



RADIO REPORT FCC 47 CFR Part 15C ISED Canada RSS-247 Digital transmission systems operating within the 2400 – 2483.5 MHz band	
Report Reference No	G0M-1709-6847-TFC247BL-V01
Testing Laboratory	Eurofins Product Service GmbH
Address	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation	 <p>A2LA Accredited Testing Laboratory, Certificate No.: 1983.01 FCC Test Firm Designation Number: DE0008 IC Testing Laboratory site: 3470A-2</p>
Applicant	stAPPtronics GmbH
Address	Frutzstrasse 4 6832 Sulz Austria
Test Specification	According to FCC/ISED rules
Standard	47 CFR Part 15C RSS-247, Issue 2, 2017-02
Non-Standard Test Method	None
Test Scope	Partial compliance test
Equipment under Test (EUT):	
Product Description	stAPPone oGPS
Model(s)	stAPPone
Additional Model(s)	None
Brand Name(s)	None
Hardware Version(s)	2.1
Software Version(s)	Nordic DTM
FCC-ID	2AOGT-STAPPONE
IC	N/A
Test Result	PASSED

Possible test case verdicts:		
required by standard but not tested	N/T	
not required by standard	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	2017-10-09	
Report:		
Compiled by	Abdullah Al Jamal	
Tested by (+ signature) (Responsible for Test)	Abdullah Al Jamal / W. Treffke	
Approved by (+ signature) (Head of Lab)	Christian Weber	
Date of Issue	2017-12-20	
Total number of pages	82	
General Remarks:		
<p>The test results presented in this report relate only to the object tested.</p> <p>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.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p>		
Additional Comments:		
Additional variants have been declared by the manufacturer (see paragraph ADDITIONAL VARIANTS).		

ADDITIONAL VARIANTS

ADDITIONAL VARIANTS – NOT TESTED VARIANTS				
Not-testes Variant	Product Type Description	Variant Name	Hardware Version	Software Version
1	stAPPone oGPS	stAPPone	2.0	1.0
2	stAPPone mGPS	stAPPone	2.0	1.0
3	stAPPone mGPS	stAPPone	2.1	Nordic DTM

Those named additional variants above have not been tested. Those additional variants of the series have been declared by the manufacturer. The test report explicitly state that those variants were neither tested nor assessed nor evaluated.

VERSION HISTORY

Version History			
Version	Issue Date	Remarks	Revised By
01	2017-12-20	Initial Release	

ABBREVIATIONS AND ACRONYMS

Acronyms	
Acronym	Description
EUT	Equipment Under Test
FCC	Federal Communications Commission
ISED	Innovation, Science and Economic Development Canada
RBW	Resolution bandwidth
RMS	Root mean square
VBW	Video bandwidth
V _{NOM}	Nominal supply voltage

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1 Equipment (Test Item) Under Test

Description	stAPPone oGPS	
Model	stAPPone	
Additional Model(s)	None	
Brand Name(s)	None	
Serial Number(s)	Not specified	
Hardware Version(s)	2.1	
Software Version(s)	Nordic DTM	
PMN	N/A	
HVIN	N/A	
FVIN	N/A	
HMN	N/A	
FCC-ID	2AOGT-STAPPONE	
IC	N/A	
Equipment type	End Product	
Radio type	Transceiver	
Assigned frequency bands	2400 - 2483.5 MHz	
Radio technology	Bluetooth LE	
Modulation	GFSK	
Number of antenna ports	1	
Radio Module	Type	Bluetooth radio module
	Model	Bluemod+S42
	Manufacturer	Telit Communications S.p.A.
	HW Version	Not specified
	SW Version	Not specified
	FCC-ID	RFRMS42
Antenna	Type	Integrated antenna
	Model	2450AT43B100
	Manufacturer	Johanson Technology
	Gain	1.3 dBi
Supply Voltage	V_{NOM}	3.7 VDC
Operating Temperature	T_{NOM}	25 °C
AC/DC-Adaptor	Model	None
	Vendor	None
	Input	None
	Output	None
Manufacturer	stAPPtronics GmbH Frutzstrasse 4 6832 Sulz Austria	

1.4 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
AE1	Laptop	Dell	Latitude E6430	S/N 4MX5TY1
AE2	Power Supply	Dell	LA65NS2-01	S/N 6TM1C
AE3	Qi Wireless Charging Pad	UWAY	UNIQT-0004	Sample 15578
AE4	Development Kit	Nordic Semiconductors	nRF6828	Sample 15581
AE5	AC Adapter	HTC	TC E250	Sample 15579
CBL1	USB cable	Assmann Electronic	AK-300127-018-S	Sample 15576
CBL2	USB cable	HTC	Not specified	Sample 15580
CBL3	USB-Serial-Adapter	Not specified	TTL-232R-3V3	Sample 16386
CBL4	J-LINK Needle Adapter 10PIN	Not specified	Not specified	Sample 16293
Description:				
AE1 – AE5	Auxillary Equipment			
SIM	Simulator			
CBL1 – CBL4	Connecting Cable			
Comment: None.				

1.5 Test Modes

Mode	Description
GFSK	Mode = Transmit Modulation = GFSK Spreading = None Duty cycle = 70%
Receive	Mode = Receive
Comment: None.	

1.6 Test Frequencies

Designator	Mode	Channel	Frequency [MHz]
F1	Tx / Rx	0	2402
F2	Tx / Rx	19	2440
F3	Tx / Rx	39	2480

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:

$$\text{Reading on Analyzer (dB}\mu\text{V)} + \text{A.F. (dB)} = \text{Net field strength (dB}\mu\text{V/m)}$$

Net:

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

Limit:

This is the FCC Class B radiated emission limit (in units of 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:

$$\text{Limit (dB}\mu\text{V/m)} = 20 \cdot \log(\mu\text{V/m})$$

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 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 Standard Reference	Requirement	Reference Method	Result	Remarks
RSS-Gen 6.6	Occupied Bandwidth	ANSI C63.10	N/R	Informational only
FCC § 15.247(a)(2) ISED RSS-247 § 5.2	6 dB 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	
FCC § 15.207 ISED RSS-247 § 3.1	AC power line conducted emissions	ANSI C63.10	N/T	
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-GEN § 8.9	Transmitter radiated spurious emissions	ANSI C63.10	PASS	
ISED RSS-247 § 3.1	Receiver radiated spurious emissions	ANSI C63.10	PASS	
Comment:				

Possible Test Case Verdicts	
PASS	Test object does meet the requirements
FAIL	Test object does not meet the requirements
N/T	Required by standard but not tested
N/R	Not required by standard for the test object

3 Test Conditions and Results

3.1 Test Conditions and Results - Occupied bandwidth

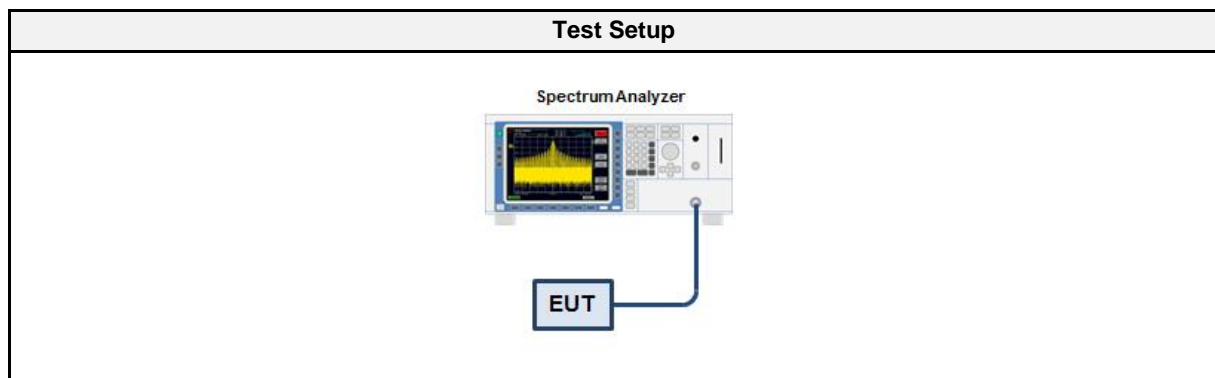
3.1.1 Information

Test Information	
Reference	ISED RSS-Gen 6.6
Measurement Method	ANSI C63.10 6.9.3
Operator	Abdullah Al Jamal
Date	2017-12-04

3.1.2 Limits

Limits
None (Informational only)

3.1.3 Setup



3.1.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSW 43	EF00896	2017-08	2018-08

3.1.5 Procedure

Test Procedure
<ol style="list-style-type: none"> 1. EUT transmitter is activated in test mode under normal conditions 2. The spectrum analyzer is set to peak detection and maximum hold with a span twice the emission spectrum 3. The resolution bandwidth is set to 1 % of the bandwidth 4. The occupied bandwidth is measured with the build-in analyzer function

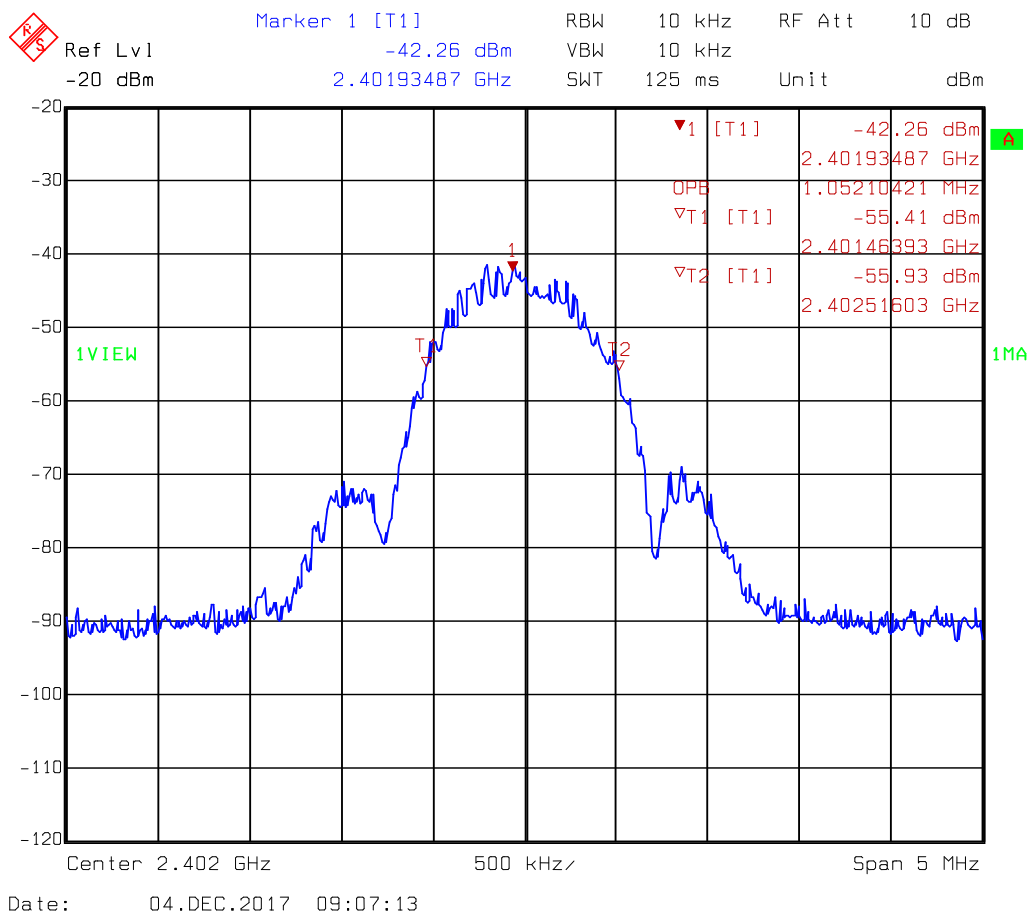
3.1.6 Results

Test Results		
Mode	Frequency [MHz]	Bandwidth [MHz]
GFSK	2402	1.0521
GFSK	2440	1.0621
GFSK	2480	1.0822

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1709-6847

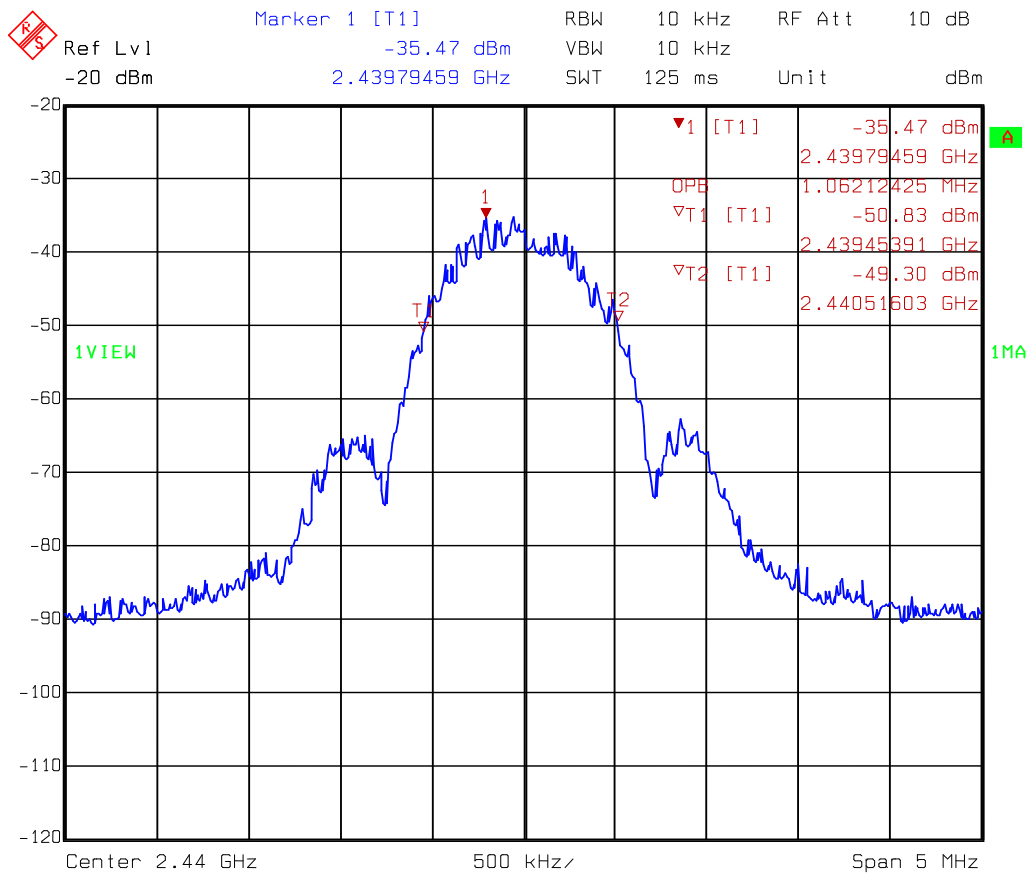
Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom / Vnom
 Mode: Tx, BT-LE, 2402 MHz
 Test Date: 2017-12-04
 Verdict: NONE (INFORMATION ONLY)
 Note 1: A spectrum analyzer with an integrated 99% power bandwidth function was used
 Note 2: OBW= 1.052 MHz



Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom / Vnom
 Mode: Tx, BT-LE, 2440 MHz
 Test Date: 2017-12-04
 Verdict: NONE (INFORMATION ONLY)
 Note 1: A spectrum analyzer with an integrated 99% power bandwidth function was used
 Note 2: OBW= 1.062 MHz

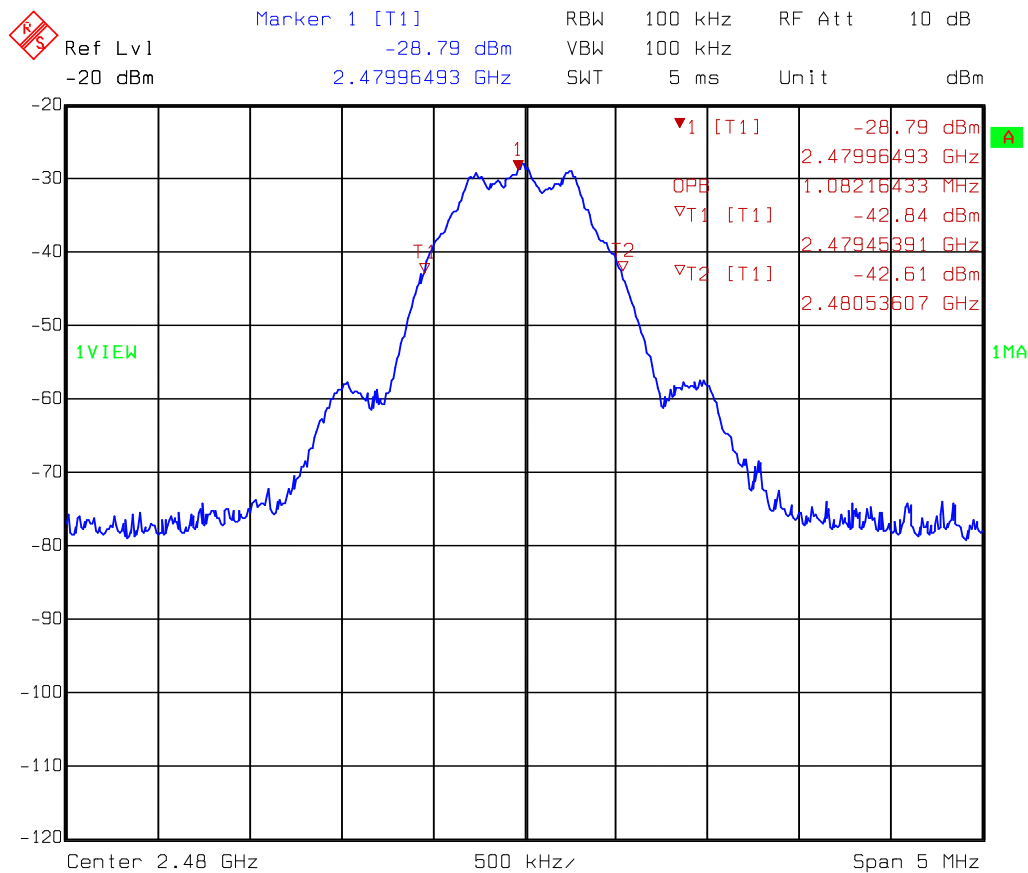


Date: 04.DEC.2017 09:09:54

Occupied Bandwidth acc. to RSS-Gen

Project Number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom / Vnom
 Mode: Tx, BT-LE, 2480 MHz
 Test Date: 2017-12-04
 Verdict: NONE (INFORMATION ONLY)
 Note 1: A spectrum analyzer with an integrated 99% power bandwidth function was used
 Note 2: OBW= 1.082 MHz



Date: 04.DEC.2017 09:16:30

3.2 Test Conditions and Results - Transmitter radiated emissions

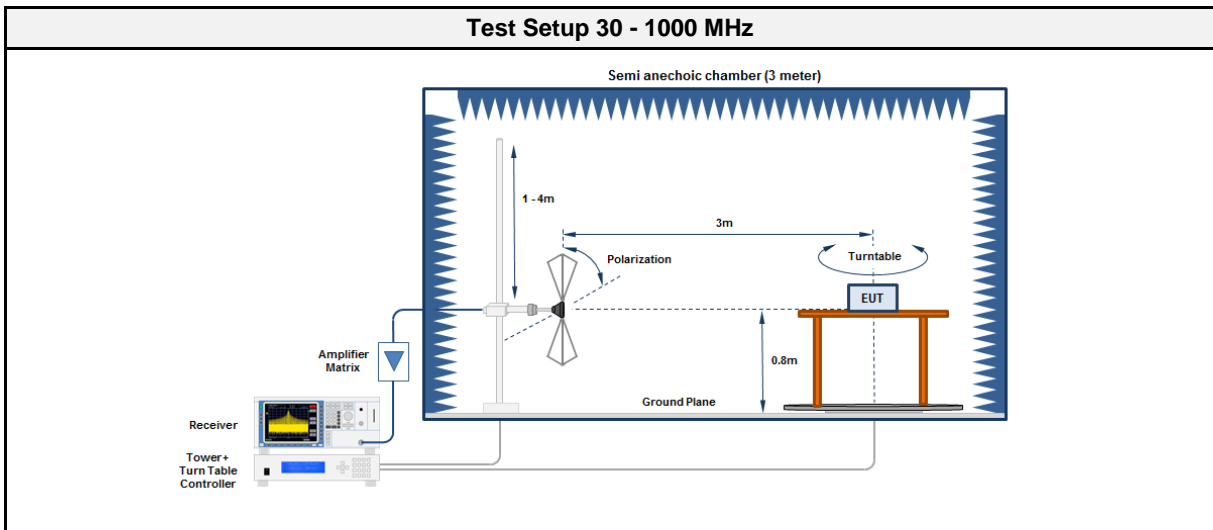
3.2.1 Information

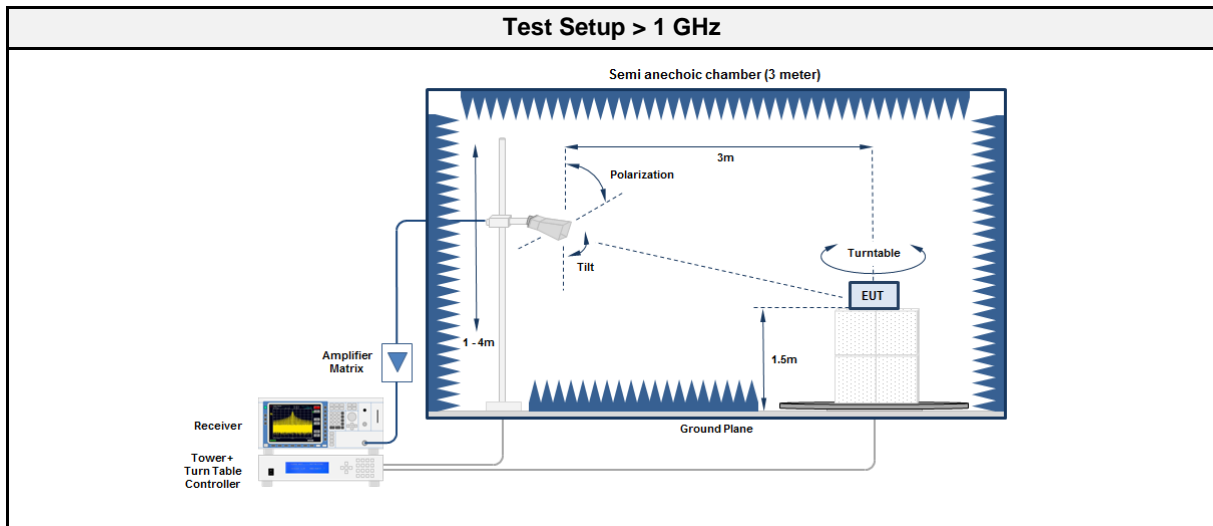
Test Information	
Reference	FCC 15.247(d) / ISED RSS-GEN 8.9
Measurement Method	ANSI C63.10 6.4, 6.5, 6.6, 11.12
Operator	Abdullah Al Jamal
Date	2017-11-30

3.2.2 Limits

Limits			
Frequency [MHz]	Detector	Field strength [dB μ V/m]	Measurement distance [m]
30 - 88	Quasi-Peak	100	3
88 - 216	Quasi-Peak	150	3
216 - 960	Quasi-Peak	200	3
960 - 1000	Quasi-Peak	500	3
>1000	Average	500	3

3.2.3 Setup





3.2.4 Equipment

Test Equipment 30 - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2017-02	2020-02
Measurement Receiver	R&S	ESU 26	EF00887	2017-07	2018-07
Antenna	R&S	HK 116	EF00030	2016-04	2019-04
Antenna	R&S	HL 223	EF00187	2016-05	2019-05

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2017-02	2020-02
Measurement Receiver	R&S	ESU 26	EF00887	2017-07	2018-07
Antenna	R&S	BBHA 9120D	EF00018	2016-09	2019-09
Antenna	Amplifier Research	AT4560	EF00302	2017-03	2018-03

3.2.5 Procedure

Test Procedure 30 - 1000 MHz	
<ol style="list-style-type: none"> 1. EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector 	

Test Procedure > 1 GHz

1. EUT is placed on a non conducting support at the center of a turn table 1.5 m above the ground
2. EUT set to test mode
3. The receiver is set to peak detection with max hold
4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m
5. All significant emissions are measured again using the corresponding final detector

