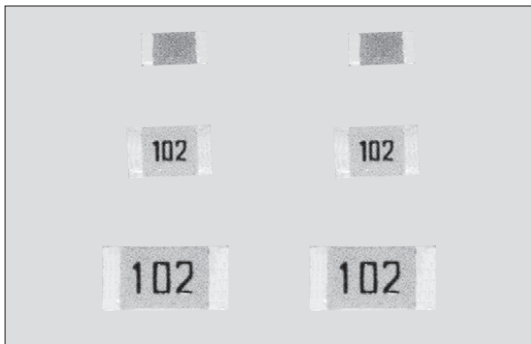


NTC THERMISTORS



温度传感器
Thermal Sensors

NT73 矩形片状热敏电阻器 NTC Flat Chip Thermistors



外观颜色: 粉红色 Coating color: Pink

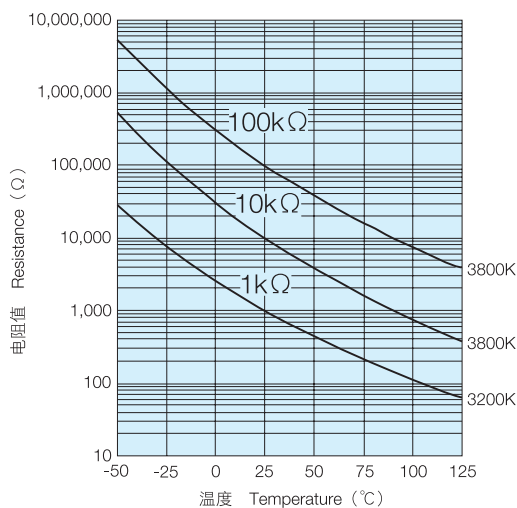
■ 特点 Features

- 是表面安装型的厚膜NTC片状热敏电阻器。
- 比层叠型, 厚度薄 (1608•2012规格的0.5mm、3216规格的0.6mm)。
- 机械强度高、安装性良好。
- 电极部是焊接电镀的, 安装性良好。
- 对应回流焊、波峰焊接。
- 端子无铅品, 对应欧盟RoHS。电极、电阻膜层、玻璃中所含铅玻璃, 不包含在欧盟RoHS指令中。
- 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.

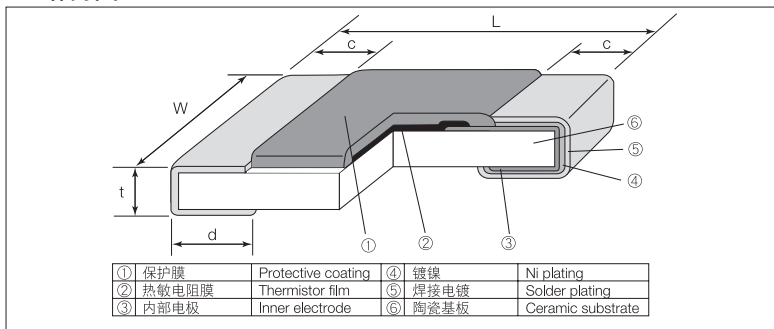
■ 参考标准 Reference Standards

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

■ 电阻—温度特性 Resistance—Temperature Characteristic



■ 结构图 Construction



■ 外形尺寸 Dimensions

型号 Type (Inch Size Code)	尺寸 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	2.54
2A (0805)	2.0	1.25±0.1	0.4±0.2	0.3 ^{+0.2} _{-0.1}	0.5 ^{+0.2} _{-0.1}	4.87
2B (1206)	3.2	1.6±0.2	0.5±0.3	0.4 ^{+0.2} _{-0.1}	0.6±0.1	10.12

■ 品名构成 Type Designation

实例 Example

NT73	2A	T	TD	103	K	3800	J
品种 Product Code	额定功率 Power Rating	端子表面材质 Termination Surface Material	二次加工 Taping	公称电阻值 Nominal Resistance	阻值允许偏差 Resistance Tolerance	公称B常数 Nominal B Constant	B常数允许偏差 B Constant Tolerance
	1J:5.0mW 2A:5.0mW 2B:5.0mW	T:Sn (L:Sn/Pb)	TD:4mm pitch punch paper BK:Bulk	3digits	J:±5% K:±10% L:±15%		H:±3% J:±5% K:±10%

端子表面材质以无铅品为标准。
预知关于此产品含有的环境负荷物质详情 (除EU-RoHS以外), 请与我们联系。
编带细节请参考卷末附录C。

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.

(代表值 Typical)

电阻值 (at 25°C) Resistance	1kΩ	5kΩ	10kΩ	100kΩ	10kΩ
B常数 (25°C / 75°C) B Constant	3200K	3500K	3700K	3800K	4100K
温度 Temp. (°C) / 单位 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

本样本手册中记载的产品规格如有变更, 恕不一一奉告。订购以及使用之前, 请仔细确认规格表的内容。

用于车载设备、医疗设备、航空设备以及其它涉及人身安全、或可能引起重大损失的设备上时, 请务必事先与我司联系。这些产品在这类用途中出现故障或失灵可能导致人身事故或严重损坏。

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

Contact our sales representatives before you use our products for applications including automobiles, medical equipment and aerospace equipment.

