

检测概要
Test Summary

报告编号 Report No.	T8-20220823-M248	报告签发日期 Date of test report	2022 年 9 月 22 日	样品名称 Sample name	可充式锂离子电池组 Rechargeable Li-ion Battery
样品型号 Sample model	361-00165-00	样品规格 Specification	3.87V 1.14Wh 297mAh	质量 (g) mass (g)	4.5
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-(0)769-8898 9338	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	+86-0769-88989149	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 (签章) (signature)	
签名 Signature		李作为: 技术负责人 Li Zuo Wei: Technical Director 郭佳丽: 中心主任 Guo Jiali: Center Director		签发日期: 2022 年 9 月 22 日	



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:	可充式锂离子电池组
Sample Name:	Rechargeable Li-ion Battery
样品型号:	361-00165-00
Sample Model:	361-00165-00
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	可充式锂离子电池组 Rechargeable Li-ion Battery	测试类别 Test category	委托检测 After testing
样品型号 Sample model	361-00165-00	样品接收日期 Accepted date	2022-08-26
样品规格 Sample specification	3.87V 1.14Wh 297mAh	测试开始日期 Test start date	2022-08-30
样品数量(个) Sample quantity (pcs.)	48	测试结束日期 Test end date	2022-09-16
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-(0)769-8898 9338	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	肖亮 孙凯旋		东莞新能源科技有限公司中心 实验室 Dongguan Amperex Technology Limited Central Lab (签章) (signature) 签发日期: 2022年9月22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

<p>化学组分 Chemical composition</p>	<p>钴酸锂-石墨</p>
<p>测试用充电程序 Test charge program</p>	<p>按照制造商推荐的充电程序进行 (297mA CC to 4.45V ,CV to 5.94mA)</p>
<p>测试用放电程序 Test discharge program</p>	<p>按照制造商推荐的放电程序进行 (594mA DC to 3.0V)</p>