3.2.6 Results

Test Results

Channel [MHz]	Emission [MHz]	Level [dB μ V/m]	Det.	Pol.	Limit [dB μ V/m]	Margin [dB]
2402	37.7043	38.90	pk	ver	40.00	-01.10
2402	37.7043	33.60	qpk	ver	40.00	-06.40
2402	38.1066	39.50	pk	ver	40.00	-00.49
2402	38.1066	35.50	qpk	ver	40.00	-04.48
2402	2274	36.03	pk	hor	74.00	-37.97
2402	4800	37.63	pk	hor	74.00	-36.37
2402	4800	35.88	pk	ver	74.00	-38.12
2440	7320	53.36	pk	hor	74.00	-20.64
2440	7320	51.63	RMS	hor	54.00	-02.37
2440	7320	48.18	pk	ver	74.00	-25.82
2440	19508	30.11	pk	ver	74.00	-43.89
2480	7440	52.53	pk	hor	74.00	-21.47
2480	7440	50.76	RMS	hor	54.00	-03.24
2480	7440	47.99	pk	ver	74.00	-26.01

3.3 Test Conditions and Results - Receiver radiated emissions

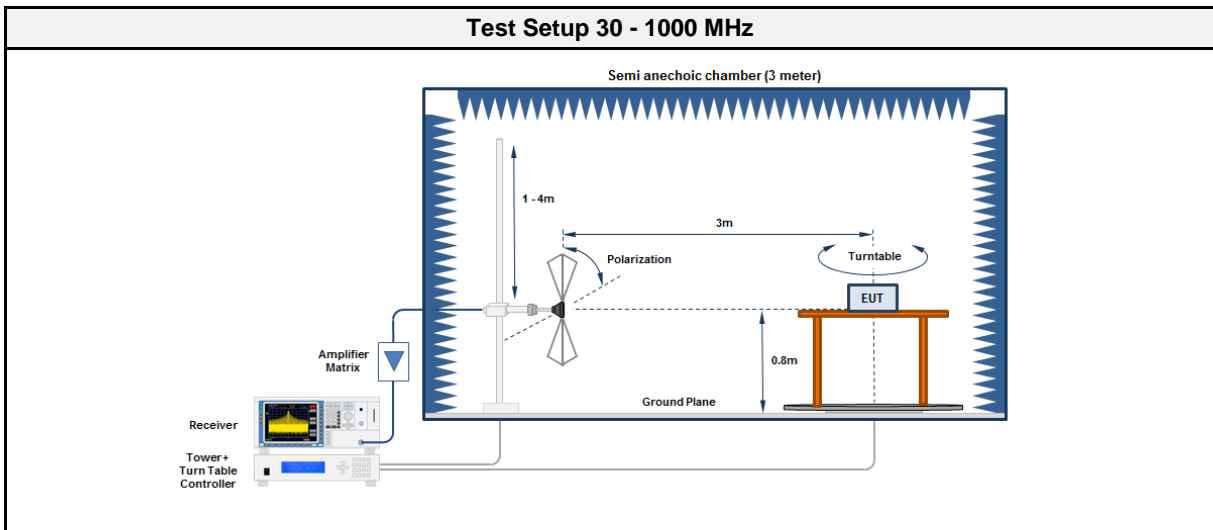
3.3.1 Information

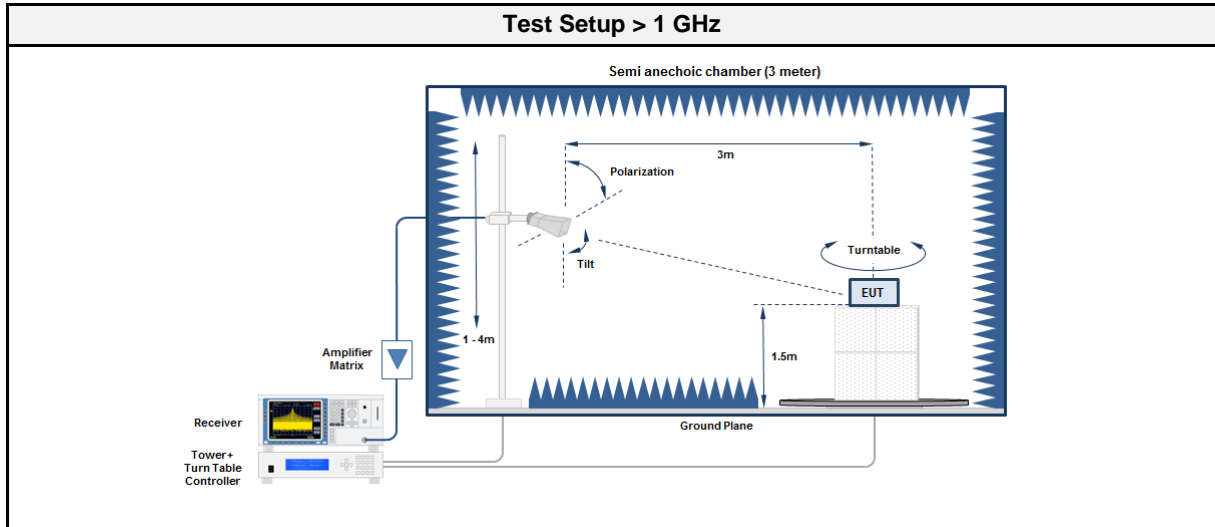
Test Information	
Reference	ISED RSS-247 3.1
Measurement Method	ANSI C63.10 6.5, 6.6, 11.12
Operator	Abdullah Al Jamal
Date	2017-12-01

3.3.2 Limits

Limits			
Frequency [MHz]	Detector	Field strength [dB μ V/m]	Measurement distance [m]
30 - 88	Quasi-Peak	100	3
88 - 216	Quasi-Peak	150	3
216 - 960	Quasi-Peak	200	3
960 - 1000	Quasi-Peak	500	3
>1000	Average	500	3

3.3.3 Setup





3.3.4 Equipment

Test Equipment 30 - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2017-02	2020-02
Measurement Receiver	R&S	ESU 26	EF00887	2017-07	2018-07
Antenna	R&S	HK 116	EF00030	2016-04	2019-04
Antenna	R&S	HL 223	EF00187	2016-05	2019-05

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2017-02	2020-02
Measurement Receiver	R&S	ESU 26	EF00887	2017-07	2018-07
Antenna	R&S	BBHA 9120D	EF00018	2016-09	2019-09
Antenna	Amplifier Research	AT4560	EF00302	2017-03	2018-03

3.3.5 Procedure

Test Procedure 30 - 1000 MHz
<ol style="list-style-type: none"> 1. EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector

Test Procedure > 1 GHz
<ol style="list-style-type: none"> 1. EUT is placed on a non conducting support at the center of a turn table 1.5 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector

3.3.6 Results

Test Results						
Channel [MHz]	Emission [MHz]	Level [dB μ V/m]	Det.	Pol.	Limit [dB μ V/m]	Margin [dB]
2440	31.624	35.30	pk	hor	40.00	-04.70
2440	31.624	33.24	qpk	hor	40.00	-06.76
2440	38.033	33.89	pk	hor	40.00	-06.11
2440	38.033	22.78	qpk	hor	40.00	-17.22
2440	2350	39.12	pk	ver	53.98	-14.86
2440	7408	50.23	pk	hor	53.98	-03.75
2440	7408	38.61	avg	hor	53.98	-15.37
2440	7577	50.48	pk	ver	53.98	-03.50
2440	7577	38.58	avg	ver	53.98	-15.40

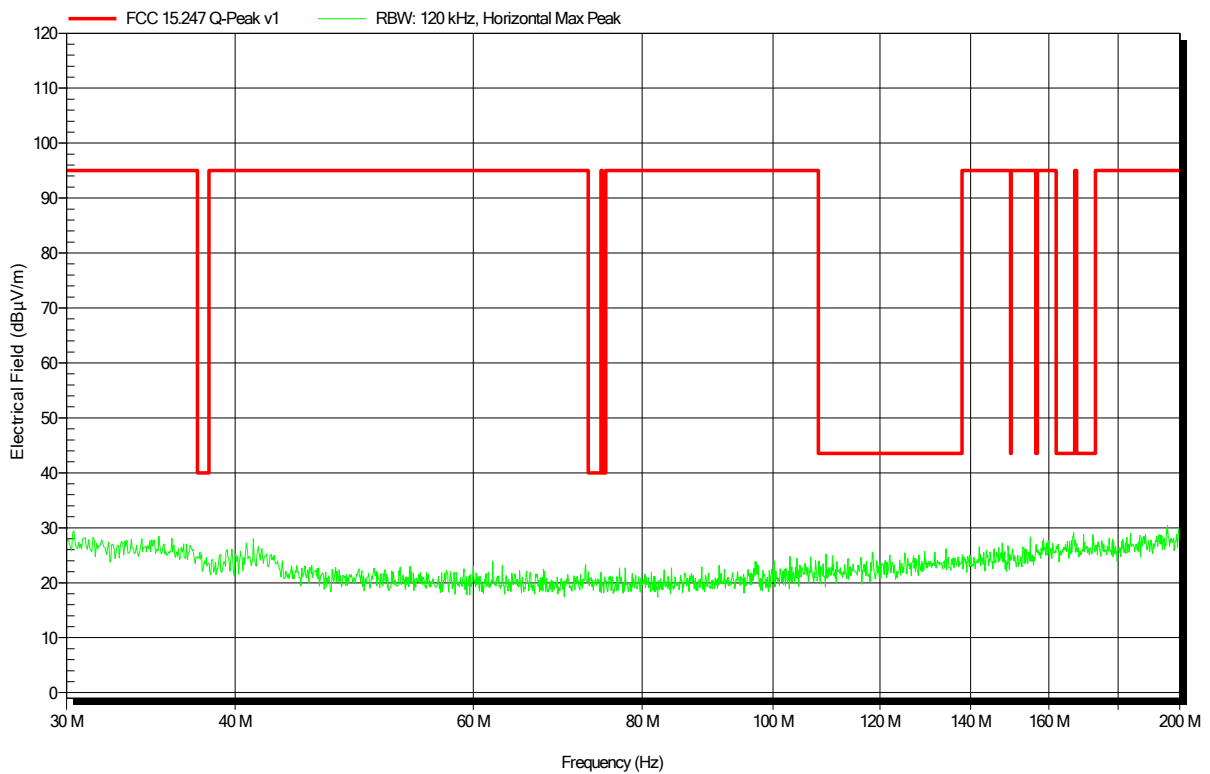
ANNEX A Transmitter spurious emissions

Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.3°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3 m
 Mode: TX; BL; 2402 MHz
 Test Date: 2017-11-30
 Note: TT := 0°; MA := 1 m

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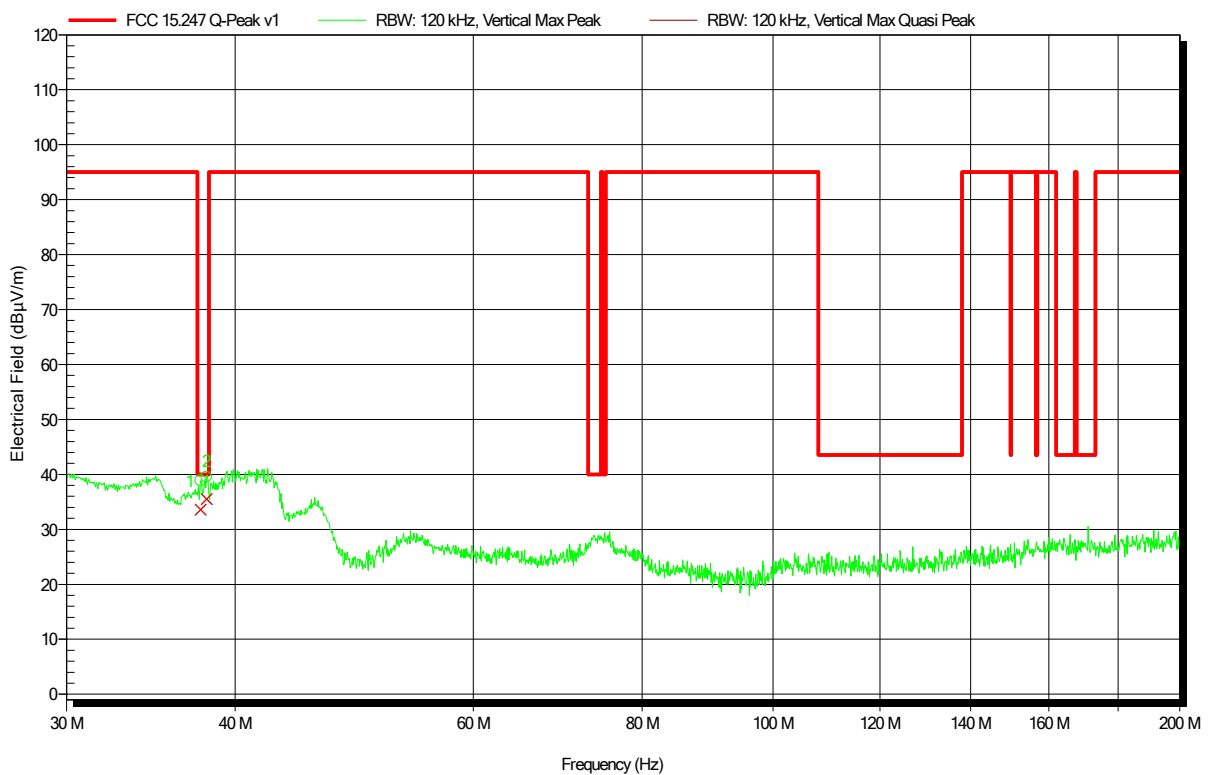


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.3°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Rohde & Schwarz HK 116, Vertical
 Measurement distance: 3 m
 Mode: TX; BL; 2402 MHz
 Test Date: 2017-11-30
 Note: TT := 0°; MA := 1 m

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Frequency	Peak	Peak Limit	Peak Difference	Status
37,7043 MHz	38,9 dBµV/m	40 dBµV/m	-1,1 dB	Pass
38,1066 MHz	39,5 dBµV/m	40 dBµV/m	-0,49 dB	Pass

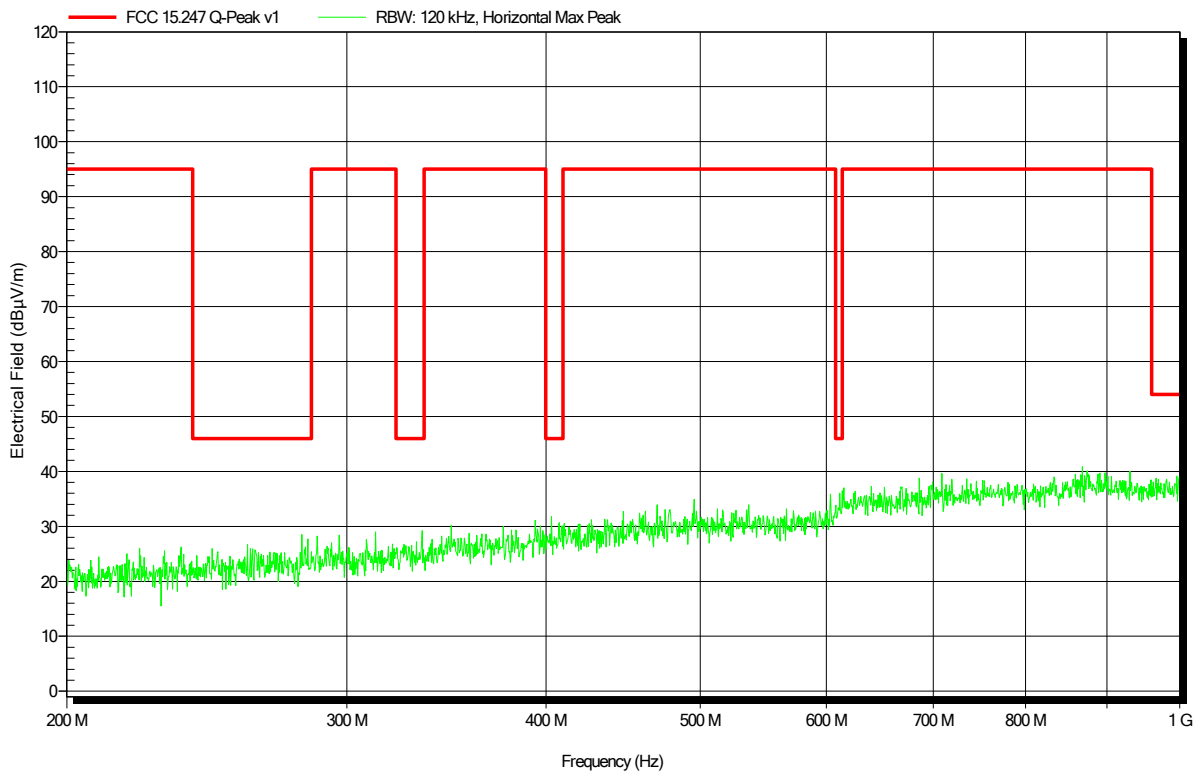
Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
37,7043 MHz	33,6 dBµV/m	40 dBµV/m	-6,4 dB	Pass
38,1066 MHz	35,5 dBµV/m	40 dBµV/m	-4,48 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.3°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3 m
 Mode: TX; BL; 2402 MHz
 Test Date: 2017-11-30
 Note: TT := 0°; MA := 1 m

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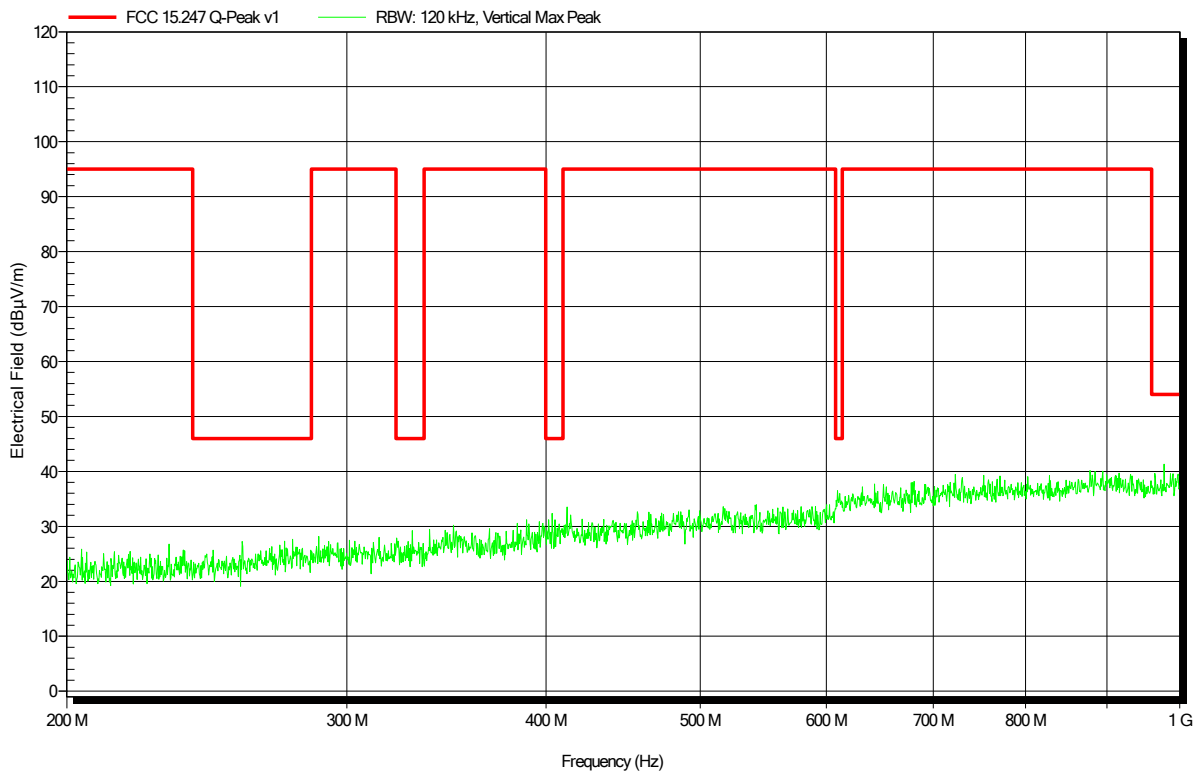


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.3°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3 m
 Mode: TX; BL; 2402 MHz
 Test Date: 2017-11-30
 Note: TT := 0°; MA := 1 m

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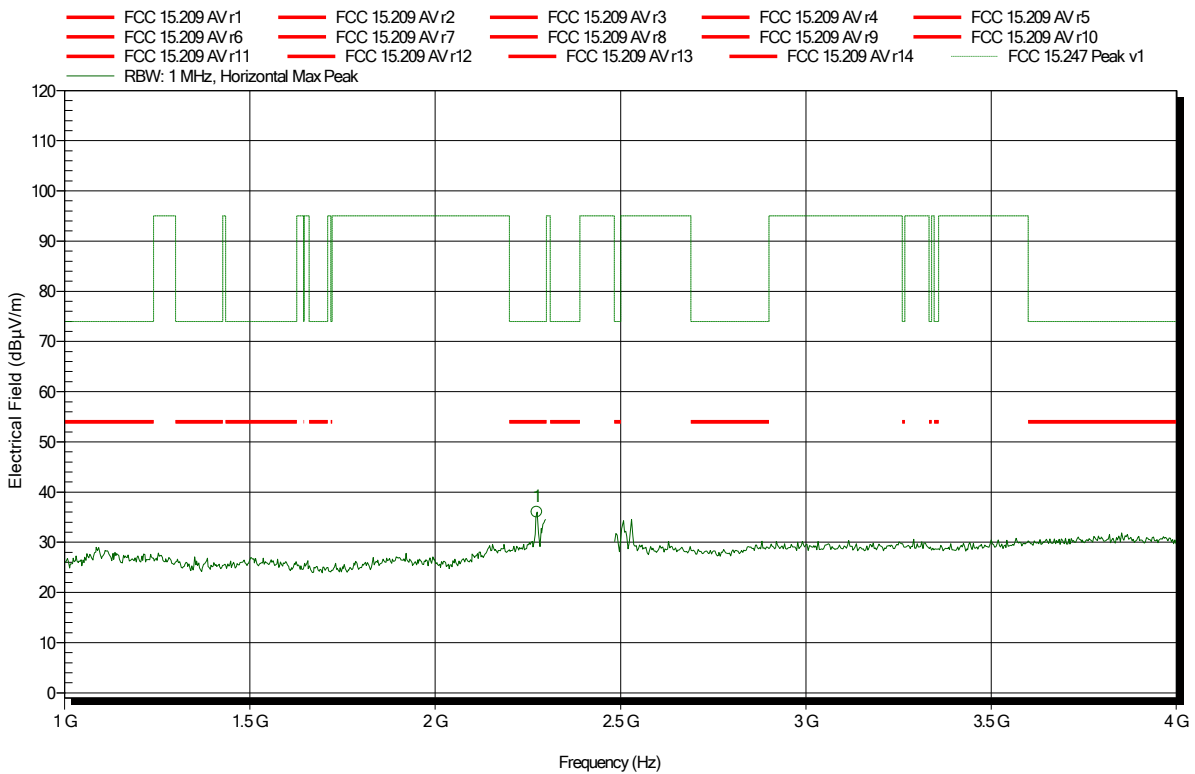


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2402 MHz
 Test Date: 2017-12-01
 Note:

Index 3



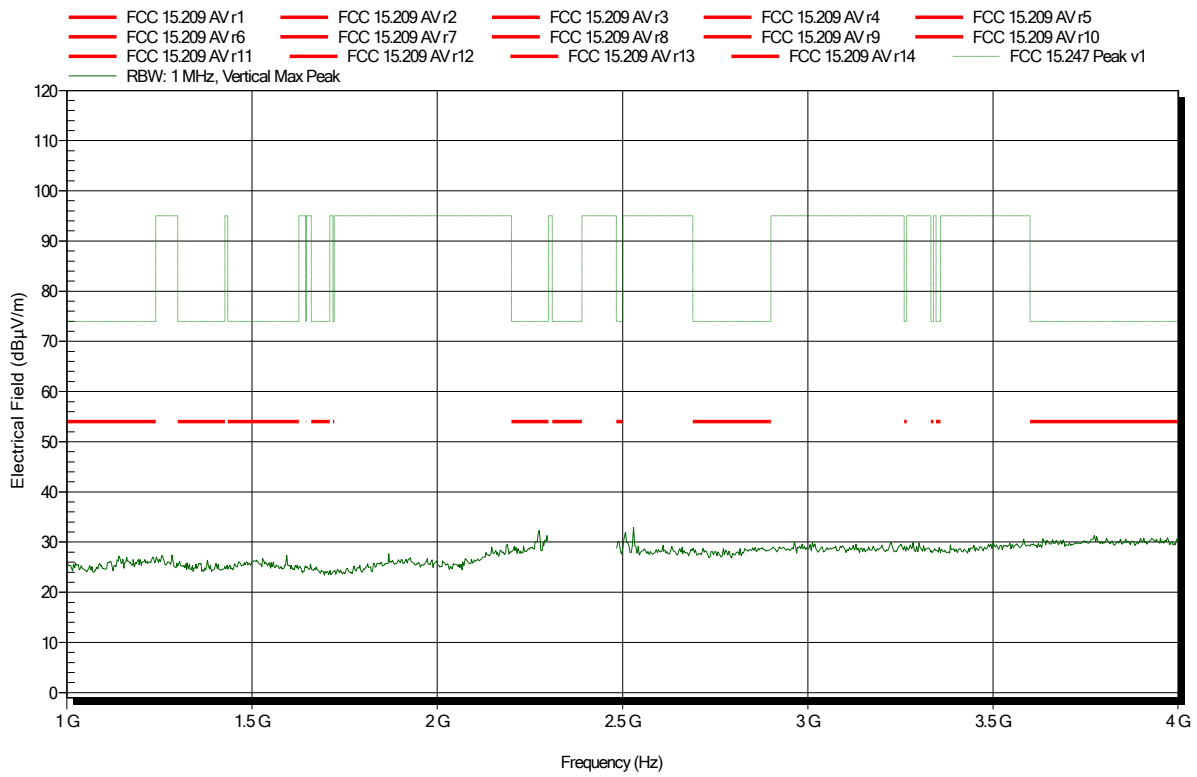
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.274 GHz	36.03 dBµV/m	74 dBµV/m	-37.97 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2402 MHz
 Test Date: 2017-12-01
 Note:

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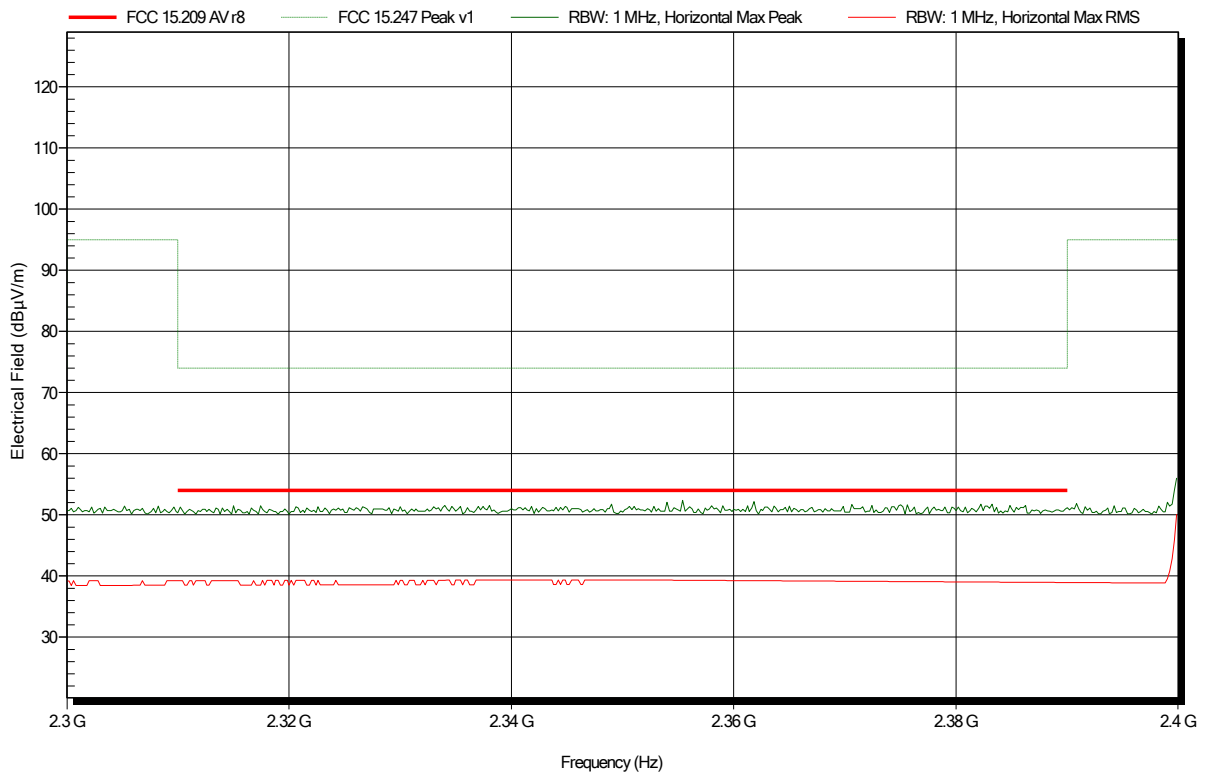


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2402 MHz
 Test Date: 2017-12-01
 Note: lower bandedge

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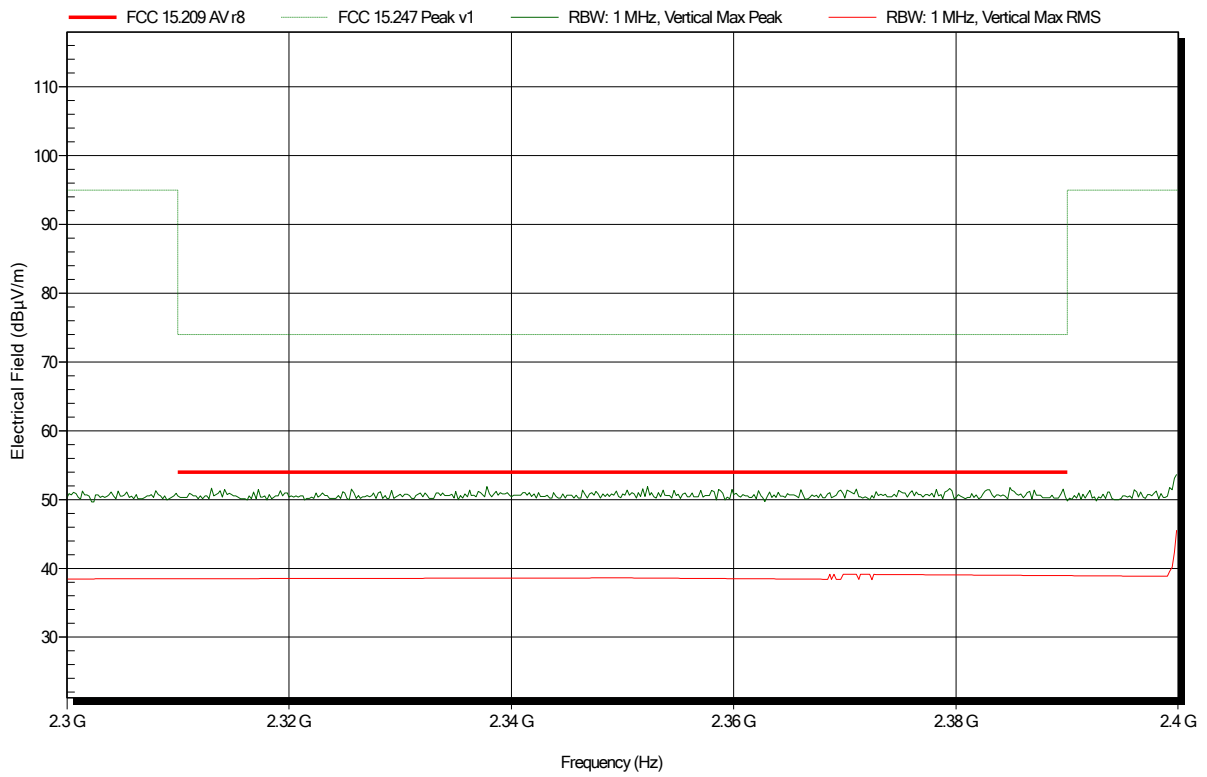


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2402 MHz
 Test Date: 2017-12-01
 Note: lower bandedge

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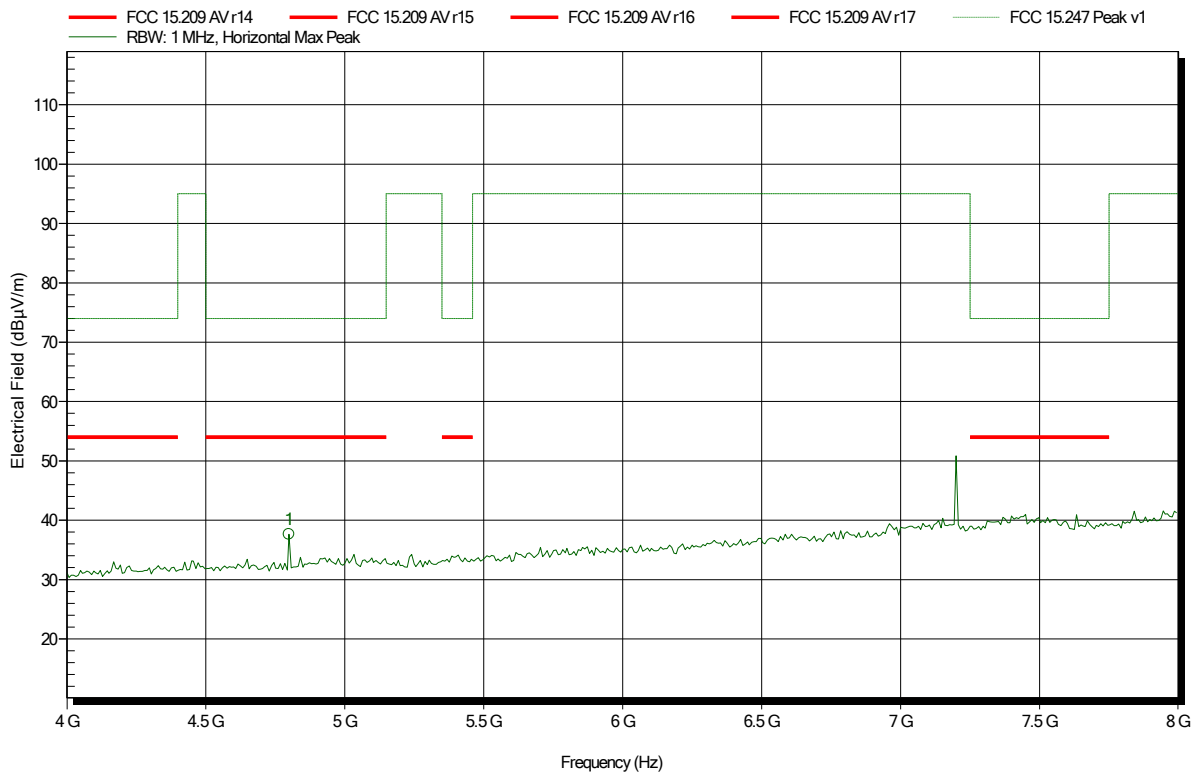


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2402 MHz
 Test Date: 2017-12-01
 Note:

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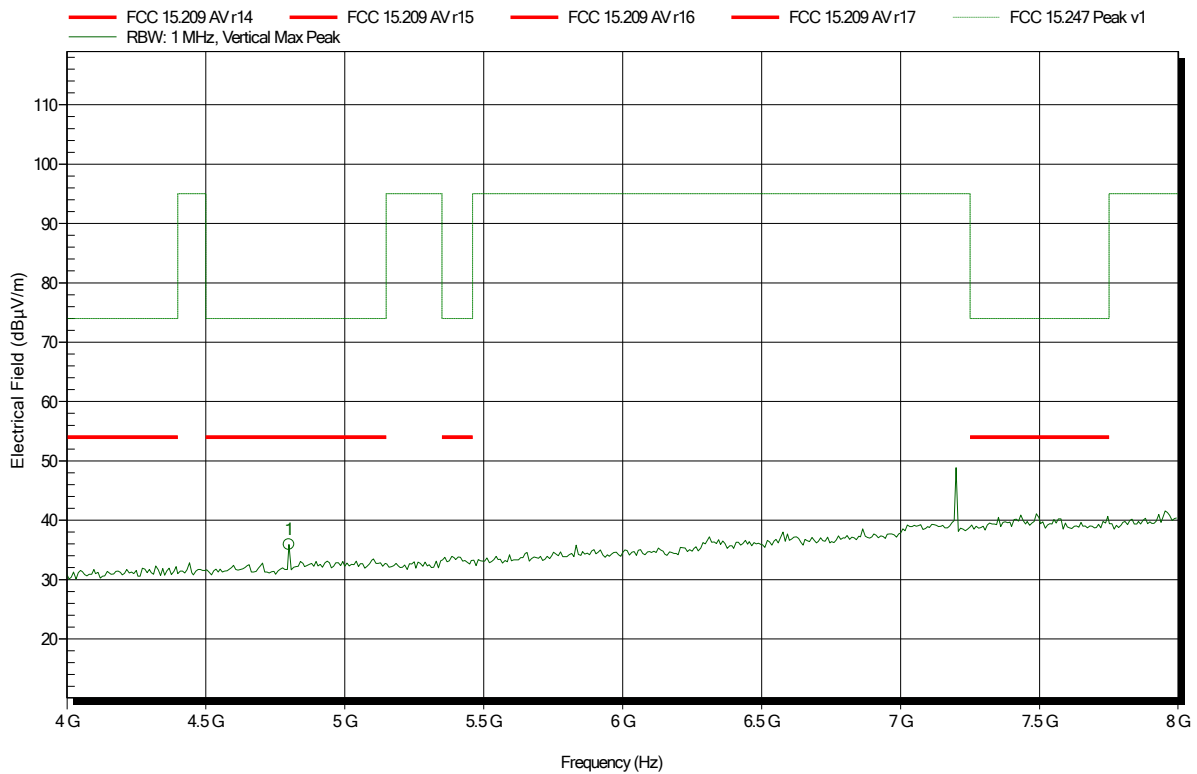
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.8 GHz	37.63 dBµV/m	74 dBµV/m	-36.37 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2402 MHz
 Test Date: 2017-12-01
 Note:

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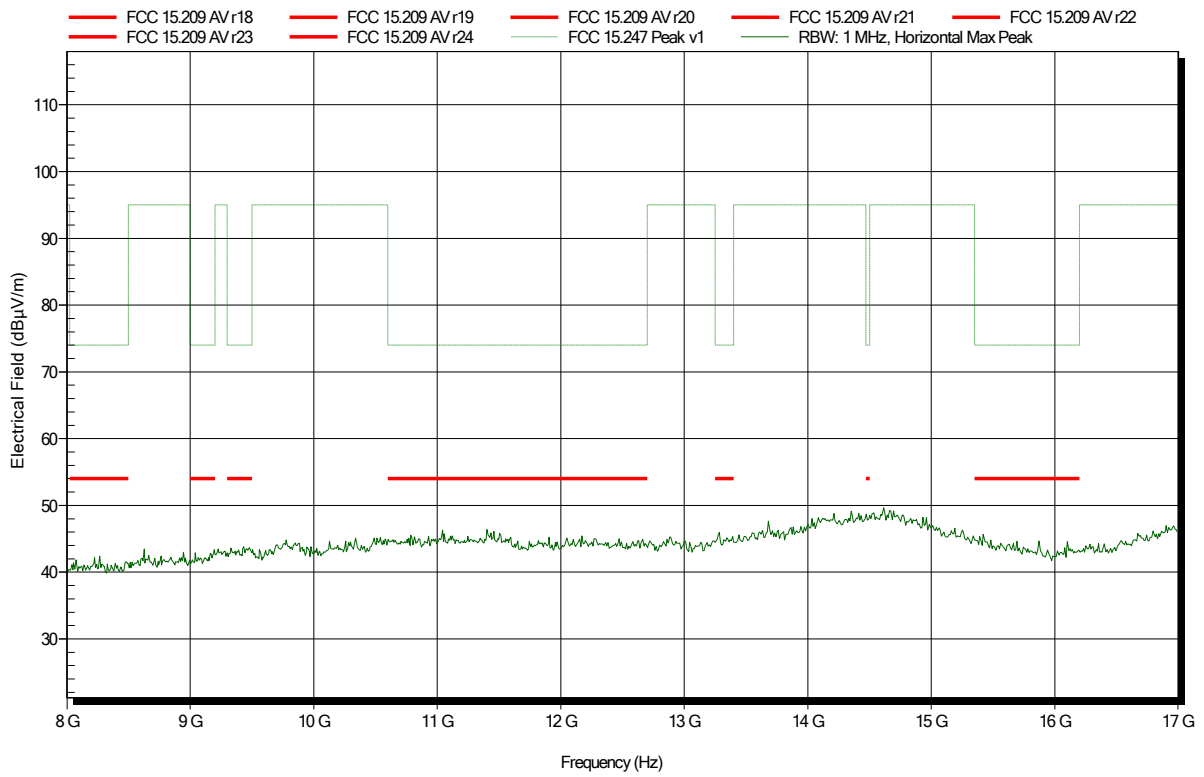
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.8 GHz	35.88 dBµV/m	74 dBµV/m	-38.12 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2402 MHz
 Test Date: 2017-12-01
 Note:

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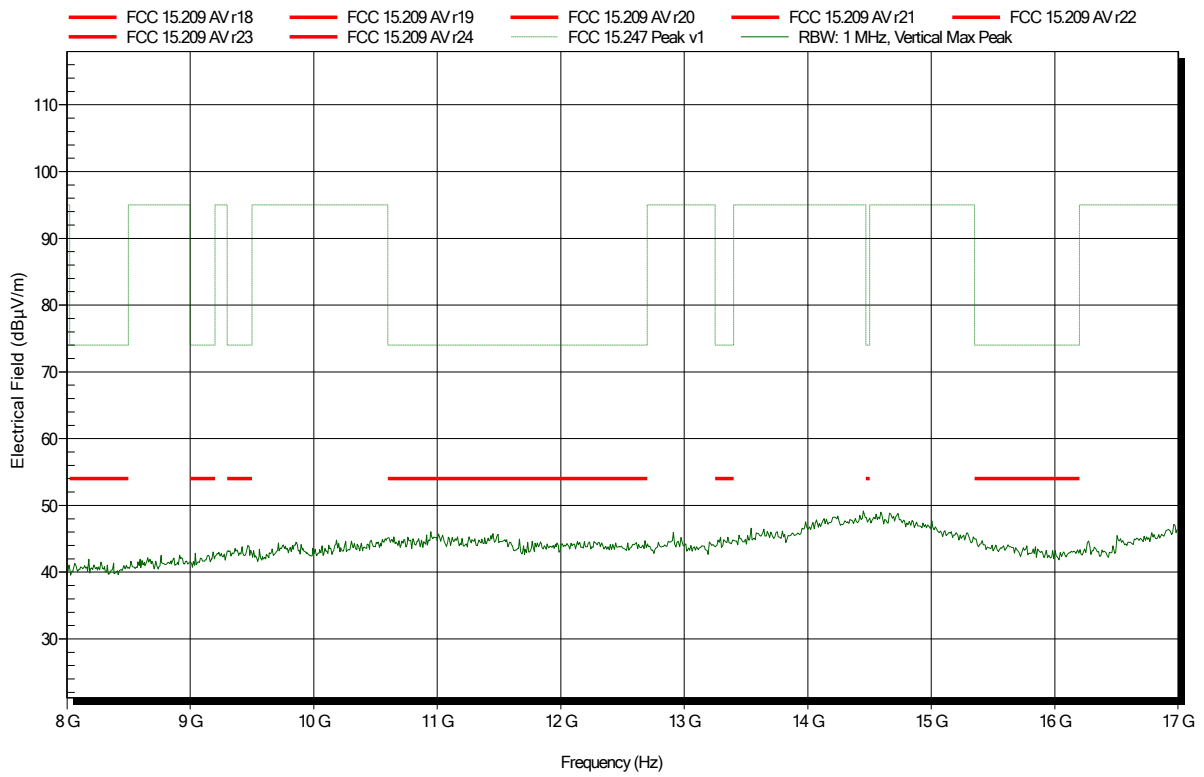


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2402 MHz
 Test Date: 2017-12-01
 Note:

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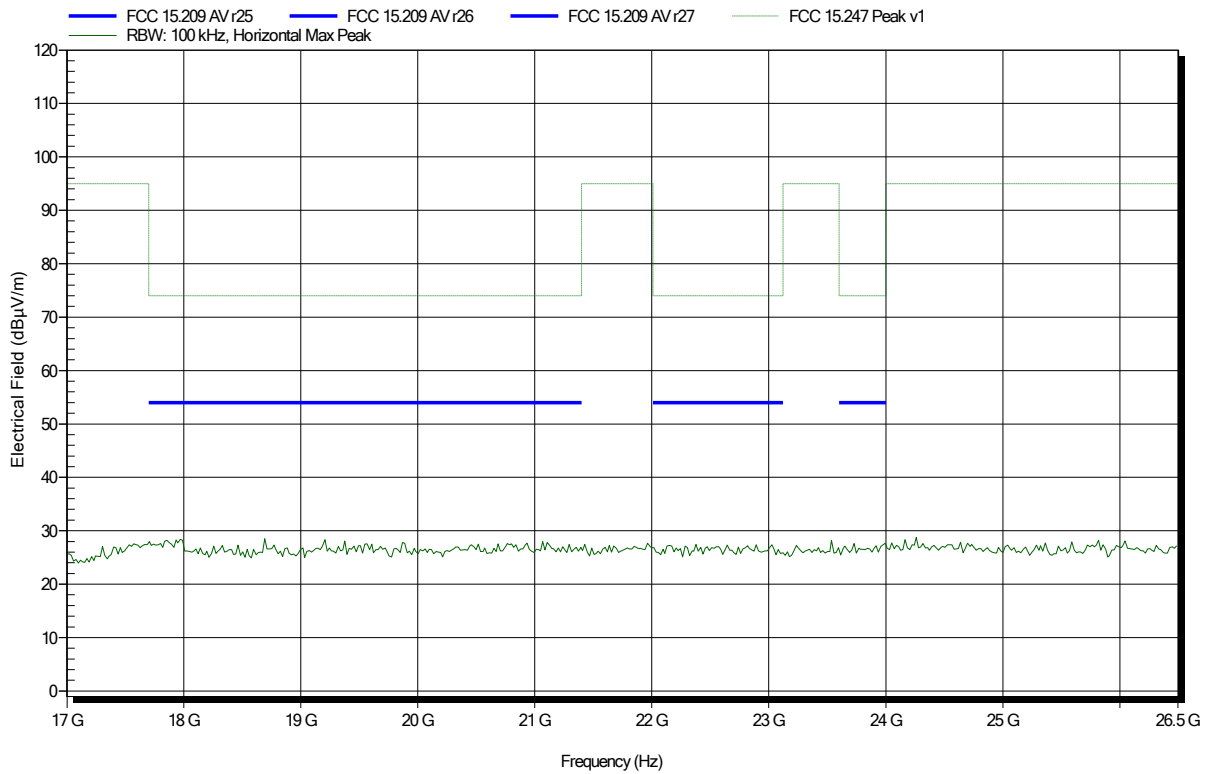
Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.8°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Amplifier Research AT 4560 (old name) / ATH18G40 (new name), Horizontal

Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2402 MHz
 Test Date: 2017-12-01
 Note:

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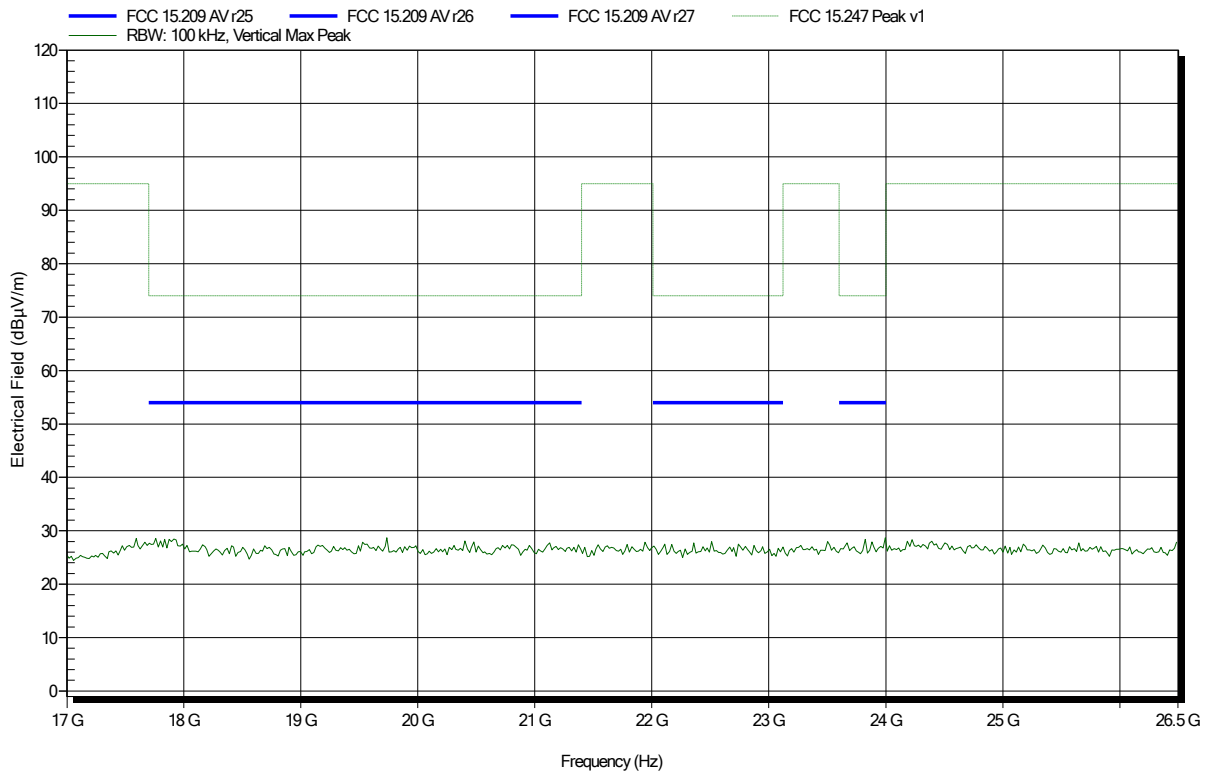
Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.8°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Amplifier Research AT 4560 (old name) / ATH18G40 (new name), Vertical

Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2402 MHz
 Test Date: 2017-12-01
 Note:

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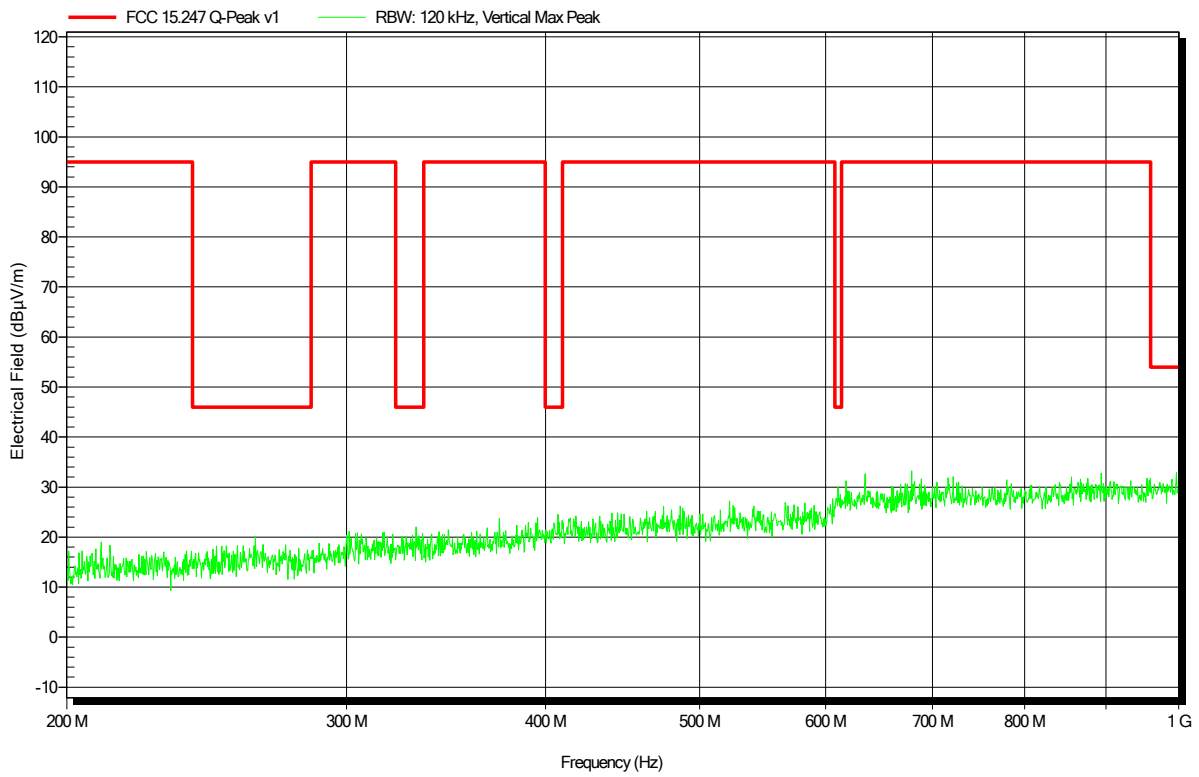


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.6°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3 m
 Mode: TX; BL; 2480 MHz
 Test Date: 2017-11-30
 Note: TT := 0°; MA := 1 m

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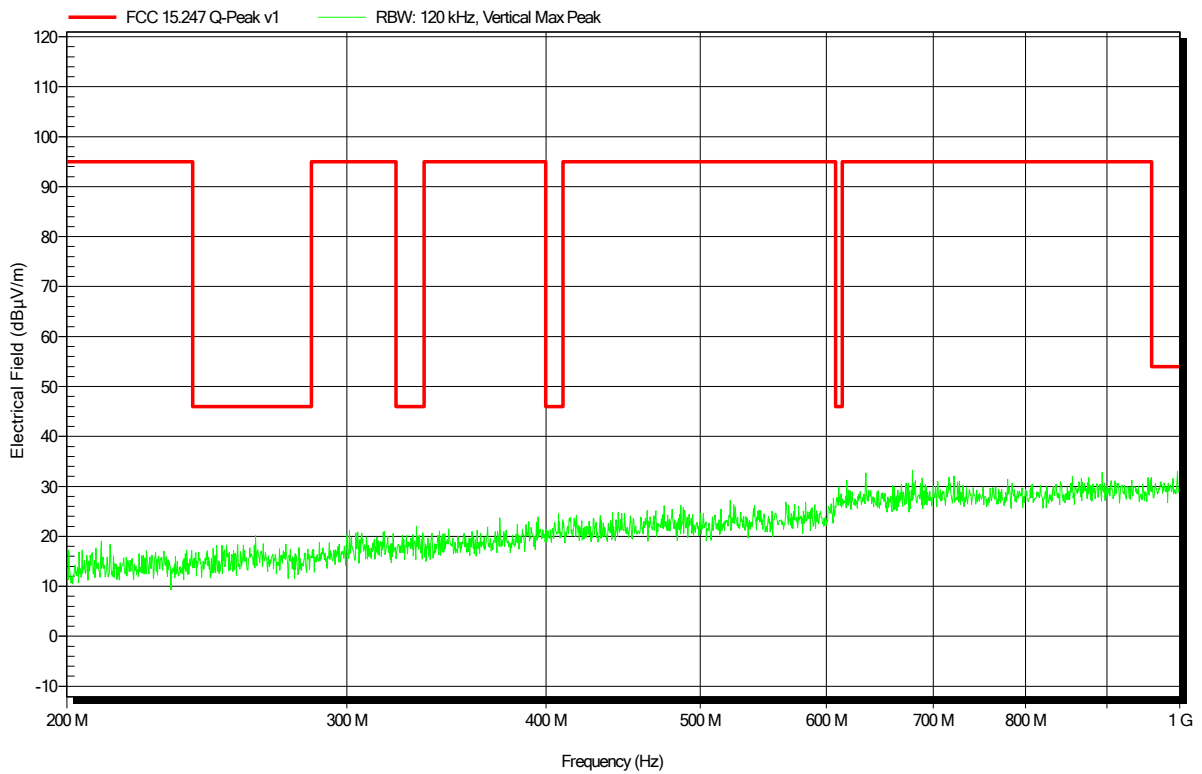


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.6°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3 m
 Mode: TX; BL; 2480 MHz
 Test Date: 2017-11-30
 Note: TT := 0°; MA := 1 m

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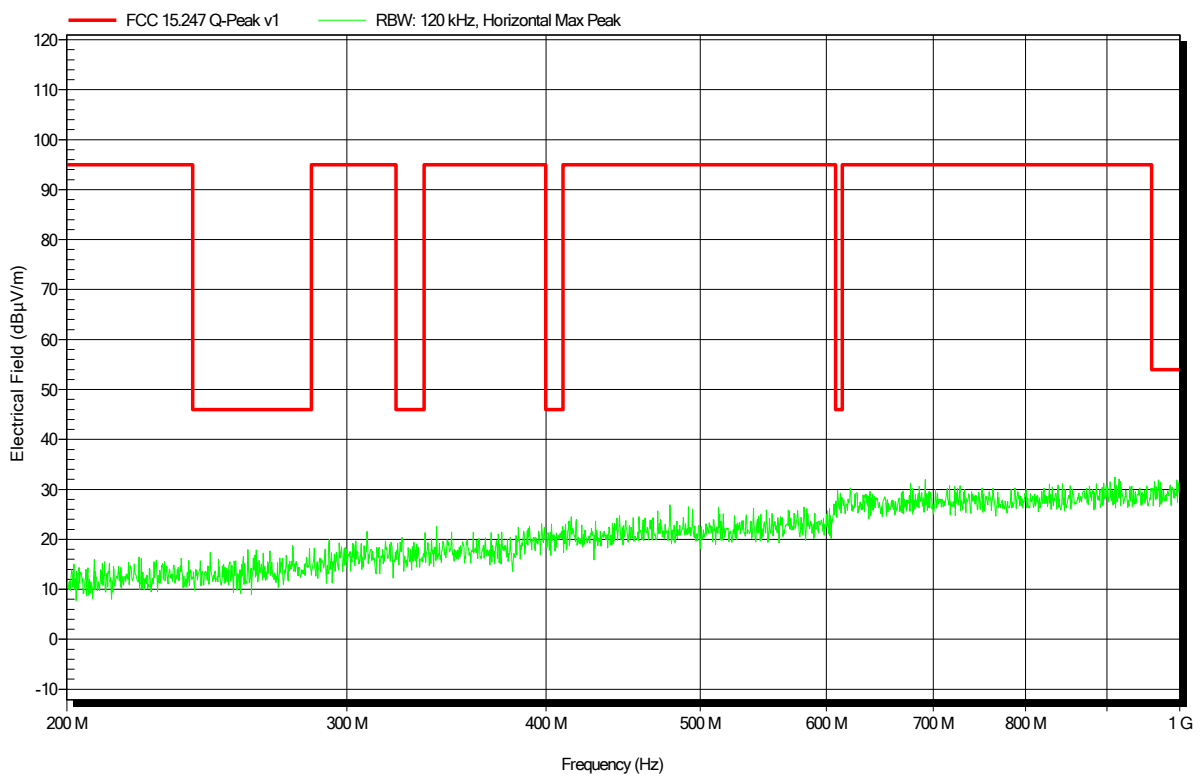


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.6°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3 m
 Mode: TX; BL; 2440 MHz
 Test Date: 2017-11-30
 Note: TT := 0°; MA := 1 m

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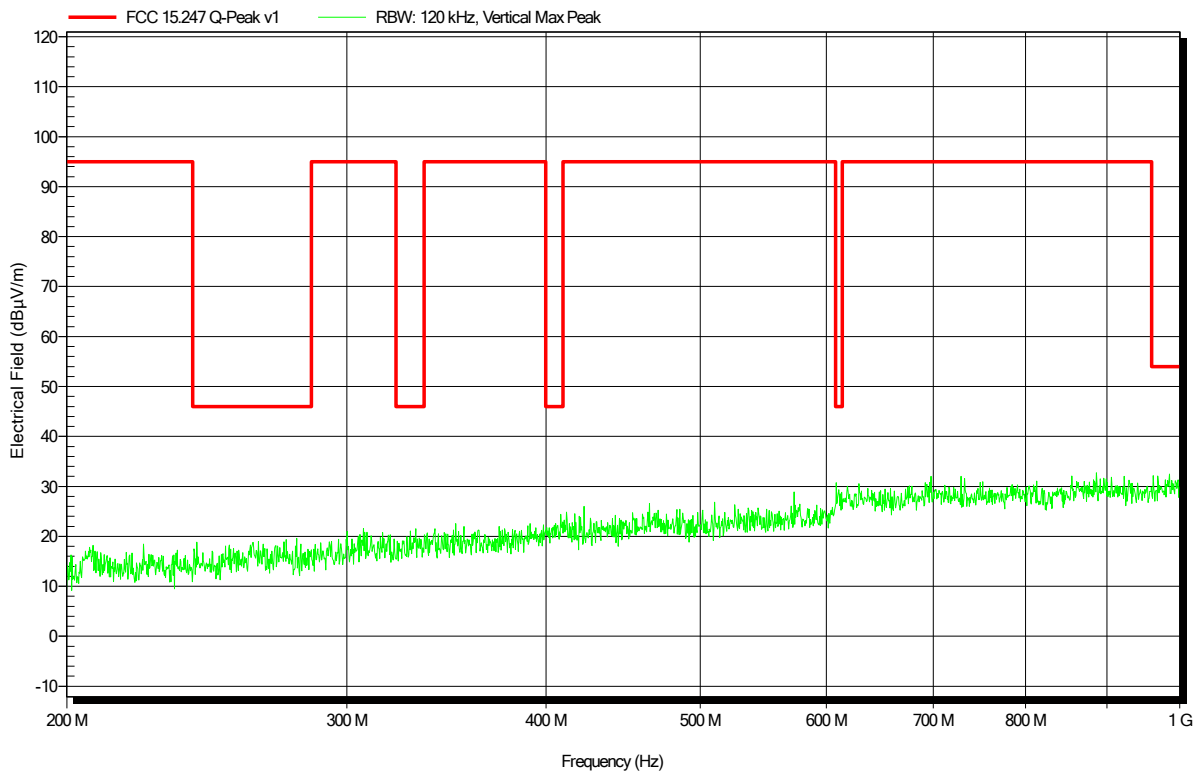


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.6°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3 m
 Mode: TX; BL; 2440 MHz
 Test Date: 2017-11-30
 Note: TT := 0°; MA := 1 m

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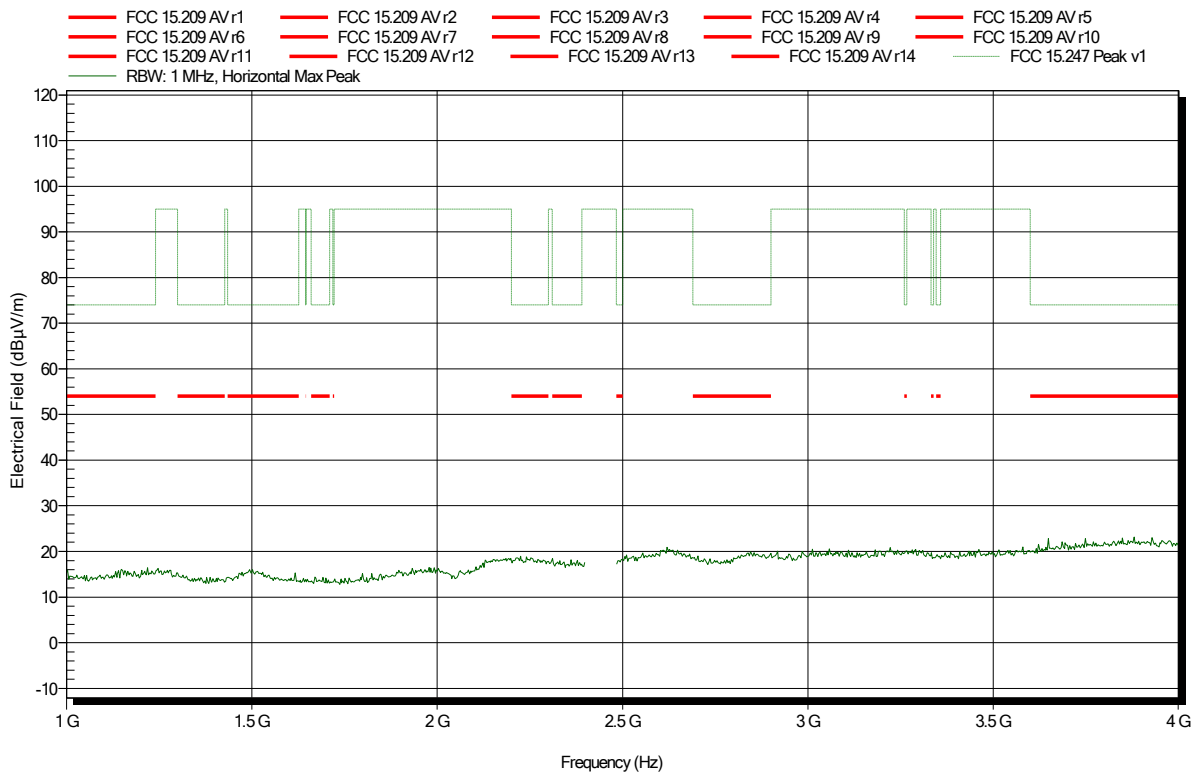


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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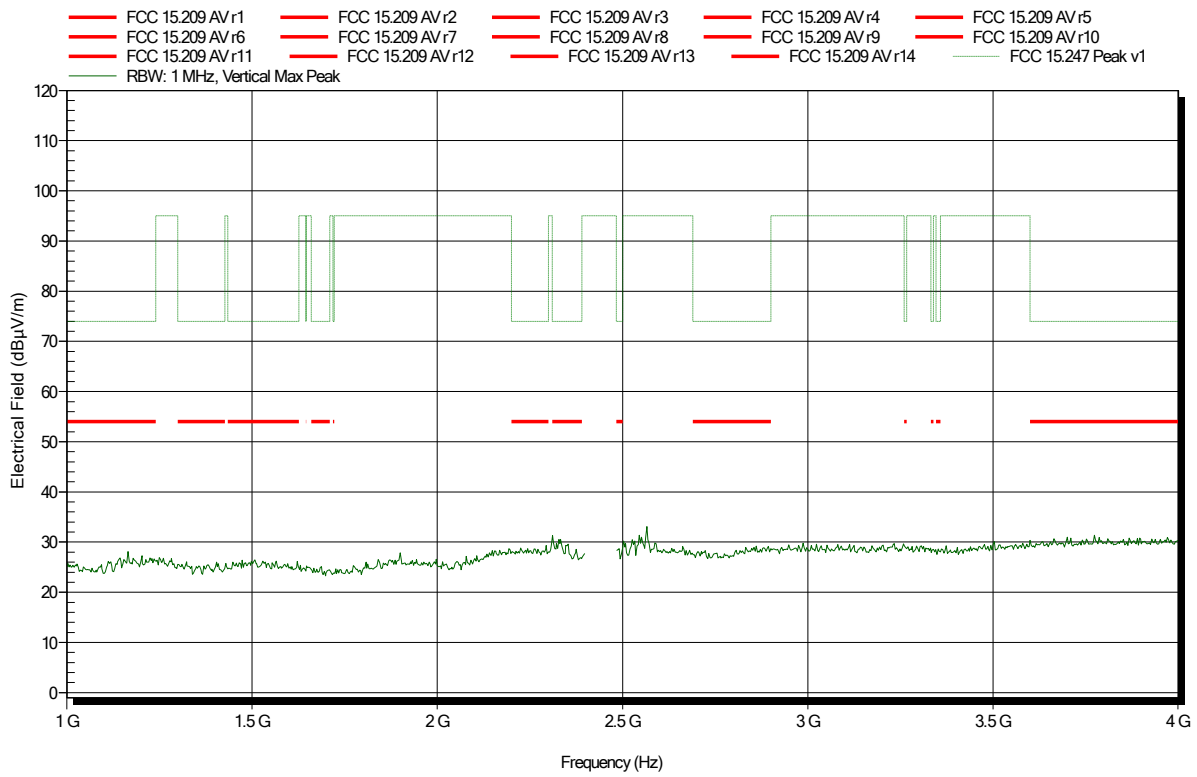


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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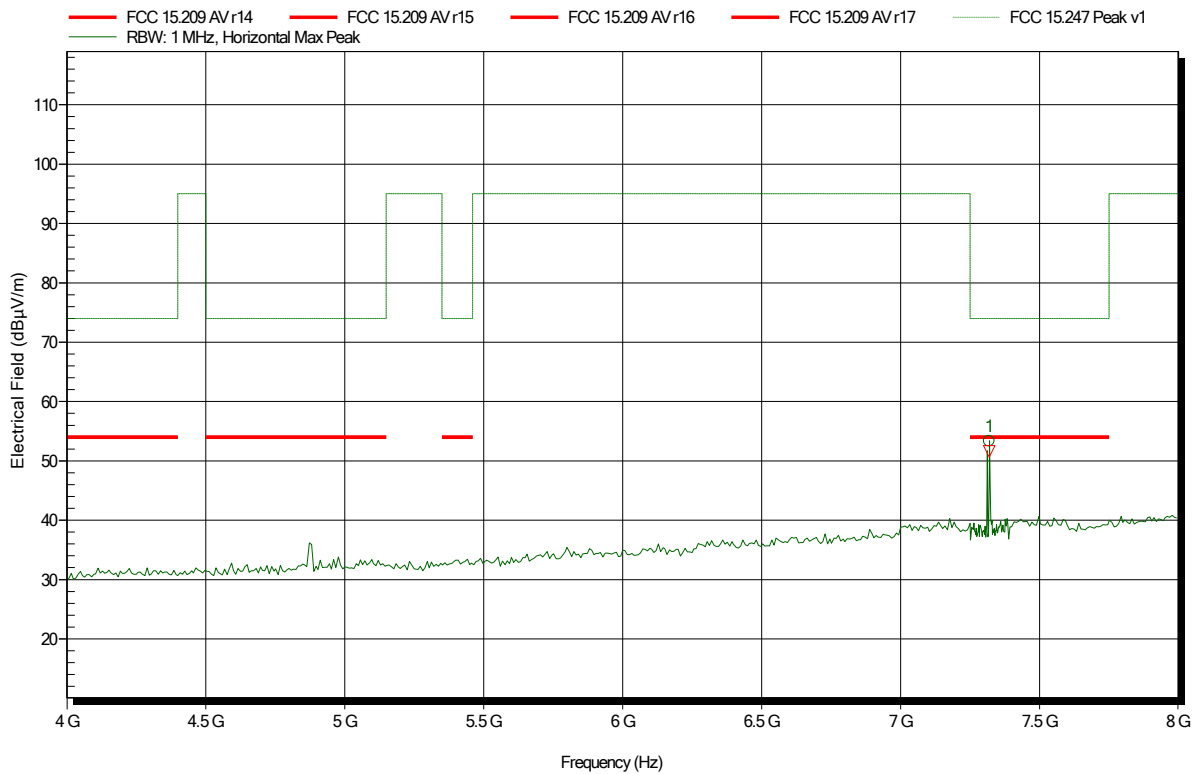


