RF Exposure Evaluation
FCC ID: 2BGC4-CX1

Report No.....	: ZHT-251011110W01-2
Product.....	: Magnetic Power Bank
Trademark.....	: /
Model(s).....	: CX1
Model Difference.....	: /
Applicant.....	: Shenzhenshi shunjingyuan yishusheji youxiangongsi
Address.....	: Shenzhenshi longgangqu longgangjiedao tongxinshequ tongxinlu85hao zonghelou7lou China
Manufacturer.....	: Shenzhenshi shunjingyuan yishusheji youxiangongsi
Address.....	: Shenzhenshi longgangqu longgangjiedao tongxinshequ tongxinlu85hao zonghelou7lou China
Prepared by.....	: Guangdong Zhonghan Testing Technology Co., Ltd.
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Date of Receipt.....	: Oct. 11, 2025
Date of Test(s).....	: Oct. 11, 2025 to Oct. 21, 2025
Date of Issue.....	: Oct. 23, 2025
Test Standard(s).....	: KDB 680106 D01 Wireless Power Transfer v04

In the configuration tested, the EUT complied with the standards specified above.

Prepared by:	Reviewed by:	Approved by:
Kimi Lu	Baret.Wu	Levi Lee
Kimi Lu/ Engineer	Baret Wu/ Director	Levi Lee/ Manager

Note: The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This test report shall not be reproduced except in full, without prior written approval of ZHT. This document may be altered or revised by ZHT, personnel only, and shall be noted in the revision of the document.

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1. GENERAL INFORMATION

1.1. GENERAL DESCRIPTION OF EUT

Product Name:	Magnetic Power Bank
Test Model No.:	CX1
Hardware version:	V1.0
Software version:	V1.0
Operation Frequency:	Phone: 110.1-205 KHz, 350-370 KHz Earphone: 110.1-205 KHz Watch: 320-345 KHz
Modulation type:	ASK
Antenna Type:	Inductive loop coil Antenna
Antenna gain:	0dBi
Ratings:	Battery capacity: DC 3.85 V/10000 mAh/ 38.5 Wh Tpye-C Input: 5 V⎓3 A/ 9 V⎓2 A/ 12 V⎓1.5 A Tvoe-C Input cable: 5 V⎓2 A/ 9 V⎓2 A/ 12 V⎓1.5 A Tpye-C Output: 5 V⎓3 A/ 9 V⎓2.22 A/ 10 V⎓2.25 A/ 12 V⎓1.67 A(22.5 W) Type-C Output cable: 5 V⎓3 A/ 9 V⎓2.22 A/ 10 V⎓2.25 A/ 12 V⎓1.67 A (22.5W) Lightning Output: 5 V⎓2.4 A Wireless charging output: 5 W/7.5 W/10 W/15 W Earphone Output: 2.5 W(max) Watch Output: 3 W(max)
Sample Number:	251011110YP001
Remark:The antenna gain is provided by the customer, if the data provided by the customer is not accurate, Guangdong Zhonghan Testing Technology Co., Ltd. does not assume any responsibility.	

1.2. TEST MODES

Test Modes:	
Mode 1	AC Mains + Watch charging port (Battery Status:≤1%)
Mode 2	AC Mains + Watch charging port (Battery Status:50%)
Mode 3	AC Mains + Watch charging port (Battery Status:≥98%)
Mode 4	Watch charging port (Battery Status:≤1%)
Mode 5	Watch charging port (Battery Status:50%)
Mode 6	Watch charging port (Battery Status:≥98%)
Mode 7	AC Mains + Earphone charging port (Battery Status:≤1%)
Mode 8	AC Mains + Earphone charging port (Battery Status:50%)
Mode 9	AC Mains + Earphone charging port (Battery Status:≥98%)
Mode 10	Earphone charging port (Battery Status:≤1%)
Mode 11	Earphone charging port (Battery Status:50%)
Mode 12	Earphone charging port (Battery Status:≥98%)
Mode 13	AC Mains + Phone charging port (Battery Status:≤1%) -110.1-205KHz
Mode 14	AC Mains + Phone charging port (Battery Status:50%) -110.1-205KHz
Mode 15	AC Mains + Phone charging port (Battery Status:≥98%) -110.1-205KHz
Mode 16	Phone charging port (Battery Status:≤1%) -110.1-205KHz
Mode 17	Phone charging port (Battery Status:50%) -110.1-205KHz
Mode 18	Phone charging port (Battery Status:≥98%) -110.1-205KHz
Mode 19	AC Mains + Phone charging port (Battery Status:≤1%) -350-370KHz
Mode 20	AC Mains + Phone charging port (Battery Status:50%) -350-370KHz
Mode 21	AC Mains + Phone charging port (Battery Status:≥98%) -350-370KHz
Mode 22	Phone charging port (Battery Status:≤1%) -350-370KHz
Mode 23	Phone charging port (Battery Status:50%) -350-370KHz
Mode 24	Phone charging port (Battery Status:≥98%) -350-370KHz
Mode 25	Standby
Note: 1. All test modes has been tested, this report only reflected the worst mode.	

