062-TFC247BT79-V01



Conducted spurious emissions - DH5-Sngl F_{LOW}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

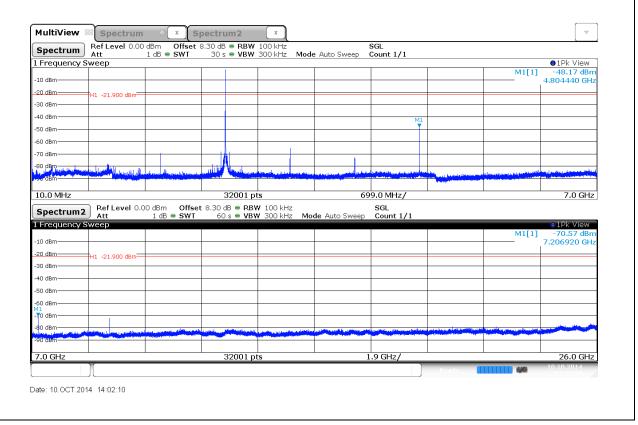
Operator: Wilfried Treffke
Test Conditions: Tnom / Vnom

Mode: Tx, GFSK, 2402 MHz, modulated

Test Date: 2014-10-10 Verdict: PASS

Note 1: Spurious in non-restricted frequency bands (DA 00-705 Meas Guidance)

Note 2: conducted measurement





Conducted spurious emissions - DH5-Sngl F_{MID}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

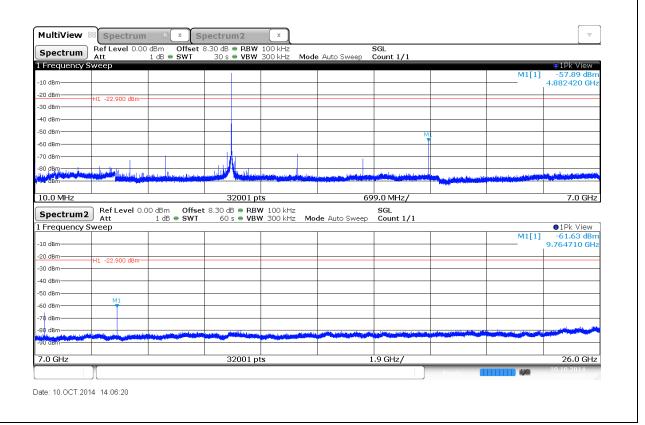
Operator: Wilfried Treffke Test Conditions: Tnom / Vnom

Mode: Tx, GFSK, 2441 MHz, modulated

Test Date: 2014-10-10 Verdict: PASS

Note 1: Spurious in non-restricted frequency bands (DA 00-705 Meas Guidance)

Note 2: conducted measurement





Conducted spurious emissions - DH5-Sngl F_{HIGH}

Spurious Emissions acc. to FCC 15.247

Project Number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

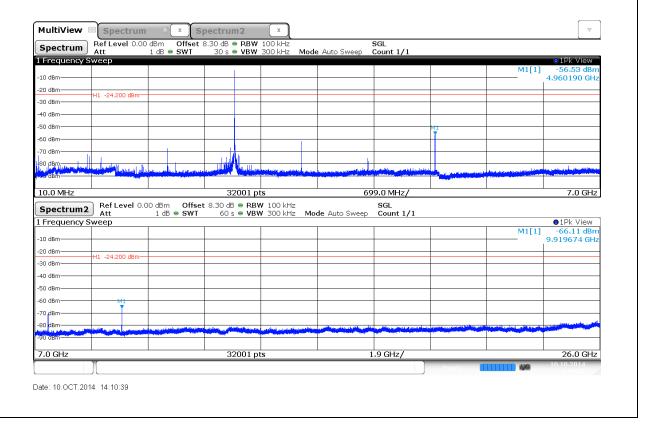
Operator: Wilfried Treffke Test Conditions: Tnom / Vnom

Mode: Tx, GFSK, 2480 MHz, modulated

Test Date: 2014-10-10 Verdict: PASS

Note 1: Spurious in non-restricted frequency bands (DA 00-705 Meas Guidance)

Note 2: conducted measurement



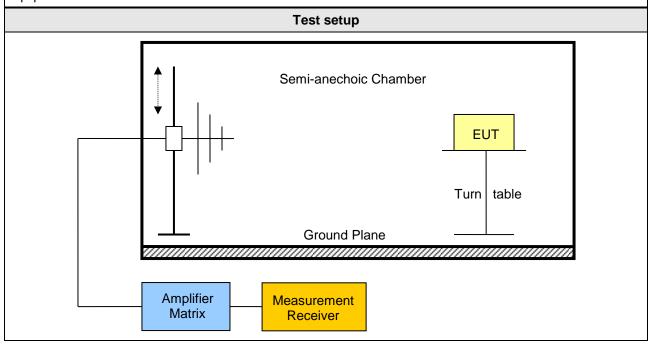


3.10 Test Conditions and Results - Transmitter radiated emissions

Transmitter radiated em	issions acc. F	FCC 47 CFR 15.247 / IC	C RSS-210	Verdict: PASS			
Test according referenced standards		Reference Method					
		FCC 15.247(d) / IC RSS-210 A8.5					
Test according to		Reference Method					
measurement refe	FCC Public Notice DA 00-705 / ANSI C63.4						
		Tested frequencies					
Test frequency ra	ange	30 MHz – 10 th Harmonic					
		Limits					
Frequency range [MHz]	Detector	Limit [µV/m]	Limit [dBµV/m]	Limit Distance [m]			
30 – 88	Quasi-Peak	100	40	3			
88 – 216	Quasi-Peak	150 43.5		3			
216 – 960	Quasi-Peak	200	3				
960 – 1000	Quasi-Peak	500	54	3			
> 1000	Average	500 54 3					

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

When average radiated emission measurements are specified, including average emission measurements below 1000 MHz, there also is a limit on the peak level of the radio frequency emissions. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.



