

Human Exposure Report

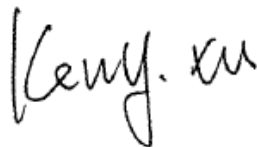
Application No.: SZCR2308002621AU
Applicant: CUSTOM ACCESSORIES INC
Address of Applicant: 5900 AMI DRIVE, RICHMOND, IL 60071
Manufacturer: Shenzhen Xiaojiu Technology Co.,Ltd
Address of Manufacturer: 6 Floor, C Building, Huamingcheng Industry Park, Matian Street, Guangming District, Shenzhen City, Guangdong Province, China
Factory: Shenzhen Xiaojiu Technology Co.,Ltd
Address of Factory: 6 Floor, C Building, Huamingcheng Industry Park, Matian Street, Guangming District, Shenzhen City, Guangdong Province, China

Equipment Under Test (EUT):
EUT Name: CARBON XT 10W Qi Wireless Charging Phone Holder
Model No.: 24510
Trade Mark: CARBON XT
FCC ID: 2ADMQ-24510-1
Standards: 47 CFR PART 1, Subpart I, Section 1.1310
47 CFR PART 2, Subpart J, Section 2.1091

Date of Receipt: 2023-08-17
Date of Test: 2023-08-17 to 2023-10-08
Date of Issue: 2023-10-09

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



Keny Xu
EMC Laboratory Manager





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

SZEMC-TRF-01 Rev. A/0 Aug01,2022

Report No.: SZCR230800262102

Page: 2 of 10

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2023-10-09		Original

Authorized for issue by:			
		<i>Winkey Wang</i>	
		Winkey Wang/Project Engineer	
		<i>Eric Fu</i>	
		Eric Fu/Reviewer	



SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (CMAA) Testing Laboratory

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2 Contents

1	Cover Page	1
2	Contents	3
3	General Information	4
3.1	Details of E.U.T.	4
3.2	Description of Support Units	4
3.3	Test Location	5
3.4	Test Facility	5
3.5	Deviation from Standards	5
3.6	Abnormalities from Standard Conditions	5
4	Equipments Used during Test	6
5	Test Results	7
5.1	RF Exposure test	7
5.1.1	E.U.T. Operation	8
5.1.2	E.U.T. Operation	8
5.1.3	Test Mode Description	8
6	Photographs- RF exposure Setup photos	10



3 General Information

3.1 Details of E.U.T.

Power Supply:	Wireless charger input:9Vdc,1.67A, Output 10Wmax; USB-A output:5Vdc,1A Car charger input 12-24Vdc,2A, output 5Vdc/3A, 9Vdc/2A, 12Vdc/1.5A Car charger model:24510
Cable(s):	100cm, unshielded
Operation frequency:	127kHz to 129.4kHz
Modulation type:	Load modulation
Antenna type:	Loop Antenna

Remark:The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

3.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Load Resistor	SGS	N/A	REF. No.SEA06A00
Mobile Phone	HUAWEI	LYA-AL00	REF. No.SEA16C00
iPhone 13	Apple	MLE03ZA/A	REF. No.SEA16Q01
Mobile Phone	Nexus	MRA58K	REF. No.SEA16P00



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3.3 Test Location

All tests were performed at:

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

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

3.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• 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 (Member No. 1937)

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.

Shenzhen EMC laboratory 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: CN1336

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

Designation Number: CN1336. Test Firm Registration Number: 787754.

• 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.

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.



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4 Equipments Used during Test

Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Due date
1	3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2025-04-01
2	Electric and Magnetic Field Analyzer	Narda	EHP-200AC	SEM022-20	2024-03-31



5 Test Results

5.1 RF Exposure test

Test Requirement: 47 CFR PART 1, Subpart I, Section 1.1310
 47 CFR PART 2, Subpart J, Section 2.1091

Measurement Distance: 20cm

Remark: According to KDB publication 680106 section 3, the separation distance shall be measured from the geometric center of the probe head to the edge of the device, so test distance as above.
 The EUT is considered as a mobile device and is evaluated at a distance of 20 cm

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).



