

Test Report

Report No.:	MTi220414018-01E2
Date of issue:	2022-06-09
Applicant:	IDEA ELECTRONICS INC
Product:	wireless Power Bank
Model(s):	WPB-100, WPB-150, WPB-200
FCC ID:	2AIZYWPB-100

Shenzhen Microtest Co., Ltd.

<http://www.mtitest.com>

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

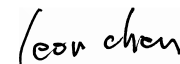
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Test Result Certification	
Applicant:	IDEA ELECTRONICS INC
Address:	13620 Benson Ave. Suite B, Chino, CA, 91710, United States
Manufacturer:	Shenzhen Xibonwe Electronics Co., LTD
Address:	802, Building F04, Renshan Zhishui, No.96 huanguan South Road, Luhua Community, Guanhu Street, Longhua District, Shenzhen
Factory:	Dongguan ELSUM Intelligent Technology Co.,Ltd
Address:	Room 901, Building 1, No.30 lianxing Road, Wulian, Fenggang Town, Dongguan city, Guangdong Province, China
Product description	
Product name:	wireless Power Bank
Trademark:	N/A
Model name:	WPB-100
Serial Model:	WPB-150, WPB-200
Standards:	FCC CFR 47 PART 1, § 1.1310
Test method:	KDB 680106 v03r01
Date of Test	
Date of test:	2022-04-14 ~ 2022-05-16
Test result:	Pass

Test Engineer :


(Cindy Qin)

Reviewed By :


(Leon Chen)

Approved By :


(Tom Xue)

1 General Description

1.1 Description of the EUT

Product name:	wireless Power Bank
Model name:	WPB-100
Series Model:	WPB-150, WPB-200
Model difference:	All the models are the same circuit and RF module, except the model name and color.
Electrical rating:	Type-C Input: DC 5V/3A, 9V/2A, 12V/1.5A Micro Input: DC 5V/3A, 9V/2A, 12V/1.5A Wireless Output: DC 15W/10W/7.5W/5W USB Output: DC 5V/3A, 9V/2A, 12V/1.5A Type-C Output: DC 9V/2.22A, 12V/1.67A(max) Battery: DC 3.7V 10000mAh 37Wh
Accessories:	2 in 1 USB cable (0.27m)
Hardware version:	IP5332
Software version:	c919
RF specification:	
Operation frequency:	115 kHz – 205 kHz
Modulation type:	ASK
Antenna type:	Coil Antenna

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
For mobile exposure conditions	
Mode 1	Stand-by mode
Mode 2	Charging + Wireless charging (5W)
The test data only show worst test mode: Mode 2	
For portable exposure conditions	
Mode 1	Stand-by mode
Mode 2	Wireless charging (5W)
Mode 3	Wireless charging (7.5W)
Mode 4	Wireless charging (10W)
Mode 5	Wireless charging (15W)
The test data only show worst test mode: Mode 5	

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	OPPO Find X3	/	OPPO
Adapter	HW-090200CH0	/	Huizhou BYD Electronics Co., Ltd.
Support cable list			
Description	Length (m)	From	To
/	/	/	/

2 Test facilities and accreditations

2.1 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

3 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	2021/06/02	2022/06/01

4 Test result

4.1.1 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

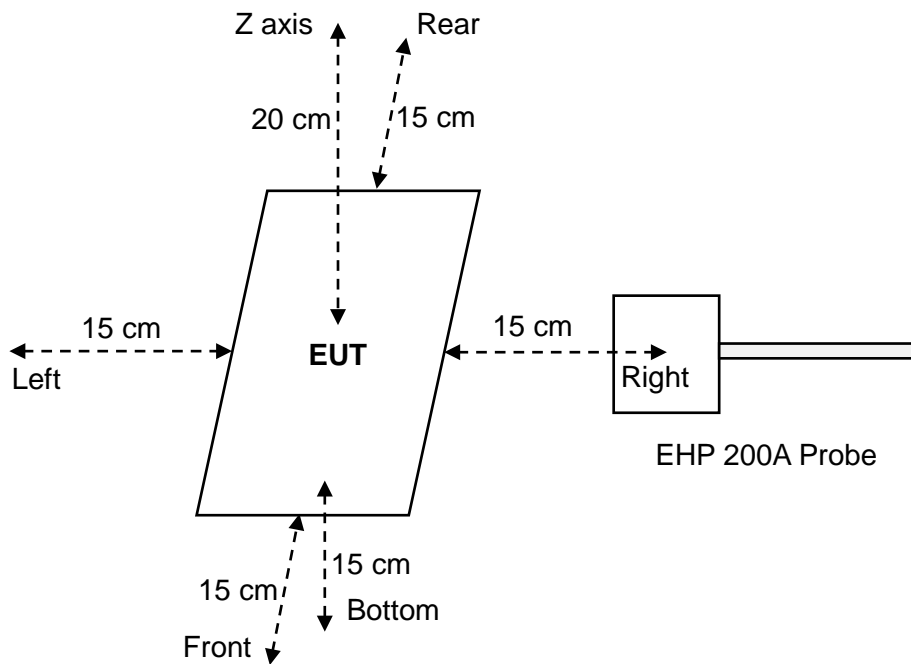
* = Plane-wave equivalent power density

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.

