MATERIAL TYPE: 5A

AVAILABLE PRODUCTS: DK, NK

Data for material type : 5A

Temp Range (°C)	Ratio	Beta
0 to 50	7.87	3642
0 to 70	15.48	3668
25 to 50	2.60	3687
25 to 85	8.13	3730
25 to 100	12.49	3746
25 to 125	23.92	3769
37.8 to 104.4	8.49	3770

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	-1.3663771E+01	4.4301300E+03	-8.5890300E+04	-6.0624600E+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
0.04180 to 26.55	3.3539760E-03	2.7401815E-04	3.0585096E-06	1.0270969E-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 α (%/°C)	β Deviation† (±%)
-40	26.55	-6.18	3.33
-35	19.59	-5.97	3.02
-30	14.61	-5.78	2.72
-25	10.99	-5.59	2.43
-20	8.350	-5.41	2.14
-15	6.398	-5.24	1.87
-10	4.944	-5.08	1.61
-5	3.851	-4.92	1.36
0	3.023	-4.77	1.11
5	2.390	-4.62	0.88
10	1.904	-4.49	0.65
15	1.526	-4.35	0.42
20	1.232	-4.23	0.21
25	1.0000	-4.11	0.00
30	0.8168	-3.99	0.20
35	0.6710	-3.88	0.40
40	0.5543	-3.77	0.59
45	0.4603	-3.67	0.78
50	0.3842	-3.57	0.96
55	0.3222	-3.47	1.14
60	0.2715	-3.38	1.31
65	0.2298	-3.29	1.48
70	0.1953	-3.21	1.65
75	0.1667	-3.12	1.81
80	0.1429	-3.05	1.96
85	0.1230	-2.97	2.12
90	0.10620	-2.90	2.27
95	0.09204	-2.83	2.41
100	0.08005	-2.76	2.56
105	0.06986	-2.69	2.70
110	0.06116	-2.63	2.83
115	0.05371	-2.57	2.97
120	0.04732	-2.51	3.10
125	0.04180	-2.45	3.23

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