



Jiangsu Yufei te Electronic Technology Co., Ltd

SPECIFICATION FOR APPROVAL

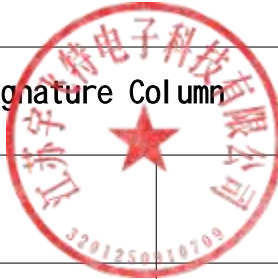
CUSTOMER _____

PART NAME _____
Negative temperature coefficient thermistor

PART NUMBER _____
YFTMF55 (SERIES)

DATE _____
2023/07/19

Supplier Confirmation Signature Column		
Quality Department	Engineering Department	Ratify
Yan Xu	Pu Lin Zhao	GuangzheYu



Supplier Confirmation Signature Column		
Quality Department	Engineering Department	Ratify

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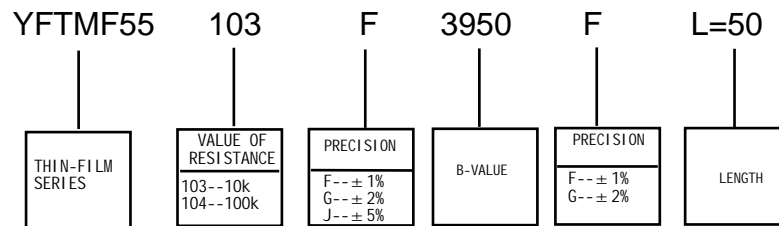
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THERMISTOR SPECIFICATIONS

1) SCOPE

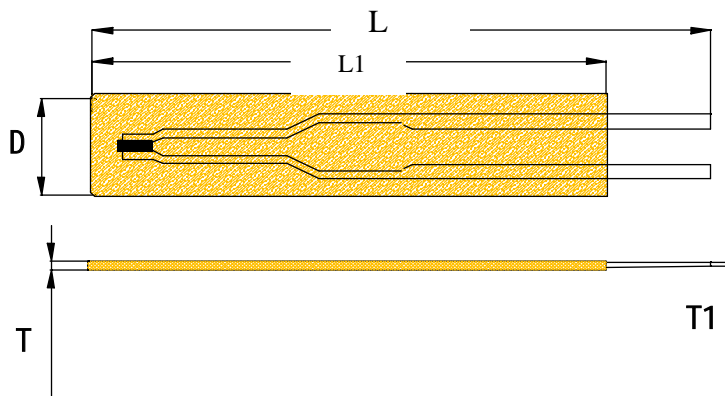
This specifications define ratings, dimension, insulation, climatic tests and mechanical characteristics for MF55 type thermistor.

2) MODEL EXAMPLE:



3) DIMENSIONS UNIT:[mm]

PARAMETER		SERIE	YFTMF55*** L=25	YFTMF55*** L=50	YFTMF55*** L=75	
DIMENSIONS	D		4.5	4.5	4.5	
	L		25±1	50±3	75±3	
	L1		20±2	45±2	70±2	
	T		≤0.6	≤0.6	≤0.6	
	T1		0.15	0.15	0.15	



4) RATING

PARAMETER		SERI	YFTMP55103F3435F L=***	YFTMP55103F3950F L=***	YFTMP555033950 L=***	YFTMP55104F3950F L=***
ELECTRICAL PERFORMANCE	Rated zero-power resistance (25°C)		10k Ω	10k Ω	50k Ω	100k Ω
	B value	B25/50		3950	3950	3950
		B25/85		3435		
	Dissipation factor. (in air)		Approx. 3.5mW/°C	Approx. 3.5mW/°C	Approx. 3.5mW/°C	Approx. 3.5mW/°C
	Thermal time constant. (in air)		Approx. 5s	Approx. 5s	Approx. 5s	Approx. 5s
	Maximum power rating. (at 25 °C)		5mW	5mW	5mW	5mW
	Category temperature range (=Operating temperature range)		-30 to 120 °C	-30 to 120 °C	-30 to 120 °C	-30 to 120 °C

5) Insulation (between epoxy resin and soldered terminals)

5-1 Dielectric withstanding voltage: AC 1000V for one second.

5-2 Insulation resistance : Above 100 MΩ at DC 500V.

6) Climatic tests

6-1) Dry Heat

After the test samples were exposed in air at 95 °C for 1,000 hours, the change ratio of the rated zero-power resistance shall be within ± 1% of the initial value.

6-2) Damp heat

After the test samples were exposed in the humidity of 95% at 40 °C for 1,000 hours, the change ratio of the rated zero-power resistance shall be within ±1% of the initial value.

6-3) Cold

After the test samples were exposed in air at -30°C for 1,000 hours, the change ratio of the rated zero-power resistance shall be within $\pm 1\%$ of the initial value.

6-4) Humidity load

After DC 1mA current was applied to the test samples in the temperature of 40°C and the humidity of 95% for 1,000 hours, the change ratio of the rated zero-power resistance shall be within $\pm 2\%$ of the initial value.

6-5) Change of temperature

One cycle of the change of temperature shall be carried out in the order of the following conditions.

