

RF EXPOSURE EVALUATION REPORT

Application No.: GZCR2602000323AT
Applicant: Zhongshan LingHu Electronics Co., Ltd.
Address of Applicant: 3rd Floor, No.132 The North of Qi Wan Road, East Area, Zhongshan, Guangdong, China
Manufacturer: Zhongshan LingHu Electronics Co., Ltd.
Address of Manufacturer: 3rd Floor, No.132 The North of Qi Wan Road, East Area, Zhongshan, Guangdong, China
Factory: Zhongshan LingHu Electronics Co., Ltd.
Address of Factory: 3rd Floor, No.132 The North of Qi Wan Road, East Area, Zhongshan, Guangdong, China
Product Name: Bluetooth Soundbar Speaker
Model No.: BS-56
Standard(s) : KDB 447498 D01 V06
 47 CFR Part 1.1310
Date of Receipt: 2026-02-05
Date of Evaluation: 2026-03-20 to 2026-03-20
Date of Issue: 2026-03-30

Evaluation Result:

Pass*

* In the configuration evaluated, the EUT complied with the standards specified above.



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SGS-CSTC Standards Technical Services Co., Ltd.
 Guangzhou Branch Testing Center EEC Laboratory

No.198, Kazhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
 中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgsgroup.com.cn
 t (86-20) 82155555 sgs.china@sgs.com

Revision Record			
Version	Report No.	Date	Remark
01	GZCR260200032304	2026-03-30	Original

Authorized for issue by:			
		Pank Feng	
		Pank Feng/Project Engineer	
Approved By		Vico Cui	
		Vico Cui/Reviewer	



2 Evaluation Summary

Item	Standard	Method	Requirement	Result
RF Exposure	KDB 447498 D01 V06	KDB 447498 D01 V06	47 CFR Part 1.1310	Pass

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 7.4V powered by internal battery as below:
 Model: 18650
 Rated: 2000mAh, DC 7.4V, 14.8Wh
 DC 5V for charging

Cable(s): For left speaker:
 USB ports with about 1m unshielded cables
 OPT ports with about 1m unshielded cables
 3.5 AUX ports with about 1m unshielded cables
 Type C charging ports

For right speaker:
 3.5 AUX input cables (1m unshielded) with base

Antenna Type: Inverted F Antenna
 Antenna Gain: 2.338 dBi according to antenna specification
 Antenna Number: 1

For BT LE
 Operation Frequency: 2402MHz to 2480MHz
 Modulation Type: GFSK
 Number of Channels: 40
 Channel Spacing: 2MHz

For BT Classic
 Operation Frequency: 2402MHz to 2480MHz
 Modulation Type: GFSK, pi/4DQPSK, 8DPSK
 Number of Channels: 79
 Channel Spacing: 1MHz
 Spectrum Spread Technology: Frequency Hopping Spread Spectrum(FHSS)

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.

4.2 Evaluating Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,
 No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou,
 Guangdong, China 510663

Tel: +86 20 82155555

No tests were sub-contracted.



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 Guangzhou Branch EMC Laboratory

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
 中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgsgroup.com.cn
 t (86-20) 82155555 sgs.china@sgs.com

4.3 Facility

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

- **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.

- **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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中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

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5 Technical Requirements Specification

5.1 General Description of Applied Standards

KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

5.2 RF Exposure Evaluation

5.2.1 Limit & Test Method

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 Exposures				
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
300–1500			f/300	6
1500–100,000			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
300–1500			f/1500	30
1500–100,000			1.0	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} * G) / (4 * P_i * R^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

P_i = 3.1416

R = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.



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Guangzhou Branch Testing Center EEC Laboratory. 中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 sgs.china@sgs.com

5.2.2 Conclusion

Normal use condition for Distance
between antenna and body: 20cm declared by applicant

For Bluetooth BLE

Antenna Gain: 2.338 dBi

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	1.713168183	-1.29	0.74	0.00025	1	Complies
2440	1.713168183	-1	0.79	0.00027	1	Complies
2480	1.713168183	-0.89	0.81	0.00028	1	Complies

For Bluetooth Classic

Antenna Gain: 2.338 dBi

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	1.713168183	0.63	1.16	0.00039	1	Complies
2441	1.713168183	1.2	1.32	0.00045	1	Complies
2480	1.713168183	1.44	1.39	0.00047	1	Complies

The Bluetooth can be transmitted together, the result is

0.00028 /1+

0.00047 /1=

0.00075 <1

So further test is not required.

Note: Refer to report No. GZCR260200032302/03 for EUT test Max Conducted Peak Output Power value.

6 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for GZCR2602000323AT

- End of the Report -



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