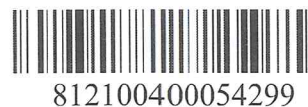




# UN38.3 试验概要

## UN38.3 Test Summary

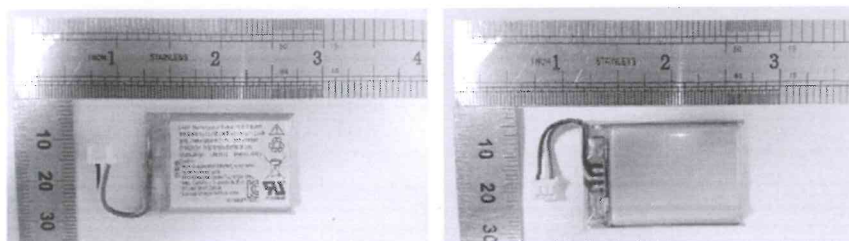


812100400054299

| 单位信息 Company information           |                                                                                                                                                                                                                    |                                |                                                            |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------|
| 委托单位<br>Consignor                  | 昆山兴能能源科技有限公司 Kunshan SYNergy ScienTech Co.,Ltd.<br>昆山市开发区南河路 688 号 No.688, Nanhe Road, Economic&Technical Development Zone, Kunshan, Jiangsu<br>0512-57710688      alice@synst.com.cn      http://www.synst.com.cn |                                |                                                            |
| 生产单位<br>Manufacturer               | 昆山兴能能源科技有限公司 Kunshan SYNergy ScienTech Co.,Ltd.<br>昆山市开发区南河路 688 号 No.688, Nanhe Road, Economic&Technical Development Zone, Kunshan, Jiangsu<br>0512-57710688      alice@synst.com.cn      http://www.synst.com.cn |                                |                                                            |
| 测试单位<br>Test lab                   | 昆山兴能能源科技有限公司 Kunshan SYNergy ScienTech Co.,Ltd.<br>昆山市开发区南河路 688 号 No.688, Nanhe Road, Economic&Technical Development Zone, Kunshan, Jiangsu<br>0512-57710688      alice@synst.com.cn      http://www.synst.com.cn |                                |                                                            |
| 电池信息 Battery information           |                                                                                                                                                                                                                    |                                |                                                            |
| 名称<br>Name                         | 锂电池 Li-ion Battery                                                                                                                                                                                                 | 品牌<br>Brand                    | /                                                          |
| 型号<br>Type                         | AHB572535PJT-04                                                                                                                                                                                                    | 原始测试型号<br>Original tested type | /                                                          |
| 标称电压(V)<br>Nominal voltage         | 3.7                                                                                                                                                                                                                | 容量/能量<br>Capacity/energy       | 500mAh 2.0Wh                                               |
| 描述<br>Description                  | 可充电锂离子单电芯电池<br>Rechargeable Li-ion single cell battery                                                                                                                                                             | 锂含量(g)<br>Li content           | /                                                          |
| 质量(kg)<br>Mass                     | 0.00991                                                                                                                                                                                                            | 外观<br>Appearance               | 银色, 黄色双色铝塑外壳<br>Silvery and Yellow aluminum-plastics shell |
| 测试信息 Test information              |                                                                                                                                                                                                                    |                                |                                                            |
| 原报告编号<br>Original test report No.  | UN21070501                                                                                                                                                                                                         | 测试报告日期<br>Date of test report  | 2021-08-10                                                 |
| 测试标准<br>Test standard              | 联合国《关于危险货物运输的建议书试验和标准手册》<br>第 38.3 章 UNITEDNATIONS "Recommendations on the<br>TRANSPORT OF DANGEROUS GOODS" Manual of<br>Tests and Criteria 38.3      ST/SG/AC.10/11/Rev.6/Amend.1                                 |                                |                                                            |
| T.1 高度模拟<br>Altitude simulation    | 合格 Passed                                                                                                                                                                                                          | T.2 温度测试<br>Thermal test       | 合格 Passed                                                  |
| T.3 振动测试<br>Vibration              | 合格 Passed                                                                                                                                                                                                          | T.4 冲击测试<br>Shock              | 合格 Passed                                                  |
| T.5 外部短路<br>External short circuit | 合格 Passed                                                                                                                                                                                                          | T.6 挤压<br>Crush                | 合格 Passed                                                  |
| T.7 过度充电<br>Overcharge             | 合格 Passed                                                                                                                                                                                                          | T.8 强制放电<br>Forced discharge   | 合格 Passed                                                  |
| 38.3.3 (f)                         | /                                                                                                                                                                                                                  | 38.3.3 (g)                     | /                                                          |



