

Test Report

No. 1-1311-25-01-03_TR1-R02

March 11. 2026

Applicant	ANDREAS STIHL AG & Co. KG
Product	Akku
Model	AP 300.0 P
Tested Technology	Bluetooth LE
Test Standard	FCC 47 CFR Part 2
Verdict	TEST EXEMPTION FULFILLED
The test results apply only to the equipment specified in this document.	

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1. Document history

1.1. Current release

Release No.: R02
Date of release: March 11. 2026
Applied changes: added minimum safety distance descriptor of 5 mm

1.2. Previous releases

Version	Applied change	Date of release
1	Initial release	Mar 11. 2026

2. Disclaimer

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The current version of test report R02 replaces the test report R01 dated March 11. 2026. The replaced test report is herewith invalid.

3. Test laboratory

3.1. Contact information

cetecom advanced GmbH
Untertuerkheimer Str. 6-10
66117 Saarbruecken
Germany

3.2. Involved test locations

Saarbrücken Lab

Untertürkheimer Strasse 6 – 10
66117 Saarbrücken
Germany

3.3. Subcontracted laboratories

None.

3.4. Laboratory listings and recognitions

	Saarbrücken	Essen
FCC	DE0002	DE0003
ISED	DE0001 3462C	DE0001 3462D

4. Measurement details

4.1. Test methodology

The testing laboratory (area of testing) is accredited according to DIN EN ISO/IEC 17025 (2018-03) by the Deutsche Akkreditierungsstelle GmbH (DAkkS).

The accreditation is valid for the scope of testing procedures as stated in the accreditation certificate with the registration number D-PL-12047-01-00.

Test method, standard, rule	Description
FCC 47 CFR Part 2	Federal Communications Commission, 47 code of federal regulations, Part 2: General Rules & Regulations for Equipment Authorisation

5. Test sample information

The data about the test samples is given/supplied by the customer and not under control by cetecom advanced GmbH.

5.1. General Information

5.1.1. General Data of Main EUT as Declared by Applicant

FCC ID

2ALP8AP4

6. Client information

6.1. Applicant

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6.2. Manufacturer

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7. 1.1 General Information

7.1. Notes and Disclaimer

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7.2. References

Guidance	Version	Description
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47 CFR 1.1307		Actions that may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared.
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47 CFR 2.1091		Radiofrequency radiation exposure evaluation: mobile devices.
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47 CFR 2.1093		Radiofrequency radiation exposure evaluation: portable devices.
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7.3. General RF Exposure Test Exemptions

KDB 447498 D04 Interim General RF Exposure Guidance v01, section 2.1.1:

RF exposure test exemptions provide means to obtain certification without the need of showing data (measurements, or analytical/numerical modeling) to demonstrate compliance. Hereafter, in this context, an RF source is referred to as “exempt RF device” in the sense that it is not required to show data demonstrating compliance to RF exposure limits.

Test exemptions apply for devices used in general population/uncontrolled exposure environments, according to the SAR-based, or MPE-based exemption thresholds. However, it is always possible, especially when the potential for exposure cannot be easily determined, that an RF exposure evaluation may become required according §§ 1.1307(c) and (d).

As detailed in Section 3.1 (see KDB 447498 D04, Section 2.1.2), the 1-mW and SAR-based test exemption conditions are in terms of source-based available maximum time-averaged (matched conducted) output power for all operating configurations, adjusted for tune-up tolerance, and at the minimum test separation distance required for the particular RF exposure scenario under consideration. This minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander. To qualify for SAR test exemption, the test separation distances applied must be fully explained and justified (typically in the SAR measurement, or SAR analysis report, according to KDB Pub. 865664) by showing the actual operating configurations and exposure conditions of the transmitter, and applicable host platform requirements (e.g., KDB Pubs. 648474, 616217, 941225)

When no other RF exposure testing or reporting is required, a statement of justification and compliance must be included in the equipment approval, in lieu of the SAR report, to qualify for SAR test exemption.

If RF exposure testing requirements for a specific device are covered in a KDB publication, those requirements must be satisfied before applying any SAR test exemption provisions. For example, this is the case for handheld PTT two-way radios, handsets, laptops, and tablets, etc. Finally, when 10-g extremity SAR applies, SAR test exemption may be considered by applying a factor of 2.5 to the SAR-based exemption thresholds.

