# UN38.3 Test Report

# UN38.3 测试报告

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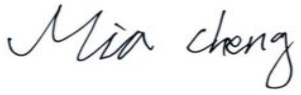
| **样品名称**<br>**Sample name:** | 可充电电池组 Rechargeable Li-ion Battery Pack<br>ASUS, C31N2310, 11.67V, 70Wh, Capacity 6000mAh (Typical)/ 5825mAh (Rated), 68Wh/ COSMX/ 242(g) |
| **委托单位**<br>**Consignor:** | 新普科技股份有限公司<br>SIMPLO TECHNOLOGY CO., LTD. |
| **报告版本:**<br>**Version of Test Report** | V01 |

| 批准<br>Approved By | 审核<br>Checked By | 编制<br>Prepared By |
|---|---|---|
| 经理/授权签字人<br>Manager/ Authorized Signatory | 授权签字人<br>Authorized Signatory | 测试工程师<br>Test Engineer |
|  |  |  |

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<table>
<tr><td>样品名称<br>Sample name</td><td colspan="3">可充电电池组 Rechargeable Li-ion Battery Pack<br>ASUS, C31N2310, 11.67V, 70Wh, Capacity 6000mAh (Typical)/<br>5825mAh (Rated), 68Wh/ COSMX/ 242(g)</td></tr>
<tr><td>委托单位<br>Consignor</td><td colspan="3">新普科技股份有限公司<br>SIMPLO TECHNOLOGY CO., LTD.</td></tr>
<tr><td>生产单位<br>Manufacturer</td><td colspan="3">新普科技（重庆）有限公司<br>SIMPLO TECHNOLOGY (CHONGQING) INC</td></tr>
<tr><td>检测方法/判定标准<br>Test method/Criterion</td><td colspan="3">联合国《标准与试验手册》ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3<br>UN Manual of the Tests and Criteria, Seventh revised edition, and Amend 1, section 38.3</td></tr>
<tr><td>样品外观<br>Appearance</td><td colspan="3">黑色塑料外壳。<br>Black Plastic film shell.</td></tr>
<tr><td rowspan="2">样品接受日期<br>Accepted Date</td><td>Cell<br>2024/01/02</td><td rowspan="2">检测起迄日期<br>Test Date</td><td>Cell Test Duration:<br>2024/01/02~2024/01/23</td></tr>
<tr><td>Pack<br>2024/01/19</td><td>Pack Test Duration:<br>2024/01/19~2024/02/06</td></tr>
<tr><td>检测项目 Test Items</td><td colspan="3">高度模拟；热测试；振动；冲击；外短路；挤压；过充电；强制放电；<br>Altitude Simulation；Thermal Test；Vibration；Shock；External Short Circuit；<br>Crush；Overcharge；Forced Discharge；</td></tr>
<tr><td>检测结论<br>Conclusion</td><td colspan="3">经检测，该样品试验符合联合国《标准与试验手册》ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 标准要求。<br>The test results complied with the requirements of UN “Manual of the Tests and Criteria, Seventh revised edition, and Amend 1” , section 38.3</td></tr>
<tr><td>备注<br>Remarks</td><td colspan="3"></td></tr>
</table>

| 报告版本清单 List of report version | | |
|---|---|---|
| **版本 Version** | **修改内容 Modify content** | **生效日 Issue date** |
| 01 | First publish | 2024/02/06 |
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| **序号** No. | **检测项目** Test items | **标准要求或标准条款号** Standard requirement or the clause number of the standard | **检测结果** Test results | **本项结论** Conclusion | **备注** Remarks |
|---|---|---|---|---|---|
| 1 | 高度模拟 Altitude Simulation | 联合国《标准与试验手册》 ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 試驗 T1 UN Manual of the Tests and Criteria, ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 Test T1 | 见附表 1 See Appendix 1 | 合格 Pass | |
| 2 | 热测试 Thermal Test | 联合国《标准与试验手册》 ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 試驗 T2 UN Manual of the Tests and Criteria, ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 Test T2 | 见附表 2 See Appendix 2 | 合格 Pass | |
| 3 | 振动 Vibration | 联合国《标准与试验手册》 ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 試驗 T3 UN Manual of the Tests and Criteria, ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 Test T3 | 见附表 3 See Appendix 3 | 合格 Pass | |
| 4 | 冲击 Shock | 联合国《标准与试验手册》 ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 試驗 T4 UN Manual of the Tests and Criteria, ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 Test T4 | 见附表 4 See Appendix 4 | 合格 Pass | |

