

检测概要
Test Summary

报告编号 Report No.	T8-20231117-X390	报告签发日期 Date of test report	2024年1月4日	样品名称 Sample name	二次锂电池组 Rechargeable Li-ion Battery
样品型号 Sample model	361-00176-01	样品规格 Specification	3.87V 16.84Wh 4350mAh	质量 (g) mass (g)	56.6
样品外观 Appearance	银色尼龙/铝/聚丙烯复合膜, 包裹黄色高温胶带 Silver nylon/Al/PP compound film, bag yellow high temperature tape				
制造商信息 Manufacturer Information	制造商名称 Manufacturer Name	东莞新能源科技有限公司 Dongguan Amperex Technology Limited			
	制造商地址 Manufacturer address	中国广东省东莞市松山湖科技园工业西路1号 West Industrial Road 1#, Songshan Lake Industry Park, Dongguan City, Guangdong Province, P. R. China			
	电话号码 Telephone Number	+86-0769-88989338	电子邮箱 E-mail	SSL-Reception@ATLBattery.com	
	网址 Website	www.atlbattery.com			
实验室信息 Lab Information	实验室名称 Lab Name	东莞新能源科技有限公司中心实验室 Dongguan Amperex Technology Limited Central Lab			
	实验室地址 Lab address	中国广东省东莞市松山湖科技园工业西路1号 West Industrial Road 1#, Songshan Lake Industry Park, Dongguan City, Guangdong Province, P. R. China			
	电话号码 Telephone Number	+86-0769-88980975	电子邮箱 E-mail	Lab-Service@ATLBattery.com	
	网址 Website	www.atlbattery.com			
序号 No.	测试项目名称 Name of test items	检测结果(合格/不合格) Test result (Pass/Fail)		备注 Remark	
T.1	高度模拟 Altitude simulation	合格 Passed		/	
T.2	温度试验 Thermal test	合格 Passed		/	
T.3	振动 Vibration	合格 Passed		/	
T.4	冲击 Shock	合格 Passed		/	
T.5	外部短路 External short-circuit	合格 Passed		/	
T.6	挤压 Crush	合格 Passed		/	
T.7	过度充电 Overcharge	合格 Passed		/	
T.8	强制放电 Forced discharge	合格 Passed		/	
测试方法和判定标准 Test method and criterion	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.7/Amend 1, 38.3 UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria ST/SG/AC.10/11 Rev.7/Amend 1, 38.3		东莞新能源科技有限公司中心实验室 Dongguan Amperex Technology Limited Central Lab 签发日期: 2024年1月4日		
签名 Signature	郭佳丽	李作为: 技术负责人 Li Zuo Wei: Technical Director 郭佳丽: 中心主任 Guo Jiali: Center Director			



中国认可
国际互认
检测
TESTING
CNAS L3767

UN38.3 检测报告

UN38.3 Test Report

样品名称:	二次锂电池组
Sample Name:	Rechargeable Li-ion Battery
样品型号:	361-00176-01
Sample Model:	361-00176-01
委托单位:	东莞新能源科技有限公司
Consignor:	Dongguan Amperex Technology Limited

