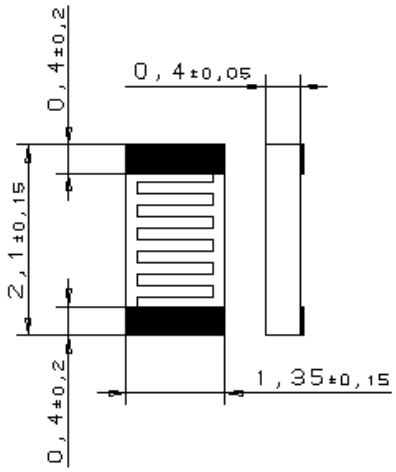
Platinum Temperature Sensor in Thin Film Technology SMD 0805-FC

The main application emphasis of the SMD 805-FC is hybrid circuits. Mass production, precision, long-term stability and low costs are also key themes of the design. The contact surfaces are on the side with the active measuring layer – no edge metallising, i. e. the sensor is designed for face-down mounting, to take into account current trends in the 'adhesion instead of soldering' electronics sector. Using conductive adhesives provides reliable and cost-effective connection technology, an alternative to the conventional application opportunities, such as reflow or wave soldering. An important advantage for users: the substrate material of the sensor (ceramic) shows a similar thermal expansion to that of the hybrid circuit.

Nominal Resistance R_0	Tolerance	Order No.
100 Ohm at 0°C	DIN EN 60751, class B DIN EN 60751, class 2B	32 208 594 32 208 595
500 Ohm at 0°C	DIN EN 60751, class B DIN EN 60751, class 2B	32 208 598 32 208 599
1000 Ohm at 0°C	DIN EN 60751, class B DIN EN 60751, class 2B	32 208 569 32 208 570

Specification	DIN EN 60751
Tolerance	Class B (R_0: ± 0.12 %), Class 2B (R_0: ± 0.24 %)
Temperature range	-50 °C to 170 °C
Temperature coefficient	TCR = 3850 ppm/K
Contact	AgPd metallising in thick-film technology
Long-term stability	R_0 drift ≤ 0.06 % after 1000 h at 170°C
Ambient conditions	Use unprotected only in dry environments
Insulation resistance	> 100 MΩ at 20°C; > 2 MΩ at 170°C (glass cover)
Measuring current	100 Ω: 0.3 to 1.0 mA 500 Ω: 0.1 to 0.7 mA 1000 Ω: 0.1 to 0.3 mA (self heating has to be considered)
Self heating	0.8 K/mW at 0°C
Reaction time	Flowing water (v = 0.4 m/s): $t_{0.5}$ = 0.10 s, $t_{0.9}$ = 0.25 s Air flow (v = 2 m/s): $t_{0.5}$ = 2.5 s, $t_{0.9}$ = 8.0 s
Processing information	- Reflow soldering or wave soldering, e.g. double wave soldering < 8 s / 235° - Also can be mounted using SMD insertion machines with Ag conductive adhesive. - When mounting PCB circuits, the expansion relationship of the sensor and the substrate material must be taken into account.
Storage life	Stored in a nitrogen atmosphere, min. 9 months
Packaging	„Face-down" in blister reel, 4000 pcs / reel
Note	Other tolerances and values of resistance are available on request.



Heraeus Sensor Technology USA
770 Township Line Road, Suite 300
Yardley, PA 19067 USA
Phone 1-215-944-9010 Fax 1-215-944-9392
Email info.hst-us@heraeus.com
www.hst-us.com

Status: HST USA 10/09
06/2016