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

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

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Human Exposure Report

Application No.:	SZEM1809008176CR (GZEM1808005112CR)
Applicant:	Xiamen Paltier Electronic Technology Co., LTD
Address of Applicant:	Unit 01, 3rd floor, No.1726 Gangzhong Road, Xiamen Free Trade Zone, Xiamen, China
Manufacturer:	Xiamen Paltier Electronic Technology Co., LTD
Address of Manufacturer:	Unit 01, 3rd floor, No.1726 Gangzhong Road, Xiamen Free Trade Zone, Xiamen, China
Factory:	Xiamen Paltier Electronic Technology Co., LTD
Address of Factory:	4th floor, building 1st, ZhenNan Seven Road, XinMin Town, Tong'An district, Xiamen China
Equipment Under Test (EUT):	
EUT Name:	Desktop Smart Cup
Model No.:	PT-502
Trade mark:	paltier
FCC ID:	2AQ87PT-502
Standards:	47 CFR PART 1, Subpart I, Section 1.1310
Date of Receipt:	2018-09-06
Date of Test:	2018-09-06 to 2018-09-11
Date of Issue:	2018-09-12
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.

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2 General Information

2.1 Details of E.U.T.

Power supply:	DC 12V from adapter input AC 120V/60Hz
	Adapter Model: R481-1204000CG
	Input: 100-240V~50/60Hz 1.5A
	Output:DC 12V 4000mA
	for WPC
	Input: DC 9V/1.67A
	Output: 10W(DC 9V/1.1A)
Cable:	DC cable: 150cm unshielded
Operation frequency:	119.8-149.0kHz
Antenna type:	Inductive Loop Coil Antenna
Modulation type:	Load modulation

2.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Mobile Phone	SAMSUNG	SM-G9500	R28J9140LPB

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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.

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3 Equipments Used during Test

Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Due date (yyyy-mm-dd)
1	Shielding Room	SAEMC	MSR733	SEM001-09	2020-05-09
2	Electric Field Meter	Schaffner	EMC20	EMC068	2019-03-21

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4 Test Results

4.1 RF Exposure test

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

Measurement Distance: 0cm

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.

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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)
143.8 kHz	0	Side 1	7.34	307
		Side 2	7.40	307
		Side 3	7.36	307
		Side 4	7.32	307
		Top	7.38	307

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
143.8 kHz	0	Side 1	0.0628	0.815
		Side 2	0.0596	0.815
		Side 3	0.0613	0.815
		Side 4	0.0623	0.815
		Top	0.0691	0.815

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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	
143.8 kHz	0	Side 1	7.27	7.07	7.15	307
		Side 2	7.15	7.18	7.13	307
		Side 3	7.09	7.16	7.19	307
		Side 4	7.21	7.22	7.25	307
		Top	7.11	7.16	7.18	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	
143.8kHz	0	Side 1	0.0582	0.0547	0.0518	0.815
		Side 2	0.0552	0.0520	0.0492	0.815
		Side 3	0.0568	0.0534	0.0506	0.815
		Side 4	0.0578	0.0543	0.0515	0.815
		Top	0.0640	0.0602	0.0571	0.815

