

# NTC Thermistors, SMD Chip



QUICK REFERENCE DATA					
PARAMETER	VALUE				
Resistance value at 25 °C	1.0 k $\Omega$ to 350 k $\Omega$				
Tolerance on $R_{25}$ - value	± 1 %, ± 2 %, ± 3 %, ± 5 %, ± 10 %				
B <sub>25/75</sub> value	3181K to 4247K				
Tolerance on B <sub>25/85</sub> - value	± 3 %				
Operating temperature range at zero power (intermittent)	- 40 °C to + 125 °C (150 °C)				

## 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

### **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 <sub>25</sub> RESISTANCE RANGE AVAILABILITY								
CURVE	B <sub>25/75</sub> (K)	TCR (%/K)	NTHS0402 (kΩ)	NTHS0603 (kΩ)	NTHS0805 (kΩ)	NTHS1206 (kΩ)	R <sub>25</sub> ± 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 dis	ssipation at 25	°C in mW	80	125	210	280		
Dissipation fa	actor 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

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### **DIMENSIONS** in inches (millimeters)



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



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