FCC TEST REPORT

Client Information:

Applicant:	U2O GLOBAL CO., LTD.
Applicant add.:	Huanzhu Road No.385, 4 Floor, Jimei District, Xiamen, China.
Manufacturer:	U2O GLOBAL CO., LTD.
Manufacturer add.:	Huanzhu Road No.385, 4 Floor, Jimei District, Xiamen, China.

Product Information:

Product Name:	PowerWatch
Model No.:	MXB001
Brand Name:	iWALK
FCC ID:	2AJN9-MXB-001
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

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Date of Receipt: Feb. 21, 2022 Date of Test: Feb. 21~ Feb. 24, 2022

Date of Issue: Feb. 25, 2022 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 Simba Huang **Approved by:** Seal-Chen 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 Aug.04, 2020

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

Product Name:	PowerWatch
Model/Type reference:	MXB001
Rating:	Capacity:10000mAh (3.7V/37Wh) Input:USB-C 5V⎓3A, 9V⎓2A, 12V⎓1.5A Output: USB-C 5V⎓3A, 9V⎓2A, 12V⎓1.5A Wireless Charging:5W/7.5W/10W/15W Apple watch Wireless Charging: 3W
Test samples ID:	22022109
Power supply:	DC 5V from adapter
Operation frequency:	113KHz-205KHz
Modulation type:	FSK
Antenna type:	Loop coil antenna

2.2 Description of the test mode

Equipment under test was operated during the measurement under the following conditions:
☒ Charging and communication mode

Test Conditions	Description	Exposure conditions	
TM1	AC/DC Adapter (12V/1.5A) + EUT + Mobile phone+ Apple watch	☒ Mobile ☐ Portable	Record
TM2	AC/DC Adapter (9V/2A) + EUT + Mobile phone + Apple watch	☒ Mobile ☐ Portable	Pre-tested
TM3	AC/DC Adapter (5V/3A) + EUT + Mobile phone + Apple watch	☒ Mobile ☐ Portable	Pre-tested
TM4	AC/DC Adapter (12V/1.5A) + EUT + Mobile phone	☒ Mobile ☐ Portable	Record
TM5	AC/DC Adapter (9V/2A) + EUT + Mobile phone	☒ Mobile ☐ Portable	Pre-tested
TM6	AC/DC Adapter (5V/3A) + EUT + Mobile phone	☒ Mobile ☐ Portable	Pre-tested
TM7	AC/DC Adapter (12V/1.5A) + EUT + Apple watch	☒ Mobile ☐ Portable	Record
TM8	AC/DC Adapter (9V/2A) + EUT + Apple watch	☒ Mobile ☐ Portable	Pre-tested
TM9	AC/DC Adapter (5V/3A) + EUT + Apple watch	☒ Mobile ☐ Portable	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
Adapter	Salcom	V2321	Input: 100-240V~, 50/60Hz, 0.5A Output: 5V⎓3A / 9V⎓2A / 12V⎓2A	CE/FCC	laboratory
Mobile phone	Sumsung	SM-G9860	/	CE/FCC	laboratory
Apple watch	Apple	Apple watch S6	/	CE/FCC	laboratory

2.4 Summary of measurement results

Test Item	Result
Electric Field Strength (E) (V/m)	Compliant
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	180ZX20505	2021.08.30	2023.08.29

