

MPE TEST REPORT

Report No.: SHE23030025-02BE

Date: 2023-03-27

Page 1 of 12

Applicant : GUARDIAN SHANGHAI CORP.
Address of Applicant : 368, Min Shen Rd, SongJiang, Shanghai, China

Product Name : Smart control device for Garage Door Opener
Brand Name : Guardian
Model Name : V3, V3B, V3M
Sample Acquisition Method : Sent by Client
Sample No. : E23030025-01#02
FCC ID : YJFV3

Standards : FCC Part 2.1091
KDB 447498 D01 General RF Exposure Guidance v06

Date of Receipt : 2023-03-07
Date of Test : 2023-03-07~ 2023-03-24
Date of Issue : 2023-03-27

Remark:

This report details the results of the testing carried out on one sample, the results contained in this report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

Prepared by:



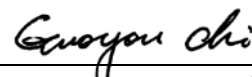
(Erik Yang)

Reviewed by:



(Jennifer Zhou)

Approved by:



(Authorized signatory: Guoyou Chi)

MPE TEST REPORT

Report No.: SHE23030025-02BE

Date: 2023-03-27

Page 2 of 12

Contents

1	GENERAL INFORMATION	3
1.1	TESTING LABORATORY	3
1.2	ENVIRONMENTAL CONDITIONS	3
1.3	DETAILS OF APPLICATION	3
1.4	DETAILS OF EUT	3
2	MAXIMUM PERMISSIBLE EXPOSURE (MPE)	4
2.1	LIMITS	4
2.2	ASSESSMENT METHODS	4
2.3	TEST RESULT	5
2.4	CONCLUSION	5
3	APPENDIXES	6
3.1	SAMPLE PHOTOGRAPH.....	6

MPE TEST REPORT

Report No.: SHE23030025-02BE

Date: 2023-03-27

Page 3 of 12

1 General Information

1.1 Testing Laboratory

Company Name	ICAS Testing Technology Service (Shanghai) Co., Ltd.
Address	No.1298 Pingan Rd, Minhang District, Shanghai, China
Telephone	0086 21-51682999
Fax	0086 21-54711112
Homepage	www.icasiso.com

1.2 Environmental conditions

Temperature (°C)	18-25
Humidity (%RH)	40-65
Barometric Pressure (mbar)	960-1060
Ambient noise & Reflection(W/kg)	< 0.012

1.3 Details of Application

Applicant Company Name	GUARDIAN SHANGHAI CORP.
Address	368, Min Shen Rd, SongJiang, Shanghai, China
Contact Person	Vincent Chan
Telephone	+86-21-57684828
Email	vincent@adhguardian.com
Manufacturer Company Name	GUARDIAN SHANGHAI CORP.
Address	368, Min Shen Rd, SongJiang, Shanghai, China
Factory Company Name	GUARDIAN SHANGHAI CORP.
Address	368, Min Shen Rd, SongJiang, Shanghai, China

1.4 Details of EUT

Product Name	Smart control device for Garage Door Opener
Brand Name	Guardian
Test Model Name	V3
Series Model Name	V3B, V3M
Difference Description	All the same except for the different market naming
FCC ID	YJFV3
Mode of Operation	WLAN 802.11b/g/n(HT20/40)
Frequency Range	2400MHz ~ 2483.5MHz
Modulation Type	DSSS, OFDM
Antenna Type	PCB Antenna

MPE TEST REPORT

Report No.: SHE23030025-02BE

Date: 2023-03-27

Page 4 of 12

Antenna Gain	3.37dBi
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Note(s):

All applicable tests as described in test case and measurement sections were performed on model V3.

2 Maximum Permissible Exposure (MPE)

2.1 Limits

According to FCC Part 1.1307, systems operating under the provisions of this section shall be operated in a manner the ensures that the public is not exposed to radio frequency energy level in excess of the commission's guidelines.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
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
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

2.2 Assessment methods

Calculation Formula from FCC OET 65:

$$S = \frac{P * G}{4 * \pi * R^2}$$

Where:

S = Power Density (mW/cm²)

P = Input Power of the Antenna (mW)

G = Antenna Gain Relative to an Isotropic Antenna

R = Distance from the Antenna to the Point of Investigation (cm)

MPE TEST REPORT

Report No.: SHE23030025-02BE

Date: 2023-03-27

Page 5 of 12

2.3 Test Result

Operation Mode	Frequency Range (MHz)	Max Conducted Power (dBm)	Antenna Gain (dBi)	Max EIRP (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)
WLAN 2.4GHz	2400 ~ 2483.5	17.64	3.37	126.18	0.0251	1.0

Note(s):

1. For 300 – 1,500MHz: Power Density limit is f/1500 mW/cm²
2. For 1,500 – 100,000MHz: Power Density limit is 1.0 mW/cm²
3. Max Conducted Power, please refer to RF test Report No. SHE23030025-02AE

2.4 Conclusion

The Power Density at the position which is 20 cm far from the EUT is smaller than the General Population/Uncontrolled Exposure limit.