# 样品图片 Sample Picture



|                          |                                                                                                                                                                                                                                                                        |                     |            |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------|
| 结论<br>Conclusion         | 测试样品符合联合国《关于危险货物运输的建议书试验和标准手册》ST/SG/AC.10/11/Rev.6/Amend.1 38.3 标准要求。The tested samples meet the requirements of test items of the UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6/Amend.1 38.3 |                     |            |
| 备注<br>Remark             | /                                                                                                                                                                                                                                                                      |                     |            |
| 签名 Signature<br>职务 Title | 王寅<br>副总工程师 Vice chief engineer                                                                                                                                                                                                                                        | 签发日期<br>Issued date | 2021-08-17 |

-验证码:055803-

\*\*\*报告结束\*\*\*



报告编号

Report NO.: UN21070501

# UN38.3检验报告

## UN38.3 Test Report

产品名称:锂电池 AHB572535PJT-04 3.7V 500mAh 2.0Wh

Name of Goods:Li-ion Battery AHB572535PJT-04 3.7V 500mAh 2.0Wh

委托单位:興能高科技股份有限公司

Consignor:SYNergy ScienTech Corp.



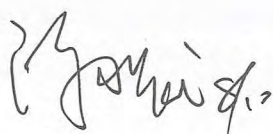
昆山兴能能源科技有限公司UN38.3实验室

The laboratory for UN38.3 of Kunshan SYNergy ScienTech Co.,Ltd.

表单编号:W-X001-1002

|                                                                                                                                      |                                                                                                                                                         |                                                  |                             |
|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-----------------------------|
|  昆山兴能能源科技有限公司<br>Kunshan SYNergy ScienTech Co., Ltd. |                                                                                                                                                         |                                                  |                             |
| <b>UN38.3检验报告(一)</b><br><b>UN38.3 Test Report(1)</b>                                                                                 |                                                                                                                                                         |                                                  |                             |
| 报告编号<br>Report NO.: UN21070501                                                                                                       |                                                                                                                                                         |                                                  |                             |
| 样品名称<br>Name of Sample                                                                                                               | 中文<br>Chinese                                                                                                                                           | 锂电池 AHB572535PJT-04 3.7V 500mAh 2.0Wh            |                             |
|                                                                                                                                      | 英文<br>English                                                                                                                                           | Li-ion Battery AHB572535PJT-04 3.7V 500mAh 2.0Wh |                             |
| 样品编号<br>Sample NO.                                                                                                                   | UN21070501                                                                                                                                              |                                                  |                             |
| 测试单位<br>Test Centre                                                                                                                  | 昆山兴能能源科技有限公司UN38.3实验室<br>The laboratory for UN38.3 of Kunshan SYNergy ScienTech Co., Ltd.                                                               |                                                  |                             |
| 检验方法<br>Test method                                                                                                                  | 联合国《关于危险货物运输的建议书》<br>UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS"                                                               |                                                  |                             |
| 判定标准<br>Criterion                                                                                                                    | 联合国《关于危险货物运输的建议书》<br>UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS"                                                               |                                                  |                             |
| 样品外观<br>Appearance                                                                                                                   | 银色铝塑外壳(内含锂电池芯)<br>Silvery aluminum-plastics shell(containing li-ion cell)                                                                               |                                                  |                             |
| 检测起迄日期<br>Test Date                                                                                                                  | 2021年7月5日-2021年8月5日                                                                                                                                     |                                                  |                             |
| 检测项目<br>Test Items                                                                                                                   | 低压(高空)模拟;冷热冲击;振动;冲击加速度;外部短路;压碎;过充;强制放电<br>Altitude Simulation;Cold/Thermal;Vibration;Shock;<br>External Short-Circuit;Crush;Overcharge;Forced discharge |                                                  |                             |
| 检验结论<br>Conclusion                                                                                                                   | 受检样品经过UN38.3项检测, 检测结果合格。<br>The sample has passed the test items of UN38.3                                                                              |                                                  |                             |
| 备注 Remark                                                                                                                            |                                                                     |                                                  |                             |
| 测试单位地址<br>Centre Address                                                                                                             | 昆山市南河路688号<br>688 # Nanhe Road Kunshan                                                                                                                  |                                                  | 邮政编码<br>Post Code<br>215300 |

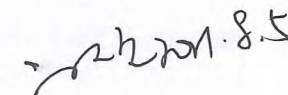
批准:  
Approver:



审核:  
Checker:



主检:  
Appraiser:



表单编号: W-X001-1103



昆山兴能能源科技有限公司  
Kunshan SYNergy ScienTech Co., Ltd.

