

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-2006-9064-TFC247BL-V03
Testing Laboratory	Eurofins Product Service GmbH
Address	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation	    DAkks - Registration number : D-PL-12092-01-03 (ISED) ISED Testing Laboratory site: 3470A-2 DAkks - Registration number : D-PL-12092-01-04 (FCC) FCC Filed Test Laboratory, Reg.-No.: 96970
Applicant	Andreas Stihl AG & Co. KG
Address	Badstraße 115 71336 Waiblingen Germany
Test Specification	47 CFR Part 15C RSS-247, Issue 2, 2017-02 RSS-Gen, Issue 5, Amendment 1, 2019-03
Non-Standard Test Method	None
Equipment under Test (EUT):	
Product Description	battery pack with Bluetooth-Modul
Model(s)	AP 500 S
Additional Model(s)	None
Brand Name(s)	STIHL
Hardware Version(s)	03.0
Software Version(s)	00.70
FCC-ID	2ALP8AP1
IC	23431-AP1
Test Result	PASSED

Possible test case verdicts:		
Required by standard but not tested	N/T	
Not required by standard	N/R	
Not applicable to EUT	N/A	
Test object does meet the requirement	P(PASS)	
Test object does not meet the requirement	F(FAIL)	
Testing:		
Test Lab Temperature	20 - 26 °C	
Test Lab Humidity	32 – 55 %	
Date of receipt of test item	2020-06-04	
Report:		
Compiled by	Florian Voigt	
Tested by (+ signature) (Responsible for Test)	Florian Voigt	
Approved by (+ signature) (Deputy Head of Lab)	Toralf Jahn	
Date of Issue	2020-11-23	
Total number of pages	102	
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:		
Internal photos are provided by customer		

VERSION HISTORY

Version History			
Version	Issue Date	Remarks	Revised By
01	2020-08-04	Initial Release	Abdullah Al Jamal
02	2020-11-05	Replaced document G0M-2006-9064-TFC247BL-V01 Replaced by G0M-2006-9064-TFC247BL-V02 Reason PMN and HVIN changed. Measurement uncertainties added.	Abdullah Al Jamal
0	2020-11-23	Replaced document G0M-2006-9064-TFC247BL-V02 Replaced by G0M-2006-9064-TFC247BL-V03 Reason Dimension of results on page 20 corrected..	

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	battery pack with Bluetooth-Modul	
Model	AP 500 S	
Additional Model(s)	None	
Brand Name(s)	STIHL	
Serial Number(s)	Not specified	
Hardware Version(s)	03.0	
Software Version(s)	00.70	
PMN	AP 500 S	
HVIN	AP 500 S	
FVIN	n/a	
HMN	n/a	
FCC-ID	2ALP8AP1	
IC	23431-AP1	
Equipment type	End Product	
Radio type	Transceiver	
Assigned frequency bands	2400 - 2483.5 MHz	
Radio technology	Bluetooth LE 5.1	
Bluetooth Specification	LE 1M PHY	Yes
	LE 2M PHY	No (Customer declaration)
	LE Coded PHY S=2 (125 kbit)	No
	LE Coded PHY S=8 (500 kbit)	No
	Stable Modulation Index - Transmitter	No
	Stable Modulation Index - Receiver	No
Modulation	GFSK	
Number of antenna ports	1	
Antenna	Type	Integrated PCB antenna
	Model	PCB
	Manufacturer	Andreas Stihl AG & Co. KG
	Gain	3 dBi
Supply Voltage	V _{NOM}	36 VDC
Operating Temperature	T _{NOM}	25 °C
Manufacturer	Andreas Stihl AG & Co. KG Badstraße 115 71336 Waiblingen Germany	

1.1 Photos – Equipment External



EUT front view



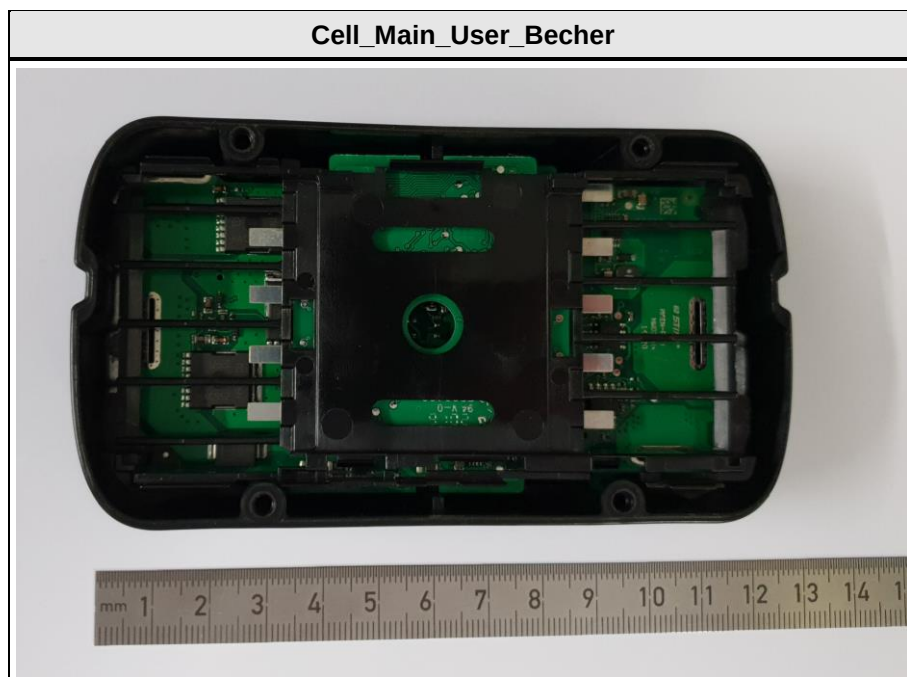
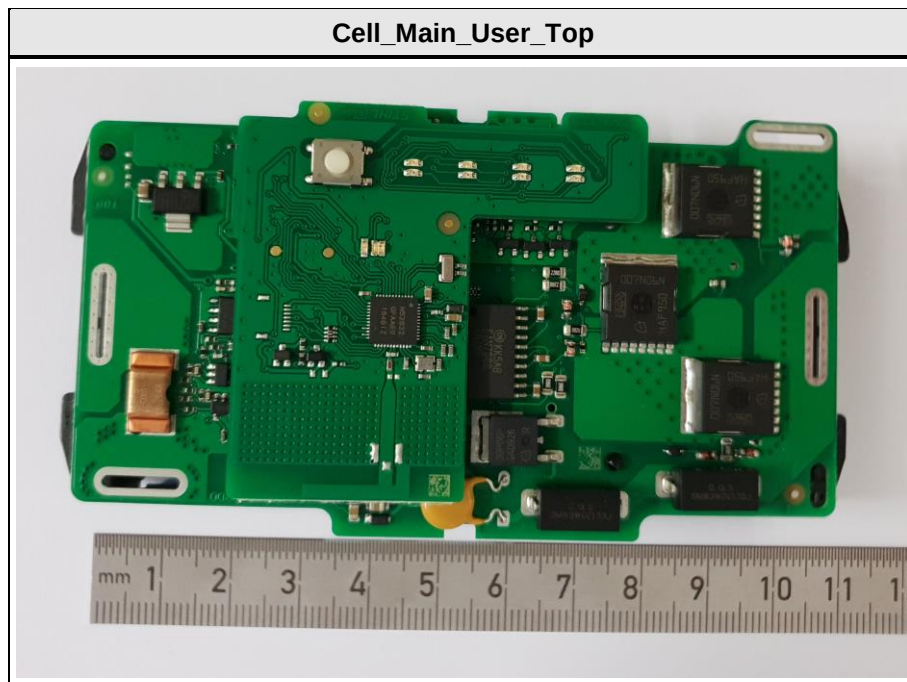
EUT side view



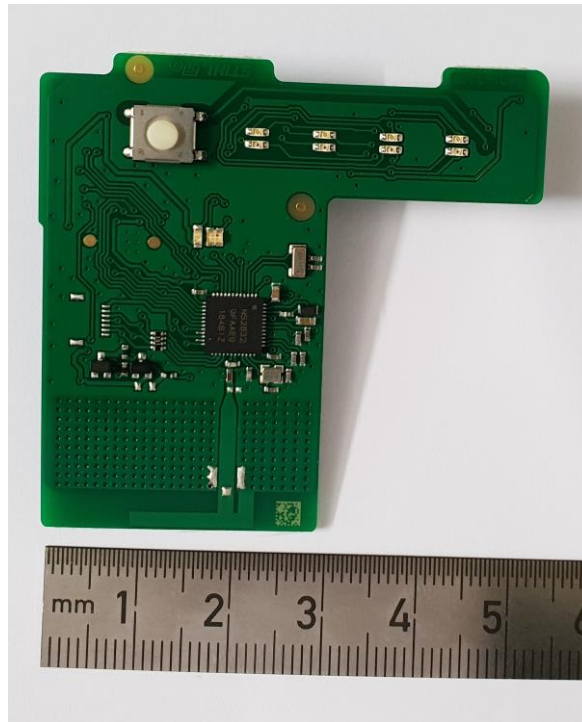
EUT back view



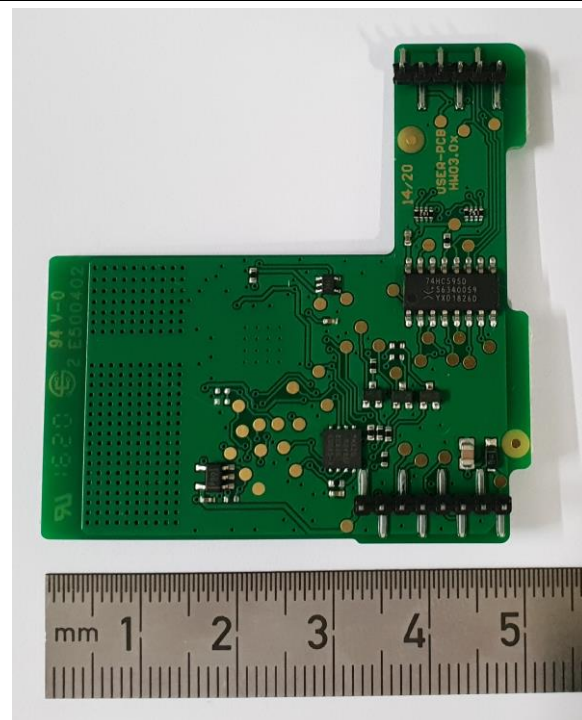
1.2 Photos – Equipment Internal



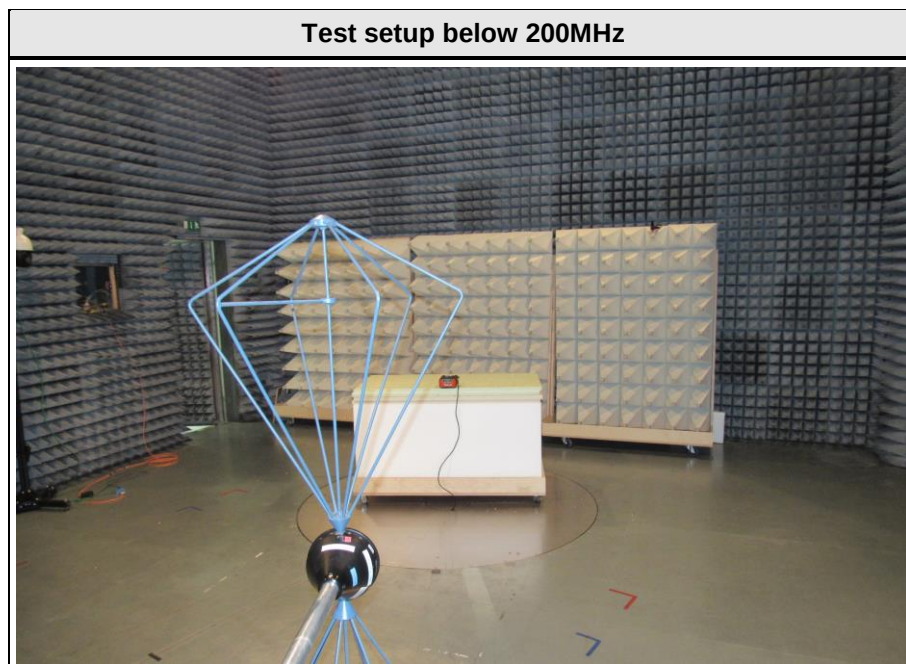
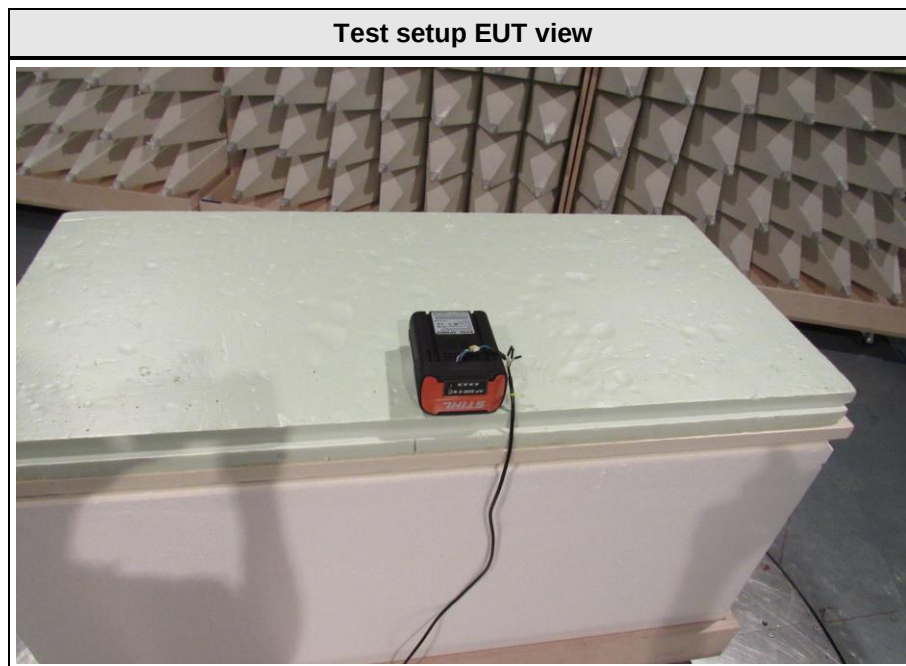
User_HW0300_Top (Contains radio)



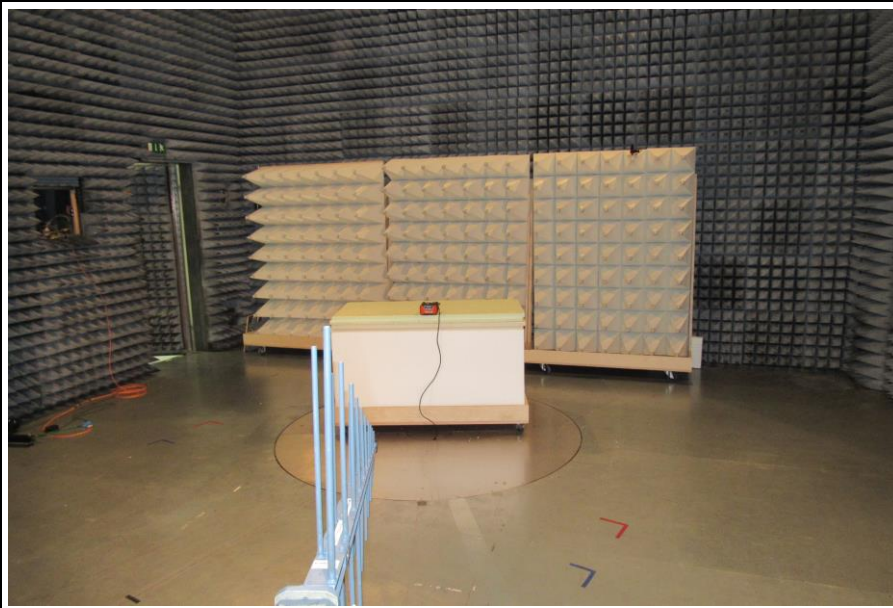
User_HW0300_Bot (Contains radio)



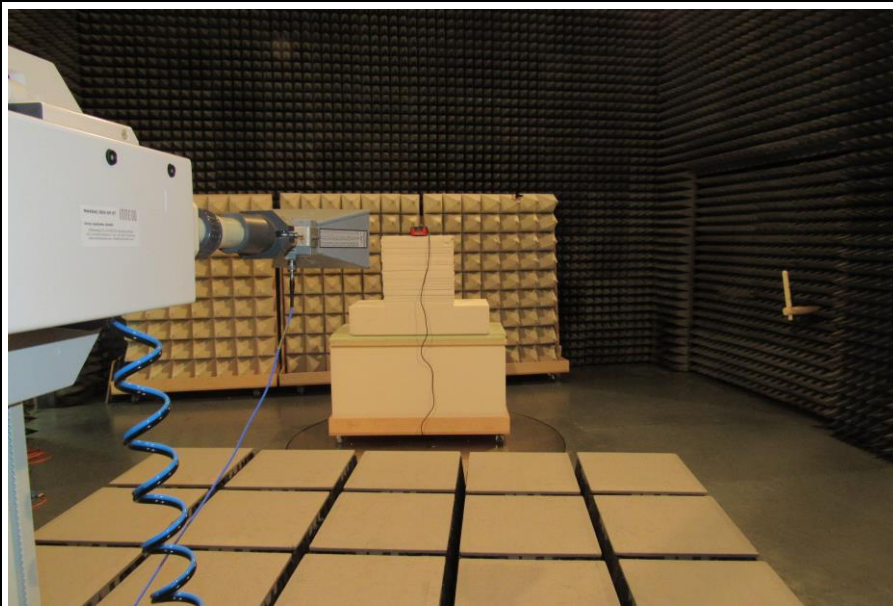
1.3 Photos – Test Setup



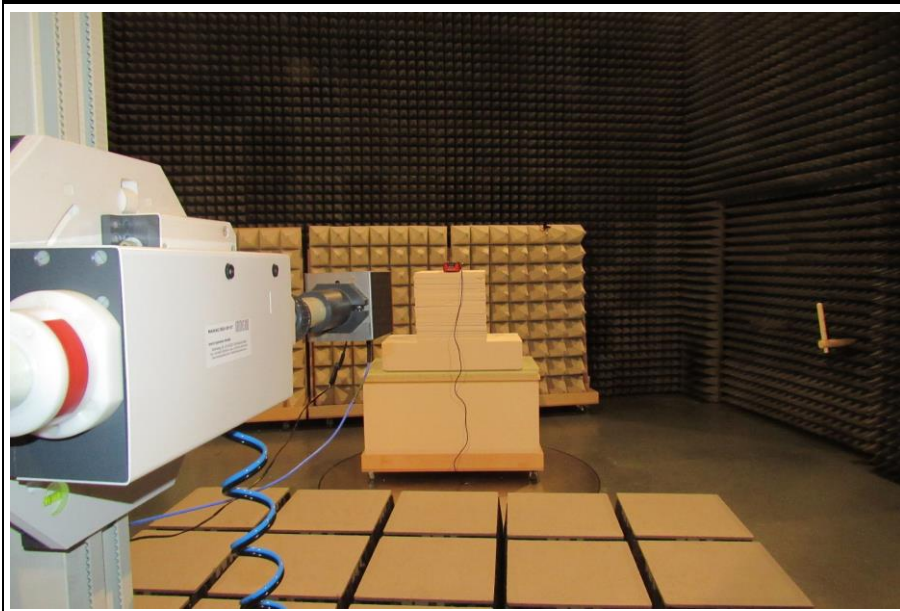
Test setup between 200MHz - 1GHz



Test setup between 1GHz - 17GHz



Test setup above 17GHz



Test setup CE



1.4 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
AE	Notebook	Lenovo	ThinkPad T510	
AE	Power Supply AC Adapter	Liteon	ADLX90NLC3A	
SFT	nRFgo Studio	Nordic Semiconductor	---	
AE	Laboratory Power Supply	Statron	2224.7	Power for conducted sample
Description:				
AE	Auxiliary Equipment			
SIM	Simulator			
CBL	Connecting Cable			
SFT	Software			
Comment:				

1.5 Test Modes

Mode	Description
GFSK	Mode = Transmit Modulation = GFSK Spreading = None Duty cycle = 63% Datarate = 1MBit/s
Receive	Mode = Receive
Comment:	

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 dB μ V. 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:

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

Net:

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

Limit:

This is the FCC Class B radiated emission limit (in units of dB μ V/m). The FCC limits are given in units of μ V/m. The following formula is used to convert the units of μ V/m to dB μ V/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 dB μ V + 26 dB/m	= 47.5 dB μ V/m	:	47.5 dB μ V/m - 57.0 dB μ V/m	= -9.5 dB

2 Result Summary

FCC 47 CFR Part 15C, ISED RSS-247				
Product Standard Reference	Requirement	Reference Method	Result	Remarks
ISED RSS-Gen, Issue 5 (section 6.6)	Occupied Bandwidth	ANSI C63.10-2013	N/R	Informational only
FCC § 15.247(a)(2) ISED RSS-247, Issue 2 (section 5.2)	6 dB Bandwidth	ANSI C63.10-2013	PASS	
FCC § 15.247(b)(1) ISED RSS-247, Issue 2 (section 5.4)	Maximum peak conducted power	ANSI C63.10-2013	PASS	
FCC § 15.247(e) ISED RSS-247, Issue 2 (section 5.2)	Power spectral density	ANSI C63.10-2013	PASS	
FCC § 15.207 ISED RSS-247, Issue 2 (section 3.1)	AC power line conducted emissions	ANSI C63.10-2013	PASS	
FCC § 15.247(d) ISED RSS-247, Issue 2 (section 5.5)	Band edge compliance	ANSI C63.10-2013	PASS	
FCC § 15.247(d) ISED RSS-247, Issue 2 (section 5.5)	Conducted spurious emissions	ANSI C63.10-2013	PASS	
FCC § 15.247(d) FCC § 15.209 ISED RSS-Gen, Issue 5 (section 6.13)	Transmitter radiated spurious emissions	ANSI C63.10-2013	PASS	
ISED RSS-247, Issue 2 (section 3.1)	Receiver radiated spurious emissions	ANSI C63.10-2013	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

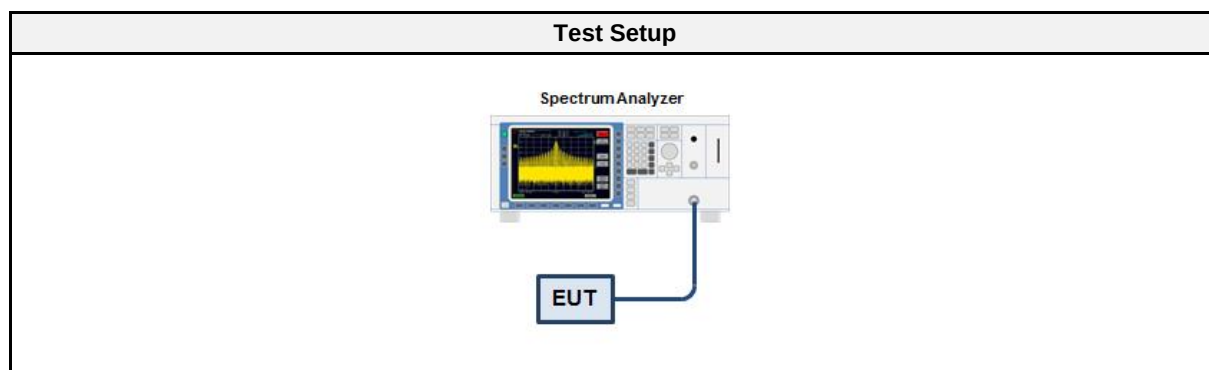
3.1.1 Information

Test Information	
Reference	ISED RSS-Gen, Issue 5 (section 6.6)
Measurement Method	ANSI C63.10 6.9.3
Measurement Uncertainty	$\pm 1.26 \%$
Operator	Florian Voigt
Date	2020-06-23

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	FSU 26	EF01407	2019-07	2020-07

3.1.5 Procedure

Test Procedure
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 the range of 1 % to 5 % of the occupied bandwidth 4. The occupied bandwidth is measured with the build-in analyzer function

3.1.6 Results

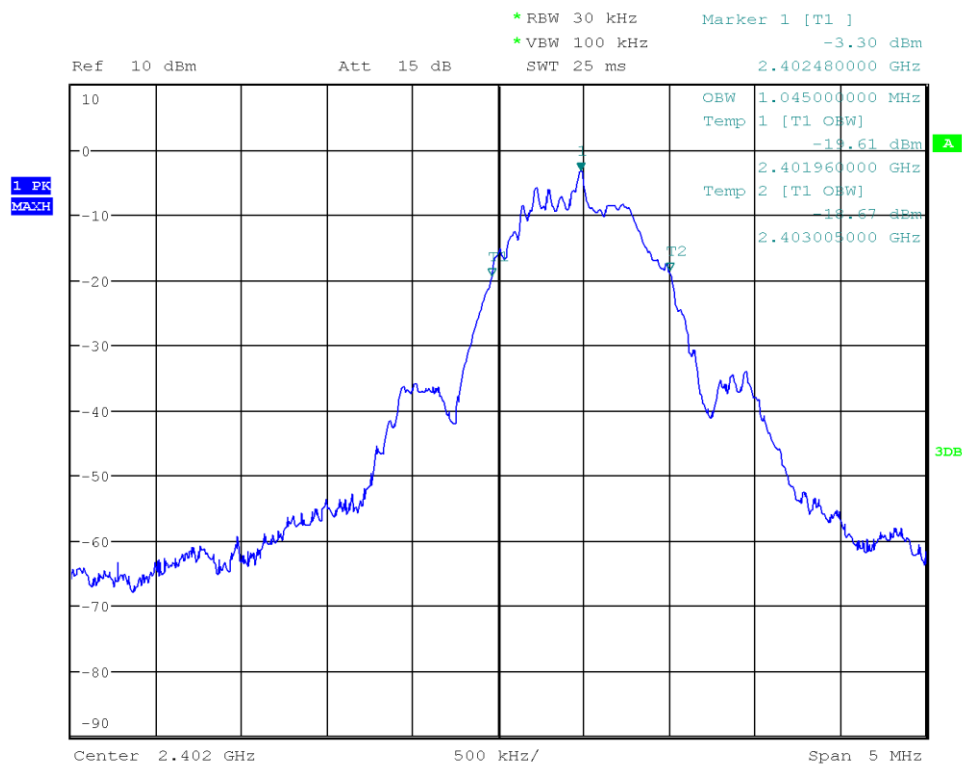
Test Results		
Mode	Frequency [MHz]	Bandwidth [kHz]
GFSK	2402	1045
GFSK	2440	1060
GFSK	2480	1055

Test Report No.: G0M-2006-9064-TFC247BL-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Occupied Bandwidth

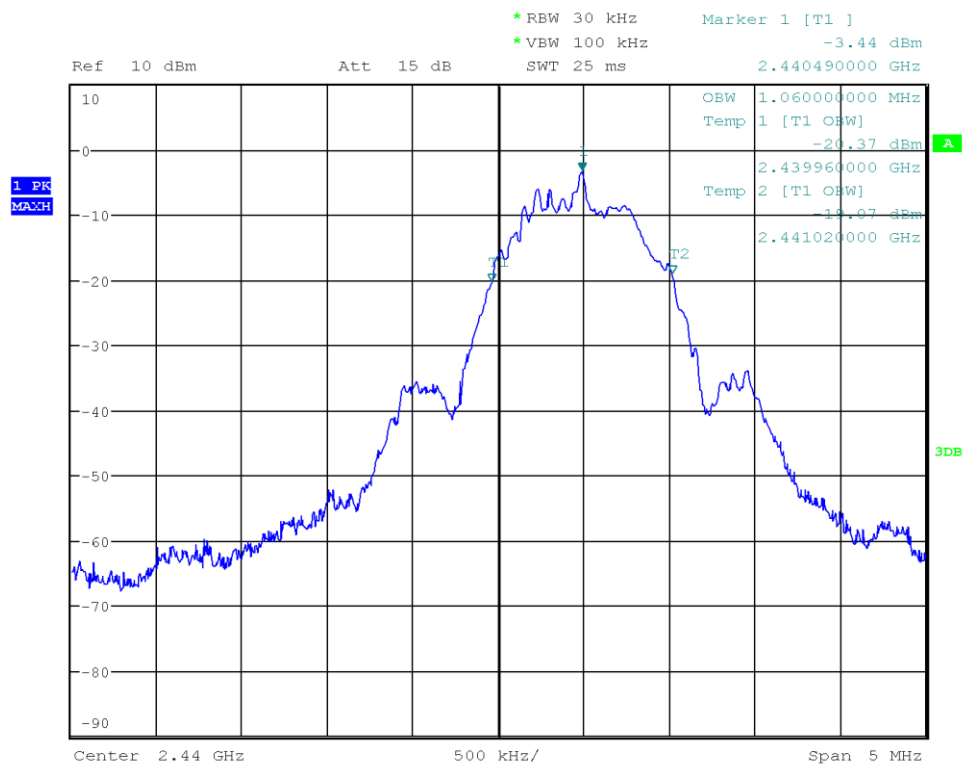
Project Number: G0M-2006-9064
 Applicant: Andreas Stihl AG & Co. KG
 Model Description: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Sample ID: 29659
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: GFSK, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Florian Voigt
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-06-23
 Occupied Bandwidth [MHz]: 1.045



Date: 23.JUN.2020 17:39:39

Occupied Bandwidth

Project Number: G0M-2006-9064
 Applicant: Andreas Stihl AG & Co. KG
 Model Description: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Sample ID: 29659
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: GFSK, Channel: 19, 2440 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Florian Voigt
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-06-23
 Occupied Bandwidth [MHz]: 1.060



Date: 23.JUN.2020 17:40:47

Occupied Bandwidth

Project Number: G0M-2006-9064
 Applicant: Andreas Stihl AG & Co. KG
 Model Description: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Sample ID: 29659
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: GFSK, Channel: 39, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Florian Voigt
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-06-23
 Occupied Bandwidth [MHz]: 1.055



Date: 23.JUN.2020 17:41:47

3.2 Test Conditions and Results - 6 dB bandwidth

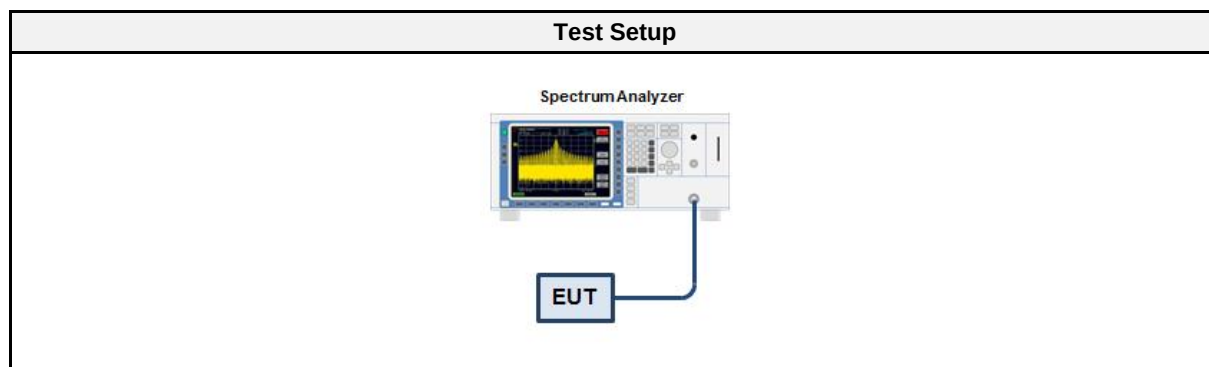
3.2.1 Information

Test Information	
Reference	FCC § 15.247(a)(2); ISSED RSS-247, Issue 2 (section 5.2)
Measurement Method	ANSI C63.10 11.8
Measurement Uncertainty	± 1.26 %
Operator	Florian Voigt
Date	2020-06-23