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|---|---|---|---|---|---|
| 5 | 外短路<br>External Short Circuit | 联合国《标准与试验手册》<br>ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 試驗 T5<br>UN Manual of the Tests and Criteria, ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 Test T5 | 见附表 5<br>See Appendix 5 | 合格<br>Pass | |
| 6-1 | 撞击<br>Impact | 联合国《标准与试验手册》<br>ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 試驗 T6<br>UN Manual of the Tests and Criteria, ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 Test T6 | 见附表 6-1<br>See Appendix 6-1 | N/A | |
| 6-2 | 挤压<br>Crush | 联合国《标准与试验手册》<br>ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 試驗 T6<br>UN Manual of the Tests and Criteria, ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 Test T6 | 见附表 6-2<br>See Appendix 6-2 | 合格<br>Pass | |
| 7 | 过充电<br>Overcharge | 联合国《标准与试验手册》<br>ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 試驗 T7<br>UN Manual of the Tests and Criteria, ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 Test T7 | 见附表 7<br>See Appendix 7 | 合格<br>Pass | |
| 8 | 强制放电 Forced Discharge | 联合国《标准与试验手册》<br>ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 試驗 T8<br>UN Manual of the Tests and Criteria, ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 Test T8 | 见附表 8<br>See Appendix 8 | 合格<br>Pass | |
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| 检测环境条件<br>Test environment condition | 环境温度：20.6℃~24.4℃；环境湿度：35%~41%。<br>Ambient temperature：20.6℃~24.4℃；Ambient humidity：35%~41%。 |
| 报告声明<br>Report statement | 测试结果包含符合基于 ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3 标准的决策规则的声明。<br>The test results contain statement of conformity with the decision rules which are based on the standards ST/SG/AC.10/11/Rev7 and Amend 1, section 38.3. |
| | 本试验结果基于标准未规定、客户无需求，不对测量不确定度进行评定。<br>This test result does not evaluate the measurement uncertainty based on the fact that the standard is not specified and the customer has no demand. |
| | 本报告中呈现的测试结果仅与测试项目/样品有关。<br>The test results presented in this report relate only to the test items/samples. |

| 附表 1 Appendix 1 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 序号 No. | 1 | 检测项目 Test items | | | 高度模拟 Altitude Simulation | | | |
| 试样编号 Sample No. | 样品状态 Sample Status | 开路电压 OCV/V | | 剩余电压 Residual OCV | 质量 Mass/g | | 质量损失 Mass loss | 其他现象 Other Event |
| | | 试验前 Before | 试验后 After | | 试验前 Before | 试验后 After | | |
| 01 | 1 Cycle 完全充电<br>1 Cycle Fully charged | 13.161 | 13.157 | 99.97% | 241.142 | 241.136 | 0.00% | O |
| 02 | 1 Cycle 完全充电<br>1 Cycle Fully charged | 13.167 | 13.163 | 99.97% | 241.152 | 241.147 | 0.00% | O |
| 03 | 1 Cycle 完全充电<br>1 Cycle Fully charged | 13.162 | 13.159 | 99.98% | 241.147 | 241.141 | 0.00% | O |
| 04 | 1 Cycle 完全充电<br>1 Cycle Fully charged | 13.165 | 13.160 | 99.96% | 241.213 | 241.206 | 0.00% | O |
| 05 | 25 Cycles 完全充电<br>25 Cycles Fully charged | 13.173 | 13.167 | 99.95% | 241.252 | 241.245 | 0.00% | O |
| 06 | 25 Cycles 完全充电<br>25 Cycles Fully charged | 13.174 | 13.169 | 99.96% | 241.366 | 241.359 | 0.00% | O |
| 07 | 25 Cycles 完全充电<br>25 Cycles Fully charged | 13.175 | 13.171 | 99.97% | 240.888 | 240.883 | 0.00% | O |
| 08 | 25 Cycles 完全充电<br>25 Cycles Fully charged | 13.176 | 13.172 | 99.97% | 241.644 | 241.637 | 0.00% | O |
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注：L-泄漏, V-泄气, D-解体, R-破裂, F-起火, O-无泄漏、无泄气、无解体、无破裂且无起火.
Note: L-Leakage, V-Venting, D-Disassembly, R-Rupture, F-Fire, O-No leakage, no venting, no disassembly, no rupture and no fire.

附表 2 Appendix 2

| 序号 No. | 2 | 检测项目 Test items | | | 热测试 Thermal Test | | | |
|---|---|---|---|---|---|---|---|---|
| 试样编号 Sample No. | 样品状态 Sample Status | 开路电压 OCV/V | | 剩余电压 Residual OCV | 质量 Mass/g | | 质量损失 Mass loss | 其他现象 Other Event |
| | | 试验前 Before | 试验后 After | | 试验前 Before | 试验后 After | | |
| 01 | 1 Cycle 完全充电 1 Cycle Fully charged | 13.157 | 13.011 | 98.89% | 241.136 | 241.024 | 0.05% | O |
| 02 | 1 Cycle 完全充电 1 Cycle Fully charged | 13.163 | 13.019 | 98.91% | 241.147 | 241.034 | 0.05% | O |
| 03 | 1 Cycle 完全充电 1 Cycle Fully charged | 13.159 | 13.018 | 98.93% | 241.141 | 241.030 | 0.05% | O |
| 04 | 1 Cycle 完全充电 1 Cycle Fully charged | 13.160 | 13.018 | 98.92% | 241.206 | 241.103 | 0.04% | O |
| 05 | 25 Cycles 完全充电 25 Cycles Fully charged | 13.167 | 13.023 | 98.91% | 241.245 | 241.134 | 0.05% | O |
| 06 | 25 Cycles 完全充电 25 Cycles Fully charged | 13.169 | 13.027 | 98.92% | 241.359 | 241.247 | 0.05% | O |
| 07 | 25 Cycles 完全充电 25 Cycles Fully charged | 13.171 | 13.025 | 98.89% | 240.883 | 240.771 | 0.05% | O |
| 08 | 25 Cycles 完全充电 25 Cycles Fully charged | 13.172 | 13.025 | 98.88% | 241.637 | 241.525 | 0.05% | O |
| 以下空白 | Blank below | | | | | | | |

