



NO.1124060572

检 测 报 告

Test Report

样品名称：可充式锂离子电池组 R2416-4S2P-MMBK 14.4V Nominal:
6.4Ah 92.16Wh Rated: 5.8Ah 83.52Wh

Name of Sample: Rechargeable Lithium-ion Battery Pack
R2416-4S2P-MMBK 14.4V Nominal: 6.4Ah 92.16Wh Rated:
5.8Ah 83.52Wh

委托单位：广州明美新能源股份有限公司

Consignor: TWS Technology (Guangzhou) Limited

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
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样品名称 Name of Sample	中文 Chinese	可充式锂离子电池组 R2416-4S2P-MMBK 14.4V Nominal: 6.4Ah 92.16Wh Rated: 5.8Ah 83.52Wh	
	英文 English	Rechargeable Lithium-ion Battery Pack R2416-4S2P-MMBK 14.4V Nominal: 6.4Ah 92.16Wh Rated: 5.8Ah 83.52Wh	
样品编号 Sample No.	1124060572		
委托单位 Consignor	广州明美新能源股份有限公司 TWS Technology (Guangzhou) Limited		
生产单位 Manufacturer	广州明美新能源股份有限公司 TWS Technology (Guangzhou) Limited		
检测方法 Test method	联合国《试验和标准手册》 ST/SG/AC.10/11/Rev.8 38.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8 Section 38.3		
判定标准 Criterion	联合国《试验和标准手册》 ST/SG/AC.10/11/Rev.8 38.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8 Section 38.3		
样品外观 Appearance	蓝色 塑料薄膜外壳 Blue Plastic film shell		
样品接受日期 Accepted Date	2024-06-24	检测起迄日期 Test Date	2024-06-27 ~ 2024-08-05
检测项目 Test Items	高度模拟;热测试;振动;冲击;外短路;撞击;过充电;强制放电 Altitude simulation,Thermal test,Vibration,Shock,External short circuit,Impact,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.8 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.8 Section 38.3 生效日期(Date): 2024-08-05		
备注 Comment	可充电锂电池组Rechargeable Lithium Battery.		
委托单位地址 Consignor Address	/		邮政编码 Post Code /

批准
Approver:
职务
Title:

许勉

审核
Checker:

丁中

编制
Compiler:

傅佳

新能源安全部部长(Head of New Energy Safety 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.8 38.3 试验T.1 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8 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.8 38.3 试验T.2 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8 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.8 38.3 试验T.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8 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.8 38.3 试验T.4 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8 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.8 38.3 试验T.5 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8 Section 38.3 Test T.5	见附表 5 See Appendix 5	合格 Passed	/
6	撞击 Impact	联合国《试验和标准手册》ST/SG/AC.10/11/Rev.8 38.3 试验T.6 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8 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.8 38.3 试验T.7 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8 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.8 38.3 试验T.8 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.8 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:21℃-25℃;环境湿度:/% Ambient temperature:21℃-25℃;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

检测报告-附表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	407.08	16.46	407.04	16.44	0.01	99.88	O
002	1CYC完全充电 1CYC Fully charged	406.49	16.46	406.43	16.45	0.01	99.94	O
003	1CYC完全充电 1CYC Fully charged	406.69	16.46	406.65	16.45	0.01	99.94	O
004	1CYC完全充电 1CYC Fully charged	406.81	16.46	406.80	16.46	0.00	100.00	O
005	25CYC完全充电 25CYC Fully charged	406.58	16.46	406.56	16.44	0.00	99.88	O
006	25CYC完全充电 25CYC Fully charged	406.42	16.47	406.40	16.45	0.00	99.88	O
007	25CYC完全充电 25CYC Fully charged	406.65	16.46	406.64	16.46	0.00	100.00	O
008	25CYC完全充电 25CYC Fully charged	406.34	16.46	406.28	16.45	0.01	99.94	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.

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					
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	407.04	16.44	407.07	16.40	0.00	99.76	O
002	1CYC完全充电 1CYC Fully charged	406.43	16.45	406.50	16.40	0.00	99.70	O
003	1CYC完全充电 1CYC Fully charged	406.65	16.45	406.68	16.40	0.00	99.70	O
004	1CYC完全充电 1CYC Fully charged	406.80	16.46	406.86	16.40	0.00	99.64	O
005	25CYC完全充电 25CYC Fully charged	406.56	16.44	406.61	16.40	0.00	99.76	O
006	25CYC完全充电 25CYC Fully charged	406.40	16.45	406.44	16.40	0.00	99.70	O
007	25CYC完全充电 25CYC Fully charged	406.64	16.46	406.70	16.40	0.00	99.64	O
008	25CYC完全充电 25CYC Fully charged	406.28	16.45	406.33	16.40	0.00	99.70	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.

