





报告编号

# **UN38.3 Test Report** UN38.3 测试报告

**Client Name** 

**Anker Innovations Limited** 

委托单位

安克创新有限公司

Address

Room 1318-19, Hollywood Plaza, 610 Nathan

Road, Mongkok, Kowloon, Hong Kong

地址

香港九龙旺角弥敦道 610 号荷李活商业中心 1318-

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**Product Name** 

**Anker SOLIX C800X Portable Power Station** 

产品名称

移动电源

Jan. 23, 2024 **Date** 

2024年01月23日 日期

## **Shenzhen Anbotek Compliance Laboratory Limited** 深圳安博检测股份有限公司

深圳安博检测股份有限公司

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## 1. SAMPLE DESCRIPTION 样品描述:

Sample Name: 样品名称	stek Anbores	Anker SOLIX C800X Portable Power Stati 移动电源	111.	100	k Aupore		
Manufacturer: 制造商		Anker Innovations Limited 安克创新有限公司 Room 1318-19, Hollywood Plaza, 610 Nathan Road, Mongkok, Kowloon, Hong Kong 香港九龙旺角弥敦道 610 号荷李活商业中心 1318-19 室					
Address of manufa 制造商地址	acturer:						
Factory: 工厂	tek Anbot	Huizhou Golden Lake 惠州市锦湖实业发展		d Anbotek	tek Aupote		
Address of factory 工厂地址	Anbotek Anbotek	Dongjiang Industrial Huizhou City, Guang 广东省惠州市惠城区	dong Province, P	.R.China	trict,,		
Battery Nominal Voltage: 电池标称电压	51.2V (Built-in battery)	Rated Capacity: 额定容量	15000mAh 768Wh	Trademark: 商标	ANKER		
Charge Current: 充电电流	60V <del></del> 10A (XT60)	Maximum Continuous Charge Current: 最大持续充电电流	60V <del></del> 10A (XT60)	End Charge Current: 充电截止电流	0.75A (Built-in battery)		
Cut-off Voltage: 终止电压	32V (Built-in battery)	Maximum Continuous Discharge Current: 最大持续放电电流	12V <del></del> 10A (Car Charger)	Limited Charge Voltage: 充电限制电压	60V (XT60)		
Cells Number: 内含电芯个数	16 Anbotek	Cell Model: 电芯型号	32140FS- 15000mAh	Cell Rated Capacity: 电芯额定容量	15Ah		
Date of first receipt 首次样品接收日期	of samples:	Jul. 31, 2023 2023年07月31日	potek Anbotek	anbotek Anbotek	Anbotek		
Date of Test: 检测日期	otek Anbo	Jul. 31, 2023 to Sept. 27, 2023 2023年07月31日至2023年09月27日					
Date of second rec samples: 第二次样品接收日期	hotek	Jan. 17, 2024 2024年01月17日					

Report Compiled:

报告编制

Checked by:

Approved by:

批准

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## 2. REFERENCE METHOD 参考方法

UN "Manual of Tests and Criteria" ST/SG/AC.10/11/Rev.7/Amend.1/Subsection 38.3 联合国《试验和标准手册》 (第7版修订1) 38.3 节

## 3. EQUIPMENT LIST 设备清单

Name of equipment /Model 设备名称/型号 Altitude Simulation Testing Machine	Serial No. 编号
	SE-132
High Fast Temperature&Humidity Chamber	SE-1488
电做式振动式给机	SE-439
	Ver Pul
Shock Tosting Machine	
	SE-440
	OL THE
High Temperature Short Circuit Test Chamber	
	SE-4071
KA CGEU	OF HOLL
The second of th	
自油 克阳 测试仪	SF-171
TK3263	SE-171
AL LADRA IN	SE-136
	OL-130
BE-5060 Battery Charge And Discharge System 申池充放电系统	
Battery Charge And Discharge System 电池充放电系统	SE-1507
电池充放电系统 CT-4002-80V40A-NA	3L-1301
	SE-4123
	Anbo
	SE-1188
LITO 4 P	OL-1100
	SE-1189
	AMBINOS
価砂度り HTC-1 DC Power Supply 直流稳压电源	
DC Power Supply 直流稳压电源 Q.I3020F	SE-1532
直流稳压电源 QJ3020E	VOL-1002
TRUE RMS multimeter	
A-7-11-4	
台式万用表 MS8040 Electronic Scale	OL-2010
Electronic Scale	nbotek
由子秤	SE-4457
ETC-D And stek andor All ak note	
ETO-D	- Anbotek
温升记录仪	SEINNA
34970A	SE-004

