

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)	$\pm 20\%$
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 ± 0.3	1.25 ± 0.2	1.3 max	0.2 min
	(0.079 ± 0.012)	(0.049 ± 0.008)	(0.051) max	(0.008) min



How to Order (Packaging options)

NB  Type NB = Ni/Sn Term for lead free soldering	12  Size 12 = 0805	N0  Material Code See Datasheet	0503  Resistance (Ohm) 2 Sig. Digits + Number of Zeros	M  Tolerance H = $\pm 3\%^*$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$	BD  Suffix: Packaging 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 (%)	α (%/°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 (Ω)	R Nom (Ω)	R Max (Ω)
3,082,365	5,504,867	7,927,369
2,248,576	3,794,468	5,340,361
1,646,572	2,648,623	3,650,673
1,211,666	1,871,202	2,530,737
896,671	1,337,306	1,777,941
667,634	966,362	1,265,091
500,298	705,746	911,194
377,380	520,674	663,968
286,565	387,892	489,220
219,061	291,683	364,306
168,572	221,311	274,050
130,573	169,367	208,161
101,794	130,689	159,584
79,862	101,646	123,430
63,044	79,662	96,279
50,070	62,890	75,711
40,000	50,000	60,000
31,868	40,021	48,174
25,538	32,243	38,947
20,580	26,139	31,697
16,676	21,318	25,960
13,583	17,487	21,390
11,121	14,424	17,728
9,149.9	11,962	14,774
7,564.0	9,971.3	12,379
6,281.7	8,353.3	10,425
5,240.1	7,031.3	8,822.6
4,389.9	5,945.9	7,501.9
3,693.0	5,050.4	6,407.9
3,119.2	4,308.2	5,497.3
2,644.7	3,690.3	4,735.9
2,250.9	3,173.6	4,096.4
1,922.6	2,739.8	3,557.0
1,648.0	2,374.1	3,100.1
1,417.3	2,064.5	2,711.7
1,223.0	1,801.6	2,380.1
1,058.6	1,577.3	2,096.1
919.2	1,385.5	1,851.8
800.4	1,220.8	1,641.1
699.0	1,078.9	1,458.8
612.2	956.3	1,300.4
537.6	850.0	1,162.4