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

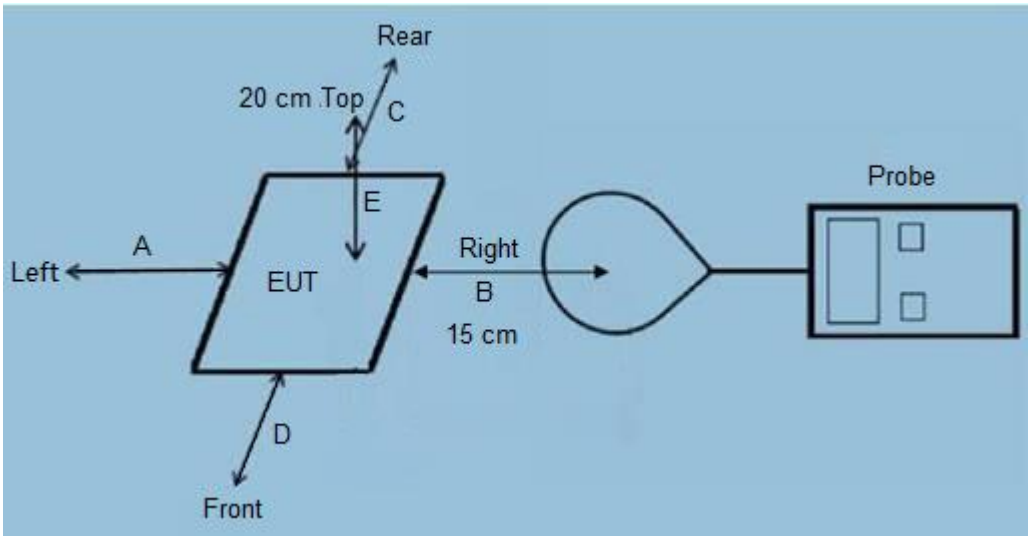
Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	6
3.0 – 30	1842/f	4.89/f	(900/f)*	6
30 – 300	61.4	0.163	1.0	6
300 – 1500	/	/	f/300	6
1500 – 100,000	/	/	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



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

3.4 Measurement Procedure

1) The RF exposure test was performed in anechoic chamber.
2) The measurement probe was placed at test distance (15 cm from all sides and 20 cm from the top) which is between the edge of the charger and the geometric center of probe.
3) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
4) The EUT was measured according to the dictates of KDB 680106 D01v03.
Remark：The EUT's test position A, B, C, D and E is valid for the E and H field measurements.

3.5 Test Result of E and H field Strength

Temperature:	24.8℃	Humidity:	56%
Test Engineer:	Simba Huang	Test site:	Anechoic chamber

3.5.1 For mobile exposure

E-Field Strength at 15 cm from the edges surrounding the EUT and 15cm from the top surface of the EUT

Test Conditions	Unit	Measured E-Field Strength Values (V/m)					FCC E-Field Strength 50% Limits (V/m)	FCC E-Field Strength Limits (V/m)
		Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
TM1	v/m	90.58	94.27	93.37	64.08	95.25	307.0	614.0
TM4	v/m	85.13	84.92	79.77	54.67	86.06	307.0	614.0
TM7	v/m	72.25	83.21	77.74	42.34	86.67	307.0	614.0

H-Field Strength at 15 cm from the edges surrounding the EUT and 15cm from the top surface of the EUT

Test Conditions	Unit	Measured H-Field Strength Values (A/m)					FCC H-Field Strength50% Limits (A/m)	FCC H-Field Strength Limits (A/m)
		Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
TM1	A/m	0.240	0.250	0.248	0.170	0.253	0.815	1.63
TM4	A/m	0.226	0.225	0.212	0.145	0.228	0.815	1.63
TM7	A/m	0.192	0.221	0.206	0.112	0.230	0.815	1.63

H-Field Strength at 20cm from the top surface of the EUT

Test Conditions	Unit	Measured H-Field Strength Values (A/m)	FCC H-Field Strength 50% Limits (A/m)	FCC H-Field Strength Limits (A/m)
		Test Position E		
TM1	A/m	0.228	0.815	1.63
TM4	A/m	0.208	0.815	1.63
TM7	A/m	0.186	0.815	1.63

3.6 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
Output power from each primary coil is less than 15 watts	Yes	The maximum output power for each primary coil is 15W.
The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.	Yes	The transfer system includes two 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).	Yes	Mobile 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.

3.7 Conclusion

A minimum safety distance of 15 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.

