



NO.1123120640

检 测 报 告

Test Report

样品名称： 可充电锂离子聚合物电池 HBA5020AA 3.87V
4900mAh/18.963Wh (Rated) 5000mAh/19.35Wh (Typical)

Name of Sample: Rechargeable Li-ion Polymer Battery HBA5020AA 3.87V
4900mAh/18.963Wh (Rated) 5000mAh/19.35Wh (Typical)

委托单位： 湖南高远电池有限公司

Consignor: HUNAN GAUYUAN BATTERY 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
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样品名称 Name of Sample	中文 Chinese	可充电锂离子聚合物电池 HBA5020AA 3.87V 4900mAh/18.963Wh(Rated) 5000mAh/19.35Wh(Typical)		
	英文 English	Rechargeable Li-ion Polymer Battery HBA5020AA 3.87V 4900mAh/18.963Wh(Rated) 5000mAh/19.35Wh(Typical)		
样品编号 Sample No.	1123120640			
委托单位 Consignor	湖南高远电池有限公司 HUNAN GAOYUAN BATTERY Co., Ltd.			
生产单位 Manufacturer	湖南高远电池有限公司 HUNAN GAOYUAN BATTERY Co., Ltd.			
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	2023-12-21	检测起迄日期 Test Date	2023-12-28 ~ 2024-01-25	
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): 2024-01-25			
备注 Comment	可充电单电芯电池Rechargeable Single Cell Battery. / (14)			
委托单位地址 Consignor Address	/		邮政编码 Post Code	511495

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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℃-21℃;环境湿度:/% Ambient temperature:20℃-21℃;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.	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	65.1308	4.41	65.1120	4.34	0.03	98.41	O
002	1CYC完全充电 1CYC Fully charged	65.3683	4.41	65.3549	4.34	0.02	98.41	O
003	1CYC完全充电 1CYC Fully charged	65.1580	4.41	65.1418	4.34	0.02	98.41	O
004	1CYC完全充电 1CYC Fully charged	65.0863	4.41	65.0678	4.34	0.03	98.41	O
005	1CYC完全充电 1CYC Fully charged	64.3695	4.42	64.3532	4.33	0.03	97.96	O
006	25CYC完全充电 25CYC Fully charged	64.9081	4.42	64.8975	4.34	0.02	98.19	O
007	25CYC完全充电 25CYC Fully charged	65.1302	4.43	65.1190	4.33	0.02	97.74	O
008	25CYC完全充电 25CYC Fully charged	65.4012	4.42	65.3889	4.34	0.02	98.19	O
009	25CYC完全充电 25CYC Fully charged	64.9635	4.41	64.9503	4.34	0.02	98.41	O
010	25CYC完全充电 25CYC Fully charged	65.0561	4.42	65.0429	4.34	0.02	98.19	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.

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	65.1120	4.34	65.1089	4.33	0.00	99.77	O
002	1CYC完全充电 1CYC Fully charged	65.3549	4.34	65.3505	4.34	0.01	100.00	O
003	1CYC完全充电 1CYC Fully charged	65.1418	4.34	65.1361	4.33	0.01	99.77	O
004	1CYC完全充电 1CYC Fully charged	65.0678	4.34	65.0620	4.34	0.01	100.00	O
005	1CYC完全充电 1CYC Fully charged	64.3532	4.33	64.3483	4.33	0.01	100.00	O
006	25CYC完全充电 25CYC Fully charged	64.8975	4.34	64.8937	4.34	0.01	100.00	O
007	25CYC完全充电 25CYC Fully charged	65.1190	4.33	65.1176	4.33	0.00	100.00	O
008	25CYC完全充电 25CYC Fully charged	65.3889	4.34	65.3878	4.33	0.00	99.77	O
009	25CYC完全充电 25CYC Fully charged	64.9503	4.34	64.9482	4.34	0.00	100.00	O
010	25CYC完全充电 25CYC Fully charged	65.0429	4.34	65.0367	4.33	0.01	99.77	O
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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	ICYC完全充电 ICYC Fully charged	65.1089	4.33	65.1063	4.33	0.00	100.00	O
002	ICYC完全充电 ICYC Fully charged	65.3505	4.34	65.3459	4.34	0.01	100.00	O
003	ICYC完全充电 ICYC Fully charged	65.1361	4.33	65.1299	4.33	0.01	100.00	O
004	ICYC完全充电 ICYC Fully charged	65.0620	4.34	65.0602	4.33	0.00	99.77	O
005	ICYC完全充电 ICYC Fully charged	64.3483	4.33	64.3436	4.33	0.01	100.00	O
006	25CYC完全充电 25CYC Fully charged	64.8937	4.34	64.8928	4.34	0.00	100.00	O
007	25CYC完全充电 25CYC Fully charged	65.1176	4.33	65.1164	4.32	0.00	99.77	O
008	25CYC完全充电 25CYC Fully charged	65.3878	4.33	65.3867	4.32	0.00	99.77	O
009	25CYC完全充电 25CYC Fully charged	64.9482	4.34	64.9447	4.33	0.01	99.77	O
010	25CYC完全充电 25CYC Fully charged	65.0367	4.33	65.0357	4.33	0.00	100.00	O
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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 /℃	其他现象 Other Event
001	1CYC完全充电 1CYC Fully charged	57.4	O
002	1CYC完全充电 1CYC Fully charged	57.5	O
003	1CYC完全充电 1CYC Fully charged	56.3	O
004	1CYC完全充电 1CYC Fully charged	57.3	O
005	1CYC完全充电 1CYC Fully charged	57.5	O
006	25CYC完全充电 25CYC Fully charged	57.5	O
007	25CYC完全充电 25CYC Fully charged	57.5	O
008	25CYC完全充电 25CYC Fully charged	57.6	O
009	25CYC完全充电 25CYC Fully charged	57.7	O
010	25CYC完全充电 25CYC Fully charged	56.6	O
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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.

