



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

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Report No.: SZEM161000877505  
Page: 1 of 13

# Human Exposure Report

**Application No.:** SZEM1610008775CR  
**Applicant:** Spire Inc  
**Address of Applicant:** 2030 Harrison St 2<sup>nd</sup> Floor, San Francisco, CA 94115  
**Manufacturer:** Dongguan Wise Ally Industrial Company Limited  
**Address of Manufacturer:** No.3 Zhen An Middle Road, Wu Sha Community, ChangAn Town, Dongguan City, Guangdong, China  
**Factory:** Regent Electron DongGuang Co.,Ltd  
**Address of Factory:** 400 Quantang section Shida road Quantang area Lilaobu town Dongguan City Guangdong province P.R.C  
**Equipment Under Test (EUT):**  
**EUT Name:** Chargepad for Mindfulness  
**Model No.:** C2  
**Trade mark:** Spire  
**FCC ID:** 2ACF5C2  
**Standards:** 47 CFR PART 1, Subpart I, Section 1.1310  
**Date of Receipt:** 2016-11-10  
**Date of Test:** 2016-11-11 to 2016-12-06  
**Date of Issue:** 2017-10-18

<b>Test Result :</b>	<b>Pass*</b>
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\* This report is just a test result base on the test method and limit requirement shown in the form on the second page. 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..

Authorized Signature:



Jack Zhang

EMC Laboratory Manager

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### 3 General Information

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

Power Supply: Test voltage:AC 120V 60Hz  
Cable: USB cable:180cm Unshielded

#### 3.2 Description of Support Units

Description	Manufacturer	Model No.
Cement Resister	SGS provide	N/A
Micro USB Cable	PHILIPS	SWR2101
Spire Mindfulness and Activity Tracker	Spire	2ACF5S1-1

#### 3.3 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.



### 3.4 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 10m Semi-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.: G-823, R-4188, T-1153 and C-2383 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.

### 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 (yyyy-mm-dd)
1	10m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2017-05-13
2	Electric Filed Meter	Schaffner	EMC20	EMC068	2017-05-06
3	DC Electronic Load	PRODIGIT	3302F	30802F00533	2017-12-03



## 5 Test Results

### 5.1 RF Exposure test

Test Requirement: 47 CFR PART 1, Subpart I, Section 1.1310  
Measurement Distance: 10cm  
Test voltage: AC 120V 60Hz  
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 the worst status of full load and the device has been tested with Spire Mindfulness and Activity Tracker at zero charge, intermediate charge, and full charge.



### 5.1.2 Measurement Data

1:Output Voltage=DC 5V; The max output power =5W;Calculation of resistor value=5Ω

Measurement Distance:10 cm

#### Electric Field Emissions

Test Position	Probe Measure Result(V/m)	Limit(V/m)	30% Limit(V/m)
Side 1	4.83	614	184.2
Side 2	4.16	614	184.2
Side 3	4.55	614	184.2
Side 4	4.79	614	184.2
Top	6.15	614	184.2
Bottom	3.95	614	184.2

#### Magnetic Field Emissions

Test Position	Probe Measure Result(A/m)	Limit(A/m)	30% Limit(A/m)
Side 1	0.0843	1.63	0.489
Side 2	0.0835	1.63	0.489
Side 3	0.0855	1.63	0.489
Side 4	0.0824	1.63	0.489
Top	0.1032	1.63	0.489
Bottom	0.0645	1.63	0.489



2:Load has been charge at zero charge, intermediate charge, and full charge.