.Room ambient temperature.(Initial value)

.At -30°C , for 30 minutes.

.Room ambient temperature, for 3 minutes.

.At $+90^{\circ}\text{C}$, for 30 minutes.

.Room ambient temperature, for 3 minutes.

After 100 cycles of change of temperature, the change ratio of the rated zero-power resistance shall be within $\pm 1\%$ of the initial value

7) Mechanical characteristics

7-1) Robustness of terminations

* Tensile to horizontal direction

Hold the thermistor body so that lead wire shall be horizontal. After 1 kg loading weight was applied to the lead wire horizontally for 10 seconds, there shall be no visible damage.

7-2) Free fall

After three times natural fall to a maple board from 50cm high, there shall be no visible damage.

8) R-T TABLE

8-1) Resistance 10k Ohms at 25deg. C
Resistance Tolerance + / -1%
B Value 3435K at 25/85 deg. C
B Value Tolerance + / - 1 %

Temp. (deg. C)	Rmax (k Ohms)	Rnor (k Ohms)	Rmin (k Ohms)
-40	211.5248	203.2171	195.2162
-39	199.6742	191.9415	184.4898
-38	188.5675	181.3676	174.4253
-37	178.1534	171.4476	164.9777
-36	168.3842	162.1366	156.1052
-35	159.2159	153.3935	147.7693
-34	150.6078	145.1801	139.9340
-33	142.5221	137.4608	132.5661
-32	134.9238	130.2030	125.6348
-31	127.7804	123.3760	119.1115
-30	121.0620	116.9517	112.9696
-29	114.7406	110.9038	107.1845
-28	108.7903	105.2079	101.7333
-27	103.1871	99.8414	96.5946
-26	97.9085	94.7832	91.7486
-25	92.9337	90.0138	87.1768
-24	88.2436	85.5148	82.8621
-23	83.8199	81.2693	78.7884
-22	79.6461	77.2615	74.9409
-21	75.7064	73.4767	71.3056
-20	71.9864	69.9011	67.8695
-19	68.4725	66.5219	64.6205
-18	65.1520	63.3272	61.5474
-17	62.0132	60.3058	58.6396
-16	59.0451	57.4473	55.8871
-15	56.2373	54.7419	53.2809
-14	53.5803	52.1805	50.8123
-13	51.0651	49.7547	48.4732
-12	48.6833	47.4565	46.2560
-11	46.4271	45.2784	44.1538
-10	44.2891	43.2135	42.1598
-9	42.2625	41.2552	40.2679
-8	40.3408	39.3975	38.4724
-7	38.5180	37.6345	36.7676
-6	36.7884	35.9610	35.1486

-5	35.1468	34.3718	33.6105
-4	33.5881	32.8623	32.1489
-3	32.1078	31.4280	30.7594
-2	30.7014	30.0647	29.4382
-1	29.3649	28.7686	28.1815
0	28.0944	27.5359	26.9858
1	26.8862	26.3632	25.8478
2	25.7370	25.2473	24.7644
3	24.6436	24.1850	23.7327
4	23.6029	23.1736	22.7499
5	22.6121	22.2103	21.8134
6	21.6686	21.2925	20.9209
7	20.7698	20.4179	20.0700
8	19.9135	19.5842	19.2585
9	19.0972	18.7893	18.4844
10	18.3191	18.0311	17.7459
11	17.5770	17.3078	17.0410
12	16.8692	16.6175	16.3680
13	16.1938	15.9587	15.7254
14	15.5492	15.3296	15.1116
15	14.9338	14.7288	14.5252
16	14.3462	14.1549	13.9648
17	13.7850	13.6066	13.4291
18	13.2488	13.0824	12.9169
19	12.7364	12.5814	12.4270
20	12.2466	12.1023	11.9584
21	11.7784	11.6440	11.5100
22	11.3305	11.2056	11.0809
23	10.9021	10.7860	10.6701
24	10.4923	10.3845	10.2767
25	10.1000	10.0000	9.9000
26	9.7318	9.6318	9.5319
27	9.3790	9.2792	9.1795
28	9.0409	8.9413	8.8420
29	8.7167	8.6176	8.5187
30	8.4059	8.3073	8.2090
31	8.1078	8.0098	7.9121
32	7.8219	7.7245	7.6275
33	7.5475	7.4509	7.3547
34	7.2843	7.1884	7.0930
35	7.0315	6.9365	6.8420
36	6.7889	6.6947	6.6012
37	6.5559	6.4627	6.3702

