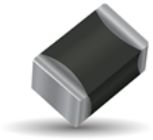
NB12N50823KBD

(0805, 82 kOhm ±10%, 4160K, Ni/100% Sn)

NTC SMD Thermistor with Ni/Sn termination

for Automotive, Industrial and General applications

To view data online visit:
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	82 kOhm
Tolerance on Resistance (25°C)	±10%
B 25/85	4160K±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

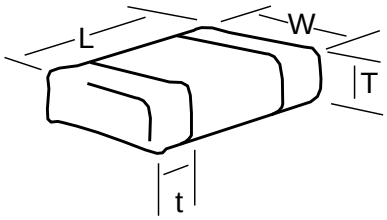
MSL 1
Pb Free
260°C

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	12	N5	0823	K	BD
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 = ±3%* J = ±5% K = ±10% M = ±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 beleived 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

N5 (B25/85 = 4160K±3%)

B25/50	B25/75	B25/85	B25/100	B Tol
4124 K	4151 K	4160 K	4171 K	±3%

T (°C)	R(T) / R25	TF (%)	α (%/°C)	R Min (Ω)	R Nom (Ω)	R Max (Ω)
-55	115.8	16.32	-7.52	6,998,833	9,498,584	11,998,335
-50	79.72	14.10	-7.28	4,962,026	6,537,351	8,112,676
-45	55.54	12.12	-7.04	3,547,037	4,554,542	5,562,047
-40	39.15	10.36	-6.82	2,556,745	3,210,500	3,864,255
-35	27.91	8.80	-6.61	1,858,355	2,288,661	2,718,967
-30	20.11	7.42	-6.40	1,361,966	1,649,214	1,936,462
-25	14.64	6.19	-6.20	1,006,368	1,200,809	1,395,250
-20	10.77	5.11	-6.01	749,623	883,072	1,016,520
-15	7.996	4.16	-5.83	562,803	655,653	748,504
-10	5.991	3.33	-5.65	425,816	491,302	556,787
-5	4.529	2.60	-5.48	324,608	371,419	418,230
0	3.454	1.97	-5.31	249,277	283,187	317,098
5	2.655	1.43	-5.16	192,799	217,690	242,580
10	2.057	0.97	-5.00	150,156	168,663	187,170
15	1.606	0.58	-4.86	117,735	131,671	145,608
20	1.263	0.26	-4.72	92,919	103,545	114,171
25	1.000	0.00	-4.58	73,800	82,000	90,200
30	0.7973	0.25	-4.45	58,675	65,378	72,081
35	0.6398	0.54	-4.32	46,936	52,466	57,996
40	0.5167	0.86	-4.20	37,767	42,368	46,969
45	0.4198	1.21	-4.09	30,564	34,421	38,278
50	0.3430	1.58	-3.97	24,871	28,128	31,384
55	0.2819	1.97	-3.86	20,347	23,114	25,881
60	0.2329	2.39	-3.76	16,732	19,097	21,462
65	0.1934	2.82	-3.66	13,828	15,860	17,893
70	0.1614	3.26	-3.56	11,483	13,238	14,994
75	0.1354	3.72	-3.46	9,579.9	11,103	12,627
80	0.1141	4.19	-3.37	8,028.5	9,356.4	10,684
85	0.0966	4.67	-3.29	6,757.7	7,919.9	9,082.1
90	0.0821	5.17	-3.20	5,712.0	6,733.1	7,754.2
95	0.0701	5.66	-3.12	4,847.8	5,748.2	6,648.6
100	0.0601	6.17	-3.04	4,130.6	4,927.2	5,723.9
105	0.0517	6.68	-2.96	3,532.9	4,240.1	4,947.3
110	0.0447	7.19	-2.89	3,032.8	3,662.6	4,292.3
115	0.0387	7.71	-2.82	2,612.8	3,175.3	3,737.7
120	0.0337	8.23	-2.75	2,258.8	2,762.5	3,266.2
125	0.0294	8.76	-2.68	1,959.2	2,411.6	2,864.0
130	0.0258	9.28	-2.62	1,704.9	2,112.2	2,519.5
135	0.0226	9.81	-2.55	1,488.2	1,855.9	2,223.5
140	0.0199	10.34	-2.49	1,303.1	1,635.7	1,968.3
145	0.0176	10.86	-2.44	1,144.3	1,445.9	1,747.6
150	0.0156	11.39	-2.38	1,007.7	1,281.9	1,556.0