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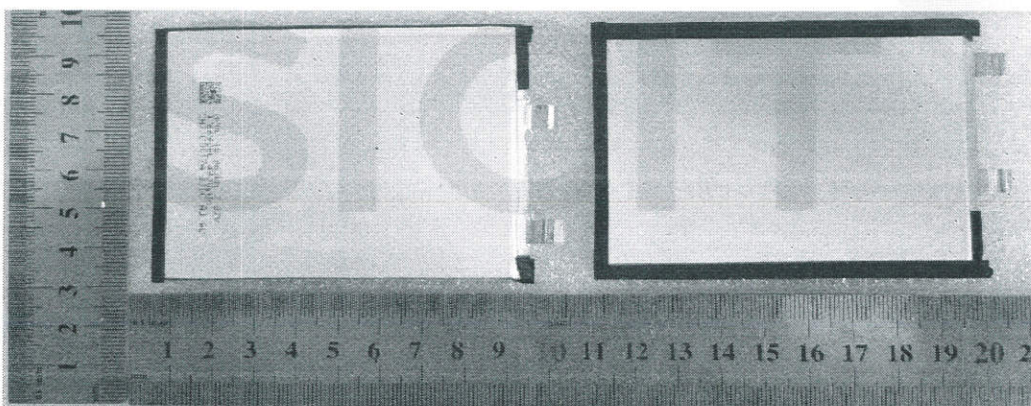
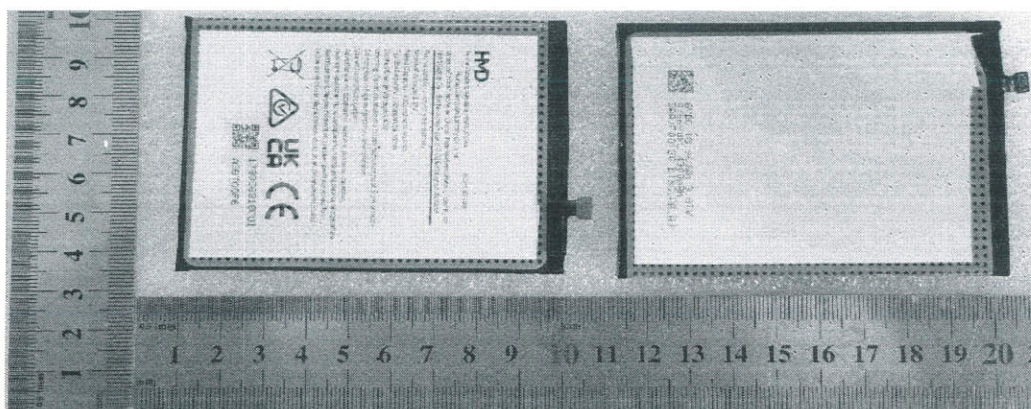
备注：D-解体 F-起火 O-无解体、无起火。
 Note: D-Disassembly F-Fire O-No Disassembly & No Fire.

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.			



Model/Modelo/Modèle:HBA5020AA
Hunan Gaoyuan Battery Co.,Ltd.

Nominal Voltage: 3.87V
Rated Capacity: 4900mAh/18.963Wh
Typical Capacity: 5000mAh/19.35Wh
Limited Charge Voltage: 4.45V

GYDC 18.963Wh 3.87V
476690PL 4900mAh
SAJJJC00174 BJEC AJAC



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