





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.iqtc.cn 邮编: 510623 Archeng Avenue, Zhujiang Xincheng, Tianhe District, Guangzhou, China

Website: www.iqtc.cn Postcode: 510623 01052100002302-1(E)

2021-05-14 Date:

### UN38.3 报告 **UN38.3 Test Report**

储能系统(内含锂离子蓄电池) 样品名称:

**Energy Storage System Sample Name:** (contain lithium ion batteries)

华为技术有限公司 委托单位:

Huawei Technologies Co., Ltd **Applicant:** 



2HQC240PHX



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### 检测证书

	TEST RE	PORT	701	
样品名称 Sample Name	储能系统(内含锂离子蓄电池) Energy Storage System (contain lith	hium ion batteries)	CAL	<i>#</i>
型号 Model	LUNA2000-5-E0			
委托单位 Applicant	华为技术有限公司 Huawei Technologies Co., Ltd.	3,067,00	TECHNOL	c TRUCT TW
委托单位地址 Applicant Address	广东省深圳市龙岗区坂田华为基: Huawei Base, Bantian Longgang D		R. China	on one
生产单位 Manufacture	惠州市德赛电池有限公司 Huizhou Desay Battery Co.,Ltd.	1151045	THOUCO	ENWEY.
生产单位地址 Manufacture Address	惠州市惠澳大道惠南高新科技产 NO.6 Plant C, Jin Da Road, Hui Na Guangdong			ay, Huizhou,
样品外观与性状 Appearance & Odor	白色金属外壳 White metal shell	ALC INC.	OGT OFF	. CH <sup>N</sup> OLO
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 UNITED NATIONS" Recommend Manual of Tests and Criteria ST/SC	dations on the TRAN	NSPORT OF DANG	
接样时间 Accepted date	2021-04-10	测试日期 Test date	2021-04-10~	2021-05-14
测试项目 Test items	高度模拟、温度试验、振动、冲Altitude simulation, Thermal test, Forced discharge.			
结论 Conclusion	经测试,该样品符合联合国《ST/SG/AC.10/11/Rev.7, 38.3 标准: The sample has passed the test i TRANSPORT OF DANGERO ST/SG/AC.10/11/Rev.7, 38.3.	要求。 items of UNITED	松哈松测去田	全利标准手册》 mendations on the st and Criteria
备注 Remark	1.随附 UN38.3 试验概要(编号: Attached with UN38.3 test sumn			O SUANETHOU

批准

主检

Appraiser:

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### 电池组信息:

#### The batteries information:

电池类型 Battery type	锂离子电池 Lithium ion batteries	标称电压 Nominal Voltage	385V
额定容量 Rated Capacity	102Ah	总能量 Total Energy	5KWh
充电限制电压 Limited Charge Voltage	435V	标准充电电流 Standard Charge Current	6.5A
最大充电电流 Maximum Charge Current	10A	充电截止电流 Charge Cut-off Current	0A
标准放电电流 Standard discharge Current	6.5A	最大放电电流 Maximum Discharge Current	6.5A
放电截止电压 Discharge Cut-off Voltage	350V	尺寸 Overall Dimensions (W×D×H)	670mm(W)*360mm(D)*150mm(H)
电芯数量 Cell Quantity	16 PCS	重量 Mass	50kg±5%
电芯容量 Cell Capacity	102Ah	电芯型号 Cell Model	C47FCSA
电芯生产单位 Manufacturer of cell	in the light of th	惠州比亚迪电池有 BYD	限公司

