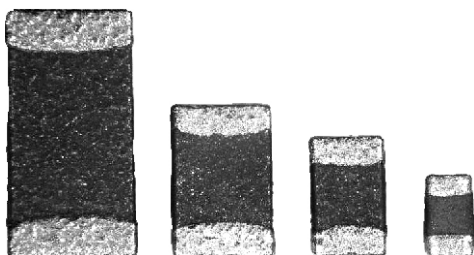


NTC Thermistors, SMD Chip



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 k Ω to 350 k Ω |
| Tolerance on R_{25} - value | $\pm 1\%$, $\pm 2\%$, $\pm 3\%$, $\pm 5\%$, $\pm 10\%$ |
| $B_{25/75}$ value | 3181K to 4247K |
| Tolerance on $B_{25/85}$ - value | $\pm 3\%$ |
| 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 (k Ω) | NTHS0603 (k Ω) | NTHS0805 (k Ω) | NTHS1206 (k Ω) | $R_{25} \pm$ 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

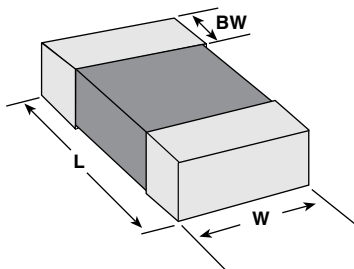
- Typical resistance vs. temperature conversion data can be found at www.vishay.com/doc?33011

GLOBAL PART NUMBER INFORMATION

Global Part Numbering: NTHS1206N02N1002JE (preferred part number format)

| GLOBAL MODEL | CONDUCTOR TYPE | CURVE | CHARACTERISTIC | RESISTANCE VALUE | TOLERANCE CODE | PACKAGING |
|--|----------------|--|----------------|------------------|--|--|
| NTHS0402 NTHS0603 NTHS0805 NTHS1206 | Nickel barrier | 01 02 03 04 05 06 10 11 17 | N | 1002 = 10K | F = $\pm 1\%$ G = $\pm 2\%$ H = $\pm 3\%$ J = $\pm 5\%$ K = $\pm 10\%$ | F = Lead (Pb)-free, bulk E = Lead (Pb)-free, T/R (2K, full) U = Lead (Pb)-free, T/R (5K, full) P = Tin/lead, bulk R = Tin/lead, T/R (2K, full) G = Tin/lead, T/R (5K, full) |

DIMENSIONS in inches (millimeters)



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



Disclaimer

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