

MATERIAL TYPE: GE7.6

AVAILABLE PRODUCTS: GE, MELF

Data for material type : GE7.6

Temp Range (°C)	Ratio	Beta
0 to 50	7.24	3495
0 to 70	13.78	3512
25 to 50	2.50	3527
25 to 85	7.36	3553
25 to 100	11.03	3561
25 to 125	20.27	3572
37.8 to 104.4	7.61	3575

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	-1.4808866 x 10 ⁰¹	5.5005622 x 10 ⁰³	-3.9789925 x 10 ⁰⁵	2.1778028 x 10 ⁰⁷
0 to 50	-1.3743404 x 10 ⁰¹	4.9347578 x 10 ⁰³	-3.2043951 x 10 ⁰⁵	2.1120941 x 10 ⁰⁷
50 to 100	-1.2841790 x 10 ⁰¹	4.2851329 x 10 ⁰³	-1.8293670 x 10 ⁰⁵	1.4099417 x 10 ⁰⁷
100 to 150	-1.2982582 x 10 ⁰¹	4.4499666 x 10 ⁰³	-2.4496327 x 10 ⁰⁵	2.1608270 x 10 ⁰⁷
150 to 200	-1.2726158 x 10 ⁰¹	4.2388773 x 10 ⁰³	-1.9667018 x 10 ⁰⁵	1.9541217 x 10 ⁰⁷
200 to 250	-1.1385003 x 10 ⁰¹	2.6800995 x 10 ⁰³	3.6781581 x 10 ⁰⁵	-4.0641573 x 10 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
45.15 to 2.899	3.3581963 x 10 ⁻⁰³	2.8017724 x 10 ⁻⁰⁴	4.1706248 x 10 ⁻⁰⁶	-8.9121336 x 10 ⁻⁰⁸
2.899 to 0.4004	3.3540170 x 10 ⁻⁰³	2.8587501 x 10 ⁻⁰⁴	2.5158173 x 10 ⁻⁰⁶	-9.7581585 x 10 ⁻⁰⁸
0.4004 to 0.09067	3.3527087 x 10 ⁻⁰³	2.8300136 x 10 ⁻⁰⁴	9.6031839 x 10 ⁻⁰⁷	-7.2982951 x 10 ⁻⁰⁸
0.09067 to 0.02875	3.3536212 x 10 ⁻⁰³	2.8313422 x 10 ⁻⁰⁴	7.8401378 x 10 ⁻⁰⁷	-1.0352094 x 10 ⁻⁰⁷
0.02875 to 0.01155	3.3500951 x 10 ⁻⁰³	2.7991807 x 10 ⁻⁰⁴	1.8222962 x 10 ⁻⁰⁷	-9.6630038 x 10 ⁻⁰⁸
0.011547 to 0.005506	3.3030157 x 10 ⁻⁰³	2.6765632 x 10 ⁻⁰⁴	1.4372971 x 10 ⁻⁰⁶	2.7055457 x 10 ⁻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	45.150000	6.52	11.629556
-45	32.790000	6.28	10.823331
-40	24.100000	6.05	10.012822
-35	17.900000	5.84	9.1997632
-30	13.437000	5.64	8.3856792
-25	10.185000	5.45	7.5719067
-20	7.792000	5.27	6.7596174
-15	6.013000	5.10	5.9498372
-10	4.679000	4.94	5.1434621
5	3.669000	4.79	4.3412737
0	2.899000	4.61	3.5439517
5	2.311000	4.46	2.6887962
10	1.856000	4.32	1.883588
15	1.500000	4.18	1.1812041
20	1.221000	4.06	0.5552562
25	1.000000	3.94	0
30	0.823800	3.82	0.489742
35	0.682500	3.71	0.9186477
40	0.568400	3.60	1.2909527
45	0.475900	3.50	1.6105007
50	0.400400	3.41	1.880787
55	0.338500	3.31	2.2091604
60	0.287600	3.22	2.5298446
65	0.245400	3.13	2.8431518
70	0.210400	3.04	3.1493772
75	0.181100	2.96	3.448799
80	0.156500	2.88	3.7416806
85	0.135800	2.80	4.0282711
90	0.118300	2.73	4.3088064
95	0.103400	2.66	4.5835099
100	0.090700	2.59	4.8525938
105	0.079800	2.52	5.0450769
110	0.070400	2.46	5.2479514
115	0.062380	2.40	5.4605304
120	0.055400	2.34	5.6821659
125	0.049350	2.29	5.9122467
130	0.044070	2.24	6.1501963
135	0.039460	2.18	6.3954706
140	0.035420	2.14	6.6475562
145	0.031870	2.09	6.9059686
150	0.028750	2.03	7.1702505
155	0.026000	1.99	7.4399704
160	0.023570	1.94	7.7147208
165	0.021410	1.90	7.9941171
170	0.019490	1.86	8.2777962
175	0.017780	1.82	8.5654152
180	0.016250	1.78	8.85666505
185	0.014880	1.74	9.1511963
190	0.013650	1.71	9.448764
195	0.012540	1.67	9.7490812
200	0.011550	1.65	10.05189
205	0.010640	1.61	10.356949
210	0.009830	1.58	10.664026
215	0.009090	1.54	10.972907
220	0.008420	1.51	11.283386
225	0.007820	1.48	11.59527
230	0.007270	1.45	11.908376
235	0.006760	1.42	12.222533
240	0.006310	1.39	12.537578
245	0.005890	1.36	12.853357
250	0.005510	1.33	13.169726

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