



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

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Report No.: SZEM180700646102  
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# Human Exposure Report

**Application No.:** SZEM1807006461CR  
**Applicant:** Chengdu Sprouting Technology Co. Ltd.  
**Address of Applicant:** Rm. 1601, G1 Building, 1800 Yi-Zhou Ave. (Mid Section), Chengdu, Sichuan, China  
**Manufacturer:** Chengdu Sprouting Technology Co. Ltd.  
**Address of Manufacturer:** Rm. 1601, G1 Building, 1800 Yi-Zhou Ave. (Mid Section), Chengdu, Sichuan, China  
**Factory:** Chengdu Sprouting Technology Co. Ltd.  
**Address of Factory:** Rm. 1601, G1 Building, 1800 Yi-Zhou Ave. (Mid Section), Chengdu, Sichuan, China

**Equipment Under Test (EUT):**

**EUT Name:** RichargeTM in-car wireless charger armrest model  
**Model No.:** SPAT-IC-ARM-01-Tx  
**FCC ID:** 2ARFC-SPAT-IC-ARM  
**Trade mark:** RichargeTM  
**Standards:** 47 CFR PART 1, Subpart I, Section 1.1310  
**Date of Receipt:** 2018-07-19  
**Date of Test:** 2018-09-04 to 2018-09-25  
**Date of Issue:** 2018-09-25

<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

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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## 2 General Information

### 2.1 Details of E.U.T.

Power supply: Input: DC 12V from Car battery  
Output: DC 5V/1A

Operation frequency: 6.78MHz

Antenna type: Loop Antenna

### 2.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
DC power	ZHAOXIN	RXN-305D	REF. No.SEA2700
iPhone 8	Apple	A1863	F4GVQ656JC6D
Receiver holster	Provided by client	SPAT-IC-ARM-01-Rx	N/A

## **2.3 Test Location**

All tests were performed at:

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

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.

## **2.4 Test Facility**

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

- CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- 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.

- Industry Canada (IC)**

Two 3m Semi-anechoic chambers and the 10m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1, 4620C-2, 4620C-3.

## **2.5 Deviation from Standards**

None.

## **2.6 Abnormalities from Standard Conditions**

None.

### **3 Equipments Used during Test**

<b>Item</b>	<b>Test Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Inventory No.</b>	<b>Cal. Due date (yyyy-mm-dd)</b>
1	Shielding Room	SAEMC	MSR733	SEM001-09	2020-05-09
2	Electric and Magnetic Field Analyzer	Narda	EHP-50F	EMC092	2019-02-06

## 4 Test Results

### 4.1 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).

#### 4.1.1 E.U.T. Operation

**Operating Environment:**

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

**EUT Operation:**

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

**Clarification for measurement:**

The probe should be scanned across the length of the appropriate edge at a set distance of 15cm. The probe should be moved along an axis parallel to the edge until the location of maximum field is found. The maximum field location is around the center of the axis. At that location the final measurement will be made. The tests were conducted in all edges using the similar procedure.

**4.1.2 Measurement Data****Output Voltage=DC 5V; The max output power =5W****Electric Field Emissions**

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (V/m)	50% Limit (V/m)
6.78MHz	15	Side 1	10.02	60.77
		Side 2	12.76	60.77
		Side 3	10.90	60.77
		Side 4	12.87	60.77
		Top	15.65	60.77

**Magnetic Field Emissions**

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
6.78MHz	15	Side 1	0.0857	0.162
		Side 2	0.0864	0.162
		Side 3	0.0878	0.162
		Side 4	0.0879	0.162
		Top	0.0934	0.162



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

## Electric Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(V/m)			50%Limit (V/m)
			zero charge	intermediate charge	full charge	
6.78MHz	15	Side 1	10.06	10.03	10.09	60.77
		Side 2	12.72	12.65	12.71	60.77
		Side 3	10.92	10.96	10.84	60.77
		Side 4	12.81	12.76	12.72	60.77
		Top	15.67	15.73	15.79	60.77

## 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	
6.78MHz	15	Side 1	0.0843	0.0851	0.0848	0.162
		Side 2	0.0861	0.0868	0.0855	0.162
		Side 3	0.0875	0.0872	0.0870	0.162
		Side 4	0.0874	0.0865	0.0869	0.162
		Top	0.0935	0.0926	0.0920	0.162

## **5 Photographs**

Please refer to RF exposure setup.

- End of the Report -