

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	39 kOhm
Tolerance on Resistance (25°C)	$\pm 5\%$
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	12	N0	0393	J	--
Type	Size	Material Code	Resistance (Ohm)	Tolerance	Suffix: Packaging
NB = Ni/Sn Term for lead free soldering	12 = 0805	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

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)
3,048,314	4,293,796	5,539,279
2,197,842	2,959,685	3,721,528
1,594,215	2,065,926	2,537,636
1,164,030	1,459,537	1,755,044
855,868	1,043,098	1,230,329
633,819	753,763	873,707
472,805	550,482	628,159
355,275	406,126	456,976
268,904	302,556	336,208
204,994	227,513	250,032
157,380	172,623	187,865
121,663	132,106	142,549
94,690	101,937	109,185
74,185	79,284	84,383
58,495	62,136	65,777
46,412	49,054	51,696
37,050	39,000	40,950
29,540	31,216	32,893
23,692	25,149	26,607
19,111	20,388	21,665
15,501	16,628	17,754
12,641	13,640	14,638
10,362	11,251	12,140
8,536.5	9,330.4	10,124
7,066.5	7,777.6	8,488.7
5,877.1	6,515.6	7,154.0
4,909.9	5,484.4	6,059.0
4,119.8	4,637.8	5,155.8
3,471.4	3,939.3	4,407.3
2,937.0	3,360.4	3,783.8
2,494.7	2,878.4	3,262.2
2,127.0	2,475.4	2,823.9
1,820.2	2,137.0	2,453.9
1,563.2	1,851.8	2,140.3
1,347.1	1,610.3	1,873.6
1,164.7	1,405.2	1,645.7
1,010.3	1,230.3	1,450.4
879.1	1,080.7	1,282.3
767.2	952.2	1,137.3
671.5	841.5	1,011.6
589.4	745.9	902.4
518.8	663.0	807.3