

RF EXPOSURE REPORT

Report No.: DDT-B24022310-2E17

Applicant	:	Sublue Underwater AI Co., Ltd.
Address	:	No1, Quanzhou Road, Zhongguancun Science And Tech. Park, Binhai Tianjin China
Equipment under Test	:	Sublue Underwater Scooter
Model No.	:	Vapor
Trade Mark	:	SUBLUE
FCC ID	:	2ASEE-AP8001
Manufacturer	:	Sublue Underwater AI Co., Ltd.
Address	:	No1, Quanzhou Road, Zhongguancun Science And Tech. Park, Binhai Tianjin China

Issued By: Tianjin Dongdian Testing Service Co., Ltd.

Address: Building D-1, No. 19, Weisi Road, Microelectronics Industrial Park Development Area, Tianjin, China.

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REPORT

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TEST REPORT DECLARE

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Assess Standard Used: FCC CFR 47 part1, 1.1307(b), 1.1310; KDB680106 D01v04

We Declare:

The equipment described above is assessed by Tianjin Dongdian Testing Service Co., Ltd and in the configuration assessed the equipment complied with the standards specified above. The assessed results are contained in this report and Tianjin Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these assess

After evaluation, our opinion is that the equipment is In Accordance with above standard.

Report No:	DDT-B24022310-2E17		
Date of Receipt:	Jul. 05, 2024	Date of Test:	Jul. 05, 2024 ~ Jul. 23, 2024

Prepared By:

Sunny Zhang

Sunny Zhang/Engineer

Approved By:

Aaron Zhang

Aaron Zhang/Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Tianjin Dongdian Testing Service Co., Ltd.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

Revision history

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Jul. 23, 2024	

1. General information

1.1. Description of Equipment

EUT* Name	:	Subblue Underwater Scooter
Model Number	:	Vapor
EUT function description	:	Please refer to user manual of this device
Power supply	:	DC 33.6V from built-in battery Output Power: 5W (Max)
Wireless charging Operation frequency	:	317 kHz
Hardware Version	:	N/A
Firmware Version	:	N/A
Antenna Type	:	Inductive loop coil antenna
Sample Number	:	N/A

Note: EUT is the ab. of equipment under test.

1.2. Assistant equipment used for test

Description of Accessories	Manufacturer	Model number	Serial No.	Other
N/A	N/A	N/A	N/A	N/A

1.3. Assess laboratory

Tianjin Dongdian Testing Service Co., Ltd.

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Tel: +86-22-58038033, <http://www.ddttest.com>, Email: ddt@dgddt.com

NVLAP (National Voluntary Laboratory Accreditation Program) CODE: 500036-0

CNAS (China National Accreditation Service for Conformity Assessment) CODE: L13402

FCC Designation Number: CN5004; FCC Test Firm Registration Number: 368676

ISED (Innovation, Science and Economic Development Canada) Company Number: 27768

Conformity Assessment Body Identifier: CN0125

VCCI Facility Registration Number: C-20089, T-20093, R-20125, G-20122

2. Equipment used during test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
Exposure Level Tester	Narda	ELT-400	M-0425	2024/07/01	1 Year
B-Field Probe	Narda	100 cm ² Probe	M-0440	2024/07/01	1 Year
Field Strength Meter	Wavecontrol	SMP2	20SN1419	2023/03/20	2 Year
Field Probe	Wavecontrol	WPF8	20WP041176	2023/03/20	2 Year

3. Method of measurement

3.1. Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

According KDB680106 D01v04r01: RF Exposure Wireless Charging Apps v04.

3.2. Test Procedure

- a) The RF exposure test was performed in shielded chamber.
- b) The measurement probe was placed at test distance which is between the edge of the charger and the measure point of probe.
- c) The measurement probe used to search of highest strength.
- d) The highest emission level was recorded and compared with limit as soon as measurement of each point (A, B, C, D, E, Top, Bottom) were completed.
- e) The EUT were measured according to the dictates of KDB 680106D01v04.

3.3. Maximum Permissible Exposure

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 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
300-1,500			f/300	6
1,500-100,000			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
300-1,500			f/1500	30
1,500-100,000			1.0	30

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

3.4. E and H Field Strength

Test mode for wireless charger:

E-Filed Strength of the EUT (V/m), Output 5W.

Test Position	Probe Measure Result(V/m)					Limits Test (V/m)
	0 cm	5 cm	10 cm	15 cm	20 cm	
A	22.47	17.28	9.83	4.42	/	614
B	4.75	2.22	1.87	0.77	/	614
C	23.92	12.72	6.48	2.79	/	614
D	6.19	2.92	1.68	1.22	/	614
Top	16.91	7.04	3.38	2.44	2.35	614
Bottom	10.91	5.09	3.35	1.81	/	614

H-Filed Strength of the EUT (A/m), Output 5W.

Test Position	Probe Measure Result(A/m)					Limits Test (A/m)
	0 cm	5 cm	10 cm	15 cm	20 cm	
A	0.043	0.160	0.090	0.061	/	1.63
B	0.052	0.048	0.046	0.045	/	1.63
C	0.545	0.184	0.086	0.059	/	1.63
D	0.048	0.036	0.033	0.034	/	1.63
Top	0.515	0.179	0.132	0.086	0.190	1.63
Bottom	0.116	0.090	0.068	0.050	/	1.63

Simultaneous:

The sum of the maximum power (BLE) duty cycle and the maximum field strength duty cycle (WPT) is less than 1: $(0.135/1)\% + (0.545/1.63)\% = 46.93\% < 1$

Note1: To avoid the ruler affecting the test results, remove the ruler after measuring the distance.

Note2: This product can only be used in conjunction with Vapor Floater (FCC ID: 2ASEE-AP8001-1) and cannot charge other devices.

Note3: The minimum distance between the handheld part and the antenna is 120mm when the user operates the device.