1.3. AUXILIARY EQUIPMENT

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	AC Adapter	Xiaomi	MDY-08-EH	/	AE
E-2	Apple watch	Apple Inc.	ultra 2	/	AE
E-3	Earphone	Apple Inc.	A2031	/	AE
E-4	Mobile phone	Xiaomi Communications Co., Ltd.	Xiaomi 13	/	AE

2. RF EXPOSURE TEST

2.1. MEASURING STANDARD

KDB 680106 D01 Wireless Power Transfer v04

2.2. REQUIREMENTS

According to the item 5 of KDB 680106 D01 v04:

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

Requirements of section 3 of KDB 680106 D01	Yes/ No	Description
Mobile Device and Portable Device Configurations	Yes	Portable Device
Equipment Authorization Procedures for Devices Operating at Frequencies Below 4 MHz	Yes	The device operate in the frequency range: Watch: 320-345KHz Phone: 110.1-205KHz, 350-370KHz Earphone: 110.1-205KHz.
RF Exposure compliance may be ensured only for a minimum conditions at smaller distances can still be considered unlikely.separation distance that is greater than 20 cm, while use conditions at smaller distances can still be considered unlikely.	No	The EUT H-field and E-field strengths at 0 cm surrounding the device.

2.3. 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)

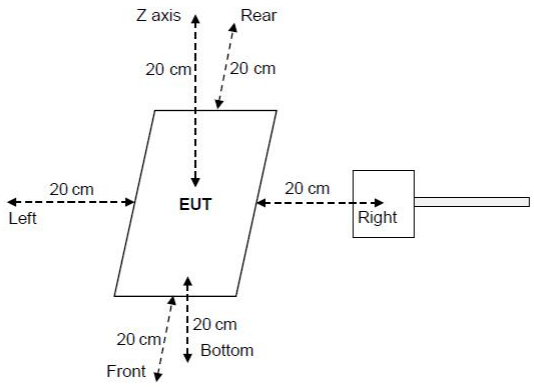
Limits for Maximum Permissible Exposure (MPE)

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

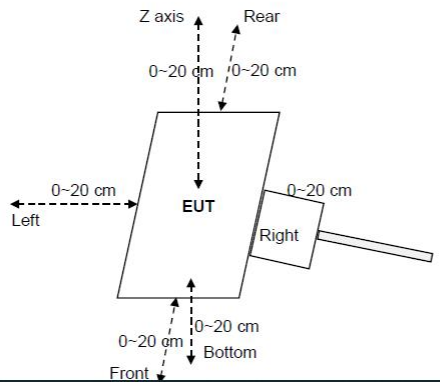
F=frequency in MHz
*=Plane-wave equivalent power density
RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

2.4. TEST SETUP

For mobile exposure conditions:



For portable exposure conditions:



2.5. TEST PROCEDURE

1) The RF exposure test was performed in anechoic chamber.

2) The measurement probe was placed at test distance (0/2/4/6/8/10/12/14/16/18/20cm) 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) were completed.

4) The EUT was measured according to the dictates of KDB 680106 D01 v04.

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

2.6. MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	H-field	0.7dB
2	E-field	1.06dB

Decision Rule

☒ Uncertainty is not included

☐ Uncertainty is included

2.7. TEST INSTRUMENTS LIST

Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Next Cal.
Near-field Electric and Electric Field Sensor System	Schmid & Partner Engineering AG	MAGPy-8H3D+E3D V2	3127	September 09, 2025	September 08, 2026
Near-field Electric and Electric Field Sensor System	Schmid & Partner Engineering AG	MAGPy-DASV2	3121	September 09, 2025	September 08, 2026

2.8. TEST RESULT

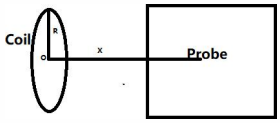
We have evaluated mode 1 to mode 25 and the worst mode 16 is showed in this report.
H-field measurements taken every 2 cm (starting as close to 20 cm as possible) on each edge/top surface of the host/client pair were also evaluated for portable use conditions.

