Test Report

Report No.:	MTi231127010-02E2
Date of issue:	2024-03-18
Applicant:	Shenzhen Yifeng Intelligent Technology Co., Ltd.
Product:	Magnetic Wireless Charger Power Bank
Model(s):	P8
FCC ID:	2AXY5-P8

Shenzhen Microtest Co., Ltd.
http://www.mtitest.com

Instructions

1. This test report shall not be partially reproduced without the written consent of the laboratory.

2. The test results in this test report are only responsible for the samples submitted

3. This test report is invalid without the seal and signature of the laboratory.

4. This test report is invalid if transferred, altered, or tampered with in any form without authorization.

5. Any objection to this test report shall be submitted to the laboratory within 15 days from the date of receipt of the report.

Contents

Test Result Certification	
Applicant:	Shenzhen Yifeng Intelligent Technology Co., Ltd.
Address:	201, Building 4, Sanwei Chaxi Industrial Zone, Sanwei Community, Hang Cheng Street, Bao An District, Shenzhen.
Manufacturer:	Shenzhen Yifeng Intelligent Technology Co., Ltd.
Address:	201, Building 4, Sanwei Chaxi Industrial Zone, Sanwei Community, Hang Cheng Street, Bao An District, Shenzhen.
Product description	
Product name:	Magnetic Wireless Charger Power Bank
Trademark:	YFZN
Model name:	P8
Series Model:	N/A
Standards:	FCC CFR 47 PART 1, § 1.1310 FCC CFR 47 PART 2, § 2.1093
Test method:	KDB 680106 D01 Wireless Power Transfer v04
Date of Test	
Date of test:	2024-03-01 to 2024-03-15
Test result:	Pass

Test Engineer	:	David. Lee
		(David Lee)
Reviewed By	:	Leon chen
		(Leon Chen)
Approved By	:	Tom Xue
		(Tom Xue)

1 General Description

1.1 Description of the EUT

Product name:	Magnetic Wireless Charger Power Bank
Model name:	P8
Series Model:	N/A
Model difference:	N/A
Electrical rating:	Battery Capcity: 5000mAh USB-C input: DC5V3A, 9V2A USB-C Output: DC 5V3A, 9V2.22A, 12V1.5A Wireless Output: 5W, 7.5W, 10W, 15W
Accessories:	Cable: USB-C to USB-C Cable 100cm
Software version:	V1.1
Hardware version:	V03B334
RF specification:	
Operation frequency:	115-205kHz(5W,10W,15W) for phone 360kHz(7.5W) for iPhone 115-205kHz(5W Max) for earphones
Modulation type:	ASK
Antenna type:	Coil

1.2 Description of test modes

All the test modes were carried out with the EUT in normal operation, the final test mode of the EUT was the worst test mode for emission test, which was shown in this report and defined as:

No.	Emission test modes
Mode1	Wireless Output(5W)
Mode2	Wireless Output(7.5W)
Mode3	Wireless Output(10W)
Mode4	Wireless Output(15W)
Mode5	Charging+Wireless Output(5W)
Mode6	Standby
Note: All of the listed test mode were tested, only the data of the worst mode (Mode4) is recorded in the report	

1.3 Description of support units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Support equipment list			
Description	Model	Serial No.	Manufacturer
Mobile phone	Find X3	/	OPPO
Lenovo Laptop Portable adapter(65W)	LS-65WTAQCPD	31088453SH94303G	Lenovo
Mobile phone	iPhone XR	/	APPLE
Mobile phone	S9+	/	SAMSUNG
TWS earphone	Air pods Pro	/	APPLE
Note: Find X3 use for Wireless Output 15W test, S9+ use for Wireless Output 10W test, iPhone XR use for Wireless Output 7.5W test, Air pods Pro use for Wireless Output 5W test			

2 Measurement uncertainty

Parameter	Expanded Uncertainty
Magnetic field measurement (9kHz~30MHz)	±7.8%
Electric field measurements (9kHz~30MHz)	±7.8%

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3 Test facilities and accreditations

3.1 Test laboratory

Test laboratory:	Shenzhen Microtest Co., Ltd.
Test site location:	101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Telephone:	(86-755)88850135
Fax:	(86-755)88850136
CNAS Registration No.:	CNAS L5868
FCC Registration No.:	448573

4 List of test equipment

No.	Equipment	Manufacturer	Model	Serial No.	Cal. date	Cal. Due
MTI-E115	Electric and Magnetic Field Probe – Analyzer	Narda	EHP-200A	101166	202308/15	2026/08/14

5 Test result

5.1 Requirement

§1.1310: 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), except in the case of portable devices which shall be evaluated according to the provisions of FCC part 2.1093 of this chapter.

