



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

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Report No.: SZEM180600543602
Page: 1 of 10

Human Exposure Report

Application No.: SZEM1810009288CR
Applicant: Chug, Inc.
Address of Applicant: 7157 Shady Oak Road Eden Prairie Washington Minnesota 55344 United States
Manufacturer/ Factory: Shenzhen Rihuida Electronic Co., Ltd
Address of Manufacturer/ Factory: Building A4, 2nd/3rd/4th floor of building A3, in Fuzhong Industrial Area Xiashiwei Road of Fuyong Street, Bao'an District, Shenzhen
Equipment Under Test (EUT):
EUT Name: QI charger 5W
Model No.: PW001, QIC32, QIC29 ♣
♣ Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Trade mark: Heyday
FCC ID: 2AO23QIC32
Standard(s) : 47 CFR PART 1, Subpart I, Section 1.1310
Date of Receipt: 2018-10-26
Date of Test: 2018-10-26 to 2018-11-02
Date of Issue: 2018-11-08

Test Result:	Pass*
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* 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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SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

Report No.: SZEM180600543602

Page: 2 of 10

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2018-11-08		Original

Authorized for issue by:				
				
		Peter Geng /Project Engineer		
				
		Eric Fu /Reviewer		



1 Contents

	Page
1 CONTENTS	3
2 GENERAL INFORMATION	4
2.1 DETAILS OF E.U.T.	4
2.2 DESCRIPTION OF SUPPORT UNITS	4
2.3 TEST LOCATION.....	5
2.4 TEST FACILITY	5
2.5 DEVIATION FROM STANDARDS	5
2.6 ABNORMALITIES FROM STANDARD CONDITIONS.....	5
3 EQUIPMENTS USED DURING TEST	6
4 TEST RESULTS	7
4.1 RF EXPOSURE TEST	7
4.1.1 E.U.T. Operation	7
4.1.2 Measurement Data.....	8
4.2 RF EXPOSURE	10



2 General Information

2.1 Details of E.U.T.

Power supply: Input: DC 5V/2A
Output: 5W
Operation frequency: 110.42-175.00 kHz
Cable: USB charging line: 20cm, unshielded
Modulation type: Load modulation
Antenna type: Inductive Loop Coil Antenna

2.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Adapter	Apple	A1357 W010A051	REF. No.SEA0500
iPhone 8	Apple	A1863	F4GVQ656JC6D
Micro USB Cable	PHILIPS	SWR2101	REF. No.SEA0700

Declaration of EUT Family Grouping:

Model No.: PW001, QIC32, QIC29

Only the model QIC32 was tested, since the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only difference on color and model No..



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.

- **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	Shielding Room	SAEMC	MSR733	SEM001-09	2020-05-09
2	Electric and Magnetic Field Analyzer	Narda	EHP-50F	EMC092	2019-02-06



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)
147.2 kHz	15	Side 1	0.98	307
		Side 2	1.25	307
		Side 3	1.33	307
		Side 4	1.44	307
		Top	1.86	307

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
147.2 kHz	15	Side 1	0.0232	0.815
		Side 2	0.0205	0.815
		Side 3	0.0235	0.815
		Side 4	0.0226	0.815
		Top	0.0346	0.815



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

Report No.: SZEM180600543602

Page: 9 of 10

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	
147.2 kHz	15	Side 1	0.98	0.94	0.83	307
		Side 2	1.25	1.16	1.15	307
		Side 3	1.33	1.38	1.34	307
		Side 4	1.44	1.32	1.39	307
		Top	1.86	1.77	1.81	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	
147.2 kHz	15	Side 1	0.0232	0.0212	0.0223	0.815
		Side 2	0.0205	0.0196	0.0188	0.815
		Side 3	0.0235	0.0222	0.0215	0.815
		Side 4	0.0226	0.0206	0.0217	0.815
		Top	0.0346	0.0334	0.0328	0.815



4.2 RF exposure

Refer to RF exposure Setup Photos.

- End of the Report -