

# FST Series

## Thin Film Temperature Sensor



The FST series design positions the contact surfaces on the side with the active measuring layer. This design produces a sensor in position for face-down mounting. This mounting optimizes current trends in the 'adhesion instead of soldering' electronics sector. Using conductive adhesives provides reliable and cost-effective connection to the circuit board and is an alternative to the conventional reflow or wave soldering. The FST series is available in 2 tolerance classes, 0.12% and 0.24% per the DIN EN 60751 specification. Both tolerance classes are available in the three resistance levels of the FST series.

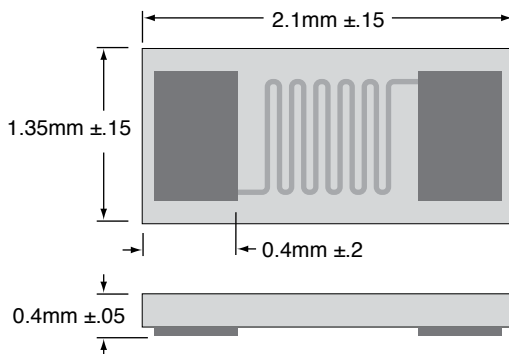
### SERIES SPECIFICATIONS

Model	Nom. Resistance (ohms)	Tolerance Class
FST08-B-100E	100	B
FST08-2B-100E	100	2B
FST08-B-500E	500	B
FST08-2B-500E	500	2B
FST08-B-1K0E	1000	B
FST08-2B-1K0E	1000	2B

Other tolerances and values of resistance are available on request.  
Resistance taken at 0°C

### DIMENSIONS

(mm)



### ORDERING INFORMATION

**F S T 0 8 - 2 B - 1 0 0 R E**

Series      Tolerance      Resistance value      RoHS Compliant

### CHARACTERISTICS

Specification	DIN EN 60751
<b>Tolerance</b>	Class B (R0: ± 0.12 %), Class 2B (R0: ± 0.24 %)
<b>Temperature range</b>	-50 °C to 170 °C
<b>Temp. coefficient</b>	TCR = 3850 ppm/K
<b>Contact</b>	AgPd metallising in thick-film technology
<b>Long-term stability</b>	R <sub>0</sub> drift ≤ 0.06 % after 1000 h at 170°C
<b>Ambient conditions</b>	Use unprotected only in dry environments
<b>Insulation resistance</b>	> 100 MW at 20°C; > 2 MW at 170°C (glass cover)
<b>Measuring current</b>	100 W: 0.3 to 1.0 mA 500 W: 0.1 to 0.7 mA 1000 W: 0.1 to 0.3 mA (self heating has to be considered)
<b>Self heating</b>	0.8 K/mW at 0°C
<b>Reaction time</b>	Flowing water (v = 0.4 m/s): t <sub>0.5</sub> = 0.10 s, t <sub>0.9</sub> = 0.25 s Air flow (v = 2 m/s): t <sub>0.5</sub> = 2.5 s, t <sub>0.9</sub> = 8.0 s
<b>Processing information</b>	<ul style="list-style-type: none"> <li>• Reflow soldering or wave soldering, e.g. double wave soldering &lt; 8 s / 235°</li> <li>• Also can be mounted using SMD insertion machines with Ag conductive adhesive.</li> <li>• When mounting PCB circuits, the expansion relationship of the sensor and the substrate material must be taken into account.</li> </ul>
<b>Storage life</b>	Stored in a nitrogen atmosphere, min. 9 months
<b>Packaging</b>	"Face-down" in blister reel, 1000 pcs / reel