



# RF EXPOSURE Test Report

**Report No.:** MTi210521009-01E2

**Date of issue:** July 01, 2021

**Applicant:** Shenzhen Powerqi Technology  
Co., Ltd.

**Product name:** Magnetic Wireless Car Charger

**Model(s):** LC24C, LC23C

**FCC ID:** 2AFP2LC23C

Shenzhen Microtest Co., Ltd.

<http://www.mtitest.com>



## Instructions

1. The report shall not be partially reproduced without the written consent of the laboratory;
2. The test results of this report are only responsible for the samples submitted;
3. This report is invalid without the seal and signature of the laboratory;
4. This report is invalid if transferred, altered or tampered with in any form without authorization;
5. Any objection to this report shall be submitted to the laboratory within 15 days from the date of receipt of the report.



### TEST RESULT CERTIFICATION

Applicant's name.....:	Shenzhen Powerqi Technology Co., Ltd.
Address.....:	Room 201, 302, 401 of A4 Building, Block A, Fangxing Science and Technology Park, No. 13 of Baonan Road, Longgang District, Shenzhen, China
Manufacturer's Name.....:	Shenzhen Powerqi Technology Co., Ltd.
Address.....:	Room 201, 302, 401 of A4 Building, Block A, Fangxing Science and Technology Park, No. 13 of Baonan Road, Longgang District, Shenzhen, China

#### Product description

Product name.....:	Magnetic Wireless Car Charger
Trademark.....:	POWERQI
Model Name.....:	LC24C
Serial Model.....:	LC23C
Standards.....:	FCC CFR 47 PART 1, 1.1310
Test procedure.....:	KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01

#### Date of Test

Date (s) of performance of tests.....:	June 04, 2021 ~ June 15, 2021
Test Result.....:	Pass

This device described above has been tested by Shenzhen Microtest Co., Ltd. and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

**Testing Engineer** :

(Danny Xu)

**Technical Manager** :

(Leo Su)

**Authorized Signatory** :

(Tom Xue)



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## 1 General Information

### 1.1 Description of EUT

Product name:	Magnetic Wireless Car Charger
Brand name:	Powerqi
Model name:	LC24C
Series model:	LC23C
Deference in serial model:	All the models are the same circuit and RF module, except the appearance shape and model No..
Operation frequency:	110-205 kHz
Operational mode:	Wireless charging
Modulation type:	ASK
Antenna type:	Coil Antenna
Power source:	DC 9V from adapter AC 120V/60Hz
Input:	5V/3A, 9V/2A, 12V/1.5A
Battery:	N/A
Adapter information:	N/A

### 1.2 Ancillary equipment list

Equipment	Model	S/N	Manufacturer
Adapter	HW-090200CHO	/	huizhou BYD electronics co., LTD
Phone	IN2020	/	ONEPLUS

### 1.3 Measurement uncertainty

Measurement Uncertainty for a Level of Confidence of 95 %,  $U=2xUc(y)$

Radiated emission(150kHz~30MHz)	± 2.5 dB
Radiated emission(30MHz~1GHz)	± 4.2 dB
Radiated emission (above 1GHz)	± 4.3 dB
Temperature	±1 degree
Humidity	± 5 %



## 2 Testing site

Test Site	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.
FCC Registration No.:	448573

Address: 101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao' an District, Shenzhen, Guangdong, China.



### 3 List of test equipment

Equipment No.	Equipment Name	Manufacturer	Model	Serial No.	Calibration date	Due date
MTI-E115	Electric and Magnetic Field Probe - Analyzer	Narda Safety Test Solutions GmbH	EHP-200A	/	2021/06/02	2022/06/01



## 4 Test Results

### 4.4 Maximum permissible exposure

#### 4.4.1 Limit

Frequency range(MHz)	Electric field strength(V/m)	Magnetic field strength(A/m)	Power density(mW/cm <sup>2</sup> )	Averaging time(minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f <sup>2</sup>	6
30-300	61.4	0.163	1.0 6	6
300-1500			f/300	6
1500-100000			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 <sup>2</sup>	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100000			1	30
f = frequency in MHz * = Plane-wave equivalent power density				

#### 4.4.2 Test Procedures

E and H-field measurements should be made with the center of the probe at a distance of 15 cm surrounding the device and 20 cm above the top surface of the primary/client pair.

These measurements should be repeated for three different client battery levels, 1%, 50%, and 99%.

Record the test results.

KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01:

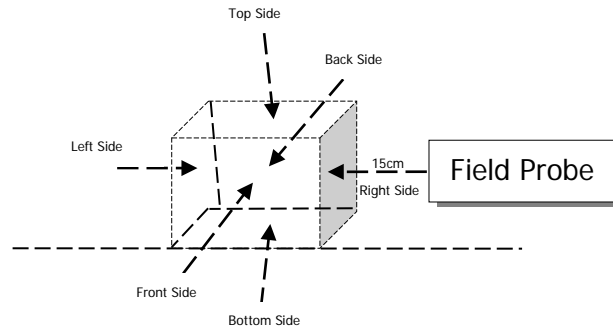
- (1) Power transfer frequency is less than 1 MHz
- (2) Output power from each primary coil is less than or equal to 15 watts.
- (3) The system may consist of more than one source primary coils, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time.
- (4) Client device is placed directly in contact with the transmitter.
- (5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
- (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.

Note: The device is in compliance with KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01 6 conditions.





### 4.4.3 Test Setup



### 4.4.4 Test Result

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E – field(V/m)	H–field(A/m)
<1%	Top	20	0.8831	0.0475
<1%	Bottom	15	0.8832	0.0482
<1%	Left	15	0.8835	0.0477
<1%	Right	15	0.8837	0.0496
<1%	Front	15	0.8836	0.0489
<1%	Back	15	0.8834	0.0486
Limit			614	1.63
Margin Limit (%)			0.069%	7.12%

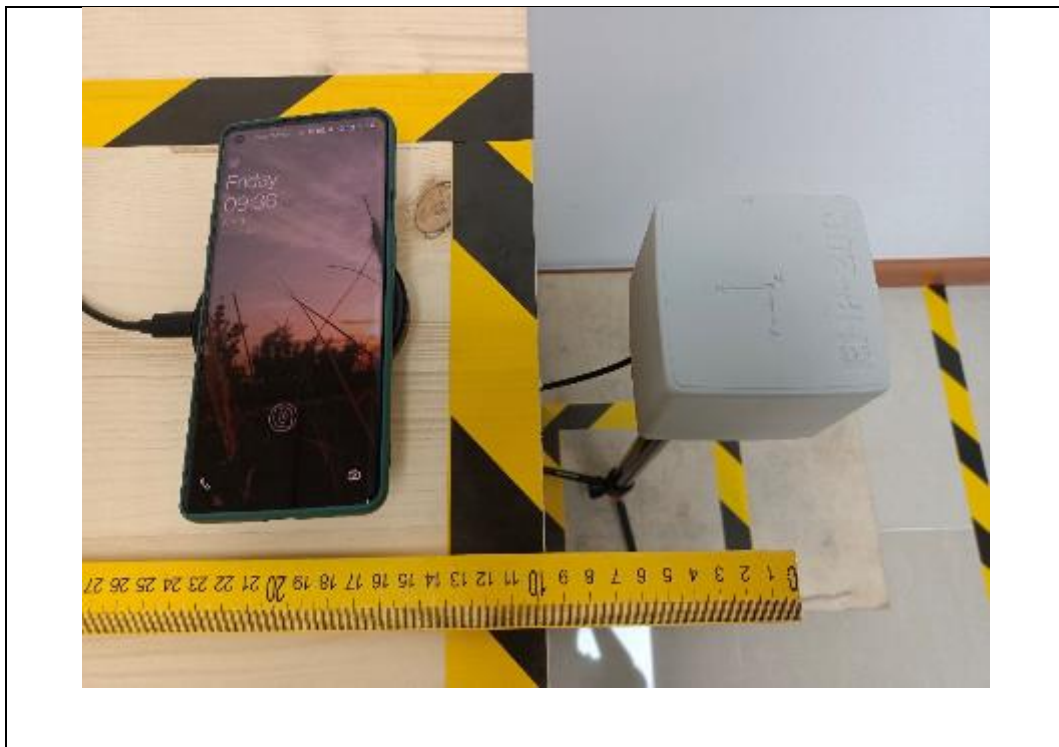


Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E – field(V/m)	H–field(A/m)
<50%	Top	20	0.8823	0.0472
<50%	Bottom	15	0.8835	0.0485
<50%	Left	15	0.8832	0.0476
<50%	Right	15	0.8825	0.0482
<50%	Front	15	0.8833	0.0484
<50%	Back	15	0.8830	0.0481
Limit			614	1.63
Margin Limit (%)			0.069%	7.30%



Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E – field(V/m)	H–field(A/m)
<99%	Top	20	0.8830	0.0471
<99%	Bottom	15	0.8832	0.0484
<99%	Left	15	0.8837	0.0479
<99%	Right	15	0.8833	0.0494
<99%	Front	15	0.8836	0.0489
<99%	Back	15	0.8838	0.0487
Limit			614	1.63
Margin Limit (%)			0.070%	7.36%

**4.4.5 MPE Setup photo**



----END OF REPORT----