



# MATERIAL TYPE: GC7

## AVAILABLE PRODUCTS: GC32

Data for material type : D

Temp Range (°C)	Ratio	Beta
0 to 50	10.87	4212
0 to 70	24.13	4263
25 to 50	3.05	4301
25 to 85	11.74	4384
25 to 100	19.60	4414
25 to 125	42.74	4458
37.8 to 104.4	12.59	4460

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

Temp Range (°C)	A	B	C	D
0 to 50	-1.6741909E+01	5.5513250E+03	-1.0588629E+05	-1.81885859E+07
50 to 100	-1.7050001E+01	5.8676536E+03	-2.1401528E+05	-5.8802115E+06
100 to 150	-1.6039989E+01	4.7047377E+03	2.3419628E+05	-6.3683250E+07
150 to 200	-2.2470895E+01	1.3155863E+04	-3.46589377E+06	4.7733153E+08
200 to 250	-4.8205742E+00	-1.2429916E+04	8.9252827E+06	-1.5287060E+09

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
3.5606 to 0.3276	3.3540146E-03	2.3655682E-04	3.8388742E-06	1.8357418E-07
0.3276 to 0.05102	3.3537780E-03	2.3608306E-04	3.5021327E-06	9.2007662E-08
0.05102 to 0.01163	3.3586428E-03	2.3993827E-04	4.5371205E-06	1.8900053E-07
0.01163 to 0.00350	3.2421786E-03	1.6776961E-04	-1.0384811E-05	-8.4130789E-07
0.00350 to 0.00130	3.9996162E-03	5.4726596E-04	5.3362372E-05	2.7525336E-06

†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)
0	3.5606	5.43%
5	2.7249	5.28%
10	2.0999	5.15%
15	1.6292	5.01%
20	1.2724	4.88%
25	1.0000	4.76%
30	0.7908	4.64%
35	0.6291	4.52%
40	0.5033	4.41%
45	0.4050	4.30%
50	0.3276	4.19%
55	0.2664	4.09%
60	0.2177	3.99%
65	0.17879	3.89%
70	0.14754	3.80%
75	0.12230	3.71%
80	0.10184	3.62%
85	0.08516	3.53%
90	0.07151	3.45%
95	0.06029	3.38%
100	0.05102	3.30%
105	0.04335	3.23%
110	0.03696	3.15%
115	0.03163	3.08%
120	0.02716	3.02%
125	0.02340	2.95%
130	0.02022	2.89%
135	0.01753	2.82%
140	0.01524	2.79%
145	0.01330	2.71%
150	0.01163	2.62%
155	0.01020	2.60%
160	0.00897	2.51%
165	0.00791	2.47%
170	0.00699	2.50%
175	0.00620	2.42%
180	0.00550	2.27%
185	0.00490	2.24%
190	0.00437	2.29%
195	0.00391	2.30%
200	0.00350	2.14%
205	0.00315	2.06%
210	0.00283	2.12%
215	0.00255	2.16%
220	0.00231	1.95%
225	0.00209	1.91%
230	0.00189	1.85%
235	0.00172	1.74%
240	0.00156	1.92%
245	0.00143	1.75%
250	0.00130	1.54%