

TEMPERATURE VS RESISTANCE CHARACTERISTICS [ITS-90]

Resistance 200k ohms at 25 Degree C
 Resistance Tolerance $\pm 0.5 \%$
 B Value 4 470K at 25/85 Degree C
 B Value Tolerance $\pm 0.5 \%$

<u>Temp. (deg C)</u>	<u>Rmax. (k ohms)</u>	<u>Rst. (k ohms)</u>	<u>Rmin. (k ohms)</u>	<u>Tolerance (deg C)</u>
-50	18330	17830	17340	-0.37 + 0.37
-49	17020	16560	16110	-0.37 + 0.37
-48	15810	15390	14970	-0.37 + 0.37
-47	14690	14310	13930	-0.37 + 0.37
-46	13670	13310	12960	-0.37 + 0.37
-45	12720	12390	12070	-0.36 + 0.37
-44	11850	11550	11250	-0.36 + 0.36
-43	11040	10760	10490	-0.36 + 0.36
-42	10290	10040	9795	-0.36 + 0.36
-41	9600	9370	9145	-0.36 + 0.36
-40	8962	8750	8543	-0.36 + 0.35
-39	8354	8159	7969	-0.34 + 0.34
-38	7791	7612	7437	-0.34 + 0.34
-37	7271	7106	6945	-0.34 + 0.34
-36	6789	6638	6490	-0.34 + 0.34
-35	6343	6204	6067	-0.33 + 0.33
-34	5930	5802	5676	-0.33 + 0.33
-33	5547	5428	5312	-0.33 + 0.33
-32	5191	5082	4975	-0.33 + 0.33
-31	4861	4760	4661	-0.32 + 0.33
-30	4554	4461	4370	-0.32 + 0.32
-29	4262	4176	4092	-0.31 + 0.31
-28	3990	3911	3834	-0.31 + 0.31
-27	3738	3665	3594	-0.31 + 0.31
-26	3503	3436	3370	-0.30 + 0.30
-25	3285	3223	3163	-0.30 + 0.30
-24	3083	3025	2969	-0.30 + 0.30
-23	2894	2841	2789	-0.30 + 0.30
-22	2718	2669	2621	-0.29 + 0.29
-21	2554	2509	2464	-0.29 + 0.29
-20	2401	2359	2318	-0.29 + 0.28
-19	2255	2217	2179	-0.28 + 0.28
-18	2119	2084	2048	-0.28 + 0.28
-17	1992	1959	1927	-0.27 + 0.27
-16	1874	1844	1814	-0.27 + 0.27
-15	1763	1735	1708	-0.27 + 0.27
-14	1660	1634	1609	-0.26 + 0.26
-13	1564	1540	1516	-0.26 + 0.26
-12	1474	1451	1429	-0.26 + 0.26
-11	1389	1369	1348	-0.25 + 0.26
-10	1311	1291	1273	-0.25 + 0.25
-9	1235	1218	1200	-0.24 + 0.24
-8	1165	1148	1132	-0.24 + 0.24
-7	1099	1084	1069	-0.24 + 0.24
-6	1037	1023	1009	-0.23 + 0.23
-5	978.8	966.2	953.8	-0.23 + 0.23
-4	924.5	912.9	901.4	-0.23 + 0.23
-3	873.7	862.9	852.3	-0.22 + 0.22
-2	825.9	816.0	806.2	-0.22 + 0.22

