

## 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	50 kOhm
Tolerance on Resistance (25°C)	$\pm 3\%$
B 25/85	4080K $\pm 3\%$
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>N0</b>  <b>Material Code</b> See Datasheet	<b>0503</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>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

**N0 (B25/85 = 4080K $\pm 3\%$ )**

T (°C)	R(T) / R25	TF (%)	$\alpha$ (%/°C)
-55	110.1	24.01	-7.50
-50	75.89	20.74	-7.25
-45	52.97	17.83	-7.01
-40	37.42	15.25	-6.78
-35	26.75	12.95	-6.56
-30	19.33	10.91	-6.35
-25	14.11	9.11	-6.14
-20	10.41	7.52	-5.95
-15	7.758	6.12	-5.76
-10	5.834	4.90	-5.58
-5	4.426	3.83	-5.41
0	3.387	2.91	-5.24
5	2.614	2.11	-5.08
10	2.033	1.43	-4.93
15	1.593	0.86	-4.78
20	1.258	0.39	-4.64
25	1.000	0.00	-4.51
30	0.8004	0.37	-4.37
35	0.6449	0.80	-4.25
40	0.5228	1.26	-4.13
45	0.4264	1.77	-4.01
50	0.3497	2.32	-3.90
55	0.2885	2.90	-3.79
60	0.2392	3.51	-3.68
65	0.1994	4.14	-3.58
70	0.1671	4.80	-3.49
75	0.1406	5.48	-3.39
80	0.1189	6.17	-3.30
85	0.1010	6.88	-3.22
90	0.0862	7.60	-3.13
95	0.0738	8.33	-3.05
100	0.0635	9.08	-2.97
105	0.0548	9.83	-2.90
110	0.0475	10.58	-2.83
115	0.0413	11.35	-2.76
120	0.0360	12.11	-2.69
125	0.0315	12.89	-2.62
130	0.0277	13.66	-2.56
135	0.0244	14.43	-2.50
140	0.0216	15.21	-2.44
145	0.0191	15.98	-2.38
150	0.0170	16.76	-2.33

B25/50	B25/75	B25/85	B25/100	B Tol
4049 K	4072 K	4080 K	4090 K	$\pm 3\%$

R Min ( $\Omega$ )	R Nom ( $\Omega$ )	R Max ( $\Omega$ )
4,018,192	5,504,867	6,991,542
2,893,636	3,794,468	4,695,301
2,096,838	2,648,623	3,200,407
1,529,771	1,871,202	2,212,632
1,124,013	1,337,306	1,550,599
831,915	966,362	1,100,809
620,275	705,746	791,217
465,895	520,674	575,453
352,506	387,892	423,278
268,647	291,683	314,720
206,195	221,311	236,427
159,365	169,367	179,368
124,011	130,689	137,366
97,142	101,646	106,150
76,587	79,662	82,737
60,761	62,890	65,020
48,500	50,000	51,500
38,672	40,021	41,371
31,019	32,243	33,466
25,024	26,139	27,253
20,300	21,318	22,336
16,556	17,487	18,417
13,573	14,424	15,275
11,183	11,962	12,741
9,259.1	9,971.3	10,684
7,701.8	8,353.3	9,004.8
6,435.4	7,031.3	7,627.3
5,400.7	5,945.9	6,491.1
4,551.6	5,050.4	5,549.3
3,851.6	4,308.2	4,764.9
3,272.1	3,690.3	4,108.5
2,790.4	3,173.6	3,556.9
2,388.4	2,739.8	3,091.2
2,051.6	2,374.1	2,696.6
1,768.3	2,064.5	2,360.7
1,529.3	1,801.6	2,073.9
1,326.8	1,577.3	1,827.9
1,154.7	1,385.5	1,616.3
1,008.0	1,220.8	1,433.6
882.5	1,078.9	1,275.3
774.8	956.3	1,137.8
682.1	850.0	1,017.9