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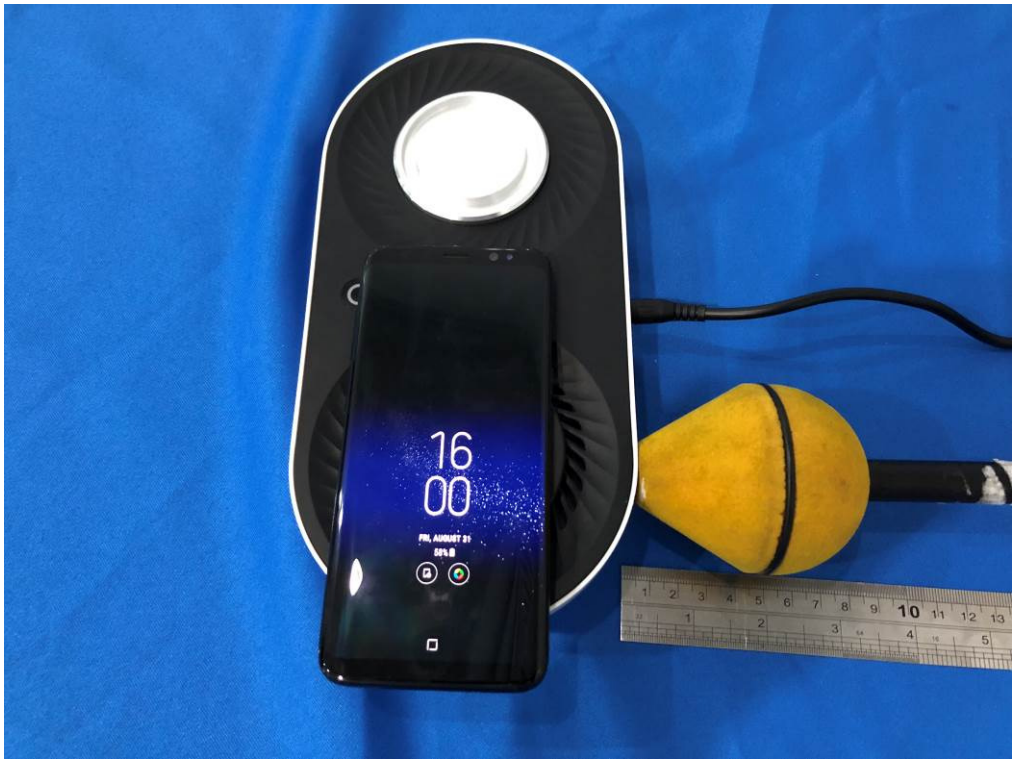
4.2 RF exposure setup Test Setup