Test Report No.: G0M-1408-4062-TFC247BT79-V01



Test procedure

- 1. EUT set to test mode (Communication tester is used if needed)
- 2. Span it set according to measurement range
- 3. Resolution bandwidth below 1 GHz is set according to CISPR 16 with peak/quasi-peak detector and RBW of 1 MHz with peak/average detector is used above 1 GHz
- 4. Markers are set to peak emission levels within restricted bands

Comments: * Physical distance between EUT and measurement antenna.

Test results – Internal Antenna									
Channel	Frequency [MHz]	Mode	Emission [MHz]	Level [dbµV/m]	Det.	Pol.	Limit [dbµV/m]	Limit dist. [m]*	Margin [dB]
F _{LOW}	2402	DH5-Sngl	4804	56.97	pk	hor	74.00	3	-17.03
F _{LOW}	2402	DH5-Sngl	4804	52.81	avg	hor	54.00	3	-01.19
F _{LOW}	2402	DH5-Sngl	4804	58.03	pk	ver	74.00	3	-15.97
F _{LOW}	2402	DH5-Sngl	4804	50.99	avg	ver	54.00	3	-03.01
F _{MID}	2441	DH5-Sngl	4882	54.28	pk	hor	74.00	3	-19.72
F _{MID}	2441	DH5-Sngl	4882	50.86	avg	hor	54.00	3	-03.14
F _{MID}	2441	DH5-Sngl	4882	56.40	pk	ver	74.00	3	-17.60
F _{MID}	2441	DH5-Sngl	4882	52.04	avg	ver	54.00	3	-01.96
F _{HIGH}	2480	DH5-Sngl	2483.5	55.82	pk	hor	74.00	3	-18.18
F _{HIGH}	2480	DH5-Sngl	2483.5	33.29	RMS	hor	54.00	3	-20.71
F _{HIGH}	2480	DH5-Sngl	4960	54.38	pk	ver	74.00	3	-19.62
F _{HIGH}	2480	DH5-Sngl	4960	49.41	avg	ver	54.00	3	-04.59

Test Report No.: G0M-1408-4062-TFC247BT79-V01



Amplifier

Matrix

3.11 Test Conditions and Results - Receiver radiated emissions

ceiver radiated emiss	ions acc. IC	RSS-210		Verdict: PASS			
Test according referenced standards		Reference Method					
		IC RSS-210 A8.5					
Test according to)		Reference Method				
measurement refere	ence		ANSI C63.4				
T		Tested frequencies					
Test frequency rar	ige –	3	30 MHz – 3 th Harmonic				
EUT test mode			Receive				
		Limits					
Frequency range [MHz]	Detector	Limit [µV/m]	Limit [dBµV/m]	Limit Distance [m]			
30 – 88	Quasi-Peak	100	40	3			
88 – 216	Quasi-Peak	150	43.5	3			
216 – 960	Quasi-Peak	200	46	3			
960 – 1000	Quasi-Peak	500	54	3			
> 1000 Average		500	54	3			
		Test setup					
		Semi-anechoic Ch	amber EUT Turn table	_ e			
-	_	Ground Plane					

Measurement

Receiver



Test procedure

- 1. EUT set to receive mode (Communication tester is used if needed)
- 2. Span it set according to measurement range
- 3. Resolution bandwidth below 1 GHz is set according to CISPR 16 with peak/quasi-peak detector and RBW of 1 MHz with peak/average detector is used above 1 GHz
- 4. Markers are set to peak emission levels

Test results Emission Level Frequency **Emission Emission Level** Limit Margin Channel Det. [MHz] [MHz] [dbµV/m] $[\mu V/m]$ $[\mu V/m]$ $[\mu V/m]$ 419.2 32.51 2441 30.24 200 167.49 F_{MID} pk

Comments:

^{*} Physical distance between EUT and measurement antenna.

^{**} Emission level corresponds to ambient noise floor



ANNEX A Transmitter radiated spurious emissions

Spurious emissions according to FCC 15.247

Project number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

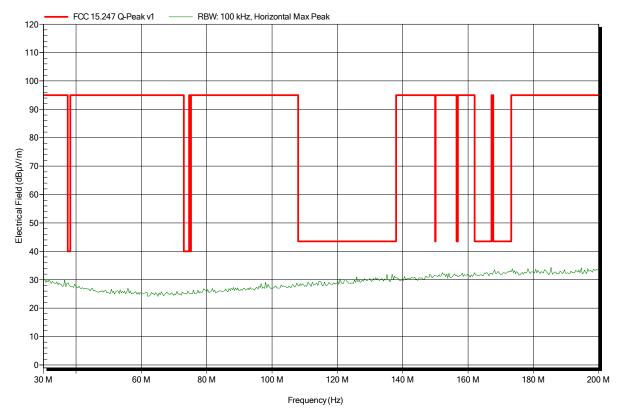
Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: TX; GFSK; DH5; 2402 MHz

Test Date: 2014-10-02 Note: worst case





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

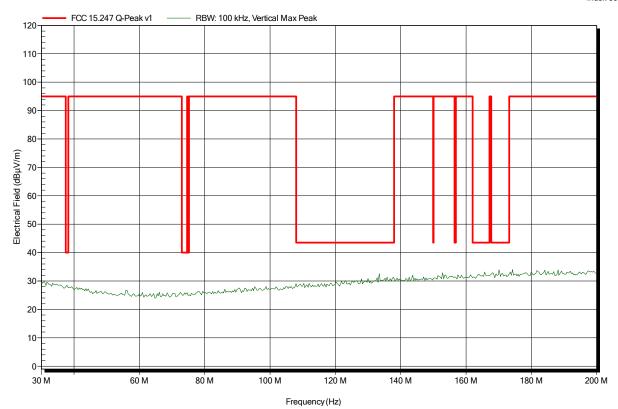
Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: TX; GFSK; DH5; 2402 MHz

Test Date: 2014-10-02 Note: worst case





Project number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

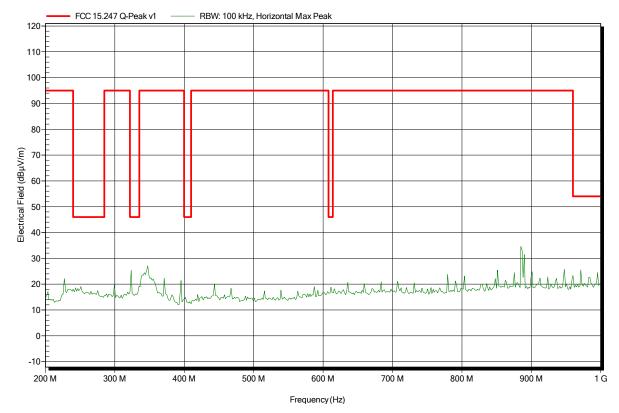
Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Antenna: Rohde & Schwarz HL 223, Horizontal

