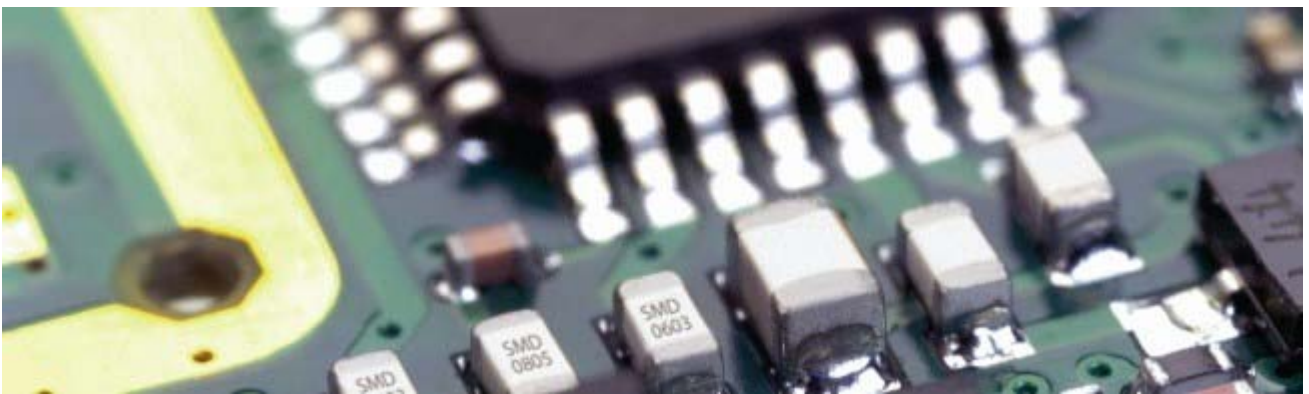


Heraeus



Sensor components



Heraeus Sensor Technology
Dependable sensor technology

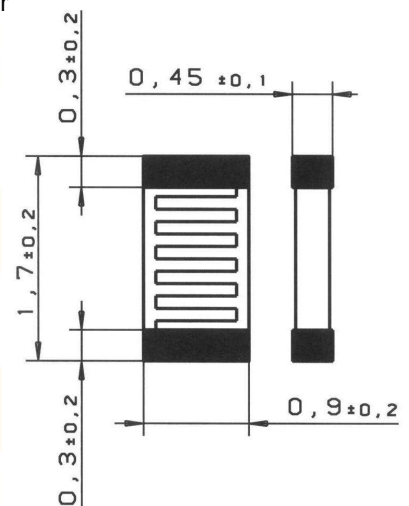
Platinum Resistance Temperature Detector

SMD 0603 (V)

The PRTD SMD 0603 is designed for automatic mounting in large volume applications on printed circuit boards where long time stability, interchangeability combined with low costs are important.

Nominal Resistance R ₀	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Order Number Plastic Box
1000 Ohm at 0°C	Class B	F 0.6	32 207 638
	Class 2B	F 0.3	32 207 637

Specification	DIN EN 60751	
Tolerance	Class B (R ₀ : ±0.12%) Class 2B (R ₀ : ±0.24%)	
Temperature range	-50°C to +130°C Tolerance Class B or 2B: -50°C up to +130°C	
Temperature coefficient	TCR = 3850 ppm/K	
Soldering connection	End-termination galvanic tin plated with Ni- barrier layer	
Long term stability	max R ₀ -Drift 0,06% after 250h with 130°C	
Environmental conditions	unhoused for dry environments only	
Insulation resistance	> 100 MΩ at 20°C; > 2 MΩ at 130°C (glass cover)	
Measuring current	1000Ω: 0.1 up to 0.3mA (self heating has to be considered)	
Self heating	0.8 K/mW at 0°C	
Reaction time	Flowing water (v= 0.4m/s):	t _{0.5} < 0.1s t _{0.9} < 0.25s
	Air flow (v= 2m/s):	t _{0.5} < 2.5s t _{0.9} < 8 s
Processing instructions	face up-mounting: reflow soldering or wave soldering, e. g. double wave ≤ 8s / 235°C	
Storage life	Min. 9 months (in dry environment)	
Packaging	„Face-up“ in blister reel, 4000 pcs	
Note	Other tolerances, 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.

