




APPROVAL SHEET

| | |
|---------|---|
| BRAND |  |
| PRODUCT | 3.0V LITHIUM-MANGANESE BUTTON CELL |
| MODEL | CR2450 |
| DATE | 2019.06 |



1. 【SCOPE】

This specification applies to the following 3.0v lithium button cell CR2450 made by WINPOW(HK) COMPANY LIMITED / HUIZHOU WINPOW ELECTRONIC CO.,LTD.

2. 【RATINGS】

TABLE I :

| ITEM | | UNIT | SPECIFICATIONS | CONDITIONS |
|----------------------------------|-------------------------|----------|----------------|--|
| Nominal voltage | | V | 3.0 | |
| Nominal capacity | | mAh | 600 | Standard discharge with load 7.5kΩ, end-voltage 2V |
| Operating temperature | | °C | -20~60 | 1、60% rated capacity ,discharge to 2V at 7.5k Ω loading in -20 °C ± 2 °C ambient; 2、99% rated capacity discharge e to 2.0V at 7.5k Ω loading in 60°C ± 2°C ambient. |
| Max pulse current | | mA | 40 | discharged 40% capacity in 23°C ambient, after 15 seconds, max discharge current at larger than 2.0V loading voltage |
| Max continuous discharge current | | mA | 10 | discharged to 2.0V with constant current in 23 °C ambient, the max current at 50% rated capacity |
| Standard weight | | g | 6.4 | Unit cell |
| Service output | Initial | Standard | 1680 h | Continuous discharge with load 7.5kΩ, till 2.0v end-voltage at 20~25°C |
| | After 12 months storage | Standard | 1590 h | |

TABLE II :

| ITEM | CONDITIONS | CHARACTERISTICS | |
|---------------------|---|-----------------|--------|
| Thermal durability | Kept for 20 days at 60 °C ±3 °C , then continuously discharge with 7.5kΩ load till 2.0v end-voltage | Standard | 1590 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°C~25°C; environmental humidity, 65±20%. Please refer to Table III

4. 【SUGGESTIONS AND CAUTIONS】

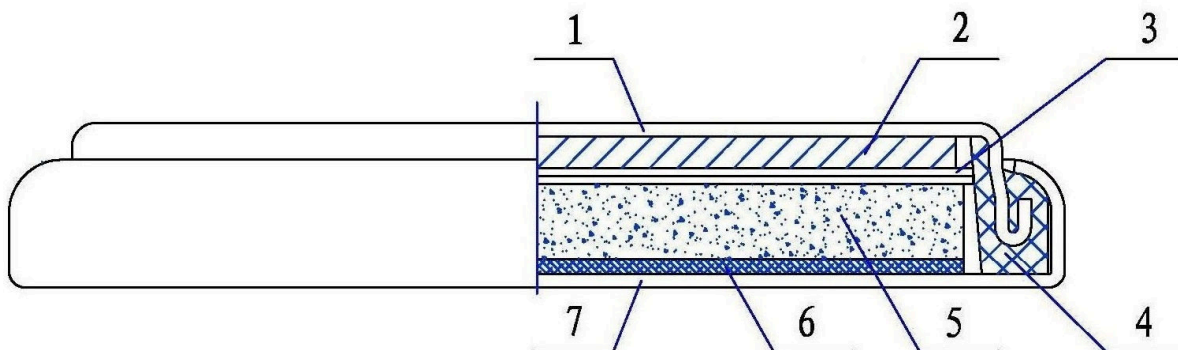
- 4.1 Install batteries correctly.
- 4.2 Ensure the contact points to be clean and conductive.

- 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 | |
|----|----------------------------------|--|---|-----------------|
| | | | Diameter | Height |
| 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 | Appearance | Eyeballing | Bright, clean, no rust, no leakage, And no flaw | |
| 4 | 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 | |
| 5 | Leakage at high temperature test | Stored under temperature (60°C) for 7 days | No leakage allowed | |
| 6 | 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】

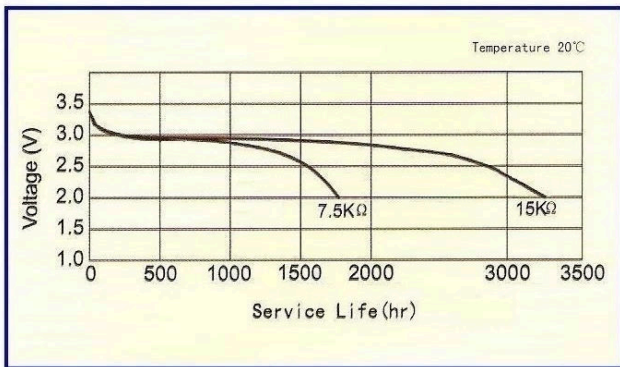


- 1、Cathode Shell 2、Cathode (slice of lithium) 3、Septum 4、Gasket
- 5、Anode (MnO₂) 6、Anode collector net 7、Anode shell

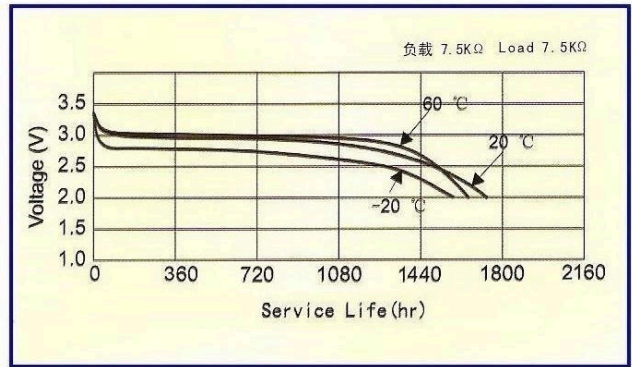


6. 【DISCHARGE CHARACTERISTICS】

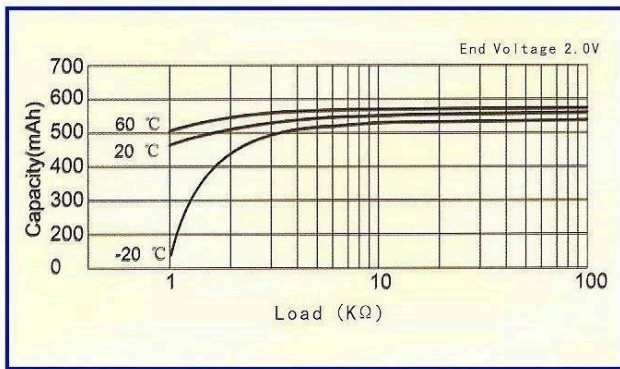
Discharge Characteristics



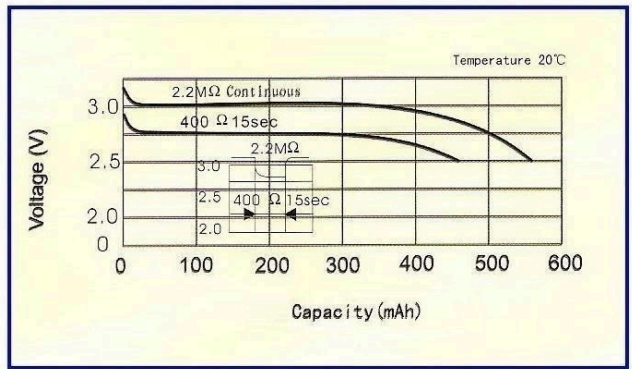
Temperature Characteristics



Load-capacity



Pulse Discharge Characteristics



1KΩ continuous discharge

电压(V)

放电曲线