UN38.3检验报告(二)  
UN38.3 Test Report(2)

报告编号  
Report NO.: UN21070501

| 序号<br>NO                                   | 检验项目名称<br>Name of Test<br>Items                                                                         | 标准要求或标准条款号<br>Standard requirement or The Clause<br>Number of Standard                                                                                         | 检验结果<br>Test Result | 本页结论<br>Conclusion | 备注 Remark |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------|-----------|
| 1                                          | 低压(高空)模拟<br>Altitude<br>Simulation                                                                      | 联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 Amend.1<br>38.3试验T.1<br>UN Manual of tests and Criteria<br>ST/SG/AC.10/11/Rev.6 Amend.1 Section<br>38.3 Test T.1 | 见低压(高空)模拟测试报告       | 合格<br>Pass         | /         |
| 2                                          | 冷热冲击<br>Cold/Thermal                                                                                    | 联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 Amend.1<br>38.3试验T.2<br>UN Manual of tests and Criteria<br>ST/SG/AC.10/11/Rev.6 Amend.1 Section<br>38.3 Test T.2 | 见冷热冲击测试报告           | 合格<br>Pass         | /         |
| 3                                          | 振动<br>Vibration                                                                                         | 联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 Amend.1<br>38.3试验T.3<br>UN Manual of tests and Criteria<br>ST/SG/AC.10/11/Rev.6 Amend.1 Section<br>38.3 Test T.3 | 见振动测试报告             | 合格<br>Pass         | /         |
| 4                                          | 冲击加速度<br>Shock                                                                                          | 联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 Amend.1<br>38.3试验T.4<br>UN Manual of tests and Criteria<br>ST/SG/AC.10/11/Rev.6 Amend.1 Section<br>38.3 Test T.4 | 见冲击加速度测试报告          | 合格<br>Pass         | /         |
| 5                                          | 外部短路<br>External Short-Circuit                                                                          | 联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 Amend.1<br>38.3试验T.5<br>UN Manual of tests and Criteria<br>ST/SG/AC.10/11/Rev.6 Amend.1 Section<br>38.3 Test T.5 | 见外部短路测试报告           | 合格<br>Pass         | /         |
| 6                                          | 压碎<br>Crush                                                                                             | 联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 Amend.1<br>38.3试验T.6<br>UN Manual of tests and Criteria<br>ST/SG/AC.10/11/Rev.6 Amend.1 Section<br>38.3 Test T.6 | 见压碎测试报告             | 合格<br>Pass         | /         |
| 7                                          | 过充<br>Overcharge                                                                                        | 联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 Amend.1<br>38.3试验T.7<br>UN Manual of tests and Criteria<br>ST/SG/AC.10/11/Rev.6 Amend.1 Section<br>38.3 Test T.7 | 见过充测试报告             | 合格<br>Pass         | /         |
| 8                                          | 强制放电<br>Forced<br>discharge                                                                             | 联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 Amend.1<br>38.3试验T.8<br>UN Manual of tests and Criteria<br>ST/SG/AC.10/11/Rev.6 Amend.1 Section<br>38.3 Test T.8 | 见强制放电测试报告           | 合格<br>Pass         | /         |
| 以下空白                                       |                                                                                                         |                                                                                                                                                                |                     |                    |           |
| 检验环境条件<br>Test<br>Environment<br>Condition | 环境温度:16.4℃~24.7℃; 环境湿度:31%RH~58.9%RH<br>Ambient temperature:16.4℃~24.7℃; Ambient humidity:31%RH~58.9%RH |                                                                                                                                                                |                     |                    |           |

审核:

Checker:

主检:

Appraiser:

表单编号: W-X001-1202



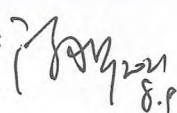
昆山兴能能源科技有限公司  
Kunshan SYNergy ScienTech Co., Ltd.

