eurofins | Product Service

FCC TEST REPORT

FCC 47 CFR Part 15C
ISED RSS-247

Digital transmission systems operating within the 2400 – 2483.5 MHz band

Report Reference No. ..... :	G0M-1612-6168-TFC247BL-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 ..... :	eResearch Technology GmbH
Address ..... :	Sieboldstrasse 3 97230 Estenfeld GERMANY
Test specification:	
Standard..... :	47 CFR Part 15C RSS-247, Issue 1, 2015-05
Test scope…….. ..... :	partial Radio compliance test
Equipment under test (EUT):	
Product description	Asthma Monitor AM3
Model No.	AM3 Option G+
Additional Model(s)	None
Brand Name(s)	None
Hardware version	1.0
Firmware / Software version	9.40
	FCC-ID: 2AAUFAM3G02 IC: 11335A-AM3G02
Test result	**Passed**

Possible test case verdicts:	
- 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 meet the requirement ..... :	P (Pass)
- test object does not meet the requirement ..... :	F (Fail)

Testing:		
Test Lab Temperature ..... :	20 – 23 °C	
Test Lab Humidity ..... :	32 – 38 %	
Date of receipt of test item ..... :	2016-12-23	
Date (s) of performance of tests ..... :	2017-01-23 – 2017-01-24	
Compiled by ..... :	Sebastian Suckow	
Tested by (+ signature) ..... : (Responsible for Test)	Sebastian Suckow	.....
Approved by (+ signature) ..... : (Head of Lab)	Christian Weber	.....
Date of issue ..... :	2017-01-31	
Total number of pages ..... :	69	

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.

Additional comments:

Test case reduction on radiated measurements only is based on the requirements for host integration for full modular approved transmitter modules (KDB 996369 D02) used by the EUT. The EUT uses a module with full modular approval according to FCC and ISED rules. For details about the radio module see EUT description in section 1.

Version History

Version	Issue Date	Remarks	Revised by
01	2017-01-31	Initial Release	

REPORT INDEX

1 Equipment (Test item) Description

Description	Asthma Monitor AM3	
Model	AM3 Option G+	
Additional Model(s)	None	
Brand Name(s)	None	
Serial number	None	
Hardware version	1.0	
Software / Firmware version	9.40	
PMN	N/A	
HVIN	AM3 Option G+	
FVIN	N/A	
HMN	N/A	
FCC-ID	2AAUFAM3G02	
IC	11335A-AM3G02	
Equipment type	End product	
Radio type	Transceiver	
Radio technology	Bluetooth 4.0 Low Energy	
Operating frequency range	2402 - 2480 MHz	
Assigned frequency band	2400 - 2483.5 MHz	
Main test frequencies	F_{LOW}	2402 MHz
	F_{MID}	2442 MHz
	F_{HIGH}	2480 MHz
Spreading	Frequency Hopping	
Modulations	GFSK	
Number of channels	40	
Channel spacing	2MHz	
Number of antennas	1	
Radio module	Type	Bluetooth Module
	Model	BT121
	Manufacturer	Silicon Labs (former Blue Giga)
	HW Version	unspecified
	SW Version	unspecified
	FCC-ID	QOQBT121
	IC	5123A-BGTBT121
Antenna	Type	integrated
	Model	BT121
	Manufacturer	Silicon Labs
	Gain	+1 dBi (manufacturer declaration)

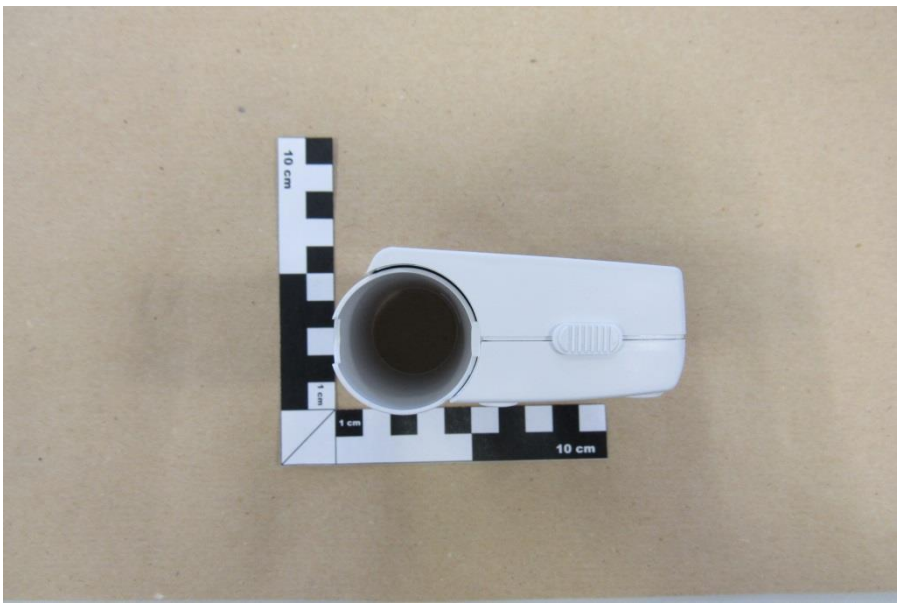
Manufacturer	eResearch Technology GmbH Sieboldstrasse 3 97230 Estenfeld GERMANY	
Power supply	V_{NOM}	3.7 VDC
	V_{MIN}	N/R
	V_{MAX}	N/R
AC/DC-Adaptor	Model	WR9QA1200MUNMRVG2773
	Vendor	GlobTek Inc.
	Input	100 - 240
	Output	5.0

1.1 Photos – Equipment External

EUT Top

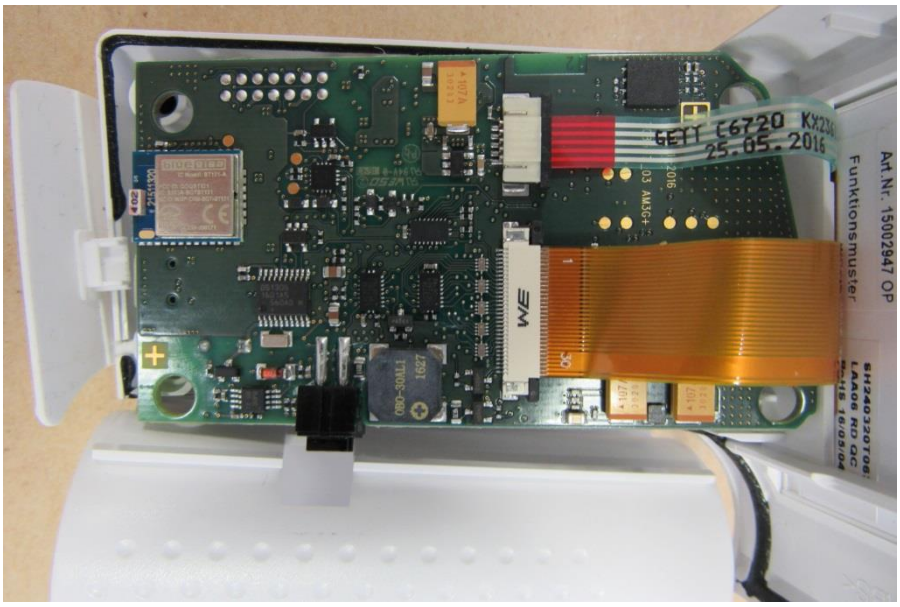

EUT Bottom


EUT Left side

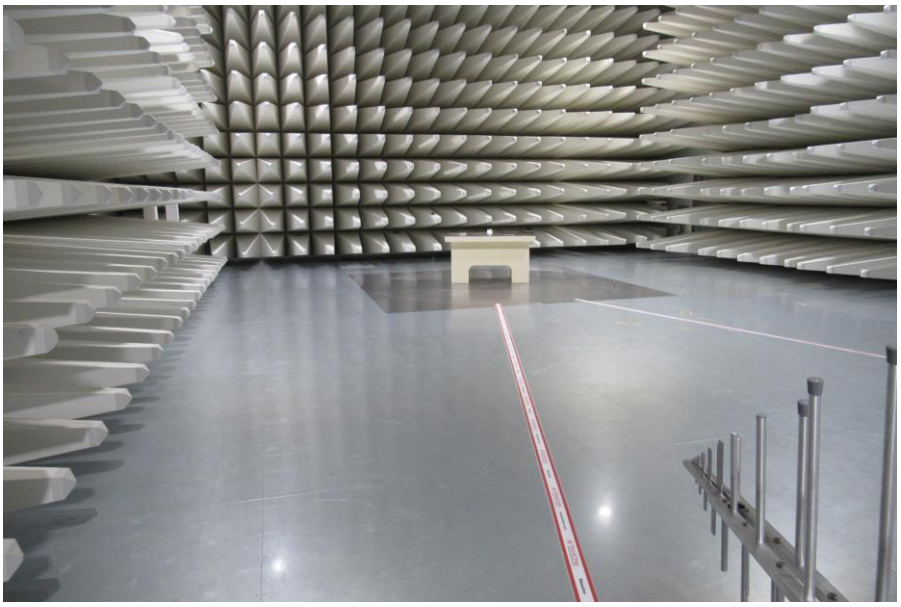

EUT Right side


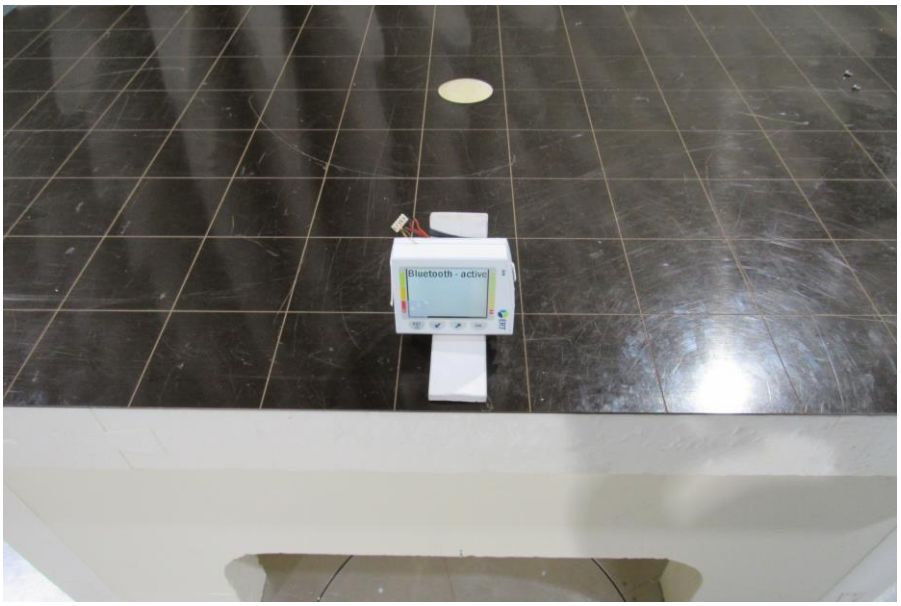
1.2 Photos – Equipment internal

PCB Top


PCB Bottom


1.3 Photos – Test setup

Test setup


Test setup detail


1.4 Supporting Equipment Used During Testing

Product Type*	Device	Manufacturer	Model No.	Comments
AE	Notebook	DELL	S/N 2FMM5R1	Used for signaling

***Note:** Use the following abbreviations:

AE : Auxiliary/Associated Equipment, or

SIM : Simulator (Not Subjected to Test)

CABL : Connecting cables

1.5 Test Modes

Mode #	Description	
BTLE	General conditions:	EUT powered by internal battery.
	Radio conditions:	Mode = standalone transmit Modulation = GFSK Power setting = 4 dBm
Receive	General conditions:	EUT powered on
	Radio conditions:	Mode = standalone receive

1.6 Test Equipment Used During Testing

Measurement Software			
Description	Manufacturer	Name	Version
EMC Test Software	Dare Instruments	Radimation	2015.2.4

Radiated spurious emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Semi-anechoic chamber	Frankonia	AC 6	EF00899	-	-
Spectrum Analyzer	R&S	FSIQ26	EF00242	2016-04	2017-04
Biconical Antenna	R&S	HK 116	EF00186	2016-02	2018-02
LPD Antenna	R&S	HL 223	EF00202	2016-02	2018-02
Horn Antenna	Schwarzbeck	BBHA9120D	EF01153	2016-07	2017-07

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 (dBµV) + A.F. (dB) = Net field strength (dBµV/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 dBµV/m). The FCC limits are given in units of µV/m. The following formula is used to convert the units of µV/m to dBµV/m:

Limit (dBµV/m) = 20*log (µV/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:

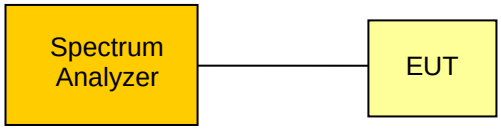
Reading	+	AF	=	Net Reading	:	Net reading - FCC limit = Margin
21.5 dBµV	+	26 dB	=	47.5 dBµV/m	:	47.5 dBµV/m - 57.0 dBµV/m = -9.5 dB

2 Result Summary

FCC 47 CFR Part 15C, ISED RSS-247				
Product Specific Standard Section	**Requirement – Test**	**Reference Method**	**Result**	**Remarks**
RSS-Gen 6.6	Occupied Bandwidth	ANSI C63.10	N/T	Information only
FCC § 15.247(a)(2) ISED RSS-247 § 5.2	6dB Bandwidth	ANSI C63.10	N/T	
FCC § 15.247(b)(3) ISED RSS-247 § 5.4	Maximum peak conducted power	ANSI C63.10	N/T	
FCC § 15.247(e) ISED RSS-247 § 5.2	Power spectral density	ANSI C63.10	N/T	
47 CFR 15.207 ISED RSS-247 § 3.1	AC power line conducted emissions	ANSI C63.4	N/R	No powered (directly or indirectly) via AC-Mains
FCC § 15.247(d) ISED RSS-247 § 5.5	Band edge compliance	ANSI C63.10	N/T	
FCC § 15.247(d) ISED RSS-247 § 5.5	Conducted spurious emissions	ANSI C63.10	N/T	
FCC § 15.247(d) FCC § 15.209 ISED RSS-247 § 5.5	Transmitter radiated spurious emissions	ANSI C63.10	PASS	
ISED RSS-247 § 3.1	Receiver radiated spurious emissions	ANSI C63.10	PASS	
Remarks:				

3 Test Conditions and Results

3.1 Test Conditions and Results – Occupied Bandwidth

Occupied Bandwidth acc. to ISED RSS-Gen	**Verdict: PASS**
Test according to measurement reference	Reference Method
	ANSI C63.10
Test frequency range	Tested frequencies
	F_{LOW} / F_{MID} / F_{HIGH}
Limits	
None (Informational only)	
Test setup	
	
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. Resolution bandwidth set to 1 % of span 4. Occupied Bandwidth (99 %) measurement with spectrum analyzer built in measurement function	

Test results

Channel	Frequency [MHz]	Mode	Occupied Bandwidth [MHz]
F_{LOW}	2402	BTLE	0.982
F_{MID}	2442	BTLE	0.992
F_{HIGH}	2480	BTLE	0.992

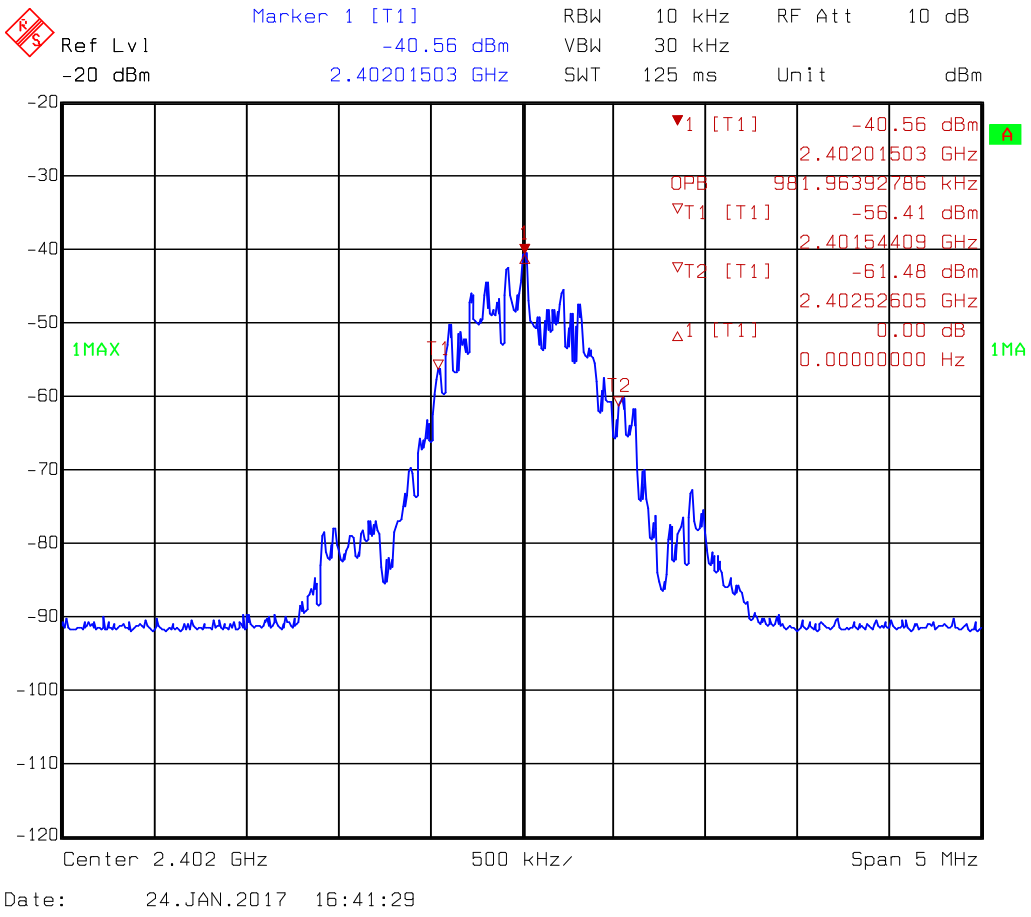
Comments:

Occupied Bandwidth – F_{LOW}

Occupied Bandwidth

Project Number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Sebastian Suckow
Test Conditions:	Tnom Vnom
Mode:	BT LE 2402 MHz
Test Date:	2017-01-24
Verdict:	NONE (INFORMATION ONLY)

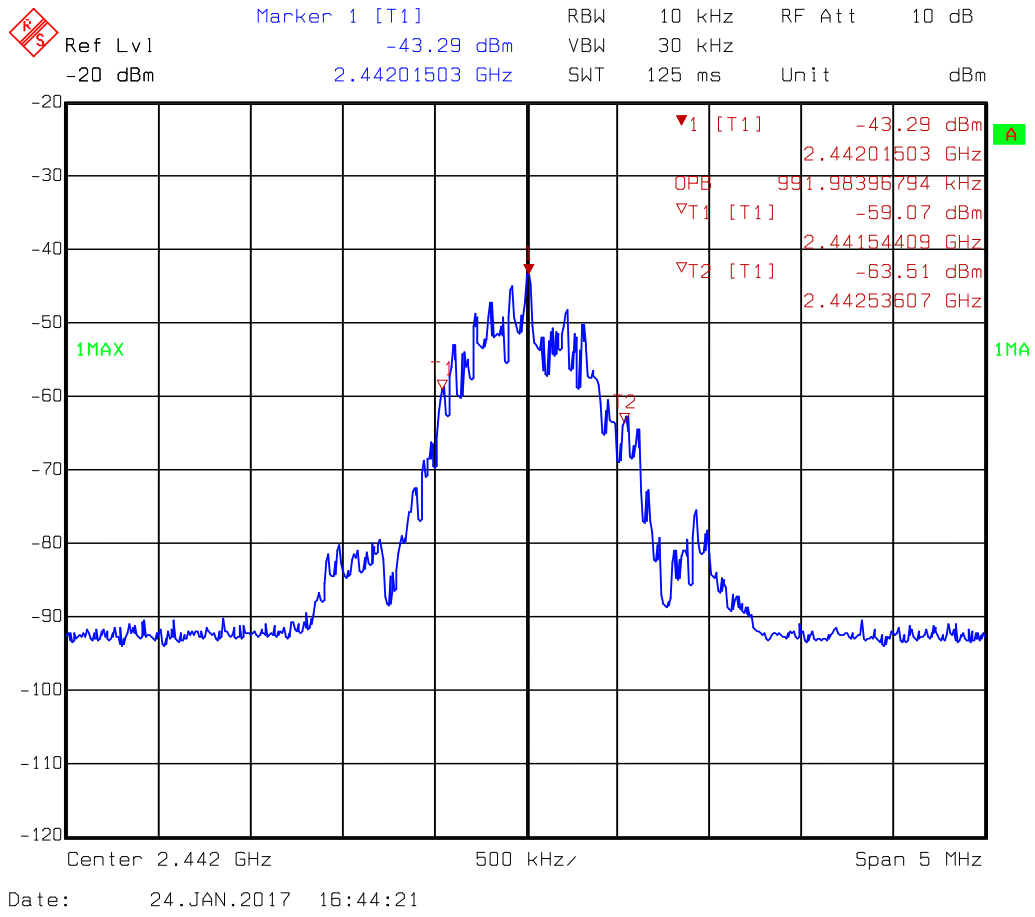


Occupied Bandwidth – F_{MID}

Occupied Bandwidth

Project Number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Sebastian Suckow
Test Conditions:	Tnom Vnom
Mode:	BT LE 2442 MHz
Test Date:	2017-01-24
Verdict:	NONE (INFORMATION ONLY)

