Resistance - Temperature Table

Ratio is the resistance at temperature divided by the resistance at 25°C. To find the actual resistance value at the temperatures listed in the charts, multiply the R25 value by the number listed in the Ratio column next to the corresponding temperature.

As an example, a Curve A thermistor with a temperature tolerance of ±1°C over the temperature range 0° to 70°C would have the following resistance tolerance: 0°C = ±5.1%; 25°C = ±4.4%; 70°C = ±3.4%

NTC (Negative Temperature Coefficient) is the negative percent resistance change per degree C. To determine the resistance tolerance of a precision thermistor at any temperature point multiply the temperature tolerance times the NTC.

	Curve A		Curve B		Curve C		Curve D		Curve E	
β at 25°C/85°C	3977K		3942K		3695K		4262K		4434K	
β at 0°C/50°C	3892K		3813K		3575K		4141K		4276K	
Temperature °C	Typical R_{25} = 1K to 100K		Typical R_{25} = 10K to 100K		Typical R_{25} = 5K to 20K		Typical R_{25} = 25K to 100K		Typical R_{25} = 1K to 200K	
	R_T/R_{25} RATIO		R_T/R_{25} RATIO		R_T/R_{25} RATIO		R_T/R_{25} RATIO		R_T/R_{25} RATIO	
	RATIO	NTC	RATIO	NTC	RATIO	NTC	RATIO	NTC	RATIO	NTC
-50	67.13	7.1	56.39	6.7	44.13	6.3	82.36	7.4	89.69	7.4
-45	47.26	6.9	40.56	6.5	32.36	6.1	57.30	7.1	62.25	7.2
-40	33.69	6.7	29.48	6.3	23.97	5.9	40.34	6.9	43.69	7.0
-35	24.29	6.4	21.64	6.1	17.92	5.3	28.72	6.7	30.98	6.8
-30	17.71	6.2	16.03	5.9	13.52	5.6	20.67	6.5	22.20	6.6
-25	13.05	6.0	11.99	5.7	10.29	5.4	15.02	6.3	16.06	6.4
-20	9.711	5.8	9.040	5.6	7.891	5.2	11.03	6.1	11.73	6.2
-15	7.297	5.6	6.875	5.4	6.102	5.1	8.174	5.9	8.644	6.0
-10	5.534	5.4	5.270	5.2	4.754	4.9	6.113	5.7	6.425	5.8
-5	4.234	5.3	4.071	5.1	3.731	4.8	4.611	5.6	4.816	5.7
0	3.266	5.1	3.168	4.9	2.949	4.6	3.507	5.4	3.638	5.5
5	2.540	5.0	2.483	4.8	2.346	4.5	2.689	5.2	2.770	5.4
