




TEST REPORT

FCC ID.	2A4MTZHX-WPB03	
Test Report No.	TCT220217E026	
Date of issue	Feb. 28, 2022	
Testing laboratory	SHENZHEN TONGCE TESTING LAB	
Testing location/ address:	TCT Testing Industrial Park Fuqiao 5th Industrial Zone, Fuhai Street, Bao'an District Shenzhen, Guangdong, 518103, People's Republic of China	
Applicant's name	Shenzhen Zhenghaixin Technology Co., Ltd.	
Address	Area 301A, No.7 Xiongyu Road, Tangxiachong Community, Yanchuan Street, Baoan District, Shenzhen, China	
Manufacturer's name ...	Shenzhen Zhenghaixin Technology Co., Ltd.	
Address	Area 301A, No.7 Xiongyu Road, Tangxiachong Community, Yanchuan Street, Baoan District, Shenzhen, China	
Standard(s)	FCC CFR Title 47 Part 1.1310 KDB 680106 D01 RF Exposure Wireless Charging App v03r01	
Test item description	Wireless Power Bank	
Trade Mark	N/A	
Model/Type reference	ZHX-WPB03	
Rating(s)	Rechargeable Li-ion Battery DC 3.7V	
Date of receipt of test item	Feb. 17, 2022	
Date (s) of performance of test	Feb. 17, 2022 - Feb. 28, 2022	
Tested by (+signature) ...	Aaron MO	
Check by (+signature)	Beryl ZHAO	
Approved by (+signature):	Tomsin	



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1. General Product Information

1.1. EUT description

Test item description	Wireless Power Bank
Model/Type reference.....	ZHX-WPB03
Sample Number.....	TCT220217E025-0101
Operation Frequency	324.34kHz
Modulation Technology	Load modulation
Max. Wireless Output Power:	3W
Antenna Type.....	Inductive loop coil Antenna
Rating(s).....	Rechargeable Li-ion Battery DC 3.7V

Note: The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.

1.2. Model(s) list

None.

2. Facilities and Accreditations

2.1. Facilities

The test facility is recognized, certified, or accredited by the following organizations:

- FCC - Registration No.: 645098

SHENZHEN TONGCE TESTING LAB

Designation Number: CN1205

The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- IC - Registration No.: 10668A-1

SHENZHEN TONGCE TESTING LAB

CAB identifier: CN0031

The testing lab has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing.

2.2. Location

SHENZHEN TONGCE TESTING LAB

Address: TCT Testing Industrial Park Fuqiao 5th Industrial Zone, Fuhai Street, Bao'an District Shenzhen, Guangdong, 518103, People's Republic of China

TEL: +86-755-27673339

3. Technical Requirements Specification

3.1. Requirements

According to the item 5 of KDB 680106 D01 RF Exposure Wireless Charging App v03r01:

- (1) Power transfer frequency is less than 1 MHz.
Yes
- (2) Output power from each primary coil is less than or equal to 15 watts.
Yes
- (3) The system may consist of more than one source primary coils, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time.
Yes
- (4) Client device is placed directly in contact with the transmitter.
Yes
- (5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
No
(Note: According to April 2018 TCB Workshop, for inductive applications where the primary does not physically attach (clip, lock on) to the client, and it is intended for desktop use, the desktop guidance in KDB 680106 D01 may be applied.)
- (6) 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

