

NTCLE350E4 AEC-Q200 Qualified NTC Thermistor With PEEK-Insulated, NiFe Leads Withstands High Temperatures Up to +185 °C, Offers a Thermal Gradient of < 0.01 K/K and 6 s Response Time in Air for Fast, High Accuracy Measurement in Automotive Applications

Product Benefits:

- AEC-Q200 qualified
- High temperature operation up to +185 °C
- PEEK-insulated, nickel-iron (NiFe) leads
- Low thermal gradient of less than 0.01 K/K (or 1 %)
- Small maximum bead size diameter of 2.4 mm
- Fast response time of 6 s in air
- Resistance at +25 °C (R_{25}) from 2.1 k Ω to 30 k Ω , with tolerance down to 1 %
- Beta ($B_{25/85}$) from 3435 K to 3984 K, with tolerance down to ± 0.5 %
- Maximum power dissipation of 100 mW
- Improved resistance to noxious gasses and acid
- RoHS-compliant



Market Applications:

- Temperature measurement and sensing
- Engine coolant, fuel, and manifold air pressure (MAP / TMAP) sensors in combustion engines; electric traction motors; oil temperature sensors (OTS) in transmission systems and liquid-cool starter generator systems; exhaust gas recirculation (EGR) applications
- HVAC applications

The News:

Vishay Intertechnology introduces a new AEC-Q200 qualified NTC thermistor with PEEK-insulated, NiFe leads and a low thermal gradient. Designed to withstand high temperatures up to +185 °C, the Vishay BCcomponents NTCLE350E4 delivers fast, high accuracy temperature measurement and sensing in a wide range of automotive applications.

- The NiFe alloy of the sensor's conductor wire features the lowest thermal conductivity available on the market
 - The device dissipates almost no heat to the surrounding environment, allowing for high accuracy temperature measurement
 - Other conductive materials, such as copper, can deviate by several degrees
- High adhesive strength between the device's PEEK-insulated lead wires and encapsulating epoxy lacquer
 - Improve reliability in high humidity conditions
- In electric traction motors, the device can be processed by potting or molding into sensors for the protection of high current connectors



The Key Specifications:

- R_{25} : 2.1 k Ω to 30 k Ω
- R_{25} tolerance: 1 %, 2 %, 3 %, 5 %
- $B_{25/85}$: 3435 K to 3984 K
- $B_{25/85}$ tolerance: ± 0.5 % to ± 1 %
- Maximum power dissipation at 55 °C: 100 mW

Availability:

Samples and production quantities of the NTCLE350E4 are available now, with lead times of 12 weeks.

To access the product datasheet on the Vishay Website, go to <http://www.vishay.com/ppg?29218> (NTCLE350E4)

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