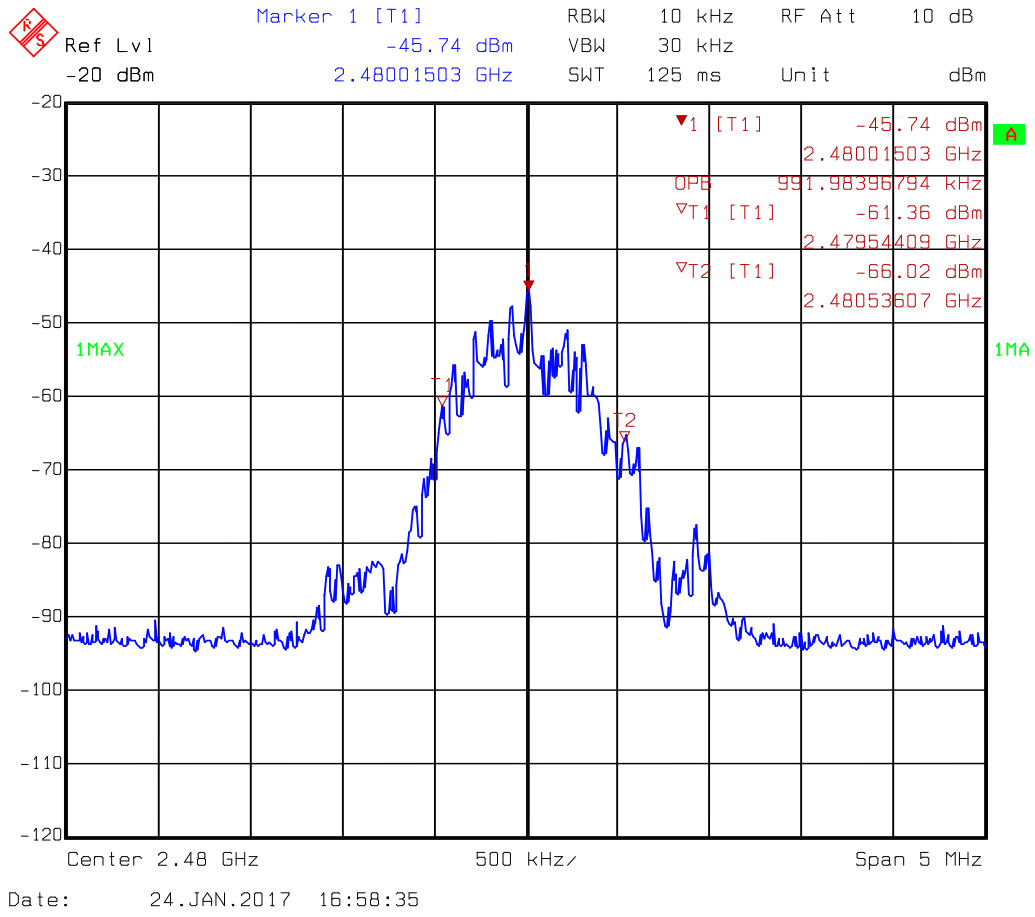


Occupied Bandwidth – F_{HIGH}

Occupied Bandwidth

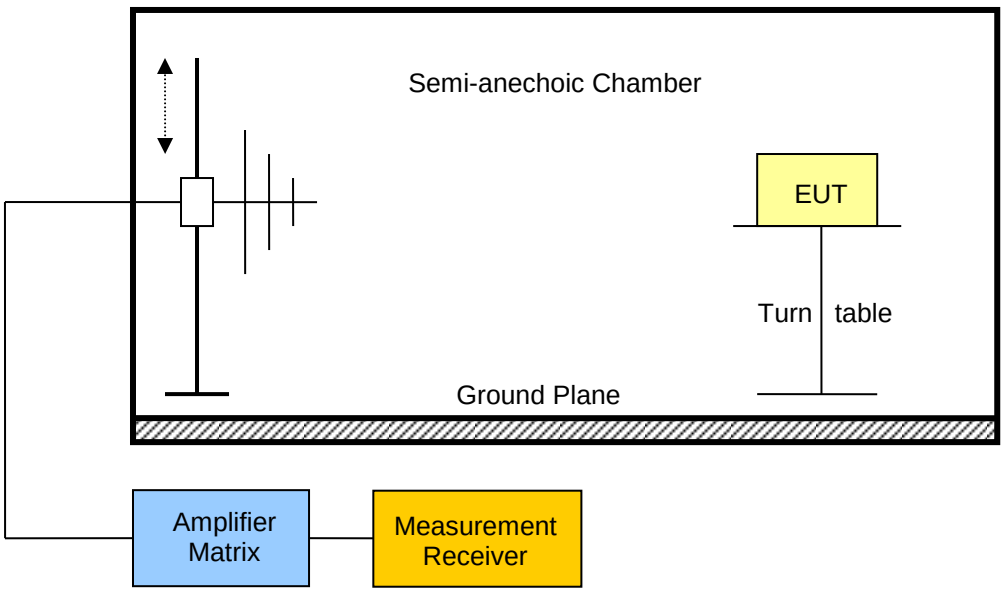
Project Number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Sebastian Suckow
Test Conditions:	Tnom Vnom
Mode:	BT LE 2480 MHz
Test Date:	2017-01-24
Verdict:	NONE (INFORMATION ONLY)



3.2 Test Conditions and Results – Transmitter radiated emissions

Transmitter radiated emissions acc. to FCC 47 CFR 15.247 / ISED RSS-247				**Verdict: PASS**
Test according referenced standards	Reference Method			
	FCC 15.247(d) / ISED RSS-247 5.5			
Test according to measurement reference	Reference Method			
	ANSI C63.10			
Test frequency range	Tested frequencies			
	30 MHz – 10th 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	46	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 setup				



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

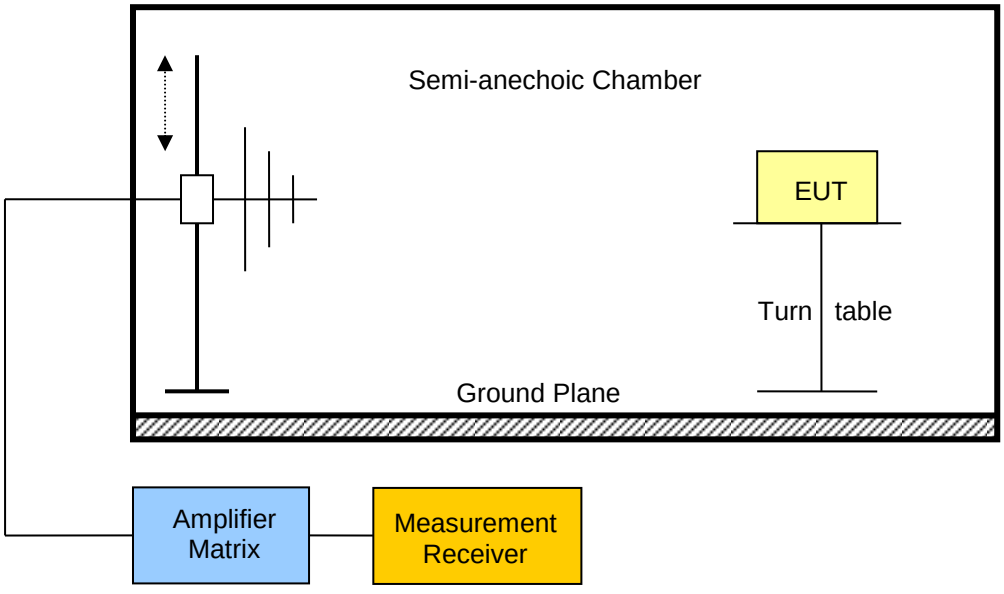
Test results

Channel	Frequency [MHz]	Mode	Emission [MHz]	Level [dbµV/m]	Det.	Pol.	Limit [dbµV/m]	Limit dist. [m]*	Margin [dB]
F_{LOW}	2402	BTLE	7336	49.51	pk	ver	74.00	3	-24.49
F_{LOW}	2402	BTLE	7400	49.17	pk	hor	74.00	3	-24.83
F_{LOW}	2402	BTLE	19204	42.72	pk	hor	74.00	3	-31.28
F_{LOW}	2402	BTLE	19204	40.62	pk	ver	74.00	3	-33.38
F_{LOW}	2402	BTLE	21617	42.12	pk	hor	95.00	3	-52.88
F_{MID}	2442	BTLE	2330	49.42	pk	ver	74.00	3	-24.58
F_{MID}	2442	BTLE	2389	51.20	pk	hor	74.00	3	-22.80
F_{MID}	2442	BTLE	2389	54.52	pk	ver	74.00	3	-19.48
F_{HIGH}	2480	BTLE	2330	46.44	pk	hor	74.00	3	-27.56
F_{HIGH}	2480	BTLE	2330	50.11	pk	ver	74.00	3	-23.89
F_{HIGH}	2480	BTLE	2372	48.25	pk	hor	74.00	3	-25.75
F_{HIGH}	2480	BTLE	2374	53.02	pk	ver	74.00	3	-20.98

Comments: * Physical distance between EUT and measurement antenna.

3.3 Test Conditions and Results – Receiver radiated emissions

Receiver radiated emissions acc. to ISED RSS-247				**Verdict: PASS**
Test according referenced standards	Reference Method			
	ISED RSS-247 3.1			
Test according to measurement reference	Reference Method			
	ANSI C63.10			
Test frequency range	Tested frequencies			
	30 MHz – 5th 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				



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

Channel	Frequency [MHz]	Emission [MHz]	Emission Level [dbµV/m]	Polarisation	Det.	Limit [dbµV/m]	Margin [dbµV/m]
F_{MID}	2442	7176	51.05	ver	pk	53.98	-2.93 dB

Comments:
* Physical distance between EUT and measurement antenna.
** Emission level corresponds to ambient noise floor

ANNEX A Transmitter radiated spurious emissions

Radiated emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Unom: 3.7 VDC
Antenna:	Schwarzbeck VULB 9162, Horizontal
Measurement distance:	3 m
Mode:	BT LE 2402 MHz
Test Date:	2017-01-23
Note:	

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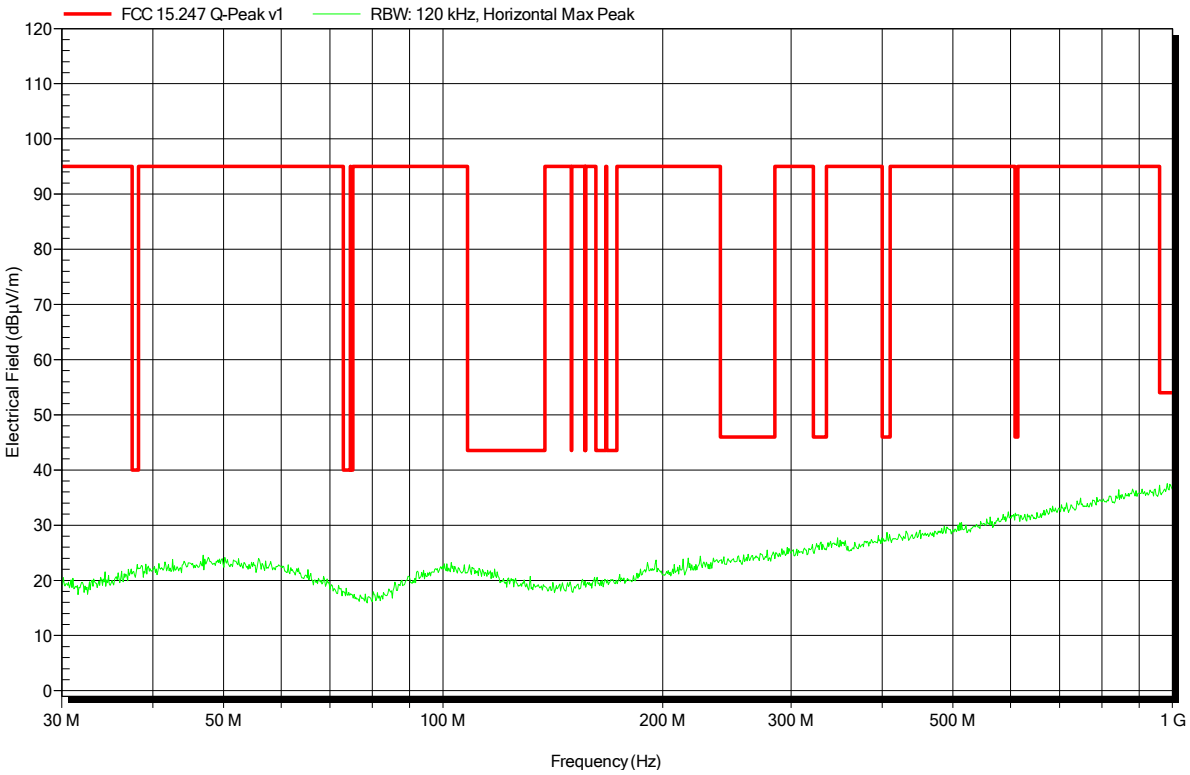

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Model:	AM3 Option G+
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Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Unom: 3.7 VDC
Antenna:	Schwarzbeck VULB 9162, Vertical
Measurement distance:	3 m
Mode:	BT LE 2402 MHz
Test Date:	2017-01-23
Note:	

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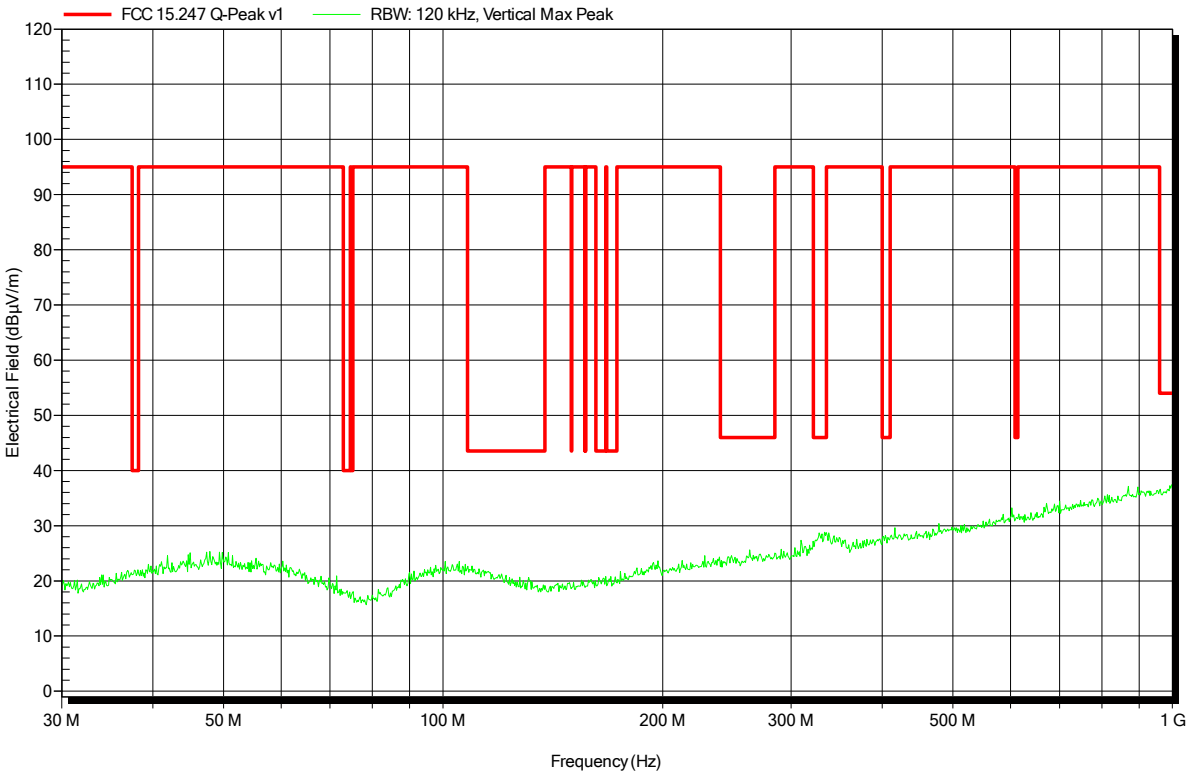

Spurious emissions according to FCC 15.247

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Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; BT LE 2402 MHz
Test Date:	2017-01-23
Note:	

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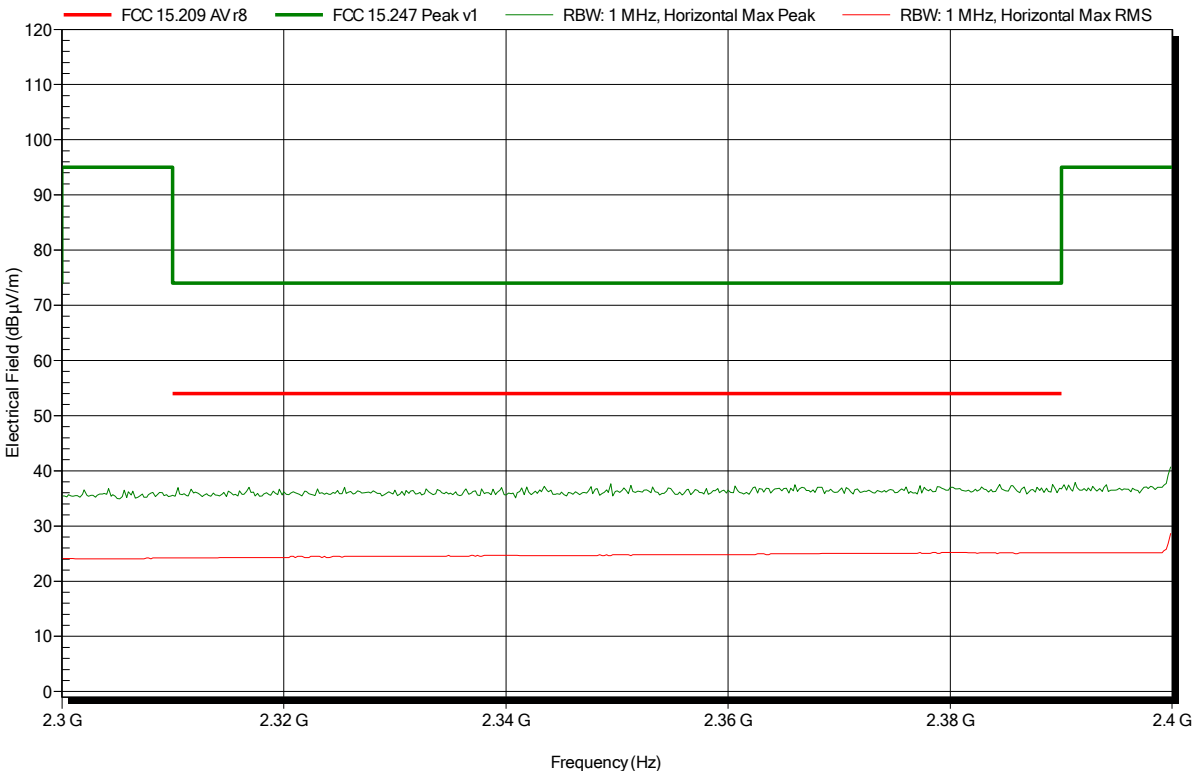

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Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; BT LE 2402 MHz
Test Date:	2017-01-23
Note:	

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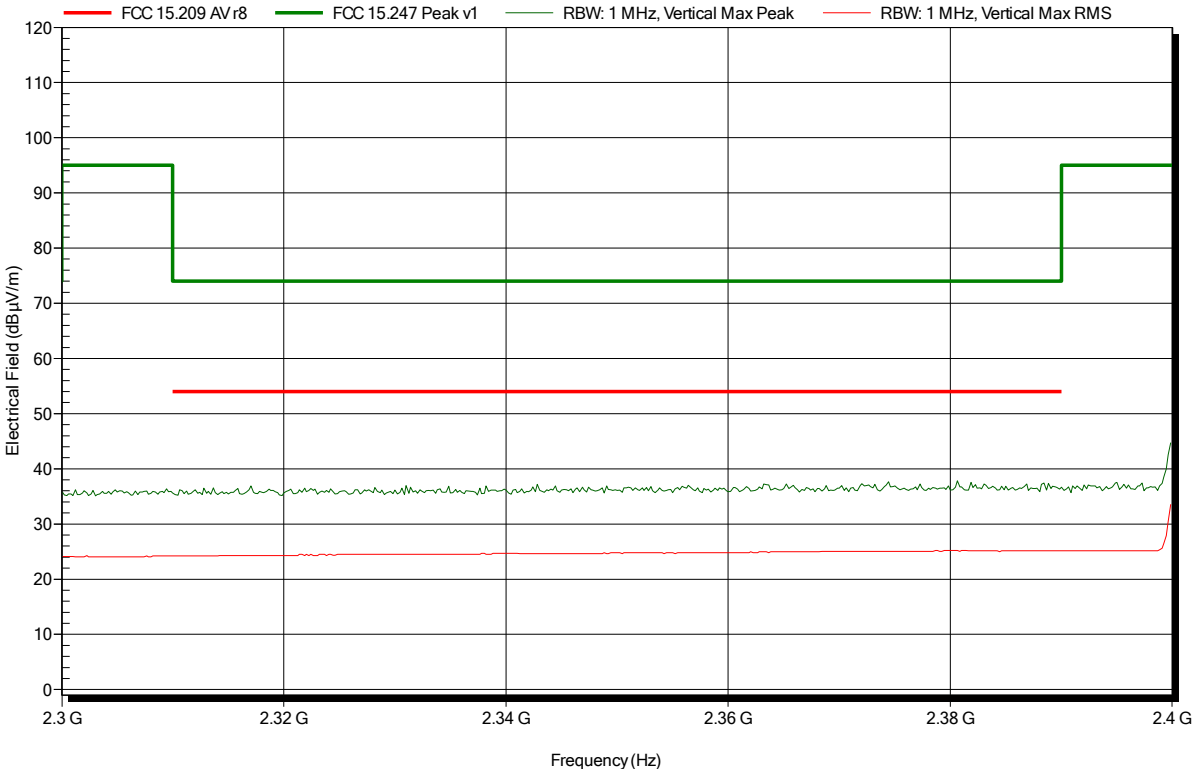

