

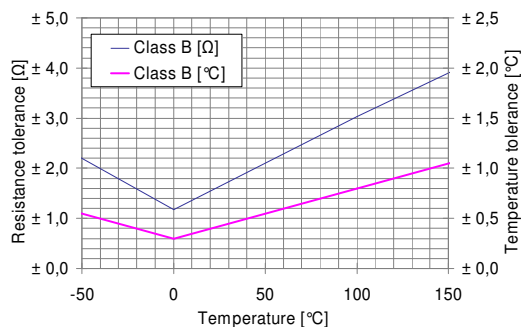
Technical Data

Resistance at 0 °C	1000 Ω
Temperature coefficient (0 °C up to 100 °C)	$3.85 \cdot 10^{-3} \text{ K}^{-1}$
Tolerance class to DIN EN 60751	B
Operating temperature range	-50 °C up to 150 °C
Measurement current (DC) at 25 °C	0.1 mA
Maximal permissible peak current (DC) at 25 °C	0.3 mA
Insulation resistance	> 10 MΩ
Self-heating at 0 °C	< 0.4 K / mW
Thermal response time	
Flowing water (v = 0.2 m/s)	$T_{0.5} = 0.2 \text{ s}$ $T_{0.9} = 0.5 \text{ s}$
Flowing air (v = 1 m/s)	$T_{0.5} = 4 \text{ s}$ $T_{0.9} = 10 \text{ s}$
Resistance value (Class B) at	
0 °C	$1000.00 \Omega \pm 1.2 \Omega$
100 °C	$1385.10 \Omega \pm 3.0 \Omega$
Maximal Resistance Change at UCT 250 h	< 0.1 %

Construction	SMD 1206
Specification	DIN EN 60751
Technology	Advanced thin-film-technology (ceramic carrier with a structured platinum layer, covered with a passivating layer)
Conformity	2002/95/EC Restriction of the use of Hazardous Substances Directive (RoHS)
Dimensions [mm]	

Functional performance

according to DIN EN 60751



Picture 1: Resistance and temperature tolerances of CPT 1000 B

Temperature range of -50 °C up to 0 °C:

$$R_t = R_0 \cdot (1 + A \cdot t + B \cdot t^2 + C \cdot (t - 100 \text{ °C}) \cdot t^3)$$

Temperature range of 0 °C up to 150 °C:

$$R_t = R_0 \cdot (1 + A \cdot t + B \cdot t^2)$$

Tolerance class B to DIN EN 60751:

$$\Delta t = \pm (0.3 + 0.005 \cdot |t|)$$

Whereby:

R_t ... Resistance [Ω] at temperature t

R_0 ... Resistance [Ω] at 0 °C

t ... Temperature [°C]

Δt ... Permissible temperature deviation at t [°C]

$$A = 3.9083 \cdot 10^{-3} \text{ °C}^{-1}$$

$$B = -5.775 \cdot 10^{-7} \text{ °C}^{-2}$$

$$C = -4.183 \cdot 10^{-12} \text{ °C}^{-4}$$

Fields of application

- Industrial electronics
- Automotive electronics
- Energy and environmental engineering

Ordering information

Please use the following code:

Type	Class of accuracy	Construction	Temperature range [°C]
CPT 1000	B	SMD 1206	-50/150

Other classes of accuracy available on request

Made in Germany

