# NTC Thermistors, Long Insulated Leads 150 °C With Very Low Thermal Gradient

## FEATURES

- Long and flexible leads for special mounting or assembly requirements
- Best accuracy of ± 0.5 °C between 25 °C and 85 °C and ± 1.0 °C between -55 °C and 150 °C
- Electrical features of “accuracy line” sensors
- Mounting: radial insulated leads, low heat-conducting FeNi wires
- AEC-Q200 qualified
- Fast response time of 0.9 s with small 1.6 mm head Ø
- cULus recognized, file E148885 (UL category XGPU2/XGPU8)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

e4

RoHS COMPLIANT

## LINKS TO ADDITIONAL RESOURCES

Design Tools | Related Documents | 3D Models

| QUICK REFERENCE DATA | | |
|---|---|---|
| PARAMETER | VALUE | UNIT |
| Resistance value at 25 °C | 10K | Ω |
| Tolerance on $R_{25}$-value | ± 2.19 | % |
| Temperature accuracy between 25 °C and 85 °C<br>-55 °C and 150 °C | ± 0.5<br>± 1.0 | °C |
| $B_{25/85}$-value | 3984 | K |
| Tolerance on $B_{25/85}$-value | ± 0.5 | % |
| Operating temperature range at zero dissipation | -55 to +150 | °C |
| Resistance value at 85 °C | 1066.1 | Ω |
| Maximum power dissipation at 55 °C | 50 | mW |
| Min. dielectric withstanding voltage (RMS) between leads and coating | 100 | V |
| Dissipation factor δ in still air (for information only) | 0.8 | mW/K |
| Response time (in oil) | 0.9 | s |
| Weight | ≈ 0.05 | g |

## DESIGN-IN SUPPORT

Not intended for fluid immersed applications or continuous contact with water or conducting liquids. Can be potted in suitable resins. For complete curve computation, please visit: www.vishay.com/thermistors/ntc-curve-list/. Consult Vishay for specific applications, mounting, alternative RT curves, or wire length.

## APPLICATIONS

Temperature measurement, sensing and control in automotive and industrial applications as e.g. battery cells and packs.

## DESCRIPTION

These negative temperature coefficient thermistors consist of a mini-chip soldered between two AWG #32 PEEK insulated silver plated nickel / iron leads and coated with ocher colored epoxy lacquer. High adhesive strength between PEEK wire and encapsulating lacquer.

## PACKAGING

The thermistors are packed in cardboard boxes; the smallest packing quantity is 1000 units.

## MARKING

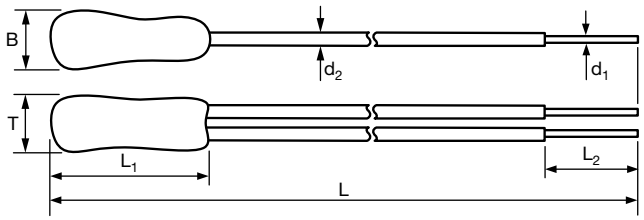
The component is not marked.

## MOUNTING

**Important mounting and handling instructions: see www.vishay.com/doc?29222**

By soldering or crimping the wire end in any position. The body can be inserted in a tube, free in air, tape attached or glued.

## DIMENSIONS in millimeters




| T | B | L | $L_1$ | $L_2$ | Ø $d_{2\ MAX.}$ | Ø $d_1$ |
|---|---|---|---|---|---|---|
| 1.6 max. | 1.6 max. | 75 ± 3 | 6 ± 1 | 5 ± 2 | 0.4 | 0.2 ± 0.02 |

## ELECTRICAL DATA AND ORDERING INFORMATION

| $R_{25}$ (Ω) | $T$-TOL. (± °C) | $B_{25/85}$ (K) | $B_{25/85}$-TOL. (± %) | SAP MATERIAL AND ORDERING NUMBER RoHS COMPLIANT |
|---|---|---|---|---|
| 10 000 | 0.5 | 3984 | 0.5 | NTCLE317E4103SBA |



For technical questions, contact: nlr@vishay.com

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