



<b>RADIO REPORT</b> <b>FCC 47 CFR Part 15C</b> <b>ISED Canada RSS-247</b> <b>Digital transmission systems operating within the 2400.0 MHz - 2483.5 MHz band</b>	
<b>Report Reference No</b>	G0M-2106-9856-TFC247BL_AP200S-V02
<b>Testing Laboratory</b>	Eurofins Product Service GmbH
<b>Address</b>	Storkower Str. 38c 15526 Reichenwalde Germany
<b>Accreditation</b>	 <p>DAkkS - Registration number : D-PL-12092-01-03 (ISED)                      ISED Testing Laboratory site: 3470A                      DAkkS - Registration number : D-PL-12092-01-04 (FCC)                      FCC Filed Test Laboratory, Reg.-No.: 96970</p>
<b>Applicant</b>	Andreas Stihl AG & Co. KG
<b>Address</b>	Badstraße 115 71336 Waiblingen Germany
<b>Test Specification</b>	47 CFR Part 15C RSS-247, Issue 3, 2023-08 RSS-Gen, Issue 5, Amendment 2, 2021-02
<b>Non-Standard Test Method</b>	None
<b>Equipment under Test (EUT):</b>	
<b>Product Description</b>	Battery pack 4850 with Bluetooth-Modul
<b>Model(s)</b>	AP 200S
<b>Additional Model(s)</b>	AP 300S
<b>Brand Name(s)</b>	Andreas Stihl AG & Co. KG
<b>Hardware Version(s)</b>	HW 00.04
<b>Software Version(s)</b>	SW 00.92
<b>FCC ID</b>	2ALP8AP2
<b>IC</b>	23431-AP2
<b>Test Result</b>	<b>PASSED</b>

<b>Possible test case verdicts:</b>		
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)	
<b>Testing:</b>		
Test Lab Temperature	20 °C - 30 °C	
Test Lab Humidity	25 % - 55 %	
Date of receipt of test item	2021-10-25	
<b>Report:</b>		
Compiled by	Stephan Liebich	
Responsible for Test	Burkhard Pudell	
Approved by (Senior Radio Expert)	Radwan Jaafar	
Date of Issue	2024-06-24	
Total number of pages	52	
<b>General Remarks:</b>		
<p><b>The test results presented in this report relate only to the object tested.</b></p> <p><b>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.</b></p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p>		
<b>Additional Comments:</b>		
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**VERSION HISTORY**

Version History			
Version	Issue Date	Remarks	Revised By
01	2022-02-18	Initial Release	--
02	2024-06-24	Replaced document: G0M-2106-9856-TFC247BL_AP200S-V01 Replaced by: G0M-2106-9856-TFC247BL_AP200S-V02  Changes: <ul style="list-style-type: none"> <li>• Update from RSS-247, Issue 3 to RSS-247, Issue 3</li> </ul>	St. Liebich

**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 <sub>NOM</sub>	Nominal supply voltage

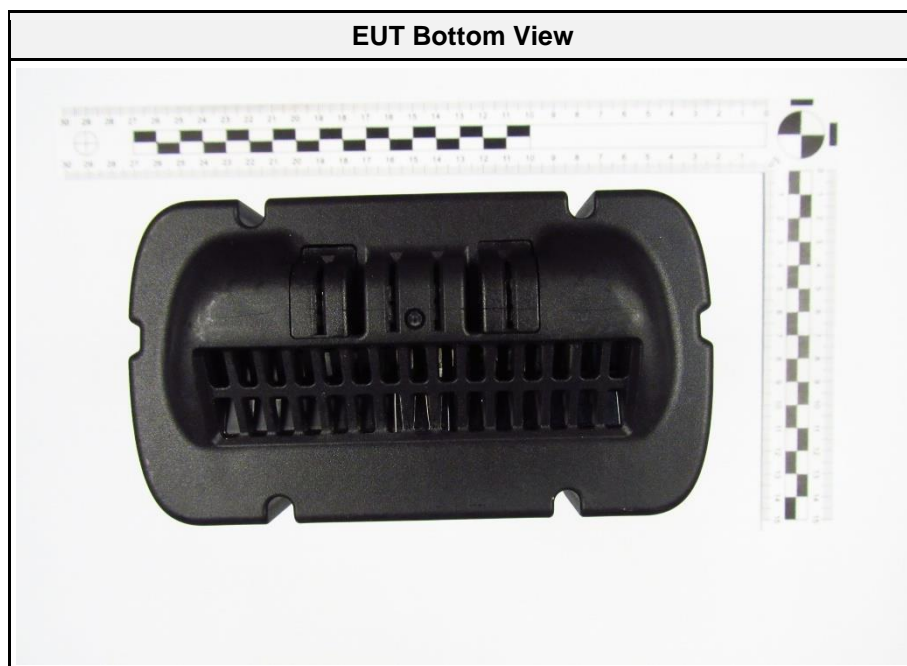
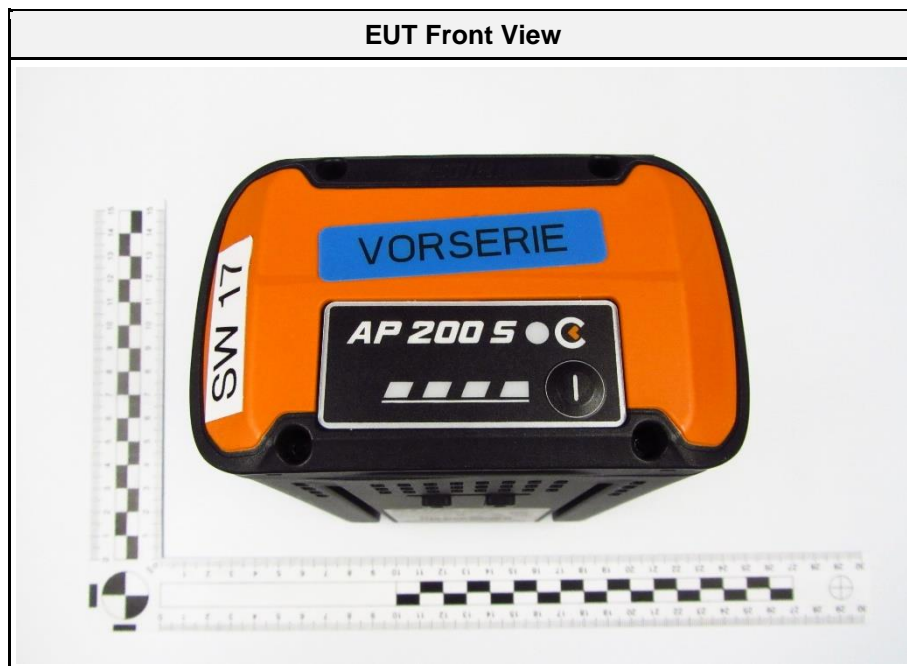
**REPORT INDEX**

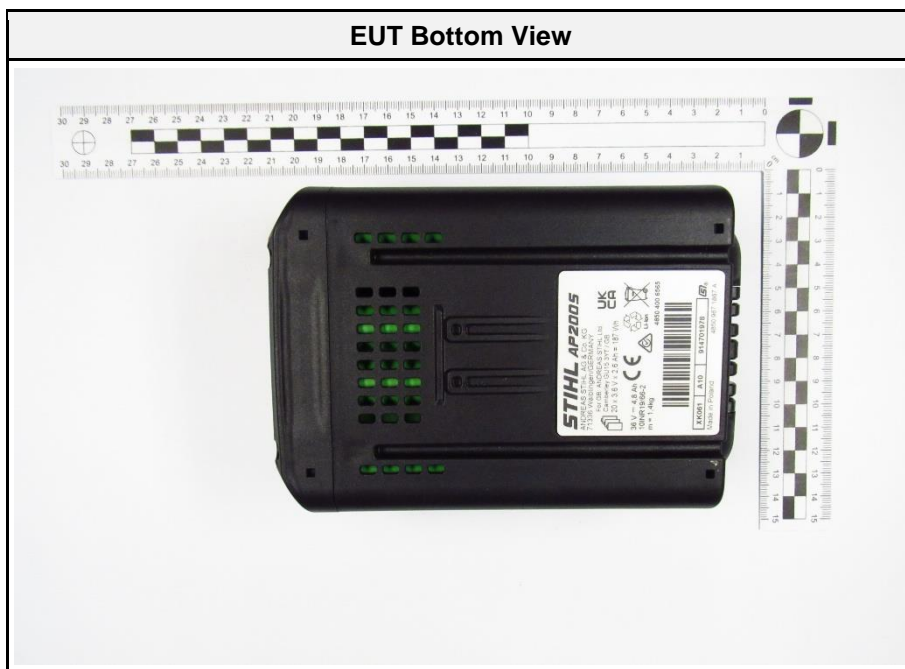
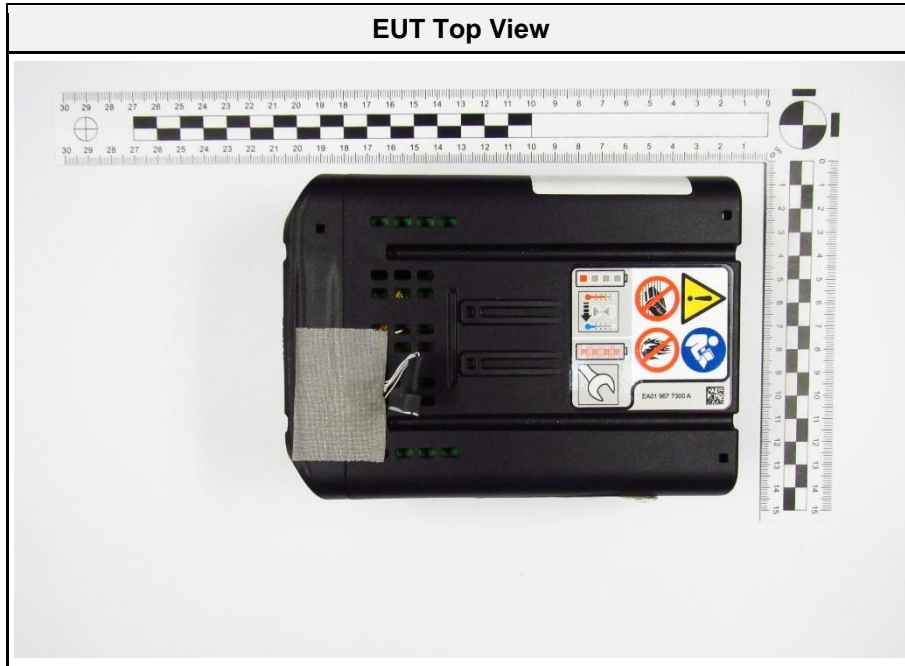
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## 1 Equipment (Test Item) Under Test

Description	Battery pack 4850 with Bluetooth-Modul	
Model	AP 200 S	
Additional Model(s)	AP 300 S	
Brand Name(s)	Andreas Stihl AG & Co. KG	
Serial Number(s)	914701978	
Hardware Version(s)	HW 00.04	
Software Version(s)	SW 00.92	
FCC ID	2ALP8AP2	
IC	23431-AP2	
Equipment type	End Product	
Radio type	Transceiver	
Assigned frequency bands	2400.0 MHz - 2483.5 MHz	
Radio technology	Bluetooth LE 4.1	
Bluetooth Specification	LE 1M PHY	Yes
	LE 2M PHY	No
	LE Coded PHY S=8 (125 kbit)	No
	LE Coded PHY S=2 (500 kbit)	No
	Stable Modulation Index - Transmitter	No
	Stable Modulation Index - Receiver	No
Modulation	GFSK	
Number of antenna ports	1	
Antenna	Type	Integrated antenna
	Model	Inverted F
	Manufacturer	Andreas Stihl AG & Co. KG
	Gain	2 dBi
Supply Voltage	V <sub>NOM</sub>	36 VDC
Operating Temperature	T <sub>NOM</sub>	25 °C
AC/DC-Adaptor	Model	4850
	Vendor	ANDREAS STIHL AG & Co. KG
	Input	120VAC/60Hz
	Output	25.6-36V
Manufacturer	ANDREAS STIHL AG & Co. KG Badstraße 115 71336 Waiblingen Germany	

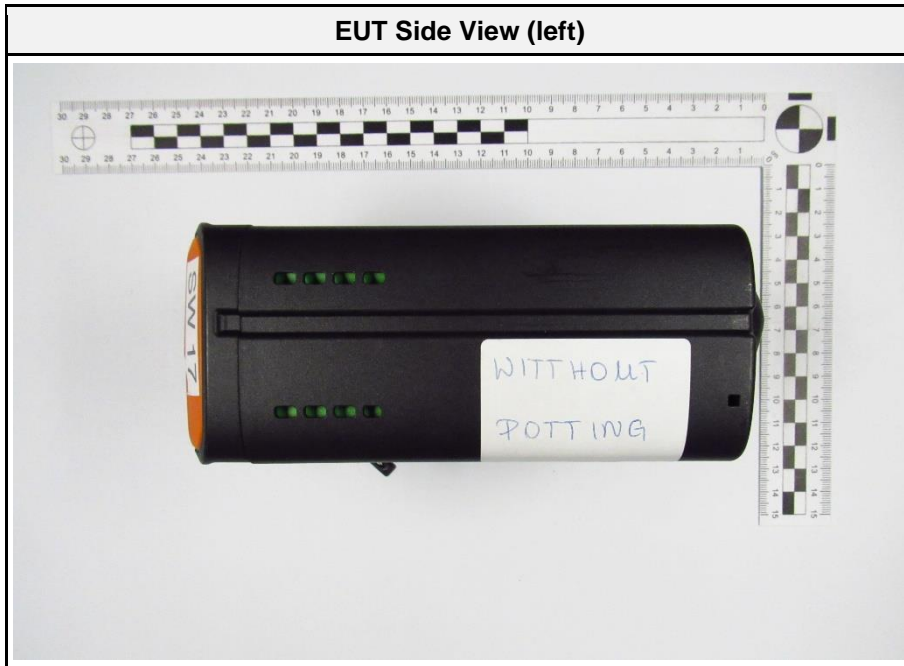
1.1 Photos – Equipment External







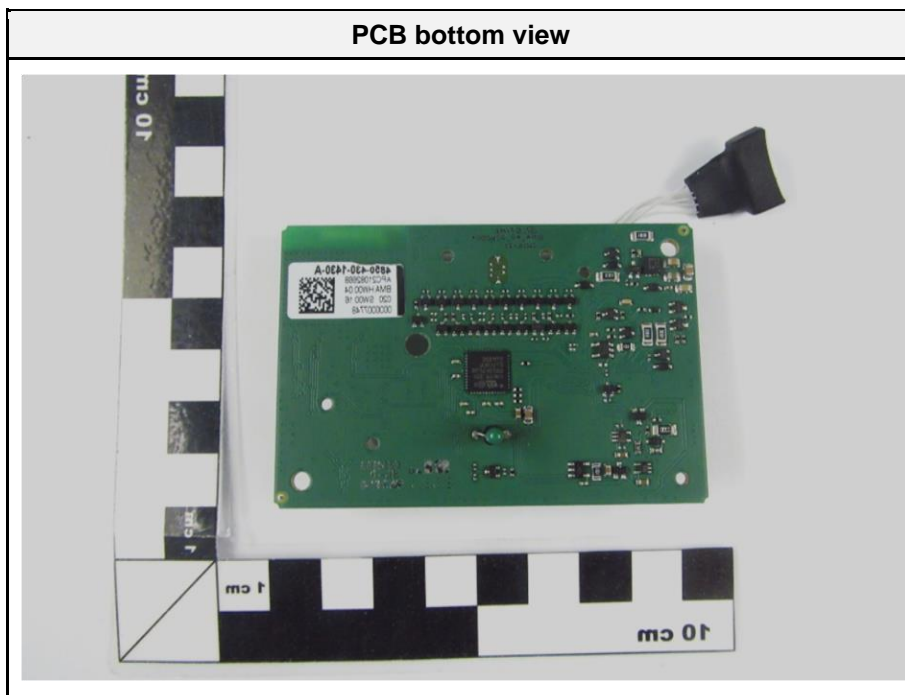
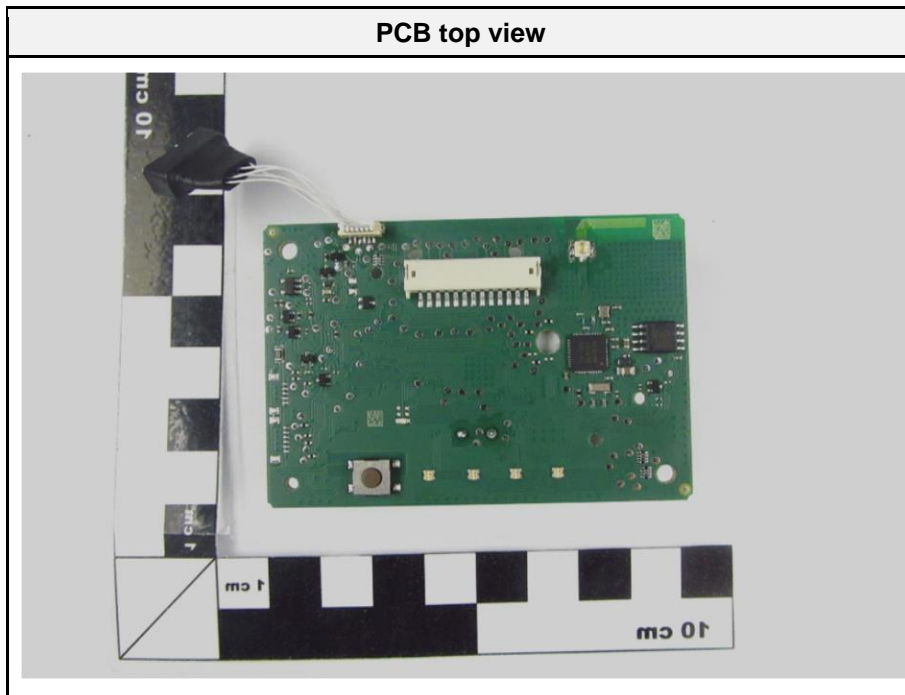
EUT Side View (left)



