

FCC TEST REPORT

Client Information:

Applicant: Foxconn Interconnect Technology Limited Taiwan Branch
Applicant add.: No. 66-1, JHONGSHAN RD., TUCHENG DIST., NEW TAIPEI CITY, Taiwan
Manufacturer: Foxconn Interconnect Technology Limited Taiwan Branch
Manufacturer add.: No. 66-1, JHONGSHAN RD., TUCHENG DIST., NEW TAIPEI CITY, Taiwan

Product Information:

Product Name: ONN. QI2 PAD
Model No.: WIAWHT100140969
Brand Name: onn.
FCC ID: 2ADB4-WA-CBZB1

Applicable standards: FCC Rules and Regulations part 2.1091
KDB680106 D01v03

Prepared By:

Dongguan Yaxu (AiT) Technology Limited

No.22, Jinqianling 3rd Street, Jitigang, Huangjiang, Dongguan,
Guangdong, China

Tel.: +86-769-8202 0499 Fax.: +86-769-8202 0495

Date of Receipt: Jan. 30, 2024

Date of Test: Jan. 30, 2024~ Feb. 01, 2024

Date of Issue: Feb. 02, 2024

Test Result: Pass

This device described above has been tested by Dongguan Yaxu (AiT) Technology Limited and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Reviewed by: 
Simba Huang

Approved by: 
Seal.chen



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1 Test Facility

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

.CNAS- Registration No: L6177

Dongguan Yaxu (AiT) technology Limited is accredited to ISO/IEC 17025:2017 general Requirements for the competence of testing and calibration laboratories (CNAS-CL01 Accreditation Criteria for the competence of testing and calibration laboratories) on April 18, 2022

FCC-Registration No.: 703111 Designation Number: CN1313

Dongguan Yaxu (AiT) technology Limited has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

IC —Registration No.: 6819A CAB identifier: CN0122

The 3m Semi-anechoic chamber of Dongguan Yaxu (AiT) technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 6819A

A2LA-Lab Cert. No.: 6317.01

Dongguan Yaxu (AiT) technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

1.1 Deviation from standard

None

1.2 Abnormalities from standard conditions

None

1.3 Test Location

Dongguan Yaxu (AiT) Technology Limited

Address: No.22, Jinqianling 3rd Street, Jitigang, Huangjiang, Dongguan, Guangdong, China

Tel.: +86-769-8202 0499

Fax.: +86-769-8202 0495

1.4 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15-35 ° C
Humidity:	30-60 %
Atmospheric pressure:	950-1050mbar

2 General Information

2.1 Product Description

EUT Name:	ONN. QI2 PAD
Model No:	WIAWHT100140969
Serial Model:	N/A
Test sample(s) ID:	24013006
Sample(s) Status:	Engineer sample
Serial No.:	N/A
Operation frequency:	113kHz-205kHz, 300kHz-365kHz BPP 128KHz, MPP 360KHz
Modulation Technology:	ASK
Antenna Type:	loop coil Antenna
Antenna gain:	0dBi
Hardware version.:	N/A
Software version.:	N/A
Power supply:	Input:5V/9V Output:5W/7.5W/10W/15W Max
Battery:	N/A
Note:	For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.2 Description of the test mode

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

☒ Charging and communication mode

Test Mode	Description	
Mode 1	AC Adapter : Wireless charging (15W) + phone	Record
Mode 2	AC Adapter : Wireless charging (10W) + phone	Pre-tested
Mode 3	AC Adapter : Wireless charging (7.5W) + phone	Pre-tested
Mode 4	AC Adapter : Wireless charging (5W) + phone	Pre-tested
Mode 5	AC Adapter : Wireless charging2 (15W)	Record
Mode 6	AC Adapter : Wireless charging2 (10W)	Pre-tested
Mode 7	AC Adapter : Wireless charging2 (7.5W)	Pre-tested
Mode 8	AC Adapter : Wireless charging2 (5W)	Pre-tested
Mode 9	Test the EUT in idle mode.	Pre-tested
Note: 1. During the test the phone is attached the network in WWAN traffic mode and Wifi/BT is connected. 2. All test modes were pre-tested, but we only recorded the worst case in this report.		