3.2.2 Limits

Limits
≥ 500kHz

3.2.3 Setup



3.2.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSU 26	EF01407	2019-07	2020-07

3.2.5 Procedure

Test Procedure
1. EUT set to test mode 2. Span set to at least twice the emission spectrum 3. Detector set to peak and max hold and RBW is set to 100 kHz 4. Envelope peak value of emission spectrum is selected 5. Marker on envelope of spectrum is set to level of -6 dB to the left of the peak 6. Marker on envelope of spectrum is set to level of -6 dB to the right of the peak 7. 6 dB Bandwidth is determined by marker frequency separation

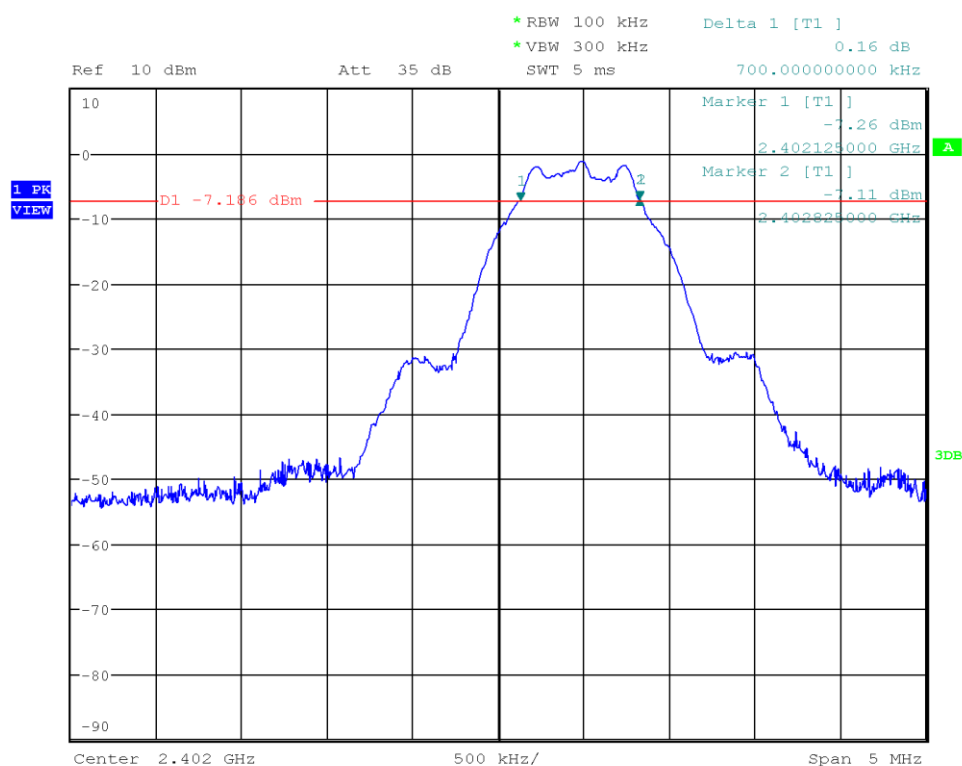
3.2.6 Results

Test Results				
Mode	Frequency [MHz]	Bandwidth [kHz]	Limit [kHz]	Verdict
GFSK	2402	700	500	PASS
GFSK	2440	705	500	PASS
GFSK	2480	705	500	PASS

Test Report No.: G0M-2006-9064-TFC247BL-V03

DTS (6 dB) Bandwidth

Project Number: G0M-2006-9064
 Applicant: Andreas Stihl AG & Co. KG
 Model Description: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Sample ID: 29659
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: GFSK, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Florian Voigt
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-06-23
 Lower Frequency [MHz]: 2402.125
 Upper Frequency [MHz]: 2402.825
 6 dB Bandwidth [kHz]: 700



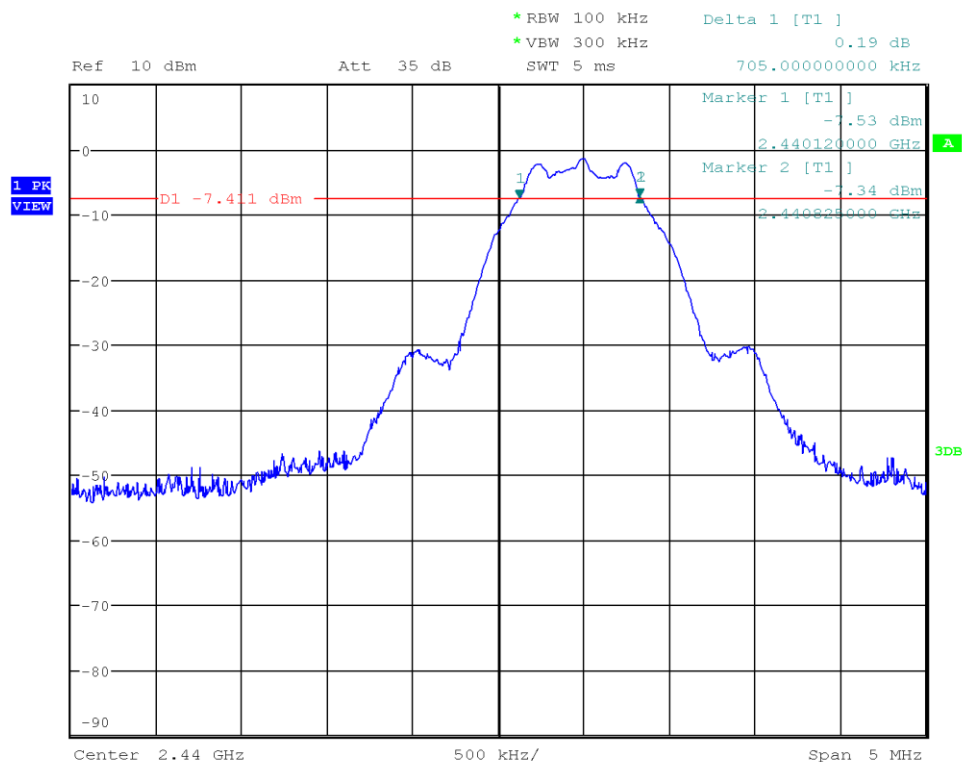
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Test Report No.: G0M-2006-9064-TFC247BL-V03

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 Storkower Str. 38c, D-15526 Reichenwalde, Germany

DTS (6 dB) Bandwidth

Project Number: G0M-2006-9064
 Applicant: Andreas Stihl AG & Co. KG
 Model Description: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Sample ID: 29659
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: GFSK, Channel: 19, 2440 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Florian Voigt
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-06-23
 Lower Frequency [MHz]: 2440.120
 Upper Frequency [MHz]: 2440.825
 6 dB Bandwidth [kHz]: 705



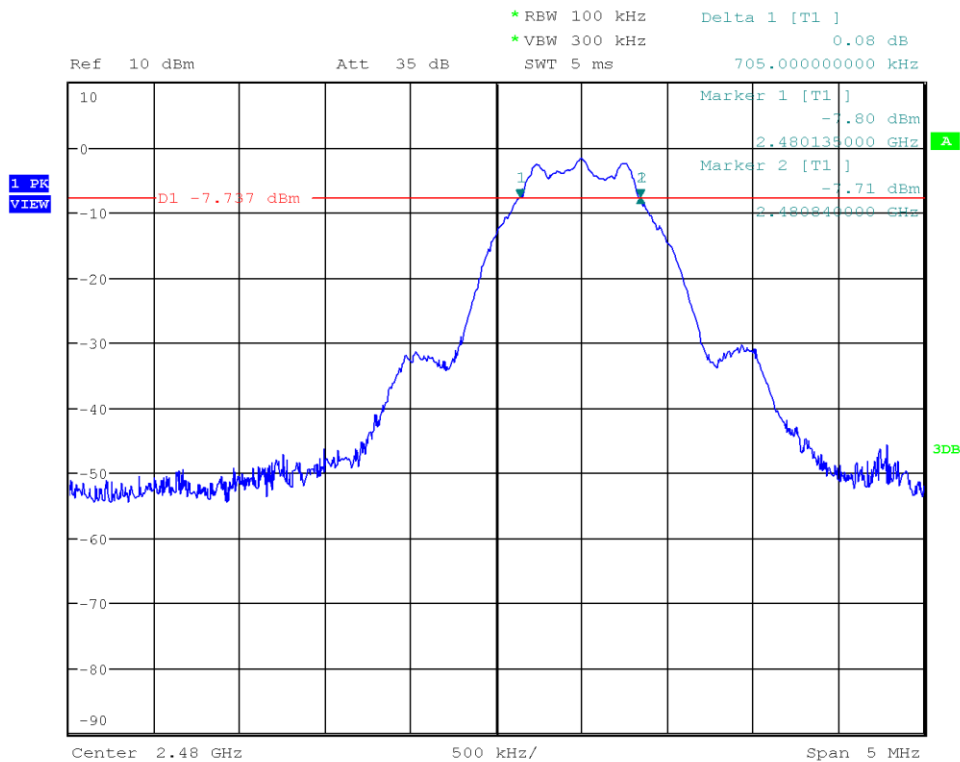
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Test Report No.: G0M-2006-9064-TFC247BL-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

DTS (6 dB) Bandwidth

Project Number: G0M-2006-9064
 Applicant: Andreas Stihl AG & Co. KG
 Model Description: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Sample ID: 29659
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: GFSK, Channel: 39, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Florian Voigt
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-06-23
 Lower Frequency [MHz]: 2480.135
 Upper Frequency [MHz]: 2480.840
 6 dB Bandwidth [kHz]: 705



Date: 23.JUN.2020 17:47:50

Test Report No.: G0M-2006-9064-TFC247BL-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

3.3 Test Conditions and Results - Maximum peak conducted output power

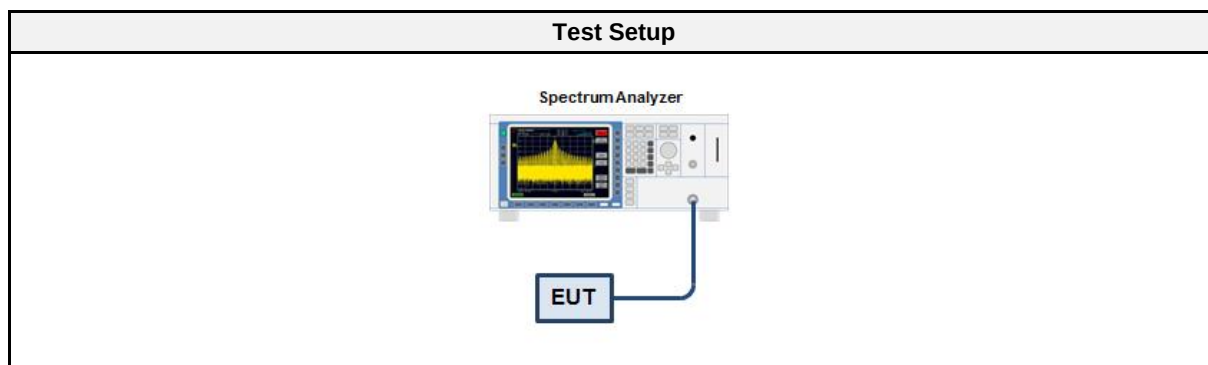
3.3.1 Information

Test Information	
Reference	FCC § 15.247(b)(1); ISED RSS-247, Issue 2 (section 5.4)
Measurement Method	ANSI C63.10 11.9.1
Measurement Uncertainty	± 2.86 dB
Operator	Florian Voigt
Date	2020-06-23

3.3.2 Limits

Limits
1 W (30 dBm)
The conducted output power limit specified above is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in the table, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.3 Setup



3.3.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSU 26	EF01407	2019-07	2020-07

3.3.5 Procedure

Test Procedure
1. EUT set to test mode (Communication tester is used if needed) 2. Analyzer resolution bandwidth is set ≥ DTS bandwidth 3. Detector set to peak and max hold 4. Sweep time is set to auto 5. After the trace has stabilized a marker is set to peak of envelope

3.3.6 Results

Test Results				
Channel [MHz]	Power [dBm]	Power [mW]	Limit [mW]	Verdict
2402	0.359	1.1	1000	PASS
2440	0.179	1.0	1000	PASS
2480	-0.342	0.9	1000	PASS

3.4 Test Conditions and Results - Power spectral density

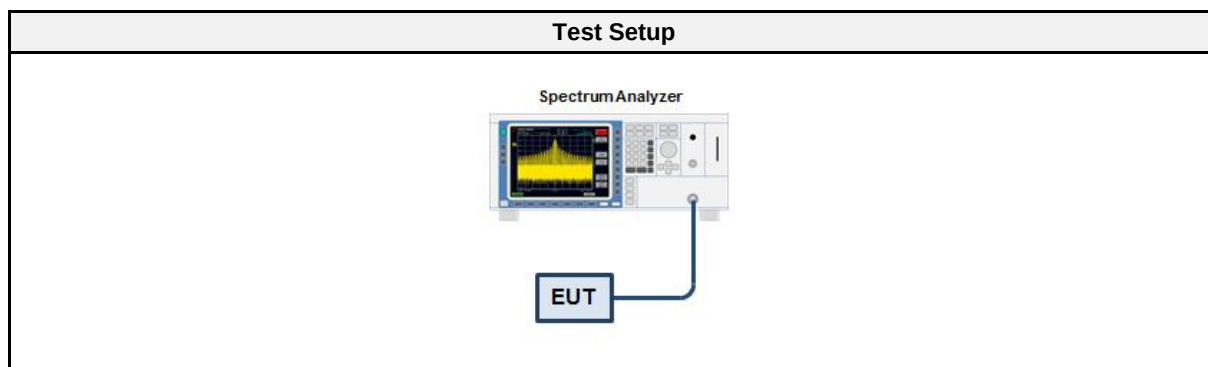
3.4.1 Information

Test Information	
Reference	FCC § 15.247(e); ISSED RSS-247, Issue 2 (section 5.2)
Measurement Method	ANSI C63.10 11.10.2, 14.3.2
Measurement Uncertainty	± 2.86 dB
Operator	Florian Voigt
Date	2020-06-23

3.4.2 Limits

Limits
8 dBm / 3 kHz

3.4.3 Setup



3.4.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSU 26	EF01407	2019-07	2020-07

3.4.5 Procedure

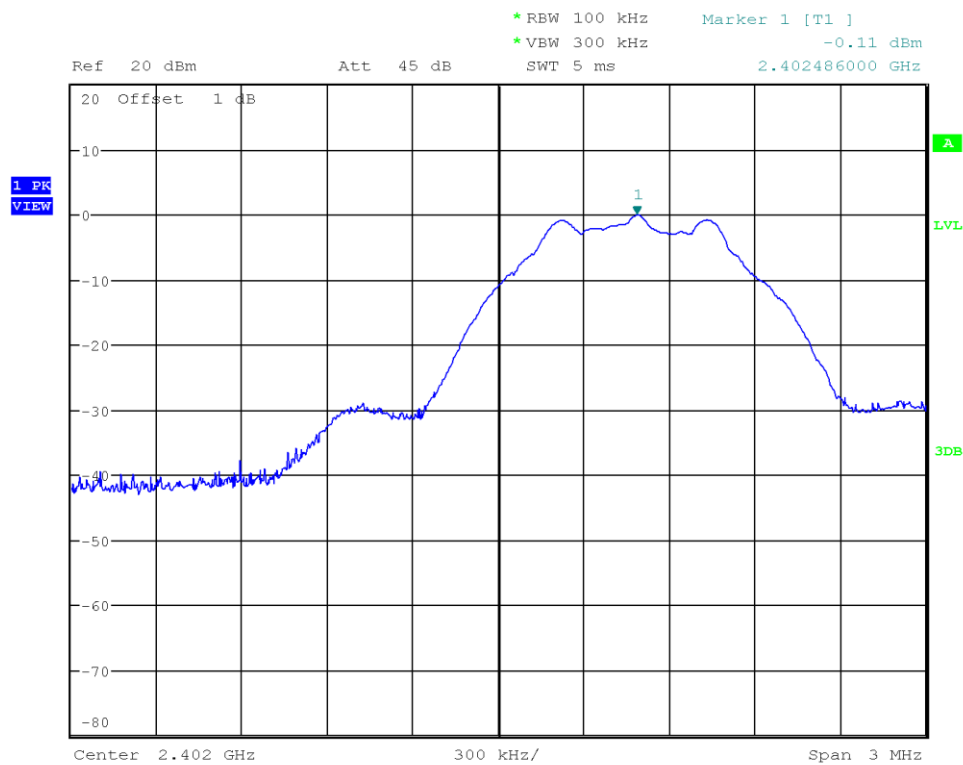
Test Procedure
1. EUT set to test mode 2. The analyzer is set to DTS channel center frequency with a span of 1.5 times the DTS bandwidth 3. The RBW is set to 100 kHz with VBW $\geq$ RBW and the detector is set to peak with max hold 4. After the trace has stabilized a marker is set to the envelope maximum 5. If the power spectral density is above the limit the RBW is reduced (not lower than 3 kHz) and the measurement is repeated 6. If the EUT has more than one transmit chain the procedure is repeated for each transmit chain

3.4.6 Results

Test Results			
Channel [MHz]	PSD [dBm/RBW]	Limit [dBm/3kHz]	Verdict
2402	-0.107	8.0	PASS
2440	-0.332	8.0	PASS
2480	-0.884	8.0	PASS
RBW = 100 kHz			

Peak Power Spectral Density

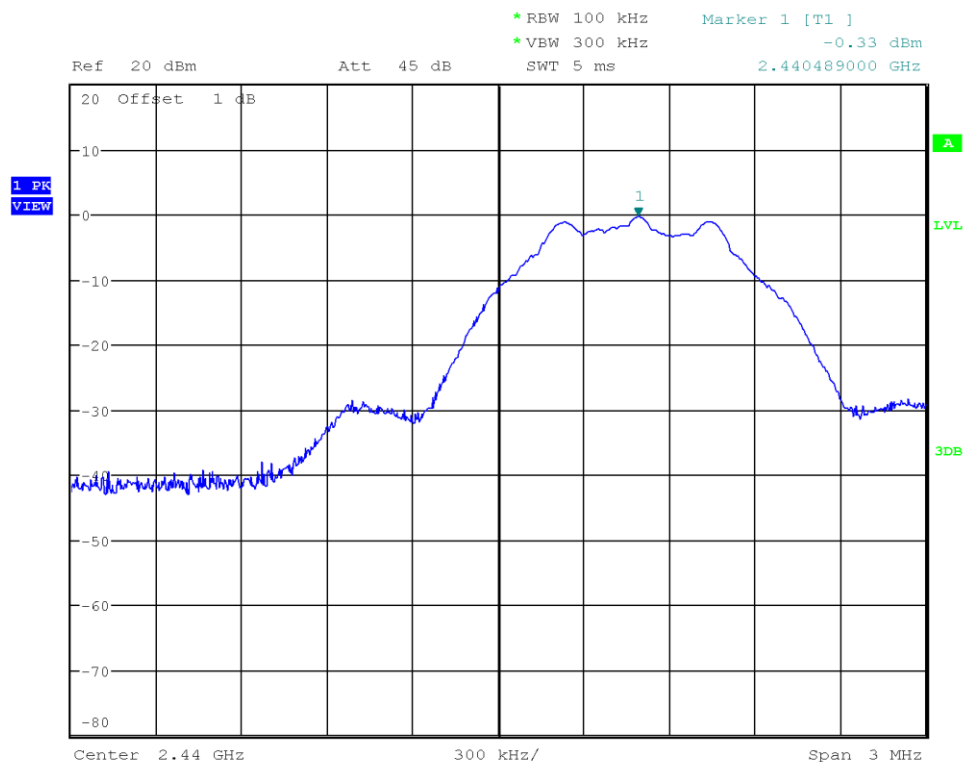
Project Number: G0M-2006-9064
 Applicant: Andreas Stihl AG & Co. KG
 Model Description: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Sample ID: 29659
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.10.2
 Operational Mode: GFSK, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Florian Voigt
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-06-23
 Peak Frequency [MHz]: 2402.486
 Spectral Density [dBm/RBW]: -0.107
 Resolution Bandwidth [kHz]: 100 kHz



Date: 23.JUN.2020 18:06:06

Peak Power Spectral Density

Project Number: G0M-2006-9064
 Applicant: Andreas Stihl AG & Co. KG
 Model Description: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Sample ID: 29659
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.10.2
 Operational Mode: GFSK, Channel: 19, 2440 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Florian Voigt
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-06-23
 Peak Frequency [MHz]: 2440.489
 Spectral Density [dBm/RBW]: -0.332
 Resolution Bandwidth [kHz]: 100 kHz



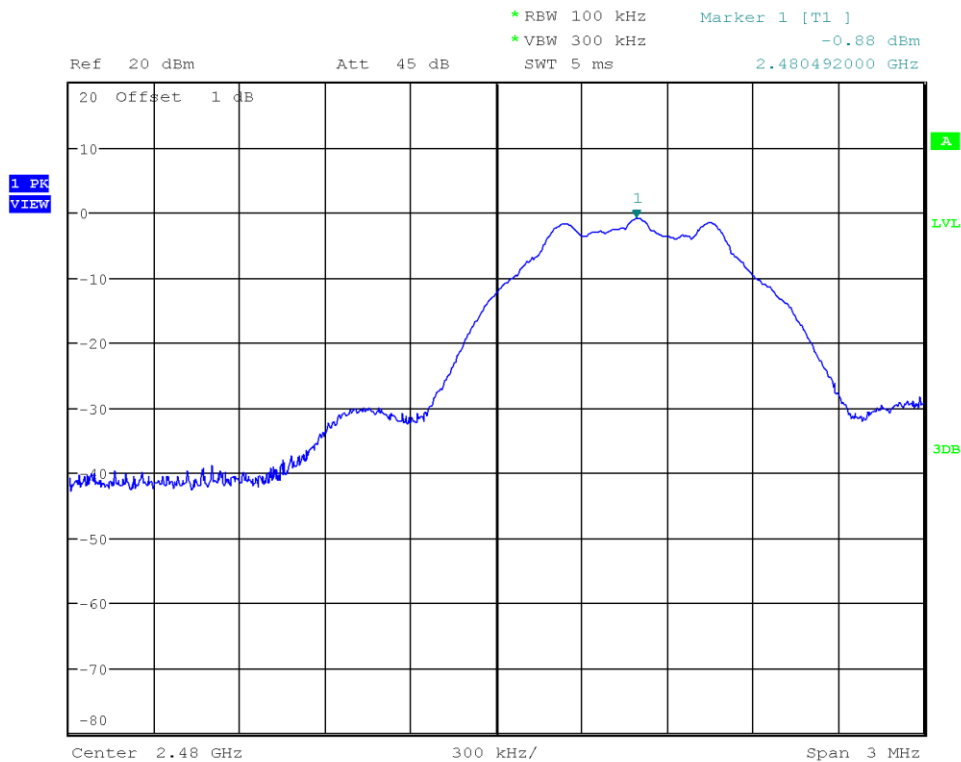
Date: 23.JUN.2020 18:07:23

Test Report No.: G0M-2006-9064-TFC247BL-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Peak Power Spectral Density

Project Number: G0M-2006-9064
 Applicant: Andreas Stihl AG & Co. KG
 Model Description: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Sample ID: 29659
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.10.2
 Operational Mode: GFSK, Channel: 39, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Florian Voigt
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-06-23
 Peak Frequency [MHz]: 2480.492
 Spectral Density [dBm/RBW]: -0.884
 Resolution Bandwidth [kHz]: 100 kHz



Date: 23.JUN.2020 18:08:24

Test Report No.: G0M-2006-9064-TFC247BL-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

3.5 Test Conditions and Results - Band-edge compliance

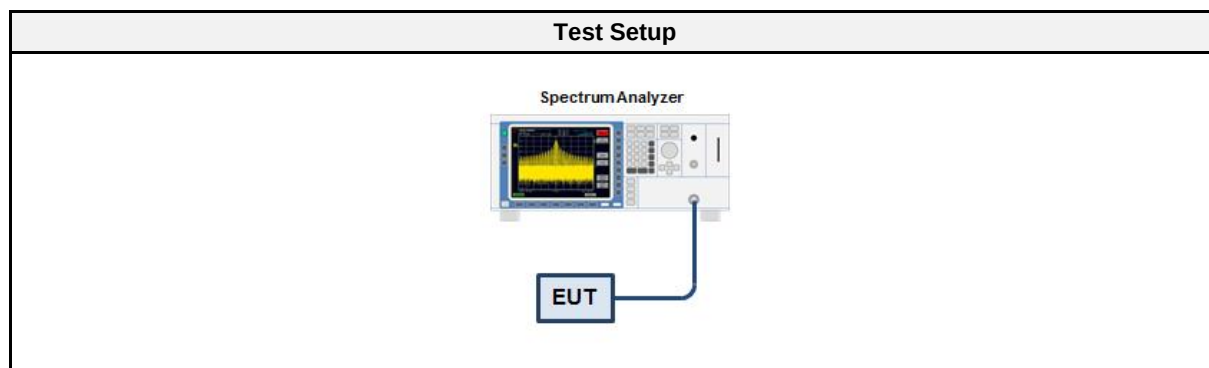
3.5.1 Information

Test Information	
Reference	FCC § 15.247(d); ISSED RSS-247, Issue 2 (section 5.5)
Measurement Method	ANSI C63.10 11.13
Measurement Uncertainty	± 3.64 dB
Operator	Florian Voigt
Date	2020-06-23

3.5.2 Limits

Limits	
Power Measurement	Out-of-band attenuation [dB]
Peak	20
RMS	30

3.5.3 Setup



3.5.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSU 26	EF01407	2019-07	2020-07

3.5.5 Procedure

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

3.5.6 Results

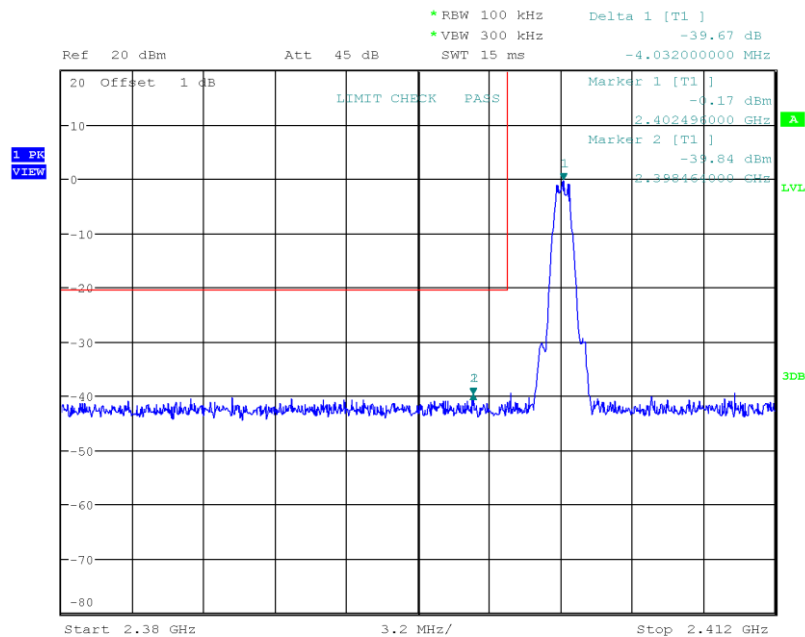
Test Results				
Mode	Channel [MHz]	Out-of-band Attenuation [dB]	Limit [dB]	Verdict
GFSK	2402	-39.67	-20	PASS
GFSK	2480	-38.33	-20	PASS

Test Report No.: G0M-2006-9064-TFC247BL-V03

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Emissions in nonrestricted frequency bands at the Band-edge

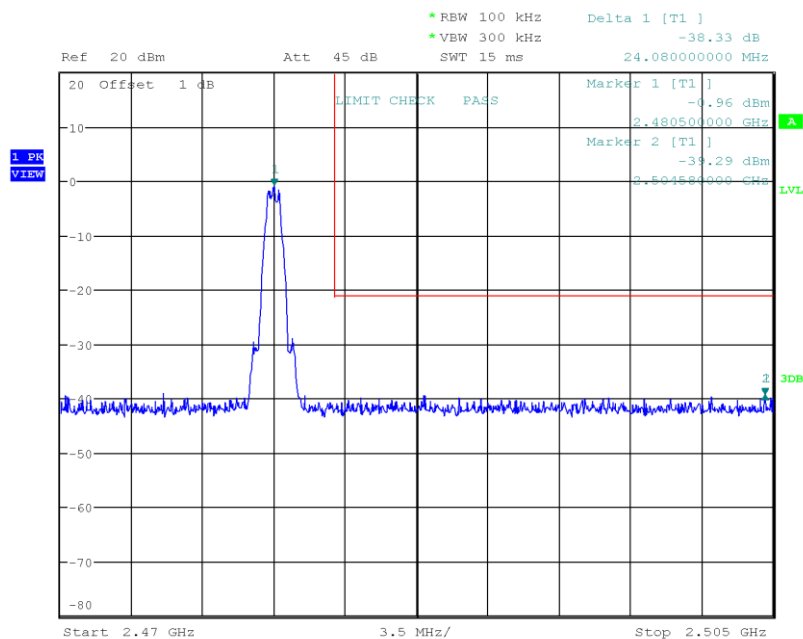
Project Number: G0M-2006-9064
 Applicant: Andreas Stihl AG & Co. KG
 Model Description: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Sample ID: 29659
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.6, 6.10.4
 Operating Conditions: Tnom/Vnom
 Operator: Florian Voigt
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-06-23
 Band-edge: Lower
 In-band Frequency [MHz]: 2402.496
 Max. in-band Level [dBm/100 kHz]: -0.169
 Out-of-band Frequency [MHz]: 2398.464
 Max. out-of-band Level [dBm/100 kHz]: -39.842
 Attenuation [dB]: -39.67



Date: 23.JUN.2020 18:15:21

Emissions in nonrestricted frequency bands at the Band-edge

Project Number: G0M-2006-9064
 Applicant: Andreas Stihl AG & Co. KG
 Model Description: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Sample ID: 29659
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.6, 6.10.4
 Operating Conditions: Tnom/Vnom
 Operator: Florian Voigt
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-06-23
 Band-edge: Upper
 In-band Frequency [MHz]: 2480.5
 Max. in-band Level [dBm/100 kHz]: -0.963
 Out-of-band Frequency [MHz]: 2504.58
 Max. out-of-band Level [dBm/100 kHz]: -39.293
 Attenuation [dB]: -38.33



