

# Human Exposure Report

**Application No.:** SZEM2004003169CR  
**Applicant:** ALOGIC Corporation Pty Ltd.  
**Address of Applicant:** Level 40, 140 William Street Melbourne, VIC Australia 3000  
**Manufacturer:** ALOGIC Corporation Pty Ltd  
**Address of Manufacturer:** Level 40, 140 William Street Melbourne, VIC Australia 3000  
**Factory:** Dongguan DBK Energy Technology Co., Ltd  
**Address of Factory:** Room 101, No. 252, Zhangmutou Section, Dongshen Rd., Zhangmutou Town, Dongguan, Guangdong, China

**Equipment Under Test (EUT):**  
**EUT Name:** Alogic Ultra Wireless Charging Pad (10W)  
**Model No.:** ULQC10W \*  
 \* Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.

**Trade Mark:** ALOGIC  
**FCC ID:** 2ATCAULQC10W  
**Standards:** 47 CFR PART 1, Subpart I, Section 1.1310  
 47 CFR PART 2, Subpart J, Section 2.1091

**Date of Receipt:** 2020-04-27  
**Date of Test:** 2020-04-29 to 2020-05-08  
**Date of Issue:** 2020-05-14

<b>Test Result :</b>	<b>Pass*</b>
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\* In the configuration tested, the EUT complied with the standards specified above



Keny Xu  
 EMC Laboratory Manager





SGS-CSTC Standards Technical Services Co., Ltd.  
 Shenzhen Branch EMC Laboratory

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No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



<i>Revision Record</i>				
<i>Version</i>	<i>Chapter</i>	<i>Date</i>	<i>Modifier</i>	<i>Remark</i>
01		2020-05-14		Original

<b>Authorized for issue by:</b>			
			
		_____ Leo Li /Project Engineer	
			
		_____ Eric Fu /Reviewer	



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### 3 General Information

#### 3.1 Details of E.U.T.

Power Supply: Input: DC 5V/2A, 9V/1.67A  
 WPC output:  
 5W(DC 5V/1A); 7.5W(DC 5V/1.5A); 10W(DC 9V/1.1A)

Cable: Type C cable: 100cm shielded

Operation Frequency: 112.18kHz to 175.64kHz

Modulation Type: Load Modulation

Antenna Type: Loop Antenna

Remark: This device has been tested the worst status of full load and the device has been tested with load at 5W,7.5W, and 10W, the worst case 10W(9V/1.1A) is reported only.

#### Declaration of EUT Family Grouping:

Model No.: ULQC10W

Only the black sample was tested, since the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only difference on color.

#### 3.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.	Remark
Adapter	Apple	A1357 W010A051	REF. No.SEA0500	Used for 5W & 7.5W output
Adapter	SAMSUNG	EP-TA200	R37J8YA7W71DK3	Used for 10W output
iPhone 8	Apple	A1863	F4GVQ656JC6D	Used for 7.5W output
SAMSUNG Galaxy S8	SAMSUNG	SM-G9500	R28J9140LPB	Used for 5W & 10W output



### 3.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch E&E Lab,

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

### 3.4 Test Facility

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

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1178**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

### 3.5 Deviation from Standards

None.

### 3.6 Abnormalities from Standard Conditions

None.



## 4 Equipments Used during Test

Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Due date
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2020-06-10
2	Electric and Magnetic Field Analyzer	Narda	EHP-50F	EMC092	2020-11-27



## 5 Test Results

### 5.1 RF Exposure test

Test Requirement: 47 CFR PART 1, Subpart I, Section 1.1310

Measurement Distance: 15cm

Limit:

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	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

RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

#### 5.1.1 E.U.T. Operation

##### Operating Environment:

Temperature: 24.0 °C Humidity: 52 % RH Atmospheric Pressure: 1015 mbar

##### EUT Operation:

This device has been tested with mobile phone at zero charge, intermediate charge, and full charge.



**5.1.1 Measurement Data**

**Output Voltage=DC 9V; The max output power =10W;Calculation of resistor value=8.1Ω**

**Magnetic Field Emissions**

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
115.4 kHz	15	Side 1	0.0673	0.815
		Side 2	0.0625	0.815
		Side 3	0.0652	0.815
		Side 4	0.0568	0.815
		Top	0.0620	0.815

**Mobile phone has been charge at zero charge, intermediate charge, and full charge.**

**Magnetic Field Emissions**

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			50%Limit (A/m)
			zero charge	intermediate charge	full charge	
115.4 kHz	15	Side 1	0.0682	0.0685	0.0664	0.815
		Side 2	0.0631	0.0610	0.0602	0.815
		Side 3	0.0645	0.0538	0.0522	0.815
		Side 4	0.0552	0.0545	0.0515	0.815
		Top	0.0637	0.0630	0.0609	0.815

- End of the Report -