Side 1



Side 2

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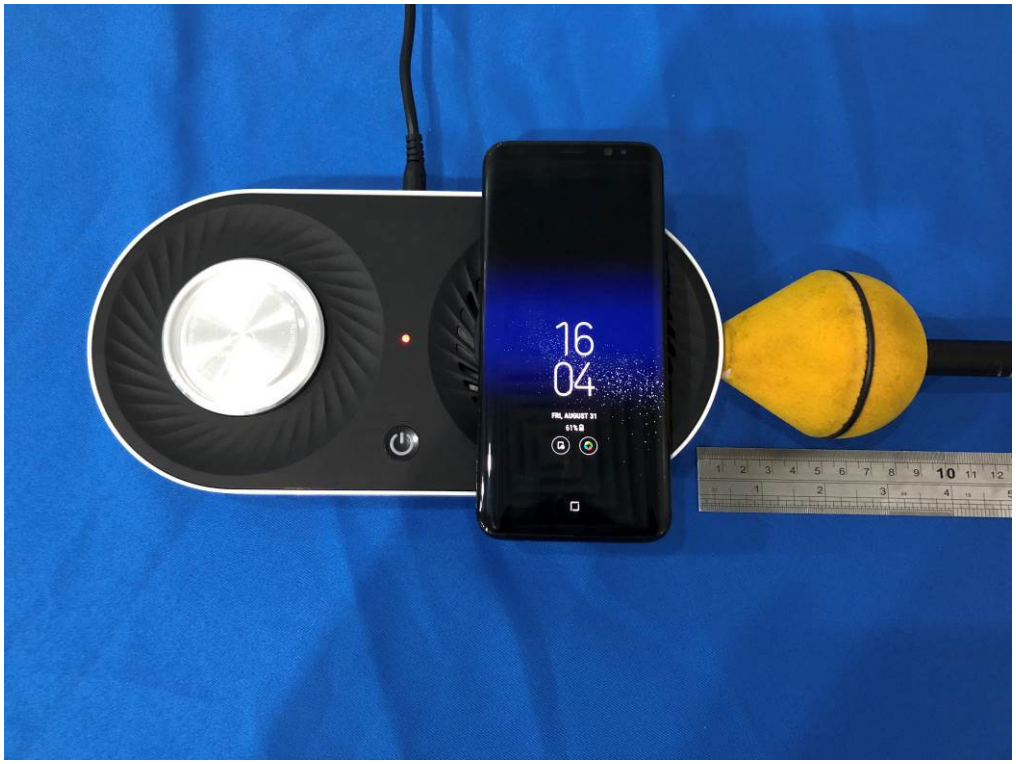
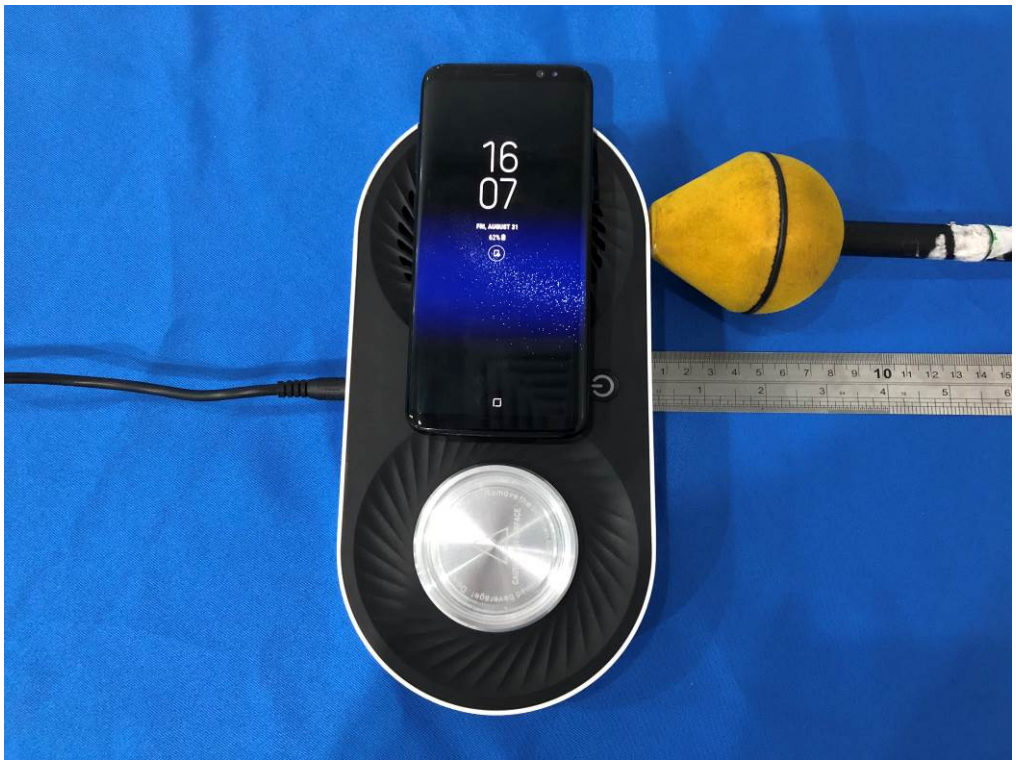