Date: 23.JUN.2020 18:16:20

3.6 Test Conditions and Results - Conducted spurious emissions

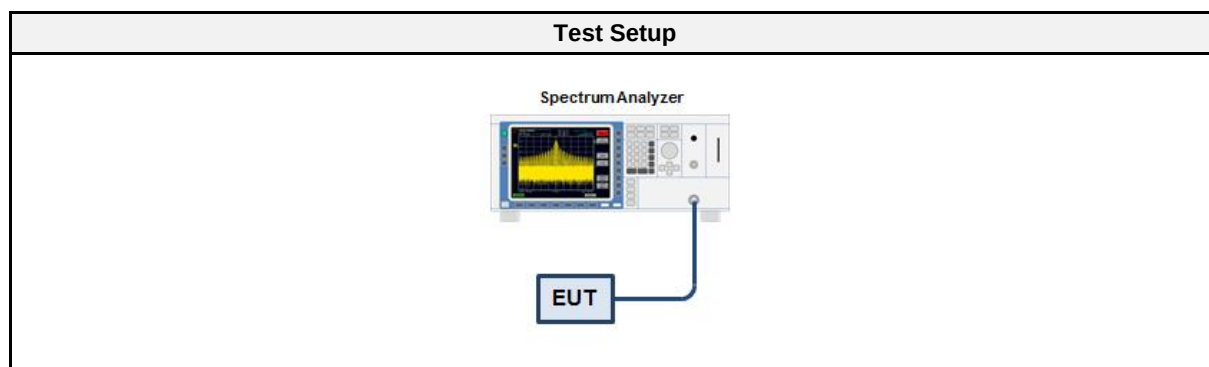
3.6.1 Information

Test Information	
Reference	FCC § 15.247(d); ISED RSS-247, Issue 2 (section 5.5)
Measurement Method	ANSI C63.10 11.11
Measurement Uncertainty	± 4.25 dB
Operator	Florian Voigt
Date	2020-06-23

3.6.2 Limits

Limits	
Power Measurement	Out-of-band attenuation [dB]
Peak	20
RMS	30

3.6.3 Setup



3.6.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSU 26	EF01407	2019-07	2020-07

3.6.5 Procedure

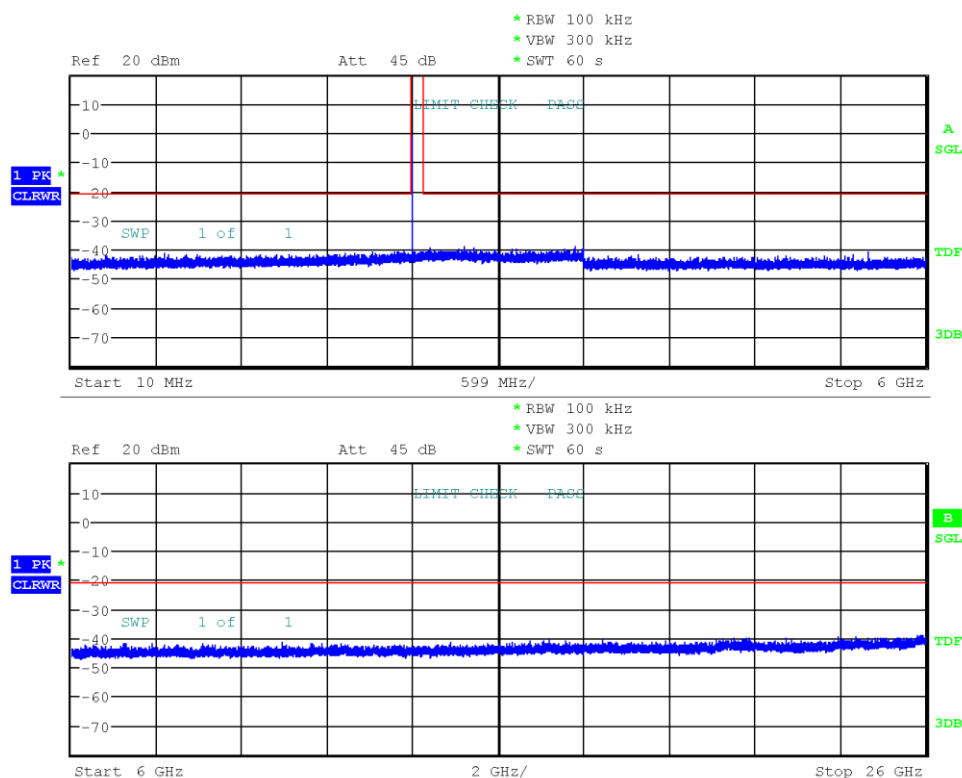
Test Procedure
1. EUT set to test mode (Communication tester is used if needed) 2. Span set around lower band edge and detector is set to peak and max hold 3. Resolution bandwidth is set to 100 kHz 4. Markers are set to peak emission levels within frequency band and outside frequency band 5. Band edge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

3.6.6 Results

Test Results		
Mode	Channel [MHz]	Verdict
GFSK	2402	PASS
GFSK	2440	PASS
GFSK	2480	PASS

Conducted Spurious Emissions

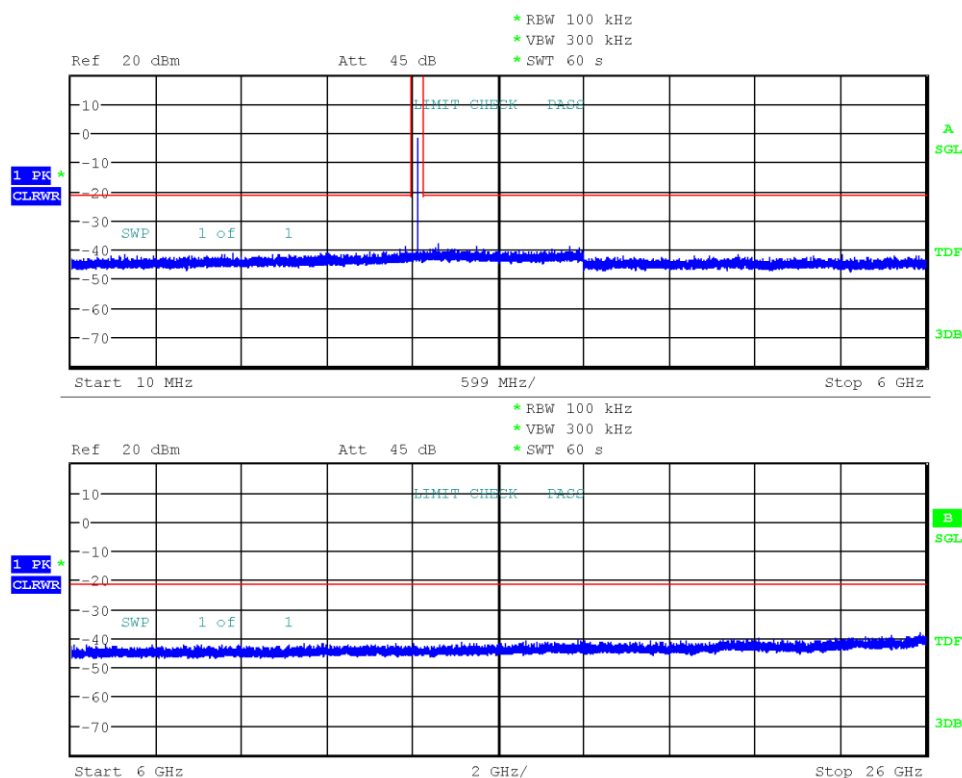
Project Number: G0M-2006-9064
 Applicant: Andreas Stihl AG & Co. KG
 Model Description: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Sample ID: 29659
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.11
 Operational Mode: GFSK, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Florian Voigt
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-06-23
 Max. in-band Frequency [MHz]: 2402.5
 Max. in-band Level [dBm/100 kHz]: -0.8
 Out-of-band Limit [dBm/100 kHz]: -20.8



Date: 23.JUN.2020 18:30:37

Conducted Spurious Emissions

Project Number: G0M-2006-9064
 Applicant: Andreas Stihl AG & Co. KG
 Model Description: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Sample ID: 29659
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.11
 Operational Mode: GFSK, Channel: 19, 2440 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Florian Voigt
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-06-23
 Max. in-band Frequency [MHz]: 2440.5
 Max. in-band Level [dBm/100 kHz]: -1.0
 Out-of-band Limit [dBm/100 kHz]: -21.0



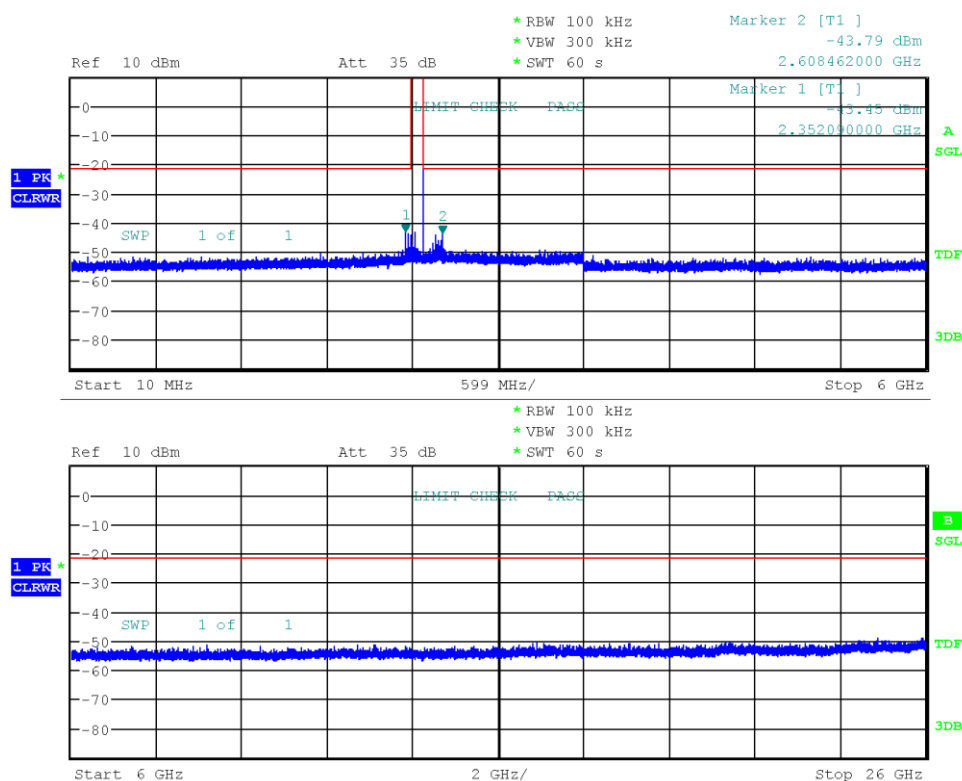
Date: 23.JUN.2020 18:34:06

Test Report No.: G0M-2006-9064-TFC247BL-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted Spurious Emissions

Project Number: G0M-2006-9064
 Applicant: Andreas Stihl AG & Co. KG
 Model Description: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Sample ID: 29659
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.11
 Operational Mode: GFSK, Channel: 39, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Florian Voigt
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-06-23
 Max. in-band Frequency [MHz]: 2480.5
 Max. in-band Level [dBm/100 kHz]: -1.4
 Out-of-band Limit [dBm/100 kHz]: -21.4



Date: 23.JUN.2020 18:37:51

3.7 Test Conditions and Results - AC powerline conducted emissions

3.7.1 Information

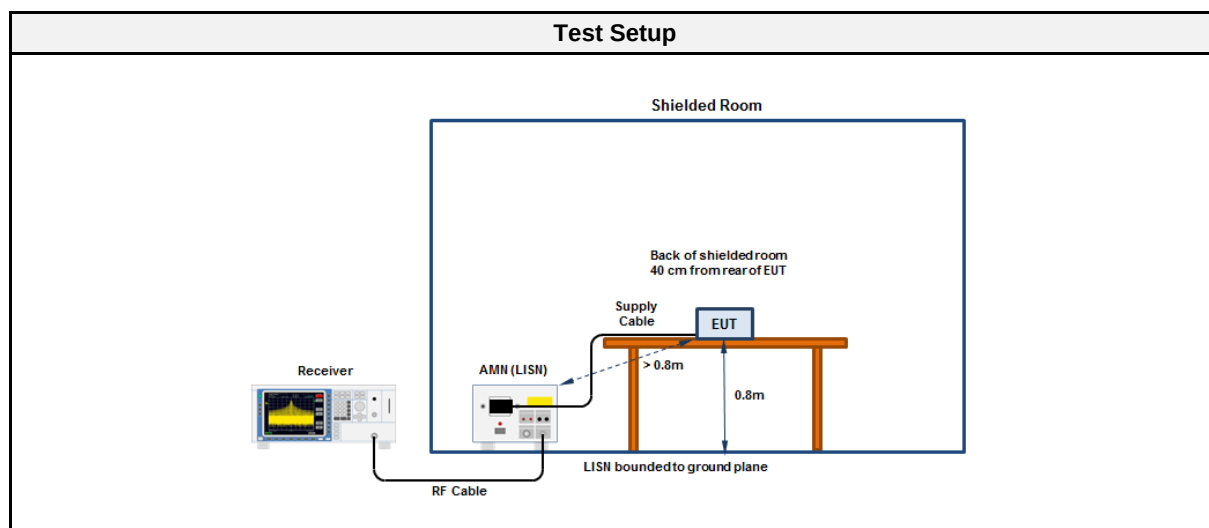
Test Information	
Reference	FCC § 15.207; ISED RSS-247, Issue 2 (section 3.1)
Measurement Method	ANSI C63.10 6.2
Measurement Uncertainty	± 3.82 dB
Operator	Florian Voigt
Date	2020-06-29

3.7.2 Limits

Limits		
Frequency [MHz]	Quasi-Peak [dBµV]	Average [dBµV]
0.15 - 0.5	66 - 56*	56 - 46*
0.5 - 5	56	46
5 - 30	60	50

* Limit decreases linearly with the logarithm of the frequency

3.7.3 Setup



3.7.4 Equipment

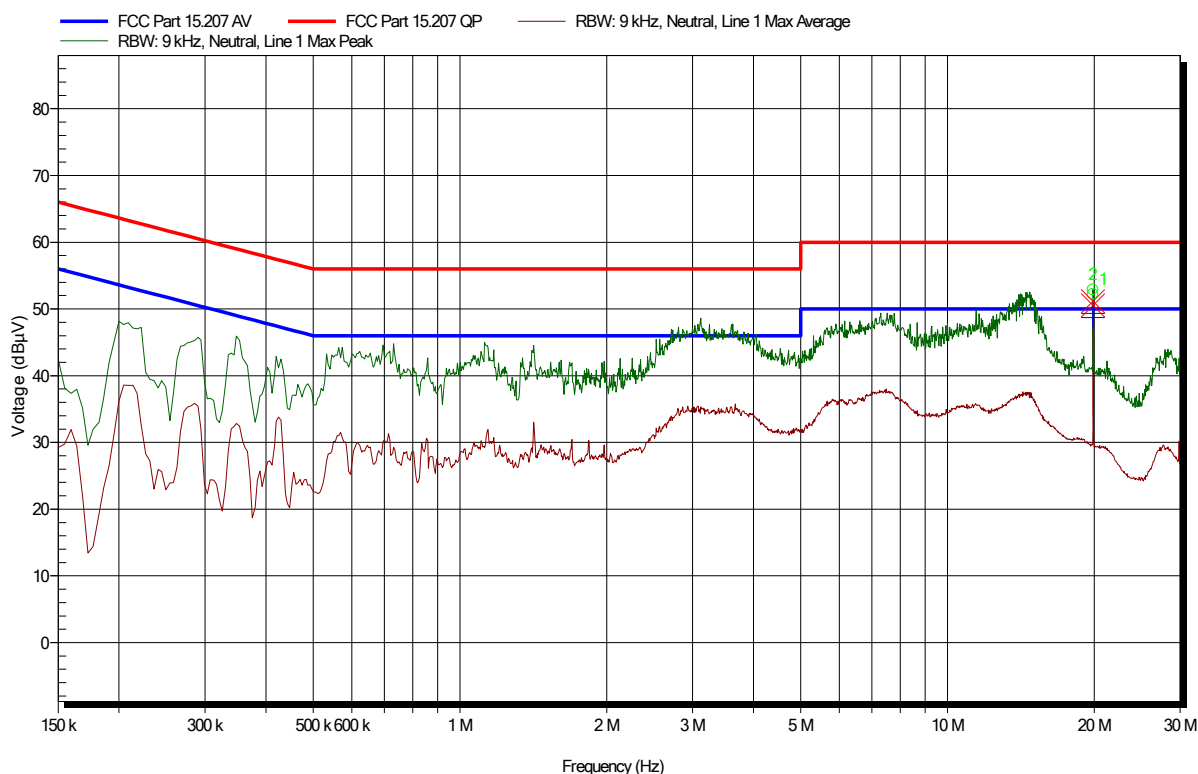
Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2016.1.10

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
LISN	Schwarzbeck	NSLK 8127 RC	EF01592	2019-10	2020-10
Pulse Limiter	R&S	ESH3-Z2	EF01222	2019-07	2020-07
EMI Test Receiver	R&S	ESCS 30	EF00295	2019-07	2020-07

Conducted emissions at the mains power port according to FCC 47 e-CFR §15.207

Project Number: G0M-2006-9064
 Applicant: Andreas Stihl AG & Co. KG
 Model Description: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Sample ID: 29658
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Voigt
 Test Date: 2020-06-29
 Operating Conditions: ambient temperature: 23.3°C
 power input: 120 VAC
 LISN: Schwarzbeck NSLK 8127 RC N
 Mode: L/N BTLE 2440MHz, Packetlength: 37 bytes
 Applied to Port: Mains
 Note 1:

Index 1



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	19.877 MHz	50.55 dBμV	60 dBμV	-9.45 dB	Pass	Neutral
2	19.878 MHz	51.14 dBμV	60 dBμV	-8.86 dB	Pass	Line 1

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	19.877 MHz	48.7 dBμV	50 dBμV	-1.3 dB	Pass	Neutral
2	19.878 MHz	49.35 dBμV	50 dBμV	-0.65 dB	Pass	Line 1

3.8 Test Conditions and Results - Transmitter radiated emissions

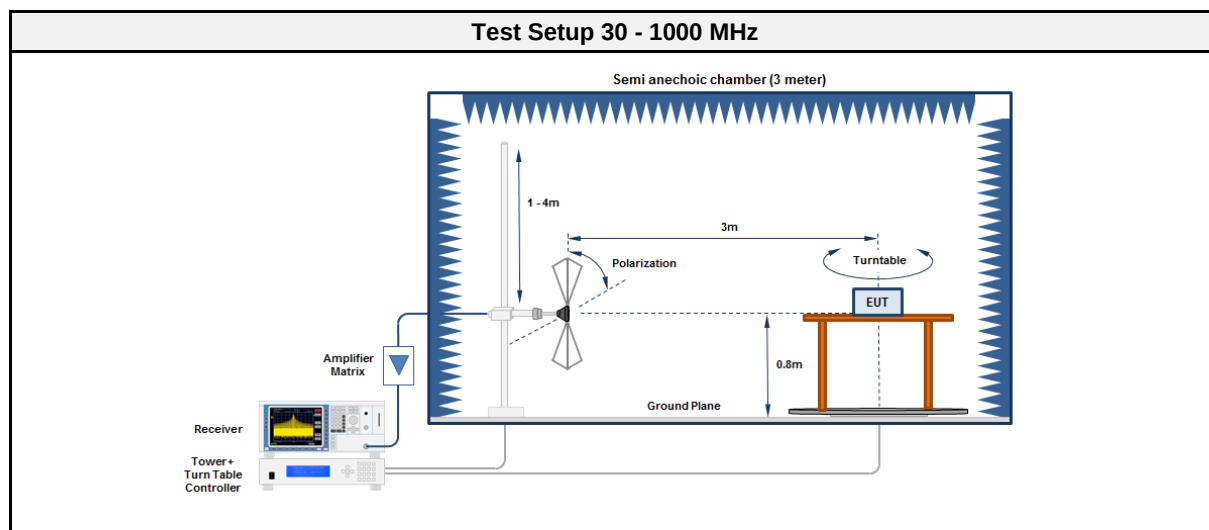
3.8.1 Information

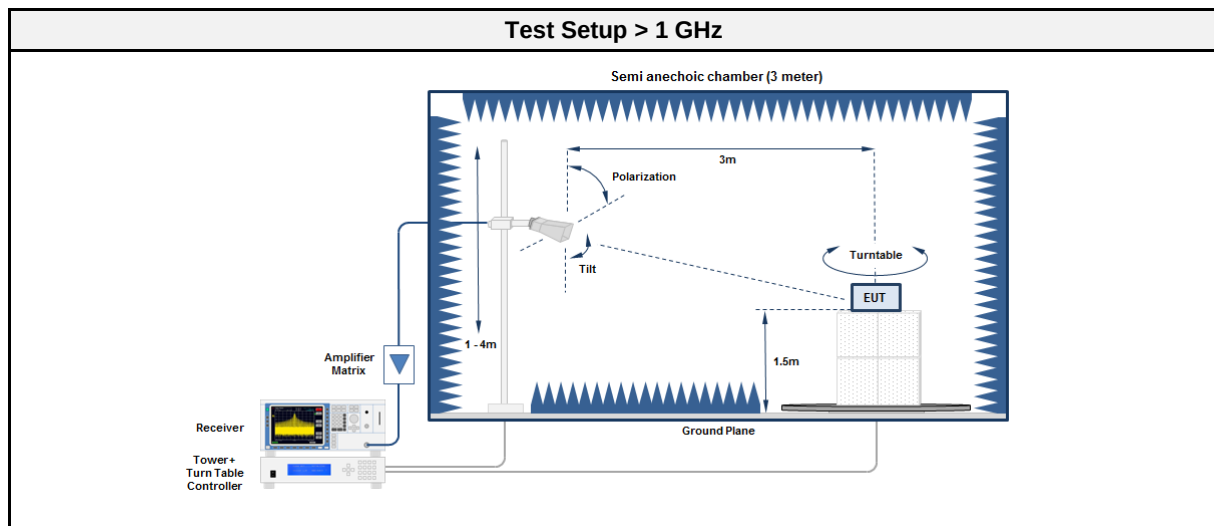
Test Information	
Reference	FCC § 15.247(d); FCC § 15.209; ISSED RSS-Gen, Issue 5 (section 6.13)
Measurement Method	ANSI C63.10 6.4, 6.5, 6.6, 11.12
Measurement Uncertainty	± 5.95 dB
Operator	Florian Voigt
Date	2020-06-19 + 2020-06-22

3.8.2 Limits

Limits			
Frequency [MHz]	Detector	Field strength [μV/m]	Measurement distance [m]
0.009 - 0.09	Average	2400/F[kHz]	300
0.09 - 0.110	Quasi-Peak	2400/F[kHz]	300
0.110 - 0.490	Average	2400/F[kHz]	300
0.490 - 1.705	Quasi-Peak	24000/F[kHz]	30
1.705 - 30.0	Quasi-Peak	30	30
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

3.8.3 Setup





3.8.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2016.1.10

Test Equipment 30 - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2018-07	2021-07
Antenna	R&S	HK 116	EF00030	2019-04	2022-04
Antenna	R&S	HL 223	EF00187	2019-05	2022-05
Spectrum analyzer	R&S	FSU26	EF01003	2019-07	2020-07

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2018-07	2021-07
Antenna	Schwarzbeck	BBHA 9120D	EF00018	2019-10	2022-10
Antenna	Amplifier Research	AT4560	EF00302	2019-05	2021-05
Spectrum analyzer	R&S	FSU26	EF01003	2019-07	2020-07

3.8.5 Procedure

Test Procedure 30 - 1000 MHz	
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	

3.8.6 Results

Test Results						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
2402	2315.2	53.53	pk	ver	74.00	-20.47
2402	2315.2	47.60	RMS	ver	54.00	-06.40
2402	2338	50.93	pk	hor	74.00	-23.07
2402	2338	43.85	RMS	hor	54.00	-10.15
2402	2338.1	53.21	pk	ver	74.00	-20.79
2402	2338.1	46.20	RMS	ver	54.00	-07.80
2402	4654	42.22	pk	hor	74.00	-31.78
2402	4801	41.49	pk	hor	74.00	-32.51
2440	4654	42.61	pk	hor	74.00	-31.39
2440	4878	45.74	pk	hor	74.00	-28.26
2440	7319	54.32	pk	hor	74.00	-19.68
2440	7319	52.40	RMS	hor	54.00	-01.60
2440	7319	56.83	pk	ver	74.00	-17.17
2440	7319	52.20	RMS	ver	54.00	-01.80
2480	2483.6	54.64	pk	hor	74.00	-19.36
2480	2483.6	41.68	RMS	hor	54.00	-12.32
2480	4654	43.82	pk	hor	74.00	-30.18
2480	4962	46.31	pk	hor	74.00	-27.69
2480	7439	54.84	pk	hor	74.00	-19.16
2480	7439	52.98	RMS	hor	54.00	-01.02
2480	7439	55.25	pk	ver	74.00	-18.75
2480	7439	53.17	RMS	ver	54.00	-0.83
Comment: All RMS-Level values have an additional duty cycle correction offset of $10 \cdot \log_{10}(1/0.63) = +2.01\text{dB}$ applied						

3.9 Test Conditions and Results - Receiver radiated emissions

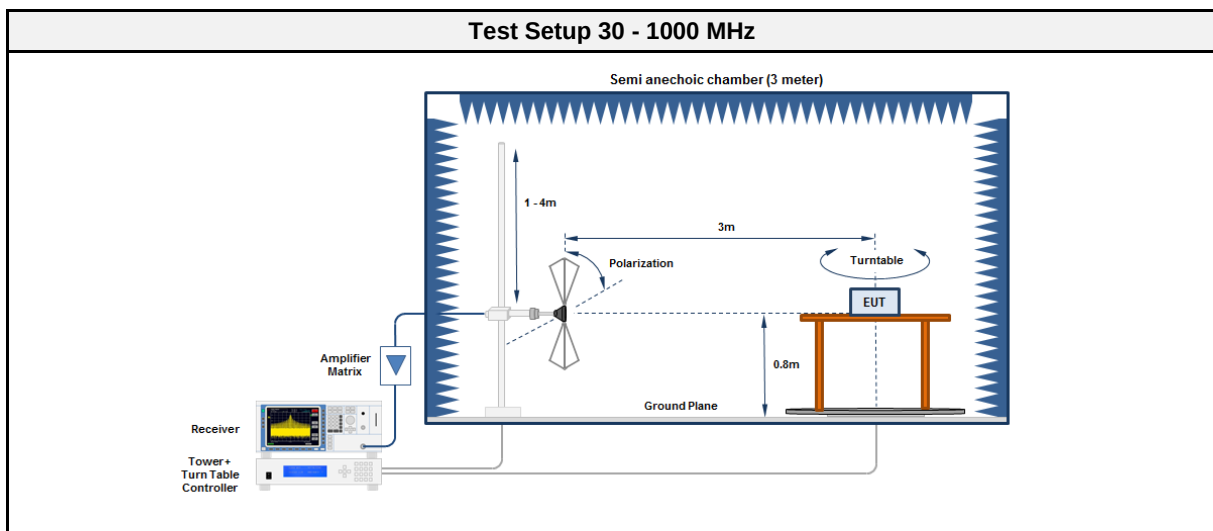
3.9.1 Information

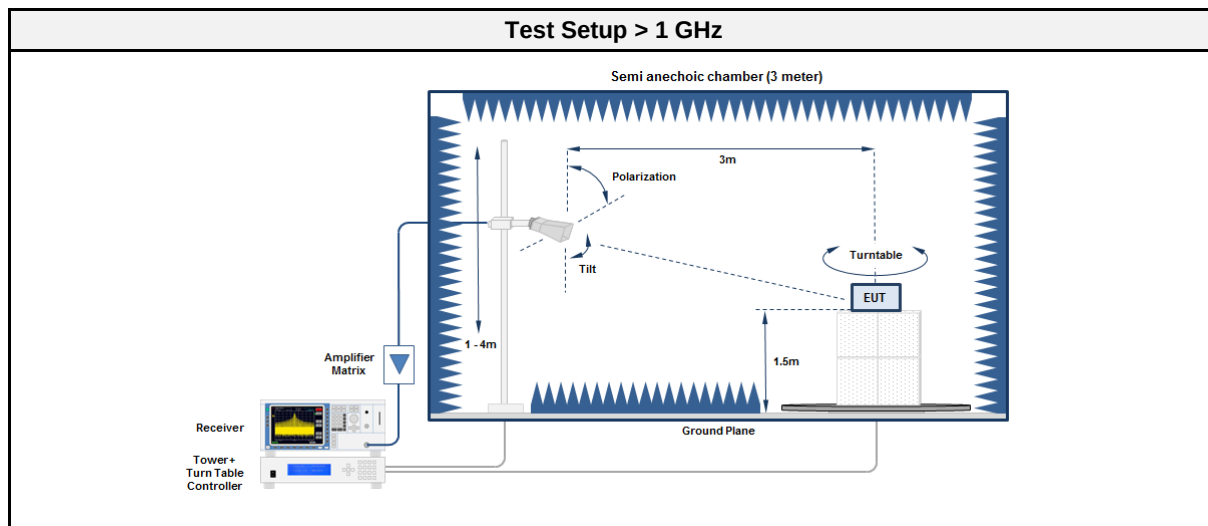
Test Information	
Reference	ISED RSS-247, Issue 2 (section 3.1)
Measurement Method	ANSI C63.10 6.5, 6.6, 11.12
Measurement Uncertainty	± 5.95 dB
Operator	Florian Voigt
Date	2020-06-19 + 2020-06-22

3.9.2 Limits

Limits			
Frequency [MHz]	Detector	Field strength [$\mu\text{V/m}$]	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

3.9.3 Setup





3.9.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2016.1.10

Test Equipment 30 - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2018-07	2021-07
Antenna	R&S	HK 116	EF00030	2019-04	2022-04
Antenna	R&S	HL 223	EF00187	2019-05	2022-05
Spectrum analyzer	R&S	FSU26	EF01003	2019-07	2020-07

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2018-07	2021-07
Antenna	Schwarzbeck	BBHA 9120D	EF00018	2019-10	2022-10
Spectrum analyzer	R&S	FSU26	EF01003	2019-07	2020-07

3.9.5 Procedure

Test Procedure 30 - 1000 MHz	
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	

3.9.6 Results

Test Results						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
2440	4878	45.91	pk	hor	53.98	-08.07
2440	4878	42.97	pk	ver	53.98	-11.01
2440	5237	38.29	pk	hor	53.98	-15.69

