



# MATERIAL TYPE: GCI

## AVAILABLE PRODUCTS: GC32

Data for material type : A

Temp Range (°C)	Ratio	Beta
0 to 50	5.05	2859
0 to 70	8.56	2876
25 to 50	2.12	2891
25 to 85	5.15	2916
25 to 100	7.18	2924
25 to 125	11.85	2935
37.8 to 104.4	5.30	2938

Temperature (°C)	Rt/R25 nominal	Temp Coef (%/°C)
0	2.3851	3.75%
5	1.9833	3.64%
10	1.6583	3.53%
15	1.3939	3.42%
20	1.1777	3.32%
25	1.0000	3.22%
30	0.8531	3.13%
35	0.7312	3.04%
40	0.6294	2.96%
45	0.5441	2.87%
50	0.4723	2.79%
55	0.4116	2.71%
60	0.3600	2.64%
65	0.3161	2.57%
70	0.2785	2.50%
75	0.2462	2.43%
80	0.2184	2.37%
85	0.19428	2.31%
90	0.17338	2.25%
95	0.15518	2.19%
100	0.13928	2.14%
105	0.12536	2.08%
110	0.11312	2.03%
115	0.10234	1.98%
120	0.09281	1.93%
125	0.08437	1.88%
130	0.07687	1.84%
135	0.07019	1.80%
140	0.06423	1.75%
145	0.05890	1.71%
150	0.05412	1.68%

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	-9.8528489E+00	2.7339494E+03	1.4288865E+05	-2.4496609E+07
50 to 100	-9.9033569E+00	2.7888230E+03	1.2326242E+05	-2.2180106E+07
100 to 150	-9.3570614E+00	2.1481348E+03	3.7408361E+05	-5.4948498E+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
2.3851 to 0.4723	3.3540147E-03	3.4894984E-04	4.4207074E-06	4.8047296E-07
0.4723 to 0.13928	3.3539225E-03	3.4864841E-04	4.0739254E-06	3.3769525E-07
0.13928 to 0.05412	3.3591442E-03	3.5511790E-04	6.7381938E-06	7.0589355E-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.