



## SOT 223, Housed Platinum Temperature Sensor according to DIN EN 60751

### Temperature range -50 °C to +150 °C

The Pt1000 PRTD in a standard SOT223 housing is characterized by its standardized signal according to DIN EN 60751 (according to IEC 751), interchangeability, high long-time stability and accuracy. It is designed for automatic mounting in electronic applications and serves e.g. for temperature compensation on PCBs. It is equipped with a cooling fin improving thermal contact to the PCB.

Nominal Resistance $R_0$	Tolerance	Order Number	Packaging
1000 Ohm at 0 °C	F 0.6 (Class 2B)	32 209 116	Blister reel "Face-up"

#### Temperature and tolerance range

Tolerance class F 0.6 (2B): -50 °C to +150 °C  
 Continuous operation

#### Temperature coefficient

TCR = 3850 ppm/K

#### Response time

Water current ( $v= 0.4\text{m/s}$ ):  $t_{0.5} = 0.45\text{ s}$   
 $t_{0.9} = 1.2\text{ s}$   
 Air stream ( $v= 2\text{m/s}$ ):  $t_{0.5} = 8.0\text{ s}$   
 $t_{0.9} = 26.0\text{ s}$

#### Measuring current

1000  $\Omega$ : 0.1 to 0.3 mA  
 (self-heating has to be considered)

#### Long-term stability

$R_0$ -Drift 0.04 % after 1000h at 150 °C

#### Self-heating

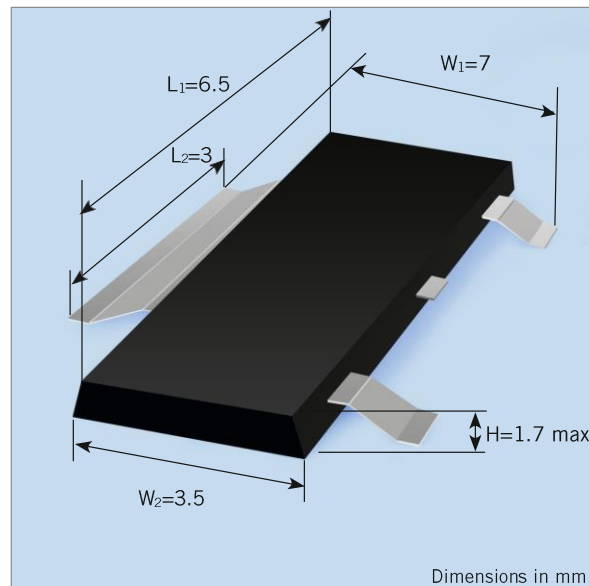
0.049 K/mW at 0 °C; mounted on PCB  
 0.2 K/mW at 0 °C; package only

#### Specific volume resistance

100 °C:  $14 \times 10^{14}\ \Omega\text{cm}$   
 150 °C:  $0.3 \times 10^{12}\ \Omega\text{cm}$

#### Physical data of housing

Material: duroplastic  
 Coefficient of thermal expansion:  $12 \times 10^{-6}\ \Omega/\text{°C}$  (below  $T_g$ )  
 Thermal conductivity: 1.04 W/mK  
 Moisture absorption: Boiling Water (48 hours) < 1.0 %



The information provided in this data sheet describes certain technical characteristics of the product, but shall not be qualified or construed as quality guarantee (Beschaffenheitsgarantie) in the meaning of sections 443 and 444 German Civil Code. The information provided in this data sheet regarding measurement values (including, but not limited to, response time, long-term stability, vibration and shock resistance, insulation resistance and self-heating) are average values that have been obtained under laboratory conditions in tests of large numbers of the product. Product results or measurements achieved by customer or any other person in any production, test, or other environment may vary depending on the specific conditions of use. The customer is solely responsible to determine whether the product is suited for the customer's intended use; in this respect Heraeus cannot assume any liability. The sale of any products by Heraeus is exclusively subject to the General Terms of Sale and Delivery of Heraeus in their current version at the time of purchase, which is available under [www.heraeus.com/gtc](http://www.heraeus.com/gtc) or may be furnished upon request. This data sheet is subject to changes without prior notice.

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Temperature range -50 °C to +150 °C

### Flammability

UL94-V0

### Soldering connection

Cu alloy with Sn coating

### Connection technology

Suitable for soft soldering

### Packaging

Alternative packaging forms on request.

### Storage life

9 months (in original packaging)

Nitrogen atmosphere recommended

### Note

Other tolerances, values of resistance and wire lengths are available on request.

### California Proposition 65



#### WARNING:

This product can expose you to chemicals including carbon black, which is known to the State of California to cause cancer. For more information go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).



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