Assessed Distance (cm)	Frequency Range (MHz)	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)	50% Limits (A/m)	Limits (A/m)	test result
0	0.1101-0.205	0.45	0.34	0.61	0.79	0.69	0.60	0.815	1.63	PASS
Measured Distance (cm)	Frequency Range (MHz)	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)	50% Limits (A/m)	Limits (A/m)	test result
2	0.1101-0.205	0.14	0.16	0.18	0.17	0.15	0.20	0.815	1.63	PASS
4	0.1101-0.205	0.10	0.12	0.12	0.12	0.09	0.17	0.815	1.63	PASS
6	0.1101-0.205	0.09	0.08	0.11	0.07	0.09	0.14	0.815	1.63	PASS
8	0.1101-0.205	0.06	0.07	0.08	0.06	0.07	0.09	0.815	1.63	PASS
10	0.1101-0.205	0.04	0.05	0.05	0.04	0.04	0.07	0.815	1.63	PASS
12	0.1101-0.205	0.02	0.04	0.03	0.02	0.02	0.06	0.815	1.63	PASS
14	0.1101-0.205	0.01	0.03	0.02	0.04	0.008	0.04	0.815	1.63	PASS
16	0.1101-0.205	0.008	0.06	0.05	0.05	0.005	0.03	0.815	1.63	PASS
18	0.1101-0.205	0.006	0.004	0.005	0.003	0.004	0.01	0.815	1.63	PASS
20	0.1101-0.205	0.003	0.006	0.003	0.004	0.003	0.006	0.815	1.63	PASS

According to the formula:
The formula for the magnetic field strength at a distance r from the coil is
$H = I/(2\pi r)*\mu$
H is A/m
I is the current intensity
μ is the permeability, and its value depends on the medium.
The other parameters are fixed, so H is inversely proportional to r.
X is the distance from the test point to the center of the coil circle.

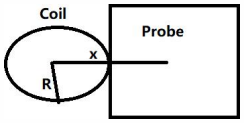
$$B = \frac{u_0 I R^2}{2(R^2+X^2)^{\frac{3}{2}}}$$

Top & Bottom Side:



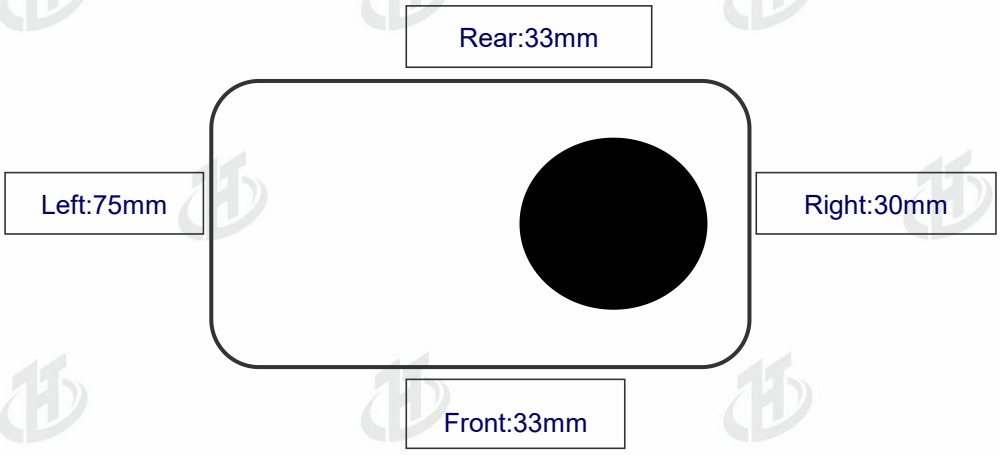
$$B = \frac{\mu_0 * I * N * R^2}{2 * (R^2 + x^2)^{3/2}}$$

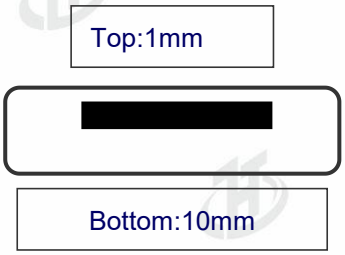
Front, Left, Right & Rear Side:



