



SMD (AEC-Q200), Platinum Temperature Sensor according to DIN EN 60751

Temperature range -50 °C to +150 °C

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

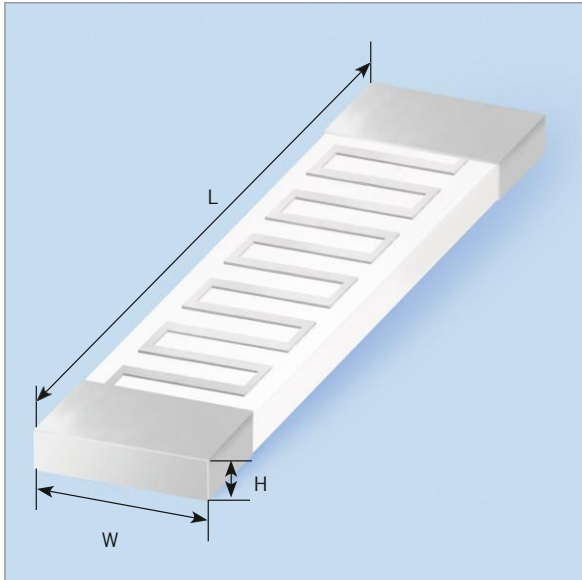


Image for illustration purposes only

Type	0603	0805	1206
L	1.7 mm	2.3 mm	3.2 mm
W	0.9 mm	1.4 mm	1.6 mm
H	0.5 mm	0.6 mm	0.6 mm
Tolerance DIN EN 60751 2009-05	F 0,3 (Class B)	F 0,3 (Class B)	F 0,3 (Class B)
Nominal Resistance R_0 at °C	1000 Ohm	1000 Ohm	1000 Ohm
Order number	5034887	5034886	5034885
Packaging	Blister reel	Blister reel	Blister reel

AEC-Q200, Rev. D – Qualification Matrix for Pt1000 SMD 0603, Pt1000 SMD 0805, Pt1000 SMD 1206

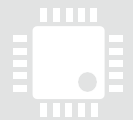
All tests are performed by an ISO 17025 certified laboratory.

Item	Standard	Test Conditions / Methods	Specifications
High Temperature Exposure (Storage)	MIL-STD-202 Method 108	Test temp.: 125 °C ± 3 °C Duration: 500 hours unpowered Measurement at 24 ± 2 hours after test conclusion.	No visible damage $\left \frac{\Delta R_{0^\circ\text{C}}}{R_{0^\circ\text{C}}} \right \leq 0,1\%$
Temperature Cycling	JESD22 Method JA-104	Test temp.: -55 °C / +125 °C (+10 °C / -0 °C) Soak time at lower or upper temp.: 30 min Number of cycles: 1000 Measurement at 24 ± 2 hours after test conclusion.	No visible damage $\left \frac{\Delta R_{0^\circ\text{C}}}{R_{0^\circ\text{C}}} \right \leq 0,1\%$
Biased Humidity	MIL-STD-202 Method 103	Test temp.: 85 °C ± 2 °C Rel. humidity of air: 85 % ± 3 % Duration: 1000 hours Measurement at 24 ± 2 hours after test conclusion.	No visible damage $\left \frac{\Delta R_{0^\circ\text{C}}}{R_{0^\circ\text{C}}} \right \leq 0,1\%$
Operational Life	MIL-STD-202 Method 108	Test temp.: 125 °C ± 3 °C Duration: 1000 hours Measurement at 24 ± 2 hours after test conclusion.	No visible damage $\left \frac{\Delta R_{0^\circ\text{C}}}{R_{0^\circ\text{C}}} \right \leq 0,1\%$
External Visual	MIL-STD-883 Method 2009	Inspect device construction, marking and workmanship.	No visible damage
Physical Dimension	JESD22 Method JB-100	Verify physical dimensions to the applicable device specification.	Within the specified values
Resistance to Solvents	MIL-STD-202 Method 215	Per MIL-STD-202 Method 215 2 parts solvent A, 2 parts solvent B, 1 part solvent D (brushed)	No visible damage

