





地址:中国广州市天河区珠江新城花城大道66号B座 网址: www.iqte.en 邮绳: 510623 Add: Tower B, No.66 Huacheng Avenue, Zhujiang Xincheng, Tianhe District, Guangzhou, China Website: www.iqtc.cn Postcode: 510623

01052100001871-1(E) No:

Date: 2021-05-24 Page:

UN38.3 报告 **UN38.3 Test Report**

样品名称: 锂离子电池

Lithium Ion Battery Sample Name:

委托单位: 湖北亿纬动力有限公司

Applicant: EVE POWER CO., LTD



56LN1Y3QVX



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检测证书

TEST REPORT

	A TES	ST REPORT		
样品名称 Sample Name	锂离子电池 Lithium Ion Battery	JS. GJANGTHO	GUP ANTER	G G
型号 Model	LF160		200700	TECHNOL.
委托单位 Applicant	湖北亿纬动力有限公司 EVE POWER Co., Ltd.			
委托单位地址 Applicant Address	荆门高新区·掇刀区荆南大道 NO.68, Jingnan Avenue, Hi-tec		ngmen, Hubei	(CHO)CO
生产单位 Manufacture	湖北亿纬动力有限公司 EVE POWER Co., Ltd.	HOJCIEJE SIR	HCTHON COL	A STEEL
生产单位地址 Manufacture Address	荆门高新区·掇刀区荆南大道 NO.68, Jingnan Avenue, Hi-tec		ngmen, Hubei	Noct con
样品外观与性状 Appearance & Odor	蓝色外壳 Blue shell	OE CHANG	loc Just How	, SDISTRI
则试方法和判定标准 Test method and criterion	联合国《关于危险货物运输自 UNITED NATIONS" Recom Manual of Tests and Criteria ST	mendations on the TRANS		
接样时间 Accepted date	2021-04-02	测试日期 Test date	2021-04-02~	-2021-05-24
测试项目 Test items	高度模拟、温度试验、振动、 Altitude simulation, Thermal tes discharge.			Feliced (
结论 Conclusion	经测试,该样品符合联合 ST/SG/AC.10/11/Rev.7,38.3 材 The sample has passed the TRANSPORT OF DANC ST/SG/AC.10/11/Rev.7,38.3.	示准要求。 test items of UNITED N	1	域i開達on t
备注 Remark	1.随附 UN38.3 试验概要(编 Attached with UN38.3 test s			GUAT
批准 Approver: 了	审核 Checker:	罗和哇	主检 Appraiser: 3	长佳
TOMP I'M	an and	<i>A</i> -	T OFF	



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电池信息:

The battery information:

电池类型 Battery type	锂离子电池 Lithium ion batteries	标称电压 Nominal Voltage	3.22V
额定容量 Rated Capacity	160Ah	总能量 Total Energy	515.2Wh
充电限制电压 Limited Charge Voltage	3.65V	标准充电电流 Standard Charge Current	80A
最大充电电流 Maximum Charge Current	160A	充电截止电流 Charge Cut-off Current	8A CHATTER
标准放电电流 Standard discharge Current	80A	最大放电电流 Maximum Discharge Current	160A
放电截止电压 Discharge Cut-off Voltage	2.5V	物理形状说明 Physical description	长方体 Cuboid
重量 Mass	3000 ± 100g	电芯生产单位 Manufacturer of cell	湖北亿纬动力有限公司 EVE POWER Co., Ltd.

