



SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250300118604

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Test Report

Application No.: SZCR2503001186AT
Applicant: Zhejiang Lingzhu Technology Co., Ltd.
Address of Applicant: Room 302, No 1 Building Huace Center, Xihu District Hangzhou 310000 China
Manufacturer: Zhejiang Lingzhu Technology Co., Ltd.
Address of Manufacturer: Room 302, No 1 Building Huace Center, Xihu District Hangzhou 310000 China
Factory: Earda Technologies Co., Ltd
Address of Factory: Block A, LianFeng Creative Industry Park, 2 JiSheng Road., HuangGe Town, NanSha District, Guangzhou, China
Equipment Under Test (EUT):
EUT Name: Human Presence Sensor
Model No.: HP222-Z, HP222-ZT ♣
♣ Please refer to section 2.2 of this report which indicates which model was actually tested and which were electrically identical.
FCC ID: 2BEWX-HP222-Z
Standard(s) : FCC Rules 47 CFR §2.1091
KDB 447498 D04 interim General RF Exposure Guidance v01
Date of Receipt: 2025-03-27
Date of Test: 2025-04-05 to 2025-05-15
Date of Issue: 2025-05-23

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu

Keny Xu
EMC Laboratory Manager



SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch EMC Laboratory

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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2025-05-23		Original

Authorized for issue by:				
		Darren Yuan		
		Darren Yuan/Project Engineer		
		Eric Fu		
		Eric Fu/Reviewer		



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2 General Information

2.1 General Description of E.U.T.

Product Type:	☐ Portable device
	☒ Mobile device
	☐ Fixed device

2.2 Details of E.U.T.

Power supply:	3V DC which from button cell
For Zigbee:	
Operation Frequency:	2405MHz to 2480MHz
Modulation Type:	O-QPSK
Number of Channels:	16
Channel Spacing:	5MHz
Antenna Type:	PCB
Antenna Gain:	1.38dBi
For 60G Radar:	
Operation Frequency:	60GHz-64GHz
Modulation Type:	FMCW
Antenna Type:	AiP
Antenna Gain:	7.43dBi

Remark: The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

Separation Distance

Minimum test separation distance:	20cm
Remark: This minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander.	



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2.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

2.4 Test Facility

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

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI (Member No. 1937)

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC –Designation Number: CN1336

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.



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3 FCC Radiofrequency radiation exposure limits

According to §1.1310, the limit for general population/uncontrolled exposures

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
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
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30



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4 Measurement and Calculation

Standalone transmission:

Mode	Maximum EIRP (dBm)	Antenna Gain (dBi)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)	Ratio	Verdict
Zigbee	9.53	1.38	0.002	1.000	0.002	Pass
60GHz Radar	13	7.43	0.004	1.000	0.004	Pass

Note1: The maximum EIRP refer to the user manual.

Simultaneous transmission

Test Mode	Zigbee	60GHz Radar	Total Ratio	Limit	Verdict
Maximum Ratio	0.002	0.004	N/A	N/A	N/A
Scenario 1	☒	☒	0.006	1.0	Pass

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

- End of the Report -