



**FCC RF EXPOSURE
CERTIFICATION TEST REPORT**

For

Wireless Charging Pad

MODEL NUMBER: AWC1109ABV

FCC ID: 2ATGY-AWC1109ABV

REPORT NUMBER: 4789915622-1

ISSUE DATE: May 8, 2021

Prepared for

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Prepared by

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Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V0	05/08/2021	Initial Issue	



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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: UBIO LABS, INC.
Address: 2821 Northup Way, Suite 250, Bellevue, WA 98004 USA

Manufacturer Information

Company Name: UBIO LABS, INC.
Address: 2821 Northup Way, Suite 250, Bellevue, WA 98004 USA

EUT Information

EUT Name: Wireless Charging Pad
Model: AWC1109ABV
Brand: /
Sample Received Date: May 7, 2021
Sample Status: Normal
Sample ID: 3863099
Date of Tested: May 8, 2021

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47CFR§1.1307	PASS
FCC 47CFR§1.1310	PASS
FCC 47CFR§2.1093	PASS
FCC 47CFR§2.1091	PASS

Prepared By:

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Laboratory Leader

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC 47CFR§1.1307(b)(1), FCC 47CFR§1.1310, FCC 47CFR§2.1093, KDB 680106 D01 RF Exposure Wireless Charging App v03r01.

3. FACILITIES AND ACCREDITATION

<p>Accreditation Certificate</p>	<p>A2LA (Certificate No.: 4102.01) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.</p> <p>FCC (FCC Designation No.: CN1187) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Delcaration of Conformity (DoC) and Certification rules</p> <p>ISED (Company No.: 21320) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046.</p> <p>VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B , the VCCI registration No. is C-20012 and T-20011</p>
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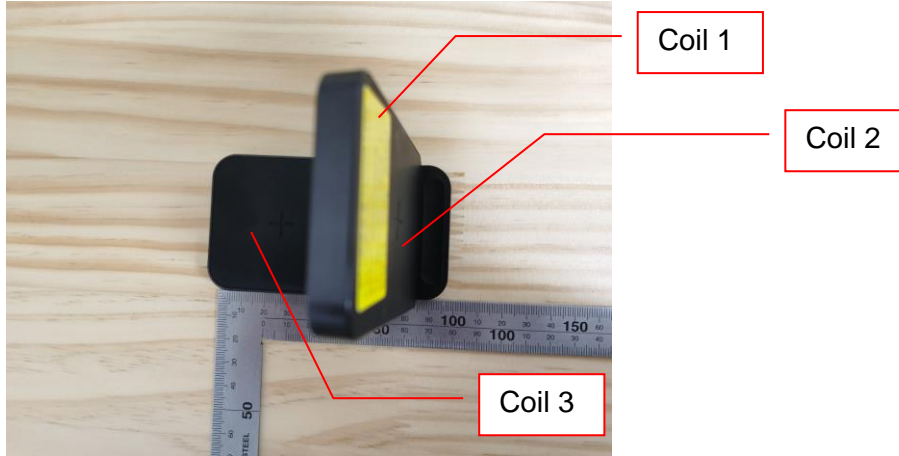
Note: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

4. DESCRIPTION OF EUT

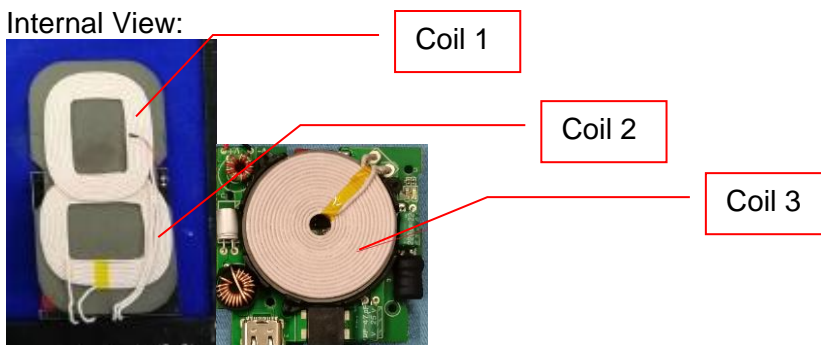
EUT Name	Wireless Charging Pad	
Model	AWC1109ABV	
Product Description	Operation Frequency	111.5 ~ 148 kHz
Rated Output Power	20 W Maximum (See note)	
Antenna type	Coil	
Input	DC 15 V, 3.5 A	

- Note: 1. The EUT has 3 coils, coil 1 and coil 2 is a group but can't work together, only one coil will active at the same time, the maximum power is 15 W.
 2. Coil 3 can work independently, the maximum power is 5 W.
 3. Coil 1 or coil 2 and coil 3 can work at the same time, so the maximum power shall be 15 W + 5 W =20 W.

