



FCC TEST REPORT

FCC ID: 2AWQ6CN810

Product	:	thermal printer
Model Name	:	CB821-USEB
Brand	:	Caysn
Report No.	:	PTC21122301204E-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		
Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China		



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 : CB821-USEB
Test procedure : KDB 447498 D01 General RF Exposure Guidance v06
Test Date : Jan. 08, 2022 to Jan. 14, 2022
Date of Issue : Jan. 14, 2022
Test Result : PASS

This device described above has been tested by PTS, 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, appearing to read 'Abel Yu'.

Abel Yu / Engineer

Technical Manager:

A handwritten signature in black ink, appearing to read 'Wu Weimin'.

Wu Weimin /Manager



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2 Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307(b)(1)	PASS
Remark:		
N/A: Not Applicable		



3 General Information

3.1 General Description of E.U.T.

Product Name	:	thermal printer
Model Name	:	CB821-USEB
Additional model	:	CN810-UB,CN810-UEB,CN821-USEB,CK810-UB,CK810-UEB,CK821-USEB, CB810-UB,CB810-UEB
Specification	:	BT 5.0 BDR+EDR ; BLE
Operation Frequency	:	2402-2480MHz for BT
Number of Channel	:	79 channels for BR+EDR 40 channels for BLE
Type of Modulation	:	GFSK, $\pi/4$ -DQPSK,8DPSK For DSS; GFSK For BLE;
Antenna installation	:	PCB antenna
Antenna Gain	:	0 dBi
Power supply	:	Adapter model:DJ-240250-SA Input:AC100-240V 50/60Hz Output:24V-2.5A
Hardware Version	:	CK810-USE V3.0
Software Version	:	N/A



4 RF Exposure

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

Evaluation Method : FCC Part 2.1091

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

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

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

Item	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)	Result
BR+EDR	1	3.105	2.044	0.000406	1	Pass
BLE	1	0.329	1.079	0.000214	1	Pass

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