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-1	781.2	772.0	762.9	-0.22	+ 0.22
0	739.1	730.6	722.2	-0.21	+ 0.21
1	698.9	691.1	683.3	-0.21	+ 0.21
2	661.1	653.9	646.7	-0.20	+ 0.20
3	625.7	619.0	612.4	-0.20	+ 0.20
4	592.4	586.2	580.1	-0.20	+ 0.20
5	561.0	555.3	549.7	-0.19	+ 0.19
6	531.6	526.3	521.1	-0.19	+ 0.19
7	503.8	499.0	494.2	-0.18	+ 0.19
8	477.8	473.3	468.8	-0.18	+ 0.18
9	453.2	449.1	445.0	-0.18	+ 0.18
10	430.0	426.2	422.4	-0.17	+ 0.17
11	407.8	404.3	400.8	-0.17	+ 0.17
12	386.9	383.7	380.5	-0.16	+ 0.16
13	367.2	364.3	361.3	-0.16	+ 0.16
14	348.6	345.9	343.2	-0.16	+ 0.16
15	331.1	328.6	326.1	-0.15	+ 0.15
16	314.6	312.3	310.0	-0.15	+ 0.15
17	299.0	296.9	294.8	-0.14	+ 0.14
18	284.3	282.4	280.4	-0.14	+ 0.14
19	270.4	268.6	266.8	-0.13	+ 0.14
20	257.3	255.6	254.0	-0.13	+ 0.13
21	244.7	243.2	241.7	-0.13	+ 0.13
22	232.9	231.5	230.1	-0.12	+ 0.12
23	221.7	220.4	219.1	-0.12	+ 0.12
24	211.1	209.9	208.8	-0.11	+ 0.11
25	201.0	200.0	199.0	-0.11	+ 0.11
26	191.6	190.5	189.5	-0.11	+ 0.11
27	182.6	181.6	180.5	-0.12	+ 0.12
28	174.1	173.1	172.0	-0.12	+ 0.13
29	166.1	165.0	164.0	-0.13	+ 0.13
30	158.5	157.4	156.4	-0.14	+ 0.14
31	151.2	150.1	149.1	-0.14	+ 0.14
32	144.3	143.2	142.2	-0.15	+ 0.15
33	137.7	136.7	135.7	-0.15	+ 0.15
34	131.5	130.5	129.5	-0.16	+ 0.16
35	125.6	124.6	123.6	-0.16	+ 0.17
36	120.0	119.0	118.1	-0.17	+ 0.17
37	114.7	113.7	112.8	-0.18	+ 0.18
38	109.6	108.7	107.8	-0.18	+ 0.18
39	104.8	103.9	103.0	-0.19	+ 0.19
40	100.3	99.36	98.52	-0.20	+ 0.19
41	95.82	94.98	94.15	-0.20	+ 0.20
42	91.64	90.82	90.01	-0.20	+ 0.21
43	87.67	86.87	86.07	-0.21	+ 0.21
44	83.89	83.11	82.32	-0.22	+ 0.22
45	80.30	79.53	78.77	-0.22	+ 0.22
46	76.89	76.13	75.38	-0.23	+ 0.23
47	73.64	72.90	72.16	-0.24	+ 0.24
48	70.54	69.82	69.10	-0.24	+ 0.24
49	67.60	66.89	66.19	-0.25	+ 0.25

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Temp. (deg C)	Rmax. (k ohms)	Rst. (k ohms)	Rmin. (k ohms)	Tolerance (deg C)	
50	64.79	64.10	63.41	-0.26	+ 0.25
51	62.09	61.41	60.74	-0.26	+ 0.26
52	59.52	58.85	58.20	-0.27	+ 0.27
53	57.06	56.42	55.78	-0.27	+ 0.27
54	54.73	54.10	53.47	-0.28	+ 0.28
55	52.50	51.88	51.27	-0.29	+ 0.29
56	50.37	49.77	49.17	-0.29	+ 0.29
57	48.35	47.76	47.18	-0.30	+ 0.30
58	46.41	45.84	45.27	-0.31	+ 0.31
59	44.57	44.01	43.45	-0.31	+ 0.31
60	42.81	42.26	41.72	-0.32	+ 0.32
61	41.11	40.57	40.04	-0.32	+ 0.33
62	39.48	38.96	38.45	-0.33	+ 0.33
63	37.94	37.43	36.92	-0.34	+ 0.34
64	36.45	35.96	35.47	-0.34	+ 0.35
65	35.04	34.56	34.08	-0.35	+ 0.35
66	33.69	33.22	32.75	-0.36	+ 0.36
67	32.40	31.94	31.48	-0.37	+ 0.37
68	31.16	30.71	30.27	-0.37	+ 0.37
69	29.98	29.54	29.11	-0.38	+ 0.38
70	28.85	28.42	28.00	-0.39	+ 0.38
71	27.76	27.34	26.93	-0.39	+ 0.39
72	26.71	26.31	25.91	-0.40	+ 0.40
73	25.71	25.32	24.93	-0.41	+ 0.41
74	24.75	24.37	23.99	-0.41	+ 0.41
75	23.84	23.46	23.09	-0.42	+ 0.42
76	22.96	22.59	22.23	-0.43	+ 0.43
77	22.12	21.76	21.41	-0.43	+ 0.44
78	21.31	20.97	20.62	-0.44	+ 0.44
79	20.54	20.20	19.87	-0.45	+ 0.45
80	19.80	19.47	19.14	-0.46	+ 0.46
81	19.09	18.77	18.45	-0.46	+ 0.46
82	18.41	18.09	17.78	-0.47	+ 0.47
83	17.75	17.44	17.14	-0.48	+ 0.48
84	17.12	16.82	16.53	-0.48	+ 0.49
85	16.52	16.23	15.94	-0.49	+ 0.49
86	15.94	15.65	15.37	-0.50	+ 0.50
87	15.38	15.10	14.83	-0.50	+ 0.51
88	14.84	14.57	14.30	-0.51	+ 0.51
89	14.33	14.06	13.80	-0.52	+ 0.52
90	13.83	13.57	13.32	-0.53	+ 0.53
91	13.35	13.10	12.86	-0.53	+ 0.53
92	12.90	12.65	12.41	-0.54	+ 0.54
93	12.46	12.22	11.98	-0.55	+ 0.55
94	12.03	11.80	11.57	-0.56	+ 0.56
95	11.63	11.40	11.18	-0.56	+ 0.57
96	11.23	11.01	10.80	-0.57	+ 0.57
97	10.86	10.64	10.43	-0.58	+ 0.58
98	10.50	10.29	10.08	-0.59	+ 0.59
99	10.15	9.945	9.747	-0.60	+ 0.60
100	9.812	9.616	9.423	-0.60	+ 0.60

