



Model : Power-Xtra 1.2V Ni-Cd AA 1000 Mah Rechargeable Battery with 3 Pins

Ver: A2

NO:900.600.503.232

## Product Specification

Name :	Ni-Cd Battery
Model:	Ni-Cd AA1000mAh 1.2V
Stock Code:	900.600.503.232
Review:	Peter
Approval:	Sam
Date:	2017/11/03

Item	Signature 签名	Date 日期
Customer Signature 客户确认		

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版本号	日期	更改人	内容
A0	2017-8-1	Peter	起草
A1	2017-11-8	Penny	更新焊片图
A2	2017-11-10	Penny	更改焊片伸出片长

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## 1、APPLICATION/描述

Model / 电池标称: Ni-Cd AA1000mAh 1.2V

Cell Size / 单体尺寸: AA ( $\phi 14.5^{+1.0}_{-1.5} \times 49.0^{+1.5}_{-1.5}$ )

## 2、DATA OF STACK UP BATTERIES/组合电池的指标

All data involves voltage and weight to stack-up battery are equal to the value of unit cell times the number of unit cell which consisted in the stack-up batteries / 组合电池的电压、重量等数据, 近似等于组成其单体电池数与对应值之乘积。

Example/例如:

Stack-up battery consisting three unit cells/电池组包括三个单体电池

Nominal voltage of unit cell=1.2V/单体电池的额定电压=1.2V

Nominal voltage of stack-up batteries=1.2V $\times$ 3=3.6V / 电池组的额定电压=1.2V $\times$ 3=3.6V

## 3、RATINGS/额定性能

Description/项目	Unit/单位	Specification/指标		Conditions/条件
Nominal Voltage/ 额定电压	V	1.2		Unit cell
Nominal Capacity/ 额定容量	mA h	1000		Standard Charge/Discharge/标准充放
Standard Charge/ 标准充电	mA	100(0.1C)		Ambient Temperature/环境温度: Ta= 20±5℃
	Hour	16		
Trickle Charge/涓充		(0.03C)~(0.05C)		Ta = 0~45℃
Standard discharge/ 标准放电	mA	200(0.2C)		Ambient Temperature/环境温度: Ta = 20±5℃ Humidity: Max /最大湿度: 85%
Discharge Cut-off Voltage /放电截止电压	V	1.0		
Operating temperature range/工作温度	℃	0~45℃		Humidity: Max /最大湿度: 85%
Storage Temperature 贮存温度	℃	-20~35℃	一年	Fully charged state、Humidity、Max.60% 满电状态下, 最高环境湿度 60%
		0~60℃	一周	Fully charged state、Humidity、Max.80% 满电状态下, 最高环境湿度 80%
Typical Weight/ 单体电池重量	g	Approx.21.0		

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## 4、 PERFORMANCE/ 电池性能

Unless otherwise stated, tests should be done within one month of delivery under the following conditions: /

除非另有说明，测试须在发货后一个月内在下述条件下进行：

Ambient Temperature/环境温度, T: 20±5°C

Relative Humidity/相对湿度: 65±20%

Test/测试项目	Unit/单位	Specification/指标	Other Condition/其它条件	Remarks/备注
Capacity/容量	mA h	1000	Standard Charge Discharge 标准充放	up to 3 cycles are allowed/
Open Circuit Voltage(OCV)	V	≥1.25	Within 1 hour after standard Charge 在标准充电后 1 小时内测量	
Internal Impedance	m Ω/ Cell	≤40	Upon fully charge(1 K Hz)/ 充满电后(1KHZ 的交流频率)	
High Rate Discharge(1.0C)	minute	≥48	Standard Charge, 1 hour rest Before Discharge by 1.0C to 1.0 V	up to 3 cycles are allowed
Overcharge/过充		No leakage nor explosion	0.1C Charge 14 days	
Charge Retention	mA h	≥650(65%)	Standard Charge, Storage: 7 day rest at 45 Ambient Temperature, Standard Discharge	
IEC Cycle Life/	Cycle	≥500	IEC61951-1(2003)7.4.1.1	(see Note )/
Leakage Test/ 泄漏测试		No leakage nor deformation	Fully charged at 0.5C for 2.5 hour stand for 14 days.	
Security Test/		No explosion, but leakage or deformation is allowed	Charge the cell 0.1C 16hrs, Then ≤100 m Ω Impedance short circuit for 1hour	Ambient Temperature: T=20±5°C
Impact Resistance/ 抗撞击		Change of voltage should be under 0.02V/ Cell Change of impedance should be under 5 m Ω/ Cell/ 电压变化 <20mV/只, 内阻变化 <5 m Ω/ 只	Charge the cell 0.1C 16hrs Then leave for 1-4hrs, check battery before/after dropped, Height 50c m Wooden board (thickness 30mm) Direction not specified, 3 times. 将电池用 0.1C 电流充 16 小时, 开路 1-4 小时, 检查掉落前后电池状况, 落体高度 50c m, 30mm 厚的木板, 3 次	Ambient Temperature/环境温度: T=20±5°C

