



MATERIAL TYPE: 100KY

AVAILABLE PRODUCTS:

HM, C100, EC95, DC95, MC65, MF65, SC30, SC50

Data for material type : 100ky

Temp Range (°C)	Ratio	Beta
0 to 50	7.58	3575
0 to 70	14.84	3612
25 to 50	2.57	3638
25 to 85	7.99	3699
25 to 100	12.28	3721
25 to 125	23.62	3754
37.8 to 104.4	8.41	3754

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

$$Rt/R25 = \exp\{A + B/T + C/T^2 + D/T^3\}$$

where T = temperature in K

where K = °C + 273.15

Temp Range (°C)	A	B	C	D
-50 to 0	-1.4044448E+01	4.7001715E+03	-1.2636484E+05	-7.9103521E+06
0 to 50	-1.4026370E+01	4.6842464E+03	-1.2170541E+05	-8.3633160E+06
50 to 100	-1.3965333E+01	4.6197708E+03	-9.9168456E+04	-1.0972932E+07
100 to 150	-1.3136699E+01	3.6234709E+03	2.9878543E+05	-6.3797413E+07

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
43.330 to 2.9478	3.3535329E-03	2.7982182E-04	3.8772244E-06	3.3764988E-07
2.9478 to 0.38903	3.3540152E-03	2.7889212E-04	4.4765815E-06	1.9707813E-07
0.38903 to 0.08141	3.3539964E-03	2.7883927E-04	4.3989492E-06	1.5093212E-07
0.08141 to 0.02359	3.3599545E-03	2.8470193E-04	6.2646630E-06	3.4054853E-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† (±%)
-50	43.33	6.21%	4.47%
-45	31.91	6.03%	4.07%
-40	23.72	5.85%	3.69%
-35	17.78	5.68%	3.33%
-30	13.44	5.52%	2.99%
-25	10.24	5.36%	2.66%
-20	7.868	5.20%	2.35%
-15	6.090	5.05%	2.05%
-10	4.748	4.91%	1.76%
-5	3.729	4.77%	1.49%
0	2.948	4.64%	1.22%
5	2.346	4.51%	0.96%
10	1.879	4.38%	0.71%
15	1.514	4.26%	0.47%
20	1.227	4.15%	0.23%
25	1.000	4.04%	0.00%
30	0.8196	3.93%	0.22%
35	0.6752	3.82%	0.44%
40	0.5592	3.72%	0.65%
45	0.4653	3.63%	0.86%
50	0.3890	3.54%	1.06%
55	0.3268	3.45%	1.26%
60	0.2756	3.36%	1.45%
65	0.2335	3.28%	1.64%
70	0.1986	3.20%	1.83%
75	0.1697	3.12%	2.01%
80	0.1454	3.04%	2.19%
85	0.1251	2.97%	2.37%
90	0.1081	2.90%	2.54%
95	0.09364	2.83%	2.70%
100	0.08141	2.77%	2.86%
105	0.07100	2.70%	3.04%
110	0.06212	2.65%	3.19%
115	0.05451	2.58%	3.36%
120	0.04798	2.53%	3.50%
125	0.04234	2.48%	3.66%
130	0.03748	2.41%	3.79%
135	0.03325	2.36%	3.97%
140	0.02958	2.32%	4.12%
145	0.02638	2.27%	4.25%
150	0.02359	2.23%	4.37%