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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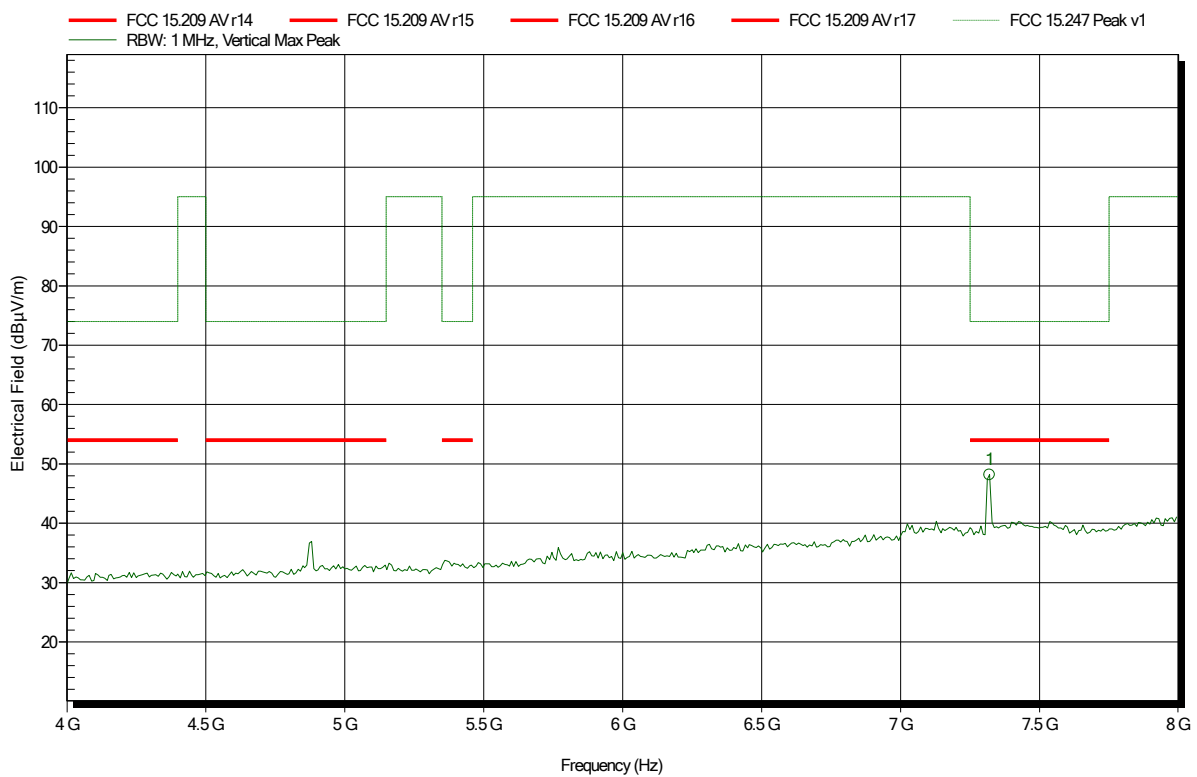
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
7.32 GHz	53.36 dBµV/m	74 dBµV/m	-20.64 dB	Pass
Frequency	RMS	RMS Limit	RMS Difference	RMS Status
7.32 GHz	51.63 dBµV/m	54 dBµV/m	-2.37 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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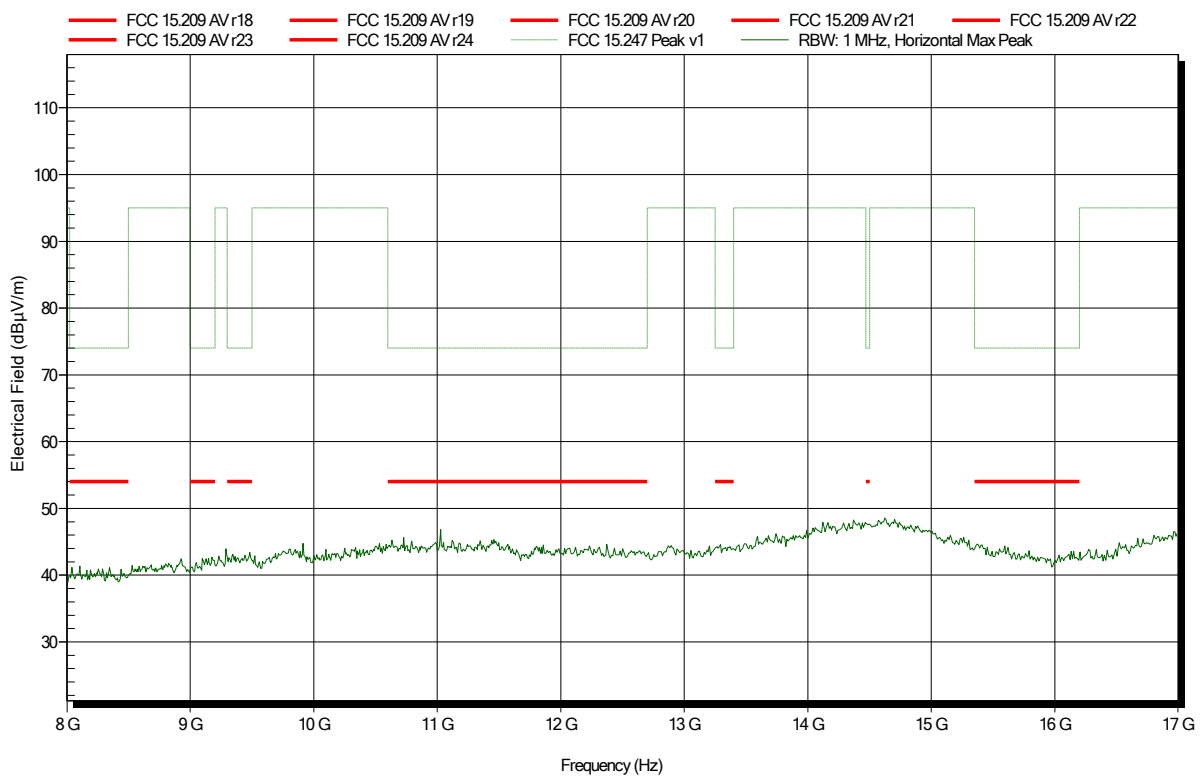
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
7.32 GHz	48.18 dBµV/m	74 dBµV/m	-25.82 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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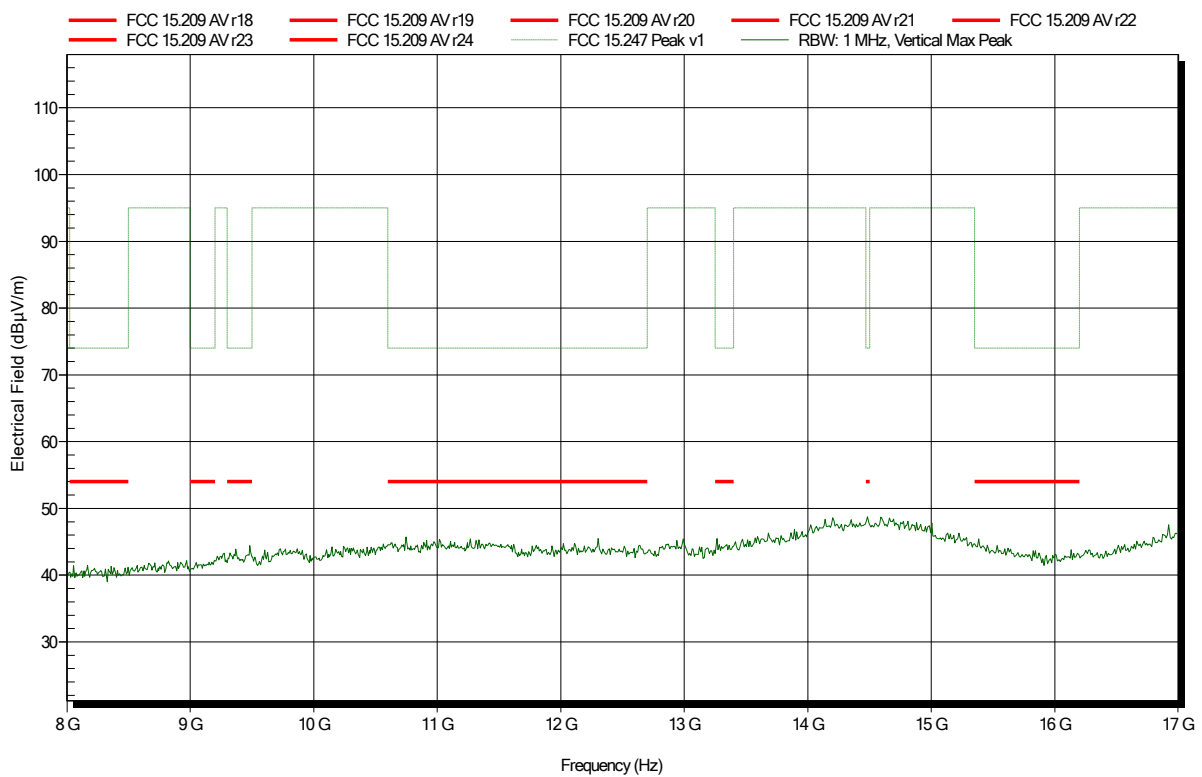


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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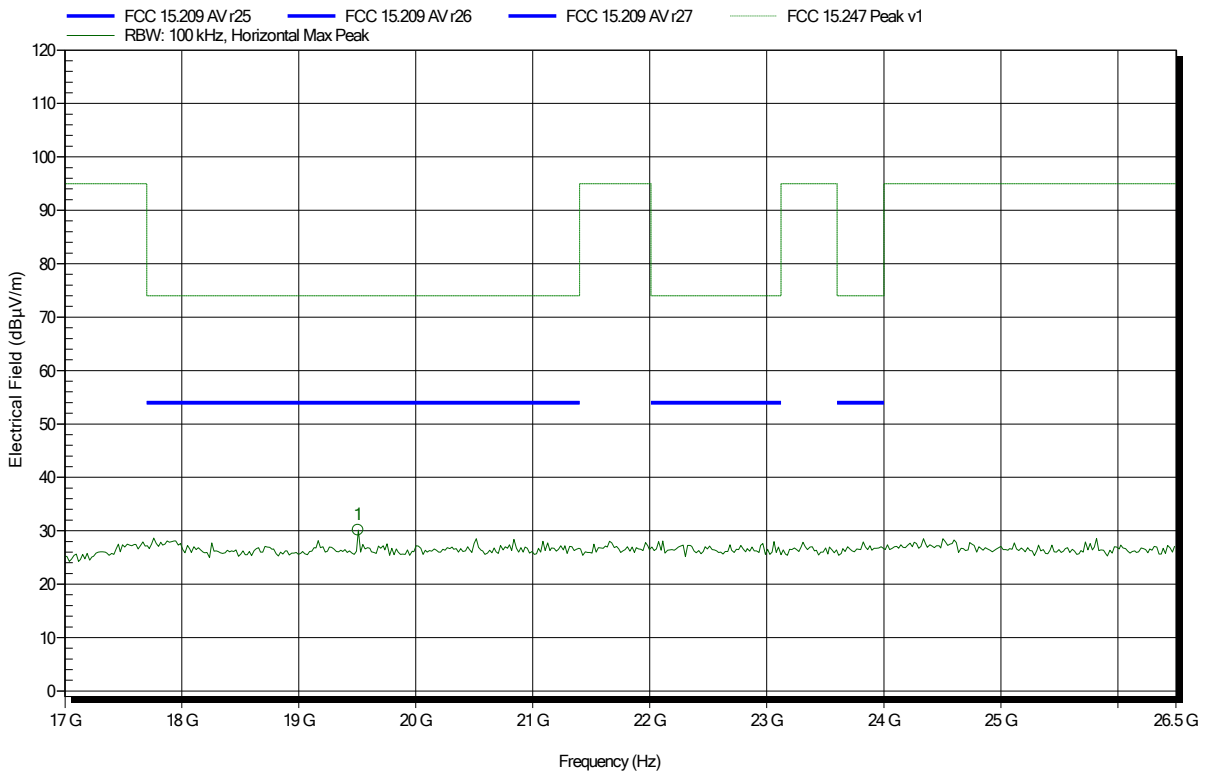
Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.8°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Amplifier Research AT 4560 (old name) / ATH18G40 (new name), Horizontal

Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
19.508 GHz	30.11 dBµV/m	74 dBµV/m	-43.89 dB	Pass

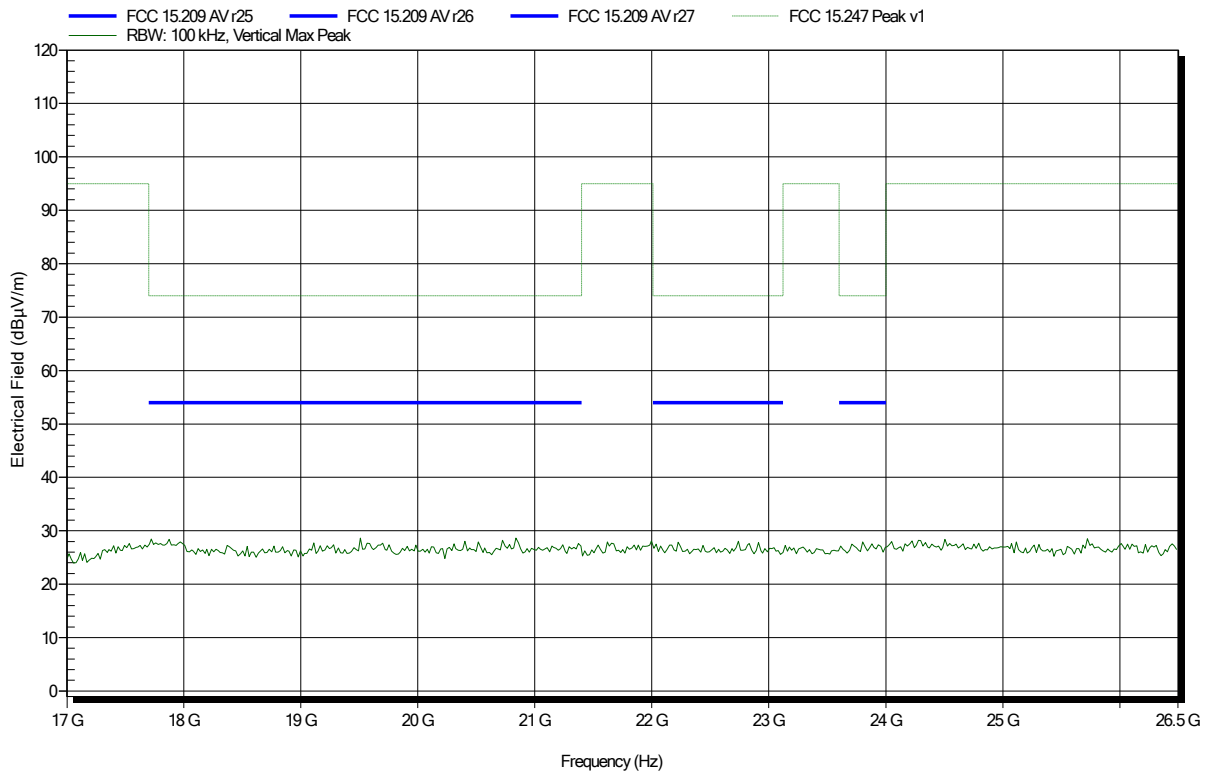
Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.8°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Amplifier Research AT 4560 (old name) / ATH18G40 (new name), Vertical

Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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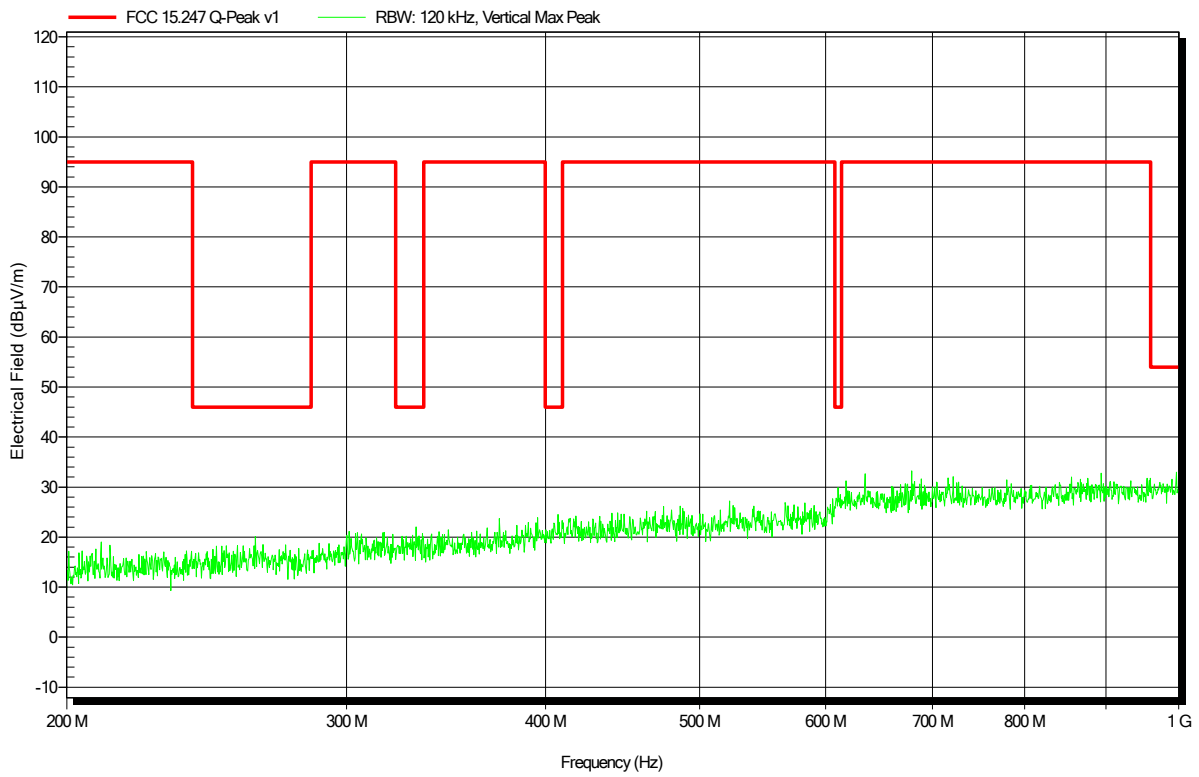


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.6°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3 m
 Mode: TX; BL; 2480 MHz
 Test Date: 2017-11-30
 Note: TT := 0°; MA := 1 m

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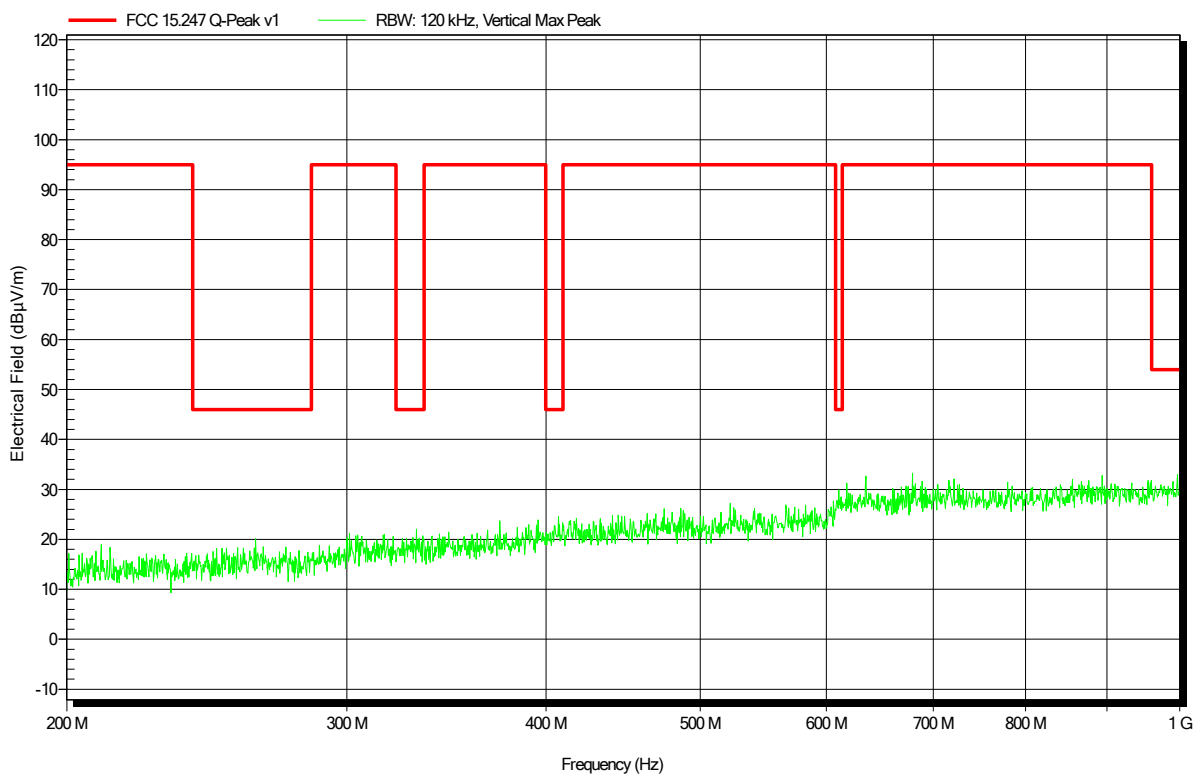


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.6°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3 m
 Mode: TX; BL; 2480 MHz
 Test Date: 2017-11-30
 Note: TT := 0°; MA := 1 m

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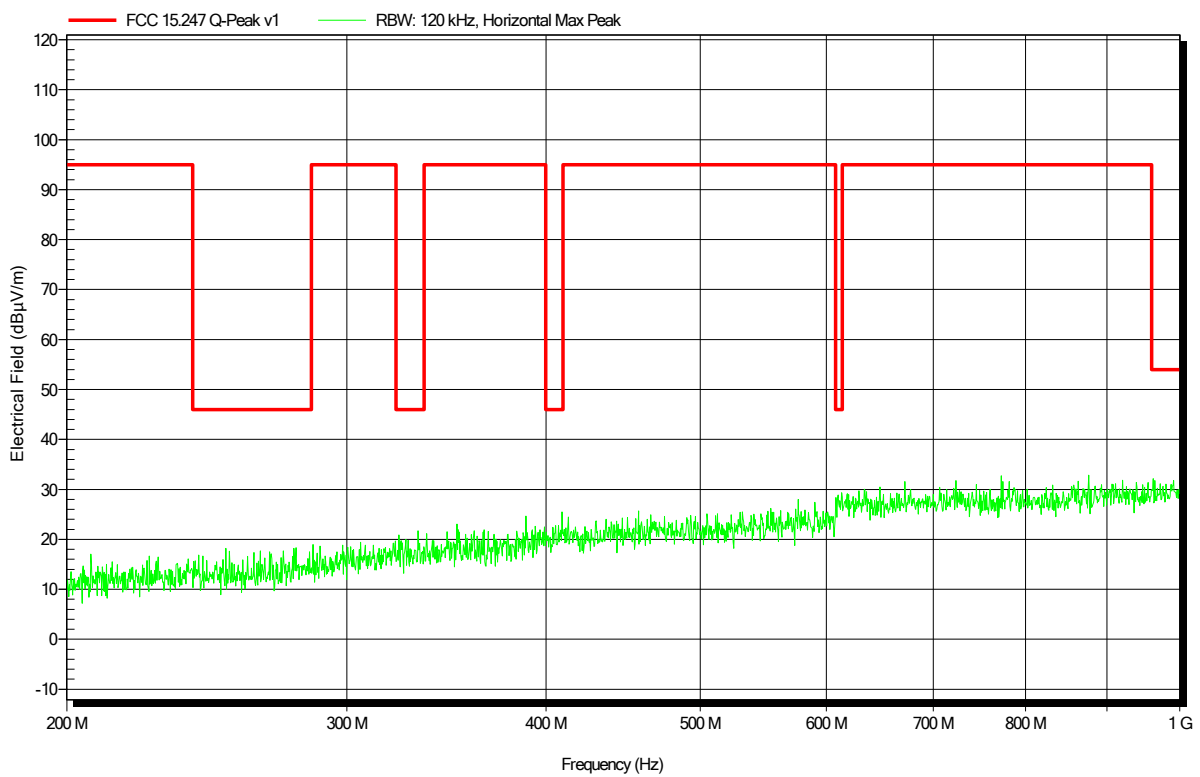


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.6°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3 m
 Mode: TX; BL; 2480 MHz
 Test Date: 2017-11-30
 Note: TT := 0°; MA := 1 m

