



# RF Exposure Report

## For

**Applicant Name:** PHROZEN TECH CO., LTD.  
**Address:** 3F., NO287, NIUPU RD., XIANGSHAN DIST., HSINCHU CITY  
30091, TAIWAN  
**EUT Name:** Desktop 3D Printer  
**Brand Name:**   
**Model Number:** Phrozen Sonic Mighty 14K Revo

## Issued By

**Company Name:** BTF Testing Lab (Shenzhen) Co., Ltd.  
**Address:** F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park,  
Tantou Community, Songgang Street, Bao'an District, Shenzhen,  
China

**Report Number:** BTF240110R01003  
**Test Standards:** 47 CFR Part 2 Subpart J Section 2.1091  
**FCC ID:** 2BCTP-14KREVO  
**Test Conclusion:** Pass  
**Test Date:** 2024-02-28 to 2024-04-07  
**Date of Issue:** 2024-04-15

**Prepared By:**

*Handwritten signature: Gavin Cui*

**Date:**

Gavin Cui, Project Engineer  
2024-04-15

**Approved By:**

*Handwritten signature: Ryan.CJ*

**Date:**

Ryan.CJ / EMC Manager  
2024-04-15

*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	2024-04-07	Original
<i>Note:</i>	<i>Once the revision has been made, then previous versions reports are invalid.</i>	

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## 1. Introduction

### 1.1 Identification of Testing Laboratory

Company Name:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Phone Number:	+86-0755-23146130
Fax Number:	+86-0755-23146130

### 1.2 Identification of the Responsible Testing Location

Test Location:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Description:	All measurement facilities used to collect the measurement data are located at F101,201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
FCC Registration Number:	518915
Designation Number:	CN1330

### 1.3 Laboratory Condition

Ambient Temperature:	20°C to 25°C
Ambient Relative Humidity:	45% to 55%
Ambient Pressure:	100 kPa to 102 kPa

### 1.4 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.

## 2. Product Information

### 2.1 Application Information

Company Name:	PHROZEN TECH CO., LTD.
Address:	3F., NO287, NIUPU RD., XIANGSHAN DIST., HSINCHU CITY 30091, TAIWAN

### 2.2 Manufacturer Information

Company Name:	PHROZEN TECH CO., LTD.
Address:	3F., NO287, NIUPU RD., XIANGSHAN DIST., HSINCHU CITY 30091, TAIWAN

### 2.3 Factory Information

Company Name:	DONGGUAN CITY PHROZEN TECH CO., LTD.
Address:	Room 601, No.28, Xinhong Road, Lincun, Tangxia Town, Dongguan City, Guangdong Province, China

### 2.4 General Description of Equipment under Test (EUT)

EUT Name	Desktop 3D Printer
Under Test Model Name	Phrozen Sonic Mighty 14K Revo
Hardware Version	PZPC2023V2

### 3. Test Requirement

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b), Limits for Maximum Permissible Exposure (MPE),

Frequency range (MHz)	Electric field strength(V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30–300	61.4	0.163	1.0	6
300–1500	-	-	f/300	6
1500–100,000	-	-	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30–300	27.5	0.073	0.2	30
300–1500	-	-	f/1500	30
1500–100,000	-	-	1.0	30

Note: f = frequency in MHz

#### EVALUATION METHOD

Transmission formula:  $Pd = (Pout * G) / (4 * pi * r^2)$

Where

**Pd** = power density in mW/cm<sup>2</sup>, **Pout** = output power to antenna in mW, **G** = gain of antenna in linear scale; **Pi** = 3.1416, **R** = distance between observation point and center of the radiator in cm

### 3.1 Assessment Result

Passed       Not Applicable

Frequency (MHz)	Type	Conducted Power (dBm)	Maximum Tune-up (dBm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
2412	2.4G WIFI 802.11b	12.67	13.0	0.0063	1.0000	Pass
5230	5G WIFI 802.11n (HT40)	12.31	13.0	0.0063	1.0000	Pass

Note: The exposure evaluation safety distance is 20cm.



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[www.btf-lab.com](http://www.btf-lab.com)

**--END OF REPORT--**