NTC Thermistors, Surface-Mount Chips

**KEY BENEFITS**
- Nickel/tin and tin/lead terminations available
- Wraparound terminations
- Allows design flexibility for use with hybrid circuitry
- High-density monolithic construction
- Customized values available

**APPLICATIONS**
- Battery chargers for cell phones, laptops, PDAs, LED display compensation
- Hard disk drives

**RESOURCES**
- For technical questions contact nlr@vishay.com or thermistor1@vishay.com
NTCS Thermistors, Surface-Mount Chips

**FEATURES**
- TCR ranging from - 6.5 %/K at - 40 °C to - 2 %/K at 150 °C
- Tolerance on $R_{25}$ down to 1 %
- Suitable for wave or reflow soldering
- NiSn terminations
- Fully glass coated and protected
- cUL recognized for safety applications (file E148885)
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

**APPLICATIONS**
- Temperature sensing, protection and compensation in automotive, industrial, telecom and consumer applications. Examples are:
  - Battery chargers
  - Power suppliers
  - Office equipment
  - LCD compensation
  - In-car entertainment

**DESCRIPTION**
Size 0402, 0603, 0805 chip thermistors with a negative temperature coefficient. The device has no marking.

**PACKAGING**
Available in 8 mm punched paper tape on reel package of 4000/10 000 units.

**DESIGN-IN SUPPORT**
For complete Curve Computation, visit:
www.vishay.com/resistors-non-linear/curve-computation-list/

NTCS Thermistors

**QUICK REFERENCE DATA**

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>VALUE</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance value at 25 °C</td>
<td>2K to 680K</td>
<td>Ω</td>
</tr>
<tr>
<td>Tolerance on $R_{25}$-value</td>
<td>±1, ±2, ±3, ±5</td>
<td>%</td>
</tr>
<tr>
<td>$B_{25/85}$-value</td>
<td>3430 to 4125</td>
<td>K</td>
</tr>
<tr>
<td>Tolerance on $B_{25/85}$-value</td>
<td>±1 to ±3</td>
<td>%</td>
</tr>
<tr>
<td>Maximum dissipation at 25 °C</td>
<td>70 to 210 mW</td>
<td></td>
</tr>
<tr>
<td>Thermal time constant $\tau$</td>
<td>5</td>
<td>s</td>
</tr>
<tr>
<td>Dissipation factor D</td>
<td>2.0/3.5 mW/K</td>
<td></td>
</tr>
<tr>
<td>Operating temperature range at zero power</td>
<td>- 40 to + 150 °C</td>
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</tr>
<tr>
<td>Weight</td>
<td>1.2 to 15 mg</td>
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</tbody>
</table>

NTHS Thermistors

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<thead>
<tr>
<th>PARAMETER</th>
<th>VALUE</th>
<th>UNIT</th>
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</thead>
<tbody>
<tr>
<td>Resistance value at 25 °C</td>
<td>1K to 350K</td>
<td>Ω</td>
</tr>
<tr>
<td>Tolerance on $R_{25}$-value</td>
<td>±1, ±2, ±3, ±5, ±10</td>
<td>%</td>
</tr>
<tr>
<td>$B_{25/75}$-value</td>
<td>3181 to 4247</td>
<td>K</td>
</tr>
<tr>
<td>$B_{25/85}$-value</td>
<td>3185 to 4261</td>
<td>K</td>
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<tr>
<td>Tolerance on $B_{25/85}$-value, $B_{25/75}$-value</td>
<td>±3</td>
<td>%</td>
</tr>
<tr>
<td>Operating temperature range at zero power (intermittent)</td>
<td>- 40 to + 125 (150) °C</td>
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