

RF EXPOSURE EVALUATION REPORT

Application No.: GZCR2201000142AT
Applicant: Procter & Gamble (Guangzhou) Technology Innovation Co., Ltd.
Address of Applicant: Room 101, No. 333, Jiu Fo Jian She Road Huangpu District Sino-Singapore Knowledge City, Guangzhou City, Guangdong Province, China
Manufacturer: Xia Men Joyatech Co., Ltd.
Address of Manufacturer: R304, Blog 28, Guanri Rd, Xiamen Software Park
Factory: Xiamen Tboss Electronics Co., Ltd.
Address of Factory: 5F, Workshop, No.188, Houxiang Road, Xinyang Street, Haicang District, Xiamen
Equipment Under Test (EUT):
EUT Name: Smart scale with barcode scanner
Model No.: HS-001
Standard(s) : 47 CFR Part 1.1310
KDB447498D01 General RF Exposure Guidance v06
Date of Receipt: 2022-01-28
Date of Evaluation: 2022-03-21
Date of Issue: 2022-04-26

Evaluation Result:	Pass*
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* In the configuration evaluated, the EUT complied with the standards specified above.

Kobe Jian
EMC Laboratory Manager



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Revision Record			
Version	Report No.	Date	Remark
01	GZCR220100014204	2022-04-26	Original

Authorized for issue by:			
			
		<hr/> Lily Kuang/Project Engineer	
			
		<hr/> Ricky Liu/Reviewer	



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2 Evaluation Summary

Note:

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.



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4 General Information

4.1 Details of E.U.T.

Power supply: DC 5 V powered by Power Adapter:
 Model: GAT-0501000U
 Input: AC 100-240V, 0.4A, 50/60Hz
 Output: 5V===1000mA

For BT

Antenna Gain 3.71dBi
 Antenna Type PCB Antenna
 Channel Spacing 2MHz
 Modulation Type GFSK
 Number of Channels 40
 Operation Frequency 2402MHz to 2480MHz

For Wi-Fi

Antenna Gain 3.71dBi
 Antenna Type PCB Antenna
 Channel Spacing 5MHz
 Modulation Type 802.11b: DSSS (CCK, DQPSK, DBPSK)
 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
 Number of Channels 802.11b/g/n(HT20):11;
 802.11n(HT40): 9
 Operation Frequency 802.11b/g/n(HT20): 2412MHz to 2462MHz;
 802.11n(HT40): 2422MHz to 2452MHz

4.2 Evaluating Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,
 198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District,
 Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.



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4.3 Facility

The facility is recognized, certified, or accredited by the following organizations:

- **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **CNAS (Lab Code: L0167)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2018 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of Testing Laboratories.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

- **ISED (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

- **VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)**

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

4.4 Deviation from Standards

None

4.5 Abnormalities from Standard Conditions

None



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5 Radio Spectrum Technical Requirement

5.1 RF Exposure

5.1.1 Test Requirement:

CFR 47 Part 1.1310

Limit:

According to FCC Part1.1310: 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 Part1.1307(b)

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				

According to IEEE C95.3:2002 section 5.5.1.1, The power density S at a point on the axis at a distance d from a transmitting antenna is given by the Friis free-space transmission formula

$$S = \frac{PG}{4\pi d^2}$$

S = power density (mW/cm²)
P = the net power delivered to the antenna (mW)
G = gain of the antenna in linear scale
d = distance between observation point and center of the radiator (cm)



5.1.2 Conclusion

Normal use condition for Distance between antenna and body:	≥ 20 cm declared by applicant
Antenna Gain(max):	3.71 dBi declared by applicant for 2.4G WIFI and Bluetooth antenna .

For Bluetooth

Frequency (MHz)	Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2402	2.350	3.52	2.249	0.00105	1	Complies
2442	2.350	3.63	2.307	0.00108	1	Complies
2480	2.350	2.87	1.936	0.00091	1	Complies

For 2.4 GHz Wi-Fi

Frequency (MHz)	Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
11B						
2412	2.350	13.63	23.067	0.01078	1	Complies
2437	2.350	13.32	21.478	0.01004	1	Complies
2462	2.350	13.01	19.999	0.00935	1	Complies
11G						
2412	2.350	3.13	2.056	0.00096	1	Complies
2437	2.350	3.12	2.051	0.00096	1	Complies
2462	2.350	2.9	1.950	0.00091	1	Complies
11(N20)						
2412	2.350	3.16	2.070	0.00097	1	Complies
2437	2.350	3.11	2.046	0.00096	1	Complies
2462	2.350	2.88	1.941	0.00091	1	Complies
11(N40)						
2422	2.350	2.96	1.977	0.00092	1	Complies
2437	2.350	2.59	1.816	0.00085	1	Complies
2452	2.350	2.49	1.774	0.00083	1	Complies

The EUT meet the Exemption Limits for Routine Evaluation – SAR Evaluation, so no SAR evaluation is required for the EUT.

Note: Refer to report No. GZCR220100014202 for WIFI and BT in EUT test Max Conducted Peak Output Power value.



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6 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for GZCR2201000142AT

- End of the Report -



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