Shenzhen Huaxia Testing Technology Co., Ltd.

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

Telephone: +86-755-26648640
Fax: +86-755-26648637
Website: www.cqa-cert.com

Report Template Version: V05
Report Template Revision Date: 2021-11-03

RF Exposure Evaluation Report

Report No.:	CQASZ20220901553E-02
Applicant:	Shenzhen Inkbird Technology Co., Ltd.
Address of Applicant:	Room 1803, Guowei Building, NO.68 Guowei Road, Xianhu Community, Liantang, Luohu District,Shenzhen, China
Equipment Under Test (EUT):	
EUT Name:	Phoenix Smart Thermometer
Model No.:	phoenix
Test Model No.:	phoenix
Brand Name:	INKBIRD
FCC ID:	2AYZDPHOENIX
Standards:	47 CFR Part 1.1307 47 CFR Part 1.1310 447498 D04 Interim General RF Exposure Guidance v01
Date of Receipt:	2022-09-07
Date of Test:	2022-09-07 to 2022-09-15
Date of Issue:	2022-11-04
Test Result:	**PASS***

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

Tested By: lewis zhou
(Lewis Zhou)

Reviewed By: Timo Lei
(Timo Lei)

Approved By: Jack
(Jack Ai)

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20220901553E-02	Rev.01	Initial report	2022-11-04

2 Contents

3 General Information

3.1 Client Information

Applicant:	Shenzhen Inkbird Technology Co., Ltd.
Address of Applicant:	Room 1803, Guowei Building, NO.68 Guowei Road, Xianhu Community, Liantang, Luohu District,Shenzhen, China
Manufacturer:	Shenzhen Inkbird Technology Co., Ltd.
Address of Manufacturer:	Room 1803, Guowei Building, NO.68 Guowei Road, Xianhu Community, Liantang, Luohu District,Shenzhen, China
Factory:	Shenzhen Inkbird Technology Co., Ltd.
Address of Factory:	Room 1803, Guowei Building, NO.68 Guowei Road, Xianhu Community, Liantang, Luohu District,Shenzhen, China

3.2 General Description of EUT

Product Name:	Phoenix Smart Thermometer
Model No.:	phoenix
Test Model No.:	phoenix
Trade Mark:	INKBIRD
Software Version:	V1.0.5
Hardware Version:	V1.1.2
EUT Power Supply:	Li-ion battery: DC 3.7V 2500mAh, Charge by DC 5V for adapter

3.3 General Description of BT Classic

Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	Bluetooth Spec 5.0
Modulation Type:	GFSK,
Number of Channel:	40
Transfer Rate:	1Mbps
Sample Type:	☒ Mobile ☐ Portable
Antenna Type:	smartrftm_studio-2.25.0
Antenna Gain:	PCB antenna
Cable loss:	5.19dBi

Note：

The above parameters will directly affect the test results. The information is provided by the applicant.

4 MPE Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

The table applies to any RF source (i.e., single fixed, mobile, and portable transmitters) and specifies power and distance criteria for each of the five frequency ranges used for the MPE limits. These criteria apply at separation distances from any part of the radiating structure of at least $\lambda/2\pi$. The thresholds are based on the general population MPE limits with a single perfect reflection, outside of the reactive near-field, and in the main beam of the radiator.For mobile devices that are not exempt per Table B.1 [Table 1 of § 1.1307(b)(1)(i)(C)] at distances from 20 cm to 40 cm and in 0.3 GHz to 6 GHz, evaluation of compliance with the exposure limits in § 1.1310 is necessary if the ERP of the device is greater than ERP20cm inFormula (B.1) [repeated from § 2.1091(c)(1) and § 1.1307(b)(1)(i)(B)].

$$P_{\text{th}}\,(\text{mW}) = ERP_{20\,\text{cm}}\,(\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases}$$

If the ERP is not easily obtained, then the available maximum time-averaged power may be used (i.e., without consideration of ERP only if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave Dipole.
SAR-based exemptions are constant at separation distances between 20 cm and 40 cm to avoid discontinuities in the threshold when transitioning between SAR-based and MPE-based exemption criteria at 40 cm, considering the importance of reflections.

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

1) For BLE Classic

Output Power Into Antenna & RF Exposure Evaluation Distance:

Measurement Data

GFSK mode					
Test channel	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
				(dBm)	(mW)
Lowest(2402MHz)	2.56	0.41	0.5±1	1.5	1.41
Middle(2440MHz)	3.18	1.03	1.0±1	2.0	1.58
Highest(2480MHz)	2.84	0.69	0.5±1	1.5	1.41

The ERP of this product is less than 3060mW

Note: 1) Refer to report No. CQASZ20220901553E-01 for EUT test Max Conducted Peak Output Power value.

2) EUT's Bluetooth module is more than 20cm away from the human body.

3) BLE and wifi cannot be transmitted at the same time. wifi is turned off when BLE is transmitted

*** END OF REPORT ***