

NTC SMD Thermistor with Ni/Sn termination

for Automotive, Industrial and General applications

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SpiCAT



KYOCERA AVX Chip NTC Thermistors are high quality devices developed especially for surface mounting applications. They are widely used for temperature compensation, but can also achieve temperature control of printed circuits in a wide range of applications, including automotive, industrial and general purpose. Ni barrier/100% Sn plated termination for lead free soldering.

Characteristics

Case Size	0805
Operating temperature	-55°C to +150°C
Resistance	100 kOhm
Tolerance on Resistance (25°C)	$\pm 3\%$
B 25/85	4220K $\pm 3\%$
Maximum dissipation at 25°C	0.12 W
Thermal dissipation factor	2 mW/°C
Thermal time constant	5 s
Termination	Ni barrier/100%Sn (for Pb free soldering)



RoHS
COMPLIANT

MSL 1
Pb Free
260°C



AEC-Q200
based qualification







Dimensions

mm (inches)

Size (EIA)	Length (L)	Width (W)	Thickness (T)	Terminal (t)
0805	2.0 ± 0.3	1.25 ± 0.2	1.3 max	0.2 min
	(0.079 ± 0.012)	(0.049 ± 0.008)	(0.051) max	(0.008) min



How to Order (Packaging options)

NB  Type NB = Ni/Sn Term for lead free soldering	12  Size 12 = 0805	P0  Material Code See Datasheet	0104  Resistance (Ohm) 2 Sig. Digits + Number of Zeros	H  Tolerance H = $\pm 3\%$ * J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$	BB  Suffix: Packaging BB = Cardboard tape (180mm reel, 4,000 pcs/reel) BF = Cardboard tape (180mm reel, 2,000 pcs/reel) BD = Cardboard tape (330mm reel, 10,000 pcs/reel) -- = Bulk (5000 pcs/bag)
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* For selected PNs

NOTICE: Specifications are subject to change without notice. All statements, information and data given herein are believed to be accurate and reliable, but are presented without guarantee or responsibility of any kind, expressed or implied. Specifications are typical and may not apply to all applications.

Material Table

P0 (B25/85 = 4220K $\pm 3\%$)

T (°C)	R(T) / R25	TF (%)	α (%/°C)
-55	121.4	24.83	-7.56
-50	83.35	21.45	-7.32
-45	57.92	18.44	-7.09
-40	40.72	15.77	-6.87
-35	28.95	13.39	-6.66
-30	20.80	11.29	-6.45
-25	15.10	9.42	-6.26
-20	11.07	7.78	-6.07
-15	8.197	6.33	-5.89
-10	6.123	5.07	-5.71
-5	4.615	3.96	-5.54
0	3.508	3.00	-5.38
5	2.688	2.18	-5.22
10	2.076	1.48	-5.07
15	1.616	0.89	-4.92
20	1.267	0.40	-4.78
25	1.000	0.00	-4.64
30	0.7949	0.38	-4.51
35	0.6359	0.82	-4.38
40	0.5120	1.31	-4.26
45	0.4148	1.84	-4.14
50	0.3379	2.40	-4.03
55	0.2769	3.00	-3.92
60	0.2281	3.63	-3.81
65	0.1890	4.28	-3.71
70	0.1573	4.96	-3.61
75	0.1316	5.66	-3.52
80	0.1106	6.38	-3.42
85	0.0934	7.11	-3.34
90	0.0792	7.86	-3.25
95	0.0674	8.62	-3.17
100	0.0577	9.39	-3.09
105	0.0495	10.16	-3.01
110	0.0427	10.95	-2.93
115	0.0369	11.74	-2.86
120	0.0320	12.53	-2.79
125	0.0279	13.33	-2.72
130	0.0244	14.13	-2.66
135	0.0214	14.93	-2.59
140	0.0188	15.73	-2.53
145	0.0166	16.53	-2.47
150	0.0147	17.33	-2.42

B25/50	B25/75	B25/85	B25/100	B Tol
4181 K	4211 K	4220 K	4232 K	$\pm 3\%$

R Min (Ω)	R Nom (Ω)	R Max (Ω)
8,760,059	12,138,140	15,516,222
6,296,668	8,334,699	10,372,731
4,550,231	5,792,400	7,034,568
3,308,032	4,072,416	4,836,799
2,420,547	2,895,177	3,369,806
1,783,147	2,080,373	2,377,599
1,322,698	1,510,332	1,697,966
988,023	1,107,387	1,226,751
743,208	819,709	896,210
562,956	612,348	661,739
429,366	461,493	493,621
329,705	350,768	371,831
254,868	268,797	282,726
198,308	207,610	216,911
155,287	161,571	167,856
122,359	126,664	130,969
97,000	100,000	103,000
76,796	79,486	82,177
61,164	63,595	66,026
48,997	51,202	53,408
39,470	41,476	43,481
31,969	33,794	35,619
26,030	27,691	29,353
21,302	22,814	24,327
17,519	18,895	20,272
14,476	15,729	16,982
12,018	13,158	14,297
10,021	11,058	12,096
8,392.4	9,336.7	10,281
7,057.9	7,917.8	8,777.7
5,959.6	6,743.1	7,526.6
5,052.0	5,766.3	6,480.5
4,298.8	4,950.5	5,602.2
3,671.4	4,266.4	4,861.5
3,146.7	3,690.5	4,234.4
2,706.2	3,203.8	3,701.4
2,335.2	2,790.9	3,246.6
2,021.5	2,439.3	2,857.1
1,755.5	2,138.9	2,522.4
1,529.1	1,881.4	2,233.8
1,335.7	1,659.9	1,984.1
1,170.2	1,468.8	1,767.4