

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	27 kOhm
Tolerance on Resistance (25°C)	$\pm 3\%$
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	0273  Resistance (Ohm) 2 Sig. Digits + Number of Zeros	H  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)
2,187,777	2,688,936	3,190,094
1,541,049	1,862,309	2,183,570
1,098,409	1,306,668	1,514,927
791,840	928,242	1,064,644
577,080	667,260	757,440
424,978	485,105	545,231
316,114	356,503	396,891
237,405	264,710	292,014
179,943	198,500	217,056
137,600	150,261	162,922
106,116	114,776	123,437
82,504	88,432	94,360
64,648	68,700	72,753
51,037	53,796	56,554
40,583	42,446	44,309
32,494	33,735	34,977
26,190	27,000	27,810
20,959	21,754	22,550
16,883	17,641	18,399
13,685	14,394	15,102
11,161	11,814	12,467
9,154.8	9,751.8	10,349
7,551.4	8,093.7	8,635.9
6,262.4	6,752.9	7,243.3
5,220.3	5,662.7	6,105.0
4,373.3	4,771.6	5,169.9
3,681.2	4,039.6	4,397.9
3,113.0	3,435.2	3,757.5
2,644.1	2,934.0	3,223.9
2,255.5	2,516.4	2,777.2
1,931.9	2,166.9	2,401.8
1,661.3	1,873.1	2,084.9
1,434.1	1,625.3	1,816.4
1,242.5	1,415.3	1,588.0
1,080.4	1,236.7	1,393.0
942.6	1,084.3	1,226.0
825.2	953.7	1,082.3
724.7	841.5	958.4
638.4	744.8	851.2
564.0	661.0	758.1
499.8	588.4	677.0
444.1	525.1	606.2