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## 4. ENVIRONMENTAL CONDITIONS OF THE TEST 环境条件

Temperature: (20±5) °C R.H.: (25~75) %RH

温度 相对湿度

## 5. TEST ITEM AND CONCLUSION 测试项目及结论

ITEM 测试项目	SAMPLE NUMBER 样品编号	STANDARD 执行标准	CONCLUSION 结论
Altitude simulation 高度模拟	Anbotek Anbot	tek abotek Ant	经测试,该样品符
Thermal test 热测试	ek Anbotek Ant	or Annotek	合联合国《试验和   标准手册》(第 <b>7</b>
Vibration 振动	B1~B4, B5~B8	inpo. W. Wipotek	版修订 1) 38.3 节 标准要求
Shock 冲击	Anbotek Anbotek	ST/SG/AC.10/11/Rev.	The sample has
External short circuit 外部短路	Anbotek Anbote	7/Amend1	passed the items of UN "Manual of
Impact 撞击	C1~C5, C6~C10	tek Anbotek Anb	Tests and Criteria"
Overcharge 过度充电	B9~B12, B13~B16	sotek Anbotek	ST/SG/AC.10/11/ Rev.7/Amend1/Su
Forced discharge 强制放电	C11~C20, C21~C30	Anbotek Anbotek	bsection 38.3

#### Notes 说明:

B1~B4: Batteries at first cycle in fully charged states; 为第 1 个充放电周期完全充电状态的电池;

B5~B8: Batteries after 25 cycles ending in fully charged states;

为第25个充放电周期后完全充电状态的电池;

B9~B12: Batteries at first cycle in fully charged states;

为第1个充放电周期完全充电状态的电池;

B13~B16: Batteries after 25 cycles ending in fully charged states;

为第25个充放电周期后完全充电状态的电池;

C1~C5: Cells at first cycle at 50% of the design rated capacity; 为第 1 个充放电周期 50%设计额定容量状态的电芯;

C6~C10: Cells at 25 cycle at 50% of the design rated capacity; 为第 25 个充放电周期 50%设计额定容量状态的电芯;

C11~C20: Cell batteries at first cycle in fully discharged states;

为第1个充放电周期完全放电状态的电芯;

C21~C30: Cells after 25 cycles ending in fully discharged states. 为第 25 个充放电周期后完全放电状态的电芯。

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## 6. TEST METHOD 测试方法

Tests T.1 to T.5 shall be conducted in sequence on the same cell or battery. Tests T.6 and T.8 shall be conducted using not otherwise tested cells or batteries. Test T.7 may be conducted using undamaged batteries previously used in tests T.1 to T.5 for purposes of testing on cycled batteries. In order to quantify the mass loss, the following procedure is provided:

Mass loss(%) =  $(M_1-M_2) / M_1 \times 100$ 

Where  $M_1$  is the mass before the test and  $M_2$  is the mass after the test. When mass loss does not exceed the values in Table blow, it shall be considered as "no mass loss".

小型电芯或电池必须按顺序进行试验 T.1 至 T.5。试验 T.6 和 T.8 应使用未另外试验过的电芯或电池。试验 T.7 可以使用原先在试验 T.1 至 T.5 中使用过的未损坏电池进行,以便测试交替充电放电过的电池。

质量损失依照下式计算:

质量损失(%)= (M<sub>1</sub>-M<sub>2</sub>)/M<sub>1</sub> \*100

式中  $M_1$  是试验前的质量, $M_2$  是试验后的质量。如质量损失不超过下表所列数值,即视为"无质量损失"。

Mass M of cell or battery 电芯或电池质量 M	Mass loss limit 质量损失限值
M<1g	0.5%
1g≤M≤75g	0.2%
M>75g	0.1%

#### T.1 Altitude simulation

Test cells and batteries shall be stored at a pressure of 11.6 kPa or less for at least six hours at ambient temperature ( $20 \pm 5$  °C).

Cells and batteries meet this requirement if there is no leakage, no venting, no disassembly, no rupture and no fire and if the open circuit voltage of each test cell or battery after testing is not less than 90% of its voltage immediately prior to this procedure. The requirement relating to voltage is not applicable to test cells and batteries at fully discharged states.