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Mode:	TX; BT LE 2402 MHz
Test Date:	2017-01-23
Note:	

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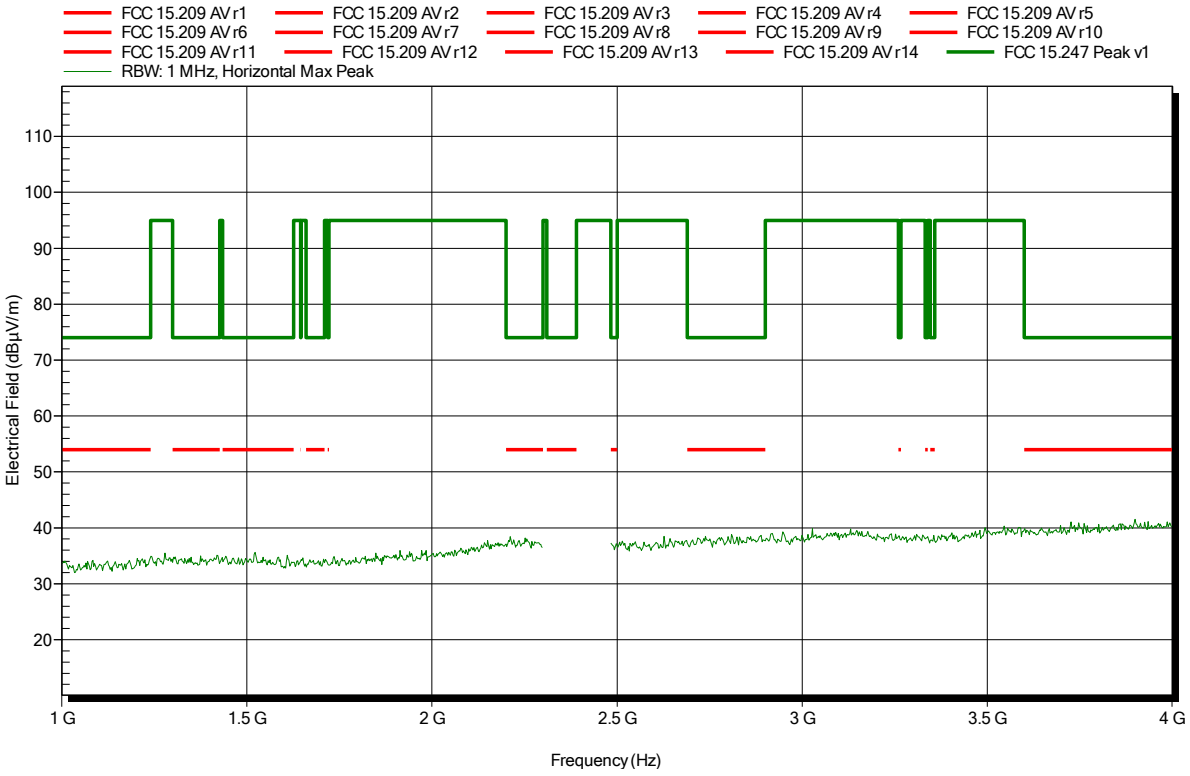

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Measurement distance:	3 m
Mode:	TX; BT LE 2402 MHz
Test Date:	2017-01-23
Note:	

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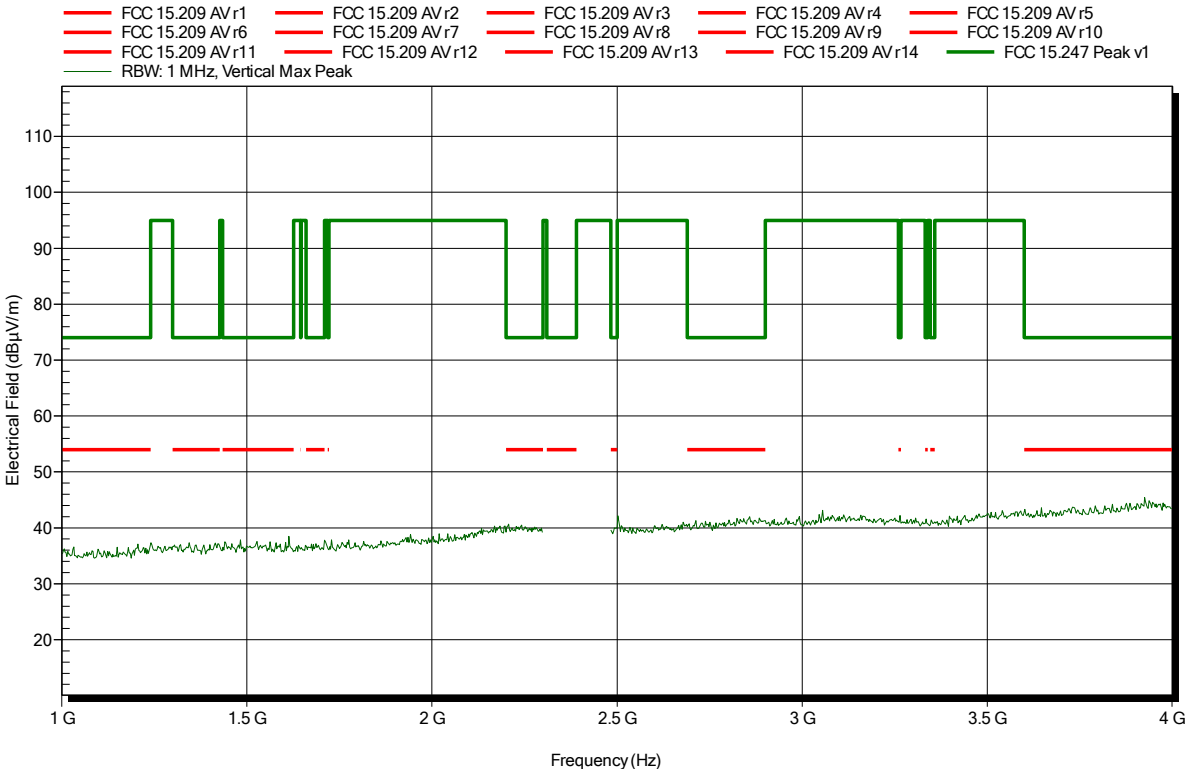

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Measurement distance:	3 m
Mode:	TX; BT LE 2402 MHz
Test Date:	2017-01-23
Note:	

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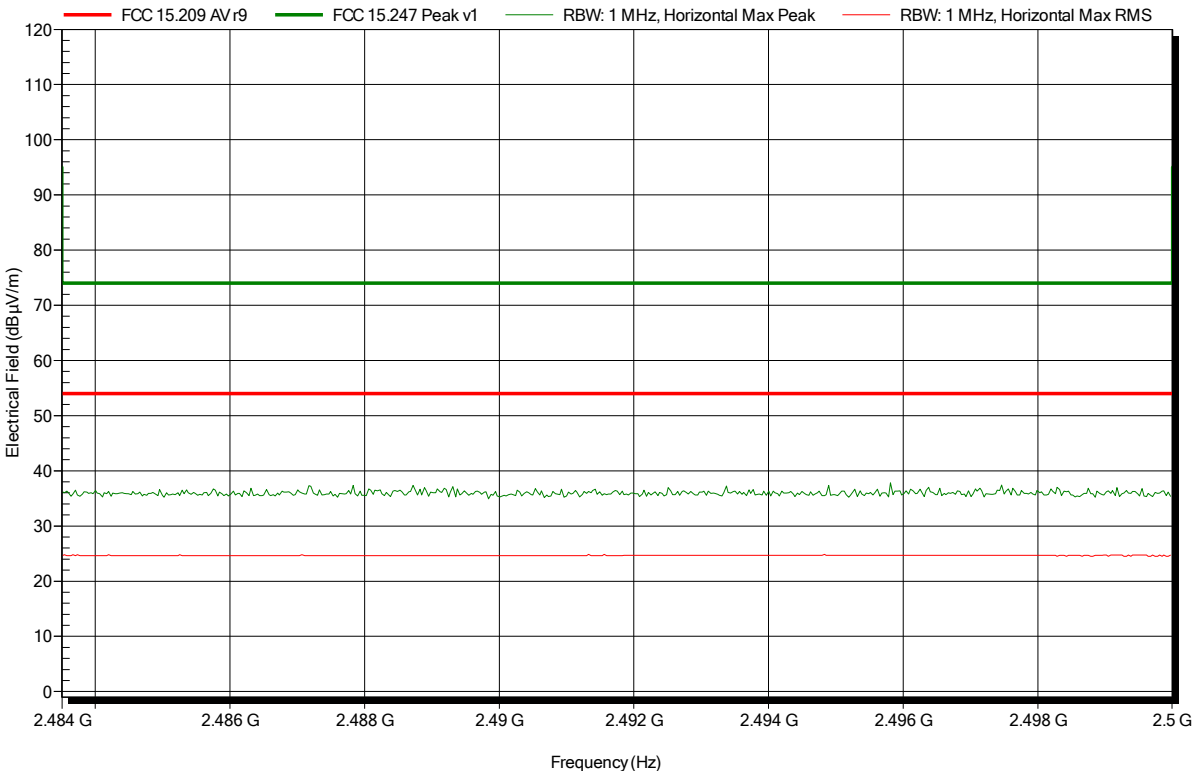

Spurious emissions according to FCC 15.247

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Test Date:	2017-01-23
Note:	

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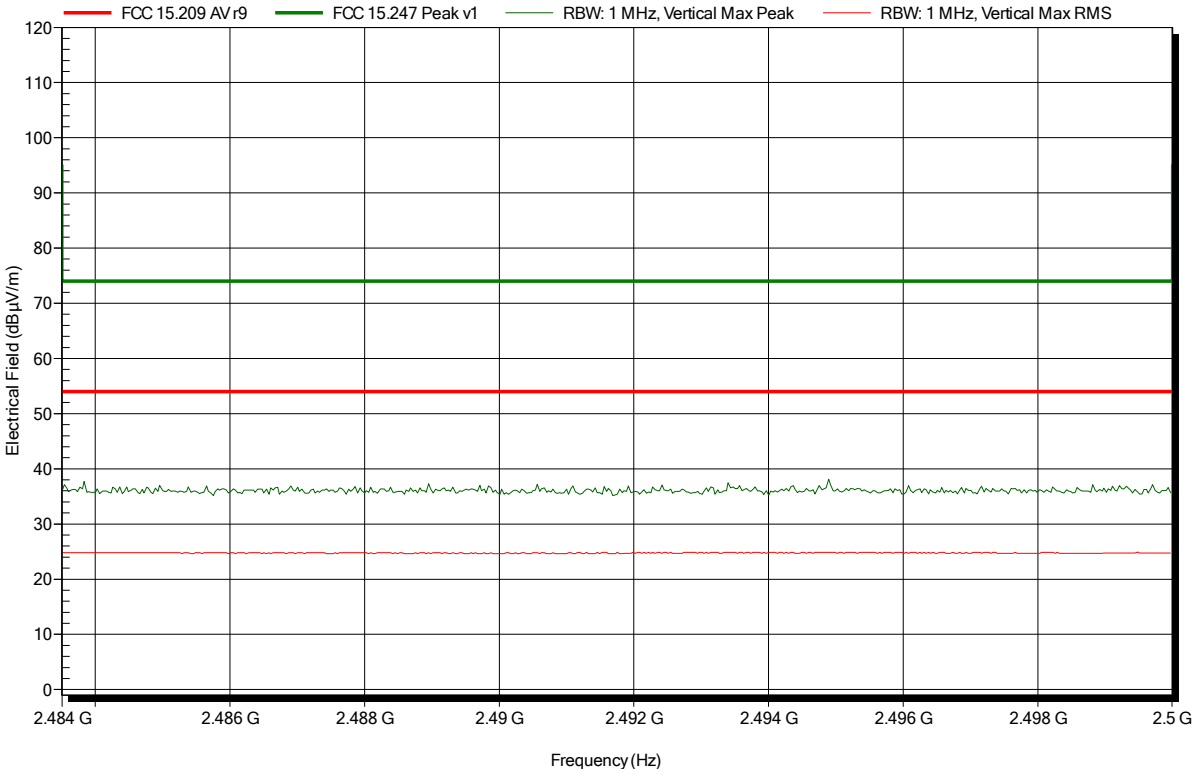

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BT LE 2402 MHz
Test Date:	2017-01-23
Note:	

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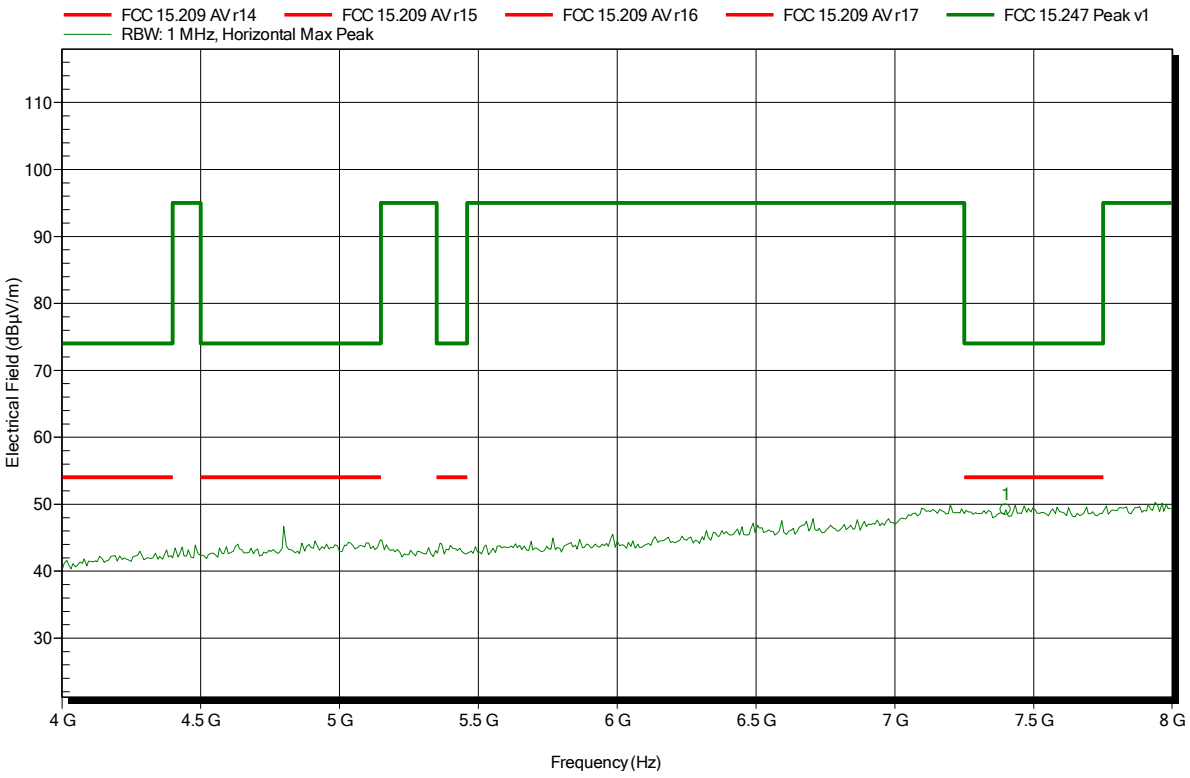

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
7.4 GHz	49.17 dBµV/m	74 dBµV/m	-24.83 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m converted to 3m
Mode:	TX; BT LE 2402 MHz
Test Date:	2017-01-23
Note:	

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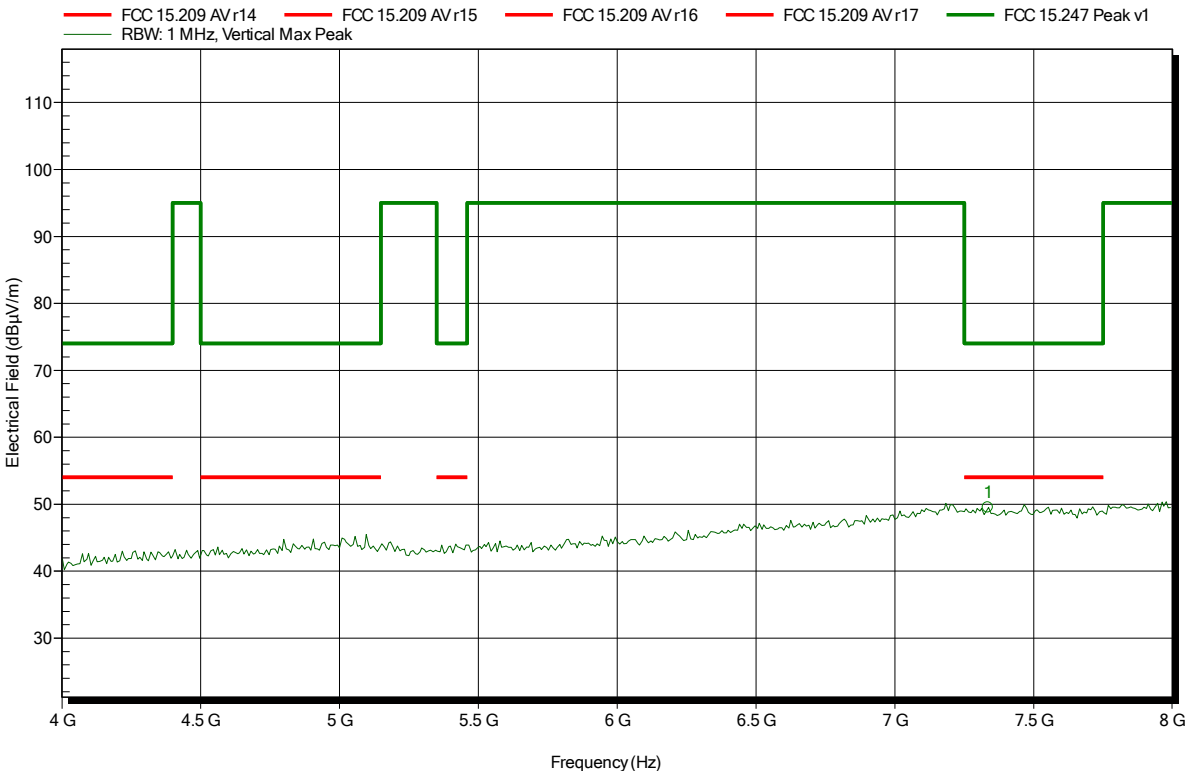

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
7.336 GHz	49.51 dBµV/m	74 dBµV/m	-24.49 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BT LE 2402 MHz
Test Date:	2017-01-23
Note:	

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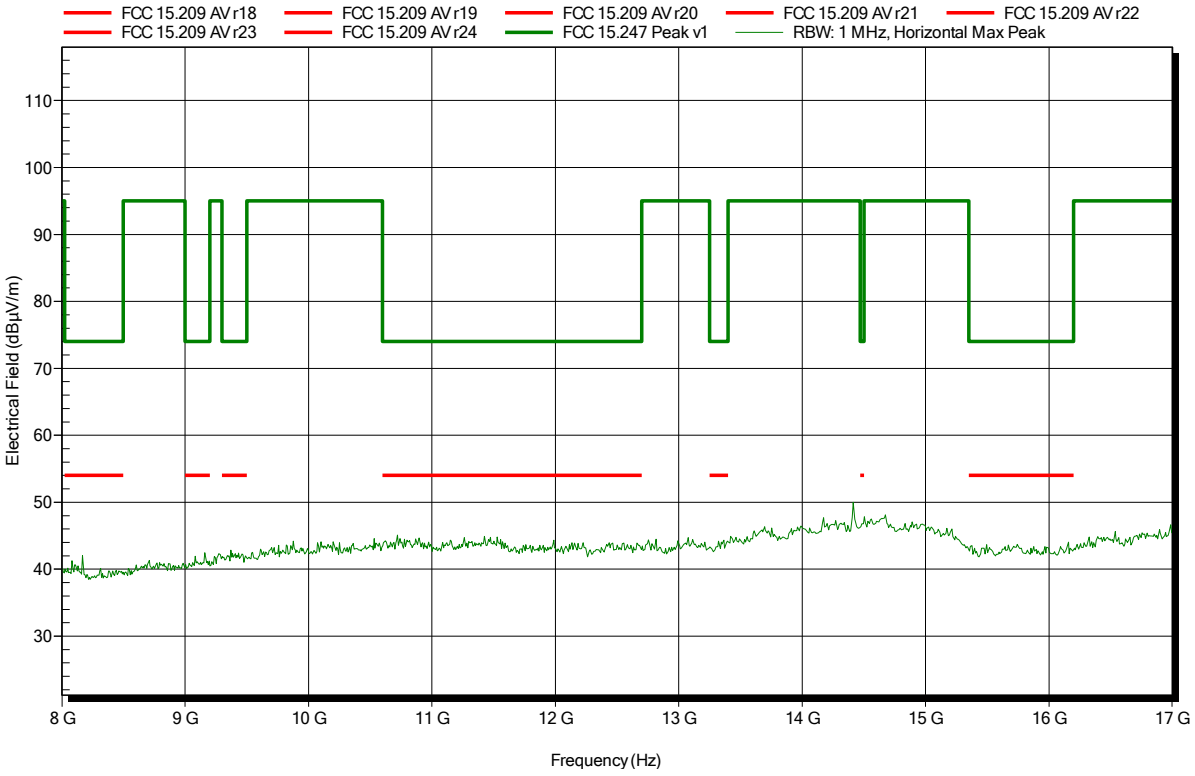