注：L-泄漏, V-泄气, D-解体, R-破裂, F-起火, O-无泄漏、无泄气、无解体、无破裂且无起火.
Note: L-Leakage, V-Venting, D-Disassembly, R-Rupture, F-Fire, O-No leakage, no venting, no disassembly, no rupture and no fire.

| 附表 3 Appendix 3 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 序号 No. | 3 | 检测项目 Test items | | | 振动 Vibration | | | |
| 试样编号 Sample No. | 样品状态 Sample Status | 开路电压 OCV/V | | 剩余电压 Residual OCV | 质量 Mass/g | | 质量损失 Mass loss | 其他现象 Other Event |
| | | 试验前 Before | 试验后 After | | 试验前 Before | 试验后 After | | |
| 01 | 1 Cycle 完全充电<br>1 Cycle Fully charged | 13.011 | 12.880 | 98.99% | 241.024 | 241.013 | 0.00% | O |
| 02 | 1 Cycle 完全充电<br>1 Cycle Fully charged | 13.019 | 12.984 | 99.73% | 241.034 | 241.005 | 0.01% | O |
| 03 | 1 Cycle 完全充电<br>1 Cycle Fully charged | 13.018 | 12.983 | 99.73% | 241.030 | 241.011 | 0.01% | O |
| 04 | 1 Cycle 完全充电<br>1 Cycle Fully charged | 13.018 | 12.990 | 99.78% | 241.103 | 241.089 | 0.01% | O |
| 05 | 25 Cycles 完全充电<br>25 Cycles Fully charged | 13.023 | 12.992 | 99.76% | 241.134 | 241.116 | 0.01% | O |
| 06 | 25 Cycles 完全充电<br>25 Cycles Fully charged | 13.027 | 12.995 | 99.75% | 241.247 | 241.235 | 0.00% | O |
| 07 | 25 Cycles 完全充电<br>25 Cycles Fully charged | 13.025 | 12.990 | 99.73% | 240.771 | 240.760 | 0.00% | O |
| 08 | 25 Cycles 完全充电<br>25 Cycles Fully charged | 13.025 | 12.987 | 99.71% | 241.525 | 241.513 | 0.00% | O |
| 以下空白 | Blank below | | | | | | | |

注：L-泄漏, V-泄气, D-解体, R-破裂, F-起火, O-无泄漏、无泄气、无解体、无破裂且无起火.
Note: L-Leakage, V-Venting, D-Disassembly, R-Rupture, F-Fire, O-No leakage, no venting, no disassembly, no rupture and no fire.

附表 4 Appendix 4

| 序号 No. | 4 | 检测项目 Test items | | | 冲击 Shock | | | |
|---|---|---|---|---|---|---|---|---|
| 试样编号 Sample No. | 样品状态 Sample Status | 开路电压 OCV/V | | 剩余电压 Residual OCV | 质量 Mass/g | | 质量损失 Mass loss | 其他现象 Other Event |
| | | 试验前 Before | 试验后 After | | 试验前 Before | 试验后 After | | |
| 01 | 1 Cycle 完全充电 1 Cycle Fully charged | 12.880 | 12.968 | 100.68% | 241.013 | 241.005 | 0.00% | O |
| 02 | 1 Cycle 完全充电 1 Cycle Fully charged | 12.984 | 12.970 | 99.89% | 241.005 | 240.998 | 0.00% | O |
| 03 | 1 Cycle 完全充电 1 Cycle Fully charged | 12.983 | 12.969 | 99.89% | 241.011 | 241.006 | 0.00% | O |
| 04 | 1 Cycle 完全充电 1 Cycle Fully charged | 12.990 | 12.979 | 99.92% | 241.089 | 241.081 | 0.00% | O |
| 05 | 25 Cycles 完全充电 25 Cycles Fully charged | 12.992 | 12.978 | 99.89% | 241.116 | 241.111 | 0.00% | O |
| 06 | 25 Cycles 完全充电 25 Cycles Fully charged | 12.995 | 12.983 | 99.91% | 241.235 | 241.228 | 0.00% | O |
| 07 | 25 Cycles 完全充电 25 Cycles Fully charged | 12.990 | 12.977 | 99.90% | 240.760 | 240.753 | 0.00% | O |
| 08 | 25 Cycles 完全充电 25 Cycles Fully charged | 12.987 | 12.975 | 99.91% | 241.513 | 241.505 | 0.00% | O |
| 以下空白 | Blank below | | | | | | | |

