

中国认可
检测
TESTING
CNAS L0748



230014349552



NO.1123110549

检测报告

Test Report

样品名称： 锂离子电池组/二次锂离子電池組 BA28 3.91V 4900mAh
19.16Wh(Rated) 5000mAh 19.55Wh(Typical)

Name of Sample: Rechargeable Li-ion Battery BA28 3.91V 4900mAh
19.16Wh(Rated) 5000mAh 19.55Wh(Typical)

委托单位： 欣旺达电子股份有限公司

Consignor: SUNWODA Electronic Co., Ltd.



上海化工院检测有限公司

Shanghai Institute of Chemical Industry Testing Co., Ltd.

上海化工院检测有限公司
检测报告

Shanghai Institute of Chemical Industry
Testing Co., Ltd. Test Report

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样品名称 Name of Sample	中文 Chinese	锂离子电池组/二次锂离子電池組 BA28 3.91V 4900mAh 19.16Wh(Rated) 5000mAh 19.55Wh(Typical)	
	英文 English	Rechargeable Li-ion Battery BA28 3.91V 4900mAh 19.16Wh(Rated) 5000mAh 19.55Wh(Typical)	
样品编号 Sample No.	1123110549		
委托单位 Consignor	欣旺达电子股份有限公司 SUNWODA Electronic Co., Ltd.		
生产单位 Manufacturer	深圳欣旺达智能科技有限公司第一分公司 Shenzhen Sunwoda Intelligence Technology Co., Ltd. First Branch		
检测方法 Test method	联合国《试验和标准手册》 ST/SG/AC.10/11/Rev.7&Amend.1 38.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3		
判定标准 Criterion	联合国《试验和标准手册》 ST/SG/AC.10/11/Rev.7&Amend.1 38.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3		
样品外观 Appearance	黑色, 银色双色 铝塑外壳 Black and silvery Aluminum-plastics shell		
样品接受日期 Accepted Date	2023-11-22	检测起迄日期 Test Date	2023-11-27 ~ 2023-12-17
检测项目 Test Items	高度模拟; 热测试; 振动; 冲击; 外短路; 挤压; 过充电; 强制放电 Altitude simulation, Thermal test, Vibration, Shock, External short circuit, Crush, Overcharge, Forced discharge		
检测结论 Conclusion	经检测, 该样品符合联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3标准要求。 The sample has passed the test items of UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 生效日期(Date): 2023-12-18		
备注 Comment	可充电单电芯电池Rechargeable Single Cell Battery. /		
委托单位地址 Consignor Address	/	邮政编码 Post Code	518108

批准
Approver:
职务
Title:

许尧

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傅廷

电化学测试部部长(Head of Electrochemical Testing Department)



上海化工院检测有限公司 检测报告

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序号 No.	检测项目名称 Name of Test Items	标准要求或标准条款号 Standard requirement or The Clause Number of Standard	检测结果 Test Result	本项结论 Conclusion	备注 Remark	
1	高度模拟 Altitude simulation	联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.1 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.1	见附表 1 See Appendix 1	合格 Passed	/	
2	热测试 Thermal test	联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.2 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.2	见附表 2 See Appendix 2	合格 Passed	/	
3	振动 Vibration	联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.3	见附表 3 See Appendix 3	合格 Passed	/	
4	冲击 Shock	联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.4 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.4	见附表 4 See Appendix 4	合格 Passed	/	
5	外短路 External short circuit	联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.5 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.5	见附表 5 See Appendix 5	合格 Passed	/	
6	挤压 Crush	联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.6 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.6	见附表 6 See Appendix 6	合格 Passed	/	
7	过充电 Overcharge	联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.7 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.7	见附表 7 See Appendix 7	合格 Passed	/	
8	强制放电 Forced discharge	联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.8 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.8	见附表 8 See Appendix 8	合格 Passed	/	
检测环境条件 Test Environment Condition		环境温度:20℃-23℃;环境湿度:/% Ambient temperature:20℃-23℃;Ambient humidity:/%				
分包检验情况 Subcontracted Test Condition		检测项目 Test Item	/			
		分包实验室 Subcontracted Laboratory	名称 Name	/	邮编 Post Code	/
		地址 Address	/	电话 Tel	/	

