

700-101BAB-B00

(Home (/index.php?ci_id=3972&la_id=1) : Products (/products) : Active Product Family 10-Oct-2006 : Temperature Sensors : Discrete RTD Sensors : 700)



700 Series temperature sensor, thin film, platinum RTD, platinum-clad nickel wire

Actual product appearance may vary.

[Overview](#)

[Specs](#)

[Documentation](#)

[Application Notes](#)

Description

The 700 Series Platinum RTDs (Resistance Temperature Detector) are economical, miniature temperature sensors. These products are available in two different package configurations, leaded and SMT (Surface Mount Technology). Two sizes are available for each configuration, with the SMT available in industry-standard 0805 and 1206 packages. The 700 Series has 100 Ohm and 1000 Ohm base resistances and is available in both the 3750 ppm/K and 3850 ppm/K temperature coefficients (375 and 385 alphas). The tolerances of the 700 Series meet DIN class A, DIN class B and DIN class 2B industry standards.

Features

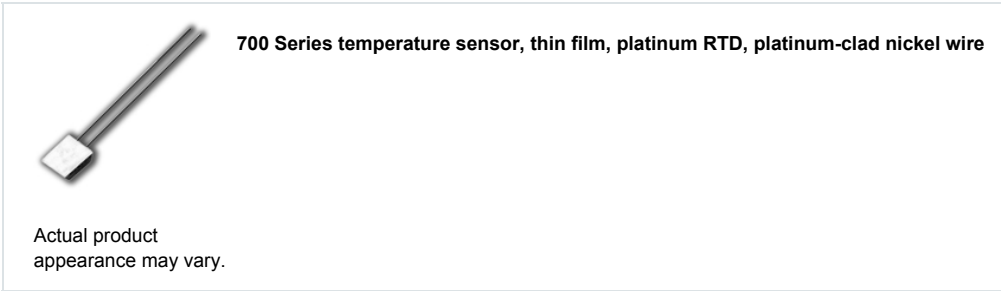
- Linear resistance vs temperature
- High accuracy
- Interchangeability
- Excellent stability
- Fast time response
- Wide temperature range

Potential Applications

- HVAC: room, duct and refrigerant temperature
- Electronic assemblies: thermal management, temperature compensation
- Process control: temperature regulation

700-101BAB-B00

(Home (/index.php?ci_id=3972&la_id=1) : Products (/products) : Active Product Family 10-Oct-2006 : Temperature Sensors : Discrete RTD Sensors : 700)



[Overview](#) [Specs](#) [Documentation](#) [Application Notes](#)

Product Specifications	
Termination	Leadwires
Termination Material	Platinum-clad nickel wire
Availability	Global
Sensor Type	100 Ohm platinum RTD
Temperature Coefficient	0.00385 Ohm/Ohm/°C DIN specification
Package Type	Radial chip
Temperature Sensing Range	-70 °C to 500 °C [-94 °F to 932 °F]
Base Resistance and Interchangeability	100 Ohm ±1.2 Ohm at 0 °C
Linearity (% of Full Scale)	±0.1% typ. -40 °C to 125 °C [-40 °F to 257 °F]; ±2.0% max. -70 °C to 500 °C [-94 °F to 932 °F]
Time Constant in Water at 0.914 m/s [3 ft/s]	Water current (v=0.4m/s): t0.5=0.05 s; t0.9=0.15 s
Time Constant in Air	Air stream (v=2 m/s): t0.5=3.0 s; t0.9=8.0 s
Stability	Max. Ro drift 0.06% after 1000 hours at 500 °C [932 °F]
Supply Voltage	Not applicable
Supply Current	0.3 mA to 1.0 mA
Self Heating	0,4 K/mW at 0 °C [32 °F]
Insulation Resistance	100 MOhm at 20 °C [68 °F]
Series Name	700
Construction	Passified 99% alumina support, resistance portion, refractory glass passified overall
UNSPSC Code	411121
UNSPSC Commodity	411121 Transducers