External View:



Internal View:



5. REQUIREMENT

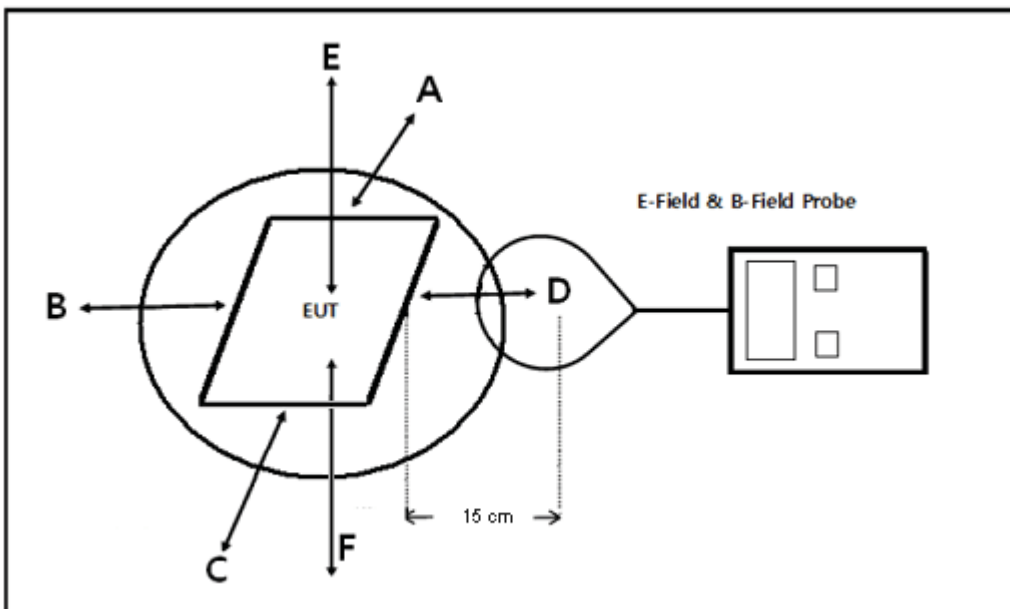
LIMIT

Frequency Range (MHz)	E-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 ²)*	30
30 -- 300	27.5	0.073	0.2	30
300 -- 1500	--	--	f/1500	30
1500 -- 100,000	--	--	1.0	30

METHOD OF MEASUREMENT

- The RF exposure test was performed in shielded chamber.
- The geometric centre of probe was placed at 15 cm test distance surrounding the device and 20 cm above the top surface.
- The measurement probe used 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 680106 D01 RF Exposure Wireless Charging App v03r01.

BLOCK DIAGRAM OF TEST SETUP



Note: As bottom point is not required to test for desktop devices, so we scanning all the surfaces and recorded the worst level in F.



EQUIPMENT APPROVAL CONSIDERATIONS

The EUT comply with 680106 D01 RF Exposure Wireless Charging App v03r01.

- 1) Power transfer frequency is less than 1 MHz.
Yes; the device operated in the frequency range from 111.5 kHz to 148 kHz.
- 2) Output power from each primary coil is less than or equal to 15 Watts.
The maximum output power of each primary coil is 15 watts.
- 3) 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.
The transmitter has three coils.
- 4) Client device is 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; The EUT is a mobile device.
- 6) The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.
Yes; The EUT's field strength levels are less than 50% of the MPE limit.

