



# FCC Test Report

Test Report  
On Behalf of  
Shenzhen Ruilanxin Technology Co., Ltd  
For  
Magnetic Wireless Power bank  
Model No.: 4SO015A--CFP20, 4SO016A--CFP20, VA11

FCC ID: 2BEC5-4SO015A

Prepared For: Shenzhen Ruilanxin Technology Co., Ltd  
A403, Block B, Huada Industry, Fuqiao Industrial Area No.3,  
Fuhai, Bao'an district, Shenzhen, Guangdong Sheng, 518103 China

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Date of Test: Dec. 20, 2023 ~ Dec. 27, 2023

Date of Report: Dec. 27, 2023

Report Number: HK2312206220-2E



## Test Result Certification

**Applicant's Name** ..... : Shenzhen Ruilanxin Technology Co., Ltd  
**Address** ..... : A403, Block B, Huada Industry, Fuqiao Industrial Area No.3,  
Fuhai, Bao'an district, Shenzhen, Guangdong Sheng, 518103 China  
**Manufacturer's Name** ..... : Shenzhen Ruilanxin Technology Co., Ltd  
**Address** ..... : A403, Block B, Huada Industry, Fuqiao Industrial Area No.3,  
Fuhai, Bao'an district, Shenzhen, Guangdong Sheng, 518103 China  
**Product Description**  
**Trade Mark** ..... : VIDA  
**Product Name** ..... : Magnetic Wireless Power bank  
**Model and/or Type Reference** : 4SO015A--CFP20, 4SO016A--CFP20, VA11  
**Standards** ..... : FCC CFR 47 PART 18, KDB 680106 D01

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**Date of Test** ..... :  
**Date (s) of Performance of Tests** ..... : Dec. 20, 2023 ~ Dec. 27, 2023  
**Date of Issue** ..... : Dec. 27, 2023  
**Test Result** ..... : Pass

Testing Engineer :

*Len Liao*

(Len Liao)

Technical Manager :

*Sliver Wan*

(Sliver Wan)

Authorized Signatory :

*Jason Zhao*

(Jason Zhao)



**Note:**

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

- 2.

|    |                |
|----|----------------|
|    | Test Frequency |
| 01 | 137KHz         |

The EUT antenna is Coil Antenna. No antenna other than that furnished by the responsible party shall be used with the device.

**2. Summary of Test Results****2.1. Test procedures according to the technical standards:**

FCC KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01

| FCC CFR 47                                                 |                                   |          |        |
|------------------------------------------------------------|-----------------------------------|----------|--------|
| Standard Section                                           | Test Item                         | Judgment | Remark |
| FCC CFR 47 part1,<br>1.1310 KDB 680106<br>D01v03r01 (3)(3) | Magnetic Field Strength (H) (A/m) | PASS     |        |

**2.2. Measurement Uncertainty**

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately **95 %**.

| No. | Item                                      | Uncertainty             |
|-----|-------------------------------------------|-------------------------|
| 1   | All Emissions, Radiated(<30M)(9KHz-30MHz) | $\pm 3.90\text{dB}$     |
| 2   | Temperature                               | $\pm 0.5^\circ\text{C}$ |
| 3   | Humidity                                  | $\pm 2\%$               |



### 2.3. Test Instruments

| Description                          | Brand | Model No. | S/N        | Calibrated Date | Calibrated Until |
|--------------------------------------|-------|-----------|------------|-----------------|------------------|
| Electric and Magnetic Field Analyzer | narda | EHP-200AC | 180ZX11028 | Feb. 17, 2023   | Feb. 16, 2024    |

NOTE: 1. the calibration interval of the above test instruments is 12 months.