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			C.7.	Can		
序号 No.	测试项目名称 Name of test	Stand requirement o	成标准条款号 r the clause number ndard	of 测试结果 Test result	本项结论 Test conclusion	备注 Remark
1	高度模拟 Altitude simulation	联合国《关于危险 验和标准手册》UN Criteria ST/SG/AC. T.1 Test T.1	N Manual of Tests a	nd 见附表 1	合格 1 Passed	CHING LOC
2	温度试验 Thermal test	联合国《关于危险 验和标准手册》UN Criteria ST/SG/AC. T.2 Test T.2	N Manual of Tests a	nd 见附表 2	合格 2 Passed	1
3	振 <i>动</i> Vibration	联合国《关于危险》 验和标准手册》UN Criteria ST/SG/AC. T.3 Test T.3	N Manual of Tests a	nd 见附表 3	合格 Passed	
4	冲击 Shock	联合国《关于危险 验和标准手册》UN Criteria ST/SG/AC. T.4 Test T.4	N Manual of Tests a	nd 见附表 4	合格 Passed	S. S. Till
5	外部短路 External short circuit	联合国《关于危险 验和标准手册》UN Criteria ST/SG/AC. T.5 Test T.5	N Manual of Tests a	nd 见附表 5	合格 5 Passed	150
6	挤压 Crush	联合国《关于危险 验和标准手册》UN Criteria ST/SG/AC. T.6 Test T.6	Manual of Tests a	nd 见附表 6	合格 Passed	/
7	过度充电 Overcharge	联合国《关于危险 验和标准手册》UN Criteria ST/SG/AC. T.7 Test T.7	Manual of Tests a	nd 见附表 7	不适用 7 Not applicable	/
8	强制放电 Forced discharge	联合国《关于危险 验和标准手册》UN Criteria ST/SG/AC. T.8 Test T.8	Manual of Tests a	nd 见附表 8	合格 Passed	
Te	测试环境 est environment condition	Ambie	环境温度: 20℃-2 nt temperature: 20℃			
	<i>사 시 께 나 ե '미</i>	测试项目 Test items	alstruct.	TONSOIL		
	分包测试情况 ibcontracted test condition	分包实验室 Subcontracted	名称 Name		邮编 Post code	/
		Laboratory	地址 Address	/	电话 Tel	130

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	147			and the second of the	(6)	N= .N= 111	201
序号 No.	附表 1 Appendix 1						拟 nulation
标准要求 Requirement of Standard	电池组应无知组在试验后的 组在试验后的 池组除外)。 Test cells and temperature 2 venting, no obattery after	电池组在压力等重量损失、无效的开路电压不少d batteries shall 20±5℃. Cells a disassembly, not testing is not relating to volta	参漏、无排气、 于其在进行立 be stored at a p nd batteries me rupture and n less than 90%	无解体、无积 这一试验前电压 pressure of 11.6 bet this required to fire and if to of its voltage	破裂和无燃烧 E的 90% (完 6 kPa or less fo ment if there is he open circuite immediately	,并且每个试验 全放电状态的 r at least six ho no mass loss, i t voltage of ea prior to this p	脸电池或电光试验电池或电 urs at ambien no leakage, no ch test cell o rocedure. Th
样品状态 Sample status	C1#~C5#: 1 C6#~C10#:	第一个循环完全 first cycle in ful 第二十五个循 after 25 cycles	ly charged state 环完全充电的	电池。	ole STHON	JUSTIC GUAT	GLIO
样品编号	测试前	Before	测试后	After	质量损失	剩余电压	测试结果
Sample No.	电池质量 m _I (g)	开路电压 V ₁ (v)	电池质量 m ₂ (g)	开路电压 v ₂ (v)	Mass loss (%)	Residual OCV(%)	Test result
C1#	3001.9	3.38	3001.9	3.37	0.000	99.70	0
C2#	2999.7	3.36	2999.7	3.36	0.000	100.00	0
C3#	2999.5	3.36	2999.5	3.36	0.000	100.00	О
C4#	3000.4	3.37	3000.4	3.36	0.000	99.70	O GO
C5#	3000.8	3.38	3000.8	3.38	0.000	100.00	<i>y</i> 0
C6#	3002.3	3.38	3002.3	3.38	0.000	100.00	0
C7#	3001.5	3.37	3001.5	3.37	0.000	100.00	O
C8#	2999.9	3.37	2999.9	3.37	0.000	100.00	О
C9#	2999.7	3.37	2999.7	3.37	0.000	100.00	0
C10#	3001.8	3.36	3001.8	3.36	0.000	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.

