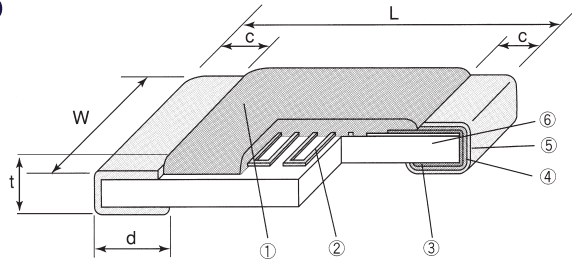
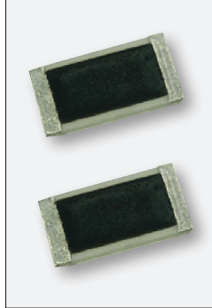


THERMAL SENSORS
THIN FILM PLATINUM PTC
AUTOMOTIVE
SDT73V



STRUCTURE

- 1 Protective coating
- 2 Platinum thin film element
- 3 Inner electrode
- 4 Nickel plating
- 5 Solder plating
- 6 Ceramic substrate

IDENTIFICATION

PRODUCT CODE	COATING COLOR	MARKING
SDT73V	Black	None

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

TYPE DESIGNATION (HOW TO ORDER)

SDT73V	2B	T	TE	100	F	385	Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS
PRODUCT CODE	STYLE 2B: 1206	TERMINATION SURFACE MATERIAL T: Sn	TAPING* TEK, TE, BK <small>*Please see "PACKAGING"</small>	NOMINAL RESISTANCE 100: 100Ω 500: 500Ω	RESISTANCE TOLERANCE C: (±0.2%) F: (±1%)	T.C.R. (3850±50 ppm/K)	

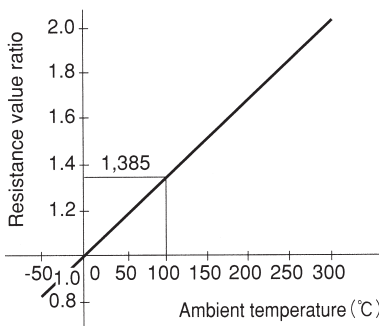
FEATURES

- SMD platinum thin film thermal sensor in standard 1206 chip size
- T.C.R. is in accordance with JIS/DIN standards
- Parts are tested according to **AEC-Q200** requirements
- Linear relationship between resistance and temperature
- Excellent environmental resistance and maintains stable characteristics over the long-term
- Suitable for temperature compensation of electronic components for automotive
- Ideal for use as temperature compensation for e.g. sensor drive circuits, telecommunication and measuring equipment, hybrid, etc.
- Meets or exceeds IEC 60751, JIS C 1604, DIN EN 60751
- Operating temperature range: -55°C...+155°C
- Suitable for reflow and wave soldering

DIMENSIONS (mm)

SIZE	TYPE	L ± 0.2	W ± 0.2	t ± 0.15	c ± 0.3	d ± 0.3
1206	SDT73V 2B	3.2	1.6	0.5	0.5	0.5

RESISTANCE TEMPERATURE CHARACTERISTICS



Approximate Expression for Resistance-Temperature Characteristics

$$-55^{\circ}\text{C} \sim 0^{\circ}\text{C} : R_T = R_0 [1 + C_1 T + C_2 T^2 + C_3 (T-100) T^3]$$

$$0^{\circ}\text{C} \sim +125^{\circ}\text{C} : R_T = R_0 (1 + C_1 T + C_2 T^2)$$

R_T : Resistance value at T°C
 R_0 : Resistance value at 0°C
 T: Ambient temperature (°C)

Constants C_1, C_2, C_3 :

$$C_1 = 3.9083 \times 10^{-3} \text{ } ^{\circ}\text{C}^{-1}$$

$$C_2 = -5.775 \times 10^{-7} \text{ } ^{\circ}\text{C}^{-2}$$

$$C_3 = -4.183 \times 10^{-12} \text{ } ^{\circ}\text{C}^{-4}$$

RATING

SIZE	TYPE	RESISTANCE (at 0°C)	RESISTANCE TOLERANCE*	THERMAL TIME CONSTANT**	THERMAL DISSIPATION CONSTANT**	T.C.R.	T.C.R. TOLERANCE	SPECIFIED CURRENT***	OPERATING TEMPERATURE RANGE
1206	SDT73V 2B	100Ω 500Ω	C: ±0.2% F: ±1%	6.5 sec.	2.4 mW/K	3850 ppm/K	±50 ppm/K	100Ω: 1 mA max. 500Ω: 0.1 mA max.	-55°C...+155°C

* Please consult with us about the products equivalent to class B of JIS.

** Thermal time constant and thermal dissipation constant are reference values, which are values of elements and vary with connecting or fixing methods. Thermal dissipation constant is approx. 4mW/°C under the surface mounting condition.

*** The electricity which is charged with in the element is moved to the range that rise in temperature due to a self-heat generation can be ignored. Ordinarily recommended measuring currents are 1mA for 100Ω and 0.1mA for 500Ω.

When measuring current higher than rated current (100Ω:1mA, 500Ω:0.1mA) is used, calculate a rise in temperature by self-heating and confirm the error range.

Please advise your detailed application to KOA and order the technical specification for this product before you order and use this series.

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

Contact our sales representatives before you use our products for applications including automobiles, medical equipment and aerospace equipment. Malfunction or failure of the products in such applications may cause loss of human life or serious damage.

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order or use.