

TEST REPORT

FCC ID.	2APP6TM-15S
Test Report No.	TCT250318E022
Date of issue	May 19, 2025
Testing laboratory	SHENZHEN TONGCE TESTING LAB
Testing location/ address:	2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China
Applicant's name	Aroma Music Co., Ltd.
Address	Room 901, Building No. 1, Langjun Plaza, No. 28 Tizai Road, Goggle Community, Xixiang Street, Baoan District, Shenzhen City, China
Manufacturer's name ...	Aroma Technology Co., Limited
Address	Building A, Aroma Park, Guwu Village, Danshui Town, Huiyang District, Huizhou, Guangdong 516200 China
Standard(s)	FCC CFR Title 47 Part 1.1307 FCC PART 2.1093 KDB 447498 D01 V06
Product Name	ELECTRIC GUITAR AMP
Trade Mark	N/A
Model/Type reference	TM-15S, TM-20S, TM-20A, TM-20B, TM-16S, EGA-15W, RV-15M, Kubo 15 BT, Kubo 15, Kubo BT 15, EKA15S, EKA15
Rating(s)	Adapter Information: MODEL: S012-1B120100VC INPUT: AC 100-240V, 50/60Hz, 0.3A OUTPUT: DC 12.0V, 1.0A
Date of receipt of test item	Mar. 18, 2025
Date (s) of performance of test	Mar. 18, 2025 ~ May 19, 2025
Tested by (+signature) ...	Yannie ZHONG
Check by (+signature)	Beryl ZHAO
Approved by (+signature):	Tomsin

General disclaimer:

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1. General Product Information

1.1. EUT description

Product Name.....	ELECTRIC GUITAR AMP
Model/Type reference.....	TM-15S
Sample Number.....	TCT250318E021-0101
Operation Frequency	2402MHz~2480MHz
Modulation Type	GFSK, π/4-DQPSK, 8DPSK
Antenna Type.....	PCB Antenna
Antenna Gain.....	-0.58dBi
Rating(s).....	Adapter Information: MODEL: S012-1B120100VC INPUT: AC 100-240V, 50/60Hz, 0.3A OUTPUT: DC 12.0V, 1.0A

Note: The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.

1.2. Model(s) list

No.	Model No.	Tested with
1	TM-15S	<input checked="" type="checkbox"/>
Other models	TM-20S, TM-20A, TM-20B, TM-16S, EGA-15W, RV-15M, Kubo 15 BT, Kubo 15, Kubo BT 15, EKA15S, EKA15	<input type="checkbox"/>

Note: TM-15S is tested model, other models are derivative models. The models are identical in circuit and PCB layout, only different on the model names. So the test data of TM-15S can represent the remaining models.

2. General Information

2.1. Test environment and mode

Item	Normal condition
Temperature	+25°C
Voltage	AC 120V
Humidity	56%
Atmospheric Pressure:	1008 mbar
Test Mode:	
Transmitting Mode:	Keep the EUT in continuous transmitting by select channel

2.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
/	/	/	/	/

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.
3. For conducted measurements (Output Power, 20dB Occupied Bandwidth, Carrier Frequencies Separation, Hopping Channel Number, Dwell Time, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.

3. Facilities and Accreditations

3.1. Facilities

The test facility is recognized, certified, or accredited by the following organizations:

- FCC - Registration No.: 645098
SHENZHEN TONGCE TESTING LAB
Designation Number: CN1205

The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- A2LA-No.: 4320.01
SHENZHEN TONGCE TESTING LAB

The testing lab has been accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories.

3.2. Location

SHENZHEN TONGCE TESTING LAB

Address: 2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China
TEL: +86-755-27673339

4. Limit

According to §1.1310, the limit is as follow,

TABLE 1 TO § 1.1310(e)(1)—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE
(MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(i) LIMITS FOR OCCUPATIONAL/CONTROLLED EXPOSURE				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
(ii) LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f ²)	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

*f = frequency in MHz. * = Plane-wave equivalent power density.*

5. Test Results and Measurement Data

According to §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.

Remark: 1) **For BT:** The maximum output power for antenna is 3.77dBm(2.38mW) at 2480MHz, -0.58dBi antenna gain(with 0.87 numeric antenna gain.)
 2) For mobile or fixed location transmitters, no SAR consideration applied. The minimum separation generally be used is at least 20cm, even if the calculation indicate that the MPE distance would be lesser.

Calculation

$$\text{Given } E = \sqrt{\frac{30 \times P \times G}{d}} \quad \& \quad S = \frac{E^2}{3770}$$

Where E = Field Strength in Volts / meter

P = Power in Watts

G =Numeric antenna gain

d =Distance in meters

S =Power Density in milliwatts / square centimeter

Substituting the MPE safe distance using $d=20\text{cm}$ into above equation.

Yields: $S=0.000199*P*G$

Mode	Power (dBm)	Power (mW)	numeric antenna gain	Power density (mW/cm ²)	Limit (mW/cm ²)	Result
BT	3.77	2.38	0.87	0.00041	1.00	PASS

*******END OF REPORT*******