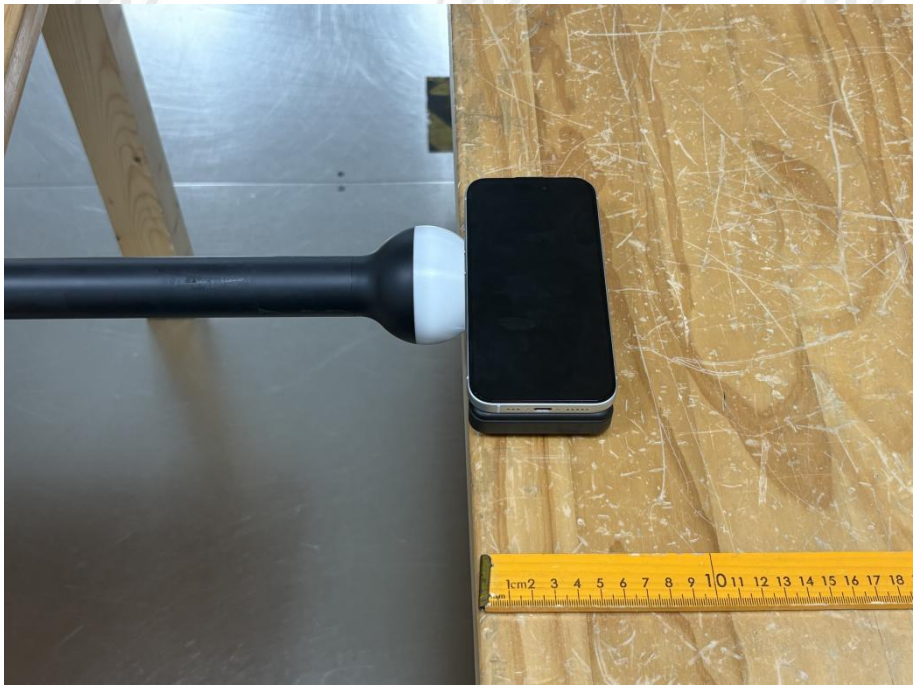
$$B = \frac{\mu_0 * I * N}{2 * x}$$

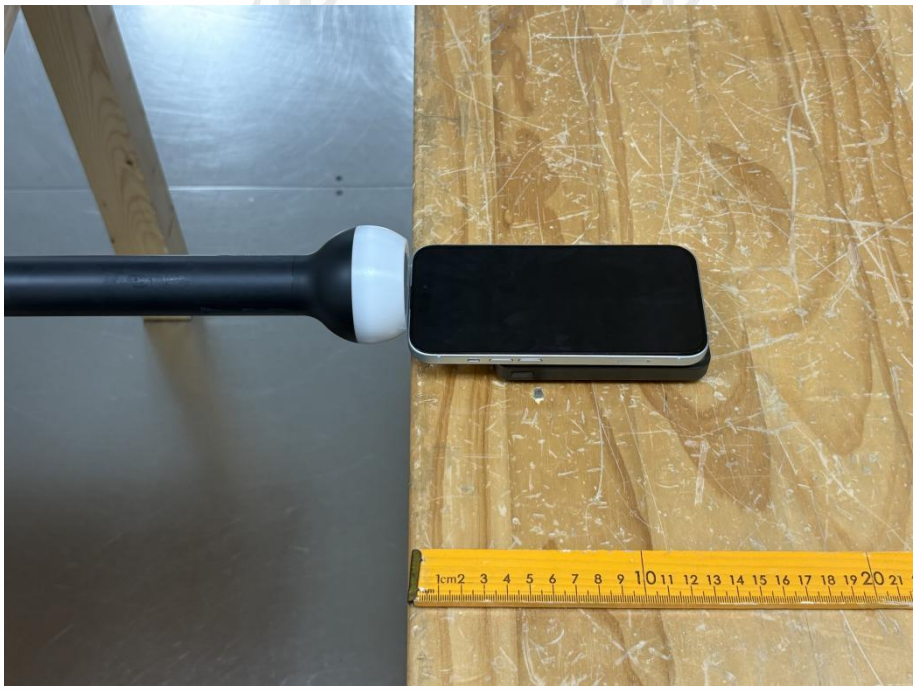
Symbol Definition	
B	means H-field value. (Unit: A/m)
μ0	is space permeability, μ0=4π*10-7.
I	a current element passing through a coil. (Unit: A)
R	the distance from the center point of the wireless charging device to other edges. R=38.5/2=19.25mm=0.01925m
X	means the evaluated point to the coil center. (For top & bottom side: x=test distance; For other side: x=test distance+R)
N	Number of turns, according to provided “Antenna specification” files: N=11