KDB 447498 D04 Interim General RF Exposure Guidance v01, Appendix A:

Frequency-dependent and distance-dependent power thresholds were adopted in Report and Order FCC 19-126. Appendix D of NPRM FCC 13-39 has the derivation of the frequency- dependent and distance-dependent time-averaged power thresholds, below which single portable RF sources operating in the frequency range of 300 MHz (0.3 GHz) to 6 GHz may be exempt from RF evaluation.

The previous power exclusion thresholds for mobile devices in § 2.1091(c) were 1.5 W ERP for transmitters operating at frequencies at or below 1.5 GHz, and 3 W ERP for transmitters operating at frequencies above 1.5 GHz. The new exemption criteria are similar to the previous power exclusion thresholds above 1.5 GHz between 20 cm and 40 cm but consider the potential for whole body resonance at frequencies below 1.5 GHz. The new exemption criteria are less restrictive than the previous power exclusion thresholds between 0.8 GHz and 1.5 GHz, and additionally support extension of these exclusion thresholds down to 0.3 GHz. The new exemption criteria can be used out to a separation distance of 40 cm for mobile and fixed RF sources operating between 300 MHz and 6 GHz. At 40 cm, the MPE-based exemption criteria and the SAR-based exemption criteria are equal.

Generally, the sequence to apply for single portable RF sources includes the following steps: Generally, the sequence to apply for single portable RF sources includes the following steps:

determination of 1 mW blanket exemption under § 1.1307(b)(3)(i)(A)

determination of exemption under the MPE-based § 1.1307(b)(3)(i)(C) if 1) is not met

determination of exemption under the SAR-based § 1.1307(b)(3)(i)(B) if both 1) and 2) are not met.

8. Simultaneous Transmission

8.1. KDB 447498 D04 Interim General RF Exposure Guidance v01, section 2.2.1:

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, according one of the following criteria:

When maximum available power each individual transmitting antenna within the same time averaging period is ≤ 1 mW, and the nearest parts of the antenna structures of the simultaneously operating transmitters are separated by at least 2 cm.

When 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.

KDB 447498 D04 Interim General RF Exposure Guidance v01, section 2.1.2:

This case is described in detail in § 1.1307(b)(3)(ii)(B) and covers the situations where both SAR-based and MPE-based exemption may be considered for test exemption in fixed, mobile, or portable device exposure conditions. For these cases, a device with multiple RF sources transmitting simultaneously will be considered an RF exempt device if the condition of Formula (4) (see section 7.1) is satisfied.

For these test exemptions to apply, the maximum output power, duty factor, and other applicable parameters used in the standalone ERP determination tests, must be the same, or corresponding to a more conservative choice, than those required for simultaneous transmission.

The power level of the standalone SAR used to qualify for SAR test exemption, or additional test exemption, must be clearly explained in the SAR report. When simultaneous transmission SAR- based test exemptions, or when the SPLSR test exemption cannot be applied, enlarged zoom scan SAR measurements must be performed at the maximum output power required for the applicable simultaneous transmission scenarios. This power level shall account for the tune-up tolerance requirements of all transmitters, but not more than

2 dB lower than the maximum tune-up tolerance limit.

KDB 447498 D04 Interim General RF Exposure Guidance v01, Appendix C.:

Either SAR-based or MPE-based exemption may be considered for test exemption for fixed, mobile, or portable device exposure conditions; therefore, the contributions from each exemption in conjunction with the measured SAR (Evaluated_k term) shall be used to determine exemption for simultaneous transmission according to Formula 4 [repeated from § 1.1307(b)(3)(ii)(B)].

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated}{Exposure Limit_k} \leq 1 \quad (4)$$

where:

- | | |
|---|---|
| a | number of fixed, mobile, or portable RF sources claiming exemption using the § 1.1307(b)(3)(i)(B) formula for P _{th} , including existing exempt transmitters and those being added. |
| b | number of fixed, mobile, or portable RF sources claiming exemption using the applicable § 1.1307(b)(3)(i)(C) Table 1 formula for Threshold ERP, including existing exempt transmitters and those being added. |

c	number of existing fixed, mobile, or portable RF sources with known evaluation for the specified minimum distance.
P_i	the available maximum time-averaged power or the ERP, whichever is greater, for fixed, mobile, or portable RF source i at a distance between 0.5 cm and 40 cm (inclusive).
$P_{th,i}$	the exemption threshold power (P_{th}) according to the § 1.1307(b)(3)(i)(B) formula for fixed, mobile, or portable RF source i.
ERP_j	the available maximum time-averaged power or the ERP, whichever is greater, of fixed, mobile, or portable RF source j.
$ERP_{th,j}$	exemption threshold ERP for fixed, mobile, or portable RF source j, at a distance of at least $\lambda/2\pi$, according to the applicable § 1.1307(b)(3)(i)(C) Table 1 formula at the location in question
Evaluated _j	the maximum reported SAR or MPE of fixed, mobile, or portable RF source k either in the device or at the transmitter site from an existing evaluation.
Exposure Limit _{th,j}	either the general population/uncontrolled maximum permissible exposure (MPE) or specific absorption rate (SAR) limit for each fixed, mobile, or portable sources, as applicable

