Lithium Thionyl Chloride Battery Specification

Bobbin Type

Model	**ER14250-VY**
Capacity	**1200mAh**

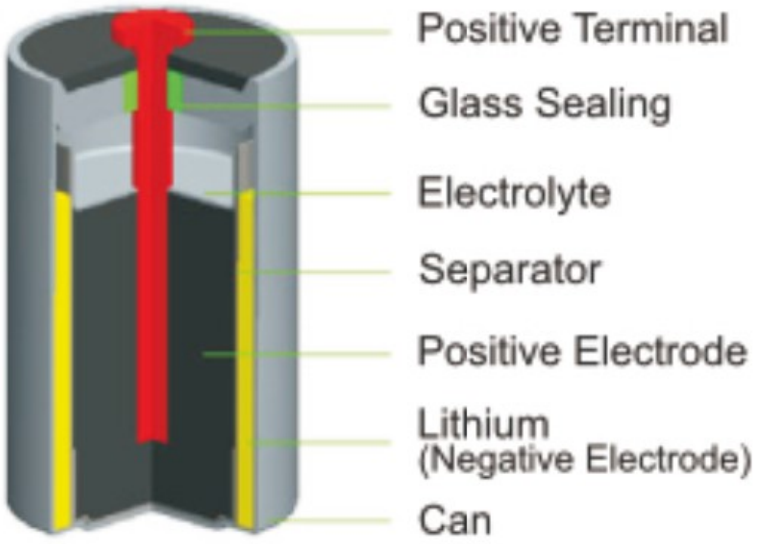
Prepared	Checked	Approved

Customer:

Confirmation:		
Signature	**Checked**	**Approved**

Bonrex

Battery Structure



1. Overview

Description below is for full sealed lithium thionyl chloride cylindrical battery provided by Bonrex (hereinafter referred to battery).

2. Structure and appearance:

2.1 Structure:Lithium thionyl chloride electrolyte and cathode, the activated carbon is anode carrier, diaphragm, stainless steel (shell) and glass-insulation cover group

2.2 Appearance:Visual ER14250 battery shall not have depression, bumps, rust or leakage. Mark must be clear.

3. Electrical characteristics:

No.	Item	Characteristics
3.1	Model	ER14250-VY
3.2	Nominal voltage	3.6V
3.3	Nominal capacity	1.2Ah（Conditions:3.5KΩ/1mA,+20℃，end voltage 2.0V） Notes:Battery capacity will be different according to the discharge current,environment temp, and end voltage
3.4	Max.constant current	25mA
3.5	Max.pulse current	50mA[discharge according to pulse characteristics frequency,continue time）temperature,battery state(storage before use)and it is different as the lowest voltage accepted by device]
3.6	Max.dimension	φ14.5mm×25.4mm（Max）
3.7	Operating temp.	-55℃~+85℃
3.8	Approx.weight	10g
3.9	Battery volume	4.2 cm^3
3.10	Self-discharge	Yearly 1%

4. Technical index and safety characteristics:

Technical index:

NO.	Item	Test condition	Index	
4.1.1	OCV	20±2℃	-40±2℃	3.64～3.70V
			23±2℃	3.64～3.70V
			85±2℃	3.64～3.74V
4.1.2	Load voltage	330Ω@5S	-40±2℃	≥3.0V
			23±2℃	≥3.3V
			85±2℃	≥3.4V
4.1.3	Standard discharge	3.6KΩ,end voltage 2V	23±2℃	≥1100mAh
	Quick discharge	330Ω,end voltage 2V	23±2℃	≥800mAh
	Low temp.discharge	1.8KΩ,end voltage 2V(storage in low temp 16h before test)	-40±2℃	≥300mAh
	Normal temp.discharge	1.8KΩ,end voltage 2V	23±2℃	≥900mAh
	High temp.discharge	1.8KΩ,end voltage 2V(storage in high temp.16h before test)	70±2℃	≥850mAh

(NOTES:The tested battery position should be vertical and positive side should be up situation.)