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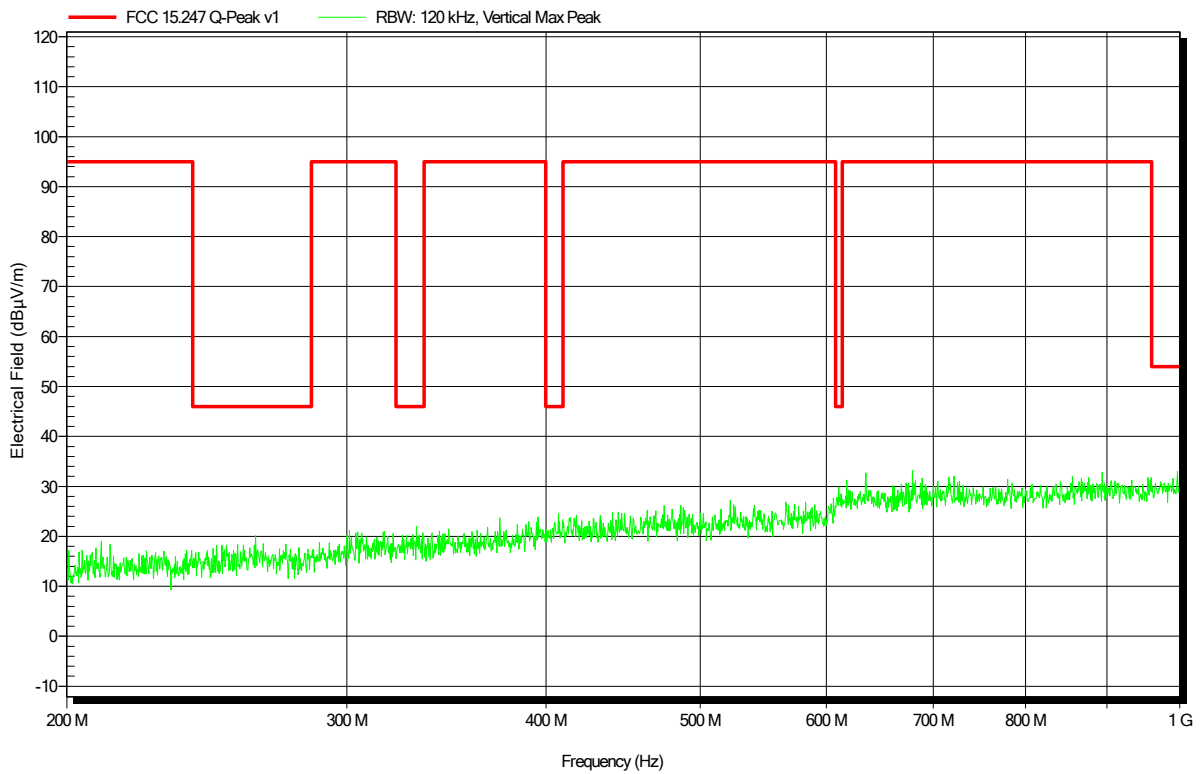


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.6°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3 m
 Mode: TX; BL; 2480 MHz
 Test Date: 2017-11-30
 Note: TT := 0°; MA := 1 m

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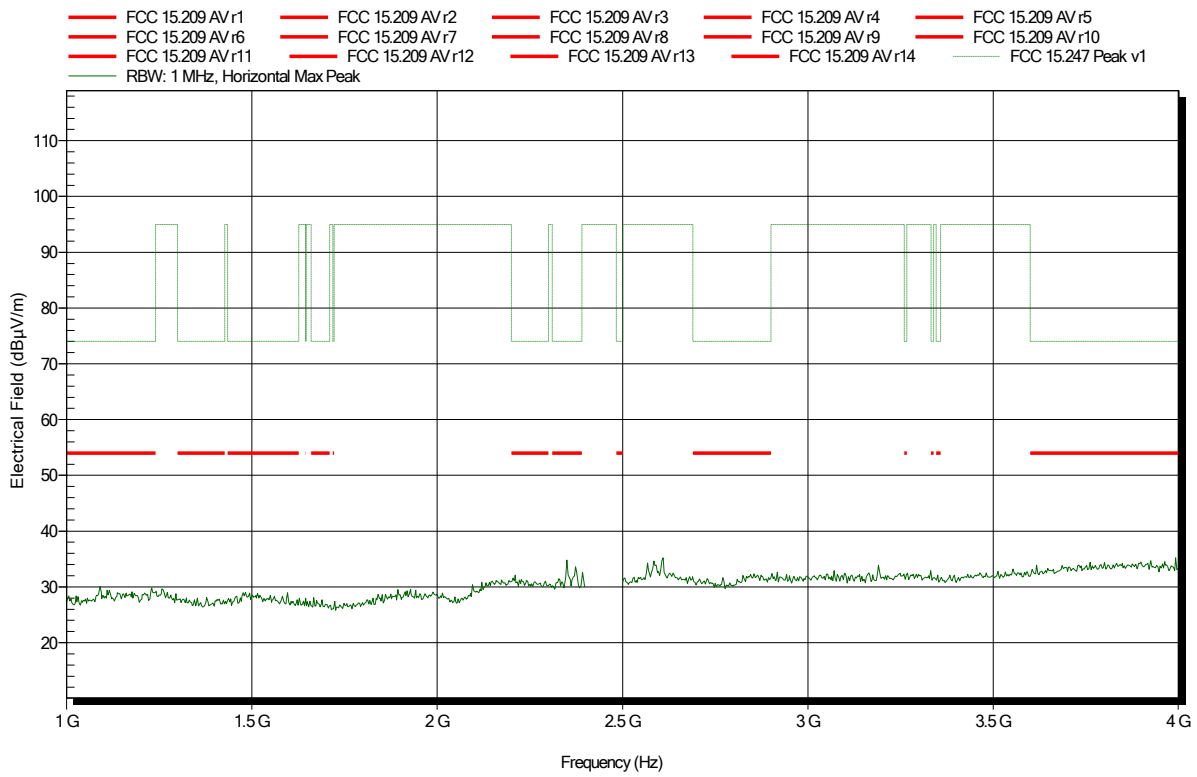


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2480 MHz
 Test Date: 2017-12-01
 Note:

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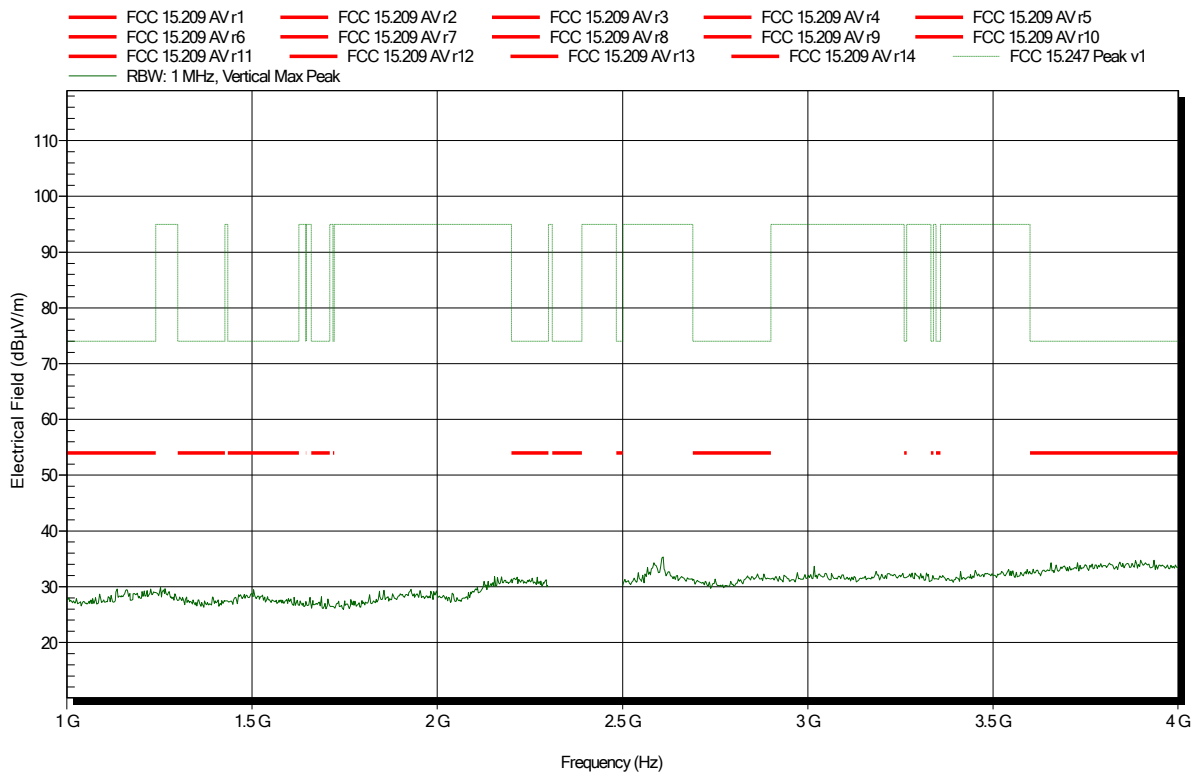


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2480 MHz
 Test Date: 2017-12-01
 Note:

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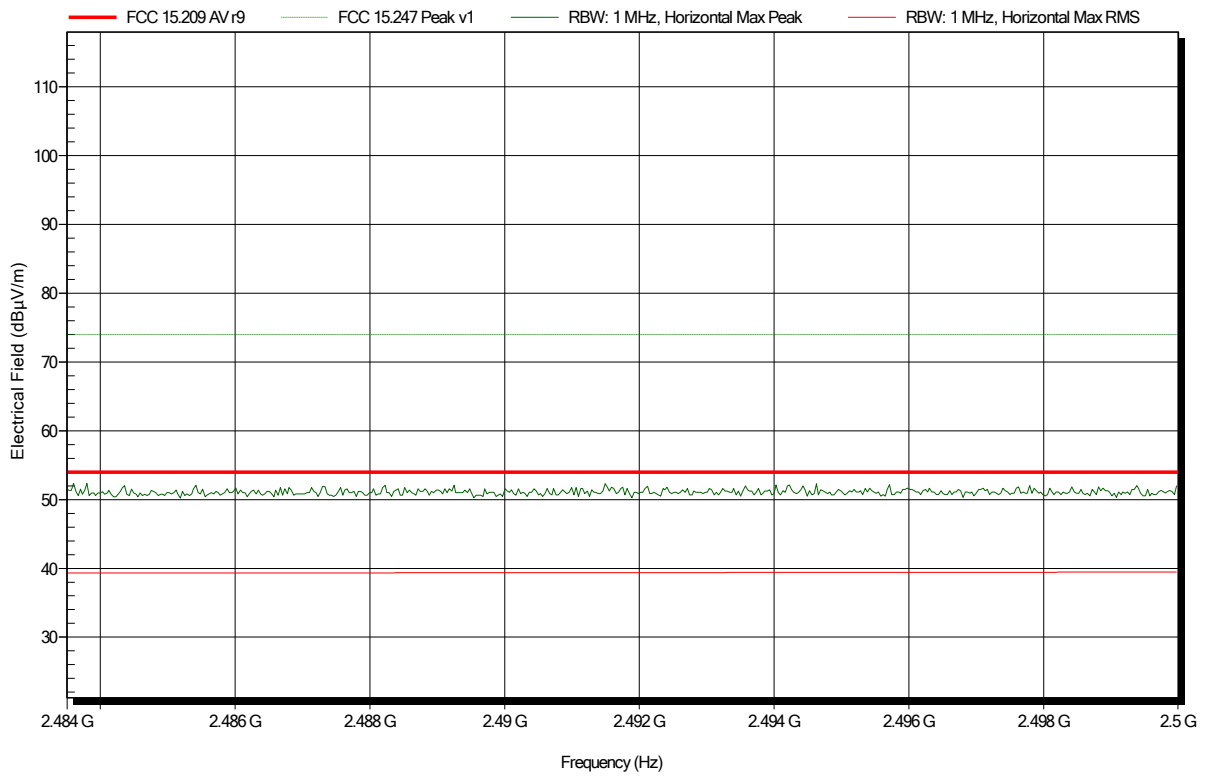


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2480 MHz
 Test Date: 2017-12-01
 Note: upper bandedge

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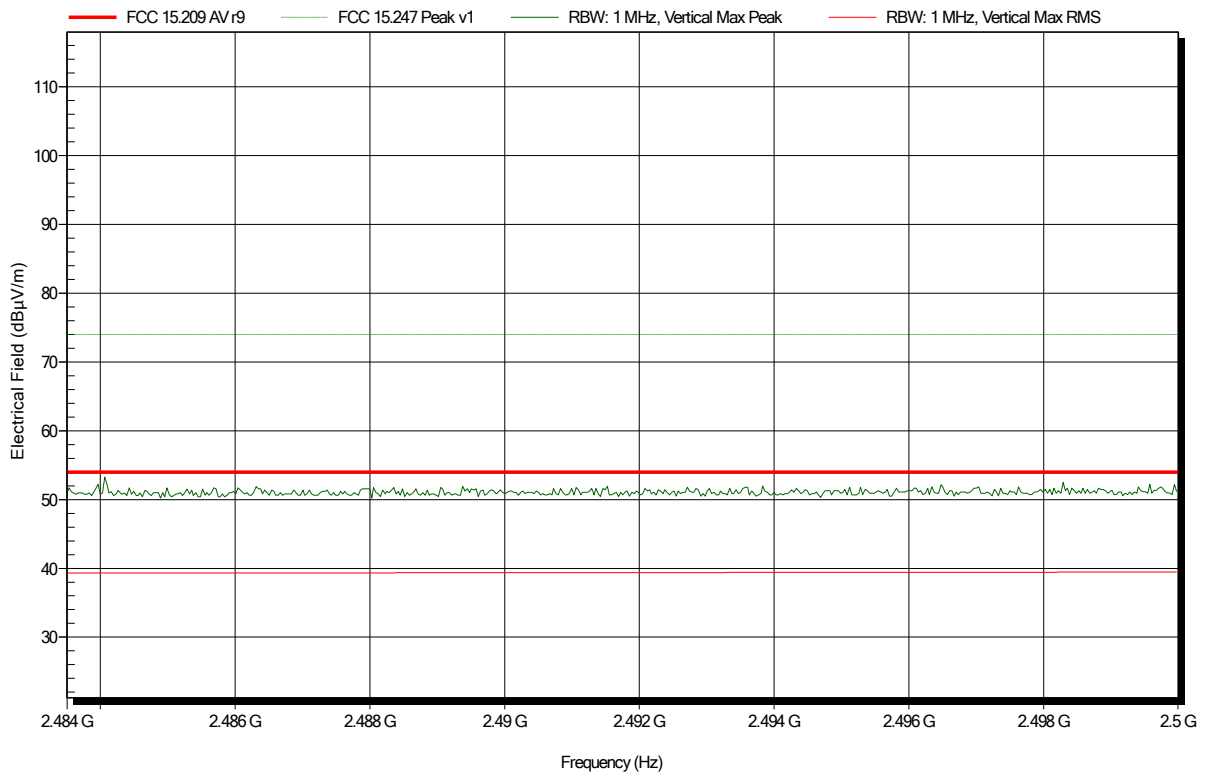


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2480 MHz
 Test Date: 2017-12-01
 Note: upper bandedge

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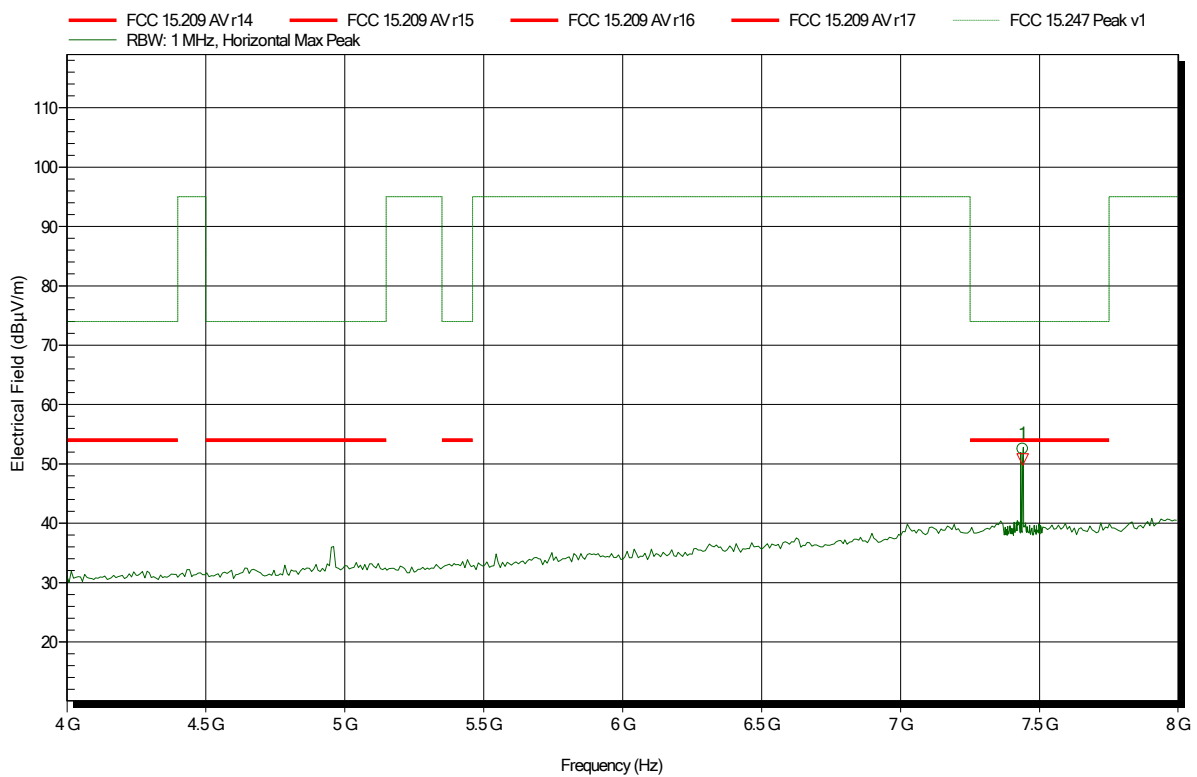


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2480 MHz
 Test Date: 2017-12-01
 Note:

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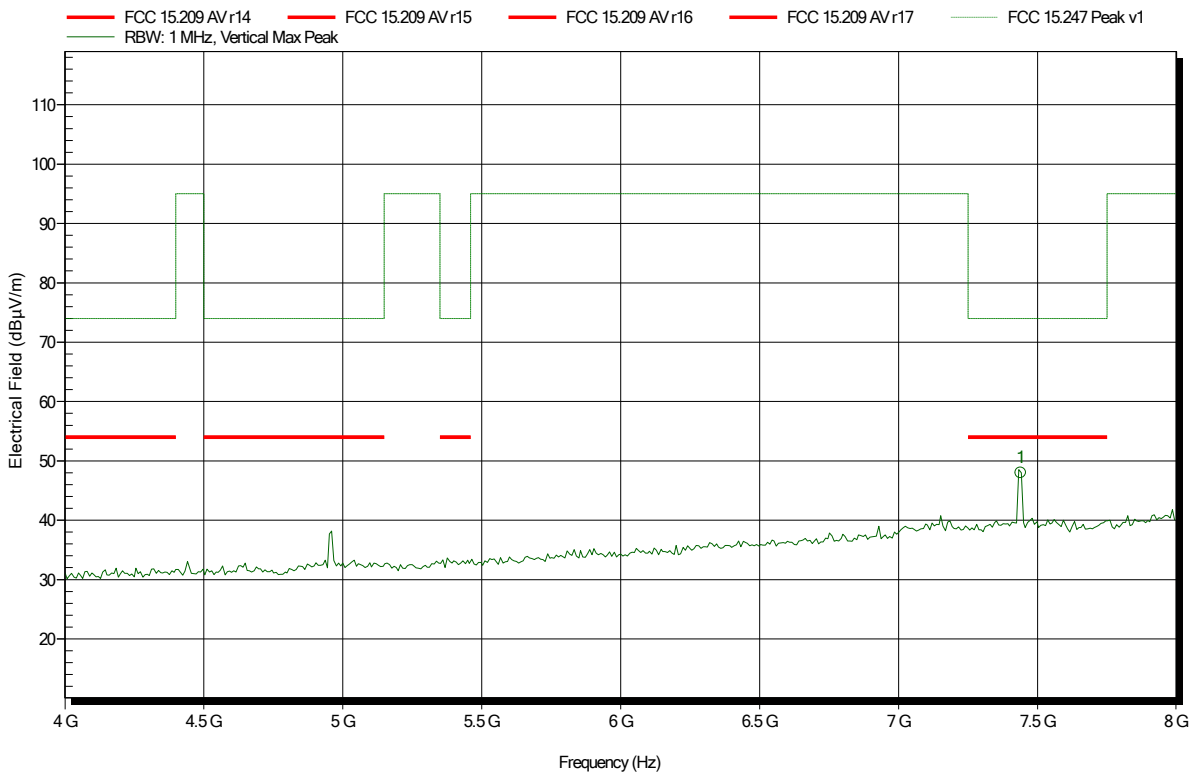
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
7.44 GHz	52.53 dBµV/m	74 dBµV/m	-21.47 dB	Pass
Frequency	RMS	RMS Limit	RMS Difference	RMS Status
7.44 GHz	50.76 dBµV/m	54 dBµV/m	-3.24 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2480 MHz
 Test Date: 2017-12-01
 Note:

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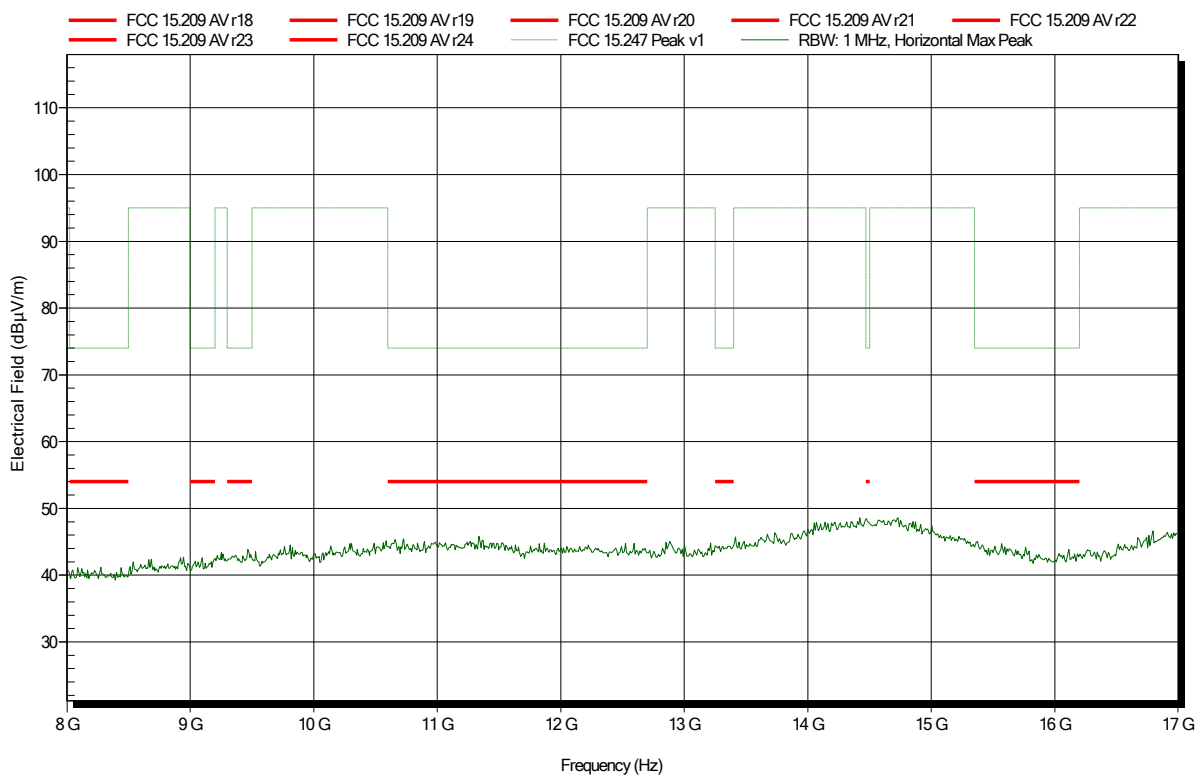
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
7.44 GHz	47.99 dBµV/m	74 dBµV/m	-26.01 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2480 MHz
 Test Date: 2017-12-01
 Note:

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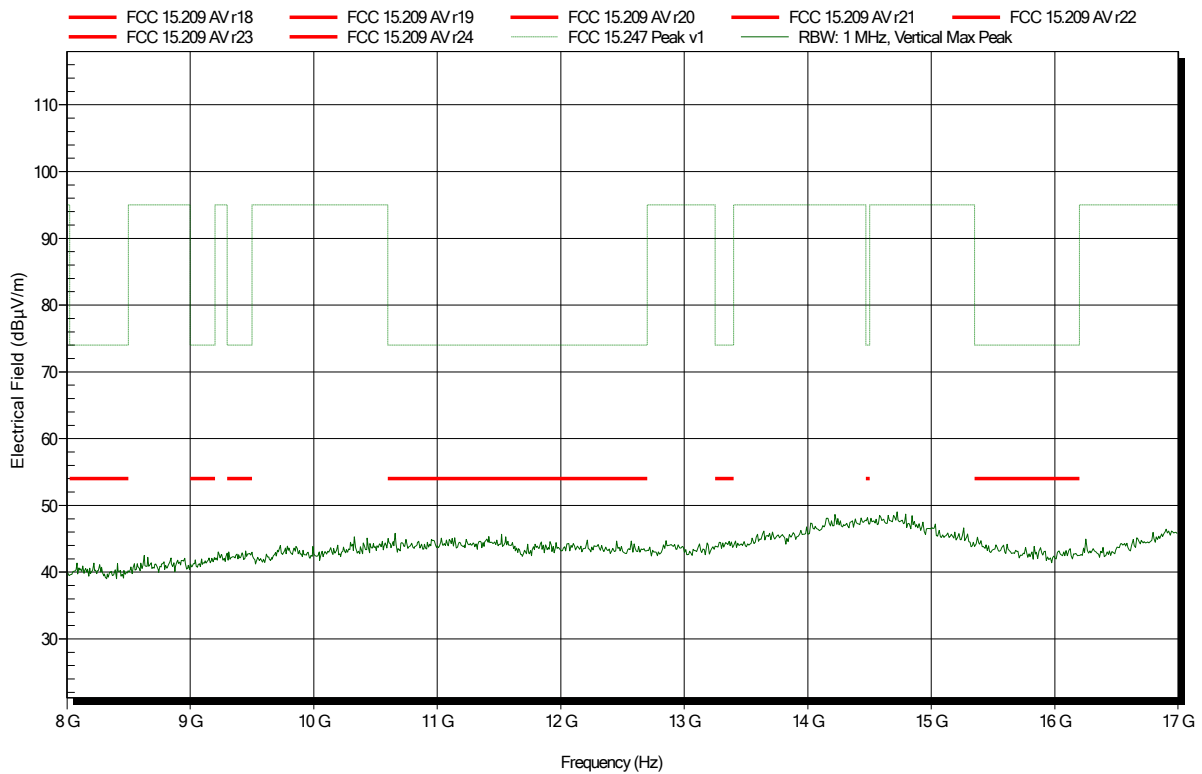


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.5°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2480 MHz
 Test Date: 2017-12-01
 Note:

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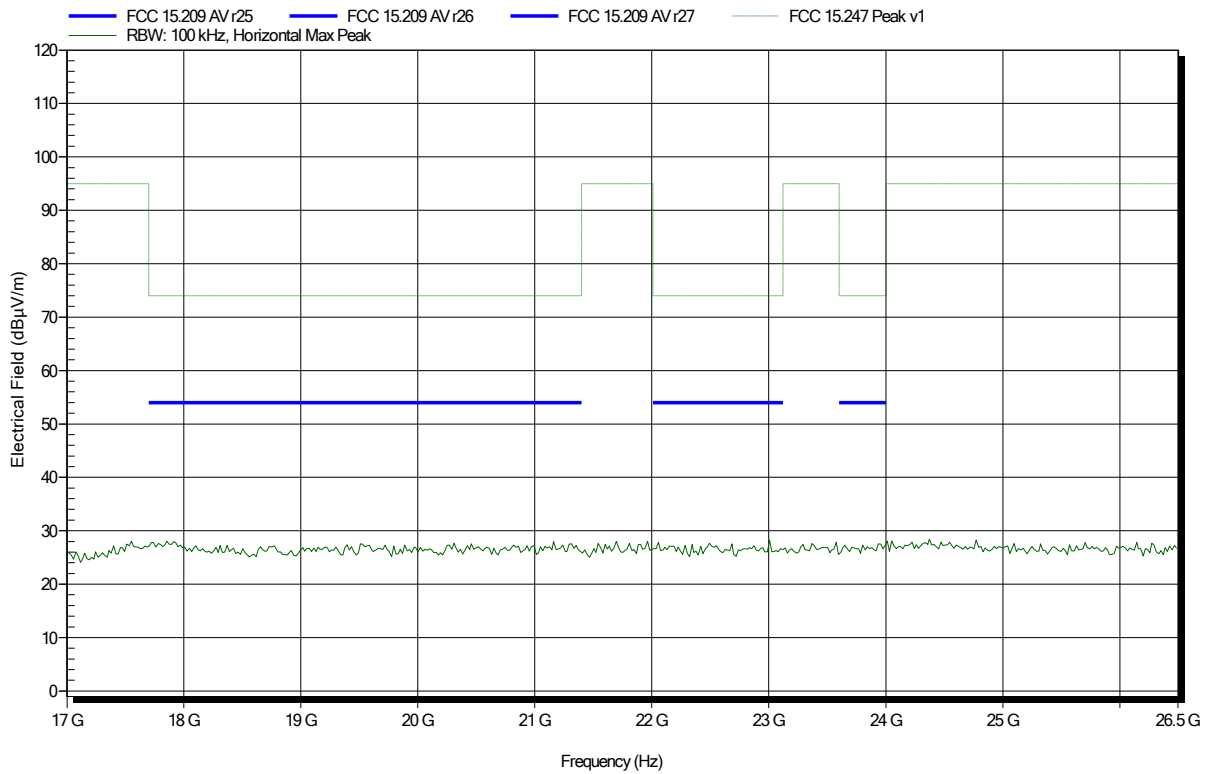
Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.8°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Amplifier Research AT 4560 (old name) / ATH18G40 (new name), Horizontal

Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2480 MHz
 Test Date: 2017-12-01
 Note:

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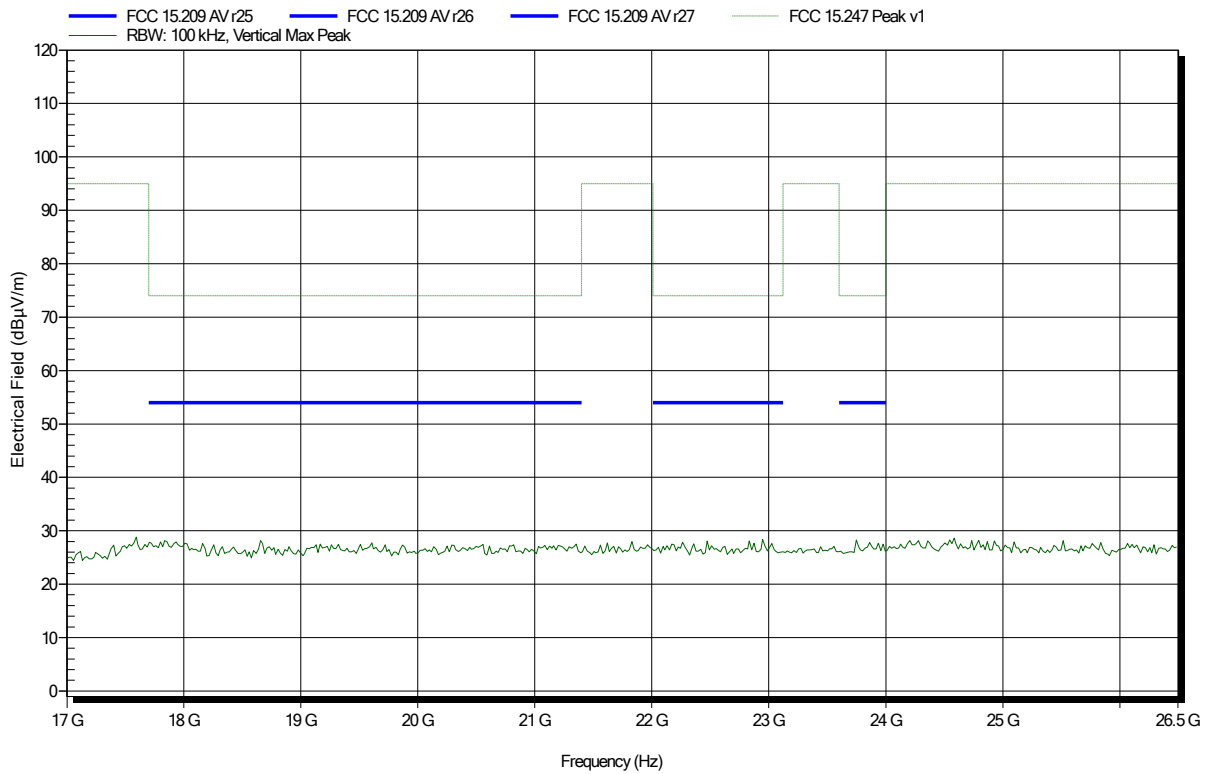
Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.8°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Amplifier Research AT 4560 (old name) / ATH18G40 (new name), Vertical

Measurement distance: 1 m converted to 3m
 Mode: TX; BL, 2480 MHz
 Test Date: 2017-12-01
 Note:

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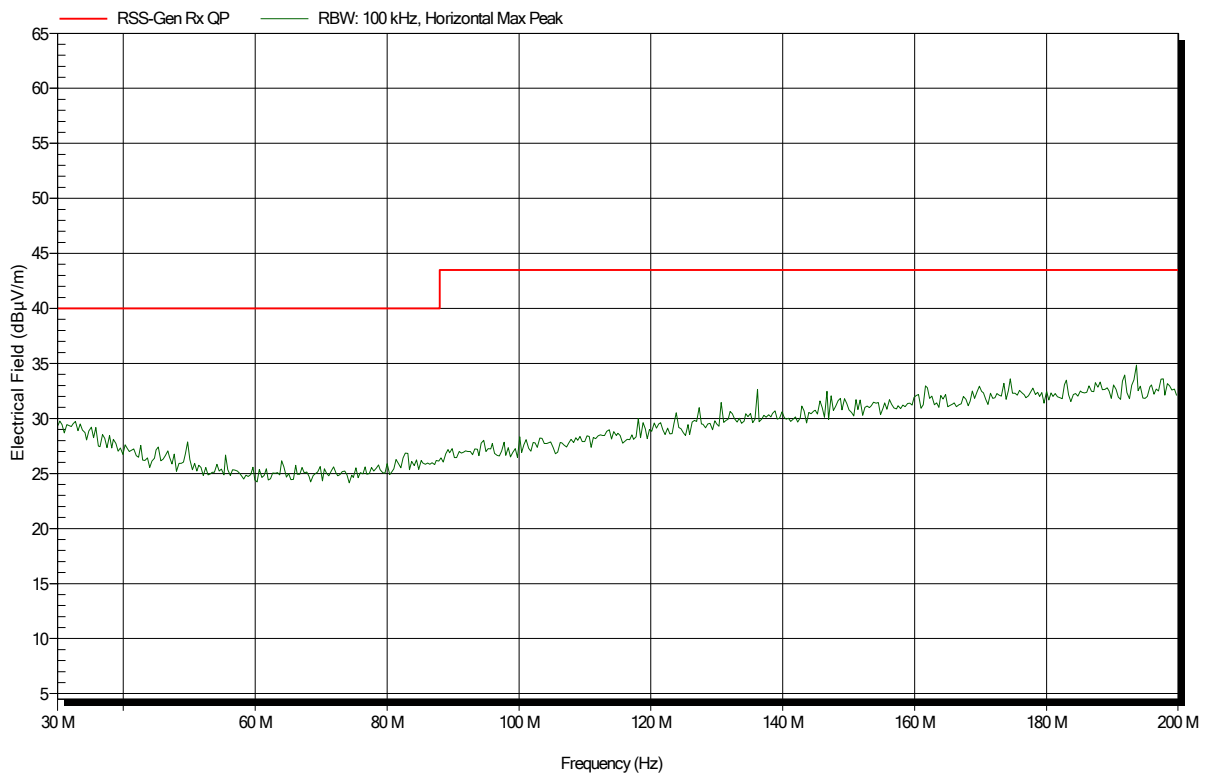
ANNEX B Receiver spurious emissions

Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.6°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3 m
 Mode: RX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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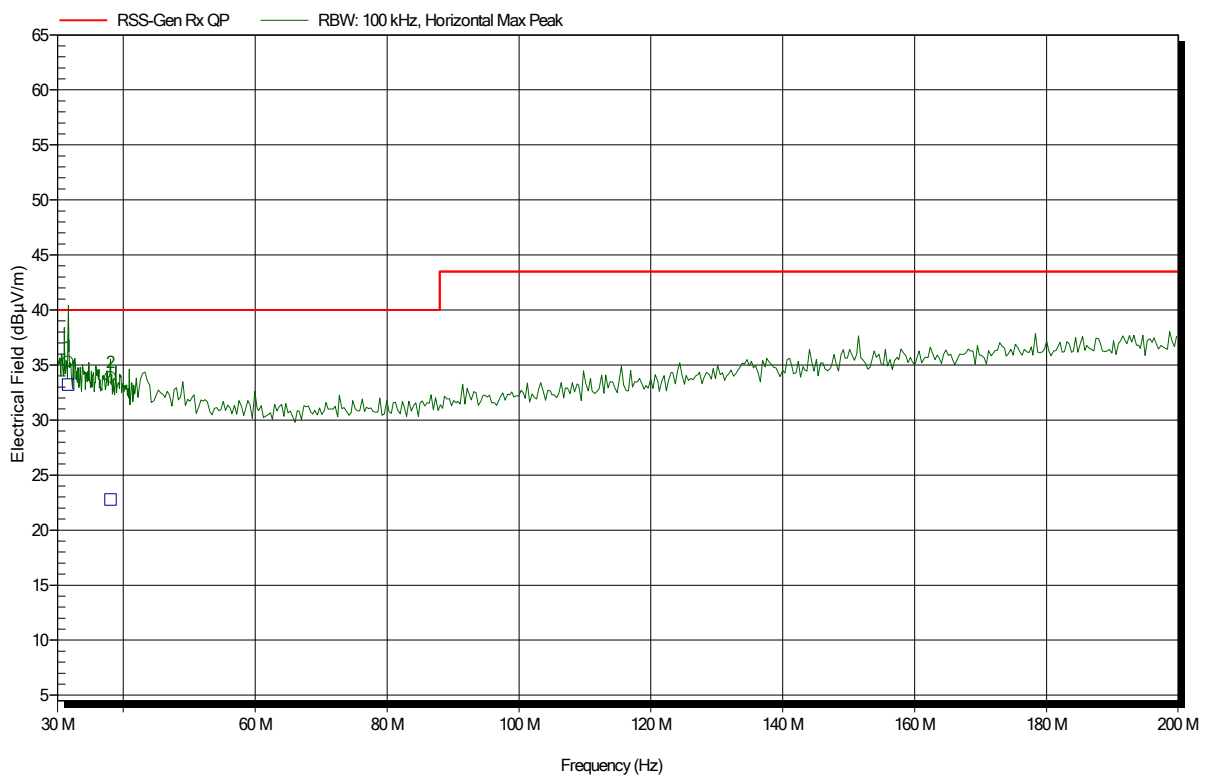


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.6°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3 m
 Mode: RX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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Frequency	Peak	Peak Limit	Peak Difference	Status
31.624 MHz	35.3 dBµV/m	40 dBµV/m	-4.7 dB	Pass
38.033 MHz	33.89 dBµV/m	40 dBµV/m	-6.11 dB	Pass

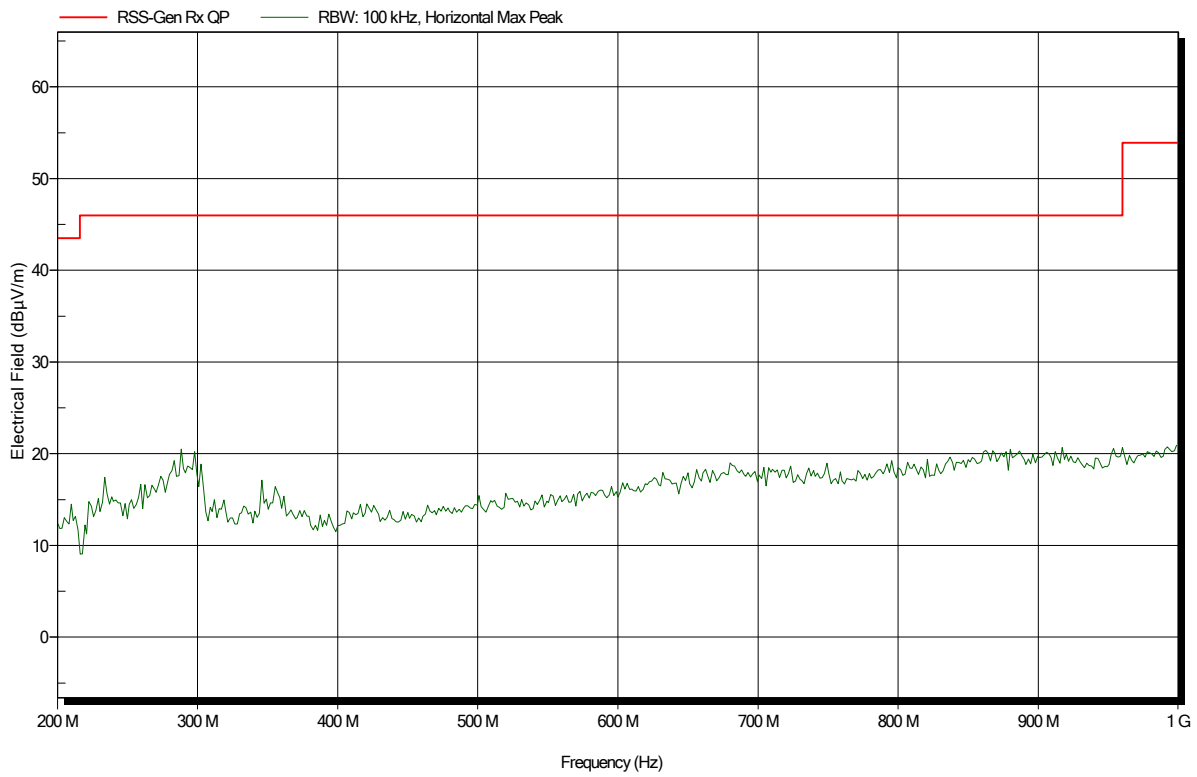
Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
31.624 MHz	33.24 dBµV/m	40 dBµV/m	-6.76 dB	Pass
38.033 MHz	22.78 dBµV/m	40 dBµV/m	-17.22 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.6°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3 m
 Mode: RX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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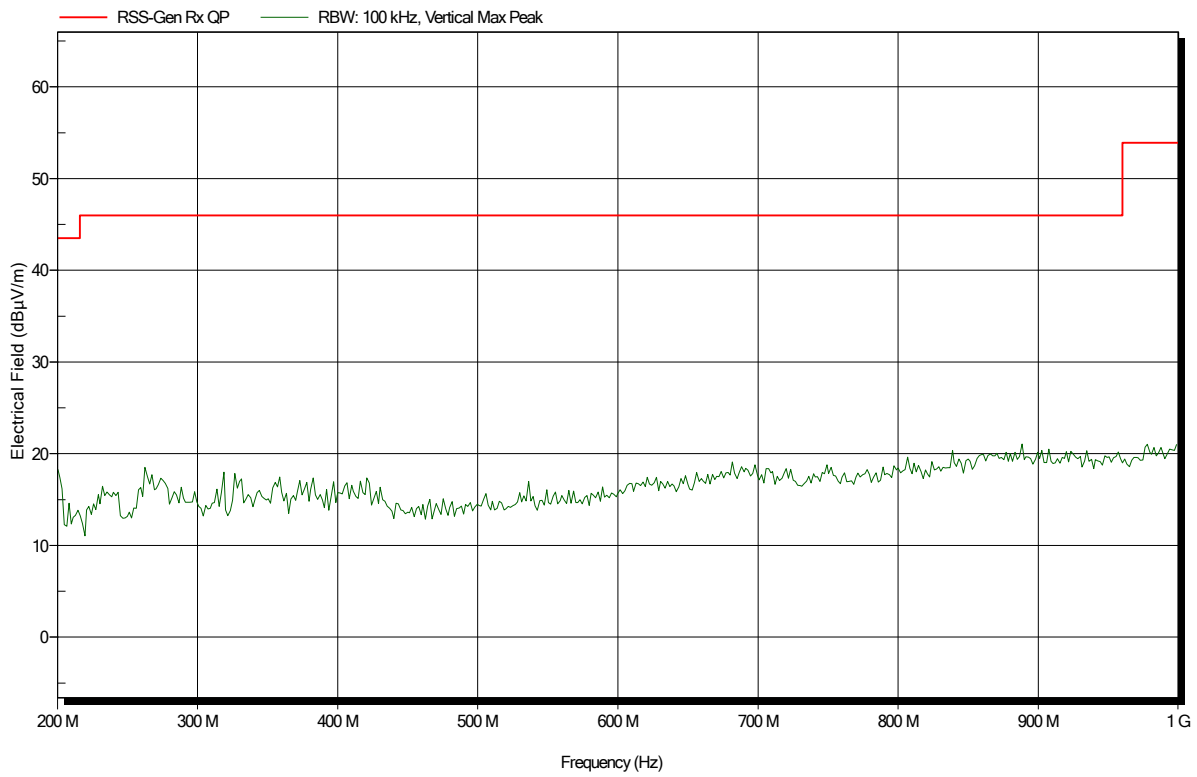


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.6°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3 m
 Mode: RX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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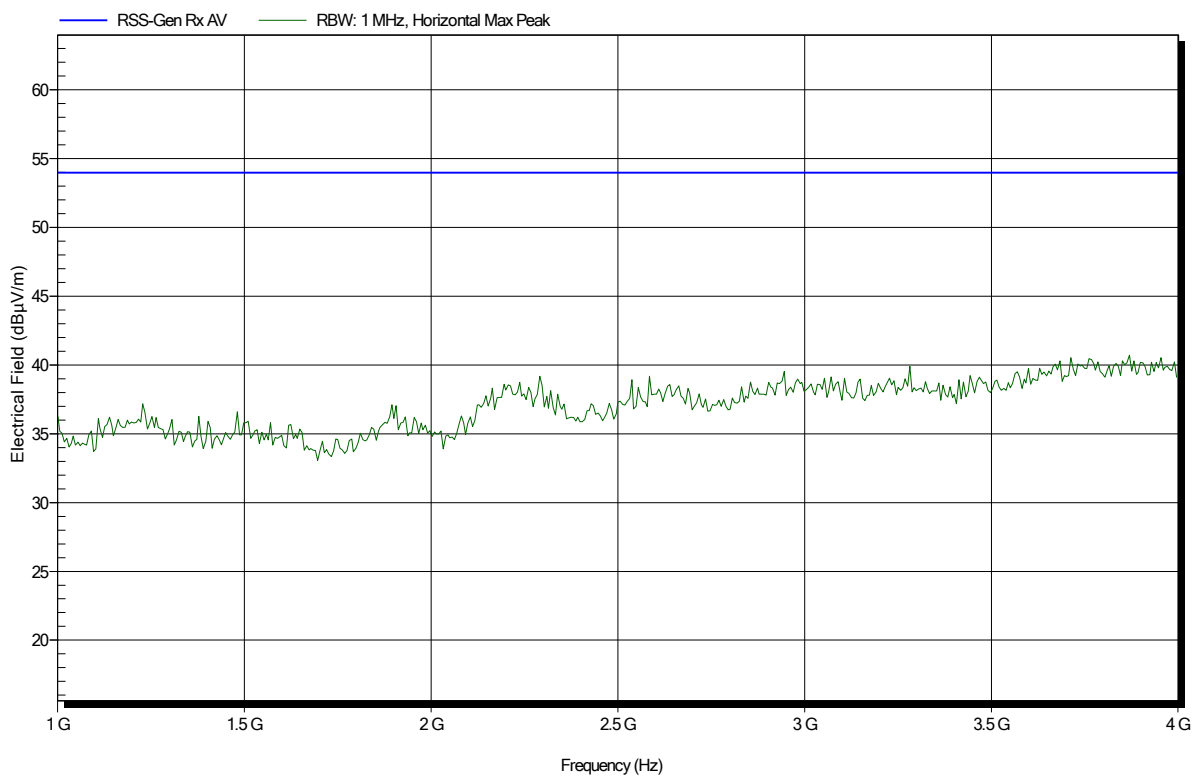


