

Therm SS R-T Table

R(25°C)=10kohm±0.5%				B(25/85)= 3990K±1%			
Temp.	Resistance(kΩ)			resistance tol. (%)		Temp.tol. (°C)	
°C	Rmin	R(t)Normal	Rmax	MIN	MAX	MIN	MAX
-40	446.29	466.10	486.78	-4.3%	4.4%	-0.56	0.59
-39	413.34	431.35	450.14	-4.2%	4.4%	-0.56	0.58
-38	383.10	399.49	416.57	-4.1%	4.3%	-0.55	0.58
-37	355.34	370.26	385.79	-4.0%	4.2%	-0.55	0.57
-36	329.82	343.41	357.55	-4.0%	4.1%	-0.54	0.56
-35	306.36	318.74	331.62	-3.9%	4.0%	-0.54	0.56
-34	284.76	296.05	307.78	-3.8%	4.0%	-0.53	0.55
-33	264.86	275.17	285.86	-3.7%	3.9%	-0.53	0.55
-32	246.53	255.93	265.69	-3.7%	3.8%	-0.52	0.54
-31	229.61	238.20	247.10	-3.6%	3.7%	-0.52	0.54
-30	214.00	221.85	229.97	-3.5%	3.7%	-0.51	0.53
-29	199.58	206.75	214.18	-3.5%	3.6%	-0.51	0.52
-28	186.25	192.81	199.59	-3.4%	3.5%	-0.50	0.52
-27	173.92	179.92	186.12	-3.3%	3.4%	-0.50	0.51
-26	162.51	168.00	173.67	-3.3%	3.4%	-0.49	0.51
-25	151.94	156.97	162.16	-3.2%	3.3%	-0.48	0.50
-24	142.15	146.75	151.50	-3.1%	3.2%	-0.48	0.49
-23	133.06	137.28	141.63	-3.1%	3.2%	-0.47	0.49
-22	124.64	128.50	132.48	-3.0%	3.1%	-0.47	0.48
-21	116.81	120.35	124.00	-2.9%	3.0%	-0.46	0.47
-20	109.54	112.79	116.13	-2.9%	3.0%	-0.45	0.47
-19	102.77	105.76	108.82	-2.8%	2.9%	-0.45	0.46
-18	96.485	99.221	102.03	-2.8%	2.8%	-0.44	0.45
-17	90.631	93.141	95.719	-2.7%	2.8%	-0.44	0.45
-16	85.178	87.483	89.848	-2.6%	2.7%	-0.43	0.44
-15	80.097	82.213	84.383	-2.6%	2.6%	-0.42	0.43
-14	75.359	77.302	79.294	-2.5%	2.6%	-0.42	0.43
-13	70.938	72.723	74.552	-2.5%	2.5%	-0.41	0.42
-12	66.812	68.452	70.130	-2.4%	2.5%	-0.40	0.41
-11	62.958	64.464	66.005	-2.3%	2.4%	-0.40	0.41
-10	59.356	60.740	62.155	-2.3%	2.3%	-0.39	0.40
-9	55.989	57.261	58.560	-2.2%	2.3%	-0.38	0.39
-8	52.838	54.007	55.200	-2.2%	2.2%	-0.38	0.38
-7	49.889	50.963	52.059	-2.1%	2.2%	-0.37	0.38
-6	47.128	48.115	49.121	-2.1%	2.1%	-0.36	0.37
-5	44.540	45.447	46.371	-2.0%	2.0%	-0.36	0.36
-4	42.115	42.948	43.796	-1.9%	2.0%	-0.35	0.35
-3	39.840	40.605	41.384	-1.9%	1.9%	-0.34	0.35
-2	37.705	38.408	39.123	-1.8%	1.9%	-0.33	0.34
-1	35.700	36.346	37.002	-1.8%	1.8%	-0.33	0.33
0	33.818	34.410	35.012	-1.7%	1.7%	-0.32	0.32
1	32.049	32.593	33.145	-1.7%	1.7%	-0.31	0.32
2	30.385	30.884	31.391	-1.6%	1.6%	-0.30	0.31
3	28.821	29.278	29.742	-1.6%	1.6%	-0.30	0.30
4	27.348	27.768	28.193	-1.5%	1.5%	-0.29	0.29
5	25.962	26.347	26.736	-1.5%	1.5%	-0.28	0.28