2.3 Special Accessories

Follow auxiliary equipment(s) test with EUT that provided by the manufacturer or laboratory is listed as follow:

Description	Manufacturer	Model	Technical Parameters	Certificate	Provided by
Wireless charger receiver	SLY	15W	/	FCC	laboratory

2.4 Summary of measurement results

Test Item	Result
Magnetic Field Strength (H) (A/m)	Compliant

2.5 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Global Test Service Co.,Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	0.009MHz-30MHz	3.10dB	(1)
Radiated Emission	30MHz-1GHz	3.75dB	(1)
Radiated Emission	1GHz-18GHz	3.88dB	(1)
Radiated Emission	18GHz-40GHz	3.88dB	(1)
AC Power Line Conducted Emission	0.15MHz ~ 30MHz	1.20dB	(1)

Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

2.6 Equipments Used during the Test

Test Equipment	Manufacturer	Model No.	SN.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
Electric and Magnetic Field Analyzer	Narda	EHP-200A	180ZX10505	2022.06.21	2024.06.20

3 TEST CONDITIONS AND RESULTS

3.1 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 §2.1091 RF exposure is calculated.

According KDB 680106 D01 RF Exposure Wireless Charging App v03

3.2 Limit

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
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 Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

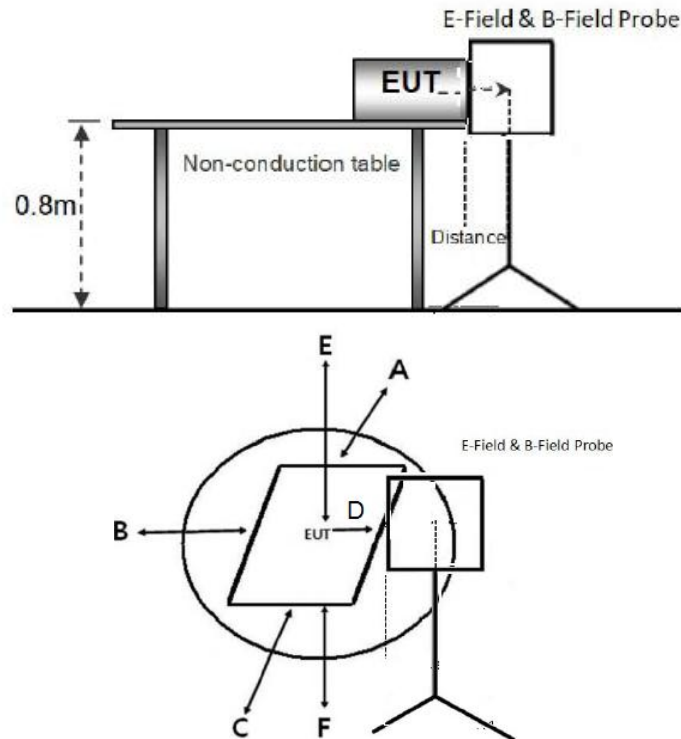
Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	30
3.0 – 30	824/f	2.19/f	(180/f)*	30
30 – 300	27.5	0.073	0.2	30
300 – 1500	/	/	f/1500	30
1500 – 100,000	/	/	1.0	30

F=frequency in MHz

*=Plane-wave equivalent power density

3.3 Test Setup

1. Block diagram of EUT configuration



Note: A, B, C, D, E, F for six surfaces of the product.

3.4 Measurement Procedure

For mobile RF exposure
For mobile RF exposure

- The RF exposure test was performed on 360 degree turn table in anechoic chamber.
- The measurement probe was placed at test distance which is between the edge of the charger and the geometric center of probe.
- The turn table was rotated 360d degree to search of highest strength.
- The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
- The EUT were measured according to the dictates of KDB 680106D01v03.