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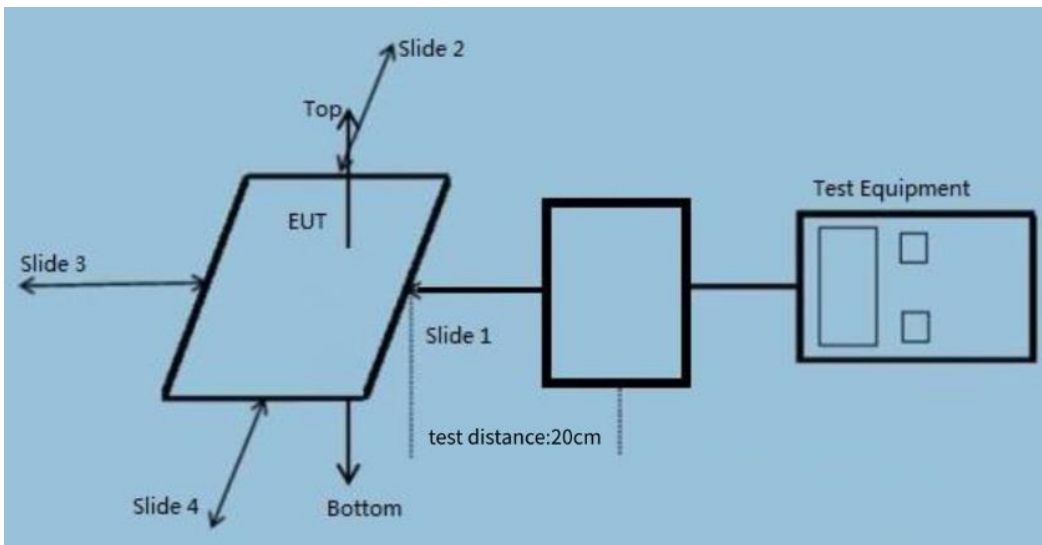
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According to IEEE C95.3:2002 section 5.5.1.1, The power density S at a point on the axis at a distance d from a transmitting antenna is given by the Friis free-space transmission formula

$$S = \frac{PG}{4\pi d^2}$$

S = power density (mW/cm²)
 P = the net power delivered to the antenna (mW)
 G = gain of the antenna in linear scale
 d = distance between observation point and center of the radiator (cm)

5.1.1 E.U.T. Operation



5.1.2 E.U.T. Operation

Operating Environment:

Temperature: 21.6 °C Humidity: 53.4 % RH Atmospheric Pressure: 1003 mbar

5.1.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Pre-scan	00	Charge mode_Keep the EUT charging(5W)
Pre-scan	01	Charge mode_Keep the EUT charging(7.5W)
Final test	02	Charge mode_Keep the EUT charging(10W)

Note: 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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5.1.4 Measurement Data

Test mode: 02

The max output power =10W for each coil.

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result			50 % Limit (A/m)	10 % Limit (A/m)
			(A/m)				
			unload	Half load	full load		
128 kHz which is the worst case within the operation frequency range	20	Side 1	0.075	0.088	0.102	0.815	0.163
		Side 2	0.074	0.084	0.104		
		Side 3	0.065	0.073	0.087		
		Side 4	0.070	0.078	0.100		
		Top	0.059	0.071	0.079		

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			50 % Limit (A/m)	10 % Limit (A/m)
			zero charge	intermediate charge	full charge		
			128 kHz which is the worst case within the operation frequency range	20	Side 1		
Side 2	0.095	0.080			0.064		
Side 3	0.088	0.074			0.059		
Side 4	0.096	0.081			0.064		
Top	0.074	0.062			0.050		



6 Photographs- RF exposure Setup photos

Refer to Appendix_RF Exposure Setup Photos for SZCR2308002621AU

- End of the Report -