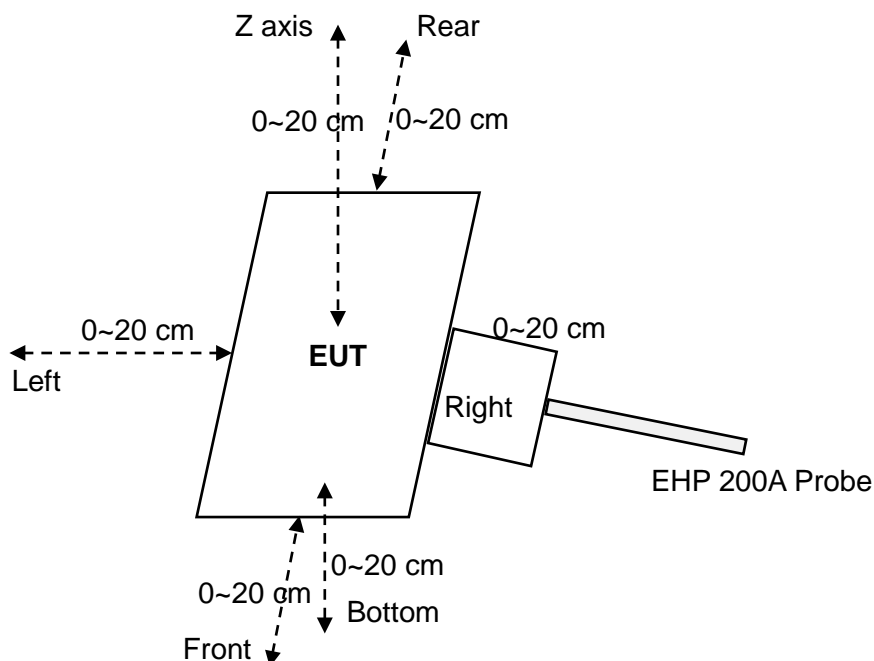
Note 2: General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

4.2 Test setup

For mobile exposure conditions:



For portable exposure conditions:



4.3 Test Procedures

For mobile exposure conditions:

- a. The RF exposure test was performed in anechoic chamber.
- b. E and H-field measurements should be made with the center of the probe at a distance of 15 cm surrounding the EUT and 20 cm above the top surface of the primary/client pair.
- c. The highest emission level was recorded and compared with limit.
- d. The EUT was measured according to the dictates of KDB 680106 v03r01.

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.

4.4 Equipment Approval Considerations item 5 b) of KDB 680106 D01 v03r01

Requirement	Device
1. Power transfer frequency is less than 1 MHz.	Yes. The operating frequencies: 115 kHz – 205 kHz
2. Output power from each primary coil is less than or equal to 15 watts	Yes. The maximum output power: 15W
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. The EUT have one source primary coils.
4. Client device is placed directly in contact with the transmitter.	Yes. The client device is placed directly in contact with the transmitter.
5. Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).	No. The EUT has portable exposure condition.
6. The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.	Yes, and 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 were also evaluated for portable use condition.

4.5 Test results

For mobile exposure conditions:

Note: 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.

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

Antenna	Probe Position	E -field (V/m)			H-field (A/m)		
		Measurement	Limit	Max. Percentage (%)	Measurement	Limit	Max. Percentage (%)
1	Z axis	0.6937	614	0.26%	0.0991	1.63	11.44%
	Left	1.5809			0.1866		
	Right	0.8096			0.0616		
	Front	0.5690			0.1604		
	Rear	0.3701			0.0921		
	Bottom	0.3611			0.0991		

For portable exposure condition:

Note: 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.