Measurement Distance:10 cm

**Electric Field Emissions**

Test Position	Probe Measure Result(V/m)			Limit(V/m)/ 30%Limit(V/m)
	zero charge	intermediate charge	full charge	
Left	3.97	4.19	3.96	614/184.2
Right	3.89	4.22	3.92	614/184.2
Front	4.15	4.25	4.12	614/184.2
Back	3.58	3.82	3.67	614/184.2
Top	5.18	5.42	5.23	614/184.2
Bottom	2.26	2.34	2.52	614/184.2

**Magnetic Field Emissions**

Test Position	Probe Measure Result(A/m)			Limit(A/m)/ 30%Limit(A/m)
	zero charge	intermediate charge	full charge	
Side 1	0.0178	0.0186	0.0183	1.63/0.489
Side 2	0.0176	0.0181	0.0179	1.63/0.489
Side 3	0.0183	0.0186	0.0185	1.63/0.489
Side 4	0.0165	0.0168	0.0172	1.63/0.489
Top	0.0223	0.0265	0.0262	1.63/0.489
Bottom	0.0155	0.0164	0.0163	1.63/0.489

## 6 Photographs

### 6.1 Test photos

Test Model No.: C2

Test with full load

Left



Right





Front



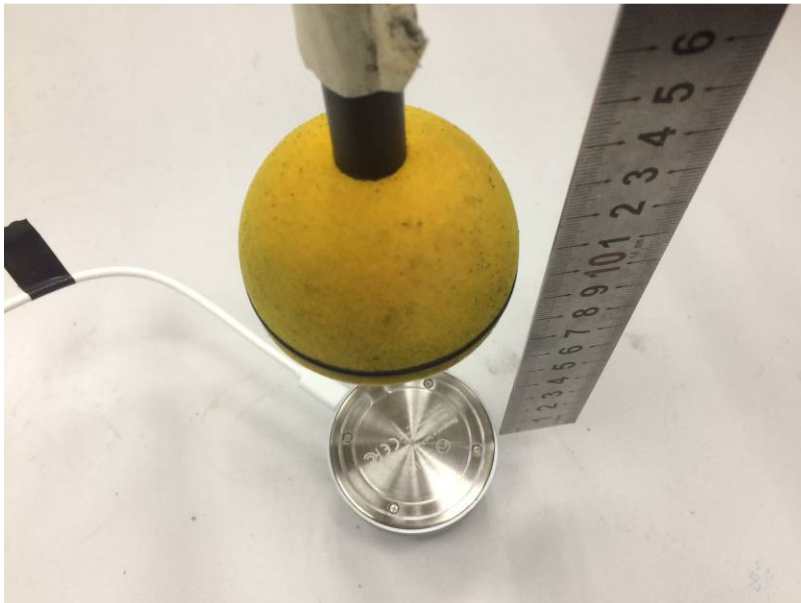
Back



Top

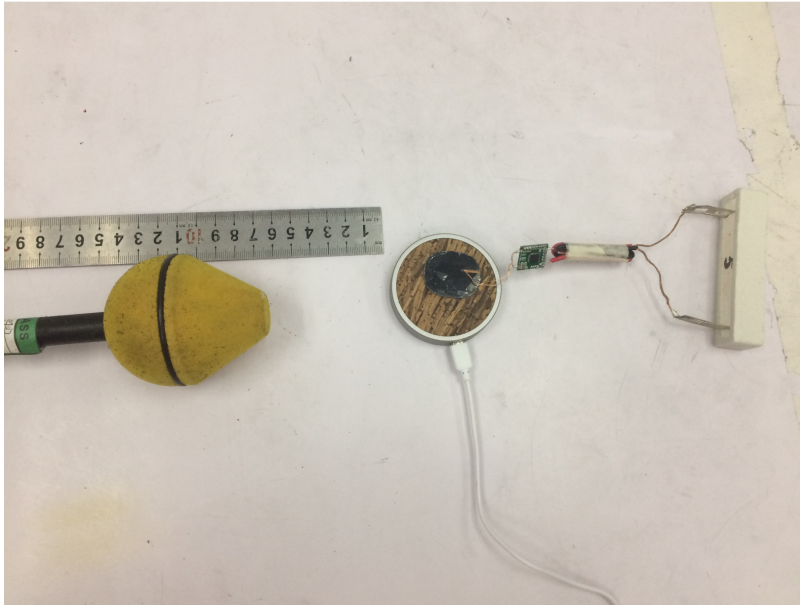