For portable RF exposure

- The RF exposure test was performed on 360 degree turn table in anechoic chamber.
- The measurement probe was placed at test distance (0cm) which is between the edge of the charger and the geometric center of probe.
- The turn table was rotated 360d degree to search of highest strength.
- The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E, F) were completed.
- Repeated measured (a) – (d) at measure distance 2 cm, 4cm, 6cm, 8cm, 10cm, 12 cm, 14cm, 16cm, 18cm and 20cm.
- The EUT were measured according to the dictates of KDB 680106D01v03.

3.5 Test Result of E and H field Strength

Temperature:	25.7℃	Humidity:	58%
Test Engineer:	Simba Huang	Test site:	Anechoic chamber

3.5.1 For portable exposure

Test Mode 1:

H-Field Strength at 0-20 cm from the edges surrounding the EUT

Test Conditions	Unit	Measured Distance (cm)	Measured H-Field Strength Values (A/m)						FCC H-Field Strength (A/m)	
			Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Test Position F	Limits	50% Limits
TM1	A/m	0	0.717	0.572	0.438	0.465	0.750	0.883	1.63	0.815
TM1	A/m	2	0.438	0.562	0.393	0.387	0.738	0.626	1.63	0.815
TM1	A/m	4	0.411	0.417	0.334	0.367	0.644	0.612	1.63	0.815
TM1	A/m	6	0.371	0.408	0.326	0.357	0.589	0.557	1.63	0.815
TM1	A/m	8	0.357	0.266	0.322	0.277	0.498	0.492	1.63	0.815
TM1	A/m	10	0.355	0.263	0.314	0.268	0.476	0.488	1.63	0.815
TM1	A/m	12	0.282	0.254	0.274	0.248	0.427	0.454	1.63	0.815
TM1	A/m	14	0.268	0.246	0.248	0.179	0.425	0.426	1.63	0.815
TM1	A/m	16	0.251	0.214	0.179	0.126	0.396	0.359	1.63	0.815
TM1	A/m	18	0.250	0.171	0.155	0.087	0.365	0.270	1.63	0.815
TM1	A/m	20	0.128	0.133	0.143	0.077	0.251	0.199	1.63	0.815

E-Field Strength at 0-20 cm from the edges surrounding the EUT

Test Conditions	Unit	Measured Distance (cm)	Measured E-Field Strength Values (V/m)						FCC E-Field Strength (V/m)	
			Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Test Position F	Limits	50% Limits
TM1	V/m	0	84.570	84.299	87.126	83.078	83.419	82.018	614	307
TM1	V/m	2	77.467	77.969	81.073	77.984	77.413	78.272	614	307
TM1	V/m	4	80.585	75.950	80.173	79.733	77.365	73.433	614	307
TM1	V/m	6	70.362	76.517	77.151	74.939	67.804	70.329	614	307
TM1	V/m	8	70.944	71.537	73.493	73.628	72.651	63.369	614	307
TM1	V/m	10	63.937	71.912	64.691	69.845	66.250	60.891	614	307
TM1	V/m	12	64.000	60.188	63.820	62.341	57.954	55.358	614	307
TM1	V/m	14	58.095	57.707	59.739	51.814	58.175	50.086	614	307
TM1	V/m	16	55.207	50.473	56.430	52.458	49.344	44.601	614	307
TM1	V/m	18	48.291	43.121	46.863	43.246	44.540	42.687	614	307
TM1	V/m	20	46.697	41.839	44.989	41.216	47.051	39.984	614	307

Test Mode 5:

H-Field Strength at 0-20 cm from the edges surrounding the EUT

Test Conditions	Unit	Measured Distance (cm)	Measured H-Field Strength Values (A/m)						FCC H-Field Strength (A/m)	
			Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Test Position F	Limits	50% Limits
TM5	A/m	0	0.713	0.566	0.438	0.457	0.743	0.874	1.63	0.815
TM5	A/m	2	0.436	0.555	0.390	0.378	0.730	0.625	1.63	0.815
TM5	A/m	4	0.411	0.415	0.328	0.367	0.642	0.610	1.63	0.815
TM5	A/m	6	0.361	0.407	0.319	0.351	0.589	0.552	1.63	0.815
TM5	A/m	8	0.354	0.259	0.320	0.274	0.495	0.486	1.63	0.815
TM5	A/m	10	0.346	0.257	0.305	0.262	0.469	0.485	1.63	0.815
TM5	A/m	12	0.279	0.247	0.266	0.243	0.424	0.445	1.63	0.815
TM5	A/m	14	0.264	0.245	0.239	0.171	0.418	0.425	1.63	0.815
TM5	A/m	16	0.245	0.212	0.178	0.117	0.387	0.349	1.63	0.815
TM5	A/m	18	0.244	0.164	0.152	0.079	0.360	0.264	1.63	0.815
TM5	A/m	20	0.125	0.128	0.141	0.071	0.249	0.198	1.63	0.815

