Type NTC Series

A range of NTC chip thermistors offering high thermal sensitivity. Suitable for temperature compensating circuits and other applications requiring a resistance that varies according to ambient temperature.

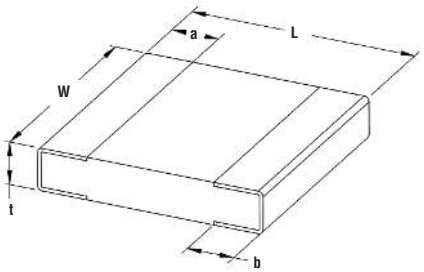
Key Features

- Two Package Sizes
- Suited to Automatic Pick and Place
- Components supplied unmarked
- -55°C to +125°C Temperature Range

Characteristics - Electrical

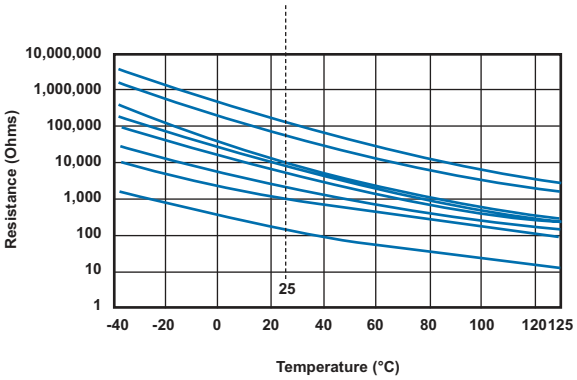
	NTC0603	NTC0805
Rated Power Max (mW)	63	125
Optimum Working Dissipation (mW)	0.4	1
Resistance Range (ohms) Min	4K7	100
Max	150K	150K
Tolerance on Resistance (%)	5 10	5 10
Code Letter	J K	J K
Selection Series	See Table	
ß Constant	See Table	
Tolerance on ß (%)	5 (3% available on request)	
Thermal Time Constant (sec)	2	4
Thermal Dissipation Constant (mW/°C)	1.2	1.5
Operation Temp. Range (°C)	-55 to +125	
Resistance to Soldering Heat	± 2% on both R25 and B	

Dimensions



Style	L	W	t	a	b
NTC0603	1.6 ± 0.15	0.8 ± 0.15	0.5 ± 0.1	0.3	0.3
NTC0805	2.0	1.25	0.5	0.4	0.4

Typical Performance Graph



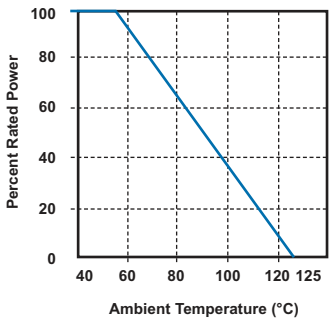
Negative Temperature Coefficient Chip Thermistors

Type NTC Series

Resistance Value / ß Constant

Resistance Value @ 25°C	ß Constant	
	NTC0603	NTC0805
100	- - - - -	2750
150	- - - - -	2750
220	- - - - -	2750
330	- - - - -	2750
470	- - - - -	2750
680	- - - - -	2750
1K0	- - - - -	2750
1K5	- - - - -	3000
2K0	- - - - -	3000
2K2	- - - - -	3000
2K5	- - - - -	3000
3K0	- - - - -	3450
3K3	- - - - -	3450
4K7	3500	3450
5K0	3500	3450
6K8	3500	3850
10K	3700	4100
15K	3850	4100
20K	3950	4100
22K	3950	4100
30K	3950	4100
33K	3950	4100
47K	4100	4100
50K	3950	3950
68K	4100	4100
100K	4100	4100
150K	4100	4100

Derating



Power Rating and Maximum Operating Temperature

The power rating is specified at an ambient temperature of 25°C. Under these conditions, the temperature of the thermistor element reaches its permitted maximum temperature of 125°C. The thermistor should be derated linearly from 100% at +55°C to zero at 125°C as shown in the derating curve.

Mounting

The thermistors are suitable for automatic placement.

Marking

The components are supplied unmarked.

Packaging

Tape/reel - 5k pcs/reel.

Change of Resistance with Temperature, ß and Tolerance

	R = 1K0 ± 5%, ß = 2750 ± 5%			R = 100K ± 5%, ß = 4100 ± 5%		
Temp (°C)	R Min	R Nom	R Max	R Min	R Nom	R Max
-55	23,619	29,443	36,612	11,437,698	15,492,485	20,932,275
-50	18,060	22,198	27,216	7,666,457	10,167,934	13,451,901
-45	13,973	16,944	20,496	5,229,571	6,797,677	8,813,894
-40	10,931	13,085	15,624	3,626,293	4,623,690	5,880,679
-35	8,639	10,214	12,047	2,553,502	3,196,281	3,990,860
-30	6,895	8,055	9,388	1,824,208	2,243,342	2,751,881
-25	5,552	6,414	7,390	1,320,987	1,597,136	1,926,187
-20	4,510	5,153	5,873	968,858	1,152,437	1,367,374
-15	3,693	4,175	4,709	719,179	842,136	983,650
-10	3,074	3,410	3,807	539,923	622,766	716,523
-5	2,532	2,806	3,103	409,704	465,752	528,143
0	2,118	2,326	2,548	314,048	352,049	393,661
5	1,784	1,941	2,107	243,038	268,796	296,539
10	1,511	1,630	1,754	189,795	207,195	225,625
15	1,288	1,377	1,469	149,493	161,161	173,305
20	1,103	1,170	1,239	118,711	126,434	134,321
25	**950**	**1,000**	**1,050**	**95,000**	**100,000**	**105,000**
30	822	859	895	76,585	79,707	82,749
35	715	741	767	62,174	64,002	65,719
40	624	643	660	50,811	51,752	52,579
45	548	560	571	41,789	42,128	42,363
50	482	490	496	34,578	34,512	34,360
55	426	430	433	28,776	28,445	28,048
60	378	379	380	24,081	23,582	23,035
65	337	336	334	20,258	19,658	19,029
70	301	298	295	17,128	16,475	15,807
75	270	266	261	14,551	13,877	13,201
80	243	238	232	12,420	11,746	11,081
85	219	213	207	10,647	9,988	9.347
90	198	192	186	9,167	8,532	7,921
95	180	173	167	7,924	7,319	6,743
100	163	157	150	6,877	6,304	5,765
105	149	142	135	5,990	5,452	4,950
110	136	129	122	5,237	4,733	4,266
115	125	118	111	4,594	4,123	3,691
120	114	108	101	4,044	3,605	3,206
125	105	99	92	3,571	3,162	2,794

How to Order

NTC	0603	J	2K0
Common Part	**Size**	**Tolerance**	**Value**
NTC - Negative Temperature Coefficient Chip Thermistor	0603 0805	J - 5%	See table on previous page