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CNAS L5785

RF Exposure Evaluation Report

Report No.:	CQASZ20240601020E-02
Applicant:	Chengdu Xiaochen Technology Co., Ltd
Address of Applicant:	3rd Floor, Building B15, Ganzhizhongguo Chengdu Center, No. 777 Huafu Avenue Shuangliu County ,Chengdu City, Sichuan province ,China
Equipment Under Test (EUT):	
Product:	VRing Charger
Model No.:	VRC11001-11, VRC11001-12, VRC11001-13
Test Model No.:	VRC11001-13
Brand Name:	VERTU
FCC ID:	2BGHD-VRC11001
Standards:	47 CFR Part 1.1307
	47 CFR Part 1.1310
	KDB 680106 D01 RF Exposure Wireless Charging Base App v04r01
Date of Receipt:	2024-06-07
Date of Test:	2024-06-07 to 2024-07-11
Date of Issue:	2024-07-17
Test Result :	**PASS***

***In the configuration tested, the EUT complied with the standards specified above**

Tested By: lewis zhou
(Lewis Zhou)

Reviewed By: Alex
(Alex Wang)

Approved By:
(Jack Ai)

SHENZHEN HUAXIA TESTING TECHNOLOGY CO., LTD. 华夏准测 APPROVED

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20240601020E-02	Rev.01	Initial report	2024-07-17

2 Contents

3 General Information

3.1 Client Information

Applicant:	Chengdu Xiaochen Technology Co., Ltd
Address of Applicant:	3rd Floor, Building B15, Ganzhizhongguo Chengdu Center, No. 777 Huafu Avenue Shuangliu County ,Chengdu City, Sichuan province ,China
Manufacturer:	Chengdu Xiaochen Technology Co., Ltd
Address of Manufacturer:	3rd Floor, Building B15, Ganzhizhongguo Chengdu Center, No. 777 Huafu Avenue Shuangliu County ,Chengdu City, Sichuan province ,China
Factory:	Chengdu Xiaochen Technology Co., Ltd
Address of Factory:	3rd Floor, Building B15, Ganzhizhongguo Chengdu Center, No. 777 Huafu Avenue Shuangliu County ,Chengdu City, Sichuan province ,China

3.2 General Description of EUT

Product Name:	VRing Charger
Model No.:	VRC11001-11, VRC11001-12, VRC11001-13
Test Model No.:	VRC11001-13
Brand Name:	VERTU
Software Version:	2301A V2.4
Hardware Version:	2301V2.0
EUT Power Supply:	Adapter: DC 5V 1A

3.3 NProduct Specification subjective to this standard

Equipment Category:	Non-ISM frequency
Operation Frequency range:	115kHz~300kHz
Modulation Type:	Induction
Antenna Type:	Induction coil
Antenna Gain:	0dBi
Power:	Output: 5W(Max)

Note:

1. In section 15.31(m), regards to the operating frequency range less 1 MHz.

2.the circuit design, layout, components used and internal wiring are all the same, except for the color difference.

3.4 Test Environment

Operating Environment:	
Temperature:	25.5 °C
Humidity:	53 % RH
Atmospheric Pressure:	1009 mbar
Test Mode:	
Mode a:	Keep the EUT Wireless Out Put for Wireless charge load 5W (MAX)
Mode b:	Keep the EUT Wireless not-load
Note: The above test modes all include full load,empty load,and half load, The worst-case state reflected in this report is the fully loaded state	

3.5 Description of Support Units

The EUT has been tested with associated equipment below.

1）Support equipment

Description	Manufacturer	Model No.	Certification	Supplied by
Adapter	/	LPL-C010050200Z	/	CQA
Wireless charge load	/	/	/	CQA

2) Cable

Cable No.	Description	Manufacturer	Cable Type/Length	Supplied by
/	/	/	/	/

3.6 Test Location

Shenzhen Huaxia Testing Technology Co., Ltd.

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

3.7 Test Facility

- **A2LA (Certificate No. 4742.01)**

Shenzhen Huaxia Testing Technology Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 4742.01.

- **FCC Registration No.: 522263**

Shenzhen Huaxia Testing Technology Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.:522263

3.8 Equipment List

Test Equipment	Manufacturer	Model No.	Instrument No.	Calibration Date	Calibration Due Date
Electromagnetic field an alyzer	Narda	EHP-200A	AC-012	2024/3/12	2025/3/12

4 RF Exposure Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

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

Note 1: f = frequency in MHz ; *Plane-wave equivalent power density

Note 2: For the applicable limit, see FCC 1.1310, 680106 D01 RF Exposure Wireless Charging Apps v04

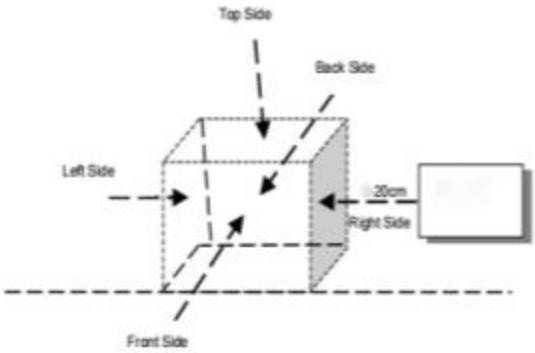
Note 3: Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

Note 4: The aggregate H-field strengths 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit .

4.1.2 Test Procedure

For devices designed for typical desktop applications, such a wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of 20 cm(Top) . E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 20 cm(Top) from the center of the probe(s) to the edge of the device.

4.1.3 Test Setup



Note: Position A: Front of EUT; Position B: Left of EUT; Position C: back of EUT; Position D: Right of EUT; Position E: Top of EUT(20 cm measure distance);

4.1.4 Test Results

The EUT does comply with item 5 KDB680106 D01 v04r01.

Requirement	Device
1.Power transfer frequency is less than 1 MHz	Yes. The operating frequency range are.Operating frequency range: 115 kHz - 300KHz
2. Output power from each primary coil is less than or equal to 15 watts.	Yes. The maximum output power is:Wireless Output: 5W(Max)
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 sametime.	Yes. EUT has a source primary coil
4. Client device is placed directly in contact with the transmitter.	Yes. The client device is placed directly in contact with the transmitter.
5.Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion)	Yes. Mobile exposure conditions only.

6. The aggregate H-field strengths anywhere at or beyond 20 cm surrounding the device, and 20cm 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.	Yes. See the test result in item 4.1.5

4.1.5 Test Results

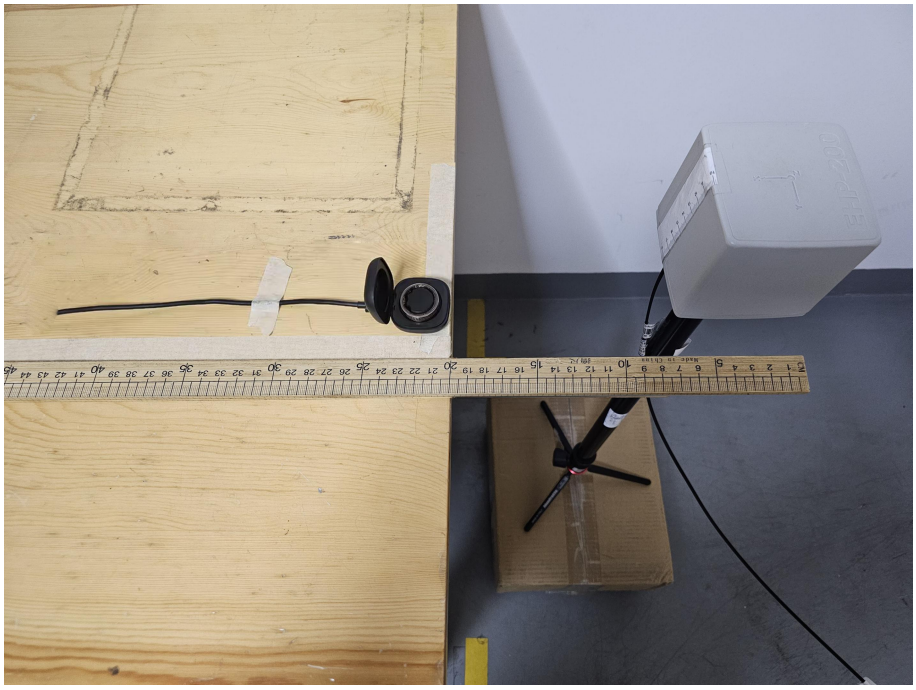
Test condition: Mode a

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E -field(V/m)	H-field(A/m)
<1%	Top	20	0.7851	0.0351
<1%	Left	20	0.7643	0.0354
<1%	Right	20	0.3414	0.0352
<1%	Front	20	1.2453	0.0853
<1%	Back	20	0.3969	0.0457
Limit			614	1.63
test result			PASS	PASS

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E -field(V/m)	H-field(A/m)
<50%	Top	20	0.7743	0.0342
<50%	Left	20	0.7688	0.0336
<50%	Right	20	0.4452	0.0347
<50%	Front	20	1.1463	0.0825
<50%	Back	20	0.4247	0.0436
Limit			614	1.63
test result			PASS	PASS

Maximum permissible Exposure				
Battery levels	Test sides	Test distance(cm)	E -field(V/m)	H-field(A/m)
<99%	Top	20	0.7747	0.0271
<99%	Left	20	0.7541	0.0283
<99%	Right	20	0.3425	0.0205
<99%	Front	20	1.3436	0.0308
<99%	Back	20	0.2925	0.0329
Limit			614	1.63
test result			PASS	PASS

APPENDIX A: PHOTOGRAPHS OF TEST SETUP



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