

## 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	12 kOhm
Tolerance on Resistance (25°C)	$\pm 3\%$
B 25/85	3790K $\pm 3\%$
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>L0</b>  <b>Material Code</b> See Datasheet	<b>0123</b>  <b>Resistance (Ohm)</b> 2 Sig. Digits + Number of Zeros	<b>H</b>  <b>Tolerance</b> H = $\pm 3\%$ * J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$	<b>BD</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

L0 (B25/85 = 3790K $\pm 3\%$ )

T (°C)	R(T) / R25	TF (%)	$\alpha$ (%/°C)
-55	82.54	22.30	-7.12
-50	58.03	19.27	-6.87
-45	41.31	16.57	-6.63
-40	29.75	14.16	-6.40
-35	21.68	12.03	-6.18
-30	15.97	10.14	-5.98
-25	11.88	8.46	-5.78
-20	8.931	6.99	-5.59
-15	6.777	5.69	-5.40
-10	5.188	4.55	-5.23
-5	4.007	3.56	-5.06
0	3.120	2.70	-4.90
5	2.449	1.96	-4.75
10	1.937	1.33	-4.60
15	1.543	0.80	-4.46
20	1.238	0.36	-4.33
25	1.000	0.00	-4.20
30	0.8128	0.35	-4.07
35	0.6648	0.74	-3.95
40	0.5469	1.17	-3.84
45	0.4525	1.65	-3.73
50	0.3764	2.16	-3.62
55	0.3148	2.69	-3.52
60	0.2646	3.26	-3.42
65	0.2235	3.85	-3.33
70	0.1896	4.46	-3.24
75	0.1616	5.09	-3.15
80	0.1383	5.73	-3.07
85	0.1189	6.39	-2.98
90	0.1026	7.06	-2.91
95	0.0889	7.74	-2.83
100	0.0773	8.43	-2.76
105	0.0674	9.13	-2.69
110	0.0590	9.83	-2.62
115	0.0519	10.54	-2.56
120	0.0457	11.25	-2.49
125	0.0404	11.97	-2.43
130	0.0358	12.69	-2.37
135	0.0319	13.41	-2.32
140	0.0284	14.13	-2.26
145	0.0254	14.85	-2.21
150	0.0228	15.57	-2.16

B25/50	B25/75	B25/85	B25/100	B Tol
3765 K	3784 K	3790 K	3798 K	$\pm 3\%$

R Min ( $\Omega$ )	R Nom ( $\Omega$ )	R Max ( $\Omega$ )
739,918	990,516	1,241,114
541,282	696,327	851,372
398,688	495,664	592,641
295,774	357,054	418,334
221,048	260,145	299,241
166,434	191,605	216,776
126,248	142,593	158,938
96,471	107,174	117,876
74,254	81,318	88,383
57,561	62,261	66,962
44,931	48,085	51,238
35,311	37,445	39,579
27,934	29,392	30,849
22,240	23,246	24,253
17,817	18,520	19,224
14,359	14,858	15,357
11,640	12,000	12,360
9,427.8	9,754.1	10,080
7,679.2	7,977.5	8,275.7
6,289.1	6,563.1	6,837.1
5,177.8	5,430.2	5,682.6
4,284.4	4,517.4	4,750.3
3,562.6	3,777.7	3,992.8
2,976.3	3,175.1	3,373.8
2,497.9	2,681.5	2,865.1
2,105.5	2,275.2	2,444.9
1,782.4	1,939.2	2,096.0
1,514.9	1,659.9	1,804.8
1,292.7	1,426.7	1,560.6
1,107.3	1,231.2	1,355.0
952.0	1,066.6	1,181.1
821.4	927.4	1,033.4
711.1	809.2	907.4
617.7	708.6	799.5
538.2	622.5	706.8
470.5	548.7	626.9
412.5	485.1	557.7
362.7	430.1	497.6
319.8	382.5	445.3
282.7	341.1	399.6
250.6	305.0	359.5
222.7	273.5	324.3