

Test Report

Report No.: MTi210719019-04E2

Date of issue: Aug. 16, 2021

Applicant: Linpo Electronic (Dongguan) Co., Ltd.

Product: MAGNETIC POWER BANK

Model(s): GZ005, GZ005WH, GZ005BL

FCC ID: 2A2P6-GZ005

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.

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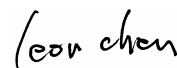
Test Result Certification	
Applicant:	Linpo Electronic (Dongguan) Co., Ltd.
Address:	No. 8, Jinshagang 1st Road, Shixia Village, Dalang, Dongguan, Guangdong Province, China.
Manufacturer:	Linpo Electronic (Dongguan) Co., Ltd.
Address:	No. 8, Jinshagang 1st Road, Shixia Village, Dalang, Dongguan, Guangdong Province, China.
Product description	
Product name:	MAGNETIC POWER BANK
Trademark:	GAINZY
Model name:	GZ005
Serial Model:	GZ005WH, GZ005BL
Standards:	FCC CFR 47 PART 1, § 1.1310
Test method:	KDB 680106 v03r01
Date of Test	
Date of test:	Aug. 03, 2021 ~ Aug. 16, 2021
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:	MAGNETIC POWER BANK
Model name:	GZ005
Series Model:	GZ005WH, GZ005BL
Model difference:	All the models are the same circuit and RF module, except the color of appearance.
Electrical rating:	Type-C Input: PD3.0\QC3.0 DC 5V/3A, 9V/2A, 12V/1.5A Wireless Output: 5W/7.5W/10W Type-C Output: PD3.0\QC3.0 DC 5V/3A, 9V/2A, 12V/1.5A Battery: DC 3.7V 4000mAh
Accessories:	USB-C to USB-C cable (0.5m)
EUT serial number:	MTi210719019-04-S0001
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)
Mode 3	wireless charging (7.5W)
Mode 4	wireless charging (10W)
The test data only show worst test mode: Mode 4	
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)
The test data only show worst test mode: Mode 4	

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
Smart phone	A2404	F17DLCK70DYN	Apple
Smart phone	SM-G9650/DS	R28K34V79NT	Samsung
Adapter	HW-090200CH0	B98788L5F02610	HUAWEI
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

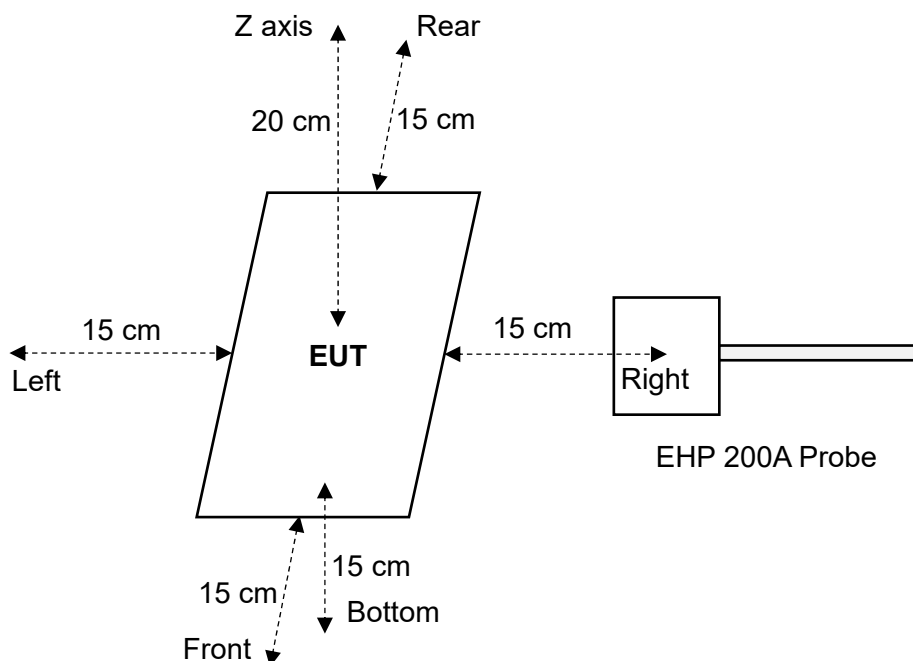
* = Plane-wave equivalent power density

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.

