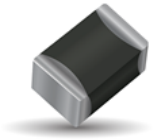
NB12M00223KBF

(0805, 22 kOhm ±10%, 3950K, 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	22 kOhm
Tolerance on Resistance (25°C)	±10%
B 25/85	3950K±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

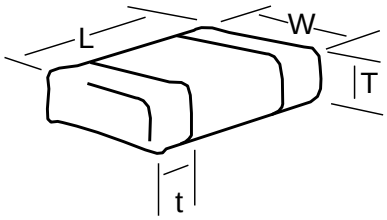
MSL 1
Pb Free
260°C

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	M0	0223	K	BF
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

M0 (B25/85 = 3950K±3%)

B25/50	B25/75	B25/85	B25/100	B Tol
3925 K	3944 K	3950 K	3958 K	±3%

T (°C)	R(T) / R25	TF (%)	α (%/°C)	R Min (Ω)	R Nom (Ω)	R Max (Ω)
-55	99.59	15.64	-7.42	1,629,264	2,190,985	2,752,705
-50	68.97	14.25	-7.16	1,149,449	1,517,437	1,885,426
-45	48.40	12.94	-6.91	820,471	1,064,692	1,308,913
-40	34.38	11.69	-6.67	592,259	756,345	920,432
-35	24.71	10.51	-6.45	432,155	543,693	655,232
-30	17.97	9.39	-6.23	318,609	395,270	471,931
-25	13.20	8.33	-6.02	237,241	290,484	343,727
-20	9.804	7.31	-5.82	178,343	215,689	253,035
-15	7.352	6.35	-5.63	135,299	161,740	188,182
-10	5.565	5.43	-5.45	103,548	122,435	141,322
-5	4.251	4.55	-5.28	79,918	93,521	107,124
0	3.275	3.70	-5.11	62,181	72,056	81,930
5	2.544	2.90	-4.95	48,758	55,978	63,199
10	1.992	2.13	-4.80	38,518	43,834	49,150
15	1.572	1.39	-4.65	30,647	34,586	38,525
20	1.249	0.68	-4.51	24,552	27,488	30,424
25	1.000	0.00	-4.38	19,800	22,000	24,200
30	0.8057	0.66	-4.25	15,837	17,726	19,615
35	0.6534	1.30	-4.12	12,750	14,374	15,998
40	0.5331	1.92	-4.00	10,330	11,728	13,126
45	0.4376	2.53	-3.89	8,420.0	9,626.2	10,832
50	0.3612	3.12	-3.77	6,903.2	7,945.9	8,988.6
55	0.2998	3.70	-3.67	5,691.4	6,594.8	7,498.3
60	0.2501	4.26	-3.57	4,717.5	5,502.3	6,287.1
65	0.2097	4.81	-3.47	3,930.6	4,614.0	5,297.5
70	0.1767	5.35	-3.37	3,291.2	3,888.0	4,484.7
75	0.1496	5.87	-3.28	2,769.1	3,291.5	3,813.9
80	0.1272	6.38	-3.19	2,340.6	2,799.1	3,257.6
85	0.1087	6.88	-3.11	1,987.1	2,390.7	2,794.2
90	0.0932	7.37	-3.03	1,694.3	2,050.4	2,406.5
95	0.0803	7.84	-2.95	1,450.6	1,765.6	2,080.6
100	0.0694	8.31	-2.87	1,246.8	1,526.2	1,805.7
105	0.0602	8.76	-2.80	1,075.8	1,324.3	1,572.7
110	0.0524	9.21	-2.73	931.7	1,153.2	1,374.7
115	0.0458	9.64	-2.66	809.8	1,007.7	1,205.6
120	0.0402	10.07	-2.60	706.2	883.5	1,060.8
125	0.0353	10.48	-2.53	618.0	777.1	936.3
130	0.0312	10.89	-2.47	542.5	685.7	828.9
135	0.0276	11.29	-2.41	477.7	606.8	736.0
140	0.0245	11.68	-2.36	421.9	538.6	655.4
145	0.0218	12.06	-2.30	373.7	479.4	585.2
150	0.0194	12.43	-2.25	331.9	427.9	523.9