Measurement distance: 3 m

Mode: TX; GFSK; DH5; 2402 MHz

Test Date: 2014-10-02 Note: worst case





Project number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

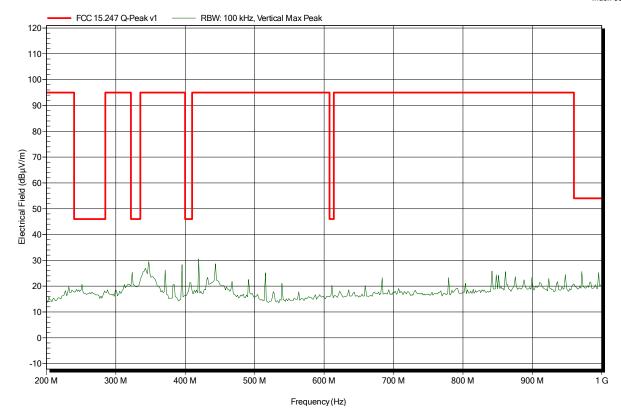
Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 r

Mode: TX; GFSK; DH5; 2402 MHz

Test Date: 2014-10-02 Note: worst case





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

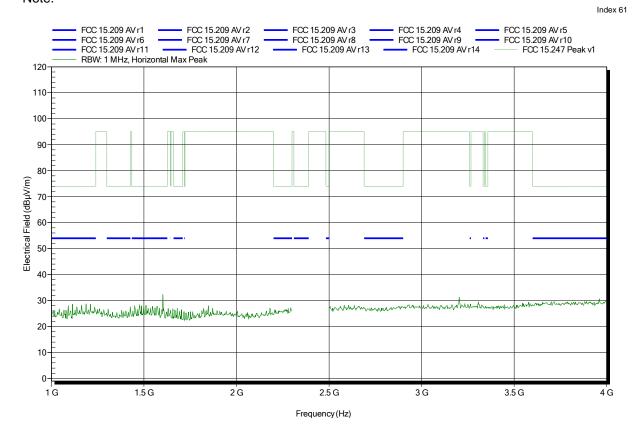
Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2402 MHz

Test Date: 2014-10-02





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

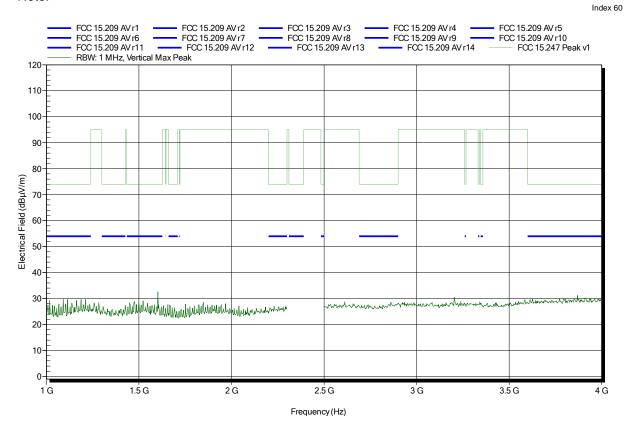
Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2402 MHz

Test Date: 2014-10-02





Project number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

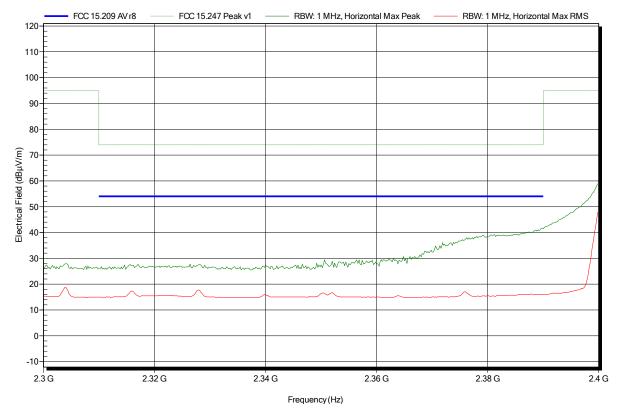
Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2402 MHz

Test Date: 2014-10-02 Note: lower bandedge





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

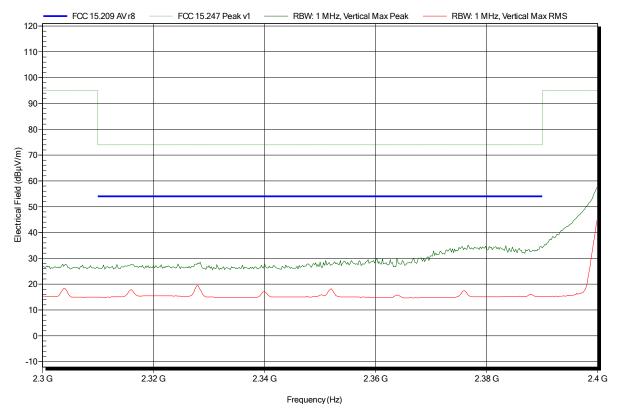
Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2402 MHz

Test Date: 2014-10-02 Note: lower bandedge





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

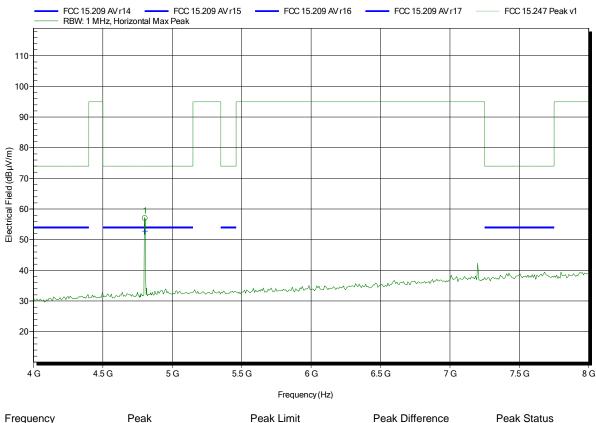
Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2402 MHz