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序号 No.	测试项目名称 Name of test	Stand requirement	或标准条款号 or the clause number of tandard	测试结果 Test result	本项结论 Test conclusion	备注 Remark
1	高度模拟 Altitude simulation	和标准手册》UN	货物运输的建议书 试验 N Manual of Tests and .10/11/Rev.7, 38.3 试验	见附表 1 See Appendix 1	合格 Passed	/ chillion
12	温度试验 Thermal test	和标准手册》UN	货物运输的建议书 试验 N Manual of Tests and .10/11/Rev.7, 38.3 试验	见附表 2 See Appendix 2	合格 Passed	/
3	振动 Vibration	和标准手册》UN	货物运输的建议书 试验 N Manual of Tests and .10/11/Rev.7, 38.3 试验	见附表 3 See Appendix 3	合格 Passed	CIHOU
4	冲击 Shock	联合国《关于危险 和标准手册》UN Criteria ST/SG/AC T.4 Test T.4	见附表 4 See Appendix 4	合格 Passed		
5	外部短路 External short circuit	和标准手册》UN	货物运输的建议书 试验 V Manual of Tests and .10/11/Rev.7, 38.3 试验	见附表 5 See Appendix 5	合格 Passed	
6	挤压 Crush	和标准手册》UN	货物运输的建议书 试验 V Manual of Tests and .10/11/Rev.7, 38.3 试验	见附表 6 See Appendix 6	合格 Passed	STOWN
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》UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7, 38.3 试验T.7 Test T.7		见附表 7 See Appendix 7	合格 Passed	÷ 1
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》UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7, 38.3 试验T.8 Test T.8		见附表 8 See Appendix 8	合格 Passed	1,400
Test e	测试环境 environment condition		、境温度: 20℃-25℃; 环 temperature: 20℃-25℃, A			5
	SHARRY NO.	测试项目 Test items	a TRICT N	ME DIS	CUSTO	GLIN
Subco	分包测试情况 ontracted test condition	分包实验室 Subcontracted	名称 Name		邮编 Post code	GUP"
		Laboratory	地址 Address	1 GAL	电话 Tel	/

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序号 No.	附表 1 Appendix 1		ous to	测试项目名称 Name of test		高度模拟 Altitude simulation	
标准要求 Requirement of Standard	池组应无重量 在试验后的开 组除外)。 Test cells and temperature 20 venting, no dis battery after te	损失、无渗漏路电压不少于batteries shall be 0±5℃. Cells and assembly, no rusting is not less	、无排气、无 其在进行这一 e stored at a pro I batteries meet upture and no fi than 90% of its	解体、无破裂 试验前电压的 essure of 11.6kl this requireme re and if the op s voltage immed	和无燃烧, 90%(完全) Pa or less for ent if there is not circuit volution to the circuit volution to circuit volution circuit vol	字放至少 6h。试算并且每个试验电验 放电状态的试验。 at least six hours no mass loss, no l tage of each test of this procedure. at fully discharge	也或电池组 电池或电池 at ambient eakage, no cell or The
样品状态 Sample status	b1#~b2#: fir b3#~b4#: 第	一个循环完全充 st cycle in fully 二十五个循环完 er 25 cycles end	charged states; 已全充电的电池	Ł.	GUANETH	<sup>2</sup>	RMC CENT
样品编号	测试前	Before	测试点	ấ After	质量损失	剩余电压	测试结果
Sample No.	电池质量 m <sub>l</sub> (kg)	开路电压 V <sub>1</sub> (v)	电池质量 m <sub>2</sub> (kg)	开路电压 V <sub>2</sub> (v)	Mass loss (%)	Residual OCV(%)	Test resul
b1#	50.550	394.36	50.550	394.36	0.00	100.00	500
b2#	50.550	394.63	50.550	394.63	0.00	100.00	0
b3#	50.500	395.12	50.500	395.12	0.00	100.00	О
b4#	50.500	395.59	50.500	395.59	0.00	100.00	О