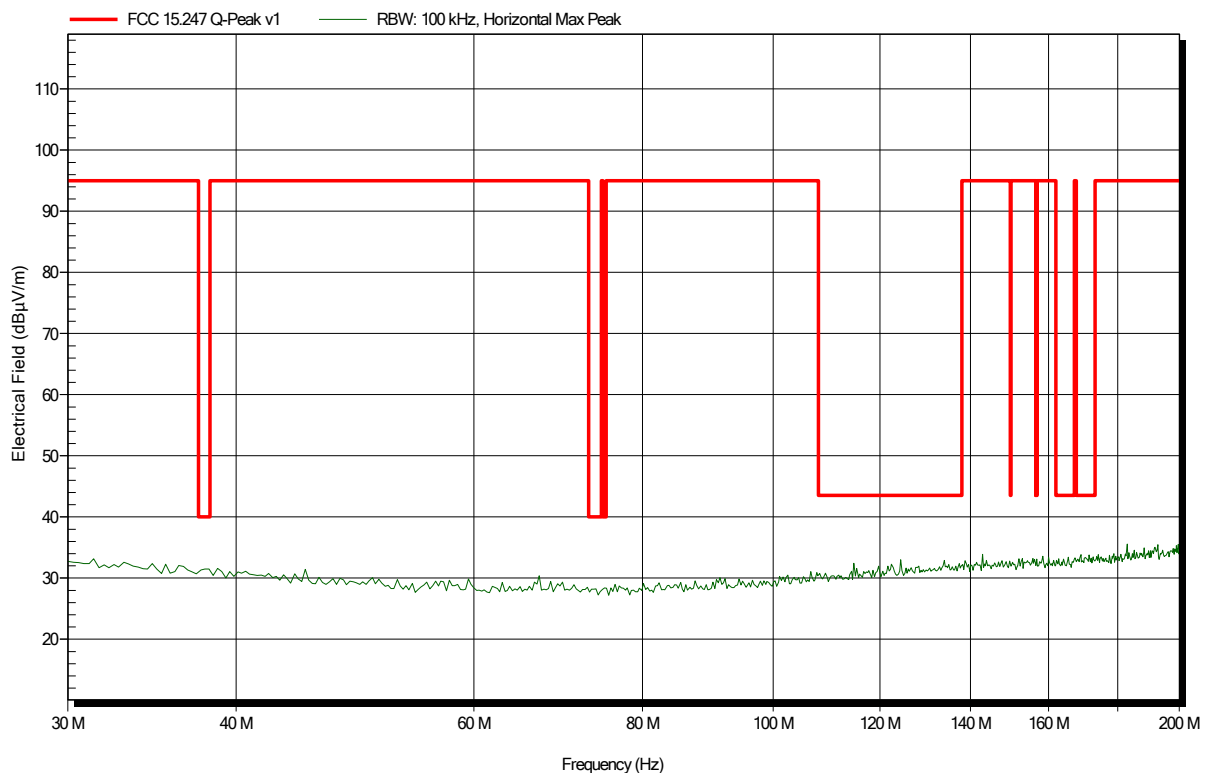
ANNEX A Transmitter spurious emissions

Spurious emissions according to FCC 47 e-CFR §15.247, ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Measurement software: RadiMation, version 2016.1.10
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Rohde & Schwarz HK 116, Horizontal
Measurement distance: 3 m
Mode: TX; 2402MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-22
Note:

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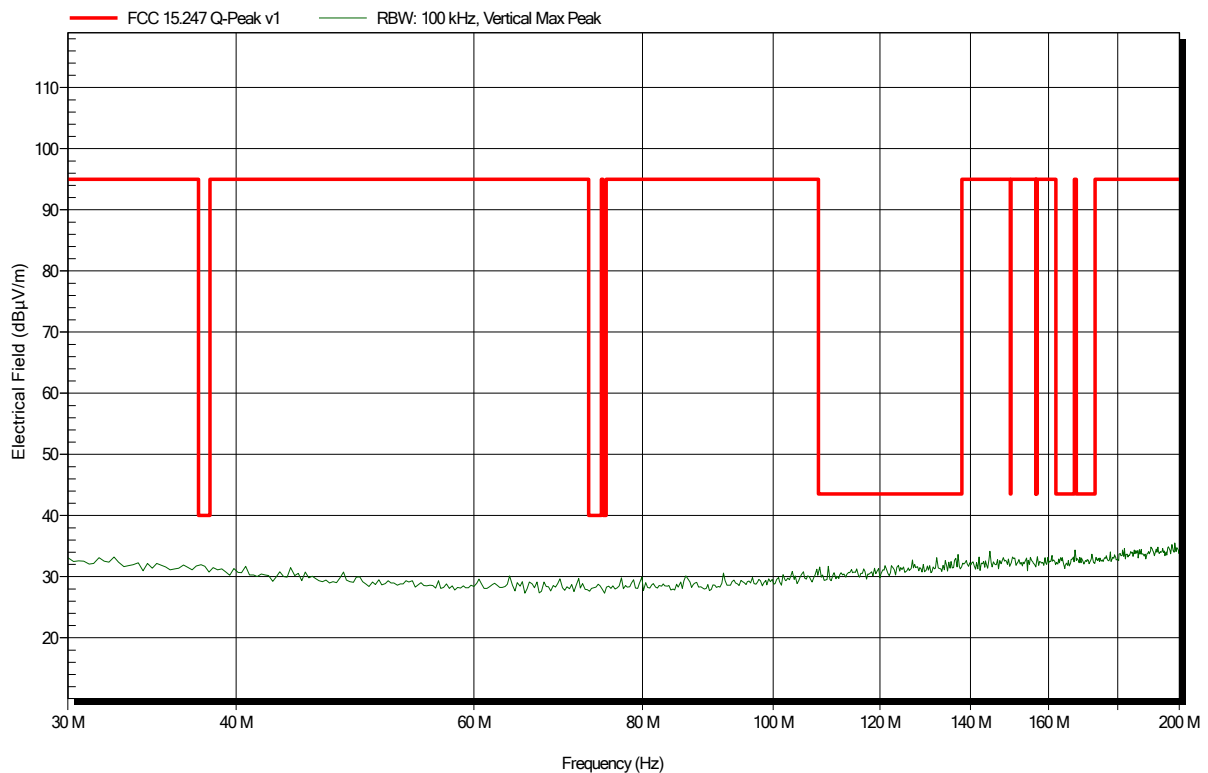


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Measurement software: RadiMation, version 2016.1.10
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Rohde & Schwarz HK 116, Vertical
Measurement distance: 3 m
Mode: TX; 2402MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-22
Note:

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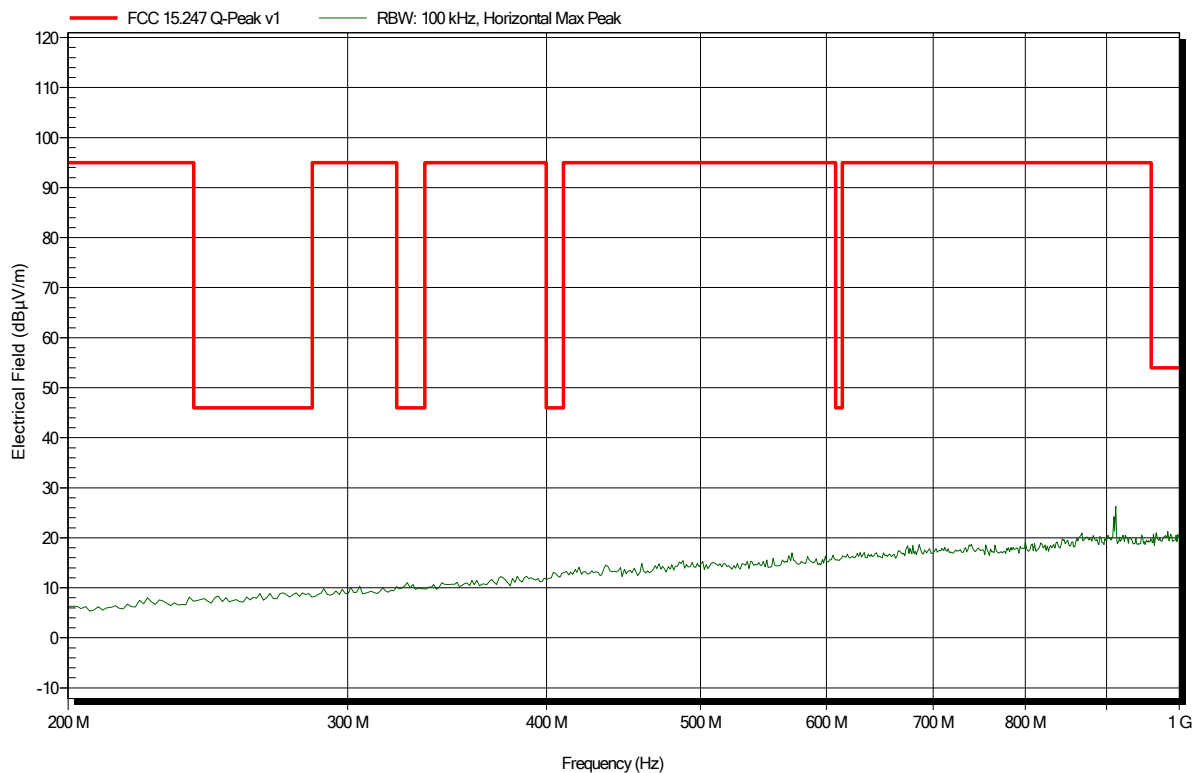


Spurious emissions according to FCC 47 e-CFR §15.247, ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Measurement software: RadiMation, version 2016.1.10
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Rohde & Schwarz HL 223, Horizontal
Measurement distance: 3 m
Mode: TX; 2402MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-22
Note:

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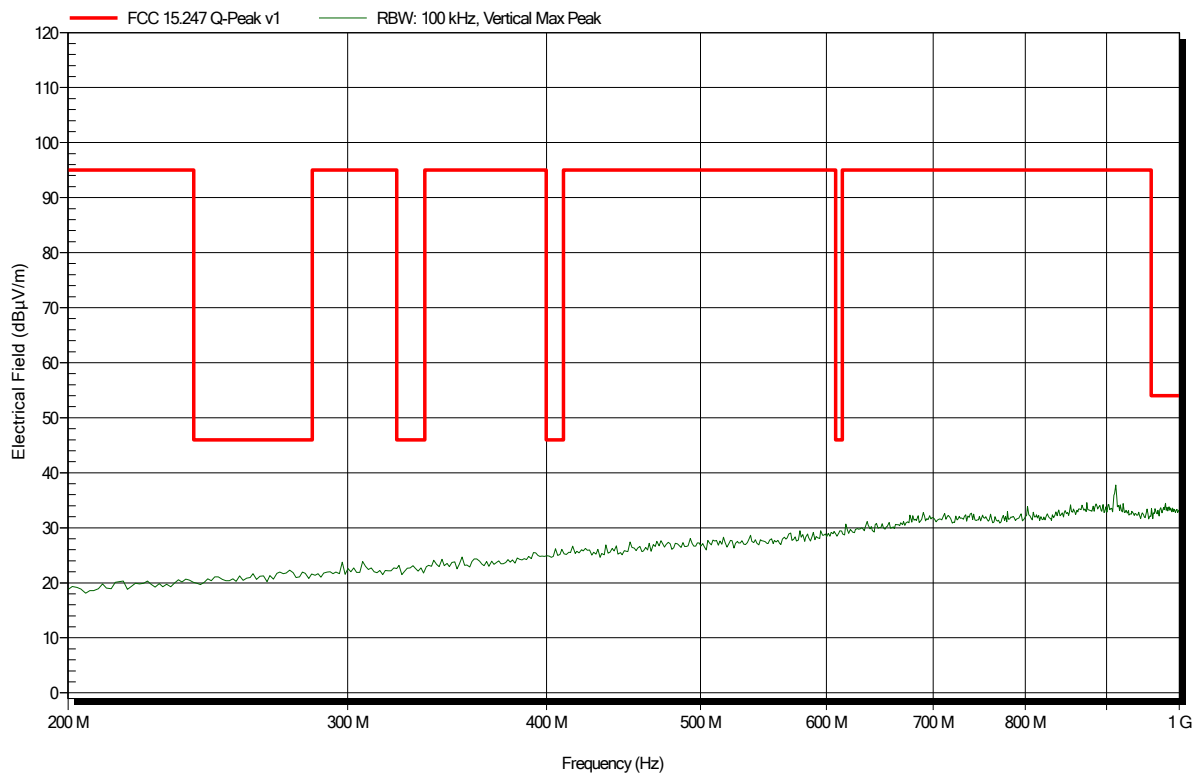


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Measurement software: RadiMation, version 2016.1.10
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Rohde & Schwarz HL 223, Vertical
Measurement distance: 3 m
Mode: TX; 2402MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-22
Note:

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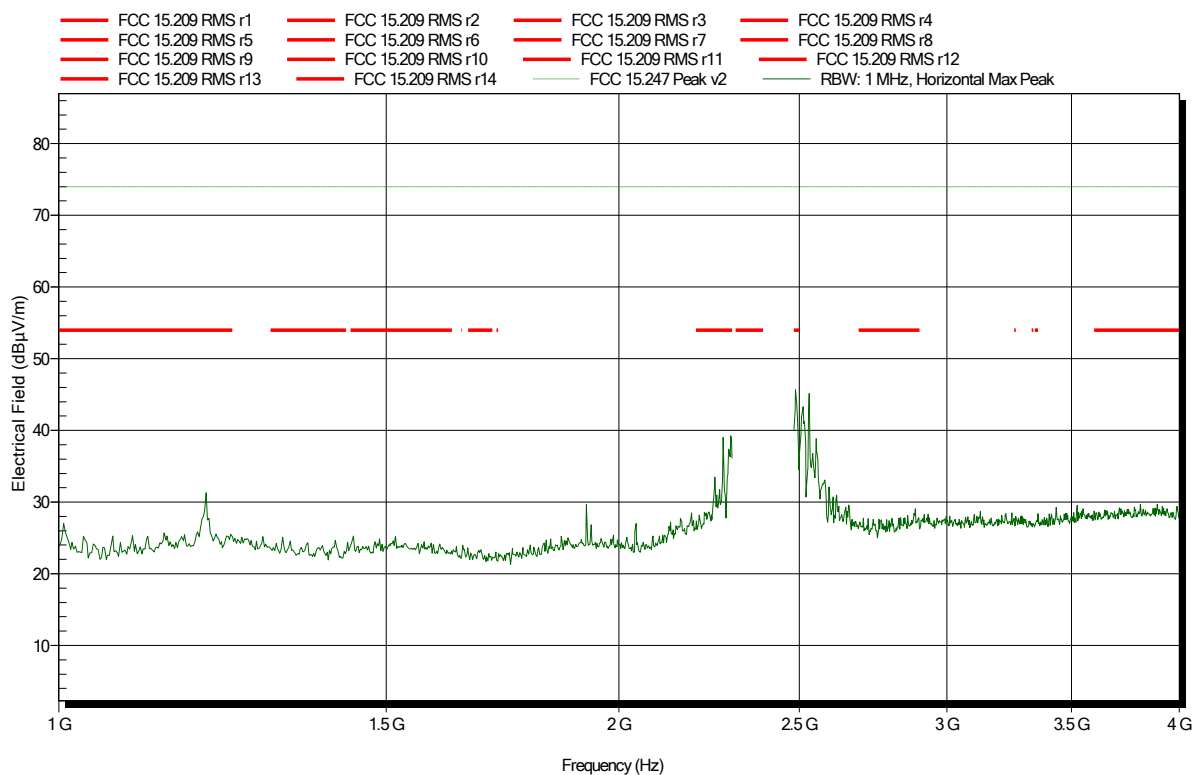


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; 2402MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note:

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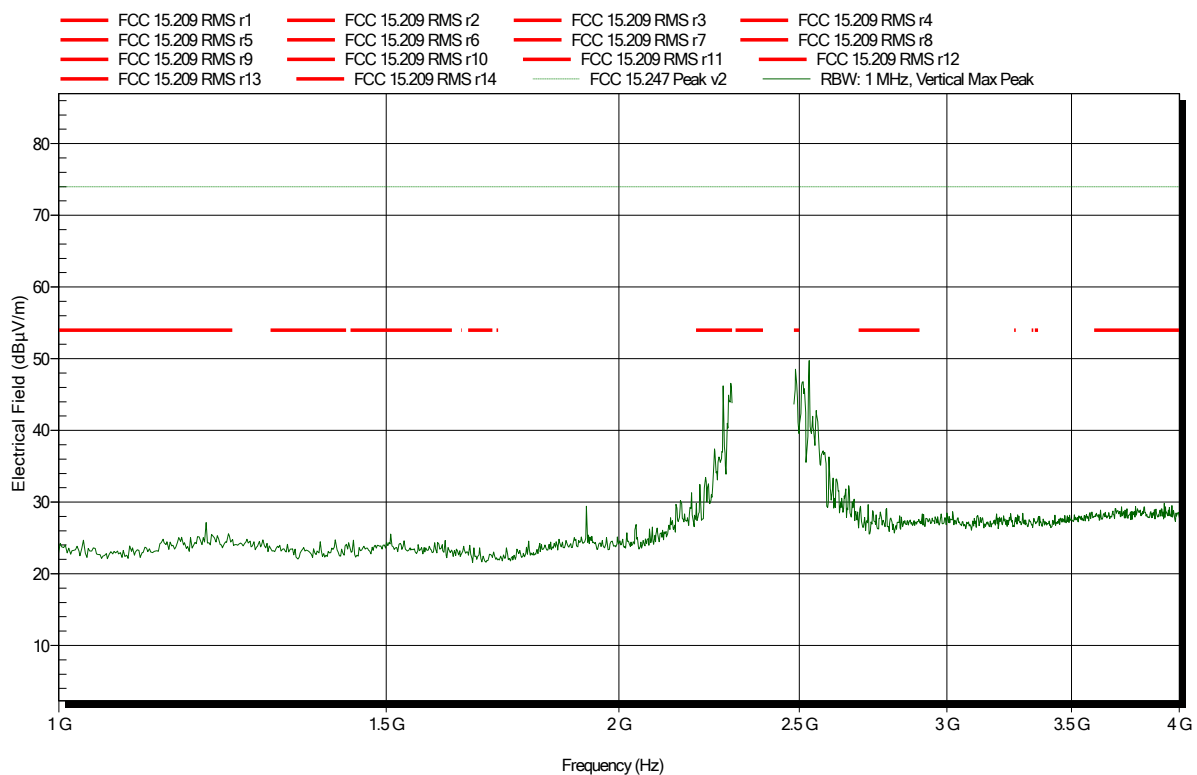


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; 2402MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note:

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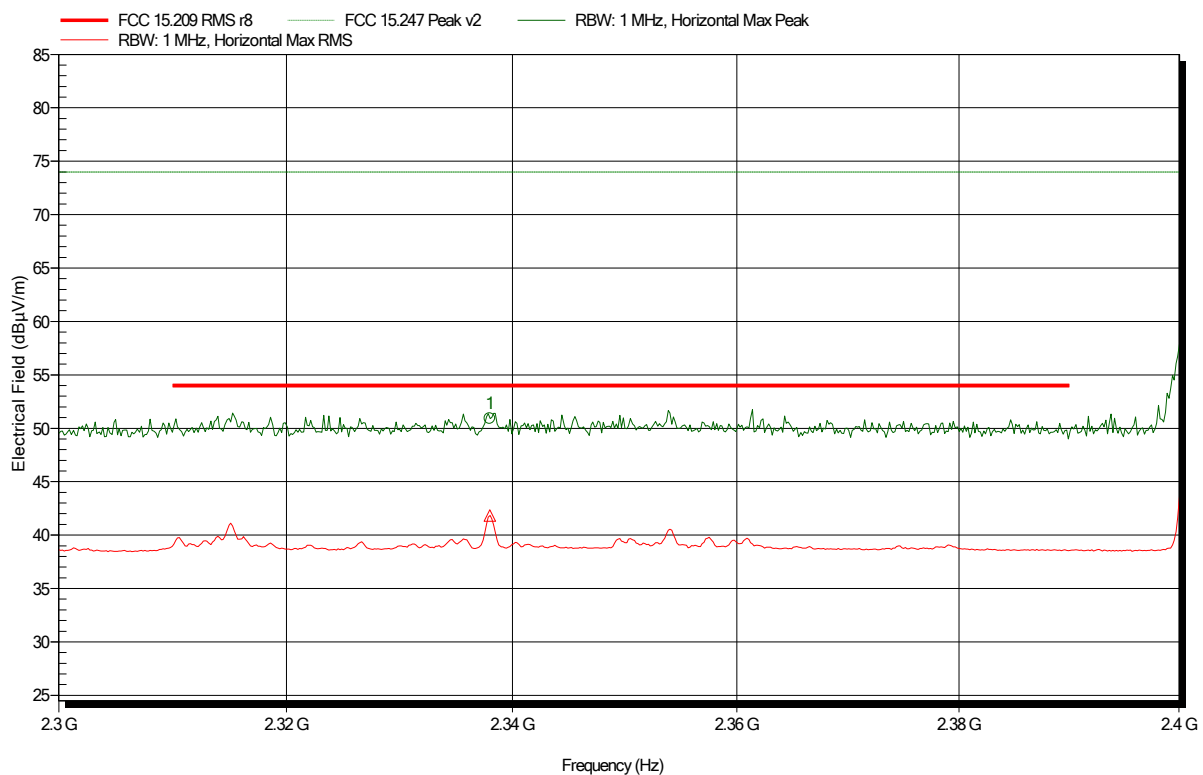


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; 2402MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note: lower bandedge

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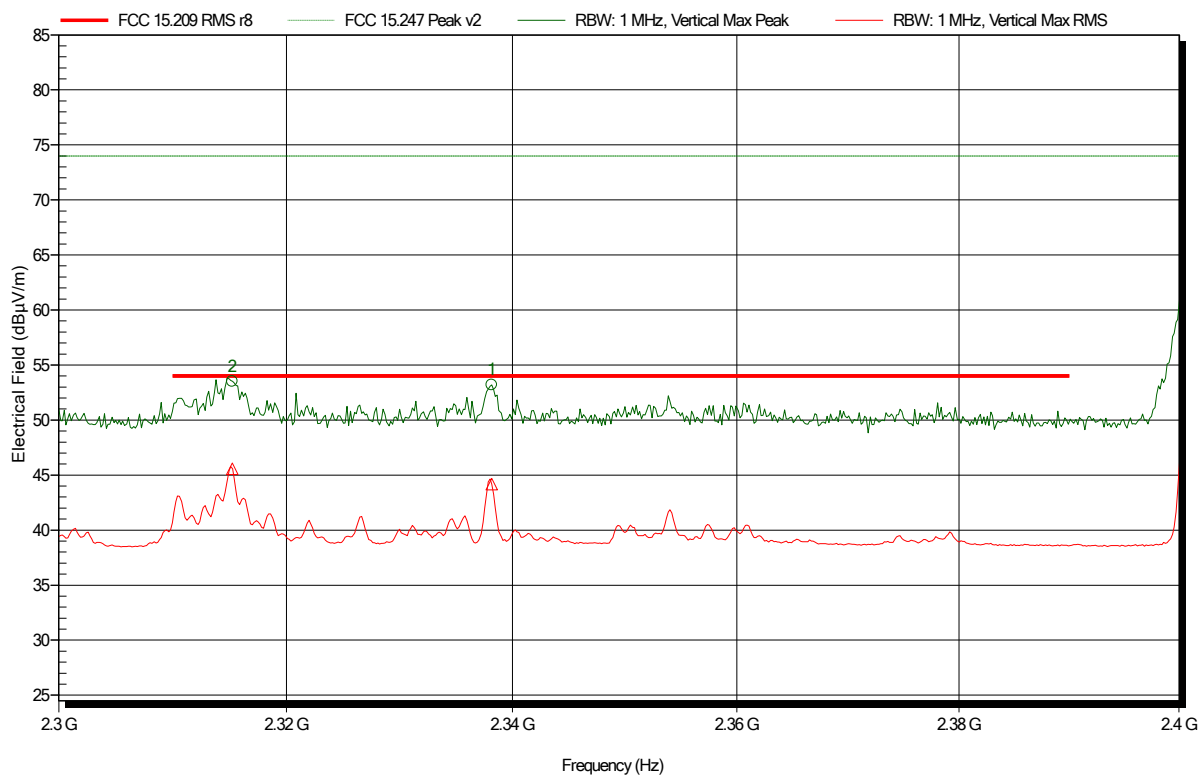
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.338 GHz	50.93 dBμV/m	74 dBμV/m	-23.07 dB	Pass
Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.338 GHz	41.84 dBμV/m	54 dBμV/m	-12.16 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; 2402MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note: lower bandedge

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.3152 GHz	53.53 dBµV/m	74 dBµV/m	-20.47 dB	Pass
2.3381 GHz	53.21 dBµV/m	74 dBµV/m	-20.79 dB	Pass

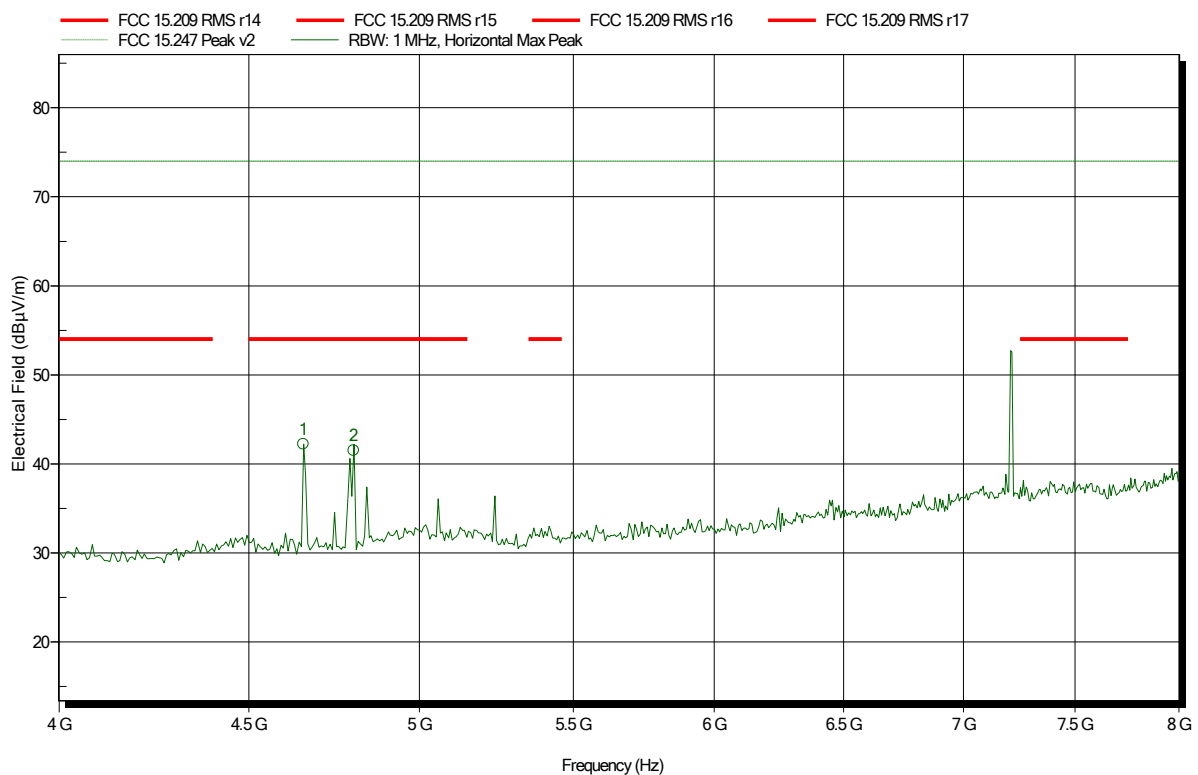
Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.3152 GHz	45.59 dBµV/m	54 dBµV/m	-8.41 dB	Pass
2.3381 GHz	44.19 dBµV/m	54 dBµV/m	-9.81 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; 2402MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note:

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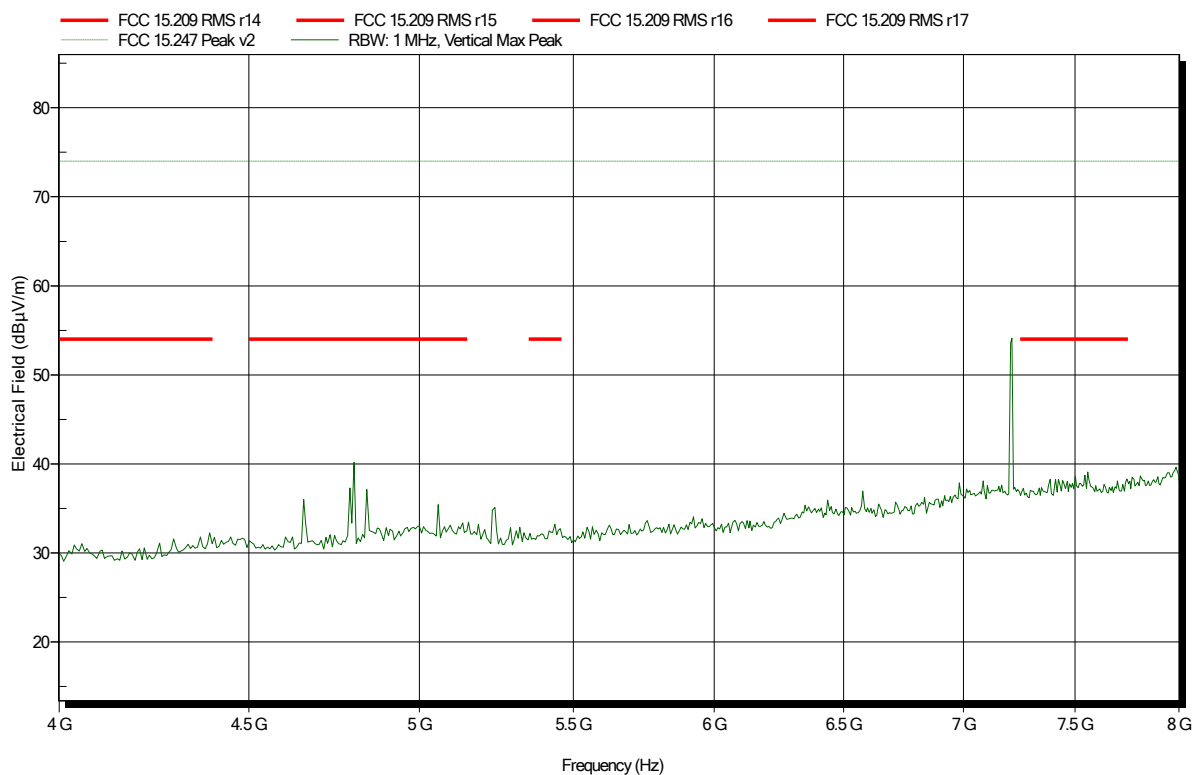
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.654 GHz	42.22 dBµV/m	74 dBµV/m	-31.78 dB	Pass
4.801 GHz	41.49 dBµV/m	74 dBµV/m	-32.51 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
 EUT Name: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Site: Eurofins Product Service GmbH
 Operator: Florian Voigt
 Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; 2402MHz, 2-GFSK, Packetlength 37 bytes
 Test Date: 2020-06-19
 Note:

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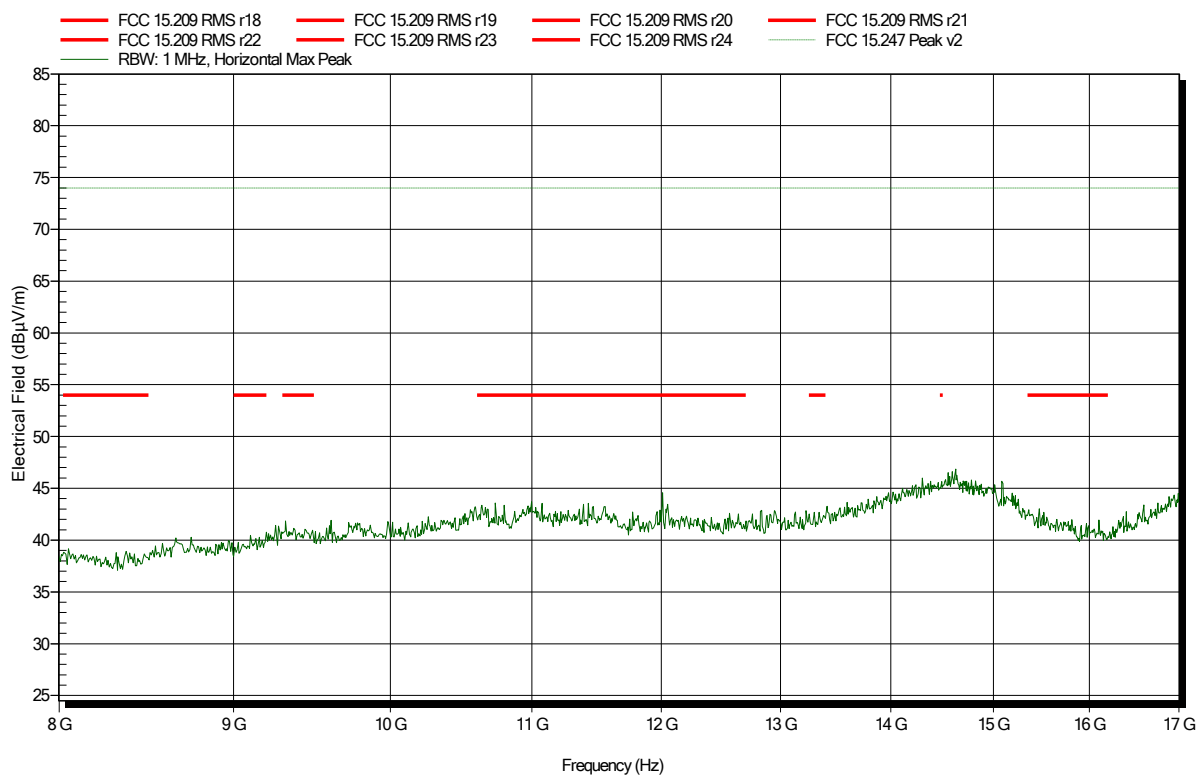


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; 2402MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note:

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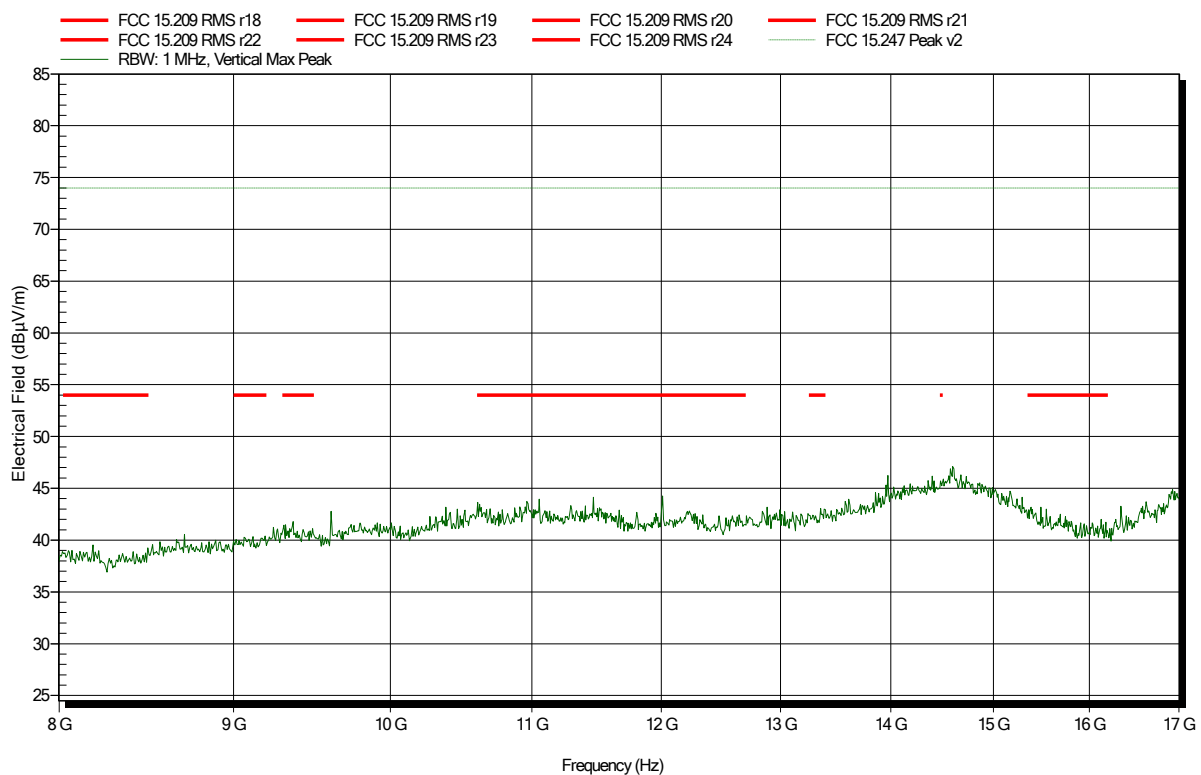


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; 2402MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note:

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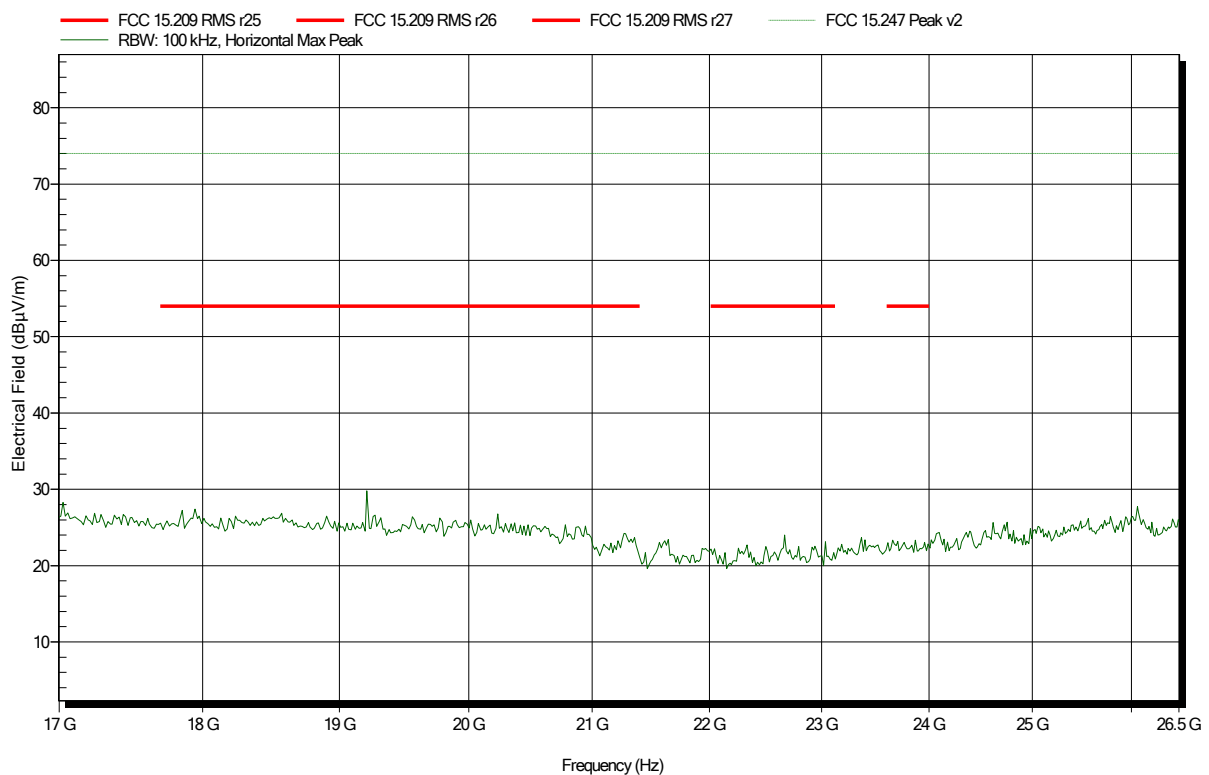


Spurious emissions according to FCC 47 e-CFR §15.247, ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Amplifier Research AT4560, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; 2402MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-22
Note:

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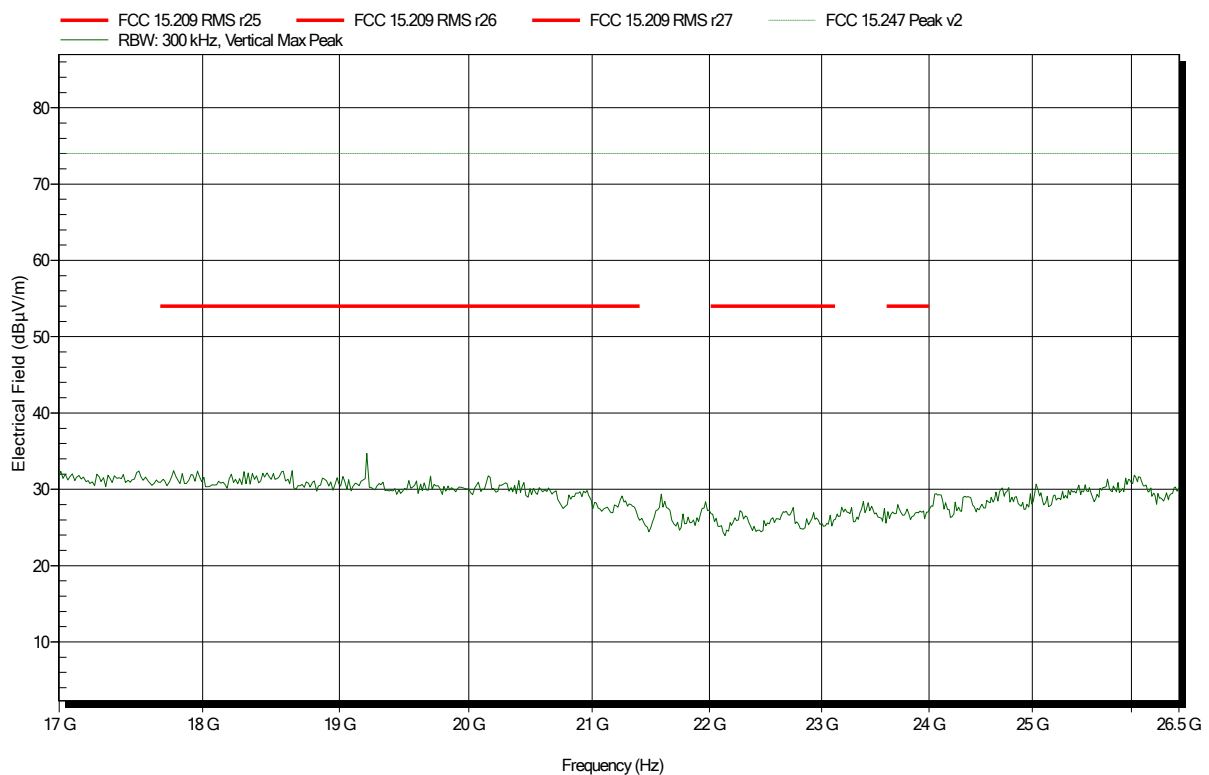


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Amplifier Research AT4560, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; 2402MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-22
Note:

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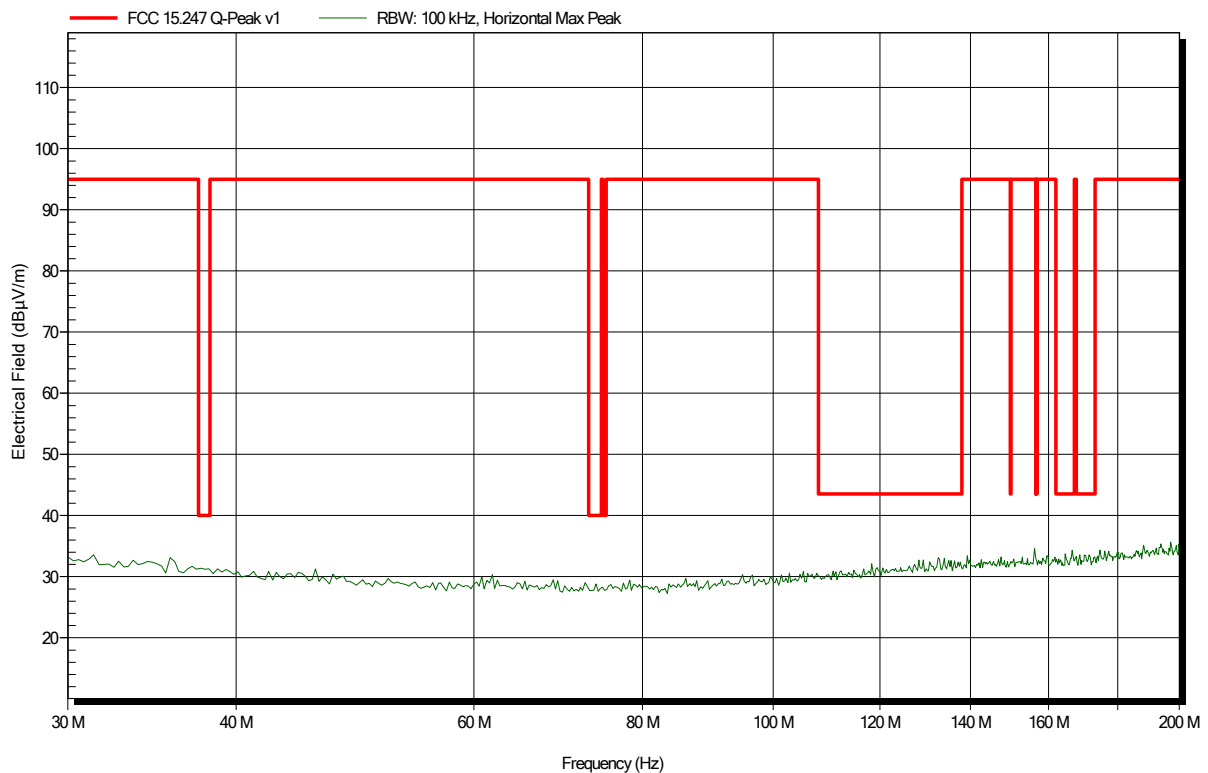


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Measurement software: RadiMation, version 2016.1.10
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Rohde & Schwarz HK 116, Horizontal
Measurement distance: 3 m
Mode: TX; 2440MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-22
Note:

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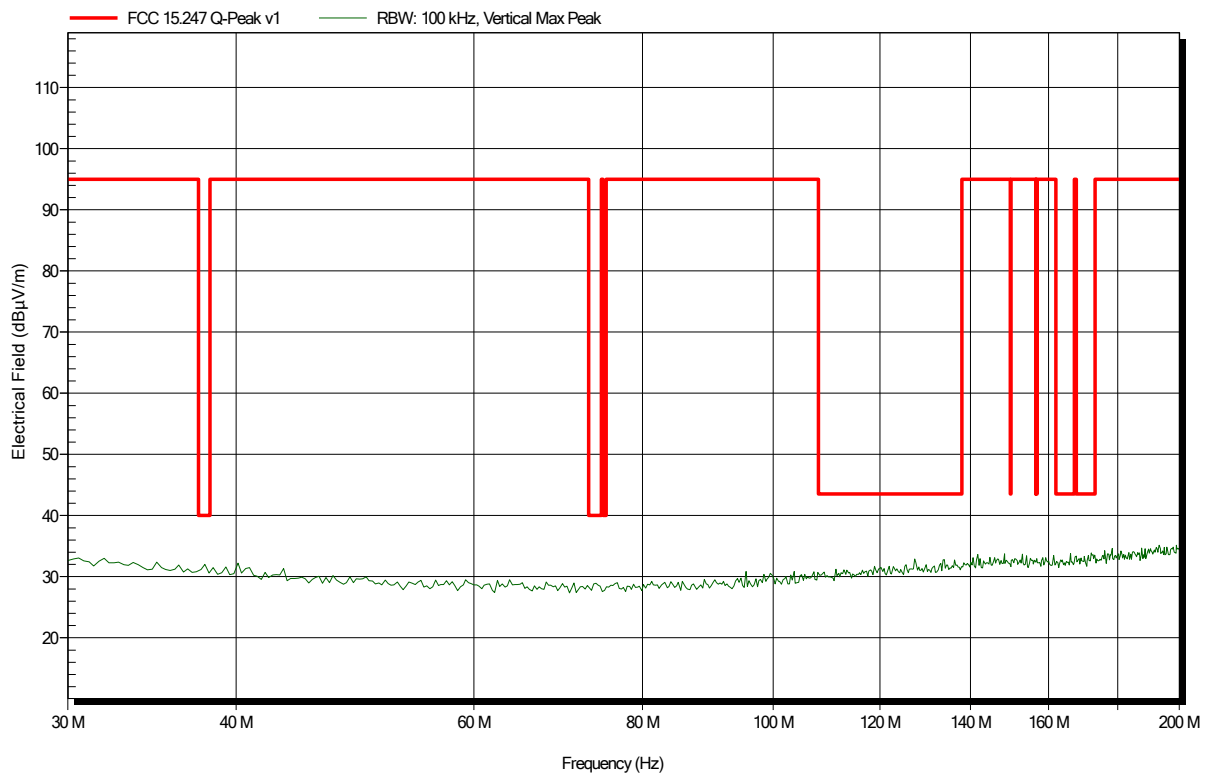


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Measurement software: RadiMation, version 2016.1.10
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Rohde & Schwarz HK 116, Vertical
Measurement distance: 3 m
Mode: TX; 2440MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-22
Note:

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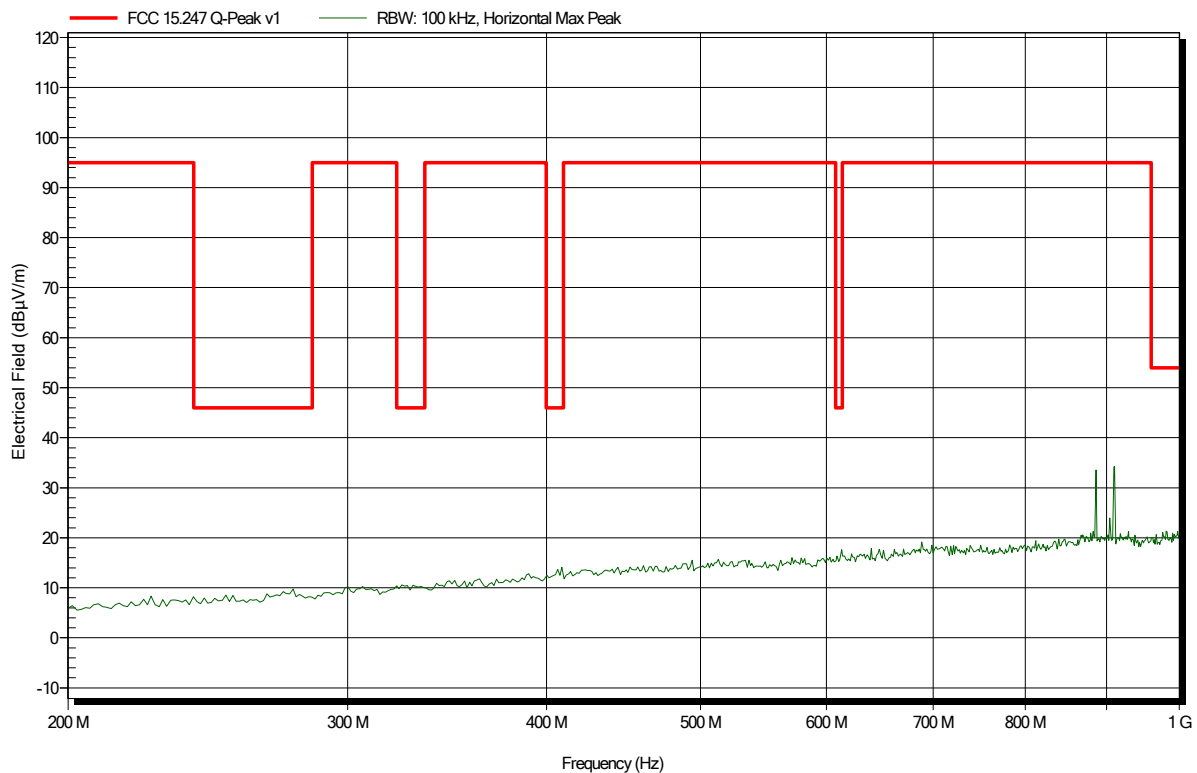


Spurious emissions according to FCC 47 e-CFR §15.247, ISED RSS-247 Issue 2 (February 2017)

Project number: GOM-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Measurement software: RadiMation, version 2016.1.10
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Rohde & Schwarz HL 223, Horizontal
Measurement distance: 3 m
Mode: TX; 2440MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-22
Note:

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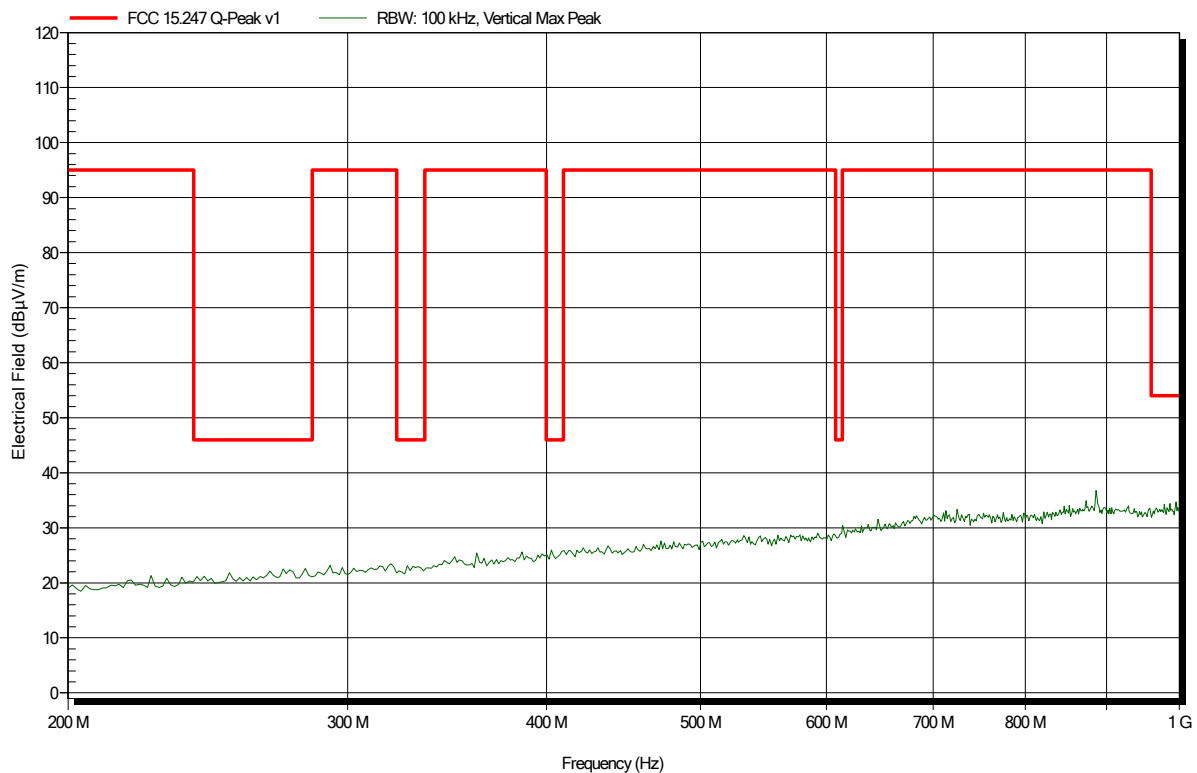


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Measurement software: RadiMation, version 2016.1.10
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Rohde & Schwarz HL 223, Vertical
Measurement distance: 3 m
Mode: TX; 2440MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-22
Note:

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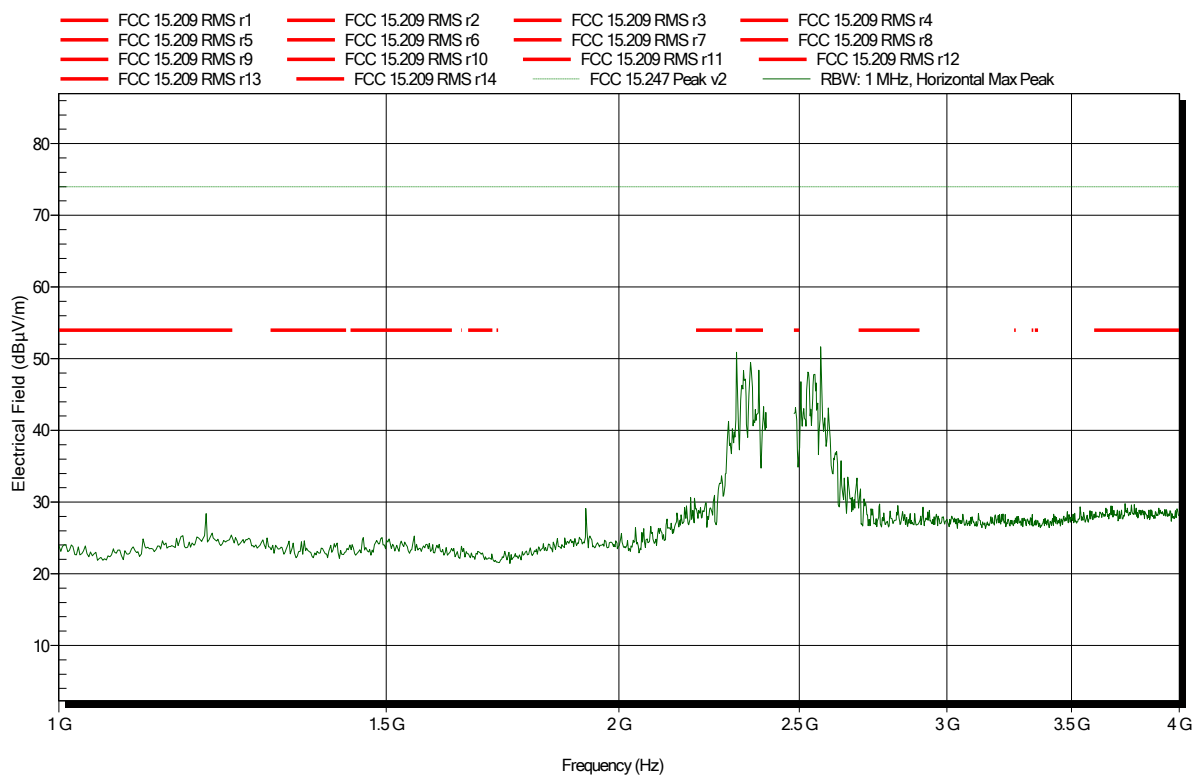


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; 2440MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note:

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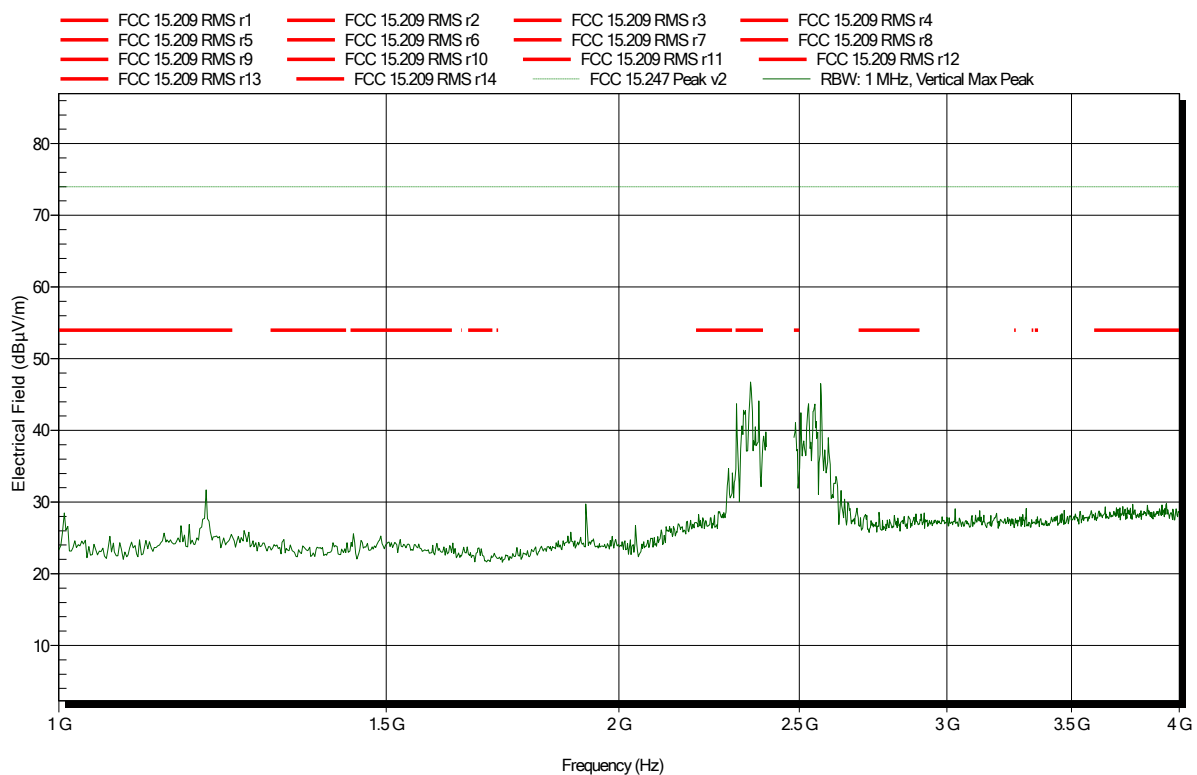


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; 2440MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note:

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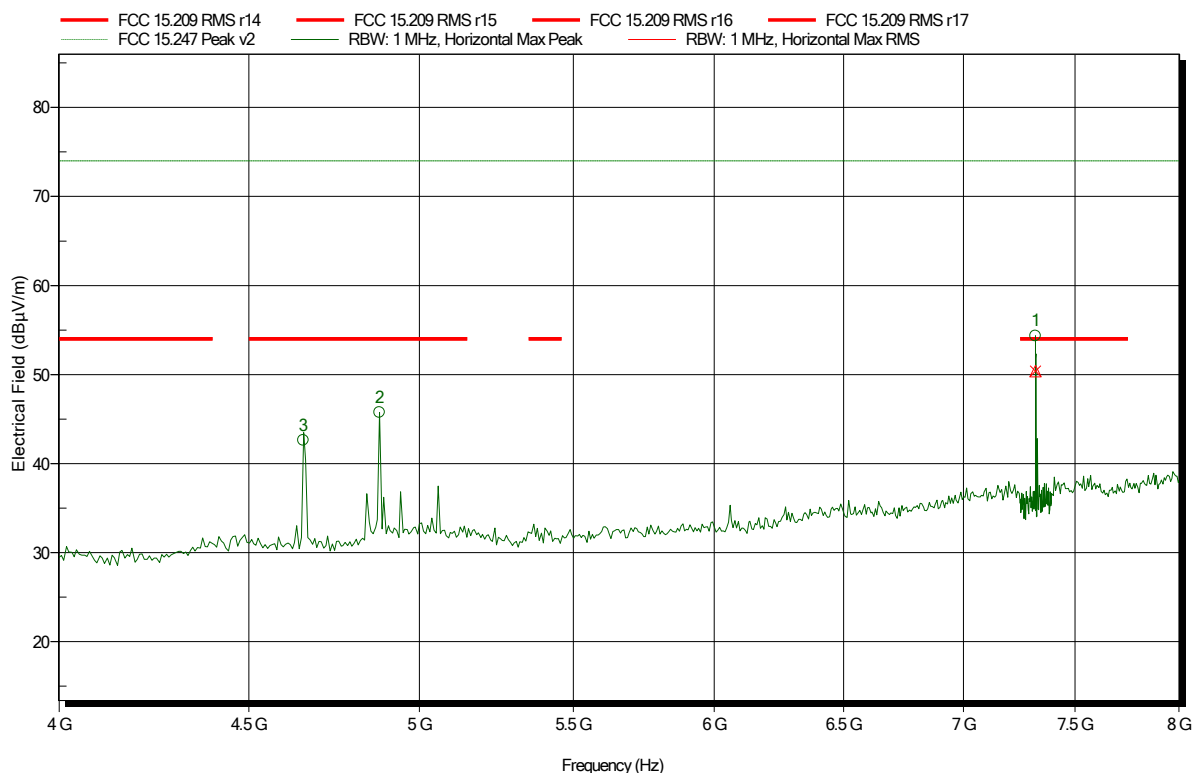


