

RF Exposure Statement

24-0136RP29-010

Product / EUT: *Spray gun with remote control*
Type designation: *RE04*
Tested type: *RE140 VARIO CONTROL Spraygun*

Intended use: ☐ *Fixed*
☐ *Mobile*
☒ *Portable*

FCC ID: *2ALP8RE04B*

Part number: *RE04-500-1302-A*
Production level: *N/A*
S/N: *N/A*

Manufacturer: *ANDREAS STIHL AG & Co. KG*
Andreas-Stihl-Str. 4
71336 Waiblingen / Germany

Test remit: 47 CFR Part 1 – Subpart I – §1.1307 (b)(3)(i)(A)
KDB 447498 D04 Interim General RF Exposure Guidance v01
1-mW Test Exemption



Applicant: ANDREAS STIHL AG & Co. KG
Andreas-Stihl-Str. 4
71336 Waiblingen / Germany

EUT-
Date of arrival: 05/21/2025
Test ID: 24-0136PR20-016
Date(s) of test: 06/17/2025

Burgrieden, 03/01/2026

Released by:

Principal Engineer - Christian Vogelmann

Test laboratory: EMCE GmbH
Ingenieurbüro für EMV-Prüfungen und
Schaltungsentwicklung
Untere Wiesen 1 / 88483 Burgrieden / Germany



Scope:

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1 General information

Project manager: M.Sc. S. Vogelmann
Inspector: M.Sc. S. Vogelmann

EMCE GmbH
Ingenieurbüro für EMV-Prüfungen und Schaltungsentwicklung

Contact person: Mr. Grohmann / ANDREAS STIHL AG & Ko. KG

Remarks: N/A

State of revision:

Source document	New Document	Date / Reviser	Modifications

2 EUT information

Sampling:	The device was selected and provided by the customer.
Description:	<i>The EUT is a spray gun with an RF interface for regulating the water pressure of a connected high-pressure cleaner, serving as the companion device.</i>
Voltage supply:	<i>Internal battery, 2x 1.5 V</i>
Frequency list:	<i>N/A</i>
RF Power settings EUT:	<i>9 dBm</i>
Max. clock frequency:	<i>< 1 GHz</i>
Temperature range:	<i>0 °C – 60 °C</i>
Dimension (mm):	<i>460 x 200 x 50 (LxWxH)</i>

RF Applications:

Application	Frequency range	Architecture for application
Regulation of the water pressure.	Lowest channel: 915.4 MHz Highest channel: 917.8 MHz	☐ Receiver ☐ Transmitter ☒ Transceiver ☐ Tagging system (RFID)

Used antennas:

Antenna designation	Manufacturer	Connector / cable length	Gain (dBi) @ f / GHz
<i>Integral antenna</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>

Used band filter:

Filter designation	Filter type	Manufacturer	Connector
<i>N/A</i>			



Supplied /
used equipment:

Designation	Type	Manufacturer	S/N
Main PCB of a high-pressure cleaner	RE 140.0 PLUS	STIHL	N/A
Adjustable nozzle	RE04-530-0710-A	STIHL	N/A
Spray gun	RE04 A, PA66-GF40	STIHL	N/A
2x Battery	PC2400	Procell Constant	

