FCC Test Report

Test Report
On Behalf of
Shenzhen Yiqizhao Technology Co.,Ltd
For
3-IN-1 MAGNETIC WIRELESS CHARGER
Model No.: N3, N11, N12, N13, N14, N15, N16, N17, N18, N19

FCC ID: 2BC2X-N3

Prepared For :	**Shenzhen Yiqizhao Technology Co.,Ltd** **201,Floor 2,Building6,Yunli Intelligent Park,No.3, Changfa MiddleRoad,YangmeiCommunity,BantianStreet, Shenzhen, China**
Prepared By :	**Shenzhen HUAK Testing Technology Co., Ltd.** **1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China**
Date of Test:	**Jun. 20, 2024 ~ Jun. 28, 2024**
Date of Report:	**Jun. 28, 2024**
Report Number:	**HK2406203234-2E**

Test Result Certification

Applicant's Name	:	Shenzhen Yiqizhao Technology Co.,Ltd
Address	:	201,Floor 2,Building6,Yunli Intelligent Park,No.3, Changfa MiddleRoad,YangmeiCommunity,BantianStreet, Shenzhen, China
Manufacturer's Name	:	Shenzhen Yiqizhao Technology Co.,Ltd
Address	:	310-313 Room 3 Floor A Building Baiwangda Intelligent Park, Shenzhen, Guangdong, China

Product Description

Trade Mark	:	N/A
Product Name	:	3-IN-1 MAGNETIC WIRELESS CHARGER
Model and/or type reference	:	N3, N11, N12, N13, N14, N15, N16, N17, N18, N19
Standards	:	FCC CFR 47 PART 18, KDB 680106 D01

Date of Test	:	
Date (s) of performance of tests	:	**Jun. 20, 2024 ~ Jun. 28, 2024**
Date of Issue	:	**Jun. 28, 2024**
Test Result	:	**Pass**

Testing Engineer Len Liao

Len Liao

Technical Manager Sliver Wan

Sliver Wan

Authorized Signatory Jason Zhou

Jason Zhou

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2.

Channel List							
Channel	Frequency (KHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	136	02	133				

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 Wireless Power Transfer v04

FCC CFR 47			
Standard Section	Test Item	Judgment	Remark
FCC CFR 47 part1, 1.1310 KDB 680106 D01v04	Electric Field Strength (E) (V/m)	PASS	
	Magnetic Field Strength (H) (A/m)	PASS	

2.2. Measurement Uncertainty

The reported uncertainty of measurement y ±U, where expended 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)	±3.90dB
2	Temperature	±0.5°C
3	Humidity	±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. 20, 2024	Feb. 19, 2025

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

2.4. Test Mode

Test Item	Test Mode	Description
Radiated & Conducted Test Cases	Mode 1	AC/DC Adapter + EUT + Cell phone (Battery Status: <1%) + Headphone (Battery Status: <1%)
	Mode 2	AC/DC Adapter + EUT + Cell phone (Battery Status: <50%) + Headphone (Battery Status: <1%)
	Mode 3	AC/DC Adapter + EUT + Cell phone (Battery Status: >95%) + Headphone (Battery Status: <1%)
	Mode 4	AC/DC Adapter + EUT + Cell phone (Battery Status: <1%) + Headphone (Battery Status: <50%)
	Mode 5	AC/DC Adapter + EUT + Cell phone (Battery Status: <50%) + Headphone (Battery Status: <50%)
	Mode 6	AC/DC Adapter + EUT + Cell phone (Battery Status: >95%) + Headphone (Battery Status: <50%)
	Mode 7	AC/DC Adapter + EUT + Cell phone (Battery Status: <1%) + Headphone (Battery Status: >95%)
	Mode 8	AC/DC Adapter + EUT + Cell phone (Battery Status: <50%) + Headphone (Battery Status: >95%)
	Mode 9	AC/DC Adapter + EUT + Cell phone (Battery Status: >95%) + Headphone (Battery Status: >95%)
	Mode 10	AC/DC Adapter + EUT + Cell phone (Battery Status: <1%)
	Mode 11	AC/DC Adapter + EUT + Cell phone (Battery Status: <50%)
	Mode 12	AC/DC Adapter + EUT + Cell phone (Battery Status: >95%)
	Mode 13	AC/DC Adapter + EUT + Headphone (Battery Status: <1%)
	Mode 14	AC/DC Adapter + EUT + Headphone (Battery Status: <50%)
	Mode 15	AC/DC Adapter + EUT + Headphone (Battery Status: >95%)
	Mode 16	AC/DC Adapter + EUT (Null Load)

Note: 1. All modes and configurations above have been tested, the report only shows the worst-case.