MPE TEST REPORT

Report No.: SHE23030025-02BE

Date: 2023-03-27

Page 6 of 12

3 Appendixes

3.1 Sample Photograph



Front of the sample



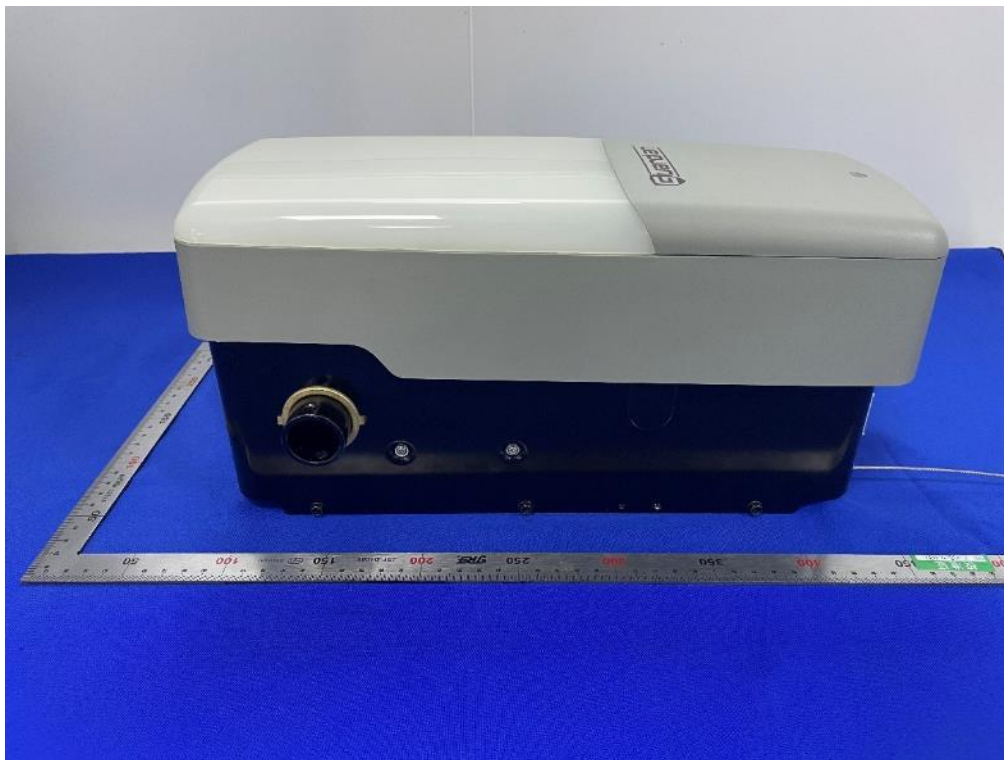
Rear of the sample

MPE TEST REPORT

Report No.: SHE23030025-02BE

Date: 2023-03-27

Page 7 of 12



Left of the sample



Right of the sample

MPE TEST REPORT

Report No.: SHE23030025-02BE

Date: 2023-03-27

Page 8 of 12



