



# 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:** MagStall Power Bank  
**Brand Name:** TORRAS  
**Model Number:** PB-P051-01

## Issued By

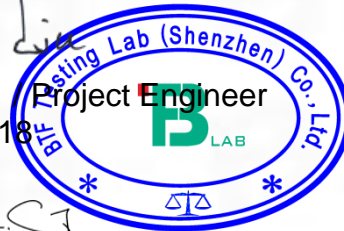
**Company Name:** BTF Testing Lab (Shenzhen) Co., Ltd.  
**Address:** F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park,  
Tantou Community, Songgang Street, Bao'an District, Shenzhen,  
China

**Report Number:** BTF230905R00202  
**Test Standards:** 47 CFR Part 1 Subpart I Section 1.1310  
**FCC ID:** 2AN4Y-PB-P051-01  
**Test Conclusion:** Pass  
**Test Date:** 2023-09-05 to 2023-09-15  
**Date of Issue:** 2023-09-18

**Prepared By:**

*Chris Liu*

Chris Liu / Project Engineer  
2023-09-18



**Date:**

**Approved By:**

*Ryan.CJ*

Ryan.CJ / EMC Manager  
2023-09-18

**Date:**

*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	2023-09-18	Original
<i>Note:</i>	<i>Once the revision has been made, then previous versions reports are invalid.</i>	

## Table of Contents

1.	Introduction.....	4
1.1	Identification of Testing Laboratory .....	4
1.2	Identification of the Responsible Testing Location.....	4
1.3	Laboratory Condition .....	4
1.4	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
3.	Test Requirement.....	6
3.1	Assessment Result .....	8
3.2	Test Set-up Photo.....	14

## 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	MagStall Power Bank
Under Test Model Name	PB-P051-01
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	WZ-2407-V2
Software and Firmware Version	N/A

### 3. Test Requirement

KDB 680106 D01 RF Exposure Wireless Charging App v03

According to the item 5.2 of KDB 680106 D01v03:

Inductive wireless power transfer applications that meet all of the following requirements are excluded from submitting an RF exposure evaluation.

- a) Power transfer frequency is less than 1 MHz.  
Yes, the device operate in the frequency range from 110-205KHz
- b) Output power from each primary coil is less than or equal to 15 watts.  
YES, the maximum output power of the primary coil is 5W.
- c) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils  
Yes, the transfer system includes only single primary and secondary coils
- d) Client device is placed directly in contact with the transmitter.  
Yes, client device is placed directly in contact with the transmitter.
- e) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).  
Yes, the EUT is a Wireless Charging mobile.
- f) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.  
Yes, the EUT field strength levels are 50% X MPE limit.

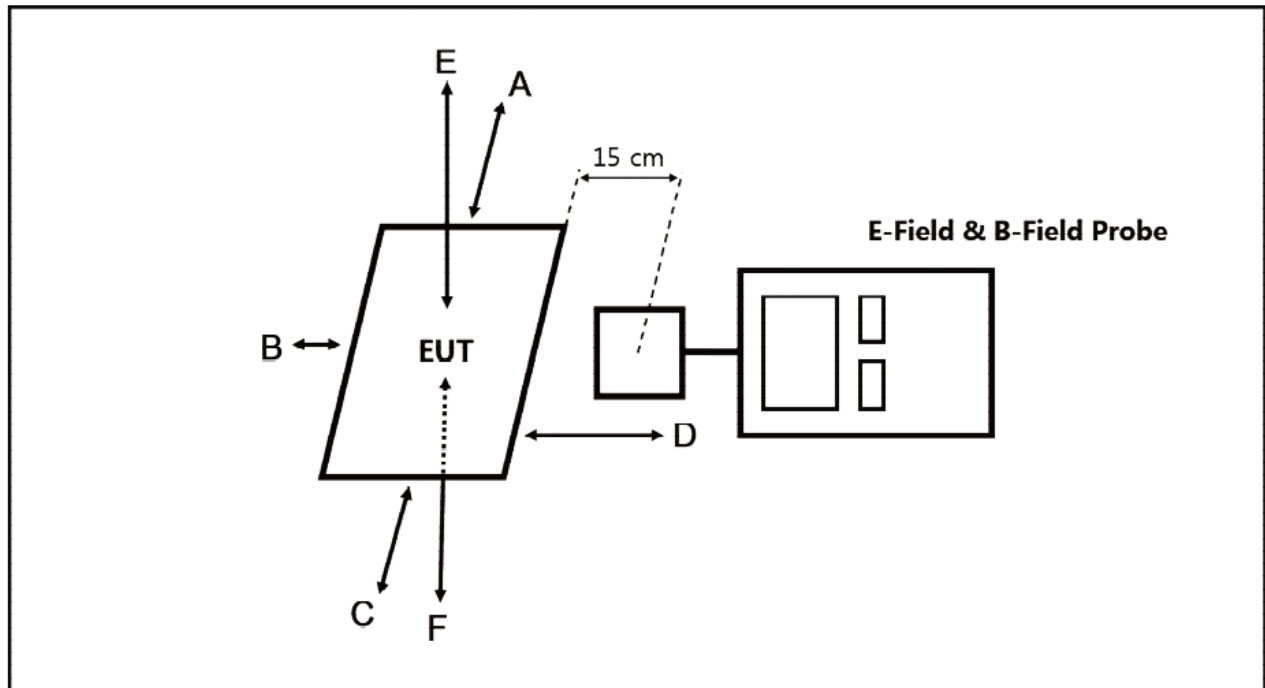
TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposure</b>				
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
300-1,500			f/300	6
1,500-100,000			5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
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
300-1,500			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 Setup**

Note: Measurements should be made from all sides and the top of the primary/client pair, with the 15cm measured from the center of the probe(s) to the edge of the device.

