

NTC SMD Thermistor with Ni/Sn termination

for Automotive, Industrial and General applications

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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	33 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)



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	0333  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)
2,115,249	3,286,477	4,457,705
1,496,558	2,276,156	3,055,754
1,071,003	1,597,038	2,123,073
774,936	1,134,518	1,494,100
566,678	815,540	1,064,402
418,624	592,906	767,187
312,288	435,725	559,162
235,161	323,534	411,907
178,687	242,611	306,534
136,957	183,652	230,348
105,849	140,282	174,715
82,464	108,084	133,704
64,740	83,967	103,195
51,202	65,751	80,300
40,782	51,879	62,975
32,705	41,232	49,759
26,400	33,000	39,600
21,096	26,589	32,081
16,969	21,561	26,153
13,736	17,592	21,449
11,186	14,439	17,692
9,163.0	11,919	14,675
7,547.8	9,892.3	12,237
6,251.0	8,253.5	10,256
5,203.8	6,921.0	8,638.3
4,353.7	5,832.0	7,310.2
3,659.9	4,937.2	6,214.6
3,091.0	4,198.6	5,306.3
2,622.1	3,586.0	4,549.9
2,233.9	3,075.5	3,917.2
1,911.0	2,648.4	3,385.8
1,641.3	2,289.4	2,937.4
1,415.1	1,986.4	2,557.8
1,224.6	1,729.8	2,235.0
1,063.5	1,511.5	1,959.6
926.8	1,325.2	1,723.7
810.4	1,165.7	1,521.0
710.8	1,028.5	1,346.2
625.5	910.3	1,195.0
552.0	807.9	1,063.9
488.6	719.1	949.7
433.7	641.8	850.0