10	1.991	4.8	1.959	4.7	1.879	4.4	2.077	5.1	2.125	5.2
15	1.572	4.7	1.556	4.5	1.514	4.3	1.617	4.9	1.642	5.1
20	1.249	4.5	1.244	4.4	1.227	4.1	1.267	4.8	1.277	5.0
25	1.000	4.4	1.000	4.3	1.000	4.0	1.000	4.7	1.000	4.8
30	0.8056	4.3	0.8088	4.2	0.8196	3.9	0.7943	4.5	0.7881	4.7
35	0.6530	4.1	0.6579	4.1	0.6754	3.8	0.6349	4.4	0.6250	4.6
37	0.6014	4.1	0.6066	4.0	0.6260	3.8	0.5815	4.4	0.5706	4.5
40	0.5325	4.0	0.5380	4.0	0.5594	3.7	0.5106	4.3	0.4986	4.5
45	0.4367	3.9	0.4423	3.9	0.4655	3.6	0.4130	4.2	0.4001	4.3
50	0.3601	3.8	0.3654	3.8	0.3893	3.5	0.3359	4.1	0.3228	4.2
55	0.2985	3.7	0.3034	3.7	0.3270	3.4	0.2747	4.0	0.2619	4.1
60	0.2487	3.6	0.2531	3.6	0.2760	3.4	0.2259	3.9	0.2136	4.0
65	0.2082	3.5	0.2121	3.5	0.2338	3.3	0.1866	3.8	0.1750	3.9
70	0.1752	3.4	0.1785	3.4	0.1990	3.2	0.1549	3.7	0.1441	3.8
75	0.1480	3.3	0.1508	3.3	0.1700	3.1	0.1293	3.6	0.1193	3.7
80	0.1256	3.2	0.1280	3.2	0.1457	3.0	0.1083	3.5	0.09915	3.7
85	0.1071	3.2	0.1091	3.2	0.1254	3.0	0.09115	3.4	0.08278	3.6
90	0.09161	3.1	0.09327	3.1	0.1084	2.9	0.07704	3.3	0.06941	3.5
95	0.07870	3.0	0.08006	3.0	0.09392	2.8	0.06538	3.2	0.05844	3.4
100	0.06786	2.9	0.06897	2.9	0.08168	2.8	0.05570	3.2	0.04940	3.3
105	0.05873	2.9	0.05962	2.9	0.07127	2.7	0.04764	3.1	0.04192	3.2
110	0.05100	2.8	0.05171	2.8	0.06237	2.6	0.04089	3.0	0.03571	3.2
115	0.04444	2.7	0.04500	2.8	0.05476	2.6	0.03522	2.9	0.03053	3.1
120	0.03885	2.7	0.03928	2.7	0.04821	2.5	0.03045	2.9	0.02619	3.0
125	0.03408	2.6	0.03439	2.6	0.04257	2.5	0.02641	2.8	0.02254	3.0
130	0.02997	2.5	0.03020	2.6	0.03769	2.4	0.02298	2.8	0.01947	2.9
135	0.02645	2.5	0.02660	2.5	0.03346	2.4	0.02006	2.7	0.01687	2.8
140	0.02340	2.4	0.02349	2.5	0.02979	2.3	0.01756	2.6	0.01467	2.8
145	0.02076	2.4	0.02080	2.4	0.02658	2.3	0.01542	2.6	0.01279	2.7
150	0.01487	2.3	0.01846	2.4	0.02377	2.2	0.01358	2.5	0.01118	2.7