Heraeus Sensor Technology GmbH, Reinhard- Heraeus- Ring 23, 63801 Kleinostheim, Germany
Phone: +49 (0) 6181/35-8098, Fax: +49 (0)6181/35-8101, E-Mail: info.HSND@Heraeus.com Web: www.heraeus-sensor-technology.com

Name of document: 30910036 Index B
Status: 10/2009

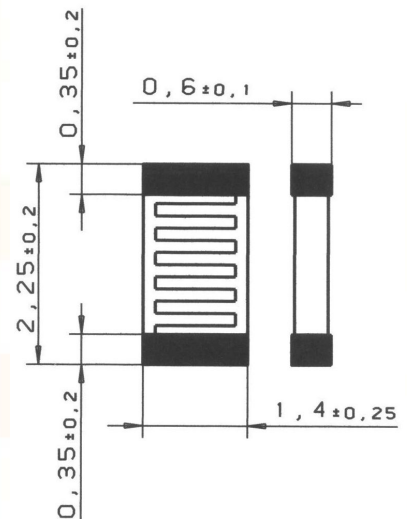
Platinum Resistance Temperature Detector

SMD 0805 (V)

The PRTD SMD 0805 is designed for automatic mounting in large volume applications on printed circuit boards where long time stability, interchangeability combined with low costs are important.

Nominal Resistance R0	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Order Number Plastic Bag
100 Ohm at 0°C	Class B	F 0.3	32 207 605
	Class 2B	F 0.6	32 207 604
1000 Ohm at 0°C	Class B	F 0.3	32 207 615
	Class 2B	F 0.6	32 207 614

Specification	DIN EN 60751	
Tolerance	Class B (R ₀ : ±0.12 %) Class 2B (R ₀ : ±0.24 %)	
Temperature range	-50°C to +130°C (Possible working temperatures using volume expansion aligned conductor board material: 150°C) Tolerance Class B or 2B: -50°C up to +130°C	
Temperature coefficient	TCR = 3850 ppm/K	
Soldering connection	End-termination galvanic tin plated with Ni-barrier layer	
Long term stability	max. R ₀ -drift 0.06 % after 1000h at 130°C	
Environmental conditions	unhoused for dry environments only	
Insulation resistance	> 100 MΩ at 20°C; > 2 MΩ at 130°C (glass covering)	
Measuring current	100Ω: 0.3 to 1.0mA 1000Ω: 0.1 to 0.3mA (self heating has to be considered)	
Self heating	0.8 K/mW at 0°C	
Reaction time	Flowing water (v= 0.4m/s):	t _{0.5} = 0.10s t _{0.9} = 0.25s
	Air flow (v= 2m/s):	t _{0.5} = 2.5s t _{0.9} = 8s
Processing instructions	face up-mounting: reflow soldering or wave soldering, e. g. double wave ≤ 8s / 235°C	
Storage life	Min. 9 months (in dry environment)	
Packaging	„Face-up“ in blister reel, 4000 pcs / 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.