38	6.3320	6.2399	6.1484
39	6.1170	6.0259	5.9355
40	5.9104	5.8203	5.7310
41	5.7119	5.6228	5.5346
42	5.5210	5.4331	5.3460
43	5.3374	5.2507	5.1648
44	5.1609	5.0753	4.9906
45	4.9912	4.9067	4.8232
46	4.8279	4.7446	4.6622
47	4.6707	4.5886	4.5075
48	4.5195	4.4385	4.3586
49	4.3739	4.2941	4.2154
50	4.2337	4.1551	4.0776
51	4.0987	4.0214	3.9450
52	3.9687	3.8925	3.8174
53	3.8435	3.7685	3.6946
54	3.7228	3.6490	3.5763
55	3.6066	3.5339	3.4624
56	3.4945	3.4230	3.3526
57	3.3865	3.3161	3.2469
58	3.2823	3.2131	3.1451
59	3.1818	3.1138	3.0469
60	3.0849	3.0180	2.9523
61	2.9915	2.9257	2.8610
62	2.9013	2.8366	2.7731
63	2.8143	2.7507	2.6882
64	2.7303	2.6677	2.6064
65	2.6492	2.5877	2.5275
66	2.5709	2.5105	2.4513
67	2.4953	2.4359	2.3778
68	2.4223	2.3640	2.3068
69	2.3517	2.2944	2.2383
70	2.2836	2.2273	2.1722
71	2.2178	2.1624	2.1083
72	2.1541	2.0998	2.0466
73	2.0926	2.0392	1.9870
74	2.0332	1.9807	1.9294
75	1.9757	1.9241	1.8738
76	1.9201	1.8695	1.8200
77	1.8663	1.8166	1.7680
78	1.8143	1.7654	1.7177
79	1.7640	1.7160	1.6692
80	1.7153	1.6682	1.6222

81	1.6682	1.6219	1.5767
82	1.6226	1.5771	1.5327
83	1.5784	1.5337	1.4902
84	1.5357	1.4918	1.4490
85	1.4943	1.4512	1.4092
86	1.4542	1.4119	1.3706
87	1.4153	1.3738	1.3333
88	1.3777	1.3369	1.2972
89	1.3413	1.3012	1.2622
90	1.3060	1.2666	1.2283
91	1.2718	1.2331	1.1955
92	1.2386	1.2006	1.1637
93	1.2064	1.1691	1.1329
94	1.1753	1.1386	1.1030
95	1.1450	1.1090	1.0741
96	1.1157	1.0804	1.0460
97	1.0873	1.0526	1.0188
98	1.0597	1.0256	0.9925
99	1.0329	0.9994	0.9669
100	1.0070	0.9741	0.9421
101	0.9818	0.9495	0.9181
102	0.9573	0.9256	0.8948
103	0.9336	0.9024	0.8721
104	0.9106	0.8799	0.8502
105	0.8882	0.8581	0.8289
106	0.8665	0.8369	0.8082
107	0.8454	0.8163	0.7881
108	0.8249	0.7963	0.7687
109	0.8050	0.7769	0.7497
110	0.7857	0.7581	0.7314
111	0.7669	0.7398	0.7135
112	0.7486	0.7220	0.6962
113	0.7309	0.7047	0.6794
114	0.7136	0.6879	0.6630
115	0.6969	0.6716	0.6472
116	0.6806	0.6557	0.6317
117	0.6647	0.6403	0.6167
118	0.6493	0.6253	0.6021
119	0.6344	0.6108	0.5880
120	0.6198	0.5966	0.5742
121	0.6056	0.5828	0.5608
122	0.5918	0.5694	0.5478
123	0.5784	0.5564	0.5351

124	0.5653	0.5437	0.5228
125	0.5526	0.5313	0.5108

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8-2) **EMPERATURE VS RESISTANCE TABLE**

Resistance **10k Ohms at 25deg. C**

Resistance Tolerance **+ / -1%**

B Value **3950K at 25/50 deg. C**

B Value Tolerance **+ / - 1%**

Temp. (deg. C)	Rmax (k Ohms)	Rnor (k Ohms)	Rmin (k Ohms)
-40	359.5644	343.6326	328.3739
-39	335.9504	321.2809	307.2213
-38	314.0464	300.5339	287.5741
-37	293.7175	281.2660	269.3154
-36	274.8405	263.3624	252.3384
-35	257.3023	246.7177	236.5449
-34	240.9996	231.2355	221.8447
-33	225.8377	216.8273	208.1555
-32	211.7294	203.4118	195.4013
-31	198.5951	190.9144	183.5124
-30	186.3613	179.2666	172.4247
-29	174.9608	168.4053	162.0793
-28	164.3317	158.2726	152.4218
-27	154.4170	148.8151	143.4022
-26	145.1643	139.9837	134.9746
-25	136.5254	131.7332	127.0964
-24	128.4558	124.0216	119.7285
-23	120.9146	116.8107	112.8348
-22	113.8640	110.0648	106.3818
-21	107.2691	103.7512	100.3387
-20	101.0977	97.8396	94.6771
-19	95.3201	92.3020	89.3705
-18	89.9088	87.1124	84.3946
-17	84.8385	82.2471	79.7268
-16	80.0856	77.6837	75.3463
-15	75.6284	73.4018	71.2336
-14	71.4468	69.3823	67.3708
-13	67.5220	65.6077	63.7412
-12	63.8370	62.0616	60.3295
-11	60.3755	58.7288	57.1212
-10	57.1228	55.5953	54.1032
-9	54.0651	52.6480	51.2629
-8	51.1895	49.8747	48.5889
-7	48.4842	47.2643	46.0705
-6	45.9381	44.8062	43.6978

