



Report No.: PTC23072411301E-FC03

FCC TEST REPORT

FCC ID: 2AWQ6KPC307

Product	:	Thermal printer
Model Name	:	KPC307-UB
Brand	:	caysn
Report No.	:	PTC23072411301E-FC03
Prepared for		
Xiamen Apt Electronic Tech. Co., Ltd		
202, NO.46 HE NING LI, HULI DISTRICT,XIAMEN,FUJIAN		
Prepared by		
Precise Testing & Certification Co., Ltd.		
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TEST RESULT CERTIFICATION

Applicant's name : Xiamen Apt Electronic Tech. Co., Ltd
Address : 202, NO.46 HE NING LI, HULI DISTRICT,XIAMEN,FUJIAN
Manufacture's name : Xiamen Apt Electronic Tech. Co., Ltd
Address : 202, NO.46 HE NING LI, HULI DISTRICT,XIAMEN,FUJIAN
Product name : Thermal printer
Model name : KPC307-UB
Test procedure : FCC CFR47 Part 1.1307(b)(1)
Test Date : Jul. 25, 2023 to Jul. 31, 2023
Date of Issue : August 01, 2023
Test Result : PASS

This device described above has been tested by PTC, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Test Engineer:

A handwritten signature in black ink that reads "Simon Pu".

Simon Pu /Engineer

Technical Manager:

A handwritten signature in black ink that reads "Ronnie Liu".

Ronnie Liu / Manager



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2 Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	15.247 (i)	PASS
Remark:		
N/A: Not Applicable		



3 General Information

3.1 General Description of E.U.T.

Product Name	:	Thermal printer
Model Name	:	KPC307-UB
Specification	:	BDR and BLE
Operation Frequency	:	2402-2480MHz
Number of Channel	:	79 channels for BDR 40 channels for BLE
Type of Modulation	:	GFSK For DSS GFSK For DTS
Antenna installation	:	PCB antenna
Antenna Gain	:	-1.62 dBi
Power supply	:	DC 12V $\overline{\text{---}}$ 2A
Hardware Version	:	N/A
Software Version	:	N/A



4 RF Exposure

Test Requirement : FCC Part 1.1307(b)(1)

Evaluation Method : KDB 447498 D01 General RF Exposure Guidance v06

4.1 Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

4.2 The procedures / limit

(A) Limits for Occupational / Controlled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density



4.3 MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } P_d \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$P_d = \frac{30 \times P \times G}{377 \times d^2} \theta \phi$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

4.4 Test Result

Mode	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Tune up tolerance (dBm)	Max Tune Up Power (mW)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)	Result
BDR	0.69	5.97	5.97 ± 1	4.977371	0.000682	1	Pass
BLE	0.69	5.83	5.83 ± 1	4.819478	0.000660	1	Pass

*****THE END REPORT*****