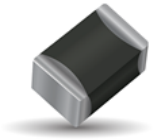
NB20M40503HBA

(1206, 50 kOhm ±3%, 4000K, 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	1206
Operating temperature	-55°C to +150°C
Resistance	50 kOhm
Tolerance on Resistance (25°C)	±3%
B 25/85	4000K±3%
Maximum dissipation at 25°C	0.24 W
Thermal dissipation factor	4 mW/°C
Thermal time constant	7 s
Termination	Ni barrier/100%Sn (for Pb free soldering)

RoHS COMPLIANT

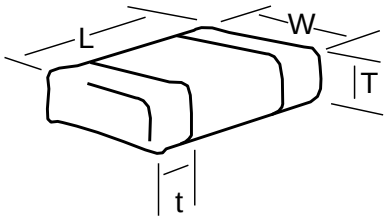
MSL 1
Pb Free 260°C

AEC-Q200 based qualification

Dimensions WWWW

mm (inches)

Size (EIA)	Length (L)	Width (W)	Thickness (T)	Terminal (t)
1206	3.2±0.4	1.6±0.25	1.5 max	0.2 min
	(0.126±0.016)	(0.063±0.01)	(0.059) max	(0.008) min



How to Order (Packaging options)

NB	20	M4	0503	H	BA
Type	**Size**	**Material Code**	**Resistance (Ohm)**	**Tolerance**	**Suffix: Packaging**
NB = Ni/Sn Term for lead free soldering	20 = 1206	See Datasheet	2 Sig. Digits + Number of Zeros	H = ±3%* J = ±5% K = ±10% M = ±20% * For selected PNs	BA = Plastic tape (180mm reel, 3,000 pcs/reel) BE = Plastic tape (180mm reel, 1,500 pcs/reel) BC = Plastic 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 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

M4 (B25/85 = 4000K±3%)

B25/50	B25/75	B25/85	B25/100	B Tol
3953 K	3984 K	4000 K	4010 K	±3%

T (°C)	R(T) / R25	TF (%)	α (%/°C)	R Min (Ω)	R Nom (Ω)	R Max (Ω)
-55	98.22	23.50	-7.38	3,609,363	4,910,981	6,212,599
-50	68.17	20.31	-7.12	2,613,903	3,408,255	4,202,607
-45	47.92	17.46	-6.88	1,905,965	2,396,227	2,886,489
-40	34.11	14.93	-6.64	1,399,819	1,705,590	2,011,361
-35	24.57	12.68	-6.42	1,035,732	1,228,313	1,420,895
-30	17.89	10.68	-6.20	772,102	894,510	1,016,918
-25	13.17	8.92	-6.00	579,894	658,373	736,852
-20	9.790	7.36	-5.80	438,771	489,500	540,229
-15	7.349	5.99	-5.62	334,419	367,471	400,523
-10	5.568	4.80	-5.44	256,711	278,414	300,117
-5	4.256	3.75	-5.27	198,438	212,802	227,167
0	3.280	2.84	-5.11	154,439	164,025	173,611
5	2.549	2.07	-4.95	120,991	127,447	133,903
10	1.996	1.40	-4.80	95,397	99,789	104,182
15	1.574	0.84	-4.66	75,686	78,710	81,734
20	1.250	0.38	-4.52	60,411	62,523	64,634
25	1.000	0.00	-4.39	48,500	50,000	51,500
30	0.8049	0.36	-4.27	38,891	40,245	41,599
35	0.6519	0.78	-4.15	31,363	32,595	33,826
40	0.5311	1.24	-4.03	25,431	26,556	27,681
45	0.4352	1.74	-3.92	20,729	21,760	22,791
50	0.3586	2.27	-3.81	16,983	17,928	18,874
55	0.2970	2.84	-3.71	13,982	14,850	15,717
60	0.2472	3.44	-3.61	11,566	12,362	13,158
65	0.2068	4.06	-3.52	9,611.7	10,341	11,071
70	0.1738	4.70	-3.42	8,022.5	8,691.7	9,360.8
75	0.1468	5.36	-3.34	6,724.7	7,338.2	7,951.8
80	0.1245	6.04	-3.25	5,660.0	6,222.5	6,785.0
85	0.1060	6.73	-3.17	4,782.9	5,298.6	5,814.4
90	0.0906	7.44	-3.09	4,057.2	4,530.1	5,003.1
95	0.0778	8.16	-3.01	3,454.3	3,888.2	4,322.1
100	0.0670	8.89	-2.94	2,951.7	3,349.8	3,748.0
105	0.0579	9.62	-2.87	2,530.9	2,896.4	3,262.0
110	0.0503	10.36	-2.80	2,177.3	2,513.2	2,849.0
115	0.0438	11.11	-2.74	1,879.3	2,188.0	2,496.7
120	0.0382	11.86	-2.67	1,627.1	1,911.2	2,195.2
125	0.0335	12.62	-2.61	1,413.1	1,674.6	1,936.1
130	0.0294	13.37	-2.55	1,230.8	1,471.8	1,712.7
135	0.0259	14.13	-2.49	1,075.1	1,297.3	1,519.6
140	0.0229	14.89	-2.44	941.7	1,146.9	1,352.0
145	0.0203	15.65	-2.38	827.0	1,016.6	1,206.2
150	0.0181	16.41	-2.33	728.2	903.6	1,078.9