#### T.1 高度模拟

试验电芯和电池应在压力等于或低于 11.6 千帕和环境温度为(20°±5°C) 下存放至少 6 小时。要求电芯和电池无渗漏、无排气、无解体、无破裂、无起火,并且每个试验电芯或电池在试验后的开路电压不小于其在进行这一实验前电压的 90%。有关电压的要求不适用于完全放电状态的试验电芯和电池。

#### T.2 Thermal test

Test cells and batteries are to be stored for at least six hours at a test temperature equal to  $72 \pm 2^{\circ}$ C, followed by storage for at least six hours at a test temperature equal to  $-40 \pm 2^{\circ}$ C. The maximum time interval between test temperature extremes is 30 minutes. This procedure is to be repeated until 10 total cycles are complete, after which all test cells and batteries are to be stored for 24 hours at ambie nt temperature (20  $\pm$  5°C). For large cells and batteries the duration of exposure to the test temperature extremes should be at least 12 hours.

Cells and batteries meet this requirement if there is no leakage, no venting, no disassembly, no rupture and no fire and if the open circuit voltage of each test cell or battery after testing is not less than 90% of its voltage immediately prior to this procedure. The requirement relating to voltage is not applicable to test cells and batteries at fully discharged states.

T.2 热测试

试验电芯和电池应先在试验温度等于 72±2°C 的条件下存放至少 6 小时,接着再在试验温度等于-40±2°C 的条件下存放至少 6 小时。两个极端试验温度之间的最大时间间隔为 30 分钟。此程序重复进行,完成 10 次,接着将所有试验电芯和电池在环境温度(20±5°C)下存放 24 小时。对于大型电芯和电池,暴露于极端试验温度的时间至少应为 12 小时。

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要求电芯和电池无渗漏、无排气、无解体、无破裂和无起火,并且每个试验电芯或电池在试验后的开路电压不小于其在进行这一试验前电压的 90%。有关电压的要求不适用于完全放电状态的试验电芯和电池。

#### T.3 Vibration

Cells and batteries are firmly secured to the platform of the vibration machine without distorting the cells in such a manner as to faithfully transmit the vibration. The vibration shall be a sinusoidal waveform with a logarithmic sweep between 7 Hz and 200 Hz and back to 7 Hz traversed in 15 minutes. This cycle shall be repeated 12 times for a total of 3 hours for each of three mutually perpendicular mounting positions of the cell. One of the directions of vibration must be perpendicular to the terminal face. The logarithmic frequency sweep shall differ for cells and batteries with a gross mass of not more than 12 kg (cells and small batteries), and for batteries with a gross mass of more than 12 kg (large batteries).

For cells and small batteries: from 7 Hz a peak acceleration of 1  $g_n$  is maintained until 18 Hz is reached. The amplitude is then maintained at 0.8 mm (1.6 mm total excursion) and the frequency increased until a peak acceleration of 8  $g_n$  occurs (approximately 50 Hz). A peak acceleration of 8  $g_n$  is then maintained until the frequency is increased to 200 Hz.

For large batteries: from 7 Hz to a peak acceleration of 1 gn is maintained until 18 Hz is reached. The amplitude is then maintained at 0.8 mm (1.6 mm total excursion) and the frequency increased until a peak acceleration of 2  $g_n$  occurs (approximately 25 Hz). A peak acceleration of 2  $g_n$  is then maintained until the frequency is increased to 200 Hz.

Cells and batteries meet this requirement if there is no leakage, no venting, no disassembly, no rupture and no fire during the test and after the test and if the open circuit voltage of each test cell or battery directly after testing in its third perpendicular mounting position is not less than 90% of its voltage immediately prior to this procedure. The requirement relating to voltage is not applicable to test cells and batteries at fully discharged states.

#### T.3 振动

电芯和电池紧固于振动机平台,但紧固程度不能造成电芯变形以致不能准确传递振动。振动应是正弦波形,对数频率扫描从 7 赫兹和 200 赫兹,再回到 7 赫兹,跨度为 15 分钟。这一振动过程须对三个相互垂直的电芯安装方位的每一方向重复进行 12 次,共为时 3 小时。其中一个振动方向必须与端面垂直。

作对数式频率扫描,对总质量不足 **12** 千克的电芯和电池(电芯和小型电池),和对 **12** 千克及更大的电池(大型电池)有所不同。

对电芯和小型电池: 从 7 赫兹开始,保持 1  $g_n$  的最大加速度,直到频率达到 18 赫兹。然后将振幅保持在 0.8 毫米(总位移 1.6 毫米),并增加频率直到最大加速度达到 8  $g_n$ (频率约为 50 赫兹)。将最大加速度保持在 8  $g_n$  直到频率增加到 200 赫兹。

对大型电池: 从 7 赫兹开始,保持 1  $g_n$  的最大加速度,直到频率达到 18 赫兹。然后将振幅保持在 0.8 毫米(总行程 1.6 毫米)并增加频率直到最大加速度达到 2  $g_n$ (频率约为 25 赫兹)。将最大加速度保持在 2  $g_n$  直到频率增加到 200 赫兹。

要求电芯和电池无渗漏、无排气、无解体、无破裂和无起火,并且每个试验电芯或电池在第三个垂直安装方位上的试验后立即测得的开路电压不小于在进行这一试验前电压的 90%。有关电压的要求不适用于完全放电状态的试验电芯和电池。

#### T.4 Shock

Test cells and batteries shall be secured to the testing machine by means of a rigid mount which will support all mounting surfaces of each test battery.