-5	43.5409	42.4906	41.4615
-4	41.2831	40.3086	39.3531
-3	39.1559	38.2516	37.3644
-2	37.1508	36.3117	35.4880
-1	35.2603	34.4817	33.7169
0	33.4771	32.7547	32.0447
1	31.7945	31.1243	30.4652
2	30.2064	29.5847	28.9728
3	28.7068	28.1301	27.5623
4	27.2904	26.7556	26.2286
5	25.9521	25.4562	24.9672
6	24.6872	24.2274	23.7738
7	23.4912	23.0650	22.6443
8	22.3599	21.9650	21.5750
9	21.2897	20.9239	20.5622
10	20.2768	19.9380	19.6028
11	19.3178	19.0041	18.6937
12	18.4096	18.1193	17.8318
13	17.5493	17.2807	17.0146
14	16.7340	16.4857	16.2394
15	15.9612	15.7317	15.5040
16	15.2284	15.0164	14.8059
17	14.5333	14.3376	14.1432
18	13.8738	13.6933	13.5139
19	13.2479	13.0816	12.9160
20	12.6537	12.5005	12.3479
21	12.0895	11.9485	11.8080
22	11.5535	11.4239	11.2946
23	11.0442	10.9252	10.8064
24	10.5602	10.4510	10.3419
25	10.1000	10.0000	9.9000
26	9.6709	9.5709	9.4710
27	9.2623	9.1626	9.0630
28	8.8732	8.7738	8.6747
29	8.5025	8.4037	8.3052
30	8.1494	8.0512	7.9534
31	7.8128	7.7154	7.6184
32	7.4919	7.3953	7.2993
33	7.1859	7.0903	6.9953
34	6.8940	6.7995	6.7056
35	6.6156	6.5221	6.4294
36	6.3498	6.2576	6.1660
37	6.0962	6.0051	5.9148

38	5.8540	5.7642	5.6752
39	5.6227	5.5342	5.4465
40	5.4018	5.3146	5.2283
41	5.1907	5.1049	5.0199
42	4.9890	4.9045	4.8210
43	4.7961	4.7130	4.6309
44	4.6117	4.5300	4.4494
45	4.4354	4.3551	4.2759
46	4.2667	4.1878	4.1100
47	4.1053	4.0278	3.9515
48	3.9508	3.8748	3.7999
49	3.8030	3.7283	3.6548
50	3.6614	3.5882	3.5161
51	3.5258	3.4540	3.3833
52	3.3960	3.3255	3.2562
53	3.2715	3.2025	3.1346
54	3.1523	3.0846	3.0181
55	3.0380	2.9717	2.9065
56	2.9285	2.8635	2.7996
57	2.8234	2.7597	2.6972
58	2.7227	2.6603	2.5990
59	2.6260	2.5649	2.5049
60	2.5333	2.4734	2.4147
61	2.4443	2.3856	2.3282
62	2.3589	2.3014	2.2452
63	2.2768	2.2206	2.1656
64	2.1981	2.1431	2.0892
65	2.1224	2.0686	2.0159
66	2.0498	1.9970	1.9455
67	1.9800	1.9283	1.8779
68	1.9129	1.8623	1.8130
69	1.8484	1.7989	1.7507
70	1.7864	1.7380	1.6908
71	1.7267	1.6794	1.6332
72	1.6694	1.6231	1.5779
73	1.6142	1.5689	1.5247
74	1.5612	1.5168	1.4736
75	1.5101	1.4667	1.4245
76	1.4610	1.4185	1.3772
77	1.4137	1.3722	1.3317
78	1.3681	1.3275	1.2880
79	1.3243	1.2845	1.2458
80	1.2820	1.2431	1.2053

81	1.2413	1.2033	1.1663
82	1.2021	1.1649	1.1287
83	1.1644	1.1279	1.0926
84	1.1279	1.0923	1.0577
85	1.0928	1.0580	1.0241
86	1.0590	1.0249	0.9918
87	1.0264	0.9930	0.9606
88	0.9949	0.9623	0.9306
89	0.9646	0.9326	0.9016
90	0.9353	0.9040	0.8737
91	0.9070	0.8764	0.8468
92	0.8797	0.8498	0.8208
93	0.8534	0.8241	0.7958
94	0.8280	0.7994	0.7716
95	0.8035	0.7754	0.7483
96	0.7798	0.7523	0.7258
97	0.7569	0.7300	0.7041
98	0.7348	0.7085	0.6831
99	0.7134	0.6877	0.6628
100	0.6928	0.6676	0.6433
101	0.6728	0.6482	0.6244
102	0.6536	0.6295	0.6062
103	0.6349	0.6113	0.5885
104	0.6169	0.5938	0.5715
105	0.5995	0.5769	0.5550
106	0.5826	0.5605	0.5391
107	0.5663	0.5447	0.5237
108	0.5506	0.5293	0.5089
109	0.5353	0.5145	0.4945
110	0.5206	0.5002	0.4806
111	0.5063	0.4863	0.4671
112	0.4924	0.4729	0.4541
113	0.4791	0.4599	0.4415
114	0.4661	0.4474	0.4293
115	0.4535	0.4352	0.4175
116	0.4414	0.4234	0.4061
117	0.4296	0.4120	0.3951
118	0.4182	0.4009	0.3844
119	0.4071	0.3902	0.3740
120	0.3964	0.3799	0.3640
121	0.3860	0.3698	0.3542
122	0.3760	0.3601	0.3448
123	0.3662	0.3506	0.3357

