Temperature Sensor Thin Film Pt100 Element For RTD Class A

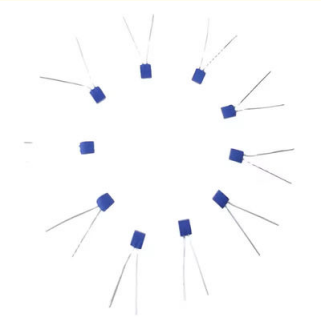
Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: ISO
- Model Number: K/J/E/T/PT100
- Minimum Order Quantity: 500 pieces
- Price: Negotiable
- Packaging Details: Spool package with Carton box, Coil package with polybag
- Delivery Time: 5-21 days
- Payment Terms: L/C, T/T, Western Union, MoneyGram
- Supply Ability: 300 tons per month

Product Specification

- Product Name: Pt100 Temperature Sensor
- Application: Industrial Temperature Measuring
- Type: K/J/E/T/PT100
- Temperature Coefficient TC: 3850 Ppm/K
- Accuracy: 1/3B,A,B,2B
- Max Current: 2mA
- Size: Custom Size
- Highlight: **Temperature Sensor Thin Film**, **Temperature Sensor Pt100 Element**, **RTD Class A Temperature Sensor**



More Images

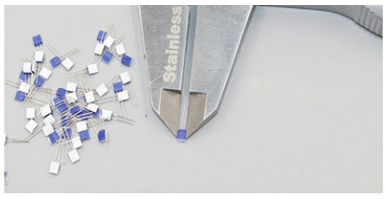
Our Product Introduction

Product Description

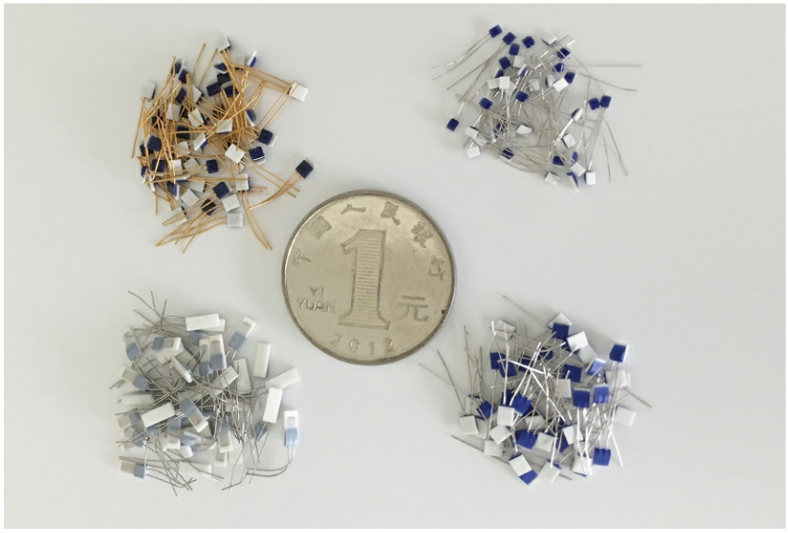
Product Description:

Thin film sensors are a specific type of temperature sensor manufactured using thin film technology. Thin film sensors usually use a structure in which a metal film is deposited on a substrate, including a platinum film for measuring temperature. This design enables thin film sensors with fast response, smaller size and lower thermal load.
Pt100 thin film sensor, Pt500 thin film sensor and Pt1000 thin film sensor are thin film temperature sensors based on the principle of platinum resistance, with resistance values of 100 ohms, 500 ohms and 1000 ohms respectively. They can be used for temperature measurement in a variety of applications, providing high accuracy and stability.

Height 2.5MM



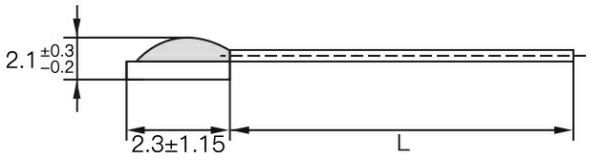
Width 2MM



Please take the Size of one dollar coin as a reference

Product information

Dimensions are shown in the figure



Features:

1. High Accuracy: These thin film sensors have high temperature measurement accuracy and can provide accurate temperature measurement results. Accuracy often varies based on build quality and application requirements.
2. Fast response: Thin film sensors have low heat capacity and heat load due to their thin film structure, so they can respond quickly to temperature changes and provide real-time temperature measurement results.
3. Wide temperature range: Pt100, Pt500 and Pt1000 thin film sensors can measure a wide range of temperatures, generally covering the range from low to high temperatures, such as -200°C to +600°C.
4. Stability: These thin film sensors have good long-term stability, and their resistance values change less over long periods of use, providing reliable and stable temperature measurements.
5. Small size: The thin film sensor has a relatively thin structure and small size, making it suitable for applications with limited space.
6. Corrosion resistance: Since the thin film sensor uses a platinum film as the sensing element, platinum has good corrosion resistance and can provide reliable temperature measurement under various environmental conditions.
7. Diverse packaging forms: These thin film sensors are available in a variety of packaging forms, such as patch, linear or flexible, to suit different application needs.

