

PRIMST (CHUZHOU) INNOVATION CO.LTD

MPE ASSESSMENT REPORT

Report Type:

FCC Part §2.1091, §2.1093 and §1.1307(b) assessment report

Model:

CT51-FRIDGE, TB-135, TB-135EYD, SCT-135EYD, HMCRCCT135

REPORT NUMBER:

220602246SHA-003

ISSUE DATE:

March 6, 2023

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Manufacturer : PRIMST (CHUZHOU) INNOVATION CO.LTD
NO. 588, NORTH SHANGHAI ROAD, CHUZHOU CITY, ANHUI, CHINA

Manufacturer Site : PRIMST (CHUZHOU) INNOVATION CO.LTD
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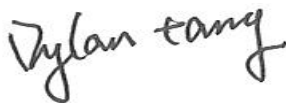
Type/Model: : CT51-FRIDGE, TB-135, TB-135EYD, SCT-135EYD, HMCRCCT135

FCC ID : 2A9LV-CT51FRIDGE

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06
FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

PREPARED BY:

Project Engineer
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REVIEWED BY:

Reviewer
Wakeyou Wang

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Revision History

Report No.	Version	Description	Issued Date
220602246SHA-003	Rev. 01	Initial issue of report	March 6, 2023

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	SMART COFFEE TABLE(REFRIGERATOR)
Type/Model:	CT51-FRIDGE, TB-135, TB-135EYD, SCT-135EYD, HMCRCCT135
Description of EUT:	The EUT is a SMART COFFEE TABLE which supports Wireless Charger and Bluetooth function, there are some series model and they are same except the appearance color. so choose CT51-FRIDGE to test as representative.
Rating:	110-120V ~ 60Hz
Category of EUT:	Class B
EUT type:	<input type="checkbox"/> Table top <input checked="" type="checkbox"/> Floor standing
Software Version:	0x0073
Hardware Version:	YZ-TB-CONTROL
Sample received date:	July 26, 2022
Date of test:	July 26, 2022 ~ February 28, 2023
Note: 3m AC cable with one core.	

1.2 Technical Specification

Frequency Range:	2400MHz ~ 2483.5MHz
Support Standards:	Bluetooth 5.0 (BR+EDR)
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Type of Modulation:	GFSK, $\pi/4$ DQPSK, 8DPSK
Channel Number:	79 (0 - 78)
Data Rate:	1Mbps
Channel Separation:	1 MHz
Antenna:	-5.48dBi, PCB antenna

1.3 Description of Test Facility

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L0139
	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier.: CN0014
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02

2 MPE Assessment

Test result: Pass

2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

According to §1.1310, the limit for general population/uncontrolled exposures

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
Limits For General Population/Uncontrolled Exposure				
0.1-0.3	614	1.63	*(100)	30
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
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

F=Frequency in MHz; *Plane-wave equivalent power density

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0**

2.2 Assessment Results

Power density (S) is calculated according to the formula:

$$S = PG / (4\pi R^2)$$

Where S = power density in mW/cm²

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 220602246HA-001&220602246HA-004:

The calculations in the table below use the highest gain of antenna for client EUT. These calculations represent worst case in terms of the exposure levels.

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Working Mode	Frequency band	Power		Antenna Gain		R	S	Limits
	(MHz)	dBm	mW	dBi	(Numeric)	(cm)	(mW/cm ²)	(mW/cm ²)
BT	2402-2480	4.53	2.84	-5.48	0.28	20	0.0005	1

Wireless charger and BT can simultaneous transmitting, so the maximum rate of MPE is,
 $0.299/307+0.0005/1=0.0037<1.0$.

Conclusion: therefore, the maximum calculations of the above simultaneous are less the limit.

Appendix I

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.
To ensure compliance, operations at closer than this distance is not recommended.

*****END*****