

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



### LINKS TO ADDITIONAL RESOURCES


[Design Tools](#)

[Related Documents](#)

| 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                         | ± 0.5       | °C   |
| -55 °C and 150 °C  | ± 1.0       |      |
| $B_{25/85}$ -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 $\delta$ in still air (for information only)      | 0.8         | mW/K |
| Response time (in oil)   | 0.3         | 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/](http://www.vishay.com/thermistors/ntc-curve-list/). Consult Vishay for specific applications, mounting, alternative RT curves, or wire length.

### 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 0.3 s with small 1.6 mm head Ø
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

### 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 other 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](http://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 |          |          |                      |                      |                             |                        |
|---------------------------|----------|----------|----------------------|----------------------|-----------------------------|------------------------|
|                           |          |          |                      |                      |                             |                        |
| <b>T</b>                  | <b>B</b> | <b>L</b> | <b>L<sub>1</sub></b> | <b>L<sub>2</sub></b> | <b>Ø d<sub>2</sub> MAX.</b> | <b>Ø d<sub>1</sub></b> |
| 1.6 max.                  | 1.6 max. | 75 ± 3   | 6 ± 1                | 5 ± 2                | 0.4                         | 0.2 ± 0.02             |

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



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