E-Field Strength at 0-20 cm from the edges surrounding the EUT

Test Conditions	Unit	Measured Distance (cm)	Measured E-Field Strength Values (V/m)						FCC E-Field Strength (V/m)	
			Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Test Position F	Limits	50% Limits
TM5	V/m	0	84.550	83.597	86.401	82.642	82.991	81.424	614	307
TM5	V/m	2	77.369	77.165	80.981	79.662	76.909	77.811	614	307
TM5	V/m	4	79.633	76.323	79.482	79.080	76.424	72.998	614	307
TM5	V/m	6	72.893	75.732	76.813	74.176	74.287	69.956	614	307
TM5	V/m	8	70.859	72.761	72.937	73.272	72.428	62.942	614	307
TM5	V/m	10	64.967	71.465	63.921	69.632	66.157	59.940	614	307
TM5	V/m	12	63.072	59.547	63.661	62.273	59.683	54.743	614	307
TM5	V/m	14	57.219	57.246	59.562	52.050	57.846	49.118	614	307
TM5	V/m	16	55.155	49.479	56.163	51.523	48.791	44.293	614	307
TM5	V/m	18	47.442	42.410	46.017	42.259	44.448	41.993	614	307
TM5	V/m	20	46.520	41.257	44.942	40.802	43.512	39.609	614	307

Equipment Approval Considerations

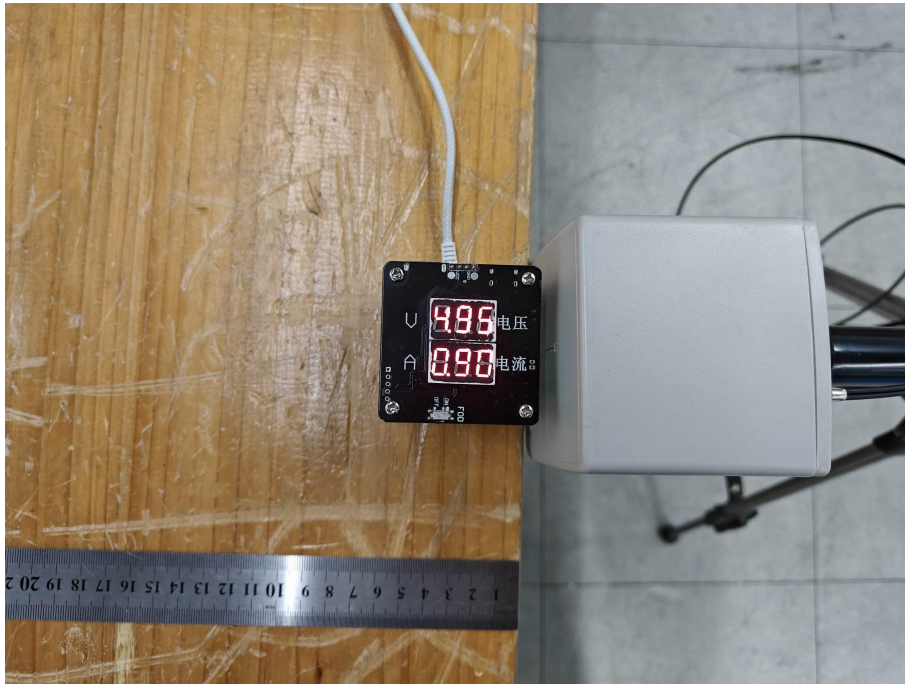
The EUT does comply with KDB 680106 D01 as follow table.

