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

No. 1 Workshop, M-10, Middle Section, Science & Technology Park,
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Human Exposure Report

Application No.:	SZEM1806004703CR
Applicant:	iOttie, Inc
Address of Applicant:	33 West 46th Street, 6th FL. New York, NY, 10036, United States.
Manufacturer:	iOttie, Inc
Address of Manufacturer:	33 West 46th Street, 6th FL. New York, NY, 10036, United States.
Factory:	SHENZHEN INVASIVE METHOD ELECTRONICS CO., LTD
Address of Factory:	2-3 building, building a, regular industrial park, saigox industrial zone, saigox city, Bao'an district, shenzhen city
Equipment Under Test (EUT):	
EUT Name:	ION Wireless Fast Charging Stand
Model No.:	CHWRIO104 ♣
♣	Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Trade mark:	iOttie
FCC ID:	2AMRO-CHWRIO104
Standard(s) :	47 CFR PART 1, Subpart I, Section 1.1310
Date of Receipt:	2018-06-04
Date of Test:	2018-06-05 to 2018-06-12
Date of Issue:	2018-06-16
Test Result:	**Pass***

* 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.

1 Contents

2 General Information

2.1 Details of E.U.T.

Power supply:	Input: DC 5V/3A, DC 9V/2A
	Output: DC 5V/1A, DC 9V/1A
Operation frequency:	127.6-164.4 kHz
Antenna type:	Inductive Loop Coil Antenna
Modulation type:	Load modulation
Remark:	Tests were conducted in both load modes and the worst case(DC 5V/1A) has reported only.

2.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
AC/DC adapter	SAMSUNG(provided by SGS)	N/A	Output: DC 5V/3A, DC 9V/2A
E-loading	provided by SGS	N/A	DC 5V/1A
Mobile Phone	SAMSUNG	SM-G9500	R28J9140LPB
Type-C Cable	SGS	N/A	REF. No.SEA0705

Declaration of EUT Family Grouping:

Model No.: CHWRIO104

Only the sample in section 7.1 was tested, since the electrical circuit design, PCB layout, components used, internal wiring and functions were identical for the above model, with only difference on colour.

2.3 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.

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

Radiated emission					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
10m Semi-Anechoic Chamber	SAEMC	FSAC1018	SEM001-03	2018-03-31	2021-03-30
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM029-01	2017-07-13	2018-07-12
EMI Test Receiver (9kHz-3GHz)	Rohde & Schwarz	ESCI	SEM004-01	2018-04-02	2019-04-01
Trilog-Broadband Antenna(30MHz-1GHz)	Schwarzbeck	VULB9168	SEM003-18	2016-01-26	2019-01-25
Pre-amplifier	Sonoma Instrument Co	310N	SEM005-04	2018-04-13	2019-04-12
Active Loop Antenna	ETS-Lindgren	6502	SEM003-08	2017-08-22	2020-08-21

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^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).				

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.

4.1.2 Measurement Data

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

Electric Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (V/m)	50% Limit (V/m)
153.7 kHz	15	Side 1	4.71	307
		Side 2	5.09	307
		Side 3	5.10	307
		Side 4	4.91	307
		Top	4.07	307

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
153.7 kHz	15	Side 1	0.0590	0.815
		Side 2	0.0582	0.815
		Side 3	0.0603	0.815
		Side 4	0.0596	0.815
		Top	0.1344	0.815

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	
153.7 kHz	15	Side 1	4.53	4.31	4.18	307
		Side 2	4.90	4.66	4.52	307
		Side 3	4.91	4.67	4.53	307
		Side 4	4.73	4.50	4.36	307
		Top	3.91	3.72	3.61	307

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	
153.7 kHz	15	Side 1	0.0546	0.0514	0.0487	0.815
		Side 2	0.0539	0.0507	0.0481	0.815
		Side 3	0.0559	0.0525	0.0498	0.815
		Side 4	0.0552	0.0520	0.0492	0.815
		Top	0.1245	0.1171	0.1110	0.815

- End of the Report -