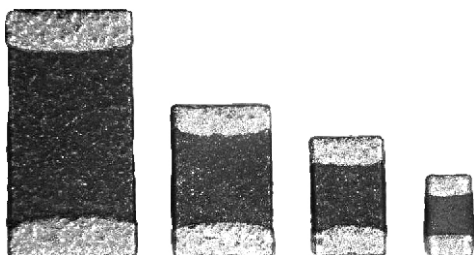


## NTC Thermistors, SMD Chip



### 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 $\Omega$ to 350 k $\Omega$
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 $\Omega$ )	NTHS0603 (k $\Omega$ )	NTHS0805 (k $\Omega$ )	NTHS1206 (k $\Omega$ )	$R_{25} \pm$ 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

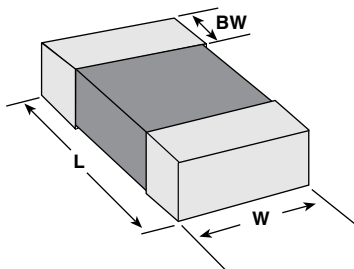
- Typical resistance vs. temperature conversion data can be found at [www.vishay.com/doc?33011](http://www.vishay.com/doc?33011)

### GLOBAL PART NUMBER INFORMATION

Global Part Numbering: NTHS1206N02N1002JE (preferred part number format)

GLOBAL MODEL	CONDUCTOR TYPE	CURVE	CHARACTERISTIC	RESISTANCE VALUE	TOLERANCE CODE	PACKAGING
<b>NTHS0402</b> <b>NTHS0603</b> <b>NTHS0805</b> <b>NTHS1206</b>	Nickel barrier	<b>01</b> <b>02</b> <b>03</b> <b>04</b> <b>05</b> <b>06</b> <b>10</b> <b>11</b> <b>17</b>	<b>N</b>	<b>1002 = 10K</b>	<b>F</b> = $\pm 1\%$ <b>G</b> = $\pm 2\%$ <b>H</b> = $\pm 3\%$ <b>J</b> = $\pm 5\%$ <b>K</b> = $\pm 10\%$	<b>F</b> = Lead (Pb)-free, bulk <b>E</b> = Lead (Pb)-free, T/R (2K, full) <b>U</b> = Lead (Pb)-free, T/R (5K, full)  <b>P</b> = Tin/lead, bulk <b>R</b> = Tin/lead, T/R (2K, full) <b>G</b> = 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](mailto:thermistor1@vishay.com)



### Disclaimer

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