

NTC SMD Thermistor with Ni/Sn termination

for Automotive, Industrial and General applications

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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	120 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)



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	12	P0	0124	H	BD
Type	Size	Material Code	Resistance (Ohm)	Tolerance	Suffix: Packaging
NB = Ni/Sn Term for lead free soldering	12 = 0805	See Datasheet	2 Sig. Digits + Number of Zeros	H = $\pm 3\%*$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$	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)

* 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)
10,512,071	14,565,769	18,619,467
7,556,001	10,001,639	12,447,277
5,460,277	6,950,879	8,441,482
3,969,639	4,886,899	5,804,159
2,904,657	3,474,212	4,043,768
2,139,776	2,496,447	2,853,118
1,587,238	1,812,399	2,037,560
1,185,628	1,328,865	1,472,101
891,850	983,651	1,075,452
675,548	734,817	794,086
515,239	553,792	592,345
395,646	420,921	446,197
305,842	322,556	339,271
237,969	249,132	260,294
186,345	193,886	201,427
146,831	151,997	157,163
116,400	120,000	123,600
92,155	95,383	98,612
73,397	76,314	79,231
58,796	61,443	64,090
47,364	49,771	52,178
38,363	40,553	42,743
31,236	33,229	35,223
25,562	27,377	29,192
21,023	22,674	24,326
17,372	18,875	20,378
14,421	15,789	17,157
12,025	13,270	14,515
10,071	11,204	12,337
8,469.5	9,501.4	10,533
7,151.5	8,091.7	9,031.9
6,062.4	6,919.5	7,776.6
5,158.6	5,940.6	6,722.6
4,405.7	5,119.7	5,833.8
3,776.0	4,428.6	5,081.3
3,247.5	3,844.6	4,441.6
2,802.2	3,349.1	3,895.9
2,425.9	2,927.2	3,428.5
2,106.6	2,566.7	3,026.9
1,834.9	2,257.7	2,680.6
1,602.9	1,991.9	2,381.0
1,404.2	1,762.6	2,120.9