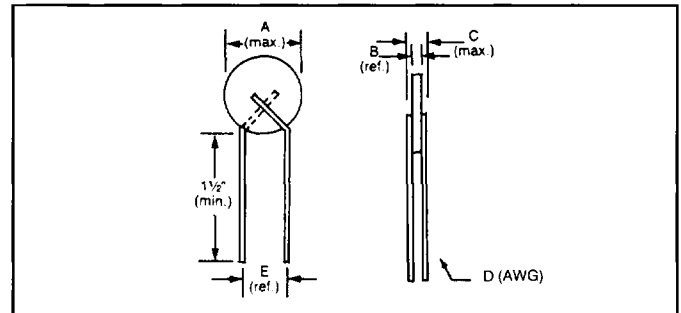


NTC THERMISTORS:

Resistance range @ 25°C50 Ω to 1000 Ω†
 Temperature coefficient of
 resistance (α) @ 25°C.....-4.23%/°C
 Operating temperature range-50°C to +150°C

Temp. Range (°C)	Resistance Ratio (Nom.)	Beta (°K)
0/50	8.4	3758
37.8/104.4	8.5	3772
25/125	23.8	3762

†This resistance range is based on the diameter/thickness combinations shown in the table below. Other R₂₅ @ 25°C values are available in this material system.



Temperature (°F)	Temperature (°C)	$\frac{R_T}{R_{25}}$	Temperature Coef. Of Resistance (α) (%/°C)
-58	-50	60.29	-6.98
-49	-45	42.80	-6.73
-40	-40	30.75	-6.49
-31	-35	22.35	-6.27
-22	-30	16.43	-6.06
-13	-25	12.20	-5.86
-4	-20	9.143	-5.67
5	-15	6.918	-5.49
14	-10	5.279	-5.32
23	-5	4.062	-5.16
32	0	3.150	-4.98
41	5	2.466	-4.82
50	10	1.946	-4.66
59	15	1.548	-4.51
68	20	1.240	-4.37
77	25	1.000	-4.23
86	30	0.8120	-4.10
95	35	0.6635	-3.98
104	40	0.5454	-3.86
113	45	0.4509	-3.75
122	50	0.3748	-3.61
131	55	0.3138	-3.50
140	60	0.2642	-3.39
149	65	0.2235	-3.29
158	70	0.1901	-3.19
167	75	0.1624	-3.10
176	80	0.1394	-3.01
185	85	0.1201	-2.93
194	90	0.1040	-2.85
203	95	0.09036	-2.77
212	100	0.07882	-2.69
221	105	0.06899	-2.62
230	110	0.06062	-2.55
239	115	0.05347	-2.49
248	120	0.04733	-2.42
257	125	0.04205	-2.36
266	130	0.03748	-2.30
275	135	0.03352	-2.25
284	140	0.03007	-2.19
293	145	0.02706	-2.14
302	150	0.02442	-2.09

To calculate $\frac{R_T}{R_{25}}$ at temperatures other than those listed in the table, use the following equation:

$$\frac{R_T}{R_{25}} = e^{(\ln A - C \ln T + \frac{D}{T})}$$

T = temperature in °K and equation constants are as follows:

Temperature Range (°C)	Ln A	C	D
-50 to 0	21.90728	5.21057	2314.03
0 to 50	-0.92654	1.74487	3240.32
50 to 100	-15.10206	-0.36253	3886.22
100 to 150	-32.10472	-2.81217	4817.58

To calculate the actual thermistor temperature as a function of the thermistor resistance, use the following equation:

$$T = \frac{1}{a + b (\ln \frac{R_T}{R_{25}}) + c (\ln \frac{R_T}{R_{25}})^2 + d (\ln \frac{R_T}{R_{25}})^3}$$

T = temperature in °K and equation constants are as follows:

$\frac{R_T}{R_{25}}$ Range	a	b	c	d
3.150 to 60.29	3.358915E-03	2.588131E-04	3.943229E-06	-6.967708E-08
.3748 to 3.150	3.354016E-03	2.659137E-04	1.456911E-06	-6.121935E-08
.0788 to .3748	3.354821E-03	2.651825E-04	1.617122E-08	8.091076E-08
.0244 to .0788	3.338208E-03	2.559800E-04	-6.167178E-08	4.653708E-07

Type Number	R° @ 25°C Ω	Tolerance* ± %	A		B		C		D (AWG)	E		δ (mW/°C)	τ (Sec.)
			(in.)	(mm)	(in.)	(mm)	(in.)	(mm)		(in.)	(mm)		
RL1007-594-85-D1	1000	10	0.110	2.79	0.070	1.78	0.150	3.81	26	0.100	2.54	2.8	10
RL1006-475-85-D1	800				0.060	1.52	0.140	3.56				2.7	10
RL1004-297-85-D1	500				0.040	1.02	0.120	3.05				2.5	9
RL1003-238-85-D1	400				0.030	0.76	0.110	2.79				2.5	9
RL2008-178-85-D1	300	10	0.220	5.59	0.080	2.03	0.170	4.32	24	0.156	3.96	6.5	30
RL2006-119-85-D1	200				0.060	1.52	0.150	3.81				6.5	20
RL2004-89.1-85-D1	150				0.040	1.02	0.130	3.30				6.5	20
RL3006-59.4-85-D1	100	10	0.320	8.13	0.060	1.52	0.150	3.81	24	0.250	6.35	7.2	35
RL3005-44.5-85-D1	75				0.050	1.27	0.140	3.56				7.0	35
RL4006-29.7-85-D1	50	10	0.430	10.92	0.060	1.52	0.150	3.81	24	0.250	6.35	9.0	40

*Consult Keystone Thermometrics Engineering Department for information on other tolerances or tolerances at temperatures other than 25°C.

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