Technical Parameters:

Accuracy	Deviation error	Deviation resistace(0 °C)	(α)(Ohm/Ohm/deg.C)
1/3B	+/-(0.1+0.0017t)	+/-0.04 Ohm	0.003851+/-0.000004
A	+/-(0.15+0.002t)	+/-0.06 Ohm	0.003851+/-0.000005
B	+/-(0.3+0.005t)	+/-0.12 Ohm	0.003851+/-0.000012
2B	+/-(0.6+0.01t)	+/-0.25 Ohm	0.003851+/-0.000024

Difference:

Pt100, Pt500 and Pt1000 are different types of platinum resistance temperature sensors, which are based on the same principle, which is to use the relationship between platinum resistance and temperature for temperature measurement. These numbers represent different resistor values for different applications and measurement requirements.

Pt100: The resistance value of a Pt100 temperature sensor is 100 ohms at 0°C. This means that at 0°C, the resistance of a Pt100 sensor is 100 ohms, and as the temperature increases or decreases, the resistance changes accordingly. Pt100 sensors are typically used to measure lower temperature ranges, such as -200°C to +600°C.

Pt500: The resistance value of the Pt500 temperature sensor is 500 ohms at 0°C. Similar to Pt100, the resistance value of the Pt500 sensor also changes with temperature, but its resistance value changes more with temperature. Pt500 sensors are typically used to measure moderate temperature ranges, such as -200°C to +600°C.

Pt1000: The resistance value of the Pt1000 temperature sensor is 1000 ohms at 0°C. Compared with Pt100 and Pt500, the resistance value of the Pt1000 sensor changes more significantly. Pt1000 sensors are typically used to measure higher temperature ranges, such as -200°C to +600°C.

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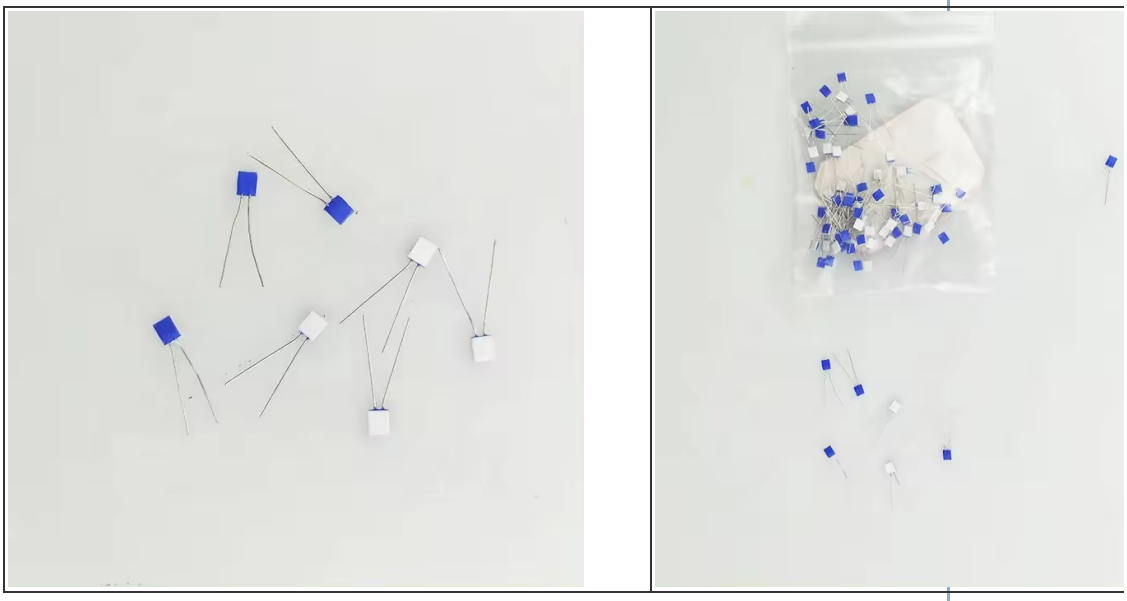

FAQ:

Q: What is the measuring range of these thin film sensors?
A: Generally, Pt100, Pt500 and Pt1000 thin film sensors can measure temperatures ranging from -200°C to +600°C. Specific measurement ranges may vary by manufacturer and model.

Q: How accurate are these thin film sensors?
Answer: Pt100, Pt500 and Pt1000 thin film sensors have high accuracy, and their accuracy is usually within the range of manufacturing quality and application requirements. Generally speaking, they can provide high temperature measurement accuracy, usually in the range of ±0.1°C to ±1°C.

Q: What is the response time of these thin film sensors?
Answer: Thin film sensors have low heat capacity and heat load due to their thin film structure, and therefore can respond quickly to temperature changes. Generally speaking, their response times can range from a few milliseconds to tens of milliseconds, depending on the sensor design and environmental conditions.

Q: What are the packaging options for these thin film sensors?
Answer: Pt100, Pt500 and Pt1000 thin film sensors can provide a variety of packaging forms to adapt to different application requirements. Common packaging forms include patch type, linear type and flexible type.

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