Configuration: ☒ As-delivered condition
☐ Modified
* _____

Cable designation	Type	Length	Remarks
Trigger cable	4-core	0.20 m	Internal cable

Software designation	Type	Manufacturer	Version
N/A			



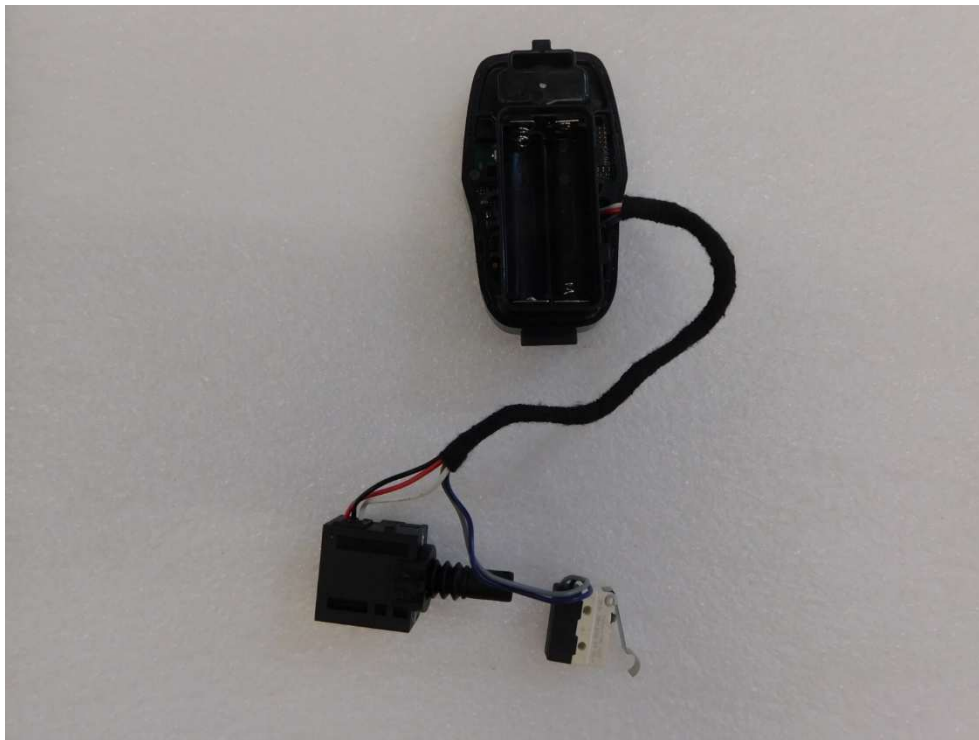
Pictures of the EUT







Pictures of the RF-Module



3 RF exposure assessment

Measurement procedure:

Rules and specification

47 CFR Part 1 Section 1307

KDB 447498 D04 Interim General RF Exposure Guidance v01

According to FCC §1.1307(b), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

1-mW Test Exemption		
☒	Single RF source	Per §1.1307(b)(3)(i)(A), a single RF source is exempt RF device (from the requirement to show data demonstrating compliance to RF exposure limits, as previously mentioned) if the available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption applies to all operating configurations and exposure conditions, for the frequency range 100 kHz to 100 GHz, regardless of fixed, mobile, or portable device exposure conditions. This is a standalone exemption, and it cannot be applied in conjunction with any other test exemption.
☐	Multiple RF sources with separation distance greater than or equal to 2 cm	As discussed in §1.1307(b)(3)(ii)(A), the 1-mW exemption intended for single transmitters may be also applied to simultaneous transmission conditions, within the same host device, when the nearest parts of the antenna structures of the simultaneously operating transmitters are separated by at least 2 cm and the maximum available power each individual transmitting antenna within the same time averaging period is ≤ 1 mW. This exemption may not be combined with any other exemption.
☐	Multiple RF sources with separation distance less than 2 cm	As discussed in §1.1307(b)(3)(ii)(A), the 1-mW exemption intended for single transmitters may be also applied to simultaneous transmission conditions, within the same host device, when the nearest parts of the antenna structures of the simultaneously operating transmitters are separated by less than 2 cm and the aggregate maximum available power of all transmitting antennas is ≤ 1 mW in the same time-averaging period. This exemption may not be combined with any other exemption.



Test Result

The result is based on maximum EIRP measured at a duty cycle of less than 1 % documented in the test report 24-0136RP29-009.

Nominal center frequency @915.4 MHz @3 m for DC <1 % (ton 1.102 ms / toff 169.398 ms)
Averaged field strength E = 46.11 dBµV/m

Nominal center frequency @917.8 MHz @3 m for DC <1 % (ton 1.102 ms / toff 169.398 ms)
Averaged field strength E = 45.88 dBµV/m

The EIRP/ERP is calculated according ANSI C63.10:2020:

$$\text{EIRP} = E_{Meas} + 20\log d_{Meas} - 104.7$$
$$\text{ERP} = \text{EIRP} - 2.15 \text{ dB}$$

EIRP is the equivalent isotropically radiated power, in dBm
 E_{Meas} is the field strength of the emission at the measurement distance, in dBµV/m
 d_{Meas} is the measurement distance, in m

$$\text{Maximum EIRP} = 46.11 + 9.54 - 104.7 = -49.05 \text{ dBm}$$
$$\text{Maximum ERP} = -49.05 - 2.15 = -51.20 \text{ dBm}$$

Center Frequency	Average field strength	Maximum ERP		Limit	1-mW Test Exemption
(MHz)	(dBµV/m)	(dBm)	(mW)	(mW)	
917.8	46.11	-51.20	0.00001	1	Fulfilled

Test result

Limits for SAR exemption:

- ☒ Met
- ☐ Not met
- ☐ Not relevant



4 Summary

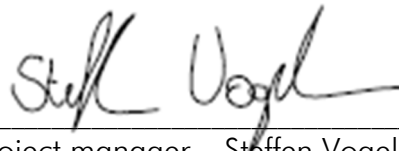
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Requirement	Regulation section	Limits	Result	Remarks
1-mW Test Exemption	§ 1.1307 (b)(3)(i)(A)	1 mW	Pass	N/A

Burgrieden, 03/01/2026

Responsible inspector:



Project manager – Steffen Vogelmann

- End of Test Report -