东莞新能源科技有限公司中心实验室
Dongguan Amperex Technology Limited Central Lab

样品名称 Sample name	二次锂电池组 Rechargeable Li-ion Battery	测试类别 Test category	委托检测 After testing
样品型号 Sample model	361-00176-01	样品接收日期 Accepted date	2023-11-21
样品规格 Sample specification	3.87V 16.84Wh 4350mAh	测试开始日期 Test start date	2023-12-09
样品数量(个) Sample quantity (pcs.)	48	测试结束日期 Test end date	2023-12-30
委托单位信息 Consignor Information	委托单位 Consignor	东莞新能源科技有限公司 Dongguan Amperex Technology Limited	
	委托单位地址 Consignor address	中国广东省东莞市松山湖科技园工业西路1号 West Industrial Road 1#, Songshan Lake Industry Park, Dongguan City, Guangdong Province, P. R. China	
制造商信息 Manufacturer Information	制造商名称 Manufacturer Name	东莞新能源科技有限公司 Dongguan Amperex Technology Limited	
	制造商地址 Manufacturer address	中国广东省东莞市松山湖科技园工业西路1号 West Industrial Road 1#, Songshan Lake Industry Park, Dongguan City, Guangdong Province, P. R. China	
	电话号码 Telephone Number	+86-0769-88989338	电子邮箱 E-mail SSL- Reception@ATLBattery.com
	网址 Website	www.atlbattery.com	
测试环境条件 Test environment condition	环境温度: 15°C - 25°C; 环境湿度: ≤ 75% RH Ambient temperature: 15°C - 25°C; Ambient humidity: ≤ 75% RH		
样品外观 Appearance	银色尼龙/铝/聚丙烯复合膜, 包裹黄色高温胶带 Silver nylon/Al/PP compound film, bag yellow high temperature tape		
测试方法和判定标准 Test method and criterion	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.7/Amend 1, 38.3 UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria ST/SG/AC.10/11 Rev.7/Amend 1, 38.3		
测试项目 Test items	高度模拟、温度试验、振动、冲击、外部短路、挤压、过度充电、强制放电 Altitude simulation, Thermal test, Vibration, Shock, External short circuit, Crush, Overcharge, Forced discharge		
测试结论 Conclusion	经测试, 该样品符合联合国《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.7/Amend 1,38.3 标准的要求 The sample has passed the test items of UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria ST/SG/AC.10/11 Rev.7/Amend 1,38.3		
测试人员 Testers	刘杰 肖亮		 东莞新能源科技有限公司中心 Dongguan Amperex Technology Central Lab 李作为 (signature) 签发日期: 2024年1月4日
审核 Checker	李作为		
批准 Approval	郭佳丽 李作为: 技术负责人 Li Zuo Wei: Technical Director 郭佳丽: 中心主任 Guo Jiali: Center Director		

样品描述及说明

Sample description

化学组分 Chemical composition	钴酸锂-石墨
测试用充电程序 Test charge program	按照制造商推荐的充电程序进行 (3000mA CC to 4.45V ,CV to 87mA)
测试用放电程序 Test discharge program	按照制造商推荐的放电程序进行 (2175mA DC to 3.0V)

测试样品图片

Test sample image



图 1: 正面
Figure 1: Front side

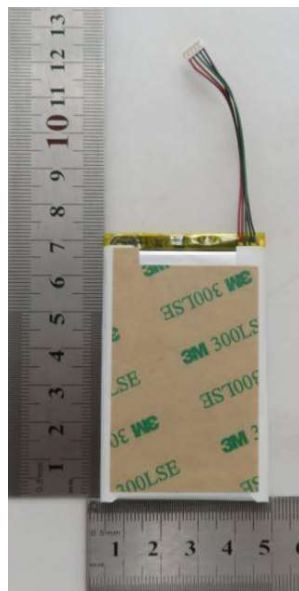


图 2: 反面
Figure 2: Back side



图 3: 标识
Figure 3: Logo

序号 No	测试项目名称 Name of test	标准要求或标准号条款 Standard requirement or the clause number of standard	测试现象 Phenomenon	本项结论 Test conclusion	备注 Remarks
T.1	高度模拟 Altitude 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.7/Amend 1, 38.3.4.1 UN Manual of Test and Criteria ST/SG/ AC.10/11/Rev.7/Amend 1, 38.3.4.1	见附表 1 See Appendix 1	合格 Passed	/
T.2	温度试验 Thermal test	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.7/Amend 1, 38.3.4.2 UN Manual of Test and Criteria ST/SG/ AC.10/11/Rev.7/Amend 1, 38.3.4.2	见附表 2 See Appendix 2	合格 Passed	/
T.3	振动 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.7/Amend 1, 38.3.4.3 UN Manual of Test and Criteria ST/SG/ AC.10/11/Rev.7/Amend 1, 38.3.4.3	见附表 3 See Appendix 3	合格 Passed	/
T.4	冲击 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.7/Amend 1, 38.3.4.4 UN Manual of Test and Criteria ST/SG/ AC.10/11/Rev.7/Amend 1, 38.3.4.4	见附表 4 See Appendix 4	合格 Passed	/
T.5	外部短路 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.7/Amend 1, 38.3.4.5 UN Manual of Test and Criteria ST/ SG/ AC.10/11/Rev.7/Amend 1, 38.3.4.5	见附表 5 See Appendix 5	合格 Passed	/
T.6	挤压 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.7/Amend 1, 38.3.4.6 UN Manual of Test and Criteria ST/ SG/ AC.10/11/Rev.7/Amend 1, 38.3.4.6	见附表 6 See Appendix 6	合格 Passed	/
T.7	过度充电 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.7/Amend 1, 38.3.4.7 UN Manual of Test and Criteria ST/ SG/ AC.10/11/Rev.7/Amend 1, 38.3.4.7	见附表 7 See Appendix 7	合格 Passed	/
T.8	强制放电 Forced 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.7/Amend 1, 38.3.4.8 UN Manual of Test and Criteria ST/ SG/ AC.10/11/Rev.7/Amend 1, 38.3.4.8	见附表 8 See Appendix 8	合格 Passed	/