**Test condition 1: Mode 5 operating mode with client device (1 % battery status of client device)
 -test distance: 0cm**

Antenna	Probe Position	H-field (A/m)		
		Measurement	Limit	Max. Percentage (%)
1	Z axis	0.2984	1.63	59.96%
	Left	0.4770		
	Right	0.9773		
	Front	0.7918		
	Rear	0.7020		
	Bottom	0.9639		

**Test condition 2: Mode 5 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	0.1908	1.63	30.20%
	Left	0.1605		
	Right	0.2328		
	Front	0.4464		
	Rear	0.4127		
	Bottom	0.4922		

Test condition 3: Mode 5 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	0.1434	1.63	19.28%
	Left	0.1110		
	Right	0.1123		
	Front	0.2883		
	Rear	0.3034		
	Bottom	0.3143		

Test condition 4: Mode 5 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	0.1129	1.63	16.71%
	Left	0.0839		
	Right	0.0638		
	Front	0.2724		
	Rear	0.1613		
	Bottom	0.0680		

Test condition 5: Mode 5 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	0.0719	1.63	6.83%
	Left	0.0601		
	Right	0.0495		
	Front	0.1056		
	Rear	0.1113		
	Bottom	0.0495		

Test condition 6: Mode 5 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	0.0540	1.63	5.2%
	Left	0.0525		
	Right	0.0510		
	Front	0.0848		
	Rear	0.0766		
	Bottom	0.0489		

Test condition 7: Mode 5 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	0.0430	1.63	3.67%
	Left	0.0513		
	Right	0.0172		
	Front	0.0599		
	Rear	0.0507		
	Bottom	0.0447		

Test condition 8: Mode 5 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	0.0419	1.63	2.73%
	Left	0.0445		
	Right	0.0113		
	Front	0.0442		
	Rear	0.0370		
	Bottom	0.0409		

Test condition 9: Mode 5 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	0.0314	1.63	2%
	Left	0.0326		
	Right	0.0307		
	Front	0.0219		
	Rear	0.0211		
	Bottom	0.0230		

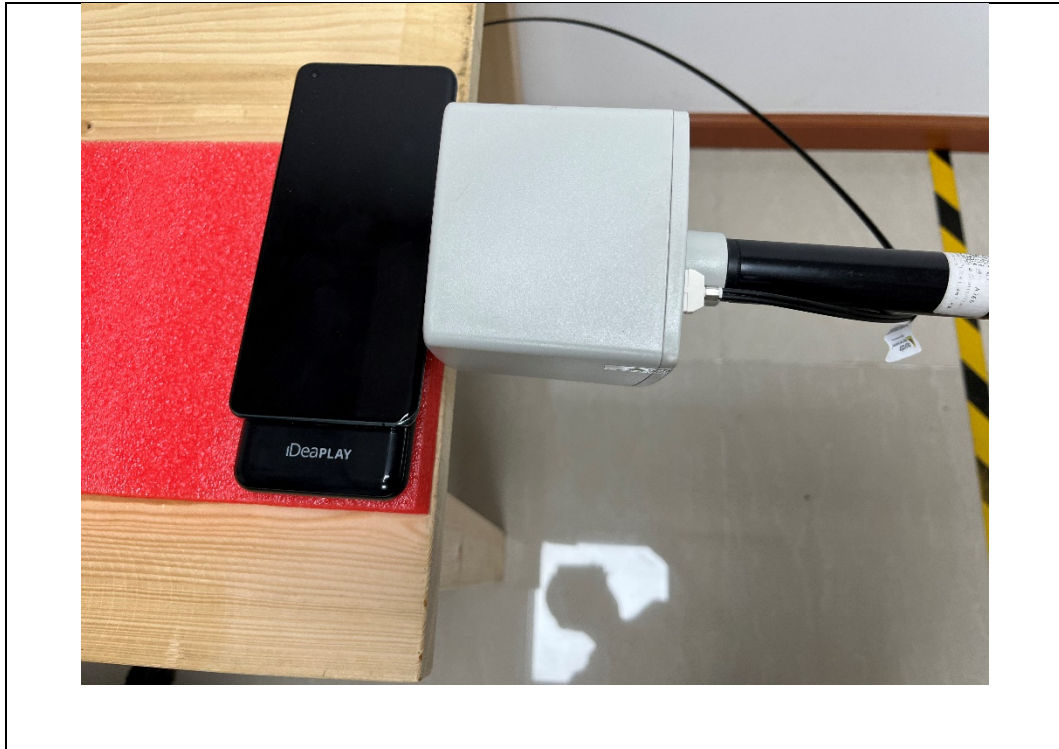
Test condition 10: Mode 5 operating mode with client device (1 % battery status of client device)
- Test distance 18cm

Antenna	Probe Position	H-field (A/m)		
		Measurement	Limit	Max. Percentage (%)
1	Z axis	0.0266	1.63	1.81%
	Left	0.0295		
	Right	0.0212		
	Front	0.0203		
	Rear	0.0242		
	Bottom	0.0209		

Test condition 11: Mode 5 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	0.0187	1.63	1.20%
	Left	0.0195		
	Right	0.0133		
	Front	0.0175		
	Rear	0.0128		
	Bottom	0.0106		

Photographs of the Test Setup



Photographs of the EUT

See the Appendix - EUT Photos.

----End of Report----