

APPROVAL SHEET

BRAND	
PRODUCT	3.0V LITHIUM-MANGANESE BUTTON CELL
MODEL	CR1632(130mAh)
PREPARED BY	
APPROVED BY	
DATE	AUG., 2016

1. 【SCOPE】

This specification applies to the following 3.0v lithium button cell CR1632.

2. 【RATINGS】

TABLE I :

ITEM		UNIT	SPECIFICATIONS	CONDITIONS
Nominal voltage		V	3.0	
Nominal capacity		mAh	130	Standard discharge with load 15kΩ,
Instantaneous short-circuit current		mA	250	Time≤0.5 second
Off-load voltage		V	3.20	
Operating temperature		℃	-20~60	
Standard weight		g	~1.7	Unit cell
Service output	Initial	Standard	670 h	Continuous discharge with load 15kΩ, till 2.0v end-voltage at 20~25℃
	After 12 months storage	Standard	630 h	

TABLE II :

ITEM	CONDITIONS	CHARACTERISTICS	
Thermal durability	Kept for 10 days at 50℃±3℃, then continuously discharge with 15kΩ load till 2.0v end-voltage	Standard	630 h
Self-discharge rate	Stored for 12 months at normal temperature and humidity	≤1%	

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.

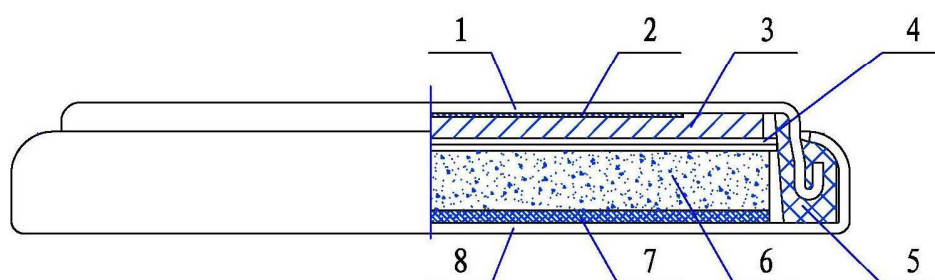
TABLE III:

No	ITEM	TEST METHODS	STANDARD	
1	Dimensions	Using vernier caliper (accuracy ≥ 0.02) while avoiding short-circuit	Diameter	16.0 (-0.20) mm
			Height	3.2(± 0.1) mm
2	Off-load voltage	Using multimeter (accuracy $\geq 0.25\%$) internal resistance $\geq 1\text{M}\Omega$	$\geq 3.20\text{ v}$	
3	Instantaneous short-circuit current	Time of short-circuit should be less than 0.5 second and avoid repeated test within half an hour	$\geq 250\text{ mA}$	
4	Appearance	Eyeballing	Bright, clean, no rust, no leakage, And no flaw	
5	Capacity	Continuously discharge with load $15\text{k}\Omega$, temperature at $20\sim 25^\circ\text{C}$, humidity at $65\pm 20\%$ till 2.0v end-voltage (for fresh battery only: within 3 months)	$\geq 670\text{ h}$	
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 (50°C) for 10 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



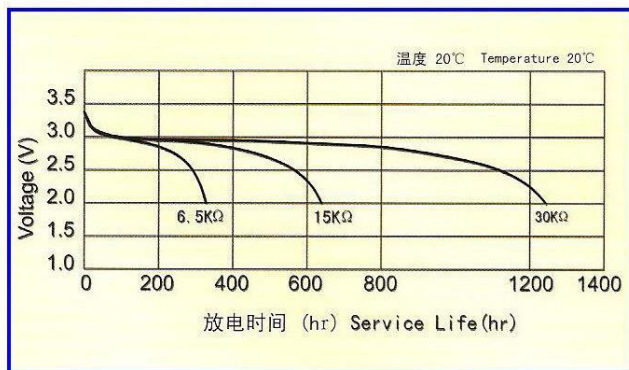
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|-----------------|---------------------------|------------------------------|---------------|
| 1、负极壳 | 2、负极集流网 | 3、负极锂片 | 4、隔膜 |
| 5、密封胶圈 | 6、正极片 | 7、正极集流网 | 8、正极壳 |
| 1、Cathode Shell | 2、Cathode collector net | 3、Cathode (slice of lithium) | 4、Septum |
| 5、Gasket | 6、Anode(MnO_2) | 7、Anode collector net | 8、Anode shell |

6. 【DISCHARGE CHARACTERISTICS】

标准曲线 STANDARD CHARACTERISTICS

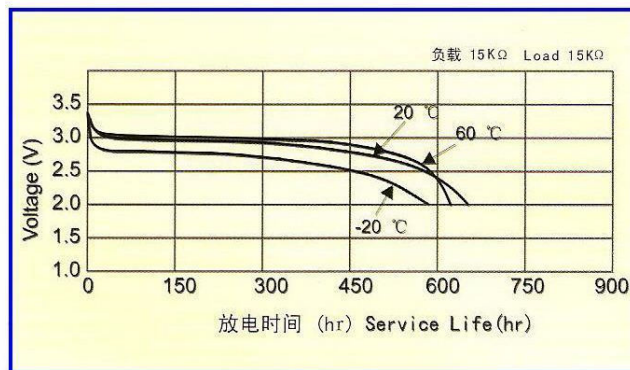
定电阻放电曲线

Discharge Characteristics



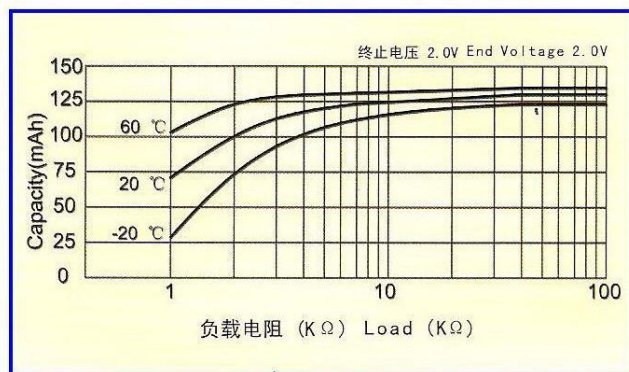
温度放电曲线

Temperature Characteristics



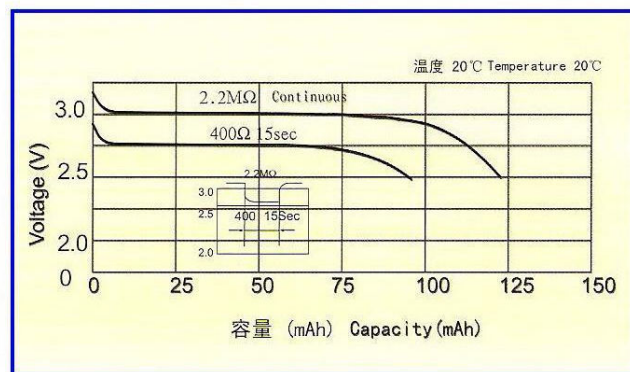
电阻容量曲线

Load-capacity

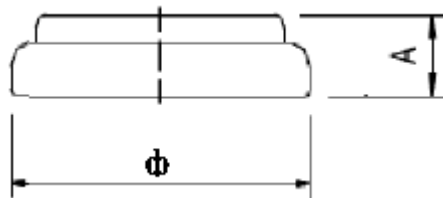


脉冲放电曲线

Pulse Discharge Characteristics



7. 【DIMENSIONS】



$$\Phi=16.0 (-0.2) \text{ mm} \quad A=3.2 (\pm 0.1) \text{ mm}$$