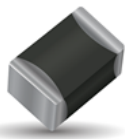


## NTC SMD Thermistor with Ni/Sn termination

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	50 kOhm
Tolerance on Resistance (25°C)	$\pm 10\%$
B 25/85	4000K $\pm 3\%$
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>M4</b>	<b>0503</b>	<b>K</b>	<b>--</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

### M4 (B25/85 = 4000K $\pm 3\%$ )

T (°C)	R(T) / R25	TF (%)	$\alpha$ (%/°C)
-55	98.22	23.50	-7.38
-50	68.17	20.31	-7.12
-45	47.92	17.46	-6.88
-40	34.11	14.93	-6.64
-35	24.57	12.68	-6.42
-30	17.89	10.68	-6.20
-25	13.17	8.92	-6.00
-20	9.790	7.36	-5.80
-15	7.349	5.99	-5.62
-10	5.568	4.80	-5.44
-5	4.256	3.75	-5.27
0	3.280	2.84	-5.11
5	2.549	2.07	-4.95
10	1.996	1.40	-4.80
15	1.574	0.84	-4.66
20	1.250	0.38	-4.52
25	1.000	0.00	-4.39
30	0.8049	0.36	-4.27
35	0.6519	0.78	-4.15
40	0.5311	1.24	-4.03
45	0.4352	1.74	-3.92
50	0.3586	2.27	-3.81
55	0.2970	2.84	-3.71
60	0.2472	3.44	-3.61
65	0.2068	4.06	-3.52
70	0.1738	4.70	-3.42
75	0.1468	5.36	-3.34
80	0.1245	6.04	-3.25
85	0.1060	6.73	-3.17
90	0.0906	7.44	-3.09
95	0.0778	8.16	-3.01
100	0.0670	8.89	-2.94
105	0.0579	9.62	-2.87
110	0.0503	10.36	-2.80
115	0.0438	11.11	-2.74
120	0.0382	11.86	-2.67
125	0.0335	12.62	-2.61
130	0.0294	13.37	-2.55
135	0.0259	14.13	-2.49
140	0.0229	14.89	-2.44
145	0.0203	15.65	-2.38
150	0.0181	16.41	-2.33

B25/50	B25/75	B25/85	B25/100	B Tol
3953 K	3984 K	4000 K	4010 K	$\pm 3\%$

R Min (Ω)	R Nom (Ω)	R Max (Ω)
3,265,594	4,910,981	6,556,368
2,375,326	3,408,255	4,441,185
1,738,229	2,396,227	3,054,225
1,280,427	1,705,590	2,130,752
949,750	1,228,313	1,506,876
709,487	894,510	1,079,534
533,808	658,373	782,938
404,506	489,500	574,494
308,696	367,471	426,245
237,222	278,414	319,606
183,542	212,802	242,063
142,957	164,025	185,093
112,070	127,447	142,824
88,412	99,789	111,167
70,177	78,710	87,244
56,034	62,523	69,011
45,000	50,000	55,000
36,074	40,245	44,416
29,081	32,595	36,108
23,572	26,556	29,540
19,206	21,760	24,314
15,728	17,928	20,129
12,943	14,850	16,756
10,701	12,362	14,023
8,888	10,341	11,795
7,414	8,692	9,969
6,211	7,338	8,465
5,224	6,223	7,221
4,412	5,299	6,185
3,740	4,530	5,320
3,182	3,888	4,594
2,717	3,350	3,982
2,328	2,896	3,465
2,001	2,513	3,025
1,726	2,188	2,650
1,493	1,911	2,329
1,296	1,675	2,053
1,128	1,472	1,816
984.3	1,297	1,610
861.4	1,147	1,432
755.9	1,017	1,277
665.0	903.6	1,142