EUT Side View (right)



1.2 Photos – Equipment Internal



### 1.3 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
CBL	USB to TTI serial adapter	DSD Tech	SH-U09C	-
AE	Laptop	Lenovo	T440	-
Description:				
AE	Auxiliary Equipment			
SIM	Simulator			
CBL	Connecting Cable			
SFT	Software			
Comment:				

#### 1.4 Test Modes

Mode	Description
1Mbit	Mode = Transmit Modulation = GFSK Spreading = None Payload= 37 bytes
Receive	Mode = Receive
Comment: --	

### 1.5 Test Frequencies

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

### 1.6 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:

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

Net:

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

Limit:

This is the FCC Class B radiated emission limit (in units of 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/m		= 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
ISED RSS-Gen, Issue 5 A2 (section 6.7)	Occupied Bandwidth	ANSI C63.10-2013	N/T	--
FCC § 15.247(a)(2) ISED RSS-247, Issue 3 (section 5.2)	6 dB Bandwidth	ANSI C63.10-2013	N/T	--
FCC § 15.247(b) ISED RSS-247, Issue 3 (section 5.4)	Maximum peak conducted power	ANSI C63.10-2013	N/T	--
FCC § 15.247(e) ISED RSS-247, Issue 3 (section 5.2)	Power spectral density	ANSI C63.10-2013	N/T	--
FCC § 15.207 ISED RSS-247, Issue 3 (section 3.1)	AC power line conducted emissions	ANSI C63.10-2013	PASS	--
FCC § 15.247(d) ISED RSS-247, Issue 3 (section 5.5)	Band edge compliance	ANSI C63.10-2013	N/T	--
FCC § 15.247(d) ISED RSS-247, Issue 3 (section 5.5)	Conducted spurious emissions	ANSI C63.10-2013	N/T	--
FCC § 15.247(d) FCC § 15.209 ISED RSS-Gen, Issue 5 A2 (section 6.13)	Transmitter radiated spurious emissions	ANSI C63.10-2013	PASS	--
ISED RSS-247, Issue 3 (section 3.1)	Receiver radiated spurious emissions	ANSI C63.4-2014	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 - AC powerline conducted emissions

##### 3.1.1 Information

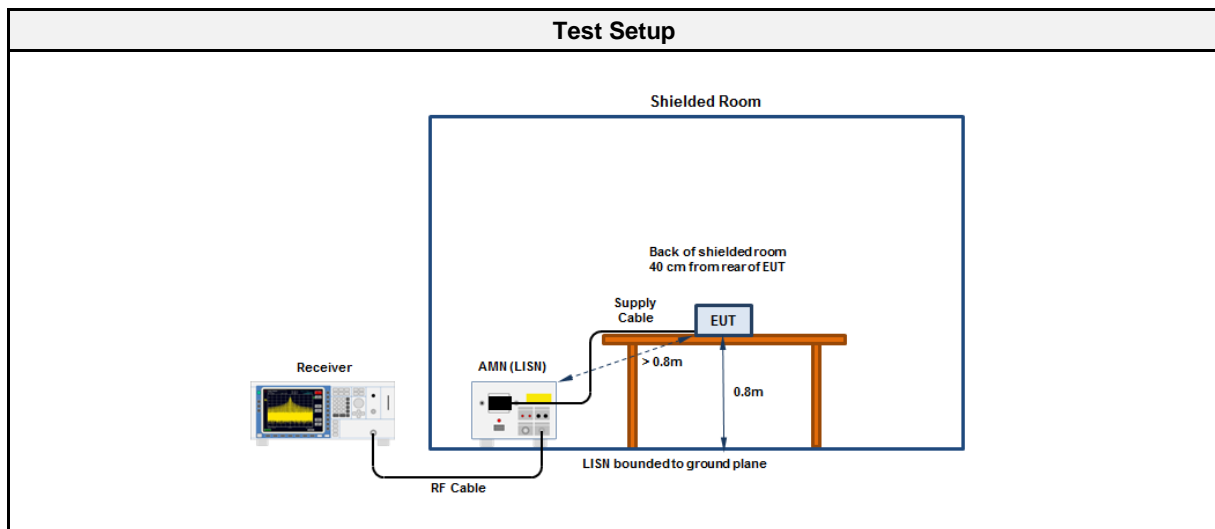
Test Information	
Reference	FCC § 15.207; ISED RSS-247, Issue 3 (section 3.1)
Measurement Method	ANSI C63.10 6.2
Measurement Uncertainty	± 3.82 dB
Operator	Jens Degenhardt
Date	2022-01-06

##### 3.1.2 Limits

Limits		
Frequency [MHz]	Quasi-Peak [dB $\mu$ V]	Average [dB $\mu$ V]
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

##### 3.1.3 Setup



##### 3.1.4 Equipment

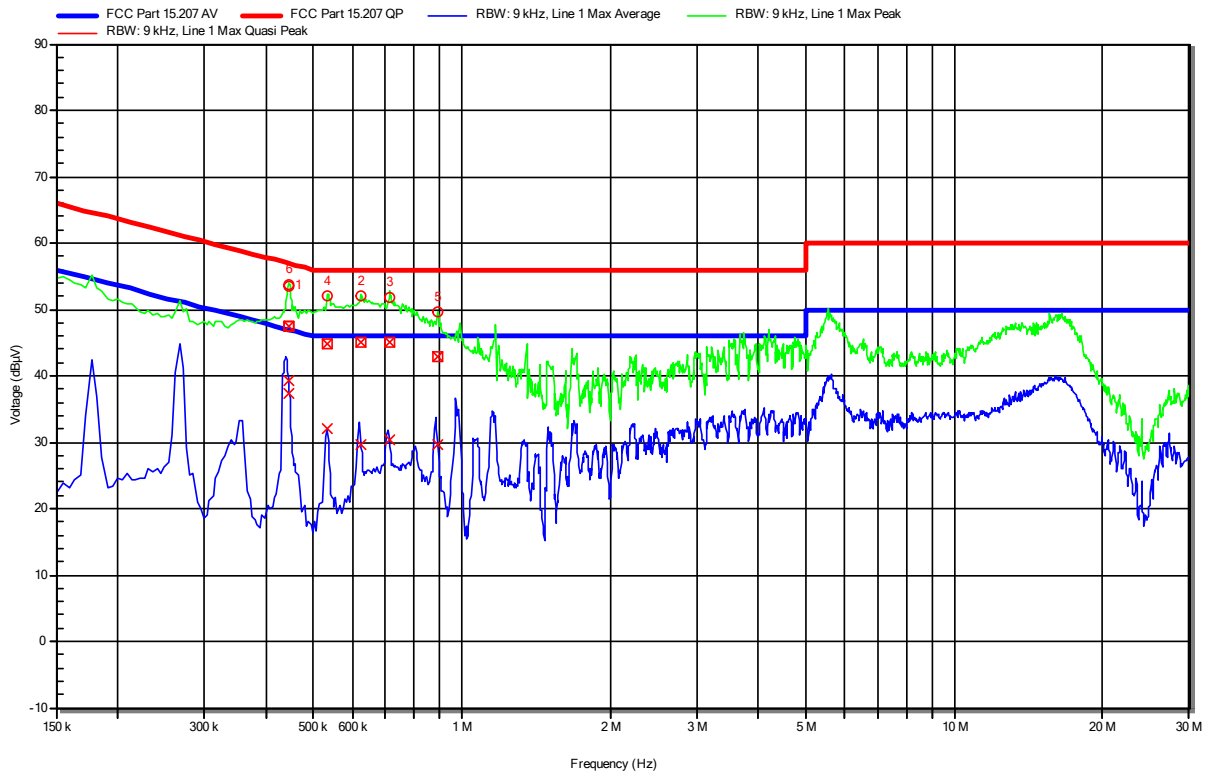
Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
EMI Test Receiver	R&S	ESR7	EF00943	2021-08	2022-08
Pulse Limiter	R&S	ESH3-Z2	EF01222	2021-07	2022-07
LISN	Schwarzbeck	NSLK 8127 RC	EF01592	2021-07	2022-07



**Conducted emissions at the mains power port according to 47 CFR Part 15.247**

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Test Date: 2022-01-06  
 Operating Conditions: ambient temperature: 23 °Celsius  
 power input: Charger AL300 (sample-ID: 38023)  
 LISN: Schwarzbeck NSLK 8127 RC L  
 Operational Mode & EUT Configuration: BT-LE, 2.444GHz, Tx  
 Applied to Port: AC.cable of charger AL300 (sample-ID:38023)



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	447 kHz	47.5 dBµV	56.93 dBµV	-9.43 dB	Pass	Line 1
2	622.5 kHz	45.2 dBµV	56 dBµV	-10.8 dB	Pass	Line 1
3	712.5 kHz	45.2 dBµV	56 dBµV	-10.3 dB	Pass	Line 1
4	532.5 kHz	44.8 dBµV	56 dBµV	-11.2 dB	Pass	Line 1
5	892.5 kHz	42.8 dBµV	56 dBµV	-13.2 dB	Pass	Line 1
6	444.75 kHz	47.53 dBµV	56.97 dBµV	-9.44 dB	Pass	Line 1
Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	447 kHz	37.32 dBµV	46.93 dBµV	-9.61 dB	Pass	Line 1
2	622.5 kHz	29.6 dBµV	46 dBµV	-16.4 dB	Pass	Line 1
3	712.5 kHz	30.4 dBµV	46 dBµV	-15.6 dB	Pass	Line 1
4	532.5 kHz	32.0 dBµV	46 dBµV	-14.0 dB	Pass	Line 1
5	892.5 kHz	29.7 dBµV	46 dBµV	-16.3 dB	Pass	Line 1
6	444.75 kHz	39.3 dBµV	46.97 dBµV	-7.7 dB	Pass	Line 1

Test Report No.: G0M-2106-9856-TFC247BL\_AP200S-V02

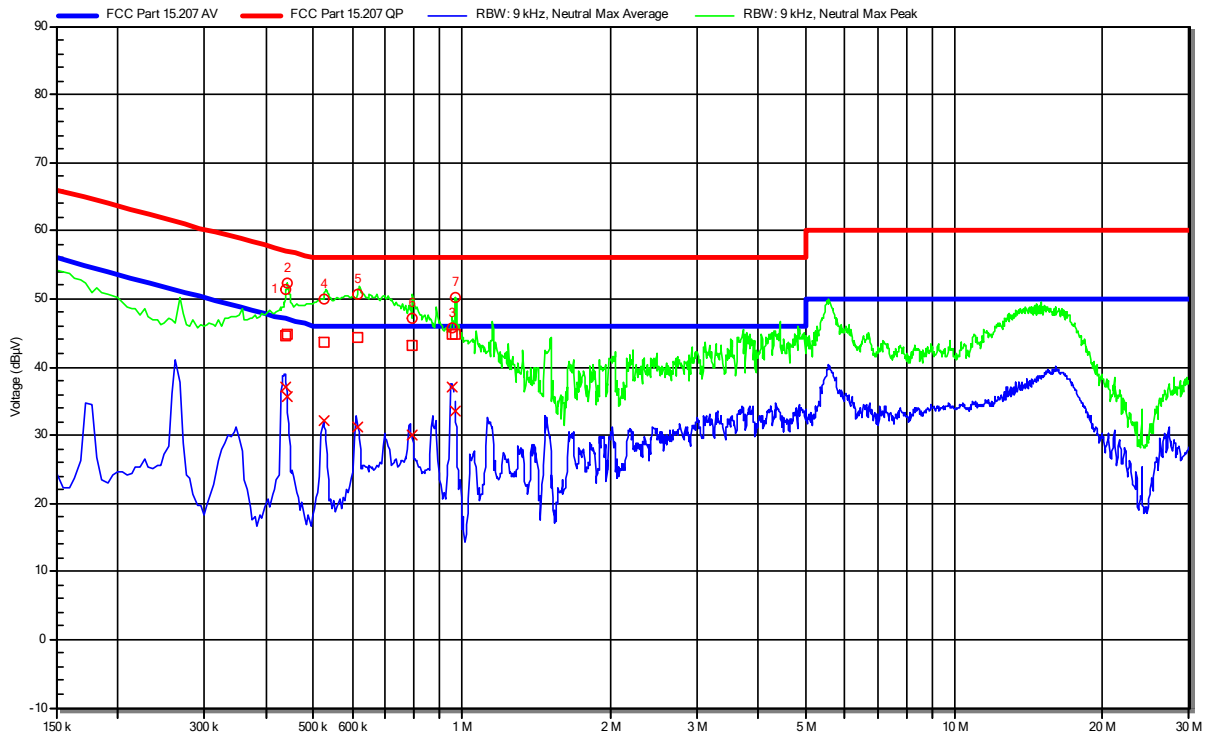
Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

**Conducted emissions at the mains power port according to 47 CFR Part 15.247**

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Test Date: 2022-01-06  
 Operating Conditions: ambient temperature: 23 °Celsius  
 power input: Charger AL300 (sample-ID: 38023)  
 LISN: Schwarzbeck NSLK 8127 RC N  
 Operational Mode & EUT Configuration: BT-LE, 2.444GHz, Tx  
 Applied to Port: AC.cable of charger AL300 (sample-ID:38023)

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RadiMation



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	440.25 kHz	44.46 dBµV	57.06 dBµV	-12.59 dB	Pass	Neutral
2	441.6 kHz	44.83 dBµV	57.03 dBµV	-12.2 dB	Pass	Neutral
3	955.5 kHz	44.89 dBµV	56 dBµV	-11.11 dB	Pass	Neutral
4	523.5 kHz	43.65 dBµV	56 dBµV	-12.35 dB	Pass	Neutral
5	613.5 kHz	44.34 dBµV	56 dBµV	-11.66 dB	Pass	Neutral
6	793.5 kHz	43.2 dBµV	56 dBµV	-12.8 dB	Pass	Neutral
7	970.35 kHz	44.9 dBµV	56 dBµV	-11.1 dB	Pass	Neutral

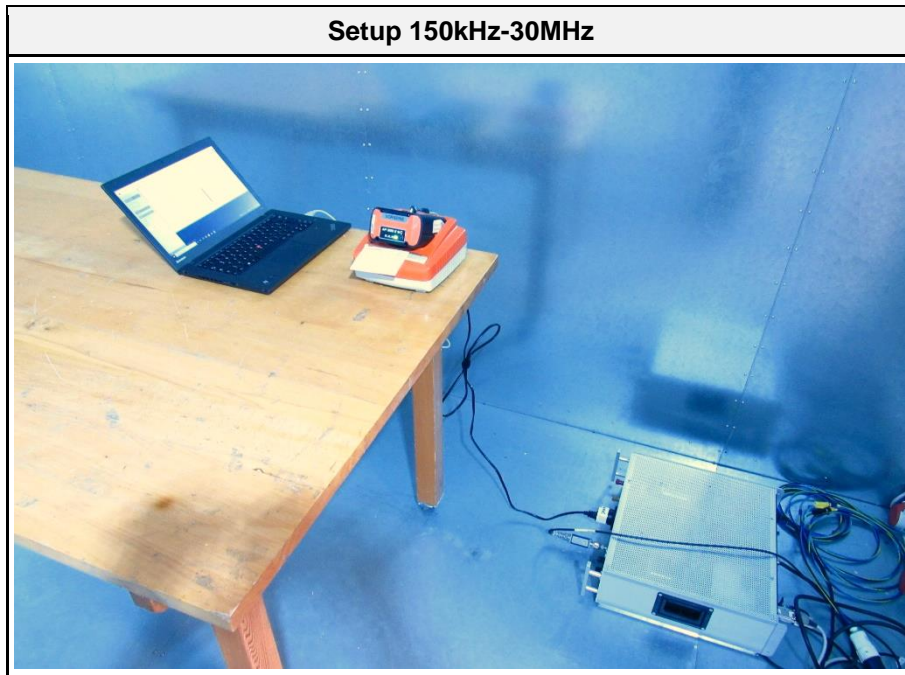
  

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	440.25 kHz	37.15 dBµV	47.06 dBµV	-9.91 dB	Pass	Neutral
2	441.6 kHz	35.62 dBµV	47.03 dBµV	-11.41 dB	Pass	Neutral
3	955.5 kHz	37.0 dBµV	46 dBµV	-9.0 dB	Pass	Neutral
4	523.5 kHz	32.5 dBµV	46 dBµV	-14.0 dB	Pass	Neutral
5	613.5 kHz	31.1 dBµV	46 dBµV	-14.7 dB	Pass	Neutral
6	793.5 kHz	30.5 dBµV	46 dBµV	-16.0 dB	Pass	Neutral
7	970.35 kHz	33.66 dBµV	46 dBµV	-12.34 dB	Pass	Neutral