Table 1 to §1.1310(e)(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)
(i) 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
300-1500			f/300	<6
1500-100000			5	<6
(ii) 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
1500-100000			1.0	<30

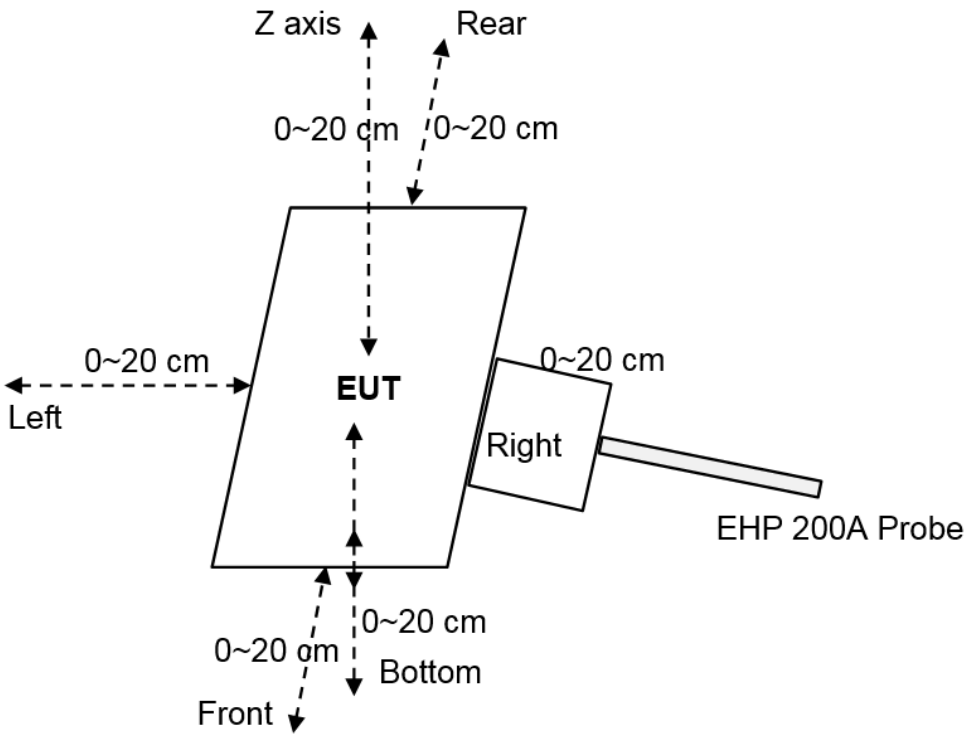
f = frequency in MHz
* = Plane-wave equivalent power density

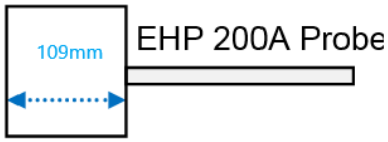
Note 1: Occupational/controlled exposure limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure.

Note 2: General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

5.2 Test setup

For portable exposure conditions:





Notes: The EHP 200A Probe has a diameter of 10.9cm and a radius of 5.45cm.

5.3 Test Procedures

For portable exposure conditions:

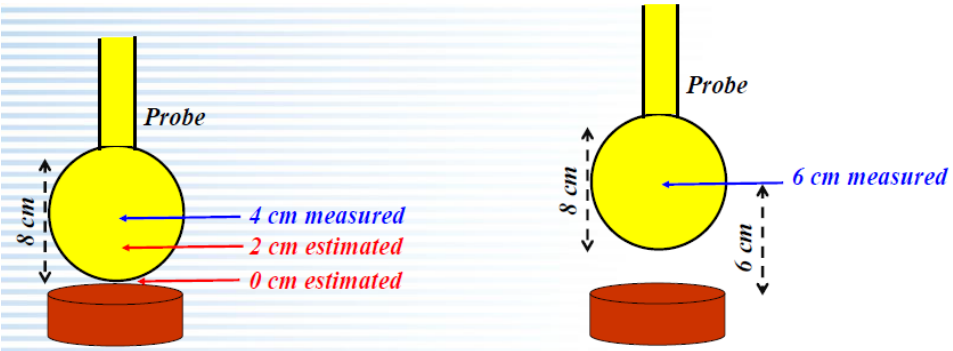
a. The RF exposure test was performed in anechoic chamber.
b. Perform H-field measurements for each edge/top surface of the host/client pair at every 2 cm, starting from as close as possible out to 20 cm
c. The highest emission level was recorded and compared with limit.

