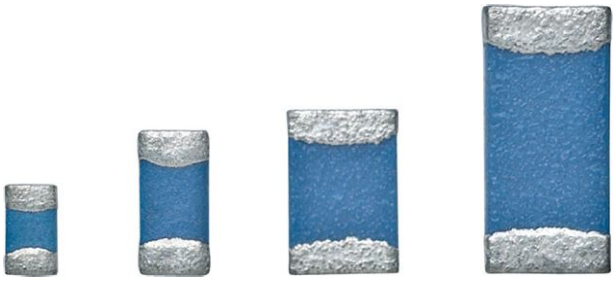
NTC Thermistors, SMD 0402, 0603, 0805, 1206 Chip



FEATURES

- Extended resistance values available in standard sizes
- Wraparound Ni barrier terminations with 100 % Sn
- Allows design flexibility for use with hybrid circuitry
- High-density monolithic construction with glass overcoat
- Sn90Pb10 plated terminations version available
- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition

e3
RoHS COMPLIANT
HALOGEN FREE

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

DESIGN-IN SUPPORT

For complete curve computation please visit the "My Vishay NTC curve" at : www.vishay.com/resistors-non-linear/ntc-curve-list/ or sent your part number to thermistor1@vishay.com to obtain a calculation spreadsheet.

QUICK REFERENCE DATA		
PARAMETER	**VALUE**	**UNIT**
Resistance value at 25 °C	1.0K to 350K	Ω
Tolerance on R_{25}-value	± 1, ± 2, ± 3, ± 5, ± 10	%
$B_{25/75}$ -value	3181 to 4247	K
$B_{25/85}$ -value	3185 to 4261	K
Tolerance on $B_{25/85}$ - value, $B_{25/75}$ -value	± 3	%
Operating temperature range at zero power (intermittent)	- 40 to + 125 (150)	°C

NTHS PRODUCT DATA AND R_{25} RESISTANCE RANGE AVAILABILITY								
CURVE	**$B_{25/75}$ (K)**	**$B_{25/85}$ (K)**	**TCR (%/K)**	**NTHS0402 (kΩ)**	**NTHS0603 (kΩ)**	**NTHS0805 (kΩ)**	**NTHS1206 (kΩ)**	**R_{25} ± TOL. AVAILABILITY**
3	3181	3185	- 3.50	-	1 to 2	1 to 1.5	1 to 2	5, 10
2	3477	3486	- 3.84	10 to 12	6.8 to 12	4.7 to 10	6 to 10	3, 5, 10
11	3691	3715	- 4.00	30 to 34	22 to 32	15 to 30	20 to 33	3, 5, 10
1	3964	3974	- 4.39	68 to 100 (1)	50 to 100	33 to 78	38 to 100	1, 2, 3, 5, 10
17	4064	4073	- 4.50	250	150 to 220	100 to 200	100 to 220	3, 5, 10
4	4247	4262	- 4.67	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	
Thermal time constant in s				5	8	10	13	

Note

(1) Only R_{25} tolerance values ± 3 %, ± 5 %, and ± 10 % are available for NTHS0402N01N types

STANDARD RESISTANCE VALUES at 25 °C in Ω						
1.0K	5.0K	12K	22K	47K	100K	220K
2.0K	6.8K	15K	30K	50K	150K	250K
4.7K	10K	20K	33K	68K	200K	330K

Note

- Most popular and available values

For technical questions, contact: thermistor1@vishay.com

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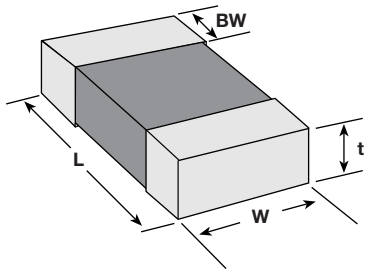
GLOBAL PART NUMBER INFORMATION

Global Part Numbering: NTHS1206N02N1002JE (preferred part number format)

N	T	H	S	1	2	0	6	N	0	2	N	1	0	0	2	J	E

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** = ± 1 % **G** = ± 2 % **H** = ± 3 % **J** = ± 5 % **K** = ± 10 %	**F** = Lead (Pb)-free, bulk **E** = Lead (Pb)-free, T/R (2K pcs, full) **U** = Lead (Pb)-free, T/R (5K pcs, full) **P** = Tin/lead, bulk **R** = Tin/lead, T/R (2K pcs, full) **G** = Tin/lead, T/R (5K pcs, full)

DIMENSIONS in inches (millimeters)



PART NUMBER	L	W	BW	$t_{max.}$
NTHS0402	0.040 ± 0.004 (1.02 ± 0.10)	0.022 ± 0.006 (0.56 ± 0.15)	0.010 ± 0.004 (0.25 ± 0.10)	0.028 (0.71)
NTHS0603	0.063 ± 0.008 (1.60 ± 0.20)	0.031 ± 0.008 (0.80 ± 0.20)	0.010 ± 0.006 (0.25 ± 0.15)	0.039 (1.00)
NTHS0805	0.079 ± 0.008 (2.01 ± 0.20)	0.049 ± 0.008 (1.25 ± 0.20)	0.012 ± 0.006 (0.30 ± 0.15)	0.057 (1.45)
NTHS1206	0.126 ± 0.008 (3.20 ± 0.20)	0.063 ± 0.008 (1.60 ± 0.20)	0.018 ± 0.008 (0.46 ± 0.20)	0.071 (1.80)

Note

- Thickness of the part is depending on the resistance value and curve

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Mouser Electronics

Authorized Distributor

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Vishay:

NTHS0402N01N6802JE NTHS0402N04N3503JE NTHS0402N05N4702JE NTHS0402N05N5002JE
NTHS0402N17N2503JE NTHS0603N01N6802JE NTHS0603N01N7002JE NTHS0603N01N8002JE
NTHS0603N03N1501JE NTHS0603N04N3303JE NTHS0603N04N3503JE NTHS0603N10N1502JE
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