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; BT LE 2402 MHz
Test Date:	2017-01-23
Note:	

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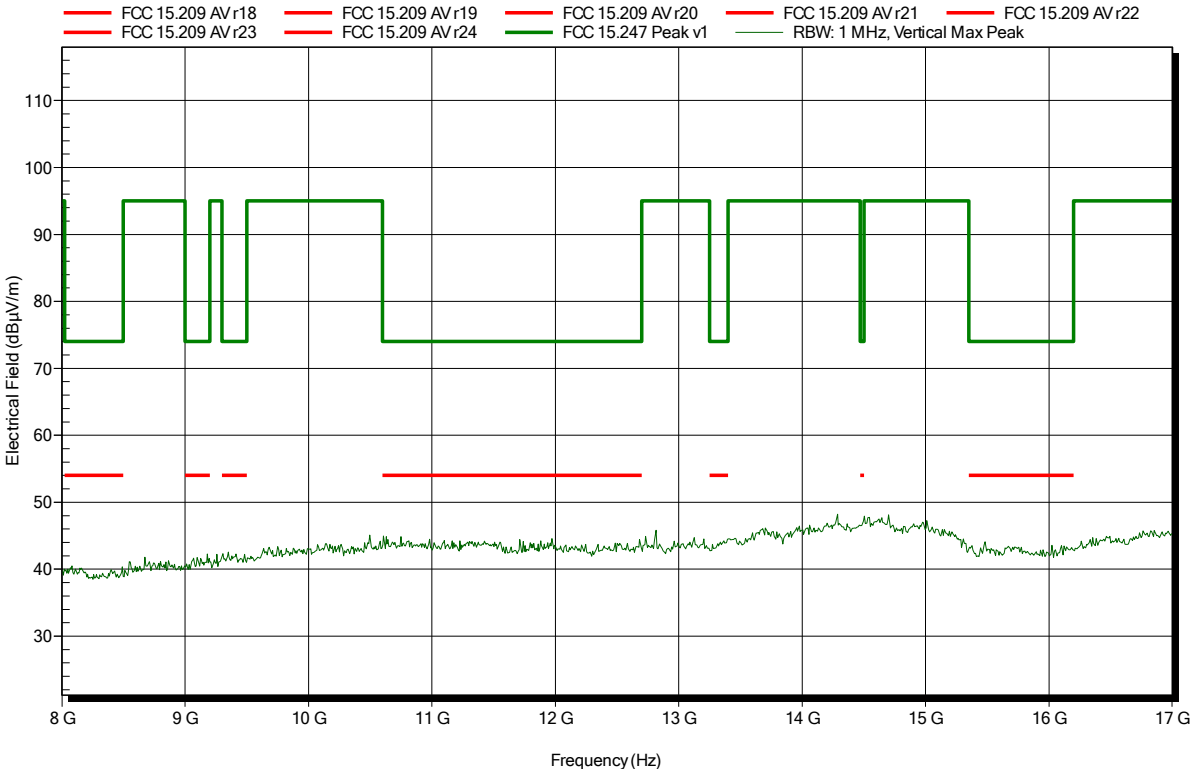

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Amplifier Research AT 4560, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BT LE 2402 MHz
Test Date:	2017-01-24
Note:	

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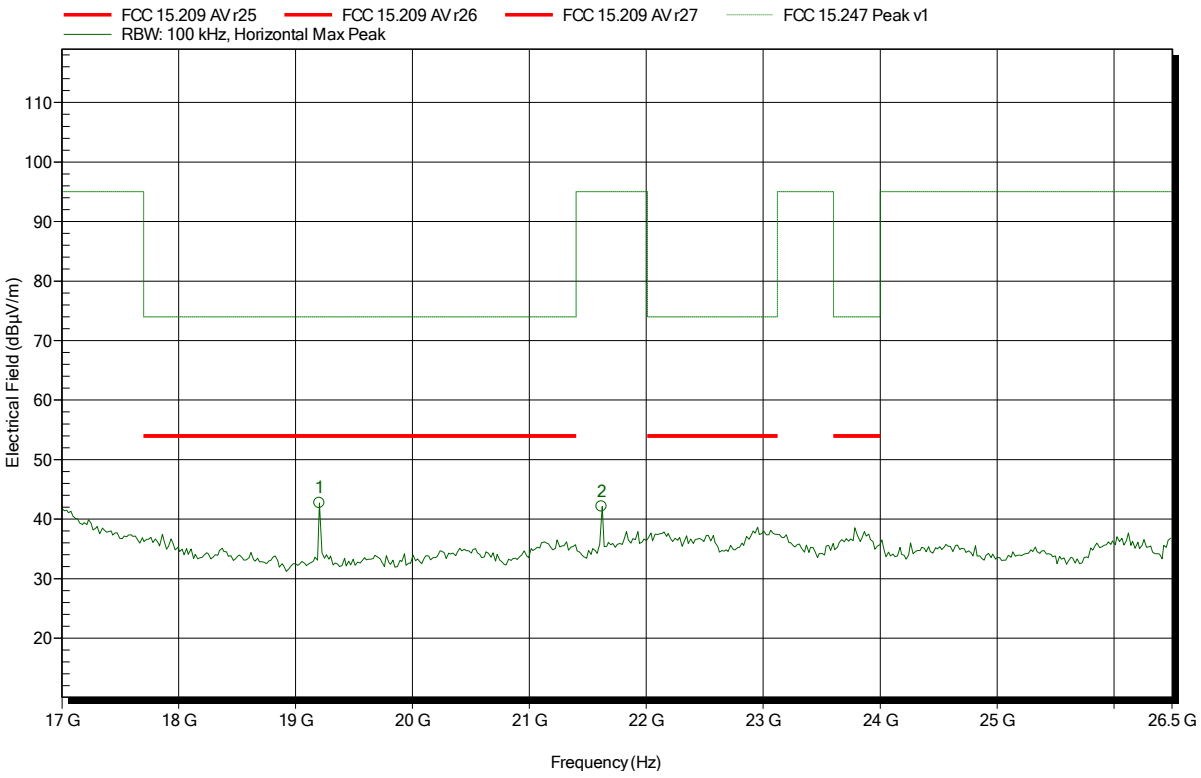

Frequency	Peak	Peak Limit	Peak Difference	Status
19.204 GHz	42.72 dBµV/m	74 dBµV/m	-31.28 dB	Pass
21.617 GHz	42.12 dBµV/m	95 dBµV/m	-52.88 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Amplifier Research AT 4560, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; BT LE 2402 MHz
Test Date:	2017-01-24
Note:	

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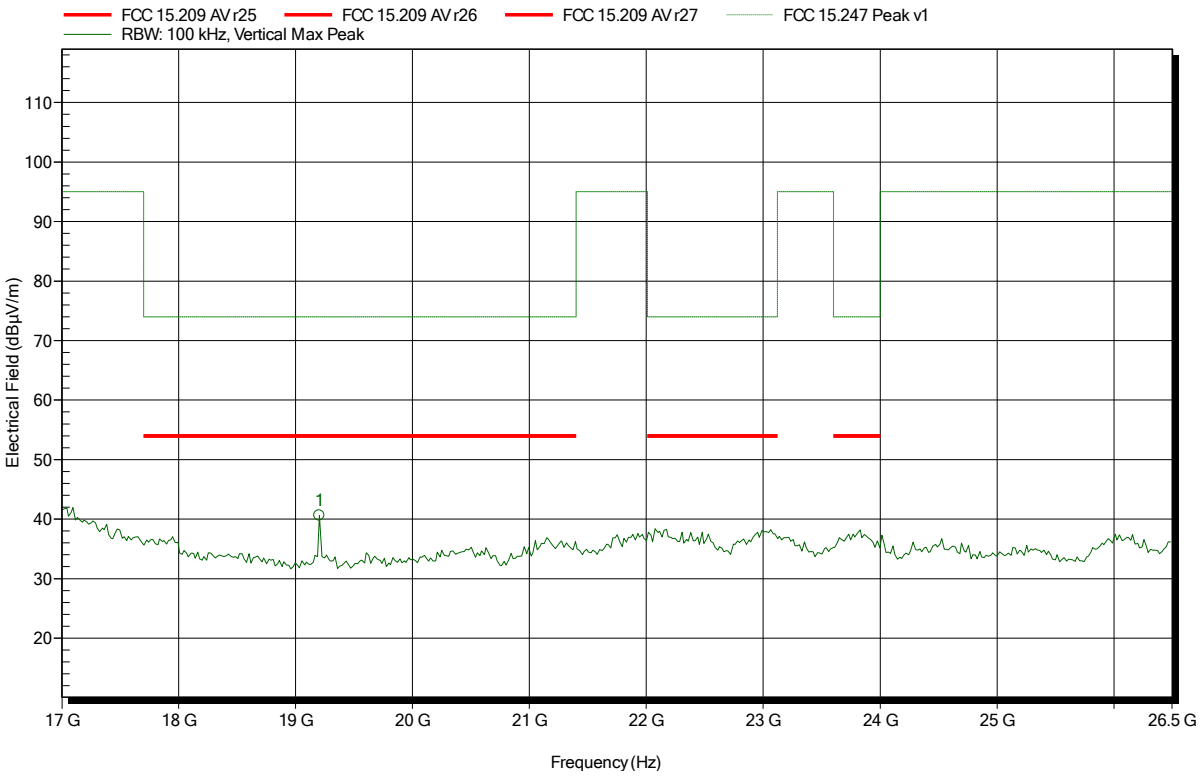

Frequency	Peak	Peak Limit	Peak Difference	Status
19.204 GHz	40.62 dBµV/m	74 dBµV/m	-33.38 dB	Pass

Radiated emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Unom: 3.7 VDC
Antenna:	Schwarzbeck VULB 9162, Horizontal
Measurement distance:	3 m
Mode:	TX; BT LE 2442 MHz
Test Date:	2017-01-23
Note:	

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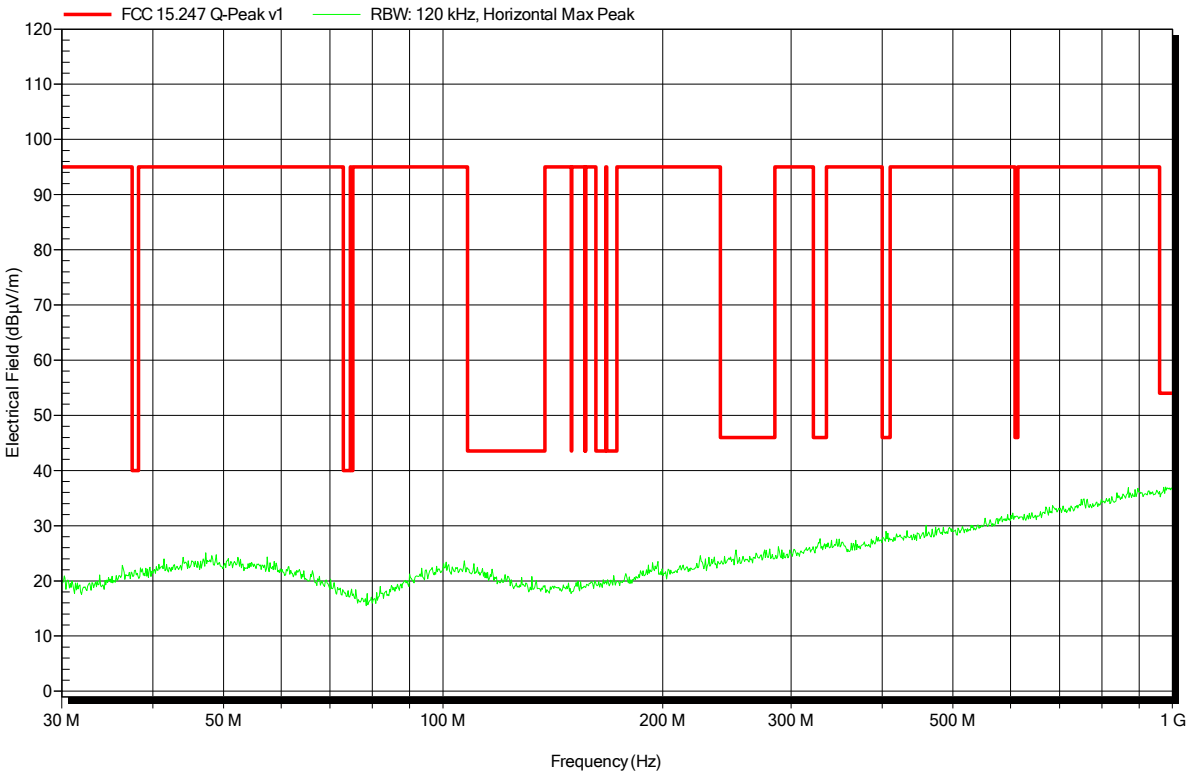

Radiated emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Unom: 3.7 VDC
Antenna:	Schwarzbeck VULB 9162, Vertical
Measurement distance:	3 m
Mode:	TX; BT LE 2442 MHz
Test Date:	2017-01-23
Note:	

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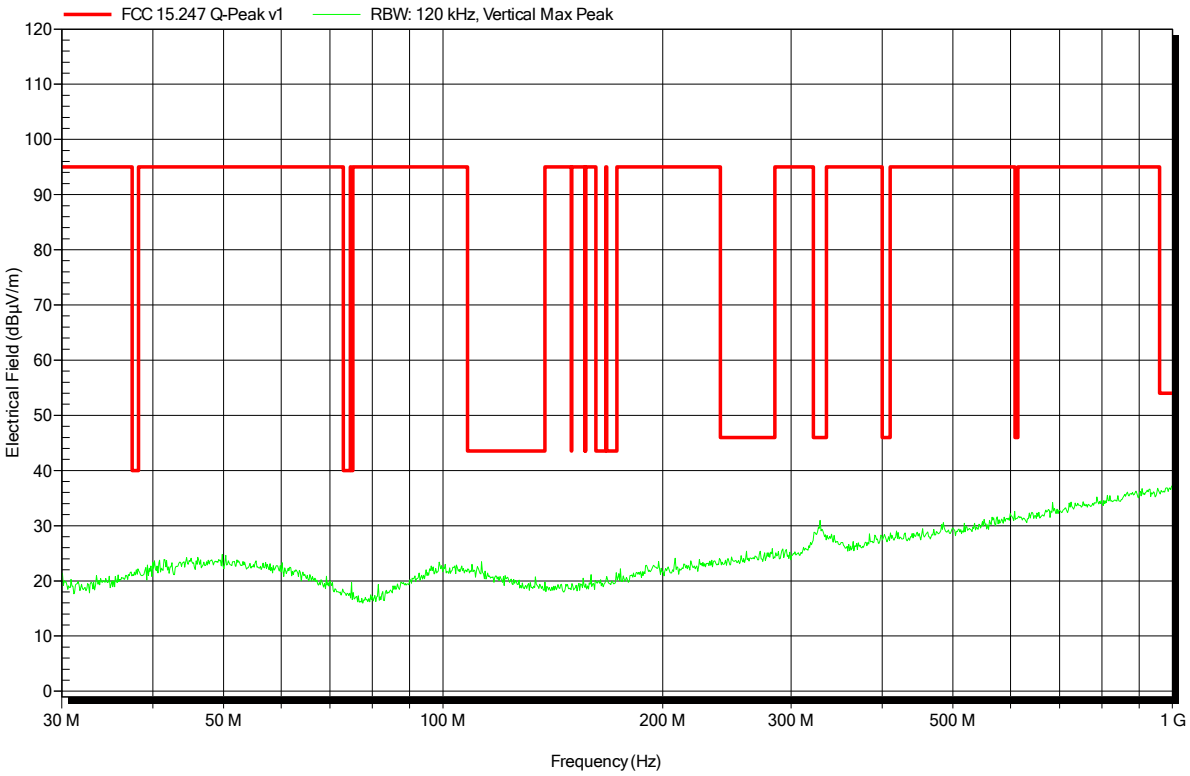

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; BT LE 2442 MHz
Test Date:	2017-01-23
Note:	

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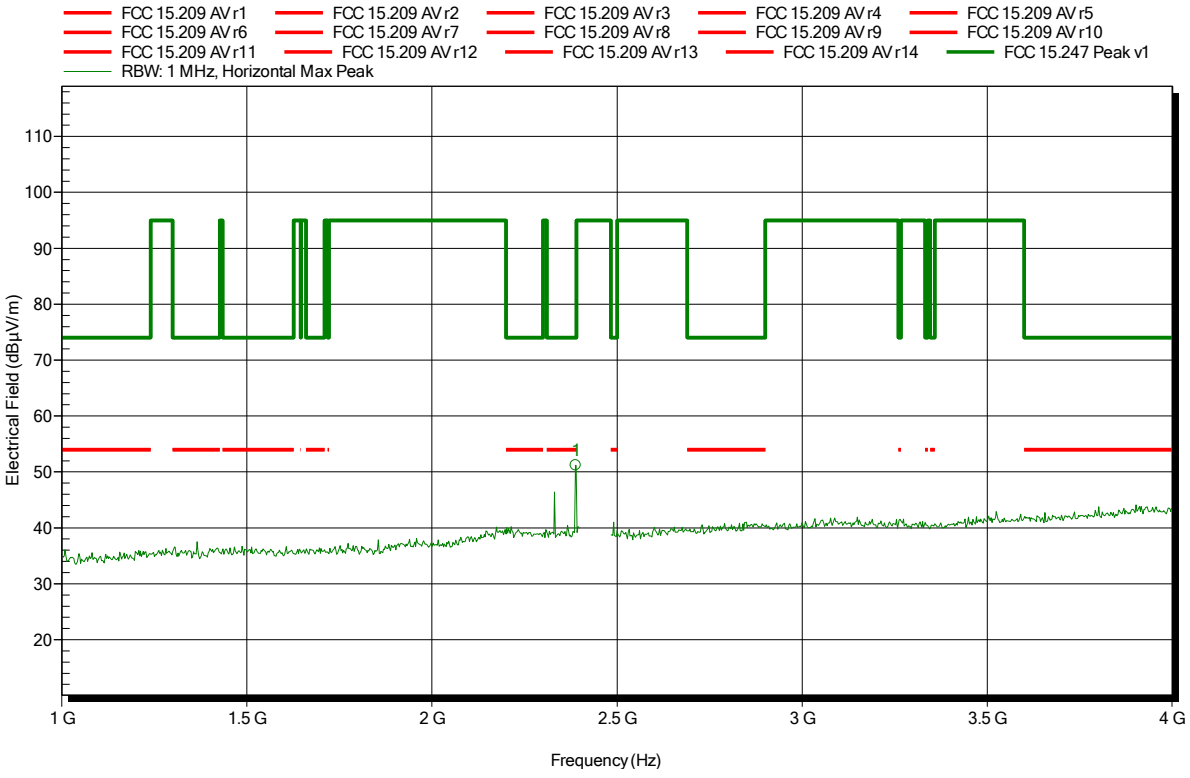

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.389 GHz	51.2 dBµV/m	74 dBµV/m	-22.8 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; BT LE 2442 MHz
Test Date:	2017-01-23
Note:	

