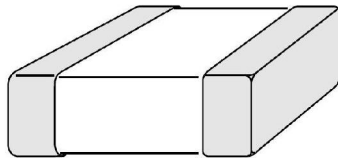




## Chip Thermistor

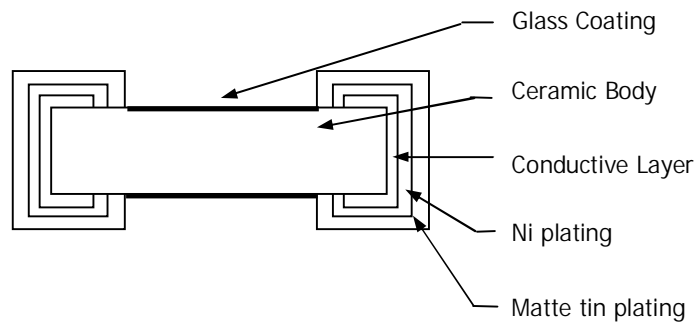
### NTC0805 series



#### FEATURES

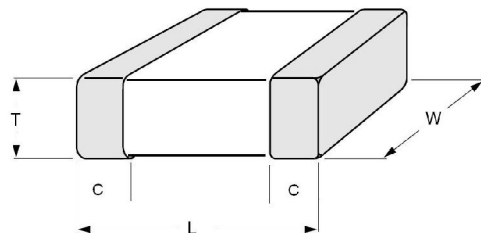
- n Small Size
- n High Precision Type (up to  $\pm 1\%$ )
- n SMD chip pattern, available in various dimension included 0603 & 0402
- n Matte tin plating termination suit for reflow & wave soldering
- n Glass sealed body
- n Leadfree and RoHS compliance components

#### CONSTRUCTION



#### DIMENSIONS

Dimension/mm	0805(2012)
L	$2.00 \pm 0.20$
W	$1.25 \pm 0.20$
T	1.20 max
C	0.20-0.60



**ELECTRICAL CHARACTERISTICS**

Resistance Value	Resistance at 25°C	B Constant (25 °C to 85 °C)	B Constant (25 °C to 50 °C)	Thermal Time Constant	Thermal Dissipation Constant	Maximum Power Rating*	Operation Temp. Range
	R25	B 25/85	B 25/50	T (at 25°C)	C (at 25°C)	Pw	-
10K	10 K	3435	3385	Approx. 7.5 sec	Approx. 4mW/ °C	400 mW	-40°C ~ 125 °C
10K	10 K	3550	3500				
10K	10 K	3970	3915				
100K	100 K	4000	3945				
100K	100 K	4400	4340				
12K	12 K	3970	3915				
15K	15 K	3630	3580				
2K	2 K	3200	3155				
200K	200 K	3950	3895				
22K	22 K	3900	3845				
220K	220 K	4050	3995				
2K	3 K	3200	3155				
3k	3 K	3900	3845				
30K	30 K	3900	3845				
33K	33 K	4055	4000				
330K	330 K	4100	4045				
4K7	4.7 K	3435	3385				
47K	47 K	4000	3945				
470K	470 K	4200	4140				
5K	5 K	3435	3385				
50K	50 K	4000	3945				
68K	68 K	3800	3750				
68K	68 K	4000	3945				

\*Maximum Power Rating = Thermal Dissipation Constant × (125 °C-25 °C)

**ENVIRONMENTAL CHARACTERISTICS**

Product	Hazardous Substance or Element/ppm					
	Pb	Cd	Hg	Cr <sup>6+</sup>	PBB	PBDE
	<1000	<100	<1000	<1000	<1000	<1000

**TEST CHARACTERISTICS**

PERFORMANCE	TEST METHOD	APPRAISE
Life	MIL – STD – 202F , Method 108A 1000 hours at 70 °C NTC WV intermittent	Within ±3 %
Humidity	MIL – STD – 202F , Method 103B 1000 hours at Temperature: 40 °C Humidity: 95%	Within ±3 %
Thermal Shock	MIL – STD – 202F , Method 107 10 cycles, -40 °C to +125 °C	Within ±3 %
Solderability	MIL – STD – 202F , Method 208 235 °C for 2 seconds	95% min. coverage
Resistance to Soldering Heat	MIL – R – 55342D , Para 4.7.7 Soldered to test board at 260 °C for 10 seconds	Within ±3 %
Bending Strength	JIS C 5202 6.1.4 Pressurizing rod at a rate at 1mm/sec for 1mm	Within ±3 %
Resistance to flexure of Substrate	JIS C 5202 6.2.1 Pressurizing force shall be 3kg (min.)	Over 3 kg
Insulation Resistance	MIL – STD – 202F , Method 302 DC 250V For 10 seconds	Over 1000M
Dielectric Withstand Voltage	MIL – STD – 202F , Method 301 DC 250V For 10 seconds	Not Short



