

TEST REPORT

Report No.: BCTC2305306782-1E

Applicant: LONGCONN ELECTRONICS (SHENZHEN) CO LTD

Product Name: Balance 3-in-1 wireless charger

Model/Type Ref.: W328

Tested Date: 2023-05-05 to 2023-05-15

Issued Date: 2023-08-03

Shenzhen BCTC Testing Co., Ltd.

FCC ID: 2AXAXW328

Product Name: Balance 3-in-1 wireless charger

Trademark: ZECHIN

Model/Type Ref.: W328

Prepared For: LONGCONN ELECTRONICS (SHENZHEN) CO LTD

Address: Floor 3,B1 Block ,Xu Jing Chang Industrial Park,NO.39 HaoyeRoad,FuhaiStreet, Bao'an, Shenzhen, China

Manufacturer: LONGCONN ELECTRONICS (SHENZHEN) CO LTD

Address: Floor 3,B1 Block ,Xu Jing Chang Industrial Park,NO.39 HaoyeRoad,FuhaiStreet, Bao'an, Shenzhen, China

Prepared By: Shenzhen BCTC Testing Co., Ltd.

Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

Sample Received Date: 2023-05-05

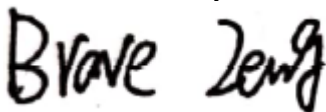
Sample tested Date: 2023-05-05 to 2023-05-15

Report No.: BCTC2305306782-1E

Test Standards: FCC CFR 47 part1, 1.1307(b), 1.1310
KDB 680106 D01 RF Exposure Wireless Charging App v03r01

Test Results: PASS

Tested by:



Brave Zeng/ Project Handler

Approved by:

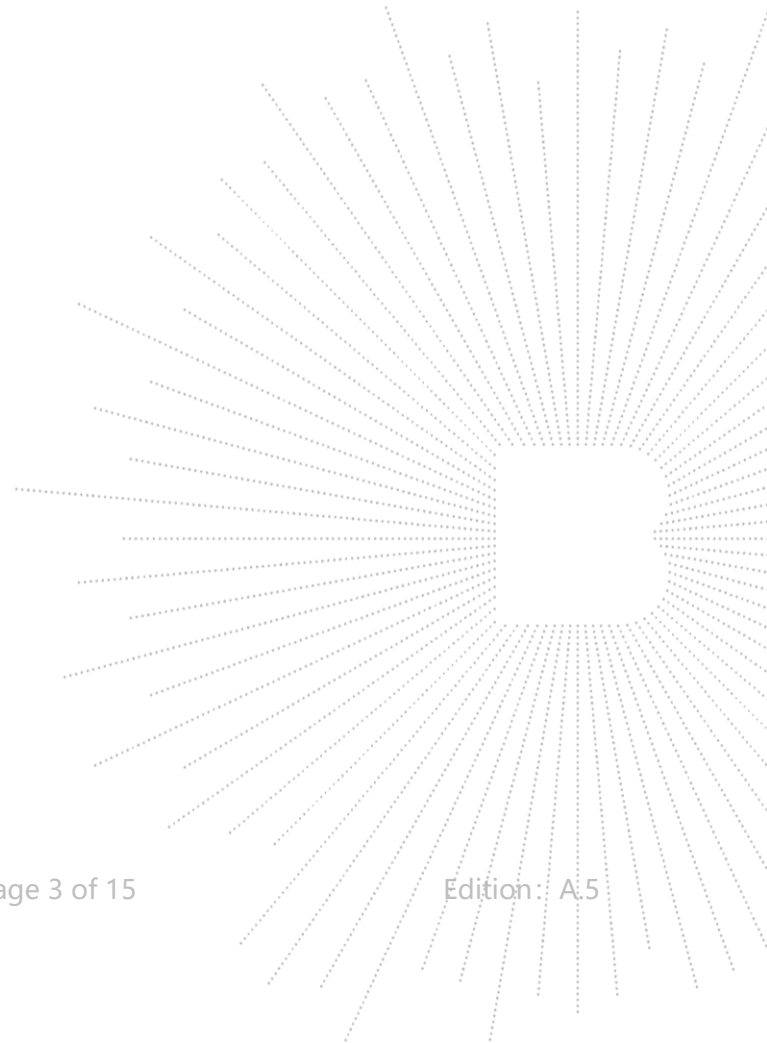


Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

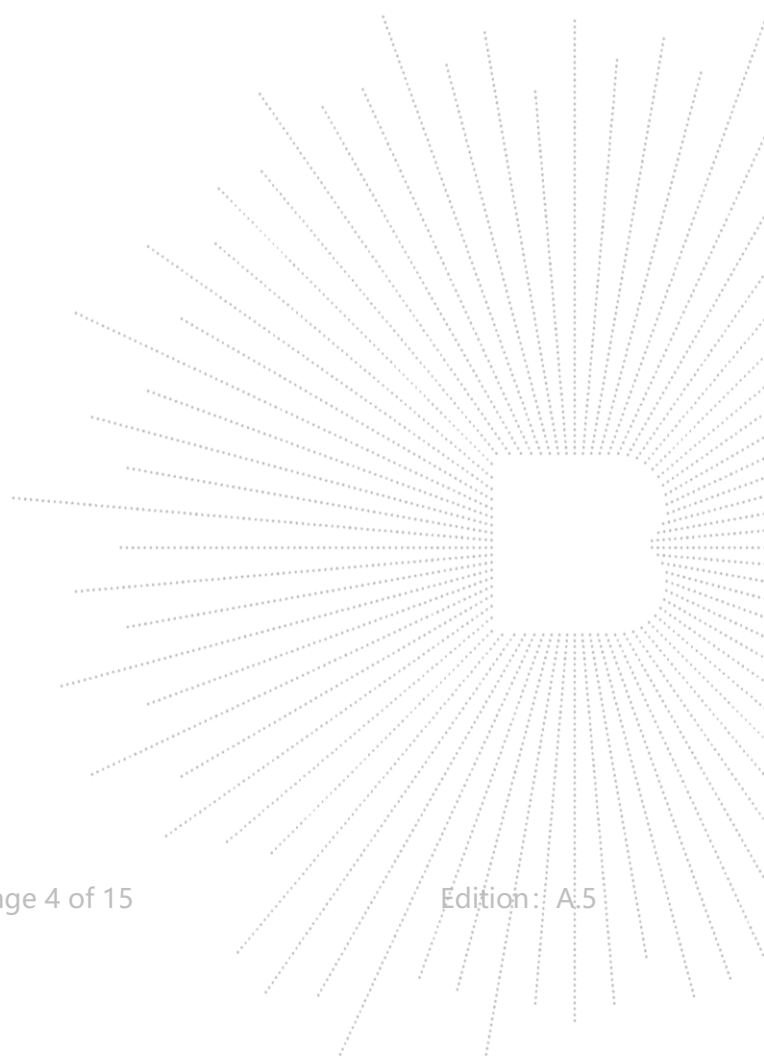
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1. Version

Report No.	Issue Date	Description	Approved
BCTC2305306782-1E	2023-08-03	Original	Valid



2. Product Information

2.1 Product Information

Model/Type reference:	W328
Model differences:	N/A
Hardware Version:	N/A
Software Version:	N/A
Operation Frequency:	112-205KHz for Charging Pad , 320-327kHz for Watch
Antenna installation:	Loop coil antenna
Ratings:	Input :5V3A,9V3A,12V2.5A Output : Wireless1:15W Wireless2:15W Wireless3:2.5W

2.2 Support Equipment

No.	Cable Type	Quantity	Provider	Length (m)	Shielded	Note
1	Dummy load	N/A	DL01	N/A	Auxiliary	Dummy load
2	Dummy load	N/A	DL02	N/A	Auxiliary	Dummy load
3	Dummy load	N/A	DL03	N/A	Auxiliary	Dummy load
4	Adapter	N/A	KA3601A	N/A	Auxiliary	N/A

Notes:

- All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

2.3 Test Mode

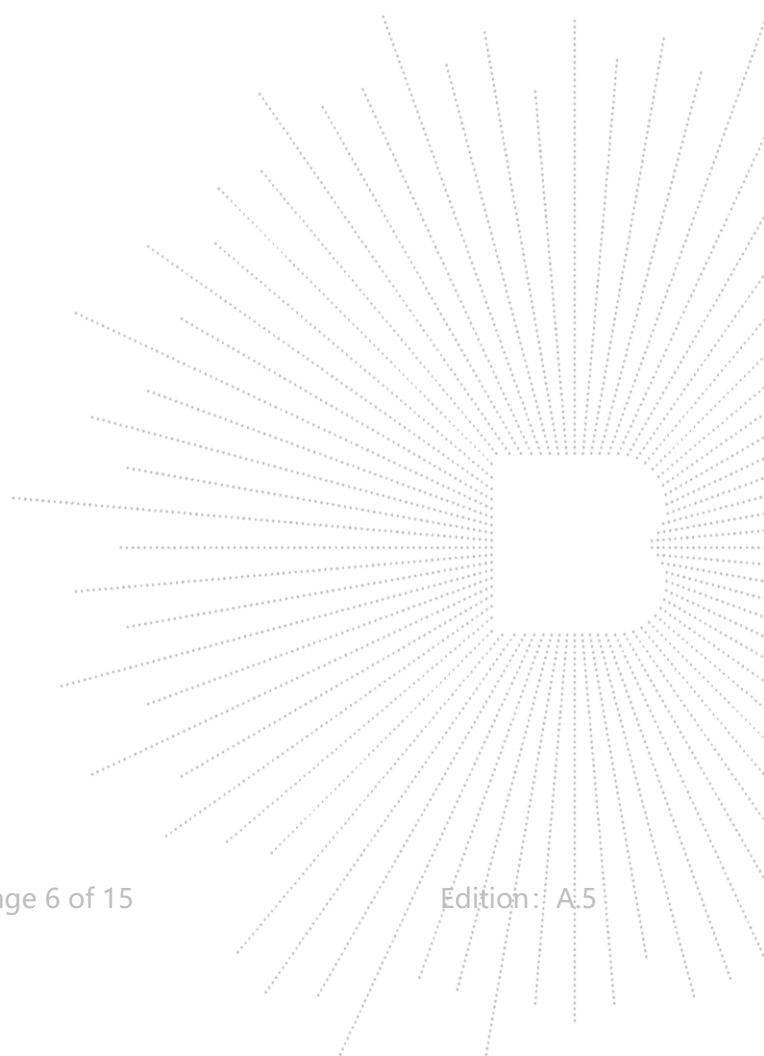
To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test config