附表 1
Appendix 1

序号 No.	T.1	测试项目名称 Name of test items		高度模拟 Altitude simulation				
		样品质量 Sample mass(g)		质量损失 Mass loss (%)	开路电压 OCV (V)		剩余电压 Residual OCV (%)	测试现象 Phenomenon
		M1 (before test)	M2 (after test)		OCV1 (before test)	OCV2 (after test)		
1cycle fully charged	NR42KR45BYG BV361-00176-01	56.6007	56.6002	0.00	4.419	4.417	99.95	O
1cycle fully charged	NR42KR45BYG BZ361-00176-01	56.5985	56.5983	0.00	4.420	4.418	99.95	O
1cycle fully charged	NR42KR45BYG BY361-00176-01	56.5196	56.5195	0.00	4.420	4.418	99.95	O
1cycle fully charged	NR42KR45BYG BG361-00176-01	56.5586	56.5582	0.00	4.420	4.418	99.95	O
1cycle fully charged	NR42KR45BYG B3361-00176-01	56.5815	56.5811	0.00	4.419	4.416	99.93	O
25cycles fully charged	NR42KR45BYG BU361-00176-01	56.6486	56.6483	0.00	4.428	4.427	99.98	O
25cycles fully charged	NR42KR45BYG B2361-00176-01	56.6156	56.6152	0.00	4.428	4.427	99.98	O
25cycles fully charged	NR42KR45BYG BW361-00176-01	56.5621	56.5618	0.00	4.428	4.427	99.98	O
25cycles fully charged	NR42KR45BYG BX361-00176-01	56.5106	56.5104	0.00	4.429	4.428	99.98	O
25cycles fully charged	NR42KR45BYG BS361-00176-01	56.5829	56.5826	0.00	4.428	4.427	99.98	O

注: L-泄漏; V-排气; D-解体; R-破裂; F-起火; O-无泄漏, 无排气, 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.

附表 2
Appendix 2

序号 No.	T.2	测试项目名称 Name of test items		温度试验 Thermal test				
		样品质量 Sample mass(g)		质量损失 Mass loss (%)	开路电压 OCV (V)		剩余电压 Residual OCV (%)	测试现象 Phenomenon
样品组别 Group	样品信息 Sample information (如 Barcode)	M1 (before test)	M2 (after test)		OCV1 (before test)	OCV2 (after test)		
1cycle fully charged	NR42KR45BYG BV361-00176-01	56.6002	56.5889	0.02	4.417	4.347	98.42	O
1cycle fully charged	NR42KR45BYG BZ361-00176-01	56.5983	56.5876	0.02	4.418	4.348	98.42	O
1cycle fully charged	NR42KR45BYG BY361-00176-01	56.5195	56.5085	0.02	4.418	4.350	98.46	O
1cycle fully charged	NR42KR45BYG BG361-00176-01	56.5582	56.5465	0.02	4.418	4.348	98.42	O
1cycle fully charged	NR42KR45BYG B3361-00176-01	56.5811	56.5704	0.02	4.416	4.348	98.46	O
25cycles fully charged	NR42KR45BYG BU361-00176-01	56.6483	56.6385	0.02	4.427	4.365	98.60	O
25cycles fully charged	NR42KR45BYG B2361-00176-01	56.6152	56.6098	0.01	4.427	4.367	98.64	O
25cycles fully charged	NR42KR45BYG BW361-00176-01	56.5618	56.5585	0.01	4.427	4.366	98.62	O
25cycles fully charged	NR42KR45BYG BX361-00176-01	56.5104	56.5005	0.02	4.428	4.368	98.64	O
25cycles fully charged	NR42KR45BYG BS361-00176-01	56.5826	56.5723	0.02	4.427	4.366	98.62	O

注: L-泄漏; V-排气; D-解体; R-破裂; F-起火; O-无泄漏, 无排气, 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.

