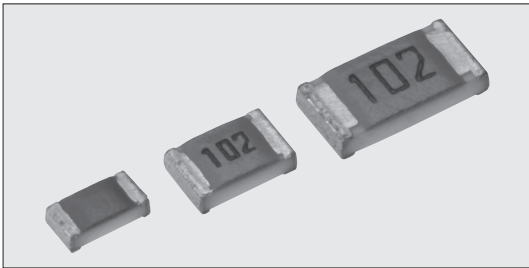


NTC THERMISTORS



Thermal Sensors

NT73 NTC Flat Chip Thermistors



Coating color : Pink

Green (1J B Constant 3700K, 4100K only)

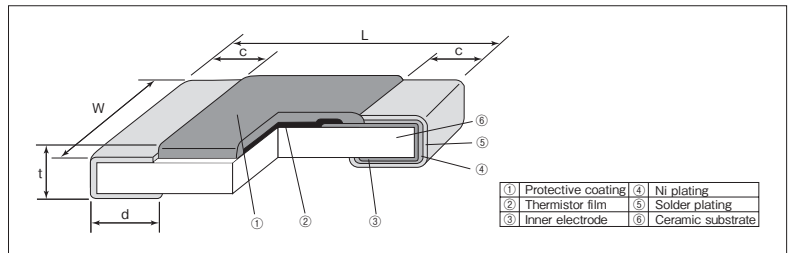
Features

- SMD type thick film NTC chip thermistors.
- Thinner (0.5mm in 1608, 2012 sizes, 0.6mm in 3216 size) than the multilayer type.
- Excellent mountability due to its higher mechanical strength.
- Excellent mountability due to its solder plating at the terminal section.
- Suitable for both flow and reflow solderings.
- Products with lead free termination meet EU-RoHS requirements.
- EU-RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.

Reference Standards

IEC 60115-8 JIS C 5201-8
IEC 60539-1 JIS C 2570-1

Construction



Dimensions

Type (Inch Size Code)	Dimensions (mm)					Weight (g) (1000pcs)
	L±0.2	W	c	d	t	
1J (0603)	1.6	0.8±0.1	0.3±0.1	0.3±0.1	0.5±0.1	2.14
2A (0805)	2.0	1.25±0.1	0.4±0.2	0.3 ^{+0.2} _{-0.1}	0.5 ^{+0.2} _{-0.1}	4.54
2B (1206)	3.2	1.6±0.2	0.5±0.3	0.4 ^{+0.2} _{-0.1}	0.6±0.1	9.14

Type Designation

Examples

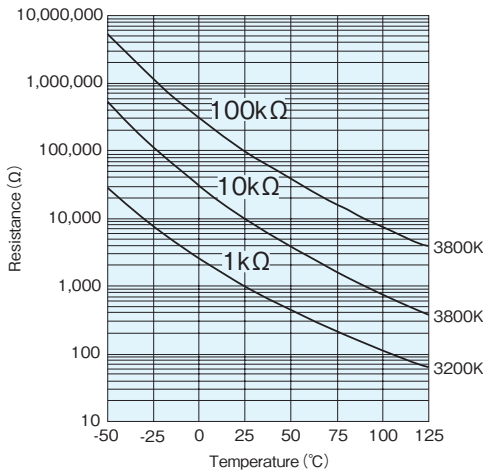
NT73	2A	T	TD	103	K	3800	J
Product Code	Size	Termination Surface Material	Taping	Nominal Resistance	Resistance Tolerance	Nominal B Constant	B Constant Tolerance
	1J:1.6×0.8mm 2A:2.0×1.25mm 2B:3.2×1.6mm	T:Sn (L:Sn/Pb)	TD:4mm pitch punch paper BK:Bulk	3digits	J:±5% K:±10% L:±15%	4digits	H:±3% J:±5% K:±10%

The terminal surface material lead free is standard.

Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS.

For further information on taping, please refer to APPENDIX C on the back pages.

Resistance—Temperature Characteristic



The graph and the table show typical values.
Please ask us for combinations of resistance and B constant not on here.

(Typical)

