



RF Exposure Report

For

Applicant Name: Shenzhen Torras Technology Co., Ltd.
Address: RM1215, BLK C, Zhantao Technology BLDG, Minzhi Avenue,
Minzhi ST, Longhua DIST, Shenzhen, China
EUT Name: Power Bank
Brand Name: TORRAS
Model Number: PB-P101-01

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: BTF231227R00102
Test Standards: 47 CFR Part 1 Subpart I Section 1.1310
FCC ID: 2AN4Y-PB-P101-01
Test Conclusion: Pass
Test Date: 2023-12-28 to 2024-01-03
Date of Issue: 2024-01-04

Prepared By:

Aria Zhang

Date:

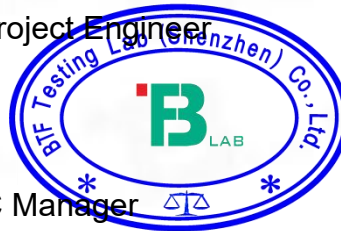
Aria Zhang / Project Engineer
2024-01-04

Approved By:

Ryan.CJ

Date:

Ryan.CJ / EMC Manager
2024-01-04



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Revision History		
Version	Issue Date	Revisions Content
R_V0	2024-01-04	Original
Note:	Once the revision has been made, then previous versions reports are invalid.	

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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:	Shenzhen Torras Technology Co., Ltd.
Address:	RM1215, BLK C, Zhantao Technology BLDG, Minzhi Avenue, Minzhi ST, Longhua DIST, Shenzhen, China

2.2 Manufacturer Information

Company Name:	Shenzhen Torras Technology Co., Ltd.
Address:	RM1215, BLK C, Zhantao Technology BLDG, Minzhi Avenue, Minzhi ST, Longhua DIST, Shenzhen, China

2.3 Factory Information

Company Name:	Shenzhen Torras Technology Co., Ltd.
Address:	RM1215, BLK C, Zhantao Technology BLDG, Minzhi Avenue, Minzhi ST, Longhua DIST, Shenzhen, China

2.4 General Description of Equipment under Test (EUT)

EUT Name	Power Bank
Under Test Model Name	PB-P101-01

3. Test Requirement

KDB 680106 D01 RF Exposure Wireless Charging App v03

Human exposure to RF Low frequency emissions from portable devices (47 CFR § 2.1093) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density.

According to the item 5.2 of KDB 680106 D01v03:

TCB Workshop and combine the actual situation of the EUT, For the portable wireless charger, RF exposure evaluation should be made from all sides(six sides) of EUT, with the 0cm to 20cm measured from the center of the probe to the edge of the EUT, in 2cm minimum increment.

E and H field strength measurements or numerical modelling may be used to demonstrate compliance.

TABLE 1—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 Exposure				
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
300-1,500			f/300	6
1,500-100,000			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
300-1,500			f/1500	30
1,500-100,000			1.0	30

