

# POWER-XTRA

Model : Power-Xtra PXG20BAT 7.2V 2600mAh Li-Polymer battery

Ver: A1

NO: 900.601.503.035

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## PX-G20BAT Battery Pack Spec

Model: PX-G20BAT

Cell Configuration: C10025

Customer P/N: 900.601.503.035

Nominal Voltage: 7.2V

Capacity: 2600mAh

Draft	Checking	Approved	Customer Confirmation
Peter	Chun Qi Zeng		

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## Revision History

Revision	Date	Editor	Contents
A0		Peter	Draft
A1		Peter	更改电芯, 增加标签, 包装

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## 1. Application

T.B.D.

## 2. Basic Information

1-1.	Model No.	:	PX-G20BAT
1-2.	Battery Type	:	Lithium Ion
1-3.	Battery Cells	:	ICR18650 *2 /2600mAh(Chinese Cell)
1-4.	Nominal Voltage	:	7.2V
1-5.	Maximum Charge Voltage	:	8.4V
1-6.	Discharge Cut of Voltage	:	5.6V
1-7.	Typical Capacity	:	2600mAh at 0.2Ca
1-8.	Internal Resistance		Less than 小于 180mΩ
1-9.	Temperature Range	:	Charge 充电:0-45°C Discharge 放电:-20~60°C Storage 储存:-20-45°C -10~25°C More than 3 months 超过 3 月
1-10.	Safety Features Battery	:	Each Lithium Ion cell is provided with several internal safety features to prevent over-charge, over-current and to resist physical abuse. Each has a temperature sensitive shut down separator, pressure sensitive tear away for current interruption, a safety vent, and the industries only temperature actuated current interrupter.
1-11.	Protection Circuit Board	:	Over charge limit per cell :( 4.255V~4.305V)/Cell Over charge release: remove charger and discharging Over discharge limit per cell : (2.17V~2.33V )/Cell Over discharge release Voltage Charging Over Charge Current Protection 5.5A-6.2A Over Discharge Current Protection: 5.5A~6.2A Over charge delay time:700mS~1300mS Over discharge delay time:70mS~150mS Over discharge current delay time:6mS~14mS Short circuit delay time: 150uS~400uS Maximum current consumption:0.1uA
1-12.	Warranty	:	Twelve(12) months limited warranty from date of purchase.
1-13.	Weight		99±2g
1-14.	humidity range		Operating humidity range: Less than 小于 75% RH Storage humidity range: Less than 小于 75% RH
1-15.	Polyswitch		\

# POWER-XTRA

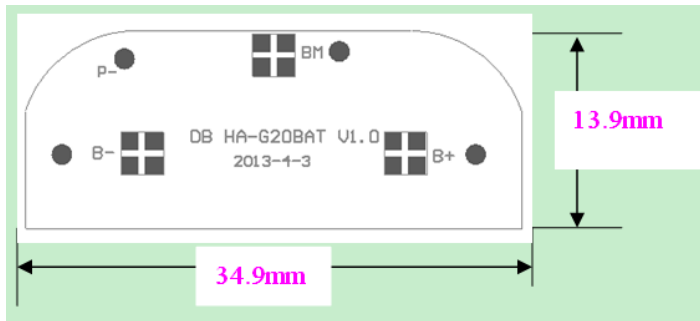
Model : Power-Xtra PXG20BAT 7.2V 2600mAh Li-Polymer battery

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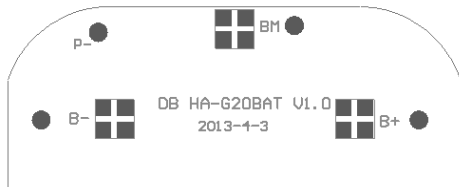
## 3. Electrical Characters

PCBA SPECIFICATION PCB

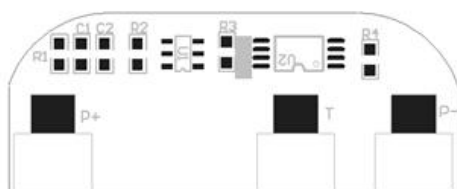


1. The protection module adopts the HY2120-DB to monitor Battery cell for over-voltage, under-voltage, over-charge current and over-discharge current.
2. External N-FET AO8822 will be driven to cut off the loop of charge and discharge if any abnormal condition occurs.

