

RF Test Report

For

Applicant name: Huaxin (Dongguan) Technology Co., Ltd.
Address: Room 801, Building 4, No. 6 Yongsheng North Road, Fenggang, Dongguan City, Guangdong Province, China
EUT name: Smart Air Pump
Brand name: N/A
Model number: HX003
Series model number: HX003-1
FCC ID: 2BB6BHX003-1

Issued By

Company name: BTF Testing Lab (Shenzhen) Co., Ltd.
Address: 101/201/301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Subdistrict, Bao'an District, Shenzhen, China
Report number: BTF250807R00402
Test standards: 47 CFR Part 2 Subpart J Section 2.1093
Test conclusion: Pass
Date of sample receipt: 2025-08-07
Test date: 2025-08-08 to 2025-08-18
Date of issue: 2025-08-19

Prepared by:

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Chris Liu /Project engineer



Ryan.CJ

Ryan.CJ /EMC manager

Note: All the test results in this report only related to the testing samples. Which can be duplicated completely for the legal use with approval of applicant; it shall not be reproduced except in full without the written approval of BTF Testing Lab (Shenzhen) Co., Ltd., All the objections should be raised within thirty days from the date of issue. To validate the report, you can contact us.

Revision History		
Version	Issue date	Revisions content
R_V0	2025-08-19	Original
Note: Once the revision has been made, then previous versions reports are invalid.		

Table of Contents

1 Introduction	4
1.1 Laboratory Location	4
1.2 Laboratory Facility	4
1.3 Announcement	4
2 Product Information	5
2.1 Application Information	5
2.2 Manufacturer Information	5
2.3 Factory Information	5
2.4 General Description of Equipment under Test (EUT)	5
2.5 Technical Information	5
3 RF Output Power	6
4 Applied Reference Documents	7
5 RF Exposure Limit	7
6 RF Exposure Assessment	8

1. Introduction

1.1 Laboratory Location

Test location:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	101/201/301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Subdistrict, Bao'an District, Shenzhen, China
Description:	All measurement facilities used to collect the measurement data are located at 101/201/301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Subdistrict, Bao'an District, Shenzhen, China
Phone number:	+86-0755-23146130
Fax number:	+86-0755-23146130

1.2 Laboratory Facility

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

FCC - Designation No.: CN1409

BTF Testing Lab (Shenzhen) Co., Ltd. has been accredited as a testing laboratory by FCC (Federal Communications Commission). The test firm Registration No. is 695374.

CNAS - Registration No.: CNAS L17568

BTF Testing Lab (Shenzhen) Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L17568.

A2LA - Registration No.: 6660.01

BTF Testing Lab (Shenzhen) Co., Ltd. is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories.

1.3 Announcement

- (1) The test report reference to the report template version v0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) This document may not be altered or revised in any way unless done so by BTF and all revisions are duly noted in the revisions section.
- (5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (6) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.
- (7) All entrusted information in this report is provided by the client and has been confirmed through consultation with the client; The testing items for this report have been discussed and confirmed with the client, and our company is only responsible for the content reflected in the report.

2. Product Information

1.4 Application Information

Company name:	Huaxin (Dongguan) Technology Co., Ltd.
Address:	Room 801, Building 4, No. 6 Yongsheng North Road, Fenggang, Dongguan City, Guangdong Province, China

1.5 Manufacturer Information

Company name:	Huaxin (Dongguan) Technology Co., Ltd.
Address:	Room 801, Building 4, No. 6 Yongsheng North Road, Fenggang, Dongguan City, Guangdong Province, China

1.6 Factory Information

Company name:	Huaxin (Dongguan) Technology Co., Ltd.
Address:	Room 801, Building 4, No. 6 Yongsheng North Road, Fenggang, Dongguan City, Guangdong Province, China

1.7 General Description of Equipment under Test (EUT)

EUT name:	Smart Air Pump
Under test model name:	HX003
Series model name:	HX003-1
Description of model name differentiation:	It's just that the model names are different, but everything else is the same.
Hardware version:	N/A
Software version:	N/A
Ratings:	Li-ion polymer Battery DC 14.8V 2500mAh 37Wh

3. Technical Information

Modulation Mode:	BLE	GFSK
Frequency Bands:	BLE	2402MHz-2480MHz
Antenna type:	Internal Antenna	
Antenna Gain:	0 dBi (declare by Applicant)	
Antenna transmit mode:	SISO (1TX, 1RX)	

4. RF Output Power

Mode	Channel	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)
GFSK-1M	CH00	2402	2.20
	CH19	2440	2.13
	CH39	2480	2.30
GFSK-2M	CH00	2402	2.29
	CH19	2440	2.18
	CH39	2480	2.34
Maximum Tune-up (dBm)			3.00

Note 1: According to KDB 447498, MPE assessment is based on source-based time-averaged maximum conducted output power of the RF channel requiring assessment, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions.

5. Applied Reference Documents

Identity	Document Title
47 CFR Part 2(2.1093)	Radio Frequency Radiation Exposure Assessment: mobile devices
KDB 447498 D01v06	General RF Exposure Guidance

6. RF Exposure Limit

Test Standards:	KDB447498 D01 General RF Exposure Guidance v06: Rf Exposure Procedures And Equipment Authorization Policies For Mobile And Portable Devices
Test Limit:	<p>For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:</p> $[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{\text{GHz}}}] \leq 3.0 \text{ for 1-g SAR, and } \leq 7.5 \text{ for 10-g extremity SAR,}^{30} \text{ where}$ <p>³⁰ This is equivalent to the formula written as: $[(\text{max. power of channel, including tune-up tolerance, mW}) / (60 / \sqrt{f_{\text{GHz}}}) \text{ mW})] \cdot [20 \text{ mm} / (\text{min. test separation distance, mm})] \leq 1.0$ for 1-g SAR; also see Appendix A for approximate exclusion threshold numerical values at selected frequencies and distances.</p> <p>f_{GHz} is the RF channel transmit frequency in GHz. Power and distance are rounded to the nearest mW and mm before calculation. The result is rounded to one decimal place for comparison. 3.0 Where is the exposure limit for the head assessment. 7.5 Where is the exposure limit for assessing the effects on the limbs.</p> <p>Remark: 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 according to 4.1 f) is applied to determine SAR test exclusion.</p>

7. RF Exposure Assessment

➤ Standalone Transmission Assessment:

Bands	Frequency (MHz)	Max Conducted Power (dBm)	Tune-up Power(dBm)	Tune-up Power(mW)	Calculating data	Limit
Bluetooth	2480	2.30	3.0	2.0	0.94	3.0

➤ Conclusion:

According to 47 CFR §2.1093, this device complies with human exposure basic restrictions.



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