RF MEASUREMENT REPORT

FCC ID:	2AYEFAR500PLUS
Applicant:	Pylon Technologies Co., Ltd
Product:	Rechargeable Lithium-ion Battery
Model No.:	AR500 PLUS
FCC Rule Part(s):	FCC Part 2.1091
Result:	Complies
Received Date:	2024-02-29
Test Date:	2024-04-09

Reviewed By: Denise Zhou

Approved By: Robin Wu

Revision History

Report No.	Version	Description	Issue Date	Note
2402RSU025-U2	V01	Initial Report	2024-04-15	Valid

CONTENTS

1. General Information

1.1. Applicant

Pylon Technologies Co..Ltd
5F,No,72,Lane 887, Zu Chongzhi Road, Zhangjiang

1.2. Manufacturer

Pylon Technologies Co..Ltd
5F,No,72,Lane 887, Zu Chongzhi Road, Zhangjiang

1.3. Testing Facility

☒	**Test Site – MRT Suzhou Laboratory**				
	Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China **Laboratory Location (Suzhou - SIP)** 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China				
	Laboratory Accreditations				
	A2LA: 3628.01		CNAS: L10551		
	FCC: CN1166		ISED: CN0001		
	VCCI:	☐R-20025	☐G-20034	☐C-20020	☐T-20020
		☐R-20141	☐G-20134	☐C-20103	☐T-20104
☐	**Test Site – MRT Shenzhen Laboratory**				
	Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China				
	Laboratory Accreditations				
	A2LA: 3628.02		CNAS: L10551		
	FCC: CN1284		ISED: CN0105		
☐	**Test Site – MRT Taiwan Laboratory**				
	Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)				
	Laboratory Accreditations				
	TAF: 3261				
	FCC: 291082, TW3261		ISED: TW3261		

1.4. Product Information

Product Name	Rechargeable Lithium-ion Battery
Model No.	AR500 PLUS
EUT Identification No.	20240229Sampe#02
WPT Specification	127.7kHz
Power Type	Battery or AC/DC Adapter
Operating Temp.	-15°C ~ +40°C
EUT Type	Mobile Device
Exposure Category	General Population/Uncontrolled Exposure
Accessories	
AC/DC Adapter	Model No.: HKA06012050-0A7 Input: 100-240V, 50/60Hz, 1,7A Output: 12.0V⎓5.0A 60.0W
Note: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification

Frequency Range	110 ~ 148kHz
Modulation	FSK
Antenna Type	Coil Antenna
WPT Output Power	Max. 15W

1.6. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 2.1091
- FCC Part 1.1310
- KDB 447498 D04v01
- KDB 680106 D01v04

2. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
Broadband Field Meter	narda	NBM 550	MRTSUE06897	3 years	2026-10-26	WZ-AC1
B-Field Probe	narda	100 cm²	MRTSUE06919	3 years	2026-10-29	WZ-AC1
Exposure Level Tester	narda	ELT-400	MRTSUE06920	3 years	2026-10-29	WZ-AC1
E-Field Probe	narda	EF 0691	MRTSUE06898	3 years	2026-02-06	WZ-AC1
Thermohygrometer	testo	608-H1	MRTSUE11039	1 year	2024-10-25	WZ-AC1

3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Magnetic Field Emissions (A/m)
1Hz-10Hz: 12.74%
10Hz-120kHz: 2.91%
120kHz-400kHz: 3.98%
Electric Field Emissions (V/m)
100kHz-6.5GHz: 39.42%

4. Test Result

4.1. Test Limits

§1.1310 Radiofrequency radiation exposure limits.

Below sets forth limits for Maximum Permissible Exposure (MPE) to radiofrequency electromagnetic fields

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/ Control Exposures				
0.3-3.0	614	1.63	*100	≤6
3.0-30	1842/f	4.89/f	*900/f2	<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 Exposures				
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
300-1,500	--	--	f/1500	<30
1,500-100,000	--	--	1.0	<30