Notes: The EUT was setted to transmit continuously with the duty cycle of 100%.

5.4 Test results

For portable exposure condition: Note:

(1). The portable test modes have covered the considerations of th e mobile test, only record the test data of the portable conditions in this report.
(2) Operating modes with client device (1 %, 50%, 99% battery status of client device) have been test, only show the data of worst case of 1% battery status of client device.
(3) 20-2cm is the actual test value, and 0 cm is the estimated value.
(4) Perform H-field/E-field measurements are taken along all three axes the device from 0cm~20cm in 2cm minimum increment for each edge surface of the host/client pair. If the center of the probe sensing element is more than 5mm from the probe outer edge, the field strengths need to be estimated for the positions that are not reachable.

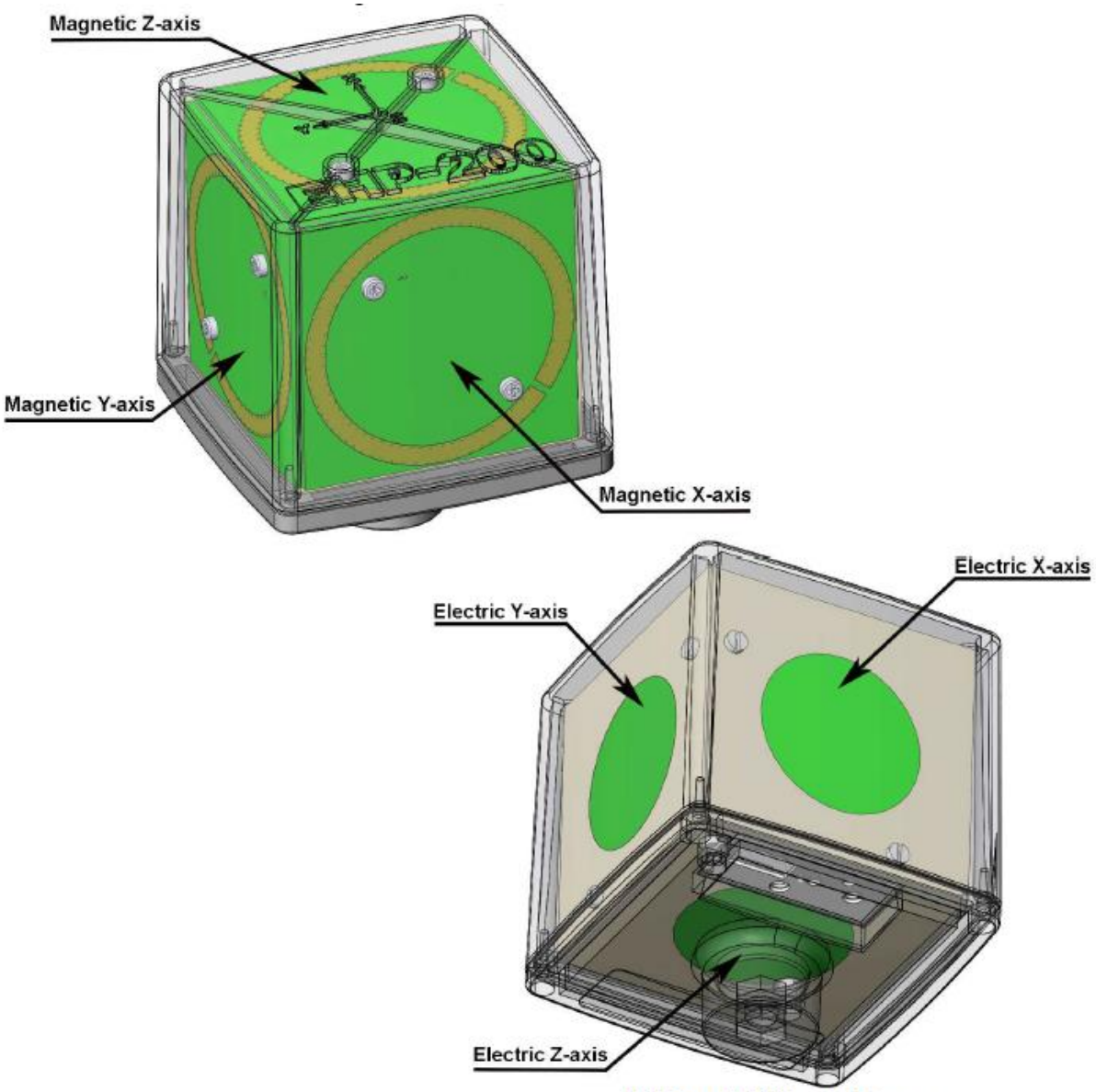


Example of probe measurements in points close to the device surface: estimates compared with measurements at 4 and 6 cm provide validation

According to Calibration information and specification about EHP-200A, The Probe EHP-200A's sensitive elements center are 8mm below the external surface, and the dimensions is 92x92x109mm. so the actual 0cm field strengths need to be estimated for the positions that are not reachable. The Extrapolated Value Calculation Method please below). And the result of test distance 2cm~20cm was measured value.

	Length	Width	Height
Probe	109mm	92mm	92mm

Note: EUT is a loop/coil emitting structure, so E-field not required. Just recorded the H-field value.



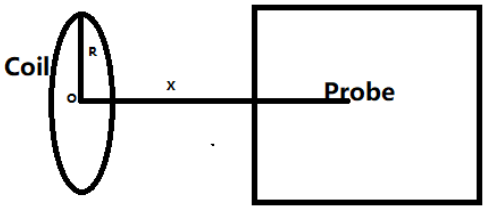
EHP-200A/EHP-200AC axes

The sensitive elements are located approximately 8 mm below the external surface

(5) Estimated method for portable RF Exposure condition:

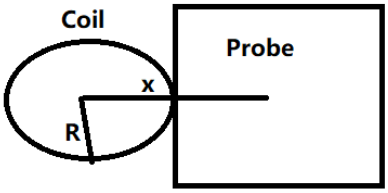
We use Biot-Savart formula theory to estimate the strength of the magnetic field that the measuring instrument cannot measure. According to Biot-Savart formula:

Top & Bottom Side:



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

Front, left, right & rear Side:



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

B: means H-field value;
μ_0 is space permeability; μ0=4π*10-7;
I：A current element passing through a coil；
R：means the Radius of coil(According to provided Antenna specification: We can get the minimum R=38/2=19mm=0.019m);
Test Distance：The distance from the sensing element of the probe to the edge of the device surface.

x: means the center of the coil to the sensing elements of the probe. (For top & bottom side: x=test distance; For other side: x=test distance+R)

N: Number of turns, according to providing “Antenna specification” files: N=10.

(6) For validation purposes: If the value to show a **30% agreement** between the mode and the (E- and/or H-field) probe measurements for the two closest points to the device surface, and with 2cm increments. Then this extrapolation method is reasonable.

Note: The percent ratio of agreement is the difference between the estimated and measured values divided by the average of the estimated and measured values.

Validation:

Magnetic Field Emissions							
Test Distance(cm)	Top	Left	Right	Rear	Front	Bottom	Conclusion
	Unit: Agreement (%); H-field (A/m)						
Agreement -2cm	18.68	26.12	28.45	25.28	15.28	15.94	Compliance (Within 30%)
2cm(estimated)	0.4223	0.1631	0.1835	0.1561	0.1309	0.3359	
2cm(measured)	0.3502	0.1254	0.1378	0.1211	0.1123	0.2863	

Magnetic Field Emissions							
Test Distance(cm)	Top	Left	Right	Rear	Front	Bottom	Conclusion
	Unit: Agreement (%); H-field (A/m)						
Agreement -2cm	16.83	18.42	23.65	11.13	27.66	26.70	Compliance (Within 30%)
4cm(estimated)	0.1209	0.0567	0.0672	0.0504	0.0499	0.1062	
4cm(measured)	0.1021	0.0471	0.0530	0.0451	0.0378	0.0812	

Test condition 1: Mode 4 operating mode with client device (1 % battery status of client device) -estimated value: 0cm

Estimated value for H-Filed Strength at 0 cm from the edges surrounding the EUT (A/m)