注：L-泄漏, V-泄气, D-解体, R-破裂, F-起火, O-无泄漏、无泄气、无解体、无破裂且无起火.
Note: L-Leakage, V-Venting, D-Disassembly, R-Rupture, F-Fire, O-No leakage, no venting, no disassembly, no rupture and no fire.

| 附表 5 Appendix 5 | | | |
|---|---|---|---|
| 序号 No. | 5 | 检测项目 Test items | 外短路 External Short Circuit |
| 试样编号 Sample No. | 样品状态 Sample Status | 表面最高溫度 Max. External Temperature/℃(<170℃) | 其他现象 Other Event |
| 01 | 1 Cycle 完全充电 1 Cycle Fully charged | 59.2 | O |
| 02 | 1 Cycle 完全充电 1 Cycle Fully charged | 59.2 | O |
| 03 | 1 Cycle 完全充电 1 Cycle Fully charged | 59.0 | O |
| 04 | 1 Cycle 完全充电 1 Cycle Fully charged | 58.9 | O |
| 05 | 25 Cycles 完全充电 25 Cycles Fully charged | 58.9 | O |
| 06 | 25 Cycles 完全充电 25 Cycles Fully charged | 59.0 | O |
| 07 | 25 Cycles 完全充电 25 Cycles Fully charged | 59.1 | O |
| 08 | 25 Cycles 完全充电 25 Cycles Fully charged | 59.0 | O |
| 以下空白 | Blank below | | |
| 注： D-解体, R-破裂, F-起火, O-无解体、无破裂且无起火<br>Note: D-Disassembly, R-Rupture, F-Fire, O-No disassembly, no rupture and no fire. | | | |

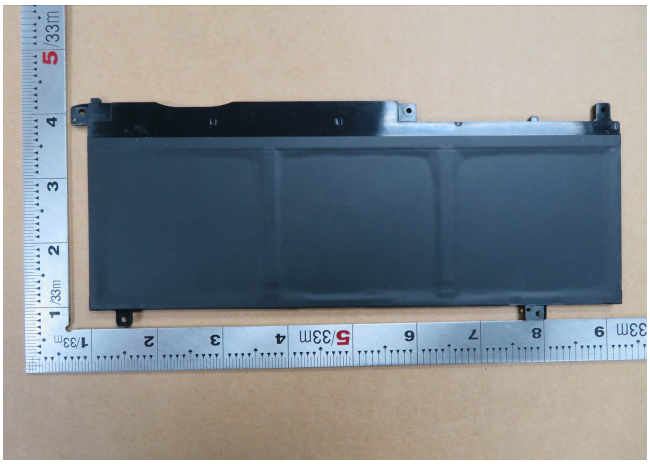
| 附表 6-1 Appendix 6-1 | | | |
|---|---|---|---|
| 序号<br>No. | 6-1 | 检测项目<br>Test items | 撞击<br>Impact |
| 试样编号<br>Sample No. | 样品状态<br>Sample Status | 表面最高溫度<br>Max. External Temperature/℃(<170℃) | 其他现象<br>Other Event |
| 01 C | 1 Cycle 50% 容量<br>1 Cycle 50% Capacity | N/A | N/A |
| 02 C | 1 Cycle 50% 容量<br>1 Cycle 50% Capacity | N/A | N/A |
| 03 C | 1 Cycle 50% 容量<br>1 Cycle 50% Capacity | N/A | N/A |
| 04 C | 1 Cycle 50% 容量<br>1 Cycle 50% Capacity | N/A | N/A |
| 05 C | 1 Cycle 50% 容量<br>1 Cycle 50% Capacity | N/A | N/A |
| 06 C | 25 Cycles 50% 容量<br>25 Cycles 50% Capacity | N/A | N/A |
| 07 C | 25 Cycles 50% 容量<br>25 Cycles 50% Capacity | N/A | N/A |
| 08 C | 25 Cycles 50% 容量<br>25 Cycles 50% Capacity | N/A | N/A |
| 09 C | 25 Cycles 50% 容量<br>25 Cycles 50% Capacity | N/A | N/A |
| 10 C | 25 Cycles 50% 容量<br>25 Cycles 50% Capacity | N/A | N/A |
| 以下<br>空白 | Blank below | | |
| 注： D-解体, F-起火, O-无解体且无起火.<br>Note: D-Disassembly, F-Fire, O-No disassembly and no fire. | | | |