Resistance (at 25°C)	1kΩ	5kΩ	10kΩ	100kΩ	10kΩ
B Constant (25°C/75°C)	3200K	3500K	3700K	3800K	4100K
Temp. (°C) / Unit	Ω	kΩ	kΩ	kΩ	kΩ
-55	38770	273.24	638.23	7692.5	1203.1
-50	28840	197.67	465.81	5414.6	820.76
-45	21706	144.85	343.25	3864.5	568.09
-40	16517	107.43	255.22	2794.3	398.57
-35	12698	80.577	191.37	2045.2	283.20
-30	9857.0	61.077	144.64	1514.1	203.64
-25	7721.2	46.759	110.13	1133.0	148.07
-20	6100.5	36.137	83.710	856.49	108.37
-15	4858.7	28.173	64.190	653.63	80.182
-10	3899.0	22.147	49.640	503.31	59.943
-5	3151.3	17.546	38.680	390.86	45.252
0	2564.2	14.004	30.370	305.97	34.478
5	2099.9	11.256	23.970	241.34	26.473
10	1730.0	9.1063	19.070	191.73	20.506
15	1433.5	7.4135	15.270	153.36	16.016
20	1194.2	6.0712	12.320	123.46	12.608
25	1000.0	5.0000	10.000	100.00	10.000
30	841.48	4.1398	8.1700	81.470	7.9880
35	711.39	3.4451	6.7100	66.739	6.4242
40	604.07	2.8809	5.5500	54.959	5.1999
45	515.10	2.4202	4.6100	45.484	4.2349
50	441.00	2.0421	3.8500	37.823	3.4692
55	379.00	1.7302	3.2300	31.594	2.8585
60	326.90	1.4718	2.7200	26.506	2.3682
65	282.95	1.2568	2.3100	22.330	1.9721
70	245.72	1.0771	1.9700	18.886	1.6504
75	214.08	0.92637	1.6800	16.035	1.3877
80	187.08	0.79937	1.4500	13.663	1.1724
85	163.96	0.69199	1.2500	11.682	0.99491
90	144.11	0.60087	1.0800	10.022	0.84926
95	127.00	0.52329	0.94000	8.6257	0.72802
100	112.21	0.45701	0.82000	7.4466	0.62662
105	99.377	0.40016	0.72000	6.4466	0.54156
110	88.224	0.35129	0.63000	5.5968	0.46982
115	78.501	0.30915	0.56000	4.8721	0.40906
120	70.004	0.27272	0.49000	4.2523	0.35741
125	62.558	0.24114	0.44000	3.7207	0.31332

Ratings

Style	Resistance (Ω) at 25°C	Resistance Tolerance (%)	B Constant (K) at 25°C/75°C	B Constant Tolerance (%)	Power Rating (mW)	Operating Temp. Range (°C)	Taping & Q'ty/Reel (pcs)			
							TD			
1J	6.8k	J:±5 K:±10	3500	K:±10	5	-55°C~+125	5,000			
	10k			J:±5						
	15k			H:±3						
	10k		3800	J:±5				J:±5		
	20k									
	22k									
	30k									
	33k									
	47k									
	68k		4100	H:±3				H:±3		
	100k									
	47k									
2A	1k	K:±10 L:±15	3500	K:±10	5	-55°C~+125	5,000			
	2k									
	2.2k									
	2.4k									
	3.3k	J:±5 K:±10 L:±15	3500	J:±5						
	4.7k									
	5k									
	10k									
	6.8k	K:±10, L:±15	3800	K:±10						
	10k									
	15k									
	20k	J:±5 K:±10 L:±15	3800	J:±5						
	22k									
	30k									
	33k									
	47k									
	68k									
	100k									
	150k									
	50k							3950	3950	H:±3
	10k									
	15k									
	20k							4100	H:±3	H:±3
	22k									
30k										
33k										
47k										
68k										
100k										
150k										
2B	1k	K:±10 L:±15	3200	K:±10	5	-55°C~+125	5,000			
	2.2k									
	3.3k									
	4.7k									
	6.8k	J:±5 K:±10 L:±15	3800	J:±5						
	10k									
	22k									
	33k									
	47k									
	68k									
100k										

Thermal Dissipation Constant - In the atmosphere - (Reference)

1J:2.0mW/°C, 2A:2.8mW/°C, 2B:3.0mW/°C

Performance

Test Items	Performance Requirement	ΔR± (%+0.05%)		Test Methods
		Limit	Typical	
Resistance	Within specified tolerance	-	-	25°C
B Constant	Within specified tolerance	-	-	+25°C/+75°C
Resistance to soldering heat	1 : others 2 : 1kΩ	0.5 : others 1.0 : 1kΩ	-	260°C±5°C, 10s±1s
Rapid change of temperature	3	1.3	-	-55°C (30min.) / +125°C (30min.) 50 cycles
Moisture resistance	3	1.1	-	40°C±2°C, 90%~95%RH, 1000h
Load life	3	2.5	-	80°C±2°C, DC5mW, 1000h
High temperature exposure (80°C)	3	1.6	-	+80°C, 1000h

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.

Actual Value (Out of guarantee)

Test Items	Reference	Test Methods
High temperature exposure	7%	+125°C, 1000h
ESD	500V	Human model, 100pF 1.5kΩ

Precautions for Use

- The resistance value of this resistor changes by its self-heating by power applied. Therefore, it is recommended to use it by taking its self heat-generation into consideration.
- Though properly and electrostatically measured taping materials are used for the components, attention should be required because of some danger that the parts absorb on the top tapes to cause mounting failure and are destructed by static electricity to change the resistance under the extra dry conditions or after the packaged parts are given vibration for a long time. Similarly, care should be given not to apply the excessive static electricity when mounting the parts on the boards.