5. OQC inspection

Before shipment,100% inspection to ER14250 battery open circuit voltage (OCV) and load voltage, appearance and size. Sampling inspection to battery capacity..

6. ER14250 battery finished products inspection standard.

6.1 Appearance

1.The steel case without ballooning at the bottom of cell, battery (especially pay attention to the positive core and the sealing) without leakage phenomenon.

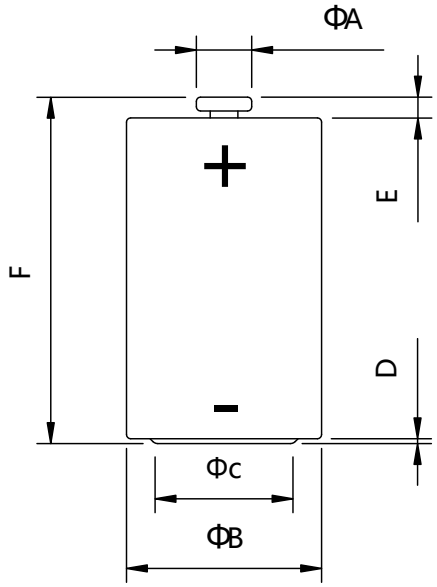
2.At the bottom of the steel case without any dimple phenomenon.

3.At the bottom of the steel case, no rust, welding scar.

4.Product identification is clear, no ghosting or blur.

6.2 Dimension

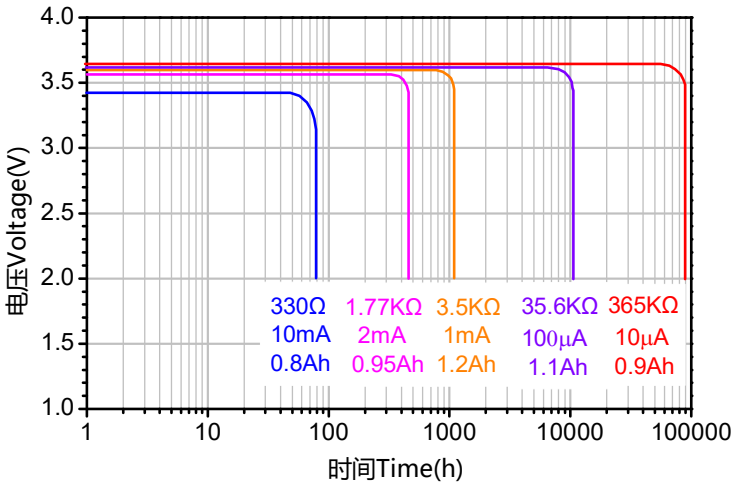
Use vernier caliper (accuracy of 0.02 mm) measuring battery dimension. The maximum diameter is 14.5 mm , the maximum height is 25.4 mm



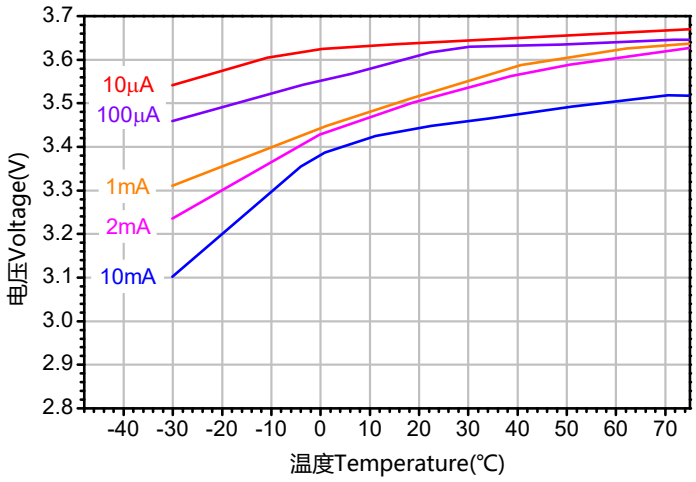
ΦA	ΦB	ΦC	D	E	F
4.4Max	14.5Max	11Max	0.4±0.5	1.5±0.2	25.4Max