4 Test Setup Photos of the EUT

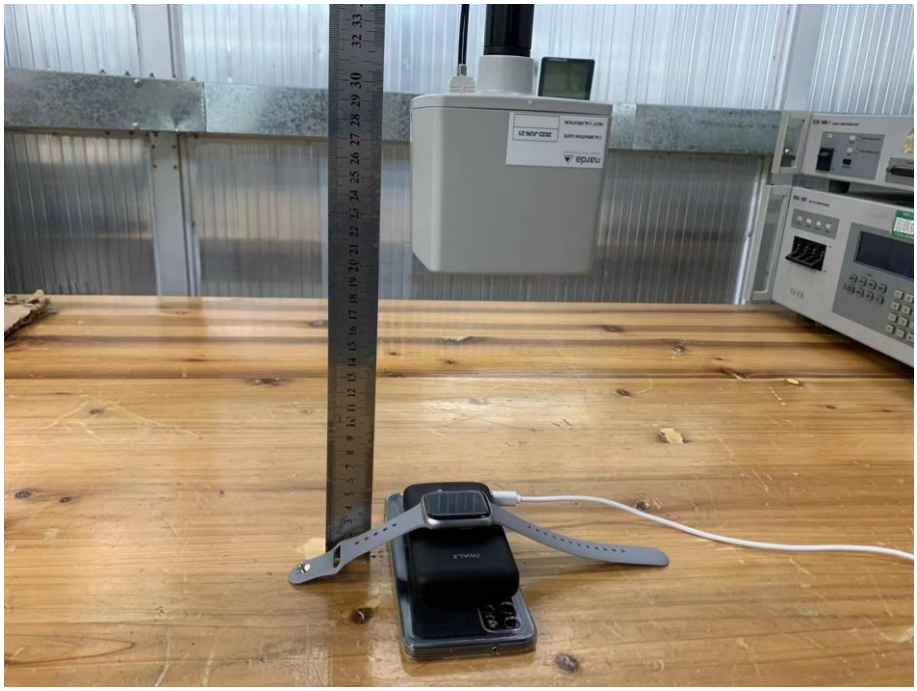
TM1

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

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

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

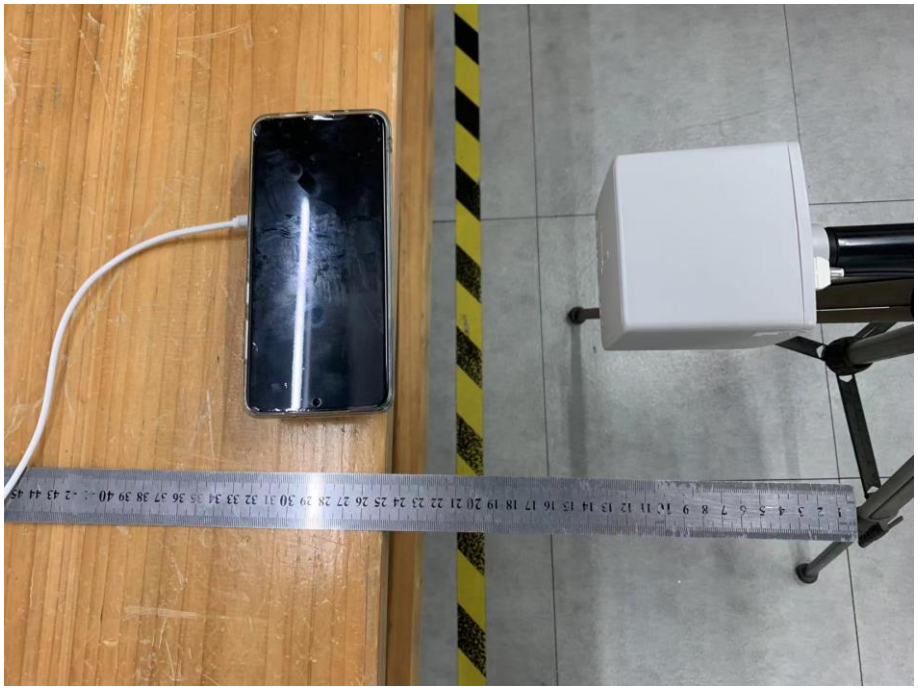
Test Position D-15cm from the edge of EUT to the geometric center of the probe