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.		表 2 endix 2		引试项目名称 Name of test	35	温度试 Thermal	
标准要求 Requirement of Standard	下存放至少 12 验电池或电池 无排气、无解 其在进行这一 Test large cells 72±2℃, follow maximum time repeated 10 tim temperature (20 no venting, no obattery after tes	或电池组在试验 th。两个极端试 组在环境温度 20 体、无破裂和无 试验前电压的 90 and batteries are ed by storage for interval between tes, after which a 0±5℃). Cells and disassembly, no retting is not less thating to voltage is	验温度之间的 0±5℃下存放 0%(完全放 to be stored for at least 12 hon test temperated that test cells and d batteries mean rupture and no nan 90% of its	的最大时间间隔 24h。试验电汽 每个试验电池或 电状态的试验 for at least 12 ho ours at a test ten cure extremes is d batteries are to et this requirement of fire and if the voltage immed	局为 30min。 地或电池组应 或电池组在设 电池或电池约 ours at a test to perature eque 30 minutes.' o be stored for ent if there is open circuit valiately prior to	重复 10 次,早 还无重量损失、 式验后的开路电 组除外)。 temperature equal to -40±2℃. This procedure or 24 hours at a no mass loss, i voltage of each o this procedure	手将所有试 无渗漏、 出压不少于 ual to The is to be mbient no leakage, test cell or e. The
样品状态 Sample status	b1#~b2#: firs b3#~b4#: 第二	- 个循环完全充的 t cycle in fully cl 二十五个循环完全 er 25 cycles endin	harged states; 全充电的电池		GUP - ET CÉ	MEE-	OLOGY CHAPTE
样品编号	测试前	Before	测试后	f After	质量损失	剩余电压	河小竹田
件而獨写 Sample No.	电池质量 m <sub>l</sub> (kg)	开路电压 V <sub>1</sub> (v)	电池质量 m <sub>2</sub> (kg)	开路电压 V <sub>2</sub> (v)	Mass loss (%)	Residual OCV(%)	测试结果 Test result
b1#	50.550	394.36	50.550	394.03	0.00	99.92	0
b2#	50.550	394.63	50.550	394.51	0.00	99.97	0
b3#	50.500	395.12	50.500	394.89	0.00	99.94	О
b4#	50.500	395.59	50.500	395.32	0.00	99.93	0

