

Housed Platinum Resistance Temperature Detector

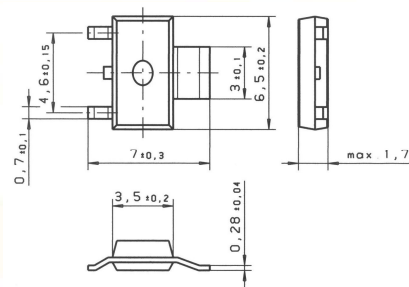
SOT 223

The Pt1000 PRTD in a standard SOT 223 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 R0	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Order Number
1000 Ohm at 0°C	Class 2B	F 0,6	32 209 116

Other resistances and tolerances on request!

Specification	DIN EN 60751 (according to IEC 751)	
Temperature range	-50°C to +150°C Tolerance Class 2B: -50°C up to +150°C	
Temperature coefficient	TCR = 3850 ppm/K	
Soldering connection	Cu alloy with Sn coating	
Long-term stability	max. R ₀ -drift 0.04% after 1000 h at 150°C	
Resistance to soldering heat	max. deviation 0.03% after 10s at 260°C	
Self heating	0.049 K/mW at 0°C; mounted on PCB 0.2 K/mW at 0°C; package only	
Response time	water current (v = 0.4 m/s):	t _{0,5} = 0.45s t _{0,9} = 1.20s
	air stream (v = 2 m/s):	t _{0,5} = 8.0s t _{0,9} = 26.0s
Measuring current	1000Ω: 0.1 to 0.3mA (self heating has to be considered)	
Flammability	UL 94-V0	
Specific volume resistance	100°C: 14 x 10 ¹⁴ Ωcm 150°C: 0.3 x 10 ¹² Ωcm	
Physical data of housing	material: duroplastic coefficient of thermal expansion: 12 x 10 ⁻⁶ 1/°C (below T _g) thermal conductivity: 1.04 W/mK moisture absorption: Boiling Water (48 h) < 1.0 %	
Storing information	≤ 1 year (in dry environments) for best solderability	
Packaging	„Face-up“ in blister reel	
Note	Other tolerances and values of resistance are available on request.	



We reserve the right to make alterations and technical data printed. All technical data serves as a guideline and does not guarantee particular properties to any products.



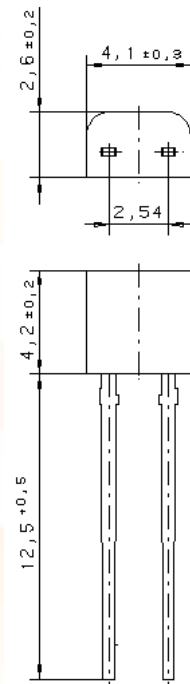
Housed Platinum Resistance Temperature Detector

TO 92

The PRTD in a plastic housing is characterized by its standardized signal according to DIN EN 60751 (according to IEC 751), interchangeability, excellent long time stability and accuracy. It offers an optimal price-performance ratio in large volume applications including Automotive, Domestic Appliances and Industrial Equipment.

Nominal Resistance R0	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Order Number Plastic Box
100 Ohm at 0°C	Class B	F 0,3	32 209 210
	Class 2B	F 0,6	32 209 216
1000 Ohm at 0°C	Class B	F 0,3	32 209 220
	Class 2B	F 0,6	32 209 226

Specification	DIN EN 60751 (according to IEC 751)	
Temperature range	-50°C to +150°C Tolerance Class B or 2B: -50°C up to +150°C	
Temperature coefficient	TC = 3850 ppm/K	
Soldering connection	Cu alloy with Sn coating	
Long-term stability	max. R ₀ -drift 0.06% after 1000 h at 150°C max. R ₀ -drift 0.04% after 1000 h at -55°C	
Self heating	Pt100: 0.4 K/mW Pt1000: 0.2 K/mW	
Response time	water current (v = 0.4 m/s):	t _{0,5} = 0.7s t _{0,9} = 2.0s
	air stream (v = 2 m/s):	t _{0,5} = 8.0s t _{0,9} = 26s
Resistance to soldering heat	max. deviation 0.03% after 10s at 260°C	
Flammability	UL 94-V0	
Specific volume resistance	20°C: 5 x 10 ¹⁶ Ωcm 150°C: 5 x 10 ¹³ Ωcm	
Physical data of housing	material: duroplastic coefficient of thermal expansion: 13 x 10 ⁻⁶ /°C thermal conductivity: 0.65 W/mK moisture absorption: 0.5% (P.C.T.: 121°C, 24h)	
Storing information	≤ 1 year (in dry environments) for best solderability	
Note	Other tolerances and values of resistance are available on request.	
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