124	0.3568	0.3415	0.3269
125	0.3476	0.3326	0.3183

8-3) TEMPERATURE VS RESISTANCE TABLE

Resistance 50k Ohms at 25deg. C

Resistance Tolerance + / - 1%

B Value 3950K at 25/50 deg. C

B Value Tolerance + / - 1 %

Temp. (deg. C)	Rmax (k Ohms)	Rnor (k Ohms)	Rmin (k Ohms)
-40	1794.3444	1714.8724	1638.7563
-39	1676.3214	1603.1563	1533.0313
-38	1566.8696	1499.4838	1434.8525
-37	1465.3101	1403.2227	1343.6316
-36	1371.0232	1313.7958	1258.8312
-35	1283.4408	1230.6732	1179.9572
-34	1202.0430	1153.3700	1106.5571
-33	1126.3539	1081.4419	1038.2168
-32	1055.9364	1014.4803	974.5544
-31	990.3897	952.1110	915.2202
-30	929.3464	893.9899	859.8925
-29	872.4685	839.8008	808.2755
-28	819.4456	789.2531	760.0970
-27	769.9924	742.0792	715.1064
-26	723.8464	698.0331	673.0729
-25	680.7657	656.8877	633.7838
-24	640.5280	618.4343	597.0428
-23	602.9280	582.4799	562.6691
-22	567.7766	548.8470	530.4955
-21	534.8996	517.3716	500.3679
-20	504.1358	487.9019	472.1436
-19	475.3366	460.2981	445.6908
-18	448.3647	434.4308	420.8877
-17	423.0932	410.1801	397.6214
-16	399.4046	387.4355	375.7875
-15	377.1905	366.0945	355.2893
-14	356.3503	346.0619	336.0370
-13	336.7907	327.2499	317.9477
-12	318.4257	309.5770	300.9442
-11	301.1751	292.9673	284.9547
-10	284.9649	277.3508	269.9131
-9	269.7263	262.6622	255.7576
-8	255.3953	248.8411	242.4308
-7	241.9127	235.8311	229.8793
-6	229.2233	223.5799	218.0537

-5	217.2760	212.0390	206.9077
-4	206.0230	201.1632	196.3984
-3	195.4201	190.9102	186.4858
-2	185.4259	181.2409	177.1326
-1	176.0022	172.1188	168.3042
0	167.1132	163.5097	159.9680
1	158.7254	155.3820	152.0938
2	150.8079	147.7061	144.6536
3	143.3316	140.4542	137.6209
4	136.2695	133.6007	130.9711
5	129.5963	127.1214	124.6813
6	123.2885	120.9939	118.7300
7	117.3241	115.1970	113.0972
8	111.6825	109.7112	107.7639
9	106.3445	104.5181	102.7127
10	101.2920	99.6004	97.9272
11	96.5083	94.9420	93.3918
12	91.9776	90.5280	89.0922
13	87.6852	86.3440	85.0149
14	83.6172	82.3770	81.1471
15	79.7608	78.6145	77.4770
16	76.1037	75.0449	73.9934
17	72.6347	71.6572	70.6858
18	69.3430	68.4413	67.5445
19	66.2187	65.3874	64.5601
20	63.2524	62.4867	61.7241
21	60.4353	59.7306	59.0282
22	57.7590	57.1111	56.4649
23	55.2158	54.6208	54.0268
24	52.7985	52.2527	51.7073
25	50.5000	50.0000	49.5000
26	48.3564	47.8566	47.3573
27	46.3153	45.8167	45.3189
28	44.3713	43.8746	43.3791
29	42.5193	42.0252	41.5328
30	40.7545	40.2637	39.7748
31	39.0723	38.5853	38.1006
32	37.4685	36.9858	36.5058
33	35.9390	35.4611	34.9861
34	34.4799	34.0072	33.5376
35	33.0878	32.6205	32.1567
36	31.7591	31.2977	30.8399
37	30.4907	30.0354	29.5838