Test Date: 2014-10-02

Note:



Frequency A Peak A Peak Limit A Peak Difference A Status A Peak Status A Peak Status A Peak Status A Peak Limit A Peak Difference A Peak Status A Peak Status A Peak Status A Peak Difference A Peak Difference A Peak Status A Peak Difference A P



Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

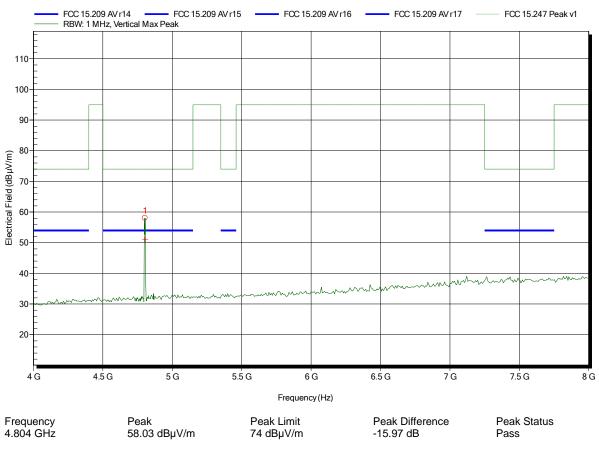
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2402 MHz

Test Date: 2014-10-02

Note:





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

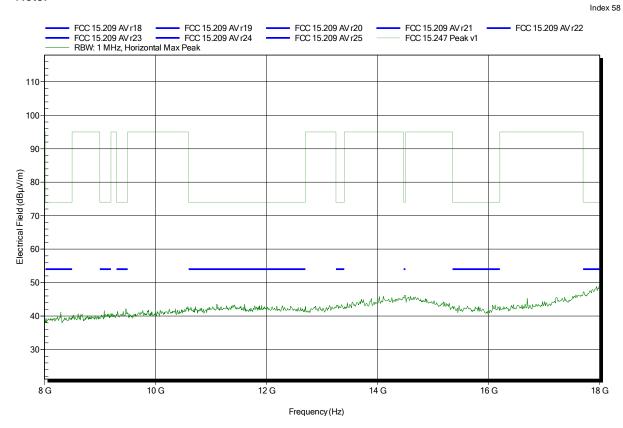
Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2402 MHz

Test Date: 2014-10-02





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

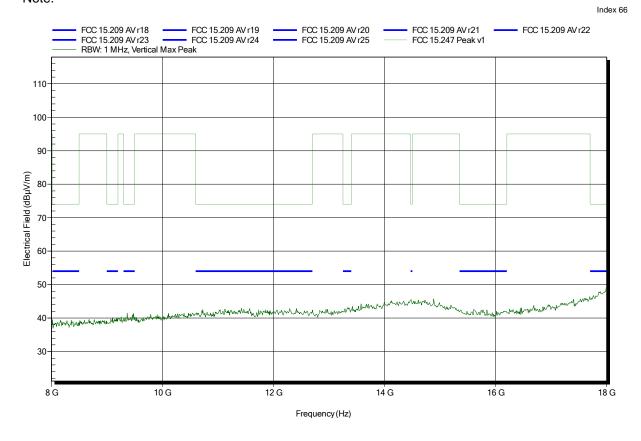
Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2402 MHz

Test Date: 2014-10-02





Project number: G0M-1408-4062

Applicant: **Sonetics Corporation EUT Name:** Communications Headset

AXP379 Model:

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

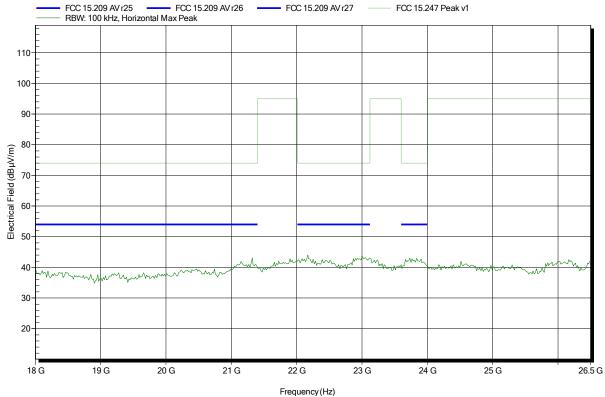
Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Rohde & Schwarz HL 025, Horizontal Antenna:

Measurement distance: 1 m converted to 3m

TX; GFSK; DH5; 2402 MHz Mode:

Test Date: 2014-10-02

Note:





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2402 MHz

Test Date: 2014-10-02

Note:

FCC 15.209 AV r26 FCC 15.247 Peak v1 FCC 15.209 AV r27 FCC 15 209 AV r25 RBW: 100 kHz, Vertical Max Peak 110 100 90 Electrical Field (dBμV/m) 60 50 40 30 20 19 G 20 G 21 G 23 G 24 G 25 G 18 G 22 G 26.5 G

Frequency (Hz)



Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

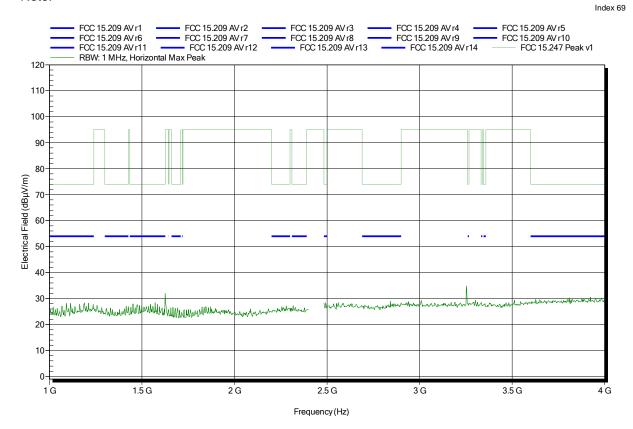
Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1m converted to 3m

