

TEST REPORT

FCC ID.	2BGAJ-ED007BICW	
Test Report No.	TCT240429E018	
Date of issue	May 20, 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	SHENZHEN EEGUARD TECHNOLOGY CO., LIMITED	
Address	201, Building A, Jingang Technology Industrial Park, Qiaotou Community, Fuhai Street, Baoan District, Shenzhen, China	
Manufacturer's name	SHENZHEN EEGUARD TECHNOLOGY CO., LIMITED	
Address	201, Building A, Jingang Technology Industrial Park, Qiaotou Community, Fuhai Street, Baoan District, Shenzhen, China	
Standard(s)	FCC CFR Title 47 Part 1.1307	
Product Name	VIDEO DOOR PHONE	
Trade Mark	N/A	
Model/Type reference	Refer to model(s) list of page 3	
Rating(s)	POE DC 15-48V AC 12-36V	
Date of receipt of test item	Apr. 29, 2024	
Date (s) of performance of test	Apr. 29, 2024 ~ May 20, 2024	
Tested by (+signature)	Yannie ZHONG	
Check by (+signature)	Beryl ZHAO	
Approved by (+signature) :	Tomsin	

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1. General Product Information

1.1. EUT description

Product Name	VIDEO DOOR PHONE
Model/Type reference	ED007BICW
Sample Number	TCT240429E005-0101
Operation Frequency	For 2.4G WIFI: 2412MHz~2462MHz (802.11b/802.11g/802.11n(HT20)) 2422MHz~2452MHz (802.11n(HT40)) For 5G WIFI: 5745MHz~5825MHz For SRD: 433.92MHz For NFC: 13.56MHz
Modulation Type	For 2.4G WIFI: 802.11b: Direct Sequence Spread Spectrum (DSSS) 802.11g/802.11n: Orthogonal Frequency Division Multiplexing(OFDM) For 5G WIFI: 256QAM, 64QAM, 16QAM, BPSK, QPSK For SRD: FSK
Antenna Type	For 2.4G WIFI/5G WIFI: FPC Antenna For SRD: Spring Antenna For NFC: PCB Antenna
Antenna Gain	For 2.4G WIFI: 3.84dBi For 5G WIFI: 2.29dBi For SRD: 0.25dBi For NFC: 2dBi
Rating(s)	POE DC 15-48V AC 12-36V

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	ED007BICW	<input checked="" type="checkbox"/>
Other models	ED007B, ED007BW, ED007BID, ED007BIC, ED007BIDW, ER012ATW, ER010ATW, ER009ATW, ER015ATW, ER012BTW, ER010BTW, ER009BTW, ER015BTW, ER015HBTW, ER012HBTW, ER010HBTW, ER009HBTW, ER015AT, ER015BT, ER012AT, ER012BT, ER010AT, ER010BT, ER009AT, ER009BT	<input type="checkbox"/>

Note: ED007BICW is tested model, other models are derivative models. The models are identical in circuit and PCB layout, only different on the model names. So the test data of ED007BICW can represent the remaining models.

2. General Information

2.1. Test environment and mode

Item	Normal condition
Temperature	+25°C
Voltage	DC 15V
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.

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 2.4G WIFI:** The maximum output power for antenna is 7.43dBm (5.53mW) at 2462MHz, 3.84dBi antenna gain (with 2.42 numeric antenna gain.)

For 5G WIFI: The maximum output power for antenna is 12.15dBm (16.41mW) at 5745MHz, 2.29dBi antenna gain (with 1.69 numeric antenna gain.)

For SRD: The maximum output power for antenna is -39.38dBm ($1 \times 10^{-4}\text{mW}$) at 433.92MHz, 0.25dBi antenna gain (with 1.06 numeric antenna gain.)

Note: $E[\text{dB}\mu\text{V}/\text{m}] = 60.55$
computational formula

$$\text{EIRP}[\text{dBm}] = E[\text{dB}\mu\text{V}/\text{m}] + 20 \log (d[\text{m}]) - 104.77;$$

Conducted Power = EIRP-4.7;

Where E is the electric field strength in V/m; d is the measurement distance in meters (m)

For NFC: The maximum output power for antenna is -46.41dBm ($2 \times 10^{-5}\text{mW}$) at 13.56MHz, 2dBi antenna gain (with 1.58 numeric antenna gain.)

Note: $E[\text{dB}\mu\text{V}/\text{m}] = 54.82$
computational formula

$$\text{EIRP}[\text{dBm}] = E[\text{dB}\mu\text{V}/\text{m}] + 20 \log (d[\text{m}]) - 104.77;$$

Conducted Power = EIRP-6;

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

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 $d=20\text{cm}$ into above equation.

Yields: $S=0.000199 \times P \times G$

Mode	Power (dBm)	Power (mW)	numeric antenna gain	Power density (mW/cm ²)	Limit (mW/cm ²)	Result
2.4G WIFI	7.43	5.53	2.42	0.002665	1.00	PASS
5G WIFI	12.15	16.41	1.69	0.005517	1.00	
SRD	-39.38	1*10 ⁻⁴	1.06	2*10 ⁻⁸	0.29	
NFC	-46.41	2*10 ⁻⁵	1.58	6*10 ⁻⁹	0.98	

Note: 2.4G WIFI/5G WIFI/SRD/NFC Can be transmitted simultaneously, MPE calculate is as follow,
 $MPE=0.002665/1.0+0.005517/1.0+2*10^{-8}/0.29+6*10^{-9}/0.98=0.008182<1.$

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