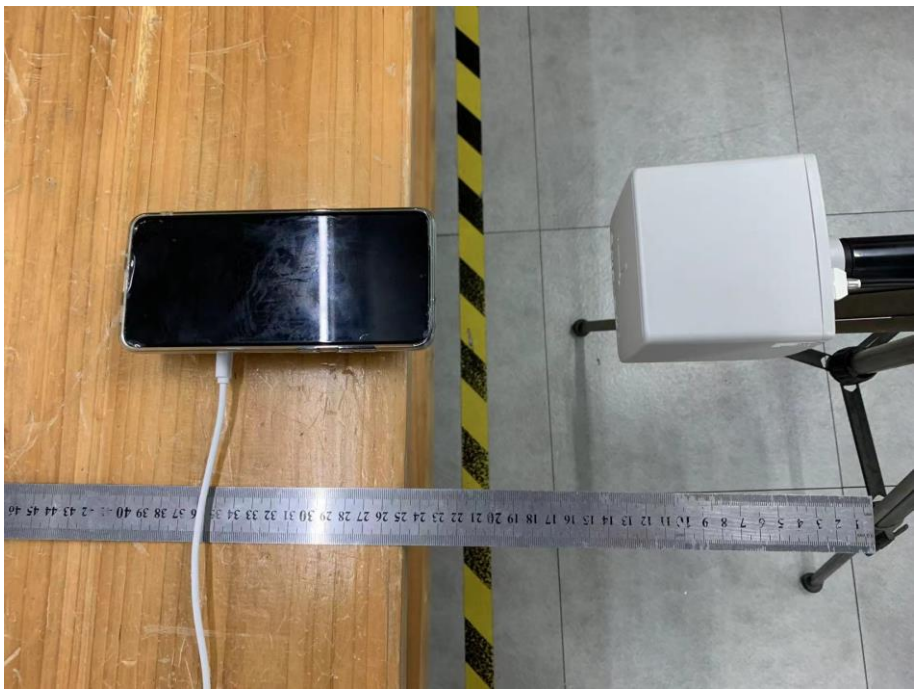
Test Position E-20cm from the edge of EUT to the geometric center of the probe

TM4

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



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



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

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

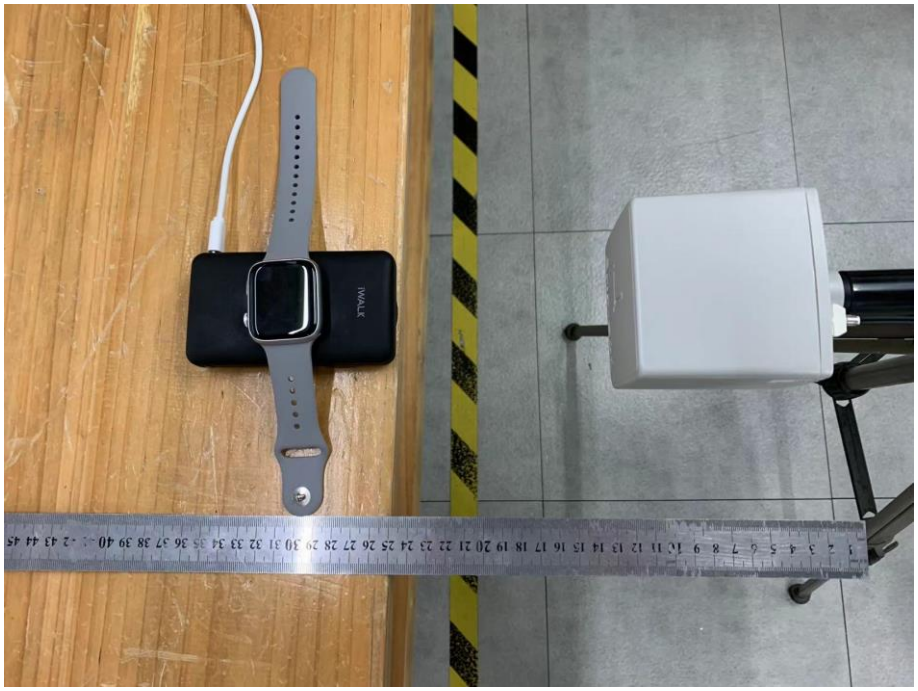
Test Position E-20cm from the edge of EUT to the geometric center of the probe

TM7

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

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

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



Test Position D-15cm 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

** End of report **