

# **UMAGE Inc.**

# **TEST REPORT**

### **SCOPE OF WORK**

EMC TESTING-4182, 4183

## **REPORT NUMBER**

230608076GZU-002

**ISSUE DATE** 

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Applicant Name & : UMAGE Inc.

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Manufacturing Site : Same as applicant Intertek Report No: 230608076GZU-002 FCC ID: 2A33B-41824183

### **Test standards**

47 CFR PART 1, Subpart I, Section 1.1310
KDB 680106 D01 RF Exposure Wireless Charging App v03r01

## **Sample Description**

Product : wireless charger Model No. : 4182, 4183

Electrical Rating : Input: 5V-9V DC 1.67-2A Output: 10W MAX

Serial No. : Not Labeled
Date Received : 08 June 2023

Date Test : 28 June 2023-01 July 2023

Conducted

Prepared and Checked By Approved By:

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## 1.0 TEST RESULT SUMMARY

Classification of EUT: Class B

Test Item	Standard	
EMF	47 CFR PART 1, Subpart I, Section 1.1310	PASS

### Remark:

When determining the test results, measurement uncertainty of tests has been considered. Model 4182 and Model 4183 are just different colors. Select model 4182 as full test.

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## 2.0 General Description

## 2.1 Product Description

Operating Frequency 112-149.1KHz

Type of Modulation: ASK

Antenna Type Inductive loop coil antenna

Power Supply: Input: 5V-9V DC 1.67-2A Output: 10W MAX

Power cord: 1m USB wires unscreened cable

## 2.2 Test Facility

Room102/104, No 203, KeZhu Road, Science City, GETDD Guangzhou, China

A2LA Certificate Number 0078.10

Intertek Testing Services Shenzhen Ltd. Guangzhou Branch is accredited by A2LA and Listed in FCC website. FCC accredited test labs may perform both Certification testing under Parts 15 and 18 and Declaration of Conformity testing.

# 2.3 EUT Exercising Software

N/A

## 2.4 Special Accessories

N/A

## 2.5 Equipment Modification

Any modifications installed previous to testing by UMAGE Inc. will be incorporated in each production model sold / leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd. Guangzhou Branch.

## 2.6 Support Equipment List and Description



This product was tested with corresponding support equipment as below: Support Equipment:

Equipment Model No.		Rating	Supplier
WPT client Tx-test2		DC 12V/0.83A,DC	Intertek
		7.5V/1.06A,DC 5V/1A	
Adaptor HW-200325CP0		100-240V,50/60Hz,1.8A	Intertek

### Cable:

Description	Model No.	Connector type	Cable length/type	Supplier
USB charging cable	Huiwei-01	Type C	1.0 m(unshielded)	Intertek

**Remark:** WPT client was one of typical Intertek devices, it's selected such that the EUT was fully exercised at maximum power from its transmitter. It will not be sold together.

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested based 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 configuration mode(s) mentioned above evaluated respectively

Pretest mode	Description				
Standby Mode	lode kept transmitting continuously				
Charging Mode	CH: Low WPT client is full load power mode,half				
	CH: Middle full load power mode and saturated				
	CH: High	charging mode respectively, keep			
	transmitting continuously.				

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### 3.0 EMF TEST

### 3.1 Standard Requirement

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 limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.1m normally can be maintained between the user and the device.

(a) 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 Times  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-3.0	0.3-3.0 614 3.0-30 1842/f		(100)*	6
3.0-30			(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100000			5	6

(b) 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 Times  E  <sup>2</sup> , H  <sup>2</sup> 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
1500-100000			1.0	30

Note: f=frequency in MHz; \*Plane-wave equivalent power density



## 3.2 Test Data

Input Voltage: 120V/60Hz Ambient Condition: 24°C, 50%RH

Test distance: 15 cm surrounding the device, and 20 cm away from the surface from the coil.

### H-Filed Strength:

Test	Probe Measu	50% Limit	Limit (A/m)		
Position	Full load	Half full load	Saturated	(A/m)	
	power mode	power mode	charging		
			mode		
Side 1	0.025	0.032	0.034	0.815	1.63
Side 2	0.026	0.034	0.034	0.815	1.63
Side 3	0.027	0.036	0.033	0.815	1.63
Side 4	0.030	0.037	0.038	0.815	1.63
Тор	0.040	0.045	0.047	0.815	1.63

# 4.0 Test Equipment List

Equip. No.	Equipment	Model	Manufacturer	Cal. date	Due date
EM007-03	Exposure Level Tester	ELT-400	NARDA	2023/3/7	2024/3/7