| 附表 6-2 Appendix 6-2 | | | |
|---|---|---|---|
| 序号<br>No. | 6-2 | 检测项目<br>Test items | 挤压<br>Crush |
| 试样编号<br>Sample No. | 样品状态<br>Sample Status | 表面最高溫度<br>Max. External Temperature/℃(<170℃) | 其他现象<br>Other Event |
| 01 C | 1 Cycle 50% 容量<br>1 Cycle 50% Capacity | 21.4 | O |
| 02 C | 1Cycle 50% 容量<br>1 Cycle 50% Capacity | 21.3 | O |
| 03 C | 1Cycle 50% 容量<br>1 Cycle 50% Capacity | 21.1 | O |
| 04 C | 1 Cycle 50% 容量<br>1 Cycle 50% Capacity | 21.0 | O |
| 05 C | 1 Cycle 50% 容量<br>1 Cycle 50% Capacity | 21.3 | O |
| 06 C | 25 Cycles 50% 容量<br>25 Cycles 50% Capacity | 21.0 | O |
| 07 C | 25 Cycles 50% 容量<br>25 Cycles 50% Capacity | 21.1 | O |
| 08 C | 25 Cycles 50% 容量<br>25 Cycles 50% Capacity | 21.1 | O |
| 09 C | 25 Cycles 50% 容量<br>25 Cycles 50% Capacity | 21.2 | O |
| 10 C | 25 Cycles 50% 容量<br>25 Cycles 50% Capacity | 21.1 | O |
| 以下<br>空白 | Blank below | | |
| 注： D-解体, F-起火, O-无解体且无起火<br>Note: D-Disassembly, F-Fire, O-No disassembly and no fire. | | | |

| 附表 7 Appendix 7 | | | |
|---|---|---|---|
| 序号<br>No. | 7 | 检测项目<br>Test items | 过充电<br>Overcharge |
| 试样编号<br>Sample No. | 样品状态 Sample Status | 其他现象 Other Event | |
| 09 | 1 Cycle 完全充电<br>1 Cycle Fully charged | O | |
| 10 | 1 Cycle 完全充电<br>1 Cycle Fully charged | O | |
| 11 | 1 Cycle 完全充电<br>1 Cycle Fully charged | O | |
| 12 | 1 Cycle 完全充电<br>1 Cycle Fully charged | O | |
| 13 | 25 Cycles 完全充电<br>25 Cycles Fully charged | O | |
| 14 | 25 Cycles 完全充电<br>25 Cycles Fully charged | O | |
| 15 | 25 Cycles 完全充电<br>25 Cycles Fully charged | O | |
| 16 | 25 Cycles 完全充电<br>25 Cycles Fully charged | O | |
| 以下<br>空白 | Blank below | | |
| 注： D-解体, F-起火, O-无解体且无起火<br>Note: D-Disassembly, F-Fire, O-No disassembly and no fire. | | | |

| 附表 8 Appendix 8 | | | |
|---|---|---|---|
| 序号<br>No. | 8 | 检测项目<br>Test items | 强制放电<br>Forced Discharge |
| 试样编号<br>Sample No. | 样品状态 Sample Status | 其他现象 Other Event | |
| 11 C | 1 Cycle 完全放电 1 Cycle Fully Discharged | O | |
| 12 C | 1 Cycle 完全放电 1 Cycle Fully Discharged | O | |
| 13 C | 1 Cycle 完全放电 1 Cycle Fully Discharged | O | |
| 14 C | 1 Cycle 完全放电 1 Cycle Fully Discharged | O | |
| 15 C | 1 Cycle 完全放电 1 Cycle Fully Discharged | O | |
| 16 C | 1 Cycle 完全放电 1 Cycle Fully Discharged | O | |
| 17 C | 1 Cycle 完全放电 1 Cycle Fully Discharged | O | |
| 18 C | 1 Cycle 完全放电 1 Cycle Fully Discharged | O | |
| 19 C | 1 Cycle 完全放电 1 Cycle Fully Discharged | O | |
| 20 C | 1 Cycle 完全放电 1 Cycle Fully Discharged | O | |
| 21 C | 25 Cycles 完全放电 25 Cycles Fully Discharged | O | |
| 22 C | 25 Cycles 完全放电 25 Cycles Fully Discharged | O | |
| 23 C | 25 Cycles 完全放电 25 Cycles Fully Discharged | O | |
| 24 C | 25 Cycles 完全放电 25 Cycles Fully Discharged | O | |
| 25 C | 25 Cycles 完全放电 25 Cycles Fully Discharged | O | |
| 26 C | 25 Cycles 完全放电 25 Cycles Fully Discharged | O | |
| 27 C | 25 Cycles 完全放电 25 Cycles Fully Discharged | O | |
| 28 C | 25 Cycles 完全放电 25 Cycles Fully Discharged | O | |
| 29 C | 25 Cycles 完全放电 25 Cycles Fully Discharged | O | |
| 30 C | 25 Cycles 完全放电 25 Cycles Fully Discharged | O | |
| 以下空白 | Blank below | | |
| 注： D-解体, F-起火, O-无解体且无起火<br>Note: D-Disassembly, F-Fire, O-No disassembly and no fire. | | | |

## 待测物照片 Sample Pictures:

## 仪器清册 Test Equipment List:

SIMPLO TECHNOLOGY CO., LTD.
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TEL: +886-3-5695920; FAX: +886-3-5695931

