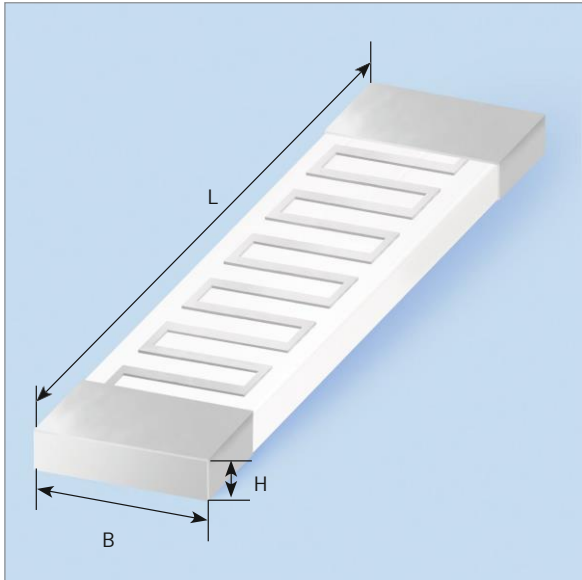




SMD (AEC-Q200), Platinum Resistance Temperature Detector according to DIN EN 60751 Temperature range -50 °C to +150 °C

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.



Type	0603	0805	1206
L	1,7 mm	2,3 mm	3,2 mm
B	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	1000 Ohm at 0°C	1000 Ohm at 0°C	1000 Ohm at 0°C
Order number	5034887	5034886	5034885

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

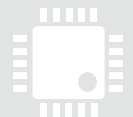
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Web: www.heraeus-nexensos.com

SMD (AEC-Q200), Platinum Resistance Temperature Detector according to DIN EN 60751 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 $\left \frac{\Delta R_{0^{\circ}C}}{R_{0^{\circ}C}} \right \leq 0,1\%$
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 $\left \frac{\Delta R_{0^{\circ}C}}{R_{0^{\circ}C}} \right \leq 0,1\%$
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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