Each cell shall be subjected to a half-sine shock of peak acceleration of 150  $g_n$  and pulse duration of 6 milliseconds. Alternatively, large cells may be subjected to a half-sine shock of peak acceleration of 50  $g_n$  and pulse duration of 11 milliseconds.

Each battery shall be subjected to a half-sine shock of peak acceleration depending on the mass of the battery. The pulse duration shall be 6 milliseconds for small batteries and 11 milliseconds for large batteries. The formulas below are provided to calculate the appropriate minimum peak accelerations.

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Battery 电池	Minimum peak acceleration 最小峰值加速度	Pulse duration 脉冲持续时间
hotek Anbore An	150 g₁ or result of formula	Anboro An
Small batteries 小型电池	Acceleration(gn)= $\sqrt{\frac{100850}{\text{mass}*}}$	6 ms
Anbo ok bojek	whichever is smaller	by potek
15k Aupore Au	50 g₁ or result of formula	Anbore An
Large batteries 大型电池	Acceleration(gn)= $\sqrt{\left(\frac{30000}{\text{mass}*}\right)}$	Anbotek 11 ms Anbotek
Anbore K Lotek Anbore	whichever is smaller	k hotek Anbort

<sup>\*</sup> Mass is expressed in kilograms.

Each cell or battery shall be subjected to three shocks in the positive direction and to three shocks in the negative direction in each of three mutually perpendicular mounting positions of the cell or battery for a total of 18 shocks.

Cells and batteries meet this requirement if there is no leakage, no venting, no disassembly, no rupture and no fire and if the open circuit voltage of each test cell or battery after testing is not less than 90% of its voltage immediately prior to this procedure. The requirement relating to voltage is not applicable to test cells and batteries at fully discharged states.

T.4 冲击

试验电芯和电池用坚固支架紧固在试验机上,支架支撑着每个试验电池的所有安装面。

每个电芯须经受最大加速度 150 g<sub>n</sub> 和脉冲持续时间 6 毫秒的半正弦波冲击。不过,大型电芯需须经受最大加速度 50 g<sub>n</sub> 和脉冲持续时间 11 毫秒的半正弦波冲击。

每个电芯须经受半正弦波冲击的峰值加速度取决于电池的质量。对小型电池的脉冲持续时间为 6 毫秒,对大型电池的脉冲持续时间为 11 毫秒。上面的公式用于计算合适的最低限度最大加速度。

每个电芯或电池须在三个相互垂直的电芯或电池安装方位的正极方向经受三次冲击,接着在负极方向经受三次冲击,总共经受 18 次冲击。

要求电芯和电池无渗漏、无排气、无解体、无破裂和无起火,并且每个试验电芯或电池在试验 后的开路电压不小于其在进行这一试验前电压的 90%。有关电压的要求不适用于完全放电状态的试验电 芯和电池。

#### T.5 External short circuit

对于待试电芯或电池,应加温一段必要的时间,使从外壳测量的温度达到均匀的稳定温度 57±4°C,这段时间的长短取决于电芯或电池的大小和设计,对于这个持续时间应加以评估和记录。如无法进行这种评估,则小型电芯或电池的暴露时间应至少持续 6 小时,大型电芯或电池的暴露时间应至少持续 12 小时。然后,电芯或电池在 57±4°C 下经受总外电阻小于 0.1 欧姆的短路条件。

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这一短路条件应在电芯或电池外壳温度回到 57±4℃ 后持续至少 1 小时,或在大电池的情况下 外壳温度降幅达试验中所观察的最高温升幅的二分之一并保持低于此温度值。

短路和降温阶段应至少相当于环境温度。

要求电芯和电池外壳温度不超过 **170℃**, 并且在试验过程中及试验后 **6** 小时内无解体,无破裂,无起火。

#### T.6 Impact / Crush

Impact (applicable to cylindrical cells greater than 18 mm in diameter)

The sample cell or component cell is to be placed on a flat smooth surface. A  $15.8 \pm 0.1$ mm diameter, at least 6 cm long, or the longest dimension of the cell, whichever is greater, Type 316 stainless steel bar is to be placed across the centre of the sample. A  $9.1 \pm 0.1$  kg mass is to be dropped from a height of  $61 \pm 2.5$  cm at the intersection of the bar and sample in a controlled manner using a near frictionless, vertical sliding track or channel with minimal drag on the falling mass. The vertical track or channel used to guide the falling mass shall be oriented 90 degrees from the horizontal supporting surface.