附表 3
Appendix 3

序号 No.	T.3	测试项目名称 Name of test items		振动 Vibration				
样品组别 Group	样品信息 Sample information (如 Barcode)	样品质量 Sample mass(g)		质量损失 Mass loss (%)	开路电压 OCV (V)		剩余电压 Residual OCV (%)	测试现象 Phenom enon
		M1 (before test)	M2 (after test)		OCV1 (before test)	OCV2 (after test)		
1cycle fully charged	NR42KR45BYG BV361-00176- 01	56.5889	56.5818	0.01	4.347	4.347	100.00	O
1cycle fully charged	NR42KR45BYG BZ361-00176- 01	56.5876	56.5803	0.01	4.348	4.348	100.00	O
1cycle fully charged	NR42KR45BYG BY361-00176- 01	56.5085	56.5023	0.01	4.350	4.350	100.00	O
1cycle fully charged	NR42KR45BYG BG361-00176- 01	56.5465	56.5431	0.01	4.348	4.347	99.98	O
1cycle fully charged	NR42KR45BYG B3361-00176-01	56.5704	56.5643	0.01	4.348	4.347	99.98	O
25cycles fully charged	NR42KR45BYG BU361-00176- 01	56.6385	56.6362	0.00	4.365	4.365	100.00	O
25cycles fully charged	NR42KR45BYG B2361-00176-01	56.6098	56.5984	0.02	4.367	4.367	100.00	O
25cycles fully charged	NR42KR45BYG BW361-00176- 01	56.5585	56.5450	0.02	4.366	4.366	100.00	O
25cycles fully charged	NR42KR45BYG BX361-00176- 01	56.5005	56.4934	0.01	4.368	4.367	99.98	O
25cycles fully charged	NR42KR45BYG BS361-00176-01	56.5723	56.5664	0.01	4.366	4.366	100.00	O

注: L-泄漏; V-排气; D-解体; R-破裂; F-起火; O-无泄漏, 无排气, 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.

附表 4
Appendix 4

序号 No.	T.4	测试项目名称 Name of test items		冲击 Shock				
样品组别 Group	样品信息 Sample information (如 Barcode)	样品质量 Sample mass(g)		质量损失 Mass loss (%)	开路电压 OCV (V)		剩余电压 Residual OCV (%)	测试现象 Phenom enon
		M1 (before test)	M2 (after test)		OCV1 (before test)	OCV2 (after test)		
1cycle fully charged	NR42KR45BYG BV361-00176- 01	56.5818	56.5803	0.00	4.347	4.347	100.00	O
1cycle fully charged	NR42KR45BYG BZ361-00176- 01	56.5803	56.5791	0.00	4.348	4.348	100.00	O
1cycle fully charged	NR42KR45BYG BY361-00176- 01	56.5023	56.5005	0.00	4.350	4.350	100.00	O
1cycle fully charged	NR42KR45BYG BG361-00176- 01	56.5431	56.5423	0.00	4.347	4.347	100.00	O
1cycle fully charged	NR42KR45BYG B3361-00176-01	56.5643	56.5631	0.00	4.347	4.347	100.00	O
25cycles fully charged	NR42KR45BYG BU361-00176- 01	56.6362	56.6352	0.00	4.365	4.364	99.98	O
25cycles fully charged	NR42KR45BYG B2361-00176-01	56.5984	56.5976	0.00	4.367	4.367	100.00	O
25cycles fully charged	NR42KR45BYG BW361-00176- 01	56.5450	56.5443	0.00	4.366	4.365	99.98	O
25cycles fully charged	NR42KR45BYG BX361-00176- 01	56.4934	56.4926	0.00	4.367	4.367	100.00	O
25cycles fully charged	NR42KR45BYG BS361-00176-01	56.5664	56.5655	0.00	4.366	4.366	100.00	O

注: L-泄漏; V-排气; D-解体; R-破裂; F-起火; O-无泄漏, 无排气, 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.

附表 5
Appendix 5

序号 NO.	T.5	测试项目名称 Name of test items	外部短路 External short circuit		
样品组别 Group		样品信息 Sample information (如 Barcode)	样品表面最高温度 Max. External temperature (°C)	测试现象 Phenomenon	备注 Remark
1 cycle fully charged		NR42KR45BYGBV361-00176-01	56.4	O	/
1 cycle fully charged		NR42KR45BYGBZ361-00176-01	57.2	O	/
1 cycle fully charged		NR42KR45BYGBY361-00176-01	57.4	O	/
1 cycle fully charged		NR42KR45BYGBG361-00176-01	56.9	O	/
1 cycle fully charged		NR42KR45BYGB3361-00176-01	56.3	O	/
25cycles fully charged		NR42KR45BYGBU361-00176-01	56.0	O	/
25cycles fully charged		NR42KR45BYGB2361-00176-01	57.0	O	/
25cycles fully charged		NR42KR45BYGBW361-00176-01	56.8	O	/
25cycles fully charged		NR42KR45BYGBX361-00176-01	56.6	O	/
25cycles fully charged		NR42KR45BYGBS361-00176-01	56.1	O	/
<p>注: D-解体; R-破裂; F-起火; O-无解体, 无破裂, 无起火。 Note: D-Disassembly, R-Rupture, F-Fire, O-No disassembly, no rupture & no fire.</p>					

