

## 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	1206
Operating temperature	-55°C to +150°C
Resistance	100 kOhm
Tolerance on Resistance (25°C)	$\pm 20\%$
B 25/85	4160K $\pm 3\%$
Maximum dissipation at 25°C	0.24 W
Thermal dissipation factor	4 mW/°C
Thermal time constant	7 s
Termination	Ni barrier/100%Sn (for Pb free soldering)



MSL 1  
Pb Free  
260°C



AEC-Q200  
based qualification

## Dimensions WWWW

mm (inches)

Size (EIA)	Length (L)	Width (W)	Thickness (T)	Terminal (t)
1206	3.2 $\pm 0.4$	1.6 $\pm 0.25$	1.5 max	0.2 min
	(0.126 $\pm 0.016$ )	(0.063 $\pm 0.01$ )	(0.059) max	(0.008) min



## How to Order (Packaging options)

<b>NB</b>	<b>20</b>	<b>N5</b>	<b>0104</b>	<b>M</b>	<b>--</b>
Type	Size	Material Code	Resistance (Ohm)	Tolerance	Suffix: Packaging
NB = Ni/Sn Term for lead free soldering	20 = 1206	See Datasheet	2 Sig. Digits + Number of Zeros	H = $\pm 3\%*$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$	BA = Plastic tape (180mm reel, 3,000 pcs/reel) BE = Plastic tape (180mm reel, 1,500 pcs/reel) BC = Plastic 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

### N5 (B25/85 = 4160K $\pm 3\%$ )

T (°C)	R(T) / R25	TF (%)	$\alpha$ (%/°C)
-55	115.8	16.32	-7.52
-50	79.72	14.10	-7.28
-45	55.54	12.12	-7.04
-40	39.15	10.36	-6.82
-35	27.91	8.80	-6.61
-30	20.11	7.42	-6.40
-25	14.64	6.19	-6.20
-20	10.77	5.11	-6.01
-15	7.996	4.16	-5.83
-10	5.991	3.33	-5.65
-5	4.529	2.60	-5.48
0	3.454	1.97	-5.31
5	2.655	1.43	-5.16
10	2.057	0.97	-5.00
15	1.606	0.58	-4.86
20	1.263	0.26	-4.72
25	1.000	0.00	-4.58
30	0.7973	0.25	-4.45
35	0.6398	0.54	-4.32
40	0.5167	0.86	-4.20
45	0.4198	1.21	-4.09
50	0.3430	1.58	-3.97
55	0.2819	1.97	-3.86
60	0.2329	2.39	-3.76
65	0.1934	2.82	-3.66
70	0.1614	3.26	-3.56
75	0.1354	3.72	-3.46
80	0.1141	4.19	-3.37
85	0.0966	4.67	-3.29
90	0.0821	5.17	-3.20
95	0.0701	5.66	-3.12
100	0.0601	6.17	-3.04
105	0.0517	6.68	-2.96
110	0.0447	7.19	-2.89
115	0.0387	7.71	-2.82
120	0.0337	8.23	-2.75
125	0.0294	8.76	-2.68
130	0.0258	9.28	-2.62
135	0.0226	9.81	-2.55
140	0.0199	10.34	-2.49
145	0.0176	10.86	-2.44
150	0.0156	11.39	-2.38

B25/50	B25/75	B25/85	B25/100	B Tol
4124 K	4151 K	4160 K	4171 K	$\pm 3\%$

R Min ( $\Omega$ )	R Nom ( $\Omega$ )	R Max ( $\Omega$ )
7,376,799	11,583,639	15,790,480
5,254,014	7,972,380	10,690,746
3,770,222	5,554,320	7,338,417
2,726,458	3,915,244	5,104,030
1,987,181	2,791,050	3,594,919
1,459,810	2,011,236	2,562,662
1,080,838	1,464,401	1,847,964
806,483	1,076,916	1,347,350
606,388	799,577	992,767
459,373	599,149	738,924
350,568	452,950	555,332
269,461	345,351	421,240
208,574	265,475	322,376
162,548	205,687	248,825
127,521	160,575	193,628
100,688	126,274	151,860
80,000	100,000	120,000
63,582	79,729	95,877
50,840	63,983	77,125
40,891	51,668	62,446
33,075	41,977	50,879
26,900	34,302	41,704
21,994	28,188	34,381
18,076	23,289	28,502
14,929	19,342	23,755
12,389	16,144	19,900
10,329	13,541	16,753
8,649.8	11,410	14,171
7,275.2	9,658.4	12,042
6,144.7	8,211.1	10,277
5,210.9	7,010.0	8,809.0
4,436.4	6,008.8	7,581.3
3,791.3	5,170.9	6,550.4
3,251.9	4,466.6	5,681.2
2,799.2	3,872.3	4,945.4
2,417.7	3,368.9	4,320.1
2,095.2	2,941.0	3,786.8
1,821.6	2,575.9	3,330.2
1,588.6	2,263.3	2,938.0
1,389.6	1,994.8	2,599.9
1,219.1	1,763.3	2,307.5
1,072.5	1,563.2	2,053.9