RF EXPOSURE EVALUATION REPORT

Application No.:	SZCR2412004534AT
Applicant:	Edifier International Limited
Address of Applicant:	P.O. Box 6264 General Post Office, Hong Kong
Manufacturer:	Beijing Edifier Technology Co., Ltd.
Address of Manufacturer:	815, Floor 8, Shuangqiao Building, No.68, North Fourth Ring West Road, Haidian District, 100080 Beijing, P.R. China
Factory:	Dongguan Edifier Technology Co., Ltd.
Address of Factory:	No.2 Gongyedong Road, Songshan Lake Sci.&Tech. Industry Park, Dongguan, 523808 Guangdong, P.R. China
Equipment Under Test (EUT):	
EUT Name:	True Wireless Planar Magnetic Noise Cancelling Earbuds
Model No.:	EDF200185
Trade Mark:	EDIFIER
FCC ID:	Z9G-EDF268
Standard(s) :	47 CFR PART 1, Subpart I, Section 1.1310 47 CFR PART 2, Subpart J, Section 2.1093 KDB447498D01 General RF Exposure Guidance v06
Date of Receipt:	2024-12-02
Date of Evaluation:	2024-12-06 to 2024-12-12
Date of Issue:	2024-12-12
Evaluation Result:	**Pass***

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

Keny Xu
EMC Laboratory Manager

Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
01		2024-12-12		Original

Authorized for issue by:				
		Bill Chen **Bill Chen/Project Engineer**		
		Eric Fu **Eric Fu/Reviewer**		

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2 Contents

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3 General Information

3.1 General Description of E.U.T.

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

3.2 Details of E.U.T.

Power supply:	Lithium Ion Battery: DC 3.73V 50mAh 0.187Wh rechargeable battery which charged by charging case for left earbud and right earbud Lithium Ion Battery: DC 3.7V 500mAh 1.85Wh rechargeable battery which charged by USB port for charging case
Cable(s):	USB cable:30cm unshielded
For BT:	
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V5.4 Dual mode
Modulation Type:	GFSK, pi/4DQPSK, 8DPSK
Number of Channels:	79
Channel Spacing:	1MHz
Spectrum Spread Technology:	Frequency Hopping Spread Spectrum(FHSS)
Antenna Type:	FPC
Antenna Gain:	Left earbud:-0.95dBi Right earbud:1.54dBi
For BT:	
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V5.4 Dual mode
Modulation Type:	GFSK
Number of Channels:	40
Channel Spacing:	2MHz
Rate data:	1Mbps
Antenna Type:	FPC
Antenna Gain:	Left earbud:-0.95dBi Right earbud:1.54dBi

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.

3.3 Separation Distance

Minimum test separation distance:	5mm
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.	

3.4 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.

3.5 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.

3.6 Deviation from Standards

None

3.7 Abnormalities from Standard Conditions

None

4 Technical Requirements Specification

4.1 RF Exposure Evaluation

4.1.1 Limit & Test Method

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation[17]
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

4.1.2 Conclusion

BT

Left earbud

The Max. power (including tune-up tolerance) is 4.30 dBm on the lowest channel 2.402 GHz (*)
4.30 dBm logarithmic terms convert to numeric result is nearly 2.69 mW
According to the formula. calculate the test exclusion thresholds:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)]

$$General\ RF\ Exposure = (2.69\ mW / 5\ mm)\ x\ \sqrt{2.402\ GHz} = 0.83 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

(1) < (2)
So the SAR report is not required.

(*) Max. power refer to Report No.:SZCR241200453402

Right earbud

The Max. power (including tune-up tolerance) is 3.13 dBm on the lowest channel 2.402 GHz (*)
3.13 dBm logarithmic terms convert to numeric result is nearly 2.06 mW
According to the formula. calculate the test exclusion thresholds:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)]

$$General\ RF\ Exposure = (2.06\ mW / 5\ mm)\ x\ \sqrt{2.402\ GHz} = 0.64 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

(1) < (2)
So the SAR report is not required.

(*) Max. power refer to Report No.:SZCR241200453402

BLE

Left earbud

The Max. power (including tune-up tolerance) is 3.75 dBm on the highest channe 2.48 GHz (*)
3.75 dBm logarithmic terms convert to numeric result is nearly 2.37 mW
According to the formula. calculate the test exclusion thresholds:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)]

$$General\ RF\ Exposure = (2.37\ mW / 5\ mm)\ x\ \sqrt{2.48\ GHz} = 0.75 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

(1) < (2)
So the SAR report is not required.

(*) Max. power refer to Report No.:SZCR241200453403

Right earbud

The Max. power (including tune-up tolerance) is 2.49 dBm on the lowest channel 2.402 GHz (*)
2.49 dBm logarithmic terms convert to numeric result is nearly 1.77 mW
According to the formula. calculate the test exclusion thresholds:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)]

$$General\ RF\ Exposure = (1.77\ mW / 5\ mm)\ x\ \sqrt{2.402\ GHz} = 0.55 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

(1) < (2)
So the SAR report is not required.

(*) Max. power refer to Report No.:SZCR241200453403

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5 EUT Constructional Details (EUT Photos)

Refer to Appendix – External and Internal Photos for SZCR2412004534AT

-End of the Report-