6	24.656	25.008	25.365	-1.4%	1.4%	-0.27	0.28
7	23.426	23.748	24.074	-1.4%	1.4%	-0.27	0.27
8	22.266	22.561	22.859	-1.3%	1.3%	-0.26	0.26
9	21.172	21.441	21.713	-1.3%	1.3%	-0.25	0.25
10	20.140	20.386	20.634	-1.2%	1.2%	-0.24	0.24
11	19.165	19.390	19.616	-1.2%	1.2%	-0.23	0.24
12	18.245	18.449	18.656	-1.1%	1.1%	-0.22	0.23
13	17.376	17.562	17.749	-1.1%	1.1%	-0.22	0.22
14	16.554	16.723	16.893	-1.0%	1.0%	-0.21	0.21
15	15.777	15.930	16.085	-1.0%	1.0%	-0.20	0.20
16	15.042	15.181	15.321	-0.9%	0.9%	-0.19	0.19
17	14.347	14.472	14.599	-0.9%	0.9%	-0.18	0.18
18	13.689	13.802	13.916	-0.8%	0.8%	-0.17	0.17
19	13.065	13.167	13.269	-0.8%	0.8%	-0.17	0.17
20	12.475	12.566	12.658	-0.7%	0.7%	-0.16	0.16
21	11.915	11.997	12.078	-0.7%	0.7%	-0.15	0.15
22	11.384	11.457	11.530	-0.6%	0.6%	-0.14	0.14
23	10.881	10.945	11.010	-0.6%	0.6%	-0.13	0.13
24	10.403	10.460	10.517	-0.5%	0.5%	-0.12	0.12
25	9.9500	10.000	10.050	-0.5%	0.5%	-0.12	0.12
26	9.5111	9.5632	9.6153	-0.5%	0.5%	-0.12	0.12
27	9.0946	9.1485	9.2024	-0.6%	0.6%	-0.13	0.13
28	8.6993	8.7546	8.8101	-0.6%	0.6%	-0.14	0.14
29	8.3238	8.3804	8.4372	-0.7%	0.7%	-0.16	0.16
30	7.9671	8.0248	8.0827	-0.7%	0.7%	-0.17	0.17
31	7.6282	7.6867	7.7455	-0.8%	0.8%	-0.18	0.18
32	7.3059	7.3651	7.4246	-0.8%	0.8%	-0.19	0.19
33	6.9995	7.0592	7.1192	-0.8%	0.9%	-0.20	0.20
34	6.7080	6.7681	6.8285	-0.9%	0.9%	-0.21	0.21
35	6.4306	6.4909	6.5516	-0.9%	0.9%	-0.22	0.22
36	6.1665	6.2269	6.2878	-1.0%	1.0%	-0.23	0.24
37	5.9151	5.9755	6.0363	-1.0%	1.0%	-0.25	0.25
38	5.6755	5.7359	5.7967	-1.1%	1.1%	-0.26	0.26
39	5.4473	5.5075	5.5681	-1.1%	1.1%	-0.27	0.27
40	5.2298	5.2897	5.3501	-1.1%	1.1%	-0.28	0.28
41	5.0224	5.0819	5.1420	-1.2%	1.2%	-0.29	0.29
42	4.8246	4.8837	4.9435	-1.2%	1.2%	-0.30	0.31
43	4.6359	4.6946	4.7538	-1.2%	1.3%	-0.32	0.32
44	4.4558	4.5140	4.5728	-1.3%	1.3%	-0.33	0.33
45	4.2839	4.3415	4.3998	-1.3%	1.3%	-0.34	0.34
46	4.1197	4.1768	4.2344	-1.4%	1.4%	-0.35	0.36
47	3.9629	4.0193	4.0764	-1.4%	1.4%	-0.36	0.37
48	3.8131	3.8689	3.9253	-1.4%	1.5%	-0.38	0.38
49	3.6700	3.7250	3.7808	-1.5%	1.5%	-0.39	0.39
50	3.5331	3.5874	3.6425	-1.5%	1.5%	-0.40	0.41
51	3.4026	3.4562	3.5106	-1.6%	1.6%	-0.41	0.42
52	3.2776	3.3305	3.3841	-1.6%	1.6%	-0.43	0.43
53	3.1578	3.2099	3.2628	-1.6%	1.6%	-0.44	0.44
54	3.0429	3.0943	3.1465	-1.7%	1.7%	-0.45	0.46
55	2.9328	2.9834	3.0348	-1.7%	1.7%	-0.46	0.47
56	2.8267	2.8766	2.9272	-1.7%	1.8%	-0.48	0.48
57	2.7248	2.7739	2.8237	-1.8%	1.8%	-0.49	0.50
58	2.6269	2.6751	2.7242	-1.8%	1.8%	-0.50	0.51

