

Dong Guan China

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ROHS,UL

TB02-BB8D

7 workdays

T/T

0.045 USD/ PCS

Bulk,500pcs per polybag

20,000,000PCS per week

# **TB02-BB8D Small Temperature Control Switch Micro Thermal Protector Temperature Control Switch Thermostat**

# **Basic Information**

- Place of Origin:
- Brand Name:
- Certification:
- Model Number:
- Minimum Order Quantity: 5000 PCS
- Price:
- Packaging Details:
- Delivery Time:
- Payment Terms:
- Supply Ability:



## **Product Specification**

• Type:	Temperature Switch
<ul> <li>Application:</li> </ul>	Electronic
• Voltage:	Small
<ul> <li>Voltage Characteristics:</li> </ul>	Safety Voltage
• Shape:	SMD Type
<ul> <li>Fusing Speed:</li> </ul>	FF/Extra Fast
<ul> <li>Implementation Standard:</li> </ul>	National Standard
• Automatic Reset Function:	Yes
<ul> <li>Maximum Voltage:</li> </ul>	250 (V)
Maximum Current:	5 (A)
<ul> <li>Holding Current:</li> </ul>	2 (A)
Operation Temperature:	30-180 (°C)
<ul> <li>Temperature Control Range:</li> </ul>	30-180 (°C)
<ul> <li>Application Area:</li> </ul>	Household Appliances



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**Our Product Introduction** 

### TB02 series temperature control switch thermal protector thermostat

TB02 series thermal protectors are small in size, sensitive in temperature and precise in protection. The lead temperature can be customized according to customer requirements. The structure is stable and is particularly suitable for various battery packs, battery protection boards, and products with small installation locations. Small in size, easy to install, fast in temperature sensing, stable in structure, lead temperature can be customized according to customer requirements, in line with environmental protection ROHS IS09001 standards, normally open or normally closed optional.

### **1 Product Application**

TBO2 series temperature control switches are small in size, sensitive in temperature sensing, and provide accurate and reliable protection. They are particularly suitable for the safety protection of temperature sensing cables, battery protection boards, micromotors and transformers.





2 Appearance and structure:



Serial number	Part name	Material name	Serial number	Part name	Material name
1	Housing	PBT CRN7030	5	Fixed seat	PBT CRN7030
2	Moving contact	AgNi/BZn	6	Ероху	9002A
3	Bimetallic strip	30R	7	Moving contact	BZn
4	Static contact	AgNi10/BZn	8	Wire	22# 3266



How to distinguish between normally closed and normally open



#### Temperature tolerance: ±3°C±5° Action range: 35°C-155°C (one specification for every 5°C) Contact internal resistance: ≤100 milliohms (the longer the line, the greater the internal resistance) Lifespan: 10,000 times OR 100,000 times Reset temperature: Action temperature drops 10°C-25°C (free reset) Electrical strength: AC1500V / 1MIN without breakdown flicker