Limits

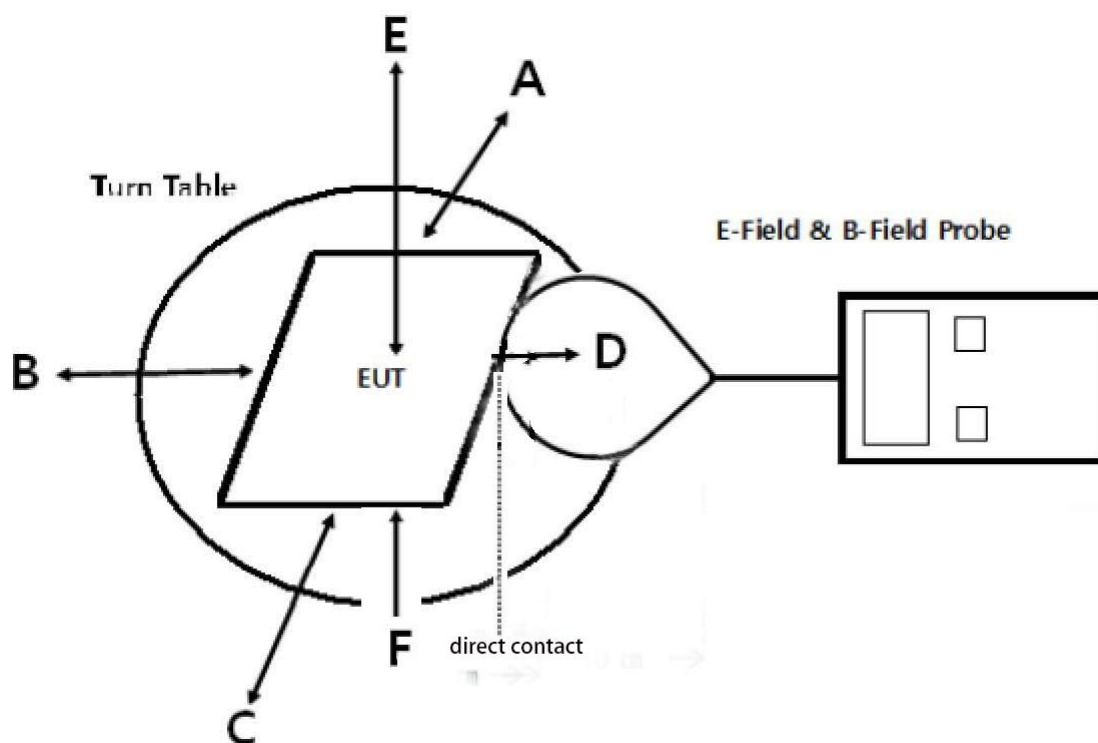
The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

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

F=frequency in MHz
 *=Plane-wave equivalent power density
 RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

3.2. Test Setup



Note: Measurements should be made from all sides of the primary/client pair, with the 0cm measured from the center of the probe(s) to the edge of the device.

3.3. Test Procedure

1. The RF exposure test was performed in anechoic chamber.
2. The measurement probe was placed at 0cm surrounding the device
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 D01v03.

Remark;

The EUT's test position A, B, C, D, F and E is valid for the H field measurements.

4.1. Test Instruments List

Equipment	Manufacturer	Model No.	Calibration Due
Magnetic field meter	NARDA	ELT-400	Mar. 07, 2022
Load	LHX	LHX901RX	/
Adapter	SAMSUNG	EP-TA20CBC	/

4.2. Test Result

Note: EUT mode: wireless output 3 W

Note: Internal battery power mode

H-Filed Strength at 0mm surrounding the EUT (A/m)

Charging Load Worse case	Test Position A (A/m)	Test Position B (A/m)	Test Position C (A/m)	Test Position D (A/m)	Test Position E (A/m)	Test Position F (A/m)	Limits (A/m)
<5%	0.216	0.183	0.194	0.198	0.189	0.191	1.63
50%	0.194	0.181	0.191	0.185	0.187	0.182	1.63
>90 %	0.189	0.174	0.182	0.184	0.176	0.176	1.63

Note: 1. mT to A/m: $A/m = 1000 \cdot mT / 1.25$

2. After pre-testing single coil and double coil in wireless charging mode, it is found that the worst case is double coil and it is reflected in the report.

Note: AC power in mode

H-Filed Strength at 0mm surrounding the EUT (A/m)

