Chip NTC Thermistor

ABNTC-0603

RoHS/RoHS II Compliant

1.6 x 0.8 x 0.8 mm

FEATURES:
- Large B constant for high temperature sensing capability
- Designed for high density
- Available in standard EIA compatible case size
- Internal electrode designed for enhanced reliability
- Excellent aging stability

APPLICATIONS:
- For temperature measurement or sensor: Digital thermometer, measuring instruments, temperature controller
- For temperature compensation: transistor circuit, TCXO, Crystal Oscillator
- LED lighting driver, Notebook, Cell Phone, Power Supplies, Disk Drive

STANDARD SPECIFICATIONS:

Operating Temperature: -55°C ~+125°C
Storage Temperature: -10°C ~ +40°C and RH 75% (Max.)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Resistance at 25°C</th>
<th>R25 Tolerance</th>
<th>B constant (25-50°C) (K)</th>
<th>B Tolerance</th>
<th>Max. Permissive Operating Current (25°C) (mA)</th>
<th>Thermal Time Constant</th>
<th>Dissipation Factor (mW/°C)</th>
<th>Rated Electric Power (mW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABNTC-0603-472A-3950□</td>
<td>4.7</td>
<td>F, H, J, K</td>
<td>3950</td>
<td>H</td>
<td>46</td>
<td>&lt;5sec</td>
<td>1.0</td>
<td>100</td>
</tr>
<tr>
<td>ABNTC-0603-502A-3950□</td>
<td>5.0</td>
<td>F, H, J, K</td>
<td>3950</td>
<td>H</td>
<td>44</td>
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<td></td>
</tr>
<tr>
<td>ABNTC-0603-682A-3950□</td>
<td>6.8</td>
<td>F, H, J, K</td>
<td>3950</td>
<td>F, H</td>
<td>38</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>ABNTC-0603-103A-3450□</td>
<td>10</td>
<td>F, H, J, K</td>
<td>3450</td>
<td>F, H</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABNTC-0603-103A-3950□</td>
<td>10</td>
<td>F, H, J, K</td>
<td>3950</td>
<td>F, H</td>
<td>33</td>
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<td></td>
</tr>
<tr>
<td>ABNTC-0603-223A-4050□</td>
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<td>F, H, J, K</td>
<td>4050</td>
<td>H</td>
<td>21</td>
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<tr>
<td>ABNTC-0603-104A-4250□</td>
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<td>F, H, J, K</td>
<td>4250</td>
<td>F, H</td>
<td>10</td>
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<td></td>
</tr>
</tbody>
</table>

Δ: Please specify the tolerance code of R25 (F=±1%, H=±3%, J=±5%, K=±10%).
□: Please specify the tolerance code of B value (F=±1%, H=±3%).

Test Conditions
Unless otherwise specified, the standard atmospheric conditions for measurement/test as:
a. Ambient Temperature: 20±15°C
b. Relative Humidity: 65±20%
c. Air Pressure: 86 kPa to 106 kPa

ABRACON IS ISO9001-2015 CERTIFIED
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RoHS/RoHS II Compliant

1.6 x 0.8 x 0.8 mm

ELECTRICAL CHARACTERISTICS CURVES

OPTIONS AND PART IDENTIFICATION:

ABNTC-0603- [ ] [ ] - [ ] - T

R25 Code
Please refer to the table above

R25 Tolerance*
F=±1%
H=±3%
J=±5%
K=±10%

B Constant
Please refer to the table above

B Tolerance*
F=±1%
H=±3%

Packaging
T: Tape and Reel (4pcs / reel)

* Please Reference electrical specifications table for available tolerances for each varistor combination.

OUTLINE DIMENSION:

Recommended Land Pattern

<table>
<thead>
<tr>
<th>L</th>
<th>W</th>
<th>T</th>
<th>a</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.6±0.15</td>
<td>0.8±0.15</td>
<td>0.8±0.15</td>
<td>0.3±0.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.60-0.80</td>
<td>0.60-0.80</td>
<td>0.60-0.80</td>
</tr>
</tbody>
</table>

Dimension: mm
Chip NTC Thermistor

**ABNTC-0603**

**REFLOW PROFILE:**

- **Preheat Condition**: 150 to 200 °C; 60 to 120 sec.
- **Allowed time above 217 °C**: 60 to 90 sec.
- **Max temperature**: 260 °C
- **Max time at max temperature**: 10 sec.
- **Solder paste**: Sn/3.0Ag/0.5Cu
- **Allowed Reflow time**: 2x max.

**TAPE & REEL:**

- **Packing**: T: 4,000pcs / reel
- **Chip Cavity**
- **Sprocket Hole**: Φ1.5 (+0.1, 0)
- **Direction of Feed**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>P</th>
<th>T (max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0±0.2</td>
<td>1.8±0.2</td>
<td>4.0±0.1</td>
<td>1.1</td>
</tr>
</tbody>
</table>

**Dimension**: mm

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