上海化工院检测有限公司 检测报告-附表1

Shanghai Institute of Chemical Industry
Testing Co., Ltd. Test Report—Appendix 1

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序号 No.	1	检测项目名称 Name of Test Items		高度模拟 Altitude simulation				
	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss %	剩余电压 Residual OCV %	其他现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	1CYC完全充电 1CYC Fully charged	69.1283	4.45	69.1289	4.45	0.00	100.00	O
002	1CYC完全充电 1CYC Fully charged	68.9611	4.45	68.9613	4.45	0.00	100.00	O
003	1CYC完全充电 1CYC Fully charged	69.0193	4.46	69.0192	4.45	0.00	99.78	O
004	1CYC完全充电 1CYC Fully charged	68.9025	4.46	68.9024	4.45	0.00	99.78	O
005	1CYC完全充电 1CYC Fully charged	69.0273	4.46	69.0269	4.45	0.00	99.78	O
006	25CYC完全充电 25CYC Fully charged	69.1585	4.46	69.1572	4.46	0.00	100.00	O
007	25CYC完全充电 25CYC Fully charged	69.1016	4.42	69.1004	4.42	0.00	100.00	O
008	25CYC完全充电 25CYC Fully charged	69.0835	4.46	69.0824	4.46	0.00	100.00	O
009	25CYC完全充电 25CYC Fully charged	68.9451	4.46	68.9432	4.46	0.00	100.00	O
010	25CYC完全充电 25CYC Fully charged	69.1864	4.46	69.1849	4.46	0.00	100.00	O
以下空白	This space intentionally left blank							

备注: L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。
 Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage, No Venting,
 No Disassembly, No Rupture & No Fire.

上海化工院检测有限公司
检测报告 - 附表2

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序号 No.	2	检测项目名称 Name of Test Items		热测试 Thermal test				
		试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他 现象 Other Event
样品 编号 Sample No.	样品状态 Sample Status	质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	1CYC完全充电 1CYC Fully charged	69.1289	4.45	69.1156	4.36	0.02	97.98	0
002	1CYC完全充电 1CYC Fully charged	68.9613	4.45	68.9477	4.37	0.02	98.20	0
003	1CYC完全充电 1CYC Fully charged	69.0192	4.45	69.0059	4.37	0.02	98.20	0
004	1CYC完全充电 1CYC Fully charged	68.9024	4.45	68.8888	4.37	0.02	98.20	0
005	1CYC完全充电 1CYC Fully charged	69.0269	4.45	69.0137	4.37	0.02	98.20	0
006	25CYC完全充电 25CYC Fully charged	69.1572	4.46	69.1428	4.38	0.02	98.21	0
007	25CYC完全充电 25CYC Fully charged	69.1004	4.42	69.0859	4.36	0.02	98.64	0
008	25CYC完全充电 25CYC Fully charged	69.0824	4.46	69.0677	4.38	0.02	98.21	0
009	25CYC完全充电 25CYC Fully charged	68.9432	4.46	68.9288	4.38	0.02	98.21	0
010	25CYC完全充电 25CYC Fully charged	69.1849	4.46	69.1702	4.38	0.02	98.21	0
以下空白	This space intentionally left blank							

备注：L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。
Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage, No Venting, No Disassembly, No Rupture & No Fire.

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检测报告 - 附表3

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序号 No.	3	检测项目名称 Name of Test Items	振动 Vibration					
样品 编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他 现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	1CYC完全充电 1CYC Fully charged	69.1156	4.36	69.1248	4.36	0.00	100.00	O
002	1CYC完全充电 1CYC Fully charged	68.9477	4.37	68.9571	4.37	0.00	100.00	O
003	1CYC完全充电 1CYC Fully charged	69.0059	4.37	69.0149	4.37	0.00	100.00	O
004	1CYC完全充电 1CYC Fully charged	68.8888	4.37	68.8973	4.37	0.00	100.00	O
005	1CYC完全充电 1CYC Fully charged	69.0137	4.37	69.0223	4.37	0.00	100.00	O
006	25CYC完全充电 25CYC Fully charged	69.1428	4.38	69.1527	4.38	0.00	100.00	O
007	25CYC完全充电 25CYC Fully charged	69.0859	4.36	69.0964	4.36	0.00	100.00	O
008	25CYC完全充电 25CYC Fully charged	69.0677	4.38	69.0779	4.38	0.00	100.00	O
009	25CYC完全充电 25CYC Fully charged	68.9288	4.38	68.9388	4.38	0.00	100.00	O
010	25CYC完全充电 25CYC Fully charged	69.1702	4.38	69.1808	4.38	0.00	100.00	O
以下空白	This space intentionally left blank							
备注: L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。 Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage, No Venting, No Disassembly, No Rupture & No Fire.								