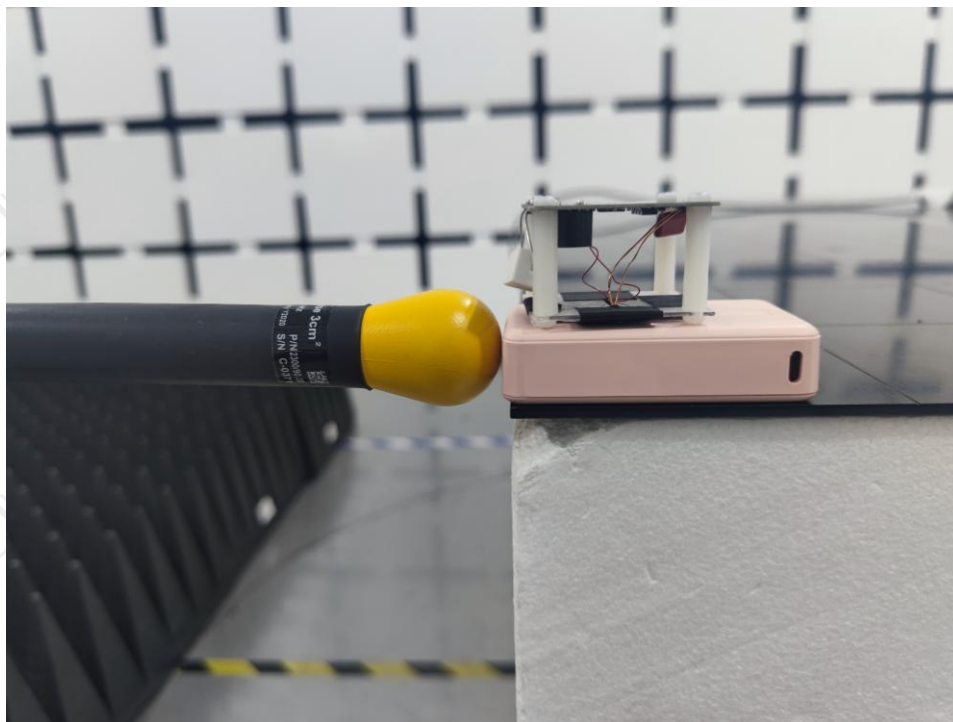
Charging Load Worse case	Test Position A(A/m)	Test Position B(A/m)	Test Position C(A/m)	Test Position D(A/m)	Test Position E(A/m)	Test Position F(A/m)	Limits (A/m)
<5%	0.214	0.198	0.196	0.196	0.184	0.195	1.63
50%	0.186	0.184	0.193	0.188	0.175	0.188	1.63
>90 %	0.187	0.174	0.187	0.185	0.179	0.186	1.63

Note: 1. mT to A/m: $A/m = 1000 \cdot mT / 1.25$

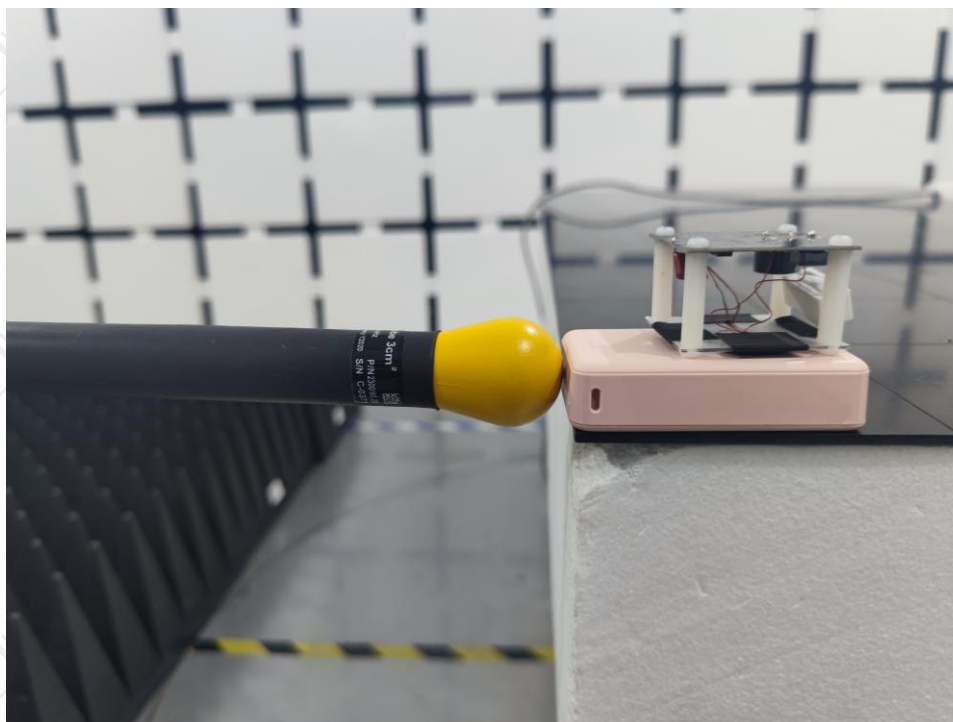
2. After pre-testing single coil and double coil in wireless charging mode, it is found that the worst case is double coil and it is reflected in the report.