Antenna	Probe Position	H–field (A/m)		
		Measurement	Limit	Max. Percentage (%)
1	Z axis	1.0718	1.63	73.11%
	Left	1.0845		
	Right	1.1917		
	Front	1.0473		
	Rear	0.9712		
	Bottom	0.8763		

Test condition 2: Mode 4 operating mode with client device (1 % battery status of client device) - Test distance: 2cm

Antenna	Probe Position	H–field (A/m)		
		Measurement	Limit	Max. Percentage (%)
1	Z axis	0.3502	1.63	21.48%
	Left	0.1254		
	Right	0.1378		
	Front	0.1211		
	Rear	0.1123		
	Bottom	0.2863		

Test condition 3: Mode 4 operating mode with client device (1 % battery status of client device) - Test distance 4cm

Antenna	Probe Position	H–field (A/m)		
		Measurement	Limit	Max. Percentage (%)
1	Z axis	0.1111	1.63	6.81%
	Left	0.0432		
	Right	0.0456		
	Front	0.0421		
	Rear	0.0411		
	Bottom	0.0876		

Test condition 4: Mode 4 operating mode with client device (1 % battery status of client device) - Test distance 6cm

Antenna	Probe Position	H–field (A/m)		
		Measurement	Limit	Max. Percentage (%)
1	Z axis	0.0421	1.63	6.27%
	Left	0.0236		
	Right	0.0280		
	Front	0.0210		
	Rear	0.0208		
	Bottom	0.0370		

Test condition 5: Mode 4 operating mode with client device (1 % battery status of client device) - Test distance 8cm

Antenna	Probe Position	H–field (A/m)		
		Measurement	Limit	Max. Percentage (%)
1	Z axis	0.0410	1.63	5.76%
	Left	0.0214		
	Right	0.0234		
	Front	0.0193		
	Rear	0.0192		
	Bottom	0.0327		

Test condition 6: Mode 4 operating mode with client device (1 % battery status of client device) - Test distance 10cm

Antenna	Probe Position	H–field (A/m)		
		Measurement	Limit	Max. Percentage (%)
1	Z axis	0.0403	1.63	5.17%
	Left	0.0207		
	Right	0.0221		
	Front	0.0189		
	Rear	0.0186		
	Bottom	0.0309		

Test condition 7: Mode 4 operating mode with client device (1 % battery status of client device) - Test distance 12cm

Antenna	Probe Position	H–field (A/m)		
		Measurement	Limit	Max. Percentage (%)
1	Z axis	0.0393	1.63	4.74%
	Left	0.0195		
	Right	0.0197		
	Front	0.0172		
	Rear	0.0177		
	Bottom	0.0296		

Test condition 8: Mode 4 operating mode with client device (1 % battery status of client device) - Test distance 14cm

Antenna	Probe Position	H–field (A/m)		
		Measurement	Limit	Max. Percentage (%)
1	Z axis	0.0384	1.63	4.50%
	Left	0.0189		
	Right	0.0181		
	Front	0.0166		
	Rear	0.0164		
	Bottom	0.0286		

Test condition 9: Mode 4 operating mode with client device (1 % battery status of client device) - Test distance 16cm

Antenna	Probe Position	H–field (A/m)		
		Measurement	Limit	Max. Percentage (%)
1	Z axis	0.0371	1.63	4.11%
	Left	0.0179		
	Right	0.0177		
	Front	0.0156		
	Rear	0.0155		
	Bottom	0.0278		

Test condition 10: Mode 4 operating mode with client device (1 % battery status of client device) - Test distance 18cm

Antenna	Probe Position	H–field (A/m)		
		Measurement	Limit	Max. Percentage (%)
1	Z axis	0.0364	1.63	4.07%
	Left	0.0161		
	Right	0.0167		
	Front	0.0141		
	Rear	0.0141		
	Bottom	0.0266		

Test condition 11: Mode 4 operating mode with client device (1 % battery status of client device) - Test distance 20cm

Antenna	Probe Position	H–field (A/m)		
		Measurement	Limit	Max. Percentage (%)
1	Z axis	0.0355	1.63	3.83%
	Left	0.0152		
	Right	0.0152		
	Front	0.0132		
	Rear	0.0138		
	Bottom	0.0257		

Photographs of the Test Setup

See the Appendix - Test Setup Photos.

Photographs of the EUT

See the Appendix - EUT Photos.

----End of Report----