Mode 1	Wireless: 15W(Magnetic Charging Pad)
Mode 2	Wireless: 15W(Non-Magnetic Charging Pad)
Mode 3	Wireless: 2.5W(Apple Watch)
Mode 4	Wireless: 10W(Magnetic Charging Pad)

Mode 5	Wireless: 7.5W(Magnetic Charging Pad)
Mode 6	Wireless: 10W(Non-Magnetic Charging Pad)
Mode 7	Wireless: 7.5W(Non-Magnetic Charging Pad)
Mode 8	Wireless: 15W(Magnetic Charging Pad) + 2.5W(Apple Watch)
Mode 9	Wireless: 15W(Non-Magnetic Charging Pad)+ 2.5W(Apple Watch)
Mode 10	Wireless: 15W(Magnetic Charging Pad)+ 15W(Non-Magnetic Charging Pad)
Mode 11	Wireless: 15W(Magnetic Charging Pad)+ 15W(Non-Magnetic Charging Pad)+ 2.5W(Apple Watch)

Note:

1. All test modes were pre - tested, but we only recorded the worst case in this report. The worst case is Mode 11.
2. All voltage inputs have been tested, with only the worst voltage recorded.



3. Test Facility and Test Instrument Used

3.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

FCC Test Firm Registration Number: 712850

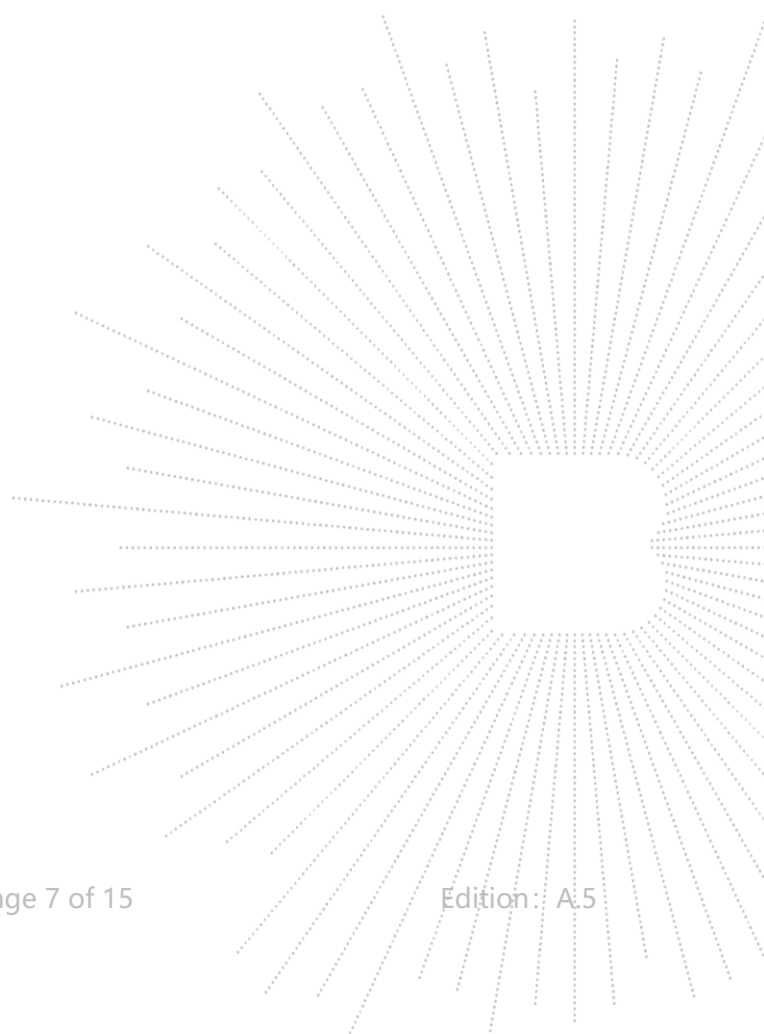
A2LA certificate registration number is: CN1212

ISED Registered No.: 23583

ISED CAB identifier: CN0017

3.2 Test Instrument Used

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Electromagnetic radiation tester	Wavecontrol	SMP160	19SN0980	May 15, 2022	May 16, 2023
Electromagnetic field probe	Wavecontrol	WP400-3	20WP120082	Sept. 08, 2022	Sept. 07, 2023
843 Chamber	ETS	843	84301	Aug. 27, 2020	Aug. 26, 2023

