

# Negative Tempco Thermistor Type NT73

ISO 9001:2000  
CERTIFIED  
TS-16949  
CERTIFIED

## 1. Features

- Anti-leaching nickel barrier terminations
- Twelve standard resistance values
- Suitable for reflow and wave soldering
- Marking: Black three-digit on pink body color

## 2. Dimensions

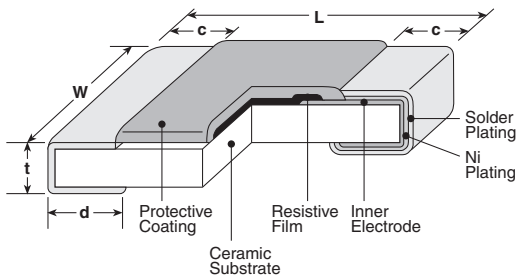


Table 1

Dimensions - inches (mm)					
Type	L	W	c	d	t
<b>1J</b> <b>(0603)</b>	.063±.008 (1.6±0.2)	.031±.004 (0.8±0.1)	.012±.004 (0.3±0.1)	.012±.004 (0.3±0.1)	.02±.004 (0.5±0.1)
<b>2A</b> <b>(0805)</b>	.079±.008 (2.0±0.2)	.049±.004 (1.25±0.1)	.016±.008 (0.4±0.2)	.012 <sup>+.008</sup> <sub>-.004</sub> (0.3 <sup>+.02</sup> <sub>-.01</sub> )	.02 <sup>+.008</sup> <sub>-.004</sub> (0.5 <sup>+.02</sup> <sub>-.01</sub> )
<b>2B</b> <b>(1206)</b>	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.02±.008 (0.5±0.3)	.016 <sup>+.008</sup> <sub>-.004</sub> (0.4 <sup>+.02</sup> <sub>-.01</sub> )	.024±.004 (0.6±0.1)

## 3. Type Designation

Type designation shall be as the following form.

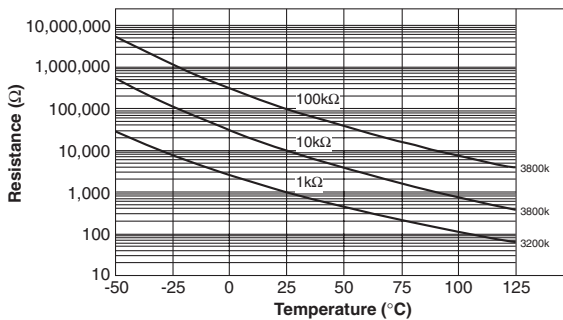
<b>NT73</b>	<b>2A</b>	<b>T</b>	<b>TD</b>	<b>103</b>	<b>K</b>	<b>3800</b>	<b>J</b>
Type	Size Code	Termination Material	Packaging	Nominal Resistance	Resistance Tolerance	B Constant Nominal	B Constant Tolerance
	1J: 0603 2A: 0805 2B: 1206	T: Sn (Other termination styles available, contact factory for options)	TD: 7" Paper Tape (5,000 pieces/reel)	2 Significant figures + 1 multiplier	J: ±5% K: ±10% L: ±15%	3200 3500 3700 3800 3950 4100	H: ±3% J: ±5% K: ±10%