Requirements of KDB 680106 D01	Yes / No	Description
Power transfer frequency is less than 1 MHz	Yes	The device operate in the frequency range 113kHz~205kHz, 300kHz-365kHz
Output power from each primary coil is less than or equal to 15 watts	Yes	The maximum output power for each primary coil is 15W.
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 may be powered on at the same time.	Yes	The transfer system includes only one primary coils.
Client device is placed directly in contact with the transmitter.	Yes	Client device is placed directly in contact with the transmitter.
Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).	No	Mixed mobile and portable exposure conditions
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 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.

3.6 Conclusion

A minimum safety distance of 0 cm to the antenna is required when the device is charging a smart phone for portable exposure and 20 cm to the antenna for mobile exposure. The detected emissions are below the limitations according FCC KDB 680106.

4 Test Setup Photos of the EUT



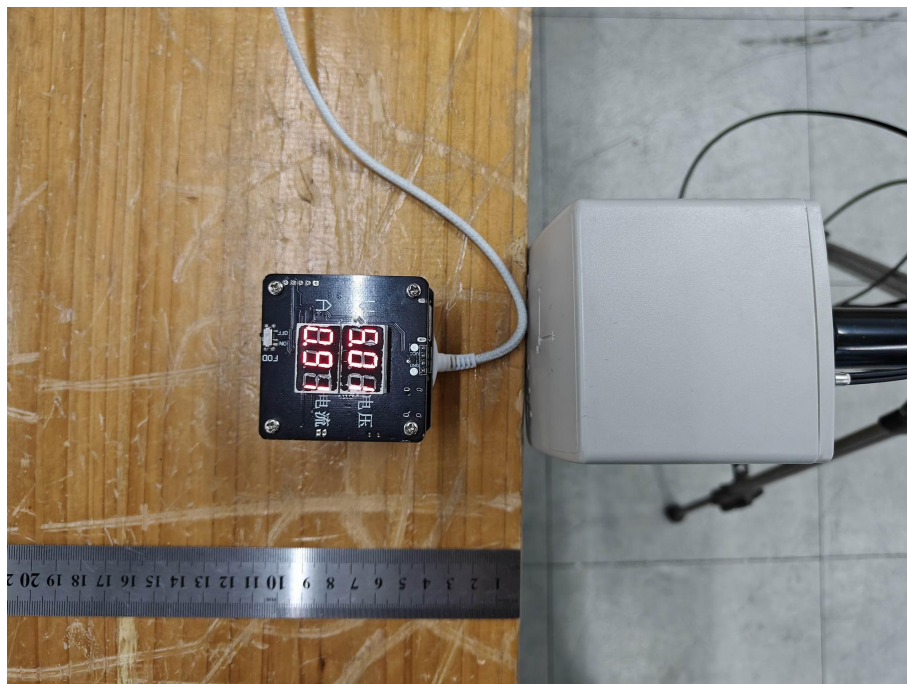
Test Position A-0cm from the edge of EUT to the geometric center of the probe



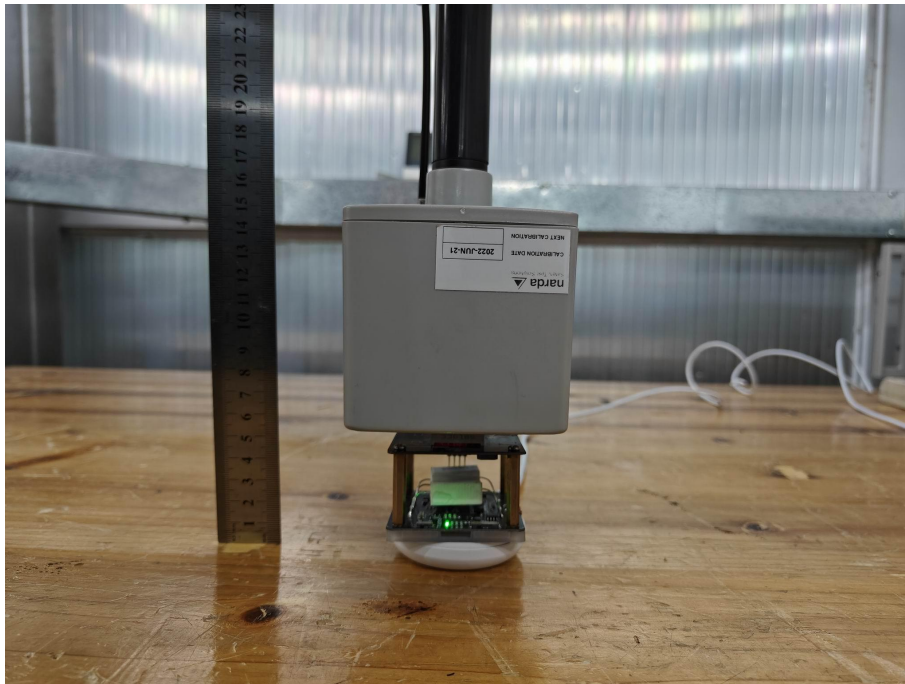
Test Position B-0cm from the edge of EUT to the geometric center of the probe