59	2.5327	2.5801	2.6284	-1.8%	1.9%	-0.51	0.52
60	2.4422	2.4888	2.5363	-1.9%	1.9%	-0.53	0.54
61	2.3548	2.4006	2.4473	-1.9%	1.9%	-0.54	0.55
62	2.2708	2.3159	2.3617	-1.9%	2.0%	-0.55	0.56
63	2.1901	2.2344	2.2795	-2.0%	2.0%	-0.57	0.58
64	2.1126	2.1561	2.2004	-2.0%	2.1%	-0.58	0.59
65	2.0381	2.0808	2.1243	-2.0%	2.1%	-0.59	0.60
66	1.9668	2.0086	2.0513	-2.1%	2.1%	-0.61	0.62
67	1.8983	1.9393	1.9813	-2.1%	2.2%	-0.62	0.63
68	1.8325	1.8728	1.9139	-2.2%	2.2%	-0.63	0.65
69	1.7693	1.8089	1.8493	-2.2%	2.2%	-0.65	0.66
70	1.7086	1.7474	1.7871	-2.2%	2.3%	-0.66	0.67
71	1.6500	1.6880	1.7269	-2.3%	2.3%	-0.67	0.69
72	1.5938	1.6312	1.6693	-2.3%	2.3%	-0.69	0.70
73	1.5402	1.5768	1.6142	-2.3%	2.4%	-0.70	0.72
74	1.4888	1.5247	1.5614	-2.4%	2.4%	-0.71	0.73
75	1.4396	1.4748	1.5108	-2.4%	2.4%	-0.73	0.74
76	1.3943	1.4288	1.4642	-2.4%	2.5%	-0.74	0.76
77	1.3504	1.3843	1.4190	-2.4%	2.5%	-0.76	0.77
78	1.3079	1.3412	1.3752	-2.5%	2.5%	-0.77	0.79
79	1.2667	1.2994	1.3328	-2.5%	2.6%	-0.78	0.80
80	1.2268	1.2588	1.2916	-2.5%	2.6%	-0.80	0.82
81	1.1852	1.2165	1.2486	-2.6%	2.6%	-0.81	0.83
82	1.1451	1.1758	1.2072	-2.6%	2.7%	-0.83	0.85
83	1.1066	1.1367	1.1674	-2.6%	2.7%	-0.84	0.86
84	1.0696	1.0990	1.1292	-2.7%	2.7%	-0.86	0.88
85	1.0340	1.0628	1.0923	-2.7%	2.8%	-0.87	0.89
86	1.0024	1.0306	1.0596	-2.7%	2.8%	-0.88	0.91
87	0.9721	0.9997	1.0281	-2.8%	2.8%	-0.90	0.92
88	0.9429	0.9700	0.9979	-2.8%	2.9%	-0.91	0.94
89	0.9149	0.9415	0.9689	-2.8%	2.9%	-0.93	0.96
90	0.8880	0.9141	0.9409	-2.9%	2.9%	-0.94	0.97
91	0.8608	0.8864	0.9126	-2.9%	3.0%	-0.96	0.99
92	0.8345	0.8595	0.8853	-2.9%	3.0%	-0.97	1.00
93	0.8091	0.8336	0.8588	-2.9%	3.0%	-0.99	1.02
94	0.7845	0.8085	0.8332	-3.0%	3.1%	-1.00	1.03
95	0.7607	0.7843	0.8085	-3.0%	3.1%	-1.02	1.05
96	0.7382	0.7613	0.7850	-3.0%	3.1%	-1.03	1.07
97	0.7165	0.7391	0.7624	-3.1%	3.2%	-1.05	1.08
98	0.6957	0.7179	0.7407	-3.1%	3.2%	-1.06	1.10
99	0.6757	0.6974	0.7198	-3.1%	3.2%	-1.08	1.11
100	0.6564	0.6777	0.6996	-3.1%	3.2%	-1.10	1.13
101	0.6378	0.6587	0.6803	-3.2%	3.3%	-1.11	1.15
102	0.6200	0.6404	0.6616	-3.2%	3.3%	-1.13	1.16
103	0.6028	0.6229	0.6436	-3.2%	3.3%	-1.14	1.18
104	0.5862	0.6059	0.6262	-3.3%	3.4%	-1.16	1.20
105	0.5702	0.5896	0.6095	-3.3%	3.4%	-1.17	1.21
106	0.5548	0.5738	0.5934	-3.3%	3.4%	-1.19	1.23
107	0.5400	0.5586	0.5778	-3.3%	3.4%	-1.21	1.25
108	0.5257	0.5440	0.5628	-3.4%	3.5%	-1.22	1.26
109	0.5119	0.5298	0.5483	-3.4%	3.5%	-1.24	1.28
110	0.4986	0.5162	0.5344	-3.4%	3.5%	-1.26	1.30
111	0.4857	0.5030	0.5209	-3.4%	3.6%	-1.27	1.32