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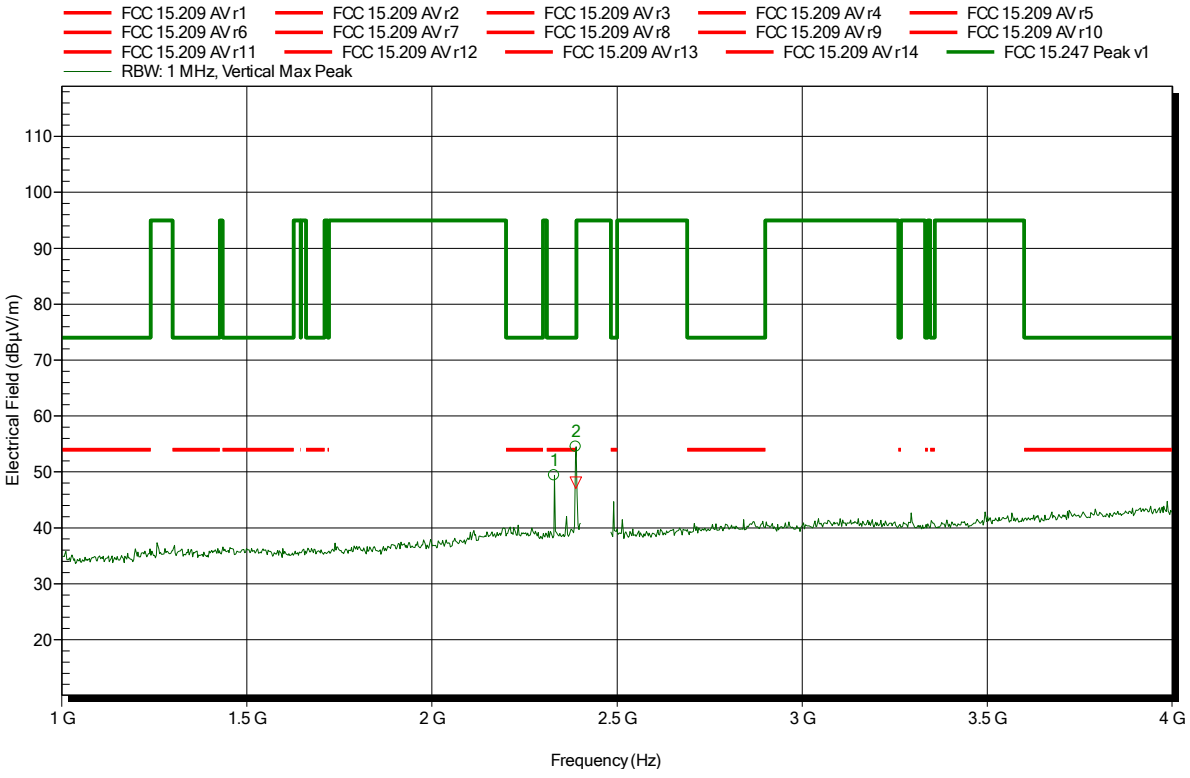

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.33 GHz	49.42 dBµV/m	74 dBµV/m	-24.58 dB	Pass
2.389 GHz	54.52 dBµV/m	74 dBµV/m	-19.48 dB	Pass

Frequency	RMS
2.389 GHz	48.07 dBµV/m

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BT LE 2442 MHz
Test Date:	2017-01-23
Note:	

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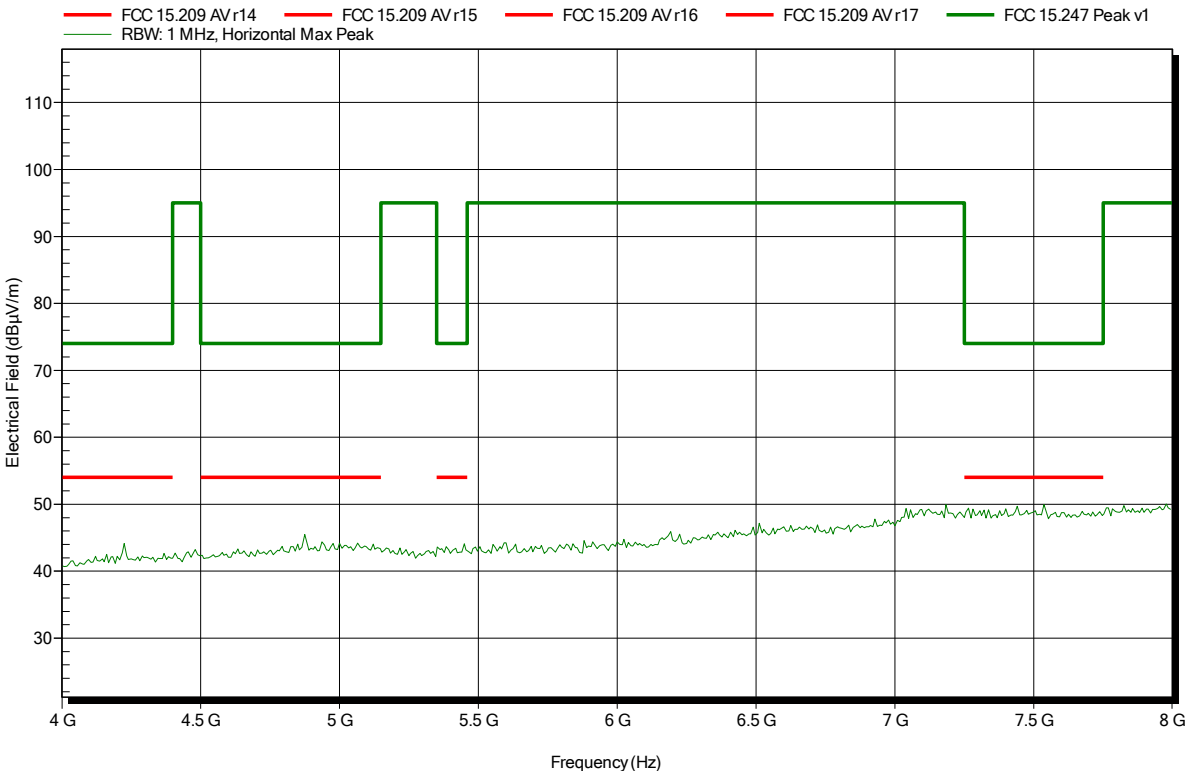

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m converted to 3m
Mode:	TX; BT LE 2442 MHz
Test Date:	2017-01-23
Note:	

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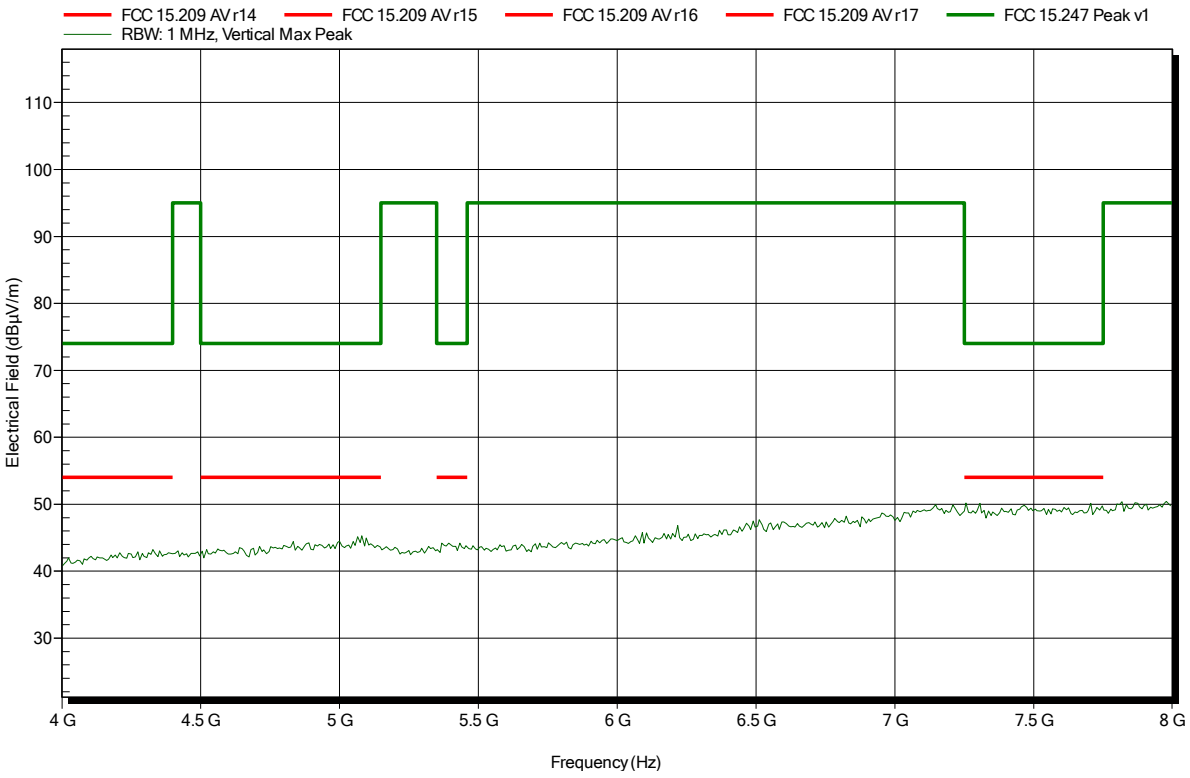

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BT LE 2442 MHz
Test Date:	2017-01-23
Note:	

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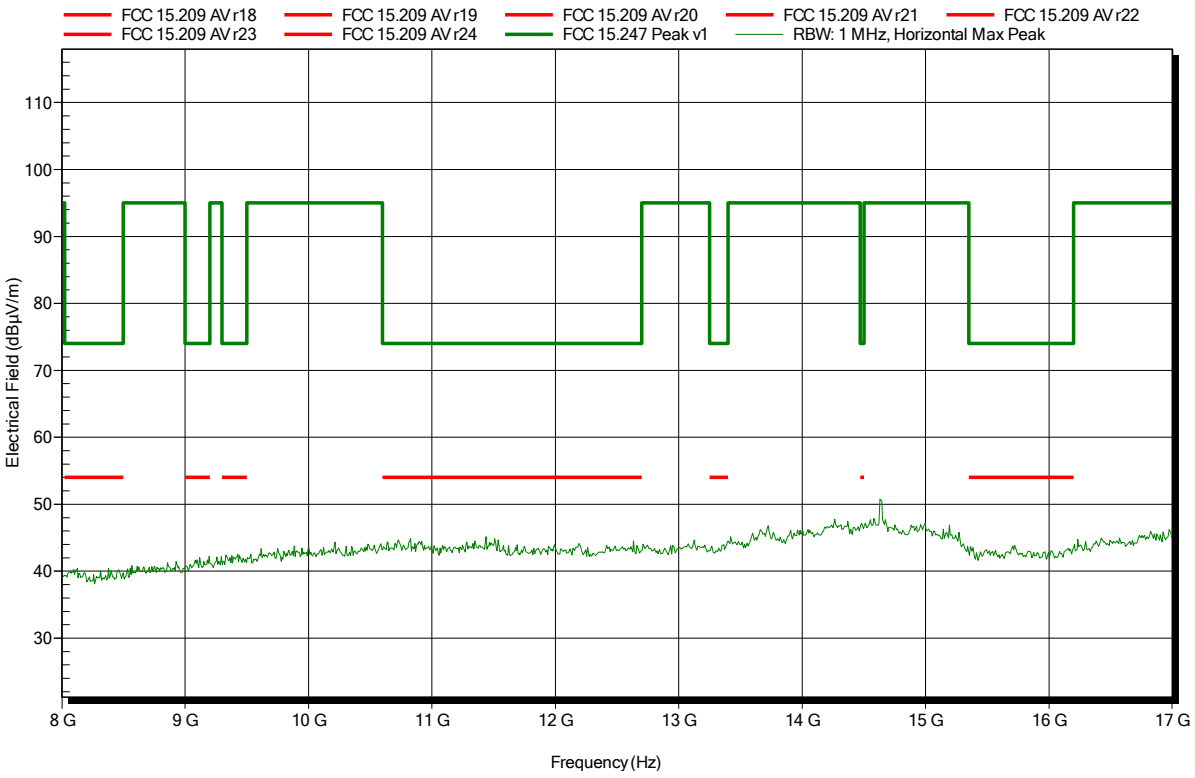

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; BT LE 2442 MHz
Test Date:	2017-01-23
Note:	

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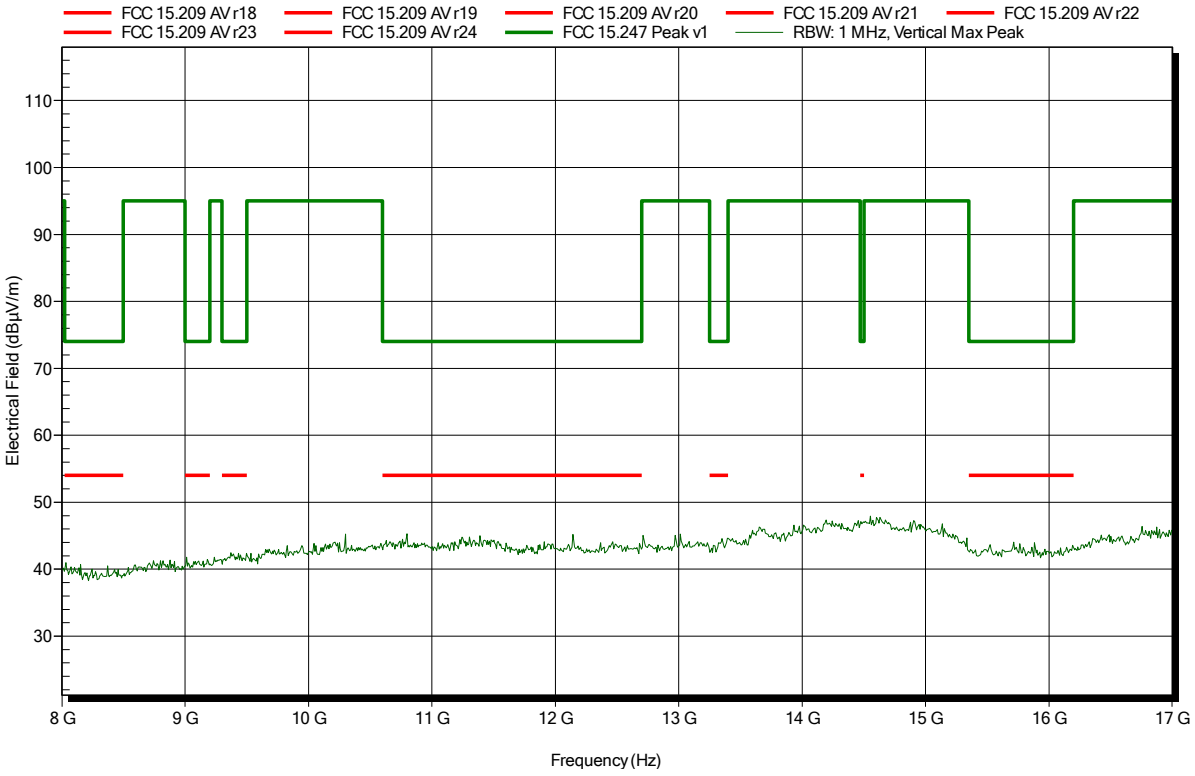

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Amplifier Research AT 4560, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BT LE 2442 MHz
Test Date:	2017-01-24
Note:	

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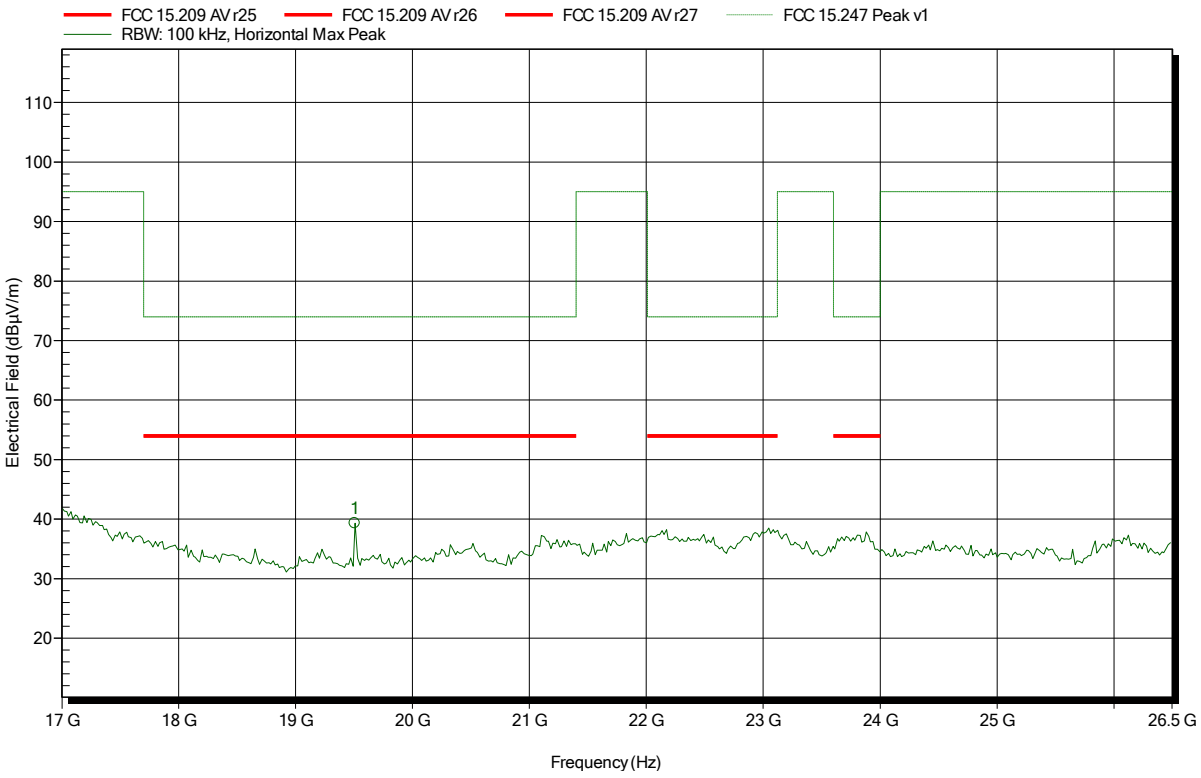

Frequency	Peak	Peak Limit	Peak Difference	Status
19.508 GHz	39.32 dBµV/m	74 dBµV/m	-34.68 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Amplifier Research AT 4560, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; BT LE 2442 MHz
Test Date:	2017-01-24
Note:	

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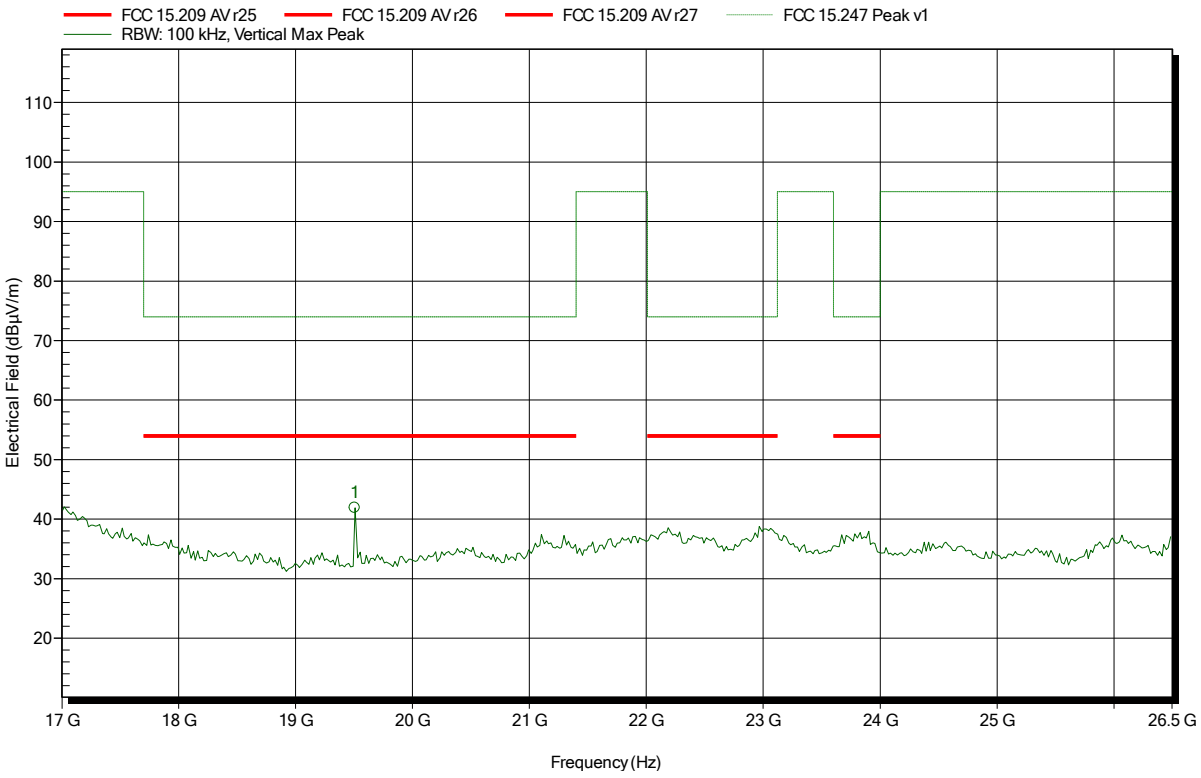

Frequency	Peak	Peak Limit	Peak Difference	Status
19.508 GHz	41.92 dBµV/m	74 dBµV/m	-32.08 dB	Pass

Radiated emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Unom: 3.7 VDC
Antenna:	Schwarzbeck VULB 9162, Horizontal
Measurement distance:	3 m
Mode:	BT LE 2480 MHz
Test Date:	2017-01-23
Note:	