The sum of the ratios of the applicable terms for SAR-based, MPE-based and measured SAR or MPE shall be less than 1, to determine simultaneous transmission exposure compliance.

8.1.1. Results

8.1.2.

Technology	Share of Limit

9. SAR Based Test Exemption

9.1. KDB 447498 D04 Interim General RF Exposure Guidance v01, section 2.1.3:

A more comprehensive exemption, considering a variable power threshold that depends on both the separation distance and power, is provided in § 1.1307(b)(3)(i)(B). This exemption is applicable to the frequency range between 300 MHz and 6 GHz, with test separation distances between 0.5 cm and 40 cm, and for all RF sources in fixed, mobile, and portable device exposure conditions.

Accordingly, a RF source is considered an RF exempt device if its available maximum time- averaged (matched conducted) power or its effective radiated power (ERP), whichever is greater, are below a specified threshold. This exemption threshold was derived based on general population 1-g SAR requirements.

SAR-based thresholds are derived based on frequency, power, and separation distance of the RF source. The formula defines the thresholds in general for either available maximum time- averaged power or maximum time- averaged ERP, whichever is greater.

If the ERP of a device is not easily determined, such as for a portable device with a small form factor, the applicant may use the available maximum time-averaged power exclusively if the device antenna or radiating structure does not exceed an electrical length of $\lambda/4$.

As for devices with antennas of length greater than $\lambda/4$ where the gain is not well defined, but always less than that of a half-wave dipole (length $\lambda/2$), the available maximum time-averaged power generated by the device may be used in place of the maximum time-averaged ERP, where that value is not known.

The separation distance is the smallest distance from any part of the antenna or radiating structure for all persons, during operation at the applicable ERP. In the case of mobile or portable devices, the separation distance is from the outer housing of the device where it is closest to the antenna.

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula (2).

$$P_{th}(mW) = \begin{cases} ERP_{20cm} \left(\frac{d}{20\text{ cm}} \right)^x, & d \leq 20\text{ cm} \\ ERP_{20cm}, & 20\text{ cm} \leq d \leq 40\text{ cm} \end{cases} \quad (2)$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20cm} \sqrt{f}} \right) \quad (3)$$

and f is in GHz, d is the separation distance (cm), and ERP_{20cm} is per Formula (1). The example values shown in Table 2 are for illustration only.

Table 2: Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)										
		5	10	15	20	25	30	35	40	45	50
	300	39	65	88	110	129	148	166	184	201	217
	450	22	44	67	89	112	135	158	180	203	226
	835	9	25	44	66	90	116	145	175	207	240
	1900	3	12	26	44	66	92	122	157	195	236
	2450	3	10	22	38	59	83	111	143	179	219
	3600	2	8	18	32	49	71	96	125	158	195
	5800	1	6	14	25	40	58	80	106	136	169

9.1.1. Results

minimum declared safety distance: 5 mm

Technology	Frequency [MHz]		Ref.	Note	Output Power [dBm]		Output Power [mW]		Share of Limit
	f _{min}	f _{max}	#	#	P _{cond.}	ERP	P _{max}	Threshold	%
Bluetooth	2402	2480	A		-0.9	-16.5	1	3	29.9%
LE									

Values:

Value	Explanation
P _{Cond.}	Maximum conducted output power for the applicable frequency band
P _{Max}	Highest of ERP and P _{Cond.} , in mW
Threshold	SAR-based threshold in mW.
Share of Threshold	P _{max} / Threshold

Value	Explanation
P _{cond}	Maximum conducted output power for the applicable frequency band
P _{max}	Highest of ERP and P _{cond} in mW
Threshold	SAR based Limit in mW
Share of Limit	P _{max} / Threshold

Referenced Documents:

#	Document	Document type	Additional Information
A	1-1311-25-01-02_TR1-R01	cetecom advanced report	pg 19 ,-0.9- dBm cond.

End of document