

# Chip NTC Thermistor

ABNTC-0402

RoHS/RoHS II Compliant



1.0 x 0.5 x 0.5 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.)

| Part Number           | Resistance at 25°C<br>R25 (kΩ) | B constant<br>(25-50 °C) (K) | Max. Permissive<br>Operating<br>Current (25 °C)<br>(mA) | Thermal Time<br>Constant | Dissipation<br>Factor (mW/°C) | Rated Electric<br>Power (mW) |
|-----------------------|--------------------------------|------------------------------|---------------------------------------------------------|--------------------------|-------------------------------|------------------------------|
| ABNTC-0402-332Δ-3950□ | 3.3                            | 3950                         | 0.55                                                    | <3sec                    | 1.0                           | 100                          |
| ABNTC-0402-682Δ-3950□ | 6.8                            | 3950                         | 0.38                                                    |                          |                               |                              |
| ABNTC-0402-103Δ-3380□ | 10                             | 3380                         | 0.31                                                    |                          |                               |                              |
| ABNTC-0402-103Δ-3950□ | 10                             | 3950                         | 0.33                                                    |                          |                               |                              |
| ABNTC-0402-103Δ-4050□ | 10                             | 4050                         | 0.33                                                    |                          |                               |                              |
| ABNTC-0402-153Δ-3450□ | 15                             | 3450                         | 0.25                                                    |                          |                               |                              |
| ABNTC-0402-223Δ-3950□ | 22                             | 3950                         | 0.23                                                    |                          |                               |                              |
| ABNTC-0402-333Δ-3500□ | 33                             | 3500                         | 0.14                                                    |                          |                               |                              |
| ABNTC-0402-473Δ-4100□ | 47                             | 4100                         | 0.12                                                    |                          |                               |                              |
| ABNTC-0402-503Δ-4100□ | 50                             | 4100                         | 0.12                                                    |                          |                               |                              |
| ABNTC-0402-683Δ-4150□ | 68                             | 4150                         | 0.11                                                    |                          |                               |                              |
| ABNTC-0402-104Δ-4150□ | 100                            | 4150                         | 0.10                                                    |                          |                               |                              |
| ABNTC-0402-104Δ-4250□ | 100                            | 4250                         | 0.10                                                    |                          |                               |                              |
| ABNTC-0402-154Δ-4150□ | 150                            | 4150                         | 0.08                                                    |                          |                               |                              |
| ABNTC-0402-224Δ-4250□ | 220                            | 4250                         | 0.06                                                    |                          |                               |                              |
| ABNTC-0402-334Δ-4300□ | 330                            | 4300                         | 0.05                                                    |                          |                               |                              |
| ABNTC-0402-684Δ-4400□ | 680                            | 4400                         | 0.03                                                    |                          |                               |                              |

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



# Chip NTC Thermistor

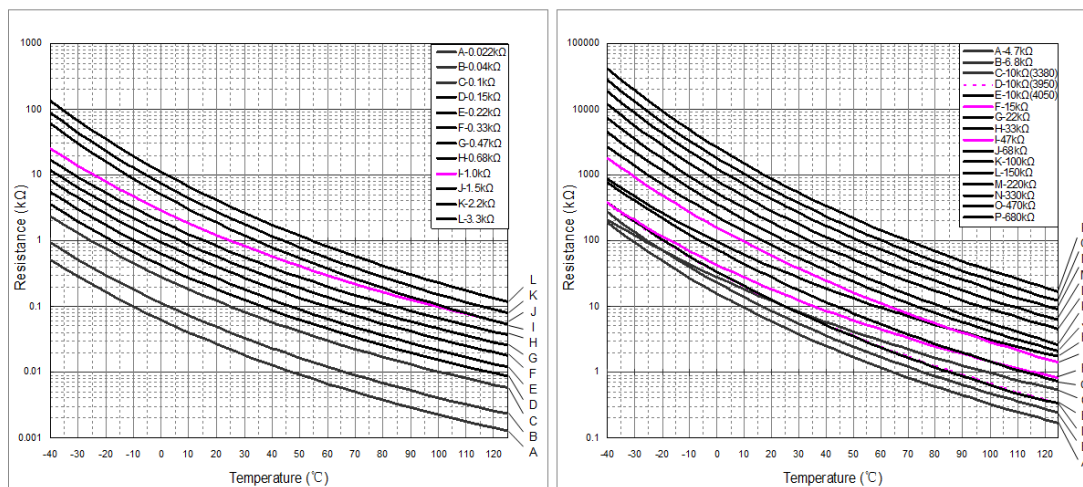
ABNTC-0402

RoHS/RoHS II Compliant



1.0 x 0.5 x 0.5 mm

## ELECTRICAL CHARACTERISTICS CURVES

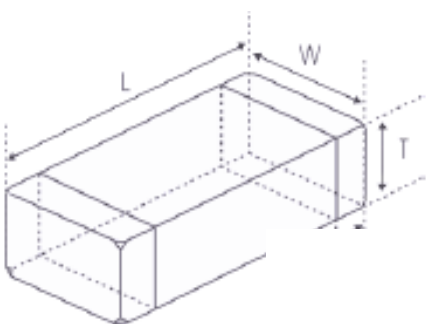


## OPTIONS AND PART IDENTIFICATION:

ABNTC-0402- [ ] [ ] - [ ] [ ] - [ ]

