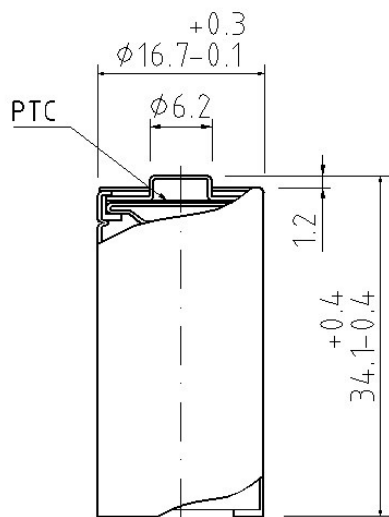




Datasheet

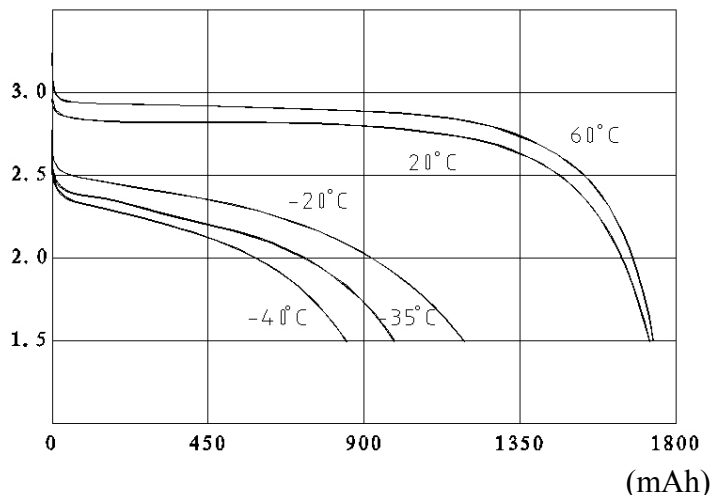
LITHIUM BATTERY

ENGLISH



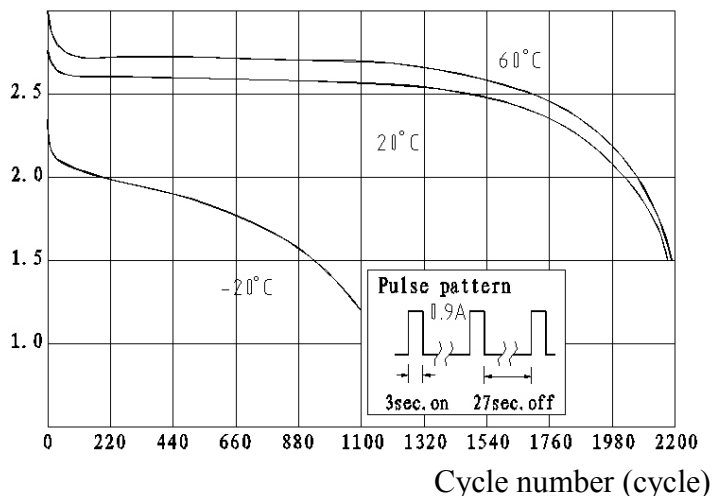
Voltage (V)

Temperature characteristics(20mA)



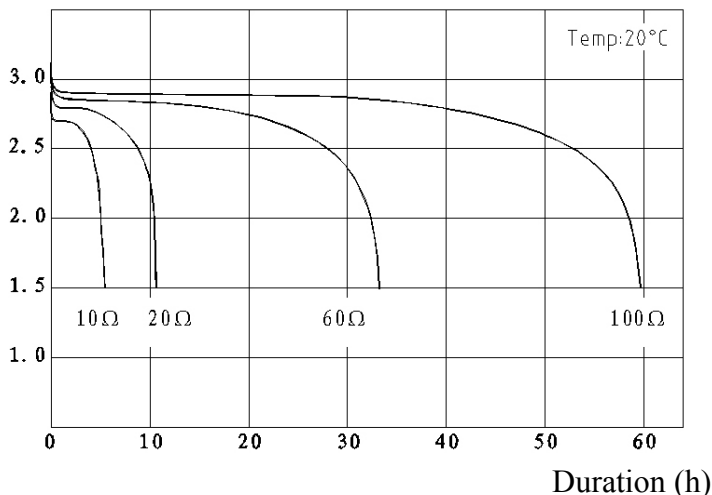
Voltage (V)