Revised Date: 2024-02-06

**Test Instruments Reference List**

| Used | Instrument ID | Instrument Name | Type | Range of use | Manufacturer | Calibration Date_Last | Calibration Date_Next | Remarks |
|---|---|---|---|---|---|---|---|---|
| | **Pretest** | | | | | | | |
| V | ML-761 | Learning | 715C | 0~18V 0~7A | SMP | 2024/1/16 | 2025/2/16 | |
| V | ML-762 | Learning | 715C | 0~18V 0~7A | SMP | 2024/1/3 | 2025/2/3 | |
| V | ML-763 | Learning | 715C | 0~18V 0~7A | SMP | 2024/1/16 | 2025/2/16 | |
| | ML-925 | Learning | 750C8 | 20~60V 0~30A | SMP | 2024/1/4 | 2025/2/4 | |
| V | ML-1139 | Learning | L720-191212-D | 0~18V 0~12A | SMP | 2024/1/3 | 2025/2/3 | |
| | ML-1157 | Learning | 17020E | 200V, 400A, 40 Kw | Chroma | 2023/5/19 | 2024/6/19 | |
| | **T.1 Altitude Simulation** | | | | | | | |
| V | ML-522 | Altitude | SVT-120 | kPa:0~95 | HSIN JIANG | 2023/5/31 | 2024/6/30 | |
| V | ML-257 | Multimeter | 34401A | DCV：0.1,1,10,100,1000V; DCI：0.01,0.1,1,2,3A | Agilent | 2024/1/2 | 2025/2/2 | |
| V | ML-995 | Electronic Balance | UX1020H | 0.1-200 gf(TAF) 0.1-1000 gf | SHIMADZU | 2024/1/8 | 2025/2/8 | |
| | ML-1035 | Electronic Balance | JWI-700W | 0.01~30kg | JADEVER | 2023/5/31 | 2024/6/30 | |
| | ML-1169 | Electronic Balance | JWI-700W | 1~60kg | JADEVER | 2023/5/11 | 2024/6/11 | |
| V | ML-550 | Data Logger | 313 | 15~35 ℃; 30~80 %RH | CENTER | 2023/7/30 | 2024/8/30 | |
| V | ML-964 | Barometric Air Pressure | MP55 | 750 to 1095 mbar | KIMO | 2023/6/7 | 2024/7/7 | |
| | **T.2 Thermal Test** | | | | | | | |
| V | ML-789 | Thermal Shock | GTST-080-65-AW | T:-40 to 100℃ | GF | 2024/1/3 | 2025/2/3 | |
| | ML-1159 | Chamber | GTH-1000-60-CP-AR1( | T:-60 to 100°C | GF | 2023/8/31 | 2024/9/30 | |
| V | ML-257 | Multimeter | 34401A | DCV：0.1,1,10,100,1000V; DCI：0.01,0.1,1,2,3A | Agilent | 2024/1/2 | 2025/2/2 | |
| V | ML-995 | Electronic Balance | UX1020H | 0.1-200 gf(TAF) 0.1-1000 gf | SHIMADZU | 2024/1/8 | 2025/2/8 | |
| | ML-1035 | Electronic Balance | JWI-700W | 0.01~30kg | JADEVER | 2023/5/31 | 2024/6/30 | |
| | ML-1169 | Electronic Balance | JWI-700W | 1~60kg | JADEVER | 2023/5/11 | 2024/6/11 | |
| | ML-1164 | Data Logger | LR8514 | 15~35 ℃; 30~80 %RH | HIOKI | 2023/4/14 | 2024/5/14 | |
| V | ML-551 | Data Logger | 313 | 15~35 ℃; 30~80 %RH | CENTER | 2023/7/30 | 2024/8/30 | |
| | **T.3 Vibration** | | | | | | | |