## 3. Maximum Permissible Exposure

## Limit of Maximum Permissible Exposure

| Limits for Occupational / Controlled Exposure         |                                   |                                   |                                          |                                                                   |
|-------------------------------------------------------|-----------------------------------|-----------------------------------|------------------------------------------|-------------------------------------------------------------------|
| Frequency Range (MHz)                                 | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes) |
| 0.3-3.0                                               | 614                               | 1.63                              | (100)*                                   | 6                                                                 |
| 3.0-30                                                | 1842 / f                          | 4.89 / f                          | (900 / f)*                               | 6                                                                 |
| 30-300                                                | 61.4                              | 0.163                             | 1.0                                      | 6                                                                 |
| 300-1500                                              |                                   |                                   | F/300                                    | 6                                                                 |
| 1500-100,000                                          |                                   |                                   | 5                                        | 6                                                                 |
| Limits for General Population / Uncontrolled Exposure |                                   |                                   |                                          |                                                                   |
| Frequency Range (MHz)                                 | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes) |
| 0.3-1.34                                              | 614                               | 1.63                              | (100)*                                   | 30                                                                |
| 1.34-30                                               | 824/f                             | 2.19/f                            | (180 / f)*                               | 30                                                                |
| 30-300                                                | 27.5                              | 0.073                             | 0.2                                      | 30                                                                |
| 300-1500                                              |                                   |                                   | F/1500                                   | 30                                                                |
| 1500-100,000                                          |                                   |                                   | 1                                        | 30                                                                |

Note 1: f = frequency in MHz; \*Plane-wave equivalent power density.

Note 2: For the applicable limit, see FCC 1.1310, 680106 D01 RF Exposure Wireless Charging Apps v03.

Note 3: Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63A/m. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

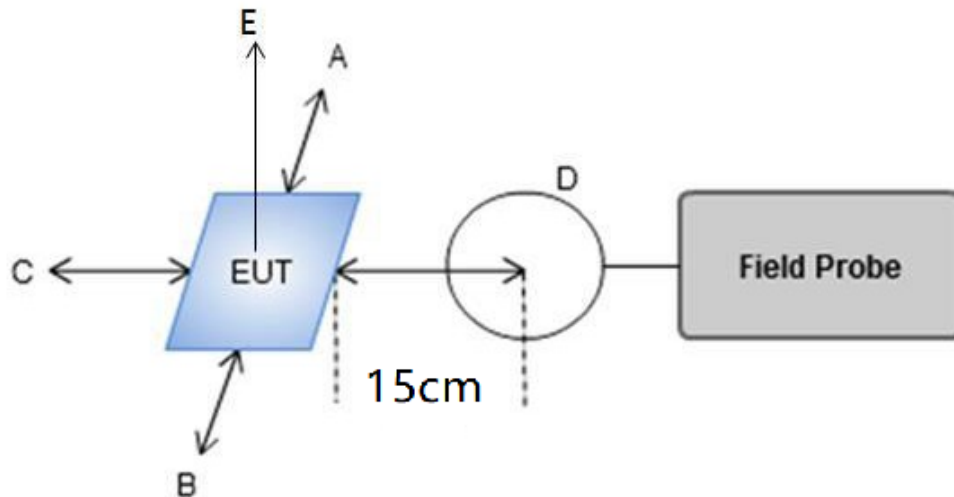


#### 4. Test Procedure

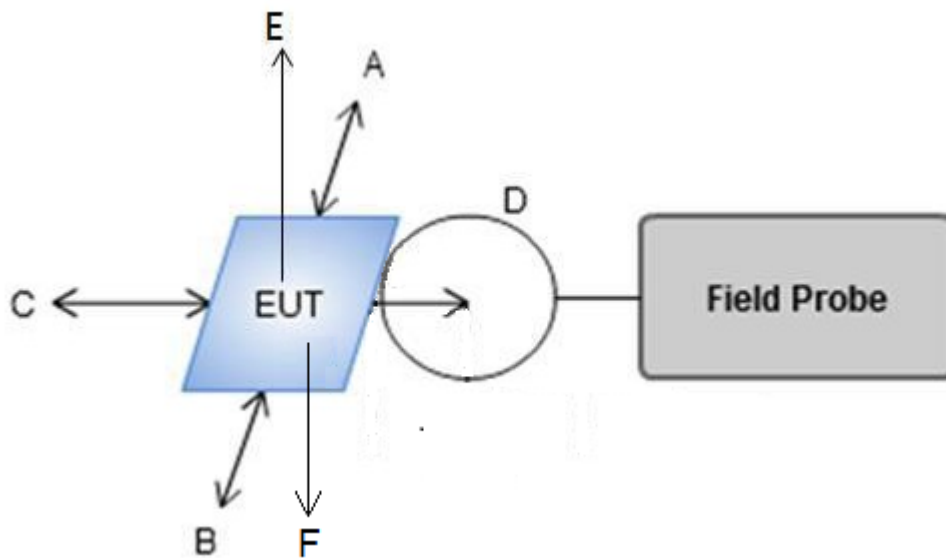
- a. For devices designed for typical desktop applications, such as wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of (AC Mode: H-field & E-field strengths for all sides is 15cm, H-field strengths of top side is 20cm) and (DC Mode: H-field & E-field strengths for all sides is 0cm, H-field strengths of top side is 0cm). E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm measured from the center of the probe(s) to the edge of the device.

