

Human Exposure Report

Application No.: SZEM1906015433CR
Applicant: Chug, Inc.
Address of Applicant: 7157 Shady Oak Road Eden Prairie, Washington, Minnesota, United States 55344
Manufacturer: HANK Electronics Co., Ltd.
Address of Manufacturer: Floor 2nd-7th, A8, Hongye Industry City, Lezhujiao, Zhoushi Road, Baoan District, Shenzhen, China 518101
Equipment Under Test (EUT):
EUT Name: Stand wireless charger
Model No.: QIC-30, QIC-30S, QIC-30E ♣
 ♣ Please refer to section 2.1 this report which indicates which model was actually tested and which were electrically identical.
Trade mark: Heyday
FCC ID: 2AO23-2210
Standards: 47 CFR PART 1, Subpart I, Section 1.1310
Date of Receipt: 2019-05-24
Date of Test: 2019-05-24 to 2019-06-20
Date of Issue: 2019-06-20

Test Result :	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu
 EMC Laboratory Manager



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2 General Information

2.1 Details of E.U.T.

Power supply:	Model:HKAP1231Q
	Input: AC 100-240V 50/60Hz 0.5A Max
	Output: DC 5V/3.0A,9V/2A,12V/1.5A
	Wireless Charger:
	Input: DC 5V/2A,9V/1.7A, 12V/1.25A
	Output:10W
Cable:	USB cable: 175cm unshielded
Operation Frequency:	126.282kHz to 128.686kHz
Modulation Type:	Load Modulation
Antenna Type:	Loop Antenna
Antenna Gain:	0dBi
Remark:	Tests were conducted in all three load modes and the worst case (DC 9V, 1.7A) is reported only.

Declaration of EUT Family Grouping:

Model No.: QIC-30, QIC-30S, QIC-30E

Only the model QIC-30 was tested, since the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only difference on model No..





2.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Mobile Phone	SAMSUNG	SM-G9500	R28J9140LPB
iPhone 8	Apple	A1863	F4GVQ656JC6D



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.

- Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.





2.5 Deviation from Standards

None.

2.6 Abnormalities from Standard Conditions

None.



3 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	2020-06-10
2	Electric Field Meter	Schaffner	EMC20	EMC068	2020-03-21



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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: 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: 25.0 °C Humidity: 51 % RH Atmospheric Pressure: 1015 mbar

EUT Operation:
 This device has been tested with mobile phone at zero charge, intermediate charge, and full charge.



4.1.2 Measurement Data

Output Voltage=DC 9V; The max output power =10W;Calculation of resistor value=1.1Ω

Electric Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (V/m)	50% Limit (V/m)
127.492 kHz	15	Side 1	3.51	307
		Side 2	2.22	307
		Side 3	3.74	307
		Side 4	2.01	307
		Top	1.37	307

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
127.492 kHz	15	Side 1	0.1333	0.815
		Side 2	0.0916	0.815
		Side 3	0.1504	0.815
		Side 4	0.0721	0.815
		Top	0.0543	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	
127.492 kHz	15	Side 1	3.81	3.61	3.43	307
		Side 2	2.52	2.27	2.09	307
		Side 3	4.02	3.73	3.53	307
		Side 4	2.26	2.01	1.79	307
		Top	1.65	1.37	1.18	307

Magnetic Field Emissions

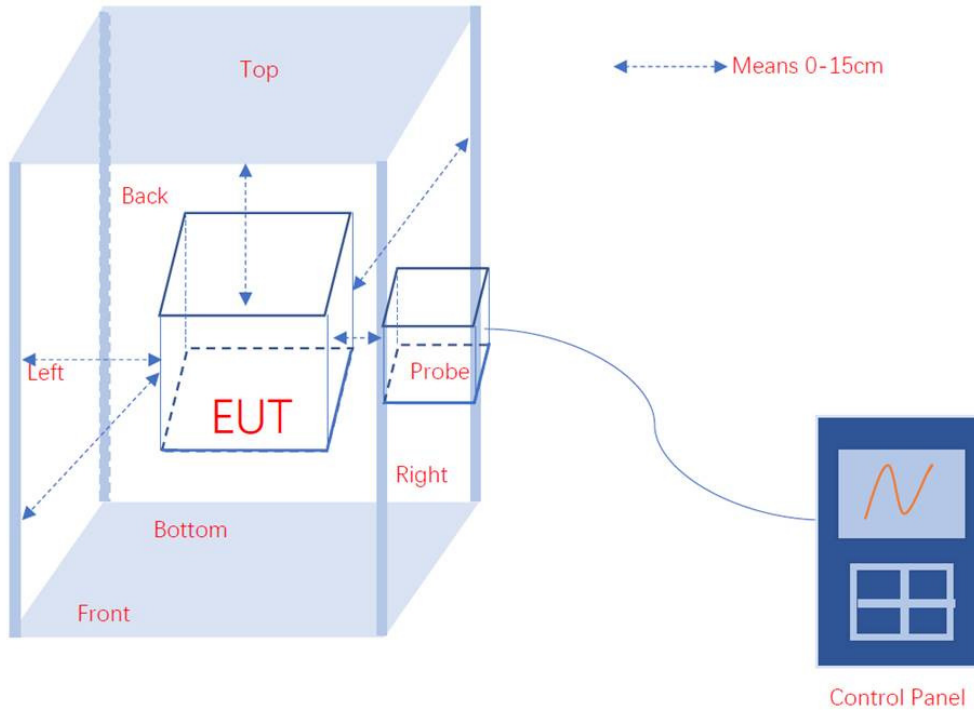
Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			50%Limit (A/m)
			zero charge	intermediate charge	full charge	
127.492 kHz	15	Side 1	0.1448	0.1297	0.1153	0.815
		Side 2	0.1044	0.0933	0.0796	0.815
		Side 3	0.1622	0.151	0.1365	0.815
		Side 4	0.0811	0.067	0.0526	0.815
		Top	0.0632	0.0473	0.0329	0.815



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5 Photographs- Test photos

5.1 Test setup photos



- End of the Report -



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