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序号	X V	附表 2	all.	测试项目名称	(C)	温度试	
No.		pendix 2	.51	Name of test	,	Thermal 战验温度等于-4	
标准要求 Requirement of Standard	最大时间间隙 试验电池或电池或电池或电池或电池或电池或电池 Test cells and followed by s interval betw after which a For large cell 12 hours. Cel disassembly, testing is not to voltage is r	隔为 30min。重电池组应无重量组在试验后的无电组除外)。d batteries are storage for at leen test temperall test cells and sand batteries no rupture and	复10次,再将量损失、无渗流 计路电压不少式 to be stored for east six hours a cature extremes batteries are to the duration of meet this requiled in of fire and if of its voltage in the otest cells and	所有试验电池 属、无排气、 于其在进行这一 r at least six h at a test tempera is 30 minutes. to be stored for exposure to the irement if there the open circumediately prio	或电池组在环无解体、无破迹 一试验前电压的 ours at a test to ature equal to . This procedure 24 hours at ar e test temperature is no mass locuit voltage of our to this procedure.	。两个极端试验 境温度 20±5℃ 裂和无燃烧,并 的 90%(完全放 emperature eque-40±2℃. The magnetic temperature extremes shows, no leakage, reach test cell or lure. The require eates.	下存放 24h 并且每个试验 故电状态的记 al to 72±2℃ naximum timated 10 time ture (20±5℃ uld be at lea no venting, respectively.
样品状态 Sample status	C1#~C5#: 1 C6#~C10#:	前一个循环元分 first cycle in ful 第二十五个循 after 25 cycles	ly charged state 环完全充电的	电池。	ed cet	Kilita Kilita	og cr
样品编号	测尔光	Before 测试后 2		- 10	质量损失	剩余电压	测试结果
样品编号	测	Бегоге	测试后	Aiter	The second second		测试结果
样品编号 Sample No.	电池质量 m ₁ (g)	开路电压 V ₁ (v)	更 电池质量 m ₂ (g)	开路电压 V ₂ (v)	质量损失 Mass loss (%)	剩余电压 Residual OCV(%)	测试结果 Test result
	电池质量	开路电压	电池质量	开路电压	Mass loss	Residual	F
Sample No.	电池质量 m _l (g)	开路电压 V1(V)	电池质量 m ₂ (g)	开路电压 V ₂ (v)	Mass loss (%)	Residual OCV(%)	Test resul
Sample No.	电池质量 m ₁ (g) 3001.9	开路电压 v ₁ (v) 3.37	电池质量 m ₂ (g) 3001.9	开路电压 v ₂ (v) 3.34	Mass loss (%) 0.00	Residual OCV(%) 99.11	Test resul O
Sample No. C1# C2#	电池质量 m ₁ (g) 3001.9 2999.7	开路电压 V ₁ (v) 3.37 3.36	电池质量 m ₂ (g) 3001.9 2999.7	开路电压 v ₂ (v) 3.34 3.34	Mass loss (%) 0.00 0.00	Residual OCV(%) 99.11 99.40	O O
C1# C2# C3#	电池质量 m ₁ (g) 3001.9 2999.7 2999.5	开路电压 V1(V) 3.37 3.36 3.36	电池质量 m ₂ (g) 3001.9 2999.7 2999.5	开路电压 v2(v) 3.34 3.34 3.36	Mass loss (%) 0.00 0.00 0.00	Residual OCV(%) 99.11 99.40 100	O O O
C1# C2# C3# C4#	电池质量 m ₁ (g) 3001.9 2999.7 2999.5 3000.4	开路电压 v ₁ (v) 3.37 3.36 3.36	电池质量 m ₂ (g) 3001.9 2999.7 2999.5 3000.4	开路电压 v ₂ (v) 3.34 3.34 3.36 3.32	Mass loss (%) 0.00 0.00 0.00 0.00	Residual OCV(%) 99.11 99.40 100 98.80	O O O
C1# C2# C3# C4# C5#	电池质量 m ₁ (g) 3001.9 2999.7 2999.5 3000.4 3000.8	开路电压 V ₁ (v) 3.37 3.36 3.36 3.36 3.38	电池质量 m ₂ (g) 3001.9 2999.7 2999.5 3000.4 3000.8	开路电压 v2(v) 3.34 3.34 3.36 3.32 3.35	Mass loss (%) 0.00 0.00 0.00 0.00 0.00	Residual OCV(%) 99.11 99.40 100 98.80 99.11	O O O O O
C1# C2# C3# C4# C5# C6#	电池质量 m ₁ (g) 3001.9 2999.7 2999.5 3000.4 3000.8 3002.3	开路电压 V1(V) 3.37 3.36 3.36 3.36 3.38 3.38	电池质量 m ₂ (g) 3001.9 2999.7 2999.5 3000.4 3000.8 3002.3	开路电压 v2(v) 3.34 3.34 3.36 3.32 3.35 3.34	Mass loss (%) 0.00 0.00 0.00 0.00 0.00 0.00	Residual OCV(%) 99.11 99.40 100 98.80 99.11 98.81	O O O O O
C1# C2# C3# C4# C5# C6# C7#	电池质量 m ₁ (g) 3001.9 2999.7 2999.5 3000.4 3000.8 3002.3	开路电压 v1(v) 3.37 3.36 3.36 3.36 3.38 3.38 3.37	电池质量 m ₂ (g) 3001.9 2999.7 2999.5 3000.4 3000.8 3002.3 3001.5	开路电压 v2(v) 3.34 3.34 3.36 3.32 3.35 3.34 3.33	Mass loss (%) 0.00 0.00 0.00 0.00 0.00 0.00 0.00	Residual OCV(%) 99.11 99.40 100 98.80 99.11 98.81 98.81	Test resul O O O O O O O O