2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.

3. The Cell phone, Headphone provided by Lab.

4. According to the manufacturer's design principle, the wireless charging power will reach its maximum when the client device's battery level is between 1% and 10%.

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/ cm²)	Averaging Time |E|²,|H|² 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/ cm²)	Averaging Time |E|²,|H|² 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.

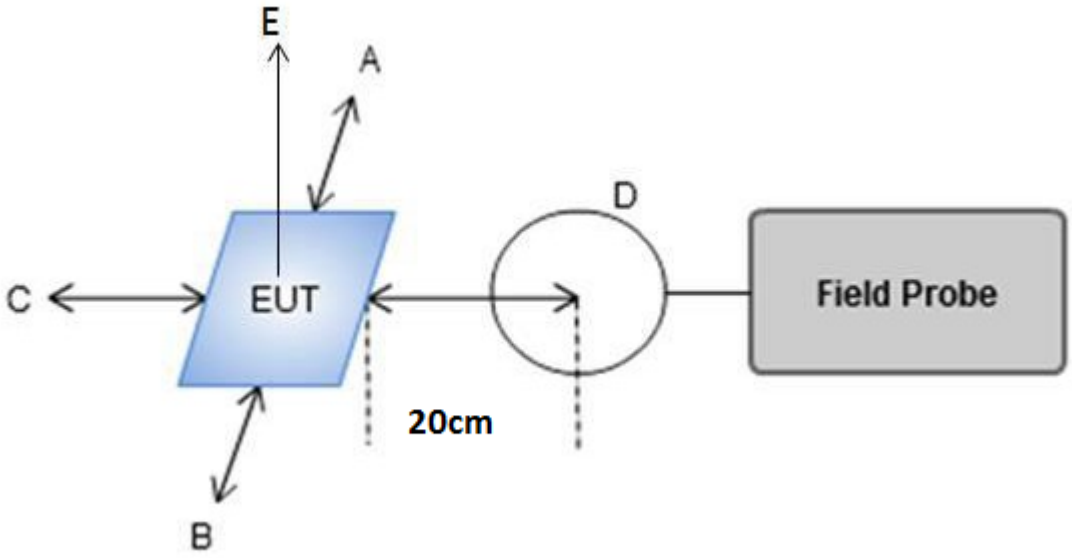
Note 2: For the applicable limit, see FCC 1.1310, 680106 D01 Wireless Power Transfer v04.

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 a wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of (H-field & E- field strengths for all sides is 20cm).
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 20 cm measured from the center of the probe(s) to the edge of the device.

4.1 Test Setup



4.2 Result of Maximum Permissible Exposure

All test modes complete the test. Only the full load test was the worst results reported below:

ANT 1: Cell phone

Cell phone battery charge is less than 1% (136 KHz)

E-Field Strength at 20 cm from the edges surrounding the EUT (V/m)

Field strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Limits (V/m)
V/m	0.0812	0.1836	0.4222	0.7476	1.1200	614

H-Field Strength at 20 cm 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	0.0051	0.0073	0.0143	0.0245	0.0343	1.63

ANT 2: Headphone

Headphone battery charge is less than 1% (133 KHz)

E-Field Strength at 20 cm from the edges surrounding the EUT (V/m)

Field strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Limits (V/m)
V/m	1.0739	1.2121	1.1799	0.9598	0.6425	614

H-Field Strength at 20 cm 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	0.0915	0.1062	0.0996	0.0831	0.0543	1.63

ANT 1 + ANT 2: Cell phone + Headphone

All the test modes completed for test. Only the worst result was reported as below:

E-Field Strength at 20 cm from the edges surrounding the EUT (V/m)

Field strength	Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Limits (V/m)
V/m	1.2072	1.7591	2.0514	2.0424	1.7413	614

H-Field Strength at 20 cm 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	0.0309	0.0433	0.0496	0.0504	0.0428	1.63

Remark: According KDB 680106 D01 Wireless Power Transfer v04, section 5.2). The aggregate H-field strengths at 20 cm surrounding the device 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 20 cm according to the KDB 680106 D01 Wireless Power Transfer v04, section 5.2).