测试样品图片

Test sample image

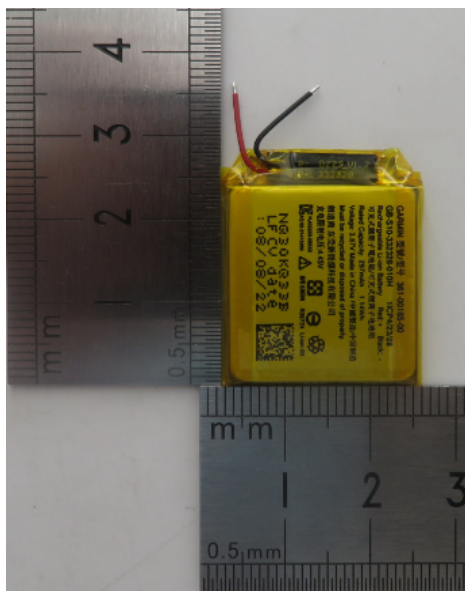


图 1: 正面
Figure 1: Front side

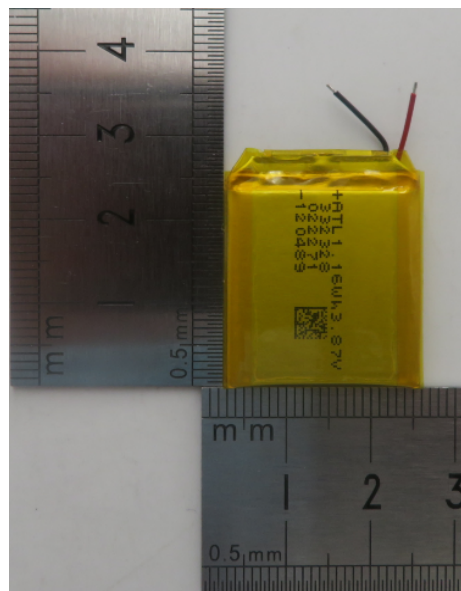


图 2: 反面
Figure 2: Back side

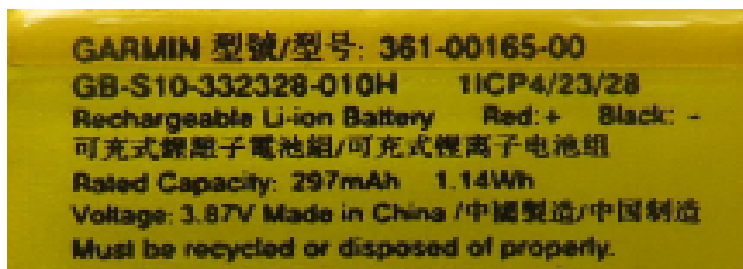


图 3: 标识
Figure 3: Logo

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	022271120489	4.4712	4.4695	0.04	4.430	4.428	99.95	O
1cycle fully charged	022271130422	4.4651	4.4634	0.04	4.426	4.425	99.98	O
1cycle fully charged	022271120415	4.4510	4.4490	0.04	4.428	4.426	99.95	O
1cycle fully charged	022271120130	4.5000	4.4982	0.04	4.427	4.426	99.98	O
1cycle fully charged	022271120268	4.5032	4.5017	0.03	4.429	4.427	99.95	O
25cycles fully charged	022271120037	4.4715	4.4700	0.03	4.430	4.429	99.98	O
25cycles fully charged	022271140085	4.4930	4.4910	0.04	4.435	4.434	99.98	O
25cycles fully charged	022271130406	4.4551	4.4531	0.04	4.431	4.429	99.95	O
25cycles fully charged	022271140132	4.4575	4.4555	0.04	4.431	4.429	99.95	O
25cycles fully charged	022271120308	4.4841	4.4822	0.04	4.432	4.431	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	022271120489	4.4729	4.4701	0.06	4.424	4.327	97.81	O
1cycle fully charged	022271130422	4.4671	4.4643	0.06	4.420	4.326	97.87	O
1cycle fully charged	022271120415	4.4526	4.4502	0.05	4.422	4.328	97.87	O
1cycle fully charged	022271120130	4.5020	4.4995	0.06	4.422	4.329	97.90	O
1cycle fully charged	022271120268	4.5053	4.5030	0.05	4.423	4.327	97.83	O
25cycles fully charged	022271120037	4.4739	4.4711	0.06	4.425	4.334	97.94	O
25cycles fully charged	022271140085	4.4950	4.4920	0.07	4.431	4.338	97.90	O
25cycles fully charged	022271130406	4.4577	4.4548	0.07	4.426	4.335	97.94	O
25cycles fully charged	022271140132	4.4595	4.4570	0.06	4.426	4.334	97.92	O
25cycles fully charged	022271120308	4.4861	4.4835	0.06	4.427	4.337	97.97	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	022271120489	4.4701	4.4698	0.01	4.327	4.324	99.93	O
1cycle fully charged	022271130422	4.4643	4.4636	0.02	4.326	4.323	99.93	O
1cycle fully charged	022271120415	4.4502	4.4496	0.01	4.328	4.324	99.91	O
1cycle fully charged	022271120130	4.4995	4.4991	0.01	4.329	4.326	99.93	O
1cycle fully charged	022271120268	4.5030	4.5021	0.02	4.327	4.324	99.93	O
25cycles fully charged	022271120037	4.4711	4.4702	0.02	4.334	4.330	99.91	O
25cycles fully charged	022271140085	4.4920	4.4915	0.01	4.338	4.335	99.93	O
25cycles fully charged	022271130406	4.4548	4.4538	0.02	4.335	4.332	99.93	O
25cycles fully charged	022271140132	4.4570	4.4560	0.02	4.334	4.331	99.93	O
25cycles fully charged	022271120308	4.4835	4.4823	0.03	4.337	4.334	99.93	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	022271120489	4.4698	4.4697	0.00	4.324	4.324	100.00	O
1cycle fully charged	022271130422	4.4636	4.4635	0.00	4.323	4.323	100.00	O
1cycle fully charged	022271120415	4.4496	4.4494	0.00	4.324	4.324	100.00	O
1cycle fully charged	022271120130	4.4991	4.4989	0.00	4.326	4.326	100.00	O
1cycle fully charged	022271120268	4.5021	4.5016	0.01	4.324	4.324	100.00	O
25cycles fully charged	022271120037	4.4702	4.4700	0.00	4.330	4.330	100.00	O
25cycles fully charged	022271140085	4.4915	4.4911	0.01	4.335	4.335	100.00	O
25cycles fully charged	022271130406	4.4538	4.4531	0.02	4.332	4.332	100.00	O
25cycles fully charged	022271140132	4.4560	4.4553	0.02	4.331	4.331	100.00	O
25cycles fully charged	022271120308	4.4823	4.4820	0.01	4.334	4.334	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	022271120489	55.5	O	/	
1 cycle fully charged	022271130422	56.6	O	/	
1 cycle fully charged	022271120415	55.7	O	/	
1 cycle fully charged	022271120130	56.6	O	/	
1 cycle fully charged	022271120268	56.0	O	/	
25cycles fully charged	022271120037	56.0	O	/	
25cycles fully charged	022271140085	57.1	O	/	
25cycles fully charged	022271130406	56.4	O	/	
25cycles fully charged	022271140132	57.1	O	/	
25cycles fully charged	022271120308	56.6	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		022271120344	23.4	O	/
1cycle 50% capacity		022271120287	23.5	O	/
1cycle 50% capacity		022271120217	23.9	O	/
1cycle 50% capacity		022271120218	23.6	O	/
1cycle 50% capacity		022271120511	24.0	O	/
25cycles 50% capacity		022271120413	23.6	O	/
25cycles 50% capacity		022271140106	23.3	O	/
25cycles 50% capacity		022271120280	23.3	O	/
25cycles 50% capacity		022271120108	23.3	O	/
25cycles 50% capacity		022271120459	23.2	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		022271120175	O	/
1cycle fully charged		022271120169	O	/
1cycle fully charged		022271130008	O	/
1cycle fully charged		022271120324	O	/
25cycles fully charged		022271120209	O	/
25cycles fully charged		022271130355	O	/
25cycles fully charged		022271140025	O	/
25cycles fully charged		022271130016	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>				

天中检测

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		022271140077	O	/
1cycle fully discharged		022271120117	O	/
1cycle fully discharged		022271120474	O	/
1cycle fully discharged		022271120194	O	/
1cycle fully discharged		022271130244	O	/
1cycle fully discharged		022271130383	O	/
1cycle fully discharged		022271120343	O	/
1cycle fully discharged		022271120313	O	/
1cycle fully discharged		022271130184	O	/
1cycle fully discharged		022271130179	O	/
25cycles fully discharged		022271130483	O	/
25cycles fully discharged		022271130205	O	/
25cycles fully discharged		022271130239	O	/
25cycles fully discharged		022271130174	O	/
25cycles fully discharged		022271140195	O	/
25cycles fully discharged		022271120236	O	/
25cycles fully discharged		022271140032	O	/
25cycles fully discharged		022271120323	O	/
25cycles fully discharged		022271120322	O	/
25cycles fully discharged		022271120174	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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