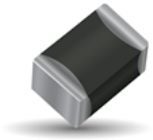
NB21M40503KBF

(0603, 50 kOhm ±10%, 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	0603
Operating temperature	-55°C to +150°C
Resistance	50 kOhm
Tolerance on Resistance (25°C)	±10%
B 25/85	4000K±3%
Maximum dissipation at 25°C	0.07 W
Thermal dissipation factor	1 mW/°C
Thermal time constant	4 s
Termination	Ni barrier/100%Sn (for Pb free soldering)

RoHS COMPLIANT

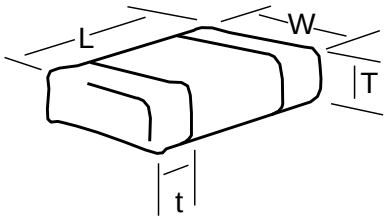
MSL 1
Pb Free
260°C

AEC-Q200
based qualification

Dimensions

mm (inches)

Size (EIA)	Length (L)	Width (W)	Thickness (T)	Terminal (t)
0603	1.6±0.2	0.8±0.2	1.0 max	0.2 min
	(0.063±0.008)	(0.031±0.008)	(0.039) max	(0.008) min



How to Order (Packaging options)

NB	21	M4	0503	K	BF
Type	**Size**	**Material Code**	**Resistance (Ohm)**	**Tolerance**	**Suffix: Packaging**
NB = Ni/Sn Term for lead free soldering	21 = 0603	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

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	3,265,594	4,910,981	6,556,368
-50	68.17	20.31	-7.12	2,375,326	3,408,255	4,441,185
-45	47.92	17.46	-6.88	1,738,229	2,396,227	3,054,225
-40	34.11	14.93	-6.64	1,280,427	1,705,590	2,130,752
-35	24.57	12.68	-6.42	949,750	1,228,313	1,506,876
-30	17.89	10.68	-6.20	709,487	894,510	1,079,534
-25	13.17	8.92	-6.00	533,808	658,373	782,938
-20	9.790	7.36	-5.80	404,506	489,500	574,494
-15	7.349	5.99	-5.62	308,696	367,471	426,245
-10	5.568	4.80	-5.44	237,222	278,414	319,606
-5	4.256	3.75	-5.27	183,542	212,802	242,063
0	3.280	2.84	-5.11	142,957	164,025	185,093
5	2.549	2.07	-4.95	112,070	127,447	142,824
10	1.996	1.40	-4.80	88,412	99,789	111,167
15	1.574	0.84	-4.66	70,177	78,710	87,244
20	1.250	0.38	-4.52	56,034	62,523	69,011
25	1.000	0.00	-4.39	45,000	50,000	55,000
30	0.8049	0.36	-4.27	36,074	40,245	44,416
35	0.6519	0.78	-4.15	29,081	32,595	36,108
40	0.5311	1.24	-4.03	23,572	26,556	29,540
45	0.4352	1.74	-3.92	19,206	21,760	24,314
50	0.3586	2.27	-3.81	15,728	17,928	20,129
55	0.2970	2.84	-3.71	12,943	14,850	16,756
60	0.2472	3.44	-3.61	10,701	12,362	14,023
65	0.2068	4.06	-3.52	8,888	10,341	11,795
70	0.1738	4.70	-3.42	7,414	8,692	9,969
75	0.1468	5.36	-3.34	6,211	7,338	8,465
80	0.1245	6.04	-3.25	5,224	6,223	7,221
85	0.1060	6.73	-3.17	4,412	5,299	6,185
90	0.0906	7.44	-3.09	3,740	4,530	5,320
95	0.0778	8.16	-3.01	3,182	3,888	4,594
100	0.0670	8.89	-2.94	2,717	3,350	3,982
105	0.0579	9.62	-2.87	2,328	2,896	3,465
110	0.0503	10.36	-2.80	2,001	2,513	3,025
115	0.0438	11.11	-2.74	1,726	2,188	2,650
120	0.0382	11.86	-2.67	1,493	1,911	2,329
125	0.0335	12.62	-2.61	1,296	1,675	2,053
130	0.0294	13.37	-2.55	1,128	1,472	1,816
135	0.0259	14.13	-2.49	984.3	1,297	1,610
140	0.0229	14.89	-2.44	861.4	1,147	1,432
145	0.0203	15.65	-2.38	755.9	1,017	1,277
150	0.0181	16.41	-2.33	665.0	903.6	1,142