(续上表)

Vibration Resistance 抗振动		Change of voltage should be under 0.02V/cell, Change of impedance should be under 5 milliohm/cell/ 电压变化 <0.02V/只, 内阻变化 <5 mΩ/只	Charge the battery 0.1C 16hrs, then leave for 24hrs, check Battery before/after vibration, Amplitude 1.5mm Vibration 3000CPM, Any direction for 60mins. 将电池用 0.1C 充电 16 小时, 开路 24 小时, 检查振动前后电池状况, 振动幅度 1.5mm 振动 3000 次, 任意方向振动 60 分钟。	Ambient Temperature/环境温度: T=20±5°C
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## 5、CONFIGURATION,DIMENSIONS AND PACKINGS/ 电池结构、尺寸、包装物

Please refer to the attached drawing./ 参见附图

## 6、EXTERNAL APPEARANCE/ 外观

The cell/battery shall be free from cracks, scars, breakage, rust, discoloration, leakage nor deformation.

无裂缝、疤痕、破裂、锈蚀、脏污、漏液、变形

## 7、CAUTION/ 使用注意事项

- 1) Reverse charging is not acceptable./ 勿将电池反极充电
- 2) Charge before use. The cells/batteries are delivered in an uncharged state. /初次使用前先充电，所提供的电池为未充电态
- 3) Do not charge/discharge with more than our specified current./ 避免以高于指定的电流充放电
- 4) Do not short circuit the cell/battery Permanent damage to the cell/battery may result.
- 5) Do not incinerate or mutilate the cell/battery./ 勿拆解或焚烧电池
- 6) Do not solder directly to the cell/battery./ 勿在电池上直接焊接
- 7) The life expectancy may be reduced if the cell/battery is subjected adverse conditions like: extreme temperature, deep cycling, excessive overcharge/ over-discharge
- 8) Store the cell/battery uncharged in a cool dry place. Always discharge batteries before bulk storage or shipment./ 电池应贮放干爽阴凉处；组合电池或装定前应将电池放电。

## Notes: /备注

- 1) Ambient Temperature./ 环境温度
- 2) Approximate charge time from discharged state is for reference only.
- 3) We recommend cells or batteries are charged and discharged at least once every 6 months
- 4) IEC61951-1(2003)7.4.1.1 Cycle Life:/ 循环寿命

Cycle No. / 循环周次	Charge / 充电	Rest / 搁置	Discharge / 放电
1	0.1C×16h	None	0.25C×2h20min
2-48	0.25C×3h10min	None	0.25C×2h20min
49	0.25C×3h10min	None	0.25C to 1.0V/ cell
50	0.1C×16h	1-4h	0.2C to 1.0V/ cell
Cycles 1 to 50 shall be repeated until the discharge duration on any 50th Cycle becomes less than 3 h/ 循环至任一第 50 次放电时间不足 3 小时为止。			