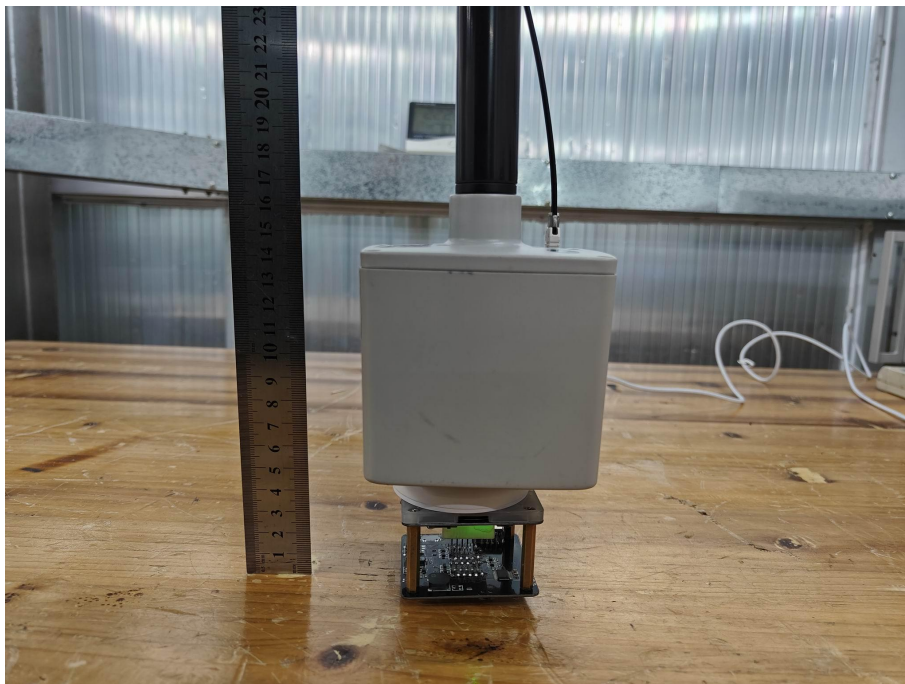
Test Position C-0cm from the edge of EUT to the geometric center of the probe



