



RF EXPOSURE Test Report

Report No.: MTi210329004-01E2

Date of issue: Apr. 12, 2021

Applicant: Chug, Inc.

Product name: WIRELESS CHARGER
CHARGEUR SANS FIL

Model(s): GSQC02

FCC ID: 2A023-GSQC02

Shenzhen Microtest Co., Ltd.

<http://www.mtitest.com>



Instructions


1. The report shall not be partially reproduced without the written consent of the laboratory;
2. The test results of this report are only responsible for the samples submitted;
3. This report is invalid without the seal and signature of the laboratory;
4. This report is invalid if transferred, altered or tampered with in any form without authorization;
5. Any objection to this report shall be submitted to the laboratory within 15 days from the date of receipt of the report.



TEST RESULT CERTIFICATION

Applicant's name	Chug, Inc.
Address	7157 Shady Oak Road, Eden Prairie, MN 55344, USA
Manufacturer's Name	SHENZHEN RIHUIDA ELECTRONICS CO., LTD.
Address	F 1~4, BUILDING 4, FUZHONG INDUSTRIAL PARK FUYONG STREET BAOAN DISTRICT, SHENZHEN, CHINA

Product description

Product name	WIRELESS CHARGER CHARGEUR SANS FIL
Trademark	ARTIX 
Model Name	GSQC02
Serial Model	N/A
Standards	FCC CFR 47 PART 1 , 1.1310
Test procedure	KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01

Date of Test

Date (s) of performance of tests	Apr. 02, 2021 ~ Apr. 12, 2021
Test Result	Pass

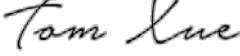
This device described above has been tested by Shenzhen Microtest Co., Ltd. and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

Testing Engineer : 

 (Danny Xu)

Technical Manager : 

 (Leo Su)

Authorized Signatory : 

 (Tom Xue)




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1 General Information

1.1 Description of EUT

Product name:	WIRELESS CHARGER CHARGEUR SANS FIL
Brand name:	ARTIX 
Model name:	GSQC02
Series model:	N/A
Deference in serial model:	N/A
Operation frequency:	115–205 kHz
Operational mode:	Wireless charging
Modulation type:	ASK
Antenna type:	Coil Antenna
Power source:	DC 5V from adapter AC 120V/60Hz
Battery:	N/A
Adapter information:	N/A

1.2 Ancillary equipment list

Equipment	Model	S/N	Manufacturer
Load	YBZ1.1	/	YBZ
USB Cable	/	1.83m	Dongguan Xunyu Electronics Co.,Ltd

1.3 Measurement uncertainty

Measurement Uncertainty for a Level of Confidence of 95 %, $U=2xUc(y)$

Radiated emission(150kHz~30MHz)	± 2.5 dB
Radiated emission(30MHz~1GHz)	± 4.2 dB
Radiated emission (above 1GHz)	± 4.3 dB
Temperature	±1 degree
Humidity	± 5 %



2 Testing site

Test Site	Shenzhen Microtest Co., Ltd
Test Site Location	101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao' an District, Shenzhen, Guangdong, China.
FCC Registration No.:	448573

Address: 101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao' an District, Shenzhen, Guangdong, China.



3 List of test equipment

Equipment No.	Equipment Name	Manufacturer	Model	Serial No.	Calibration date	Due date
MTI-E115	Electric and Magnetic Field Probe - Analyzer	Narda Safety Test Solutions GmbH	EHP-200A	/	2020/11/12	2021/11/11



4 Test Results

4.4 Maximum permissible exposure

4.4.1 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 Exposure				
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	6
300-1500			f/300	6
1500-100000			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
1500-100000			1	30

f = frequency in MHz * = Plane-wave equivalent power density

4.4.2 Test Procedures

E and H-field measurements should be made with the center of the probe at a distance of 15 cm surrounding the device and 20 cm above the top surface of the primary/client pair.

These measurements should be repeated for three different client battery levels, 1%, 50%, and 99%.

Record the test results.

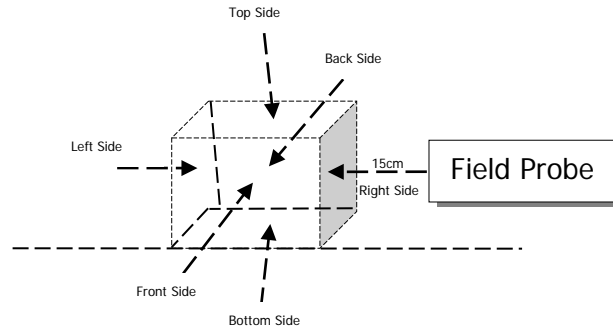
KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01:

- (1) Power transfer frequency is less than 1 MHz
- (2) Output power from each primary coil is less than or equal to 15 watts.
- (3) The system may consist of more than one source primary coils, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time.
- (4) Client device is placed directly in contact with the transmitter.
- (5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
- (6) The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.

Note: The device is in compliance with KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01 6 conditions.



4.4.3 Test Setup



4.4.4 Test Result

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E – field(V/m)	H–field(A/m)
<1%	Top	20	0.42	0.0116
<1%	Bottom	15	0.40	0.0113
<1%	Left	15	0.43	0.0112
<1%	Right	15	0.42	0.0108
<1%	Front	15	0.41	0.0104
<1%	Back	15	0.41	0.0112
Limit			614	1.63
Margin Limit (%)			0.069%	7.12%

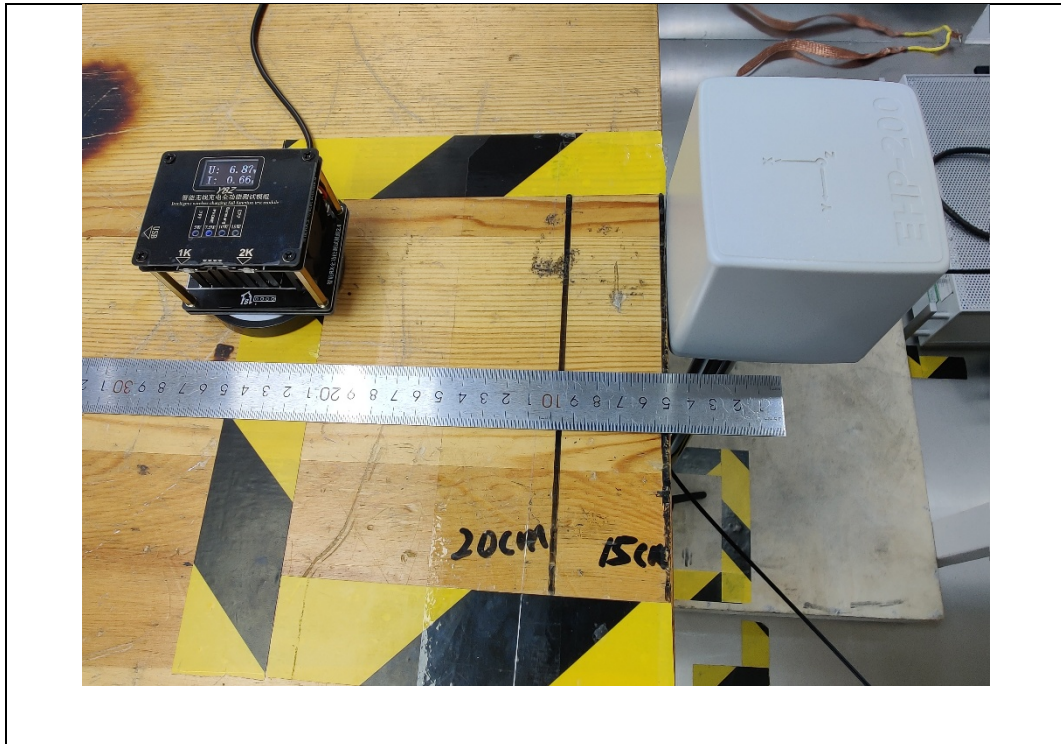


Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E – field(V/m)	H–field(A/m)
<50%	Top	20	0.41	0.0119
<50%	Bottom	15	0.40	0.0115
<50%	Left	15	0.41	0.0113
<50%	Right	15	0.42	0.0108
<50%	Front	15	0.41	0.0110
<50%	Back	15	0.42	0.0112
Limit			614	1.63
Margin Limit (%)			0.069%	7.30%

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E – field(V/m)	H–field(A/m)
<99%	Top	20	0.43	0.0120
<99%	Bottom	15	0.41	0.0109
<99%	Left	15	0.40	0.0106
<99%	Right	15	0.41	0.0105
<99%	Front	15	0.43	0.0111
<99%	Back	15	0.41	0.0106
Limit			614	1.63
Margin Limit (%)			0.070%	7.36%



4.4.5 MPE Setup photo



----END OF REPORT----