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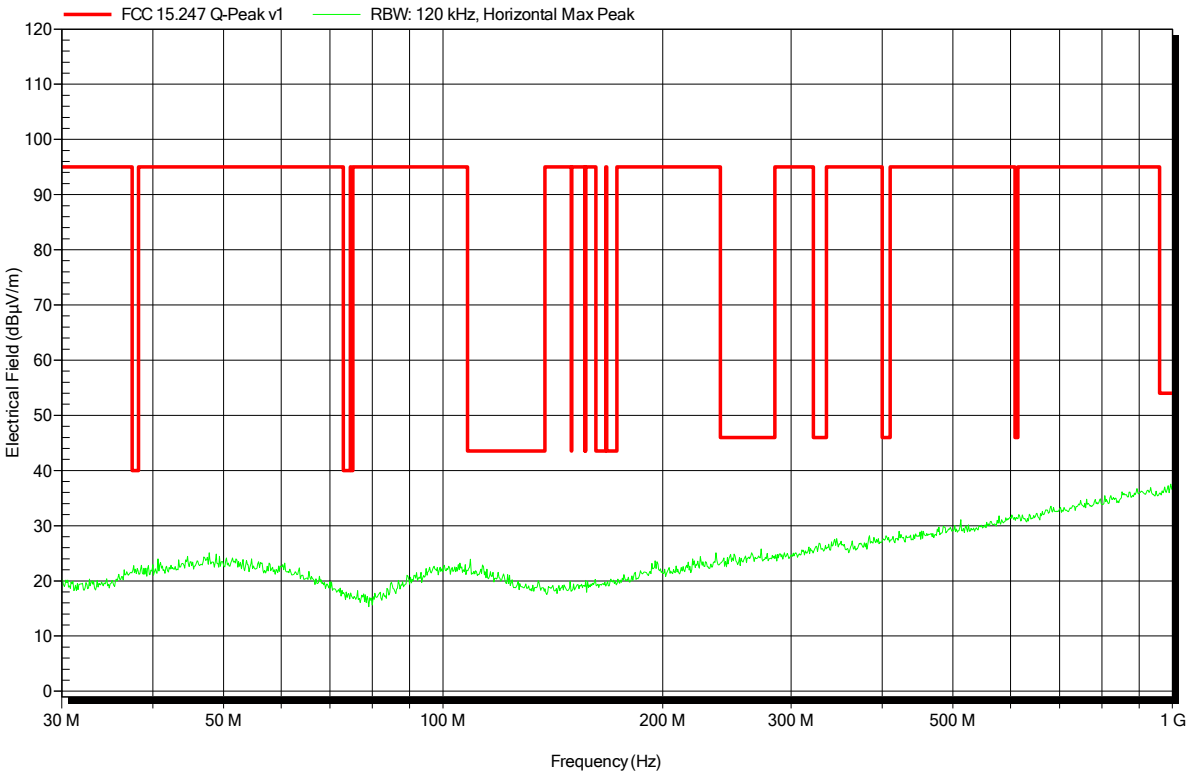

Radiated emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Unom: 3.7 VDC
Antenna:	Schwarzbeck VULB 9162, Vertical
Measurement distance:	3 m
Mode:	BT LE 2480 MHz
Test Date:	2017-01-23
Note:	

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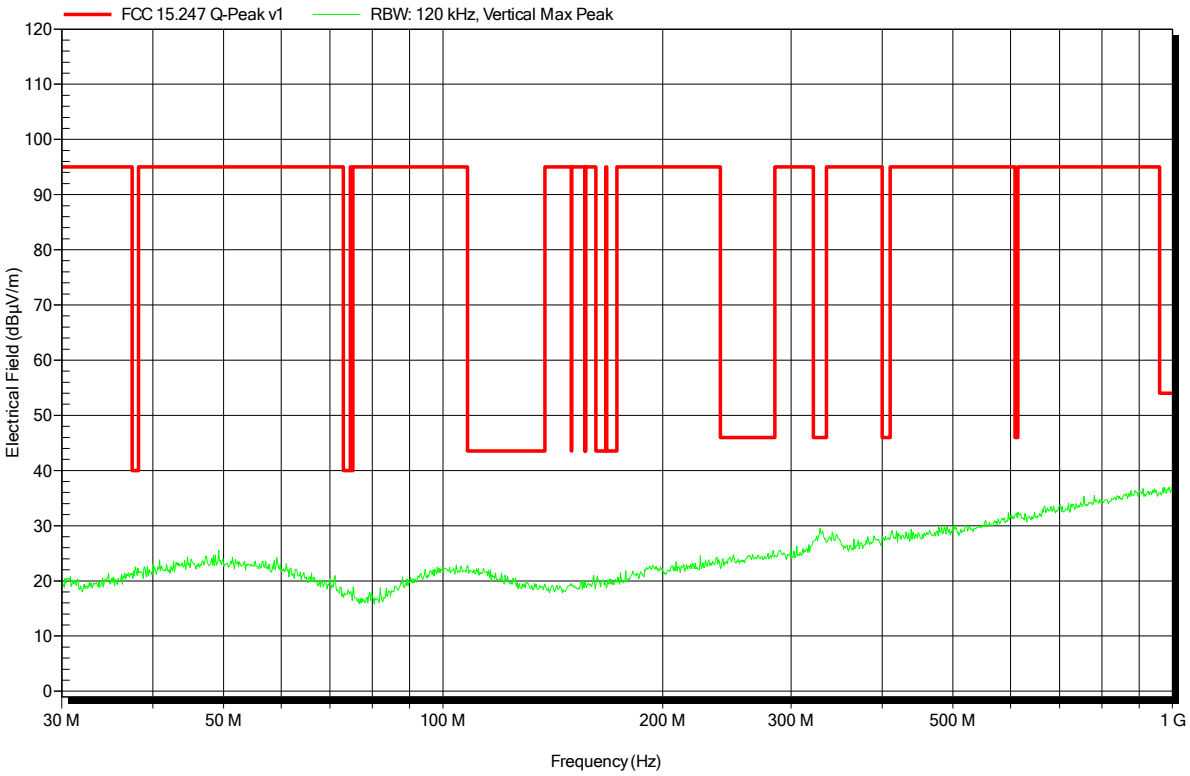

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; BT LE 2480 MHz
Test Date:	2017-01-23
Note:	

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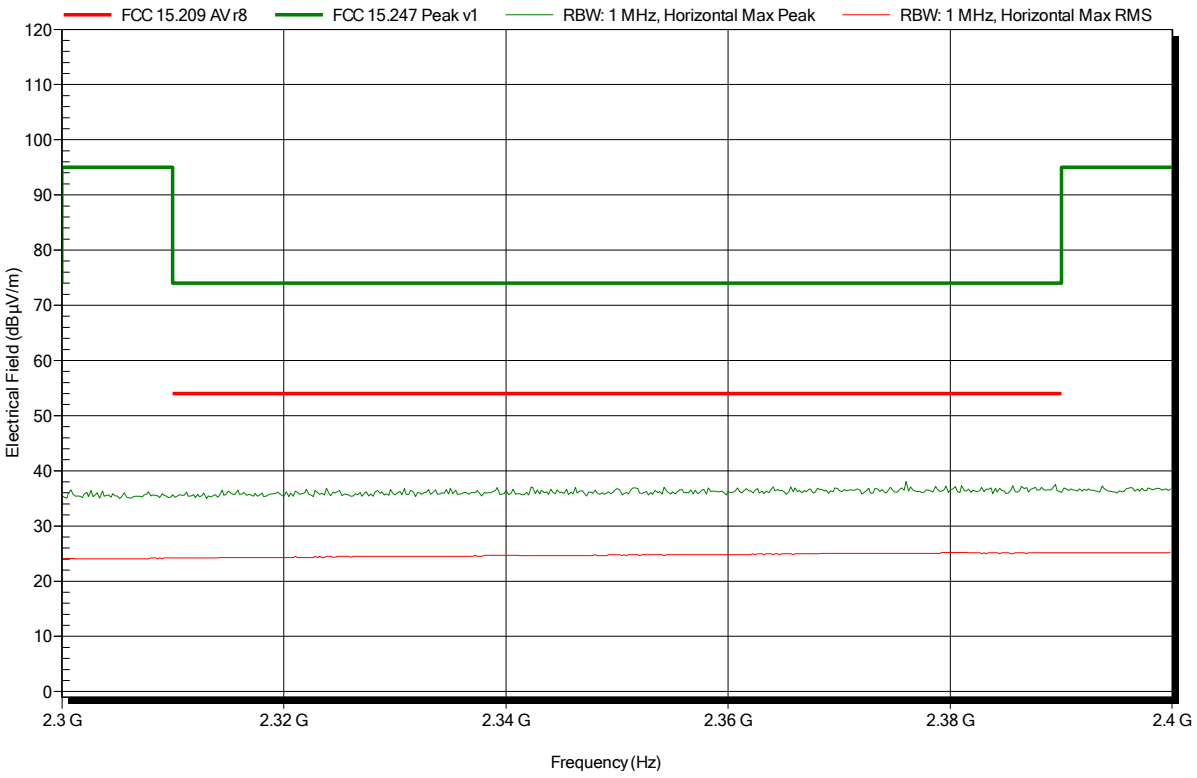

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; BT LE 2480 MHz
Test Date:	2017-01-23
Note:	

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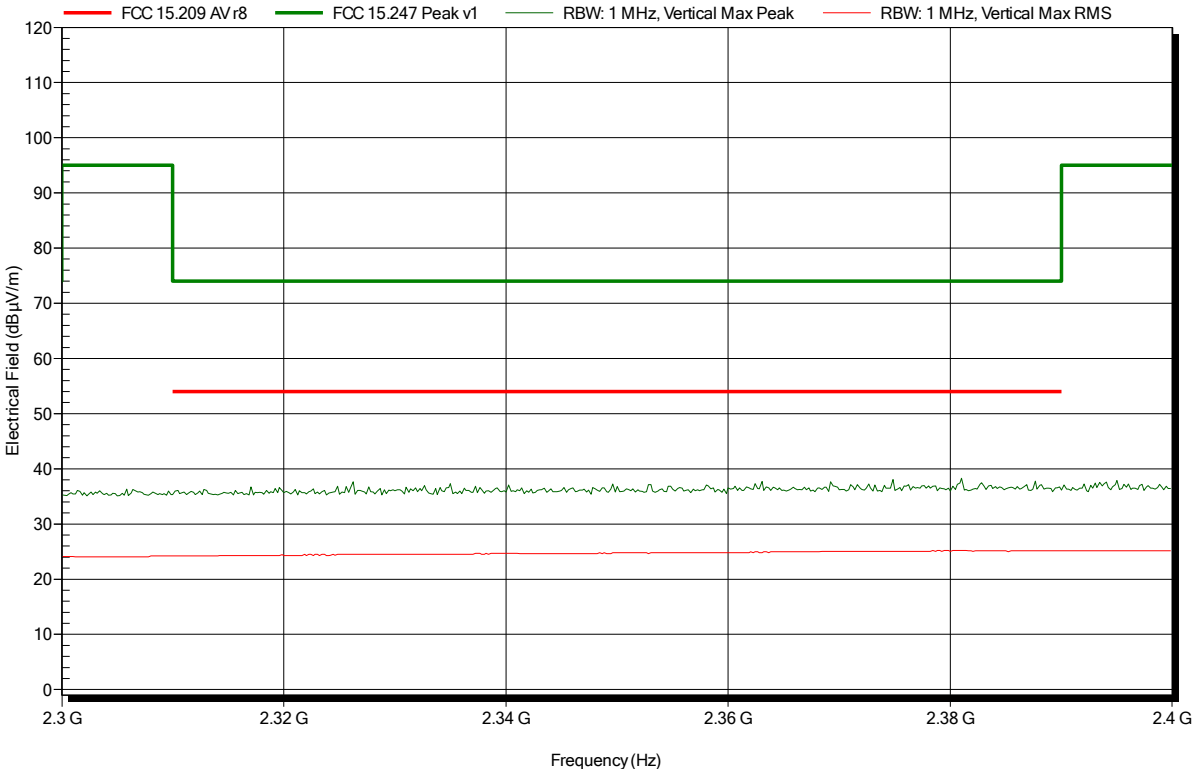

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; BT LE 2480 MHz
Test Date:	2017-01-23
Note:	

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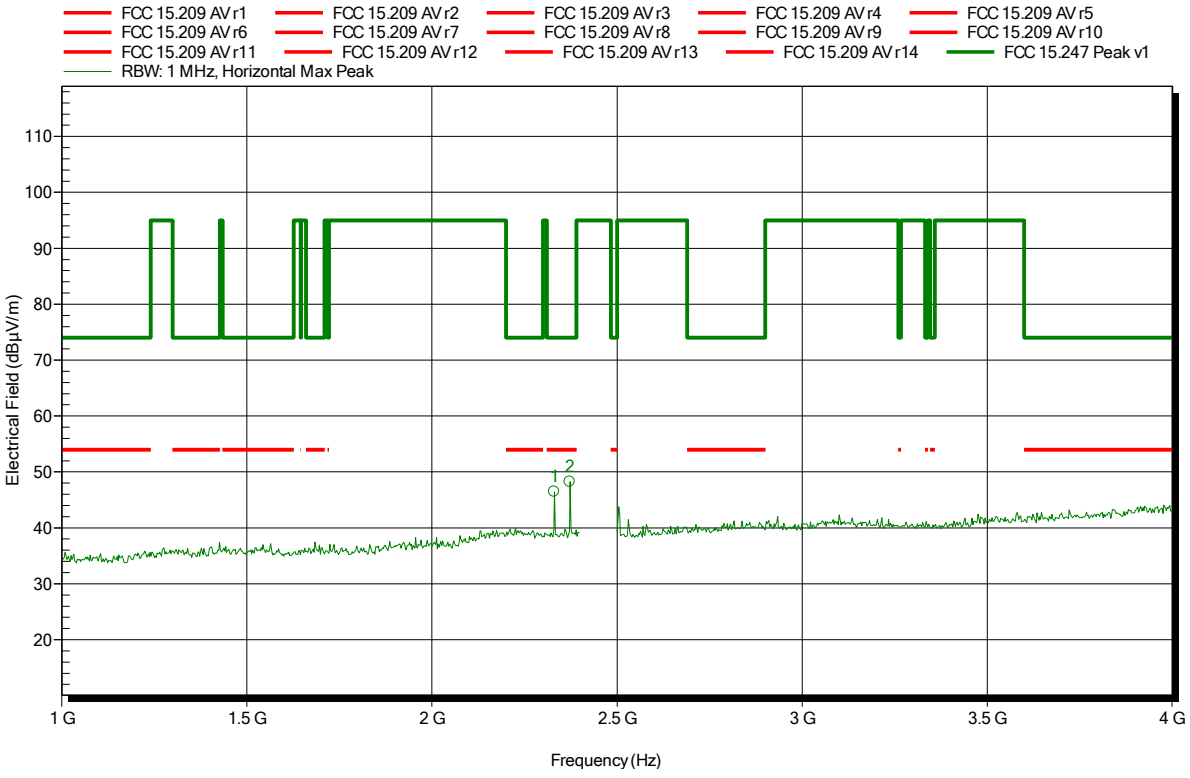

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.33 GHz	46.44 dBµV/m	74 dBµV/m	-27.56 dB	Pass
2.372 GHz	48.25 dBµV/m	74 dBµV/m	-25.75 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; BT LE 2480 MHz
Test Date:	2017-01-23
Note:	

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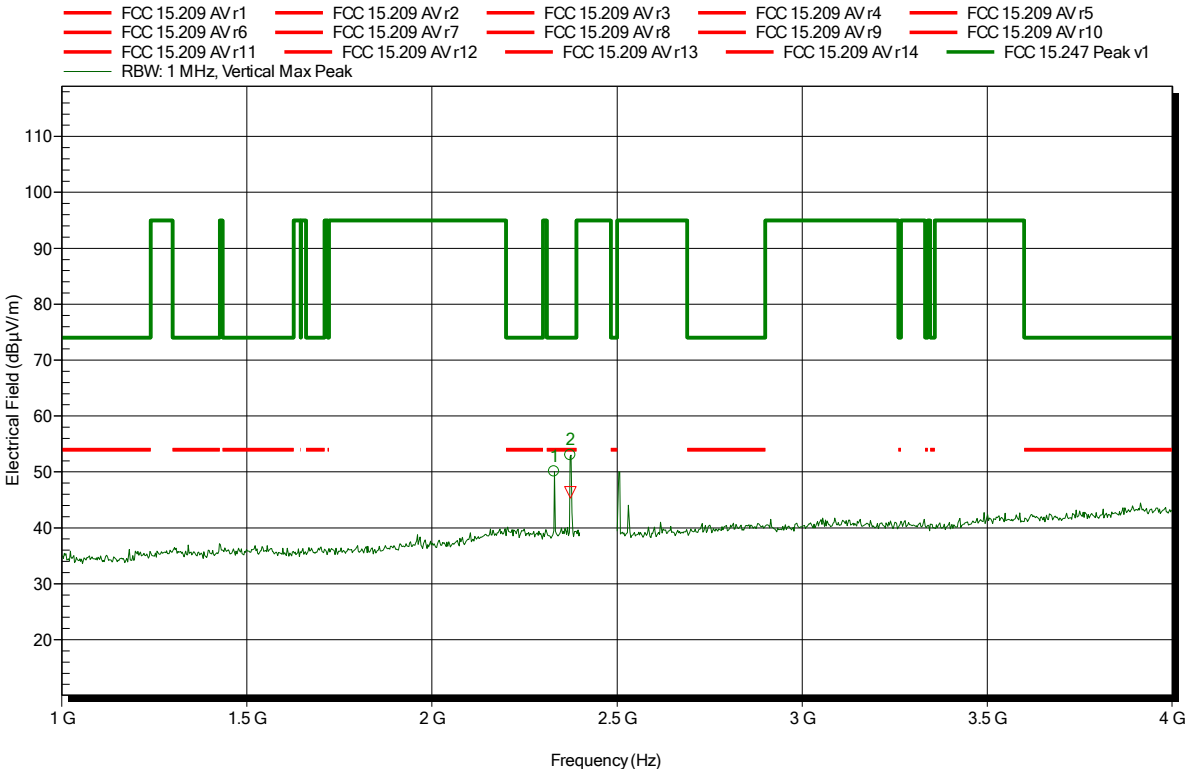

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.33 GHz	50.11 dBµV/m	74 dBµV/m	-23.89 dB	Pass
2.374 GHz	53.02 dBµV/m	74 dBµV/m	-20.98 dB	Pass

Frequency	RMS
2.374 GHz	46.36 dBµV/m

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	TX; BT LE 2480 MHz
Test Date:	2017-01-23
Note:	

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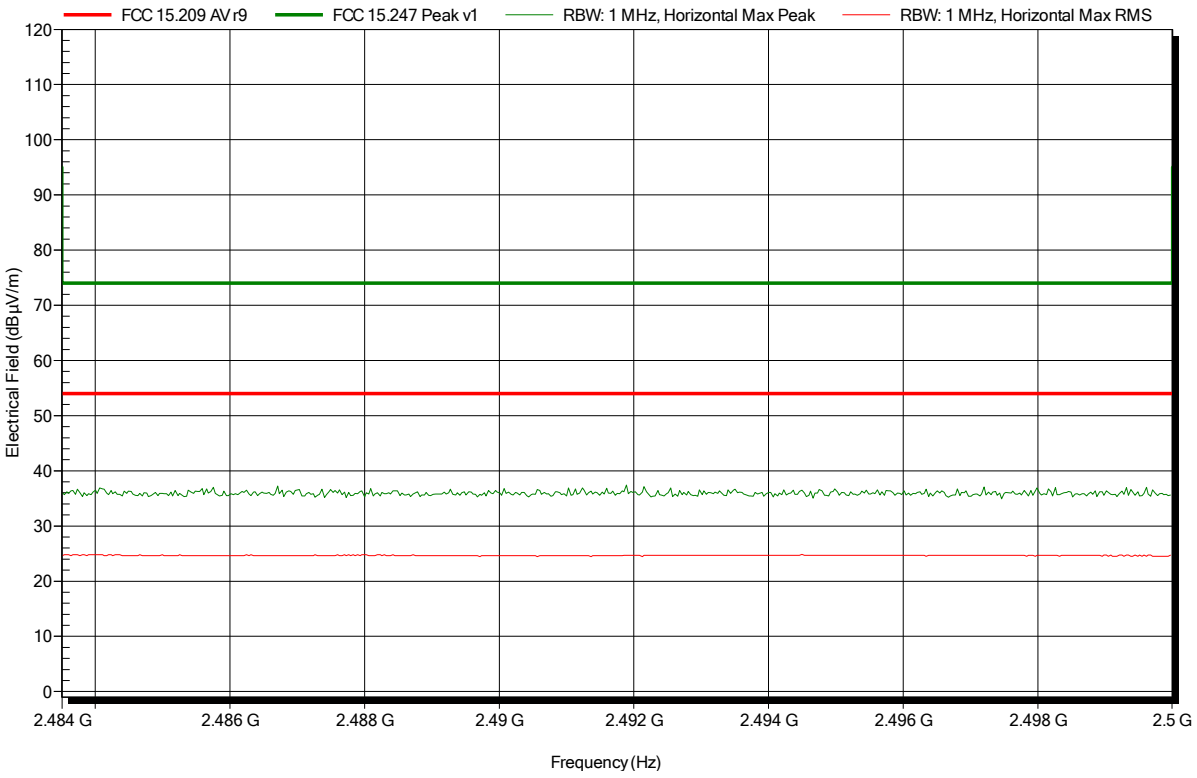

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	TX; BT LE 2480 MHz
Test Date:	2017-01-23
Note:	

