

TEST REPORT

Product Name : Smart Thermostat
Model Number : ST02
FCC ID : 2BCBU-ST02

Prepared for : Shenzhen YuanRui Information Technology Co.,Ltd.
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1. TEST RESULT CERTIFICATION

Applicant : Shenzhen YuanRui Information Technology Co.,Ltd.
Address : Room 201,A Bldg,NO.1QianWan 1st Road, ShenZhen Hong Kong Cooperation Zone, Shenzhen, China
Manufacturer : Shenzhen Saswell Technology Inc.
Address : Room 1601-1602, Floor16, Building 4, Tianan Cloud Park, No.2018 Xuegang Road, Bantian Street, Longgang District, Shenzhen,
Factory : SASWELL SMART TECH (DONG GUAN) LTD.
Address : Room 1001, Building 28, No.179, Fenggang Section, Dongshen Road, Fenggang Town, Dongguan City, Guangdong Province, China 523690
EUT : Smart Thermostat
Model Name : ST02
Trademark : Clevast

Measurement Procedure Used:

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
§ 15.247(i), § 2.1091	PASS

The above equipment was tested by EMTEK (DONGGUAN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2020) and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules FCC § 15.247(i), § 2.1091.

The test results of this report relate only to the tested sample identified in this report

Date of Test : Apr 09, 2026 to Apr 27, 2026

Prepared by :


Jessica Zhang /Editor

Reviewer :


Warren Deng /Supervisor

Approve & Authorized Signer :


Sam Lv / Manager



Modified History

Version	Report No.	Revision Date	Summary
	EDG2604090051E00102R	/	Original Report



2. EUT Specification

Characteristics	Description
Product:	Smart Thermostat
Model Number:	ST02
Sample:	2#
Device Type:	2.4G WIFI
Data Rate:	802.11b 802.11g 802.11n(20MHz channel bandwidth) 802.11n(40MHz channel bandwidth)
Modulation:	DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n;
Operating Frequency Range(s) :	2412-2462MHz for 802.11b/g/n(HT20); 2422-2452MHz for 802.11n(HT40);
Number of Channels:	11 channels for 802.11b/g/n(HT20); 7 Channels for 802.11n(HT40);
Transmit Power Max:	16.86 dBm(0.048529 W)
Antenna Type:	PCB Antenna
Antenna Gain:	3.75 dBi
Power supply:	18-30VAC 50/60Hz
Evaluation applied:	☒ MPE Evaluation ☐ SAR Evaluation

3. Test Requirement:

RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density(mW/cm ²)	Average Time
(A) Limits for Occupational/Control Exposures				
300-1500	--	--	F/300	6
1500-100000	--	--	5	6
(B) Limits for General Population/Uncontrol Exposures				
300-1500	--	--	F/1500	6
1500-100000	--	--	1	30

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

P_d = Power density in mW/cm²

P_{out} =output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

π =3.1416

R =20, distance between observation point and center of the radiator in cm

P_d the limit of MPE, 1mW/cm². If we know the maximum gain of the nd total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

Measurement Result

Antenna gain:
2.4G: 3.75 dBi

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	(dBi)	Numeric		
2412	11B	16.82	17±1	18	63.096	3.75	2.371	0.0298	1
2437		16.86	17±1	18	63.096	3.75	2.371	0.0298	1
2462		16.11	16±1	17	50.119	3.75	2.371	0.0236	1
2412	11G	16.19	16±1	17	50.119	3.75	2.371	0.0236	1
2437		16.08	16±1	17	50.119	3.75	2.371	0.0236	1
2462		15.37	15±1	16	39.811	3.75	2.371	0.0188	1
2412	11N20SISO	15.14	15±1	16	39.811	3.75	2.371	0.0188	1
2437		15.09	15±1	16	39.811	3.75	2.371	0.0188	1
2462		14.39	14±1	15	31.623	3.75	2.371	0.0149	1
2422	11N40SISO	14.67	14±1	15	31.623	3.75	2.371	0.0149	1
2437		14.86	15±1	16	39.811	3.75	2.371	0.0188	1
2452		14.23	14±1	15	31.623	3.75	2.371	0.0149	1

According to KDB 447498, no stand-alone required for 2.4G WIFI antenna, and no simultaneous SAR measurement is required.

*** End of Report ***