Rupture & No Fire.

Note: L-Leakage, V-Venting, D-Disassembly, R-Rupture, F-Fire, O- No Leakage, No Venting, No Disassembly, No

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150	16	· /		0,	Co.	.0	11/2
序号 No.	X 1/2	附表 3 opendix 3	ZOM.	测试项目名称 Name of test		振动 Vibrati	
标准要求 Requirement of Standard	之间摆动再 重复进行 12 破裂和无燃 压的 90% (Cells and baccells in such waveform w minutes. Thi perpendicula to the termin venting, no obattery after	池组直接安装或回到 7Hz 的对之次,一共振动之次,一共振动之烧,并且每个证完全放电状态的 tteries are firmly a manner as with a logarithm is cycle shall bur mounting posical face. Cells and disassembly, no testing is not relating to voltage.	数扫频 15min, 3h。试验电池式验电池或电池或电池或电流验电池或的 secured to the faithfully traic sweep betwee repeated 12 tions of the celed batteries me rupture and no less than 90%	,对三个互相 或电池组应无 也组在试验后 电池组除外)。 e platform of ansmit the vib een 7 Hz and times for a to all. One of the co et this requirer of ire and if to of its voltage	垂直的电池或 主重量损失、无 的开路电压不 the vibration noration. The vi 200 Hz and lotal of 3 hour directions of vi ment if there is the open circuite immediately	电池组安装方 少于其在进行社 加achine without ibration shall be back to 7 Hz tr s for each of the bration must be s no mass loss, re it voltage of each prior to this p	句的每个方成 、无解体、对 这一试验前电 distorting the a sinusoidal aversed in 1 hree mutuall perpendicular no leakage, no ch test cell corocedure. The
样品状态 Sample status	C1#~C5#: C6#~C10#:	第一个循环完全 first cycle in ful 第二十五个循: after 25 cycles	ly charged state 环完全充电的	电池。	3E	glift	OCY CENTRE
样品编号	测试前	测试前 Before 测试后 After		质量损失	剩余电压	测试结果	
Sample No.	电池质量 m ₁ (g)	开路电压 V ₁ (v)	电池质量 m ₂ (g)	开路电压 v ₂ (v)	Mass loss (%)	Residual OCV(%)	Test result
C1#	3001.9	3.34	3001.9	3.34	0.00	100.00	0
C2#	2999.7	3.34	2999.7	3.33	0.00	99.70	0 🗞
C3#	2999.5	3.36	2999.5	3.36	0.00	100.00	0
C4#	3000.4	3.32	3000.4	3.32	0.00	100.00	0
C5#	3000.8	3.35	3000.8	3.34	0.00	99.70	0
C6#	3002.3	3.34	3002.3	3.34	0.00	100.00	о O
7G		747	CA	III	0.00	100.00	0
C7#	3001.5	3.33	3001.5	3.33	0.00	100.00	()_
IN.	3001.5 2999.9	3.33	3001.5 2999.9	3.33	0.00	100.00	0
C7#	1. C	0,	YIO,	.6^^	000	50	.10)

Rupture & No Fire.