| V | ML-233 | Vibration | KD-9363-EM-300F2K-30N80 | F:2~2000Hz G:0.2~8G | King Design | 2023/7/24 | 2024/8/24 | |
| | ML-1161 | Vibration | KD-9363-EM5000F2K-76N800 | F:2~2000Hz G:0.2~8G | King Design | 2023/5/16 | 2024/6/16 | |
| V | ML-257 | Multimeter | 34401A | DCV：0.1,1,10,100,1000V; DCI：0.01,0.1,1,2,3A | Agilent | 2024/1/2 | 2025/2/2 | |
| V | ML-995 | Electronic Balance | UX1020H | 0.1-200 gf(TAF) 0.1-1000 gf | SHIMADZU | 2024/1/8 | 2025/2/8 | |
| | ML-1035 | Electronic Balance | JWI-700W | 0.01~30kg | JADEVER | 2023/5/31 | 2024/6/30 | |
| | ML-1169 | Electronic Balance | JWI-700W | 1~60kg | JADEVER | 2023/5/11 | 2024/6/11 | |
| | ML-1163 | Data Logger | LR8514 | 15~35 ℃; 30~80 %RH | HIOKI | 2023/4/14 | 2024/5/14 | |
| V | ML-1152 | Data Logger | LR-8514 | 15~35 ℃; 30~80 %RH | HIOKI | 2023/4/21 | 2024/5/21 | |
| | **T.4 Shock** | | | | | | | |
| V | ML-056 | Shock | DP-1200-25 | G:10~500G | King Design | 2023/7/24 | 2024/8/24 | |
| | ML-1160 | Shock | KingDesign / DP-1200-100 | (3~20)ms, (7~150)g | King Design | 2023/5/16 | 2024/6/16 | |
| V | ML-257 | Multimeter | 34401A | DCV：0.1,1,10,100,1000V; DCI：0.01,0.1,1,2,3A | Agilent | 2024/1/2 | 2025/2/2 | |
| V | ML-995 | Electronic Balance | UX1020H | 0.1-200 gf(TAF) 0.1-1000 gf | SHIMADZU | 2024/1/8 | 2025/2/8 | |
| | ML-1035 | Electronic Balance | JWI-700W | 0.01~30kg | JADEVER | 2023/5/31 | 2024/6/30 | |
| | ML-1169 | Electronic Balance | JWI-700W | 1~60kg | JADEVER | 2023/5/11 | 2024/6/11 | |
| | ML-1163 | Data Logger | LR8514 | 15~35 ℃; 30~80 %RH | HIOKI | 2023/4/14 | 2024/5/14 | |
| V | ML-551 | Data Logger | 313 | 15~35 ℃; 30~80 %RH | CENTER | 2023/7/30 | 2024/8/30 | |
| | **T.5 External Short Circuit** | | | | | | | |
| V | ML-894 | Battery Hitester | BT3562 | 10mΩ ~ 3kΩ 0-59V | HIOKI | 2023/4/14 | 2024/5/14 | |
| V | ML-257 | Multimeter | 34401A | DCV：0.1,1,10,100,1000V; DCI：0.01,0.1,1,2,3A | Agilent | 2024/1/2 | 2025/2/2 | |
| V | ML-459 | Data Acquisition | MX100-E-1D | 1-100 Vdc, 0 to 200°C | Yokogawa | 2023/6/30 | 2024/7/30 | |
| V | ML-460 | Data Acquisition | MX100-E-1D | 1-100 Vdc, 0 to 200°C | Yokogawa | 2023/6/30 | 2024/7/30 | |
| | ML-1153 | Data Acquisition | LR-8450 | 1-100 Vdc, 0 to 500°C | HIOKI | 2023/4/27 | 2024/5/27 | |
| | ML-1159 | Chamber | GTH-1000-60-CP-AR1( | T:-60 to 100°C | GF | 2023/8/31 | 2024/9/30 | |
| | ML-1164 | Data Logger | LR8514 | 15~35 ℃; 30~80 %RH | HIOKI | 2023/4/14 | 2024/5/14 | |

