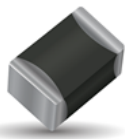


## NTC SMD Thermistor with Ni/Sn termination

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	0603
Operating temperature	-55°C to +150°C
Resistance	150 kOhm
Tolerance on Resistance (25°C)	$\pm 20\%$
B 25/85	4220K $\pm 3\%$
Maximum dissipation at 25°C	0.07 W
Thermal dissipation factor	1 mW/°C
Thermal time constant	4 s
Termination	Ni barrier/100%Sn (for Pb free soldering)



MSL 1  
Pb Free  
260°C



AEC-Q200  
based qualification

## Dimensions

mm (inches)

Size (EIA)	Length (L)	Width (W)	Thickness (T)	Terminal (t)
0603	1.6 $\pm 0.2$	0.8 $\pm 0.2$	1.0 max	0.2 min
	(0.063 $\pm 0.008$ )	(0.031 $\pm 0.008$ )	(0.039) max	(0.008) min



## How to Order (Packaging options)

<b>NB</b>	<b>21</b>	<b>P0</b>	<b>0154</b>	<b>M</b>	<b>BB</b>
Type	Size	Material Code	Resistance (Ohm)	Tolerance	Suffix: Packaging
NB = Ni/Sn Term for lead free soldering	21 = 0603	See Datasheet	2 Sig. Digits + Number of Zeros	H = $\pm 3\%*$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$	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)

\* 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

P0 (B25/85 = 4220K $\pm 3\%$ )

T (°C)	R(T) / R25	TF (%)	$\alpha$ (%/°C)
-55	121.4	24.83	-7.56
-50	83.35	21.45	-7.32
-45	57.92	18.44	-7.09
-40	40.72	15.77	-6.87
-35	28.95	13.39	-6.66
-30	20.80	11.29	-6.45
-25	15.10	9.42	-6.26
-20	11.07	7.78	-6.07
-15	8.197	6.33	-5.89
-10	6.123	5.07	-5.71
-5	4.615	3.96	-5.54
0	3.508	3.00	-5.38
5	2.688	2.18	-5.22
10	2.076	1.48	-5.07
15	1.616	0.89	-4.92
20	1.267	0.40	-4.78
25	1.000	0.00	-4.64
30	0.7949	0.38	-4.51
35	0.6359	0.82	-4.38
40	0.5120	1.31	-4.26
45	0.4148	1.84	-4.14
50	0.3379	2.40	-4.03
55	0.2769	3.00	-3.92
60	0.2281	3.63	-3.81
65	0.1890	4.28	-3.71
70	0.1573	4.96	-3.61
75	0.1316	5.66	-3.52
80	0.1106	6.38	-3.42
85	0.0934	7.11	-3.34
90	0.0792	7.86	-3.25
95	0.0674	8.62	-3.17
100	0.0577	9.39	-3.09
105	0.0495	10.16	-3.01
110	0.0427	10.95	-2.93
115	0.0369	11.74	-2.86
120	0.0320	12.53	-2.79
125	0.0279	13.33	-2.72
130	0.0244	14.13	-2.66
135	0.0214	14.93	-2.59
140	0.0188	15.73	-2.53
145	0.0166	16.53	-2.47
150	0.0147	17.33	-2.42

B25/50	B25/75	B25/85	B25/100	B Tol
4181 K	4211 K	4220 K	4232 K	$\pm 3\%$

R Min (Ω)	R Nom (Ω)	R Max (Ω)
10,044,862	18,207,211	26,369,559
7,319,653	12,502,049	17,684,445
5,348,284	8,688,599	12,028,914
3,923,582	6,108,624	8,293,665
2,892,551	4,342,765	5,792,980
2,144,225	3,120,559	4,096,893
1,598,913	2,265,499	2,932,084
1,199,651	1,661,081	2,122,510
905,787	1,229,564	1,553,340
688,286	918,521	1,148,757
526,368	692,240	858,112
405,111	526,152	647,192
313,759	403,195	492,631
244,521	311,415	378,308
191,730	242,357	292,984
151,239	189,996	228,754
120,000	150,000	180,000
94,925	119,229	143,534
75,529	95,392	115,255
60,438	76,803	93,169
48,629	62,214	75,798
39,336	50,691	62,047
31,983	41,537	51,090
26,135	34,222	42,308
21,460	28,343	35,226
17,704	23,594	29,483
14,671	19,736	24,801
12,212	16,588	20,964
10,208	14,005	17,802
8,568	11,877	15,186
7,220	10,115	13,009
6,108	8,649	11,191
5,186	7,426	9,666
4,419	6,400	8,380
3,779	5,536	7,293
3,242	4,806	6,369
2,791	4,186	5,582
2,410	3,659	4,908
2,088	3,208	4,329
1,814	2,822	3,830
1,580	2,490	3,399
1,381	2,203	3,026