The test sample is to be impacted with its longitudinal axis parallel to the flat surface and perpendicular to the longitudinal axis of the  $15.8 \pm 0.1$ mm diameter curved surface lying across the centre of the test sample. Each sample is to be subjected to only a single impact.

Crush (applicable to prismatic, pouch, coin/button cells and cylindrical cells not more than 18 mm in 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 1.5 cm/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 13 ± 0.78 kN;
- (b) The voltage of the cell drops by at least 100 mV; 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 100 mV or more, or the cell is deformed by at least 50% of its original thickness, the pressure shall be released.

A prismatic or pouch cell shall be crushed by applying the force to the widest side. A button/coin cell shall be crushed by applying the force on its flat surfaces. For cylindrical cells, the crush force shall be applied perpendicular to the longitudinal axis.

Each test cell or component cell is to be subjected to one crush only. The test sample shall be observed for a further 6 h. The test shall be conducted using test cells or component cells that have not previously been subjected to other tests.

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. T.6 撞击/挤压

撞击(适用于直径不小于18毫米的圆柱形电芯)

试样电芯或组成电芯放在平坦光滑的表面上,一根 316 型不锈钢棒横放在试样中心,钢棒直径 15.8 ± 0.1 毫米,长度至少 6 厘米,或电芯最长端的尺度,取二者之长者。将一块 9.1 ± 0.1 千克的重锤 从 61 ± 2.5 厘米高处跌落到钢棒和试样交叉处,使用一个几乎没有摩擦的、对落体重锤阻力最小的垂直轨道或管道加以控制。垂直轨道或管道用于引导落锤沿水平支撑表面呈 90 度落下。

接受撞击的试样,纵轴应与平坦表面平行并与横放在试样中心的直径 15.8 ± 0.1 毫米弯曲表面的纵轴垂直。每一试样只经受一次撞击。

挤压(棱柱形、袋装、硬币/纽扣电芯和直径小于 18 毫米的圆柱形电芯)

将电芯或组成电芯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 1.5 厘米/秒。挤压持续进行,直到出现以下三种情况之一:

- (a) 施加的力量达到 13 ± 0.78 千牛顿;
- (b) 电芯的电压下降至少 100 毫伏;或
- (c) 电芯变形达到原始厚度的 50%或以上。
- 一旦达到最大压力、电压下降 100 毫伏或更多,或电芯变形至少达原厚度的 50%,即可解除压力。

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棱柱形或袋装电芯应从最宽的一面施压。纽扣/硬币形电芯应从其平坦表面施压。圆柱形电芯应从与纵轴 垂直的方向施压。

每个试样电芯或组成电芯只做一次挤压试验。试样应继续观察 6 小时。试验应使用之间未做过其他试验的电芯或组成电芯进行。

要求电芯或组成电芯外壳温度不超过 170°C, 并且在试验过程中及试验后 6 小时内无解体,无起火。

#### T.7 Overcharge

The charge current shall be twice the manufacturer's recommended maximum continuous charge current. The minimum voltage of the test shall be as follows:

- (a) When the manufacturer's recommended charge voltage is not more than 18V, the minimum voltage of the test shall be the lesser of two times the maximum charge voltage of the battery or 22V.
- (b) When the manufacturer's recommended charge voltage is more than 18V, the minimum voltage of the test shall be 1.2 times the maximum charge voltage.

Tests are to be conducted at ambient temperature; the duration of the test shall be 24 hours. Rechargeable batteries meet this requirement if there is no disassembly and no fire during the test and within seven days after the test.

#### T.7 过度充电

充电电流必须是制造商建议的最大持续充电电流的两倍。试验的最小电压如下:

- (a)制造商建议的充电电压不大于 18 伏时,试验的最小电压应是电池最大充电电压的两倍或 22 伏两者中的较小者;
  - (b)制造商建议的充电电压大于 18 伏时,试验的最小电压应为最大充电电压的 1.2 倍试验应在环境温度下进行,进行试验的时间应为 24 小时。要求可充电电池在试验过程中和试验后 7 天内无解体,无起火。

#### T.8 Forced discharge

Each cell shall be forced discharged at ambient temperature by connecting it in series with a 12V D.C. power supply at an initial current equal to the maximum discharge current specified by the manufacturer. The specified discharge current is to be obtained by connecting a resistive load of the appropriate size and rating in series with the test cell. Each cell shall be forced discharged for a time interval (in hours) equal to its rated capacity divided by the initial test current (in ampere).