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.7°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: RX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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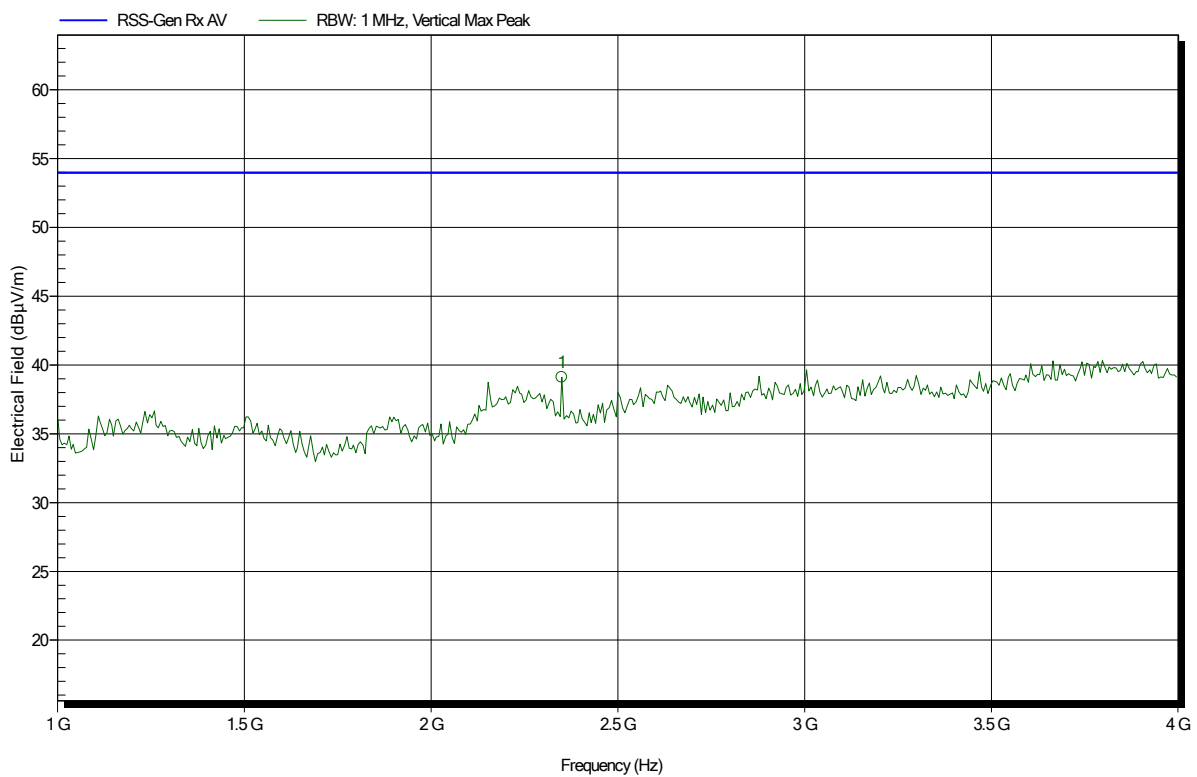


Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.6°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: RX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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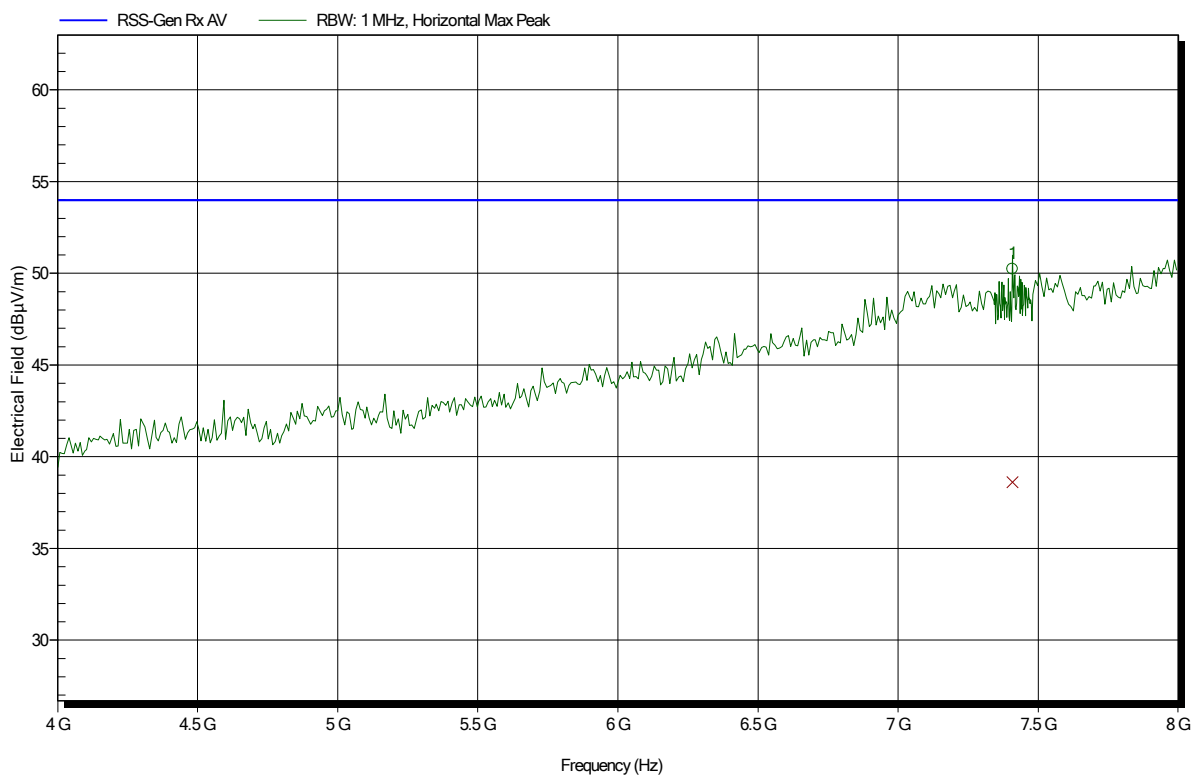
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.35 GHz	39.12 dBµV/m	53.98 dBµV/m	-14.86 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

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 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.7°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: RX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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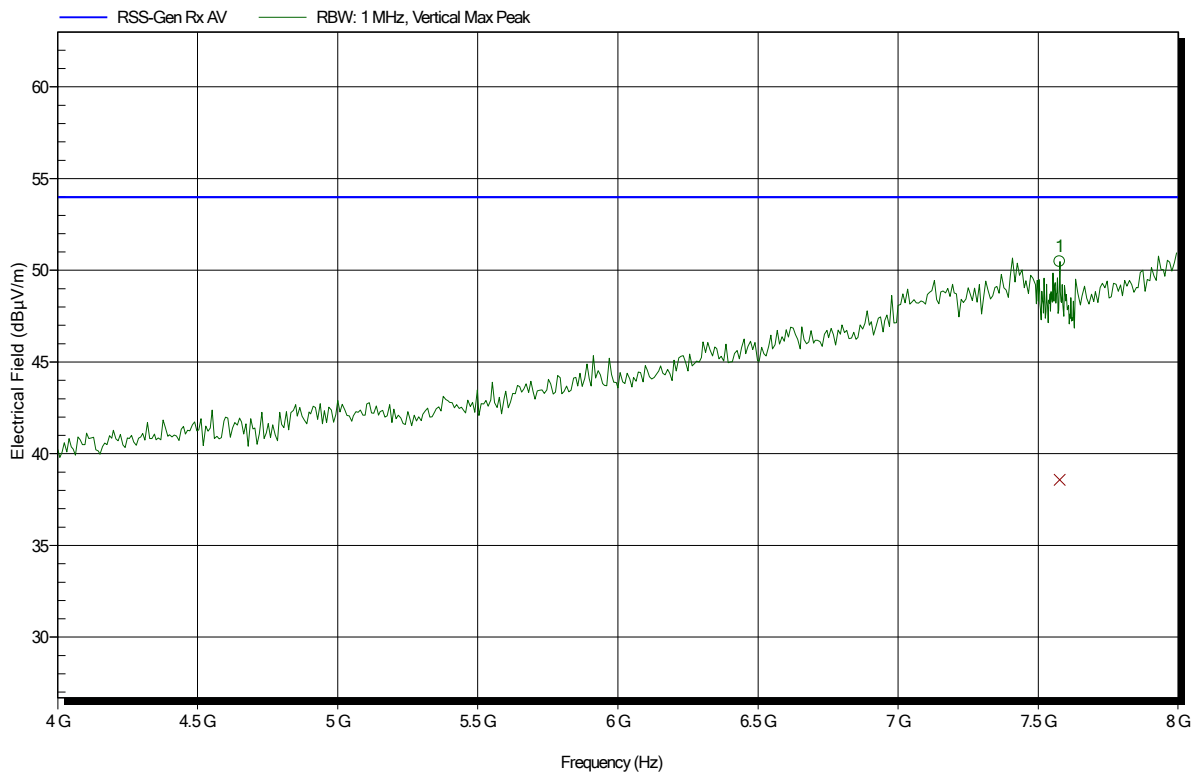
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
7.408 GHz	50.23 dBµV/m	53.98 dBµV/m	-3.75 dB	Pass
Frequency	Average	Average Limit	Average Difference	Average Status
7.408 GHz	38.61 dBµV/m	53.98 dBµV/m	-15.37 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

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 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.6°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: RX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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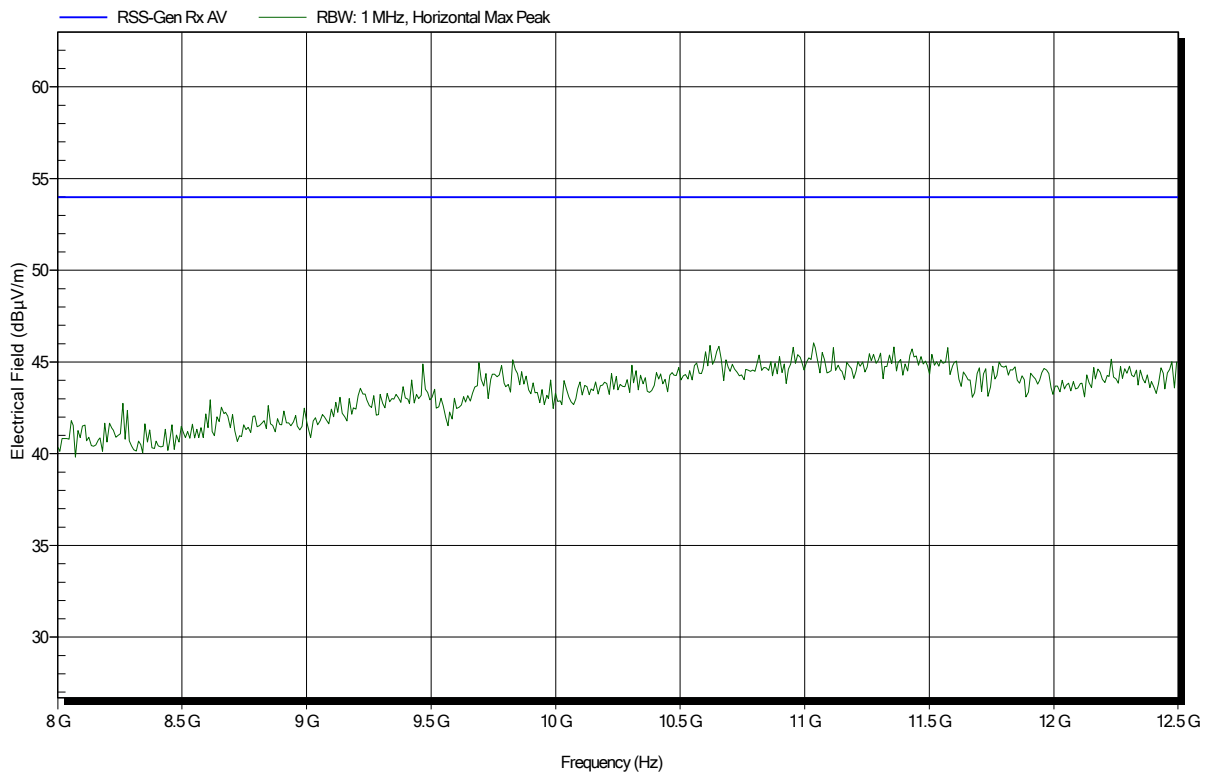
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
7.577 GHz	50.48 dBµV/m	53.98 dBµV/m	-3.5 dB	Pass
Frequency	Average	Average Limit	Average Difference	Average Status
7.577 GHz	38.58 dBµV/m	53.98 dBµV/m	-15.4 dB	Pass

Spurious emissions according to FCC 15.247

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 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.7°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: RX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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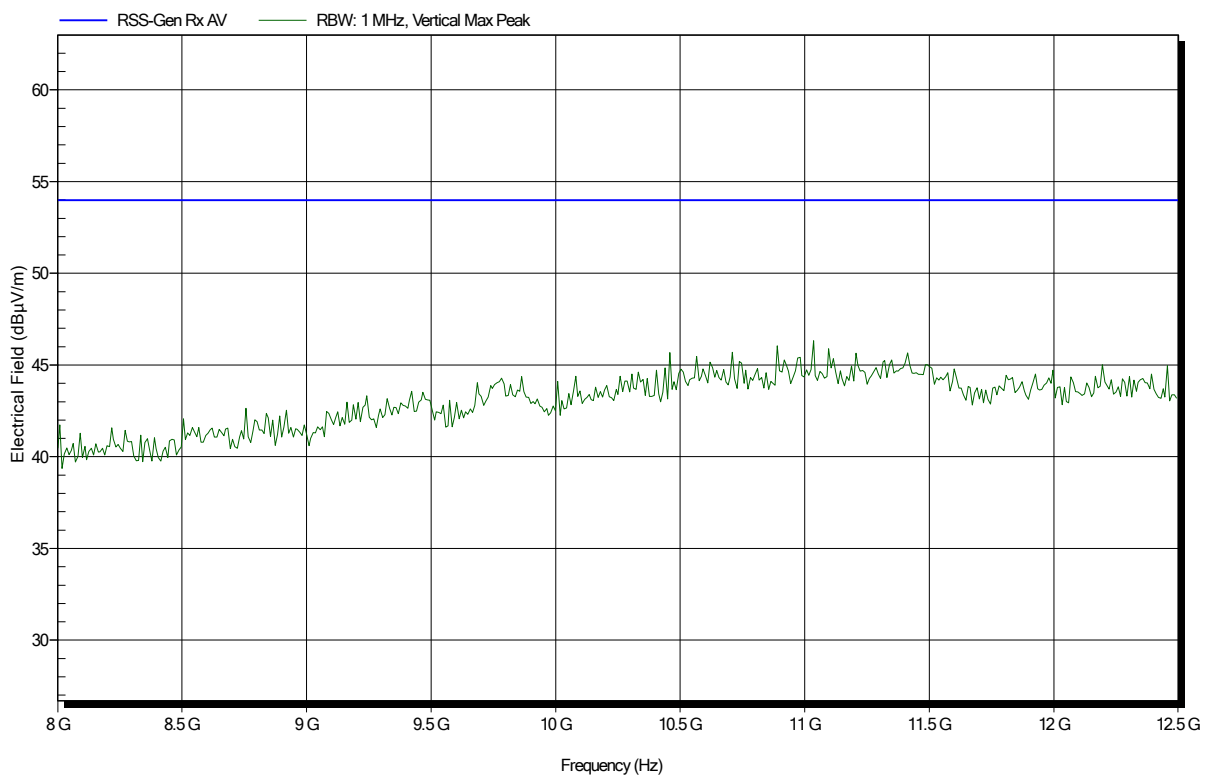


Spurious emissions according to FCC 15.247

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 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.7°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: RX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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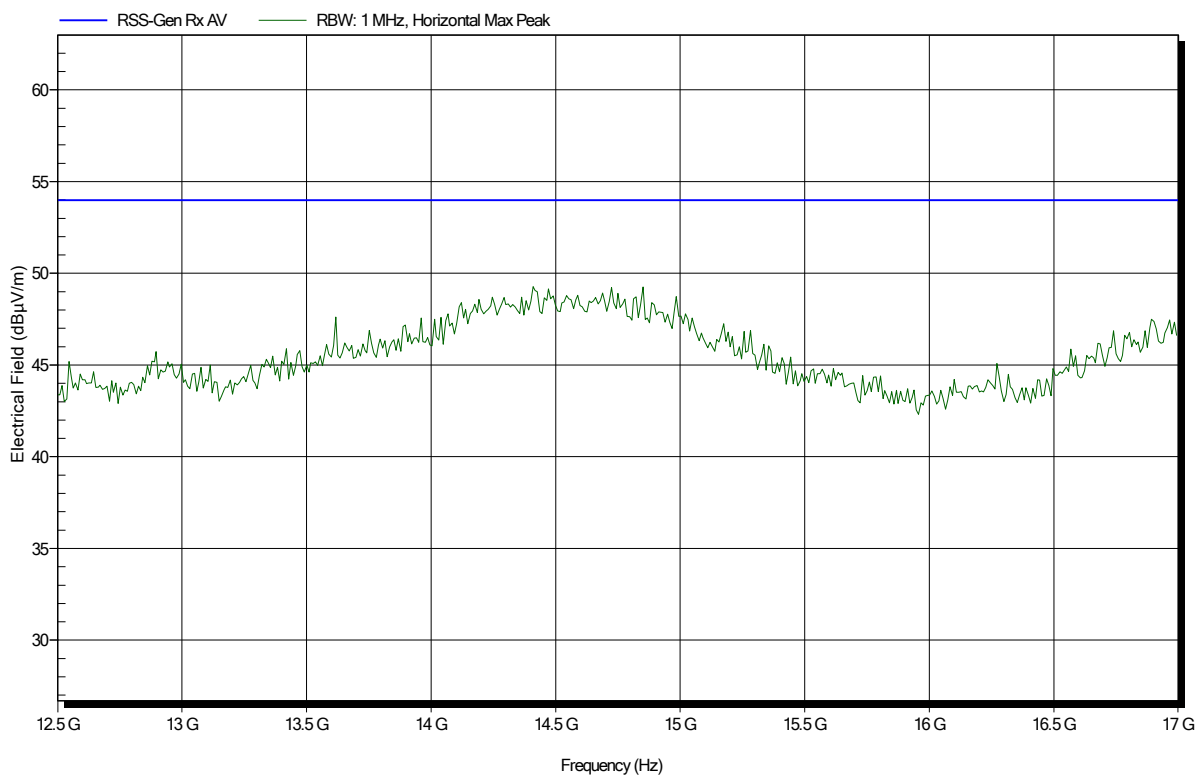


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 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: RX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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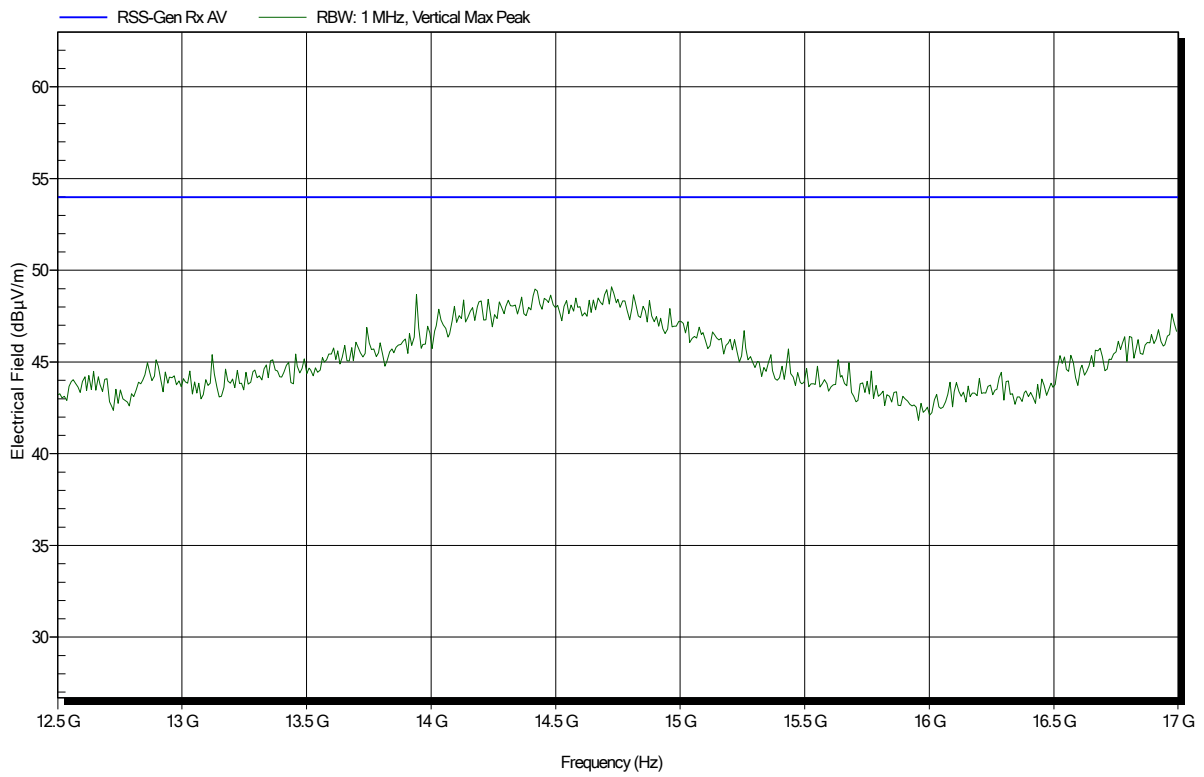


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 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: RX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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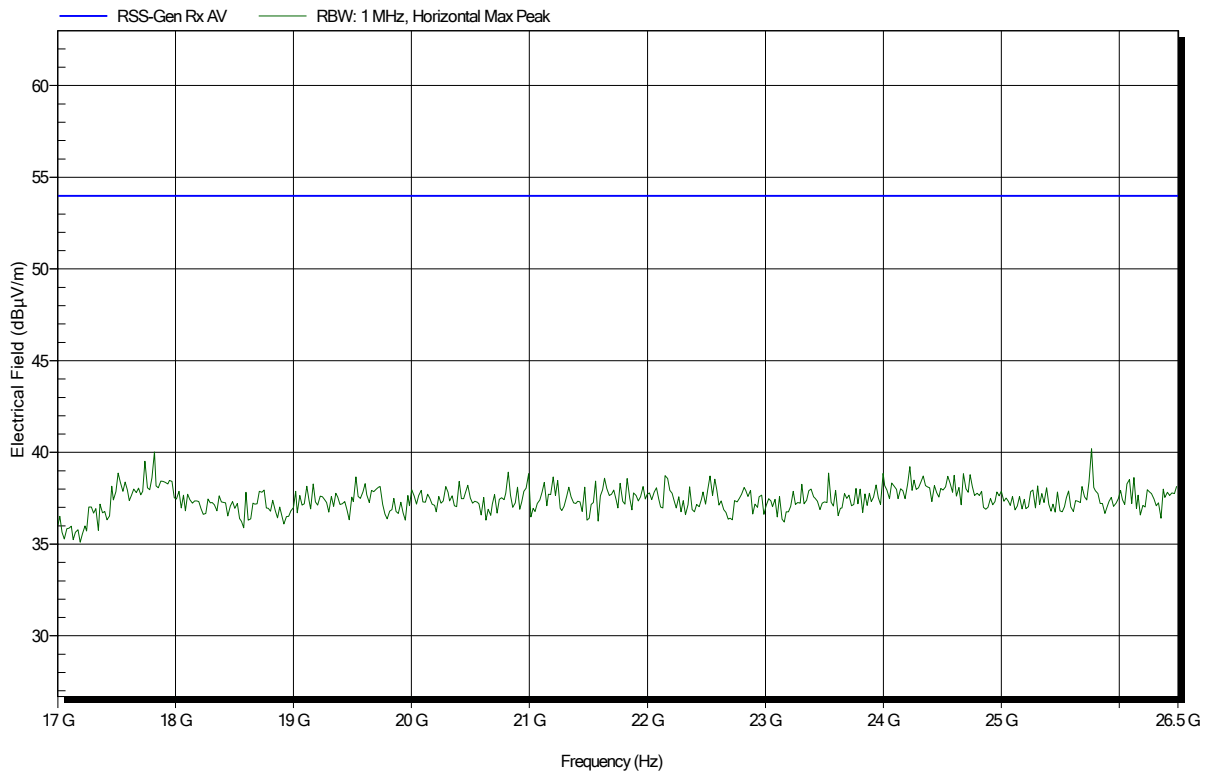


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 EUT Name: stAPPone
 Model: stAPPone oGPS
 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.7°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Amplifier Research AT 4560 (old name) / ATH18G40 (new name),
 Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: RX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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Spurious emissions according to FCC 15.247

Project number: G0M-1709-6847

Applicant: stAPPtronics GmbH
 EUT Name: stAPPone
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 Test Site: Eurofins Product Service GmbH
 Operator: Abdullah Al Jamal
 Test Conditions: Tnom: 23.7°C, Vnom: 3.7 VDC (lithium battery)
 Antenna: Amplifier Research AT 4560 (old name) / ATH18G40 (new name),
 Vertical
 Measurement distance: 1 m converted to 3m
 Mode: RX; BL, 2440 MHz
 Test Date: 2017-12-01
 Note:

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