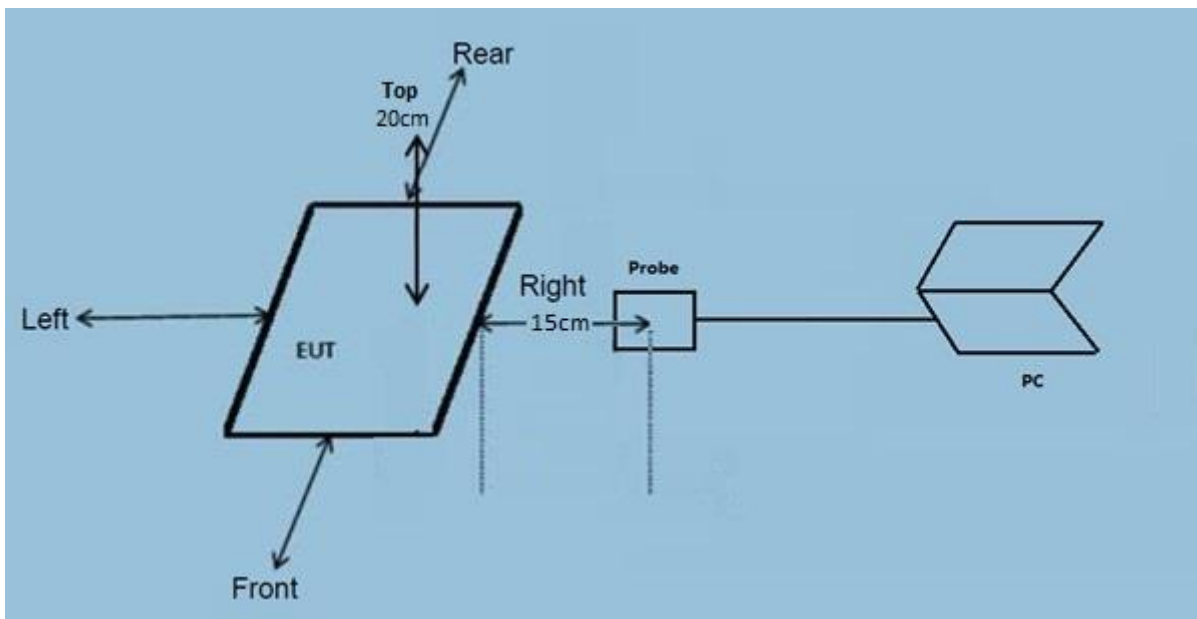


4. Method Of Measurement

4.1 Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines. According to §1.1310 and §2.1093 RF exposure is calculated. According KDB 680106 D01 RF Exposure Wireless Charging.

4.2 Block Diagram Of Test Setup



4.3 Limit

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 ²)	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/ cm ²)	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

4.4 Test Procedure

- 1) RF exposure test was performed in anechoic chamber.
- 2) The measurement probe was placed 15cm around the device for testing; The measurement probe was placed at 20 cm for surface testing.
- 3) The highest emission level was recorded and compared with limit as soon as measurement of eachd) The highest emission level was recorded and compared with limit as soon as measurement of each points (left, right, front, rear and top) were completed.
- 4) The EUT was measured according to the dictates of KDB680106 D01
- 5) Remark:
The EUT's test position left, right, front, rear and top is valid for the E and H field measurements.

4.5 The EUT does comply with item 5(b) of KDB 680106 D01v03

- 1) Power transfer frequency is less than 1MHz

Yes, the device operate in the frequency range from 112- 205KHz and 320- 327KHz

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

Yes, the maximum output power of the primary coil is 15W.

- 3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that able to detect and allow coupling only between individual pair of coils.

Yes, the transfer system including a charging system with only single primary coils is to detect and allow only between individual of coils.

- 4) Client device is inserted in or placed directly in contact with the transmitter.

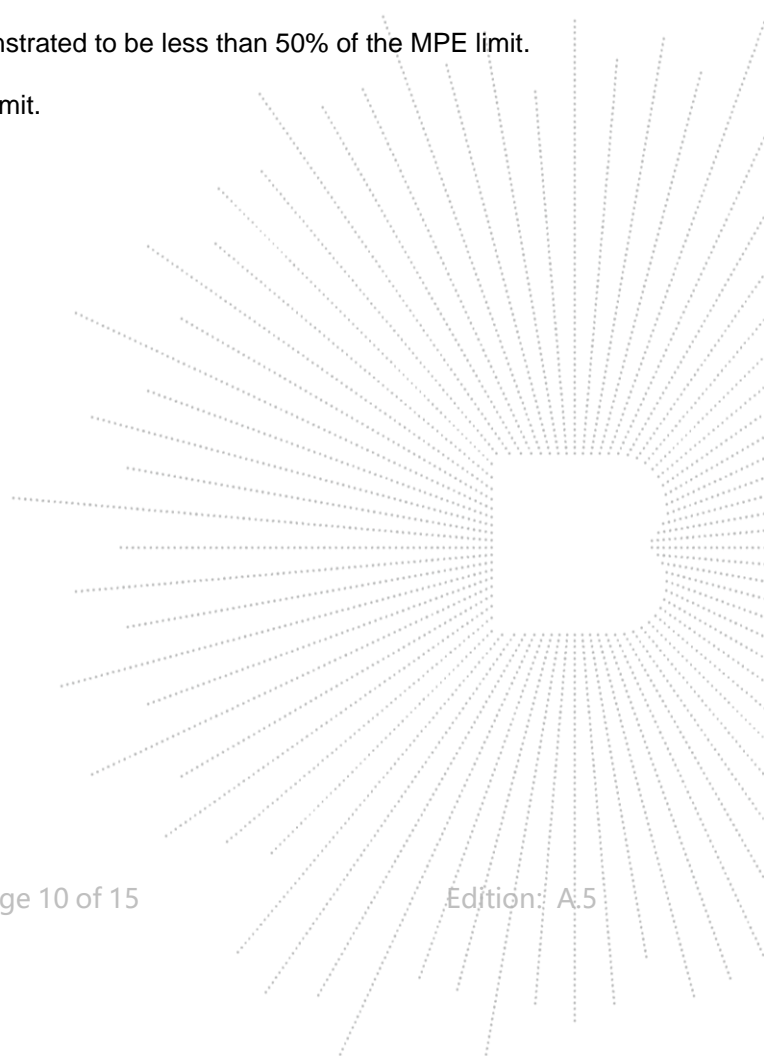
Yes, client device is placed directly in contact with the transmitter.