## 4. Applications and Ratings

Part Designation	Resistance @ 25°C	Resistance Tolerance	B Constant @ 25°C/75°C	B Constant Tolerance	Thermal Dissipation Constant (mW/°C)	Power Rating (mW)	Operating Temperature Range
<b>NEW</b> NT731J	6.8kΩ	J: ±5% K: ±10%	3500K	±10%	2	5	-55°C to +125°C
	10kΩ			±5%			
	15kΩ			±3%			
	10kΩ		3800K	±5%			
	20kΩ						
	22kΩ						
	30kΩ						
	33kΩ						
	47kΩ						
	68kΩ						
100kΩ	4100K	±3%					
47kΩ							
NT732A	1kΩ	K: ±10% L: ±15%	3500K	±10%	2.8	5	-55°C to +125°C
	2kΩ						
	2.2kΩ						
	2.4kΩ						
	3.3kΩ						
	4.7kΩ						
	5kΩ						
	6.8kΩ						
	10kΩ						
	15kΩ						
	10kΩ	J: ±5% K: ±10% L: ±15%	3800K	±5%			
	20kΩ						
	22kΩ						
	30kΩ						
	33kΩ						
	47kΩ						
	68kΩ						
	100kΩ						
	150kΩ						
	50kΩ						
	10kΩ						
	15kΩ						
	22kΩ						
	30kΩ						
	33kΩ						
	47kΩ						
	68kΩ						
	100kΩ						
150kΩ							
NT732B	1kΩ	K: ±10% L: ±15%	3200K	±10%	3	5	
	2.2kΩ						
	3.3kΩ						
	4.7kΩ						
	6.8kΩ						
	10kΩ	J: ±5% K: ±10% L: ±15%	3800K	±5%			
	22kΩ						
	33kΩ						
	47kΩ						
	68kΩ						
100kΩ							

## 5. Environmental Applications

### 5.1 Temperature Characteristics



### 5.2 RT/R25 Ratio vs. B Constant

#### RT/R25 Ratio vs. B Constant

Resistance	1k Ω	5k Ω	10k Ω	100k Ω	10k Ω	Resistance	1k Ω	5k Ω	10k Ω	100k Ω	10k Ω
B Constant	3200K	3500K	3700K	3800K	4100K	B Constant	3200K	3500K	3700K	3800K	4100K
Temp. (°C)	Ω	k Ω	k Ω	k Ω	k Ω	Temp. (°C)	Ω	k Ω	k Ω	k Ω	k Ω
-55	38770	273.24	638.23	7692.5	1203.1	40	604.07	2.8809	5.5500	54.959	5.1999
-50	28840	197.67	465.81	5414.6	820.76	45	515.10	2.4202	4.6100	45.484	4.2349
-45	21706	144.85	343.25	3964.5	568.09	50	441.00	2.0421	3.8500	37.823	3.4692
-40	16517	107.43	255.22	2794.3	398.57	55	379.00	1.7302	3.2300	31.594	2.8585
-35	12698	80.577	191.37	2045.2	283.20	60	326.90	1.4718	2.7200	26.506	2.3682
-30	9857.0	61.077	144.64	1514.1	203.64	65	282.95	1.2568	2.3100	22.330	1.9721
-25	7721.2	46.759	110.13	1133.0	148.07	70	245.72	1.0771	1.9700	18.886	1.6504
-20	6100.5	36.137	83.710	856.49	108.37	75	214.08	0.92637	1.6800	16.035	1.3877
-15	4858.7	28.173	64.190	653.63	80.182	80	187.08	0.79937	1.4500	13.663	1.1724
-10	3899.0	22.147	49.640	503.31	59.943	85	163.96	0.69199	1.2500	11.682	0.99491
-5	3151.3	17.546	38.680	390.86	45.252	90	144.11	0.60087	1.0800	10.022	0.84926
0	2564.2	14.004	30.370	305.97	34.478	95	127.00	0.52329	0.94000	8.6257	0.72802
5	2099.9	11.256	23.970	241.34	26.473	100	112.21	0.45701	0.82000	7.4466	0.62862
10	1730.0	9.1063	19.070	191.73	20.506	105	99.377	0.40016	0.72000	6.4466	0.54156
15	1433.5	7.4135	15.270	153.36	16.016	110	88.224	0.35129	0.63000	5.5968	0.46982
20	1194.2	6.0712	12.320	123.46	12.608	115	78.501	0.30915	0.56000	4.8721	0.40906
25	1000.0	5.0000	10.000	100.00	10.000	120	70.004	0.27272	0.49000	4.2523	0.35741
30	841.48	4.1398	8.1700	81.470	7.9880	125	62.558	0.24114	0.44000	3.7207	0.31332
35	711.39	3.4451	6.7100	66.739	6.4242						