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; 2440MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note:

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.654 GHz	42.61 dBµV/m	74 dBµV/m	-31.39 dB	Pass
4.878 GHz	45.74 dBµV/m	74 dBµV/m	-28.26 dB	Pass
7.319 GHz	54.32 dBµV/m	74 dBµV/m	-19.68 dB	Pass

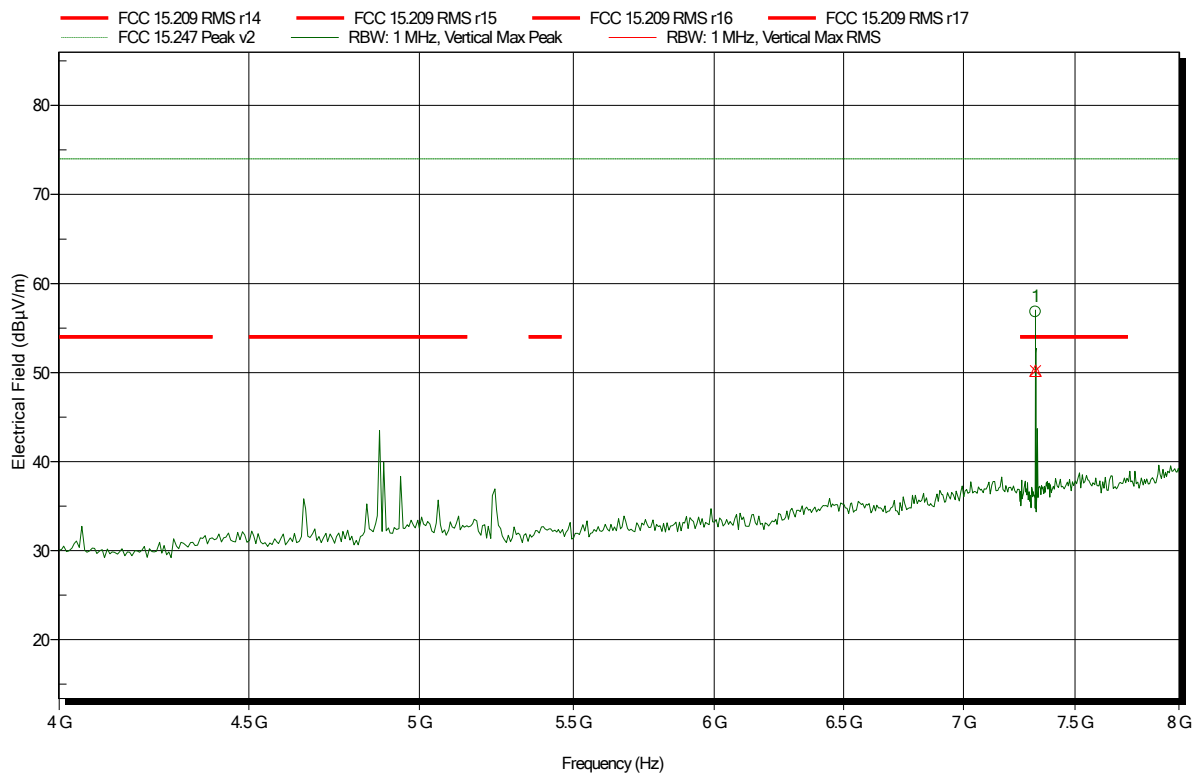
Frequency	RMS	RMS Limit	RMS Difference	RMS Status
7.319 GHz	50.39 dBµV/m	54 dBµV/m	-3.61 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
 EUT Name: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Site: Eurofins Product Service GmbH
 Operator: Florian Voigt
 Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; 2440MHz, 2-GFSK, Packetlength 37 bytes
 Test Date: 2020-06-19
 Note:

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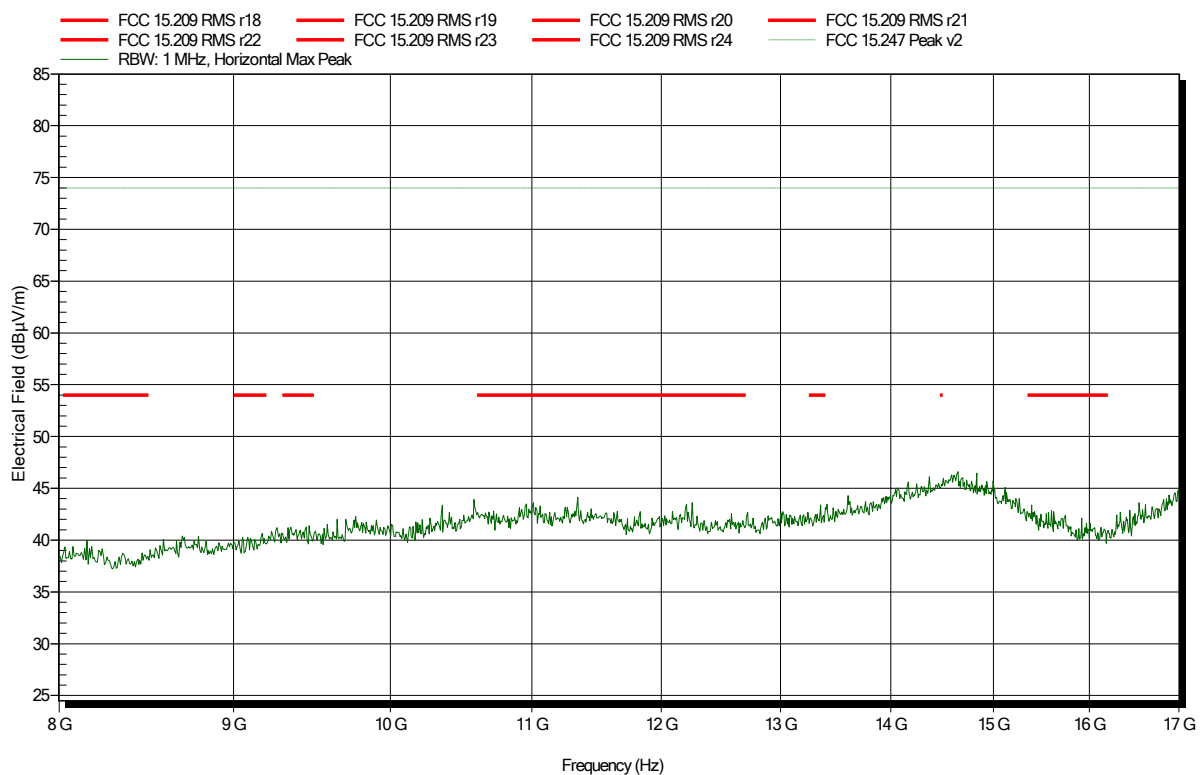
Frequency 7.319 GHz	Peak 56.83 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -17.17 dB	Peak Status Pass
Frequency 7.319 GHz	RMS 50.19 dBµV/m	RMS Limit 54 dBµV/m	RMS Difference -3.81 dB	RMS Status Pass

Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; 2440MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note:

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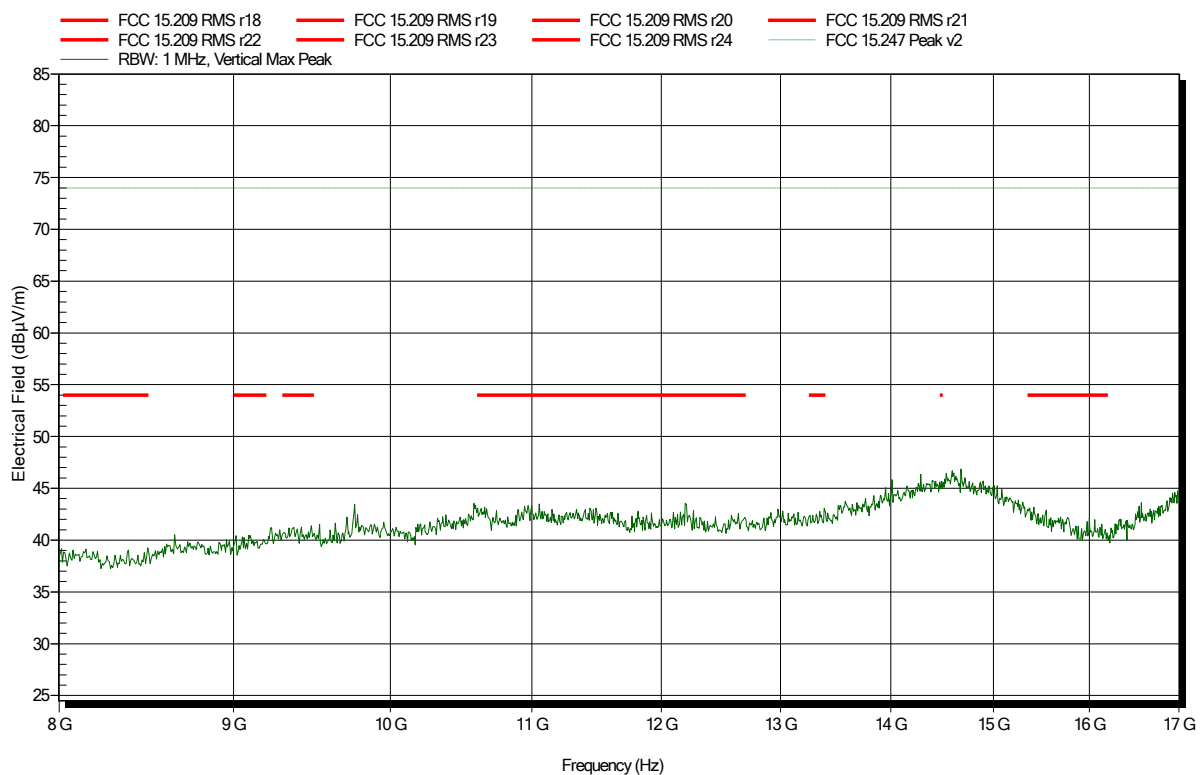


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; 2440MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note:

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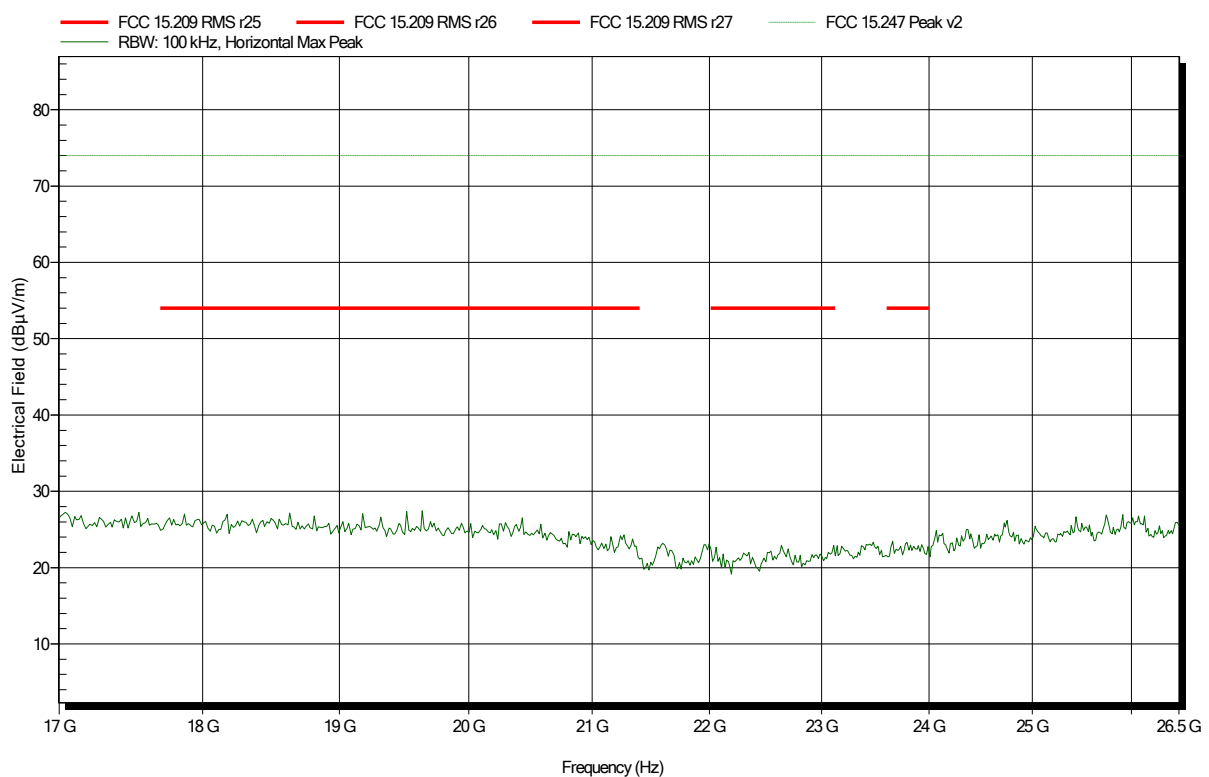


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Amplifier Research AT4560, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; 2440MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-22
Note:

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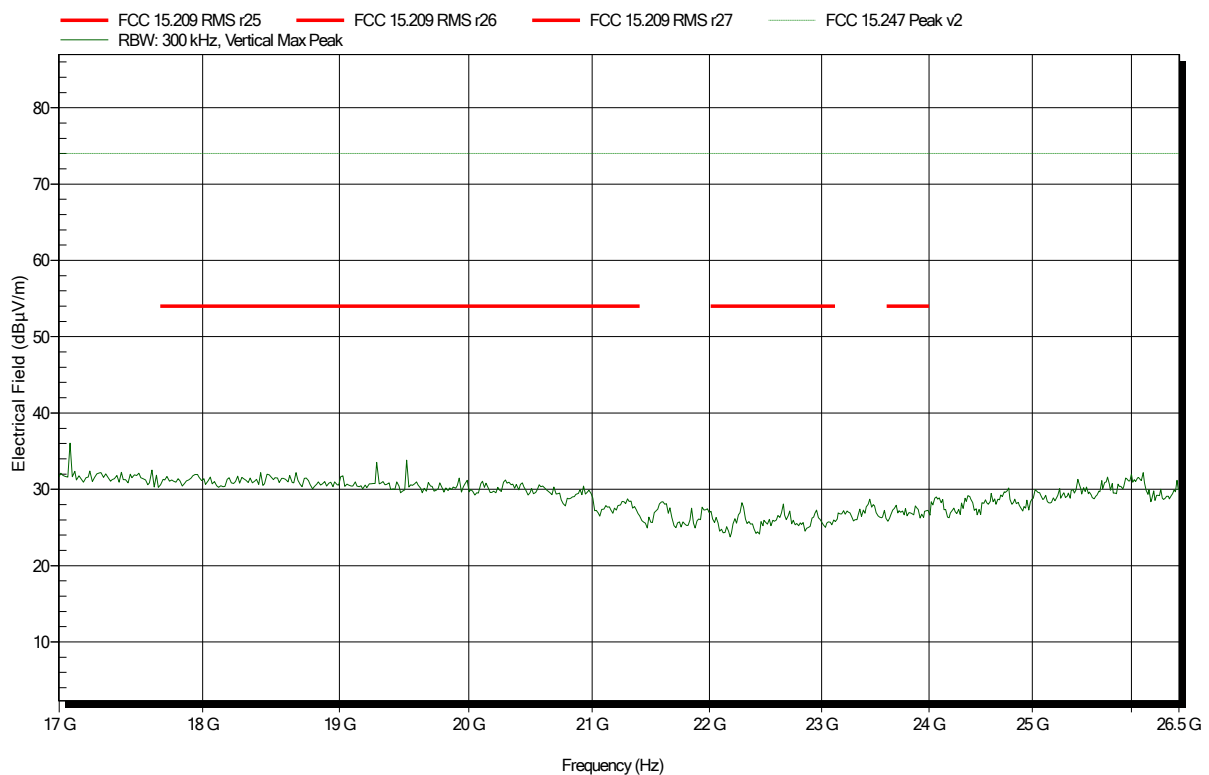


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Amplifier Research AT4560, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; 2440MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-22
Note:

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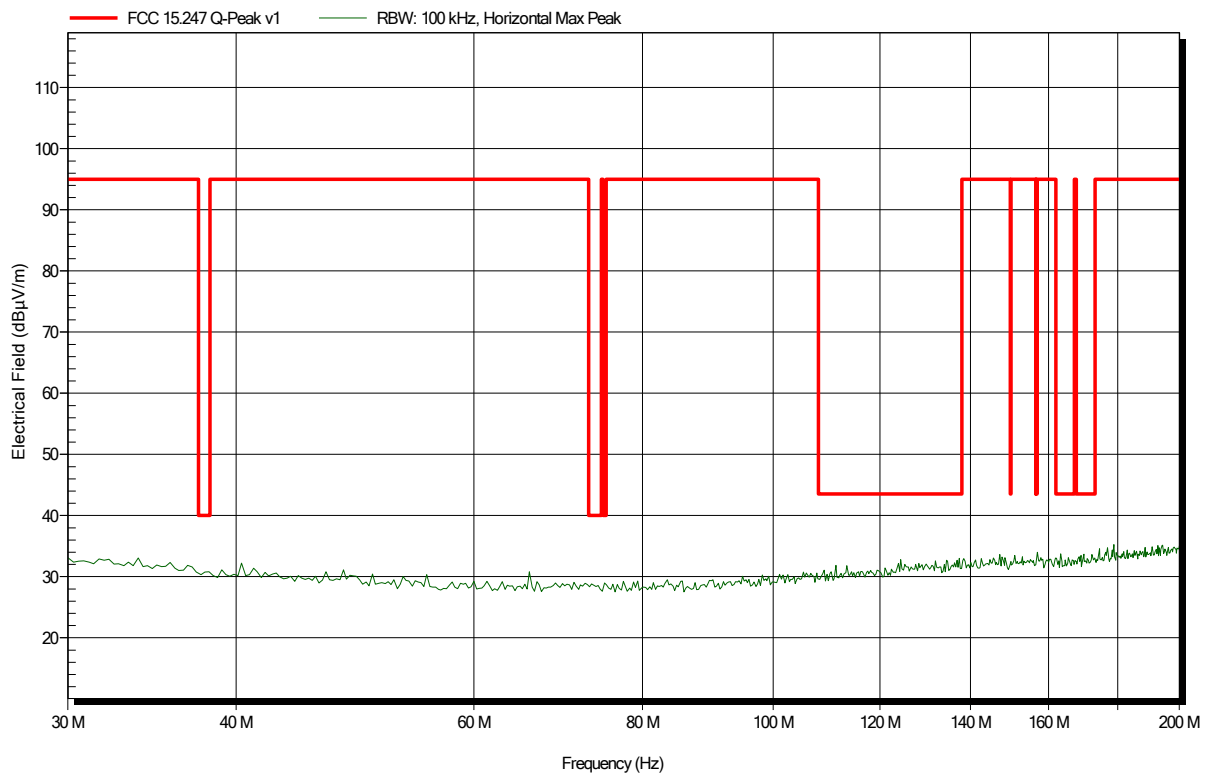


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
 EUT Name: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Site: Eurofins Product Service GmbH
 Operator: Florian Voigt
 Measurement software: RadiMation, version 2016.1.10
 Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3 m
 Mode: TX; 2480MHz, 2-GFSK, Packetlength 37 bytes
 Test Date: 2020-06-22
 Note:

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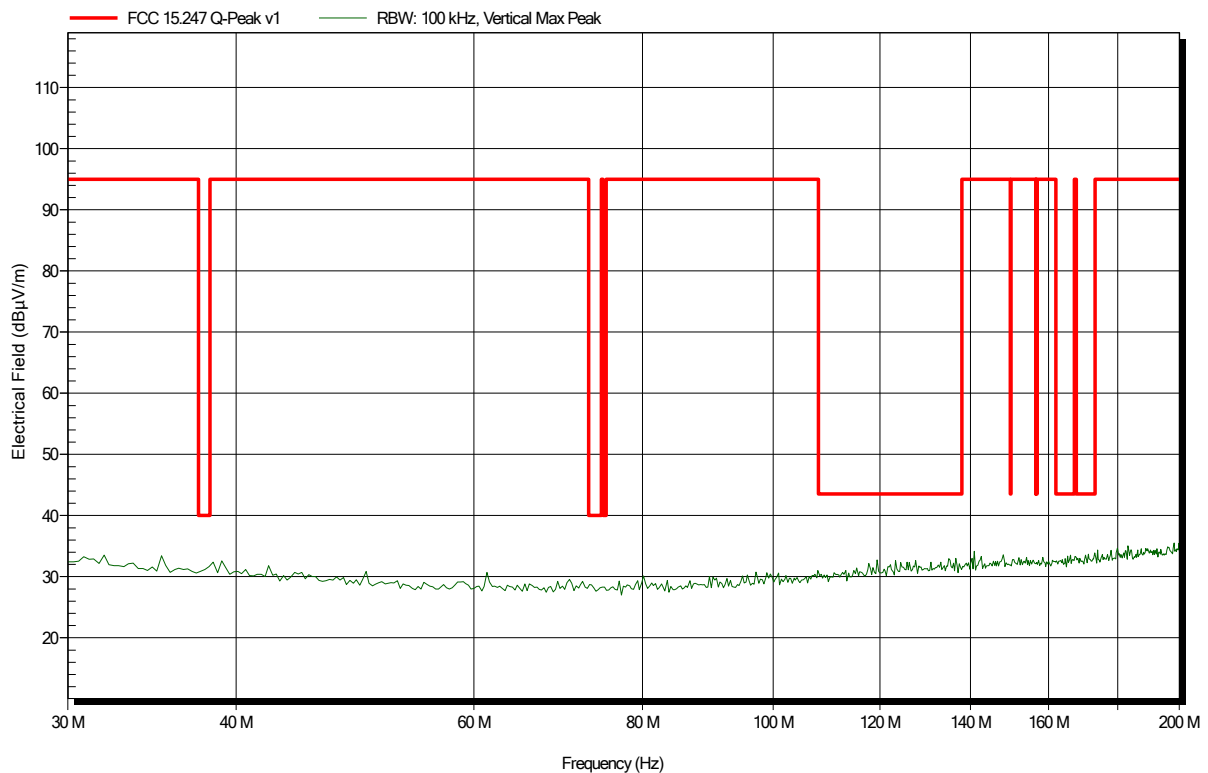


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
 EUT Name: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Site: Eurofins Product Service GmbH
 Operator: Florian Voigt
 Measurement software: RadiMation, version 2016.1.10
 Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
 Antenna: Rohde & Schwarz HK 116, Vertical
 Measurement distance: 3 m
 Mode: TX; 2480MHz, 2-GFSK, Packetlength 37 bytes
 Test Date: 2020-06-22
 Note:

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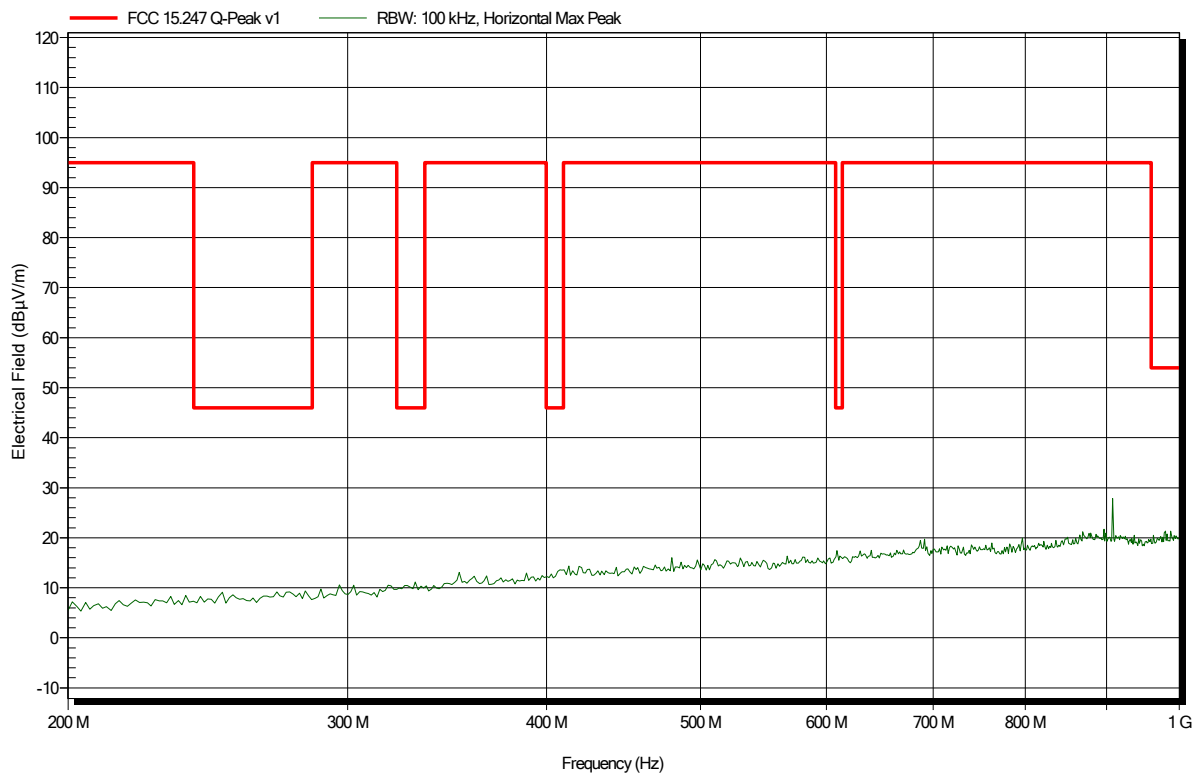


Spurious emissions according to FCC 47 e-CFR §15.247, ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Measurement software: RadiMation, version 2016.1.10
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Rohde & Schwarz HL 223, Horizontal
Measurement distance: 3 m
Mode: TX; 2480MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-22
Note:

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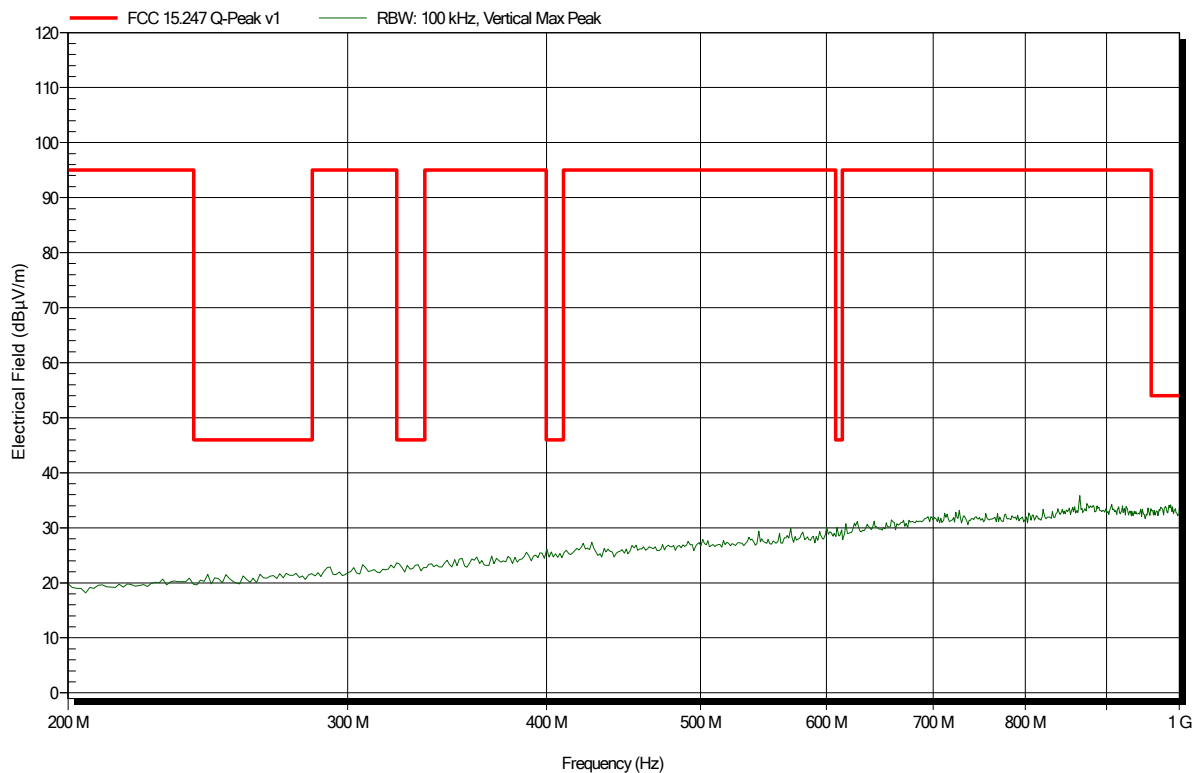


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Measurement software: RadiMation, version 2016.1.10
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Rohde & Schwarz HL 223, Vertical
Measurement distance: 3 m
Mode: TX; 2480MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-22
Note:

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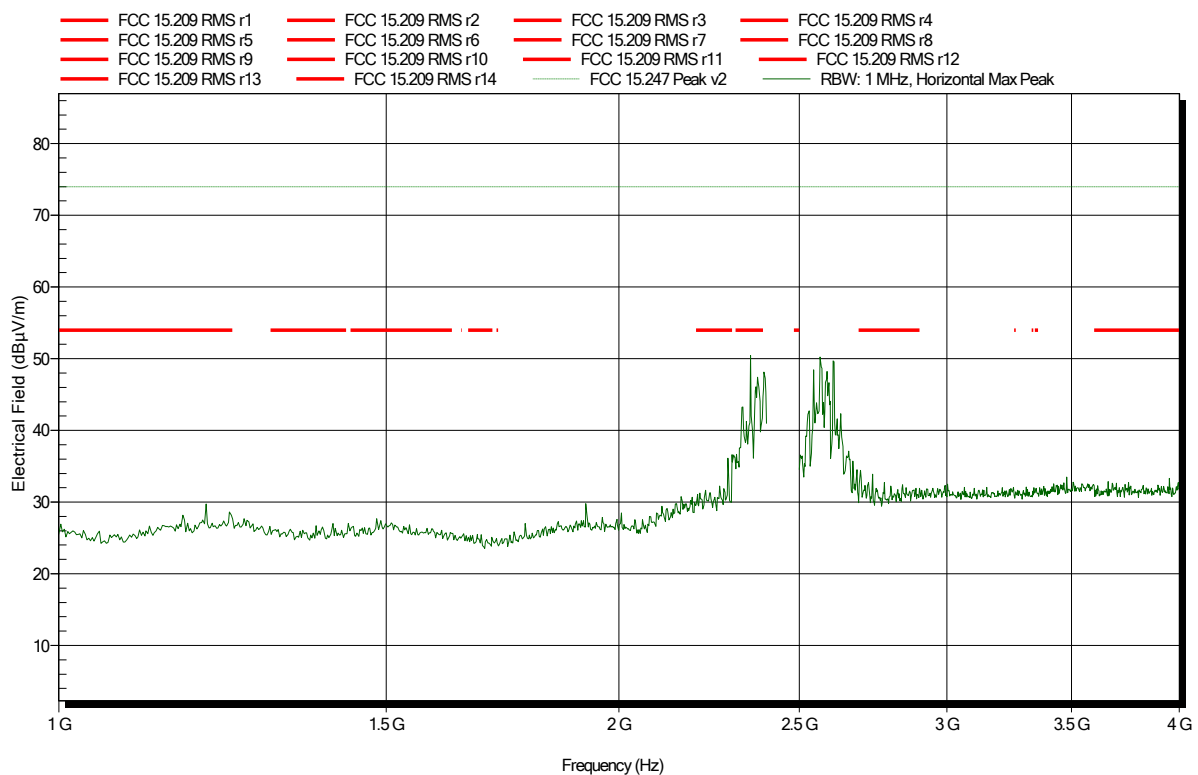