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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Ca	- 20	'C',			.60	. X	171
序号 No.		付表 3 pendix 3		则试项目名称 Name of test	Scool	振动 Vibrat	
标准要求 Requirement of Standard	lgn 的最大加速速度达到 2gn(约 的电池或电池,损失、无渗漏电压不少于其The large Cells distorting the cosinusoidal wave until 18Hz is refrequency increof 2gn is then matimes for a total of the direction requirement if the sinusoidal wave until 18Hz is refrequency increof 2gn is then matimes for a total of the direction requirement if the sinusoidal wave until 18Hz is refrequency increof 2gn is then matimes for a total of the direction requirement if the sinusoidal wave until 18Hz is refrequency in the si	电池组直接安装速度,直到 18Hz。 频率约为 25Hz)。 组安装方向的每 无排气、无解 在进行这一试验 and batteries are ells in such a man eform with a logal ached. The ampl assed until a peak naintained until the lof 3 hours for each of vibration must here is no mass l	然后将振幅保 将最大加速度 个方向重复进 体、无破裂和 前电压的 90% firmly secured mer as to faithf arithmic sweep itude is then ma acceleration of the frequency is ach of three mu ast be perpendic loss, no leakage	持在 0.8mm(保持在 2gn 直行 12 次,一无燃烧,并且 (完全放电) to the platformully transmit the from 7Hz to a sintained at 0.5 2gn occurs (a increased to 2 tually perpendular to the term, no venting, r	总偏移 1.6m 共振动 3h。 每个试验电 状态的试验电 m of the vibration. peak acceler 8mm (1.6mm approximately 00Hz. This colicular mount minal face. Cono disassemb	nm),并增加频率 到 200Hz。对三 试验电池或电池 电池或电池组在设 电池或电池组除 ation machine w . The vibration sl ration of 1g <sub>n</sub> is n total excursion y 25Hz). A peak cycle shall be rep ting positions of Cells and batterie	直到最大加 三个互相垂重 出组应无开 就验后的开 without hall be a naintained ) and the acceleration beated 12 the cell. One is meet this and no fire and
STONEDIS	immediately pr	ior to this proced fully discharged	lure. The require				
样品状态 Sample status	immediately prand batteries at b1#~b2#: 第一b1#~b2#: firs b3#~b4#: 第二	ior to this proced	lure. The require states. 电的电池; harged states; 全充电的电池。	ement relating			
Sample status	immediately prand batteries at b1#~b2#: 第一b1#~b2#: firs b3#~b4#: 第二	ior to this proced fully discharged 一个循环完全充 t cycle in fully cl 二十五个循环完全 er 25 cycles endin	lure. The require states. 电的电池; harged states; 全充电的电池。	ement relating			to test cells
Sample	immediately prand batteries at b1#~b2#: 第一b1#~b2#: firs b3#~b4#: 第二b3#~b4#: afte	ior to this proced fully discharged 一个循环完全充 t cycle in fully cl 二十五个循环完全 er 25 cycles endin	lure. The require states. 电的电池; harged states; 全充电的电池。 ng in fully charg	ement relating	g to voltage is	s not applicable t	
Sample status 样品编号	immediately prand batteries at b1#~b2#: 第一b1#~b2#: firs b3#~b4#: 第二b3#~b4#: afte 测试前	ior to this proced fully discharged  - 个循环完全充。 t cycle in fully cl - 十五个循环完全。 er 25 cycles endin  Before	lure. The require states.  电的电池; harged states; 全充电的电池。 ng in fully charge in full charge in	ged states.  After  开路电压	g to voltage is 质量损失 Mass loss	s not applicable t 剩余电压 Residual	to test cells 测试结果
Sample status 样品编号 Sample No.	immediately prand batteries at b1#~b2#: 第一b1#~b2#: firs b3#~b4#: 第二b3#~b4#: afte 测试前 电池质量 m1(kg)	ior to this proced fully discharged  - 个循环完全充 t cycle in fully cl - 十五个循环完全 er 25 cycles endin  Before	lure. The require states.  电的电池; harged states; 全充电的电池。 ng in fully charged m2(kg)	ged states.  After  开路电压  v2(v)	质量损失 Mass loss (%)	剩余电压 Residual OCV(%)	wi di 结果 Test result
Sample status 样品编号 Sample No.	immediately prand batteries at b1#~b2#: 第一b1#~b2#: 第二b3#~b4#: 第二b3#~b4#: afte 测试前 电池质量 m <sub>1</sub> (kg)	ior to this proced fully discharged  - 个循环完全充。 t cycle in fully cl - 十五个循环完全。 er 25 cycles endin  Before  开路电压 V1(V)  394.03	lure. The require states.  电的电池; harged states; 全充电的电池。 ng in fully charge in full full full full full full full ful	ged states.  After  开路电压 v2(v)  394.03	质量损失 Mass loss (%)	剩余电压 Residual OCV(%)	测试结果 Test result

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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# 州海关技术中小







