

RF Exposure Evaluation Report

Product : AM Relic 80
Trade mark : Angry Miao
Model/Type reference : AM21
Serial Number : N/A
Report Number : EED32P80965003
FCC ID : 2A3FY-AM21
Date of Issue : Sep. 08, 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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1 Version

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3 General Information

3.1 Client Information

Applicant:	Angry Miao Technology Co., Limited
Address of Applicant:	2/F, No.5 of Nanteng Street, Qi'ao Industrial Zone, Tangjiawan Town, Xiangzhou District, Zhuhai, China
Manufacturer:	Angry Miao Technology Co., Limited
Address of Manufacturer:	2/F, No.5 of Nanteng Street, Qi'ao Industrial Zone, Tangjiawan Town, Xiangzhou District, Zhuhai, China
Factory:	Angry Miao Technology Co., Limited
Address of Factory:	2/F, No.5 of Nanteng Street, Qi'ao Industrial Zone, Tangjiawan Town, Xiangzhou District, Zhuhai, China

3.2 General Description of EUT

Product Name:	AM Relic 80
Model No.(EUT):	AM21
Trade Mark:	Angry Miao
Device type:	Portable
Power Supply:	Battery DC 3.8V
Test Voltage:	DC 3.8V
Sample Received Date:	Aug. 22, 2023
Sample tested Date:	Aug. 22, 2023 to Aug. 30, 2023
Remark:	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.

3.3 General Description of BLE

Operation Frequency:	2402MHz~2480MHz
Modulation Type:	GFSK
Transfer Rate:	☒ 1Mbps ☒ 2Mbps
Number of Channel:	40
Antenna Type:	PIFA Antenna
Antenna Gain:	2.0dBi
Max Conducted Peak Output Power:	-3.11dBm
	The Max Conducted Peak Output Power data refer to the report EED32P80965001

3.4 General Description of 2.4G

Operation Frequency:	2402MHz~2480MHz
Modulation Type:	GFSK
Number of Channel:	23
Antenna Type:	PIFA Antenna
Antenna Gain:	2.0dBi
Max Conducted Peak Output Power:	-3.29dBm
	The Max Conducted Peak Output Power data refer to the report EED32P80965002

3.5 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

3.6 Deviation from Standards

None.

3.7 Abnormalities from Standard Conditions

None.

3.8 Other Information Requested by the Customer

None.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.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

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

where

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

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1).

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

4.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

4.1.3 EUT RF Exposure Evaluation**For Stand alone:****For BLE**

Frequency (MHz)	Separation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
2480	0.5	-3.11	2.0	-1.11	-3.26	0.472	2.717	PASS

For 2.4G

Frequency (MHz)	Separation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
2480	0.5	-3.29	2.0	-1.29	-3.44	0.453	2.717	PASS

Note:

- ① EIRP=conducted power+antenna gain;
- ② ERP=EIRP-2.15
- ③ Only the worst case data was recorded in the report.

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 ***