

# CR2477



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## Lithium-Manganese button cell (Data Sheet)

BRAND	
PRODUCT	3.0V LITHIUM-MANGANESE BUTTON CELL
MODEL	CR2477
PREPARED BY	
APPROVED BY	
DATE	JANUARY. 18, 2010

## 1. SCOPE

This specification applies to the following 3.0v lithium button cell CR2477 made by Unique Energy.

## 2. RATINGS

TABLE :

ITEM		UNIT	SPECIFICATIONS	CONDITIONS
Nominal voltage		V	3.0	Standard discharge
Nominal capacity		mAh	850	Standard discharge with load 15kΩ
Off-load voltage		V	≥3.2	
Storage temperature		°C	0~35	
Standard weight		g	8.4	Unit cell
Service output	Initial	Standard	1700 h	Continuous discharge with load 7.5kΩ, till 2.0v end-voltage at 20~25
	After 12 months storage	Standard	1643 h	

TABLE :

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	1643 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, 50±10%. Please refer to Table

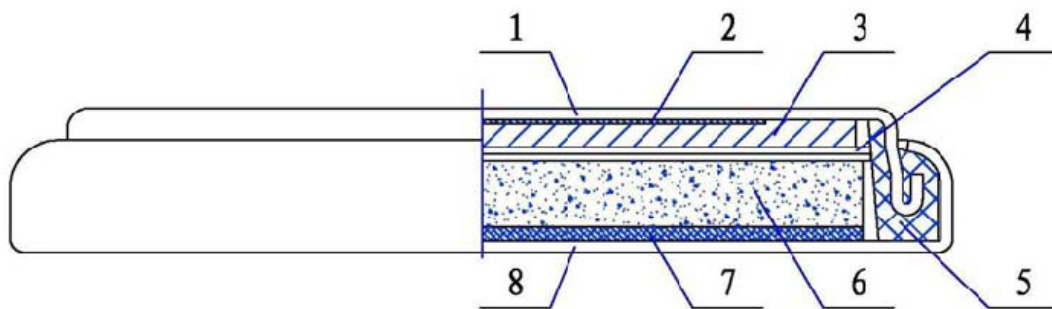
#### 4. SUGGESTIONS AND CAUTIONS

- 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:

No	ITEM	TEST METHODS	STANDARD	
1	Dimensions	Using vernier caliper (accuracy $\geq 0.02$ ) while avoiding short-circuit	Diameter	24.5(-0.20)mm
			Height	7.7(-0.20) mm
2	Off-load voltage	Using multimeter (accuracy $\geq 0.25\%$ ) internal resistance $\geq 1M\Omega$	$\geq 3.2v$	
3	Appearance	Eyeballing	Bright, clean, no rust, no leakage, and no flaw	
4	Capacity	Continuously discharge for 8 hours with load 7.5k $\Omega$ , temperature at 20~25°C, humidity at 50 $\pm$ 10% till 2.0v end-voltage (for fresh battery only: within 3 months )	$\geq 1684$ h	
5	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	
6	Leakage at high temperature	Stored under temperature (60°C) for 3 days	No leakage allowed	
7	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

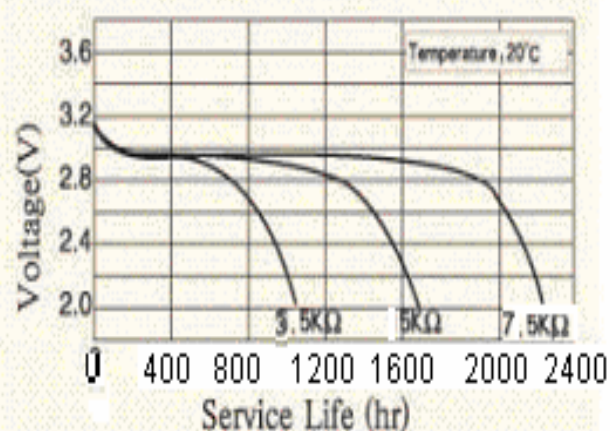


- |                  |                              |                               |                |
|------------------|------------------------------|-------------------------------|----------------|
| 1、 Cathode Shell | 2、 Cathode collector net     | 3、 Cathode (slice of lithium) | 4、 Septum      |
| 5、 Gasket        | 6、 Anode( MnO <sub>2</sub> ) | 7、 Anode collector net        | 8、 Anode shell |

## 标准曲线 STANDARD CHARACTERISTICS

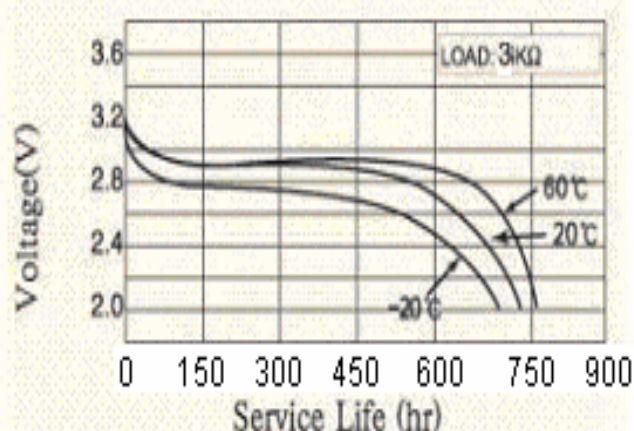
定电阻放电曲线

Discharge Characteristics



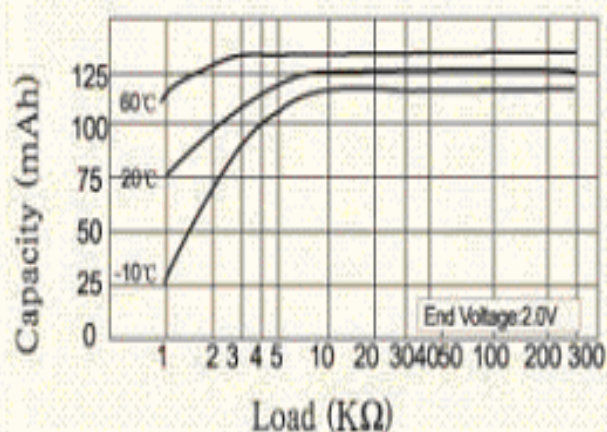
温度放电曲线

Temperature Characteristics



电阻容量曲线

Load-capacity



脉冲放电曲线

Pulse Discharge Characteristics