Top of the sample



Bottom of the sample

MPE TEST REPORT

Report No.: SHE23030025-02BE

Date: 2023-03-27

Page 9 of 12



Open photo-1 of the sample



Open photo-2 of the sample

MPE TEST REPORT

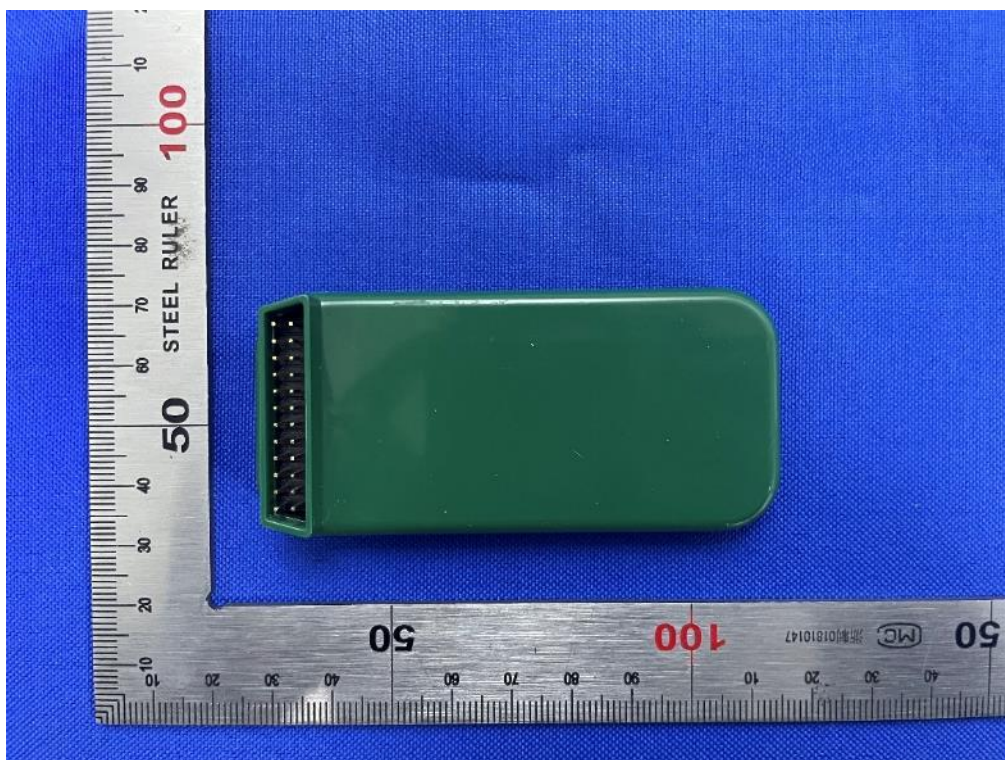
Report No.: SHE23030025-02BE

Date: 2023-03-27

Page 10 of 12



Open photo-3 of the sample



Open photo-4 of the sample

MPE TEST REPORT