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; 2480MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note:

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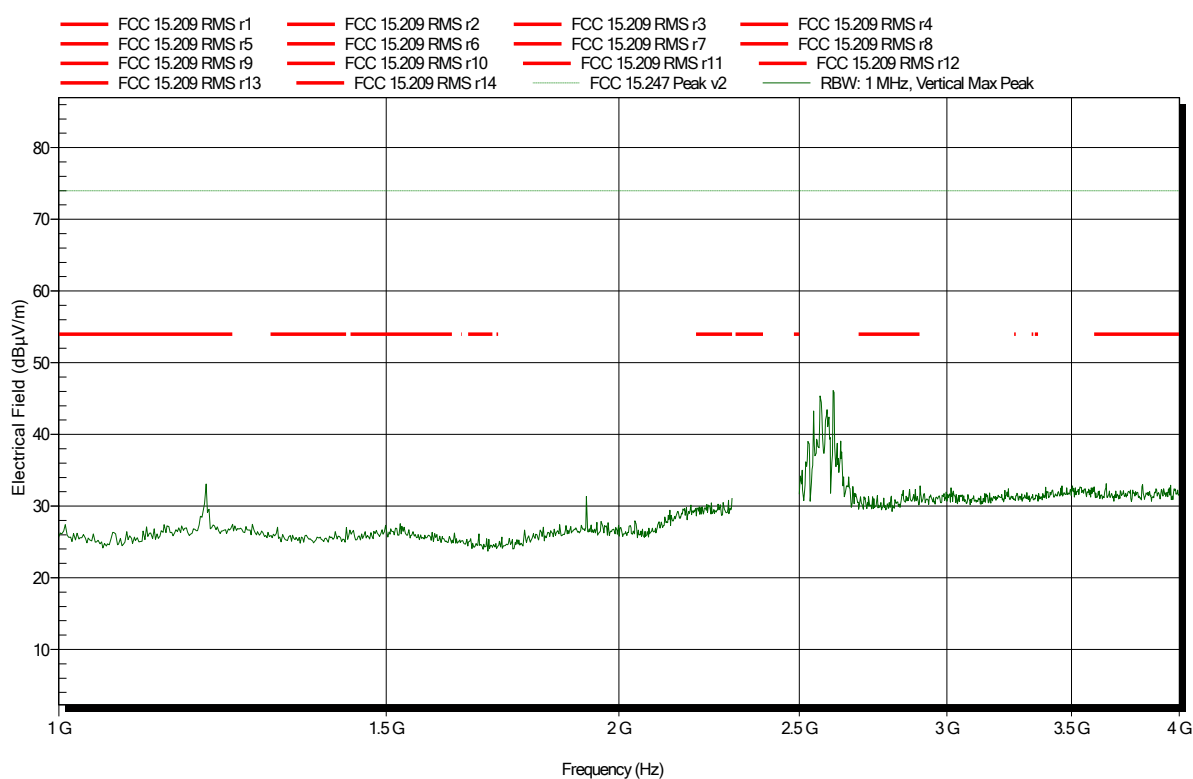


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
 EUT Name: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Site: Eurofins Product Service GmbH
 Operator: Florian Voigt
 Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; 2480MHz, 2-GFSK, Packetlength 37 bytes
 Test Date: 2020-06-19
 Note:

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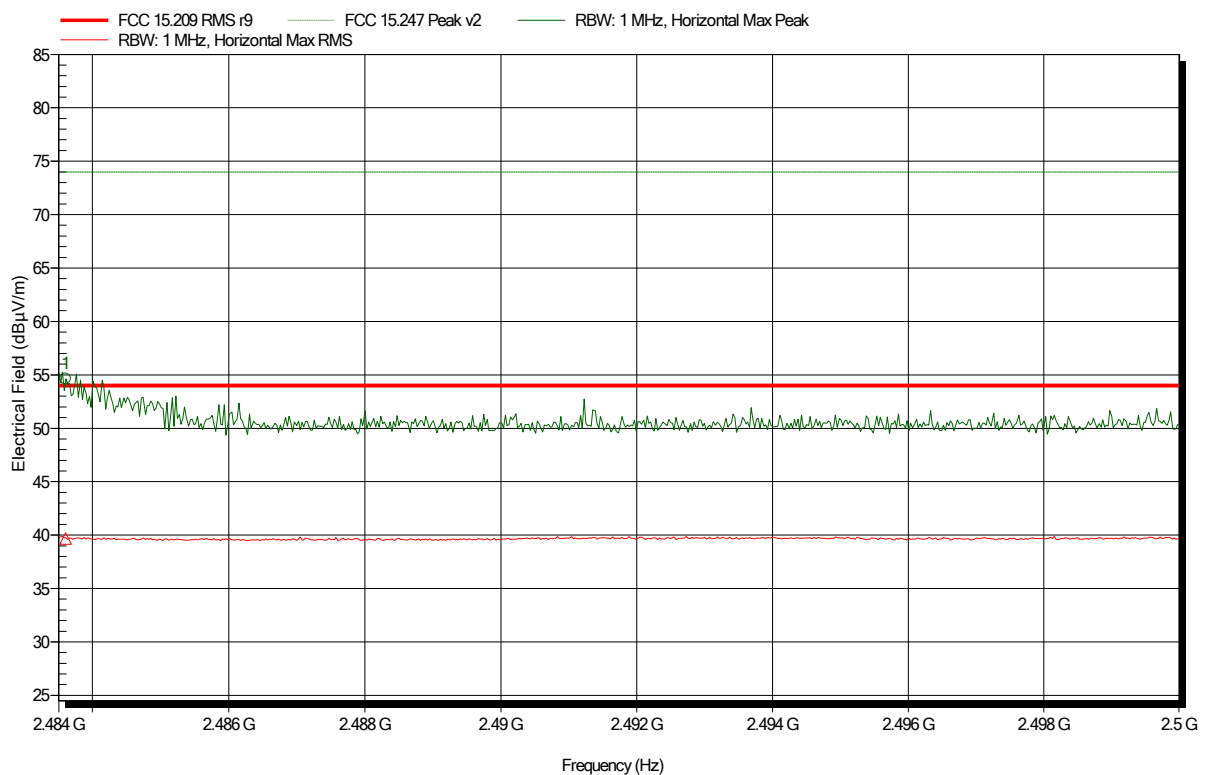


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; 2480MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note: upper bandedge

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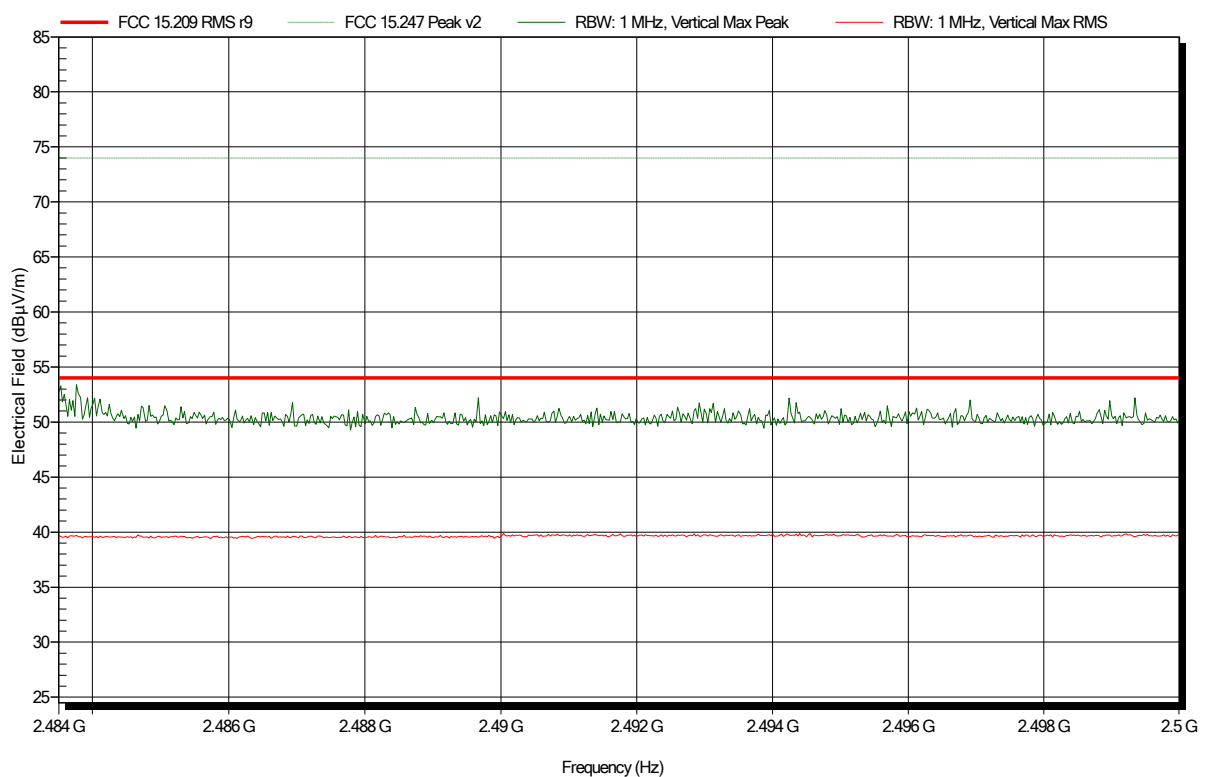
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.4836 GHz	54.64 dBµV/m	74 dBµV/m	-19.36 dB	Pass
Frequency	RMS	RMS Limit	RMS Difference	RMS Status
2.4836 GHz	39.67 dBµV/m	54 dBµV/m	-14.33 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; 2480MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note: upper bandedge

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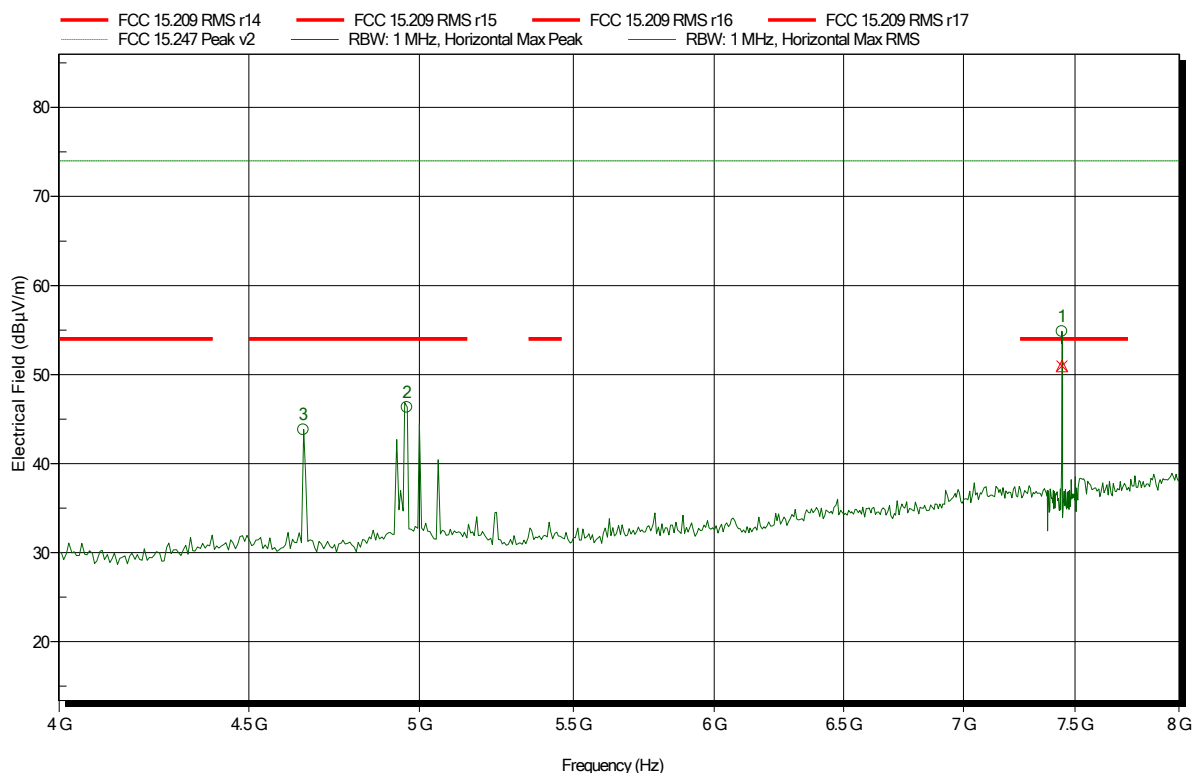


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; 2480MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note:

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.654 GHz	43.82 dBµV/m	74 dBµV/m	-30.18 dB	Pass
4.962 GHz	46.31 dBµV/m	74 dBµV/m	-27.69 dB	Pass
7.439 GHz	54.84 dBµV/m	74 dBµV/m	-19.16 dB	Pass

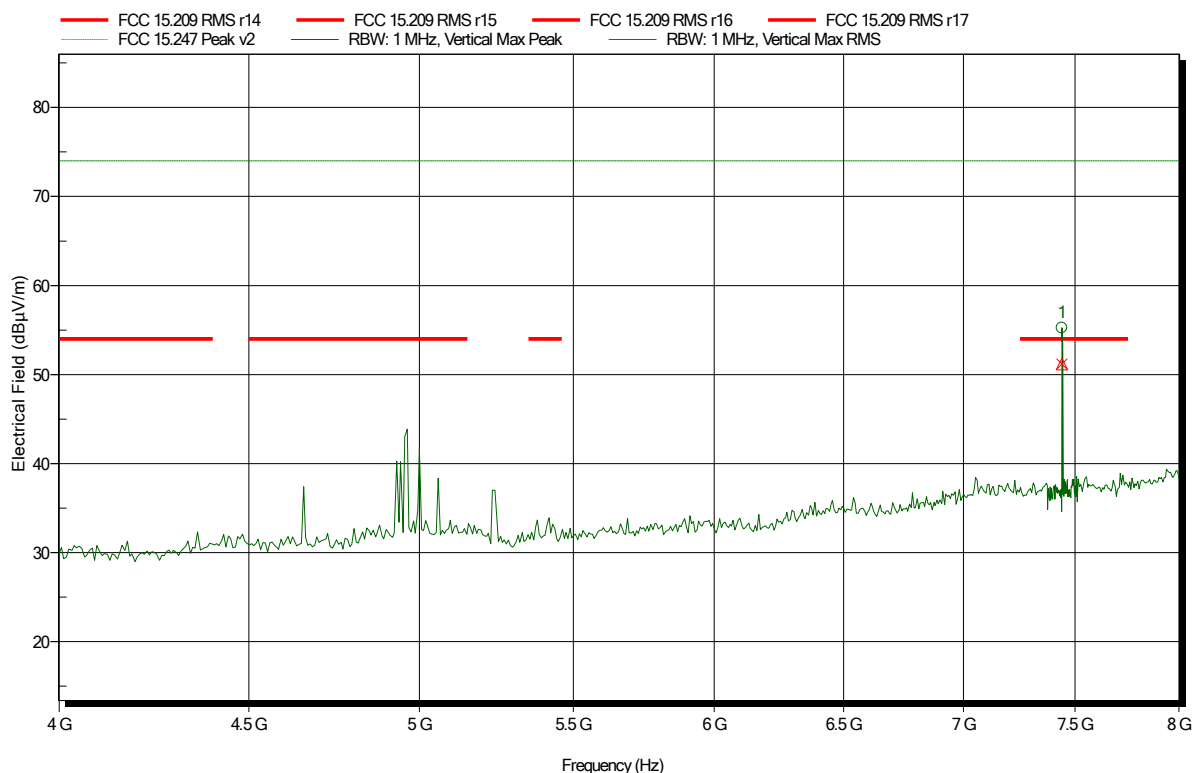
Frequency	RMS	RMS Limit	RMS Difference	RMS Status
7.439 GHz	50.97 dBµV/m	54 dBµV/m	-3.03 dB	Pass

Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
 EUT Name: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Site: Eurofins Product Service GmbH
 Operator: Florian Voigt
 Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; 2480MHz, 2-GFSK, Packetlength 37 bytes
 Test Date: 2020-06-19
 Note:

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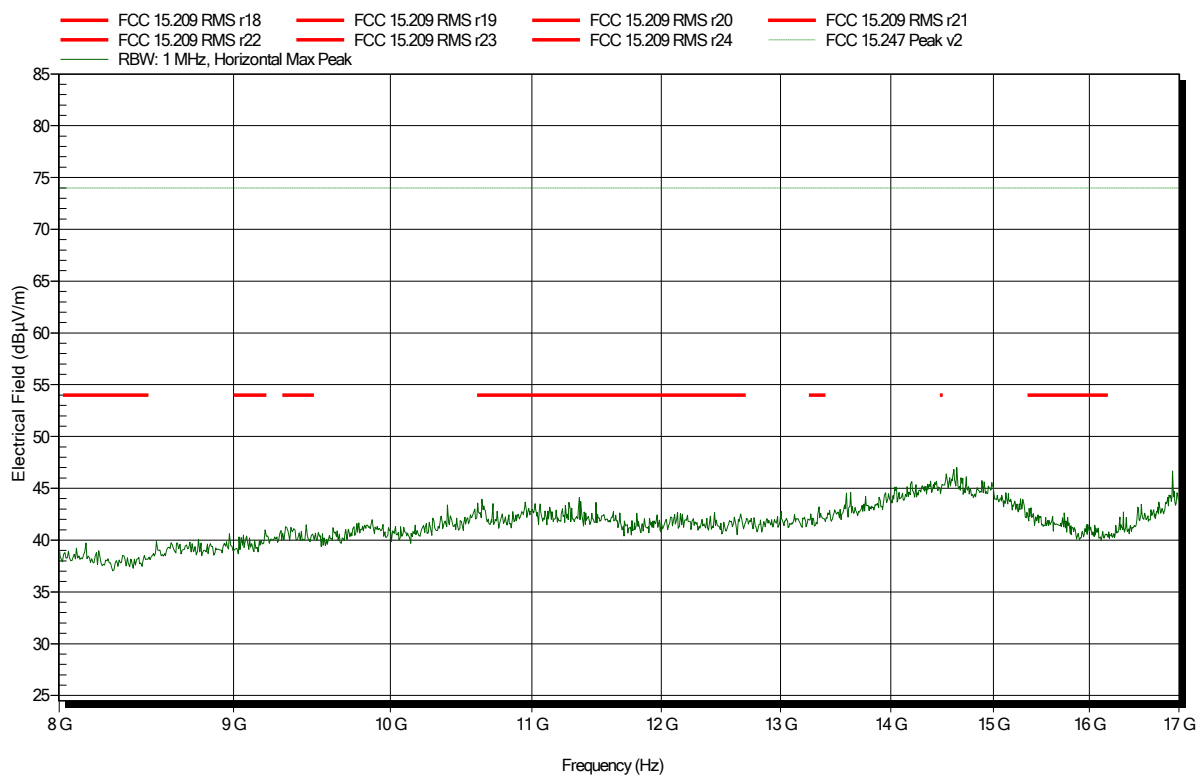
Frequency 7.439 GHz	Peak 55.25 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -18.75 dB	Peak Status Pass
Frequency 7.439 GHz	RMS 51.16 dBµV/m	RMS Limit 54 dBµV/m	RMS Difference -2.84 dB	RMS Status Pass

Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; 2480MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note:

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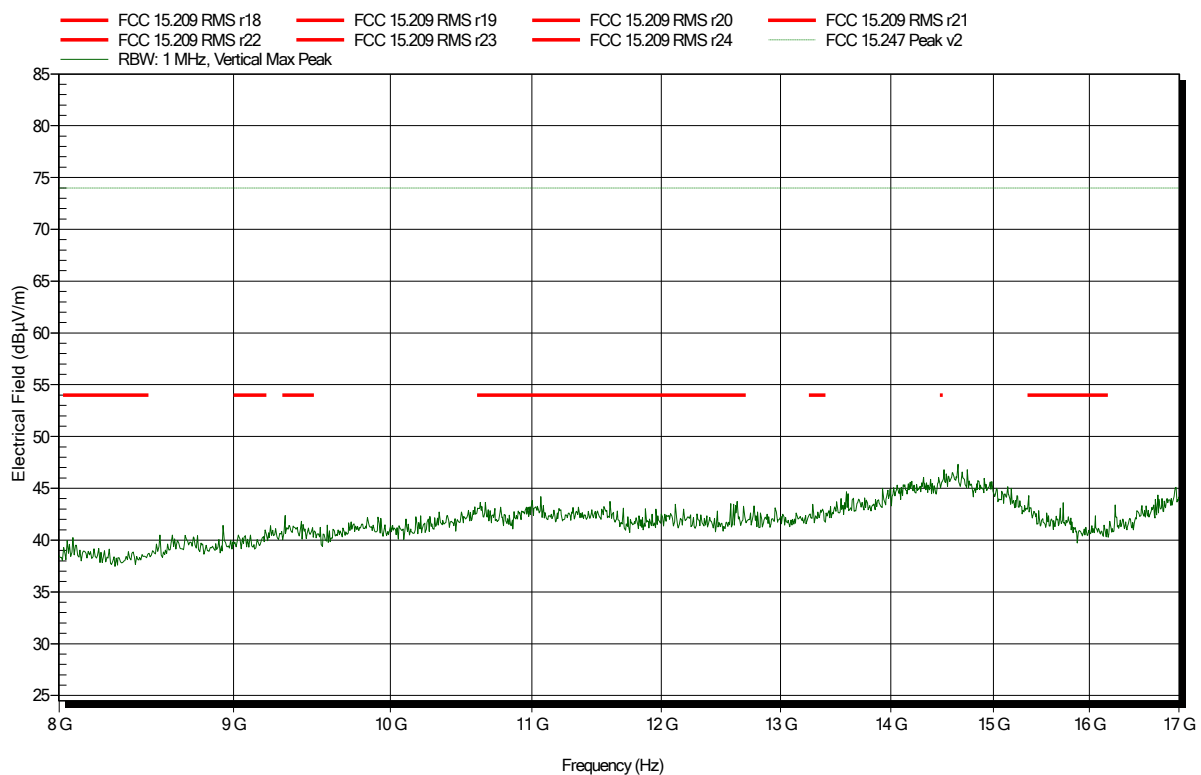


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; 2480MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-19
Note:

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Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
 EUT Name: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Site: Eurofins Product Service GmbH
 Operator: Florian Voigt
 Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
 Antenna: Amplifier Research AT4560, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; 2480MHz, 2-GFSK, Packetlength 37 bytes
 Test Date: 2020-06-22
 Note:

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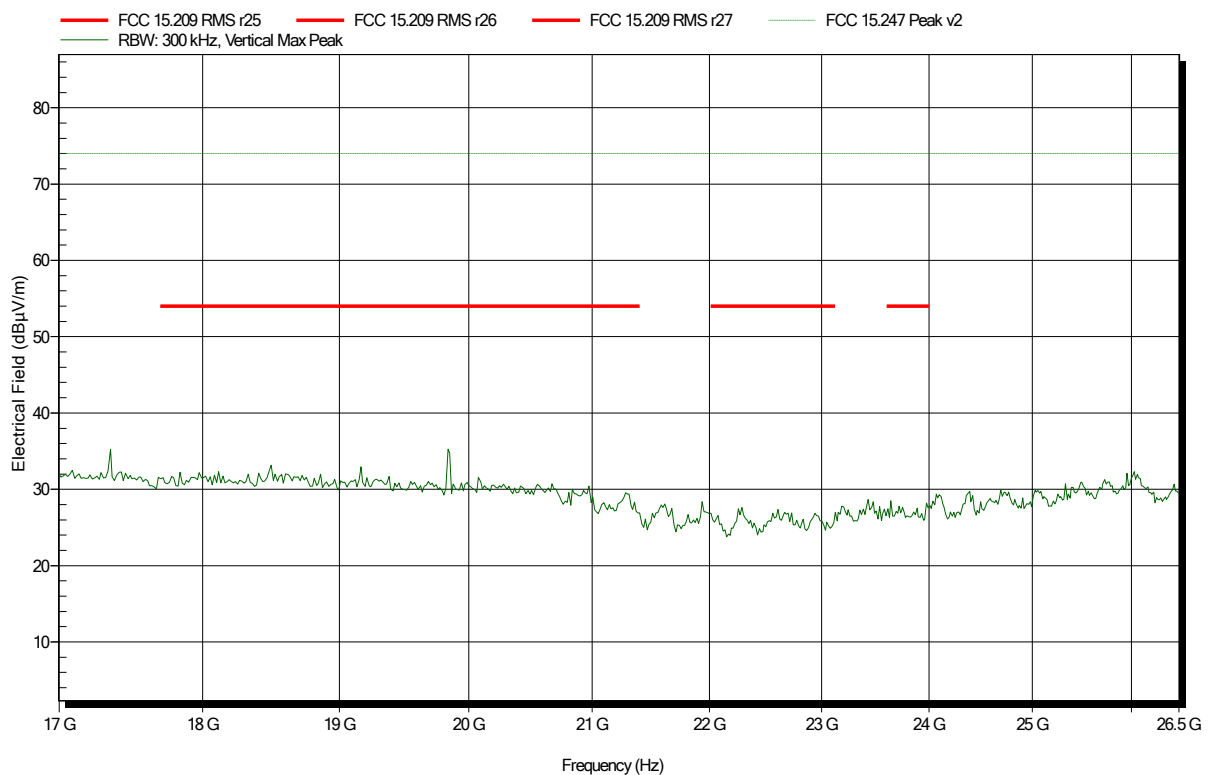


Spurious emissions according to FCC 47 e-CFR §15.247, ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: Andreas Stihl AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 24.5°C, Vnom: 36 VDC
Antenna: Amplifier Research AT4560, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; 2480MHz, 2-GFSK, Packetlength 37 bytes
Test Date: 2020-06-22
Note:

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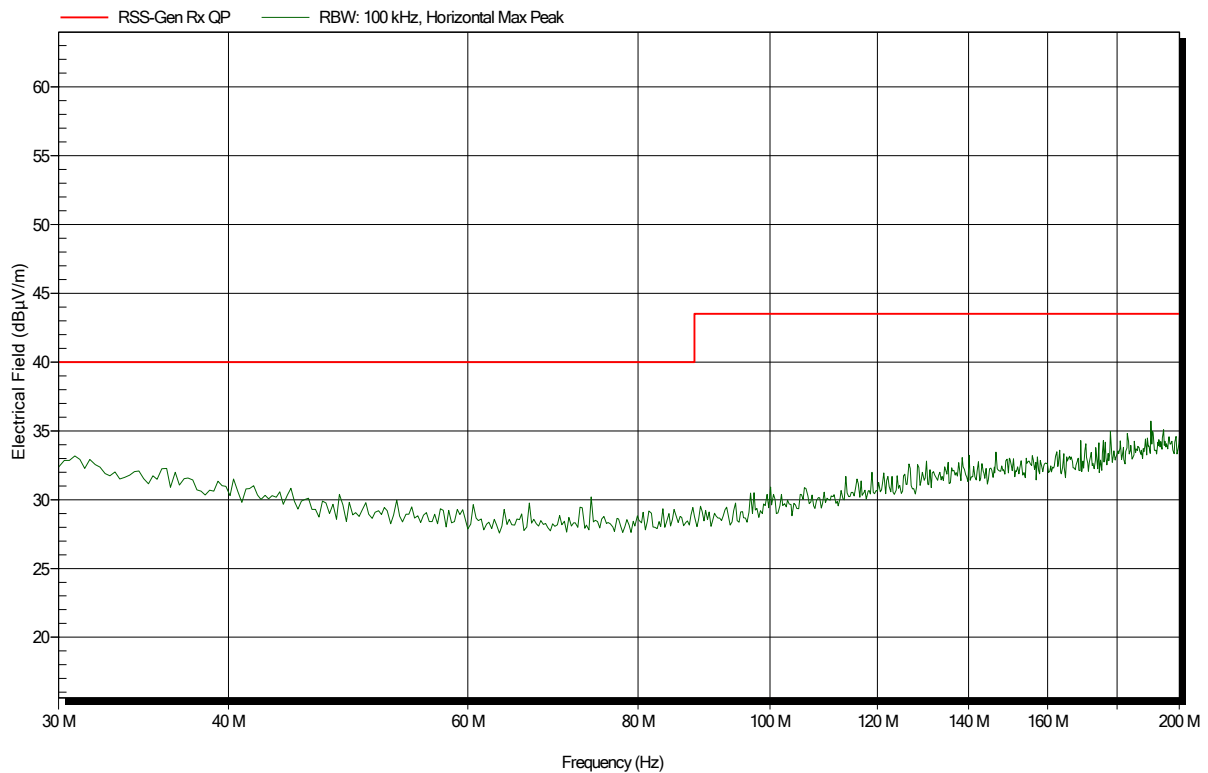
ANNEX B Receiver spurious emissions

Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: ANDREAS STIHL AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Measurement software: RadiMation, version 2016.1.10
Test Conditions: Tnom: 25.5°C, Vnom: 36 VDC
Antenna: Rohde & Schwarz HK 116, Horizontal
Measurement distance: 3 m
Mode: RX; 2440MHz
Test Date: 2020-06-22
Note:

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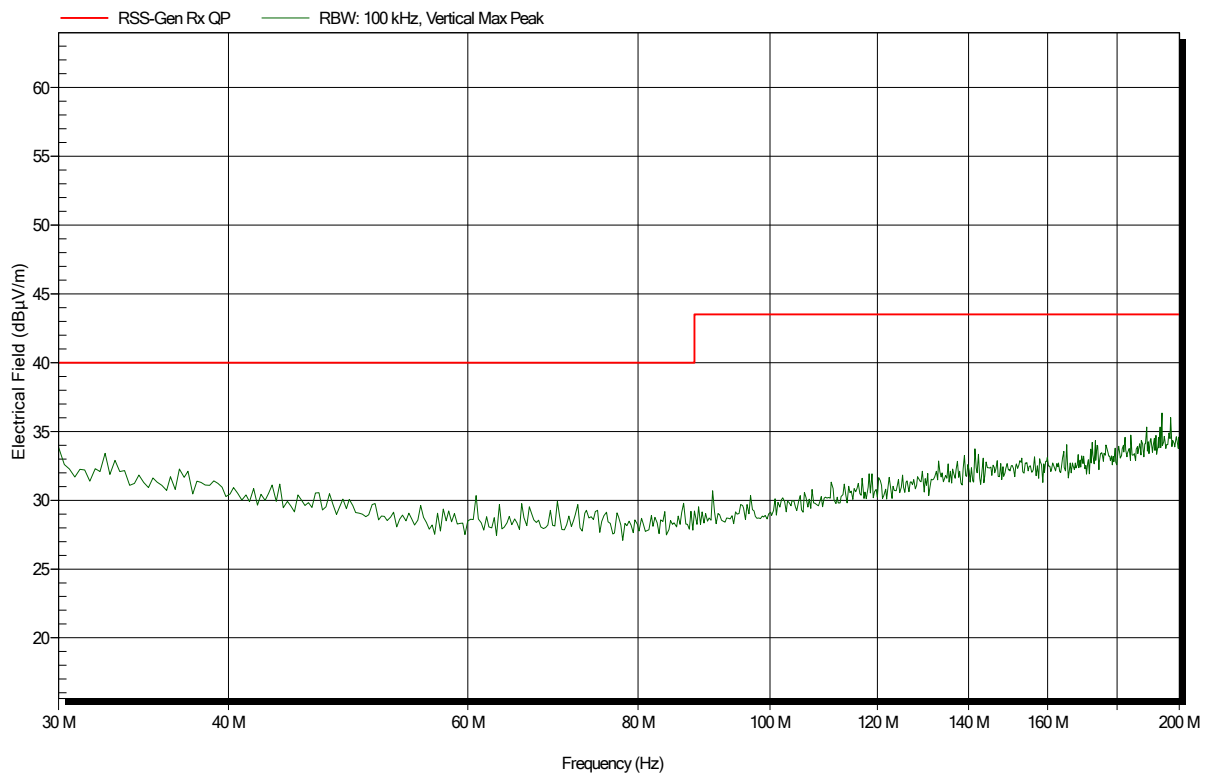


Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: ANDREAS STIHL AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Measurement software: RadiMation, version 2016.1.10
Test Conditions: Tnom: 25.5°C, Vnom: 36 VDC
Antenna: Rohde & Schwarz HK 116, Vertical
Measurement distance: 3 m
Mode: RX; 2440MHz
Test Date: 2020-06-22
Note:

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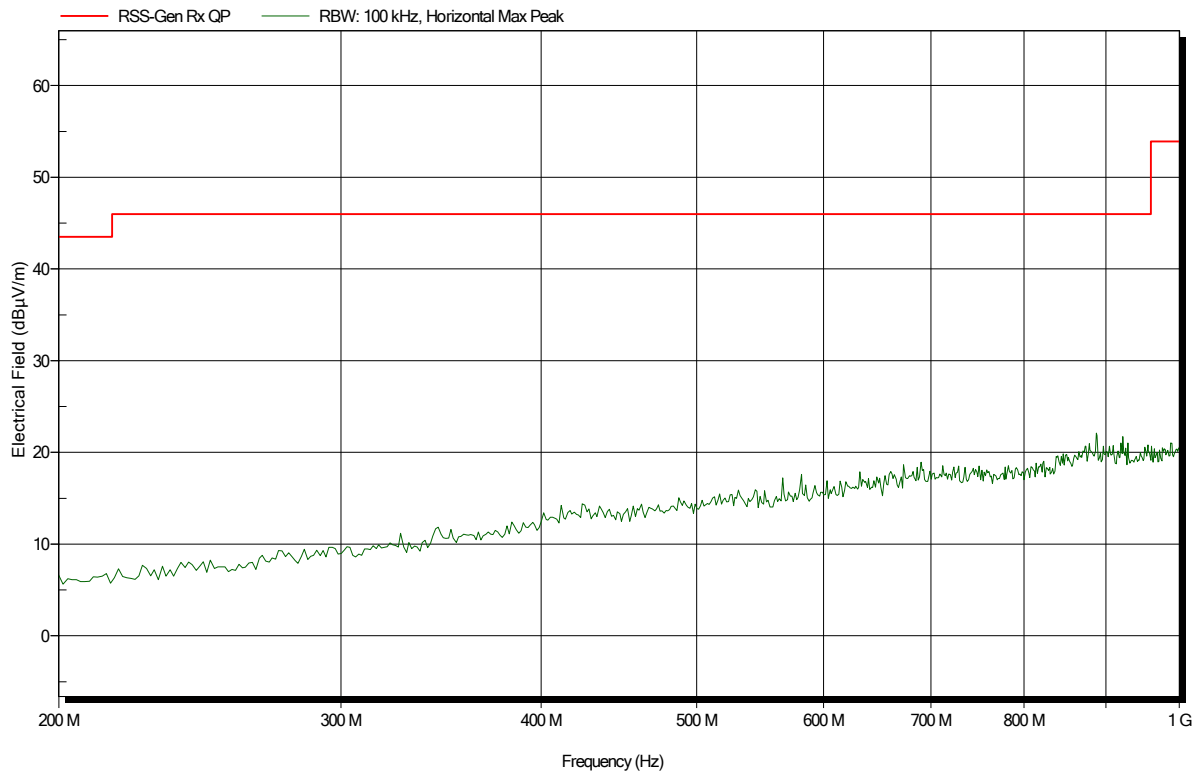


Spurious emissions according to ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: ANDREAS STIHL AG & Co. KG
 EUT Name: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Site: Eurofins Product Service GmbH
 Operator: Florian Voigt
 Measurement software: RadiMation, version 2016.1.10
 Test Conditions: Tnom: 25.5°C, Vnom: 36 VDC
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3 m
 Mode: RX; 2440MHz
 Test Date: 2020-06-22
 Note:

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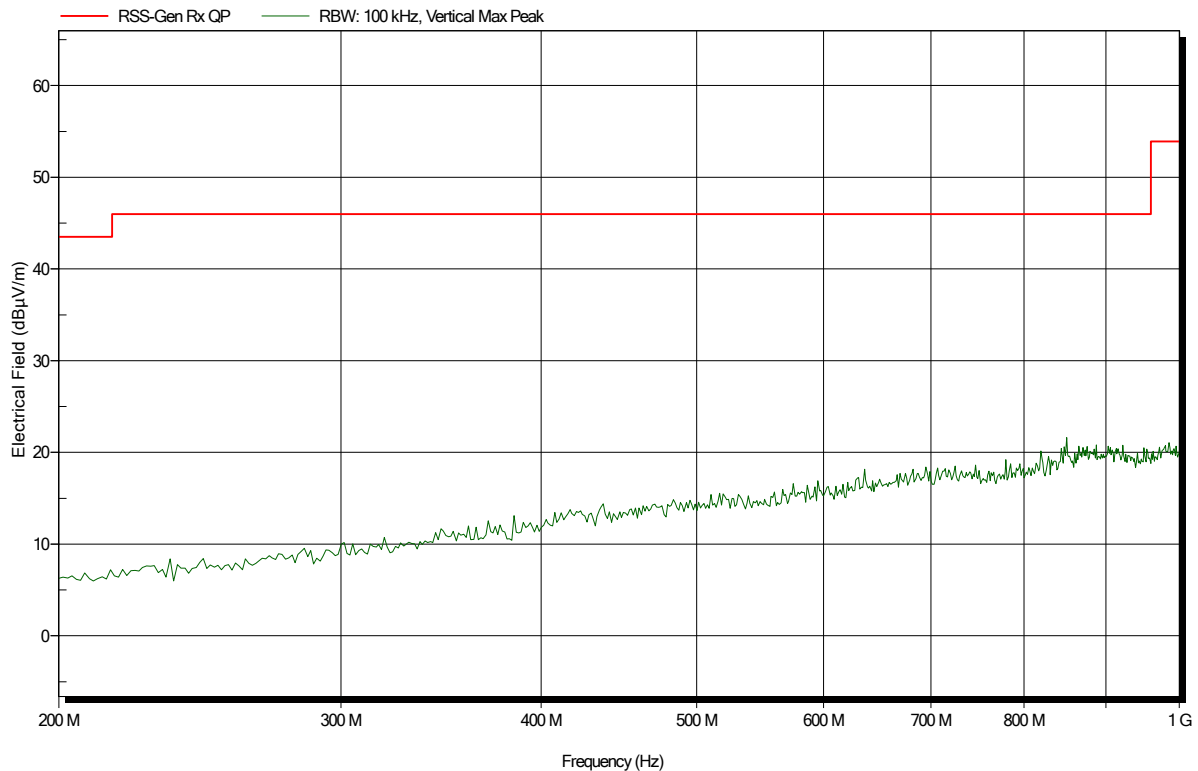


Spurious emissions according to ISSED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: ANDREAS STIHL AG & Co. KG
 EUT Name: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Site: Eurofins Product Service GmbH
 Operator: Florian Voigt
 Measurement software: RadiMation, version 2016.1.10
 Test Conditions: Tnom: 25.5°C, Vnom: 36 VDC
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3 m
 Mode: RX; 2440MHz
 Test Date: 2020-06-22
 Note:

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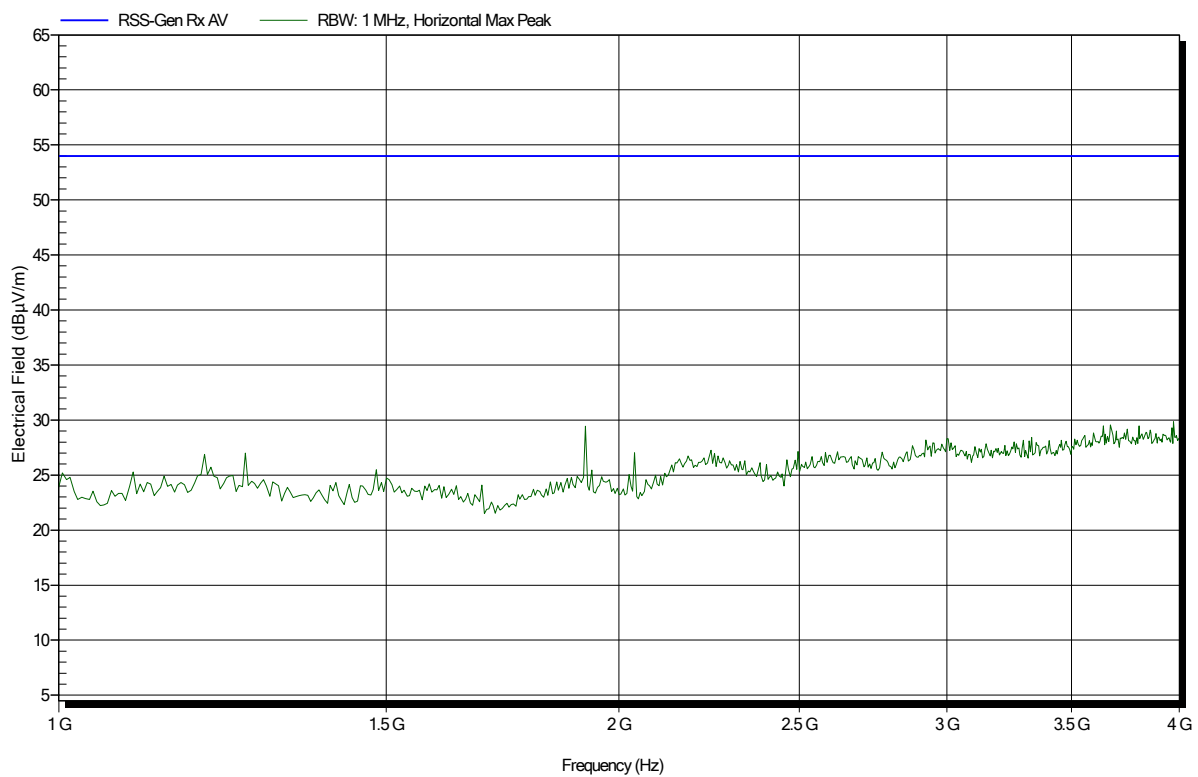


Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: ANDREAS STIHL AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 25.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; 2440MHz
Test Date: 2020-06-19
Note:

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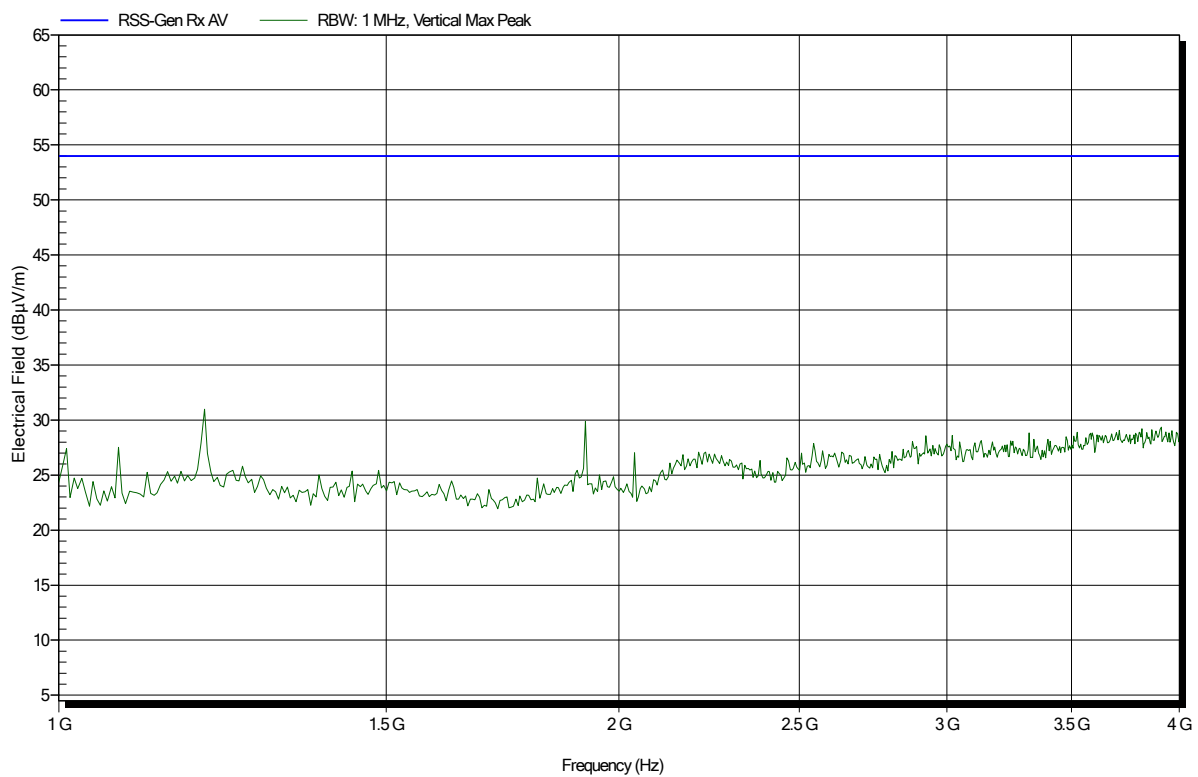


Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: ANDREAS STIHL AG & Co. KG
 EUT Name: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Site: Eurofins Product Service GmbH
 Operator: Florian Voigt
 Test Conditions: Tnom: 25.5°C, Vnom: 36 VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; 2440MHz
 Test Date: 2020-06-19
 Note:

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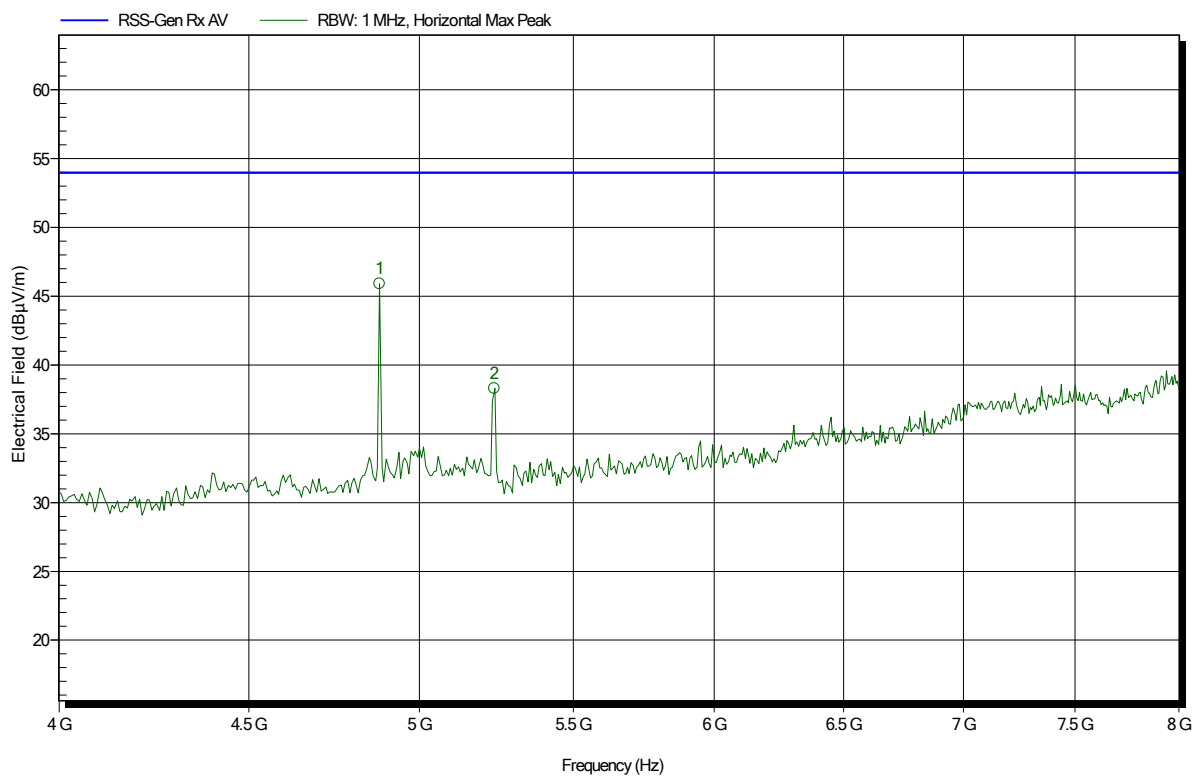


Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: ANDREAS STIHL AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 25.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: TX; 2440MHz
Test Date: 2020-06-19
Note:

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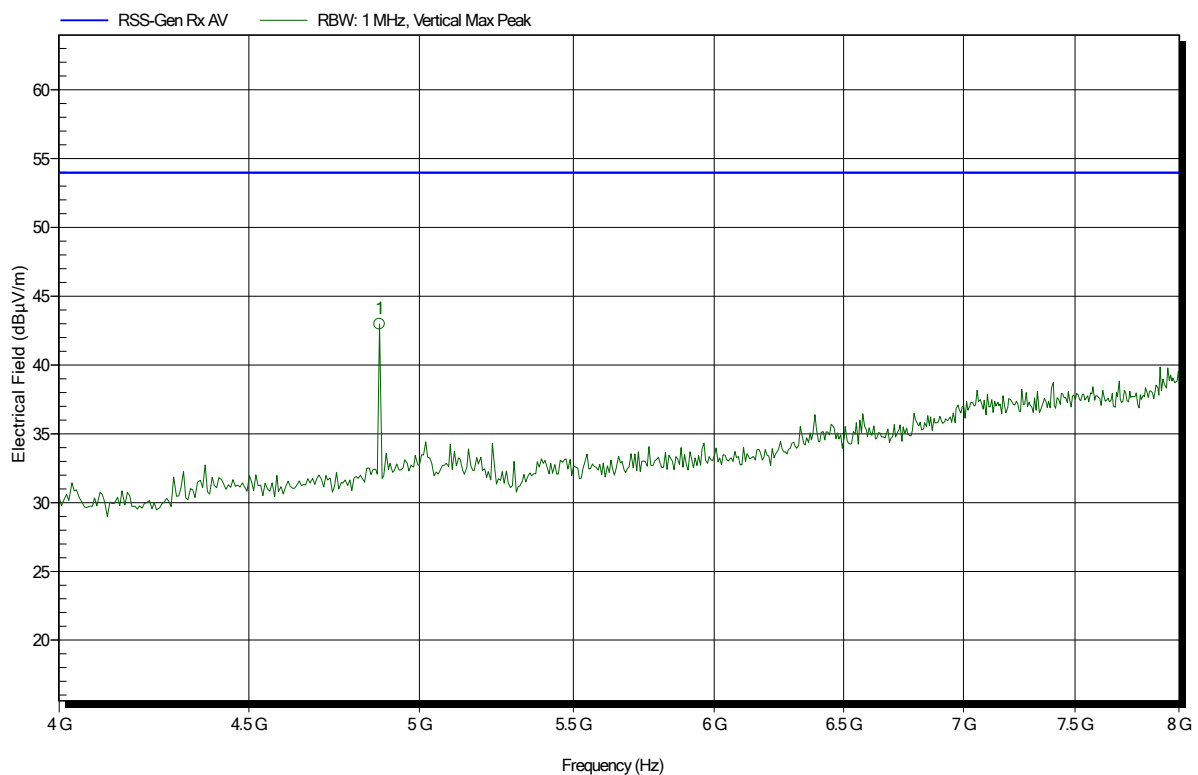
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.878 GHz	45.91 dBµV/m	53.98 dBµV/m	-8.07 dB	Pass
5.237 GHz	38.29 dBµV/m	53.98 dBµV/m	-15.69 dB	Pass

Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: ANDREAS STIHL AG & Co. KG
 EUT Name: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Site: Eurofins Product Service GmbH
 Operator: Florian Voigt
 Test Conditions: Tnom: 25.5°C, Vnom: 36 VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; 2440MHz
 Test Date: 2020-06-19
 Note:

Index 2



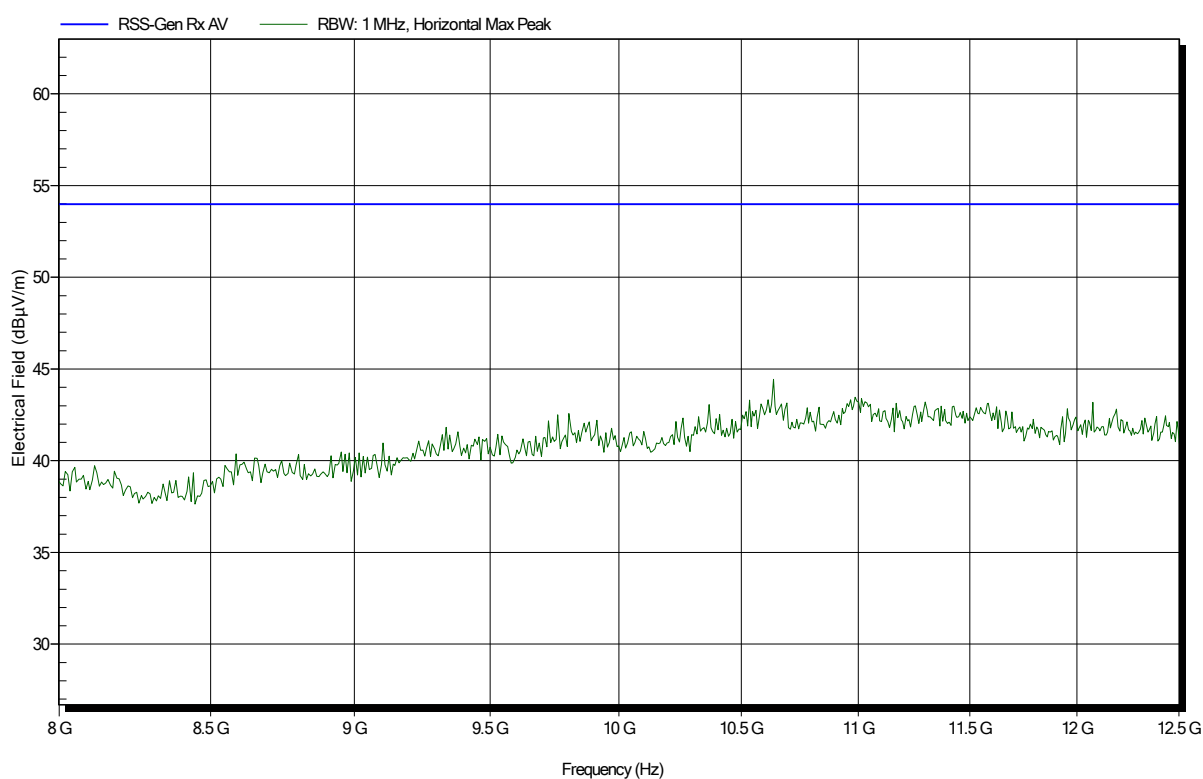
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.878 GHz	42.97 dBµV/m	53.98 dBµV/m	-11.01 dB	Pass

Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: ANDREAS STIHL AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 25.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: RX; 2440MHz
Test Date: 2020-06-19
Note:

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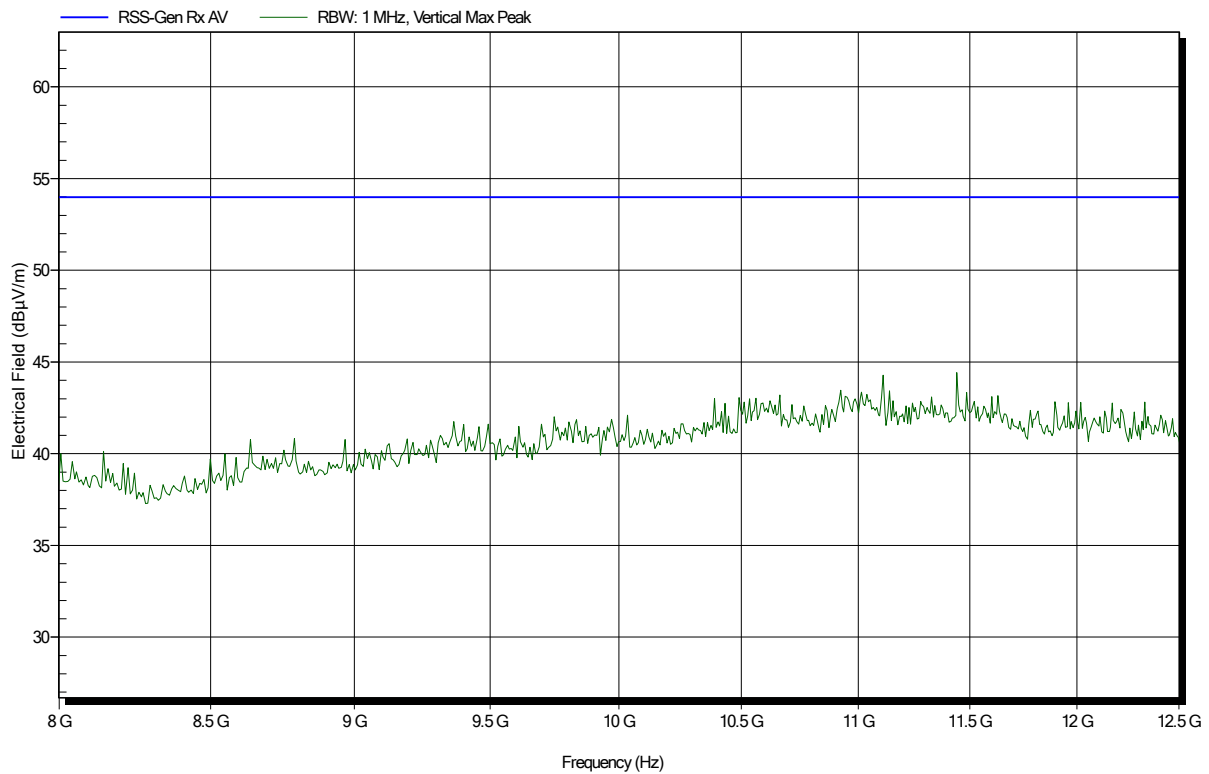


Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: ANDREAS STIHL AG & Co. KG
 EUT Name: battery pack with Bluetooth-Modul
 Model: AP 500 S
 Test Site: Eurofins Product Service GmbH
 Operator: Florian Voigt
 Test Conditions: Tnom: 25.5°C, Vnom: 36 VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: RX; 2440MHz
 Test Date: 2020-06-19
 Note:

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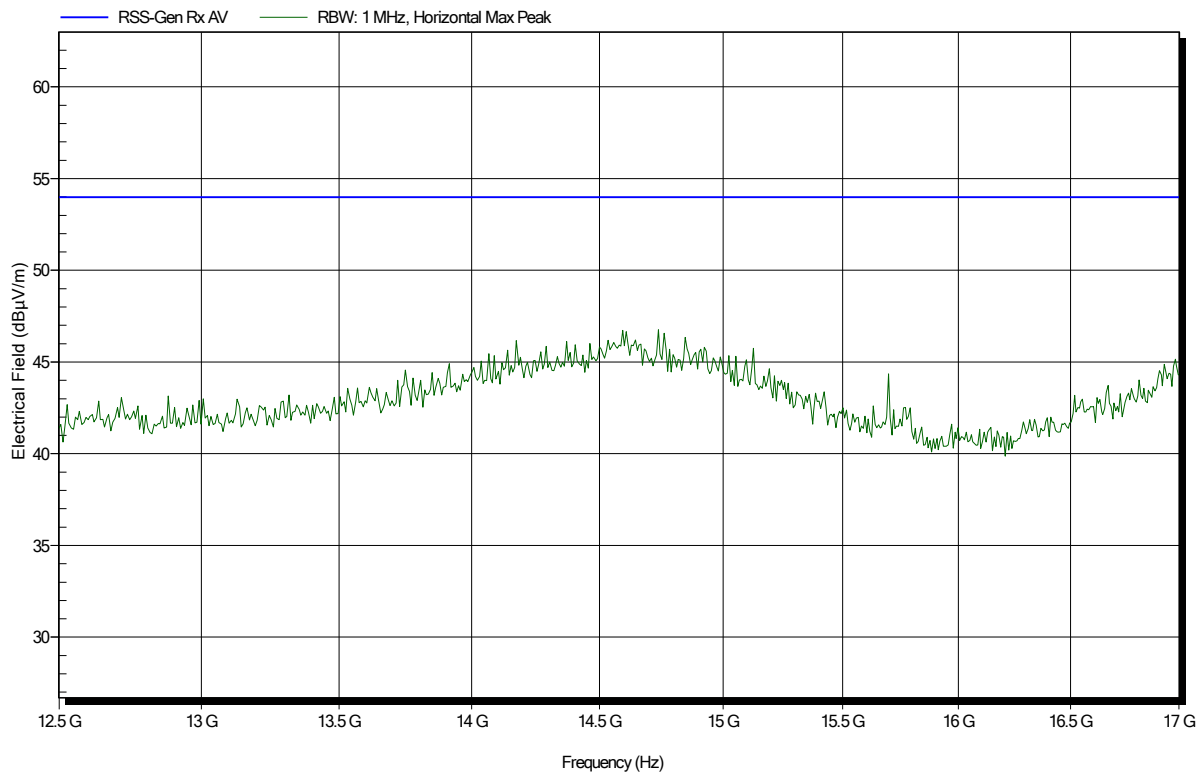


Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: ANDREAS STIHL AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 25.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: RX; 2440MHz
Test Date: 2020-06-19
Note:

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Spurious emissions according to ISED RSS-247 Issue 2 (February 2017)

Project number: G0M-2006-9064

Applicant: ANDREAS STIHL AG & Co. KG
EUT Name: battery pack with Bluetooth-Modul
Model: AP 500 S
Test Site: Eurofins Product Service GmbH
Operator: Florian Voigt
Test Conditions: Tnom: 25.5°C, Vnom: 36 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: RX; 2440MHz
Test Date: 2020-06-19
Note:

Index 3