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Resistance - Temperature Table

	Curve F		Curve G		Curve H		Curve I		Curve K		Curve P	
β at 25°C/85°C	3435K		4390K		4847K		3535K		3485K		4144K	
β at 0°C/50°C	3320K		4269K		4669K		3419K		3405K		3988K	
Temperature °C	Typical R_{25} = 10K		Typical R_{25} = 10K		Typical R_{25} = 1MEG		Typical R_{25} = 2K to 20K		Typical R_{25} = 200 to 2K		Typical R_{25} = 100K	
	R_T/R_{25} RATIO		R_T/R_{25} RATIO		R_T/R_{25} RATIO		R_T/R_{25} RATIO		R_T/R_{25} RATIO		R_T/R_{25} RATIO	
	RATIO	NTC	RATIO	NTC	RATIO	NTC	RATIO	NTC	RATIO	NTC	RATIO	NTC
-50	32.95	6.2	95.84	8.1					39.18	6.2		
-45	24.77	6.0	65.66	7.8					28.88	6.0		
-40	18.85	5.8	45.72	7.5			20.68	6.0	21.50	5.8	33.58	6.5
-35	14.41	5.6	32.06	7.2			15.67	5.7	16.18	5.6	24.41	6.3
-30	11.13	5.4	22.82	7.0			11.998	5.5	12.28	5.4	17.91	6.3
-25	8.643	5.2	16.37	6.7			9.241	5.3	9.415	5.2	13.26	5.9
-20	6.777	5.0	11.91	6.5	14.65	6.1	7.189	5.2	7.278	5.1	9.898	5.8
-15	5.341	4.8	8.727	6.3	10.51	6.6	5.623	5.0	5.673	4.9	7.452	5.6
-10	4.247	4.7	6.472	6.0	7.607	6.4	4.439	4.8	4.457	4.7	5.655	5.4
-5	3.39	4.5	4.834	5.8	5.556	6.2	3.518	4.7	3.528	4.6	4.325	5.3
0	2.728	4.4	3.65	5.7	4.093	6.0	2.812	4.5	2.813	4.5	3.331	5.1
5	2.205	4.2	2.772	5.5	3.041	5.9	2.258	4.4	2.259	4.3	2.585	5.0
10	1.796	4.1	2.125	5.3	2.277	5.7	1.828	4.2	1.826	4.2	2.019	4.9
15	1.469	4.0	1.64	5.1	1.718	5.6	1.486	4.1	1.485	4.1	1.587	4.7
20	1.209	3.9	1.277	5.0	1.306	5.4	1.16	4.0	1.215	4.0	1.256	4.6
25	1.000	3.7	1.000	4.8	1.000	5.3	1.000	3.9	1.000	3.8	1.000	4.5
30	0.8313	3.6	0.7888	4.7	0.7710	5.1	0.8267	3.7	0.8277	3.7	0.8008	4.4
35	0.694	3.5	0.6259	4.5	0.5984	5.0	0.6865	3.6	0.6887	3.6	0.6450	4.3
37					0.5417	5.0	0.6384	3.6	0.6408	3.6	0.5924	4.2
40	0.5827	3.4	0.5003	4.4	0.4675	4.9	0.5735	3.5	0.5760	3.5	0.5224	4.2
45	0.4912	3.3	0.402	4.3	0.3675	4.8	0.4809	3.4	0.4842	3.4	0.4253	4.1
50	0.4161	3.2	0.3251	4.1	0.2907	4.6	0.4054	3.3	0.4089	3.3	0.3480	4.0
55	0.3536	3.1	0.2642	4.0	0.2312	4.5	0.3430	3.2	0.3469	3.2	0.2862	3.9
60	0.302	3.1	0.2161	3.9	0.1580	4.4	0.2916	3.2	0.2956	3.2	0.2365	3.8
65	0.2588	3.0	0.1775	3.8	0.1488	4.3	0.2488	3.1	0.2530	3.1	0.1964	3.4
70	0.2228	2.9	0.1466	3.7	0.1204	4.2	0.2133	3.0	0.2174	3.0	0.1638	3.6
75	0.1924	2.8	0.1215	3.6	0.09784	4.1	0.1834	2.9	0.1875	2.9	0.1372	3.5
80	0.1668	2.7	0.1013	3.5	0.07993	4.0	0.1584	2.8	0.1623	2.8	0.1154	3.4
85	0.1451	2.7	0.08483	3.4	0.06561	3.9	0.13724	2.8	0.1411	2.8	0.09742	3.3
90	0.1266	2.6	0.07135	3.3	0.05411	3.8	0.11929	2.7	0.1230	2.7	0.08260	3.3
95	0.1108	3.0	0.06025	3.3	0.04483	3.7	0.10402	2.6	0.1076	2.6	0.07030	3.2
100	0.09731	2.5	0.05111	3.2	0.03730	3.6	0.09102	2.6	0.09450	2.6	0.06005	3.1
105	0.08572	2.4	0.04351	3.1	0.03117	3.6	0.07990	2.5	0.08322	2.5	0.05148	3.0
110	0.07576	2.4	0.0372	3.0	0.02615	3.5	0.07038	2.4	0.07351	2.5	0.04429	3.0
115			0.0319	2.9	0.02203	3.4	0.06216	2.4	0.06512	2.4	0.03823	2.9
120			0.02746	2.9	0.01863	3.3	0.05505	2.3	0.05786	2.3	0.03310	2.8
125			0.02371	2.8	0.01581	3.2	0.04888	2.3	0.05154	2.3	0.02876	2.8
130					0.01347	3.2	0.04351	2.2			0.02506	2.7
135					0.01152	3.1	0.03883	2.2			0.02190	2.7
140					0.00988	3.0	0.03472	2.1			0.01920	2.6
145					0.00850	3.0	0.03112	2.1			0.0168	2.6
150					0.00734	2.9	0.02796	2.0			0.01487	2.5

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