



Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China

## FCC RF Exposure

Report Reference No.....: CTA25112100202

FCC ID.....: 2BCJZ-WP23

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Date of issue .....: Nov. 28, 2025

Testing Laboratory Name.....: Shenzhen CTA Testing Technology Co., Ltd.

Address .....: Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China

Applicant's name.....: Shenzhen MOPO Electronic Technology Co., Ltd

Address .....: Room 212, 2nd Floor, No. 498, Longfeng 1st Road, Longyuan Community, Longhua Street, Longhua District Shenzhen, 518000 China

Test specification .....: FCC CFR 47 PART 1, § 1.1310

Standard .....: KDB 680106 D01 Wireless Power Transfer v04

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Test item description .....: Power bank

Trade Mark .....: N/A

Manufacturer .....: DONGGUAN MOPO NEW ENERGY TECH. CO.,LTD.

Model/Type reference .....: WP23

Listed Models .....: PB23, MagS-23

Modulation Type.....: ASK

Rating .....: Type-C Input: 5V---3A, 9V---2A  
Type-C Output: 5V---3A, 9V---3A, 12V---2.25A  
Wireless Output: 5W/7.5W/10W/15W(Max)  
Battery: 3.85V 2500mAh 9.6Wh

Result .....: PASS

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## TEST REPORT

Equipment under Test : Power bank

Model /Type : WP23

Listed Models : PB23, MagS-23

Model difference : The PCB board, circuit, structure and internal of these models are the same, Only model number and colour is different for these model.

**Applicant** : **Shenzhen MOPO Electronic Technology Co., Ltd**

Address : Room 212, 2nd Floor, No. 498, Longfeng 1st Road, Longyuan Community, Longhua Street, Longhua District Shenzhen, 518000 China

**Manufacturer** : **DONGGUAN MOPO NEW ENERGY TECH. CO.,LTD.**

Address : Room 212, 2nd Floor, No. 498, Longfeng 1st Road, Longyuan Community, Longhua Street, Longhua District Shenzhen, 518000 China

|                     |             |
|---------------------|-------------|
| <b>Test Result:</b> | <b>PASS</b> |
|---------------------|-------------|

The test report merely corresponds to the test sample.  
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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## **1 TEST STANDARDS**

The tests were performed according to following standards:

[680106 D01 Wireless Power Transfer v04](#): EQUIPMENT AUTHORIZATION OF WIRELESS POWER TRANSFER DEVICES.

## 2 SUMMARY

### 2.1 General Remarks

|                                |   |               |
|--------------------------------|---|---------------|
| Date of receipt of test sample | : | Nov. 21, 2025 |
| Testing commenced on           | : | Nov. 21, 2025 |
| Testing concluded on           | : | Nov. 28, 2025 |

### 2.2 Product Description

|                       |                                                                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name:         | Power bank                                                                                                                                              |
| Model/Type reference: | WP23                                                                                                                                                    |
| Hardware version:     | V1.0                                                                                                                                                    |
| Software version:     | V1.0                                                                                                                                                    |
| Test samples ID:      | CTA251121002-1# (Engineer sample)<br>CTA251121002-2# (Normal sample)                                                                                    |
| Power supply:         | Type-C Input: 5V---3A, 9V---2A<br>Type-C Output: 5V---3A, 9V---3A, 12V---2.25A<br>Wireless Output: 5W/7.5W/10W/15W(Max)<br>Battery: 3.85V 2500mAh 9.6Wh |
| Operation frequency:  | 110KHz - 205KHz                                                                                                                                         |
| Modulation type:      | ASK                                                                                                                                                     |
| Antenna type:         | Loop coil antenna                                                                                                                                       |
| ANT Gain:             | 0dBi                                                                                                                                                    |

### 2.3 Description of the test mode

Equipment under test was operated during the measurement under the following conditions:

☒ Charging and communication mode

| Test Modes: |            |            |
|-------------|------------|------------|
| Mode 1      | POWER BANK | Recorded   |
| Mode 2      | Standby    | Pre-tested |

### 2.4 Special Accessories

The following is the EUT test of the auxiliary equipment provided by the laboratory:

| Description | Manufacturer | Model            | Technical Parameters                                  | Certificate | Provided by |
|-------------|--------------|------------------|-------------------------------------------------------|-------------|-------------|
| phone       | Apple        | iPhone 12pro max | /                                                     | /           | laboratory  |
| Adapter     | /            | /                | Input: AC 100-240V 50/60Hz<br>Output: DC 5V 3A, 9V 2A | /           | laboratory  |
| /           | /            | /                | /                                                     | /           | /           |

### 2.5 Modifications

No modifications were implemented to meet testing criteria.