Test Report No.: G0M-2106-9856-TFC247BL\_AP200S-V02

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

3.1.5 Setup Photos



### 3.2 Test Conditions and Results - Transmitter radiated emissions

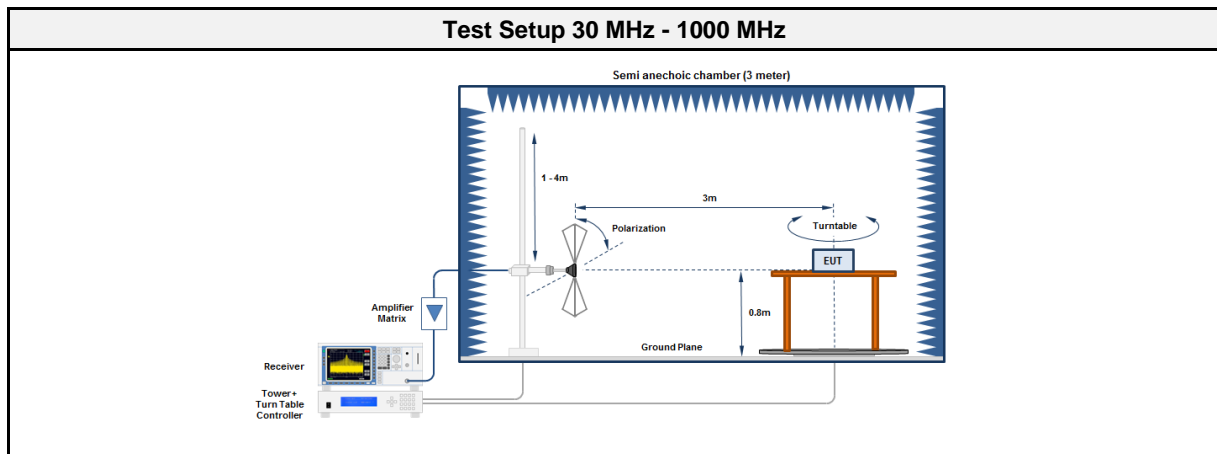
#### 3.2.1 Information

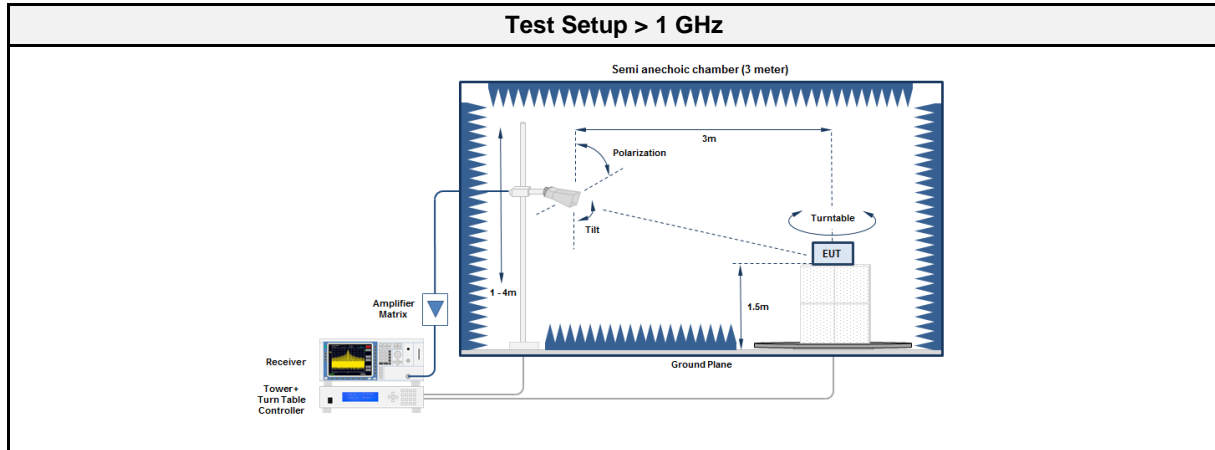
Test Information	
Reference	FCC § 15.247(d); FCC § 15.209; ISSED RSS-Gen, Issue 5 A2 (section 6.13)
Measurement Uncertainty	± 5.95 dB
Measurement Method	ANSI C63.10 6.4, 6.5, 6.6, 11.12
Operator	Jens Degenhardt
Date	2021-12-30

#### 3.2.2 Limits

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

#### 3.2.3 Setup





### 3.2.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment 30 - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2021-02	2024-02
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2021-07	2022-07
Antenna	R&S	HK 116	EF00030	2021-05	2024-05
Antenna	R&S	HL 223	EF00212	2019-05	2022-05

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic chamber	Frankonia	AC 2	EF01616	2021-09	2022-09
Spectrum analyzer	R&S	FSU43	EF01631	2021-07	2022-07
Horn antenna	Schwarzbeck	BBHA 9120B	EF01678	2021-03	2022-03
Horn Antenna	Schwarzbeck	HWRD 650	EF01679	2021-03	2022-03
Antenna	Amplifier Research	AT4560	EF00302	2021-06	2023-06

### 3.2.5 Procedure

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

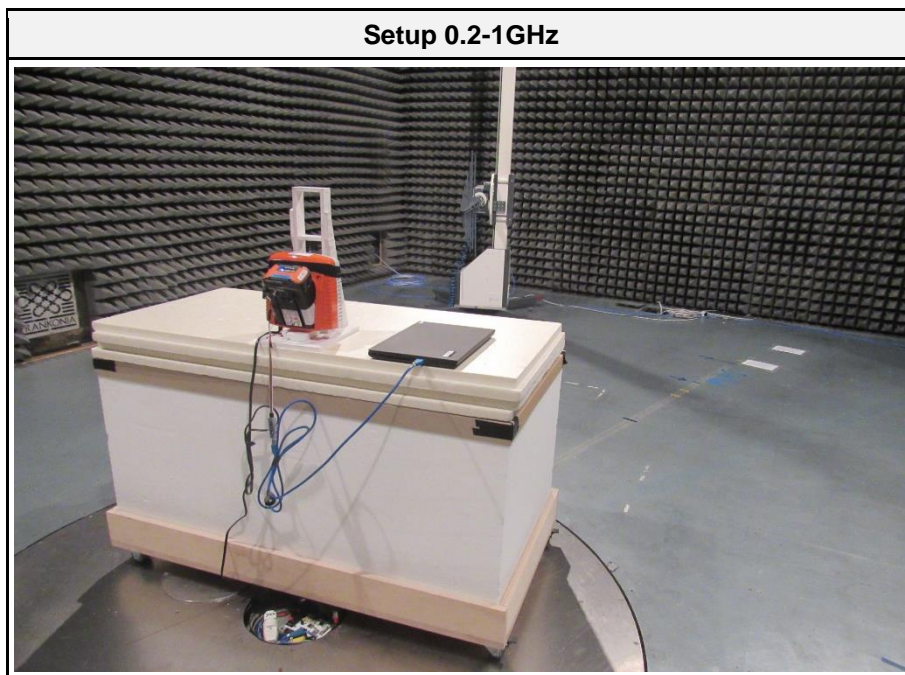
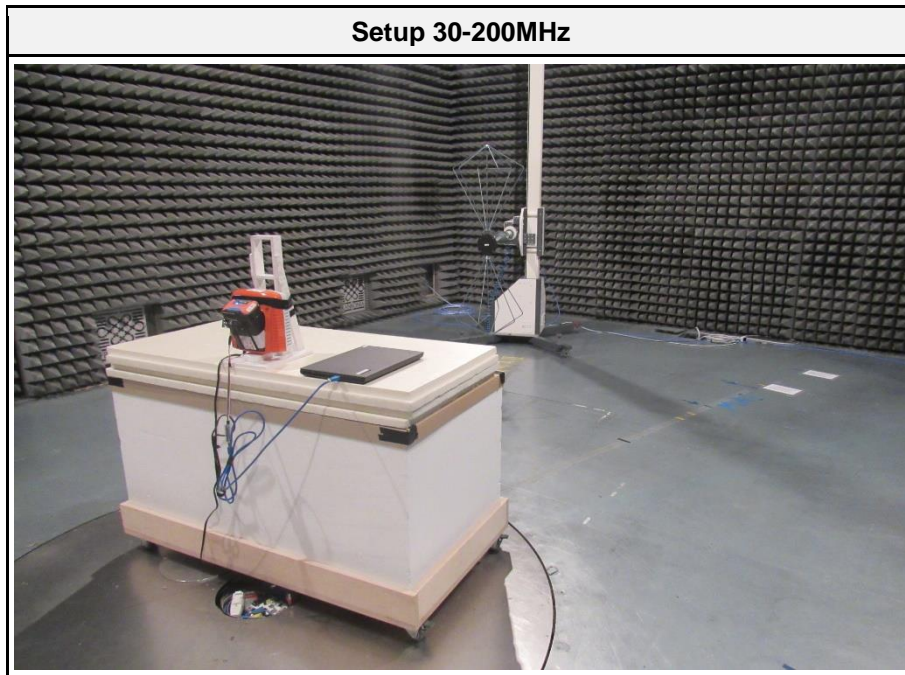
Test Procedure > 1 GHz
<ol style="list-style-type: none"> <li>EUT is placed on a non conducting support at the center of a turn table 1.5 m above the ground</li> <li>EUT set to test mode</li> <li>The receiver is set to peak detection with max hold</li> <li>The EUT is rotated through 360° and the height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

## 3.2.6 Results

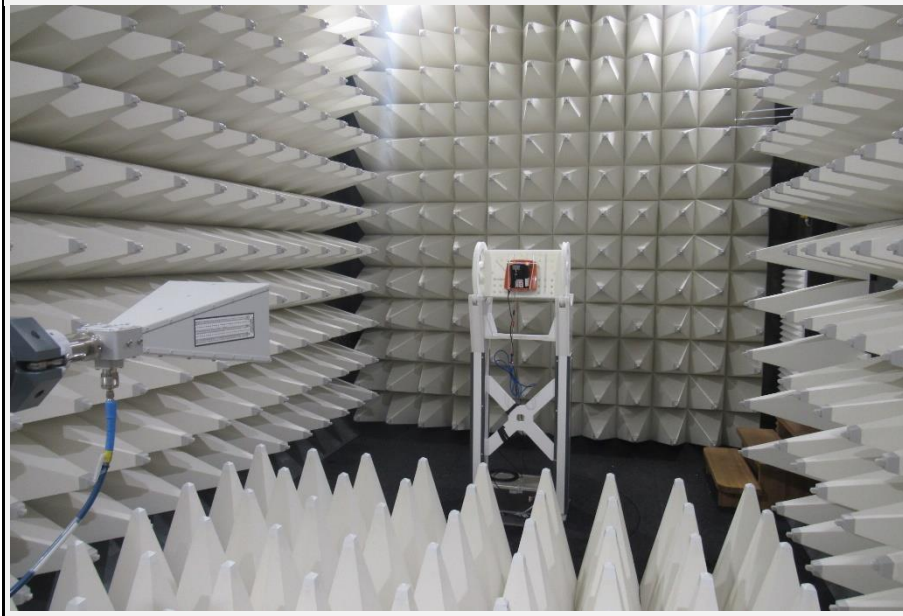
Test Results						
Channel [MHz]	Emission [MHz]	Level [dB $\mu$ V/m]	Det.	Pol.	Limit [dB $\mu$ V/m]	Margin [dB]
2402	192.2438	23.10	pk	hor	95.00	-71.93
2402	240	39.70	pk	hor	46.00	-06.34
2402	240	36.90	qpk	hor	46.00	-09.12
2402	2273.9	50.63	pk	hor	74.00	-23.37
2402	2273.9	46.27	avg	hor	54.00	-07.73
2402	2311.3	51.19	pk	hor	74.00	-22.81
2402	2311.3	47.05	avg	hor	54.00	-06.95
2402	2338.1	50.90	pk	hor	74.00	-23.10
2402	2338.1	45.53	avg	hor	54.00	-08.47
2402	2386.8	44.68	pk	hor	74.00	-29.32
2402	2386.8	34.93	avg	hor	54.00	-19.07
2402	2492.6	54.53	pk	hor	74.00	-19.47
2402	2492.6	51.89	avg	hor	54.00	-02.11
2402	4804.2	51.88	pk	hor	74.00	-22.12
2402	4804.2	46.53	avg	hor	54.00	-07.47
2440	192.01	23.50	pk	hor	95.00	-71.50
2440	240.04	40.10	pk	hor	46.00	-05.94
2440	240.04	38.50	qpk	hor	46.00	-07.53
2440	2312.1	50.97	pk	hor	74.00	-23.03
2440	2312.1	46.61	avg	hor	54.00	-07.39
2440	2329.1	50.52	pk	hor	74.00	-23.48
2440	2329.1	45.87	avg	hor	54.00	-08.13
2440	2331.8	51.77	pk	hor	74.00	-22.23
2440	2331.8	42.48	avg	hor	54.00	-11.52
2440	2349.4	51.57	pk	hor	74.00	-22.43
2440	2349.4	48.46	avg	hor	54.00	-05.54
2440	2376.2	53.44	pk	hor	74.00	-20.56
2440	2376.2	48.65	avg	hor	54.00	-05.35
2440	4879.6	46.14	pk	hor	74.00	-27.86
2440	4879.6	41.90	avg	hor	54.00	-12.10
2440	7319	51.13	pk	ver	74.00	-22.87
2440	7319	48.21	avg	ver	54.00	-05.79
2480	191.9718	23.00	pk	hor	95.00	-71.99
2480	240.04	39.80	pk	hor	46.00	-06.22
2480	240.04	38.50	qpk	hor	46.00	-07.55
2480	2352	54.64	pk	hor	74.00	-19.36
2480	2352	50.59	avg	hor	54.00	-03.41
2480	2496.1	44.34	pk	ver	74.00	-29.66
2480	2496.1	29.20	avg	ver	54.00	-24.80
2480	4959.8	45.73	pk	hor	74.00	-28.27
2480	4959.8	43.63	avg	hor	54.00	-10.37
2480	7439	55.73	pk	hor	74.00	-18.27
2480	7439	51.04	avg	hor	54.00	-02.96



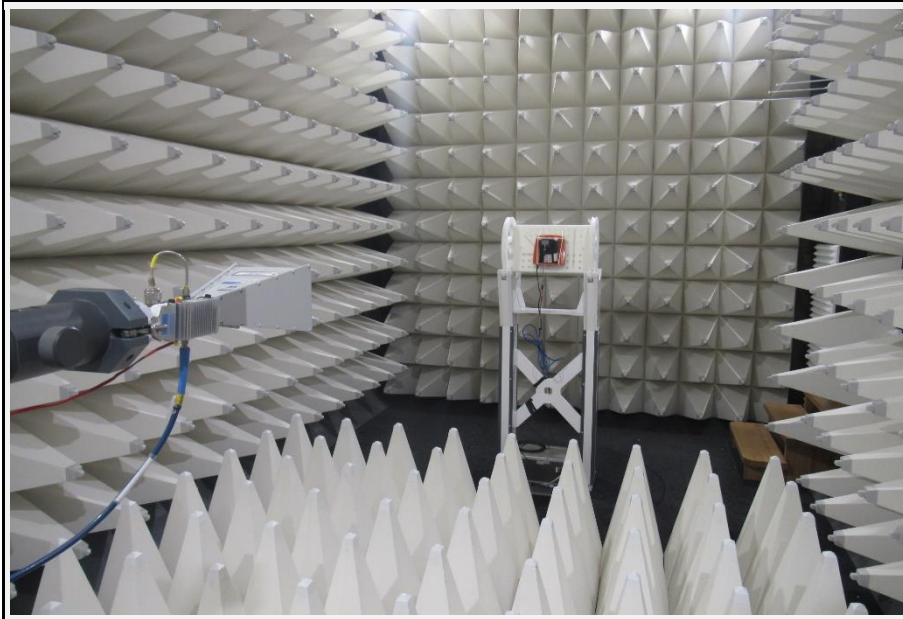
3.2.7 Setup Photos



**Setup 1-8GHz**

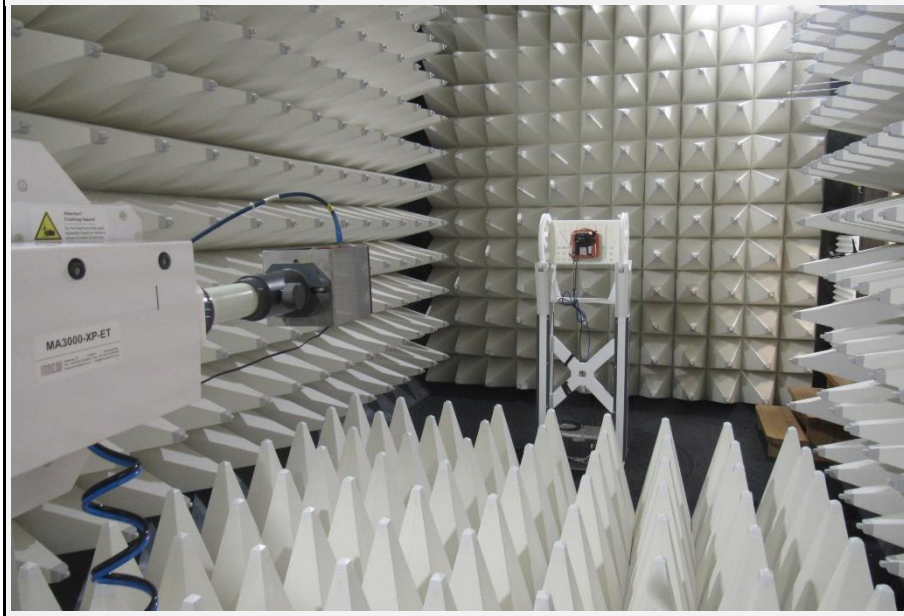


**Setup 8-18GHz**





Setup 18-26.5GHz



### 3.3 Test Conditions and Results - Receiver radiated emissions

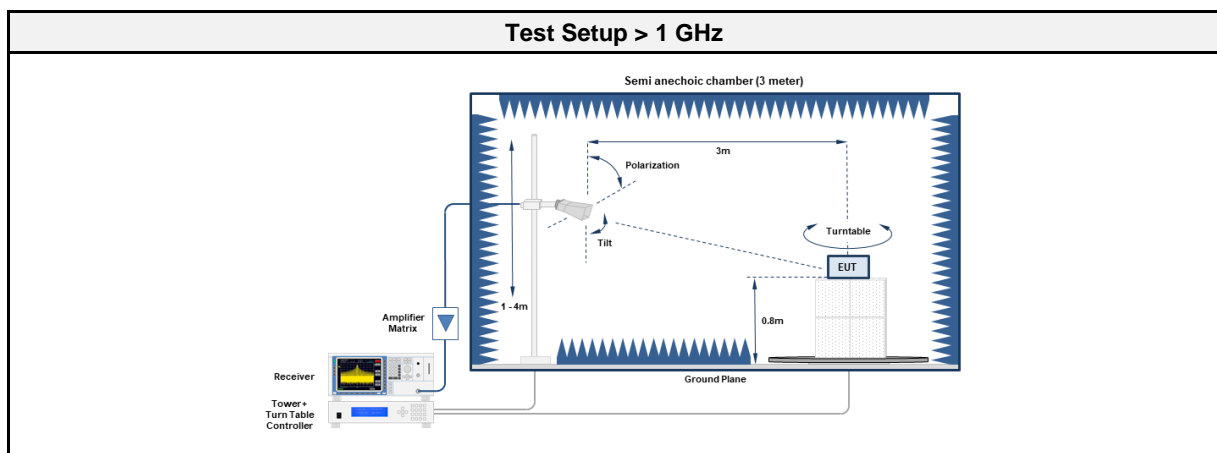
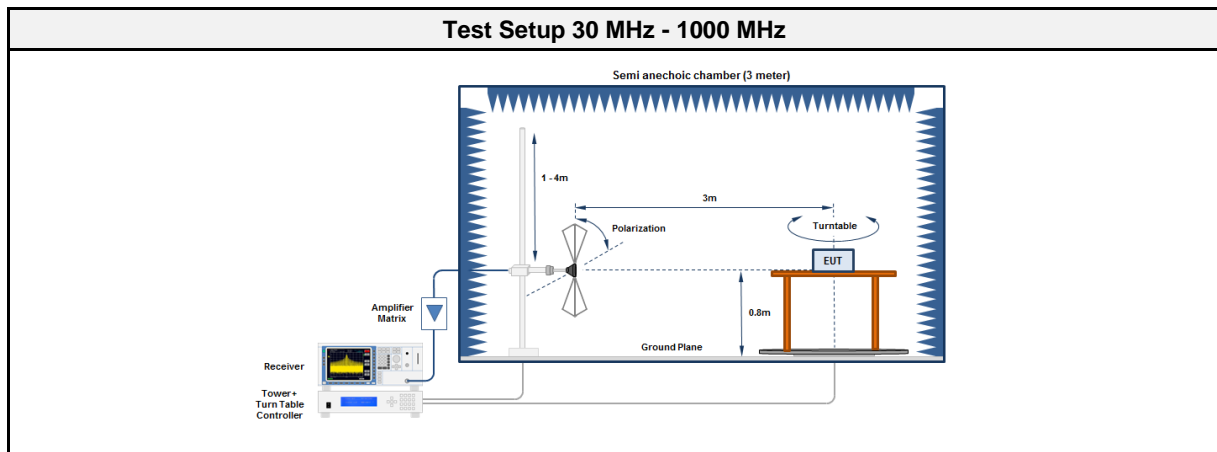
#### 3.3.1 Information

