

3850ppm/K Platinum Film RTD Temperature Sensors

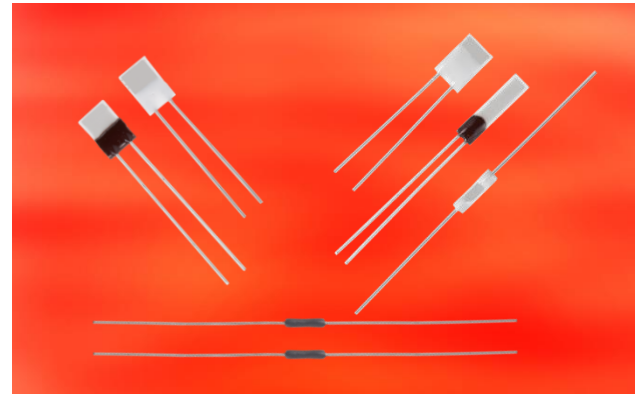


KOA's SDT310 range of resistance temperature detectors (RTD) are available in both radial and axial formats.

These sensors offer excellent linearity, high stability, homogenous heating, high accuracy and fast response times.

The new SDT310VASP series combines improved heat response times in a body a quarter the size of conventional types.

All SDT310 are ideal for high accuracy sensing in industrial, measurement and automotive applications.



Applications

- Cold point compensation for thermocouples
- Temperature compensation for RF circuits
- Heater element for thermal flowmeters
- Temperature compensation of air flow meters
- Medical and industrial appliances and machinery
- Analytical equipment
- Automotive (SDT310VASP)
- HVAC (heating, ventilation, air conditioning)
- Energy generating industries

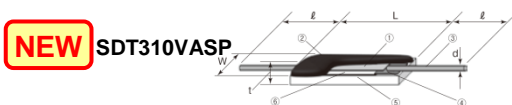
Product Features

- High long term stability
- Excellent temperature shock resistance
- Excellent precision over a wide temperature range
- IEC 60751 and JIS C 1604 standard (SDT310HCTP)
- -55 °C to +650 °C Temperature range
- SDT310MTM measures to +650 °C with class B accuracy
- Ultra small types (SDT310VASP)
- Easy soldering of SDT310LTC and SDT310HLTC (SnCu wire)
- Meets EU-RoHS requirements

Rating examples of standard types

Category	Type	Size (mm)	T.C.R. (ppm/K)	T.C.R. Tolerance	Thermal Time Constant	Resistance at 0 °C	Resistance Tolerance	Class: Tolerance of Measuring Temperature	Operating Temperature Range		
Low Temp.	SDT310 HLTC	1.2 x 5.0	3850 (at 0°C/100°C)	-	2.8 sec in stationary air	1 kΩ	A: ± 0.059 % B: ± 0.12 % C: ± 0.39 %	A: ± (0.15+0.002 t) °C B: ± (0.30+0.005 t) °C C: ± (1.00+0.010 t) °C	-55 ~ +155 °C		
Low Temp.	SDT310 LTC	2.0 x 3.0		-	7.0 sec in stationary air	100 Ω 500 Ω 1 kΩ			B: ± 0.12 % C: ± 0.39 %	B: ± (0.30+0.005 t) °C C: ± (1.00+0.010 t) °C	-55 ~ +400 °C
General	SDT310 P			100 Ω		-55 ~ +650 °C					
High Temp.	SDT310 MTM			100 Ω							
Small Heater	SDT310 AP	0.8 x 3.0		± 2 %	6 sec in stationary air	10 Ω	± 10 %	-	-55 ~ +400 °C		
Small Heater	SDT310 VASP	0.4 x 2.0		± 25 ppm/K	3.2 sec in stationary air	20 Ω	± 1 %	-	-55 ~ +600 °C		
General	SDT310 HCTP*	1.2 x 3.0	-	-	2.8 sec in stationary air	100 Ω	± 0.059 %	F0.15: ± (0.15+0.002 t) °C	-55 ~ +300 °C		
							± 0.12 %	F0.3: ± (0.30+0.005 t) °C	-55 ~ +400 °C		

*Characteristics of SDT310HCTP are equivalent to IEC 60751²⁰⁰⁸, JIS C 1604²⁰¹³



- ① Protective coating
- ② Platinum thin film
- ③ Lead wire
- ④ Inner electrode/Auxiliary electrode
- ⑤ Ceramic substrate
- ⑥ Platinum thin film

Dimensions (mm)				
W	L	t	d	l
0.4 ^{+0.15}	2.0±0.1	0.65 max	φ0.15±0.05	10±2

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