

Negative Tempco Thermistor Type NT73

ISO 9001:2008
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

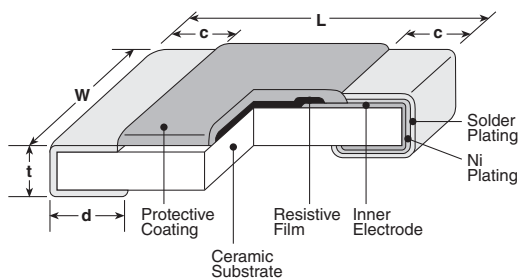


Table 1

Dimensions - inches (mm)					
Type	L	W	c	d	t
1J (0603)	.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)
2A (0805)	.079±.008 (2.0±0.2)	.049±.004 (1.25±0.1)	.016±.008 (0.4±0.2)	.012 ^{+.008} _{-.004} (0.3 ^{+.02} _{-.01})	.02 ^{+.008} _{-.004} (0.5 ^{+.02} _{-.01})
2B (1206)	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.02±.008 (0.5±0.3)	.016 ^{+.008} _{-.004} (0.4 ^{+.02} _{-.01})	.024±.004 (0.6±0.1)

3. Type Designation

Type designation shall be as the following form.

NT73	2A	T	TD	103	K	3800	J
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%

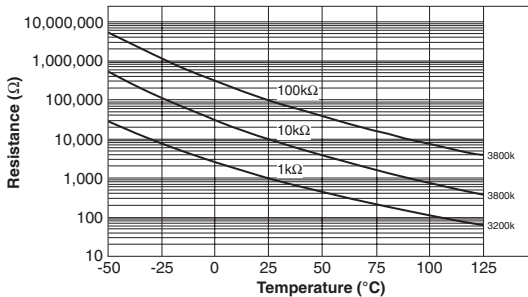
4. Applications and Ratings

Part Designation	Resistance @ 25°C	Resistance Tolerance	B Constant @ 25°C/75°C	B Constant Tolerance	Power Rating (mW)	Operating Temperature Range	
NT731J	6.8kΩ	J: ±5% K: ±10%	3500K	±10%	5		
	10kΩ		3800K	±5%			
	15kΩ		3700K	±3%			
	20kΩ						
	22kΩ						
	30kΩ		3800K	±5%			
	33kΩ						
	47kΩ						
	68kΩ						
	100kΩ		4100K	±3%			
NT732A	1kΩ	K: ±10% L: ±15%	3200K	±10%	5		
	2kΩ						
	2.2kΩ						
	2.4kΩ						
	3.3kΩ		J: ±5%; K: ±10% L: ±15%				±5%
	4.7kΩ						
	5kΩ						
NT732A	6.8kΩ	J: ±5% K: ±10% L: ±15%	3800K	±10%	5	-55°C to +125°C	
	10kΩ		3500K				
	15kΩ						
	20kΩ						
	22kΩ						
	30kΩ		3800K				±5%
	33kΩ						
	47kΩ						
	68kΩ						
	100kΩ						
	150kΩ						
	50kΩ		3950K				
	10kΩ						
	15kΩ						
	20kΩ						
	22kΩ						
	30kΩ		4100K				±3%
	33kΩ						
	47kΩ						
	68kΩ						
100kΩ							
150kΩ							
NT732B	1kΩ	K: ±10% L: ±15%	3200K	±10%	5		
	2.2kΩ						
	3.3kΩ		3500K				
	4.7kΩ						
	6.8kΩ						
	10kΩ						
	22kΩ						
	33kΩ						
	47kΩ		3800K				±5%
	68kΩ						
100kΩ							

Thermal dissipation constant - in the atmosphere - (reference) 1J: 2.0mW/°C, 2A: 2.8mW/°C, 2B: 3.0mW/°C