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检测报告 - 附表4

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序号 No.	4	检测项目名称 Name of Test Items	冲击 Shock					
样品 编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他 现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	1CYC完全充电 1CYC Fully charged	69.1248	4.36	69.1233	4.36	0.00	100.00	O
002	1CYC完全充电 1CYC Fully charged	68.9571	4.37	68.9562	4.36	0.00	99.77	O
003	1CYC完全充电 1CYC Fully charged	69.0149	4.37	69.0086	4.37	0.01	100.00	O
004	1CYC完全充电 1CYC Fully charged	68.8973	4.37	68.8914	4.36	0.01	99.77	O
005	1CYC完全充电 1CYC Fully charged	69.0223	4.37	69.0186	4.37	0.01	100.00	O
006	25CYC完全充电 25CYC Fully charged	69.1527	4.38	69.1504	4.37	0.00	99.77	O
007	25CYC完全充电 25CYC Fully charged	69.0964	4.36	69.0925	4.36	0.01	100.00	O
008	25CYC完全充电 25CYC Fully charged	69.0779	4.38	69.0715	4.37	0.01	99.77	O
009	25CYC完全充电 25CYC Fully charged	68.9388	4.38	68.9371	4.38	0.00	100.00	O
010	25CYC完全充电 25CYC Fully charged	69.1808	4.38	69.1781	4.37	0.00	99.77	O
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备注: L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。
 Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage, No Venting,
 No Disassembly, No Rupture & No Fire.

上海化工院检测有限公司

检测报告 - 附表5

Shanghai Institute of Chemical Industry
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序号 No.	5	检测项目名称 Name of Test Items	外短路 External short circuit
样品编号 Sample No.	样品状态 Sample Status	样品表面最高温度 Max. External Temperature /°C	其他现象 Other Event
001	1CYC完全充电 1CYC Fully charged	56.5	O
002	1CYC完全充电 1CYC Fully charged	56.1	O
003	1CYC完全充电 1CYC Fully charged	56.2	O
004	1CYC完全充电 1CYC Fully charged	56.9	O
005	1CYC完全充电 1CYC Fully charged	56.8	O
006	25CYC完全充电 25CYC Fully charged	56.6	O
007	25CYC完全充电 25CYC Fully charged	57.8	O
008	25CYC完全充电 25CYC Fully charged	57.5	O
009	25CYC完全充电 25CYC Fully charged	57.7	O
010	25CYC完全充电 25CYC Fully charged	56.5	O
以下空白	This space intentionally left blank		
备注: D-解体 R-破裂 F-起火 O-无解体、无起火、无破裂。 Note: D-Disassembly R-Ruptur F-Fire O-No Disassembly,No Fire & No Rupture.			

上海化工院检测有限公司
 检测报告-附表6
 Shanghai Institute of Chemical Industry
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序号 No.	6	检测项目名称 Name of Test Items	挤压 Crush
样品编号 Sample No.	样品状态 Sample Status	样品表面最高温度 Max. External Temperature /°C	其他现象 Other Event
011	1CYC 50%容量 1CYC 50% Capacity	19.4	O
012	1CYC 50%容量 1CYC 50% Capacity	19.0	O
013	1CYC 50%容量 1CYC 50% Capacity	19.2	O
014	1CYC 50%容量 1CYC 50% Capacity	19.4	O
015	1CYC 50%容量 1CYC 50% Capacity	19.2	O
016	25CYC 50%容量 25CYC 50% Capacity	19.4	O
017	25CYC 50%容量 25CYC 50% Capacity	19.5	O
018	25CYC 50%容量 25CYC 50% Capacity	19.5	O
019	25CYC 50%容量 25CYC 50% Capacity	19.6	O
020	25CYC 50%容量 25CYC 50% Capacity	19.3	O
以下空白	This space intentionally left blank		
备注: D-解体 F-起火 O-无解体、无起火。 Note: D-Disassembly F-Fire O-No Disassembly & No Fire.			

上海化工院检测有限公司

检测报告-附表7

Shanghai Institute of Chemical Industry
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序号 No.	7	检测项目名称 Name of Test Items	过充电 Overcharge
样品编号 Sample No.	样品状态 Sample Status	其他现象 Other Event	
021	1CYC完全充电 1CYC Fully charged		O
022	1CYC完全充电 1CYC Fully charged		O
023	1CYC完全充电 1CYC Fully charged		O
024	1CYC完全充电 1CYC Fully charged		O
025	25CYC完全充电 25CYC Fully charged		O
026	25CYC完全充电 25CYC Fully charged		O
027	25CYC完全充电 25CYC Fully charged		O
028	25CYC完全充电 25CYC Fully charged		O
以下空白	This space intentionally left blank		
备注: D-解体 F-起火 O-无解体、无起火。 Note: D-Disassembly F-Fire O-No Disassembly & No Fire.			