Test Position D-0cm from the edge of EUT to the geometric center of the probe



Test Position E-0cm from the edge of EUT to the geometric center of the probe



Test Position F-0cm from the edge of EUT to the geometric center of the probe



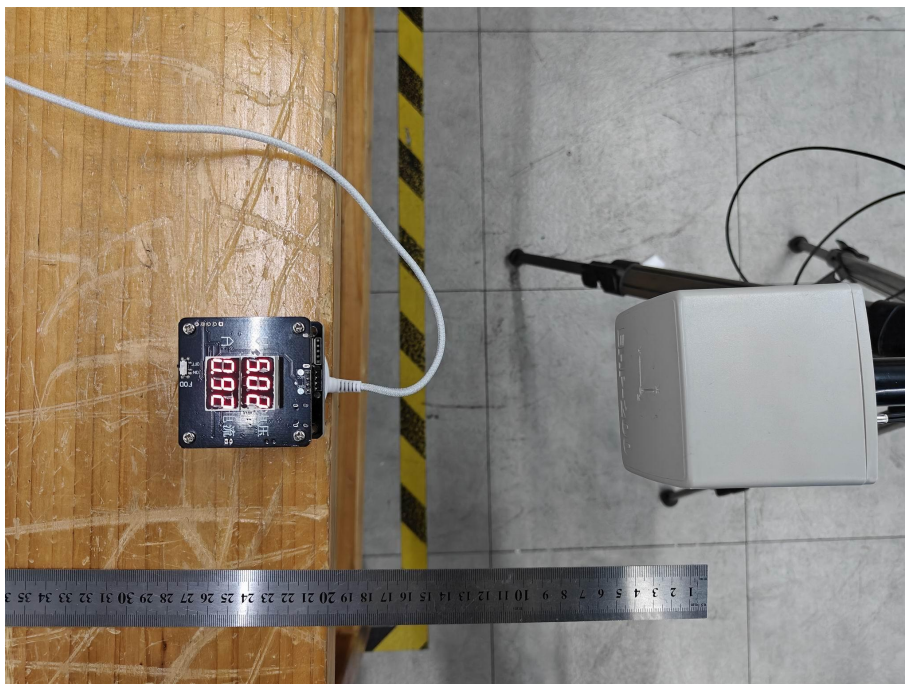
Test Position A-20cm from the edge of EUT to the geometric center of the probe



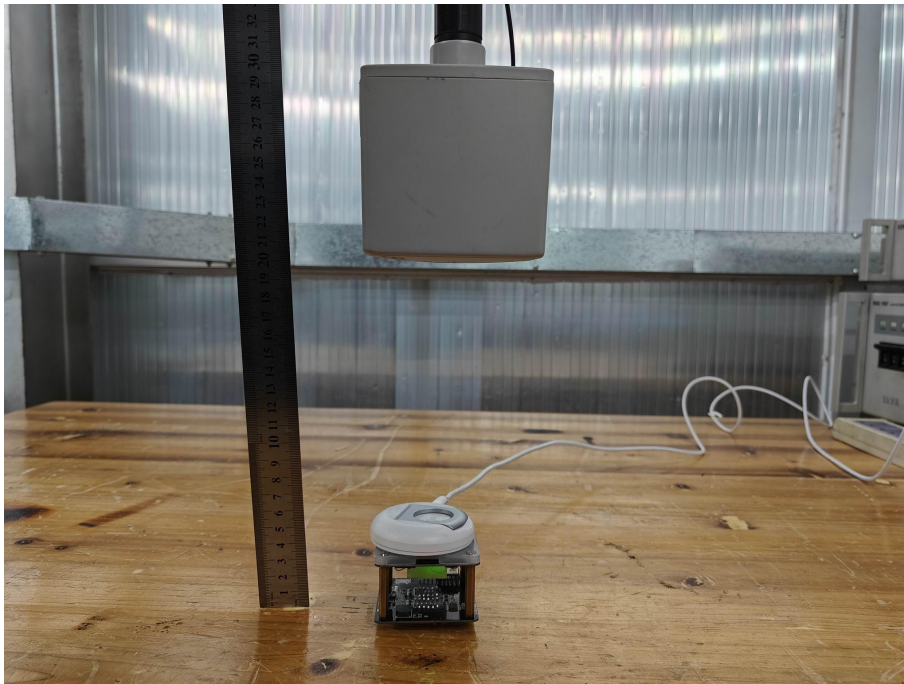
Test Position B-20cm from the edge of EUT to the geometric center of the probe