##### 4.1 Test Setup

AC Mode :



DC Mode :





## 4.2 Result of Maximum Permissible Exposure

AC Mode:

For Full load:

H-Field Strength at 15 cm (E top side: 20cm) from the edges surrounding the EUT (A/m)

| Field strength | Test Position A | Test Position B | Test Position C | Test Position D | Test Position E | Limits (A/m) |
|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|
| A/m            | 0.2101          | 0.2330          | 0.2251          | 0.2164          | 0.2083          | 1.63         |

For Half Load mode:

H-Field Strength at 15 cm (E top side: 20cm) from the edges surrounding the EUT (A/m)

| Field strength | Test Position A | Test Position B | Test Position C | Test Position D | Test Position E | Limits (A/m) |
|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|
| A/m            | 0.2084          | 0.1973          | 0.2000          | 0.2018          | 0.1966          | 1.63         |

For No load mode:

H-Field Strength at 15 cm (E top side: 20cm) from the edges surrounding the EUT (A/m)

| Field strength | Test Position A | Test Position B | Test Position C | Test Position D | Test Position E | Limits (A/m) |
|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|
| A/m            | 0.1962          | 0.1847          | 0.1853          | 0.1869          | 0.1785          | 1.63         |



DC Mode:

For Full load mode:

H-Field Strength at 0-20 cm from the edges surrounding the EUT (A/m)

| Measuring distance (cm) | Field strength | Test Position A | Test Position B | Test Position C | Test Position D | Test Position E | Test Position F | Limits (A/m) |
|-------------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|
| 0                       | A/m            | 0.272           | 0.269           | 0.263           | 0.256           | 0.248           | 0.244           | 1.63         |
| 2                       | A/m            | 0.257           | 0.253           | 0.250           | 0.250           | 0.244           | 0.240           | 1.63         |
| 4                       | A/m            | 0.233           | 0.230           | 0.224           | 0.219           | 0.212           | 0.206           | 1.63         |
| 6                       | A/m            | 0.218           | 0.208           | 0.213           | 0.209           | 0.203           | 0.196           | 1.63         |
| 8                       | A/m            | 0.207           | 0.200           | 0.202           | 0.201           | 0.194           | 0.189           | 1.63         |
| 10                      | A/m            | 0.185           | 0.178           | 0.183           | 0.173           | 0.172           | 0.171           | 1.63         |
| 12                      | A/m            | 0.171           | 0.163           | 0.162           | 0.161           | 0.153           | 0.145           | 1.63         |
| 14                      | A/m            | 0.151           | 0.149           | 0.148           | 0.148           | 0.141           | 0.136           | 1.63         |
| 16                      | A/m            | 0.143           | 0.133           | 0.142           | 0.138           | 0.134           | 0.133           | 1.63         |
| 18                      | A/m            | 0.131           | 0.121           | 0.128           | 0.120           | 0.120           | 0.119           | 1.63         |
| 20                      | A/m            | 0.127           | 0.125           | 0.122           | 0.116           | 0.114           | 0.108           | 1.63         |

For Half Load mode:

H-Field Strength at 0-20 cm from the edges surrounding the EUT (A/m)

| Measuring distance (cm) | Field strength | Test Position A | Test Position B | Test Position C | Test Position D | Test Position E | Test Position F | Limits (A/m) |
|-------------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|
| 0                       | A/m            | 0.235           | 0.229           | 0.228           | 0.219           | 0.213           | 0.214           | 1.63         |
| 2                       | A/m            | 0.238           | 0.237           | 0.232           | 0.226           | 0.217           | 0.223           | 1.63         |
| 4                       | A/m            | 0.205           | 0.203           | 0.201           | 0.194           | 0.193           | 0.193           | 1.63         |
| 6                       | A/m            | 0.191           | 0.188           | 0.187           | 0.178           | 0.172           | 0.175           | 1.63         |
| 8                       | A/m            | 0.187           | 0.177           | 0.183           | 0.175           | 0.175           | 0.165           | 1.63         |
| 10                      | A/m            | 0.169           | 0.166           | 0.164           | 0.160           | 0.159           | 0.154           | 1.63         |
| 12                      | A/m            | 0.143           | 0.135           | 0.135           | 0.130           | 0.126           | 0.127           | 1.63         |
| 14                      | A/m            | 0.132           | 0.126           | 0.124           | 0.118           | 0.115           | 0.115           | 1.63         |
| 16                      | A/m            | 0.131           | 0.127           | 0.128           | 0.120           | 0.115           | 0.116           | 1.63         |
| 18                      | A/m            | 0.113           | 0.108           | 0.104           | 0.103           | 0.099           | 0.094           | 1.63         |
| 20                      | A/m            | 0.104           | 0.095           | 0.100           | 0.092           | 0.085           | 0.086           | 1.63         |



For No load mode:

H-Field Strength at 0-20 cm from the edges surrounding the EUT (A/m)

| Measuring distance (cm) | Field strength | Test Position A | Test Position B | Test Position C | Test Position D | Test Position E | Test Position F | Limits (A/m) |
|-------------------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|
| 0                       | A/m            | 0.210           | 0.207           | 0.198           | 0.202           | 0.201           | 0.205           | 1.63         |
| 2                       | A/m            | 0.217           | 0.212           | 0.204           | 0.212           | 0.202           | 0.210           | 1.63         |
| 4                       | A/m            | 0.185           | 0.178           | 0.169           | 0.173           | 0.178           | 0.169           | 1.63         |
| 6                       | A/m            | 0.168           | 0.166           | 0.163           | 0.159           | 0.157           | 0.165           | 1.63         |
| 8                       | A/m            | 0.172           | 0.168           | 0.159           | 0.158           | 0.163           | 0.161           | 1.63         |
| 10                      | A/m            | 0.159           | 0.155           | 0.150           | 0.152           | 0.151           | 0.146           | 1.63         |
| 12                      | A/m            | 0.124           | 0.119           | 0.110           | 0.111           | 0.116           | 0.117           | 1.63         |
| 14                      | A/m            | 0.109           | 0.107           | 0.104           | 0.099           | 0.102           | 0.106           | 1.63         |
| 16                      | A/m            | 0.110           | 0.110           | 0.106           | 0.107           | 0.103           | 0.105           | 1.63         |
| 18                      | A/m            | 0.101           | 0.095           | 0.086           | 0.089           | 0.087           | 0.086           | 1.63         |
| 20                      | A/m            | 0.082           | 0.075           | 0.071           | 0.066           | 0.066           | 0.070           | 1.63         |



Remark: According KDB 680106 D01 RF Exposure Wireless Charging App v03r01, section 5, b). The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit. The E- field evaluation conducted assuming a user separation distance of 15 cm according to the KDB 680106 D01 RF Exposure Wireless Charging App v03 section 3, c).

Result: The device comply with the RF exposure requirement according to 680106 D01 v03r01, section 5, b):

(1) Power transfer frequency is less than 1 MHz.

- The device operate in the frequency range for 112KHz~ 205KHz

(2) Output power from each primary coil is less than or equal to 15 watts.

- The maximum output power of ANT1 is 5W

(3) A 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 can be powered on at the same time

- The EUT is placed directly in contact with the transmitter

(4) Client device is placed directly in contact with the transmitter.

- The EUT meet the conditions.

(5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).

- This is a portable device.

(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.

- The EUT meet the conditions.



