

## 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	2200 Ohm
Tolerance on Resistance (25°C)	$\pm 20\%$
B 25/85	3910K $\pm 3\%$
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>MC</b>  <b>Material Code</b> See Datasheet	<b>0222</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

MC (B25/85 = 3910K $\pm 3\%$ )

T (°C)	R(T) / R25	TF (%)	$\alpha$ (%/°C)
-55	100.6	23.00	-7.56
-50	69.29	19.90	-7.27
-45	48.40	17.10	-7.00
-40	34.27	14.60	-6.75
-35	24.57	12.40	-6.50
-30	17.83	10.50	-6.27
-25	13.09	8.70	-6.05
-20	9.710	7.20	-5.84
-15	7.282	5.90	-5.64
-10	5.514	4.70	-5.45
-5	4.215	3.70	-5.27
0	3.250	2.80	-5.10
5	2.528	2.00	-4.93
10	1.982	1.40	-4.77
15	1.567	0.80	-4.62
20	1.247	0.40	-4.48
25	1.000	0.00	-4.34
30	0.8072	0.40	-4.21
35	0.6559	0.80	-4.08
40	0.5362	1.20	-3.96
45	0.4410	1.70	-3.85
50	0.3647	2.20	-3.74
55	0.3033	2.80	-3.63
60	0.2535	3.40	-3.53
65	0.2130	4.00	-3.43
70	0.1798	4.60	-3.34
75	0.1525	5.20	-3.25
80	0.1300	5.90	-3.16
85	0.1112	6.60	-3.08
90	0.0955	7.30	-2.99
95	0.0824	8.00	-2.92
100	0.0713	8.70	-2.84
105	0.0620	9.40	-2.77
110	0.0541	10.10	-2.70
115	0.0473	10.90	-2.63
120	0.0415	11.60	-2.57
125	0.0366	12.30	-2.51
130	0.0323	13.10	-2.45
135	0.0286	13.80	-2.39
140	0.0254	14.60	-2.33
145	0.0227	15.30	-2.28
150	0.0203	16.10	-2.23

B25/50	B25/75	B25/85	B25/100	B Tol
3887 K	3904 K	3910 K	3917 K	$\pm 3\%$

R Min ( $\Omega$ )	R Nom ( $\Omega$ )	R Max ( $\Omega$ )
126,152	221,320	316,488
91,615	152,438	213,261
66,976	106,480	145,984
49,308	75,394	101,480
36,541	54,054	71,567
27,262	39,226	51,190
20,533	28,798	37,063
15,552	21,362	27,172
11,871	16,020	20,170
9,134.5	12,131	15,127
7,075.3	9,273.0	11,471
5,519.8	7,150.0	8,780.2
4,338.0	5,561.6	6,785.2
3,427.3	4,360.4	5,293.5
2,730.3	3,447.4	4,164.5
2,183.7	2,743.4	3,303.1
1,760.0	2,200.0	2,640.0
1,413.6	1,775.8	2,138.1
1,142.8	1,443.0	1,743.1
929.6	1,179.6	1,429.7
759.7	970.2	1,180.7
624.2	802.3	980.5
515.1	667.3	819.4
427.2	557.7	688.2
356.1	468.6	581.1
298.3	395.6	492.9
251.0	335.5	420.0
211.9	286.0	360.1
179.6	244.6	309.7
152.8	210.1	267.5
130.5	181.3	232.0
111.9	156.9	202.0
96.3	136.4	176.5
83.1	118.9	154.7
71.9	104.1	136.2
62.5	91.4	120.2
54.5	80.5	106.5
47.6	71.1	94.6
41.7	63.0	84.3
36.6	56.0	75.3
32.3	49.9	67.5
28.5	44.6	60.6