### **UN38.3** Lithium Ion Battery Test Summary



Version: 1.0 Revision date: October 13, 2023

### 1.0 Products covered by this Test Summary

Model Number	Description	Notes
APCRBC174-LI	APC Lithium Ion Replacement Battery Cartridge	



Battery pack is a manufactured article consisting of a plastic and metal sealed case containing electronics and cylindrical lithium- ion battery/cells. Solid.

#### 1.1 Batteries in Products

#	Model Number	Description	Notes
1	APCRBC174-LI, 911-9023	Li-Ion Battery Pack ; 48 VDC; 432 Wh	
2	APCRBC174-LI-1, SE2101, 911-9023	Li-Ion Battery Pack ; 48 VDC; 432 Wh	

#### 1.2 Cells in Batteries

#	Model Number	Description	Notes
3	26650PFS	Lithium-ion Cell; 3.2Vdc; 3000mAh	
4	IFR26650	Lithium-ion Cell; 3.2Vdc; 3000mAh	

# 2.0 Manufacturers of Cells/Batteries

#### 2.1 Battery Maker #1

Name	Address	Phone	Website

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SHENZHEN ACE	101/Room 101, Building B05, BAK	+86-755-	www.acebattery.com
BATTERY CO.,LTD	Industrial Park, No. 119-2 Kuipeng	86541827	
DAPENG BRANCH	Road, Kuixin Zone, Kuichong		
2711 2110 2117 111011	Street, Dapeng District, Shenzhen,		
	Guangdong Province 518119,		
	P.R.China		

### 2.1 Battery Maker #2

Name	Address	Phone	Website
C-TECH. United	5F., No.669, Zhongzheng Road,	886-2-2901-6600	ww.c-techone.com/
Corporation	Xinzhuang District, New Taipei		
	City 24257, Taiwan		

### 2.1 Cell Maker #3

Name	Address	Phone	Website
DALIAN CBAK POWER BATTERY CO.,LTD	No. 11, Meigui Street, Huayuankou Economic Zone,	0086-0411- 39185968	www.cbak.com.cn
,	Dalian, Liaoning, 116450 CHINA		

### 2.1 Cell Maker #4

Name	Address	Phone	Website
O'CELL New Energy	Osai Technology Industrial	0717-6344848	www.ocelltech.cn/
Technology CO., LTD	Park, No. 1, Yayuan Road,		
	Xiaoting District, Yichang City,		
	Hubei Province		

# 3.0 Test Laboratories of Cells / Batteries

### 3.1 Test for Battery #1

Name		Address	Phone	Website
Precise Testing &		Building 1, No. 6, Tongxin	0769-38808222	www.ptc-testing.com
Certification(Guangdong)		Road, Dongcheng Street,		
Co., Ltd.		Dongguan, Guangdong, China.		
Test ID No:	PTC21051204001S-LD01			
Date:	2020-05-20			
NOTES: The samples has passed the test items of Manual of Tests and Criteria				
(ST/SG/AC.10/11/Rev.6/Amend.1), Part III sub-section 38.3.				

	Lithium Ion Cell		Lithium Metal Cell
XXX	Lithium Ion Battery		Lithium Metal Battery

# 3.1 Test for Battery #2

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Name		Address	Phone	Website
AnTek Certification Inc.		7F, No.351, Yangguang St.	+886-2-8752-	www.atclab.com.tw
		Taipei, 11491 Taiwan	3779	
Test ID No:	TW2210098-001			
Date: 2022-11-07				
NOTES: The samples has passed the test items of Manual of Tests and Criteria (ST/SG/AC, 10/11/Rev, 7/Amend, 1). Part III sub-section 38.3.				

	Lithium Ion Cell	Lithium Metal Cell
XXX	Lithium Ion Battery	Lithium Metal Battery

# 4.0 Parameters of Cells/Batteries

### 4.1 Battery #1

Parameters	Cell#3 (26650PFS)	Battery#1
Mass (Kg)	0.088	3.96
Lithium ion Indicate watt-hour rating (Wh)	9.6	432
Lithium metal Indicate lithium metal content in gram (g)	N/A	N/A

## **Physical Description of Cells / Batteries**

APCRBC174-LI, 911-9023



APCRBC174-LI,911-9023 Label

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### Cell (Cell#3) 26650PFS



### 4.1 Battery #2

Parameters	Cell#4 (IFR26650)	Battery#2
Mass (Kg)	0.082	3.69
Lithium ion Indicate watt-hour rating (Wh)	9.6	432
Lithium metal Indicate lithium metal content in gram (g)	N/A	N/A

# **Physical Description of Cells / Batteries**

APCRBC174-LI-1, SE2101



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Cell (Cell #4) IFR26650



### 5.0 List of tests conducted and results

Test	Pass	Fail	N/A
	Х		
T1 – Altitude simulation			
TO TI IT .	X		
T2 – Thermal Tests			
T3 – Vibration	Х		
T4 Charle	Х		
T4 – Shock			
T5 – External Short Circuit	X		
T6 – Impact	X		
T7 – Overcharge	Х		
T8 – Forced Discharge	Х		

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### 6.0 UN38.3 Test Conformation for the Cells inside the battery:

	Cell UN 38.3 Test Confirmed (Yes or No)
When no separate document for the cells is provided, this confirms that the cells inside the battery have successfully passed the UN	
38.3 test. In this case under section 5.0 the T7 and T8 must be marked as "passed" and here under section 6.0 "Cell UN 38.3 Test confirmed" needs to be Yes.	YES

### 7.0 Reference to assembled battery testing requirements

Not Applicable
XXX

### 8.0 Reference to the edition on the Manual of Tests and Criteria applied

ST/SG/AC.10/11/Rev.6/Amend.1 and ST/SG/AC.10/11/Rev.7/Amend.1 Recommendations on the Transport of Dangerous Goods:

Manual of Tests and Criteria, Part III, Sub-Section 38.3

Lithium metal and lithium ion batteries

United Nations

9.0 Manufacture of the cell / battery is in accordance with quality management system as required by the regulations:

Schneider Electric certifies that all articles described in this Test Survey are in compliance with all applicable Schneider Electric Product Specifications, Manufacturing Processes, Quality Control Testing, Quality Plan per ISO9001: 2015, and Environmental guidelines.

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### 10.0 Certification

Company: Schneider Electric – Secure Power Division Signature:



Raymond P. Lizotte, Jr. Director, Sustainability Office EMAIL: raymond.lizotte@SE.com

Phone: +1 978-691-1468

Date of compilation: October 13, 2023

Place of expertise: Schneider Electric Andover R&D Center

Andover, MA 01810

**United States** 



Company Seal

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# Images of Test Report Identifiers



#### LITHIUM ION BATTERY SAFETY TESTING REPORT

Applicant:	American Power Conversion Holdings Inc., Talwan Branch 5F., No.189, Sec. 2, Jiuzong Rd., Neihu District, Taipei City 11494, Taiwan TE: +886-2-6611-7221; E-mail: ken.hsieh@se.com Website: www.apc.com/
Manufacturer:	C-TECH UNITED CORP. 5F, N0.669, Zhongzheng Rd., Xinzhuang District, New Taipei City, Taiwan
Product:	Rechargeable Li-Ion Battery Pack
Model:	APCRBC174-LI
Rating:	48 Vdc, 9 Ah, 432 Wh
Test method & Criterion	UNITED NATIONS *Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7
Appearance	Metal shell
Verification Issuing Office	AnTek Certification Inc. 7F, No.351, Yangguang St. Taipei, 11491 Taiwan
Name	Tel: +886-2-8752-3779; Website: www.atclab.com.tw; E-mail: atc@atclab.com.tw
Date Received	Apr. 21, 2022
Test Performed Date:	Aug. 08, 2022 – Oct. 20, 2022
Conclusion:	The sample has passed the test items of UN 38.3
Date of Issued:	Nov. 07, 2022
Comment:	Internal cell source: O'CELL / IFR26650 3.0Ah

样品名称 Sample Name		电锂离子电池组 ole Li-Ion Battery Pack	样品型 Sample Me	를 무	APCRBC174-L	
委托单位 Consignor	1 XE XE	American Power C	onversion Ho	ldings	Inc., Taiwan Branch	0 (0
生产单位 Manufacturer	10 10	深圳市安仕新能源科技有限公司大鵬分公司 SHENZHEN ACE BATTERY CO.,LTD DAPENG BRANCH				0,0
标称电压 Normal Voltage	48V	额定容量 Rated Capacity	100	Ah 2Wh	充电限制电压 Limited Charge Voltage	54V
充电电流 Charge Current	1.8A	最大连续充电电源 Max Continuous Cha	10	20A	充电截止电流 End Charge Current	180mA
终止电压 Cut-off Voltage	36V	最大放电电流 Max Discharge Curr	rent 4.	5A	电芯额定容量 Cell Rated Capacity	3000mAl
内含电芯个数 Cells Number	45Pcs	电芯型号 Cell Model	2665	50PFS	商标 Trademark	1
样品外观 Appearance	10 10	长方形电池, Rechargeable ba	尺寸: 517.4 ttery, size: 51			9.0
Test method and criterion	UNITED NA	ATIONS "Recommendal Man	ual of Tests C.10/11/Rev.	and Cr 6/Ame	PORT OF DANGEROUS	S GOODS
样品接收日期 Accepted date	A. 40	2021.04.28	21.04.28 測试起讫日期 Test date 2021.04.28~2021.05.20		5.20	
recopied date		The second section of the second section secti	All Amberola	24 ×		
测试项目 Test items	100	ulation, Thermal test, Vil			过度充电、强制放电。 mal short circuit, Impact,	Overcharg
测试项目	Altitude simu Forced discha Test conclusi 检验结论: The Recharge Taiwan Brane Recommenda Criteria(ST/S 甜 American	ulation, Thermal test, Viturge. on: cable Li-Ion Battery Pack the are tested according to titions on the Transport of G/AC_10/11/Rev6/Amen Fower Conversion Holdi 七千度溶流 统 统制设备的复数 制。	submitted by Section 38.3 Dangerous G d 1, 38.3). ngs Inc., Taiw 社议书试验和	Americ of the F oods, M van Bra 标准手	rnal short circuit, Impact, can Power Conversion Hole ifth Revised Edition of the fanual of Test and	dings Inc.,

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