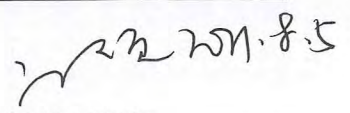
## 低压(高空)模拟测试报告 Altitude Simulation Test Report

报告编号  
Report NO.: UN21070501

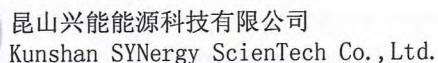
| 样品编号<br>Sample NO. | 样品状态Sample<br>status            | 试验前Before        |                 | 试验后After         |                 | 质量损失<br>Mass<br>Loss/% | 剩余电压<br>Residual<br>OCV/% | 其他现象<br>Other<br>Event |
|--------------------|---------------------------------|------------------|-----------------|------------------|-----------------|------------------------|---------------------------|------------------------|
|                    |                                 | 质量<br>Weight (g) | 开路电压<br>OCV (V) | 质量<br>Weight (g) | 开路电压<br>OCV (V) |                        |                           |                        |
| 1                  | 1CYC 满电<br>1CYC Fully charged   | 9.9056           | 4.1821          | 9.8055           | 4.1816          | 1.01                   | 99.99                     | 0                      |
| 2                  | 1CYC 满电<br>1CYC Fully charged   | 9.9062           | 4.1861          | 9.9062           | 4.1851          | 0.00                   | 99.98                     | 0                      |
| 3                  | 1CYC 满电<br>1CYC Fully charged   | 9.9069           | 4.1853          | 9.9068           | 4.1846          | 0.00                   | 99.98                     | 0                      |
| 4                  | 1CYC 满电<br>1CYC Fully charged   | 9.9076           | 4.1846          | 9.9076           | 4.1838          | 0.00                   | 99.98                     | 0                      |
| 5                  | 1CYC 满电<br>1CYC Fully charged   | 9.9086           | 4.1838          | 9.9090           | 4.1835          | 0.00                   | 99.99                     | 0                      |
| 6                  | 25CYC 满电<br>25CYC Fully charged | 9.9091           | 4.1809          | 9.9088           | 4.1798          | 0.00                   | 99.97                     | 0                      |
| 7                  | 25CYC 满电<br>25CYC Fully charged | 9.9075           | 4.1821          | 9.9072           | 4.1815          | 0.00                   | 99.99                     | 0                      |
| 8                  | 25CYC 满电<br>25CYC Fully charged | 9.9068           | 4.1819          | 9.9065           | 4.1811          | 0.00                   | 99.98                     | 0                      |
| 9                  | 25CYC 满电<br>25CYC Fully charged | 9.9067           | 4.1835          | 9.9065           | 4.1183          | 0.00                   | 98.44                     | 0                      |
| 10                 | 25CYC 满电<br>25CYC Fully charged | 9.9055           | 4.1826          | 9.9052           | 4.1819          | 0.00                   | 99.98                     | 0                      |
| End                |                                 |                  |                 |                  |                 |                        |                           |                        |
|                    |                                 |                  |                 |                  |                 |                        |                           |                        |
|                    |                                 |                  |                 |                  |                 |                        |                           |                        |
|                    |                                 |                  |                 |                  |                 |                        |                           |                        |
|                    |                                 |                  |                 |                  |                 |                        |                           |                        |
|                    |                                 |                  |                 |                  |                 |                        |                           |                        |
|                    |                                 |                  |                 |                  |                 |                        |                           |                        |
|                    |                                 |                  |                 |                  |                 |                        |                           |                        |
|                    |                                 |                  |                 |                  |                 |                        |                           |                        |
|                    |                                 |                  |                 |                  |                 |                        |                           |                        |
|                    |                                 |                  |                 |                  |                 |                        |                           |                        |
|                    |                                 |                  |                 |                  |                 |                        |                           |                        |
|                    |                                 |                  |                 |                  |                 |                        |                           |                        |
|                    |                                 |                  |                 |                  |                 |                        |                           |                        |

备注:L-漏液、V-漏气、D-解体、R-破裂、F-起火、O-无漏液、无漏气、无解体、无破裂、无起火、喷印无模糊。  
Note: L-Leakage、V-Venting、D-Disassembly、R-Rupture、F-Fire、O-No Leakage、No Venting、  
No Disassembly、No Rupture & No Fire、No Print Incomplete.

审核:  
Checker:  2021.8.8.5

主检:  
Appraiser:  2021.8.5

表单编号: W-X001-1303



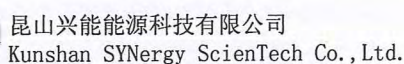
报告编号  
Report NO.: UN21070501

备注:L-漏液、V-漏气、D-解体、R-破裂、F-起火、O-无漏液、无漏气、无解体、无破裂、无起火、喷印无模糊。  
Note: L-Leakage、V-Venting、D-Disassembly、R-Rupture、F-Fire、O-No Leakage、No Venting、  
No Disassembly、No Rupture、No Fire、No Print Incomplete.