- 1) The RF exposure test was performed in anechoic chamber.
- 2) The measurement probe was placed at test distance (15cm) which is between the edge of the charger and the geometric center of probe.
- 3) 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.
- 4) The EUT was measured according to the dictates of KDB 680106 D01 v03.

### 3.1 Assessment Result

**Passed**       **Not Applicable**

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	0.3772	1.63
Bottom	0	0.2269	1.63
Front	0	0.2091	1.63
Rear	0	1.2125	1.63
Left	0	0.8191	1.63
Right	0	0.8844	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	0	6.214	614
Bottom	0	5.2827	614
Front	0	1.1254	614
Rear	0	3.1342	614
Left	0	2.374	614
Right	0	2.855	614

2cm  
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	2	0.3012	1.63
Bottom	2	0.1005	1.63
Front	2	0.0687	1.63
Rear	2	0.2269	1.63
Left	2	0.2329	1.63
Right	2	0.3256	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	2	5.6478	614
Bottom	2	2.0074	614
Front	2	0.9303	614
Rear	2	2.1399	614
Left	2	1.2907	614
Right	2	1.4077	614



4cm  
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	4	0.2994	1.63
Bottom	4	0.0711	1.63
Front	4	0.0244	1.63
Rear	4	0.1582	1.63
Left	4	0.1105	1.63
Right	4	0.171	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	4	5.2645	614
Bottom	4	1.183	614
Front	4	0.6086	614
Rear	4	1.0648	614
Left	4	0.7087	614
Right	4	0.8287	614

6cm  
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	6	0.2021	1.63
Bottom	6	0.0439	1.63
Front	6	0.0211	1.63
Rear	6	0.1467	1.63
Left	6	0.1234	1.63
Right	6	0.1632	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	6	2.8395	614
Bottom	6	0.7969	614
Front	6	0.5783	614
Rear	6	1.0023	614
Left	6	0.6973	614
Right	6	0.7834	614

8cm  
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	8	0.1146	1.63
Bottom	8	0.0426	1.63
Front	8	0.0201	1.63
Rear	8	0.1389	1.63
Left	8	0.1198	1.63
Right	8	0.1542	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	8	1.9871	614
Bottom	8	0.6693	614
Front	8	0.5435	614
Rear	8	0.9876	614
Left	8	0.6738	614
Right	8	0.7021	614

10cm  
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	10	0.0771	1.63
Bottom	10	0.0335	1.63
Front	10	0.0184	1.63
Rear	10	0.1145	1.63
Left	10	0.1003	1.63
Right	10	0.1487	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	10	1.5354	614
Bottom	10	0.5705	614
Front	10	0.4387	614
Rear	10	0.8432	614
Left	10	0.5987	614
Right	10	0.6933	614

12cm  
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	12	0.053	1.63
Bottom	12	0.0296	1.63
Front	12	0.0156	1.63
Rear	12	0.1034	1.63
Left	12	0.287	1.63
Right	12	0.1366	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	12	1.0789	614
Bottom	12	0.7372	614
Front	12	0.3282	614
Rear	12	0.7843	614
Left	12	0.5623	614
Right	12	0.5932	614

14cm  
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	14	0.0368	1.63
Bottom	14	0.0205	1.63
Front	14	0.0144	1.63
Rear	14	0.1021	1.63
Left	14	0.2343	1.63
Right	14	0.1298	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	14	0.8306	614
Bottom	14	0.7337	614
Front	14	0.2289	614
Rear	14	0.6539	614
Left	14	0.4332	614
Right	14	0.5201	614

16cm  
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	16	0.0303	1.63
Bottom	16	0.0153	1.63
Front	16	0.0136	1.63
Rear	16	0.0995	1.63
Left	16	0.0967	1.63
Right	16	0.1201	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	16	0.6536	614
Bottom	16	0.5832	614
Front	16	0.2012	614
Rear	16	0.5839	614
Left	16	0.3893	614
Right	16	0.4998	614

18cm  
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	18	0.023	1.63
Bottom	18	0.02	1.63
Front	18	0.0123	1.63
Rear	18	0.0876	1.63
Left	18	0.0876	1.63
Right	18	0.1109	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	18	0.554	614
Bottom	18	0.6559	614
Front	18	0.1932	614
Rear	18	0.5543	614
Left	18	0.3654	614
Right	18	0.3867	614

20cm  
Magnetic Field Strength Measurement

Test Position	Distance (cm)	Measured Value(A/m)	Limit(A/m)
Top	20	0.023	1.63
Bottom	20	0.0193	1.63
Front	20	0.0157	1.63
Rear	20	0.0832	1.63
Left	20	0.0849	1.63
Right	20	0.1002	1.63

Test Position	Distance (cm)	Measured Value(V/m)	Limit(V/m)
Top	20	0.561	614
Bottom	20	0.5929	614
Front	20	0.1467	614
Rear	20	0.4987	614
Left	20	0.0306	614
Right	20	0.2691	614

According to October 2018 TCB workshop. Only H-field required.

### 3.2 Test Set-up Photo





Test Report Number: BTF230905R00202



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F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street,  
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**--END OF REPORT--**