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### 3 TEST ENVIRONMENT

#### 3.1 Address of the test laboratory

**Shenzhen CTA Testing Technology Co., Ltd.**

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,  
Fuhai Street, Bao'an District, Shenzhen, China

#### 3.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

**FCC-Registration No.: 517856 Designation Number: CN1318**

Shenzhen CTA Testing Technology Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

**A2LA-Lab Cert. No.: 6534.01**

Shenzhen CTA Testing Technology Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.10 and CISPR 16-1-4:2010.

#### 3.3 Statement of the measurement uncertainty

| Test                                      | Measurement Uncertainty | Notes |
|-------------------------------------------|-------------------------|-------|
| Magnetic field measurement (9kHz~30MHz)   | ±7.8 %                  | (1)   |
| Electric field measurements (9kHz~ 30MHz) | ±7.8 %                  | (1)   |

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

#### 3.4 Equipments Used during the Test

| Test Equipment                             | Manufacturer | Model No.                    | Equipment No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
|--------------------------------------------|--------------|------------------------------|---------------|---------------------|-------------------------|
| Exposure Level Tester                      | Narda        | ELT-400                      | CTA-352       | 2025/5/18           | 2026/5/17               |
| Magnetic field probe<br>100cm <sup>2</sup> | Narda        | ELT probe 100cm <sup>2</sup> | CTA-353       | 2025/5/18           | 2026/5/17               |

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## 4 Test limit

### 4.1 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 <sup>2</sup> ) | 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 <sup>2</sup> )              | <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 <sup>2</sup> )              | <30                      |
| 30-300                                                   | 27.5                          | 0.073                         | 0.2                                 | <30                      |
| 300-1500                                                 | /                             | /                             | f/1500                              | <30                      |
| 1500-100000                                              | /                             | /                             | 1.0                                 | <30                      |

f = frequency in MHz

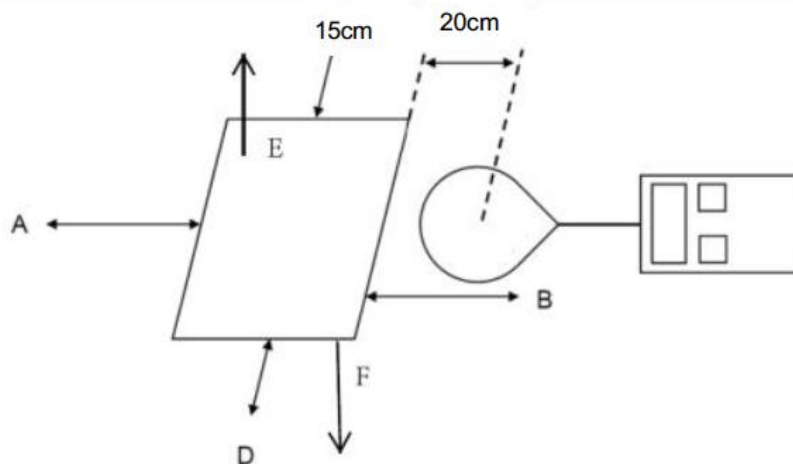
\* = Plane-wave equivalent power density

**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.

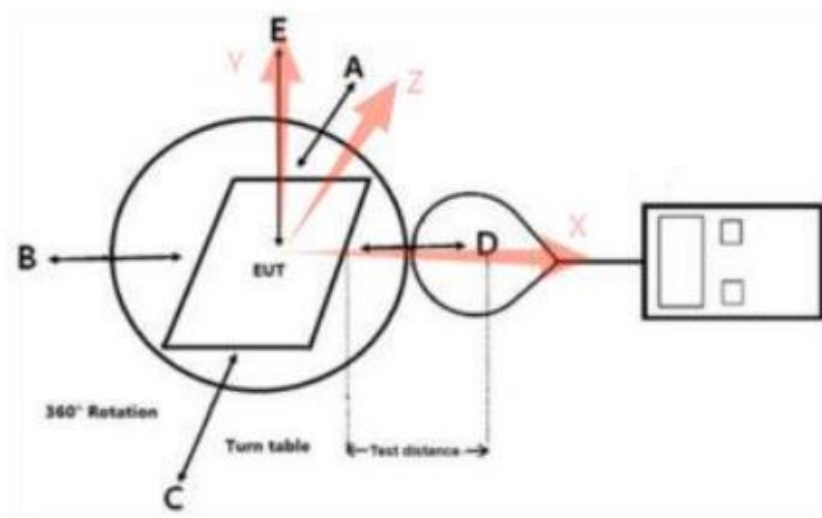
## 4.2 Test setup

For mobile exposure conditions:



Note: The distance of the points A/B/C/D is 15cm, and the point E is 20cm.