Test Set-up Photo

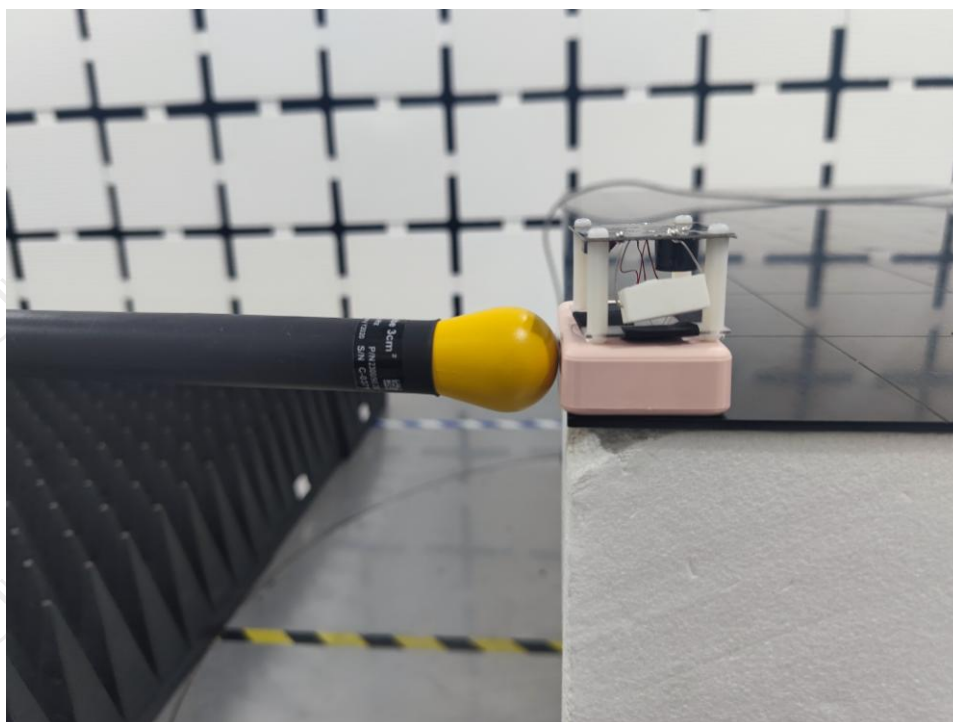
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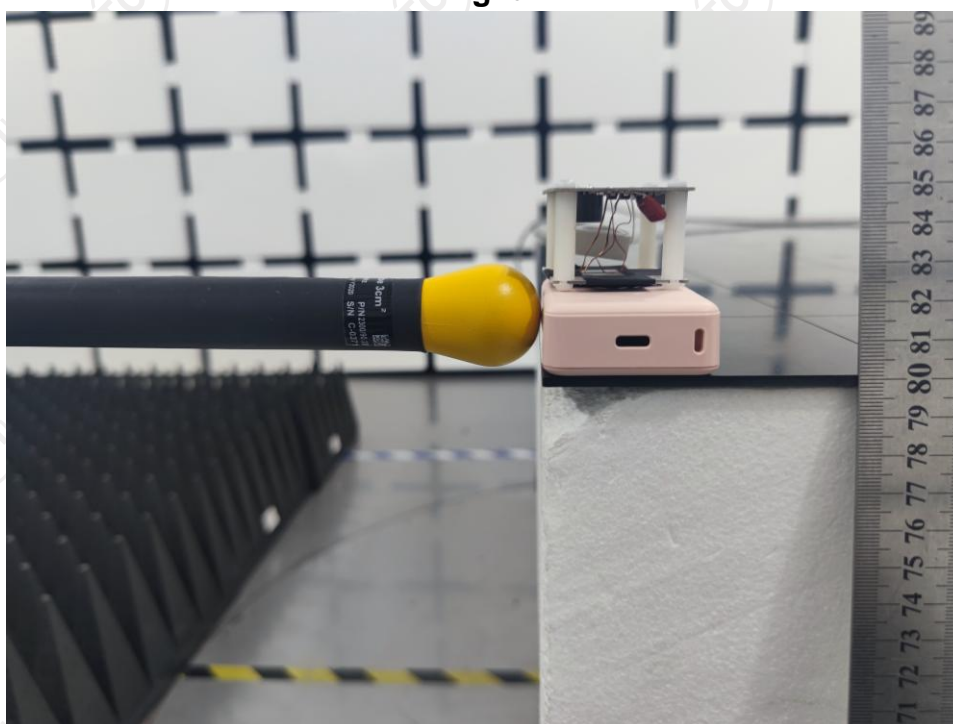
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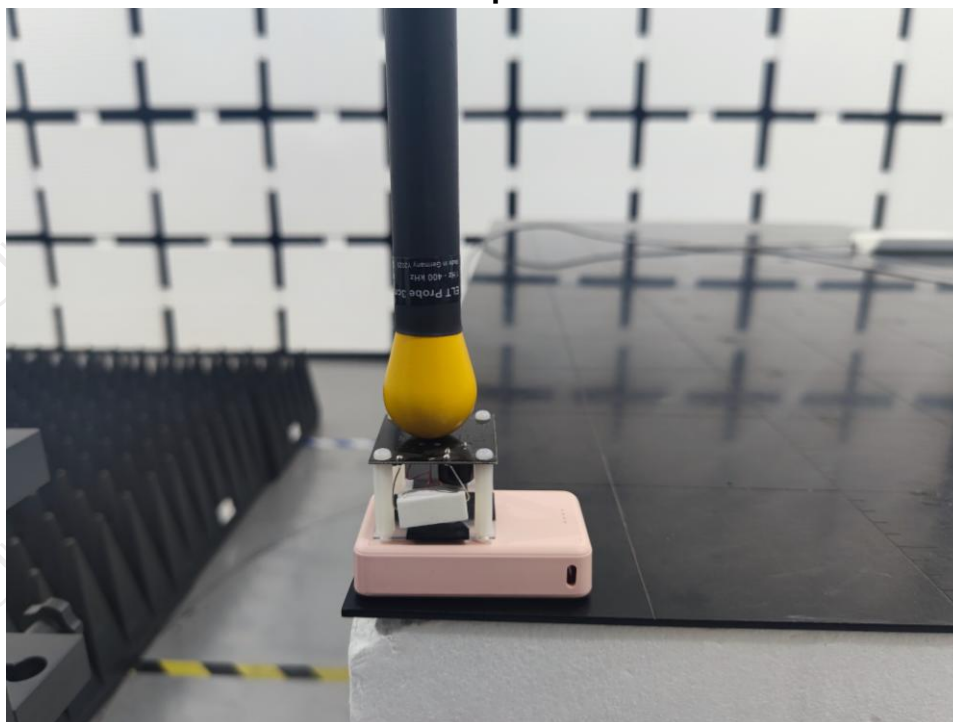
