


	Shenzhen Gaonengda Battery Co., Ltd	
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APPROVAL SHEET

MESSRS	
BRAND	
PRODUCT	3.0V LITHIUM-MANGANESE BUTTON CELL
MODEL	CR2477T-1HF
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DATE	MAR. 05, 2010

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1. 【SCOPE】

This specification applies to the following 3.0v lithium button cell CR2477T-1HF made by SHENZHEN GAONENGDA BATTERY CO., LTD.

2. 【RATINGS】

TABLE I :

ITEM		UNIT	SPECIFICATIONS	CONDITIONS
Nominal voltage		V	3.0	Standard discharge
Nominal capacity		mAh	1000	Standard discharge
Instantaneous short-circuit current		mA	≥ 250	Time ≤ 0.5 second
Off-load voltage		V	≥ 3.30	
Storage temperature		$^{\circ}\text{C}$	0~35	
Standard weight		g	9.5	Unit cell
Service output	Initial	Standard	500 h	Continuous discharge with load 1.5k Ω , till 2.0v end-voltage at 20~25 $^{\circ}\text{C}$
		Minimum	480 h	
	After 12 months storage	Standard	475 h	
		Minimum	450 h	

TABLE II :

ITEM	CONDITIONS	CHARACTERISTICS
Self-discharge rate	Stored for 12 months at normal temperature, then continuously discharged with 15k Ω load till 2.0v end-voltage	$\leq 5\%$

3. 【PERFORMANCE AND TEST METHODS】

Unless otherwise stated, all the testing is carried out under the condition: environmental temperature, 20 $^{\circ}\text{C}$ ~25 $^{\circ}\text{C}$; 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.


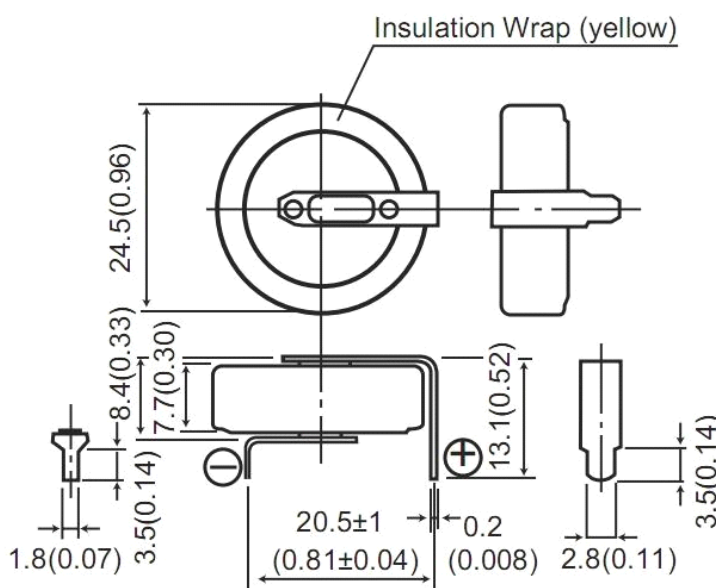
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TABLE III:

No	ITEM	TEST METHODS	STANDARD	
1	Dimensions	Using vernier caliper (accuracy ≥ 0.02) while avoiding short-circuit	Diameter	24.5 (-0.20) mm
			Height	7.7 (-0.20) mm
2	Off-load voltage	Using multimeter (accuracy $\geq 0.25\%$) internal resistance $\geq 1M\Omega$	$\geq 3.30v$	
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 1.5k Ω , temperature at 20~25 $^{\circ}C$, humidity at 65 \pm 20% till 2.0v end-voltage (for fresh battery only: within 3 months)	$\geq 500h$	
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 (45 $^{\circ}C$) for 30 days	Leakage rate $\leq 0.7\%$	
8	Over discharge Test	After 2.0v end-voltage, continuously discharged for 5 hours	No leakage allowed	

5. 【TAB DRAWING】





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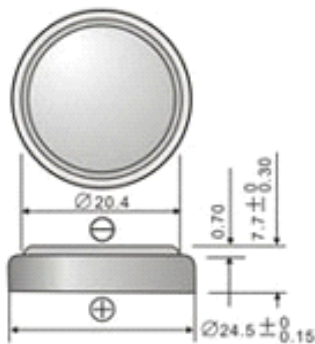
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6. 【DISCHARGE CHARACTERISTICS】

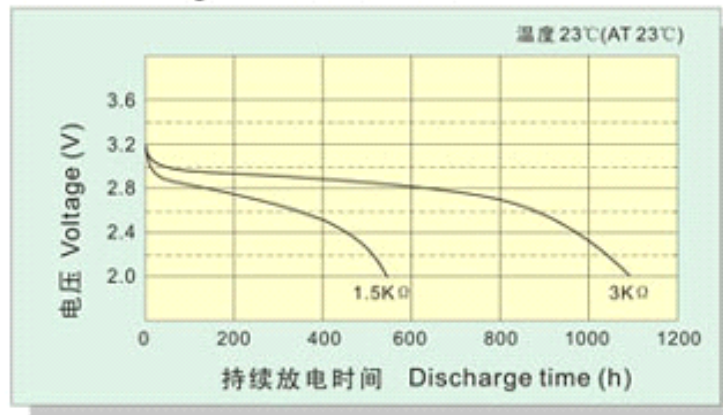


规格 Specifications

标称电压 Nominal Voltage	3V
标称容量 Nominal Capacity	1000mAh
标准电流 Std Current	1.0mA
标准重量 Weight	10.0g



负载放电特性 Discharge Characteristics on Load



温度放电特性 Discharge Characteristics on Temperature