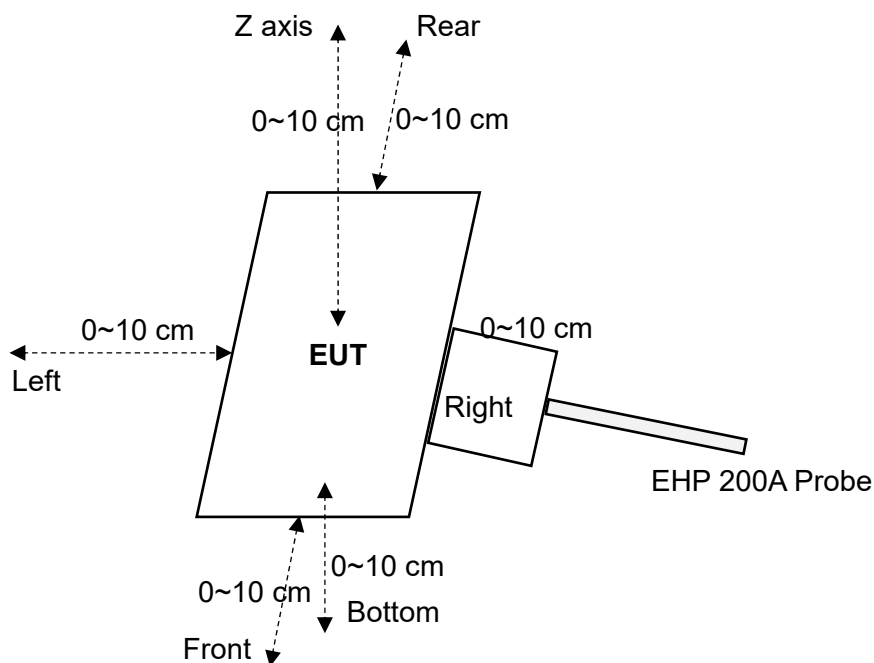
Note 2: General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

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. E and H-field measurements should be made with the probe at 0~10 cm for all side of the EUT.
- 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: 10W
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 can be used as mobile exposure conditions and potable exposure conditions
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.	No. For the mobile exposure conditions, the measurement was taken based on KDB 680106 D01. For the portable exposure conditions, the measurement was taken based on the KDB inquiry. See the test result in item 4.5.

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 4 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	0.2328	614	0.07%	0.0432	1.63	3.13%
	Left	0.3277			0.0511		
	Right	0.4169			0.0428		
	Front	0.3407			0.0438		
	Rear	0.3215			0.0502		
	Bottom	0.3486			0.0463		

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 4 operating mode with client device (1 % battery status of client device)
-test distance: 0cm

Antenna	Probe Position	E –field (V/m)			H–field (A/m)		
		Measurement	Limit	Max. Percentage (%)	Measurement	Limit	Max. Percentage (%)
1	Z axis	0.7532	614	2.10%	0.9590	1.63	58.83%
	Left	2.4262			0.8877		
	Right	1.5147			0.9189		
	Front	12.866			0.4684		
	Rear	11.158			0.1208		
	Bottom	1.9652			0.6752		

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

Antenna	Probe Position	E –field (V/m)			H–field (A/m)		
		Measurement	Limit	Max. Percentage (%)	Measurement	Limit	Max. Percentage (%)
1	Z axis	1.9772	614	0.34%	0.8717	1.63	53.48%
	Left	1.0132			0.3617		
	Right	1.1139			0.2463		
	Front	0.9913			0.1994		
	Rear	0.9587			0.0568		
	Bottom	2.112			0.2421		

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

Antenna	Probe Position	E -field (V/m)			H-field (A/m)		
		Measurement	Limit	Max. Percentage (%)	Measurement	Limit	Max. Percentage (%)
1	Z axis	0.977	614	0.22%	0.2962	1.63	18.17%
	Left	0.5948			0.2006		
	Right	0.9132			0.1183		
	Front	0.6984			0.1183		
	Rear	0.7544			0.0521		
	Bottom	1.369			0.1110		

Test condition 4: Mode 4 operating mode with client device (99 % battery status of client device)
- Test distance 6cm

Antenna	Probe Position	E -field (V/m)			H-field (A/m)		
		Measurement	Limit	Max. Percentage (%)	Measurement	Limit	Max. Percentage (%)
1	Z axis	0.6711	614	0.13%	0.1175	1.63	7.21%
	Left	0.4069			0.0911		
	Right	0.5715			0.1005		
	Front	0.4069			0.0498		
	Rear	0.4242			0.0485		
	Bottom	0.7895			0.0482		

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

Antenna	Probe Position	E -field (V/m)			H-field (A/m)		
		Measurement	Limit	Max. Percentage (%)	Measurement	Limit	Max. Percentage (%)
1	Z axis	0.6482	614	0.11%	0.0835	1.63	5.12%
	Left	0.3931			0.0589		
	Right	0.4988			0.0766		
	Front	0.3691			0.0465		
	Rear	0.4005			0.0465		
	Bottom	0.4936			0.0482		

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

Antenna	Probe Position	E -field (V/m)			H-field (A/m)		
		Measurement	Limit	Max. Percentage (%)	Measurement	Limit	Max. Percentage (%)
1	Z axis	0.4253	614	0.07%	0.0460	1.63	3.21%
	Left	0.3348			0.0524		
	Right	0.4403			0.0478		
	Front	0.3539			0.0482		
	Rear	0.374			0.0510		
	Bottom	0.3894			0.0495		

Photographs of the test setup

See the APPENDIX – Test Setup Photos.

Photographs of the EUT

See the APPENDIX - EUT Photos.

----End of Report----