Primary or rechargeable cells meet this requirement if there is no disassembly and no fire during the test and within seven days after the test.

#### T.8 强制放电

每个电芯应在环境温度下与 12 伏直流电源串联在起始电流等于制造商给定的最大放电电流的条件下强制放电。

将适当大小和额定值的电阻负荷与试验电池串联,计算得出给定的放电电流。对每个电池进行强制放电,放电时间(小时)应等于其额定容量除以初始试验电流(安培)。

要求原电芯或可充电电芯在试验过程中和试验后7天内无解体,无起火。

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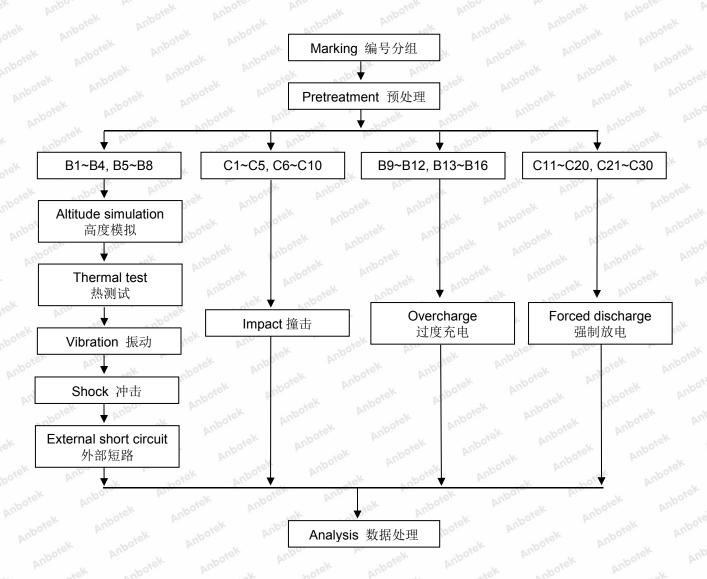




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## 7. TEST PROCEDURE 测试程序



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## 8. DATA 测试数据

## T.1 Altitude simulation 高度模拟

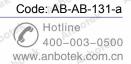
No.	Pre-test 测试前		Pre-test 测试前		Voltage	Whether leakage,	
编号	Mass	Voltage	Mass	Voltage	loss	loss	venting,
bote	质量	电压	质量	电压	质量亏损	电压亏损	disassembly,
AMD	克(kg)	伏(V)	克(kg)	伏(V)	(%)	(%)	rupture, fire (Y/N) 有无渗漏,排气,解
ek Aup	opotek VI	Anborek	Anboten	Anbote	Anbo	ek Aup	体,破裂和起火(是 /否)
B1	11.682	5.119	11.682	5.118	0.00	0.02	N M
B2	11.726	5.117	11.726	5.117	0.00	0.00	Am Note
B3	11.771	5.106	11.770	5.106	0.01	0.00	Anbore N Am
B4	11.778	5.119	11.778	5.119	0.00	0.00	NK AND
B5	11.714	5.124	11.713	5.124	0.01	0.00	MUD N K
B6	11.695	5.119	11.695	5.119	0.00	0.00	*ex Note, b
B7 Anbo	11.755	5.113	11.755	5.112	0.00	0.02	"N sek
B8	11.732	5.114	11.732	5.114	0.00	0.00	hotek Nabo

## T.2 Thermal test 热测试

. ~~							
No.	Pre-test 测试前		Pre-test 测试前 After test 测试后		Mass	Voltage	Whether leakage,
编号	Mass	Voltage	Mass	Voltage	loss	Loss	venting,
16 00	质量	电压	质量	电压	质量亏损	电压亏损。	disassembly,
Arra	克(kg)	伏(V)	克(kg)	伏(V)	(%)	(%)	rupture, fire (Y/N)
nek an	boys = ( 0) b	rok.	abotek	Anlo	V	otek or	有无渗漏,排气,解
V		Anboro	Al.	6 200	ien Vup	V.	体,破裂和起火(是
oboter		botek	Anboro	Dir	rek.	Upoler	/否)
B1	11.682	5.118	11.679	5.109	0.03	0.18	anbore N And
B2	11.726	5.117	11.723	5.106	0.03	0.21	N Nobo
B3	11.770	5.106	11.768	5.097	0.02	0.18	And N
B4	11.778	5.119	11.775	5.109	0.03	0.20	ok "Nier bi
B5 (00)	11.713	5.124	11.711	5.114	0.02	0.20	PI'N LOK
B6	11.695	5.119	11.693	5.108	0.02	0.21	otek Mpo,
B7 An	11.755	5.112	11.752	5.101	× 0.03	0.22	N hotek
B8	11.732	5.114	11.730	5.103	0.02	0.22	" N VUD