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Revised Date: 2024-02-06

**Test Instruments Reference List**

| Used | Instrument ID | Instrument Name | Type | Range of use | Manufacturer | Calibration Date_Last | Calibration Date_Next | Remarks |
|---|---|---|---|---|---|---|---|---|
| | ML-521 | Oven | 9031 | 30~70 °C | YEOW LONG | 2023/8/21 | 2024/9/21 | |
| V | ML-1023 | Oven | GCT-125-20-TR-SP | -20~100 °C | GF | 2023/7/25 | 2024/8/25 | |
| V | ML-1083 | Data Logger | 1161 | 15~35 ℃; 30~80 %RH | TES | 2023/9/15 | 2024/10/15 | |
| | **T.6 Impact / Crush** | | | | | | | |
| V | ML-458 | Data Acquisition | XL122-D | 1-50 Vdc, 0 to 200°C | Yokogawa | 2023/4/21 | 2024/5/21 | |
| | ML-1153 | Data Acquisition | LR-8450 | 1-100 Vdc, 0 to 500°C | HIOKI | 2023/4/27 | 2024/5/27 | |
| | ML-1016 | Impact Tester | KD-2054E | 9.1kg 15.8mm H:610mm | King Design | 2023/3/23 | 2024/4/23 | |
| | ML-553 | Crush Tester | BCT-01 | 1.32~10.2 ton<br>Speed : 10, 15, 20mm/s | Simplo | 2023/3/23 | 2024/4/23 | |
| V | ML-866 | Crush Tester | M0654 | 1327kg 15mm 2-5 Vdc,<br>10 to 200°C | JYI SHENG | 2023/3/23 | 2024/4/23 | |
| V | ML-1083 | Data Logger | 1161 | 15~35 ℃; 30~80 %RH | TES | 2023/9/15 | 2024/10/15 | |
| | ML-459 | Data Acquisition | MX100-E-1D | 1-100 Vdc, 0 to 200°C | Yokogawa | 2023/7/30 | 2024/8/30 | |
| | **T.7 Overcharge** | | | | | | | |
| | ML-482 | Programmable DC Source | DS10014 | 1-100Vdc, 0.3-14.4A | MOTECH | 2023/4/21 | 2024/5/21 | |
| | ML-489 | Programmable DC Source | DS10014 | 1-100Vdc, 0.3-14.4A | MOTECH | 2023/4/21 | 2024/5/21 | |
| | ML-904 | Programmable DC Source | DS10014-MO | 1-100Vdc, 0.3-14.4A | B&K Precision | 2023/4/21 | 2024/5/21 | |
| | ML-487 | Programmable DC Source | DS6024 | 1-60 Vdc, 0.3-24A | MOTECH | 2023/4/21 | 2024/5/21 | |
| | ML-488 | Programmable DC Source | DS6024 | 1-60 Vdc, 0.3-24A | MOTECH | 2023/4/21 | 2024/5/21 | |
| | ML-490 | Programmable DC Source | DS6024 | 1-60 Vdc, 0.3-24A | MOTECH | 2023/5/24 | 2024/6/24 | |
| | ML-1157 | Learning | 17020E | 200V, 400A, 40 Kw | Chroma | 2023/5/19 | 2024/6/19 | |
| | ML-1153 | Data Acquisition | LR-8450 | 1-100 Vdc, 0 to 500°C | HIOKI | 2023/4/27 | 2024/5/27 | |
| | ML-1159 | Chamber | GTH-1000-60-CP-AR1( | T:-60 to 100°C | GF | 2023/8/31 | 2024/9/30 | |
| | ML-1164 | Data Logger | LR8514 | 15~35 ℃; 30~80 %RH | HIOKI | 2023/4/14 | 2024/5/14 | |
| V | ML-1083 | Data Logger | 1161 | 15~35 ℃; 30~80 %RH | TES | 2023/9/15 | 2024/10/15 | |
| | ML-459 | Data Acquisition | MX100-E-1D | 1-100 Vdc, 0 to 200°C | Yokogawa | 2023/6/30 | 2024/7/30 | |
| | ML-460 | Data Acquisition | MX100-E-1D | 1-100 Vdc, 0 to 200°C | Yokogawa | 2023/6/30 | 2024/7/30 | |
| V | ML-918 | Overcharge & Forced discharge tester | T901 | Charge: 0.2~29.4Vdc, 0.2~18A<br>Discharge: 3~19.5Vdc 0.1~11A | SMP | 2023/4/21 | 2024/5/21 | |
| | **T.8 Forced Discharge** | | | | | | | |
| | ML-894 | Battery Hitester | BT3562 | 10mΩ ~ 3kΩ 0-59V | HIOKI | 2023/4/14 | 2024/5/14 | |
| | ML-132 | Electronic Load | 3311C | 60V,60A, 300W | Prodigit | 2024/1/15 | 2025/2/15 | |
| | ML-133 | Electronic Load | 3311C | 60V,60A, 300W | Prodigit | 2024/1/15 | 2025/2/15 | |
| | ML-136 | Electronic Load | 3311C | 60V,60A, 300W | Prodigit | 2024/1/15 | 2025/2/15 | |
| | ML-192 | Electronic Load | 3311C | 60V,60A, 300W | Prodigit | 2024/1/15 | 2025/2/15 | |
| | ML-269 | Electronic Load | 3311C | 60V,60A, 300W | Prodigit | 2024/1/15 | 2025/2/15 | |
| | ML-532 | DC Electronic Load | 33511-01 | 120V, 99.64A | Prodigit | 2023/5/24 | 2024/6/24 | |
| | ML-482 | Programmable DC Source | DS10014 | 1-100Vdc, 0.3-14.4A | MOTECH | 2023/4/21 | 2024/5/21 | |
| | ML-489 | Programmable DC Source | DS10014 | 1-100Vdc, 0.3-14.4A | MOTECH | 2023/4/21 | 2024/5/21 | |
| | ML-904 | Programmable DC Source | DS10014-MO | 1-100Vdc, 0.3-14.4A | B&K Precision | 2023/4/21 | 2024/5/21 | |
| | ML-487 | Programmable DC Source | DS6024 | 1-60 Vdc, 0.3-24A | MOTECH | 2023/4/21 | 2024/5/21 | |
| | ML-488 | Programmable DC Source | DS6024 | 1-60 Vdc, 0.3-24A | MOTECH | 2023/4/21 | 2024/5/21 | |
| | ML-490 | Programmable DC Source | DS6024 | 1-60 Vdc, 0.3-24A | MOTECH | 2023/5/24 | 2024/6/24 | |
| V | ML-1083 | Data Logger | 1161 | 15~35 ℃; 30~80 %RH | TES | 2023/9/15 | 2024/10/15 | |
| | ML-459 | Data Acquisition | MX100-E-1D | 1-100 Vdc, 0 to 200°C | Yokogawa | 2023/6/30 | 2024/7/30 | |
| | ML-460 | Data Acquisition | MX100-E-1D | 1-100 Vdc, 0 to 200°C | Yokogawa | 2023/6/30 | 2024/7/30 | |
| V | ML-918 | Overcharge & Forced discharge tester | T901 | Charge: 0.2~29.4Vdc, 0.2~18A<br>Discharge: 3~19.5Vdc 0.1~11A | SMP | 2023/4/21 | 2024/5/21 | |

Note 1: DC Voltage: 0.1-1000V; AC Voltage: 0.5-700V at 60Hz, 1kHz; Resistance: 10Ω-10MΩ; DC Current: 0.1mA-3A; AC Current: 0.01-3A at 60Hz, 0.01-1A, at 1kHz.

# **报告结束 End of Test Report**

Form NO. W11-002-B07