

RF Exposure Evaluation Report

Product : ELEHEAR Beyond Hearing Aids
Trade mark : ELEHEAR
Model/Type reference : RIC 03,RIC 03A,RIC 03B,
RIC 03C,RIC 03D,RIC 03E,
RIC 03F,RIC 03G,RIC 03H,
RIC 03I,RIC 03J,RIC 03K,
RIC 03M,RIC 03N,RIC 03O
Serial Number : N/A
Report Number : EED32Q80139503
FCC ID : 2BF4W-RIC03
Date of Issue : Jun. 13, 2024
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1310
47 CFR Part 2.1091
47 CFR Part 2.1093
KDB 447498 D04 Interim General RF Exposure Guidance v01
Test result : PASS

Prepared for:

ELEHEAR Inc.

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709, Nanshan District,Shenzhen,China**

Prepared by:

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Jun. 13, 2024



Check No.: 6119241022

1 Version

Version No.	Date	Description
00	Jun. 13, 2024	Original

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3 General Information

3.1 Client Information

Applicant:	ELEHEAR Inc.
Address of Applicant:	708, Building 12,Shenzhen Bay Tech-Eco Park,Nanshan District,Shenzhen,China
Manufacturer:	ELEHEAR Inc.
Address of Manufacturer:	708, Building 12,Shenzhen Bay Tech-Eco Park,Nanshan District,Shenzhen,China

3.2 General Description of EUT

Product Name:	ELEHEAR Beyond Hearing Aids
Model No.:	RIC 03, RIC 03A, RIC 03B, RIC 03C, RIC 03D, RIC 03E, RIC 03F, RIC 03G, RIC 03H, RIC 03I, RIC 03J, RIC 03K, RIC 03M, RIC 03N, RIC 03O
Test Model No.:	RIC 03
Trade Mark:	ELEHEAR

3.3 Product Specification subjective to this standard

Frequency Range:	2402MHz~2480MHz	
Modulation Type:	BLE 1Mbps: 2402MHz~2480MHz; BLE 2Mbps: 2404MHz~2478MHz; BT: 2402MHz~2480MHz	
Test Power Grade:	Default	
Test Software:	BQB.exe(manufacturer declare)	
Antenna Type:	Internal antenna	
Antenna Gain:	0.76dBi	
Power Supply:	Battery:	DC 3.85V
Sample Received Date:	Apr. 22, 2024	
Sample tested Date:	Apr. 23, 2024 to May 06, 2024	

Remark:

Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.

Model No.: RIC 03, RIC 03A, RIC 03B, RIC 03C, RIC 03D, RIC 03E, RIC 03F, RIC 03G, RIC 03H, RIC 03I, RIC 03J, RIC 03K, RIC 03M, RIC 03N, RIC 03O

Only the model RIC 03 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, only the model name, Color and Accoustics parameter are different for marketing requirements. .

3.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.

3.7 Other Information Requested by the Customer

None.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold Pth (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). Pth is given by Formula

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and ERP20cm is per Formula (B.1).

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

4.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

4.1.3 EUT RF Exposure Evaluation

For Stand alone:

For Bluetooth LE:

Frequency (MHz)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
2440	0.82	0.76	1.58	-0.57	0.877	2.753	PASS

For Bluetooth Classic:

Frequency (MHz)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
2441	0.64	0.76	1.40	-0.75	0.841	2.752	PASS

Note:

- ① EIRP=conducted power+antenna gain;
- ② ERP=EIRP-2.15;
- ③ $EIRP(dBm) = \text{Field strength of the fundamental signal}(dBuV/m@3m) - 95.23$;
- ④ $ERP(mW) = 10^{(ERP(dBm)/10)}$;
- ⑤ The estimation distance is 0.5cm;
- ⑥ The test data please refer to the report of EED32Q80139501, EED32Q80139502 and only the worst case data was recorded in the report.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***