

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

Telephone: +86 (0) 755 2601 2053
Fax: +86 (0) 755 2671 0594
Email: ee.shenzhen@sgs.com

Report No.: SZEM130900527202
Page: 1 of 9

Human Exposure Report

Application No.: SZEM1309005272RF

Applicant/Manufacturer/ SEA Electronics Ltd.

Factory:

Address of Applicant/ Unit G-F, 10/F, Blk A, Lianjian Bldg, Chaping Railway Station, Dongguan
Manufacturer/Factory: Guangdong.

Equipment Under Test (EUT):

EUT Name: SEA Wireless Charger

Item No.: SEA012

Standards: 47 CFR PART 1, Subpart I, Section 1.1310

Date of Receipt: 2013-09-22

Date of Test: 2013-10-18 to 2013-10-31

Date of Issue: 2013-11-11

Test Result :	PASS*
----------------------	--------------

* 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:



Starry Li
EMC Laboratory Project Engineer

2 Contents

	Page
1 COVER PAGE	1
2 CONTENTS	2
3 GENERAL INFORMATION.....	3
3.1 DETAILS OF E.U.T	3
3.2 DESCRIPTION OF SUPPORT UNITS	3
3.3 TEST LOCATION	3
3.4 TEST FACILITY.....	4
3.5 DEVIATION FROM STANDARDS.....	4
3.6 ABNORMALITIES FROM STANDARD CONDITIONS.....	4
4 EQUIPMENTS USED DURING TEST	4
5 TEST RESULTS.....	5
5.1 RF EXPOSURE TEST	5
5.1.1 E.U.T. Operation.....	5
<i>Operating Environment:</i>	5
<i>EUT Operation:</i>	5
5.1.2 Measurement Data	6
6 PHOTOGRAPHS	7
6.1 TEST PHOTOS	7
6.2 EUT PHOTOS	9

3 General Information

3.1 Details of E.U.T.

Power Supply: MODEL NO.:SWPP-19000500-US
INPUT:100-240VAC 50/60Hz 0.5A
OUTPUT:19V ~~±~~ 500mA
DC Line: 105cm(Unshielded)

3.2 Description of Support Units

The EUT has been tested with associated equipment below.

Description	Manufacturer	Model No.
Resistance	Supply by Client	N/A

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:

- **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.

- **VCCI**

The 3m Semi-anechoic chamber, Full-anechoic Chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2197, G-416, T-1153 and C-2383 respectively.

- **FCC – Registration No.: 556682**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 556682.

- **Industry Canada (IC)**

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

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	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2014-06-10
2	Electric Filed Meter	Schaffner	EMC20	EMC068	2014-05-08
3	DC Electronic Load	ITECH	IT8512C	SZE073-10	2014-07-09

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 ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	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 full load.

5.1.2 Measurement Data**Electric Field Emissions**

Test Position	Probe Measure Result(V/m)	Limit(V/m)
Side 1	2.05	614
Side 2	1.81	614
Side 3	1.83	614
Side 4	2.23	614
Top	2.62	614
Bottom	2.01	614

Magnetic Field Emissions

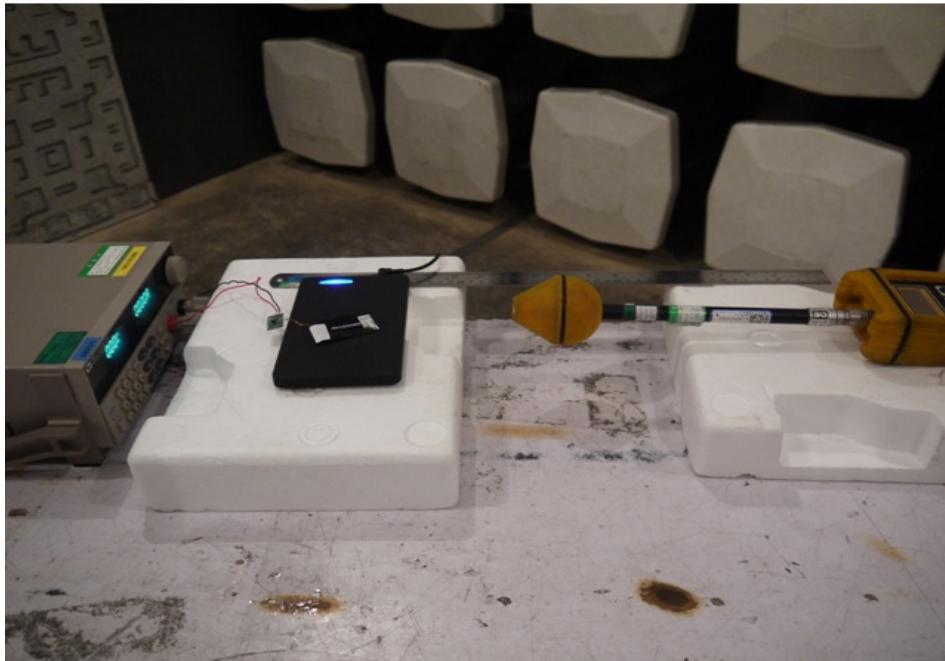
Test Position	Probe Measure Result(A/m)	Limit(A/m)
Side 1	0.0051	1.63
Side 2	0.0040	1.63
Side 3	0.0043	1.63
Side 4	0.0064	1.63
Top	0.0078	1.63
Bottom	0.0049	1.63