7. Discharge Curve

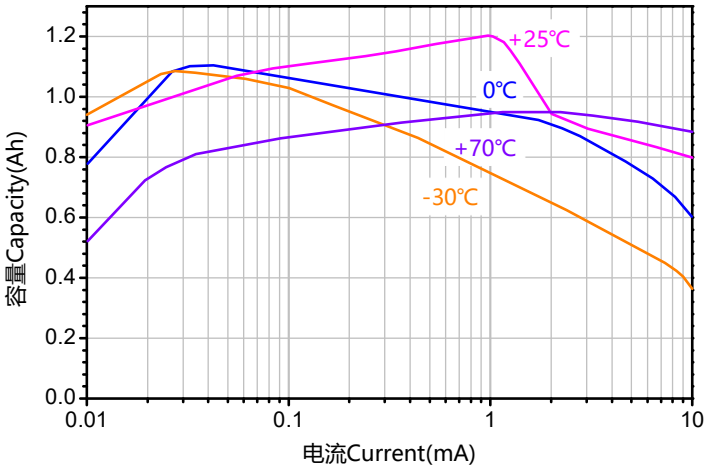
Discharge Characteristics（+25℃)



Voltage Versus Temperature

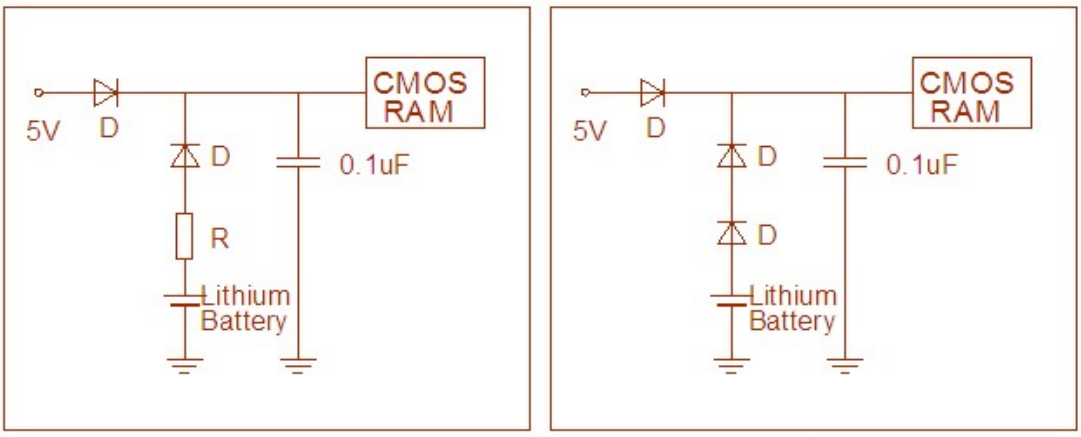


Capacity Versus Current



8.Memory Backup Circuit Design Suggestion

A primary lithium battery is not rechargeable, when used for memory backup in combination with another power source; current may flow into the battery from the other source. A protection diode and resistor into the circuit is needed to avoid battery charging or over discharging. Select a silicon diode or a diode with minimum leakage current,and design the circuit so that the amount of charging due to leakage current will not exceed 2% of the nominalbattery capacity over the total period of use.While used for memory backup, the following circuit shall be applied:



9.Packing

1.Plastic plate:1000pcs/plate

2.10 plates/carton

3.Carton dimension:280*235*360

4.G.W.:12KGS/carton

10.WARNING

Safety

•Do not remove the cells from their original packing before use.

• Do not store the cells in bulk in order to avoid accidental short circuit.

• Do not disassemble.

• Do not recharge.

• Do not solder directly in the cell.

• Do not mix new and used cells or cells from different origins.

• Respect the polarities of the cell.

Sentences on cell Fire, explosion, and severe burn hazard. Do not recharge, crush, disassemble, heat above 212°F (100℃) or incinerate. Keep battery out of reach of children and in original package until ready to use. Dispose of used batteries promptly.

ER14250-VY: