RF Exposure Report

For

Applicant name:	**PHROZEN TECH CO., LTD.**
Address:	3F., NO.287, NIUPU RD., XIANGSHAN DIST., HSINCHU CITY 30091, TAIWAN
EUT name:	Desktop 3D Printer
Brand name:	phrozen
Model number:	Phrozen Arco FDM 3D Printer
Series model number:	N/A
FCC ID:	2BCTP-ACROFDN

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:	BTF250402R00802
Test standards:	47 CFR Part 2 Subpart J Section 2.1091
Test conclusion:	Pass
Date of sample receipt:	2025-04-02
Test date:	2025-04-03 to 2025-06-04
Date of issue:	2025-06-17
Test by:	Sean.He Sean.He/ Tester
Prepared by:	Chris Liu Chris Liu / Project engineer
Approved by:	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	2025-06-17	Original
Note:	*Once the revision has been made, then previous versions reports are invalid.*	

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BTF Testing Lab (Shenzhen) Co., Ltd.
101/201/301, Building 1, Block 2, Tantou Industrial Park,Tantou Community, Songgang Subdistrict, Bao'an District, Shenzhen, China
Email: info@btf-lab.com Tel: +86-755-23146130 http://www.btf-lab.com

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
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 518915.

- **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.

2. Product Information

2.1 Application Information

Company Name:	PHROZEN TECH CO., LTD.
Address:	3F., NO.287, NIUPU RD., XIANGSHAN DIST., HSINCHU CITY 30091, TAIWAN

2.2 Manufacturer Information

Company Name:	PHROZEN TECH CO., LTD.
Address:	3F., NO.287, 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 Arco FDM 3D Printer
Series model name	N/A
Description of model name differentiation	N/A
Hardware Version	N/A
Software Version	N/A
Rating:	Model: Phrozen Arco FDM 3D Printer Input: 100-240V AC; 50-60Hz Power: max 900W
Max. Conducted Power:	14.17 dBm (802.11g)
Antenna type:	Internal Antenna
Antenna gain:	0.0 dBi (declare by Applicant)

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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^2)	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	*($900/f^2$)	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	*($180/f^2$)	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^2, **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)	Gain of antenna in linear scale	Power Density (mW/cm2)	Limit (mW/cm2)	Result
2412	802.11g	14.17	15.00	1.00	0.007	1.0000	Pass

Note: The exposure evaluation safety distance is 20cm.

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