Test Information	
Reference	ISED RSS-247, Issue 3 (section 3.1)
Measurement Uncertainty	± 5.95 dB
Measurement Method	ANSI C63.4-2014 8.1-8.3
Operator	Jens Degenhardt
Date	2021-12-16

#### 3.3.2 Limits

Limits			
Frequency range [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

#### 3.3.3 Setup



## 3.3.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment 30 - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2021-02	2024-02
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2021-07	2022-07
Antenna	R&S	HK 116	EF00030	2021-05	2024-05
Antenna	R&S	HL 223	EF00212	2019-05	2022-05

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2021-02	2024-02
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2021-07	2022-07
Horn antenna	Schwarzbeck	BBHA 9120B	EF01678	2021-03	2022-03
Horn Antenna	Schwarzbeck	HWRD 650	EF01679	2021-03	2022-03

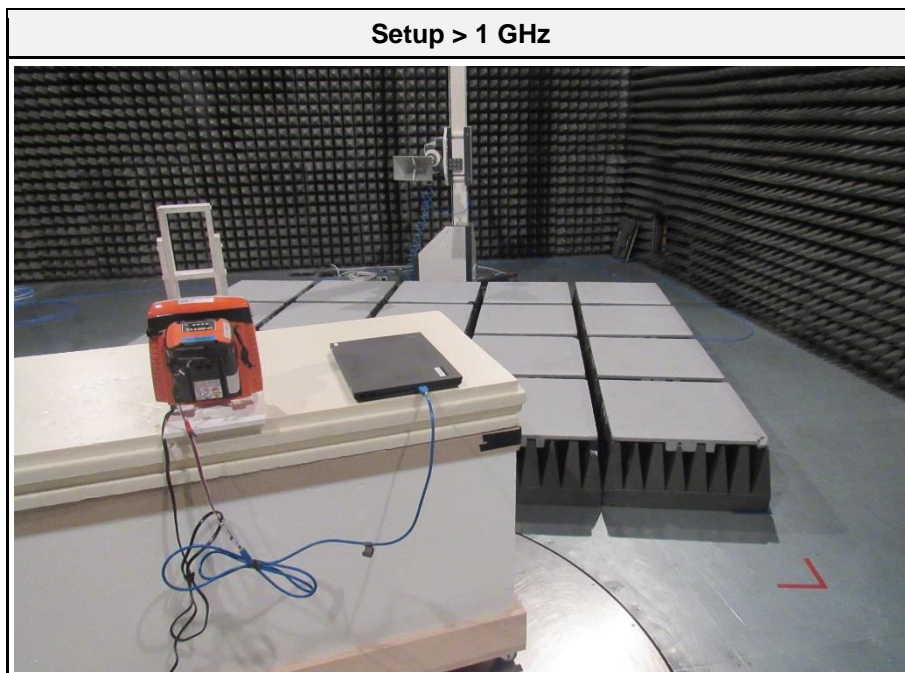
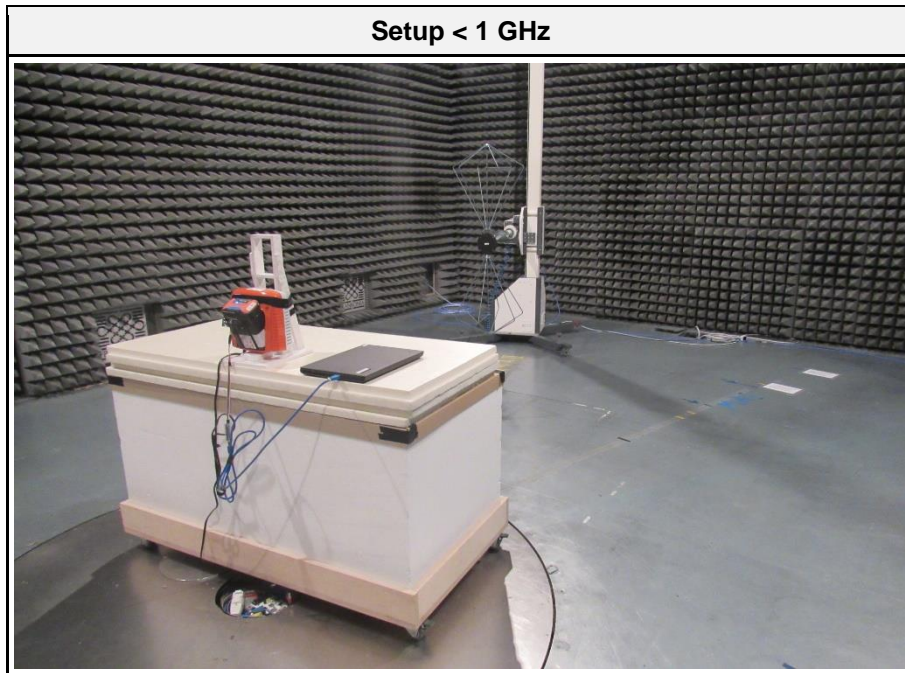
## 3.3.5 Procedure

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

## 3.3.6 Results

Test Results						
Channel [MHz]	Emission [MHz]	Level [dB $\mu$ V/m]	Det.	Pol.	Limit [dB $\mu$ V/m]	Margin [dB]
2440	48	20.00	pk	ver	40.00	-19.99
2440	240	39.40	pk	hor	46.00	-06.63
2440	240	38.00	qpk	hor	46.00	-08.02
2440	4878	45.85	pk	hor	74.00	-28.15
2440	4878	42.04	avg	hor	53.98	-11.94
2440	17890	47.61	pk	ver	74.00	-26.39
2440	17890	39.56	avg	ver	53.98	-14.42

3.3.7 Setup Photos



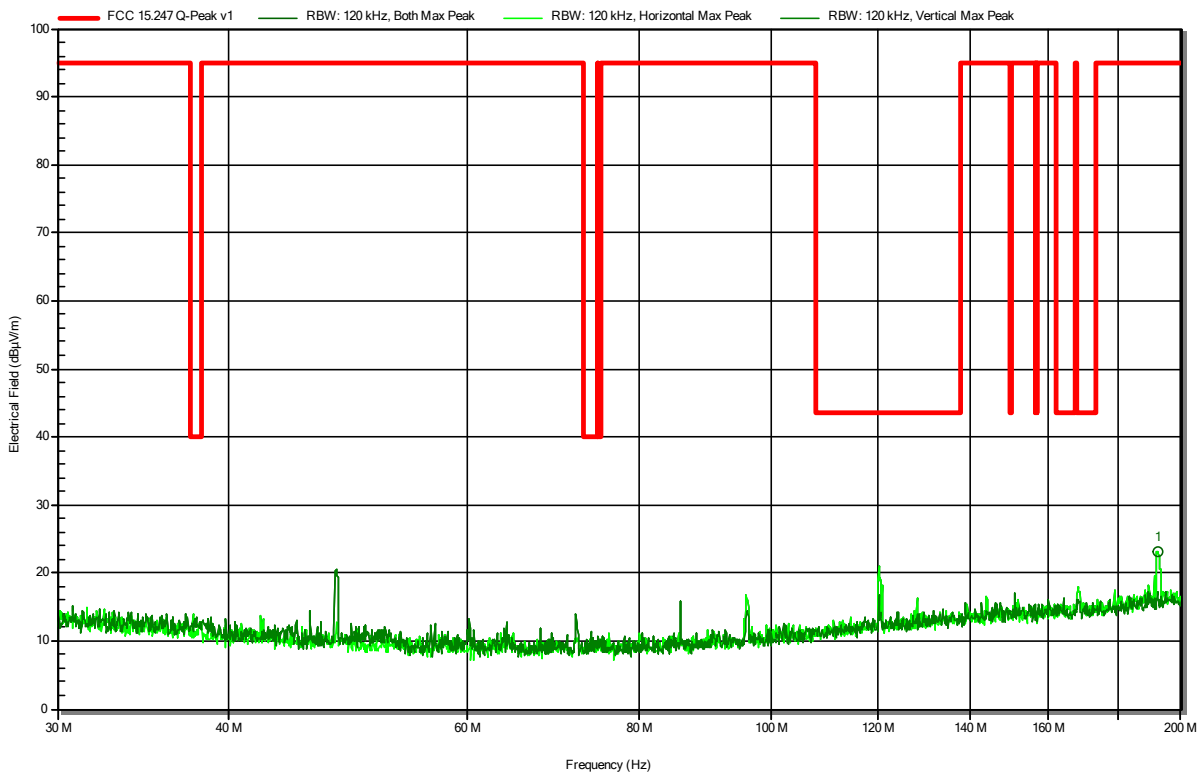
## ANNEX A Transmitter spurious emissions

### Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Rohde & Schwarz HK 116  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.402GHz  
 Test Date: 2021-12-20  
 Note: EUT vertical

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RadiMation



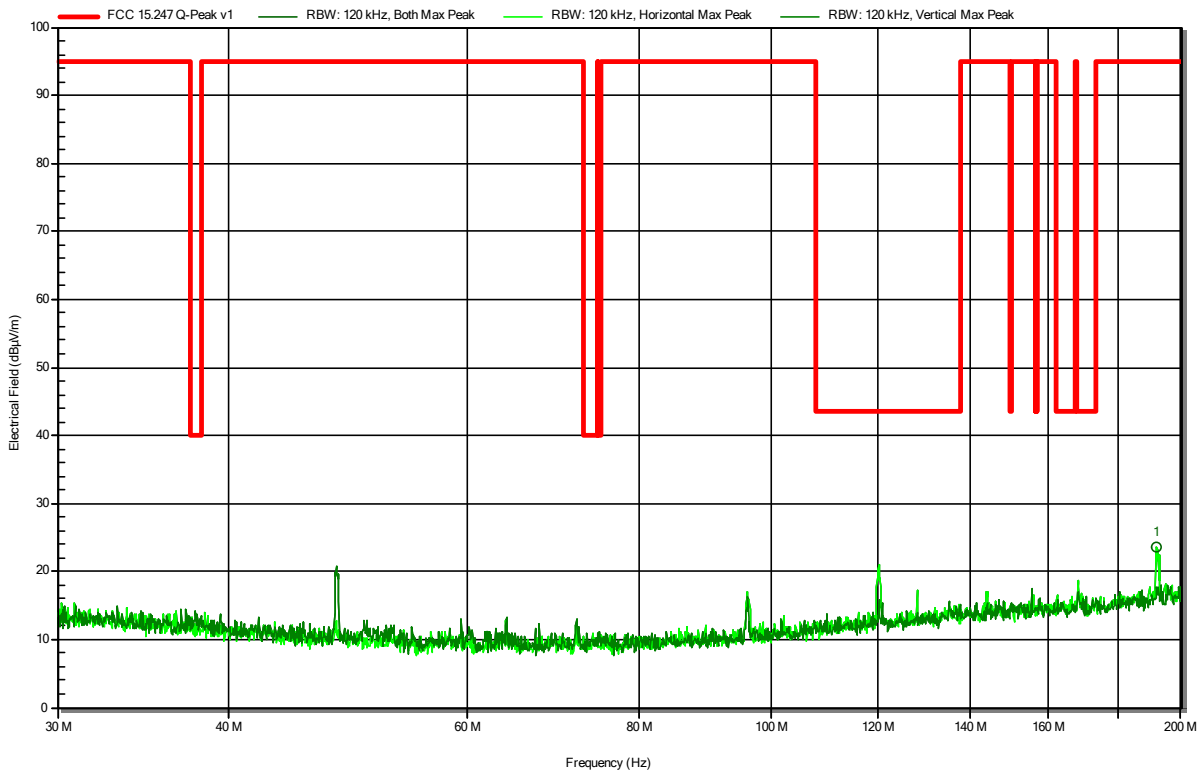
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
192.2438 MHz	23.1 dBµV/m	95 dBµV/m	-71.93 dB	Pass	Horizontal

### Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Rohde & Schwarz HK 116  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.44GHz  
 Test Date: 2021-12-20  
 Note: EUT vertical

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RadiMation



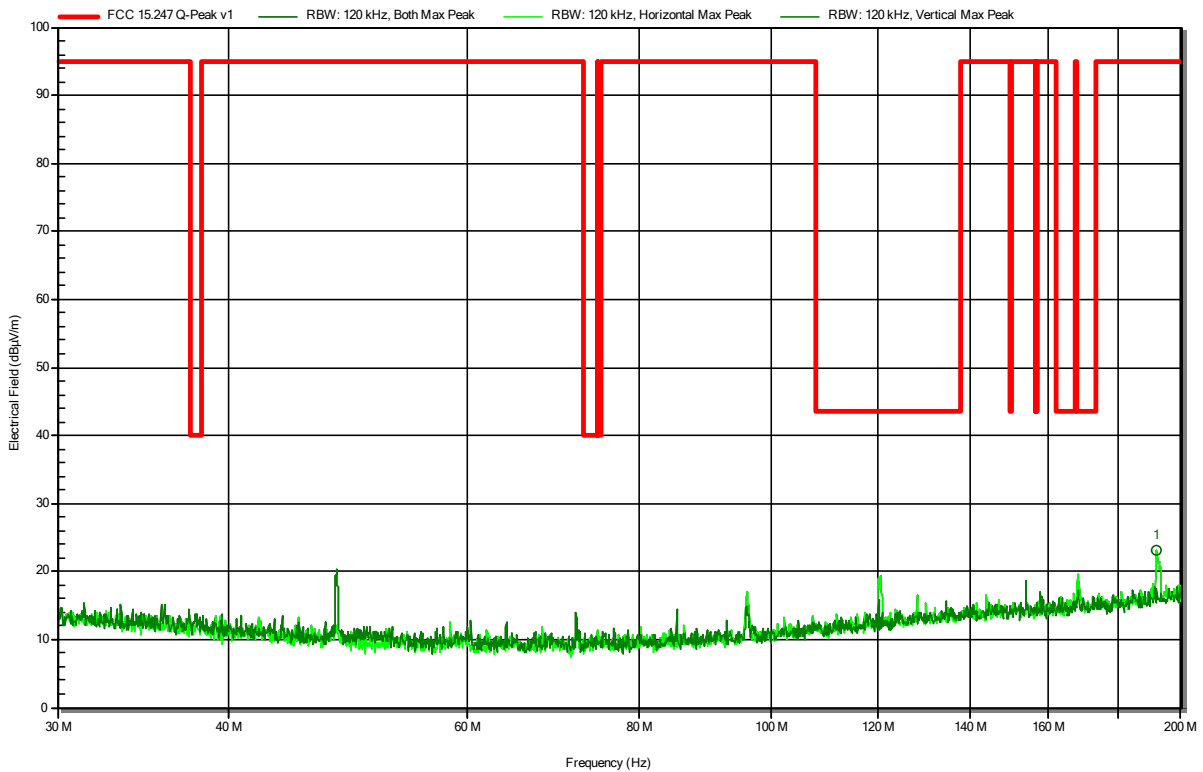
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
192.01 MHz	23.5 dBµV/m	95 dBµV/m	-71.5 dB	Pass	Horizontal

**Radiated Spurious Emissions according to 47 CFR Part 15.247**

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Rohde & Schwarz HK 116  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.48GHz  
 Test Date: 2021-12-20  
 Note: EUT vertical

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**RadiMation**



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
191.9718 MHz	23 dBµV/m	95 dBµV/m	-71.99 dB	Pass	Horizontal

