

深圳市晨木实业有限公司



SHENZHEN CHENMU INDUSTRY CO., LTD.

深圳市龙华区福城街道大水坑社区一村 300 号沃特思厂房 5 栋 2 楼

[Http://www.chenmubattery.com](http://www.chenmubattery.com)

APPROVAL SHEET

MESSRS	
BRAND	
PRODUCT	3.0V LITHIUM-MANGANESE BUTTON CELL
MODEL	CR2450
PREPARED BY	
APPROVED BY	
DATE	JAN. 14, 2015

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1. 【SCOPE】

This specification applies to the following 3.0v lithium button cell CR2450 made by SHENZHEN M&LAK INDUSTRY CO., LTD.

2. 【RATINGS】

TABLE I :

ITEM	UNIT	SPECIFICATIONS	CONDITIONS	
Nominal voltage	V	3.0		
Nominal capacity	mAh	700	Standard discharge with load 7.5kΩ	
Instantaneous short-circuit current	mA	≥250	Time≤0.5 second	
Off-load voltage	V	≥3.20		
Operating temperature	℃	-20~60		
Standard weight	g	6.5	Unit cell	
Service output	Initial	Standard	1970 h	Continuous discharge with load 7.5kΩ, till 2.0v end-voltage at 20~25℃
	After 12 months storage	Standard	1870 h	

TABLE II :

ITEM	CONDITIONS	CHARACTERISTICS	
Thermal durability	Kept for 20 days at 60 ℃ ±3 ℃ , then continuously discharge with 7.5kΩ load till 2.0v end-voltage	Standard	1870 h
Self-discharge rate	Stored for 12 months at normal temperature and humidity	≤5%	

3. 【PERFORMANCE AND TEST METHODS】

Unless otherwise stated, all the testing is carried out under the condition: environmental temperature, 20℃~25℃; environmental humidity, 65±20%. Please refer to Table III

4. 【SUGGESTIONS AND CAUTIONS】

- 4.1 Install batteries correctly.
- 4.2 Ensure the contact points to be clean and conductive.
- 4.3 Do not mix different types, different brands batteries to serve together.
- 4.4 Do not heat, recharge the batteries.
- 4.5 Do not dispose of the batteries in fire.
- 4.6 Keep away from the small children, if swallowed promptly see doctor.
- 4.7 Pay attention to the producing date.

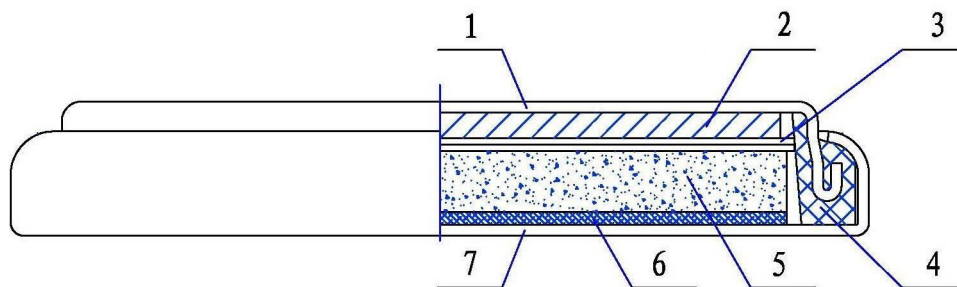
TABLE III:

No	ITEM	TEST METHODS	STANDARD	
1	Dimensions	Using vernier caliper (accuracy ≥ 0.02) while avoiding short-circuit	Diameter	24.5 (-0.20) mm
			Height	5.0 (+0.20) mm
2	Off-load voltage	Using multimeter (accuracy $\geq 0.25\%$) internal resistance $\geq 1M\Omega$	≥ 3.20 V	
3	Instantaneous short-circuit current	Time of short-circuit should be less than 0.5 second and avoid repeated test within half an hour	≥ 250 mA	
4	Appearance	Eyeballing	Bright, clean, no rust, no leakage, And no flaw	
5	Capacity	Continuously discharge for 8 hours with load $7.5k\Omega$, temperature at $20\sim 25^\circ C$, humidity at $65\pm 20\%$ till 2.0v end-voltage (for fresh battery only: within 3 months)	≥ 1870 h	
6	Vibration test	Put battery on the platform of the vibrations machine, start the machine and adjust the frequency form 10 times per minute to 15 times per minute. keep it running for an hour	Characteristics keep stability	
7	Leakage at high temperature test	Stored under temperature ($60^\circ C$) for 7 days	No leakage allowed	
8	Over discharge Test	After 2.0v end-voltage, continuously discharged for 5 hours	No leakage allowed	

