

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

Report No.: SZCR230500170102

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Human Exposure Report

Application No.: SZCR2305001701AT **Applicant:** Annex Products Pty Ltd

Address of Applicant: Level 3 Suite 6A, 299 Toorak Road, South Yarra, VIC 3141 Australia

Manufacturer: Annex Products Pty Ltd

Address of Manufacturer: Level 3 Suite 6A, 299 Toorak Road, South Yarra, VIC 3141 Australia

Factory: Shenzhen Huagon Technology Co., Ltd

Address of Factory: 401-403, Building B, Weihuada Industrial Park, No. 5, Lirong Road, Xinshi

community, Dalang street, Longhua District, Shenzhen

Equipment Under Test (EUT):

EUT Name: 12V-24V Waterproof Wireless Charger

Model No.: QL-5764
Trade Mark: QUAD LOCK
FCC ID: 2AOU9-HWCH

Standards: 47 CFR PART 1, Subpart I, Section 1.1310

47 CFR PART 2, Subpart J, Section 2.1091

Date of Receipt: 2023-05-30

Date of Test: 2023-06-01 to 2023-06-08

Date of Issue: 2023-06-29

Test Result : Pass*

Keny Xu EMC Laboratory Manager

Ceny. Ku



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



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	Revision Record						
Version Chapter Date Modifier Remark							
01		2023-06-29		Original			

Authorized for issue by:			
	(eo-li		
	Leo Li/Project Engineer	_	
	Exic Fu		
	Eric Fu/Reviewer	-	



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3 **General Information**

Details of E.U.T.

Power supply:	Input: DC 12-24V 2A Max
	Output: 5W/7.5W/10W/15W
Cable(s):	DC cable: 150cm unshielded
Operation frequency:	120.0kHz to 126.4kHz
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.
DC power supply	ZHAOXIN	PS-3005D	REF. No.SEA27B01
E-loading	N/A	N/A	REF. No.SEA42A00
Mobile Phone	SAMSUNG	SM-G9810	REF. No.SEA16K00



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Test Location 3.3

All tests were performed at:

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

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.



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3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.

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 Mode Description

Pre-scan / Final test	Mode Code	Description
Pre-scan	00	Charge mode_Keep the EUT charging(5W)(DC 12V supply)
Pre-scan	01	Charge mode_Keep the EUT charging(7.5W) (DC 12V supply)
Pre-scan	02	Charge mode_Keep the EUT charging(10W) (DC 12V supply)
Final test	03	Charge mode_Keep the EUT charging(15W) (DC 12V supply)
Pre-scan	04	Charge mode_Keep the EUT charging(5W)(DC 24V supply)
Pre-scan	05	Charge mode_Keep the EUT charging(7.5W) (DC 24V supply)
Pre-scan	06	Charge mode_Keep the EUT charging(10W) (DC 24V supply)
Pre-scan	07	Charge mode_Keep the EUT charging(15W) (DC 24V supply)



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Test Results 5

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: 15cm

Limit:

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm²)	Averaging time (minutes)				
(A) Limits for Occupational/Controlled Exposures								
0.3-3.0 614 1.63 *(100)								
3.0-30	1842/f	4.89/f	*(900/f²)	6				
30-300	61.4	0.163	1.0	6				
300-1500	/	/	f/300	6				
1500-100,000	/	1	5	6				
	(B) Limits for Genera	l Population/Uncontrolle	d Exposure					
0.3-1.34	614	1.63	*(100)	30				
1.34-30	824/f	2.19/f	*(180/f²)	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

5.1.1 E.U.T. Operation

Operating Environment:

Temperature: 22.3 °C 52.9 % RH Atmospheric Pressure: 1020 mbar Humidity: 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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⁼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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5.1.2 **Measurement Data**

Test mode: 03

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)			50 % Limit (A/m)
			unload	Half load	full load	
		Side 1	0.535	0.589	0.708	
		Side 2	0.513	0.564	0.679	
126.3 kHz	15	Side 3	0.557	0.612	0.738	0.815
		Side 4	0.562	0.623	0.742	
		Тор	0.611	0.673	0.811	

Magnetic Field Emissions

Operation	Test Distance Test Probe Measure Result(A/m)					50 % Limit	
frequency	(cm)	Position	zero charge	intermediate charge	full charge	(A/m)	
		Side 1	0.746	0.627	0.518		
		Side 2	0.718	0.604	0.499		
126.2 kHz	126.2 kHz	15	Side 3	0.773	0.650	0.537	0.815
		Side 4	0.783	0.658	0.544		
		Тор	0.803	0.714	0.590		



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6 **Test Setup Photos**

Refer to Appendix - Test Setup Photo for SZCR2305001701AT

- End of the Report -



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