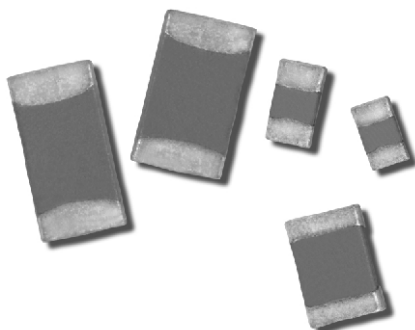


## NTC Thermistors, SMD Chip



### 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

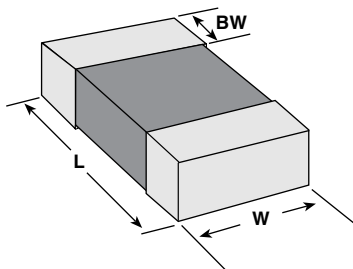
- Typical resistance vs. temperature conversion data can be found at [www.vishay.com/doc?33011](http://www.vishay.com/doc?33011)

### 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](mailto:thermistor1@vishay.com)



### Disclaimer

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