



MATERIAL TYPE: D9.5

AVAILABLE PRODUCTS: RL, NC, MS

Data for material type : D9.5

Temp Range (°C)	Ratio	Beta
0 to 50	9.25	3927
0 to 70	18.77	3926
25 to 50	2.82	3997
25 to 85	9.28	3965
25 to 100	14.53	3970
25 to 125	28.34	3970
37.8 to 104.4	9.54	3972

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	-1.7300408 x 10 ⁰¹	6.6673051 x 10 ⁰³	-5.5246661 x 10 ⁰⁵	3.0237888 x 10 ⁰⁷
0 to 50	-1.7451259 x 10 ⁰¹	6.9742767 x 10 ⁰³	-6.7795393 x 10 ⁰⁵	4.4685579 x 10 ⁰⁷
50 to 100	-1.5113251 x 10 ⁰¹	5.4915916 x 10 ⁰³	-4.0012272 x 10 ⁰⁵	3.0838518 x 10 ⁰⁷
100 to 150	-1.2761641 x 10 ⁰¹	3.4549793 x 10 ⁰³	1.5066226 x 10 ⁰⁵	-1.3291514 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
66.97 to 3.279	3.3573160 x 10 ⁻⁰³	2.5080613 x 10 ⁻⁰⁴	4.2008236 x 10 ⁻⁰⁶	-6.3842900 x 10 ⁻⁰⁸
3.279 to 0.3545	3.3540180 x 10 ⁻⁰³	2.5415585 x 10 ⁻⁰⁴	3.7354242 x 10 ⁻⁰⁶	-7.8037673 x 10 ⁻⁰⁸
0.3545 to 0.06880	3.3623675 x 10 ⁻⁰³	2.6006156 x 10 ⁻⁰⁴	1.6553817 x 10 ⁻⁰⁶	-8.9265938 x 10 ⁻⁰⁸
0.06880 to 0.0196	3.3491833 x 10 ⁻⁰³	2.4905364 x 10 ⁻⁰⁴	-2.1959257 x 10 ⁻⁰⁷	5.9212818 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	66.970000	7.11	8.9621801
-45	47.250000	6.86	8.1762247
-40	33.740000	6.62	7.4133024
-35	24.370000	6.40	6.6722521
-30	17.800000	6.19	5.9519946
-25	13.130000	5.99	5.2515254
-20	9.776000	5.80	4.569908
-15	7.347000	5.63	3.9062679
-10	5.570000	5.46	3.2597878
-5	4.257000	5.30	2.6297022
0	3.279000	5.10	2.0152938
5	2.550000	4.95	1.5746264
10	1.998000	4.81	1.1539316
15	1.576000	4.68	0.7519946
20	1.252000	4.55	0.3676955
25	1.000000	4.43	0
30	0.803800	4.31	0.3520485
35	0.649800	4.20	0.689336
40	0.528200	4.09	1.012684
45	0.431600	3.99	1.3228556
50	0.354500	3.74	1.6205602
55	0.294800	3.63	1.9330747
60	0.246500	3.54	2.227981
65	0.207000	3.44	2.5062746
70	0.174700	3.35	2.7688805
75	0.148100	3.26	3.0166591
80	0.126100	3.18	3.250412
85	0.107700	3.10	3.4708866
90	0.092430	3.03	3.6787806
95	0.079610	2.95	3.874746
100	0.068800	2.86	4.0593929
105	0.059770	2.78	4.1527077
110	0.052110	2.70	4.2475235
115	0.045600	2.63	4.3437222
120	0.040050	2.56	4.4411935
125	0.035290	2.50	4.5398341
130	0.031190	2.44	4.6395467
135	0.027660	2.37	4.7402407
140	0.024600	2.31	4.8418306
145	0.021940	2.26	4.9442364
150	0.019630	2.20	5.0473829

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