Side 3



Side 4

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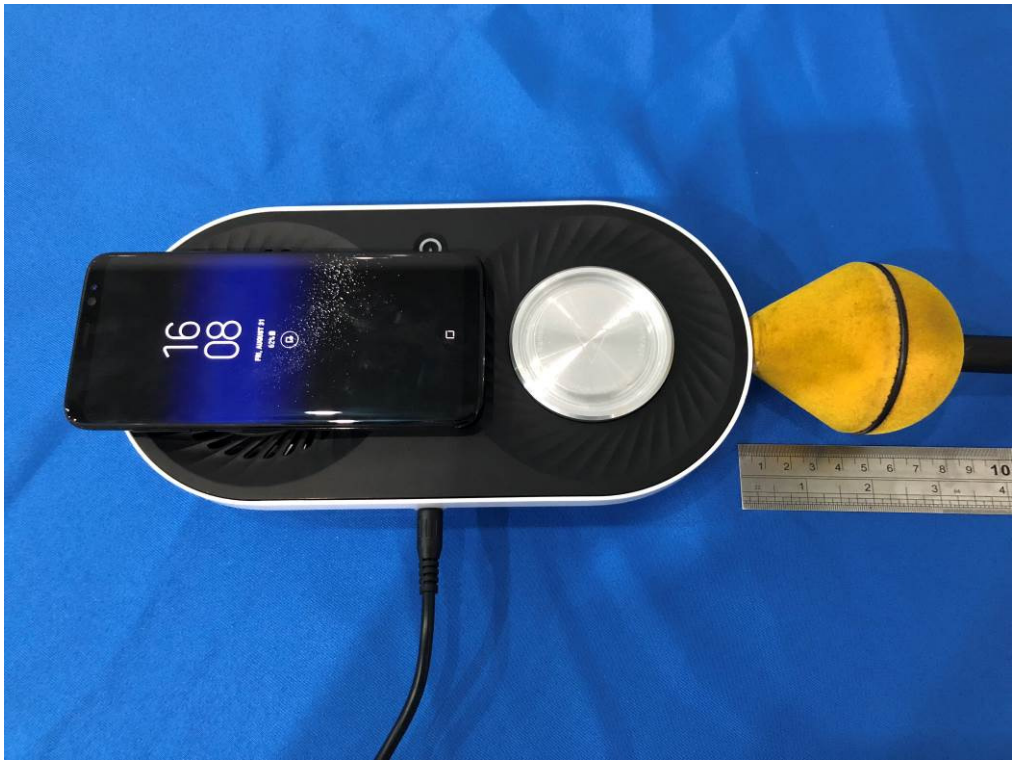

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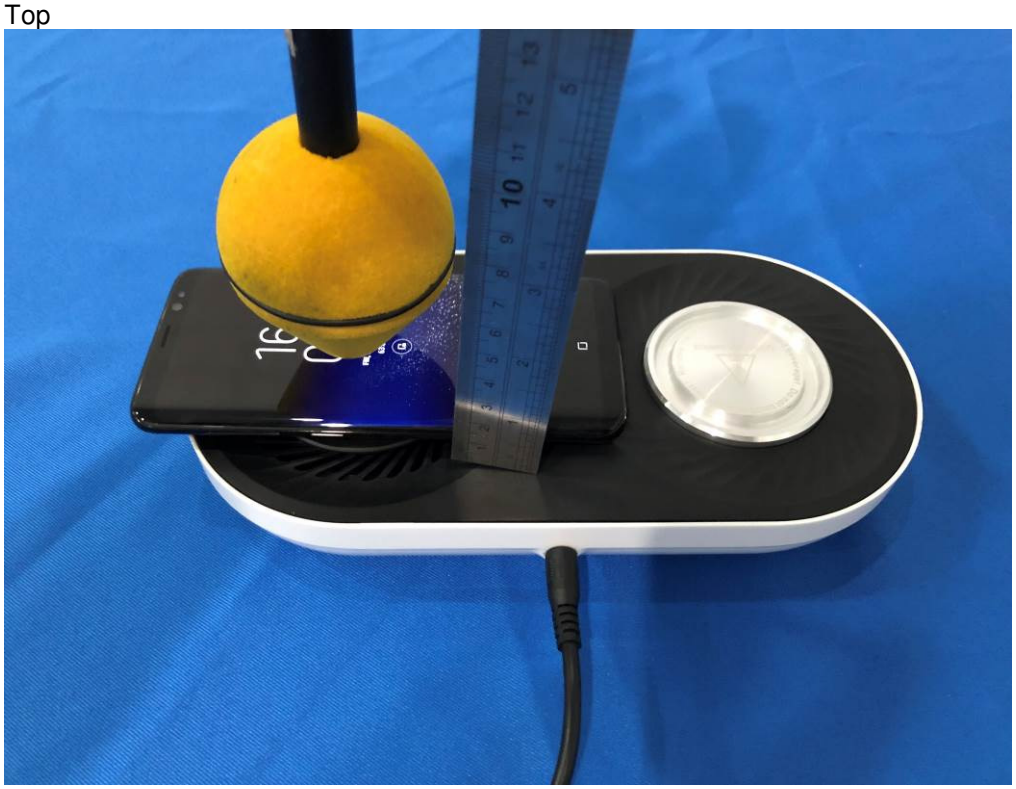
Top



Bottom

- End of the Report -

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