

# ***RF EXPOSURE EVALUATION REPORT***

**Application No.:** GZCR2108020948AT  
**Applicant:** Dongguan Padmat Rubber Co., Ltd  
**Address of Applicant:** Zhongxing Road, Shayao Village, Shijie Town, Dongguan, Guangdong 523000, China  
**Manufacturer:** Dongguan Padmat Rubber Co., Ltd  
**Address of Manufacturer:** Zhongxing Road, Shayao Village, Shijie Town, Dongguan, Guangdong 523000, China  
**Factory:** Dongguan Padmat Rubber Co., Ltd  
**Address of Factory:** Zhongxing Road, Shayao Village, Shijie Town, Dongguan, Guangdong 523000, China  
**Equipment Under Test (EUT):**  
**EUT Name:** Soft RGB wireless charge (10W)  
**Model No.:** WC03  
**Standard(s) :** 47 CFR PART 1, Subpart I, Section 1.1310  
47 CFR PART 2, Subpart J, Section 2.1091  
**Date of Receipt:** 2021-08-25  
**Date of Evaluation:** 2021-08-25 to 2021-09-05  
**Date of Issue:** 2021-09-07

<b>Evaluation Result:</b>	<b>Pass*</b>
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\* In the configuration evaluated, the EUT complied with the standards specified above.

Kobe Jian  
EMC Laboratory Manager



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<i>Revision Record</i>				
<i>Version</i>	<i>Chapter</i>	<i>Date</i>	<i>Modifier</i>	<i>Remark</i>
01		2021-08-31		Original

<b>Authorized for issue by</b>			
<b>Tested By</b>			
	<hr/>		
	<b>Curry Wu/Project Engineer</b>		
<b>Reviewed By</b>			
	<hr/>		
	<b>Ricky Liu/Reviewer</b>		



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## 2 Evaluation Summary

Radio Spectrum Matter Part				
Item	Standard	Method	Requirement	Result
RF Exposure	47 CFR PART 1, Subpart I, Section 1.1310	KDB 680106 D01 TCB Workshop Presentation November 2019 RF Exposure	CFR 47 Part 1.1310	Pass

**Note:**

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.



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## 4 General Information

### 4.1 Details of E.U.T.

Power supply:	Input: 5V/2A, 9V/2A Output: 5W/7.5W/10W
Cable(s):	USB Cable: 180cm unshielded
Operation Frequency:	110.4kHz to 145.6kHz
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 is reported only.

### 4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Adapter	Apple	A1863	REF. No.SEA16J00
Mobile Phone	Nexus	MRA58K	REF. No.SEA16P00
iPhone 8	Apple	A1863	REF. No.SEA16J00
SAMSUNG Galaxy S8	SAMSUNG	SM-G9500	REF. No.SEA16M01
E-loading	SGS	N/A	REF. No.SEA42A00

#### ■ Measurement Uncertainty

Test Item	Measurement Uncertainty
RF Exposure Evaluation	MF: 0.13dB, EF: 0.4dB

## 5 Equipments Used during Test

RF Exposure					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
743 Compact 3m Semi-Anechoic Chamber	ChangZhou ZhongYu	N/A	EMC0525	2019-10-20	2022-10-19
Electric and Magnetic Field Analyzer	Narada	NBM-550	EMC2143	2020-01-07	2022-01-06
Probe	Narada	EHP-50F	EMC2143	2020-01-07	2022-01-06

General used equipment					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
DMM	Fluke	73	EMC0006	2021-07-08	2022-07-07
DMM	Fluke	73	EMC0007	2021-07-08	2022-07-07



## 5.1 Facility

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

- **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **CNAS (Lab Code: L0167)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2018 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of Testing Laboratories.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

- **ISED (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

- **VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)**

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

## 5.2 Deviation from Standards

None

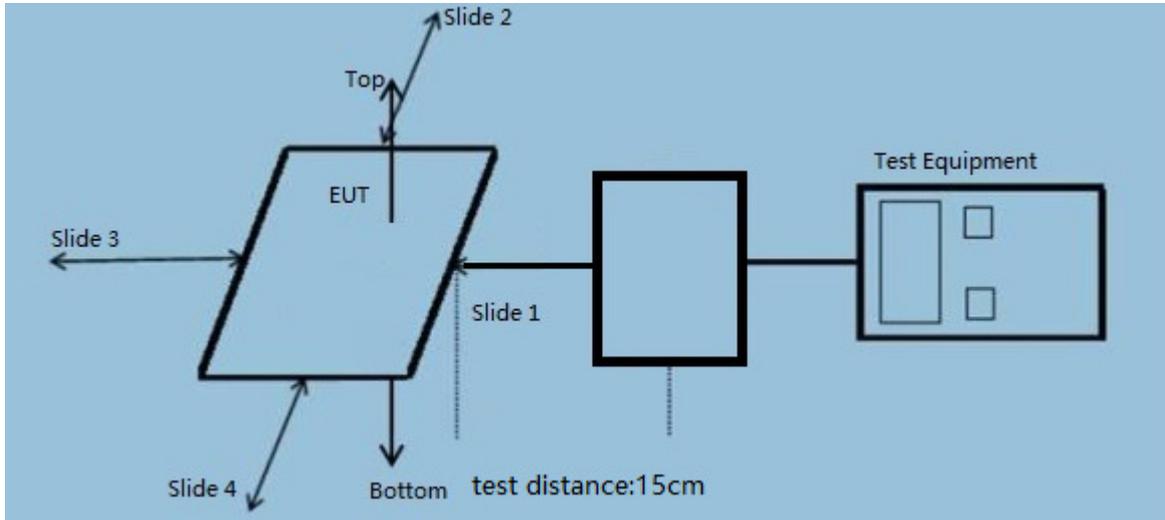
## 5.3 Abnormalities from Standard Conditions

None



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### 5.4 Test Block Diagram



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## 6 Test Results

### 6.1 RF Exposure test

Test Requirement: 47 CFR PART 1, Subpart I, Section 1.1310  
 47 CFR PART 2, Subpart J, Section 2.1091

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).				