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No.		附表 4 ppendix 4	USTON	测试项目名 Name of te		冲 · Sho	
标准要求 Requirement of Standard	gn= √(30000 / 其正负极各冲解体、无破裂。 验前电压的 90 Test cells and be support all moushock of peak a milliseconds. El by three shocks or battery for a leakage, no ver cell or battery a requirement rel	mass) 中较小者 击 3 次,共冲 和无燃烧,并且 %(完全放电 outteries shall be inting surfaces acceleration of s ach cell or batter in the negative total of 18 shoot iting, no disasse after testing is nating to voltage	t的正弦波冲击 击 18次。各试 引每个试验电池 状态的试验电 e secured to the of each test bate 50gn or accelera ery shall be sub e direction of th cks. Cells and b embly, no ruptu not less than 90%	,脉冲持续时 强电池或电池 迅或电池组条 testing machin tery. Each Larg tion (gn) = $\sqrt{30}$ jected to three ree mutually per atteries meet the re and no fire a 6 of its voltage ble to test cells a	型电池组,以力间 11ms,按三组 元重量损益 所用路电外)。  The by means of a second by means of a second by mass and batteries at a shock in the poer perpendicular monis requirement in the open commediately prand batteries at a shock in the open commediately prand batteries at a shock in the open commediately prand batteries at a shock in the open commediately prand batteries at a shock in the open commediately prand batteries at a shock in the open commediately prand batteries at a shock in the open commediately prand batteries at a shock in the open commendately prand batteries at a shock in the open comme	个相互垂直的失、无渗漏、压不少于其在 rigid mount we be subjected to and pulse duration sitive direction unting position if there is no mount in the process of	知知向分别对无排气、无进行这一试 which will o a half-sine on of 11 in followed is of the cell class loss, no of each test redure. The
样品状态 Sample status		t cycle in fully 二十五个循环完					ol <sup>o</sup> ne dis
Sample status	b1#~b2#: firs b3#~b4#: 第二	t cycle in fully 二十五个循环完 er 25 cycles end	charged states; 已全充电的电池 ling in fully cha		质量指生	剩余由压	JE ONE DIE
Sample	b1#~b2#: firs b3#~b4#: 第二 b3#~b4#: afte	t cycle in fully 二十五个循环完 er 25 cycles end	charged states; 已全充电的电池 ling in fully cha	arged states.	质量损失 Mass loss (%)	剩余电压 Residual OCV(%)	测试结果 Test result
Sample status 样品编号	b1#~b2#: firs b3#~b4#: 第二 b3#~b4#: afte 测试前 电池质量	t cycle in fully 二十五个循环完 er 25 cycles end Before 开路电压	charged states; 尼全充电的电池 ling in fully cha 测试后 电池质量	f After 开路电压	Mass loss	Residual	
Sample status 样品编号 Sample No.	b1#~b2#: firs b3#~b4#: 第二 b3#~b4#: afte 测试前 电池质量 m <sub>1</sub> (kg)	t cycle in fully 二十五个循环完 er 25 cycles end Before 开路电压 V <sub>1</sub> (v)	charged states; 完全充电的电池 ling in fully cha 测试后 电池质量 m <sub>2</sub> (kg)	### After 开路电压 v2(v)	Mass loss (%)	Residual OCV(%)	Test result
Sample status 样品编号 Sample No.	b1#~b2#: firs b3#~b4#: 第二 b3#~b4#: afte 测试前 电池质量 m <sub>1</sub> (kg)	t cycle in fully 二十五个循环完 er 25 cycles end Before 开路电压 v <sub>1</sub> (v) 394.03	charged states; 已全充电的电池 ling in fully cha 测试后 电池质量 m <sub>2</sub> (kg) 50.550	开路电压 v <sub>2</sub> (v) 394.03	Mass loss (%) 0.00	Residual OCV(%)	Test result 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小于 0.1Ω 的短路条件,当电池耳再观察电池或电池组 6h 才结束i 6h 内应无解体、无破裂和无燃烧The cell or battery to be tested shalf reaches 57±4℃ and then the cell of external resistance of less than 0.1 least one hour after the cell or battery must be observed for a furt this requirement if their external terupture and no fire within six hour.	或电池组外壳温度回到 57±4℃后式验。电池或电池组的外壳温度 6。 Il be temperature stabilized so that or battery shall be subjected to a sh ohm at 57±4℃. This short circuit ery external case temperature has r her six hours for the test to be concemperature does not exceed 170℃	继续至少 1h,然后短路断开,应不超过 170℃,并且试验后 its external case temperature for circuit condition with a total condition is continued for at eturned to 57±4℃. The cell or cluded. Cells and batteries meet
样品状态 Sample status	b1#~b2#: 第一个循环完全充电的 b1#~b2#: first cycle in fully char b3#~b4#: 第二十五个循环完全的 b3#~b4#: after 25 cycles ending	ged states;	ST. G. OLOGY CERTIFIC
样品编号 Sample No.	样品表面最高温度 Max External Temperature	测试结果 (℃) Test result	备注 Remark
b1#	57.5	0	EDE TETOM
b2#	57.3	The Octo	Story Strong
b3#	56.9	JUST GLO	C Profession 1
. ~ ~	(9)		A-

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.