Bottom

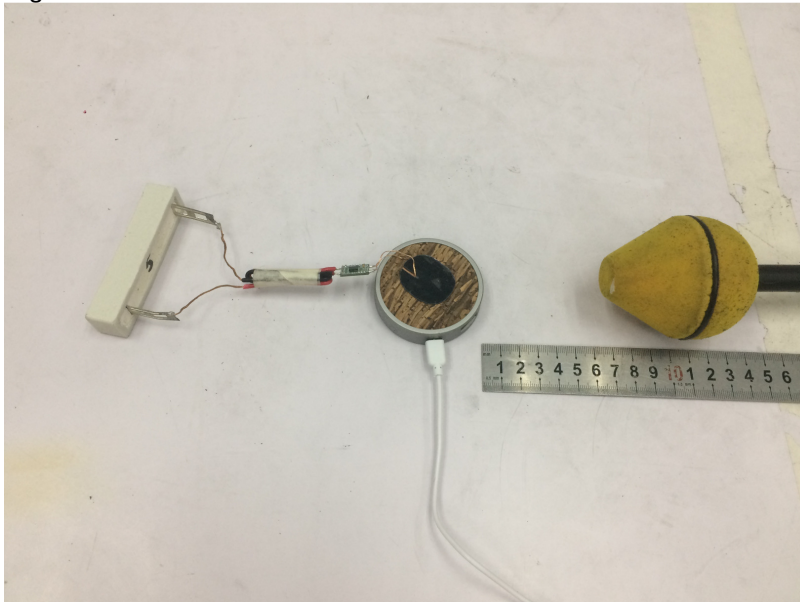


Test with simulate the load at zero charge,intermediate charge,full charge

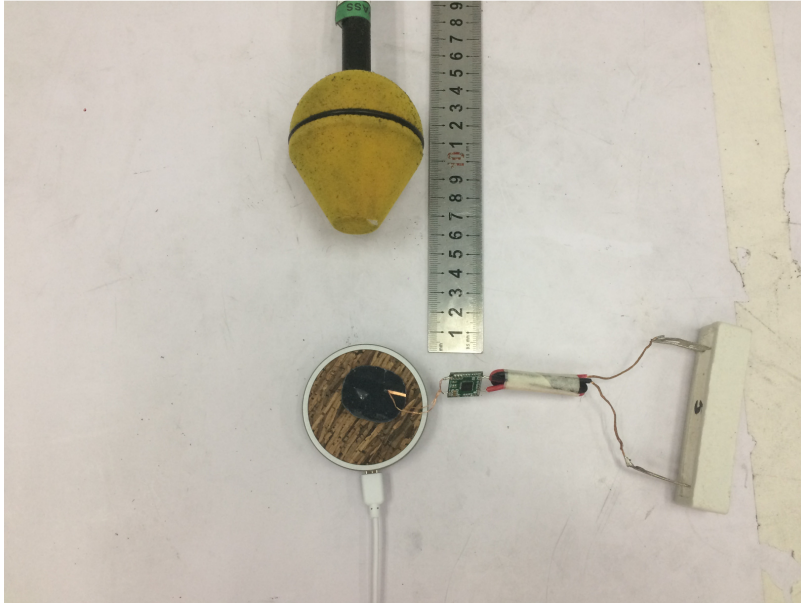
Left



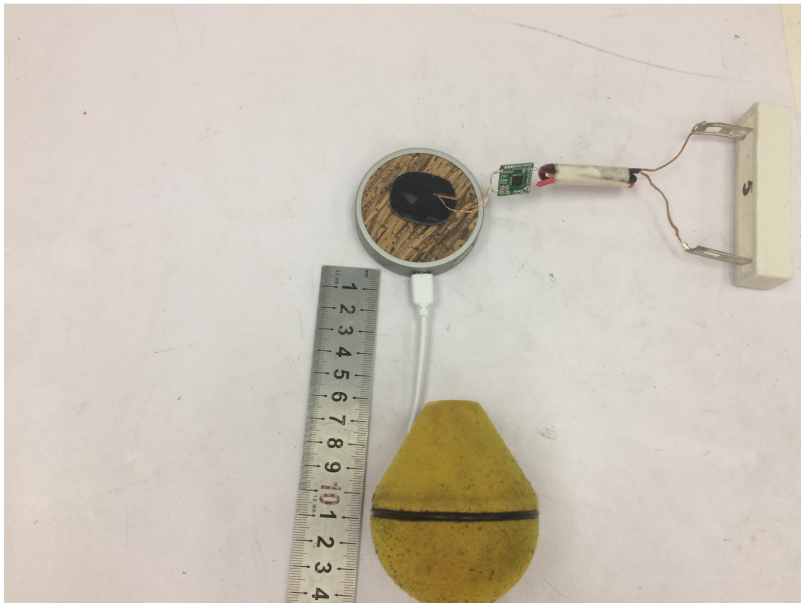
Right



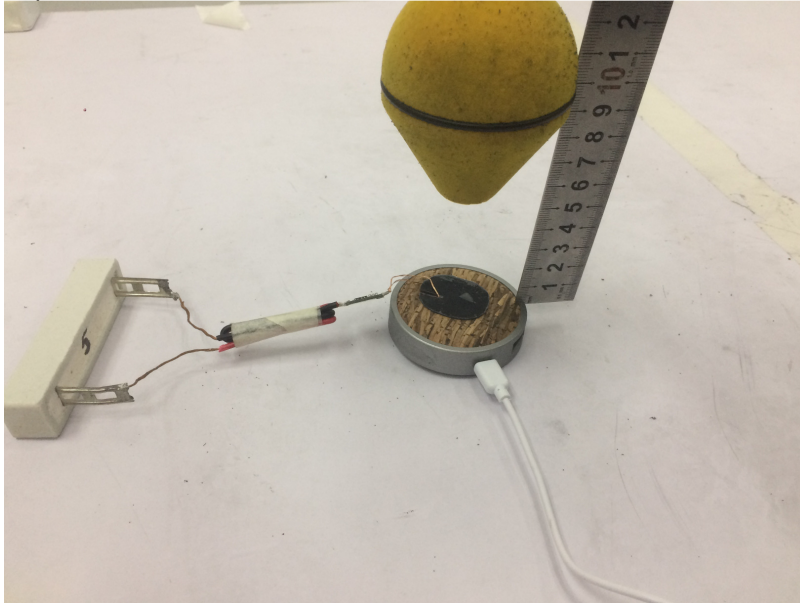
Front



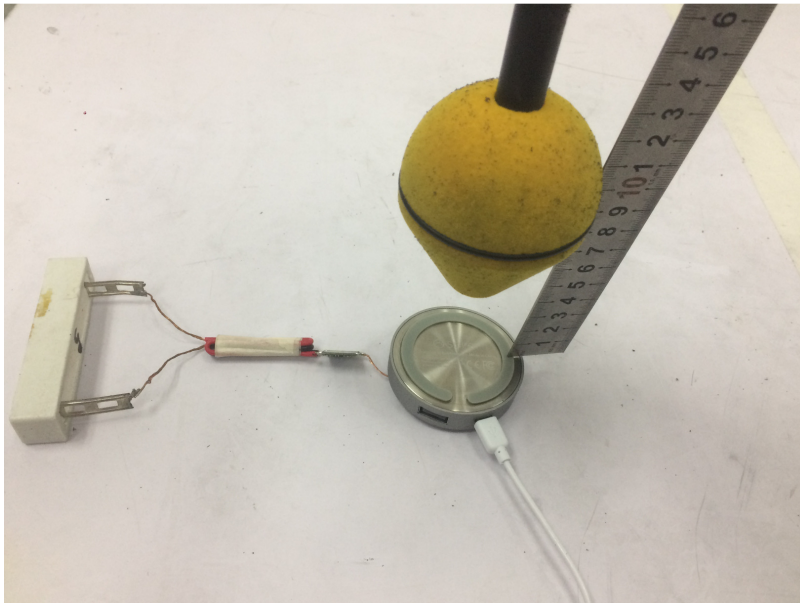
Back



Top



Bottom



## 6.2 EUT photos

Refer to Appendix A - Photographs of EUT Constructional Details for SZEM1610008775CR.