Mode: TX; GFSK; DH5; 2441 mHz

Test Date: 2014-10-02





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

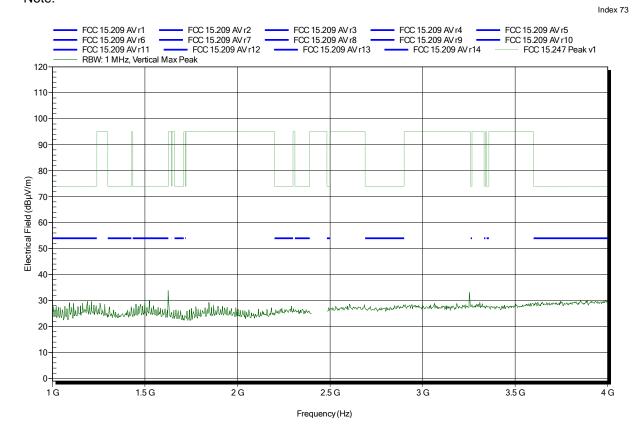
Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2441 MHz

Test Date: 2014-10-02





Project number: G0M-1408-4062

Sonetics Corporation Applicant: **EUT Name:** Communications Headset

AXP379 Model:

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

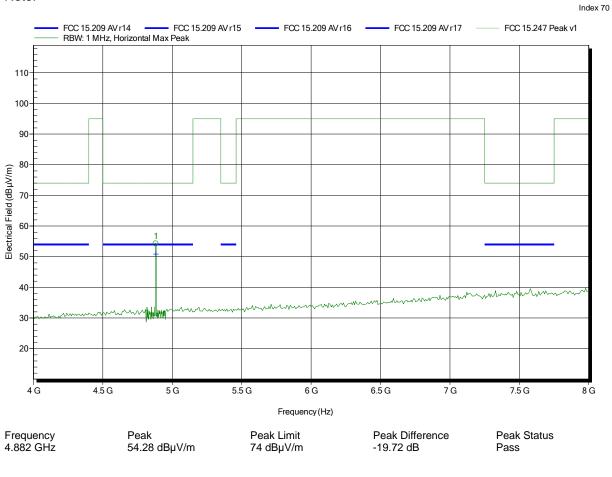
Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Schwarzbeck BBHA 9120D, Horizontal Antenna:

Measurement distance: 1 m converted to 3m

TX; GFSK; DH5; 2441 MHz Mode:

Test Date: 2014-10-02

Note:



Average Limit 54 dBµV/m Frequency Average Average Difference Average Status 50.86 dBµV/m -3.14 dB 4.882 GHz Pass



Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

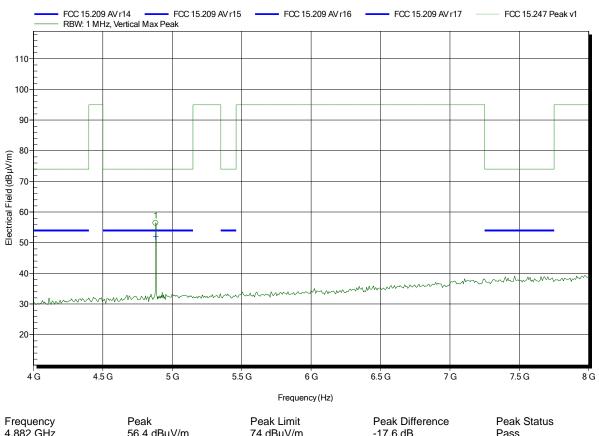
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2441 MHz

Test Date: 2014-10-02

Note:





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

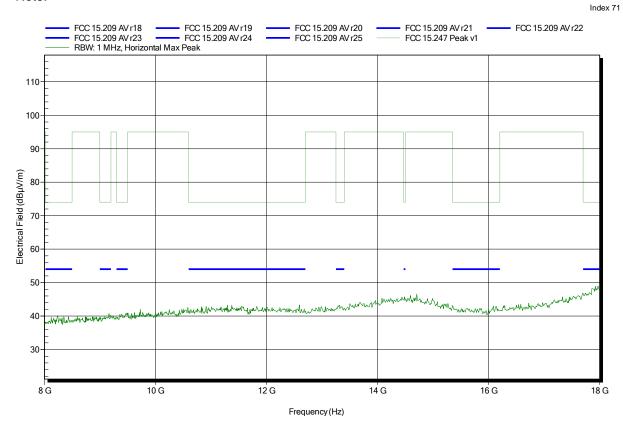
Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2441 MHz

Test Date: 2014-10-02





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

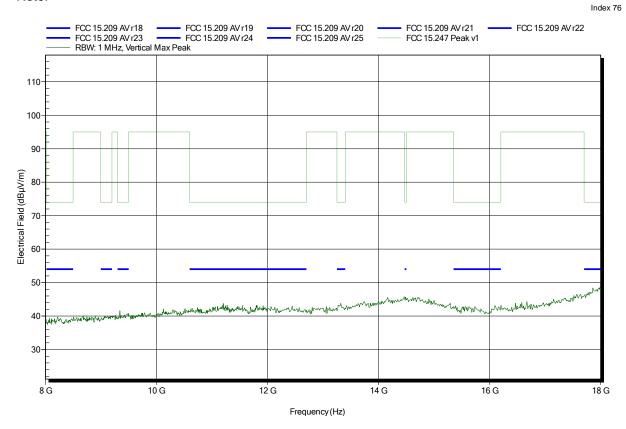
Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2441 MHz

Test Date: 2014-10-02





Project number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

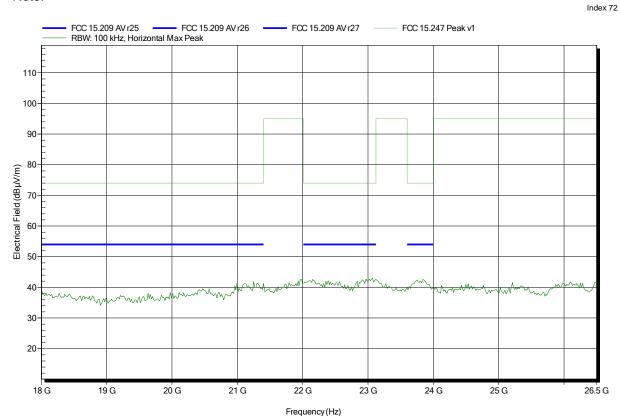
Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Antenna: Rohde & Schwarz HL 025, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2441 MHz