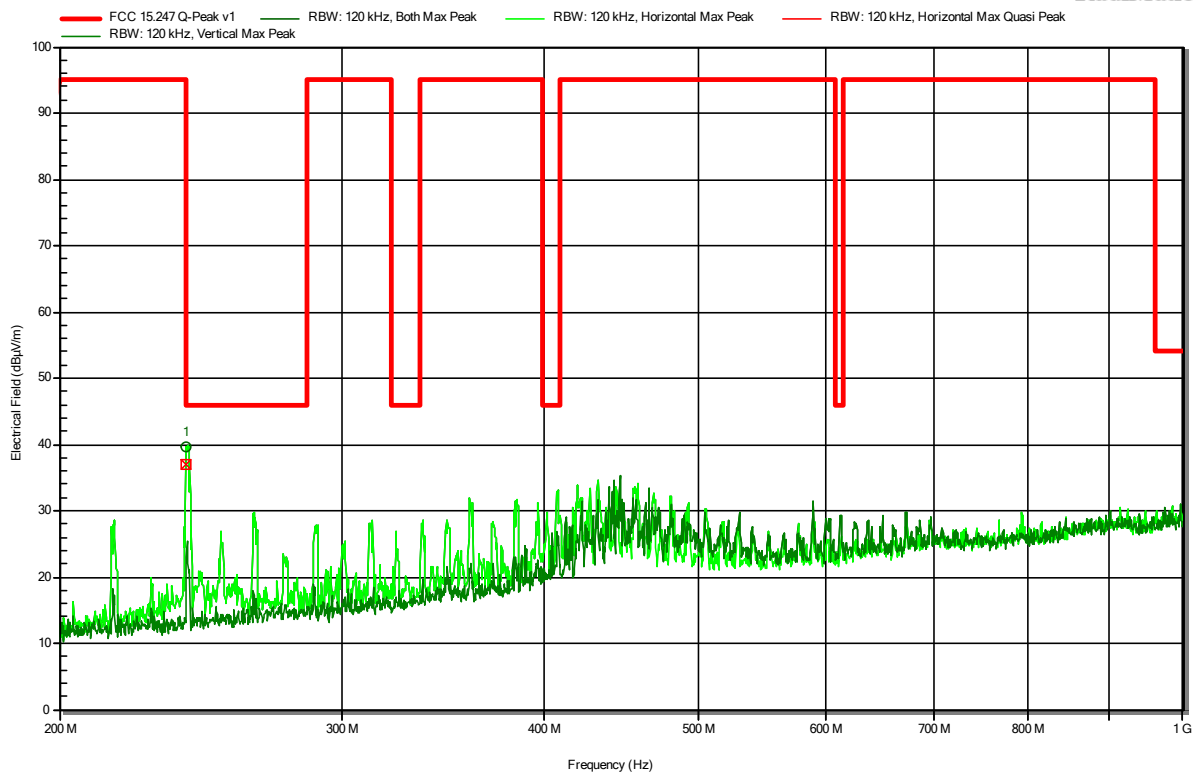


**Radiated Spurious Emissions according to 47 CFR Part 15.247**

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Rohde & Schwarz HL 223  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.402GHz  
 Test Date: 2021-12-20  
 Note: EUT vertical

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**RadiMation**



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
240 MHz	39.7 dBµV/m	46 dBµV/m	-6.34 dB	Pass	Horizontal

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Polarization
240 MHz	36.9 dBµV/m	46 dBµV/m	-9.12 dB	Pass	Horizontal

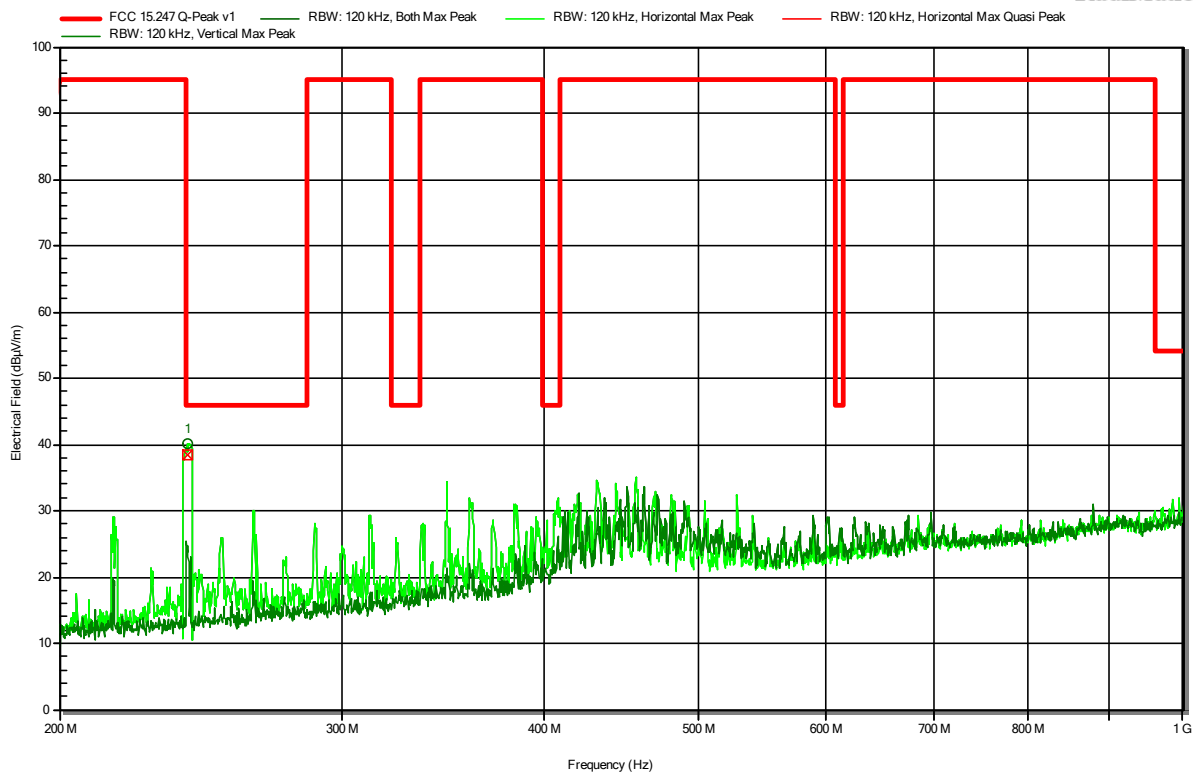


**Radiated Spurious Emissions according to 47 CFR Part 15.247**

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Rohde & Schwarz HL 223  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.44GHz  
 Test Date: 2021-12-20  
 Note: EUT vertical

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**RadiMation**



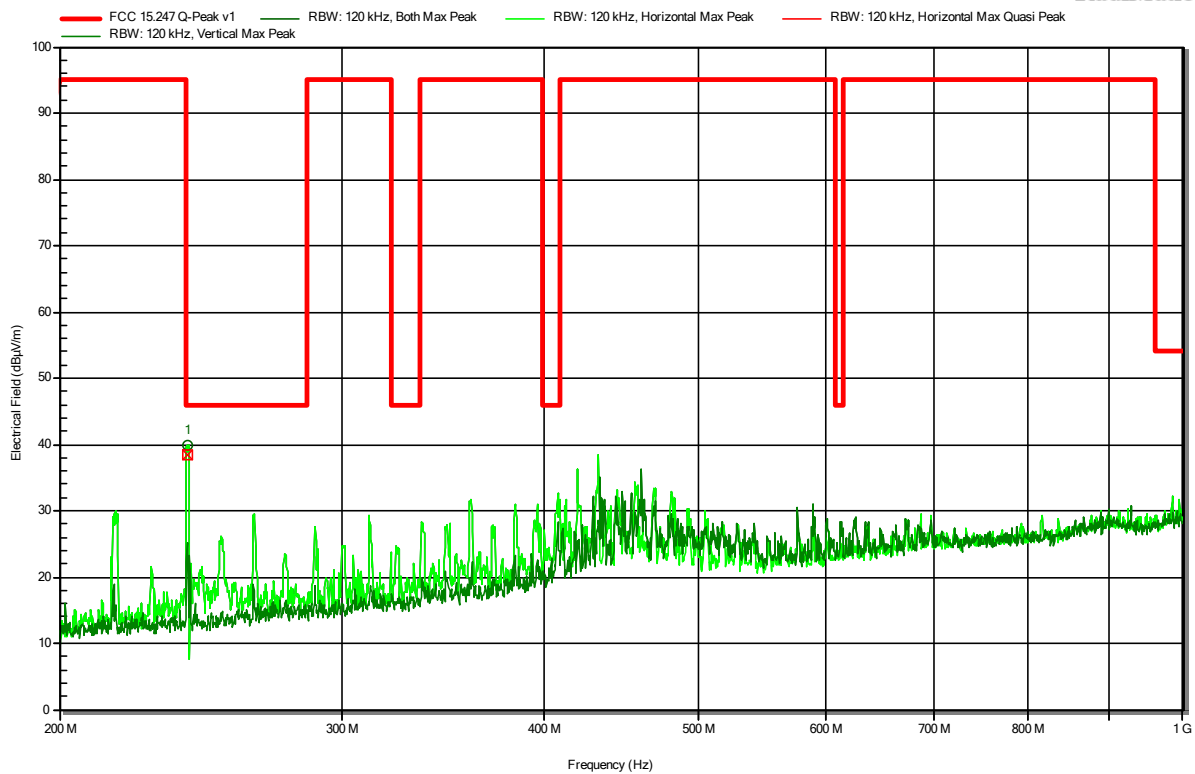
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
240.04 MHz	40.1 dBµV/m	46 dBµV/m	-5.94 dB	Pass	Horizontal
Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Polarization
240.04 MHz	38.5 dBµV/m	46 dBµV/m	-7.53 dB	Pass	Horizontal

### Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Rohde & Schwarz HL 223  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.48GHz  
 Test Date: 2021-12-20  
 Note: EUT vertical

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**RadiMation**



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
240.04 MHz	39.8 dBµV/m	46 dBµV/m	-6.22 dB	Pass	Horizontal

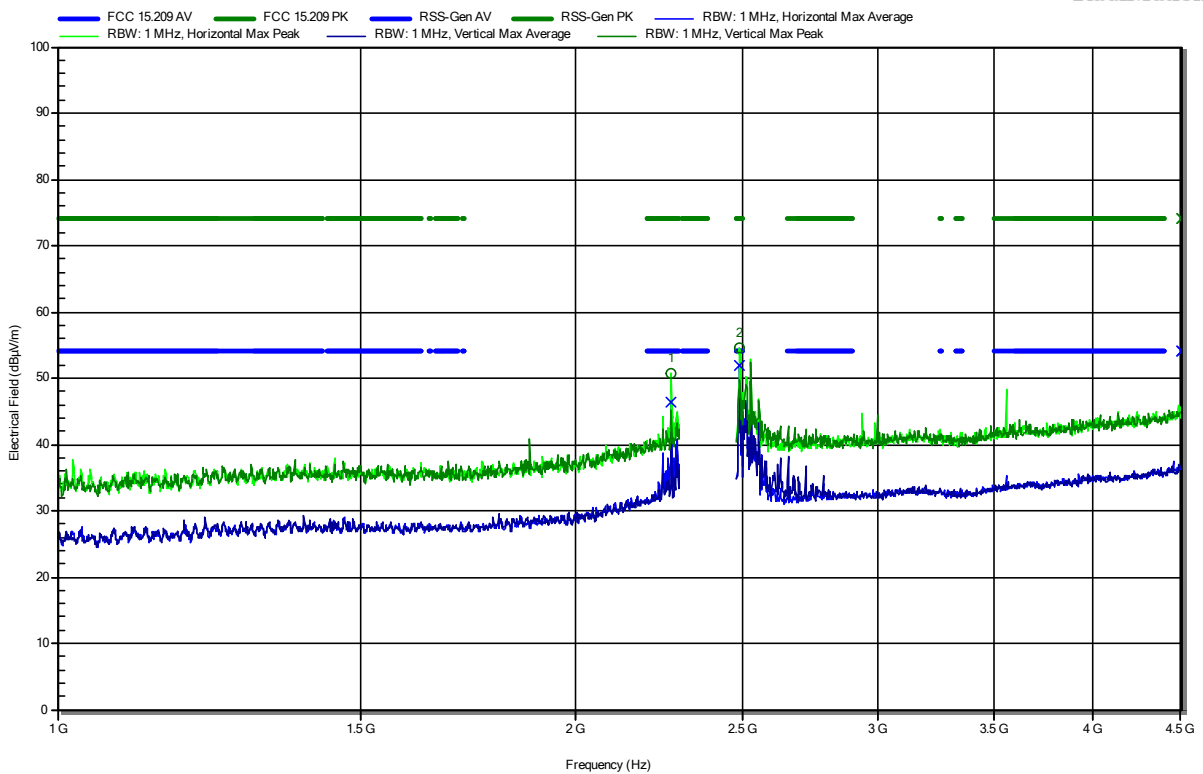
Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Polarization
240.04 MHz	38.5 dBµV/m	46 dBµV/m	-7.55 dB	Pass	Horizontal

### Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Schwarzbeck BBHA 9120D  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.402GHz  
 Test Date: 2021-12-17  
 Note: EUT vertical

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RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.2739 GHz	50.63 dBµV/m	74 dBµV/m	-23.37 dB	Pass	Horizontal
2.4926 GHz	54.53 dBµV/m	74 dBµV/m	-19.47 dB	Pass	Horizontal

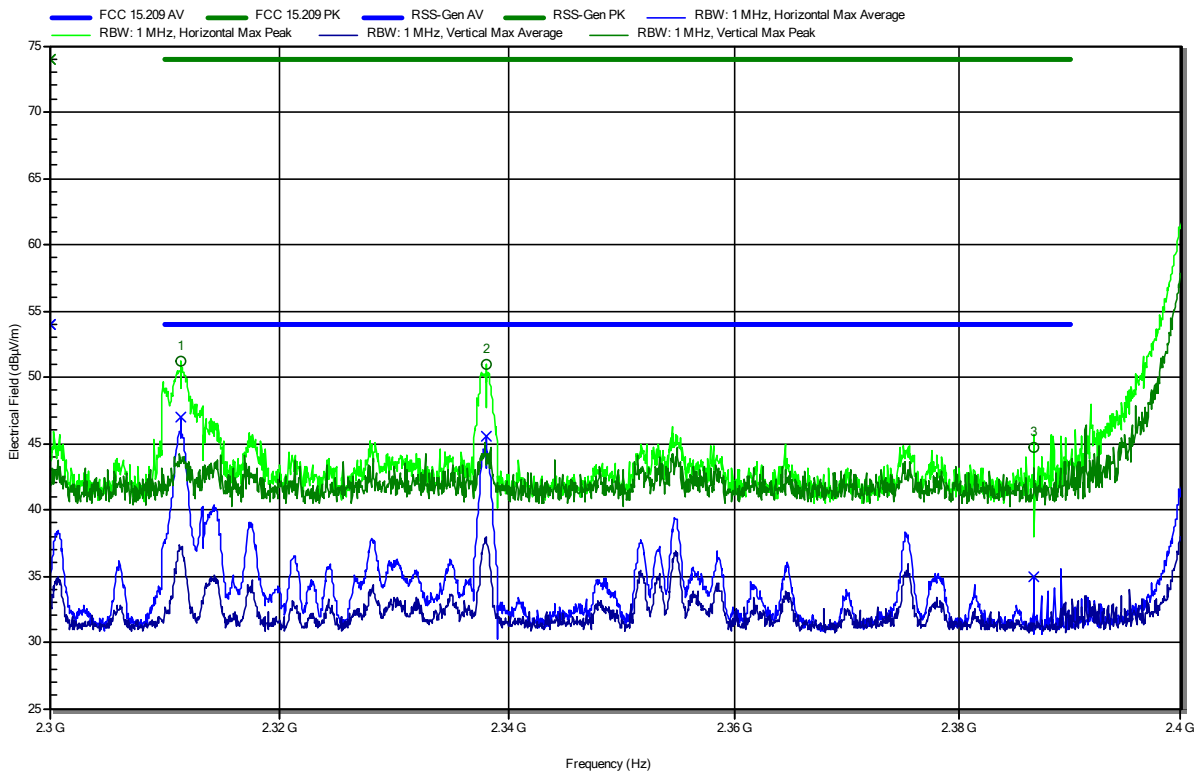
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.2739 GHz	46.27 dBµV/m	54 dBµV/m	-7.73 dB	Pass	Horizontal
2.4926 GHz	51.89 dBµV/m	54 dBµV/m	-2.11 dB	Pass	Horizontal

### Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Schwarzbeck BBHA 9120D  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.402GHz  
 Test Date: 2021-12-20  
 Note: EUT vertical  
 Marker 1 : at 195cm height

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**RadiMation**



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.3113 GHz	51.19 dBµV/m	74 dBµV/m	-22.81 dB	Pass	Horizontal
2.3381 GHz	50.9 dBµV/m	74 dBµV/m	-23.1 dB	Pass	Horizontal
2.3868 GHz	44.68 dBµV/m	74 dBµV/m	-29.32 dB	Pass	Horizontal

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.3113 GHz	47.05 dBµV/m	54 dBµV/m	-6.95 dB	Pass	Horizontal
2.3381 GHz	45.53 dBµV/m	54 dBµV/m	-8.47 dB	Pass	Horizontal
2.3868 GHz	34.93 dBµV/m	54 dBµV/m	-19.07 dB	Pass	Horizontal

