



MATERIAL TYPE: 5

AVAILABLE PRODUCTS: DK, NK

Data for material type : 5

Temp Range (°C)	Ratio	Beta
0 to 50	7.96	3661
0 to 70	15.67	3685
25 to 50	2.61	3702
25 to 85	8.18	3740
25 to 100	12.56	3754
25 to 125	24.02	3774
37.8 to 104.4	8.51	3775

To calculate Rt/R25 at temperatures other than those listed in the table, use the following equation:

$$\ln(Rt/R25) = A + B / T + C / T^2 + D / T^3$$

where T = temperature in K

Temp Range (°C)	A	B	C	D
-40 to 125	-1.3459139E+01	4.2576300E+03	-4.3269000E+04	-8.8593700E+06

To calculate the actual thermistor temperature as a function of the thermistor resistance, use the following equation:

$$1/T = a + b(\ln Rt/R25) + c(\ln Rt/R25)^2 + d(\ln Rt/R25)^3$$

Rt/R25 range	a	b	c	d
0.04163 to 27.31	3.3539752E-03	2.7259688E-04	2.7187321E-06	1.0381632E-07

†The deviation resulting from the tolerance on the material constant, Beta. The deviation must be added to the resistance tolerance of the part as specified at 25°C.

Temperature (°C)	Rt/R25 nominal	Temp Coef (%/°C)	β Deviation† (±%)
-40	27.31	-6.25	3.36
-35	20.08	-6.04	3.05
-30	14.92	-5.84	2.74
-25	11.20	-5.65	2.45
-20	8.484	-5.46	2.16
-15	6.485	-5.29	1.89
-10	4.999	-5.12	1.62
-5	3.886	-4.96	1.37
0	3.045	-4.80	1.12
5	2.403	-4.66	0.88
10	1.911	-4.52	0.65
15	1.530	-4.38	0.43
20	1.233	-4.25	0.21
25	1.0000	-4.13	0.00
30	0.8160	-4.01	0.20
35	0.6698	-3.89	0.40
40	0.5528	-3.78	0.59
45	0.4587	-3.68	0.78
50	0.3827	-3.58	0.97
55	0.3208	-3.48	1.14
60	0.2702	-3.39	1.32
65	0.2286	-3.30	1.49
70	0.1943	-3.21	1.65
75	0.1658	-3.13	1.81
80	0.1421	-3.05	1.97
85	0.1223	-2.97	2.12
90	0.10560	-2.89	2.27
95	0.09154	-2.82	2.42
100	0.07962	-2.75	2.56
105	0.06950	-2.69	2.70
110	0.06086	-2.62	2.84
115	0.05346	-2.56	2.97
120	0.04711	-2.50	3.10
125	0.04163	-2.44	3.23