Note: L-Leakage, V-Venting, D-Disassembly, R-Rupture, F-Fire, O- No Leakage, No Venting, No Disassembly, No

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测试项目名称

序号

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附表 4

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冲击

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NT-		竹表 4	- [A]	测试坝目名称		冲击	
No.	Ap	pendix 4	.50.	Name of test	77.	Shock	k
标准要求 Requirement of Standard	gn=√(100850, 其正负极各处解体、无破弱试验前电压的 Test cells and support all me shock of peal milliseconds. by three shock or battery for leakage, no v cell or battery requirement states.(NOTE	/ mass) 中较小神击 3 次,共和民燃烧,美物 90%(完全) l batteries shall ounting surface k acceleration of Each cell or baks in the negating a total of 18 shenting, no disast after testing is relating to volume.	者的正弦波冲击 18次。各并且每个试验时 放电状态的试验 be secured to so of each test be of 150gn or accuttery shall be seembly, no rups not less than sessed in kilograms	击,脉冲持续 试验电池或电池组 验电池或电池组 验电池或电池 the testing ma- attery. Each sn celeration (gn) subjected to the three mutually I batteries meet oture and no fir 90% of its volta pplicable to to ms)	于小型电池组时间 6ms,按地组应无重量在试验后的开始的。 chine by means mall batteries she $=\sqrt{100850/m}$ ree shocks in the perpendicular at this requirement and if the opage immediately est cells and be set to the set of t	三个相互垂直的损失、无渗漏、路电压不少于的 of a rigid mouall be subjected ass) and pulse be positive direct mounting position tif there is not en circuit voltagy prior to this p	的轴向分别对 、无排气、为 unt which wi I to a half-sin duration of ction followe ons of the ce mass loss, n ge of each ter procedure. Th
样品状态 Sample status	C1#~C5#: f C6#~C10#:	等一个循环完全 irst cycle in ful 第二十五个循 after 25 cycles	ly charged state 环完全充电的	es. 电池。	s. s ^d	III.	òe _s con
以日始日		测试前 Before 测试后 After		质量损失			
样品编号	测试前	Before	测试后	After		剩余电压	测试结果
样品编号 Sample No.	测试前 电池质量 m ₁ (g)	Before 开路电压 v ₁ (v)	测试后 电池质量 m ₂ (g)	开路电压 V ₂ (v)	质量损失 Mass loss (%)	剩余电压 Residual OCV(%)	测试结果 Test result
	电池质量	开路电压	电池质量	开路电压	Mass loss	Residual	
Sample No.	电池质量 m _l (g)	开路电压 V ₁ (v)	电池质量 m ₂ (g)	开路电压 V2(V)	Mass loss (%)	Residual OCV(%)	Test result
Sample No.	电池质量 m ₁ (g) 3001.9	开路电压 v ₁ (v) 3.34	电池质量 m ₂ (g) 3001.9	开路电压 v ₂ (v) 3.34	Mass loss (%) 0.000	Residual OCV(%)	Test result
Sample No. C1# C2#	电池质量 m ₁ (g) 3001.9 2999.7	开路电压 V1(V) 3.34 3.33	电池质量 m ₂ (g) 3001.9 2999.7	开路电压 v ₂ (v) 3.34 3.33	Mass loss (%) 0.000 0.000	Residual OCV(%) 100.00	O O
C1# C2# C3#	电池质量 m ₁ (g) 3001.9 2999.7 2999.5	开路电压 v ₁ (v) 3.34 3.33 3.36	电池质量 m ₂ (g) 3001.9 2999.7 2999.5	开路电压 v ₂ (v) 3.34 3.33 3.36	Mass loss (%) 0.000 0.000 0.000	Residual OCV(%) 100.00 100.00	O O O
C1# C2# C3# C4#	电池质量 m ₁ (g) 3001.9 2999.7 2999.5 3000.4	开路电压 v ₁ (v) 3.34 3.33 3.36 3.32	电池质量 m ₂ (g) 3001.9 2999.7 2999.5 3000.4	开路电压 v ₂ (v) 3.34 3.33 3.36 3.32	Mass loss (%) 0.000 0.000 0.000 0.000	Residual OCV(%) 100.00 100.00 100.00 100.00	O O O
C1# C2# C3# C4# C5#	电池质量 m ₁ (g) 3001.9 2999.7 2999.5 3000.4	开路电压 v1(v) 3.34 3.33 3.36 3.32 3.34	电池质量 m ₂ (g) 3001.9 2999.7 2999.5 3000.4 3000.8	开路电压 v ₂ (v) 3.34 3.33 3.36 3.32 3.33	Mass loss (%) 0.000 0.000 0.000 0.000 0.000	Residual OCV(%) 100.00 100.00 100.00 100.00 99.70	O O O O
C1# C2# C3# C4# C5# C6#	电池质量 m ₁ (g) 3001.9 2999.7 2999.5 3000.4 3000.8	开路电压 v1(v) 3.34 3.33 3.36 3.32 3.34 3.34	电池质量 m ₂ (g) 3001.9 2999.7 2999.5 3000.4 3000.8 3002.3	开路电压 v ₂ (v) 3.34 3.33 3.36 3.32 3.33 3.34	Mass loss (%) 0.000 0.000 0.000 0.000 0.000 0.000	Residual OCV(%) 100.00 100.00 100.00 100.00 99.70 100.00	O O O O O
C1# C2# C3# C4# C5# C6# C7#	电池质量 m ₁ (g) 3001.9 2999.7 2999.5 3000.4 3000.8 3002.3	开路电压 v1(v) 3.34 3.33 3.36 3.32 3.34 3.34 3.33	电池质量 m ₂ (g) 3001.9 2999.7 2999.5 3000.4 3000.8 3002.3 3001.5	开路电压 v ₂ (v) 3.34 3.33 3.36 3.32 3.33 3.34 3.33	Mass loss (%) 0.000 0.000 0.000 0.000 0.000 0.000 0.000	Residual OCV(%) 100.00 100.00 100.00 100.00 99.70 100.00 100.00	O O O O O 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.