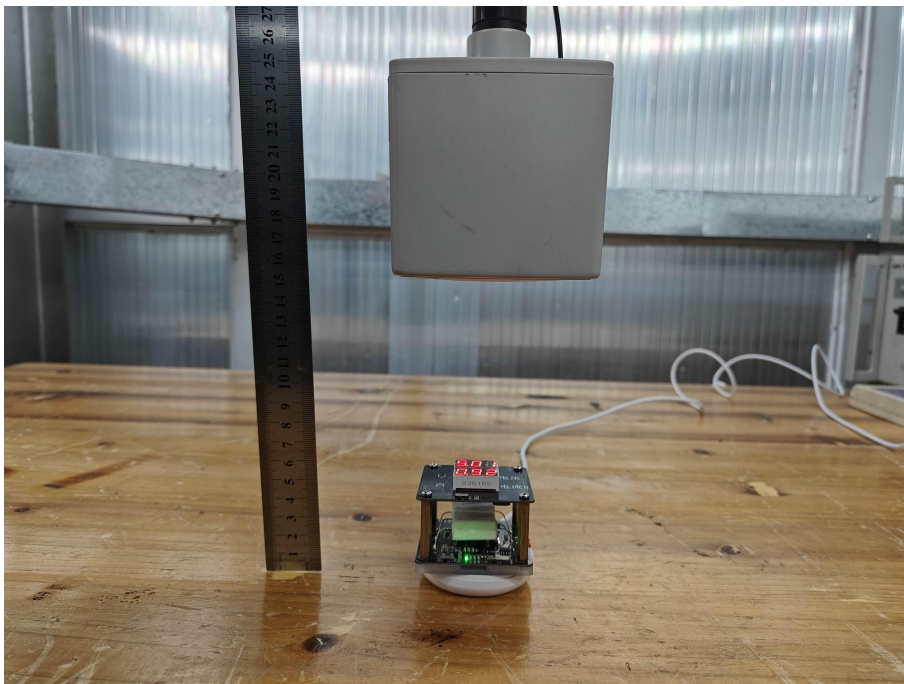
Test Position C-20cm from the edge of EUT to the geometric center of the probe



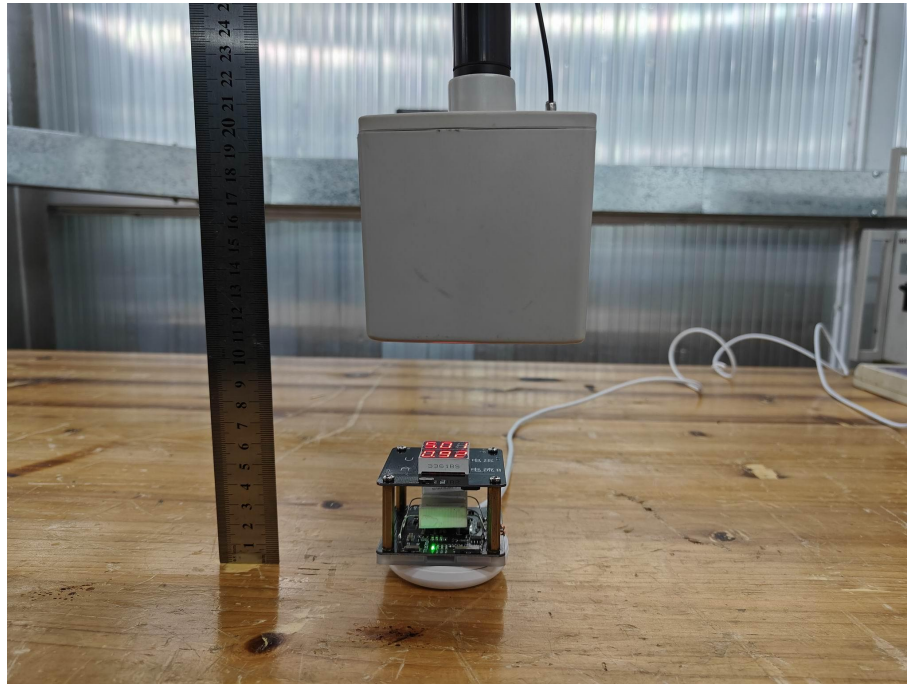
Test Position D-20cm from the edge of EUT to the geometric center of the probe



Test Position E-20cm from the edge of EUT to the geometric center of the probe



Test Position F-20cm from the edge of EUT to the geometric center of the probe



Test Position F-15cm from the edge of EUT to the geometric center of the probe

** End of report **