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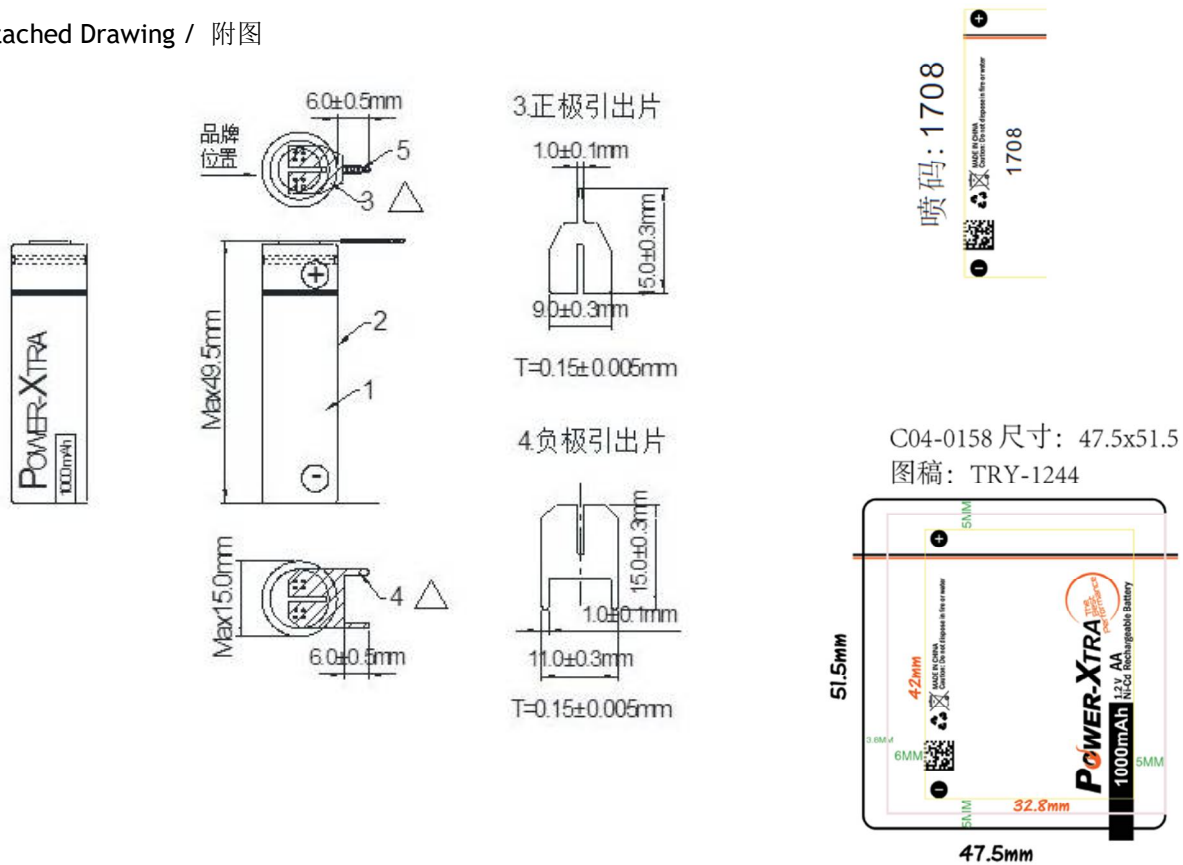
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## 8、Other/其他

- 1) The information ( subject to change without prior notice ) contained in this document is for reference only and should not be used as a basis for product guarantee or warranty./
- 2) Manufacturer reserves the right to alter or amend the design, model and specification without prior notice.

Attached Drawing / 附图



NO	NAME	SIZE	QTY	NOTE		
1	CELLS	AA1000MAH	1	NICD		
2	PVC	47.5*51.5*0.07mm	1		MODEL	
3	LEAD OUT PLATE(+)	15*9*0.15mm	1		DESIGN BY	
4	LEAD OUT PLATE(-)	15*11*0.15mm	1		CHECKER	
5	INSULATION PIPE	Φ0.6*6mm 黑色	1		VERSION	

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## Drawing Packing 包装图

PP 袋单独包装，每箱不超 10KG，贴侧唛；客户定制 Logo 外箱；外箱 Logo 内容格式如下：

# POWER-XTRA

侧唛：

条形码格式为：GS1(EAN.UCC)/ENA-13 Bar code，侧唛分别贴于纸箱两侧（尺寸视纸箱尺寸更改），内容及格式如下：

PO NO.	Order
MODEL NO.	900.600.503.232
QTY	500PCS
DATE	YYYY-MM-DD
Made in China	
	
8 680187 003548	

← 根据每次订单更改

← 根据每箱数量更改

← 根据出货日期更改