MEASURING INSTRUMENT USED

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
Electric and Magnetic Field Analyzer	Narda	EHP-200A	170WX90204	May 20, 2020	May 20, 2021



E FIELD AND H FIELD STRENGTH TEST RESULT

Test Mode	Description
Mode 1	Coil 1 charging with 15 W wireless charging load (Full Load)
Mode 2	Coil 1 charging with 15 W wireless charging load (Half Load)
Mode 3	Coil 1 charging with 15 W wireless charging load (No Load)
Mode 4	Coil 2 charging with 15 W wireless charging load (Full Load)
Mode 5	Coil 2 charging with 15 W wireless charging load (Half Load)
Mode 6	Coil 2 charging with 15 W wireless charging load (No Load)
Mode 7	Coil 3 charging with 5 W wireless charging load (Full Load)
Mode 8	Coil 3 charging with 5 W wireless charging load (Half Load)
Mode 9	Coil 3 charging with 5 W wireless charging load (No Load)
Mode 10	Coil 1 charging with 15 W wireless charging load (Full Load) + Coil 3 charging with 15 W wireless charging load (Full Load)
Mode 11	Coil 2 charging with 15 W wireless charging load (Full Load) + Coil 3 charging with 15 W wireless charging load (Full Load)

Note: All the modes had been tested, but only the worst data was recorded in the report.



H-Filed Strength at 15 cm from the edges surrounding the EUT and 20 cm above the top surface of the EUT (A/m)

Test Position	H-Filed Strength Measure Result		Limits (A/m)
	Mode 1		
	A/m		
A	0.7297		1.63
B	0.2483		1.63
C	0.7664		1.63
D	0.6846		1.63
E	0.3476		1.63
F	0.7915		1.63

Test Position	H-Filed Strength Measure Result		Limits (A/m)
	Mode 7		
	A/m		
A	0.3029		1.63
B	0.2483		1.63
C	0.2833		1.63
D	0.1278		1.63
E	0.1895		1.63
F	0.3093		1.63

Test Position	H-Filed Strength Measure Result		Limits (A/m)
	Mode 10		
	A/m		
A	0.7145		1.63
B	0.2479		1.63
C	0.7674		1.63
D	0.6779		1.63
E	0.3581		1.63
F	0.7754		1.63



E-Filed Strength at 15 cm from the edges surrounding the EUT and 20 cm above the top surface of the EUT (V/m)