5. Environmental Applications

5.1 Temperature Characteristics



5.2 RT/R25 Ratio vs. B Constant

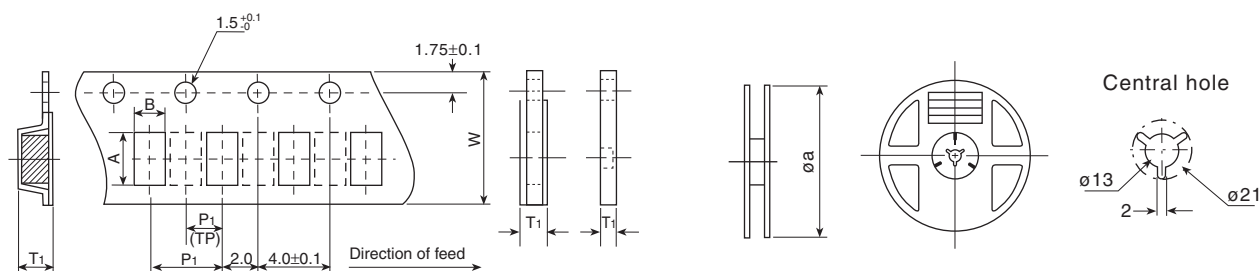
Resistance	1k Ω	5k Ω	10k Ω	100k Ω	10k Ω	Resistance	1k Ω	5k Ω	10k Ω	100k Ω	10k Ω
B Constant	3200K	3500K	3700K	3800K	4100K	B Constant	3200K	3500K	3700K	3800K	4100K
Temp. (°C)	Ω	k Ω	k Ω	k Ω	k Ω	Temp. (°C)	Ω	k Ω	k Ω	k Ω	k Ω
-55	38770	273.24	638.23	7692.5	1203.1	40	604.07	2.8809	5.5500	54.959	5.1999
-50	28840	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	3864.5	568.09	50	441.00	2.0421	3.8500	37.823	3.4692
-40	16517	107.43	255.22	2794.3	398.57	55	378.00	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	0.62662
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						

6. Performance Characteristics

Parameter	Requirement $\Delta R \pm(\%+0.05\Omega)$		Test Method
	Limit	Typical	
Resistance	Within specified tolerance	—	25°C
B Constant	Within specified tolerance	—	+25°C/+75°C
Resistance to Solder Heat	$\pm 1\%$, $\pm 2\%:1k\Omega$	$\pm 0.5\%$, $\pm 1\%:1k\Omega$	260°C $\pm 5^\circ\text{C}$, 10 seconds ± 1 second
Rapid Change of Temperature	$\pm 3.0\%$	$\pm 1.3\%$	-55°C (30 minutes), +125°C (30 minutes), 50 cycles
Moisture Resistance	$\pm 3.0\%$	$\pm 1.1\%$	40°C $\pm 2^\circ\text{C}$, 90 - 95% RH, 1000 hours
Load Life	$\pm 3.0\%$	$\pm 2.5\%$	80°C $\pm 3^\circ\text{C}$, DC5mW, 1000 hours
High Temperature Exposure	$\pm 3.0\%$	$\pm 1.6\%$	80°C, 1000 hours

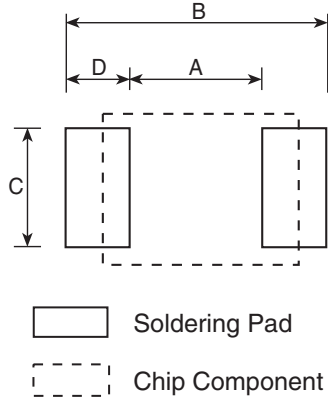
Confirming resistance drift is recommended since this product has a tendency to have bigger resistance change than general flat chip over 80°C. Please pay attention not to be applied ESD, it may cause of resistance change.

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 \pm 0.1	1.1 \pm 0.1	8.0 \pm 0.2	4.0 \pm 0.1	0.6+0.2/-0	178
2A	2	1.25	0.5	TD	5000	2.4 \pm 0.2	1.65 \pm 0.2	8.0 \pm 0.2	4.0 \pm 0.1	0.75+0.2/-0	178
2B	3.2	1.6	0.6	TD	5000	3.5 \pm 0.2	2 \pm 0.2	8.0 \pm 0.2	4.0 \pm 0.1	0.75+0.2/-0	178

8. Pad Dimensions



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