检测报告-附表3

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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	407.12	16.40	407.10	16.39	0.00	99.94	O
002	1CYC完全充电 1CYC Fully charged	406.48	16.39	406.47	16.39	0.00	100.00	O
003	1CYC完全充电 1CYC Fully charged	406.66	16.39	406.63	16.39	0.01	100.00	O
004	1CYC完全充电 1CYC Fully charged	406.82	16.39	406.77	16.38	0.01	99.94	O
005	25CYC完全充电 25CYC Fully charged	406.53	16.39	406.49	16.39	0.01	100.00	O
006	25CYC完全充电 25CYC Fully charged	406.45	16.40	406.38	16.39	0.02	99.94	O
007	25CYC完全充电 25CYC Fully charged	406.74	16.37	406.72	16.36	0.00	99.94	O
008	25CYC完全充电 25CYC Fully charged	406.33	16.39	406.31	16.38	0.00	99.94	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7

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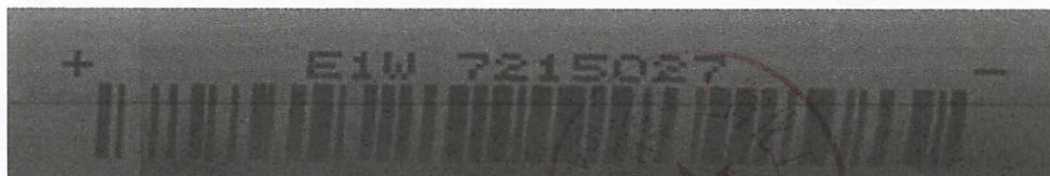
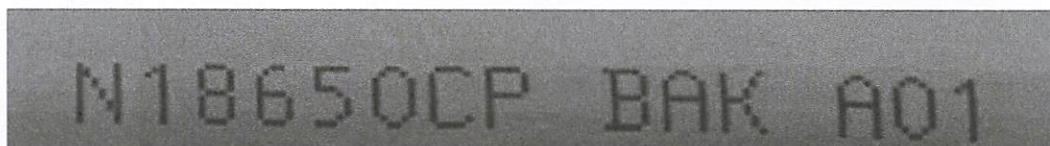
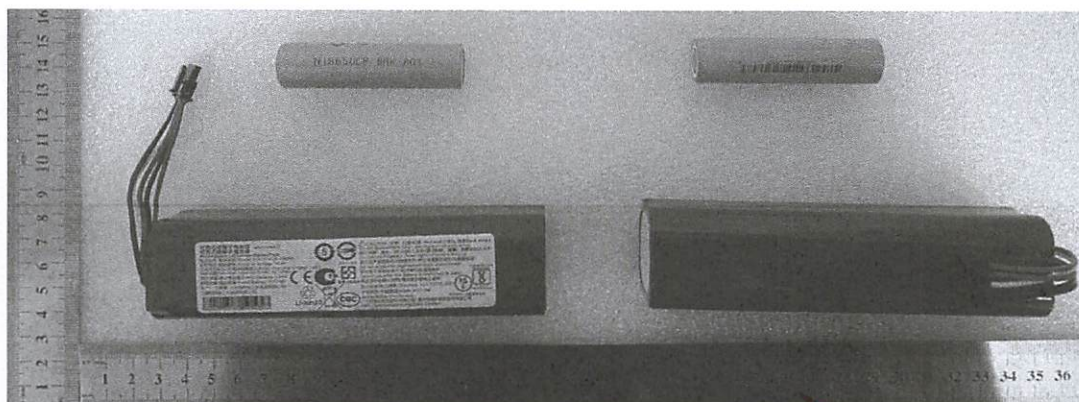
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上海化工院检测有限公司
检测报告-附表8
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序号 No.	8	检测项目名称 Name of Test Items	强制放电 Forced discharge
样品编号 Sample No.	样品状态 Sample Status	其他现象 Other Event	
027	1CYC完全放电 1CYC Fully discharged	O	
028	1CYC完全放电 1CYC Fully discharged	O	
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	25CYC完全放电 25CYC Fully discharged	O	
038	25CYC完全放电 25CYC 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	
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.			



报告结束