

## 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	56 kOhm
Tolerance on Resistance (25°C)	$\pm 3\%$
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)



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)

**NB**



Type

NB = Ni/Sn Term for lead free soldering

**12**



Size

12 = 0805

**N0**



Material Code

See Datasheet

**0563**



Resistance (Ohm)

2 Sig. Digits + Number of Zeros

**H**



Tolerance

H =  $\pm 3\%$ \*  
J =  $\pm 5\%$   
K =  $\pm 10\%$   
M =  $\pm 20\%$

\* For selected PNs

**BB**



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)

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 (%)	$\alpha$ (%/°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 ( $\Omega$ )	R Nom ( $\Omega$ )	R Max ( $\Omega$ )
4,500,375	6,165,451	7,830,527
3,240,872	4,249,804	5,258,737
2,348,458	2,966,457	3,584,456
1,713,343	2,095,746	2,478,148
1,258,894	1,497,782	1,736,671
931,745	1,082,326	1,232,907
694,708	790,436	886,163
521,802	583,155	644,507
394,807	434,439	474,071
300,884	326,685	352,486
230,938	247,868	264,798
178,489	189,691	200,892
138,893	146,372	153,850
108,799	113,844	118,889
85,777	89,221	92,665
68,052	70,437	72,822
54,320	56,000	57,680
43,312	44,824	46,335
34,741	36,112	37,482
28,027	29,275	30,524
22,736	23,876	25,016
18,543	19,585	20,627
15,202	16,155	17,109
12,525	13,397	14,270
10,370	11,168	11,966
8,626.0	9,355.7	10,085
7,207.6	7,875.1	8,542.5
6,048.8	6,659.4	7,270.0
5,097.8	5,656.5	6,215.2
4,313.8	4,825.2	5,336.7
3,664.7	4,133.1	4,601.6
3,125.2	3,554.5	3,983.7
2,675.0	3,068.6	3,462.2
2,297.7	2,658.9	3,020.1
1,980.5	2,312.3	2,644.0
1,712.8	2,017.7	2,322.7
1,486.0	1,766.6	2,047.3
1,293.3	1,551.8	1,810.3
1,128.9	1,367.3	1,605.6
988.4	1,208.4	1,428.4
867.7	1,071.0	1,274.4
763.9	952.0	1,140.1