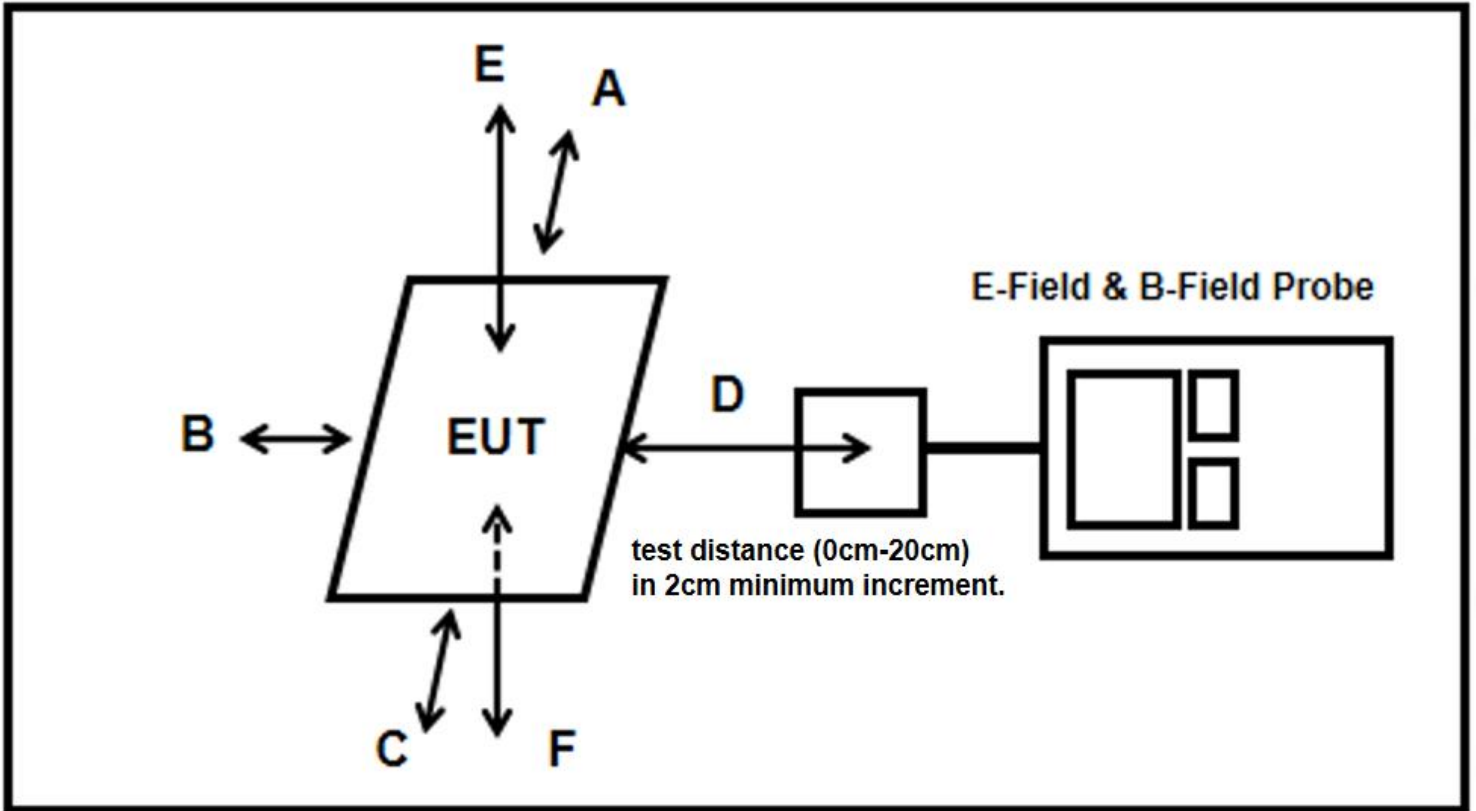
f = frequency in MHz * = Plane-wave equivalent power density

Test Equipment List

Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. (mm-dd-yy)	Next Cal. (mm-dd-yy)
Electric and Magnetic Field Analyzer	Narda	EHP-200A	180ZX11001	2023.3.29	2024.3.28

Test Mode

Test item	Test mode
Radiated&Conducted Test cases	Mode 1: AC/DC Adapter + EUT + Wireless load (Full Load) Mode 2: AC/DC Adapter + EUT + Wireless load (Half Load) Mode 3: AC/DC Adapter + EUT + Wireless load (Null Load) Mode 4: AC/DC Adapter + EUT (Null Load)

Test Setup

Note: Measurements should be made from all sides and the top of the primary/client pair, the test distance of A, B, C, D, E, F side is 0cm to 20cm.

- 1) The RF exposure test was performed in anechoic chamber.
- 2) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E, F) were completed.
- 3) The EUT was measured according to the dictates of KDB 680106 D01 v03.

3.1 Assessment Result

Note: All modes have been tested, and only the worst case Mode 1 shown in the report.