Result: The device comply with the RF exposure requirement according to 680106 D01 v04, section 5.2):

(1) The power transfer frequency is below 1MHz.
- The device operate in the frequency range for 112KHz~ 205KHz

(2) The output power from each transmitting element (e .g., coil) is less than or equal to 15 watts.
- The maximum output power of ANT1 is 15W

- The maximum output power of ANT2 is 5W

3) A client device providing the maximum permitted load is placed in physical contact with the transmitter (i.e., the surfaces of the transmitter and client device enclosures need to be in physical contact)
-The EUT is placed directly in contact with the transmitter

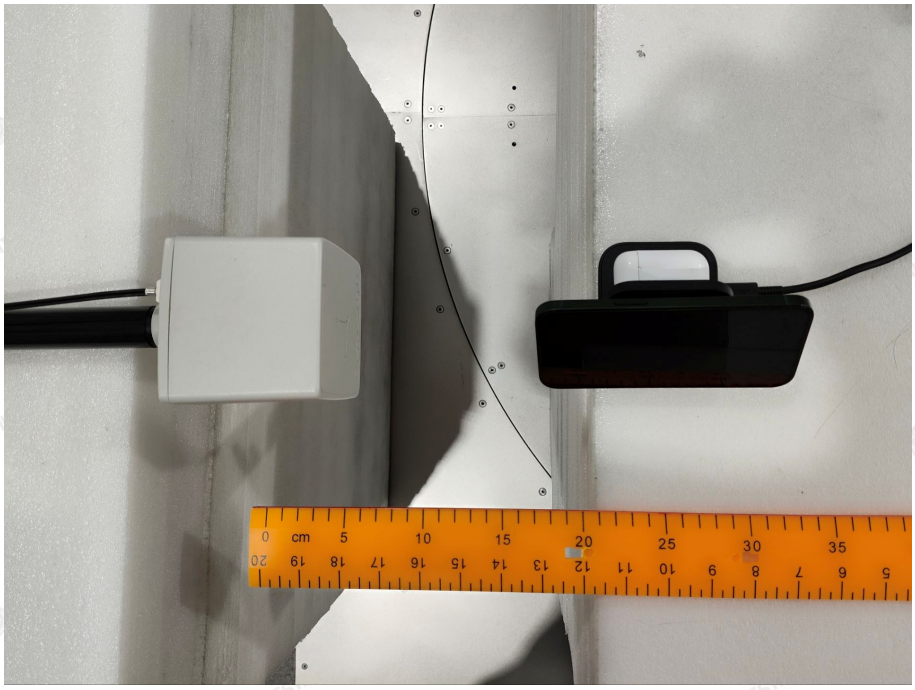
(4) Only 2.1091-Mobile exposure conditions apply (i.e., this provision does not cover 2.093-porable exposure conditions).
- Yes, mobile device only.

(5) The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit, per KDB 447498, Table 1. These measurements shall be taken along the principal axes of the device, with one axis oriented along the direction of the estimated maximum field strength, and for three points per axis or until a 1/d (inverse distance from the emitter structure) field strength decay is observed. Symmetry considerations may be used for test reduction purposes. The device shall be operated in documented worst-case compliance scenarios (i.e., the ones that lead to the maximum field components), and while all the radiating structures (e.g., coils or antennas) that by design can simultaneously transmit are energized at their nominal maximum power.
- The EUT meet the conditions.