Pulse discharge characteristics



Voltage (V)

Typical discharge characteristics



Model	CR123A
Nominal Voltage	3V
Nominal Capacity	1700mAh
Standard Discharge Current	20mA
Dimension	$\Phi 16.7 \times 34.1$ mm
Weight	15.8g
Temperature range	-40~60°C



1. Model Number : CR-123A
2. Nominal Voltage : 3 V
3. Nominal Capacity : 1700 mAh
(Nominal capacity is based on standard discharge current and cutoff Voltage down to 1.5V at $20\pm 5^{\circ}\text{C}$)
4. Standard Discharge Current : 20 mA
5. Max. Continuous Discharge Current : 1500 mA
6. Construction
 - 6.1 Appearance, Dimensions : There shall be no noticeable deformation. The dimensions shall be according to the attached drawings.
 - 6.2 Weight : Approx. 15.8g
7. Performance
 - 7.1 Open Circuit Voltage : Min. 3 V
 - 7.2 Duration 1. (at $20\pm 2^{\circ}\text{C}$)
 - 7.2.1 Pulse Discharge Conditions : Population Mean ≥ 2000 cycles
 - Pulse Current : 900 mA
 - One Cycle : 3 seconds on, 27 seconds off
 - Cut Off V. : 1.55 V
 - 7.3 Duration 2. (at $-20\pm 2^{\circ}\text{C}$)
 - 7.3.1 Pulse Discharge Conditions : Population Mean ≥ 1100 cycles
 - Pulse Current : 900 mA
 - One Cycle : 3 seconds on, 27 seconds off
 - Cut off V. : 1.2 V
 - 7.4 Temperature Range : Discharge -40 to 60°C
Storage -20 to 45°C
 - 7.5 Leakage Resistance : The battery shall not show leakage or salting which harms performance.
8. PTC (Positive Temperature Coefficient) Device Performance
 - 8.1 Appearance : There shall be no noticeable deformation and/or scratches.
 - 8.2 Resistance : The resistance shall be between 10 to 70 $\text{m}\Omega$ (no load).
When 5 A flows, the resistance shall be more than 10 Ω before 80 seconds.
9. Test Conditions, Measuring Instruments and Measuring Methods
 - 9.1 Test Conditions : If not otherwise specified,
Temperature : $25\pm 5^{\circ}\text{C}$
Humidity : $65\pm 10\%$



9.2 Measuring Instruments

i) Volt Meter

ii) Caliper

iii) Balance

9.3 Measuring Method

i) Outer Dimensions

ii) Weight

iii) Appearance

iv) Open Circuit Voltage

v) Operating Time (Duration)

vi) Vibration Resistance

vii) Leakage Resistance

: Internal Impedance : More than $1M\Omega$

Accuracy : Less than 0.25%

: Accuracy : less than 0.25%

: Sensitivity : More than 100 mg

: This shall be measured with the caliper described in Item 9.2 ii).

: This shall be measured with the balance described in Item 9.2 iii).

: Deformation or tarnish shall be visually checked.

: This shall be measured with the volt meter described in Item 9.2 i).

: Operating time shall be measured with cycles until terminal voltage reaches the specified cut-off voltage.

: Amplitude ; 2 mm

Number of Vibrations : 1000 rpm.

Directions ; X, Y, Z

Time ; 30 minutes in each direction

: Heat cycle test

Leakage, appearance and outer dimensions shall be checked after 10 cycles according to MIL-STD-202E-106D.

The battery shall be kept in a dry place. It should not show any dew point when stored in this condition.

10. Precautions for use

1) A battery shall not be stored at temperatures in excess of 45°C. Storage at less than 30°C is recommended. Storage at less than -40°C can deform the plastic parts and may cause a leakage. To prevent self-discharge caused by corrosion, or decrease of insulation, humidity during storage shall be less than 70%.

2) The battery has an explosion resistant construction. But the following cautions should be taken, because combustible materials such as lithium metal and organic electrolyte are contained in the battery.

* Do not use except in applicable model or equipment.

* Do not connect more than three cells in series.

* Do not mix different types (chemistries) of batteries.

* Do not short circuit.

* Do not dispose in fire.

* Do not charge.

* Do not disassemble.

* Do not connect the wrong polarity (+, -)

3) Keep away from heat source of flame.

4) The battery shall not be washed by ultrasonic wave washer.