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序号 No.	附表 5 Appendix 5	测试项目名称 Name of test	外部短路 External short circuit
标准要求 Requirement of Standard	待试验电池或电池组的外壳温度稳小于 0.1Ω 的短路条件,当电池或电再观察电池或电池组 6h 才结束试6h 内应无解体、无破裂和无燃烧。The cell or battery to be tested shall reaches 57±4℃ and then the cell or beternal resistance of less than 0.1 of least one hour after the cell or battery must be observed for a further this requirement if their external temprupture and no fire within six hours of	已池组外壳温度回到 57±4℃, 验。电池或电池组的外壳温, be temperature stabilized so pattery shall be subjected to a shm at 57±4℃. This short ciry external case temperature har six hours for the test to be coperature does not exceed 170℃.	后继续至少 1h, 然后短路断开, 度应不超过 170℃, 并且试验后 that its external case temperature short circuit condition with a total reuit condition is continued for a as returned to 57±4℃. The cell of concluded. Cells and batteries mee
样品状态 Sample status	C1#~C5#: 第一个循环完全充电的 C1#~C5#: first cycle in fully charge C6#~C10#: 第二十五个循环完全充 C6#~C10#: after 25 cycles ending in	d states. E电的电池。	Tho, Say
样品编号 Sample No.	样品表面最高温度 Max External Temperature(℃	测试结果 Test resu	A ' Remark
C1#	81.5	0	STEEL 1 SELLE
C2#	83.4	HE O	EDISTR ISOME
C3#	80.2	O S	THOUS 1
C4#	77.6	0	GINTS /
C5#	88.3	O GINERA O	A STATE OF THE STA
C6#	80.1	0	Set 1 HOHM
C7#	75.5	The o	All Children
C8#	73.8	Highin Ogh	AND THE ONE OF THE OWNER OWNER OF THE OWNER OWNE
C9#	81.0	ETRIC TONEO	1 Letho
C10#	80.8	Oliche O	electric electric

