

## 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)	$\pm 20\%$
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)



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 $\pm 0.3$	1.25 $\pm 0.2$	1.3 max	0.2 min
	(0.079 $\pm 0.012$ )	(0.049 $\pm 0.008$ )	(0.051) max	(0.008) min



## How to Order (Packaging options)

<b>NB</b>  <b>Type</b> NB = Ni/Sn Term for lead free soldering	<b>12</b>  <b>Size</b> 12 = 0805	<b>SC</b>  <b>Material Code</b> See Datasheet	<b>0104</b>  <b>Resistance (Ohm)</b> 2 Sig. Digits + Number of Zeros	<b>M</b>  <b>Tolerance</b> H = $\pm 3\%$ * J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$	<b>BB</b>  <b>Suffix: Packaging</b> 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

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

T (°C)	R(T) / R25	TF (%)	$\alpha$ (%/°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 ( $\Omega$ )	R Nom ( $\Omega$ )	R Max ( $\Omega$ )
6,946,125	12,977,225	19,008,326
5,102,085	8,931,109	12,760,134
3,750,011	6,215,436	8,680,861
2,762,428	4,371,900	5,981,372
2,041,726	3,106,737	4,171,748
1,515,227	2,229,407	2,943,587
1,129,679	1,614,919	2,100,160
846,410	1,180,389	1,514,368
637,461	870,277	1,103,094
482,651	646,997	811,343
367,411	484,865	602,319
281,204	366,170	451,135
216,390	278,588	340,787
167,409	213,474	259,538
130,204	164,708	199,211
101,798	127,928	154,058
80,000	100,000	120,000
62,600	78,653	94,707
49,241	62,234	75,226
38,931	49,526	60,122
30,932	39,634	48,336
24,695	31,889	39,083
19,808	25,791	31,774
15,960	20,965	25,969
12,917	17,125	21,332
10,499	14,054	17,609
8,569.9	11,587	14,604
7,023.4	9,595.2	12,167
5,778.8	7,980.0	10,181
4,772.9	6,664.3	8,555.8
3,956.9	5,588.0	7,219.1
3,292.3	4,703.8	6,115.4
2,748.9	3,974.6	5,200.2
2,303.1	3,370.7	4,438.3
1,936.1	2,868.8	3,801.6
1,632.8	2,450.1	3,267.5
1,381.3	2,099.6	2,817.8
1,172.1	1,805.0	2,437.9
997.6	1,556.7	2,115.8
851.5	1,346.7	1,841.9
728.8	1,168.5	1,608.2
625.6	1,016.8	1,408.1