TCT 通测检测 TESTING CENTRE TECHNOLOGY

TEST REPORT

FCC ID. ..... :	2BFEP-DBCAM2	
Test Report No..... :	TCT240408E031	
Date of issue..... :	Apr. 11, 2024	
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..... :	CONVERGE BEAUTY LIMITED	
Address..... :	FLAT/RM C 22/F FORD GLORY PLAZA 37 WING HONG STREET LAI CHI KOK KOWLOON HONG KONG China	
Manufacturer's name ... :	Shenzhen Puge Electronics Co., Ltd.	
Address..... :	Building E, Urban Construction Industrial Zone, No. 1 Fenghuang Lingxia Road, Fuyong Street, Baoan District, Shenzhen, China	
Standard(s) ..... :	FCC CFR Title 47 Part 1.1307	
Product Name..... :	Smart Wi-Fi Doorbell Camera	
Trade Mark ..... :	N/A	
Model/Type reference..... :	T50, P10, P20, P30, P50, T10, T20, T30, N10, N20, N30, N50, U10, U20, U30, U50, M10, M20, M30, M50, M60	
Rating(s)..... :	Rechargeable Li-ion Battery DC 3.7V	
Date of receipt of test item ..... :	Apr. 08, 2024	
Date (s) of performance of test..... :	Apr. 08, 2024 ~ Apr. 11, 2024	
Tested by (+signature) ... :	Ronaldo LUO	
Check by (+signature).... :	Beryl ZHAO	
Approved by (+signature):	Tomsin	

General disclaimer:

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Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

1. General Product Information

1.1. EUT description

Product Name.....:	Smart Wi-Fi Doorbell Camera
Model/Type reference.....:	T50
Sample Number.....:	TCT240408E012-0101
Operation Frequency.....:	For BLE: 2402MHz~2480MHz For 2.4G WIFI: 2412MHz~2462MHz (802.11b/802.11g/802.11n(HT20) For SRD: 433.92MHz
Modulation Type.....:	For BLE: GFSK For 2.4G WIFI: 802.11b: Direct Sequence Spread Spectrum (DSSS) 802.11g/802.11n: Orthogonal Frequency Division Multiplexing(OFDM) For SRD:: FSK
Antenna Type.....:	Internal Antenna
Antenna Gain.....:	For BLE/2.4G WIFI: 1.65dBi For SRD: -1.74dBi
Rating(s).....:	Rechargeable Li-ion Battery DC 3.7V

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	T50	☒
Other models	P10, P20, P30, P50, T10, T20, T30, N10, N20, N30, N50, U10, U20, U30, U50, M10, M20, M30, M50, M60	☐

Note: T50 is tested model, other models are derivative models. The models are identical in circuit and PCB layout, only different on the model names and appearance. So the test data of T50 can represent the remaining models.

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2. General Information

2.1. Test environment and mode

Item	Normal condition
Temperature	+25ºC
Voltage	DC 3.7V
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.

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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.

- IC - Registration No.: 10668A-1

  SHENZHEN TONGCE TESTING LAB

  CAB identifier: CN0031

  The testing lab has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing.

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. 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 BLE:** The maximum output power for antenna is 5.53dBm (3.57mW) at 2480MHz, 1.65dBi antenna gain(with 1.46 numeric antenna gain.)
For 2.4G WIFI: The maximum output power for antenna is 14.96dBm (31.33mW) at 2462MHz, 1.65dBi antenna gain(with 1.46 numeric antenna gain.)
For SRD: The maximum output power for antenna is -18.87dBm (0.01mW) at 433.92MHz, -1.74dBi antenna gain(with 0.67 numeric antenna gain.)
Note: E[dBμV/m]=81.06
computational formula
EIRP[dBm] = E[dBμV/m] + 20 log (d[m]) − 104.77;
Conducted Power = EIRP-4.7;
Where E is the electric field strength in V/m; d is the measurement distance in meters (m)
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

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

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=20cm 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
BLE	5.53	3.57	1.46	0.001037	1.00	PASS
2.4G WIFI	14.96	31.33	1.46	0.009103	1.00	
SRD	-18.87	0.01	0.67	0.000001	0.29	

Note: BLE/2.4G WIFI/SRD Can be transmited simultaneously, MPE calculate is as follow,
MPE=0.001037/1.0+0.009103/1.0+0.000001/0.29=0.01014<1.

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

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