

## 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	27 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 $\pm 0.3$	1.25 $\pm 0.2$	1.3 max	0.2 min
	(0.079 $\pm 0.012$ )	(0.049 $\pm 0.008$ )	(0.051) max	(0.008) min



## How to Order (Packaging options)

<b>NB</b>  <b>Type</b> NB = Ni/Sn Term for lead free soldering	<b>12</b>  <b>Size</b> 12 = 0805	<b>M0</b>  <b>Material Code</b> See Datasheet	<b>0273</b>  <b>Resistance (Ohm)</b> 2 Sig. Digits + Number of Zeros	<b>M</b>  <b>Tolerance</b> H = $\pm 3\%^*$ J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$	<b>BF</b>  <b>Suffix: Packaging</b> 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 (%)	$\alpha$ (%/°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 ( $\Omega$ )	R Nom ( $\Omega$ )	R Max ( $\Omega$ )
1,730,658	2,688,936	3,647,213
1,224,456	1,862,309	2,500,163
876,275	1,306,668	1,737,060
634,039	928,242	1,222,445
463,646	667,260	870,874
342,510	485,105	627,699
255,509	356,503	457,497
192,405	264,710	337,014
146,199	198,500	250,801
112,055	150,261	188,466
86,604	114,776	142,949
67,470	88,432	109,394
52,969	68,700	84,432
41,892	53,796	65,700
33,367	42,446	51,525
26,759	33,735	40,712
21,600	27,000	32,400
17,261	21,754	26,248
13,884	17,641	21,398
11,238	14,394	17,549
9,152.3	11,814	14,476
7,497.0	9,751.8	12,007
6,175.5	8,093.7	10,012
5,114.4	6,752.9	8,391.3
4,257.6	5,662.7	7,067.7
3,562.1	4,771.6	5,981.1
2,994.5	4,039.6	5,084.6
2,529.0	3,435.2	4,341.5
2,145.3	2,934.0	3,722.7
1,827.7	2,516.4	3,205.0
1,563.5	2,166.9	2,770.2
1,342.9	1,873.1	2,403.4
1,157.8	1,625.3	2,092.7
1,001.9	1,415.3	1,828.6
870.1	1,236.7	1,603.3
758.3	1,084.3	1,410.3
663.0	953.7	1,244.5
581.6	841.5	1,101.5
511.8	744.8	977.8
451.7	661.0	870.4
399.8	588.4	777.0
354.8	525.1	695.4