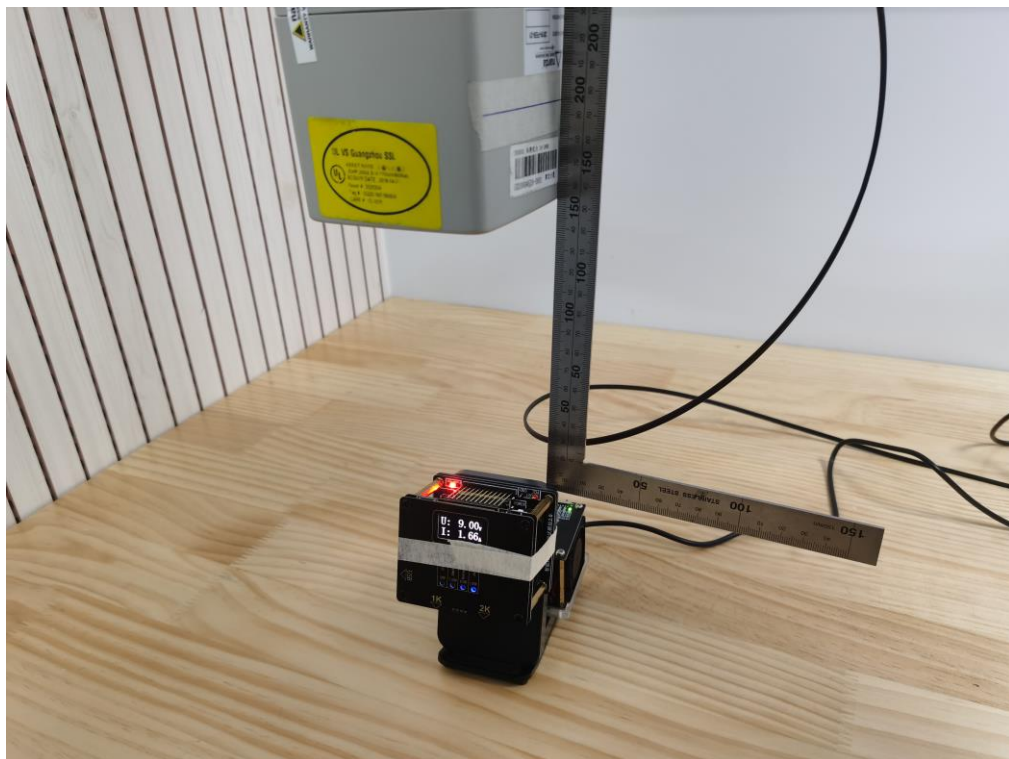
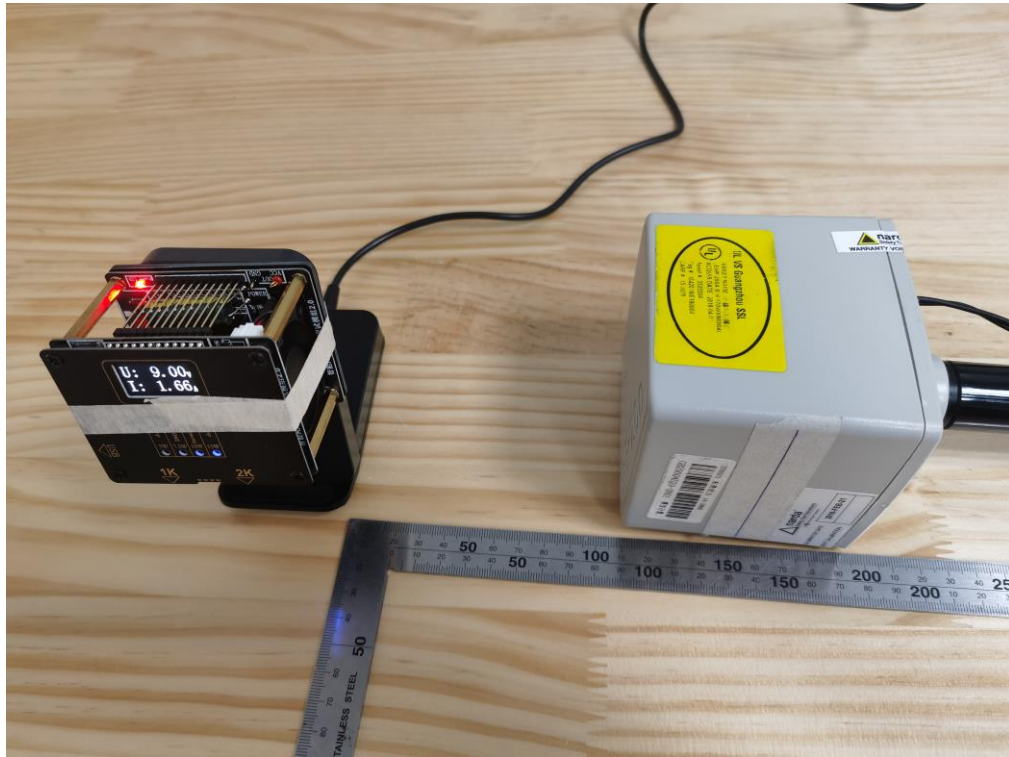
Test Position	E-Filed Strength Measure Result		Limits (V/m)
	Mode 1		
	V/m		
A	4.2361		614
B	2.3776		614
C	4.3849		614
D	3.8654		614
E	0.7995		614
F	4.4571		614

Test Position	E-Filed Strength Measure Result		Limits (V/m)
	Mode 7		
	V/m		
A	1.5602		1.63
B	0.9191		1.63
C	1.5763		1.63
D	0.6689		1.63
E	1.1362		1.63
F	1.5792		1.63

Test Position	E-Filed Strength Measure Result		Limits (V/m)
	Mode 10		
	V/m		
A	4.1342		614
B	2.3886		614
C	4.3754		614
D	3.8789		614
E	0.8033		614
F	4.3890		614