Test Date: 2014-10-02





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

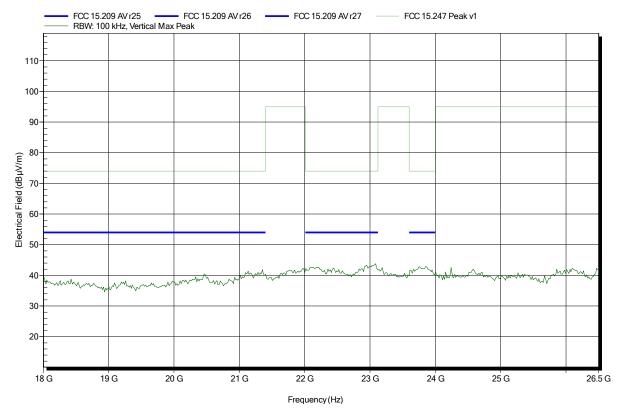
Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2441 MHz

Test Date: 2014-10-02

Note:





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

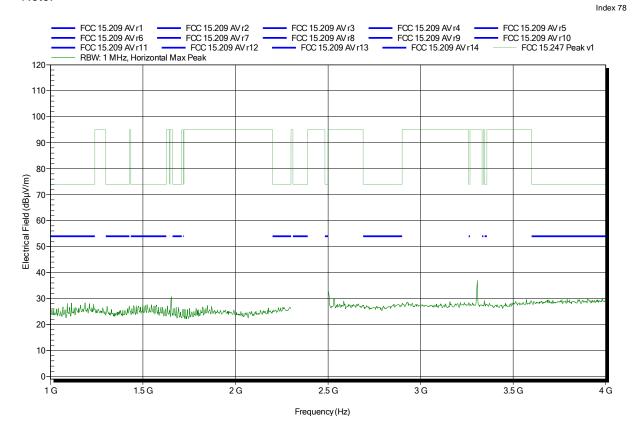
Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2480 MHz

Test Date: 2014-10-02





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

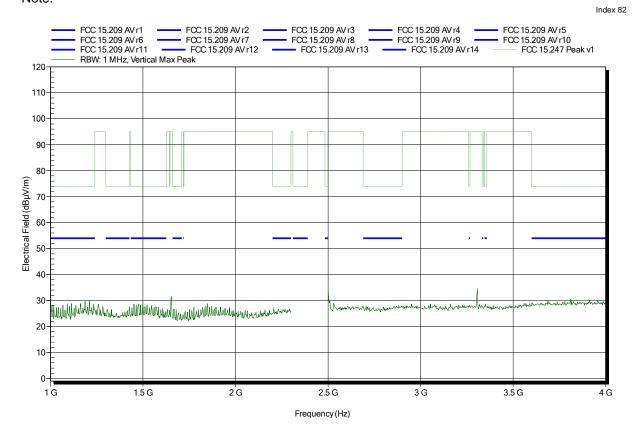
Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2480 MHz

Test Date: 2014-10-02





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

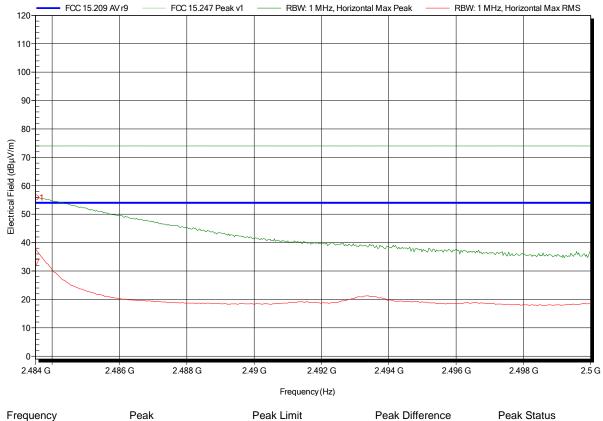
Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2480 MHz

Test Date: 2014-10-02 Note: upper bandedge

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Project number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

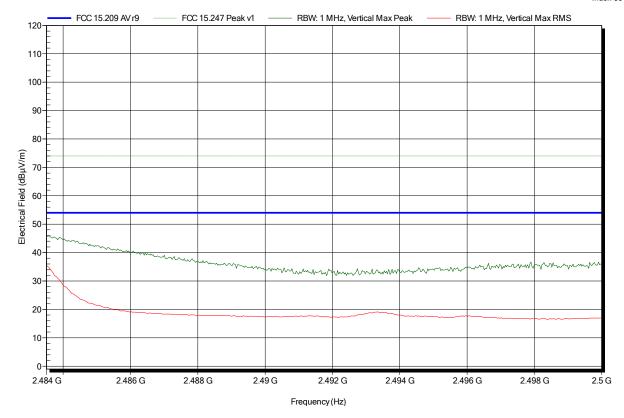
Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2480 MHz

Test Date: 2014-10-02 Note: upper bandedge





Project number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

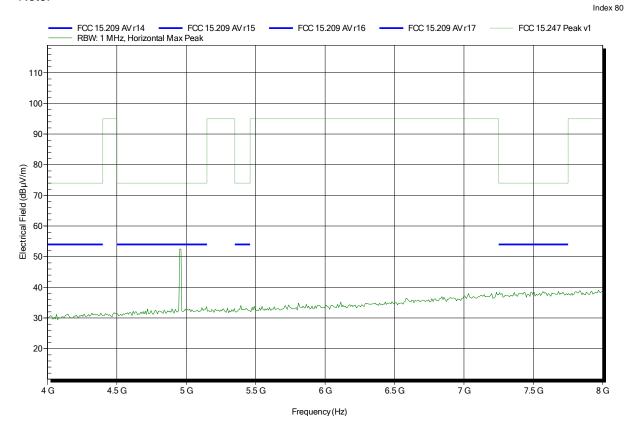
Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2480 MHz