f = Frequency in MHz. * = Plane-wave equivalent power density

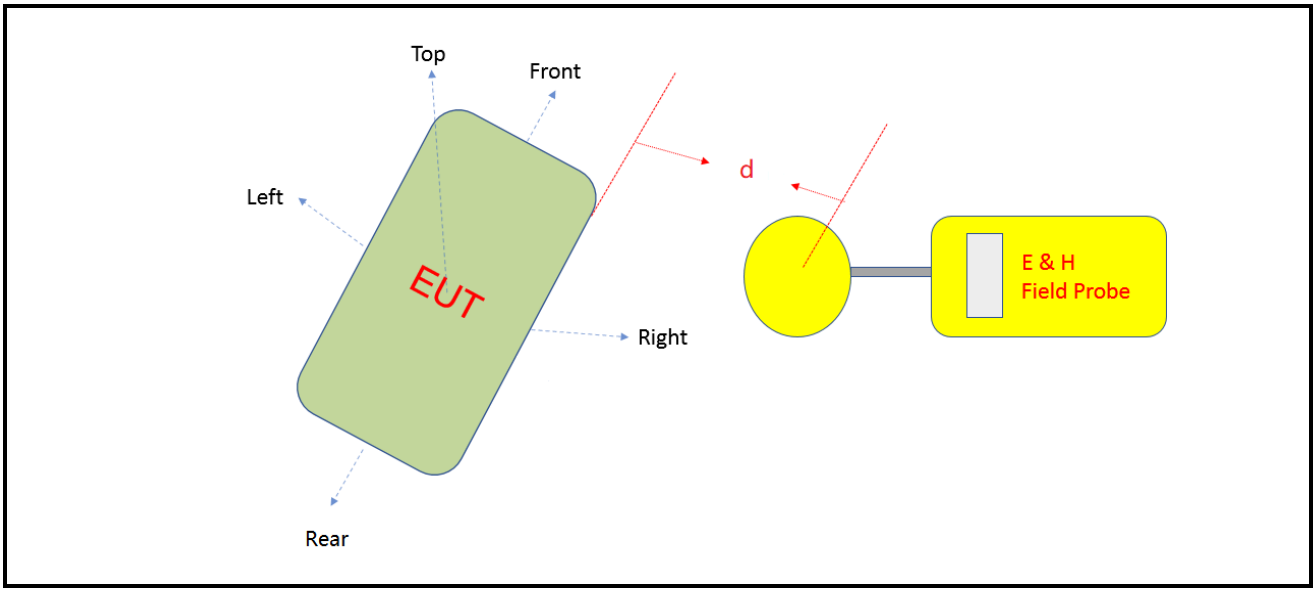
According to KDB 680106 D01v04, for § 2.1091-Mobile devices, the MPE limits between 100 kHz to 300 kHz are to be considered the same as those at 300 kHz in Table 1 of § 1.1310, that is, 614 V/m and 1.63 A/m, for the electric field and magnetic field, respectively.

Furthermore, consistent with FCC's equipment authorization RF exposure guidance, any device (both portable and mobile) operating at frequencies below 100 kHz is considered compliant for the purpose of equipment authorization when the external (unperturbed) temporal peak field strengths do not exceed the following reference levels: 83 V/m for the electric field strength (E) and 90 A/m for the magnetic field strength (H).

4.2. Test Mode

Test Mode
Mode 1: Standby Mode
Mode 2: Charge the Load

4.3. Test Setup



Notes:

1. This shall be measured as the distance from the edge of the device to the center of the measurement probe.
2. d = 20 cm.

4.4. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20 ~ 75%RH

4.5. Test Result

Test Site	WZ-AC1	Test Engineer	Amy Zhang
Test Date	2024-04-09	Test Mode	Mode 1

Electric Field Emissions				
Test Position	Test Distance (d) (cm)	Measure Value (V/m)	Limit (V/m)	Result
Front	20	0.34	614	Pass
Rear	20	0.24	614	Pass
Left	20	0.32	614	Pass
Right	20	0.40	614	Pass
Top	20	0.50	614	Pass
Magnetic Field Emissions				
Test Position	Test Distance (d) (cm)	Measure Value (A/m)	Limit (A/m)	Result
Front	20	0.062	1.63	Pass
Rear	20	0.058	1.63	Pass
Left	20	0.057	1.63	Pass
Right	20	0.053	1.63	Pass
Top	20	0.121	1.63	Pass

Test Site	WZ-AC1	Test Engineer	Amy Zhang
Test Date	2024-04-09	Test Mode	Mode 2

Electric Field Emissions				
Test Position	Test Distance (d) (cm)	Measure Value (V/m)	Limit (V/m)	Result
Front	20	0.56	614	Pass
Rear	20	1.56	614	Pass
Left	20	0.24	614	Pass
Right	20	0.51	614	Pass
Top	20	2.01	614	Pass
Magnetic Field Emissions				
Test Position	Test Distance (d) (cm)	Measure Value (A/m)	Limit (A/m)	Result
Front	20	0.076	1.63	Pass
Rear	20	0.054	1.63	Pass
Left	20	0.061	1.63	Pass
Right	20	0.072	1.63	Pass
Top	20	0.156	1.63	Pass

Appendix A – Test Setup Photograph

Refer to “2402RSU025-UT” file.

Appendix B – EUT Photograph

Refer to “2402RSU025-UE” file.

The End