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

Yes, it's a Mobile product

- 6) 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.

Yes, the EUT field strength levels are 10% MPE limit.



4.6 E And H Field Strength

Worst Case Operating Mode:11

Operation condition	Test Position Front (uT)	Test Position Rear (uT)	Test Position Left (uT)	Test Position Right (uT)	Test Position Top (uT)
Full load	0.069	0.076	0.078	0.078	0.08
Half load	0.079	0.061	0.079	0.075	0.07
No load	0.06	0.063	0.065	0.065	0.061

Note: $A/m = uT \div 1.25$

H-Field Strength at 15 cm surrounding the EUT and 20cm above the top surface of the EUT

Operation condition	Test Position Front (A/m)	Test Position Rear (A/m)	Test Position Left (A/m)	Test Position Right (A/m)	Test Position Top (A/m)	Limits (A/m)
Full load	0.055	0.061	0.062	0.062	0.064	1.63
Half load	0.063	0.049	0.063	0.060	0.056	1.63
No load	0.048	0.050	0.052	0.052	0.049	1.63

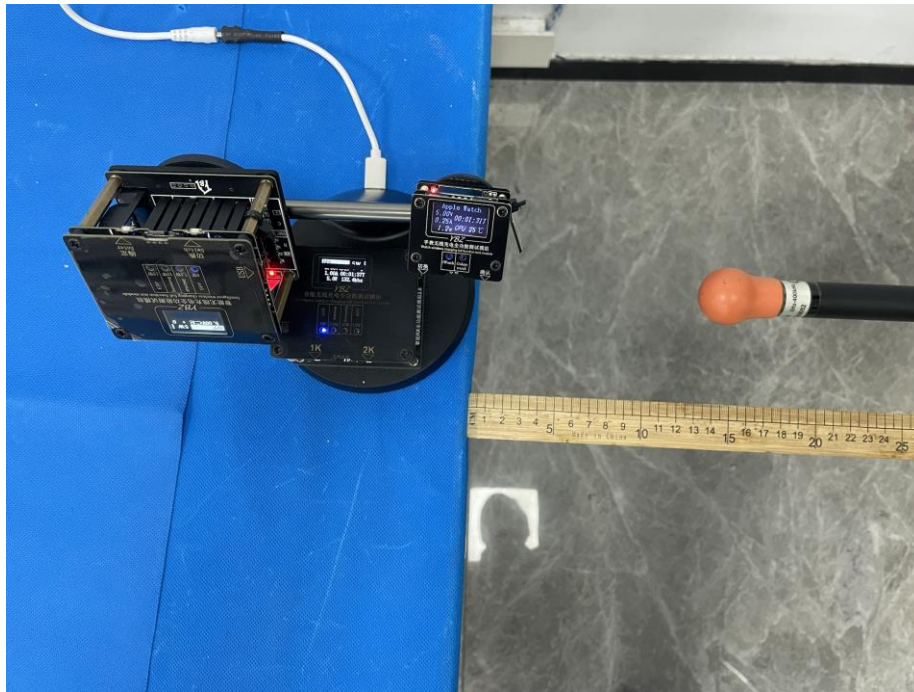
E-Field Strength at 15 cm surrounding the EUT and 20cm above the top surface of the EUT

Operation condition	Test Position Front (V/m)	Test Position Rear (V/m)	Test Position Left (V/m)	Test Position Right (V/m)	Test Position Top (V/m)	Limits (V/m)
Full load	0.055	0.061	0.062	0.062	0.064	614
Half load	0.063	0.049	0.063	0.060	0.056	614
No load	0.048	0.051	0.052	0.052	0.049	614