上海化工院检测有限公司

检测报告 - 附表8

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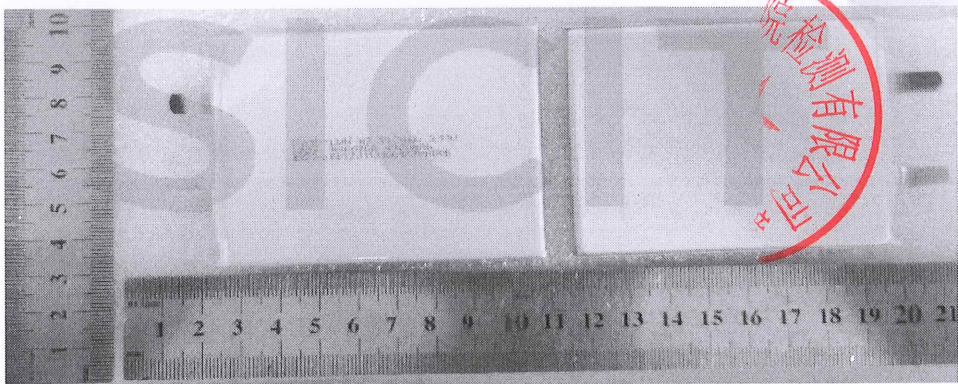
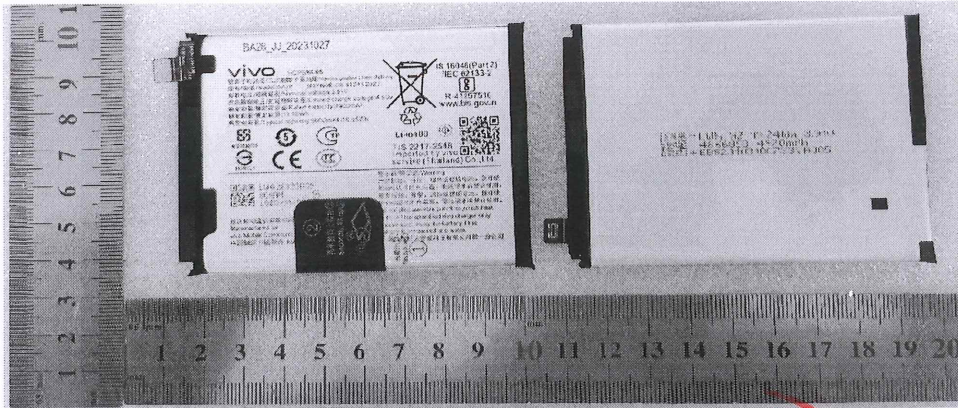
序号 No.	8	检测项目名称 Name of Test Items	强制放电 Forced discharge
样品编号 Sample No.	样品状态 Sample Status	其他现象 Other Event	
029	1CYC完全放电 1CYC Fully discharged		O
030	1CYC完全放电 1CYC Fully discharged		O
031	1CYC完全放电 1CYC Fully discharged		O
032	1CYC完全放电 1CYC Fully discharged		O
033	1CYC完全放电 1CYC Fully discharged		O
034	1CYC完全放电 1CYC Fully discharged		O
035	1CYC完全放电 1CYC Fully discharged		O
036	1CYC完全放电 1CYC Fully discharged		O
037	1CYC完全放电 1CYC Fully discharged		O
038	1CYC完全放电 1CYC Fully discharged		O
039	25CYC完全放电 25CYC Fully discharged		O
040	25CYC完全放电 25CYC Fully discharged		O
041	25CYC完全放电 25CYC Fully discharged		O
042	25CYC完全放电 25CYC Fully discharged		O
043	25CYC完全放电 25CYC Fully discharged		O
044	25CYC完全放电 25CYC Fully discharged		O
045	25CYC完全放电 25CYC Fully discharged		O
046	25CYC完全放电 25CYC Fully discharged		O
047	25CYC完全放电 25CYC Fully discharged		O
048	25CYC完全放电 25CYC Fully discharged		O

备注: D-解体 F-起火 O-无解体、无起火。
Note: D-Disassembly F-Fire O-No Disassembly & No Fire.

上海化工院检测有限公司
 检测报告-附图
 Shanghai Institute of Chemical Industry
 Testing Co., Ltd. Test Report—Appendix

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名称 - LWN H2 19.24Wh 3.91V
 型号 - 486685B 4920mAh
 料号 - EBS23103100733YF005

vivo 1ICP5/66/85
 锂离子電池組/二次鋰離子電池組/Rechargeable Li-ion Battery
 型号/型號/Model:BA28 执行标准:GB 31241-2022
 标称电压/標稱電壓/Nominal voltage:3.91V
 充电限制电压/充電限制電壓/Limited charge voltage:4.50V
 額定容量/額定電容量/Rated capacity:4900mAh
 額定能量/額定能量:19.16Wh
 典型电容量/Typical capacity:5000mAh/19.55Wh



报告结束