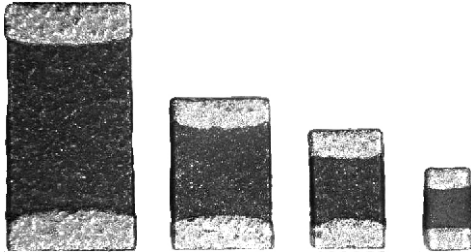


## NTC Thermistors, SMD Chip



### FEATURES

- Extended resistance values available in standard sizes
- Wraparound Ni barrier terminations with 100 % Sn (or Sn90Pb10)
- Allows design flexibility for use with hybrid circuitry
- Available in bulk or tape and reel packaging
- High-density monolithic construction with glass overcoat
- Compliant to RoHS directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

### QUICK REFERENCE DATA

| PARAMETER  | VALUE                              |
|--|------------------------------------|
| Resistance value at 25 °C                                | 1.0 kΩ to 350 kΩ                   |
| Tolerance on $R_{25}$ - value                            | ± 1 %, ± 2 %, ± 3 %, ± 5 %, ± 10 % |
| $B_{25/75}$ value  | 3181K to 4247K                     |
| Tolerance on $B_{25/85}$ - value                         | ± 3 %                              |
| Operating temperature range at zero power (intermittent) | - 40 °C to + 125 °C (150 °C)       |

### APPLICATIONS

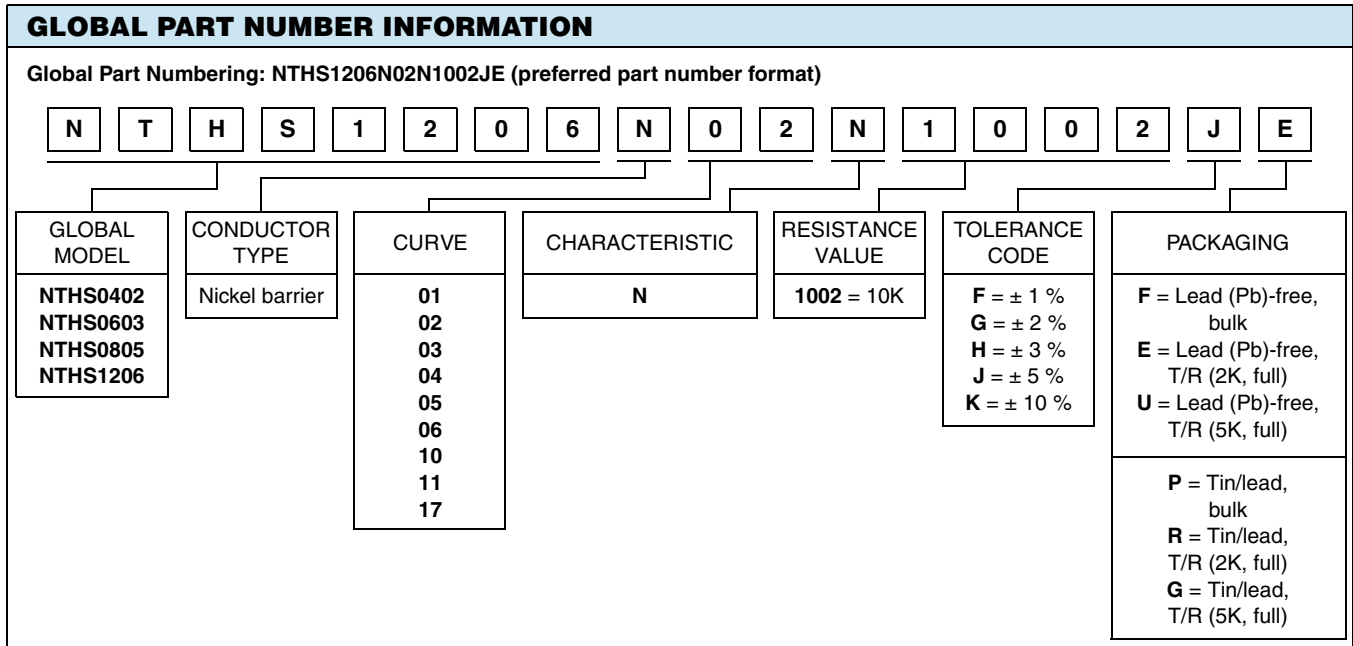
- Temperature sensing, protection and compensation in automotive, industrial, telecom and consumer applications. Examples are:
  - Battery chargers
  - Power suppliers
  - Office equipment
  - LCD compensation
  - In-car entertainment

