

RF Exposure Evaluation Report

Product : AMS lite
Trade mark : bambulab
Model/Type reference : SA005
Serial Number : N/A
Report Number : EED32P81159002
FCC ID : 2A6J8-SA005
Date of Issue : Aug. 29, 2023
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1310
47 CFR Part 2.1091
47 CFR Part 2.1093
447498 D04 Interim General RF
Exposure Guidance v01
Test result : PASS

Prepared for:

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2 Version

Version No.	Date	Description
00	Aug. 29, 2023	Original

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4 General Information

4.1 Client Information

Applicant:	Shenzhen Tuozhu Technology Co., Ltd.
Address of Applicant:	Room 201, Building A, No. 1 First Qianwan Road, Qianhai Shengang Cooperation Zone, Shenzhen
Manufacturer:	Shenzhen Tuozhu Technology Co., Ltd.
Address of Manufacturer:	Room 201, Building A, No. 1 First Qianwan Road, Qianhai Shengang Cooperation Zone, Shenzhen
Factory:	Shenzhen Tuozhu Technology Co., Ltd.
Address of Factory:	Room 201, Building A, No. 1 First Qianwan Road, Qianhai Shengang Cooperation Zone, Shenzhen

4.2 General Description of EUT

Product Name:	AMS lite
Model No.(EUT):	SA005
Trade Mark:	bambulab

4.3 Product Specification subjective to this standard

Frequency Range:	13.56MHz
Modulation Type:	ASK
Test Power Grade:	Default
Test Software of EUT:	RF Test
Antenna Type:	Coil antenna
Power Supply:	DC 24.0V
Sample Received Date:	Aug. 10, 2023
Sample tested Date:	Aug. 10, 2023 to Aug. 15, 2023

Remark:

The product has four antennas, and only one antenna is in operation at a time during normal operation. Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.

4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

Determination of exemption.

(i) For single RF sources (i.e., any single fixed RF source, mobile device, or portable device, as defined in paragraph (b)(2) of this section): A single RF source is exempt if:

(C) Or using Table 1 and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least $\lambda/2\pi$, where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum timeaveraged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

Table 1 to § 1.1307(b)(3)(i)(C)—Single RF Sources Subject to Routine Environmental Evaluation

RF Source frequency (MHz)	Threshold ERP (watts)
0.3–1.34	$1,920 R^2$.
1.34–30	$3,450 R^2/f^2$.
30–300	$3.83 R^2$.
300–1,500	$0.0128 R^2f$.
1,500–100,000	$19.2R^2$.

5.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at 13.56MHz individually.

5.1.3 EUT RF Exposure Evaluation

For standalone:

Antenna	Frequency (MHz)	Field strength of the fundamental signal (dBuV/m@3m)	ERP (dBm)	ERP (W)	Threshold ERP (W)	Result
1	13.56	80.14	-17.24	0.0000189	≤0.7505	PASS
2	13.56	79.86	-17.52	0.0000177	≤0.7505	PASS
3	13.56	80.15	-17.23	0.0000189	≤0.7505	PASS
4	13.56	80.11	-17.27	0.0000187	≤0.7505	PASS

Note:

- ① EIRP=conducted power+antenna gain;
- ② ERP=EIRP-2.15;
- ③ $EIRP(dBm) = \text{Field strength of the fundamental signal}(dBuV/m@3m) - 95.23$;
- ④ $ERP(mW) = 10^{(ERP(dBm)/10)}$;
- ⑤ The estimation distance(R) is 0.2m;
- ⑥ The test data please refer to the report of EED32P81159001.

For Simultaneous Transmission:

Cannot transmit simultaneously.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***