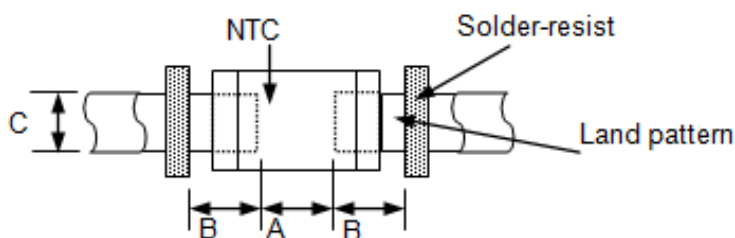
| R25 Code                        | R 25Tolerance | B Constant                      | B Tolerance | Packaging        |
|---------------------------------|---------------|---------------------------------|-------------|------------------|
| Please refer to the table above | F=±1%         | Please refer to the table above | F=±1%       | T: Tape and Reel |
|                                 | H=±3%         |                                 | H=±3%       | (10kpcs / reel)  |
|                                 | J=±5%         |                                 |             |                  |
|                                 | K=±10%        |                                 |             |                  |

## OUTLINE DIMENSION:



| L        | W        | T        | a        |
|----------|----------|----------|----------|
| 1.0±0.15 | 0.5±0.15 | 0.5±0.15 | 0.25±0.1 |

## Recommended Land Pattern



| A         | B         | C         |
|-----------|-----------|-----------|
| 0.45~0.55 | 0.40~0.50 | 0.45~0.55 |

Dimension: mm

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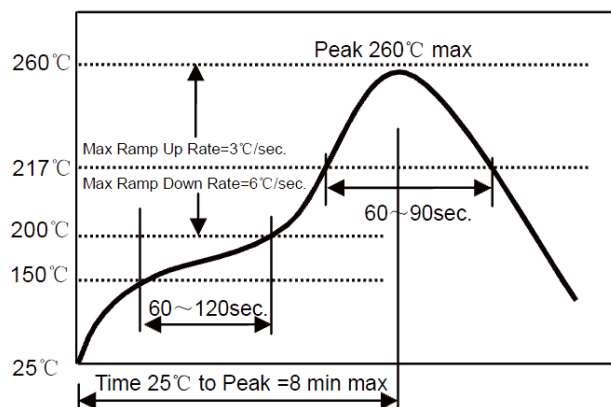
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1.0 x 0.5 x 0.5 mm

## REFLOW PROFILE:

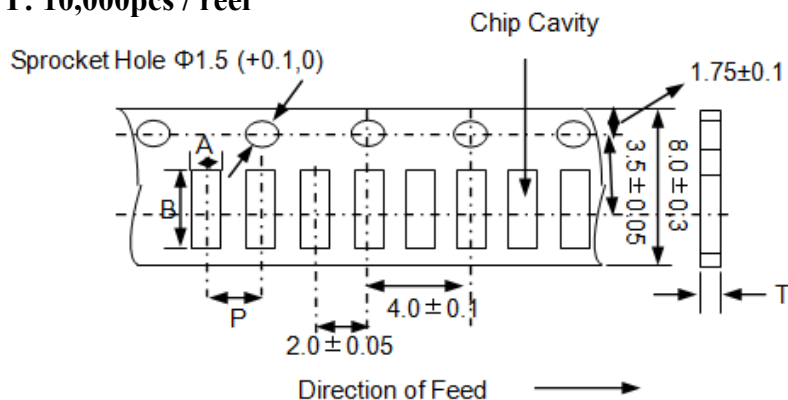


|                             |                               |
|-----------------------------|-------------------------------|
| Preheat Condition           | 150 to 200 °C; 60 to 120 sec. |
| Allowed time above 217 °C   | 60 to 90 sec.                 |
| Max temperature             | 260 °C      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

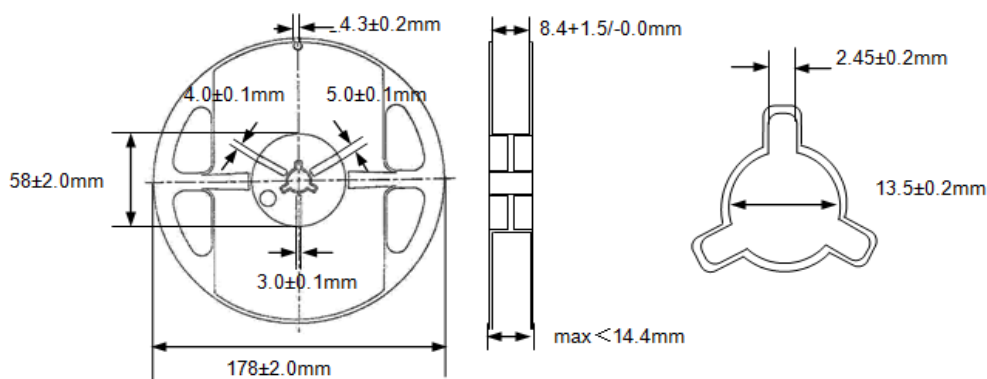
## TAPE & REEL:

### Packing

T: 10,000pcs / reel



| A        | B        | P        | T (max) |
|----------|----------|----------|---------|
| 0.65±0.1 | 1.15±0.1 | 2.0±0.05 | 0.8     |



Dimension: mm

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