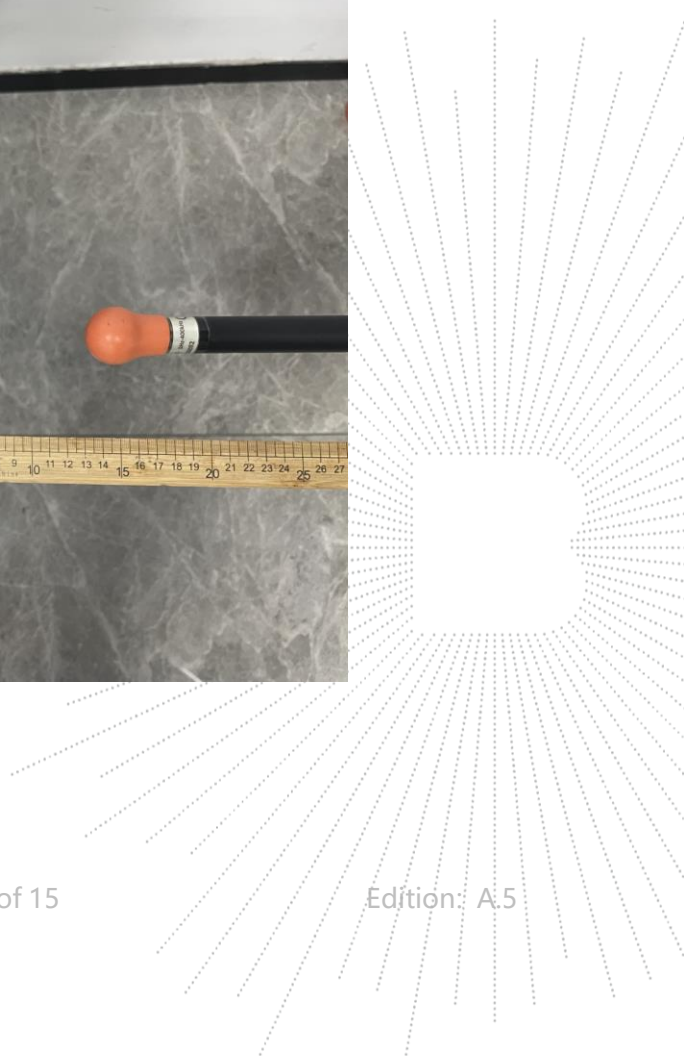
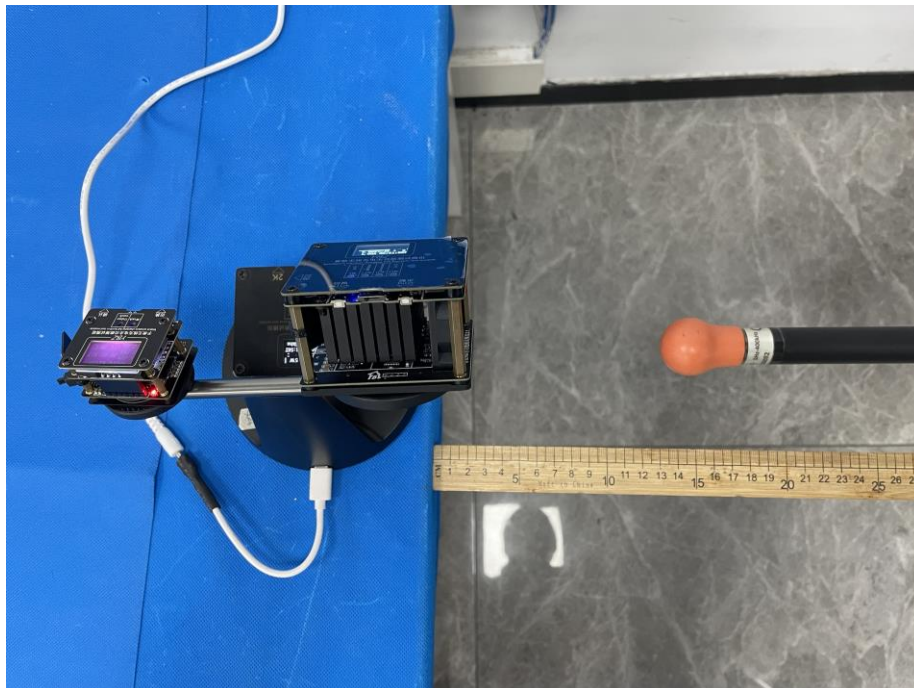
Note: In the frequency range of 1k-10M, except the fundamental frequency, other transmissions of the power transmission system are less than 20dB lower than the maximum fundamental transmission, so it is not necessary to evaluate.