注: D-解体; R-破裂; F-起火; O-无解体、无破裂、无起火。

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No.	附表 6 Appendix	6	USTON	测试项目名称 Name of test	200 CHANGE	挤压 Crush	
标准要求 Requirement of Standard	适用于棱柱形、袋袋 为 1.5cm/s。挤压持 (a)施加的电压压力 (b)电池变形装电方 发生形或或量面的地 与纵轴垂直或电视 无解体、无键的力 Crush(applicable to diameter):A cell or c gradual with a speed continued until the 13kN±0.78kN; (b)The voltage of the (c)The cell is deformed Once the maximum per deformed by at least seach test cell or com this requirement if th	女在两个平百 结状N±0.78k 至少 100mV 厚皮 的 50% 应短最大。 应短是成大。 prismatic, omponent cell drops be cell drops be d by 50% of pressure has 50% of its of ponent cell	面之出來 到出 ,或 或 或 或 或 或 或 而 之 之 的 现 。 。 。 。 。 。 。 。 。 。 。 。 。	玉,挤压力度主下三种情况之 组扣/硬币电。 一次挤压试验。 不超过 170℃, oin/button cell e crushed betw. 5cm/s at the fi ptions below 100mV;or its original thic ained, the volta ekness, the pres bjected to one	逐渐加大,在第一个一即解除压力: 池应从其平坦表面就并且在试验过程中 ls and cylindrical deen two flat surfaces arst point of contact. is reached. (a)The skness. age drops by 100mV sure shall be released crush only. Cells and	起压。圆柱形和试验后 6 cells less the crushing applied force or more, or l. d component	小时内 nan 18 ng is to be g is to be the cell cells me
	no fire during the test				cou 170 °C and incre	2 15 110 013033	emory ar
样品状态 Sample status	no fire during the test C11#~C15#: 第一个 C11#~C15#: first c: C16#~C20#: 第二十	and within 循环 50%自 ycle at 50% 五个循环 5	six hours a 勺额定容量 of the desi 50%的额気	after this test. 量的电芯。 ign rated capaci 定容量的电芯。	ity of cell.	a is no disass	emory ar
	no fire during the test C11#~C15#: 第一个 C11#~C15#: first c	and within 循环 50%自 ycle at 50% 五个循环 5	six hours a 约额定容量 of the desi 50% 的额5 50% of the 备注	after this test. 量的电芯。 ign rated capaci 定容量的电芯。	ity of cell.	Welhoneley	备注
Sample status 样品编号	no fire during the test C11#~C15#: 第一个 C11#~C15#: first c: C16#~C20#: 第二十 C16#~C20#: after 2 样品表面最高温度 Max External	and within 循环 50%自 ycle at 50% 五个循环 5 25 cycles at 5 测试结果	six hours a 约额定容量 of the desi 50% 的额5 50% of the 备注	after this test.	ity of cell. apacity of cell. 样品表面最高温度 Max External	测试结果	备注
Fample status 样品编号 Sample No.	no fire during the test C11#~C15#: 第一个 C11#~C15#: first c C16#~C20#: 第二十 C16#~C20#: after 2 样品表面最高温度 Max External Temperature(°C)	and within 一循环 50%的 ycle at 50% 一五个循环 5 25 cycles at 5 测试结果 Test result	six hours a 约额定容量 of the desi 50% 的额5 50% of the 备注	after this test.	ity of cell. apacity of cell. 样品表面最高温度 Max External Temperature(℃)	测试结果 Test result	备注
样品编号 Sample No. C11#	no fire during the test C11#~C15#: 第一个 C11#~C15#: first c; C16#~C20#: 第二十 C16#~C20#: after 2 样品表面最高温度 Max External Temperature(°C) 25.4	and within 循环 50%的 ycle at 50% 五个循环 5 5 cycles at 5 测试结果 Test result	six hours a 约额定容量 of the desi 50% of the 备注 Remark	after this test. after this	ity of cell. apacity of cell. 样品表面最高温度 Max External Temperature(℃) 25.5	测试结果 Test result O	备注
样品编号 Sample No. C11# C12#	no fire during the test C11#~C15#: 第一个 C11#~C15#: first c; C16#~C20#: 第二十 C16#~C20#: after 2 样品表面最高温度 Max External Temperature(°C) 25.4	and within 循环 50%的 ycle at 50% -五个循环 5 25 cycles at 5 测试结果 Test result O	six hours a 约额定容量 of the desi 50% of the 备注 Remark	after this test. after this	ity of cell. apacity of cell. 样品表面最高温度 Max External Temperature(℃) 25.5	测试结果 Test result O	备注