TOP



BOTTOM



## Board Connection

Pin	Description
B+	Connect to Positive terminal of cell1.
B-	Connect to negative terminal of cell1.
BM	Connect to negative /Positive terminal of cell1 /.
P+	Connect to Camcorder +/Charger +.
P-	Connect to Camcorder -/ Charger -.
T	Thermistor 10K NTC

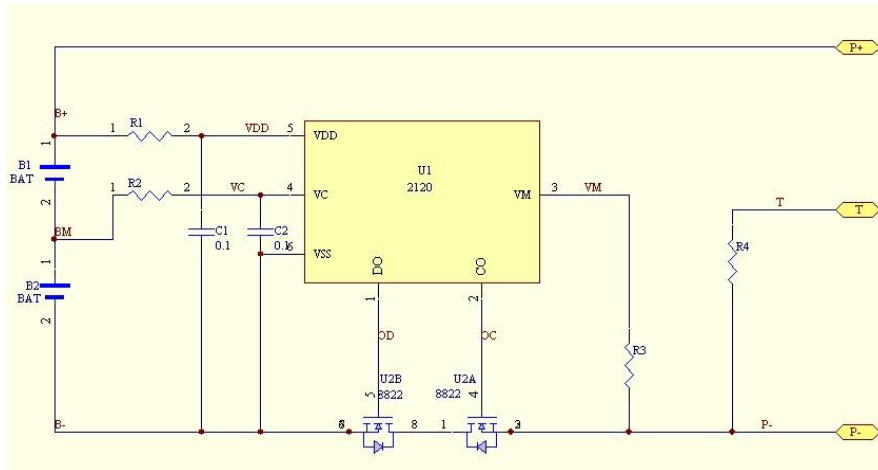
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## Schematic



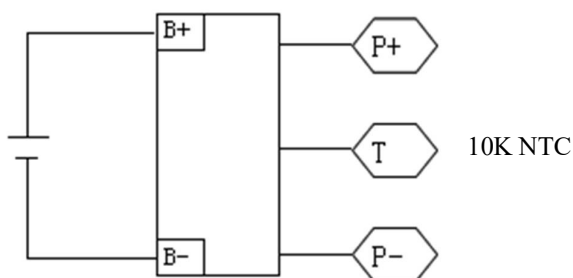
## BOM

No.	Name	Function	Unit	Quan	Symbol
1	IC	HY2120-DB SOT-23-6	PCS	1	U1
2	FET	AO8822 TSSOP-8	PCS	1	U2
3	Resistor	330R±5% 0603	PCS	2	R1 R2
4	Resistor	2KΩ±5% 0603	PCS	1	R3
5	Thermistor	10K NTC ±5% B=3435 0402	PCS	1	R4
6	Capacitor	0.1uF M 50V Y5V 0603	PCS	2	C1 C2
7		3.0*3.0*0.3mm	PCS	3	B+ B- BM
8	PCB	DB HA-G20BAT V1.0	PCS	1	

## 4. Certification

T.B.D.

## 5. System Block Diagram



# POWER-XTRA

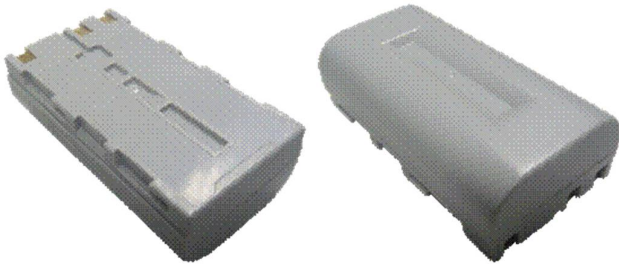
Model : Power-Xtra PXG20BAT 7.2V 2600mAh Li-Polymer battery

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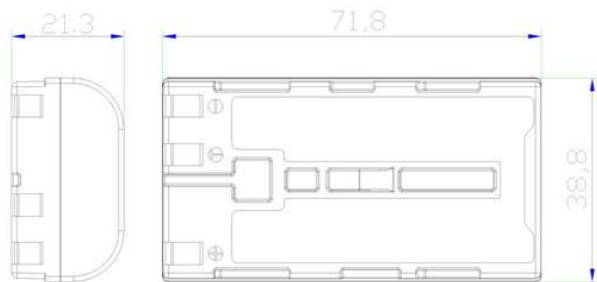
NO: 900.601.503.035

