

广州市迈可电池有限公司 GUANGZHOU MARKYN BATTERY CO., LTD

# APPROVAL SHEET

MESSRS	
BRAND	<b>GM</b> <sup>®</sup> <b>POWER</b> <sup>®</sup>
PRODUCT	3.0V LITHIUM-MANGANESE BUTTON CELL
MODEL	CR1225 (50mAh)
PREPARED BY	
APPROVED BY	
DATE	

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#### 1. **[SCOPE]**

This specification applies to the following 3.0v lithium button cell CR1225 made by GUANGZHOU MARKYN BATTERY CO., LTD.

#### 2. **[RATINGS]**

TABLE I:

ITEM		UNIT	SPECIFICATIONS	CONDITIONS	
Nominal voltage		V	3.0	Standard discharge	
Nominal capacity		mAh	50	Standard discharge	
Instantaneous short–circuit current		mA	≥100	Time≤0.5 second	
Off-load voltage		V	≥3.20		
Storage temperature		°C	0~35		
Standard weight		g	0.9	Unit cell	
Service output	Initial	Standard	290 h	Continuous discharge with load 15kΩ, till 2.0v end-voltage at 20~25℃	
	After 12 months storage	Standard	275 h		

#### TABLE II :

ITEM	CONDITIONS	CHARACTERISTICS	
Thermal durability	Kept for 20 days at $60^{\circ}C \pm 3^{\circ}C$ , then continuously discharge with $15k \Omega$ load till 2.0v end-voltage	Standard	275 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,  $20^{\circ}C \sim 25^{\circ}C$ ; environmental humidity,  $65\pm 20\%$ . 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.



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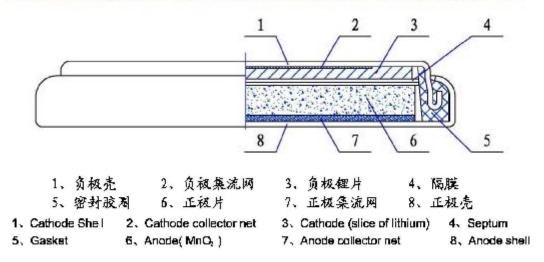
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TA	TABLE III:								
No	ITEM	TEST METHODS	STANDARED						
1 Dime	Dimensions	Using vernier caliper (accuracy≥0.02) while avoiding short-circuit	Diameter	12.5(-0.20) mm					
	Dimensiona		Height	2.5(-0.20) mm					
2	Off-load voltage	Using multimeter (accuracy $\geq$ 0.25%) internal resistance $\geq$ 1M $\Omega$	≥3.20v						
3	Instantaneous short-circuit current	Time of short-circuit should be less than 0.5 second and avoid repeated test within half an hour	≥100 mA						
4	Appearance	Eyeballing	Bright, clean, no rust, no leakage, And no flaw						
5	Capacity	Continuously discharge for 8 hours with load $15k \Omega$ , temperature at $20\sim25$ C, humidity at $65\pm20\%$ till 2.0v end-voltage (for fresh battery only: within 3 months)	≥290 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	Stored under temperature (60 $^\circ\!{\mathbb C}$ ) for 20 days	No leakage allowed						
8	Over discharge Test	After 2.0v end-voltage, continuously discharged for 5 hours	No lea	kage 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



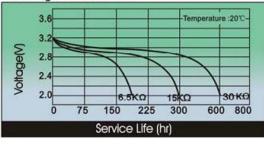


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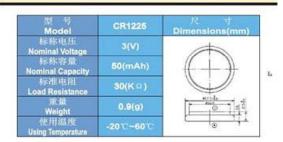
#### 6. [DISCHARGE CHARACTERISTICS]

## CR1225





规格 SPECIFICATIONS



**Temperature Characteristics** 