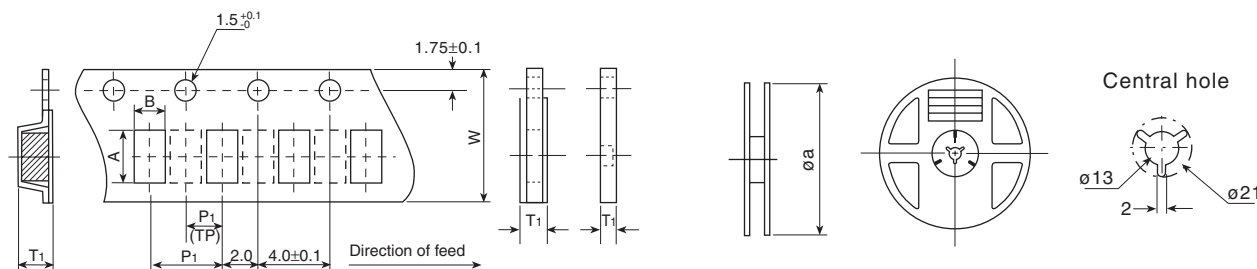
Note: RT/R25 ratio is the resistance at temperature (T) divided by the nominal resistance at 25°C. The RT/R25 ratio value is multiplied by the thermistor's nominal 25°C value to determine the nominal resistance value at a given temperature in the chart above.

## 6. Performance Characteristics

Parameter	Maximum $\Delta R$	Test Method
High Temperature Exposure	$\pm 3.0\%$	1000 hours @ 80°C
Resistance to Solder Heat	$\pm 1.0\%$	MIL-R-55342 $\pi$ 4.7.7, 260°C for 10 seconds
Terminal Strength-Bend	$\pm 1.0\%$	2mm min. deflection in either direction for 10 seconds
Moisture Resistance	$\pm 3.0\%$	MIL-STD-202, Method 103, 40°C, 90 - 95% RH, 1000 hours
Life	$\pm 3.0\%$	80°C, DC 5mm, 1000 hours
Temperature Cycling	$\pm 3.0\%$	30 minutes @ -55°C, 15 minutes @ +25°C, 30 minutes @ +125°C, 15 minutes @ +25°C, 50 cycles
Dielectric Withstanding Voltage 2A 2B	400V 400V	1 minute minimum MIL-STD-202, Method 301
Insulation Resistance	10,000 M $\Omega$ Minimum	—

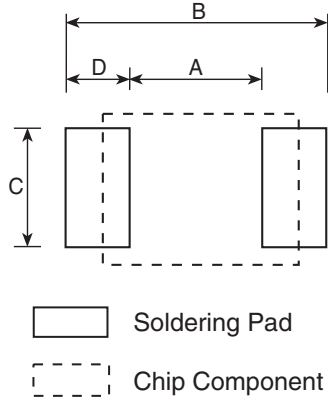
Note: RT/R25 ratio is the resistance at temperature (T) divided by the nominal resistance at 25°C. The RT/R25 ratio value is multiplied by the thermistor's nominal 25°C value to determine the nominal resistance value at a given temperature in the chart above.

## 7. Packaging Information



Type	Component Size (mm)			Carrier Tape	Quantity/ Reel (Pieces)	Taping (mm)					Reel Size
	L	W	T			A	B	W	P1	T1	
NT73 1J	14.6	0.8	0.45	TD	5000	1.9±0.1	1.1±0.1	8.0±0.2	4.0±0.1	0.6+0.2/-0	178
2A	2	1.25	0.5	TD	5000	2.4±0.2	1.65±0.2	8.0±0.2	4.0±0.1	0.75+0.2/-0	178
2B	3.2	1.6	0.6	TD	5000	3.5±0.2	2±0.2	8.0±0.2	4.0±0.1	0.75+0.2/-0	178

**8. Pad Dimensions**



NT73	Size	A	B	C	D
<b>1J</b>	1.6 x 0.8	0.8	2.6	0.8	0.9
<b>2A</b>	2.0 x 1.25	1.2	3.0	1.2	0.9
<b>2B</b>	3.2 x 1.6	2.2	4.2	1.5	1.0