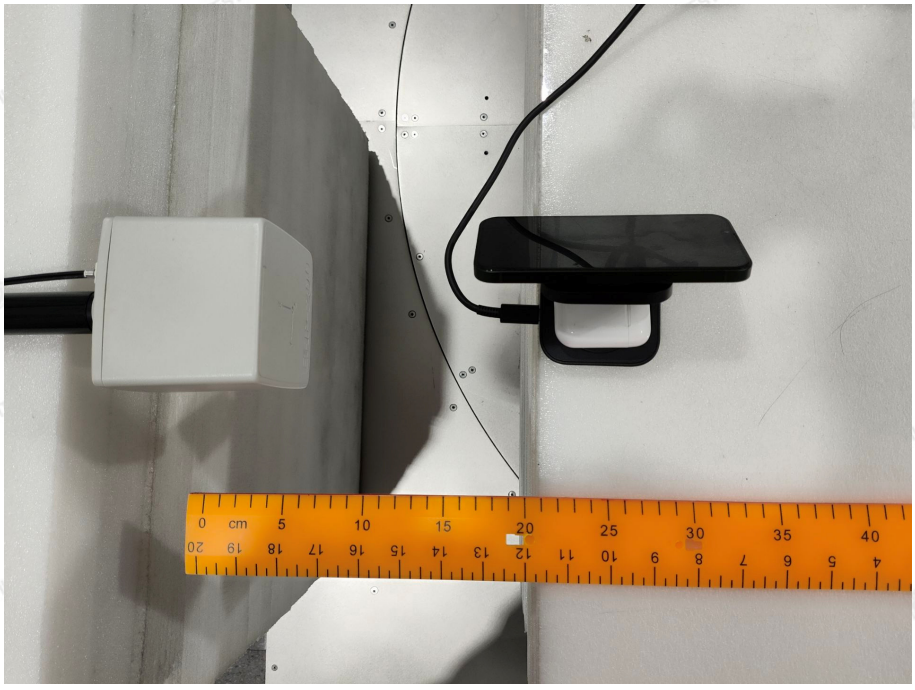
(6) For systems with more than one radiating structure, the conditions specified in (5) must be met when the system is fully loaded (i.e., clients absorbing maximum power available), and with all the radiating structures operating at maximum power at the same time, as per design conditions. If the design allows one or more radiating structures to be powered at a higher level while other radiating structures are not powered, then those cases must be tested as well. For instance, a device may use three RF coils powered at 5 W, or one coil powered at 15 W: in this case, both scenarios shall be tested.
- The transfer system including a charging system with two primary coils, the coil pairs can be powered on at the same time.