APPENDIX I: PHOTOGRAPHS OF TEST CONFIGURATION

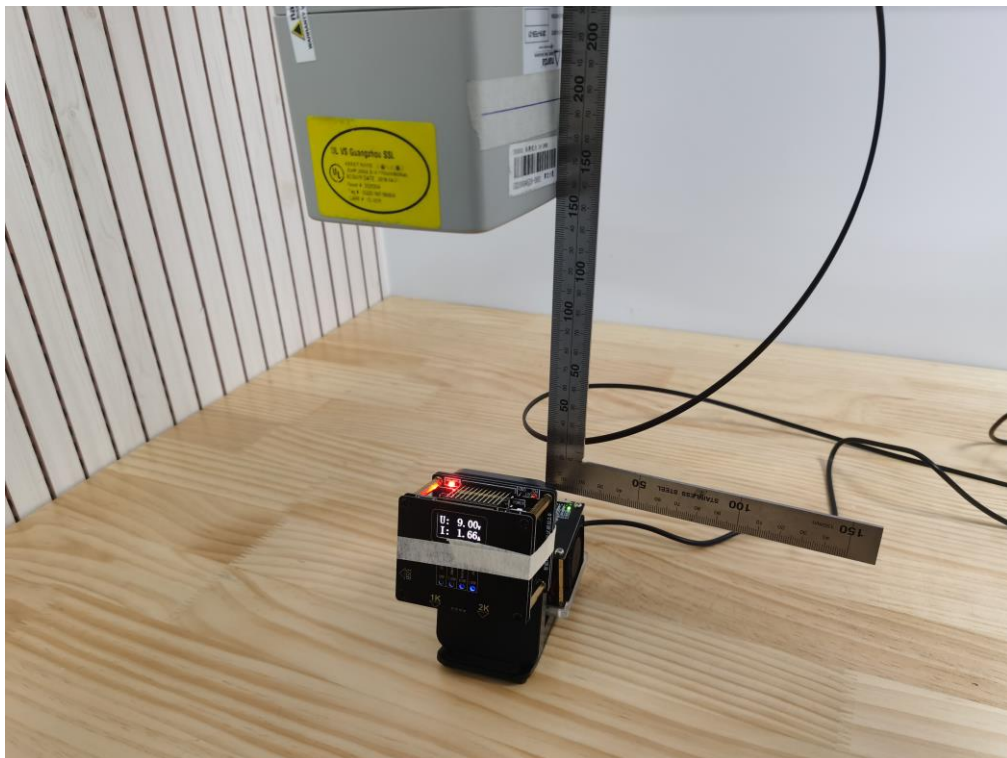
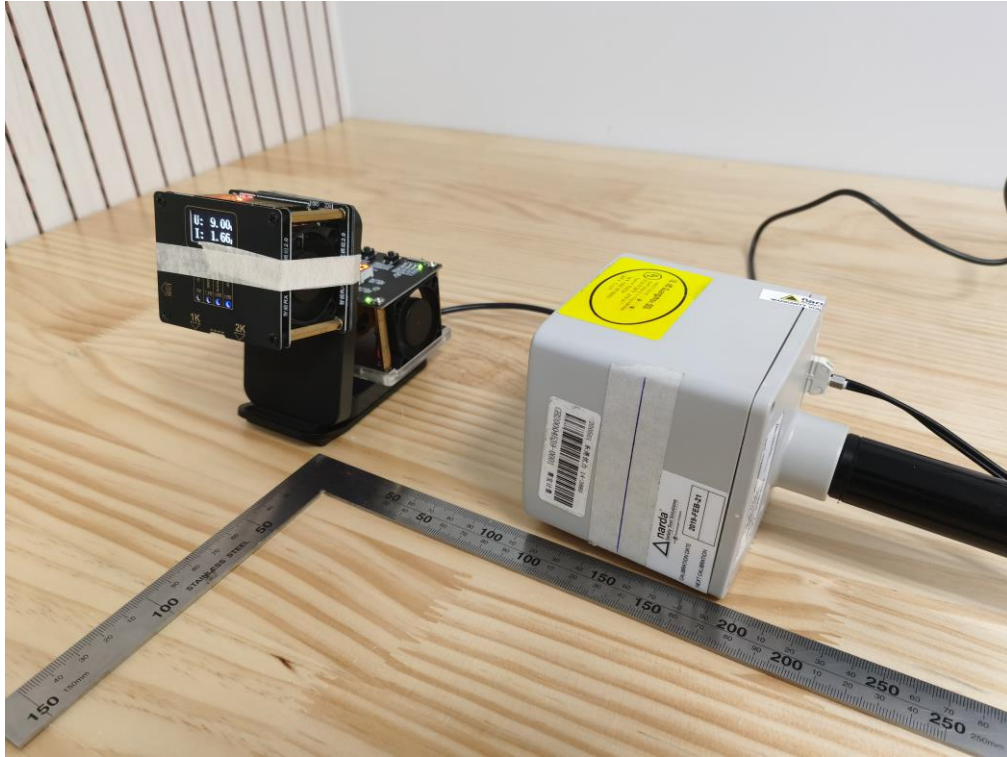
Mode 1



Mode 7



Mode 10



END OF REPORT