Test Report No.: G0M-2106-9856-TFC247BL\_AP200S-V02

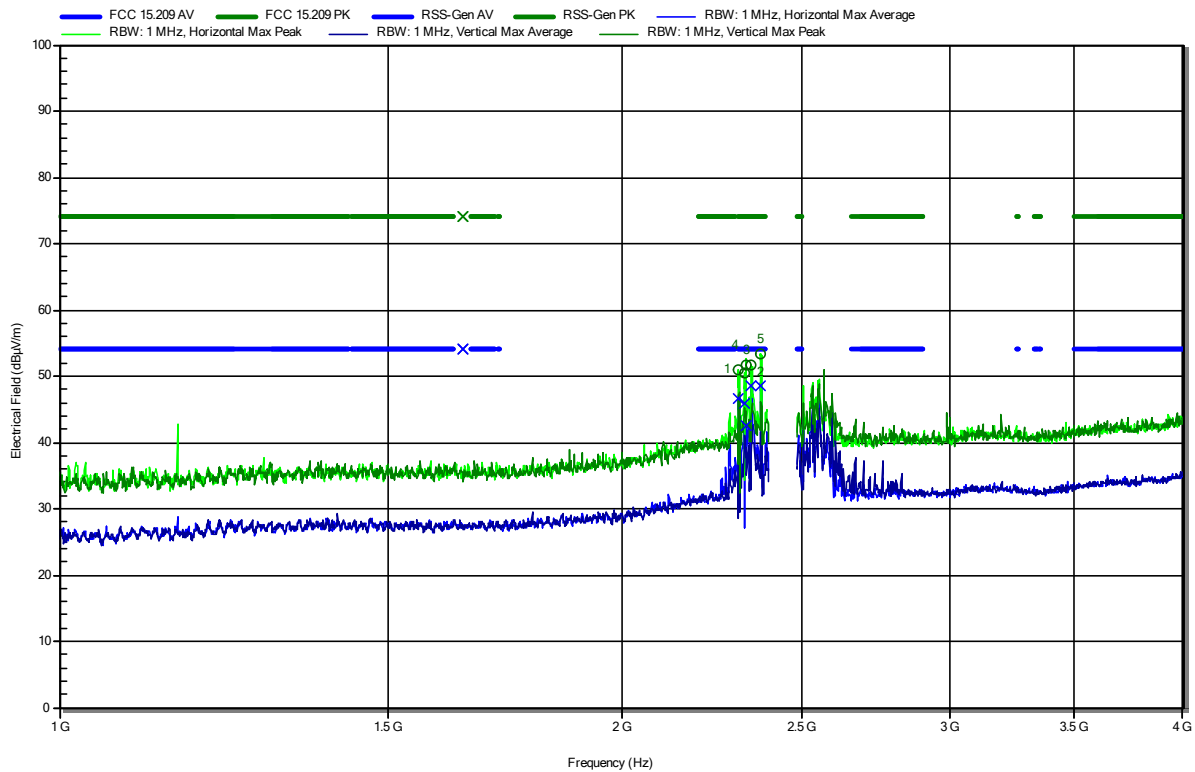
Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

### Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Schwarzbeck BBHA 9120D  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.44GHz  
 Test Date: 2021-12-17  
 Note: EUT vertical

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RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.3121 GHz	50.97 dBµV/m	74 dBµV/m	-23.03 dB	Pass	Horizontal
2.3291 GHz	50.52 dBµV/m	74 dBµV/m	-23.48 dB	Pass	Horizontal
2.3318 GHz	51.77 dBµV/m	74 dBµV/m	-22.23 dB	Pass	Horizontal
2.3494 GHz	51.57 dBµV/m	74 dBµV/m	-22.43 dB	Pass	Horizontal
2.3762 GHz	53.44 dBµV/m	74 dBµV/m	-20.56 dB	Pass	Horizontal

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.3121 GHz	46.61 dBµV/m	54 dBµV/m	-7.39 dB	Pass	Horizontal
2.3291 GHz	45.87 dBµV/m	54 dBµV/m	-8.13 dB	Pass	Horizontal
2.3318 GHz	42.48 dBµV/m	54 dBµV/m	-11.52 dB	Pass	Horizontal
2.3494 GHz	48.46 dBµV/m	54 dBµV/m	-5.54 dB	Pass	Horizontal
2.3762 GHz	48.65 dBµV/m	54 dBµV/m	-5.35 dB	Pass	Horizontal

Test Report No.: G0M-2106-9856-TFC247BL\_AP200S-V02

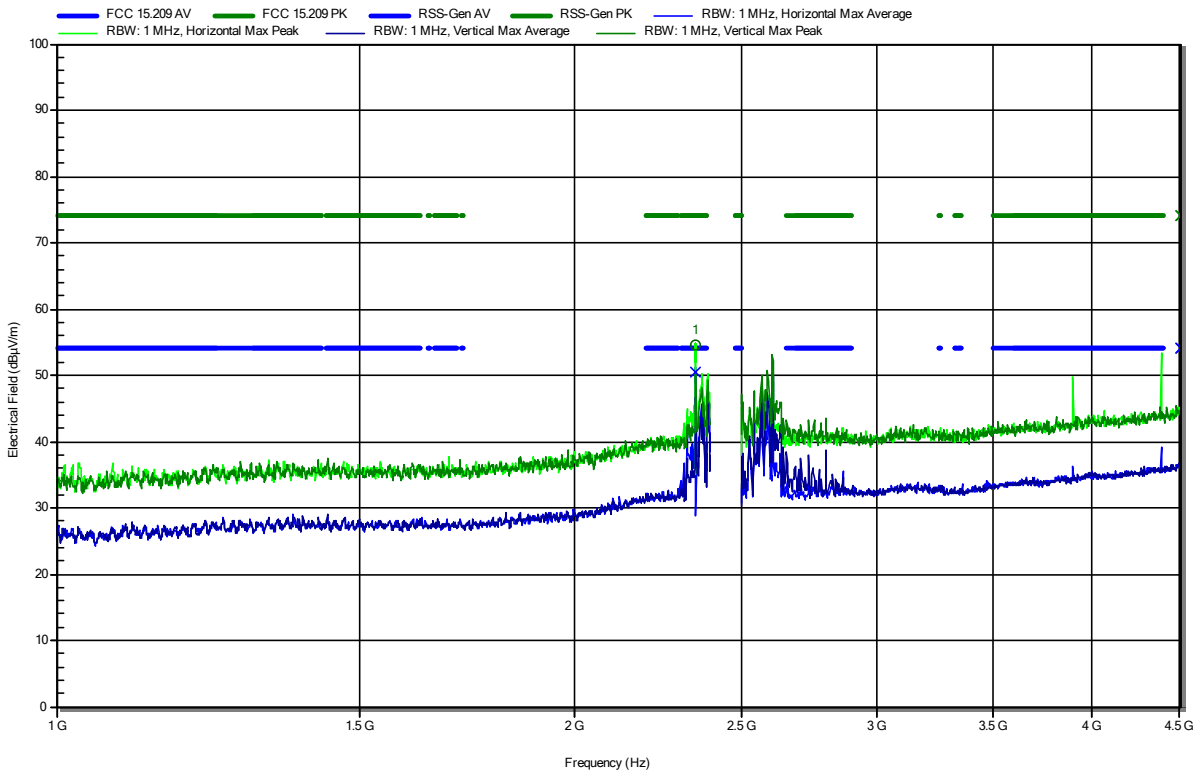
Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

**Radiated Spurious Emissions according to 47 CFR Part 15.247**

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Schwarzbeck BBHA 9120D  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.48GHz  
 Test Date: 2021-12-17  
 Note: EUT vertical

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**RadiMation**



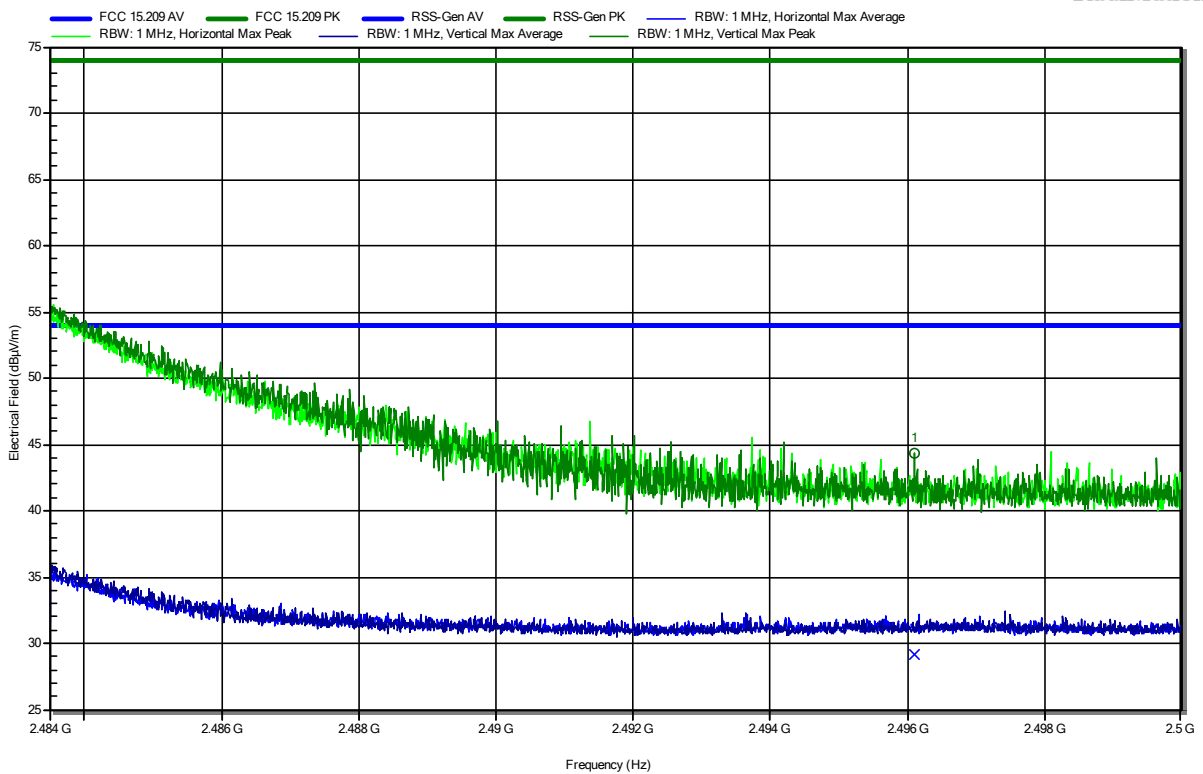
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.352 GHz	54.64 dBµV/m	74 dBµV/m	-19.36 dB	Pass	Horizontal
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.352 GHz	50.59 dBµV/m	54 dBµV/m	-3.41 dB	Pass	Horizontal

### Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Schwarzbeck BBHA 9120D  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.48GHz  
 Test Date: 2021-12-20  
 Note: EUT vertical

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**RadiMation**



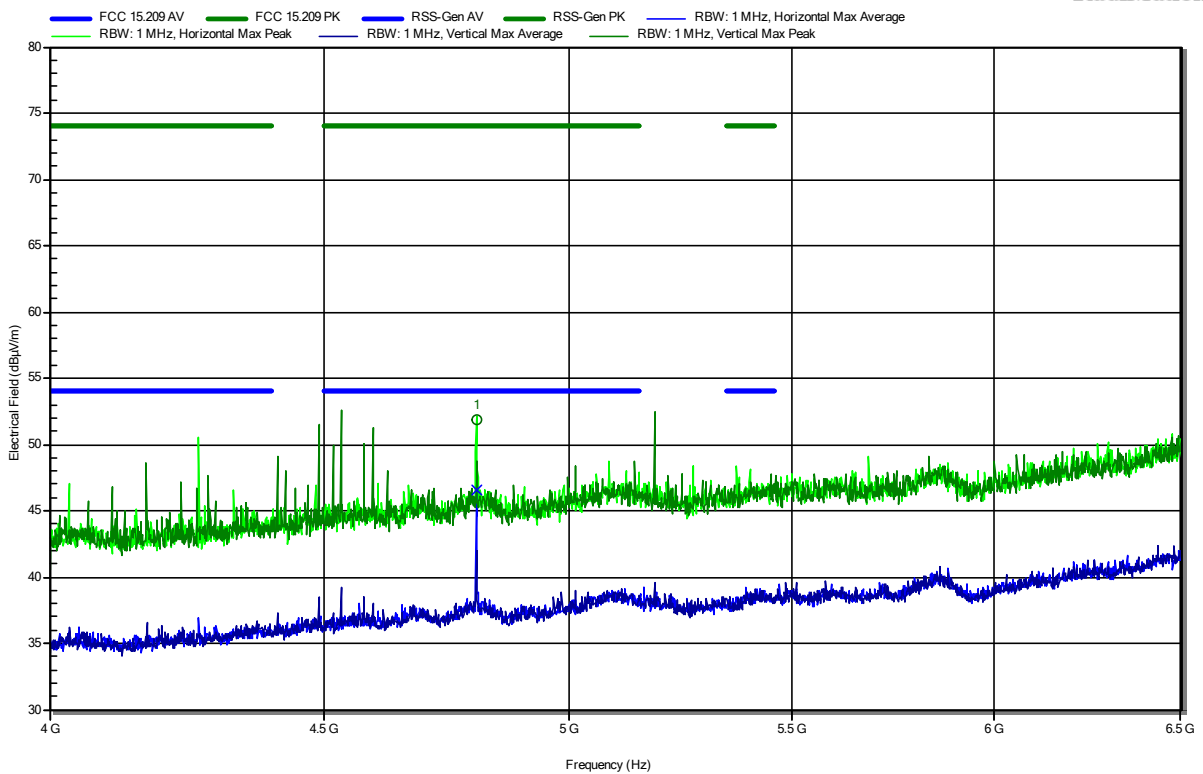
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.4961 GHz	44.34 dBµV/m	74 dBµV/m	-29.66 dB	Pass	Vertical
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.4961 GHz	29.2 dBµV/m	54 dBµV/m	-24.8 dB	Pass	Vertical

**Radiated Spurious Emissions according to 47 CFR Part 15.247**

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Qawasmeh  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Schwarzbeck BBHA 9120D  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.402GHz  
 Test Date: 2021-12-17  
 Note: EUT vertical

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**RadiMation**



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
4.8042 GHz	51.88 dBµV/m	74 dBµV/m	-22.12 dB	Pass	Horizontal
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
4.8042 GHz	46.53 dBµV/m	54 dBµV/m	-7.47 dB	Pass	Horizontal

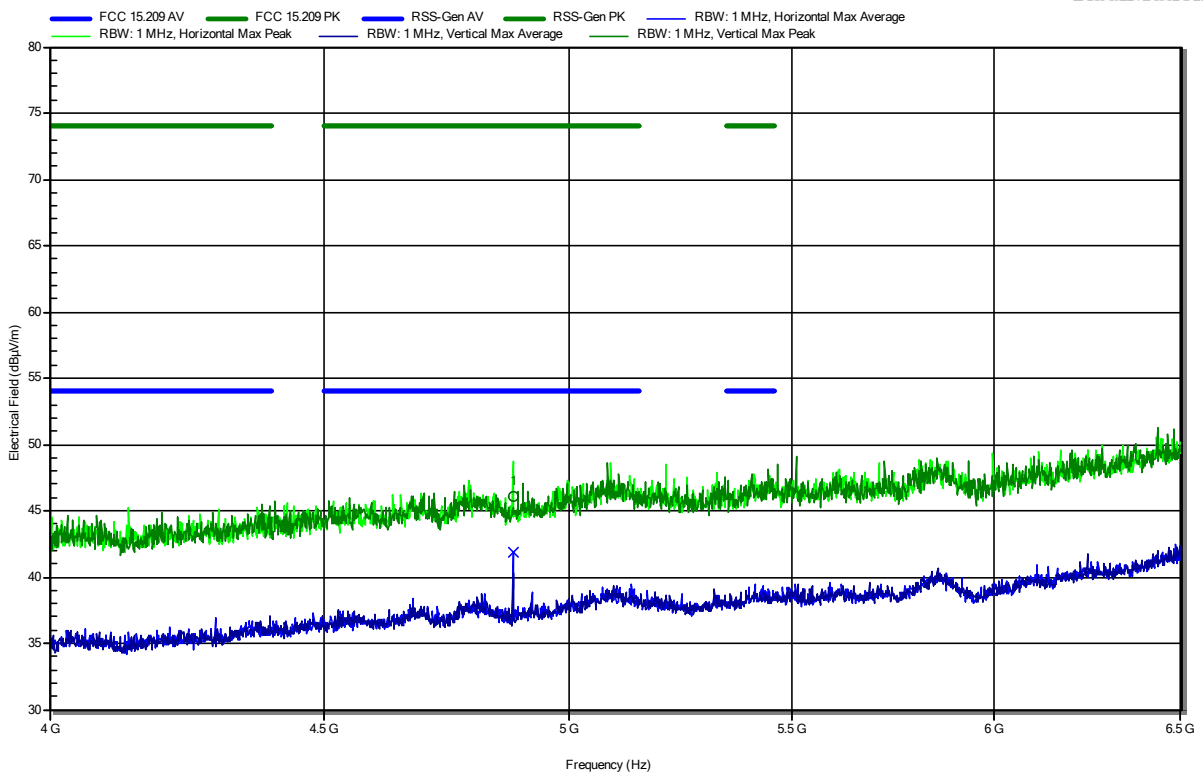


**Radiated Spurious Emissions according to 47 CFR Part 15.247**

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Qawasmeh  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Schwarzbeck BBHA 9120D  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.44GHz  
 Test Date: 2021-12-17  
 Note: EUT vertical

