

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	47 kOhm
Tolerance on Resistance (25°C)	$\pm 10\%$
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)



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	0473	K	--
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)
3,414,880	5,174,575	6,934,270
2,470,341	3,566,800	4,663,259
1,796,748	2,489,705	3,182,662
1,314,859	1,758,929	2,203,000
968,577	1,257,067	1,545,558
718,414	908,381	1,098,347
536,621	663,401	790,182
403,681	489,434	575,186
305,833	364,619	423,405
233,335	274,182	315,029
179,261	208,032	236,804
138,659	159,205	179,751
107,971	122,848	137,724
84,625	95,547	106,470
66,750	74,882	83,014
52,977	59,117	65,257
42,300	47,000	51,700
33,718	37,620	41,522
27,036	30,308	33,580
21,803	24,570	27,338
17,679	20,039	22,398
14,412	16,438	18,463
11,810	13,559	15,308
9,725.3	11,244	12,763
8,047.4	9,373.0	10,699
6,690.0	7,852.1	9,014.1
5,586.6	6,609.4	7,632.3
4,685.5	5,589.2	6,492.9
3,946.2	4,747.4	5,548.7
3,337.0	4,049.7	4,762.5
2,832.9	3,468.9	4,104.8
2,414.1	2,983.2	3,552.3
2,064.8	2,575.4	3,086.0
1,772.2	2,231.6	2,691.0
1,526.4	1,940.6	2,354.9
1,319.0	1,693.5	2,068.0
1,143.4	1,482.7	1,822.0
994.3	1,302.4	1,610.5
867.2	1,147.5	1,427.9
758.5	1,014.2	1,269.8
665.4	898.9	1,132.5
585.2	799.0	1,012.8