

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	150 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	0154	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)
13,140,088	18,207,211	23,274,333
9,445,002	12,502,049	15,559,097
6,825,346	8,688,599	10,551,852
4,962,048	6,108,624	7,255,199
3,630,821	4,342,765	5,054,710
2,674,720	3,120,559	3,566,398
1,984,048	2,265,499	2,546,949
1,482,035	1,661,081	1,840,126
1,114,813	1,229,564	1,344,314
844,435	918,521	992,608
644,049	692,240	740,431
494,557	526,152	557,746
382,302	403,195	424,088
297,462	311,415	325,367
232,931	242,357	251,783
183,538	189,996	196,454
145,500	150,000	154,500
115,194	119,229	123,265
91,746	95,392	99,039
73,495	76,803	80,112
59,205	62,214	65,222
47,953	50,691	53,429
39,045	41,537	44,029
31,953	34,222	36,490
26,278	28,343	30,408
21,715	23,594	25,473
18,027	19,736	21,446
15,032	16,588	18,144
12,589	14,005	15,422
10,587	11,877	13,167
8,939.4	10,115	11,290
7,578.0	8,649.4	9,720.8
6,448.2	7,425.7	8,403.3
5,507.1	6,399.7	7,292.3
4,720.0	5,535.8	6,351.6
4,059.3	4,805.7	5,552.0
3,502.8	4,186.3	4,869.8
3,032.3	3,659.0	4,285.7
2,633.2	3,208.4	3,783.6
2,293.6	2,822.1	3,350.7
2,003.6	2,489.9	2,976.2
1,755.3	2,203.2	2,651.1