5. Photographs of Test Set-Up

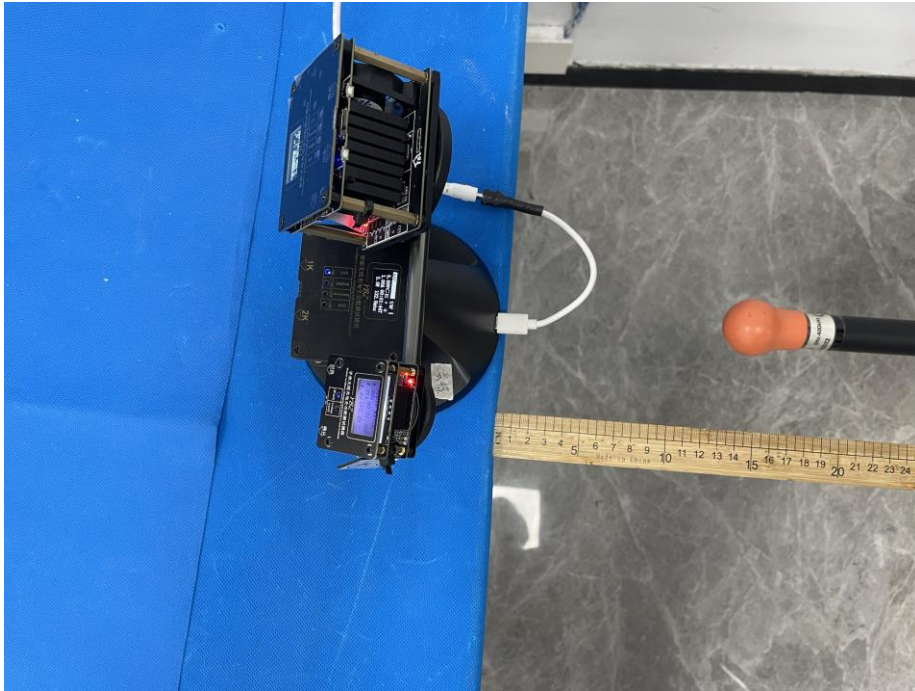
Front



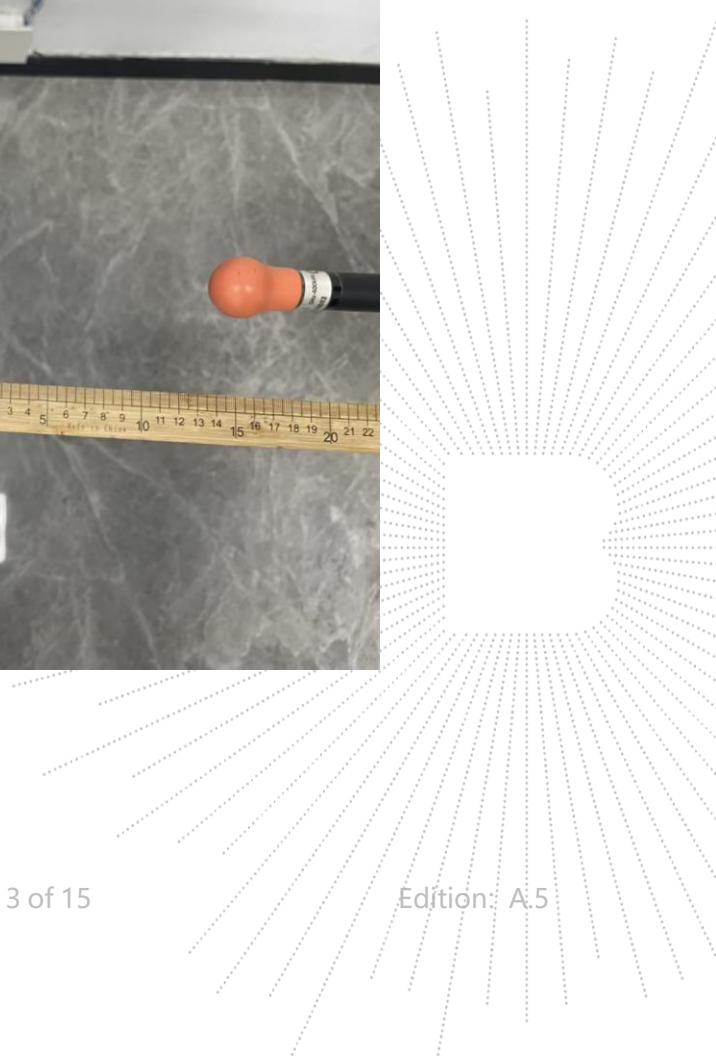
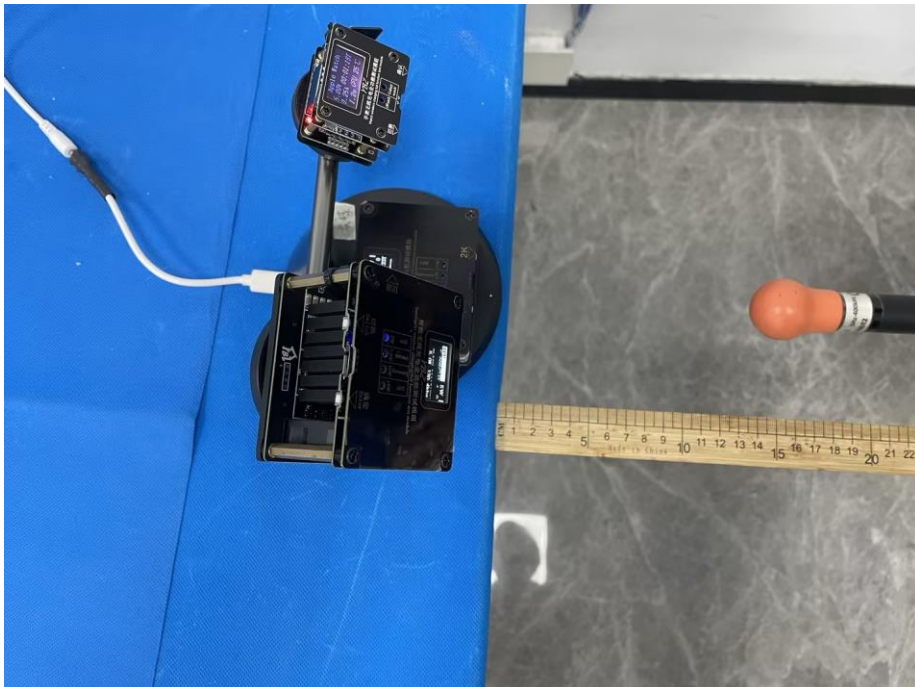
Rear