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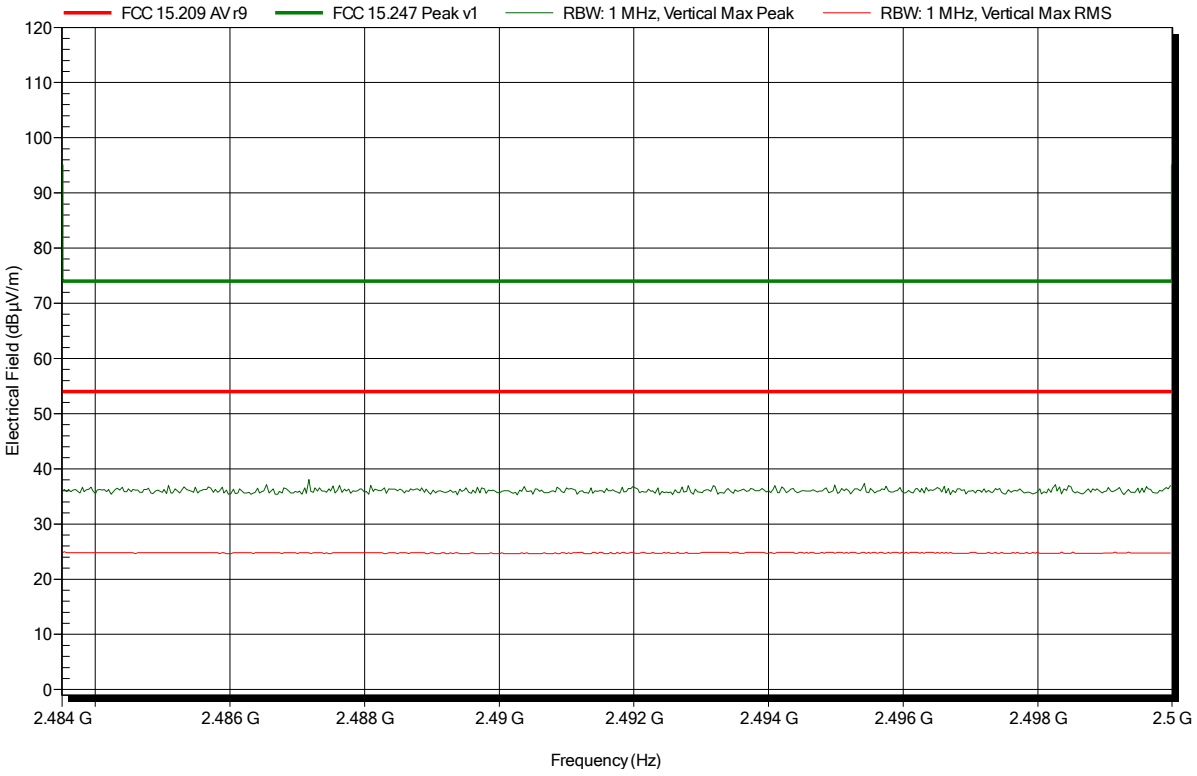

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BT LE 2480 MHz
Test Date:	2017-01-23
Note:	

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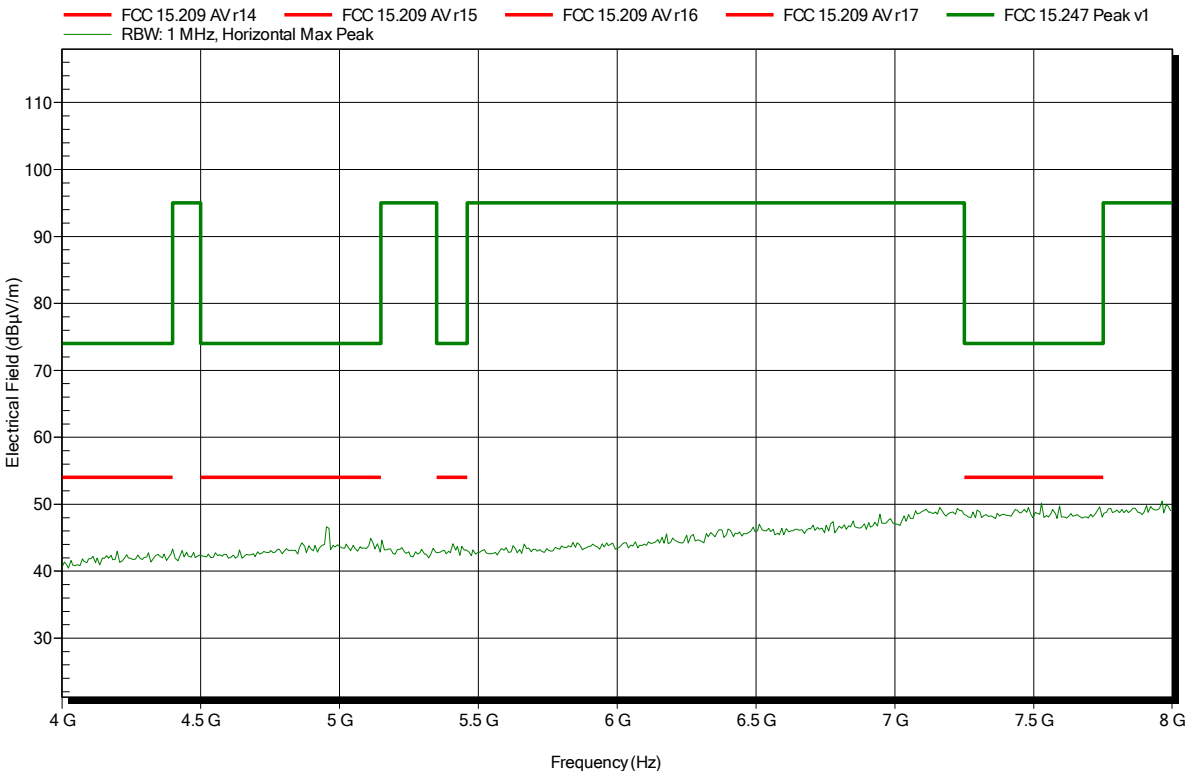

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m converted to 3m
Mode:	TX; BT LE 2480 MHz
Test Date:	2017-01-23
Note:	

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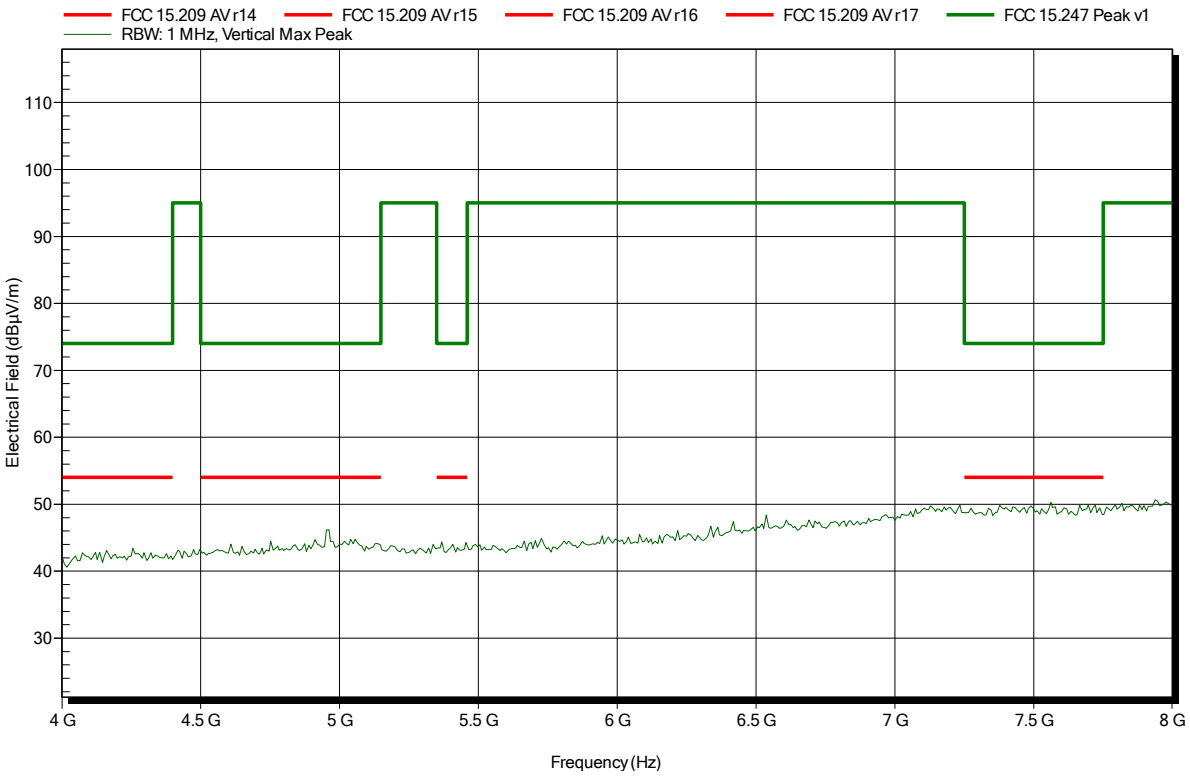

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BT LE 2480 MHz
Test Date:	2017-01-23
Note:	

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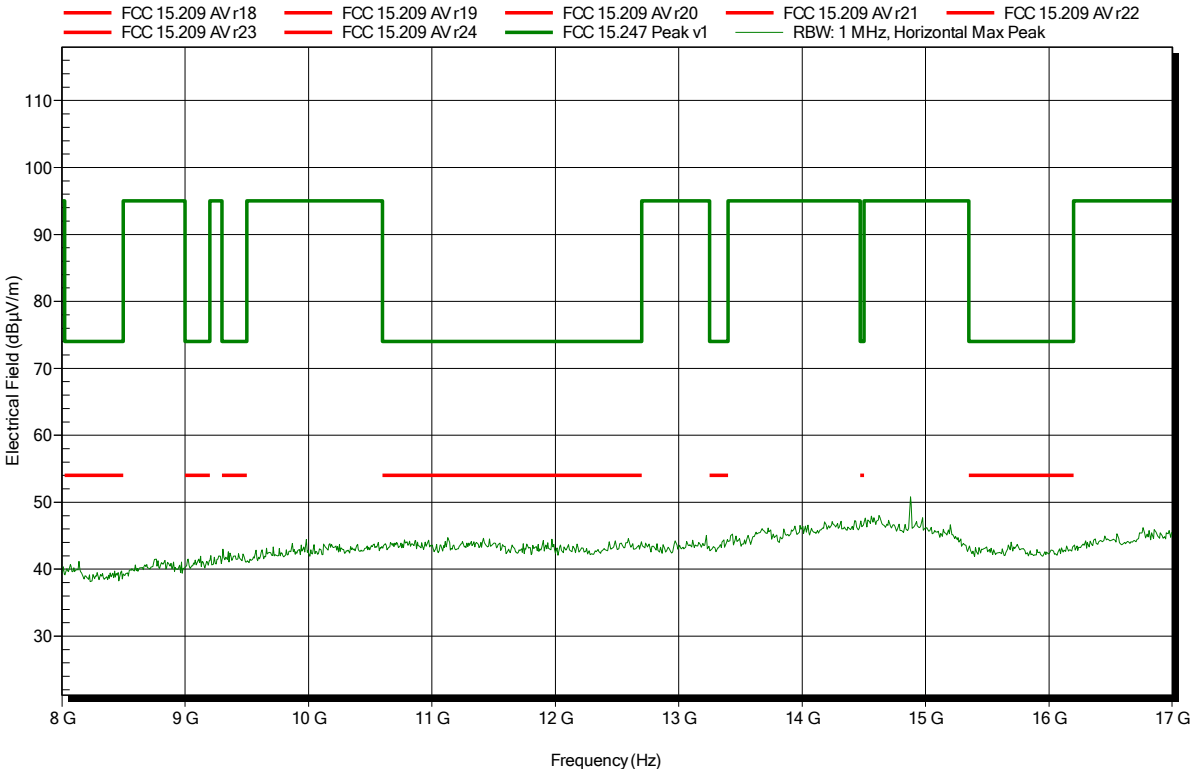

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; BT LE 2480 MHz
Test Date:	2017-01-23
Note:	

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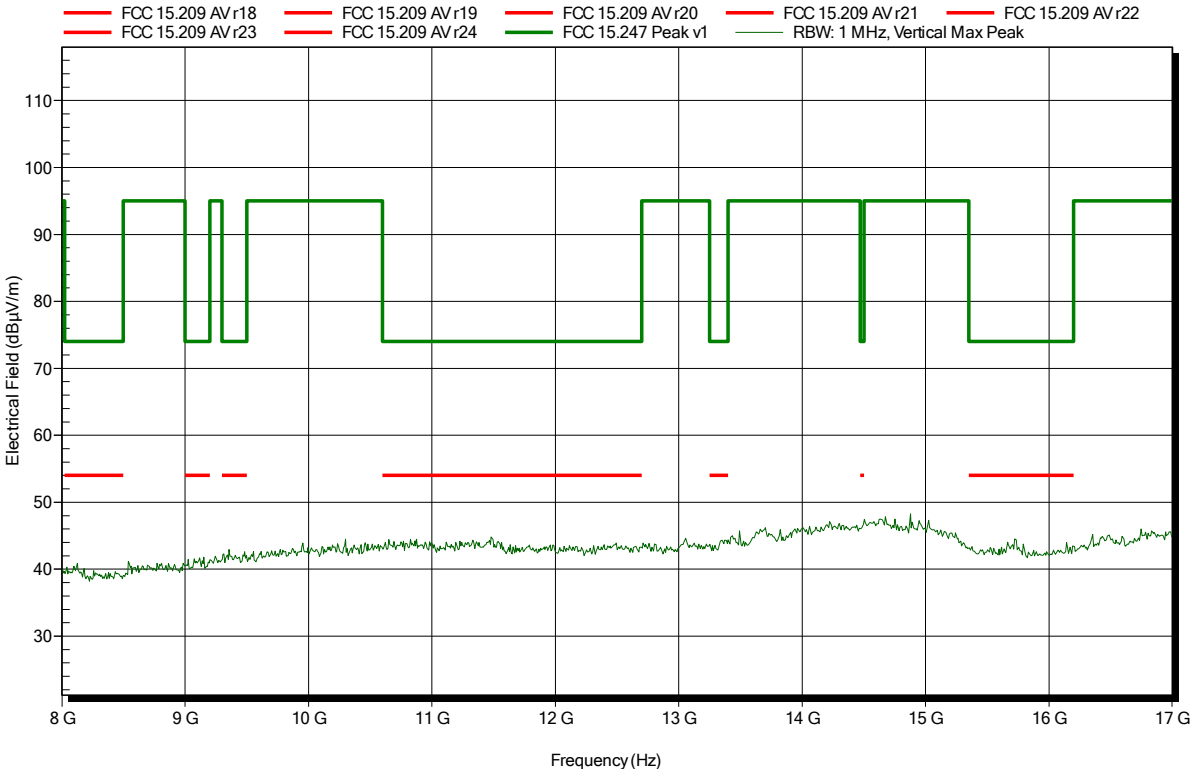

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Amplifier Research AT 4560, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	TX; BT LE 2480 MHz
Test Date:	2017-01-24
Note:	

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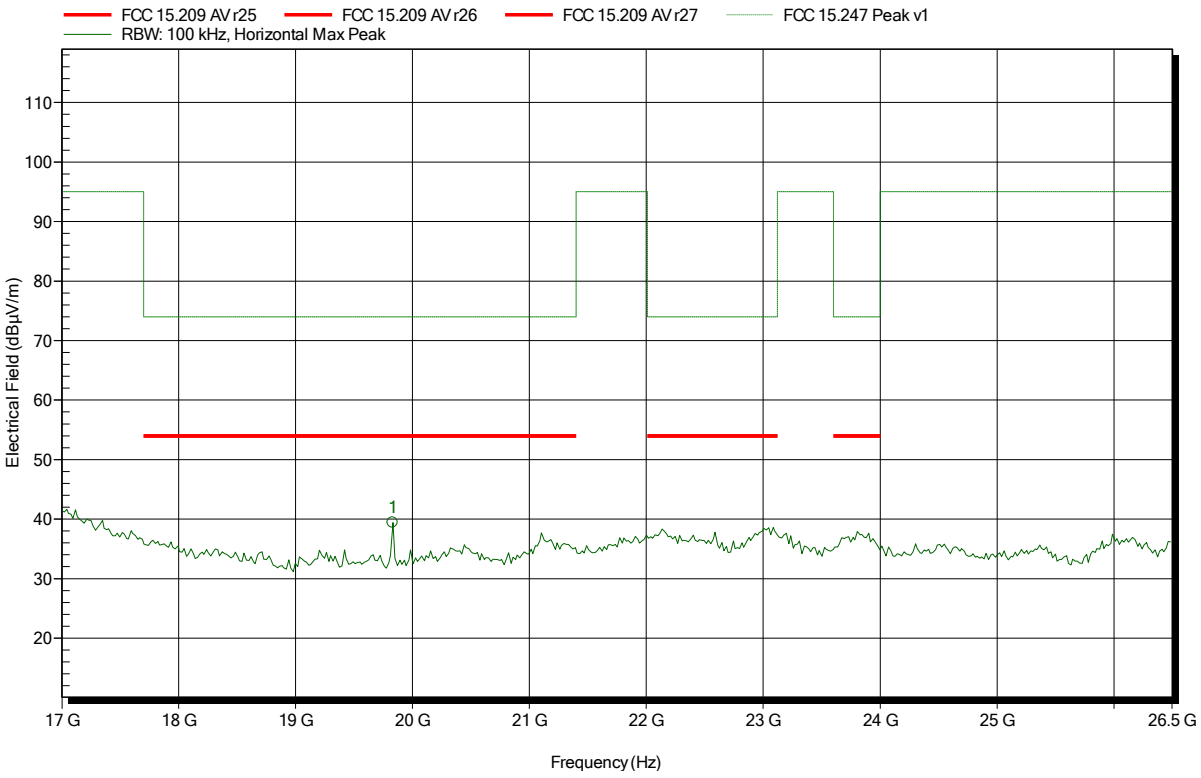

Frequency	Peak	Peak Limit	Peak Difference	Status
19.831 GHz	39.4 dBµV/m	74 dBµV/m	-34.6 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Amplifier Research AT 4560, Vertical
Measurement distance:	1 m converted to 3m
Mode:	TX; BT LE 2480 MHz
Test Date:	2017-01-24
Note:	

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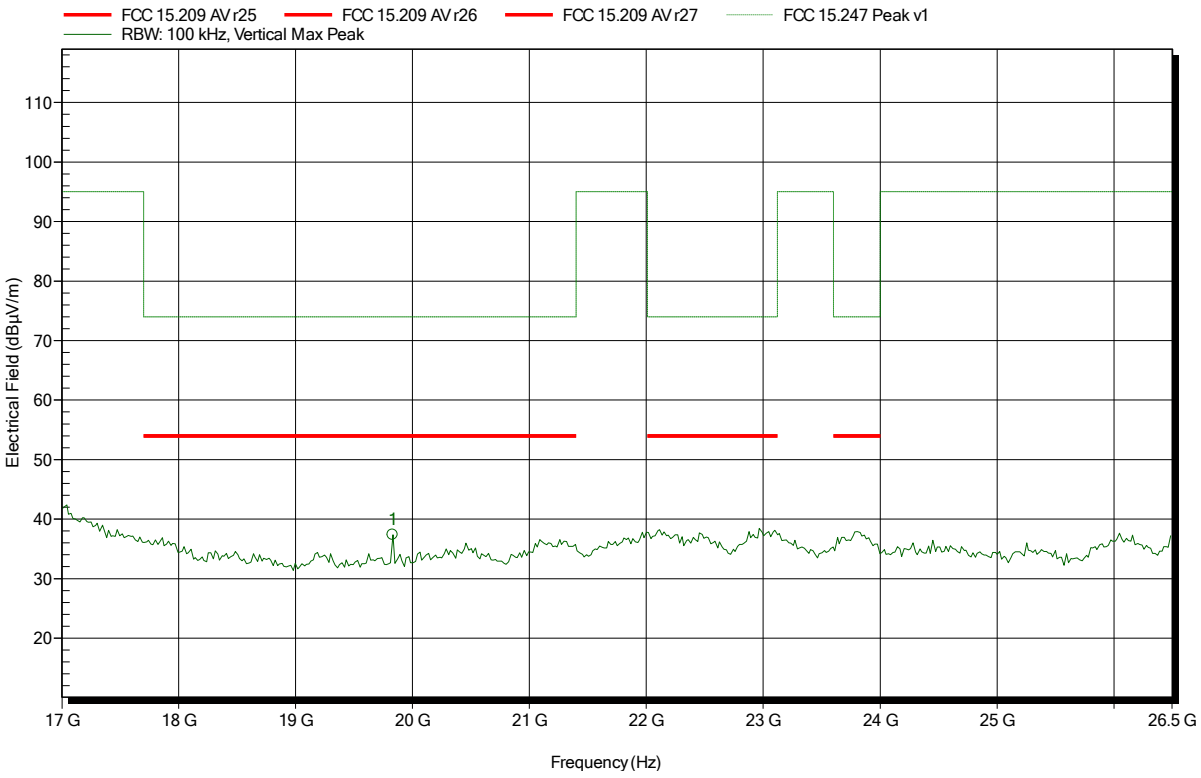

Frequency	Peak	Peak Limit	Peak Difference	Status
19.831 GHz	37.36 dBµV/m	74 dBµV/m	-36.64 dB	Pass

ANNEX B Receiver radiated spurious emissions

Radiated emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Unom: 3.7 VDC
Antenna:	Schwarzbeck VULB 9162, Horizontal
Measurement distance:	3 m
Mode:	RX; BT LE 2442 MHz
Test Date:	2017-01-23
Note:	