For portable exposure conditions:



Note: The distance of the points A/B/C/D/E/F is 0,2,4,6,8,10,12,14,16,18, 20cm.  
The values tested by the probe are X, Y, and Z on three axes perpendicular to the edge of the device. Top and bottom side coincident with the axis(Y) of the main coil.

### 4.3 Test Procedures

**For mobile exposure conditions:**

- The RF exposure test was performed in anechoic chamber.
- 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.
- The highest emission level was recorded and compared with limit.
- The EUT was measured according to the KDB 680106 D01 Wireless Power Transfer v04.

**For portable exposure conditions:**

- The RF exposure test was performed in anechoic chamber.
- 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
- The highest emission level was recorded and compared with limit.
- The EUT was measured according to the KDB 680106 D01 Wireless Power Transfer v04.

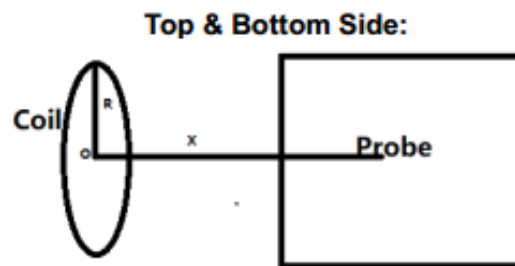
### 4.4 Equipment Approval Considerations of KDB 680106 D01v04

| Requirements of KDB 680106 D01                                                                                            | Description                                             |
|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| WPT operating frequency (or frequencies).                                                                                 | The device operate in the frequency range 110KHz~205KHz |
| Number of radiating structure(Coil)                                                                                       | Only one radiated Coil                                  |
| Conducted power for each radiating structure.                                                                             | Maximum15W                                              |
| § 2.1091-Mobile or § 2.1093-Portable demonstrated scenarios of operation, including RF exposure compliance information    | Mobile and Portable Device                              |
| Maximum distance from the WPT transmitter at which, by design, a load can be charged (including slow-charging operations) | Charing with the load directly contact                  |

## 4.5 Test results

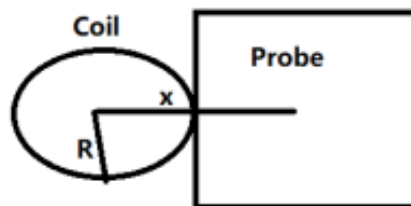
### For portable exposure condition:

- (1). The portable test modes have covered the considerations of the 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) Test performed with all the radiating structures operating at maximum power at the same time.
- (4) H-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.
- (5) According to Calibration information and specification about ETL-400 Probe, The Probe ETL-400 Probe's sensitive elements center is located in the probe's center, and the distance from the sensitive elements center to the tip of probe is 6.25cm.
- (6) The actual 0cm, 2cm, 4cm and 6cm field strengths need to be estimated for the positions that are not reachable via numerical calculation.
- (7) Use Biot-Savart formula theory to estimate the strength of the magnetic field that the measuring instrument cannot measure. According to Biot-Savart formula:



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

### Front, left, right & rear Side:



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

**B(Unit:A/m):** means H-field value;  
 $\mu_0$  is space permeability;  $\mu_0=4\pi*10^{-7}$ ;

**I(Unit:A):** A current element passing through a radiated coil;

**R(Unit:m):** means the Radius of radiated coil, According to provided Antenna specification:  
 $R=42/2=21\text{mm}=0.021\text{m}$ ;

**Test Distance(Unit:m):** The distance from the sensing element of the probe to the edge of the device surface.

**x(Unit:m):** means the center of the coil to the sensing elements of the probe. (For top & bottom side:  $x=\text{test distance}$ ; For other side:  $x=\text{test distance}+R$ )

**N:** Number of turns, according to providing "Antenna specification" files:  $N=14$ .

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

#### 4.5.1 Validation results for the numerical calculation model

- Measure with probe directed contact(test distance:6.25cm)
- Using Biot-Savart formula to calculate estimated results at test distance of 8cm and 10 cm;
- measure at test distance of 8 cm and 10cm;
- Compares the estimated results and measured result, the variation should not be greater than 30%;