Test Date: 2014-10-02





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

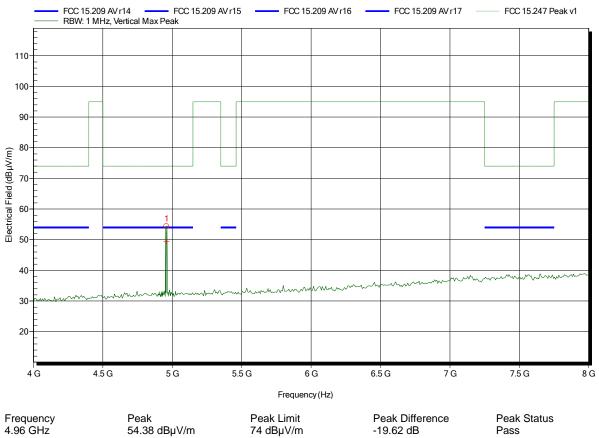
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2480 MHz

Test Date: 2014-10-02

Note:





Project number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

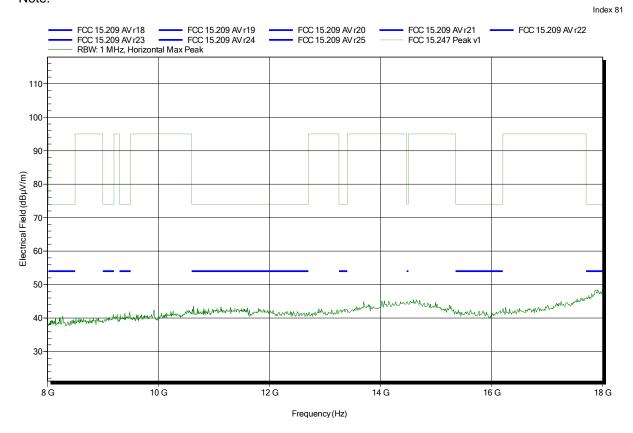
Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2480 MHz

Test Date: 2014-10-02





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

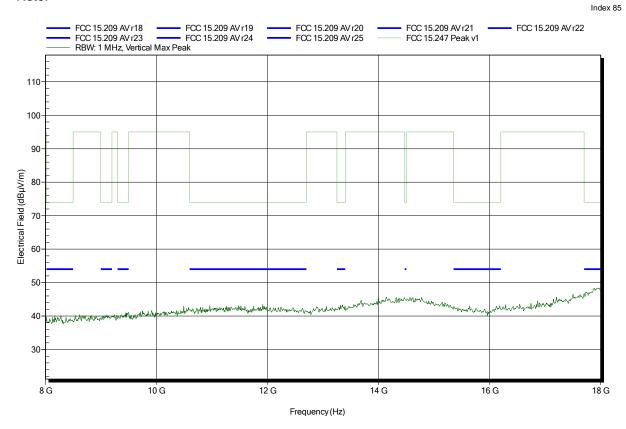
Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2480 MHz

Test Date: 2014-10-02





Project number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

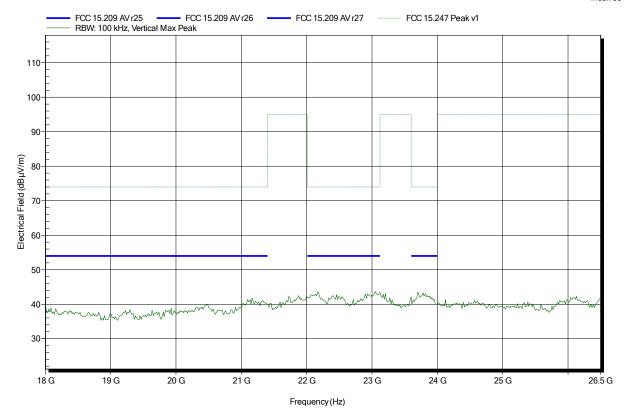
Antenna: Rohde & Schwarz HL 025, Vertical

Measurement distance: 1 m converted to 3m

Mode: TX; GFSK; DH5; 2480 MHz

Test Date: 2014-10-02

Note:





ANNEX B Receiver radiated spurious emissions

Spurious emissions according to RSS-GEN

Project number: G0M-1408-4062

Applicant: Sonetics Corporation
EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

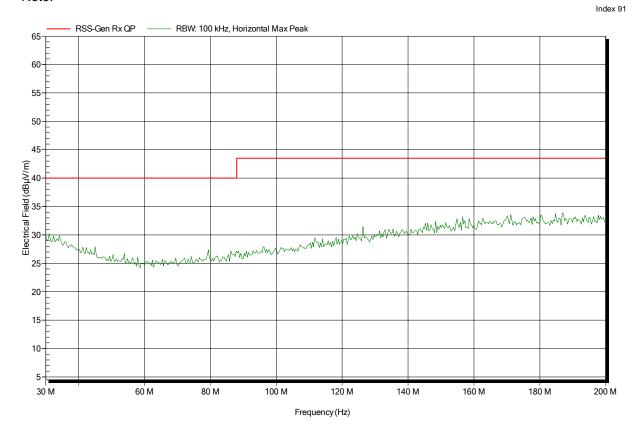
Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Antenna: Rohde & Schwarz HK 116, Horizontal

Measurement distance: 3 m

Mode: RX; DECT ch.2 and BT ch.39 acrive

Test Date: 2014-10-02





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

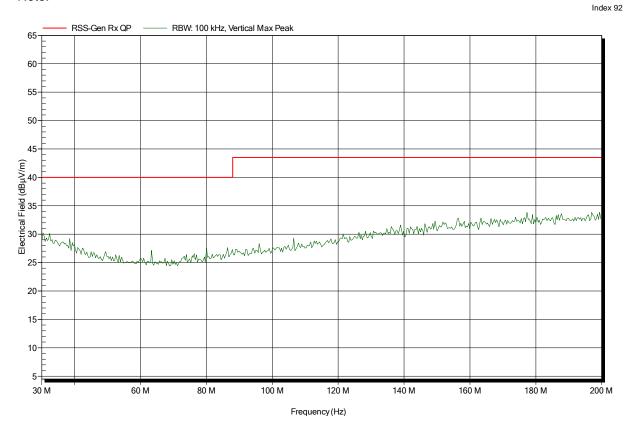
Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

Antenna: Rohde & Schwarz HK 116, Vertical

Measurement distance: 3 m

Mode: RX; DECT ch.2 and BT ch.39 acrive

Test Date: 2014-10-02





Project number: G0M-1408-4062

Applicant: **Sonetics Corporation EUT Name:** Communications Headset

AXP379 Model:

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

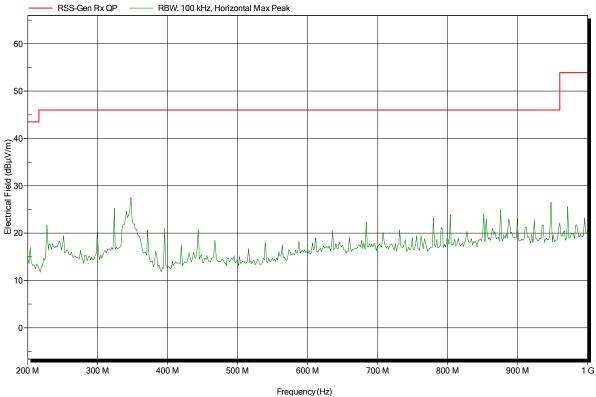
Rohde & Schwarz HL 223, Horizontal Antenna:

Measurement distance:

RX; DECT ch.2 and BT ch.39 acrive Mode:

2014-10-02 Test Date:

Note:





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

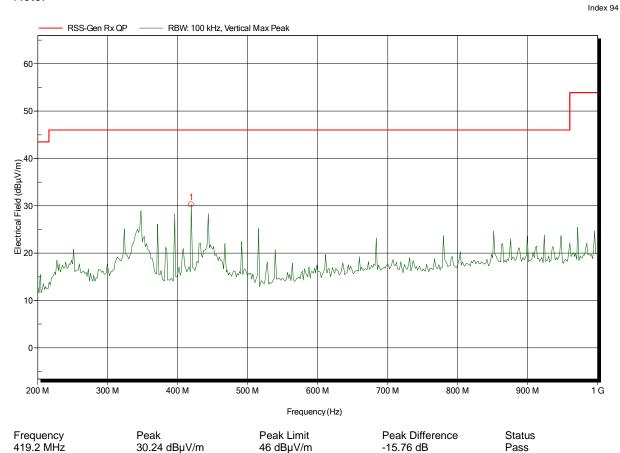
Antenna: Rohde & Schwarz HL 223, Vertical

Measurement distance: 3 m

Mode: RX; DECT ch.2 and BT ch.39 acrive

Test Date: 2014-10-02

Note:



Test Report No.: G0M-1408-4062-TFC247BT79-V01



Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

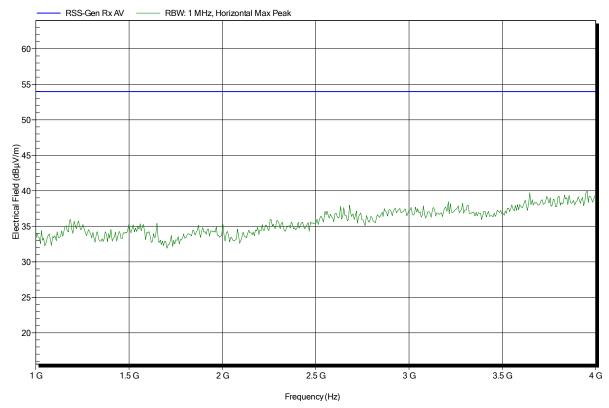
Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 3 m

Mode: RX; DECT ch.2 and BT ch.39 acrive

Test Date: 2014-10-02

Note:





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

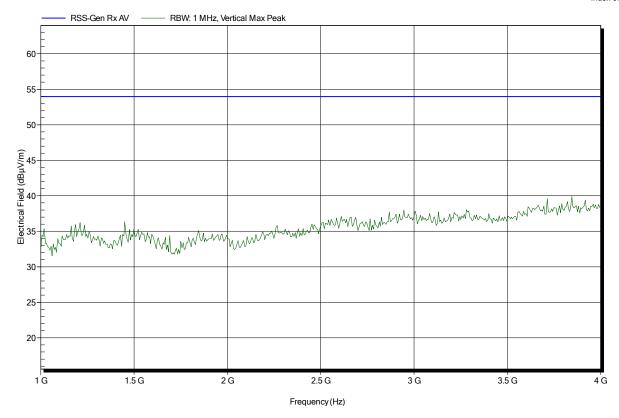
Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 3 m

Mode: RX; DECT ch.2 and BT ch.39 acrive

Test Date: 2014-10-02

Note:





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

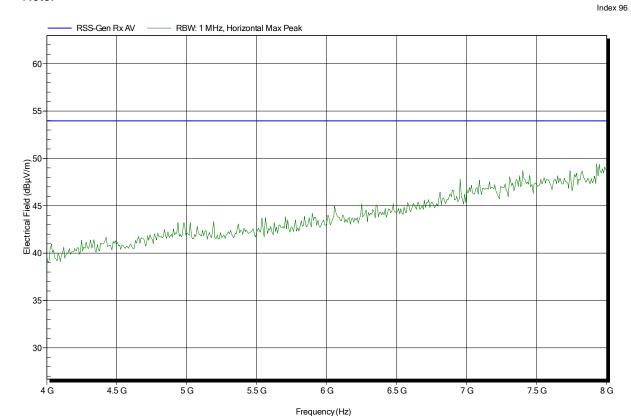
Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery Antenna: Schwarzbeck BBHA 9120D, Horizontal

Measurement distance: 3 m

Mode: RX; DECT ch.2 and BT ch.39 acrive

Test Date: 2014-10-02





Project number: G0M-1408-4062

Applicant: Sonetics Corporation EUT Name: Communications Headset

Model: AXP379

Test Site: Eurofins Product Service GmbH

Operator: Mr. Treffke

Test Conditions: Tnom: 25°C, Vnom: 3.7 VDC lithium battery

Antenna: Schwarzbeck BBHA 9120D, Vertical

Measurement distance: 3 m

Mode: RX; DECT ch.2 and BT ch.39 acrive

Test Date: 2014-10-02