5. 【CUTAWAY DIAGRAM OF 3.0V LITHIUM MANGANESE DIOXIDE BUTTON CELL】

3.0V 锂—二氧化锰扣式电池剖面图

Cutaway Diagram of 3.0V Lithium Manganese Dioxide Button Cell



- | | | | |
|-----------------------------|------------------------------|---------------|----------|
| 1、负极壳 | 2、负极锂片 | 3、隔膜 | 4、密封胶圈 |
| 5、正极片 | 6、正极集流网 | 7、正极壳 | |
| 1、Cathode Shell | 2、Cathode (slice of lithium) | 3、Septum | 4、Gasket |
| 5、Anode (MnO ₂) | 6、Anode collector net | 7、Anode shell | |

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6. 【DISCHARGE CHARACTERISTICS】

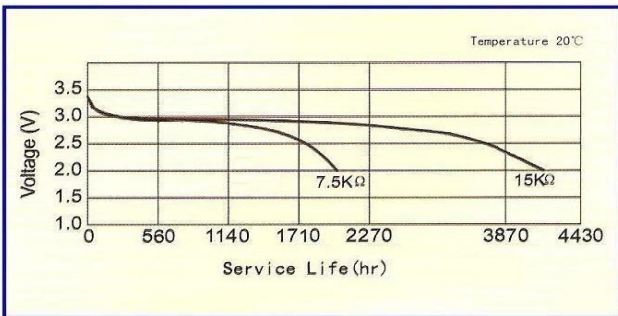
SPECIFICATIONS



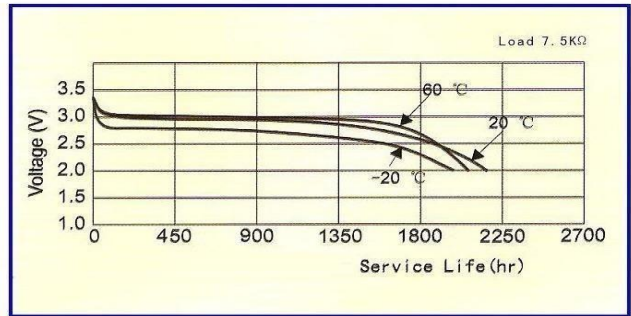
Model No.	CR2450	Dimensions (mm)
Nominal Voltage	3 (V)	
Nominal Capacity	700 (mAh)	
Load Resistance	7.5 (k Ω)	
Weight	7.0 (g)	
Using Temperature	-20 $^{\circ}$ C~60 $^{\circ}$ C	

STANDARD CHARACTERISTICS

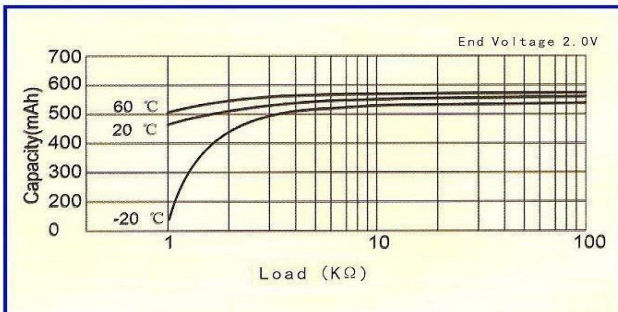
Discharge Characteristics



Temperature Characteristics



Load-capacity



Pulse Discharge Characteristics