### NTHS PRODUCT DATA AND $R_{25}$ RESISTANCE RANGE AVAILABILITY

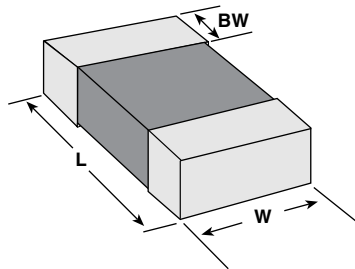
| CURVE                              | $B_{25/75}$ (K) | TCR (%/K) | NTHS0402 (kΩ) | NTHS0603 (kΩ) | NTHS0805 (kΩ) | NTHS1206 (kΩ) | $R_{25} \pm$ TOL. AVAILABILITY |
|------------------------------------|-----------------|-----------|---------------|---------------|---------------|---------------|--------------------------------|
| 3                                  | 3181            | - 3.70    | -             | 1 to 2        | 1 to 1.5      | 1 to 2        | 5, 10                          |
| 6                                  | 3254            | - 3.60    | -             | 2.5 to 4.7    | 2 to 3.3      | 2.7 to 3.5    | 5, 10                          |
| 2                                  | 3477            | - 3.83    | 10 to 12      | 6.8 to 12     | 4.7 to 10     | 6 to 10       | 3, 5, 10                       |
| 10                                 | 3500            | - 3.90    | 18 to 25      | 12 to 20      | 6 to 12       | 10 to 20      | 3, 5, 10                       |
| 11                                 | 3700            | - 4.00    | 30 to 34      | 22 to 32      | 15 to 30      | 20 to 33      | 3, 5, 10                       |
| 5                                  | 3890            | - 4.30    | 47 to 50      | 38 to 57      | 35 to 50      | 30 to 44      | 3, 5, 10                       |
| 1                                  | 3964            | - 4.40    | 68 to 100     | 50 to 100     | 33 to 78      | 38 to 100     | 1, 2, 3, 5, 10                 |
| 17                                 | 4064            | - 4.54    | 250           | 150 to 220    | 100 to 200    | 100 to 220    | 3, 5, 10                       |
| 4                                  | 4247            | - 4.68    | 350           | 250 to 350    | 200 to 300    | 200 to 330    | 3, 5, 10                       |
| Maximum dissipation at 25 °C in mW |                 |           | 80            | 125           | 210           | 280           |                                |
| Dissipation factor in mW/K         |                 |           | 2.0           | 3.0           | 3.5           | 4.0           |                                |

#### Note

- Typical resistance vs. temperature conversion data can be found at [www.vishay.com/doc?33011](http://www.vishay.com/doc?33011)



**DIMENSIONS** in inches (millimeters)



| PART NUMBER | L                                | W                              | BW                              |
|-------------|----------------------------------|--------------------------------|---------------------------------|
| NTHS0402    | 0.040 ± 0.004<br>(1.016 ± 0.102) | 0.022 ± 0.006<br>(0.5 ± 0.051) | 0.010 ± 0.004<br>(0.25 ± 0.102) |
| NTHS0603    | 0.063 ± 0.008<br>(1.6 ± 0.20)    | 0.031 ± 0.008<br>(0.80 ± 0.20) | 0.010 ± 0.006<br>(0.25 ± 0.15)  |
| NTHS0805    | 0.079 ± 0.008<br>(2.00 ± 0.20)   | 0.049 ± 0.008<br>(1.25 ± 0.20) | 0.012 ± 0.006<br>(0.30 ± 0.15)  |
| NTHS1206    | 0.126 ± 0.008<br>(3.20 ± 0.20)   | 0.063 ± 0.008<br>(1.60 ± 0.20) | 0.018 ± 0.008<br>(0.46 ± 0.20)  |

**Note**

- Thickness of the part is depending on size and resistance value. Please consult the factory for more information on individual types at [thermistor1@vishay.com](mailto:thermistor1@vishay.com)



## Disclaimer

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