38	29.2796	28.8305	28.3855
39	28.1228	27.6802	27.2418
40	27.0177	26.5818	26.1502
41	25.9618	25.5325	25.1079
42	24.9525	24.5301	24.1125
43	23.9876	23.5722	23.1616
44	23.0649	22.6565	22.2531
45	22.1824	21.7811	21.3848
46	21.3382	20.9439	20.5548
47	20.5303	20.1431	19.7612
48	19.7571	19.3770	19.0022
49	19.0169	18.6438	18.2762
50	18.3082	17.9421	17.5815
51	17.6294	17.2702	16.9167
52	16.9791	16.6269	16.2804
53	16.3560	16.0107	15.6711
54	15.7589	15.4204	15.0877
55	15.1865	14.8548	14.5288
56	14.6378	14.3127	13.9934
57	14.1115	13.7930	13.4803
58	13.6067	13.2947	12.9886
59	13.1225	12.8169	12.5172
60	12.6578	12.3585	12.0651
61	12.2118	11.9188	11.6316
62	11.7837	11.4968	11.2158
63	11.3727	11.0918	10.8168
64	10.9780	10.7030	10.4339
65	10.5989	10.3297	10.0664
66	10.2346	9.9712	9.7136
67	9.8846	9.6269	9.3749
68	9.5483	9.2960	9.0495
69	9.2250	8.9781	8.7370
70	8.9141	8.6726	8.4368
71	8.6152	8.3789	8.1482
72	8.3277	8.0965	7.8709
73	8.0512	7.8250	7.6044
74	7.7851	7.5638	7.3481
75	7.5290	7.3126	7.1016
76	7.2826	7.0708	6.8645
77	7.0454	6.8382	6.6365
78	6.8170	6.6143	6.4170
79	6.5970	6.3988	6.2059
80	6.3852	6.1913	6.0026

81	6.1811	5.9914	5.8070
82	5.9845	5.7989	5.6186
83	5.7950	5.6135	5.4372
84	5.6124	5.4348	5.2624
85	5.4363	5.2627	5.0941
86	5.2666	5.0968	4.9319
87	5.1030	4.9368	4.7756
88	4.9451	4.7826	4.6249
89	4.7929	4.6339	4.4797
90	4.6460	4.4905	4.3397
91	4.5043	4.3521	4.2047
92	4.3675	4.2186	4.0745
93	4.2355	4.0899	3.9489
94	4.1080	3.9656	3.8277
95	3.9850	3.8456	3.7108
96	3.8662	3.7298	3.5979
97	3.7514	3.6180	3.4890
98	3.6406	3.5100	3.3839
99	3.5335	3.4058	3.2823
100	3.4300	3.3051	3.1843
101	3.3300	3.2077	3.0896
102	3.2334	3.1137	2.9982
103	3.1400	3.0229	2.9098
104	3.0496	2.9350	2.8245
105	2.9623	2.8502	2.7420
106	2.8779	2.7681	2.6622
107	2.7962	2.6887	2.5852
108	2.7171	2.6120	2.5107
109	2.6407	2.5378	2.4386
110	2.5667	2.4660	2.3689
111	2.4951	2.3965	2.3015
112	2.4258	2.3293	2.2364
113	2.3588	2.2642	2.1733
114	2.2938	2.2013	2.1123
115	2.2310	2.1403	2.0532
116	2.1701	2.0813	1.9961
117	2.1111	2.0242	1.9407
118	2.0540	1.9689	1.8872
119	1.9986	1.9153	1.8353
120	1.9450	1.8634	1.7851
121	1.8930	1.8131	1.7364
122	1.8427	1.7644	1.6893
123	1.7939	1.7172	1.6437

124	1.7466	1.6715	1.5995
125	1.7007	1.6271	1.5566

8-4) TEMPERATURE VS RESISTANCE TABLE

Resistance 100k Ohms at 25deg. C

Resistance Tolerance + / -1%

B Value 3950K at 25/50 deg. C

B Value Tolerance + / - 1%

Temp. (deg. C)	Rmax (k Ohms)	Rnor (k Ohms)	Rmin (k Ohms)
-40	3588.6887	3429.7449	3277.5127
-39	3352.6428	3206.3125	3066.0625
-38	3133.7393	2998.9675	2869.7051
-37	2930.6201	2806.4453	2687.2632
-36	2742.0464	2627.5916	2517.6624
-35	2566.8816	2461.3464	2359.9143
-34	2404.0859	2306.7400	2213.1143
-33	2252.7078	2162.8838	2076.4336
-32	2111.8728	2028.9607	1949.1089
-31	1980.7794	1904.2219	1830.4404
-30	1858.6927	1787.9797	1719.7849
-29	1744.9370	1679.6017	1616.5510
-28	1638.8912	1578.5061	1520.1940
-27	1539.9847	1484.1584	1430.2129
-26	1447.6929	1396.0662	1346.1459
-25	1361.5315	1313.7754	1267.5675
-24	1281.0560	1236.8685	1194.0856
-23	1205.8561	1164.9598	1125.3381
-22	1135.5532	1097.6941	1060.9911
-21	1069.7992	1034.7432	1000.7358
-20	1008.2715	975.8038	944.2871
-19	950.6732	920.5962	891.3817
-18	896.7294	868.8615	841.7754
-17	846.1864	820.3603	795.2428
-16	798.8093	774.8710	751.5750
-15	754.3810	732.1889	710.5786
-14	712.7005	692.1238	672.0741
-13	673.5814	654.4999	635.8954
-12	636.8513	619.1540	601.8883
-11	602.3502	585.9346	569.9095
-10	569.9298	554.7016	539.8262
-9	539.4526	525.3245	511.5153
-8	510.7906	497.6821	484.8615
-7	483.8254	471.6621	459.7586
-6	458.4467	447.1599	436.1073