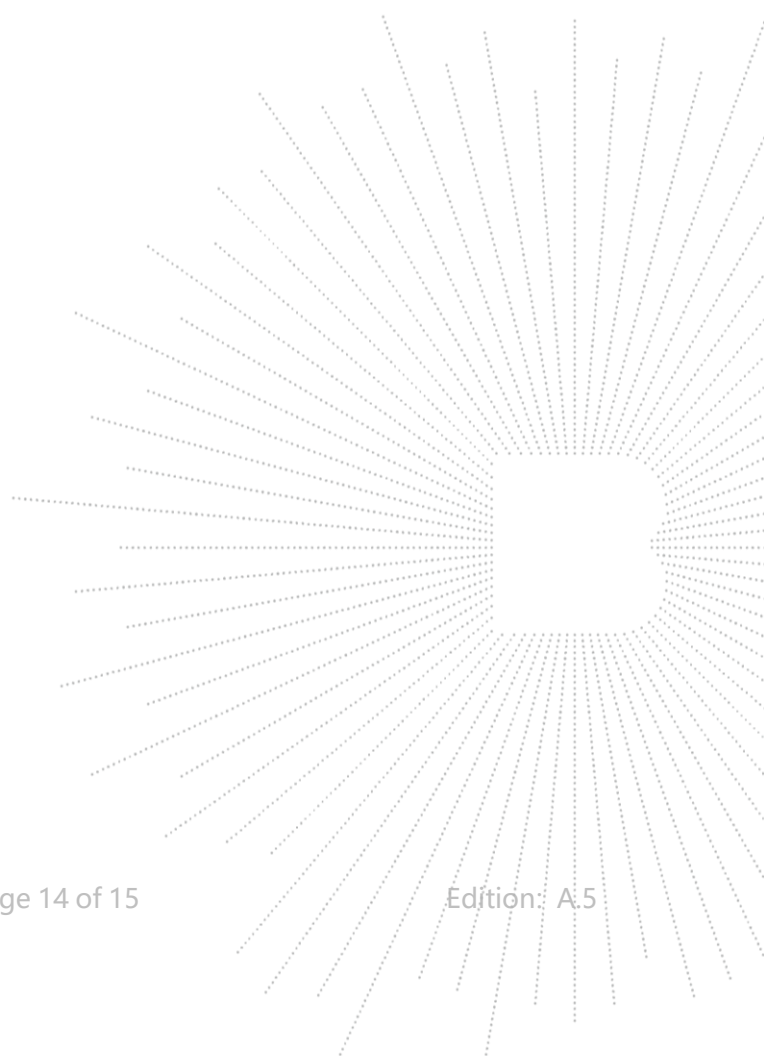
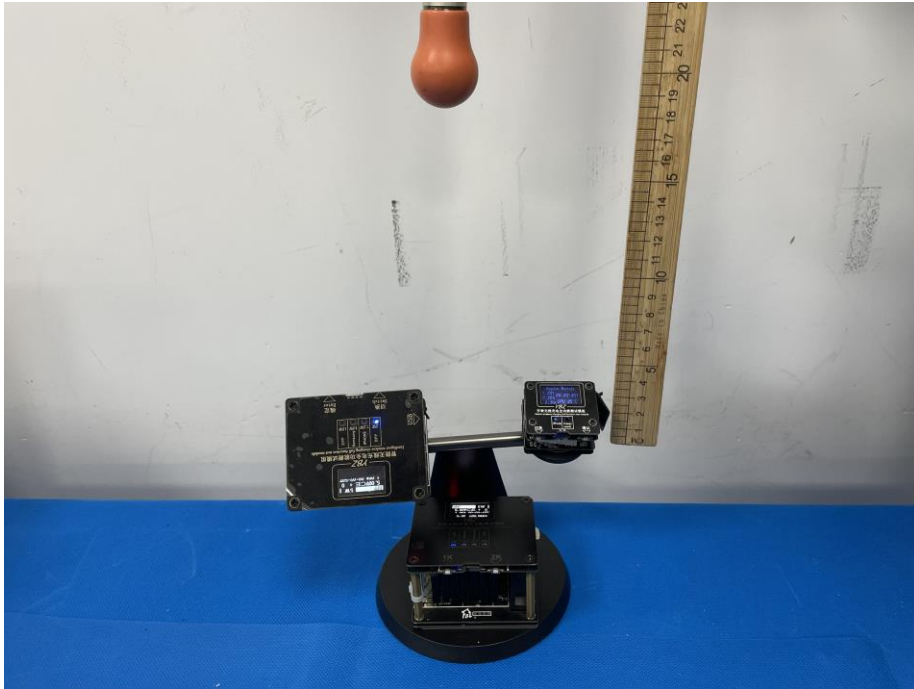
Left



Right



Top



STATEMENT

- 1.The equipment lists are traceable to the national reference standards.
- 2.The test report can not be partially copied unless prior written approval is issued from our lab.
- 3.The test report is invalid without stamp of laboratory.
- 4.The test report is invalid without signature of person(s) testing and authorizing.
- 5.The test process and test result is only related to the Unit Under Test.
- 6.The quality system of our laboratory is in accordance with ISO/IEC17025.
- 7.If there is any objection to report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

Address:

1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

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***** END *****

