

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	22 kOhm
Tolerance on Resistance (25°C)	$\pm 10\%$
B 25/85	3950K $\pm 3\%$
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  Type NB = Ni/Sn Term for lead free soldering	12  Size 12 = 0805	M0  Material Code See Datasheet	0223  Resistance (Ohm) 2 Sig. Digits + Number of Zeros	K  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

M0 (B25/85 = 3950K $\pm 3\%$)

T (°C)	R(T) / R25	TF (%)	α (%/°C)
-55	99.59	15.64	-7.42
-50	68.97	14.25	-7.16
-45	48.40	12.94	-6.91
-40	34.38	11.69	-6.67
-35	24.71	10.51	-6.45
-30	17.97	9.39	-6.23
-25	13.20	8.33	-6.02
-20	9.804	7.31	-5.82
-15	7.352	6.35	-5.63
-10	5.565	5.43	-5.45
-5	4.251	4.55	-5.28
0	3.275	3.70	-5.11
5	2.544	2.90	-4.95
10	1.992	2.13	-4.80
15	1.572	1.39	-4.65
20	1.249	0.68	-4.51
25	1.000	0.00	-4.38
30	0.8057	0.66	-4.25
35	0.6534	1.30	-4.12
40	0.5331	1.92	-4.00
45	0.4376	2.53	-3.89
50	0.3612	3.12	-3.77
55	0.2998	3.70	-3.67
60	0.2501	4.26	-3.57
65	0.2097	4.81	-3.47
70	0.1767	5.35	-3.37
75	0.1496	5.87	-3.28
80	0.1272	6.38	-3.19
85	0.1087	6.88	-3.11
90	0.0932	7.37	-3.03
95	0.0803	7.84	-2.95
100	0.0694	8.31	-2.87
105	0.0602	8.76	-2.80
110	0.0524	9.21	-2.73
115	0.0458	9.64	-2.66
120	0.0402	10.07	-2.60
125	0.0353	10.48	-2.53
130	0.0312	10.89	-2.47
135	0.0276	11.29	-2.41
140	0.0245	11.68	-2.36
145	0.0218	12.06	-2.30
150	0.0194	12.43	-2.25

B25/50	B25/75	B25/85	B25/100	B Tol
3925 K	3944 K	3950 K	3958 K	$\pm 3\%$

R Min (Ω)	R Nom (Ω)	R Max (Ω)
1,629,264	2,190,985	2,752,705
1,149,449	1,517,437	1,885,426
820,471	1,064,692	1,308,913
592,259	756,345	920,432
432,155	543,693	655,232
318,609	395,270	471,931
237,241	290,484	343,727
178,343	215,689	253,035
135,299	161,740	188,182
103,548	122,435	141,322
79,918	93,521	107,124
62,181	72,056	81,930
48,758	55,978	63,199
38,518	43,834	49,150
30,647	34,586	38,525
24,552	27,488	30,424
19,800	22,000	24,200
15,837	17,726	19,615
12,750	14,374	15,998
10,330	11,728	13,126
8,420.0	9,626.2	10,832
6,903.2	7,945.9	8,988.6
5,691.4	6,594.8	7,498.3
4,717.5	5,502.3	6,287.1
3,930.6	4,614.0	5,297.5
3,291.2	3,888.0	4,484.7
2,769.1	3,291.5	3,813.9
2,340.6	2,799.1	3,257.6
1,987.1	2,390.7	2,794.2
1,694.3	2,050.4	2,406.5
1,450.6	1,765.6	2,080.6
1,246.8	1,526.2	1,805.7
1,075.8	1,324.3	1,572.7
931.7	1,153.2	1,374.7
809.8	1,007.7	1,205.6
706.2	883.5	1,060.8
618.0	777.1	936.3
542.5	685.7	828.9
477.7	606.8	736.0
421.9	538.6	655.4
373.7	479.4	585.2
331.9	427.9	523.9