**LIZ**

Chip Thermistor

NTC0805 series

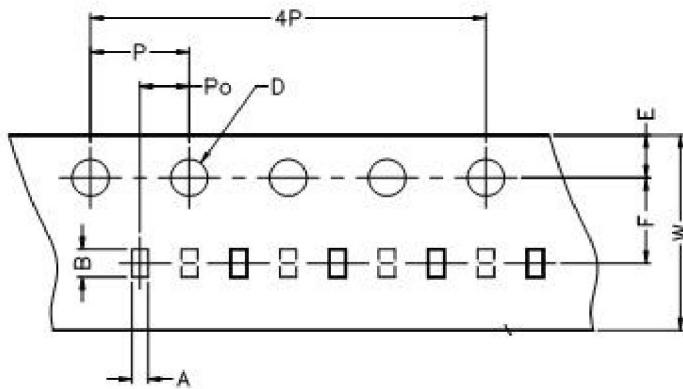
**NTC THERMISTOR**

4:6

**PACKING METHOD**

Product	Quality/Reel	Reel Size	Tape
	4,000pcs	7"	Paper

n Taping Dimension

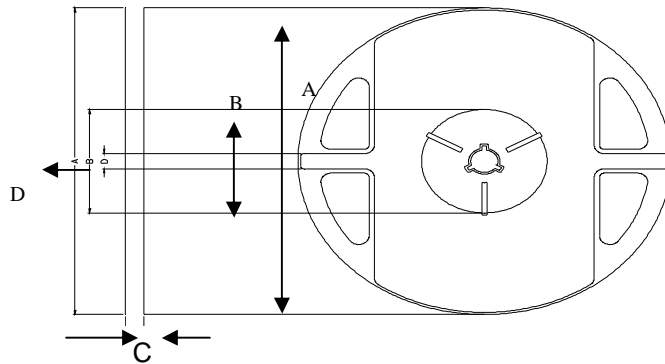


Unit: mm

Dimension	0805	
A	1.50	± 0.05
B	2.30	± 0.05
W	8.00	± 0.10
D	1.50	± 0.10
E	1.75	± 0.10
F	3.50	± 0.05
P	4.00	± 0.10
Po	2.00	± 0.05
4P	16.00	± 0.10



n Reel Dimension



Unit: mm

Item	A	B	C	D
Dimension	178.0 ±1.0	60.0 ±1.0	9.0 ±0.1	13.0 ±0.1

**APPLICATIONS**

n Function: Temperature compensation &amp; detection

n Soldering Condition:

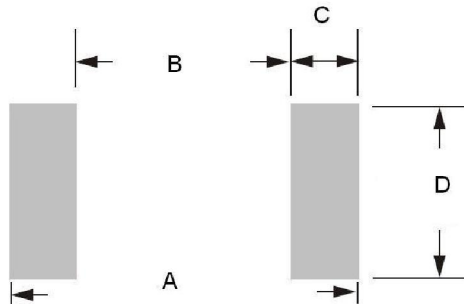
Recommended Soldering Condition  
(Refer to IPC/JEDEC J-STD-020D 4.1&5-2)

Recommended Profile Condition	Sn-Pb Soldering	Leadfree Soldering
Ramp-up rate (from pre-heat stage)	<3°C/s	<3°C/s
Pre-heat Temperature & Time	100-150 °C 60-120s	150-200 °C 60-120s
Soldering Temperature & Time	183 °C 60-150s	217 °C 60-150s
Practicable Peak Temperature	230±5°C	245±5°C
Maximum Temperature	<260°C	<260°C
Time within 5°C of peak temperature	10-20s	20-30s
Ramp-down rate	<6°C/s	<6°C/s
Time 25°C to peak temperature	<6min	<8min

Manual Soldering: Approx. 350°C for 3s, avoid solder iron tip direct touch the components body



n Recommended Soldering Footprint:



Reflow Soldering				
Product Size	Dimension/ mm			
	A	B	C	D
0805	3.0	1.2	0.9	1.2

n Storage Condition: Product termination solderability can degrade due to high temperature and humidity or chemical environment. Storage condition must be in an ambient temperature of <40°C and ambient humidity of <75%RH, and free from chemical.

**PART NUMBER**

NTC	0805	104	F	4A
<b>Product series</b> NTC: Chip Thermistor	<b>Size Code</b> 0805	<b>Resistance Value</b> 104=10 x 10 <sup>4</sup> =100K	<b>Tolerance</b> F: ±1% G: ±2% H: ±3% J: ±5% K: ±10%	<b>B Value</b> Refer to B Value table

B value table:

1: 1000	C: 101~150	I: 401~450	O: 701~750
2: 2000	D: 151~200	J: 451~500	P: 751~800
3: 3000	E: 201~250	K: 501~550	Q: 801~850
4: 4000	F: 251~300	L: 551~600	R: 851~900
A: 0~50	G: 301~350	M: 601~650	S: 901~950
B: 51~100	H: 351~400	N: 651~700	T: 951~999