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序号 附表 6 测试项目名称 挤压 No. Appendix 6 Name of test Crush (适用于棱柱形、袋装、硬币/纽扣电池和直径小于18mm的圆柱形电池): 将电池或元件电池放在两个平面之间挤压,挤压力度逐渐加大,在第一个接触点上的速度大约 为 1.5cm/s。挤压持续进行, 直到出现以下三种情况之一即解除压力: (a) 施加的力量达到 13kN±0.78kN; (b)电池的电压下降至少 100 毫伏; 或 (c)电池变形量达原始厚度的50%或以上。 棱柱形或袋装电池应从最宽的一面施压。纽扣/硬币电池应从其平坦表面施压。圆柱形电池应从 与纵轴垂直的方向施压。每个电池只做一次挤压试验。 试验电池或电池组的组成电芯外部温度不超过170℃,并且在试验过程中和试验后6小时内应 无解体、无破裂、无起火。 Requirement Crush (applicable to prismatic, pouch, coin/button cells and cylindrical cells not more than 18 in of Standard diameter): A cell or component cell is to be crushed between two flat surfaces. The crushing is to be gradual with a speed of approximately 1.5cm/s at the first point of contact. The crushing is to be continued until the first of the three options below is reached. (a) The applied force reaches 13kN±0.78kN; (b) The voltage of the cell drops by at least 100mV; or (c) The cell is deformed by 50% or more of its original thickness. Once the maximum pressure has been obtained, the voltage drops by at least 100mV or more, or the cell is deformed by at least 50% of its original thickness, the pressure shall be released. Each test cell or component cell is to be subjected to one crush only. Cells and component cells meet this requirement if their external temperature does not exceed 170°C and there is no disassembly and no fire during the test and within six hours after this test. C1#~C5#: 第一个循环 50%的额定容量的电芯。 样品状态 C1#~C5#: first cycle at 50% of the design rated capacity of cell. C6#~C10#: 第二十五个循环 50%的额定容量的电芯。 Sample status C6#~C10#: after 25 cycles at 50% of the design rated capacity of cell. 样品表面最高温度 样品表面最高温度 样品编号 样品编号 测试结果 测试结果 备注 备注 Max External Max External Test result Remark Test result Remark Sample No. Sample No. Temperature(°C) Temperature(°C) 23.9 O 23.9 O C1# C6# C2# 23.8 O C7# 24.1 O 24.0 O 23.9 0 C3# C8# C4# 24.1 O C9# 24.2 O C5# 24.0  $\mathbf{O}$ C10# 24.3  $\mathbf{O}$ 

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.

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					0
序号	附表 7	测试项目名称	000	过度充电	en,
No.	Appendix 7	Name of test	100	Overcharge	
(4) C.	充电电流必须是制:	造商建议的最大连续充电	电流的两倍, 试验的	的最小电压应为如下	:
	(a)制造商建议的	充电电压不大于 18V 时	, 试验的最小电压	应是电池组最大充电	1.电压的两
ONE	倍或 22V 两者中的				
215		充电电压大于 18V 时, 记	式验的最小电压应是	是最大充电电压的 1.	2倍。
No.	( //\/	环境温度下试验 24h。试材			
标准要求		hall be twice the manufactu		naximum continuous	charge
Requirement		m voltage of the test shall bacturer's recommended char		ro than 19VI the mini	imum
of Standard		all be the lesser of two time			
	22V.			8	11/0
CELT		acturer's recommended char		han 18V, the minimus	m voltage
3		2 times the maximum charged ducted at ambient temper		of the test shall be	24 hours
		es meet this requirement i			
a RIV	days of the test.	CV CV	60)		-67
样品状态		环完全充电的电池;			
Sample		e in fully charged states; 个循环完全充电的电池。			
status		cycles ending in fully charg			
样品编号		测试结果	CC 201		S.
Sample No.		Test result	" CHANGE	Remark	
b1#	707	O CHILD	16	- () <sup>18</sup>	(6,0)
01π		2 0	A 825	OME I	37
b2#	ST. CHIPT	0 200	,501°	1 2110	
- LOV			P. 170	, ANO	
b3#	XPIC.	0	.GINE	D.,	
.6^^*	000	20, 70,	- Okar	3	A STATE OF THE PARTY OF THE PAR
b4#	OMP 11CO	0	0	~ / . E	
á	, O	182		3	

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.