Checker:

Appraiser:

表单编号: W-X001-1403



报告编号  
Report NO.: UN21070501

UN38.3实验室

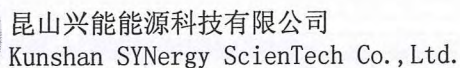
备注:L-漏液、V-漏气、D-解体、R-破裂、F-起火、O-无漏液、无漏气、无解体、无破裂、无起火、喷印无模糊。  
Note: L-Leakage、V-Venting、D-Disassembly、R-Rupture、F-Fire、O-No Leakage、No Venting、  
No Disassembly、No Rupture、No Fire、No Print Incomplete .

John Cox, Jr.  
8.9 521-8-5

222 201.8.5

表单编号: W-X001-1503





报告编号  
Report NO.: UN21070501

审核:  12/3 2021.8.5  
Checker:

主检:  
Appraiser:  2011.8.5  
表单编号: W-X001-1703

# 压碎测试报告

## Crush test Report

报告编号  
Report NO.: UN21070501

[illegible]

备注:D-解体、 F-起火、 O-无解体、无起火、喷印无模糊。

Note: D-Disassembly, F-Fire, O-No Disassembly, No Fire, No Print Incomplete.

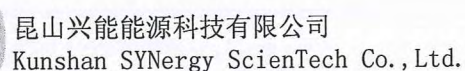
审核:

Checker:

主检:

Appraiser:

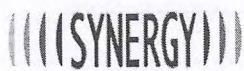
表单编号: W-X001-2402



报告编号  
Report NO.: UN21070501

审核:  8.9 2007.8.5

主检:  2011.8.5  
Appraiser:  
表单编号: W-X001-1903



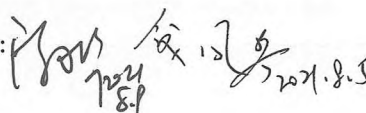
昆山兴能能源科技有限公司  
Kunshan SYNergy ScienTech Co., Ltd.

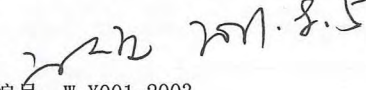
## 强制放电测试报告 Forced discharge test Report

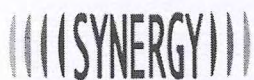
报告编号  
Report NO.: UN21070501

| 样品编号<br>Sample NO. | 样品状态<br>Sample status             | 其他现象<br>Other Event |
|--------------------|-----------------------------------|---------------------|
| 29                 | 1CYC放光<br>1CYC Fully discharged   | 0                   |
| 30                 | 1CYC放光<br>1CYC Fully discharged   | 0                   |
| 31                 | 1CYC放光<br>1CYC Fully discharged   | 0                   |
| 32                 | 1CYC放光<br>1CYC Fully discharged   | 0                   |
| 33                 | 1CYC放光<br>1CYC Fully discharged   | 0                   |
| 34                 | 1CYC放光<br>1CYC Fully discharged   | 0                   |
| 35                 | 1CYC放光<br>1CYC Fully discharged   | 0                   |
| 36                 | 1CYC放光<br>1CYC Fully discharged   | 0                   |
| 37                 | 1CYC放光<br>1CYC Fully discharged   | 0                   |
| 38                 | 1CYC放光<br>1CYC Fully discharged   | 0                   |
| 39                 | 25CYC放光<br>25CYC Fully discharged | 0                   |
| 40                 | 25CYC放光<br>25CYC Fully discharged | 0                   |
| 41                 | 25CYC放光<br>25CYC Fully discharged | 0                   |
| 42                 | 25CYC放光<br>25CYC Fully discharged | 0                   |
| 43                 | 25CYC放光<br>25CYC Fully discharged | 0                   |
| 44                 | 25CYC放光<br>25CYC Fully discharged | 0                   |
| 45                 | 25CYC放光<br>25CYC Fully discharged | 0                   |
| 46                 | 25CYC放光<br>25CYC Fully discharged | 0                   |
| 47                 | 25CYC放光<br>25CYC Fully discharged | 0                   |
| 48                 | 25CYC放光<br>25CYC Fully discharged | 0                   |

备注:D-解体、R-破裂、F-起火、O-无解体、无破裂、无起火、喷印无模糊。  
Note: D-Disassembly、 R-Rupture、 F-Fire、 O-No Disassembly、 No Rupture、 No Fire、 No Print Incomplete.

审核:  
Checker: 

主检:  
Appraiser:   
表单编号: W-X001-2003



昆山兴能能源科技有限公司  
Kunshan SYNergy ScienTech Co., Ltd.

## 样品图片 Sample Photo

报告编号

Report NO.: UN21070501



审核:

Checker:

*[Handwritten signature]*  
2021.8.5

主检:

Appraiser:

*[Handwritten signature]*  
2021.8.5

表单编号: W-X001-2102