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RF Exposure Evaluation Report

Report No.:	CQASZ20220701273E-02
Applicant:	Shenzhen RB-LINK Intelligent Technology Co., Ltd
Address of Applicant:	Room 401, building C, Runhe Industrial Zone Huangpu, Shajing Town, Bao'an District, Shenzhen, Guangdong Province
Equipment Under Test (EUT):	
EUT Name:	IT510 bluetooth headset
Model No.:	IT510, IT510 Plus, IT511, IT511 Plus, A9, A9 Plus, A8
Test Model No.:	IT510
Brand Name:	N/A
FCC ID:	2AXI9-IT510
Standards:	47 CFR Part 1.1307 47 CFR Part 2.1093 KDB447498 D04 Interim General RF Exposure Guidance v01
Date of Receipt:	2022-07-25
Date of Test:	2022-07-25 to 2022-08-09
Date of Issue:	2022-08-11
Test Result:	**PASS***

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

Tested By: lewis zhou

(Lewis Zhou)

Reviewed By: K. Liao

(K Liao)

Approved By:

(Jack Ai)

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20220701273E-02	Rev.01	Initial report	2022-08-11

2 Contents

3 General Information

3.1 Client Information

Applicant:	Shenzhen RB-LINK Intelligent Technology Co., Ltd
Address of Applicant:	Room 401, building C, Runhe Industrial Zone Huangpu, Shajing Town, Bao'an District, Shenzhen, Guangdong Province
Manufacturer:	Shenzhen RB-LINK Intelligent Technology Co., Ltd
Address of Manufacturer:	Room 401, building C, Runhe Industrial Zone Huangpu, Shajing Town, Bao'an District, Shenzhen, Guangdong Province
Factory:	Shenzhen RB-LINK Intelligent Technology Co., Ltd
Address of Factory:	Room 401, building C, Runhe Industrial Zone Huangpu, Shajing Town, Bao'an District, Shenzhen, Guangdong Province

3.2 General Description of EUT

Product Name:	IT510 bluetooth headset
Model No.:	IT510, IT510 Plus, IT511, IT511 Plus, A9, A9 Plus, A8
Test Model No.:	IT510
Trade Mark:	N/A
Software Version:	RBZN-IT510-BT8926B2(IT510)-20220720-6E6C7BD2_6A74401F_C45_D
Hardware Version:	IT510 Power Pack V1.1 20220602 IT510_Charger_V1.0_20220601 IT510_BT8926B_L_V1.4_20220616 IT510_BT8926B_R_V1.4_20220616
Power Supply:	Charging Box: Li-ion battery: DC 3.7V 400mAh, Charge by DC 5V for adapter
	Earphone: Li-ion battery: DC 3.7V 40mAh, Charge by DC 3.7V for Charging box

3.3 General Description of BT

Operation Frequency:	2402MHz~2480MHz
Modulation Type:	GFSK, π/4DQPSK
Transfer Rate:	1Mbps/2Mbps
Number of Channel:	79
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location
Antenna Type:	Chip antenna
Antenna Gain:	2.67dBi

Certify the product: IT510 bluetooth headset

Model No.: IT510, IT510 Plus, IT511, IT511 Plus, A9, A9 Plus, A8

The circuit design, layout, components used and internal wiring are all the same, except for the color difference

4 MPE Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Standard Requirement

447498 D04 Interim General RF Exposure Guidance v01

3.2. SAR Test Reduction Guidance

SAR test reduction procedures [Glossary] allow using a particular set of test data as representative of other, similar, test conditions. This may be applied for data within different test positions (e.g. body, head, extremity), wireless modes (e.g. Wi-Fi, cellular), and frequency bands.This test reduction process provides for the use of test data for one specific channel, while referencing to those data for demonstrating compliance in other required channels for each test position of an exposure condition, within the operating mode of a frequency band. This is limited specifically to when the reported 1-g or 10-g SAR for the mid-band or highest output power channel meets any of the following conditions.

4.1.2 Limits

SAR-based thresholds are derived based on frequency, power, and separation distance of the RF source. The formula defines the thresholds in general for either available maximum timeaveraged power or maximum time-averaged ERP, whichever is greater.

If the ERP of a device is not easily determined, such as for a portable device with a small form factor, the applicant may use the available maximum time-averaged power exclusively if the device antenna or radiating structure does not exceed an electrical length of $\lambda/4$.

As for devices with antennas of length greater than $\lambda/4$ where the gain is not well defined, but always less than that of a half-wave dipole (length $\lambda/2$), the available maximum time-averaged power generated by the device may be used in place of the maximum time-averaged ERP, where that value is not known.

The separation distance is the smallest distance from any part of the antenna or radiating structure for all persons, during operation at the applicable ERP. In the case of mobile or portable devices, the separation distance is from the outer housing of the device where it is closest to the antenna.

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 (B.2).

$$P_{\text{th}}\,(\text{mW}) = \begin{cases} ERP_{20\,\text{cm}}(d/20\ \text{cm})^{x} & d \le 20\ \text{cm} \\ ERP_{20\,\text{cm}} & 20\ \text{cm} < d \le 40\ \text{cm} \end{cases} \qquad \text{(B.2)}$$

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 $ERP_{20\text{cm}}$ is per Formula (B.1). The example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)										
	5	10	15	20	25	30	35	40	45	50
300	39	65	88	110	129	148	166	184	201	217
450	22	44	67	89	112	135	158	180	203	226
835	9	25	44	66	90	116	145	175	207	240
1900	3	12	26	44	66	92	122	157	195	236
2450	3	10	22	38	59	83	111	143	179	219
3600	2	8	18	32	49	71	96	125	158	195
5800	1	6	14	25	40	58	80	106	136	169

For BT(2DH5)

Measurement Data

Channel	Max EIRP(dBm)	Max EIRP (mW)	Exclusion threshold (mW)
Lowest (2402MHz)	0.98	1.253	3.0
Middle (2441MHz)	1.6	1.445	
Highest (2480MHz)	1.64	1.459	

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20220701273E-01

*** END OF REPORT ***