Malfunction or failure of the products in such applications may cause loss of human life or serious damage.

■ 额定值 Ratings

形状 Style	电阻值 Resistance (Ω) at 25℃	阻值允许偏差 Resistance Tolerance	B常数 B Constant (K) at 25℃/75℃	B常数允许偏差 B Constant Tolerance	额定功率 Power Rating (mW)	使用温度范围 Operating Temp.Range	编带和包装数/卷 Taping & Q'ty/Reel (pcs)				
							TD				
1J	6.8k	J: ±5% K: ±10%	3500	K: ±10%	5	-55℃~+125℃	5,000				
	10k										
	15k		3800	J: ±5%							
	10k		3700	H: ±3%							
	20k										
	22k										
	30k		3800	J: ±5%							
	33k										
	47k										
	68k										
100k											
47k		4100	H: ±3%								
1k		3200									
2A	2k	K: ±10% L: ±15%	3500	K: ±10%	5	-55℃~+125℃	5,000				
	2.2k										
	2.4k										
	3.3k										
	4.7k	J: ±5% K: ±10% L: ±15%	3500	J: ±5%							
	5k										
	10k										
	6.8k										
	10k	K: ±10%、L: ±15%	3800	K: ±10%							
	15k										
	20k										
	22k										
	30k										
	33k										
	47k										
	68k										
	100k										
	150k										
	50k			3950							
	10k			4100				H: ±3%			
	15k										
	20k										
	22k										
	30k										
	33k										
	47k										
	68k										
	100k										
	150k										
	2B	1k	K: ±10% L: ±15%	3200				K: ±10%	5	-55℃~+125℃	5,000
		2.2k		3500							
		3.3k									
4.7k											
6.8k		J: ±5% K: ±10% L: ±15%	3800	J: ±5%							
10k											
22k											
33k											
47k											
68k											
100k											

热扩散常数—大气中— (参考值) Thermal Dissipation Constant —In the atmosphere— (Reference)
1J:2.0mW/ $^{\circ}$ C、2A:2.8mW/ $^{\circ}$ C、2B:3.0mW/ $^{\circ}$ C

■ 性能 Performance

试验项目 Test Items	标准值 Performance Requirements $\Delta R \pm (\% \pm 0.05 \Omega)$		试验方法 Test Methods
	保证值 Limit	代表值 Typical	
电阻值 Resistance	在规定的允许偏差内 Within specified tolerance	—	25 $^{\circ}$ C
B常数 B Constant	在规定值以内 Within specified T.C.R.	—	+25 $^{\circ}$ C/+75 $^{\circ}$ C
耐焊接热 Resistance to soldering heat	1 2: 1k Ω	0.5 1.0: 1k Ω	260 $^{\circ}$ C $\pm 5^{\circ}$ C, 10s ± 1 s
温度突变 Rapid change of temperature	3	1.3	-55 $^{\circ}$ C (30min.) / +125 $^{\circ}$ C (30min.) 50 cycles
耐湿负荷 Moisture resistance	3	1.1	40 $^{\circ}$ C $\pm 2^{\circ}$ C, 90%~95%RH, 1000h
额定负荷 Load life	3	2.5	80 $^{\circ}$ C $\pm 3^{\circ}$ C, DC5mW, 1000h
高温放置 (80 $^{\circ}$ C) High temperature exposure	3	1.6	80 $^{\circ}$ C, 1000h

本产品因为在超过80 $^{\circ}$ C高温环境下有电阻值漂移大的倾向, 请确认之后使用。并且, 本产品由于使用特殊的皮膜, 所以有可能因静电破坏皮膜导致电阻变化, 所以在静电使用时请注意。

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

■ 实际值 (不在保证范围) Actual Value (Out of guarantee)

试验项目 Test Items	参考值 Reference	试验方法 Test Methods
高温放置 High temperature exposure	7%	+125 $^{\circ}$ C, 1000h
静电特性 ESD	500V	人体模型, Human model, 100pF 1.5k Ω

■ 使用注意事项 Precautions for Use

- 根据所使用的电源不同, 电阻的自加热温度也不同, 电阻值也会发生相应的变化。因此, 建议在使用该电阻时考虑到电阻的自身产热问题。
- 虽然元件采用了经过静电处理的编带材质, 但是仍然要注意带子上部那些元件会带来危险, 从而会导致无法安装或安装受到影响, 这种情况是由于在超干躁条件下或包装内的元件在长时间振动的情况下, 产生静电 (100pF/1.5k Ω 条件下等于500V) 而带来的电阻变化所造成的。同样, 电路板上安装元件时, 要注意过量静电。
- 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 (equivalent to 500V at 100pF/1.5k Ω) 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.

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