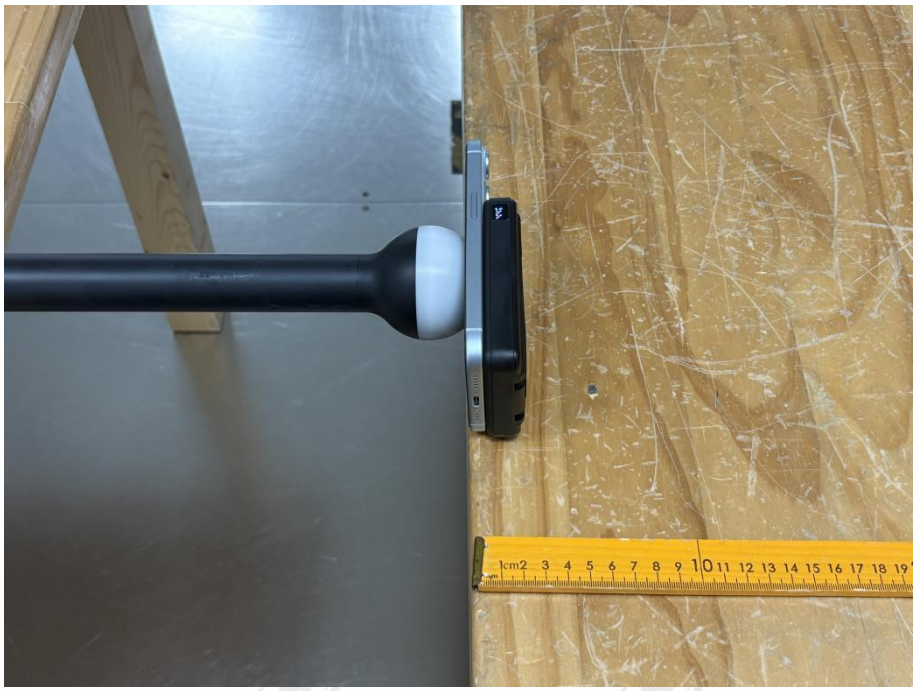


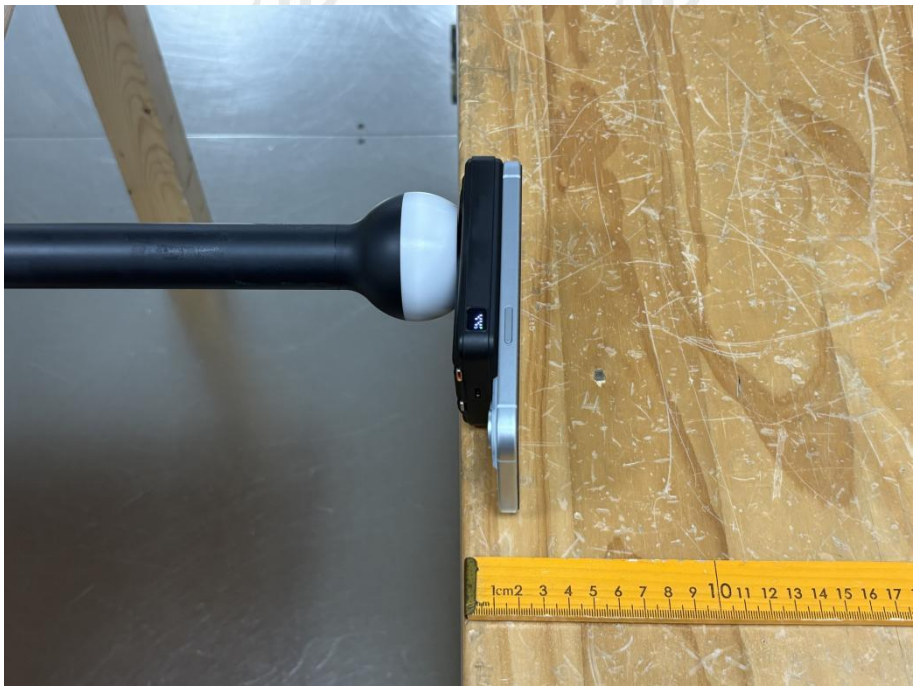


2.9. TEST PHOTOS









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