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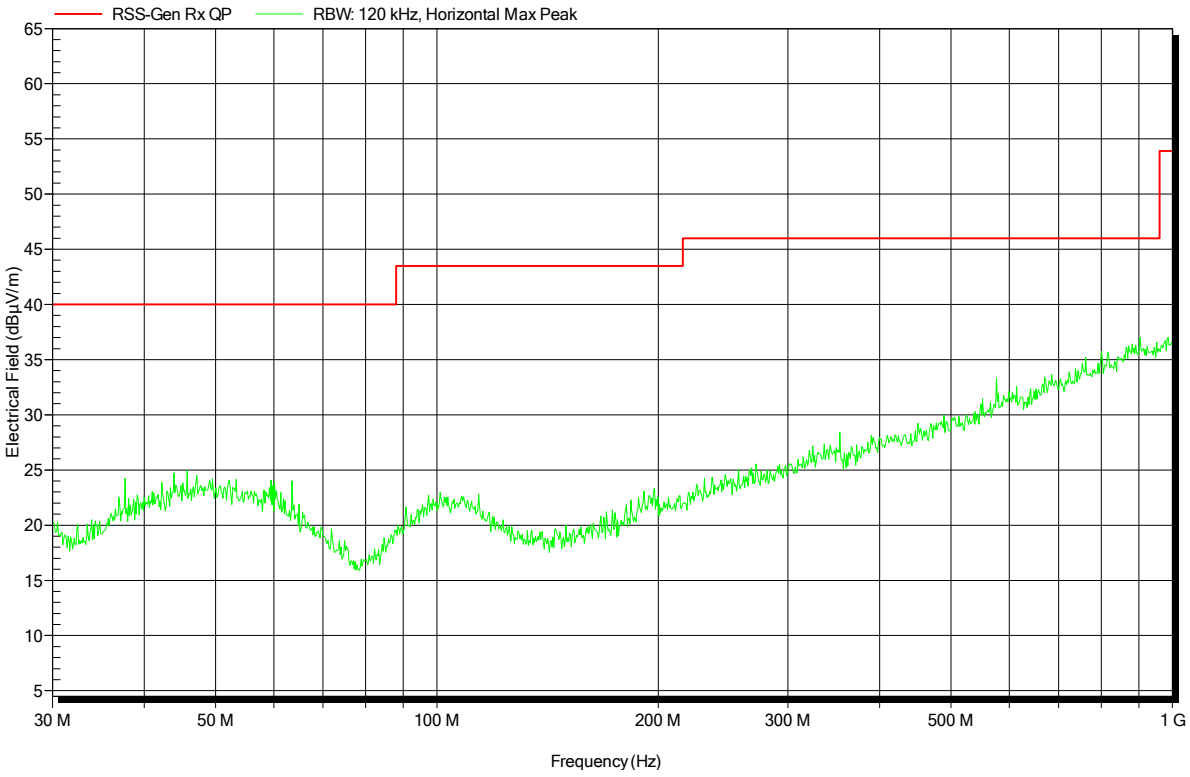

Radiated emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Unom: 3.7 VDC
Antenna:	Schwarzbeck VULB 9162, Vertical
Measurement distance:	3 m
Mode:	RX; BT LE 2442 MHz
Test Date:	2017-01-23
Note:	

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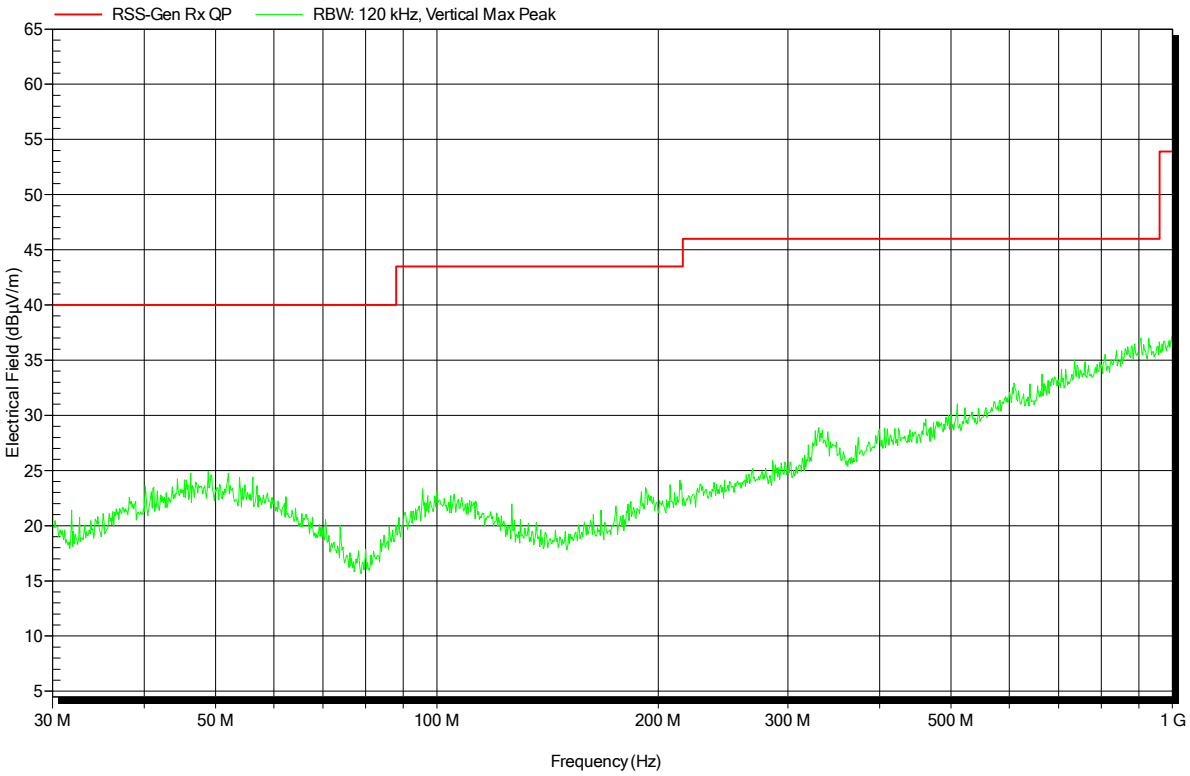

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	RX; BT LE 2442 MHz
Test Date:	2017-01-23
Note:	

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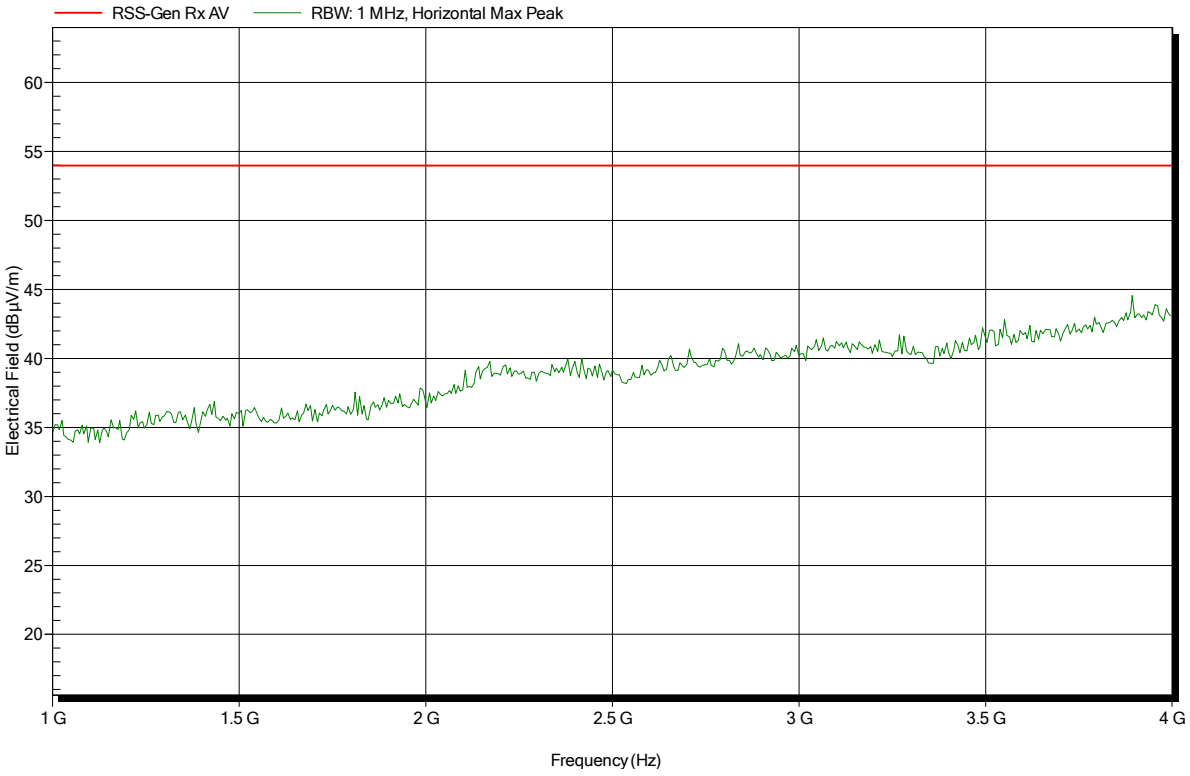

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	RX; BT LE 2442 MHz
Test Date:	2017-01-23
Note:	

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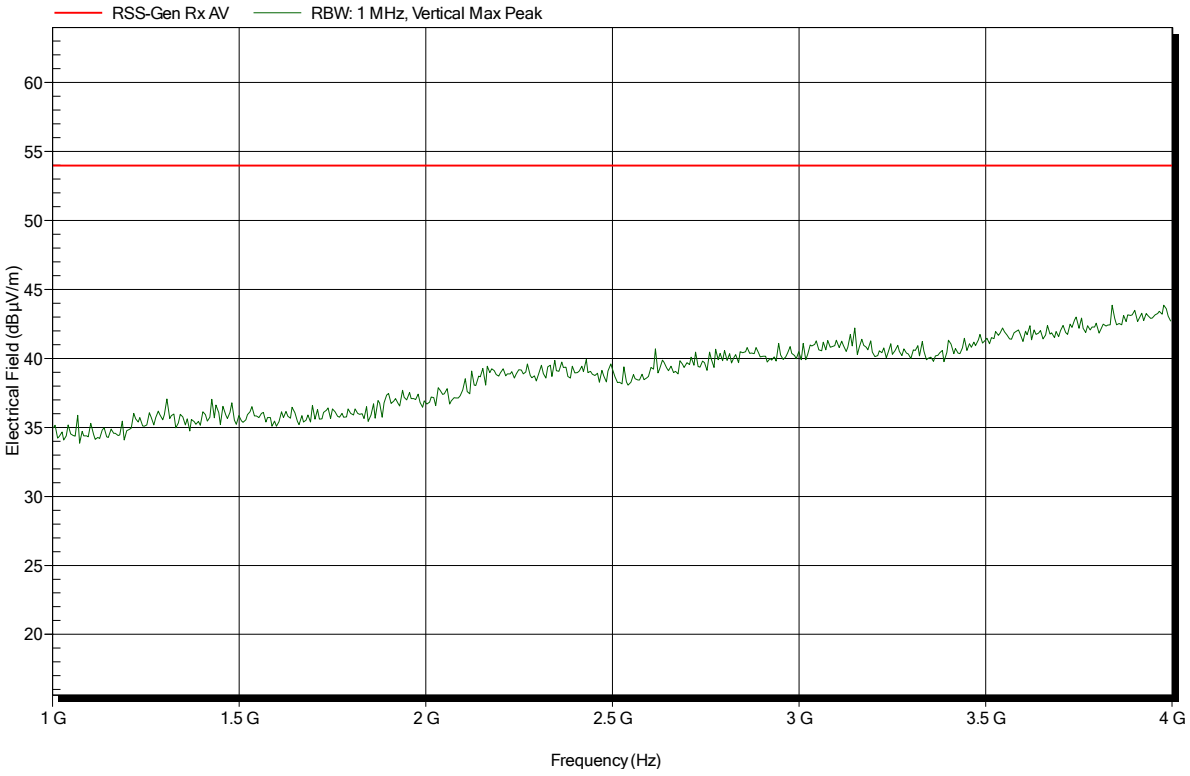

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	RX; BT LE 2442 MHz
Test Date:	2017-01-23
Note:	

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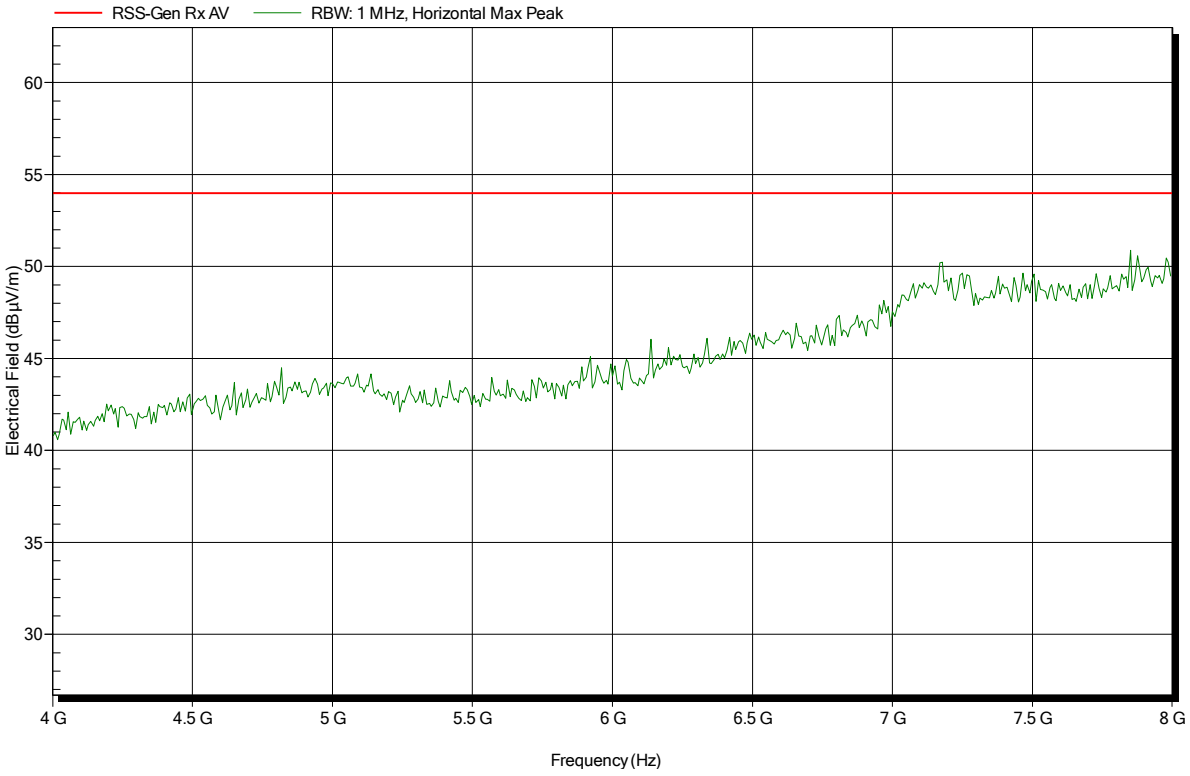

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	RX; BT LE 2442 MHz
Test Date:	2017-01-23
Note:	

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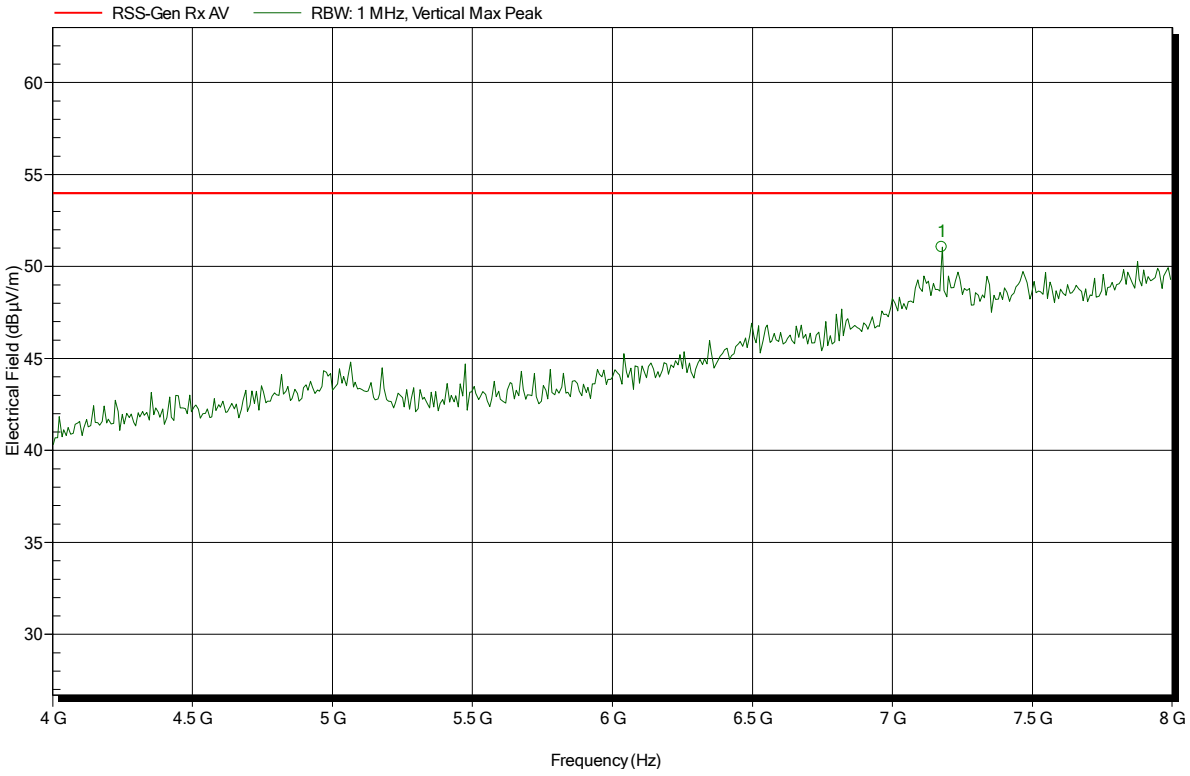

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
7.176 GHz	51.05 dBµV/m	53.98 dBµV/m	-2.93 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	RX; BT LE 2442 MHz
Test Date:	2017-01-23
Note:	

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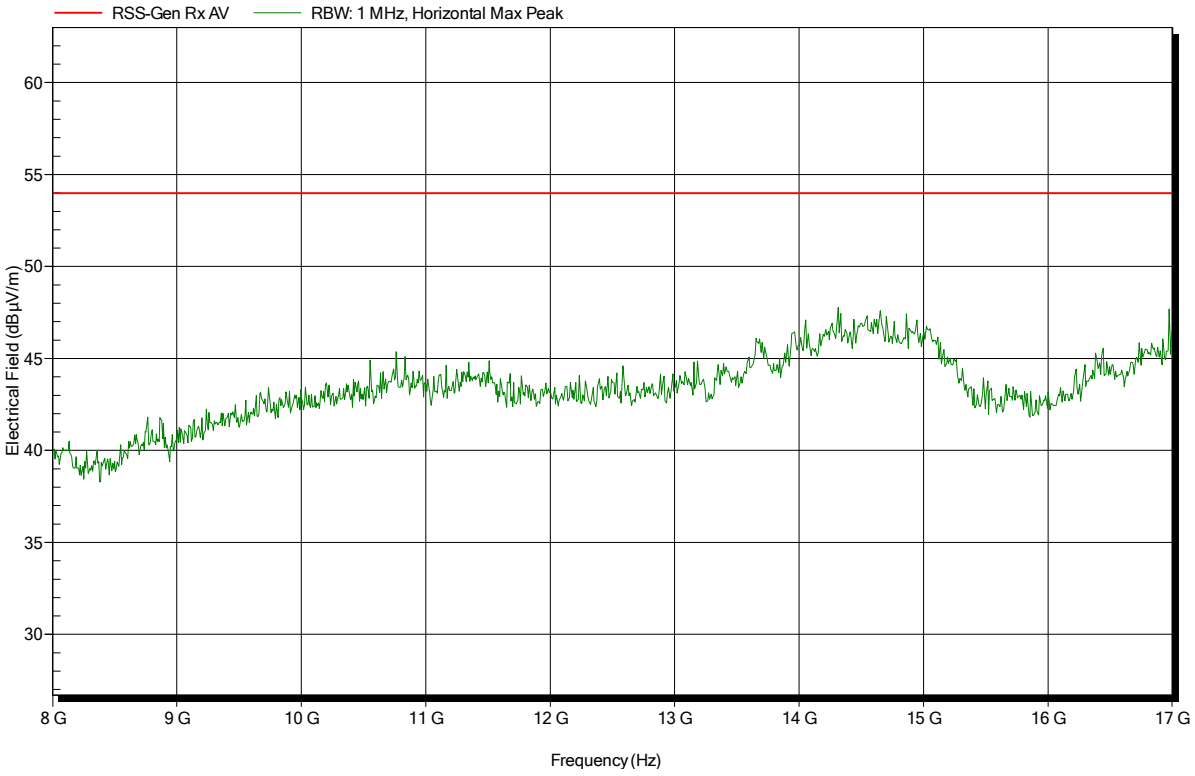

Spurious emissions according to FCC 15.247

Project number: G0M-1612-6168

Applicant:	eResearch Technology GmbH
EUT Name:	Asthma Monitor AM3
Model:	AM3 Option G+
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Suckow
Test Conditions:	Tnom: 20°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	RX; BT LE 2442 MHz
Test Date:	2017-01-23
Note:	

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