The information provided in this data sheet describes certain technical characteristics of the product, but shall not be qualified or construed as quality guarantee (Beschaffenheitsgarantie) in the meaning of sections 443 and 444 German Civil Code. The information provided in this data sheet regarding measurement values (including, but not limited to, response time, long-term stability, vibration and shock resistance, insulation resistance and self-heating) are average values that have been obtained under laboratory conditions in tests of large numbers of the product. Product results or measurements achieved by customer or any other person in any production, test, or other environment may vary depending on the specific conditions of use. The customer is solely responsible to determine whether the product is suited for the customer's intended use; in this respect Heraeus cannot assume any liability. The sale of any products by Heraeus is exclusively subject to the General Terms of Sale and Delivery of Heraeus in their current version at the time of purchase, which is available under www.heraeus.com/gtc or may be furnished upon request. This data sheet is subject to changes without prior notice.

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Temperature range -50 °C to +150 °C

Item	Standard	Test Conditions / Methods	Specifications
Mechanical Shock	MIL-STD-202 Method 213	Test Condition F Acceleration: 1500 g Half sine waveform Duration: 0,5 ms 3 shocks per direction, 6 directions Room temperature	No visible damage $\left \frac{\Delta R_{0^\circ\text{C}}}{R_{0^\circ\text{C}}} \right \leq 0,1\%$
Vibration	MIL-STD-202 Method 204	Acceleration: 5 g Cycle time: 20 min Frequency range: 10 to 2000 Hz 12 cycles per axis 3 axes Room temperature	No visible damage $\left \frac{\Delta R_{0^\circ\text{C}}}{R_{0^\circ\text{C}}} \right \leq 0,1\%$
Resistance to Soldering Heat	MIL-STD-202 Method 210	Condition B - No pre-heat of samples. Temp.: 260 °C ± 5 °C, Time: 10 s ± 1 s, 1 cycle	No visible damage $\left \frac{\Delta R_{RT}}{R_{RT}} \right \leq 0,5\%$
ESD	AEC-Q200-002	Stress levels: 500V, 1000V, 2000V, 4000V, 6000V, 8000V, 12000V, 16000V, 25000V; Zaps & Polarities: 1 zap, positive and negative per pin	SMD 0603: Product passed the component classification level 4 (4000 V) SMD 0805: Product passed the component classification level 3 (2000 V) SMD 1206: Product passed the component classification level 6 (8000 V)
Solderability	J-STD-002	a) Test condition J-STD-002D, condition B Ageing: 155 °C dry heat, 4 h Soldering temperature: 235 °C Dwell time: 5 s Flux: ROL 1 Solder bath: SnPb b) Test condition J-STD-002D, condition B, category C Ageing: Steam, 8 h Soldering temperature: 215 °C Dwell time: 5 s Flux: ROL 1 Solder bath: SnPb c) Test condition J-STD-002D, condition D, category C Ageing: Steam, 8 h Soldering temperature: 260 °C Dwell time: 30 s Flux: ROL 1 Solder bath: SnPb	Min. 95 % of termination is covered by solder
Electrical Characterization	Specifications	a) T1 = 0 °C b) T2 = -40 °C c) T3 = 130 °C	Within the specified values
Board Flex	AEC-Q200-005	Bending of board: 2mm (Min.) Duration: 60 (+5) s	No visible damage $\left \frac{\Delta R_{RT}}{R_{RT}} \right \leq 0,5\%$
Terminal Strength	AEC-Q200-006	Applied force: 1,8 kg (17,7N) Duration of the applied forces: 60 (+1) s	No visible damage $\left \frac{\Delta R_{RT}}{R_{RT}} \right \leq 0,5\%$



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