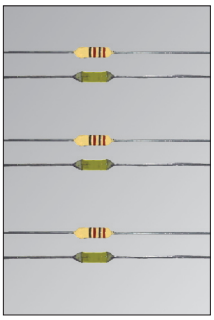
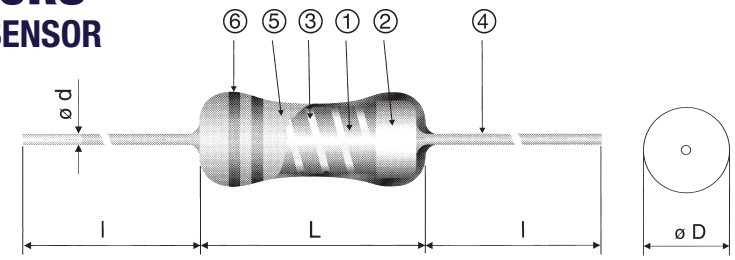
THERMAL SENSORS

THIN FILM PLATINUM SENSOR
AXIAL
SDT101





STRUCTURE

1 Thin Pt film on ceramic core
2 End caps
3 Laser cuts
4 Copper lead wire
SnCu (type A)
Ni (type B)
5 Epoxy resin (type A)
Polyimide resin (type B)
6 Marking (only type A)

IDENTIFICATION

PRODUCT CODE	COATING COLOR	MARKING
SDT101 A	Ivory	Color Code (R-value and tolerance)
SDT101 B	Transparent Brown	None

All these products have Pb-free terminations and meet EU-RoHS and China-RoHS requirements

TYPE DESIGNATION (HOW TO ORDER)

SDT101	A	X	C	T52	A**	500	F	G
PRODUCT CODE	TEMPERATURE RANGE A: -55°C…+150°C B: -55°C…+300°C	REFERENCE TEMPERATURE X: 0°C Y: +25°C*	TERMINATION SURFACE MATERIAL C: SnCu (A only) N: Ni (B only)	TAPING Nil: Bulk T26: 26mm Taping (A only) T52: 52mm Taping (A only)	PACKAGING Nil: Bulk A: AMMO (A only)	NOMINAL RESISTANCE 10: 10Ω 100: 100Ω 500: 500Ω	RESISTANCE TOLERANCE D: (±0.5%) F: (±1%)	T.C.R. TOLERANCE F: (±1%) G: (±2%)

* Products of resistances measured at +25°C are also available (but TCRs will be measured at 0°C/+100°C). Please consult us.
**Please see 'PACKAGING'

Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS

FEATURES

- Linear relationship between resistance and temperature
- Excellent reliability and stable characteristics
- Fastest response time
- Economy type: SDT-101A
- High temperature use is possible (+300°C: SDT 101B)
- Ideal for use as air flow sensor for automobile, or as temperature compensation for several applications (e.g. measuring instruments and analysers, air conditioner, detection of outer air and water and cooling temperatures etc.)
- Leads solderable and weldable

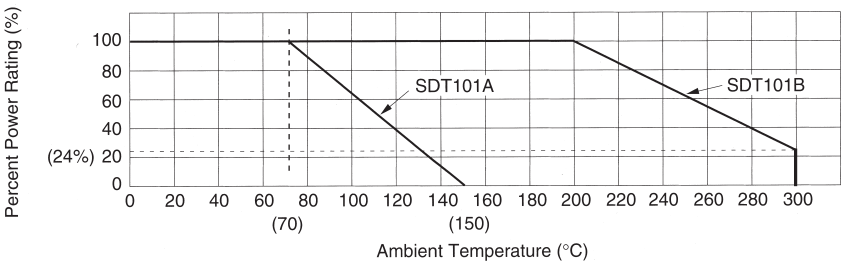
DIMENSIONS (mm)

TYPE	L	ø D	l	ø d
SDT101 A	4.0 ± 0.8	1.6 ± 0.2	30 ± 3	0.4 ± 0.08
SDT101 B		1.5 ± 0.2		

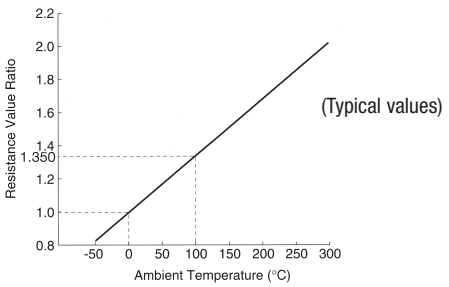
PRECAUTIONS

- It is difficult to solder SDT101B because heat resistant leads are used. Please use welding to connect the lead wires.
- When an operating current is 1mA or more, calculate a rise in temperature by self-heating to confirm an error.
- If SDT101 is used by being molded or placed in a metal protection tube filling with resin, the resistance value may occasionally vary slightly depending on the resin used.

DERATING CURVE



TEMPERATURE CHARACTERISTICS



RATING

TYPE	THERMAL TIME CONSTANT*1	THERMAL DISSIPATION CONSTANT*1	RESISTANCE*2		T.C.R*3		RATED POWER*4	RATED AMBIENT TEMPERATURE	OPERATING TEMP. RANGE*4
			NOM. VALUE	TOLERANCE	ppm/K	TOLERANCE			
SDT101 A	Approx. 6 sec. in stationary air	2.8 mW/K	10 Ω 100 Ω 500 Ω	D (±0.5%) F (±1%)	± 3500	F (±1%) G (±2%)	0.125 W	+ 70°C	-55°C ... +150°C
SDT101 B	Approx. 9 sec. in stationary air	1.8 mW/K						+ 200°C	-55°C ... +300°C

(*1) Thermal Time Constant and Dissipation Constant are the value of sensor element. Those values vary depending on how the element is connected and fixed.
(*2) Contact KOA if resistance values other than these listet above are required. Measurement is made at 0°C as a reference.
(*3) T.C.R. Measuring Temperature: 0°C/+100°C
(*4) See above „DERATING CURVE". Derate by load derating curve if the rated ambient temperature is exceeded.
Rated voltage = $\sqrt{\text{Power rating x resistance value.}}$

Please contact KOA for special precautions before you order and use this series.