

MATERIAL TYPE: D7.3

AVAILABLE PRODUCTS: RL, UD, NC, MS

Data for material type : D7.3

Temp Range (°C)	Ratio	Beta
0 to 50	6.85	3398
0 to 70	12.85	3419
25 to 50	2.44	3431
25 to 85	7.02	3468
25 to 100	10.45	3481
25 to 125	19.21	3509
37.8 to 104.4	7.31	3505

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
-50 to 0	-1.4636238 x 10 ⁰¹	5.5477905 x 10 ⁰³	-4.3292916 x 10 ⁰⁵	2.3695303 x 10 ⁰⁷
0 to 50	-1.3459620 x 10 ⁰¹	4.8671021 x 10 ⁰³	-3.2692912 x 10 ⁰⁵	2.1548687 x 10 ⁰⁷
50 to 100	-1.3365175 x 10 ⁰¹	4.8538387 x 10 ⁰³	-3.4907923 x 10 ⁰⁵	2.6904461 x 10 ⁰⁷
100 to 150	-1.1796494 x 10 ⁰¹	3.3869024 x 10 ⁰³	6.8079798 x 10 ⁰⁴	-6.0060403 x 10 ⁰⁶

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
38.99 to 2.813	3.3556775 x 10 ⁻⁰³	2.9003547 x 10 ⁻⁰⁴	5.0708019 x 10 ⁻⁰⁶	-1.0057107 x 10 ⁻⁰⁷
2.813 to 0.4105	3.3540170 x 10 ⁻⁰³	2.9400700 x 10 ⁻⁰⁴	2.7918281 x 10 ⁻⁰⁶	-1.0890007 x 10 ⁻⁰⁷
0.4105 to 0.09569	3.3532194 x 10 ⁻⁰³	2.9247976 x 10 ⁻⁰⁴	2.0674135 x 10 ⁻⁰⁶	-1.2598588 x 10 ⁻⁰⁷
0.09569 to 0.0304	3.3258883 x 10 ⁻⁰³	2.7471721 x 10 ⁻⁰⁴	-1.5664133 x 10 ⁻⁰⁷	-1.1796494 x 10 ⁻⁰⁸

†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	38.990000	6.22	11.629556
-45	28.740000	5.99	10.823331
-40	21.410000	5.78	10.012822
-35	16.120000	5.58	9.1997632
-30	12.250000	5.40	8.3856792
-25	9.398000	5.22	7.5719067
-20	7.271000	5.05	6.7596174
-15	5.671000	4.89	5.9498372
-10	4.457000	4.74	5.1434621
-5	3.529000	4.60	4.3412737
0	2.813000	4.48	3.5439517
5	2.257000	4.33	2.6687962
10	1.824000	4.20	1.883588
15	1.484000	4.07	1.1812041
20	1.214000	3.94	0.5552562
25	1.000000	3.83	0
30	0.828200	3.72	0.489742
35	0.689700	3.61	0.9186477
40	0.577300	3.51	1.2909527
45	0.485700	3.41	1.6105007
50	0.410500	3.32	1.880787
55	0.348500	3.23	2.2091604
60	0.297200	3.14	2.5298446
65	0.254600	3.06	2.8431518
70	0.218900	2.98	3.1493772
75	0.189000	2.90	3.448799
80	0.163800	2.83	3.7416806
85	0.142500	2.76	4.0282711
90	0.124400	2.69	4.3088064
95	0.108900	2.62	4.5835099
100	0.095690	2.60	4.8525938
105	0.084170	2.53	5.0450769
110	0.074280	2.47	5.2479514
115	0.065770	2.40	5.4605304
120	0.058420	2.34	5.6821659
125	0.052050	2.28	5.9122467
130	0.046510	2.22	6.1501963
135	0.041670	2.17	6.3954706
140	0.037440	2.12	6.6475562
145	0.033720	2.06	6.9059686
150	0.030450	2.02	7.1702505

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