Photograph of Test

AC Mode:

A



B

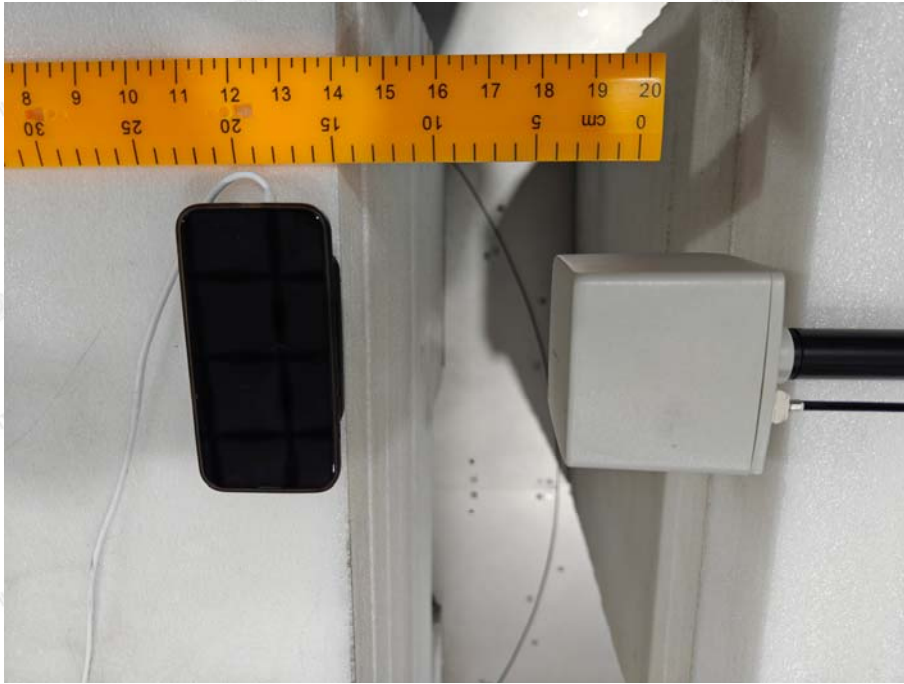


C

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by HUAKE, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.cer-mark.com>.

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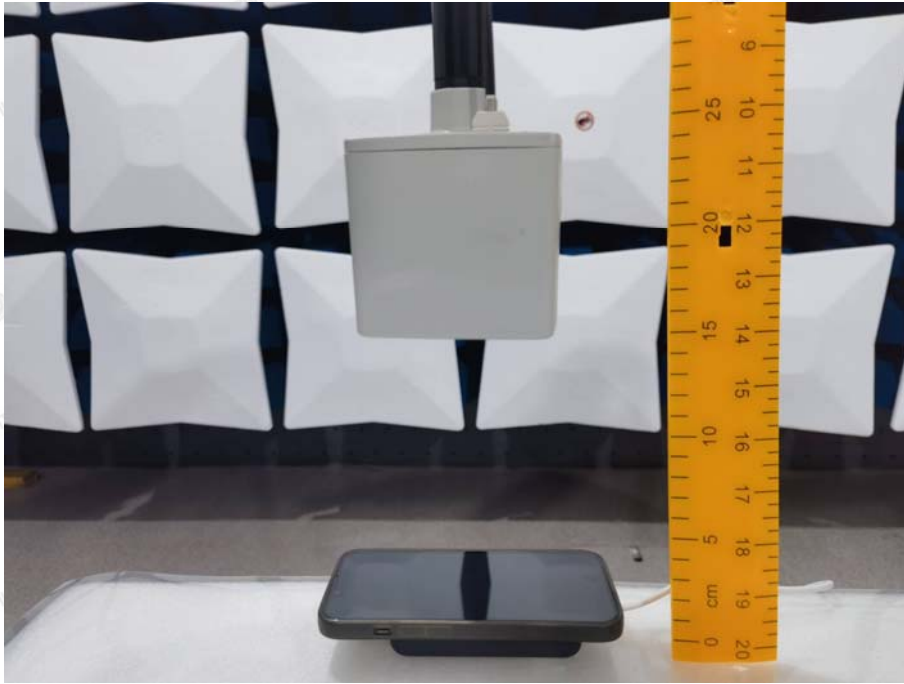
Add: 1-2F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



D



E



DC Mode:

A



B



C



D



E





F



※※※※THE END※※※※※

