

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	18 kOhm
Tolerance on Resistance (25°C)	$\pm 20\%$
B 25/85	3950K $\pm 3\%$
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	M0  Material Code See Datasheet	0183  Resistance (Ohm) 2 Sig. Digits + Number of Zeros	M  Tolerance H = $\pm 3\%^*$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$	BF  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

M0 (B25/85 = 3950K $\pm 3\%$)

T (°C)	R(T) / R25	TF (%)	α (%/°C)
-55	99.59	15.64	-7.42
-50	68.97	14.25	-7.16
-45	48.40	12.94	-6.91
-40	34.38	11.69	-6.67
-35	24.71	10.51	-6.45
-30	17.97	9.39	-6.23
-25	13.20	8.33	-6.02
-20	9.804	7.31	-5.82
-15	7.352	6.35	-5.63
-10	5.565	5.43	-5.45
-5	4.251	4.55	-5.28
0	3.275	3.70	-5.11
5	2.544	2.90	-4.95
10	1.992	2.13	-4.80
15	1.572	1.39	-4.65
20	1.249	0.68	-4.51
25	1.000	0.00	-4.38
30	0.8057	0.66	-4.25
35	0.6534	1.30	-4.12
40	0.5331	1.92	-4.00
45	0.4376	2.53	-3.89
50	0.3612	3.12	-3.77
55	0.2998	3.70	-3.67
60	0.2501	4.26	-3.57
65	0.2097	4.81	-3.47
70	0.1767	5.35	-3.37
75	0.1496	5.87	-3.28
80	0.1272	6.38	-3.19
85	0.1087	6.88	-3.11
90	0.0932	7.37	-3.03
95	0.0803	7.84	-2.95
100	0.0694	8.31	-2.87
105	0.0602	8.76	-2.80
110	0.0524	9.21	-2.73
115	0.0458	9.64	-2.66
120	0.0402	10.07	-2.60
125	0.0353	10.48	-2.53
130	0.0312	10.89	-2.47
135	0.0276	11.29	-2.41
140	0.0245	11.68	-2.36
145	0.0218	12.06	-2.30
150	0.0194	12.43	-2.25

B25/50	B25/75	B25/85	B25/100	B Tol
3925 K	3944 K	3950 K	3958 K	$\pm 3\%$

R Min (Ω)	R Nom (Ω)	R Max (Ω)
1,153,772	1,792,624	2,431,475
816,304	1,241,540	1,666,775
584,184	871,112	1,158,040
422,693	618,828	814,963
309,097	444,840	580,583
228,340	323,403	418,466
170,339	237,668	304,998
128,270	176,473	224,676
97,466	132,333	167,200
74,704	100,174	125,644
57,736	76,517	95,299
44,980	58,955	72,929
35,313	45,800	56,288
27,928	35,864	43,800
22,245	28,297	34,350
17,839	22,490	27,141
14,400	18,000	21,600
11,507	14,503	17,499
9,255.8	11,761	14,265
7,492.2	9,595.8	11,699
6,101.5	7,875.9	9,650.4
4,998.0	6,501.2	8,004.4
4,117.0	5,395.8	6,674.6
3,409.6	4,501.9	5,594.2
2,838.4	3,775.1	4,711.8
2,374.7	3,181.1	3,987.4
1,996.3	2,693.0	3,389.8
1,686.0	2,290.2	2,894.3
1,430.2	1,956.0	2,481.8
1,218.5	1,677.6	2,136.7
1,042.4	1,444.6	1,846.8
895.3	1,248.7	1,602.2
771.9	1,083.5	1,395.1
668.0	943.5	1,219.1
580.1	824.5	1,068.9
505.5	722.9	940.2
442.0	635.8	829.6
387.7	561.0	734.3
341.2	496.5	651.8
301.1	440.7	580.3
266.5	392.3	518.0
236.6	350.1	463.6