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Temp. (deg C)	Rmax. (k ohms)	Rst. (k ohms)	Rmin. (k ohms)	Tolerance (deg C)	
101	9.487	9.295	9.108	-0.61	+ 0.61
102	9.174	8.987	8.804	-0.61	+ 0.62
103	8.872	8.690	8.512	-0.62	+ 0.62
104	8.582	8.405	8.231	-0.63	+ 0.63
105	8.304	8.130	7.961	-0.64	+ 0.64
106	8.035	7.866	7.701	-0.65	+ 0.65
107	7.777	7.612	7.451	-0.65	+ 0.66
108	7.528	7.367	7.210	-0.66	+ 0.67
109	7.288	7.132	6.978	-0.67	+ 0.67
110	7.057	6.905	6.755	-0.68	+ 0.68
111	6.834	6.685	6.539	-0.68	+ 0.69
112	6.618	6.473	6.331	-0.69	+ 0.70
113	6.411	6.269	6.130	-0.70	+ 0.71
114	6.211	6.072	5.937	-0.71	+ 0.71
115	6.018	5.883	5.751	-0.72	+ 0.72
116	5.832	5.700	5.571	-0.73	+ 0.73
117	5.653	5.524	5.398	-0.74	+ 0.74
118	5.480	5.355	5.232	-0.75	+ 0.75
119	5.314	5.191	5.071	-0.75	+ 0.76
120	5.153	5.033	4.916	-0.76	+ 0.76
121	4.996	4.880	4.765	-0.77	+ 0.77
122	4.846	4.732	4.620	-0.78	+ 0.78
123	4.700	4.589	4.480	-0.78	+ 0.79
124	4.560	4.451	4.345	-0.79	+ 0.80
125	4.424	4.318	4.214	-0.80	+ 0.81
126	4.293	4.190	4.088	-0.81	+ 0.82
127	4.167	4.066	3.967	-0.82	+ 0.82
128	4.045	3.946	3.849	-0.83	+ 0.83
129	3.927	3.830	3.736	-0.84	+ 0.84
130	3.813	3.719	3.627	-0.85	+ 0.84
131	3.702	3.610	3.520	-0.85	+ 0.85
132	3.595	3.505	3.417	-0.86	+ 0.86
133	3.491	3.403	3.318	-0.87	+ 0.87
134	3.391	3.305	3.221	-0.88	+ 0.88
135	3.294	3.210	3.129	-0.89	+ 0.89
136	3.201	3.119	3.039	-0.90	+ 0.90
137	3.110	3.030	2.952	-0.91	+ 0.91
138	3.023	2.945	2.868	-0.91	+ 0.92
139	2.938	2.862	2.787	-0.92	+ 0.93
140	2.856	2.782	2.709	-0.93	+ 0.93
141	2.777	2.703	2.632	-0.94	+ 0.94
142	2.699	2.628	2.558	-0.95	+ 0.95
143	2.625	2.555	2.487	-0.95	+ 0.96
144	2.552	2.484	2.417	-0.96	+ 0.97
145	2.482	2.416	2.351	-0.97	+ 0.98
146	2.415	2.349	2.286	-0.98	+ 0.99
147	2.349	2.285	2.223	-0.99	+ 1.00
148	2.286	2.223	2.162	-1.00	+ 1.01
149	2.224	2.163	2.104	-1.01	+ 1.02
150	2.165	2.105	2.047	-1.02	+ 1.03

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