Heraeus Sensor Technology GmbH, Reinhard- Heraeus- Ring 23, 63801 Kleinostheim, Germany
Phone: +49 (0) 6181/35-8098, Fax: +49 (0)6181/35-8101, E-Mail: info.HSND@Heraeus.com Web: www.heraeus-sensor-technology.com

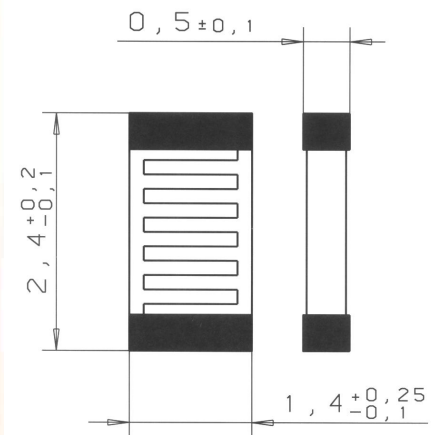
Platinum Resistance Temperature Detector

SMD 0805 (V) 10kOhm

The PRTD SMD 0805 is designed for automatic mounting in large volume applications on printed circuit boards where long time stability, interchangeability combined with low costs are important.

Nominal Resistance R0	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Order Number Plastic Bag
10000 Ohm at 0°C	Class 2B	F 0,6	32 208 655

Specification	DIN EN 60751	
Tolerance	Class 2B (R ₀ : ±0.24%)	
Temperature range	-50°C to +130°C Tolerance Class 2B: -50°C up to +130°C	
Temperature coefficient	TCR = 3850 ppm/K	
Soldering connection	End-termination galvanic tin plated with Ni-barrier layer	
Long-term stability	max. R ₀ -drift 0.06% after 1000h at 130°C	
Environmental conditions	unhoused for dry environments only	
Insulation resistance	> 100 MΩ at 20°C	
Measuring current	10000Ω: 0.1 to 0.25mA (self heating has to be considered)	
Self heating	0.8 K/mW at 0°C	
Reaction time	Flowing water (v= 0.4m/s):	t _{0.5} = 0.10s t _{0.9} = 0.25s
	Air flow (v= 2m/s):	t _{0.5} = 2.5s t _{0.9} = 8s
Processing instructions	face up-mounting: reflow soldering or wave soldering, e. g. double wave ≤ 8s / 235°C	
Storage life	Min. 9 months (in dry environment)	
Packaging	„Face-up“ in blister reel, 4000 pcs / reel	
Note	Other tolerances and values of resistance are available on request.	
Status	Objective	



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.

Heraeus Sensor Technology GmbH, Reinhard- Heraeus- Ring 23, 63801 Kleinostheim, Germany
Phone: +49 (0) 6181/35-8098, Fax: +49 (0)6181/35-8101, E-Mail: info.HSND@Heraeus.com Web: www.heraeus-sensor-technology.com

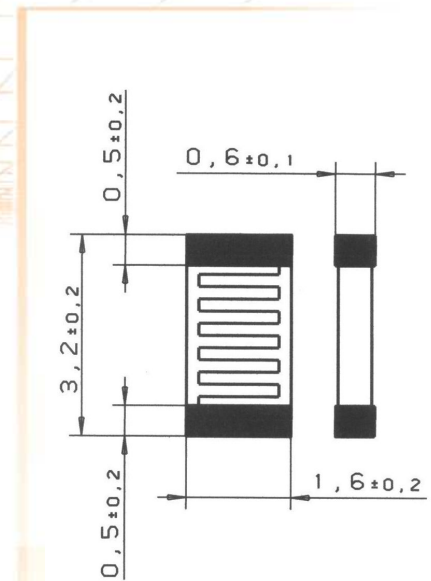
Platinum Resistance Temperature Detector

SMD 1206 (V)

The PRTD SMD 1206 is designed for automatic mounting in large volume applications on printed circuit boards where long time stability, interchangeability combined with low costs are important.