#### 6.1.1 E.U.T. Operation

##### Operating Environment:

Temperature: 22.3 °C Humidity: 52.9 % RH Atmospheric Pressure: 1010 mbar

This device has been tested the worst status of full load and the device has been tested with mobile phone at zero charge, intermediate charge, and full charge.



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**6.1.2 Measurement Data**

**1: The max output power =10W**

**Electric Field Emissions**

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (V/m)	Limit (V/m)	30% Limit (V/m)	Verdict
125.7 kHz which is the worst case within the operation frequency range	15	Side 1	0.74	83	24.9	Pass
		Side 2	0.88	83	24.9	Pass
		Side 3	0.67	83	24.9	Pass
		Side 4	0.54	83	24.9	Pass
		Top	0.43	83	24.9	Pass

**Magnetic Field Emissions**

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	Limit (A/m)	30% Limit (A/m)	Verdict
125.7 kHz which is the worst case within the operation frequency range	15	Side 1	0.1175	90	27	Pass
		Side 2	0.1274	90	27	Pass
		Side 3	0.1161	90	27	Pass
		Side 4	0.1203	90	27	Pass
		Top	0.1045	90	27	Pass



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

**Electric Field Emissions**

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(V/m)			30%Limit (V/m)
			zero charge	intermediate charge	full charge	
125.7 kHz which is the worst case within the operation frequency range	15	Side 1	0.77	0.64	0.55	24.9
		Side 2	0.84	0.71	0.62	24.9
		Side 3	0.70	0.58	0.50	24.9
		Side 4	0.56	0.44	0.31	24.9
		Top	0.55	0.47	0.34	24.9

**Magnetic Field Emissions**

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			30%Limit (A/m)
			zero charge	intermediate charge	full charge	
125.7 kHz which is the worst case within the operation frequency range	15	Side 1	0.1263	0.1061	0.0844	27
		Side 2	0.1227	0.1109	0.0902	27
		Side 3	0.1248	0.1048	0.0834	27
		Side 4	0.1202	0.1193	0.1087	27
		Top	0.1006	0.0925	0.0836	27



### 7 Photographs- RF exposure Setup photos

Test with mobile phone with 15cm measurement distance

Side 1



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Side 2



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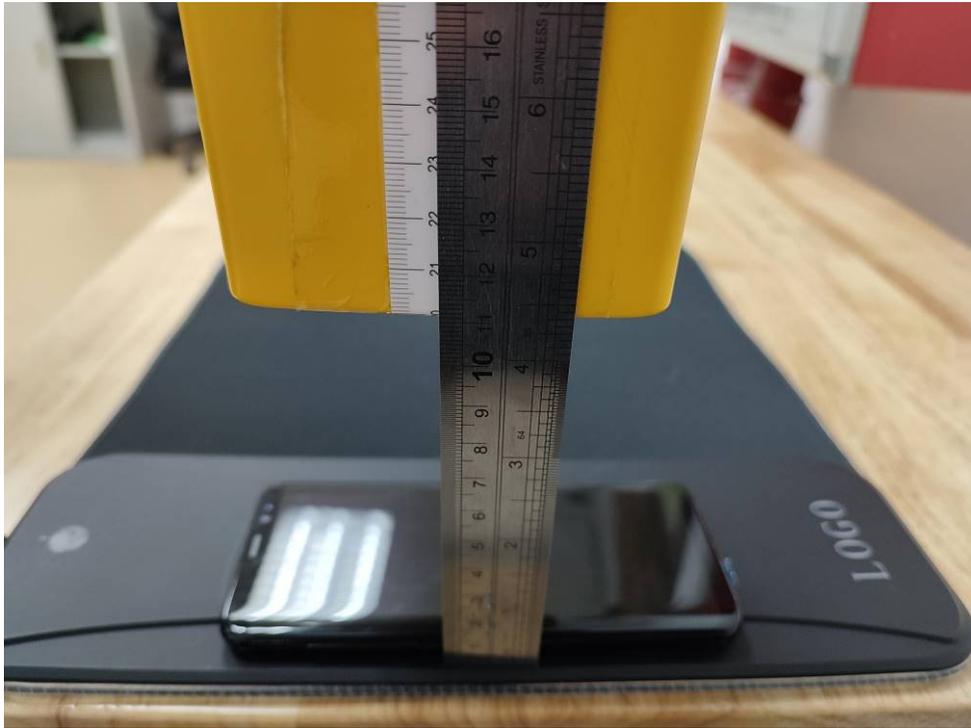
Side 3



Side 4



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