



RF Exposure Report

For

Applicant Name: DONGGUAN CHENGXIANG INDUSTRIAL CO.,LTD
Address: Southwest of Tai Yuen Industrial Zone Shi jie Town,Dongguan City,Guangdong Province,China
EUT Name: MAGNETIC WIRELESS CHARGER WITH POWER BANK
Brand Name: ADPROTECH, AAPROMAX
Model Number: CX-ASM-M001
Series Model Number: Refer to section 2

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: BTF230712R00402
Test Standards: 47 CFR Part 15 Subpart C
FCC ID: 2BBZC-CX-M001
Test Conclusion: Pass
Test Date: 2023-07-10 to 2023-07-18
Date of Issue: 2023-07-21

Prepared By:

Elma. Yang / Project Engineer

Date:

2023-07-21

Approved By:

Ryan CJ / EMC Manager

Date:

2023-07-21

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	2023-07-21	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:	DONGGUAN CHENGXIANG INDUSTRIAL CO.,LTD
Address:	Southwest of Tai Yuen Industrial Zone Shi jie Town,Dongguan City,Guangdong Province,China

2.2 Manufacturer Information

Company Name:	DONGGUAN CHENGXIANG INDUSTRIAL CO.,LTD
Address:	Southwest of Tai Yuen Industrial Zone Shi jie Town,Dongguan City,Guangdong Province,China

2.3 Factory Information

Company Name:	DONGGUAN CHENGXIANG INDUSTRIAL CO.,LTD
Address:	Southwest of Tai Yuen Industrial Zone Shi jie Town,Dongguan City,Guangdong Province,China

2.4 General Description of Equipment under Test (EUT)

EUT Name	MAGNETIC WIRELESS CHARGER WITH POWER BANK
Under Test Model Name	CX-ASM-M001
Series Model Name	CX-ASM-MC002, CX-ASM-MC003, PPBA1001, PPBA1002, PPBA1003, A0302010, A0302019, A0302020
Description of Model name differentiation	Since according to the declaration from the applicant, the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only different on model.
Hardware Version	NA
Software and Firmware Version	NA

2.5 Technical Information

Modulation Type	FSK
Frequency Range	The frequency block is 111.0 KHz to 205.0KHz.
Antenna Type	Coil antenna

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.

- Power transfer frequency is less than 1 MHz.
Yes, the device operate in the frequency range from 111-205KHz
- 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.
- 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
- Client device is placed directly in contact with the transmitter.
Yes, client device is placed directly in contact with the transmitter.
- Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
Yes, the EUT is a Wireless Charging mobile.
- 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)

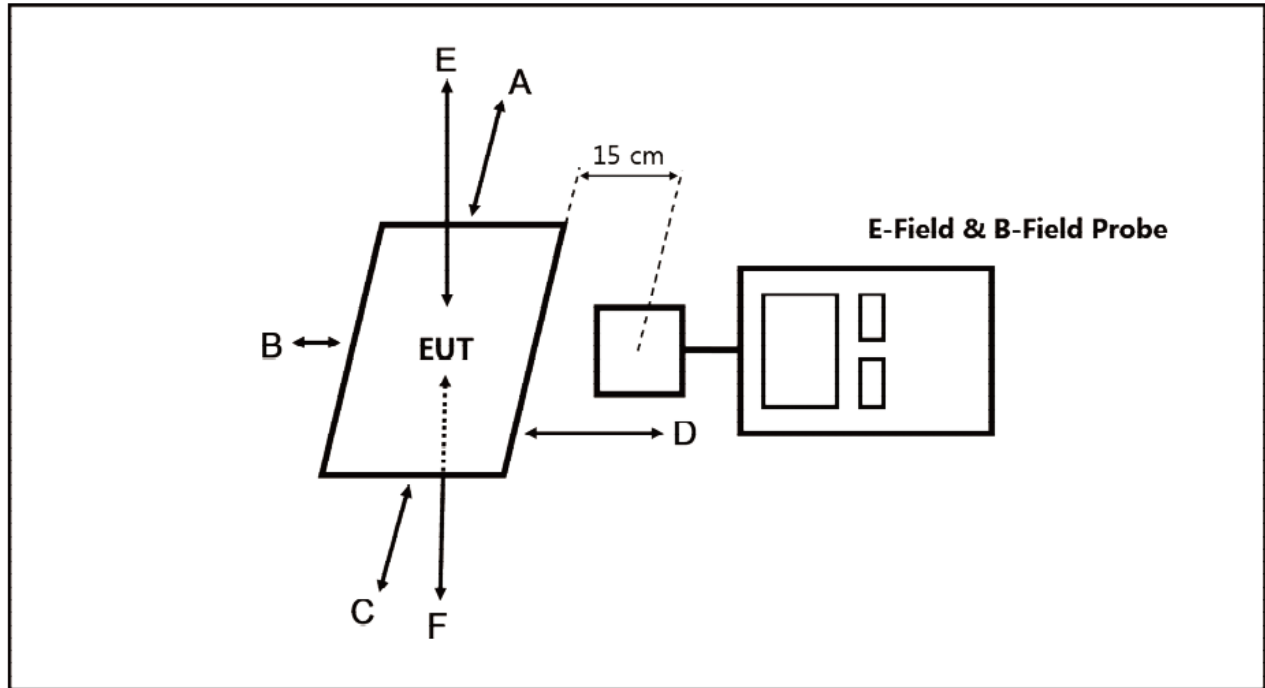
Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	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	2023.2.25	2024.2.24

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.

1.1 Assessment Result

☒ Passed ☐ Not Applicable

Note: All test modes were pre-tested, but we only recorded the worst case in this report.

Test distance: 15cm from the top of the EUT

Magnetic Field Emissions					
Test Position	Measure Value (A/m)				Limit(A/m)
	X	Y	Z	Max. Value	
Top	0.0279	0.0284	0.0312	0.0506	1.63
Front	0.0284	0.0186	0.0306	0.0457	1.63
Rear	0.0213	0.0252	0.0244	0.0410	1.63
Left	0.0211	0.024	0.0221	0.0389	1.63
Right	0.0178	0.0209	0.0169	0.0322	1.63

Test distance: 20cm from the top of the EUT

Magnetic Field Emissions					
Test Position	Measure Value (A/m)				Limit(A/m)
	X	Y	Z	Max. Value	
Top	0.0151	0.0153	0.0194	0.0290	1.63
Front	0.0152	0.0171	0.0165	0.0282	1.63
Rear	0.0154	0.0151	0.0153	0.0264	1.63
Left	0.0155	0.0152	0.0152	0.0265	1.63
Right	0.0104	0.0101	0.0102	0.0177	1.63

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

Note: All test modes were pre-tested, but we only recorded the worst case in this report.

1.2 Test Set-up Photo

Top 20cm



Top 15cm



Front 15cm



Rear 15cm



Left 15cm



Right 15cm





Test Report Number: BTF230712R00402



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