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**RadiMation**



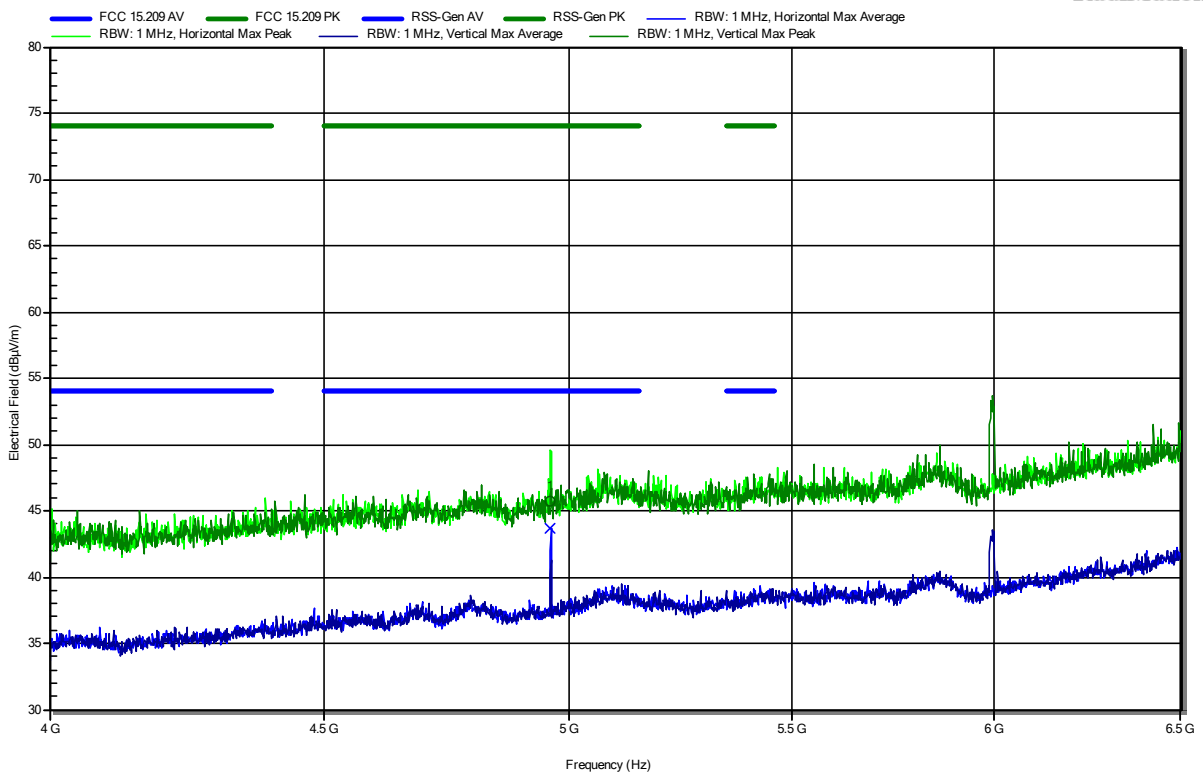
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
4.8796 GHz	46.14 dBµV/m	74 dBµV/m	-27.86 dB	Pass	Horizontal
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
4.8796 GHz	41.9 dBµV/m	54 dBµV/m	-12.1 dB	Pass	Horizontal

**Radiated Spurious Emissions according to 47 CFR Part 15.247**

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Qawasmeh  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Schwarzbeck BBHA 9120D  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.48GHz  
 Test Date: 2021-12-17  
 Note: EUT vertical

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**RadiMation**



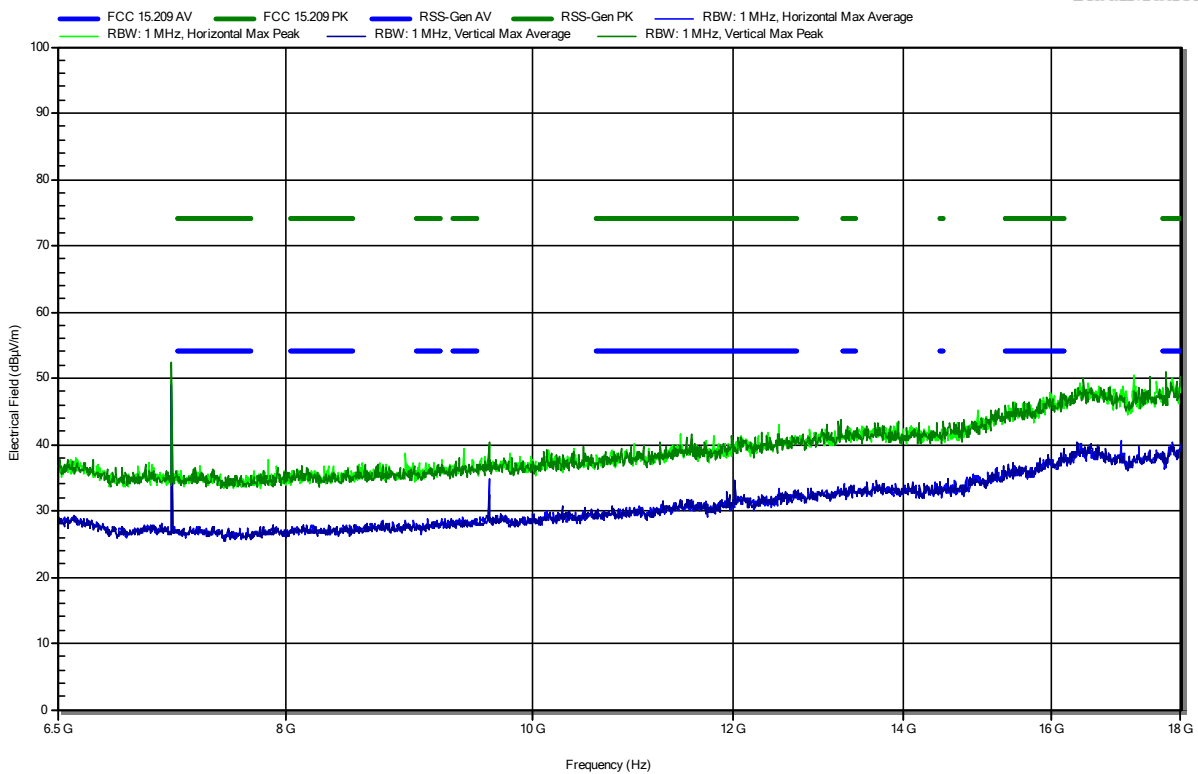
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
4.9598 GHz	45.73 dBµV/m	74 dBµV/m	-28.27 dB	Pass	Horizontal
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
4.9598 GHz	43.63 dBµV/m	54 dBµV/m	-10.37 dB	Pass	Horizontal

### Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Qawasmeh  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Schwarzbeck HWRD 650  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.402GHz  
 Test Date: 2021-12-17  
 Note: EUT vertical

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**RadiMation**

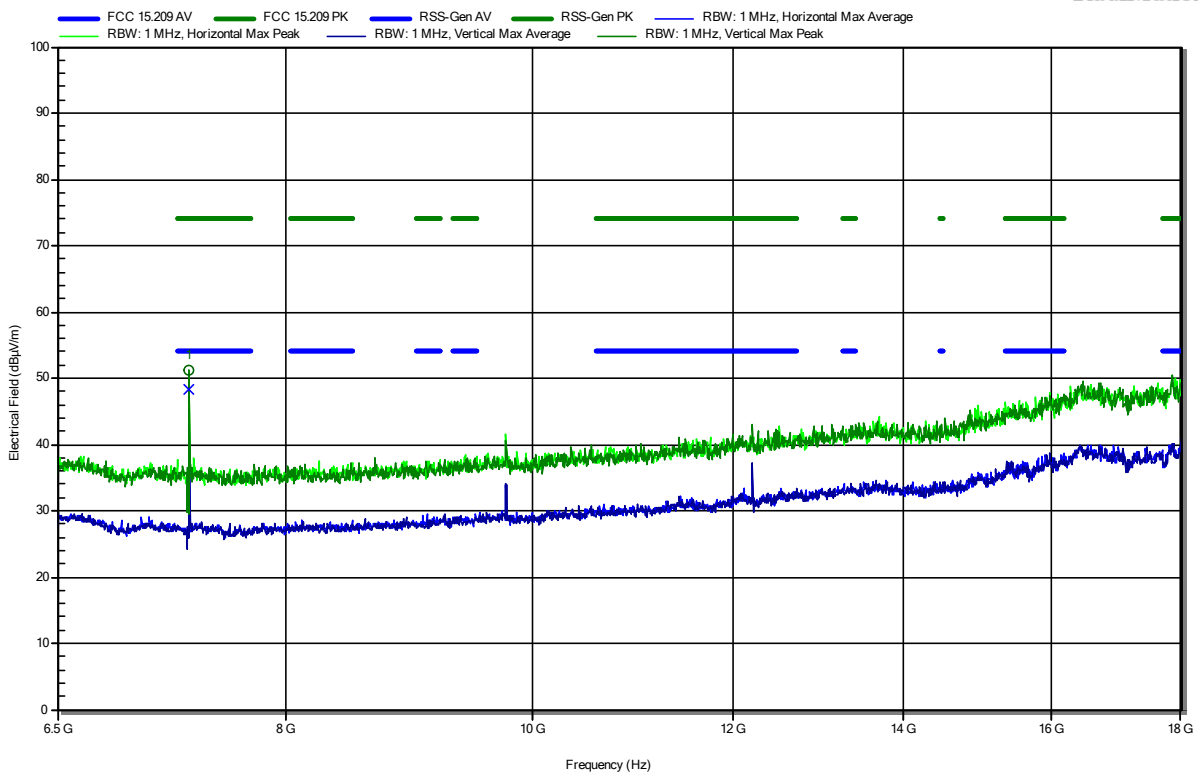


**Radiated Spurious Emissions according to 47 CFR Part 15.247**

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Qawasmeh  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Schwarzbeck HWRD 650  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.44GHz  
 Test Date: 2021-12-17  
 Note: EUT vertical

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**RadiMation**



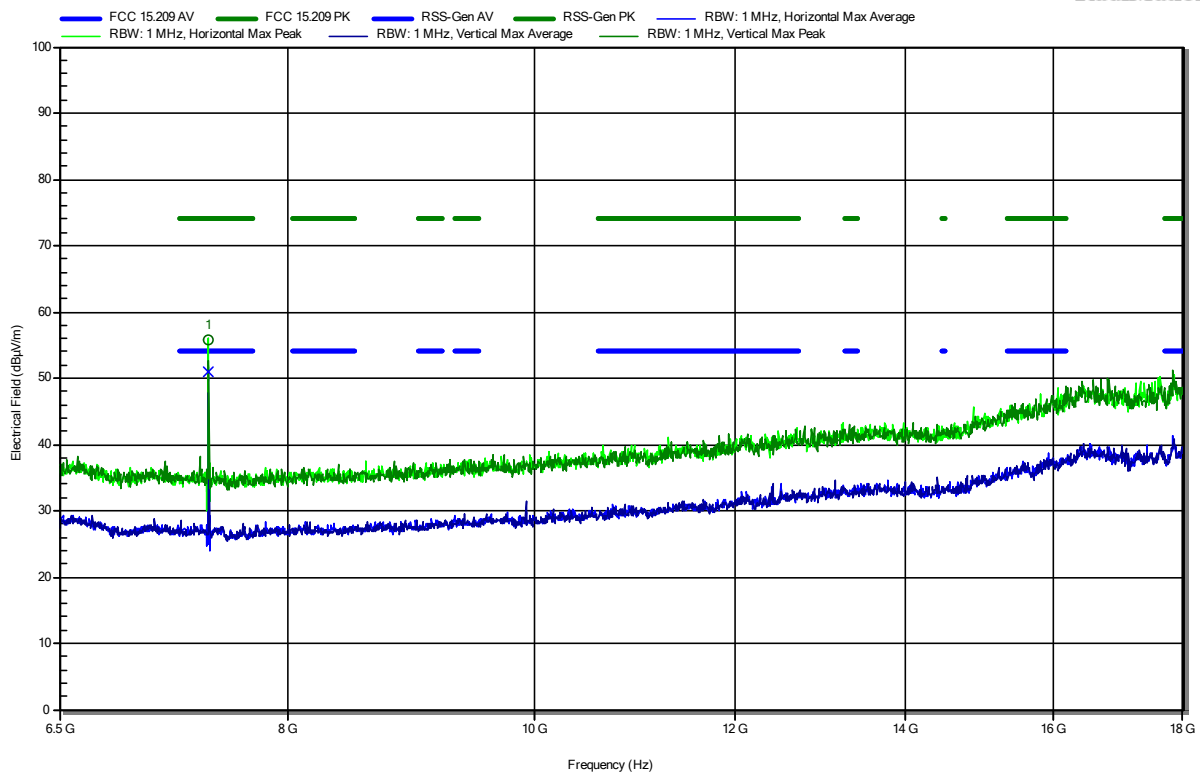
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
7.319 GHz	51.13 dBµV/m	74 dBµV/m	-22.87 dB	Pass	Vertical
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
7.319 GHz	48.21 dBµV/m	54 dBµV/m	-5.79 dB	Pass	Vertical

**Radiated Spurious Emissions according to 47 CFR Part 15.247**

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Qawasmeh  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Schwarzbeck HWRD 650  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.48GHz  
 Test Date: 2021-12-17  
 Note: EUT vertical

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**RadiMation**



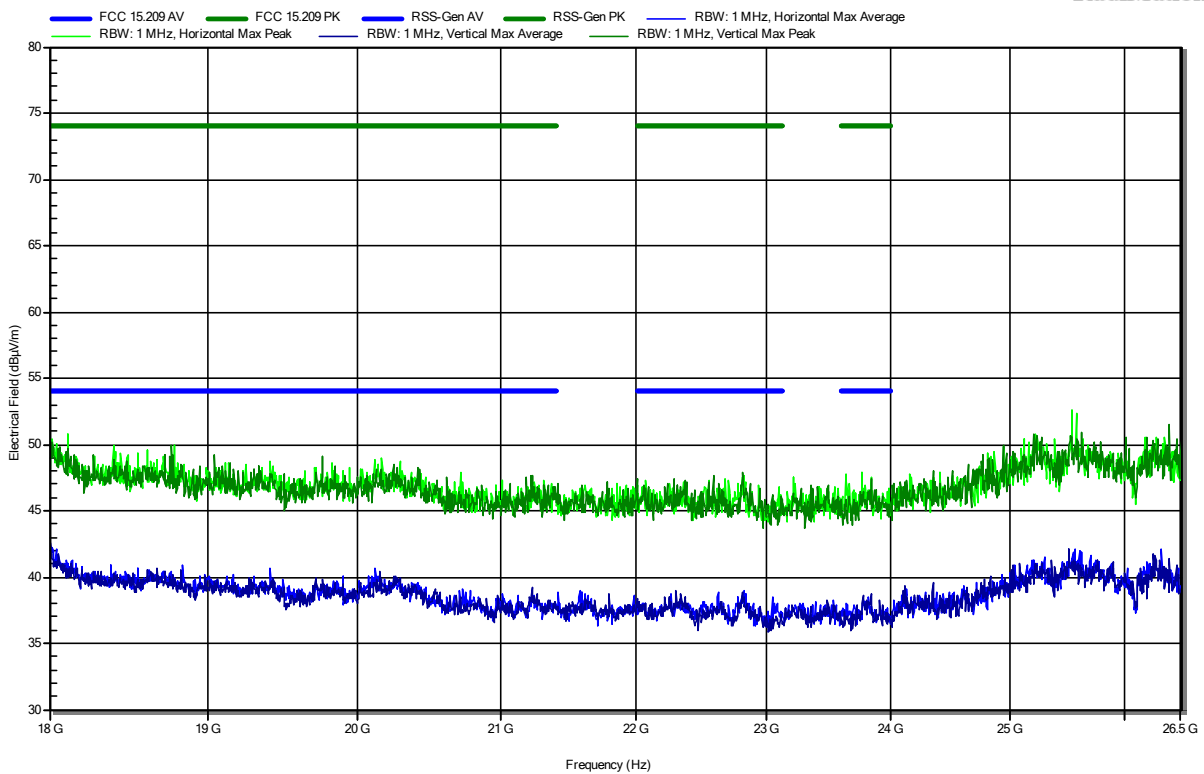
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
7.439 GHz	55.73 dBµV/m	74 dBµV/m	-18.27 dB	Pass	Horizontal
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
7.439 GHz	51.04 dBµV/m	54 dBµV/m	-2.96 dB	Pass	Horizontal

### Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Qawasmeh  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Amplifier Research AT4560  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.402GHz  
 Test Date: 2021-12-17  
 Note: EUT vertical

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**RadiMation**

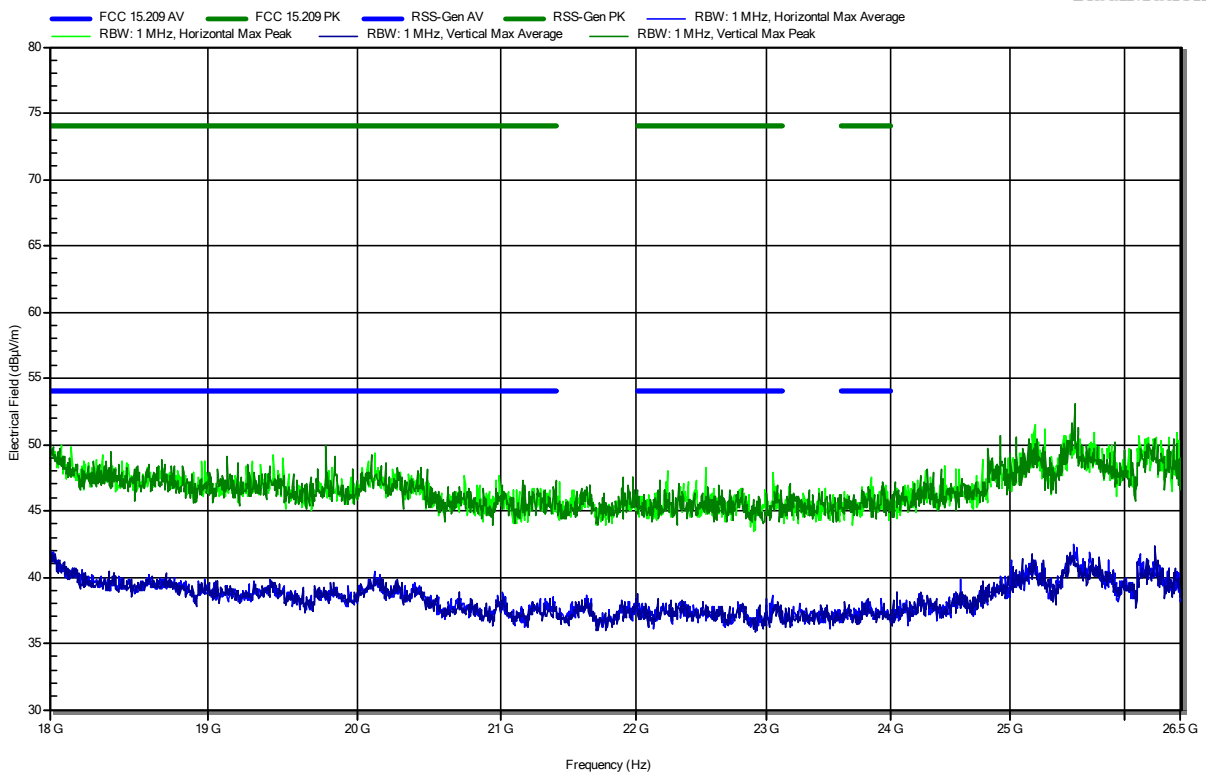


### Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Qawasmeh  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Amplifier Research AT4560  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.44GHz  
 Test Date: 2021-12-17  
 Note: EUT vertical