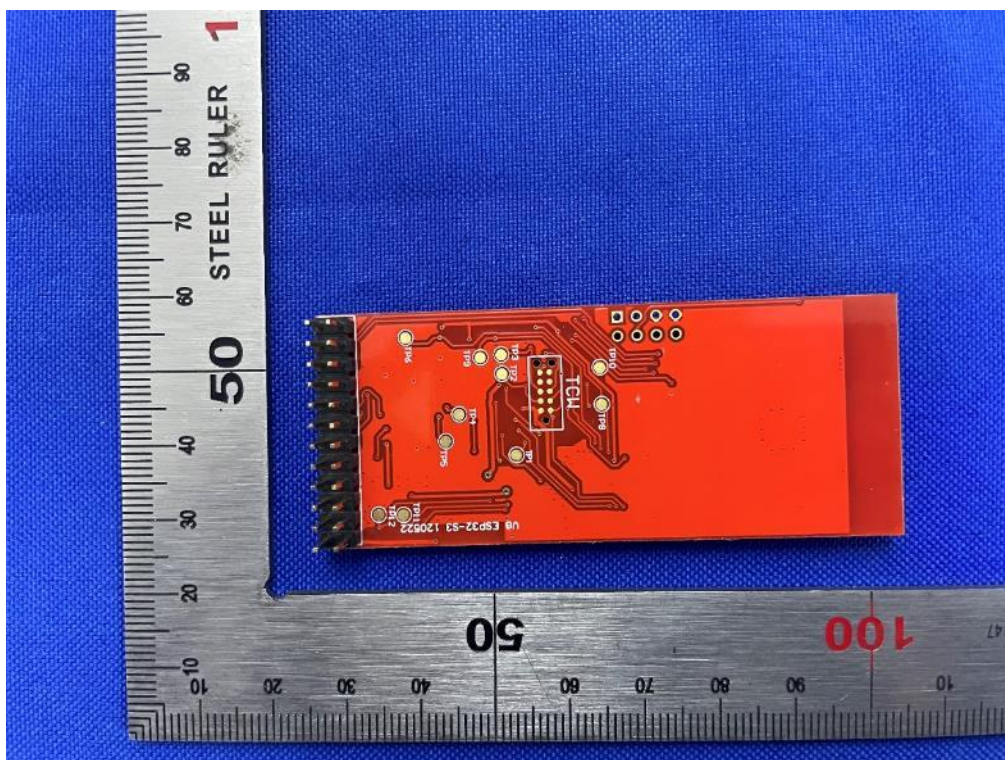
Report No.: SHE23030025-02BE

Date: 2023-03-27

Page 11 of 12



Open photo-5 of the sample



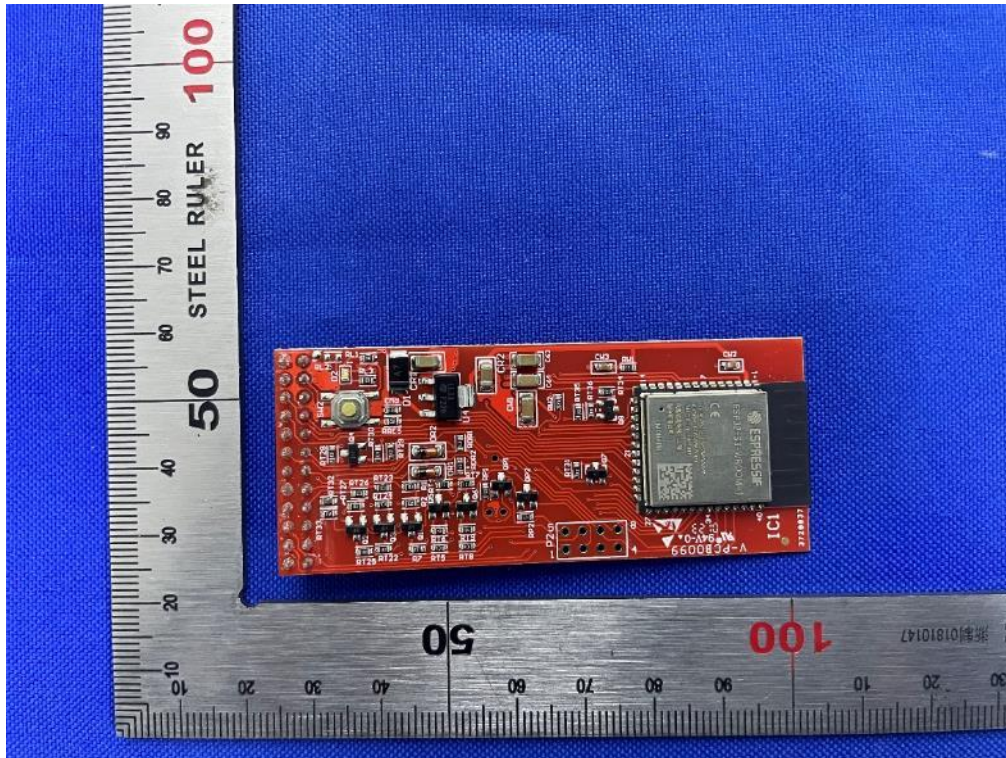
Internal photo-1 of the sample

MPE TEST REPORT

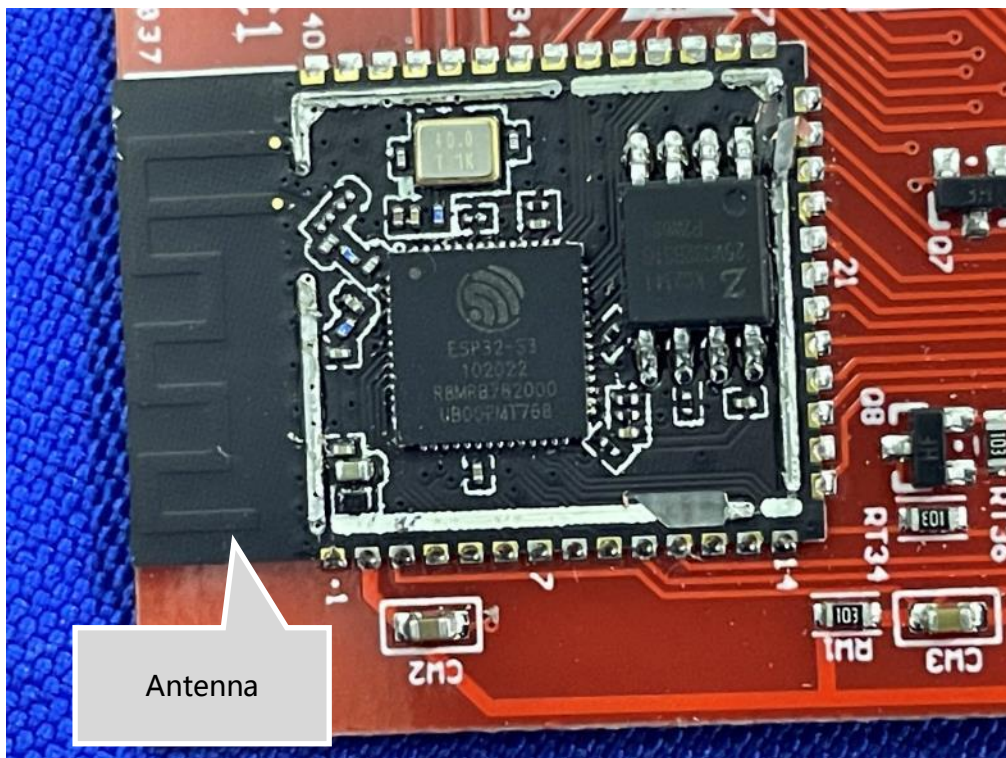
Report No.: SHE23030025-02BE

Date: 2023-03-27

Page 12 of 12



Internal photo-2 of the sample



Remove Cover of the sample

End of the report