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序号 No.	附表 7 Appendix 7	测试项目名称 Name of test	过度充电 Overcharge
标准要求 Requirement of Standard	信或 22V 两者中的较少者。 (b)制造商建议的充电电压,可再充电电池组在环境温度 The charge current shall be twic current. The minimum voltage of (a) When the manufacturer's rec voltage of the test shall be the le 22V. (b) When the manufacturer's rec voltage of the test shall be 1.2 times are to be conducted at a conducted at	大于 18V 时,试验的最小电压大于 18V 时,试验的最小电压下试验 24h。试样在试验后 7 the the manufacturer's recommend of the test shall be as follows: commended charge voltage is not esser of two times the maximum commended charge voltage is more the maximum charge voltage mbient temperature. The durati	压应是电池组最大充电电压的两应是最大充电电压的 1.2 倍。 天内应无解体和无燃烧。 led maximum continuous charge t more than 18V, the minimum charge voltage of the battery or ore than 18V, the minimum
样品状态 Sample status	John Christian C		Carlotton Carlotton
样品编号 Sample No.	测试结果 Test result	alocato alectrica	备注 Remark
I I I I I I I I I I I I I I I I I I I		能用在另 池组或设 组,无需 Batteries equipped withat are componen equipment	度充电保护装置、按设计要求只一个带过度充电保护装置的电 备中的电池组或单一电池电池 满足本项试验的要求。 or single cell batteries not with battery overcharge protection designed for use only as a at in another battery or in t, which affords such protection, abject to the requirements of this

注: D-解体; R-破裂; F-起火; O-无解体、无破裂、无起火。

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		(2)		Col	
序号 No.	附表 8 Appendix	8	测试项目名和 Name of test		强制放电 Forced discharge
标准要求 Requirement of Standard	定的最大放电电流的燃烧。 Each cell shall be fo D.C. power supply a manufacturer. The sp appropriate size and interval (in hours) ec	的条件下强制定 rced discharge at an initial cur pecified dischar rating in series qual to its rated	放电。原电池或可即 d at ambient tempera rrent equal to the m ge current is to be of with the test cell. Ea capacity divided by	手充电电池在试验后 ature by connecting in aximum discharge contained by connecting the cell shall be force the initial test current	E始电流等于制造商约 7 天内应无解体和分 it in series with a 12 vurrent specified by the g a resistive load of the d discharged for a time that (in Ampere).Primare of fire within seven day
样品状态 Sample status	C21#~C30#: 第一 C21#~C30#: first c C31#~C40#: 第二- C31#~C40#: after 25	cycle in fully di 十五个循环完全	scharged states; 全放电的电芯。	ie dancihoncos	GUANGIA.
样品编号 Sample No.	测试结果 Test result	备注 Remark	样品编号 Sample No.	测试结果 Test result	备注 Remark
C21#		/	C31#	O	LOWING /
C22#	0		C32#	Ching O	The present
C23#	o g	3 /	C33#	ONEDIE	109
C24#	O	S. A. S.	C34#	0	MCTHO /
C25#	0	OWE DI	C35#	Chic o	/2-
C26#	Web O Men	1,40	C36#	O	of Charles
C27#	OSTA	9	C37#	o w	1
C28#	0	- /	C38#	O	DIE P
C29#	O de	.cHelo	C39#	0	JSTONE / THE
C30#	0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	C40#	STONIN O THOU	/JEHG.

注: D-解体; R-破裂; F-起火; O-无解体、无破裂、无起火。

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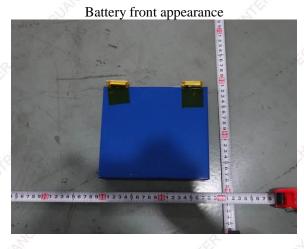
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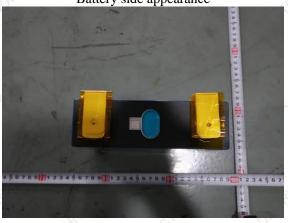
样品图片

Photo of the sample

电池正面外观



电池侧面外观 Battery side appearance



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