Photographs of Test

A

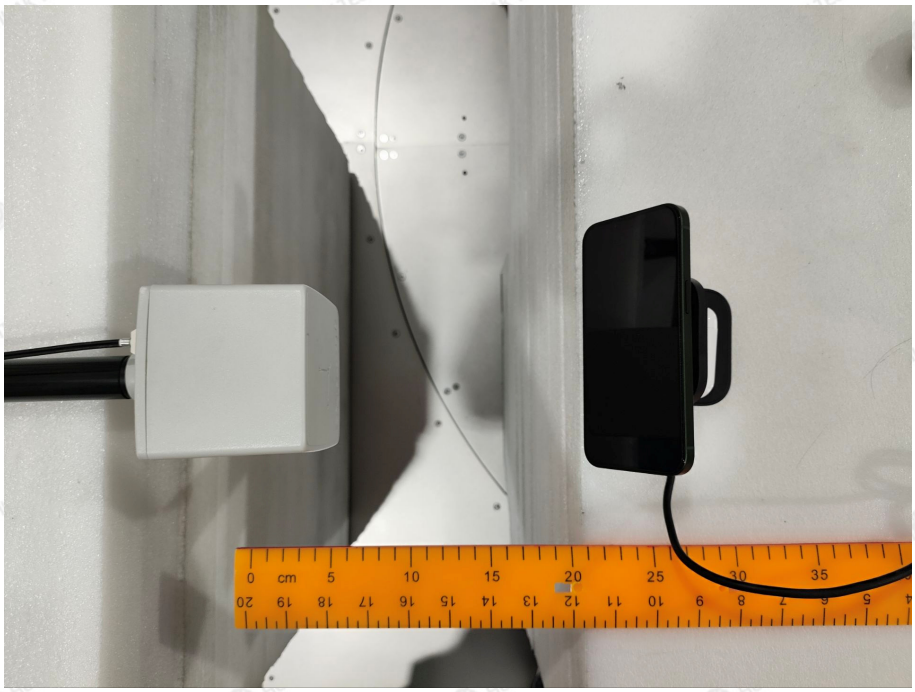


B

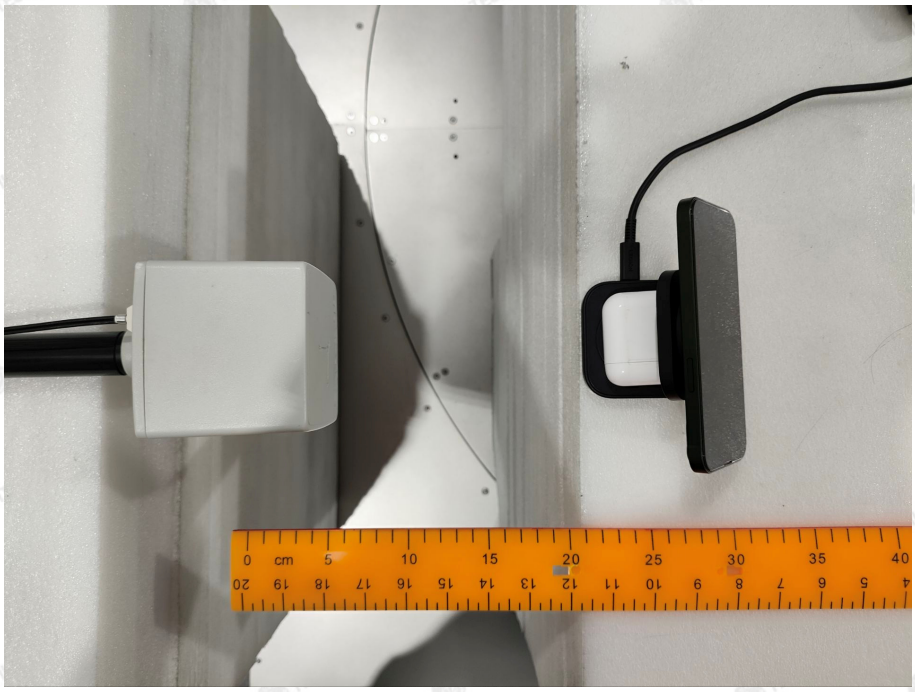


TEL : +86-755 2302 9901 FAX : +86-755 2302 9901 E-mail : service@cer-mark.com
Add: 1-2F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

C

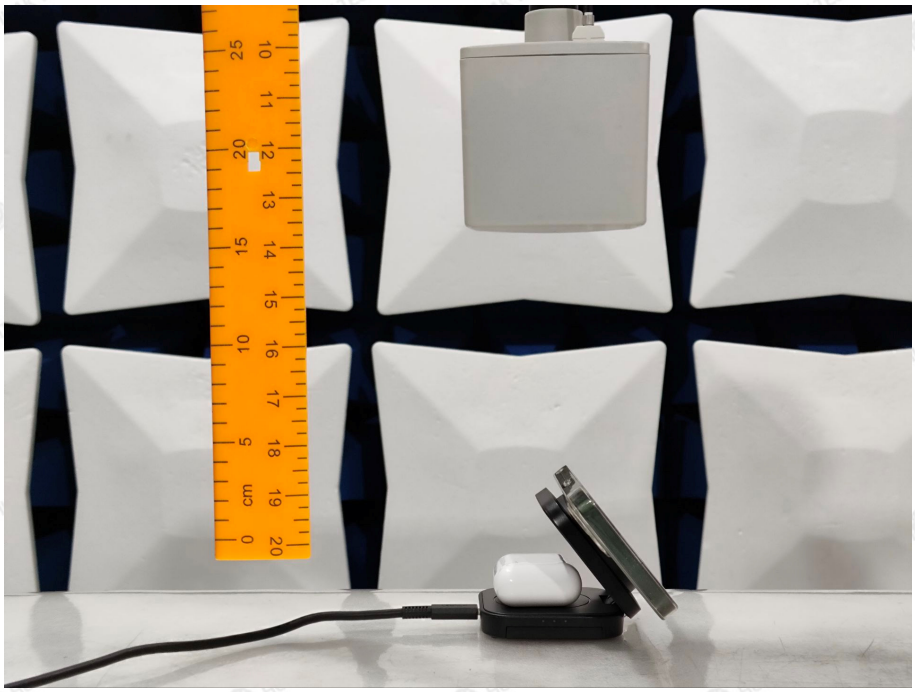


D



TEL : +86-755 2302 9901 FAX : +86-755 2302 9901 E-mail : service@cer-mark.com
Add: 1-2F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

E



※※※※※THE END※※※※※

TEL : +86-755 2302 9901 FAX : +86-755 2302 9901 E-mail : service@cer-mark.com
Add: 1-2F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China