-5	434.5519	424.0781	413.8153
-4	412.0460	402.3264	392.7968
-3	390.8401	381.8204	372.9716
-2	370.8519	362.4818	354.2653
-1	352.0045	344.2375	336.6083
0	334.2264	327.0195	319.9360
1	317.4508	310.7640	304.1877
2	301.6157	295.4121	289.3072
3	286.6631	280.9084	275.2418
4	272.5389	267.2014	261.9423
5	259.1926	254.2428	249.3626
6	246.5770	241.9877	237.4601
7	234.6482	230.3940	226.1943
8	223.3650	219.4224	215.5278
9	212.6890	209.0361	205.4255
10	202.5840	199.2007	195.8544
11	193.0167	189.8841	186.7836
12	183.9552	181.0559	178.1844
13	175.3704	172.6881	170.0298
14	167.2345	164.7540	162.2942
15	159.5216	157.2290	154.9539
16	152.2075	150.0898	147.9867
17	145.2694	143.3144	141.3716
18	138.6861	136.8825	135.0889
19	132.4375	130.7749	129.1202
20	126.5049	124.9734	123.4482
21	120.8705	119.4612	118.0564
22	115.5180	114.2223	112.9298
23	110.4316	109.2417	108.0537
24	105.5969	104.5053	103.4147
25	101.0000	100.0000	99.0000
26	96.7127	95.7132	94.7146
27	92.6306	91.6333	90.6378
28	88.7426	87.7492	86.7583
29	85.0386	84.0505	83.0655
30	81.5090	80.5274	79.5497
31	78.1446	77.1707	76.2012
32	74.9370	73.9717	73.0115
33	71.8779	70.9222	69.9721
34	68.9598	68.0144	67.0752
35	66.1755	65.2411	64.3134
36	63.5182	62.5954	61.6798
37	60.9814	60.0707	59.1677

38	58.5591	57.6610	56.7710
39	56.2456	55.3604	54.4837
40	54.0355	53.1635	52.3004
41	51.9235	51.0651	50.2158
42	49.9049	49.0602	48.2250
43	47.9752	47.1443	46.3232
44	46.1298	45.3130	44.5062
45	44.3649	43.5621	42.7696
46	42.6764	41.8878	41.1096
47	41.0607	40.2862	39.5224
48	39.5143	38.7539	38.0044
49	38.0339	37.2876	36.5524
50	36.6163	35.8842	35.1631
51	35.2587	34.5405	33.8335
52	33.9582	33.2538	32.5608
53	32.7121	32.0214	31.3423
54	31.5178	30.8408	30.1754
55	30.3731	29.7096	29.0576
56	29.2755	28.6253	27.9868
57	28.2230	27.5860	26.9607
58	27.2135	26.5895	25.9772
59	26.2450	25.6338	25.0343
60	25.3156	24.7171	24.1303
61	24.4237	23.8376	23.2633
62	23.5675	22.9937	22.4315
63	22.7454	22.1836	21.6336
64	21.9560	21.4061	20.8678
65	21.1977	20.6594	20.1328
66	20.4692	19.9424	19.4272
67	19.7693	19.2537	18.7497
68	19.0966	18.5920	18.0990
69	18.4499	17.9562	17.4740
70	17.8282	17.3452	16.8735
71	17.2304	16.7578	16.2965
72	16.6554	16.1930	15.7419
73	16.1023	15.6499	15.2087
74	15.5702	15.1276	14.6961
75	15.0581	14.6251	14.2032
76	14.5652	14.1417	13.7291
77	14.0907	13.6764	13.2729
78	13.6339	13.2286	12.8341
79	13.1940	12.7976	12.4118
80	12.7703	12.3825	12.0053

81	12.3622	11.9828	11.6139
82	11.9689	11.5978	11.2372
83	11.5900	11.2270	10.8743
84	11.2247	10.8697	10.5248
85	10.8727	10.5254	10.1881
86	10.5332	10.1935	9.8637
87	10.2059	9.8736	9.5511
88	9.8902	9.5652	9.2499
89	9.5858	9.2678	8.9594
90	9.2920	8.9809	8.6794
91	9.0085	8.7042	8.4094
92	8.7350	8.4373	8.1489
93	8.4710	8.1797	7.8977
94	8.2161	7.9312	7.6554
95	7.9700	7.6912	7.4215
96	7.7324	7.4596	7.1958
97	7.5029	7.2360	6.9780
98	7.2812	7.0201	6.7677
99	7.0670	6.8115	6.5647
100	6.8601	6.6101	6.3686
101	6.6601	6.4155	6.1793
102	6.4668	6.2274	5.9964
103	6.2799	6.0457	5.8197
104	6.0993	5.8701	5.6489
105	5.9246	5.7003	5.4839
106	5.7557	5.5362	5.3245
107	5.5923	5.3775	5.1703
108	5.4343	5.2240	5.0213
109	5.2814	5.0755	4.8772
110	5.1334	4.9319	4.7379
111	4.9903	4.7930	4.6031
112	4.8517	4.6586	4.4727
113	4.7175	4.5285	4.3466
114	4.5877	4.4026	4.2245
115	4.4619	4.2807	4.1064
116	4.3401	4.1627	3.9921
117	4.2222	4.0484	3.8815
118	4.1079	3.9378	3.7743
119	3.9972	3.8306	3.6706
120	3.8900	3.7268	3.5702
121	3.7861	3.6263	3.4729
122	3.6854	3.5289	3.3787
123	3.5877	3.4345	3.2874

