



MATERIAL TYPE: GE10.1

AVAILABLE PRODUCTS: GE, MELF

Data for material type : GE10.1

Temp Range (°C)	Ratio	Beta
0 to 50	10.60	4167
0 to 70	22.26	4155
25 to 50	2.90	4107
25 to 85	10.02	4102
25 to 100	15.75	4090
25 to 125	30.75	4067
37.8 to 104.4	10.09	4071

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	-1.8099366 x 10 ⁰¹	6.7546090 x 10 ⁰³	-4.9774603 x 10 ⁰⁵	2.7242893 x 10 ⁰⁷
0 to 50	-1.0276560 x 10 ⁰¹	1.5325218 x 10 ⁰³	5.8618539 x 10 ⁰⁵	-3.8636893 x 10 ⁰⁷
50 to 100	-1.1427015 x 10 ⁰¹	2.1905753 x 10 ⁰³	4.9128247 x 10 ⁰⁵	-3.7864442 x 10 ⁰⁷
100 to 150	-1.7619322 x 10 ⁰¹	7.9058002 x 10 ⁰³	-1.1532582 x 10 ⁰⁶	1.0174113 x 10 ⁰⁸
150 to 200	1.2041448 x 10 ⁰¹	-2.3326766 x 10 ⁰⁴	9.1495734 x 10 ⁰⁶	-9.0910478 x 10 ⁰⁸
200 to 250	1.5268134 x 10 ⁰¹	-2.7921159 x 10 ⁰⁴	1.1311282 x 10 ⁰⁷	-1.2498329 x 10 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
102.10 to 3.650	3.3578221 x 10 ⁻⁰³	2.3047341 x 10 ⁻⁰⁴	2.9092829 x 10 ⁻⁰⁶	-5.0003286 x 10 ⁻⁰⁸
3.650 to 0.3445	3.3540184 x 10 ⁻⁰³	2.4034212 x 10 ⁻⁰⁴	-2.7547800 x 10 ⁻⁰⁶	1.9018555 x 10 ⁻⁰⁷
0.3445 to 0.06348	3.3497682 x 10 ⁻⁰³	2.3786211 x 10 ⁻⁰⁴	-1.3448004 x 10 ⁻⁰⁶	1.8510207 x 10 ⁻⁰⁷
0.06348 to 0.01770	3.4244716 x 10 ⁻⁰³	2.8399022 x 10 ⁻⁰⁴	4.7506174 x 10 ⁻⁰⁶	-1.0789612 x 10 ⁻⁰⁷
0.01770 to 0.00663	4.6413414 x 10 ⁻⁰³	1.3134420 x 10 ⁻⁰³	2.8507812 x 10 ⁻⁰⁴	2.4659467 x 10 ⁻⁰⁵
0.006628 to 0.004075	5.8815861 x 10 ⁻⁰³	3.3005191 x 10 ⁻⁰²	6.4661877 x 10 ⁻⁰³	4.2660438 x 10 ⁻⁰⁴

†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	102.100000	7.91	12.052819
-45	69.290000	7.61	10.695609
-40	47.690000	7.34	9.4854727
-35	33.260000	7.08	8.408248
-30	23.485000	6.84	7.4515138
-25	16.780000	6.61	6.6043379
-20	12.124000	6.40	5.8570644
-15	8.852000	6.19	5.2011362
-10	6.528000	6.00	4.6289461
5	4.859000	5.81	4.1337107
0	3.650000	5.73	3.7093637
5	2.758000	5.49	2.8025821
10	2.107000	5.27	1.9849643
15	1.627000	5.07	1.2494473
20	1.270000	4.87	0.5896932
25	1.000000	4.68	0
30	0.794900	4.50	0.5247745
35	0.637300	4.34	0.9892783
40	0.515200	4.18	1.3977223
45	0.419700	4.02	1.7539293
50	0.344500	3.97	2.0613769
55	0.283500	3.84	2.3377924
60	0.234700	3.71	2.6110799
65	0.195600	3.59	2.8812781
70	0.164000	3.47	3.1484266
75	0.138200	3.36	3.412566
80	0.117100	3.26	3.6737374
85	0.099800	3.16	3.9319824
90	0.085400	3.06	4.1873431
95	0.073500	2.97	4.4398616
100	0.063500	2.81	4.6895802
105	0.055200	2.76	4.7303414
110	0.048200	2.70	4.772122
115	0.042160	2.65	4.8148537
120	0.036980	2.60	4.8584721
125	0.032520	2.55	4.9029169
130	0.028660	2.50	4.9481314
135	0.025320	2.45	4.9940623
140	0.022430	2.41	5.0406594
145	0.019900	2.37	5.0878755
150	0.017700	2.61	5.1356708
155	0.015600	2.46	5.167135
160	0.013840	2.33	5.2053958
165	0.012360	2.19	5.250126
170	0.011110	2.07	5.3010141
175	0.010050	1.94	5.3577635
180	0.009150	1.83	5.4200911
185	0.008370	1.72	5.4877276
190	0.007700	1.61	5.560416
195	0.007130	1.50	5.6379113
200	0.006630	1.40	5.7199798
205	0.006190	1.31	5.7881447
210	0.005810	1.22	5.8530209
215	0.005480	1.13	5.9147331
220	0.005190	1.04	5.9734006
225	0.004940	0.96	6.029137
230	0.004720	0.88	6.0820508
235	0.004520	0.80	6.1322455
240	0.004350	0.73	6.1798202
245	0.004200	0.66	6.2248694
250	0.004080	0.59	6.2674835

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