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## T.3 Vibration 振动

No.	No. Pre-test 测试前		D. Pre-test 测试前 After test 测试后		Mass Voltage		Whether leakage,
编号	Mass	Voltage	Mass	Voltage	loss	Loss	venting,
botek	质量	电压	质量	电压	质量亏损	电压亏损	disassembly,
And	克(kg)	伏(V)	克(kg)	伏(V)	(%)	(%)	rupture, fire (Y/N)
Anbor		rek.	"poter	And	hotek	Aupor	有无渗漏,排气,解
tek Anb		bo, stek	nbotek	Anbore	K And	ek Anb	体,破裂和起火(是   /否)
B1	11.679	5.109	11.679	5.109	0.00	0.00	Aboret NAME
B2	11.723	5.106	11.722	5.106	0.01	0.00	** N "poter
B3	11.768	5.097	11.768	5.097	0.00	0.00	Aupo, N by
B4	11.775	5.109	11.775	5.108	0.00	0.02	hotelN Anbo.
B5	11.711	5.114	11.711	5.113	0.00	0.02	And Nk
B6	11.693	5.108	11.693	5.108	0.00	0.00	L AND AN
B7	11.752	5.101	11.751	5.101	0.01	0.00	Notek
B8	11.730	5.103	11.730	5.103	0.00	0.00	PN PN

## T.4 Shock 冲击

Peak acceleration: 92.8 g<sub>n</sub>, Pulse duration: 6 ms 峰值加速度: 92.8 g<sub>n</sub>, 脉冲时间: 6 ms

No.	Pre-test	t测试前	After tes	t 测试后	Mass	Voltage	Whether leakage,
编号	Mass	Voltage	Mass	Voltage	loss	Loss	venting,
40.	质量	电压	质量	电压	质量亏损	电压亏损	disassembly,
DOTE AN	克(kg)	伏(V)	克(kg)	伏(V)	· (%)	(%)	rupture, fire (Y/N)
-otek	Auporo	VIII	abote	Anbo	V	rotek	有无渗漏,排气,解
PUD	Potek	Aupore	Di.	rek or	boten	YUD OK	体,破裂和起火(是
aboter	AND	· · · · · ·	ek anb	D. D.	*ek	aboter	/否)
B1	11.679	5.109	11.679	5.109	0.00	0.00	abot N And
B2	11.722	5.106	11.722	5.105	0.00	0.02	N <sub>xe</sub> k
B3	11.768	5.097	11.768	5.097	0.00	0.00	ek MUN
B4	11.775	5.108	11.774	5.108	0.01	0.00	N hotek
B5	11.711	5.113	11.711	5.113	0.00		port N
B6	11.693	5.108	11.693	5.107	0.00	0.02	nek Nanbore
bot®B7	11.751	5.101	11.751	5.101	0.00	0.00	And N week
B8	11.730	5.103	11.729	5.103	0.01	0.00	aboter N Amb

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## T.5 External short circuit 外部短路

Peak temperature (°C) 最高温度	Whether disassembly, rupture, fire (Y/N) 有无解体,破裂,起火(是/否)
58.0	And k holds Anbor An
58.5	AND N W MOTER AND
58.5	March Arm Arm
58.6	Botes Anbot K N hotek Anbot
57.7	otek sobote Nati
58.3	Anbor Artek N Anbore Arte
57.3	abotek Anbote N sotek Anbote
58.6 March 58.6	And And And And And And And Andrew
	最高温度 58.0 58.5 58.5 58.6 57.7 58.3 57.3

#### T.6 Impact 撞击

No. 编号	Peak temperature (°C) 最高温度	Whether disassembly, fire (Y/N) 有无解体,起火(是/否)
C1	24.5	N N
C2	24.0	Anbor Anbore An
know C3	23.9	And N Motek Anbo.
C4	23.9	A. Mak Model Aug
C5	24.4	Anbo M. Nok anbore An
C6	23.9	tek spoker Ania
C7 Mb0	24.2	Notes And
C8	24.2	hotek Anbo. N
C9 Ann	23.8	Un Napor Napor An
C10	23.8	ports Ann N stek Aupo.

