

## SMD 0805 FC, Pt Temperature Sensor according to DIN EN 60751

Temperature range -50 °C to +170 °C

- Pt chip in standard SMD flipchip format
- High accuracy and interchangeability of a platinum sensor
- Automated mounting via standard pick-and-place tools
- Blister reel packaging
- Optional wafer frame packaging for large volumes

SMD-FC 0805 Pt RTD elements are designed for automated assembly on printed circuit boards. Application areas include HVAC, automobiles, e-mobility, and medical and industrial equipment.

In principle, the products can also be used in automotive applications, in this case Heraeus will check upon the request of the customer, whether additional requirements can be met (e.g. IMDS, PPAP).

Nominal Resistance $R_0$ [ $\Omega$ ]	Tolerance Class	Order Number	Packaging
Pt100	F 0.3 (Class B) F 0.6 (Class 2B)	32208594 32208595	Blister reel Blister reel
Pt1000	F 0.3 (Class B) F 0.6 (Class 2B)	32208569 32208570	Blister reel Blister reel

### Temperature Range of Tolerance Class

Tolerance Class F 0.3 (B) -50 °C to +170 °C

Tolerance Class F 0.6 (2B) -50 °C to +170 °C

By coordinating materials, design and connection technology applications are possible up to +250 °C

### Temperature Coefficient

TCR = 3850 ppm/K

### Response Time

Water ( $v = 0.4$  m/s):  
 $t_{0.5} = 0.1$  s  
 $t_{0.9} = 0.25$  s

Air ( $v = 2$  m/s):  
 $t_{0.5} = 2.5$  s  
 $t_{0.9} = 8$  s

### Measuring Current

Pt100  $\Omega$ : 0.3 to 1 mA  
 Pt1000  $\Omega$ : 0.1 to 0.3 mA  
 (self-heating has to be considered)

### Long-Term Stability

The drift of the resistance value at 0 °C after a storage for 1000 hours in air at the declared upper temperature limit is not more than the tolerance value of the declared tolerance class according DIN EN 60751.

Typical drift of  $R(0$  °C) is 0.06 % after 1000 hours at +170 °C.

### Self-Heating

0.8 K/mW at 0 °C

### Contact

AgPt metallizing in thick film technology

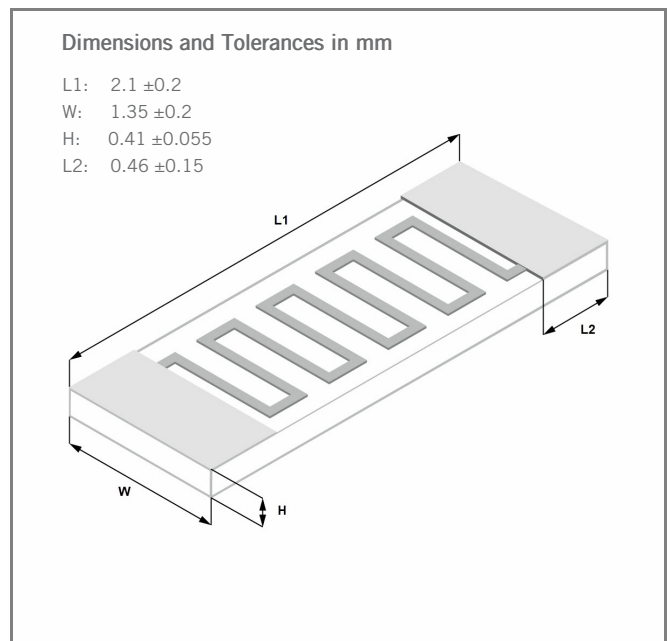


Image for illustration purposes only  
 Color, shape and forming of metallization may vary

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### Connection Technology

Reflow soldering or wave soldering, e.g. double wave soldering  $\leq 8$  s /235 °C.

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

### Packaging

Blister reel

"Face-down" 4000 pcs/ reel

Alternative packaging forms on request

### Storage Life

At least 9 months (after manufacture), when stored under the recommended conditions. Longer shelf life may be possible, depending upon actual storage conditions, after requalification by customer.

Nitrogen atmosphere recommended.

### Note

Other tolerances, values of resistance are available on request



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