

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	4500K $\pm 3\%$
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	SC	0104	H	--
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

SC (B25/85 = 4500K $\pm 3\%$)

T (°C)	R(T) / R25	TF (%)	α (%/°C)
-55	129.8	26.47	-7.51
-50	89.31	22.87	-7.29
-45	62.15	19.67	-7.07
-40	43.72	16.81	-6.87
-35	31.07	14.28	-6.68
-30	22.29	12.03	-6.49
-25	16.15	10.05	-6.31
-20	11.80	8.29	-6.14
-15	8.703	6.75	-5.97
-10	6.470	5.40	-5.81
-5	4.849	4.22	-5.66
0	3.662	3.20	-5.51
5	2.786	2.33	-5.36
10	2.135	1.58	-5.23
15	1.647	0.95	-5.09
20	1.279	0.43	-4.96
25	1.000	0.00	-4.84
30	0.7865	0.41	-4.72
35	0.6223	0.88	-4.60
40	0.4953	1.39	-4.49
45	0.3963	1.96	-4.38
50	0.3189	2.56	-4.28
55	0.2579	3.20	-4.18
60	0.2096	3.87	-4.08
65	0.1712	4.57	-3.99
70	0.1405	5.29	-3.89
75	0.1159	6.04	-3.80
80	0.0960	6.80	-3.72
85	0.0798	7.58	-3.63
90	0.0666	8.38	-3.55
95	0.0559	9.19	-3.47
100	0.0470	10.01	-3.40
105	0.0397	10.84	-3.32
110	0.0337	11.67	-3.25
115	0.0287	12.51	-3.18
120	0.0245	13.36	-3.12
125	0.0210	14.21	-3.05
130	0.0181	15.06	-2.99
135	0.0156	15.92	-2.92
140	0.0135	16.77	-2.86
145	0.0117	17.63	-2.80
150	0.0102	18.48	-2.75

B25/50	B25/75	B25/85	B25/100	B Tol
4405 K	4474 K	4500 K	4534 K	$\pm 3\%$

R Min (Ω)	R Nom (Ω)	R Max (Ω)
9,152,253	12,977,225	16,802,198
6,620,373	8,931,109	11,241,846
4,806,635	6,215,436	7,624,237
3,505,652	4,371,900	5,238,149
2,569,871	3,106,737	3,643,603
1,894,226	2,229,407	2,564,588
1,404,215	1,614,919	1,825,623
1,047,076	1,180,389	1,313,702
785,408	870,277	955,147
592,641	646,997	701,353
449,838	484,865	519,892
343,453	366,170	388,886
263,750	278,588	293,427
203,700	213,474	223,247
158,205	164,708	171,211
123,546	127,928	132,310
97,000	100,000	103,000
75,971	78,653	81,335
59,821	62,234	64,646
47,350	49,526	51,703
37,669	39,634	41,599
30,116	31,889	33,662
24,192	25,791	27,390
19,524	20,965	22,405
15,828	17,125	18,421
12,889	14,054	15,219
10,540	11,587	12,634
8,654.6	9,595.2	10,536
7,135.4	7,980.0	8,824.7
5,905.9	6,664.3	7,422.8
4,906.9	5,588.0	6,269.2
4,091.9	4,703.8	5,315.8
3,424.6	3,974.6	4,524.6
2,876.2	3,370.7	3,865.3
2,423.8	2,868.8	3,313.9
2,049.3	2,450.1	2,851.0
1,738.2	2,099.6	2,460.9
1,479.0	1,805.0	2,131.0
1,262.2	1,556.7	1,851.2
1,080.4	1,346.7	1,613.0
927.5	1,168.5	1,409.5
798.4	1,016.8	1,235.2