6 Photographs

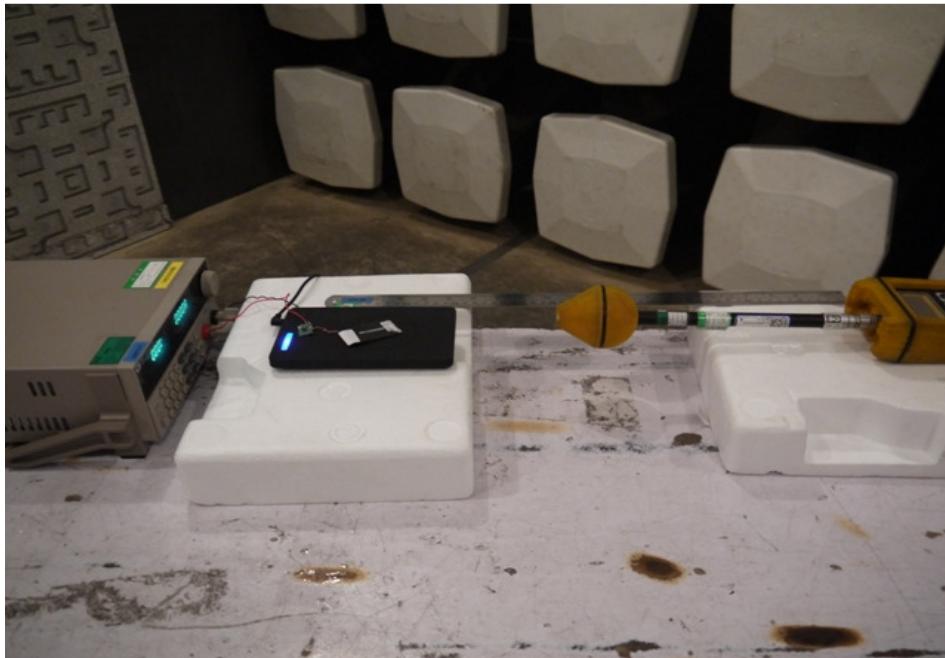
6.1 Test photos

Test Model No.: SEA012

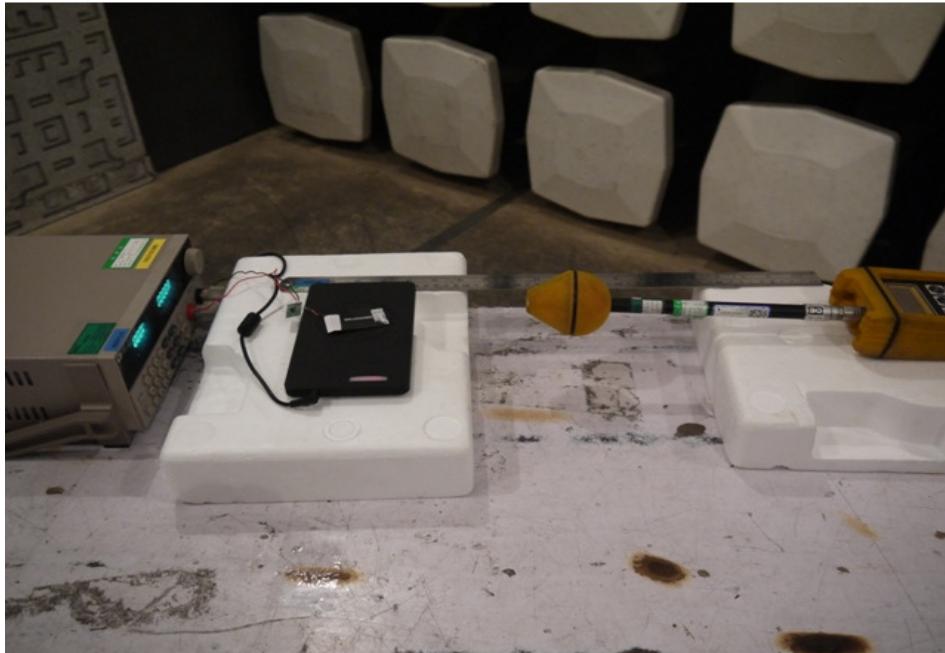
Side 1



Side 2



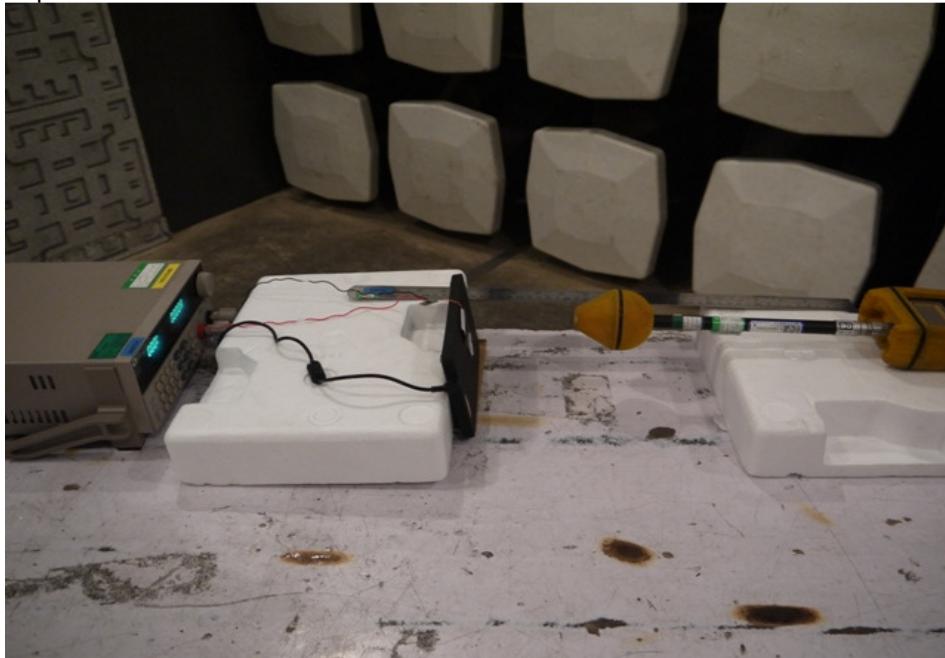