附表 6
Appendix 6

序号 NO.	T.6	测试项目名称 Name of test items	挤压 Crush		
样品组别 Group		样品信息 Sample information (如 Barcode)	样品表面最高温度 Max. External temperature (°C)	测试现象 Phenomenon	备注 Remark
1cycle 50% capacity		0223820C0531	21.4	O	/
1cycle 50% capacity		0223820C0521	19.9	O	/
1cycle 50% capacity		0223820C0526	20.1	O	/
1cycle 50% capacity		0223820C0296	20.4	O	/
1cycle 50% capacity		0223820C0512	22.0	O	/
25cycles 50% capacity		0223820C0532	20.1	O	/
25cycles 50% capacity		0223820C0260	22.3	O	/
25cycles 50% capacity		0223820C0405	23.4	O	/
25cycles 50% capacity		0223820C0242	21.8	O	/
25cycles 50% capacity		0223820C0592	22.4	O	/

注: D-解体; F-起火; O-无解体, 无起火。
Note: D-Disassembly, F-Fire, O-No disassembly, no fire.

附表 7
Appendix 7

序号 No.	T.7	测试项目名称 Name of test items	过度充电 Overcharge	
样品组别 Group	样品信息 Sample Information (如 Barcode)	测试现象 Phenomenon	备注 Remark	
1cycle fully charged	NR42KR45BYGCA361-00176-01	O	/	
1cycle fully charged	NR42KR45BYGC9361-00176-01	O	/	
1cycle fully charged	NR42KR45BYGC7361-00176-01	O	/	
1cycle fully charged	NR42KR45BYGCD361-00176-01	O	/	
25cycles fully charged	NR42KR45BYGCE361-00176-01	O	/	
25cycles fully charged	NR42KR45BYGCG361-00176-01	O	/	
25cycles fully charged	NR42KR45BYGCB361-00176-01	O	/	
25cycles fully charged	NR42KR45BYGCH361-00176-01	O	/	

注: D-解体; F-起火; O-无解体, 无起火。
Note: D-Disassembly, F-Fire, O-No disassembly, no fire.

附表 8
Appendix 8

序号 NO.	T.8	测试项目名称 Name of test items	强制放电 Forced discharge	
样品组别 Group		样品信息 Sample information (如 Barcode)	测试现象 Phenomenon	备注 Remark
1cycle fully discharged		0223820C0208	O	/
1cycle fully discharged		0223820C0225	O	/
1cycle fully discharged		0223820C0216	O	/
1cycle fully discharged		0223820C0228	O	/
1cycle fully discharged		0223820C0219	O	/
1cycle fully discharged		0223820C0473	O	/
1cycle fully discharged		0223820C0474	O	/
1cycle fully discharged		0223820C0517	O	/
1cycle fully discharged		0223820C0680	O	/
1cycle fully discharged		0223820C0257	O	/
25cycles fully discharged		0223820C0227	O	/
25cycles fully discharged		0223820C0626	O	/
25cycles fully discharged		0223820C0640	O	/
25cycles fully discharged		0223820C0674	O	/
25cycles fully discharged		0223820C0226	O	/
25cycles fully discharged		0223820C0223	O	/
25cycles fully discharged		0223820C0535	O	/
25cycles fully discharged		0223820C0538	O	/
25cycles fully discharged		0223820C0577	O	/
25cycles fully discharged		0223820C0580	O	/
<p>注: D-解体; F-起火; O-无解体, 无起火。 Note: D-Disassembly, F-Fire, O-No disassembly, no fire.</p>				

声明

Statement

1. 检测报告无本实验室公章无效。

The test report is invalid if not affixed the official seal of the laboratory to it.

2. 检测报告涂改无效。

The test report is invalid if it is blotted out.

3. 送样委托检测结果，仅对所送样品有效。

The conclusion of the consignment test is only valid for the provided sample.

4. 对检测报告若有异议，应于收到报告之日起十五日内向检测单位提出。

Objections to the test report must be submitted to ATL Central Lab within 15 days.

5. 本报告未经本实验室书面许可，不可部分复制。

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