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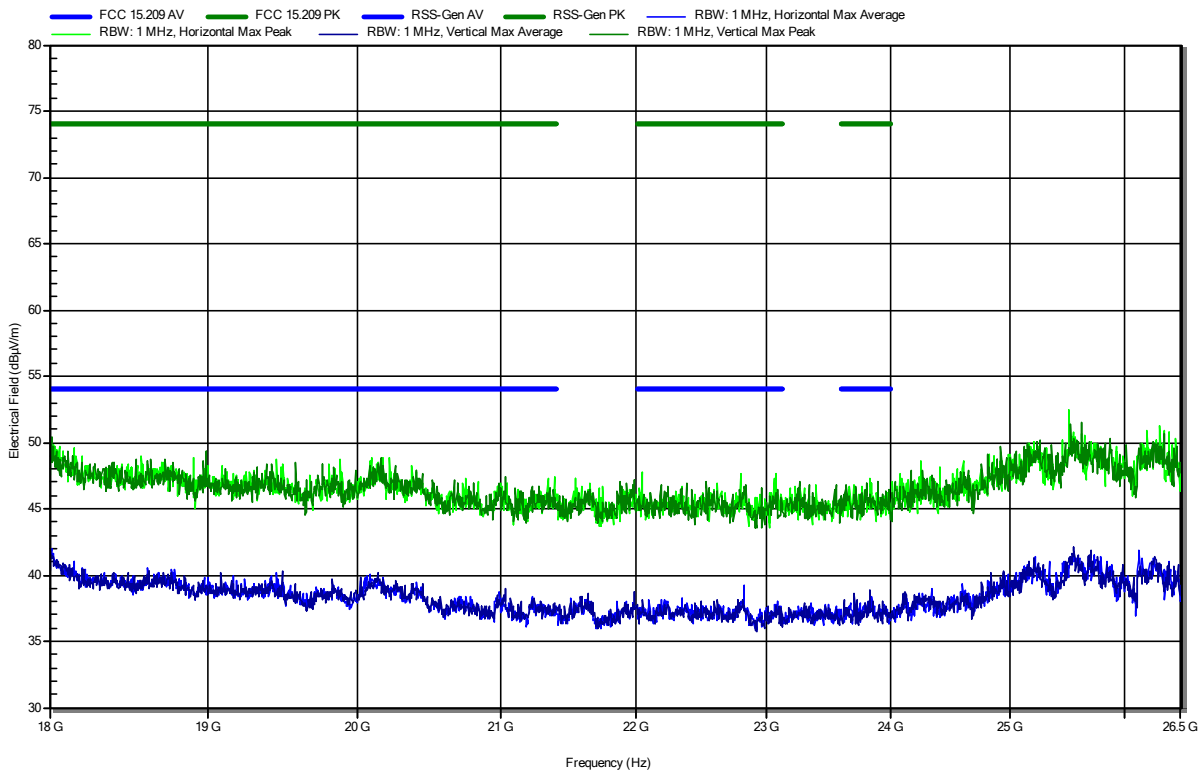
**RadiMation**



### Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Qawasmeh  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Amplifier Research AT4560  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE 2.48GHz  
 Test Date: 2021-12-17  
 Note: EUT vertical

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**RadiMation**





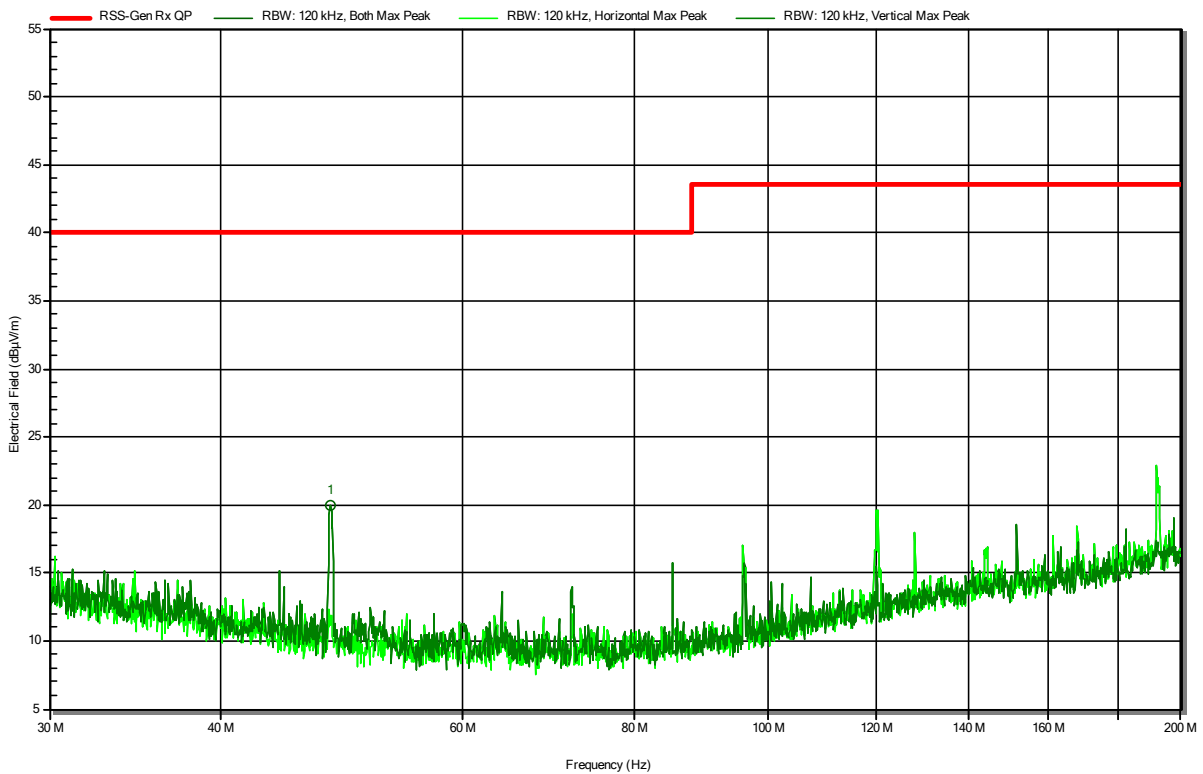
## ANNEX B Receiver spurious emissions

### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-Gen Issue 5

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Rohde & Schwarz HK 116  
 Measurement distance: 3 m  
 Mode: Rx; BT-LE 2.44GHz Receive  
 Test Date: 2021-12-20  
 Note: EUT vertical

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**RadiMation**

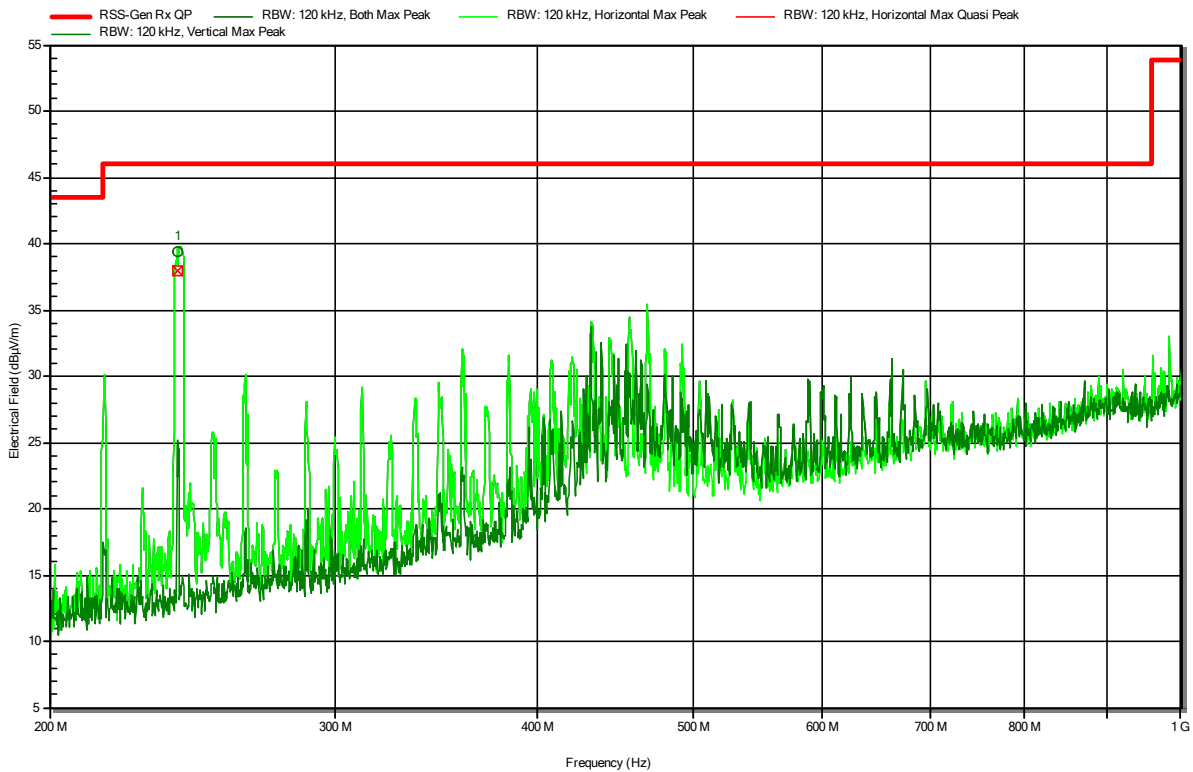


Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
48.054 MHz	20 dBµV/m	40 dBµV/m	-19.99 dB	Pass	Vertical

### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-Gen Issue 5

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Rohde & Schwarz HL 223  
 Measurement distance: 3 m  
 Mode: Rx; BT-LE 2.44GHz Receive  
 Test Date: 2021-12-20  
 Note: EUT vertical

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**RadiMation**



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
240.16 MHz	39.4 dBµV/m	46 dBµV/m	-6.63 dB	Pass	Horizontal

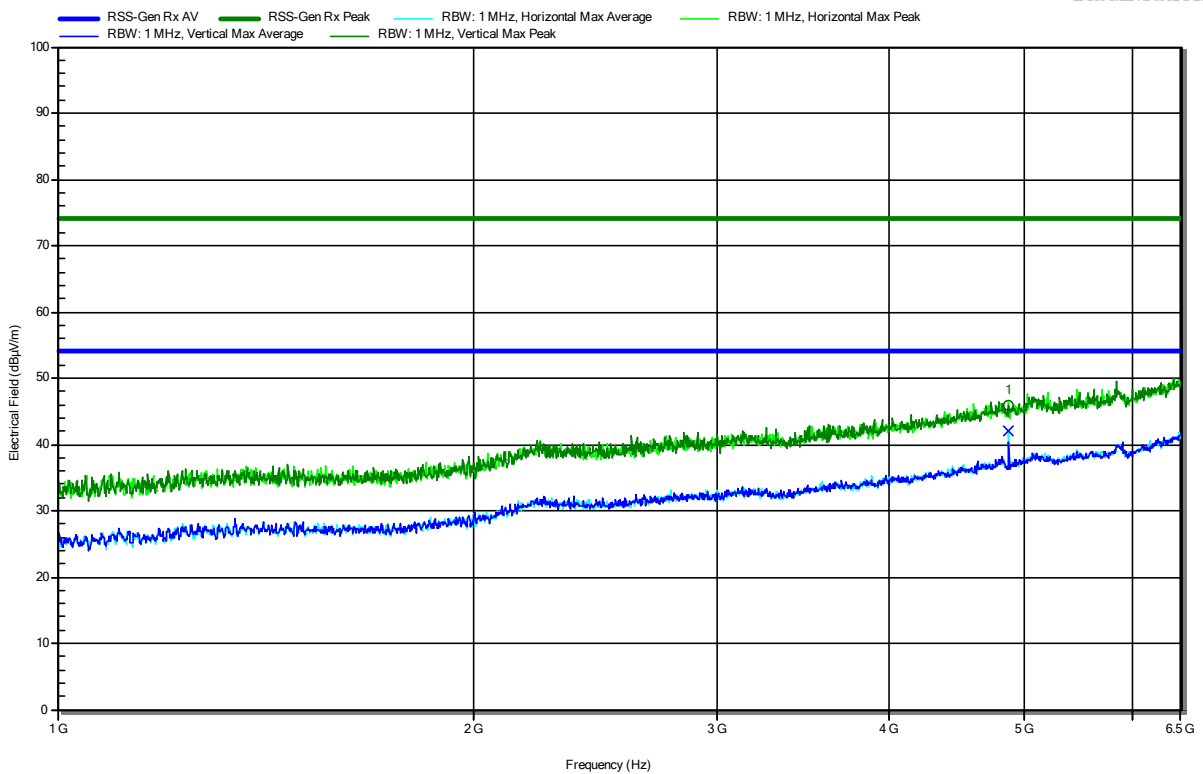
Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Polarization
240.16 MHz	38 dBµV/m	46 dBµV/m	-8.02 dB	Pass	Horizontal

**Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-Gen Issue 5**

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Qawasmeh  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Schwarzbeck BBHA 9120D  
 Measurement distance: 3 m  
 Mode: Rx; BT-LE 2.44GHz Receive  
 Test Date: 2021-12-17  
 Note: EUT vertical

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**RadiMation**



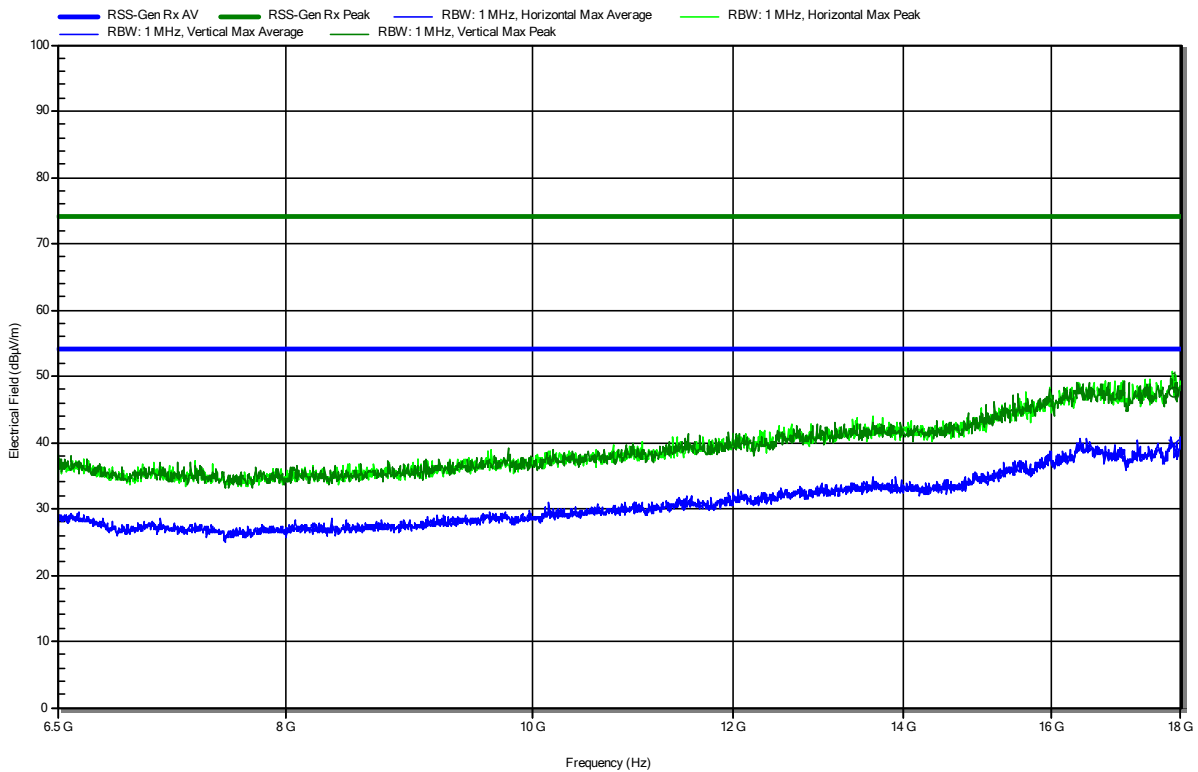
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
4.878 GHz	45.85 dBµV/m	74 dBµV/m	-28.15 dB	Pass	Horizontal
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
4.878 GHz	42.04 dBµV/m	53.98 dBµV/m	-11.94 dB	Pass	Horizontal

### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-Gen Issue 5

Project Number: G0M-2106-9856  
 Applicant: ANDREAS STIHL AG & Co. KG  
 Model Description: Battery pack 4850 with Bluetooth-Modul  
 Model: AP 200 S  
 Test Sample ID: 37459  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Degenhardt  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 23 °Celsius, Vnom: Charger AL300 (sample-ID:35883)  
 Antenna: Schwarzbeck HWRD 650  
 Measurement distance: 3 m  
 Mode: Rx; BT-LE 2.44GHz Receive  
 Test Date: 2021-12-17  
 Note: EUT vertical

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
17.89 GHz	47.61 dBµV/m	74 dBµV/m	-26.39 dB	Pass	Vertical
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
17.89 GHz	39.56 dBµV/m	53.98 dBµV/m	-14.42 dB	Pass	Vertical

== = END OF TEST REPORT == =

Test Report No.: G0M-2106-9856-TFC247BL\_AP200S-V02

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