#### T.7 Overcharge 过度充电

N <sub>S</sub>	No. 编号	Anbotek	Anbo. botek	Whether disa 有无解体,	ssen 起力	nbly, fire (Y/N) k(是/否)	lek.	Anbotek A
	B9	Vupo	Yu.	potek	N			Auport
, o	B10		Lorek Anbore	bu.	N	poten Ar	100	botek
	B11	D)	'K hote	Anbo,	N	*ek	abote	And
74	B12	ek	Aupole, Mus	ok hotek	N	Anbo.	A. Sie	k Vupose
Ī	B13		otek Ant	Oto Vin	N	potek	Aupo	V
	B14	poter	Anbo	rotek Anbo	N	Arr.	da	Oter Vup.
Ī	Anbon B15	*eK	"pole"	7Up	N	Aupor	burn	*ek
4	B16	Vupo.	p. otek	upole. An	N	tod, Yo.	ek b	'upo. b

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## T.8 Forced discharge 强制放电

70°, 5,	ote, vue
No. 编号	Whether disassembly, fire (Y/N)
Aupois Air	有无解体,起火(是/否)
Lorek C11 Anbor	Ar hotek abotek And N hotek Anbor Ar
C12	ek Anbo A stek anb N Anb ak hotek Ant
C13	Notek Anbo Mitek Anbore Anti-
C14	por An abover AN water Anbord
C15	Josek Anbor An tek Naporer And the borek
C16	And ok botek Anbo N stek anbote And ok
C17	Anbore Ani tok shorek N Anbe Stek Anbore
C18	notek Anbor All tek N aborek Anbo
C19 200 C19	And A hotek Aupo, N A tek aupote, And
C20	and a hotel And at hotel Ando Arek and
C21	And Note And
C22	oter Pupp K noter VIM, by VIII tek upoter t
C23	rek supores And K N notek Ando, Andrew
C24	Anto Notek unbore Notek Antoo
C25	abotek Ando K otek N Anbore Alli
C26	My Potek William William William William William Pili
C27	Anbo, An tek aupole N And the polek Aupo,
C28	k botek Anbo Anbote Anb ak bi
C29	And N And N And
C30	otel Anbore An tek at Mer And K wotek A

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## 9. PHOTOS OF THE SAMPLE 样品照片

#### Battery 电池





#### Anker SOLIX C800X Portable Power Station

USB-A cutput 1: 5V=34 / 9V=34 / 15V=3A / 20V=3A / 20V=5A (100W Max)

USB-C Output 2: 5V=3A / 9V=3A / 12V=2.5A (30W Max)

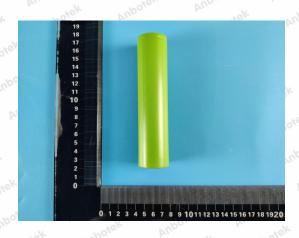
Camping Light Charger Output: 5V=1A Per Port

AC Output (Bypass Mode): 220-240V~ 9A Max, 50Hz/60Hz, L+N+PE, 2070VA/ 2070W Ma

AC Output (Inverter Mode): 230V~5.22A, 50Hz, 1200W/1200VA Max

## Cell 电芯





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## **DECLARATION**

## 声明

 Reference documents for the testing: UN "Manual of Tests and Criteria" ST/SG/AC.10/11/Rev.7/Amend.1/Subsection 38.3

测试参考文件: 联合国《试验和标准手册》(第7版修订1)38.3节

2. Test place Lab: Shenzhen Anbotek Compliance Laboratory Limited

Address: East of 4/F., Building A, Hourui No.3 Industrial Zone, Xixiang Street, Bao'an District, Shenzhen, Guangdong, China

测试实验室: 深圳安博检测股份有限公司

地址:广东省深圳市宝安区西乡街道后瑞第三工业区A栋四楼东

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本报告不能修改和删除。

- 4. As specified by the client, this report is transformed from Original report 18360BC30033701, which is issued on October 07, 2023, no new test item is involved. The battery photos, english name and sample model has been changed in this report has not changed the key materials, product design and production process of the samples in the original report, nor has the production plant changed. 根据客户要求,本报告是18360BC30033701的变更报告,原报告签发于2023年10月07日,不涉及新的测试项目。本报告中变更了电池照片,英文名称和样品型号该变更未改变原报告中样品的关键材料,产品设计和生产工艺,生产厂也未改变。
- 5. The test results presented in this report are only relevant to the test sample. 本报告出现的试验结果仅与试验样品有关。
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