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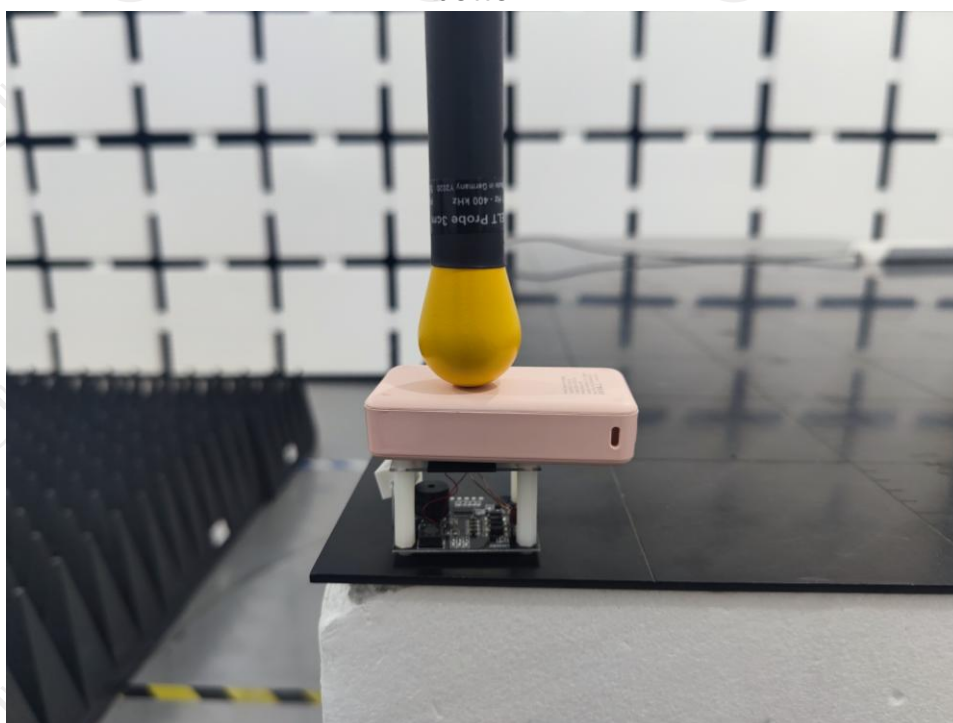
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top



bottom



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