Conclusion: The numerical calculation model is valid.

| Distance(cm)                                                                                                        | Test condition: Mode 1 |        |      |        |        |      |        |        |      |        |        |       |        |        |      |        |        |      |
|---------------------------------------------------------------------------------------------------------------------|------------------------|--------|------|--------|--------|------|--------|--------|------|--------|--------|-------|--------|--------|------|--------|--------|------|
|                                                                                                                     | Top                    |        |      | Bottom |        |      | Left   |        |      | Right  |        |       | Front  |        |      | back   |        |      |
|                                                                                                                     | Mea.                   | Est.   | Var. | Mea.   | Est.   | Var. | Mea.   | Est.   | Var. | Mea.   | Est.   | Var.  | Mea.   | Est.   | Var. | Mea.   | Est.   | Var. |
| 6.25                                                                                                                | 0.0336                 | /      | /    | 0.0298 | /      | /    | 0.0274 | /      | /    | 0.0268 | /      | /     | 0.0264 | /      | /    | 0.0343 | /      | /    |
| 8                                                                                                                   | 0.016                  | 0.0169 | 5.7  | 0.0153 | 0.015  | -1.7 | 0.0234 | 0.0226 | -3.2 | 0.0247 | 0.0221 | -10.5 | 0.0230 | 0.0218 | -5.1 | 0.0274 | 0.0283 | 3.5  |
| 10                                                                                                                  | 0.0081                 | 0.0089 | 10.2 | 0.0083 | 0.0079 | -4.8 | 0.0199 | 0.0188 | -5.5 | 0.0188 | 0.0184 | -1.9  | 0.0175 | 0.0181 | 3.6  | 0.0223 | 0.0235 | 5.5  |
| Mea.-Measured H-field(A/m); Est.-Estimated H-field(A/m);<br>Var.-Variation between measured and estimated value(%); |                        |        |      |        |        |      |        |        |      |        |        |       |        |        |      |        |        |      |

#### 4.5.1 Final H-Field Emission level with a combination of measured and estimated results.

Test condition: Mode 1

| Distance(cm) | Type     | Result(A/m) |        |        |        |        |        | Limit(A/m) |
|--------------|----------|-------------|--------|--------|--------|--------|--------|------------|
|              |          | Top         | Bottom | Left   | Right  | Front  | back   |            |
| 0            | Estimate | 1.2717      | 1.1279 | 0.1152 | 0.1127 | 0.111  | 0.1442 | 1.63       |
| 2            | Estimate | 0.4327      | 0.3837 | 0.0569 | 0.0556 | 0.0548 | 0.0712 | 1.63       |
| 4            | Estimate | 0.107       | 0.0949 | 0.0378 | 0.0369 | 0.0364 | 0.0473 | 1.63       |
| 6            | Estimate | 0.0376      | 0.0333 | 0.0283 | 0.0276 | 0.0272 | 0.0354 | 1.63       |
| 8            | Measured | 0.016       | 0.0153 | 0.0234 | 0.0247 | 0.0230 | 0.0274 | 1.63       |
| 10           | Measured | 0.0081      | 0.0083 | 0.0199 | 0.0188 | 0.0175 | 0.0223 | 1.63       |
| 12           | Measured | 0.0051      | 0.0053 | 0.0167 | 0.0153 | 0.0141 | 0.0174 | 1.63       |
| 14           | Measured | 0.0031      | 0.0028 | 0.0144 | 0.0143 | 0.0140 | 0.0193 | 1.63       |
| 16           | Measured | 0.0021      | 0.002  | 0.0139 | 0.0106 | 0.0108 | 0.0150 | 1.63       |
| 18           | Measured | 0.0014      | 0.0013 | 0.0127 | 0.0107 | 0.0105 | 0.0146 | 1.63       |
| 20           | Measured | 0.0011      | 0.0009 | 0.0114 | 0.0092 | 0.0106 | 0.0142 | 1.63       |

## 4.6 Conclusion

A minimum safety distance of 0 cm to the antenna is required when the device is charging a smart phone for portable exposure. The detected emissions are below the limitations according FCC KDB 680106 and confirmed by the FCC according to KDB Inquire..

## 5 Photographs of the Test Setup



\*\*\*\*\* End of Report \*\*\*\*\*