



Shandong Huatai New Energy Battery Co., Ltd.

SPECIFICATION

MODEL NAME: LITHIUM BATTERY

Model code: CR2032

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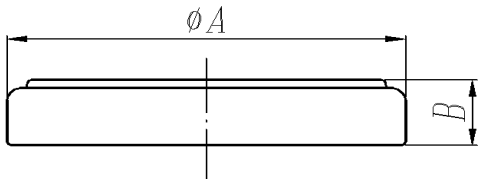
<http://www.huataibattery.com>

1. Applicability:

This specification is applicable to the following product: Coin type high temperature manganese lithium battery CR2032.

ITEM: CR2032
 IEC: CR2032
 Maxell: CR2032
 SONY: CR2032
 DURACELL: DL2032

2. Battery type and ratings

Electrochemical System		Lithium manganese dioxide/organic electrolytes
Nominal Voltage		3V
Nominal Capacity (Continuous Discharging Under 15kΩ load to 2.0V End-Voltage at 20°C)		210mAh
Operating temperature range		-20°C~70°C
	diameter (A)	20.0(-0.3)mm
	height (B)	3.2(-0.3)mm
Mass		Approx2.8g
Appearance and poles	Appearance should be smooth, clear mark, no deformation, rust, and leakage	
minimum average duration (Load 15kΩ)	Initial test (New battery in 60 days)	1000h
	After 12 months	950h
Open Voltage	Initial test (New battery in 60 days)	3.10V-3.45V
	After 12 months	3.10V-3.45V
Closed Circuit Voltage (15kΩ)	Initial test (New battery in 60 days)	3.10V-3.45V
	After 12 months	3.00V-3.45V
Leakage Characteristics (Over discharge)		No Leakage

3. Test Method

	Item	Condition
1	Dimensions	When measure with vernier calipers which precision is up 0.02mm. to avoid short circuit, should paste on one insulation material on one end of the vernier calipers.
2	Open voltage	the precision of multimeter is not lower than 0.25%, intel resistance is bigger than 1MΩ
3	Instant short-circuit current	When test with multimeters, not surpass 0.5 second each time, avoid duplicating tests, if need once more, the time-gap should above half hour
4	Appearance	Appearance of batteries shall be inspected by visual means.
5	Min time of discharge	Lay aside above 8 hours in the temperature of 20±2℃ and under the humidity of 60±15% conditions, with the condition that Resistance is 15kΩ, end-point voltage is 2.0V. The new battery (Initial stage) should be tested in 60 days after produce. The old battery (Delayed for 12 months) should be tested in 14 days after the storage period.
6	Over-discharge Characteristics	Take nine battery in the temperature of 20±2℃ and under the humidity of 60±15% conditions, with the condition that Resistance is 15kΩ, end-point voltage is 1.2V. visual test.

4. Acceptance rule

- 4.1 Delivery inspection for each shipment quantity for a test batch。
- 4.2 Delivery inspection using GB2828.1-2003 Normal inspection sampling plan at a time, inspection item、inspection level (IL)、acceptance quality limit (AQL) According to the provisions of the table below。

	Check item	IL	AQL
1	Dimensions	I	0.25
2	Open voltage		0.25
3	Appearance	II	0.25

5. Important Notes (Warranty)

- 5.1 No swallowing
Keep the battery out of reach of children. Never put batteries in mouth. If ingested, immediately seek medical attention.
- 5.2 No recharging
Forbid using any other power supply to charge the battery. Recharging can lead to produce gas and internal short circuit, causing cell deformation, leakage, overheat, explode or catch fire.
- 5.3 Do Not Dispose In Fire
The lithium will be melted when dispose in fire.

5.4 Do Not Disassemble

Do not disassemble the battery or it will cause the damage of gasket or the separator, deformation, leakage, over-heat, explosion or firing will happen.

5.5 Insert Batteries Correctly

Depending on the application device, incorrect insertion of batteries, with positive(+) and negative(-) poles reversed, may result in short circuits and the risk of heat generation, fire or explosion.

5.6 Do Not Short-circuit

Do Not Short-circuit. Do not keep or store the battery with metal or it will cause deformation, leakage, over-heat, explosion or firing.

Do not take several pieces of batteries from the packing box at one time or stock mixed, it can lead deformation, leakage, over-heat or firing.

5.7 Do Not Mix Different Types Of Batteries

For some application, mixing different types of batteries, or new and old batteries, can cause over discharge due to difference in voltage and electrical capacities. This may lead to the risk of swelling or explosion.

5.8 Do Not Weld Pin Or Wire Directly On The Battery

The lithium will melt when welding or cause damage of insulation material. This will lead deformation, over-heat, explosion or firing. If weld is needed, please contact supplier or professional welder.

6. Cautions

6.1 Shaking, jumbling, Scatters or trampled batteries, may cause short circuits, heat generation, fire or explosion.

6.2 Install batteries, please be careful when operating, don't let the battery come into contact with metal objects could make the battery short circuit.

6.3 Selecting suitable batteries as the operation instructions.

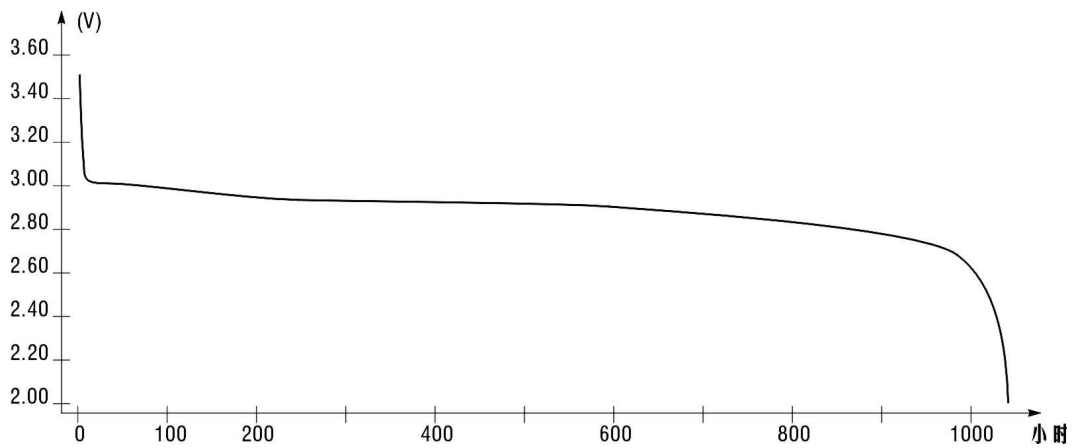
6.4 Do not use or store the batteries in high-temp places like exposure sunshine or in car which in burning hot, it will lead deformation, leakage, over-heat, explosion or firing.

6.5 Do not let the battery contact water or store in a wet environment or it will cause rust, deformation, leakage, over-heat, explosion or firing.

6.6 The voltage may lower than target one by bad contact so pls keep 2N contact pressure.

6.7 If any questions please contact .

7. Storage Environment



With the progress of product technology, technical parameters, the specification will be updated too, please contact for latest specification.