0cm

Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	0	0.4117	1.63
Bottom	0	0.8122	1.63
Front	0	0.3935	1.63
Rear	0	0.1279	1.63
Left	0	0.6225	1.63
Right	0	1.0814	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	0	6.8452	614
Bottom	0	4.5660	614
Front	0	3.3302	614
Rear	0	1.5856	614
Left	0	1.9859	614
Right	0	3.5293	614

2cm

Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	2	0.3687	1.63
Bottom	2	0.7931	1.63
Front	2	0.3324	1.63
Rear	2	0.8647	1.63
Left	2	0.5798	1.63
Right	2	1.0304	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	2	6.0036	614
Bottom	2	4.0974	614
Front	2	3.0347	614
Rear	2	1.3214	614
Left	2	1.5647	614
Right	2	3.1123	614

4cm
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	4	0.3346	1.63
Bottom	4	0.4697	1.63
Front	4	0.3164	1.63
Rear	4	0.8031	1.63
Left	4	0.5049	1.63
Right	4	1.0247	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	4	5.4789	614
Bottom	4	3.6479	614
Front	4	2.8647	614
Rear	4	1.2479	614
Left	4	1.1467	614
Right	4	2.3478	614

6cm
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	6	0.2894	1.63
Bottom	6	0.3967	1.63
Front	6	0.2967	1.63
Rear	6	0.7564	1.63
Left	6	0.4791	1.63
Right	6	0.8947	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	6	5.0145	614
Bottom	6	2.9874	614
Front	6	2.3475	614
Rear	6	1.2001	614
Left	6	0.9574	614
Right	6	1.6478	614

8cm
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	8	0.2014	1.63
Bottom	8	0.2478	1.63
Front	8	0.1135	1.63
Rear	8	0.6214	1.63
Left	8	0.3514	1.63
Right	8	0.7621	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	8	3.2145	614
Bottom	8	2.0145	614
Front	8	1.9541	614
Rear	8	0.9641	614
Left	8	0.8864	614
Right	8	1.0647	614

10cm
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	10	0.1245	1.63
Bottom	10	0.1647	1.63
Front	10	0.867	1.63
Rear	10	0.4687	1.63
Left	10	0.1964	1.63
Right	10	0.4321	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	10	2.3214	614
Bottom	10	1.6987	614
Front	10	1.6178	614
Rear	10	0.8461	614
Left	10	0.6748	614
Right	10	0.8641	614

12cm
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	12	0.1026	1.63
Bottom	12	0.1039	1.63
Front	12	0.4987	1.63
Rear	12	0.4214	1.63
Left	12	0.1698	1.63
Right	12	0.2687	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	12	1.9541	614
Bottom	12	1.3014	614
Front	12	1.2647	614
Rear	12	0.6874	614
Left	12	0.4967	614
Right	12	0.6947	614

14cm
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	14	0.0899	1.63
Bottom	14	0.0786	1.63
Front	14	0.1647	1.63
Rear	14	0.1674	1.63
Left	14	0.0967	1.63
Right	14	0.1952	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	14	1.0254	614
Bottom	14	0.8647	614
Front	14	0.5895	614
Rear	14	0.5697	614
Left	14	0.3847	614
Right	14	0.2598	614

16cm
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	16	0.0349	1.63
Bottom	16	0.0244	1.63
Front	16	0.0285	1.63
Rear	16	0.0193	1.63
Left	16	0.0168	1.63
Right	16	0.0200	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	16	0.6358	614
Bottom	16	0.2176	614
Front	16	0.3494	614
Rear	16	0.2591	614
Left	16	0.3717	614
Right	16	0.2471	614

18cm
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	18	0.0269	1.63
Bottom	18	0.0204	1.63
Front	18	0.0215	1.63
Rear	18	0.0175	1.63
Left	18	0.0146	1.63
Right	18	0.0178	1.63

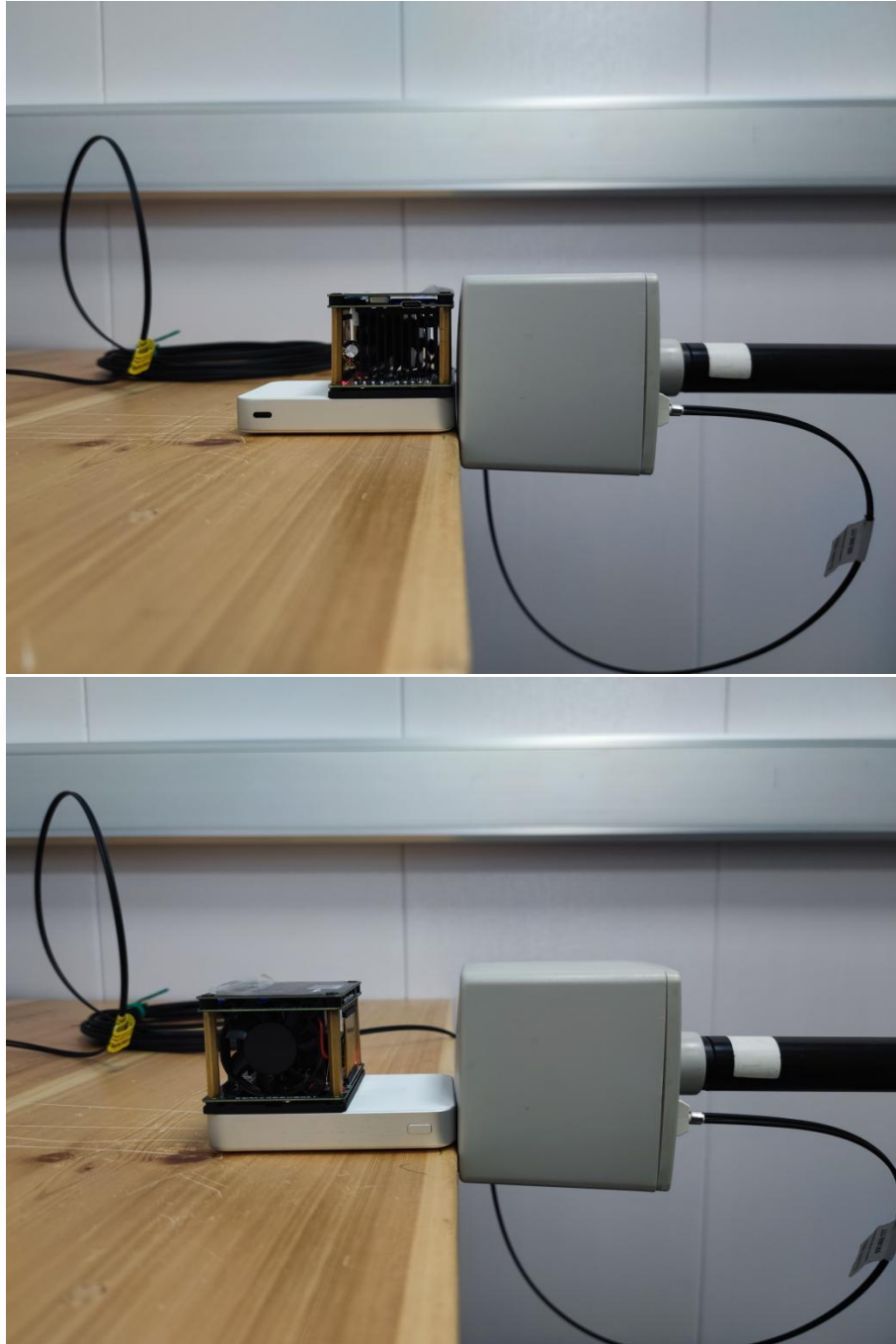
Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	18	0.5958	614
Bottom	18	0.2084	614
Front	18	0.2934	614
Rear	18	0.2042	614
Left	18	0.3469	614
Right	18	0.2049	614

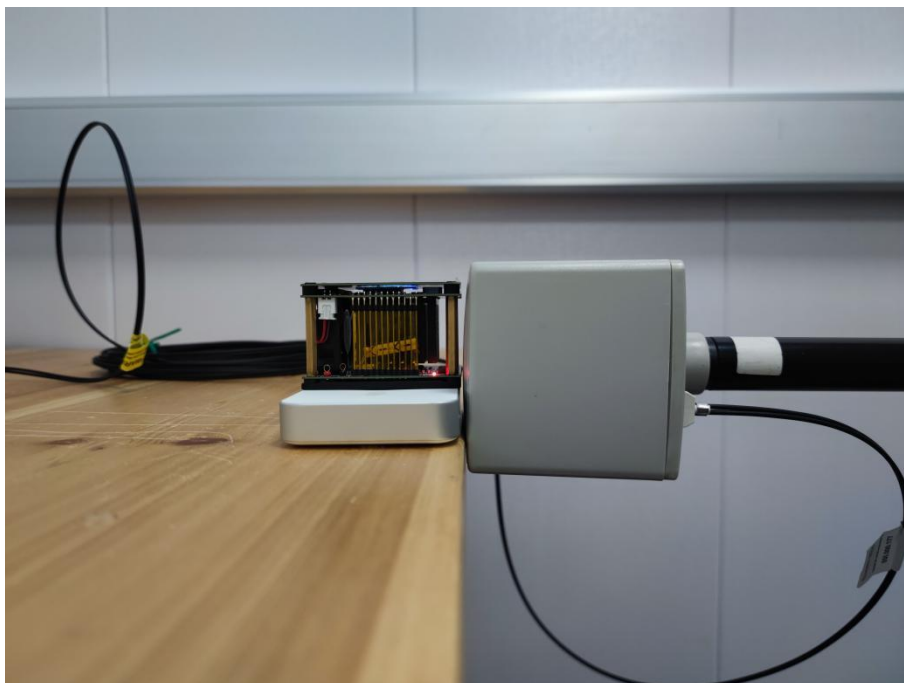
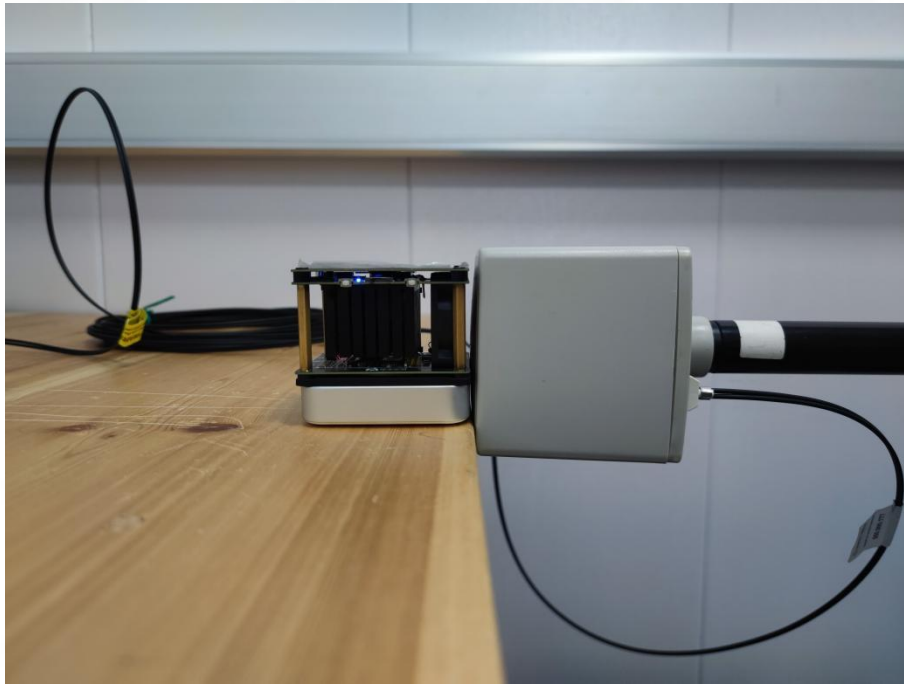
20cm
Magnetic Field Strength Measurement

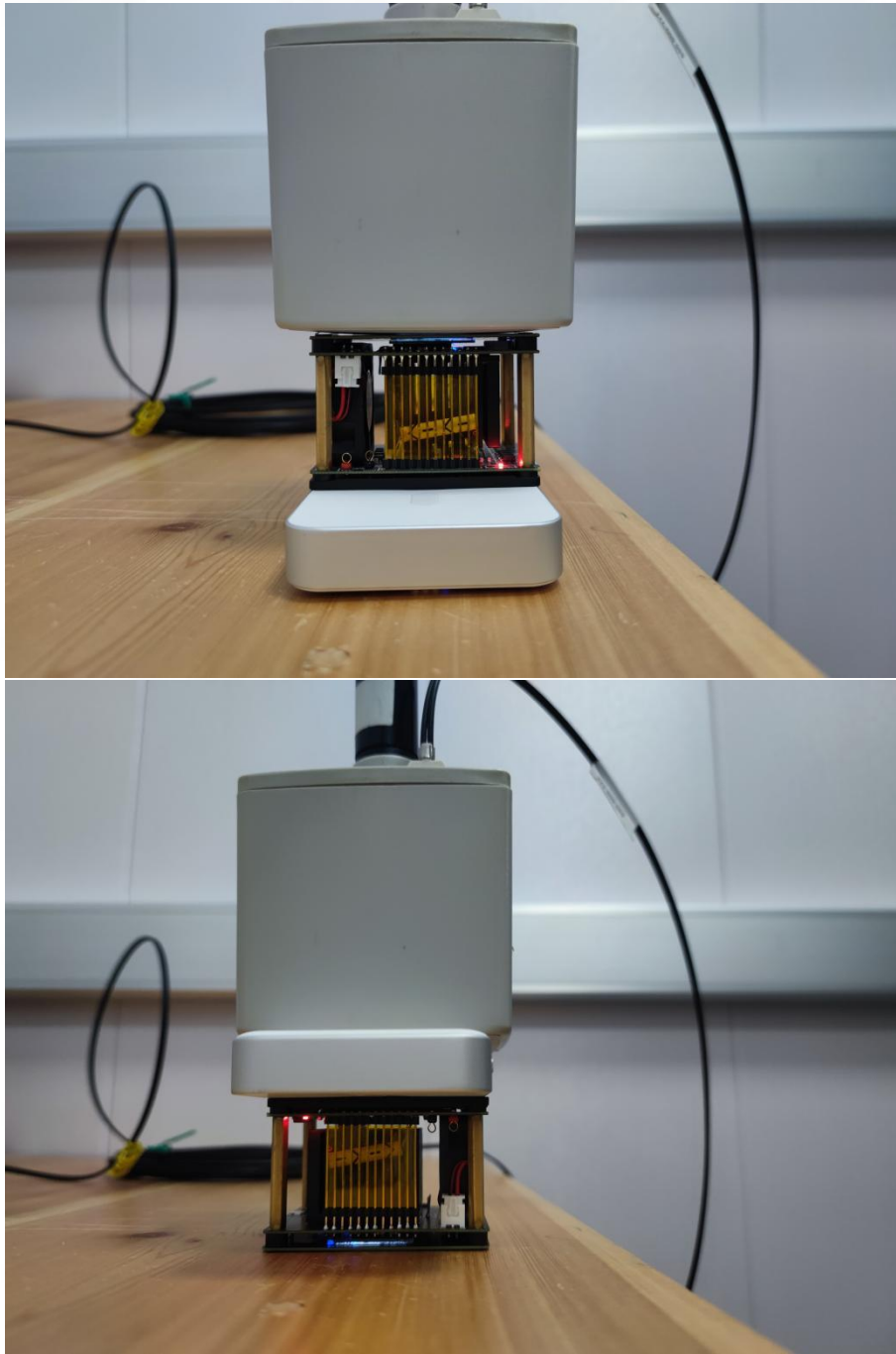
Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	20	0.0189	1.63
Bottom	20	0.0134	1.63
Front	20	0.0167	1.63
Rear	20	0.0126	1.63
Left	20	0.0107	1.63
Right	20	0.0112	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	20	0.5467	614
Bottom	20	0.1874	614
Front	20	0.2654	614
Rear	20	0.1764	614
Left	20	0.2967	614
Right	20	0.1697	614

3.2 Test Set-up Photo









Test Report Number: BTF231227R00102



BTF Testing Lab (Shenzhen) Co., Ltd.

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Bao'an District, Shenzhen, China

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