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序号 No.	附表 8 Appendix 8	3	测试项目。 Name of t		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 force D.C. power supply at manufacturer. The speappropriate size and rainterval (in hours) equivalent of the test.  C11#~C20#:第一个	ed discharged an initial curre ecified dischargating in series all to its rated oneet this require affix完全放电	x 也。原电池或可和 at ambient tempera ent equal to the max ge current is to be o with the test cell. Ea capacity divided by rement if there is no ube芯;	再充电电池在试验 ture by connecting imum discharge contained by connect ach cell shall be for the initial test curr	在起始电流等于制造商经验后 7 天内应无解体和无实 it in series with a 12V urrent specified by the ting a resistive load of the orced discharged for a time rent (in Ampere). Primary no fire within seven days
Sample status	C11#~C20#: first cycl C21#~C30#: 第二十 C21#~C30#: after 25	五个循环完全	放电的电芯。	GURNO	e se
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
C11#	O	15-	C21#	0	
C12#	O	- CET /	C22#	О О	SE / TOMP
C13#	0	/ /	C23#	0.0	3059
C14#	O	122	C24#	О	Mer 1
C15#	0	OME /	C25#	o o	18
C16#	0	1	C26#	O	487
C17#	0	Por	C27#	0	
C18#	0	/	C28#	0 ,	(E) (E) (E)
C19#	0	1,00	C29#	o e	a out of
C20#	O	29	C30#	0	(No. 1 (1)

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.

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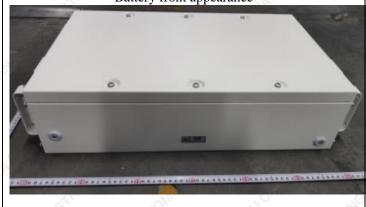
Date: 2021-05-14 Page: 13 of 14

### 样品图片

### Photo of the sample

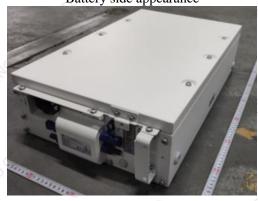
电池正面外观

Battery front appearance



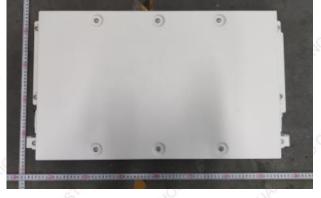
电池侧面外观

Battery side appearance



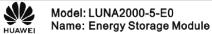
电池背面外观

Battery back appearance



电池铭牌(含 Wh)

#### Battery nameplate (With Wh)



Battery Type: LI-Ion
Battery Energy: 5 kWh
Input/Output: == 350 - 435 V; 7.5 A; 2.5 kW
Max Output Current: 10 A
Protective Class: I
Battery Interface: Isolated
Enclosure Type: IP66
Weight: 50 kg
Operatin

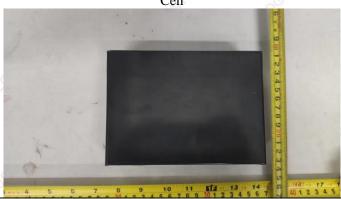


Operating Temperature Range: -20 - +55 °C

华为技术有限公司 HUAWEI TECHNOLOGIES CO., LTD. 中国制造 MADE IN CHINA HQ of Huawei, Bantian, Longgang District, Shenzhen, 518129, P.R.C



### Cell



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Inspection Address: Room C102, No.1 Nanxiangzhi Road, Science City, Guangzhou, Guangdong, China (Light Industry Testing Laboratory in Science City)

电话(Tel): 020-38669019-811

电子邮箱(E-mail): battery@iqtcnet.cn; itl@iqtcnet.cn

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