



Shenzhen CTA Testing Technology Co., Ltd.

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

## RF Exposure-WPT

Report Reference No. .... : CTA25101101402

FCC ID. .... : 2BTO3-XC-WXC-QR001

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Date of issue ..... : Oct. 17, 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 ..... : Zhangzhou Xuchen Electronic Technology Co., Ltd.

Address ..... : Building 8, No. 16, Jinhua Road, Jinfeng Industrial Development Zone, Xiangcheng District, Zhangzhou City, 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 ..... : Embedded wireless charging

Manufacturer ..... : Zhangzhou Xuchen Electronic Technology Co., Ltd.

Trade Mark ..... : N/A

Model/Type reference ..... : xc-wxc-qr001

Listed Models ..... : xc-wxc-qr002

Rating ..... : Input: DC 5V 2A, 9V 2A

Wireless Output: 5W/7.5W/10W/15W

Result ..... : PASS

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## TEST REPORT

Equipment under Test : Embedded wireless charging

Model /Type : xc-wxc-qr001

Listed Models : xc-wxc-qr002

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

**Applicant** : **Zhangzhou Xuchen Electronic Technology Co., Ltd.**

Address : Building 8, No. 16, Jinhua Road, Jinfeng Industrial Development Zone, Xiangcheng District, Zhangzhou City, China

**Manufacturer** : **Zhangzhou Xuchen Electronic Technology Co., Ltd.**

Address : Building 8, No. 16, Jinhua Road, Jinfeng Industrial Development Zone, Xiangcheng District, Zhangzhou City, 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 | : | Oct. 11, 2025 |
| Testing commenced on           | : | Oct. 11, 2025 |
| Testing concluded on           | : | Oct. 17, 2025 |

### 2.2 Product Description

|                       |                                                                      |
|-----------------------|----------------------------------------------------------------------|
| Product Name:         | Embedded wireless charging                                           |
| Model/Type reference: | xc-wxc-qr001                                                         |
| Hardware version:     | V1.0                                                                 |
| Software version:     | V1.0                                                                 |
| Test samples ID:      | CTA251011014-1# (Engineer sample)<br>CTA251011014-2# (Normal sample) |
| Power supply:         | Input: DC 5V 2A, 9V 2A<br>Wireless Output: 5W/7.5W/10W/15W           |
| 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      | Wireless Charging | 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 2A, 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)   | $\pm 7.8 \%$            | (1)   |
| Electric field measurements (9kHz~ 30MHz) | $\pm 7.8 \%$            | (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 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

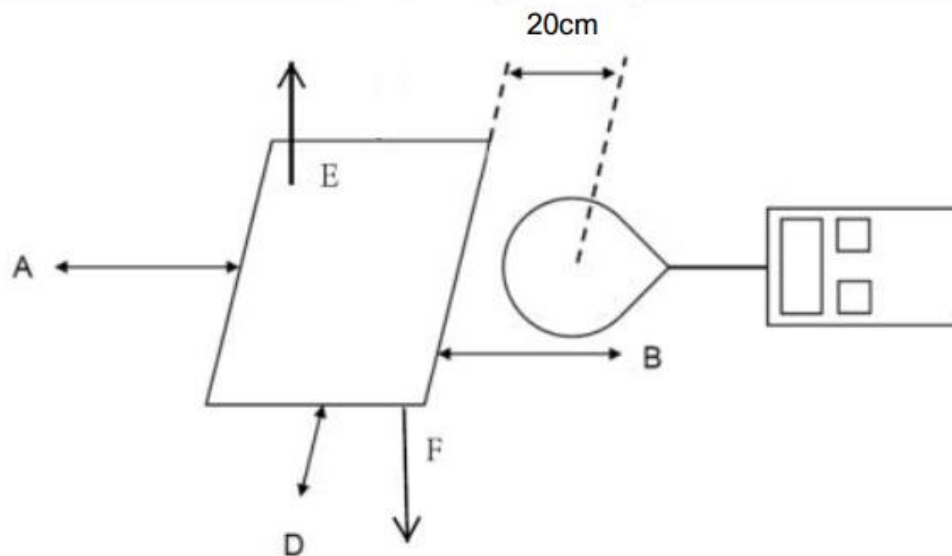
\* = Plane-wave equivalent power density

**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/E is 20cm.



### 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 20 cm surrounding 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.

### 4.4 Equipment Approval Considerations of KDB 680106 D01v04

| Requirements of KDB 680106 D01                                                                                                                                                       | Yes / No | Description                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------------------------|
| Mobile Device and Portable Device Configurations                                                                                                                                     | Yes      | Mobile Device                                              |
| Equipment Authorization Procedures for Devices Operating at Frequencies Below 4 MHz                                                                                                  | Yes      | The device operate in the frequency range 110KHz - 205KHz  |
| RF Exposure compliance may be ensured only for a minimum separation distance that is greater than 20 cm, while use conditions at smaller distances can still be considered unlikely. | Yes      | The EUT H-field strengths at 20 cm surrounding the device. |

### 4.5 Test results

H-Field Strength at 20 cm from the edges surrounding the EUT

| Charging Battery Level | Unit | Frequency Range (MHz) | Measured H-Field Strength Values (A/m) |                 |                 |                 |                 | FCC H-Field Strength Limits (A/m) |
|------------------------|------|-----------------------|----------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------------------------|
|                        |      |                       | Test Position A                        | Test Position B | Test Position C | Test Position D | Test Position E |                                   |
| 1%                     | uT   | 0.132                 | 0.481                                  | 0.476           | 0.484           | 0.489           | 0.490           | --                                |
| 1%                     | A/m  | 0.132                 | 0.385                                  | 0.381           | 0.387           | 0.391           | 0.392           | 1.63                              |
| 50%                    | uT   | 0.132                 | 0.391                                  | 0.393           | 0.398           | 0.401           | 0.403           | --                                |
| 50%                    | A/m  | 0.132                 | 0.313                                  | 0.314           | 0.318           | 0.321           | 0.322           | 1.63                              |
| 99%                    | uT   | 0.132                 | 0.214                                  | 0.215           | 0.218           | 0.219           | 0.228           | --                                |
| 99%                    | A/m  | 0.132                 | 0.171                                  | 0.172           | 0.174           | 0.175           | 0.182           | 1.63                              |

Note:1.  $A/m = uT/1.25$

Note: 2. During test the frequencies less than 1 MHz and E/H ratio less than 1/10 of the 377-ohm free space wave impedance, only record H-field measurements result.

### 4.6 Conclusion

A minimum safety distance of 20 cm to the antenna is required when the device is charging a smart phone for mobile exposure. The detected emissions are below the limitations according FCC KDB 680106 and confirmed by the FCC according to KDB Inquire..

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## **5 Photographs of the Test Setup**



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