3.2 Rated	operating	temperature	code and	reset	temperature:
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3.2 Rated operating temperature code and reset temperature:						
Product model	Action temperature	Reset temperature	Product model	Action temperature	Reset temperature	
TBO2-BB8D- 30°C	30±3°C	≥20°C	TBO2-BB8D- 80°C	80±5°C	55±15°C	
TBO2-BB8D- 35°C	35±3.5°C	≥25°C	TBO2-BB8D- 85°C	85±5°C	60±15°C	
TBO2-BB8D- 40°C	40±4°C	≥30°C	TBO2-BB8D- 90°C	90±5°C	65±15°C	
TBO2-BB8D- 45°C	45±4.5°C	≥33°C	TBO2-BB8D- 95°C	95±5°C	70±15°C	
TBO2-BB8D- 50°C	50±5°C	≥35°C	TBO2-BB8D- 100c	100±5°C	70±15℃	
TBO2-BB8D- 55°C	55±5°C	42±6°C	TBO2-BB8D- 105°C	105±5°C	75±15℃	
TBO2-BB8D- 60°C	60±5°C	45±8°C	TBO2-BB8D- 110°C	110±5°C	75±15°C	
TBO2-BB8D- 65°C	65±5°C	48±10°C	TBO2-BB8D- 115°C	115±5°C	80±15°C	
TBO2-BB8D- 70°C	70±5°C	50±12°C	TBO2-BB8D- 120°C	120±5°C	85±15°C	
TBO2-BB8D- 75°C	75±5°C	53±14°C	TBO2-BB8D- 125°C	125±5°C	85±15°C	
TBO2 BB8D- 80°C	80±5°C	55±15°C	TBO2-BB8D- 145°C	145±5°C	100±15°C	
TBO2-BB8D- 85°C	85±5°C	60±15°C	TBO2-BB8D- 150°C	150±5°C	105±15°C	
TBO2-BB8D- 90°C	90±5°C	65±15°C	TBO2-BB8D- 155°C	155±5°C	110±15°C	

## 3.3 Dimensions:

5A/10A: Metal housing: 20×7.4×3.8mm 15×6.4×3.1 (excluding insulating sleeve)

Plastic housing: 20×7.4×3.8mm 15×7×3.5mm

Ceramic housing: 20×8.5×5mm

16A: Metal housing: 21.5×8×4.25mm (excluding insulating sleeve)

Plastic shell/metal shell size table

ТВ02	Height (mm)	Width (mm)	Length (mm)
15 long plastic case	15	5.4	2.4
12 long plastic case	12	5.4	2.4
10 long plastic case	10	5	2

## There are many shell styles and sizes that are not listed in full. If you need any, please contact customer service.

3.4 Tensile test: The lead end of the product should be able to withstand a tensile force greater than or equal to 2ON, and the wire should not break or slip out

### 3.5 Insulation voltage:

a The lead wires of the product should be able to withstand AC660V when disconnected, and last for 1 min without breakdown and flashover;

b The lead wires of the product and the insulating shell can withstand AC1800v, and last for 1S without breakdown and flashover:

3.6 Insulation resistance: Under normal conditions, the insulation resistance between the lead wire and the insulating shell is above 100MQ. (The meter used is a DC500V megohmmeter)

**3.7 Contact resistance:** The contact resistance of the product should not exceed 50mQ.

3.8 High temperature resistance test: The product is placed in an air environment 50°C higher than the rated operating temperature for 96h.

3.9 Low temperature resistance test: The product is placed in an air environment of -40°C for 96h.

3.10 Vibration test: The thermal protector should be able to withstand an amplitude of 1.5mm, a frequency change of 10 to 55Hz, a scanning change cycle of 3 to 5 times/min, and vibration directions X, Y, and Z, with continuous vibration for 2 hours in each direction.

3.11 Drop test: The product falls freely from a height of 0.7m once.

3.12 Compression test: The product should be able to withstand a static pressure of 100N for 1min.

3.8, 3.9, 3.10, 3.11, and 3.12 should meet the following conditions after the tests:

a The disconnection temperature change should be within +7°C of the initial value;

b The contact resistance should be below  $100m\Omega$ ;

c The appearance should not be significantly deformed;

d The wire should not be cracked or damaged.

### 4 Lifespan

Under the conditions of rated voltage, current and power factor of 0.7, the product is operated 10,000 times by an external heat source, and the following conditions should be met:

a The disconnection temperature change should be within +5°C of the initial value;

b The contact resistance should be below  $100m\Omega$ ;

Continue the test until it can operate after 5,000 times.

#### 5 Other matters:

5.1 The heating rate of disconnection temperature detection should be controlled at 1°C/1min;

5.2 The product cannot withstand strong impact and pressure during use;

6 Matters not covered by this standard or other requirements of customers shall be separately established.





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