112	0.4733	0.4903	0.5078	-3.5%	3.6%	-1.29	1.33
113	0.4614	0.4780	0.4952	-3.5%	3.6%	-1.30	1.35
114	0.4498	0.4661	0.4830	-3.5%	3.6%	-1.32	1.37
115	0.4386	0.4547	0.4713	-3.5%	3.7%	-1.34	1.39
116	0.4278	0.4436	0.4599	-3.6%	3.7%	-1.35	1.40
117	0.4174	0.4329	0.4489	-3.6%	3.7%	-1.37	1.42
118	0.4073	0.4225	0.4383	-3.6%	3.7%	-1.39	1.44
119	0.3975	0.4125	0.4280	-3.6%	3.8%	-1.40	1.46
120	0.3881	0.4028	0.4180	-3.6%	3.8%	-1.42	1.47
121	0.3790	0.3934	0.4084	-3.7%	3.8%	-1.44	1.49
122	0.3701	0.3843	0.3990	-3.7%	3.8%	-1.46	1.51
123	0.3616	0.3755	0.3900	-3.7%	3.9%	-1.47	1.53
124	0.3533	0.3670	0.3812	-3.7%	3.9%	-1.49	1.55
125	0.3453	0.3587	0.3727	-3.8%	3.9%	-1.51	1.57
126	0.3375	0.3507	0.3645	-3.8%	3.9%	-1.52	1.58
127	0.3300	0.3430	0.3565	-3.8%	3.9%	-1.54	1.60
128	0.3227	0.3355	0.3488	-3.8%	4.0%	-1.56	1.62
129	0.3156	0.3282	0.3413	-3.8%	4.0%	-1.58	1.64
130	0.3087	0.3211	0.3340	-3.9%	4.0%	-1.60	1.66
131	0.3021	0.3143	0.3270	-3.9%	4.0%	-1.61	1.68
132	0.2956	0.3077	0.3202	-3.9%	4.1%	-1.63	1.70
133	0.2894	0.3012	0.3135	-3.9%	4.1%	-1.65	1.71
134	0.2833	0.2950	0.3071	-3.9%	4.1%	-1.67	1.73
135	0.2774	0.2889	0.3008	-4.0%	4.1%	-1.68	1.75
136	0.2717	0.2830	0.2947	-4.0%	4.1%	-1.70	1.77
137	0.2662	0.2773	0.2888	-4.0%	4.2%	-1.72	1.79
138	0.2608	0.2717	0.2831	-4.0%	4.2%	-1.74	1.81
139	0.2556	0.2663	0.2775	-4.0%	4.2%	-1.76	1.83
140	0.2505	0.2611	0.2721	-4.1%	4.2%	-1.78	1.85
141	0.2455	0.2560	0.2669	-4.1%	4.3%	-1.79	1.87
142	0.2407	0.2510	0.2617	-4.1%	4.3%	-1.81	1.89
143	0.2361	0.2462	0.2568	-4.1%	4.3%	-1.83	1.91
144	0.2315	0.2415	0.2519	-4.1%	4.3%	-1.85	1.93
145	0.2271	0.2370	0.2472	-4.2%	4.3%	-1.87	1.95
146	0.2228	0.2325	0.2427	-4.2%	4.4%	-1.89	1.97
147	0.2187	0.2282	0.2382	-4.2%	4.4%	-1.91	1.99
148	0.2146	0.2240	0.2339	-4.2%	4.4%	-1.93	2.01
149	0.2106	0.2199	0.2296	-4.2%	4.4%	-1.94	2.03
150	0.2068	0.2160	0.2255	-4.2%	4.4%	-1.96	2.05

A polynomial function approximation with temperature as the independent variable accurate between 0°C and 50°C is;

$$T = 7.843e-17 \cdot R^4 - 9.017e-12 \cdot R^3 + 3.8e-7 \cdot R^2 - 0.0077 \cdot R + 72.08$$

where,

R = resistance (Ω)

T = temperature ($^{\circ}\text{C}$)

A function can be made to describe other temperature ranges accurately.