## 6. Mechanical Information

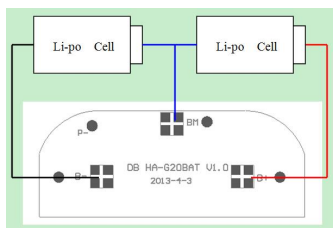
### 6.1. Sample Picture



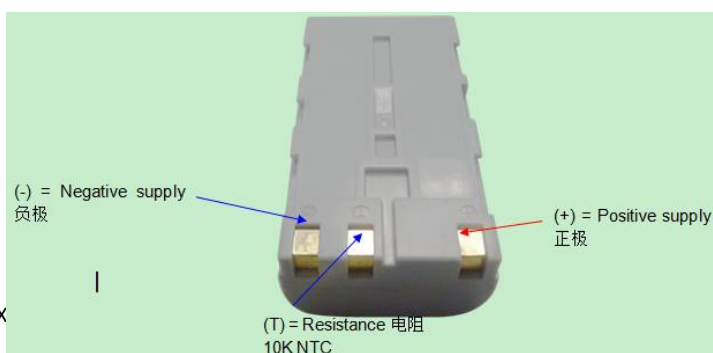
### 6.2. Drawing of Outline



### 6.3. Drawing of Pack Assemble 电池包组装图



### 6.4. Drawing of Terminal 端子图



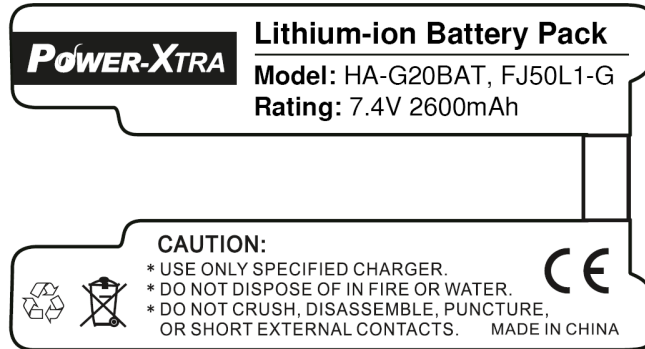
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## 6.5. Drawing of Label



## 6.6. The Picture of Battery



## 7. Caution and prohibition

Before using and handling the pack, see carefully attached "Handling Instruction for Rechargeable Lithium ion battery Pack". For safety reasons rechargeable batteries are shipped in a low remaining capacity state. Charge before using. New pack is the initialized. If used without full charge and discharge for long time, the accuracy loss occurred. Recover such packs to original performance through repeating Several cycles of full charging and discharging

## 8. Warranty

Manufacturer will be responsible for replacing the battery pack against defects or poor workmanship for 12 months from the date of shipping. Any other problem caused by malfunction of the equipment or misuse of the battery is battery is not covered under this warranty.



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## 9. Handling Instruction Guide for Li-ion Battery(Polymer) Pack

### 10.1. Storage of pack

The packs are requested to be stored under the following conditions:

- a. Indoor storage in a cool circumstances without direct sun light on the packs or cartons.
- b. Store batteries in a dry location with low humidity, and a temperature range of - 20°C to +30°C. In case of the long term storage
  - a. As long-term storage can accelerate battery self-discharge and lead to the deactivation of the batteries. To minimize the deactivation effect, store battery packs in a temperature range of +10°C to +30°C.
  - b. When charging for the first time after long-term storage, deactivation of the packs may have led to decreased capacity. Recover such packs to original performance through repeating several cycles of full charging and discharging.
  - c. When store packs for more than 6 month, charge at least once charring require per 6 months to prevent leakage and deterioration in performance due to self-discharging.

### 10.2. Charging pack

- a. Never attempt reverse charging. Charring with polarity reversed can cause a reversal in battery polarity, causing gas pressure inside of the battery to rise, which can be lead to leakage of the batteries in the pack.
- b. Avoid overcharging. Repeated overcharging can be lead to deterioration in pack performance. And Over-heat occurred.
- c. Charging efficiency drops at temperatures above 40°C.

### 10.3. Protection from unexpected damaged to pack

- a. (+) and/or (-) terminals must not be connected in metal wire, necklace, chains.
- b. Do not drop packs from height in order to prevent them from possible malfunction or damage.
- c. Do not twist or bend packs in order to prevent possible damage.

### 10.4. For Safety

- a. Do not disassemble packs.
- b. Do not use pack when something abnormal found such as smells, deformation, discoloration, and so on.
- c. Do not re-use Li-ion cells or other parts after removing from the packs.
- d. When the electrolyte leakage occurs, do not touch the liquid.
- e. Once watered, packs may have potential malfunctions. Do not use those packs.
- f. Do not have packs in the hot-temperature (60°C or more).
- g. Do not put packs into fire.
- h. Do not crush/nail pack.
- i. Do not apply solder directly to packs.