Nominal Resistance R0	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Order Number Plastic Box
100 Ohm at 0°C	Klasse B	F 0.3	32 207 590
	Klasse 2B	F 0.6	32 207 589
1000 Ohm at 0°C	Class B	F 0.6	32 207 595
	Class 2B	F 0.3	32 207 594

Specification	DIN EN 60751 (according to IEC 751)
Temperature range	-50°C to +130°C (Possible working temperatures using volume expansion aligned conductor board material: 150°C) Tolerance Class B or 2B: -50°C up to +130°C
Temperature coefficient	TCR = 3850 ppm/K
Soldering connection	End-termination galvanic tin plated with Ni-barrier layer
Long term stability	max. R ₀ -drift 0.06% after 1000 h at 130°C
Environmental conditions	unhoused for dry environments only
Insulation resistance	> 100 MΩ at 20°C; > 2 MΩ at 130°C (glass covering)
Measuring current	100Ω: 0.3 to 1.0mA 1000Ω: 0.1 to 0.3mA (self heating has to be considered)
Self heating	0.4 K/mW at 0°C
Response time	water current (v= 0.4m/s): t _{0.5} = 0.15s t _{0.9} = 0.30s air stream (v= 2m/s): t _{0.5} = 3.5s t _{0.9} = 10s
Processing instructions	face up-mounting: reflow soldering or wave soldering, e. g. double wave ≤ 8s / 235°C
Storage life	Min. 9 months (in dry environment)
Packaging	„Face-up“ in blister reel, 4000 pcs / 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.

Heraeus Sensor Technology GmbH, Reinhard- Heraeus- Ring 23, 63801 Kleinostheim, Germany
Phone: +49 (0) 6181/35-8098, Fax: +49 (0)6181/35-8101, E-Mail: info.HSND@Heraeus.com Web: www.heraeus-sensor-technology.com

Housed Platinum Resistance Temperature Detector

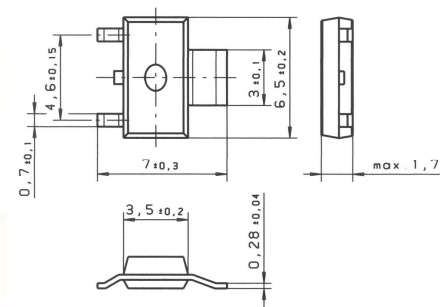
SOT 223

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 Plastic Box
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 max. R ₀ -drift 0.04% after 1000 h at -55°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	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 1/°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	



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.

Heraeus Sensor Technology GmbH, Reinhard- Heraeus- Ring 23, 63801 Kleinostheim, Germany
Phone: +49 (0) 6181/35-8098, Fax: +49 (0)6181/35-8101, E-Mail: info.HSND@Heraeus.com Web: www.heraeus-sensor-technology.com

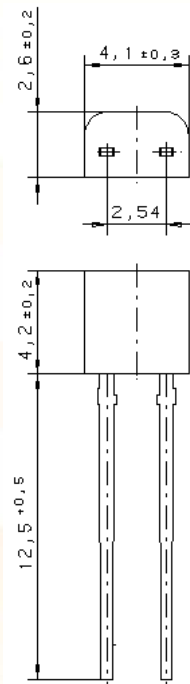
Housed Platinum Resistance Temperature Detector

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 R ₀	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Temperature Range	Order Number Plastic Box
100 Ohm at 0°C	Class B	F 0,3	-70°C up to +500°C	32 209 210
	Class 2B	F 0,6	-70°C up to +500°C	32 209 216
1000 Ohm at 0°C	Class B	F 0,3	-70°C up to +500°C	32 209 220
	Class 2B	F 0,6	-70°C up to +500°C	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	TCR = 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.	
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.

Heraeus Sensor Technology GmbH, Reinhard- Heraeus- Ring 23, 63801 Kleinostheim, Germany
Phone: +49 (0) 6181/35-8098, Fax: +49 (0)6181/35-8101, E-Mail: info.HSND@Heraeus.com Web: www.heraeus-sensor-technology.com



kamet
thermoccomponents

Kamet Trading
Franciscusweg 9-10
1216 SK Hilversum

Tel. : +31 (0)35-628 2910
Fax : +31 (0)35-628 2912
E-mail : info@kamet-trading.nl