Side 3



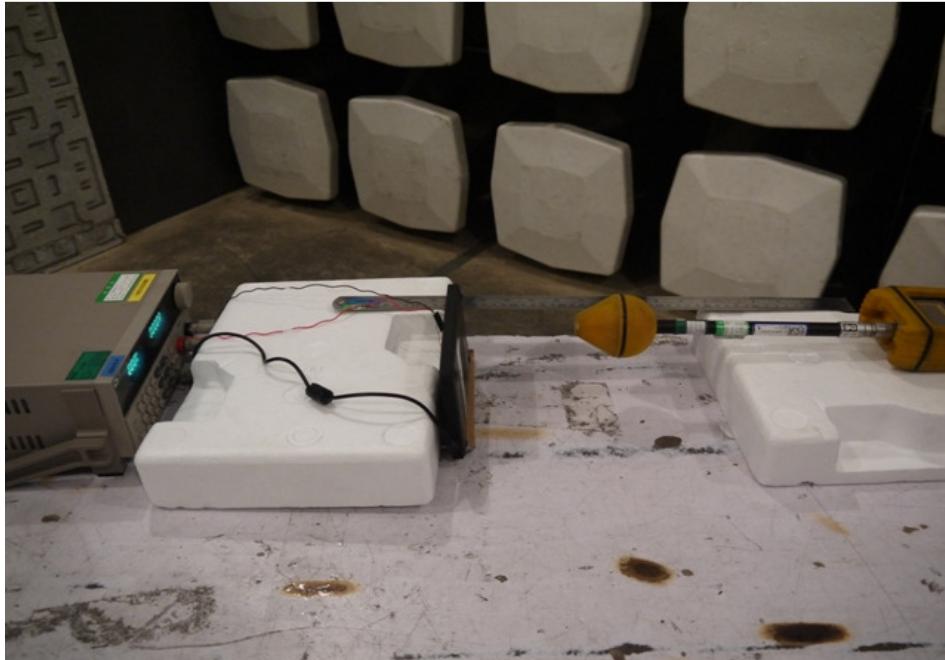
Side 4



Top



Bottom



6.2 EUT photos

Test Model No.: SEA012

Refer to Report No. SZEM130900527201 for EUT external and internal photos.