124	3.4931	3.3430	3.1990
125	3.4014	3.2543	3.1133
126	3.3124	3.1683	3.0302
127	3.2261	3.0850	2.9497
128	3.1424	3.0042	2.8717
129	3.0613	2.9258	2.7960
130	2.9825	2.8498	2.7227
131	2.9061	2.7761	2.6515
132	2.8320	2.7045	2.5826
133	2.7601	2.6352	2.5157
134	2.6902	2.5678	2.4507
135	2.6225	2.5025	2.3878
136	2.5567	2.4391	2.3267
137	2.4928	2.3775	2.2674
138	2.4308	2.3178	2.2098
139	2.3705	2.2598	2.1540
140	2.3120	2.2034	2.0997
141	2.2552	2.1487	2.0471
142	2.2000	2.0956	1.9960
143	2.1463	2.0440	1.9463
144	2.0942	1.9939	1.8981
145	2.0436	1.9452	1.8513
146	1.9943	1.8978	1.8058
147	1.9465	1.8518	1.7616
148	1.9000	1.8071	1.7187
149	1.8547	1.7637	1.6770
150	1.8108	1.7215	1.6364
151	1.7680	1.6804	1.5970
152	1.7264	1.6405	1.5587
153	1.6860	1.6017	1.5215
154	1.6467	1.5640	1.4853
155	1.6084	1.5273	1.4501
156	1.5712	1.4915	1.4158
157	1.5349	1.4568	1.3825
158	1.4997	1.4230	1.3501
159	1.4654	1.3901	1.3186
160	1.4320	1.3582	1.2880
161	1.3995	1.3270	1.2582
162	1.3678	1.2967	1.2292
163	1.3370	1.2672	1.2009
164	1.3070	1.2385	1.1734
165	1.2778	1.2106	1.1467
166	1.2494	1.1833	1.1207

167	1.2217	1.1568	1.0953
168	1.1947	1.1310	1.0706
169	1.1684	1.1059	1.0466
170	1.1428	1.0814	1.0232
171	1.1179	1.0576	1.0004
172	1.0935	1.0343	0.9782
173	1.0698	1.0117	0.9566
174	1.0467	0.9896	0.9355
175	1.0242	0.9681	0.9150
176	1.0023	0.9472	0.8950
177	0.9809	0.9268	0.8756
178	0.9601	0.9069	0.8566
179	0.9397	0.8875	0.8381
180	0.9199	0.8686	0.8200
181	0.9006	0.8501	0.8024
182	0.8817	0.8321	0.7853
183	0.8633	0.8146	0.7686
184	0.8454	0.7975	0.7523
185	0.8279	0.7808	0.7364
186	0.8108	0.7646	0.7209
187	0.7941	0.7487	0.7058
188	0.7779	0.7332	0.6911
189	0.7620	0.7181	0.6767
190	0.7465	0.7034	0.6627
191	0.7314	0.6890	0.6490
192	0.7166	0.6749	0.6356
193	0.7022	0.6612	0.6226
194	0.6882	0.6479	0.6099
195	0.6744	0.6348	0.5975
196	0.6610	0.6221	0.5853
197	0.6479	0.6096	0.5735
198	0.6351	0.5975	0.5620
199	0.6227	0.5856	0.5507
200	0.6105	0.5740	0.5397
201	0.5985	0.5627	0.5290
202	0.5869	0.5517	0.5185
203	0.5755	0.5409	0.5082
204	0.5644	0.5303	0.4982
205	0.5536	0.5200	0.4884
206	0.5430	0.5099	0.4789
207	0.5326	0.5001	0.4696
208	0.5225	0.4905	0.4604
209	0.5126	0.4811	0.4515

210	0.5029	0.4719	0.4428
211	0.4934	0.4630	0.4343
212	0.4842	0.4542	0.4260
213	0.4751	0.4456	0.4179
214	0.4663	0.4372	0.4100
215	0.4576	0.4290	0.4022
216	0.4492	0.4210	0.3946
217	0.4409	0.4132	0.3872
218	0.4328	0.4055	0.3800
219	0.4249	0.3980	0.3729
220	0.4171	0.3907	0.3660
221	0.4096	0.3836	0.3592
222	0.4021	0.3765	0.3525
223	0.3949	0.3697	0.3461
224	0.3878	0.3630	0.3397
225	0.3809	0.3564	0.3335
226	0.3741	0.3500	0.3274
227	0.3674	0.3437	0.3215
228	0.3609	0.3376	0.3157
229	0.3545	0.3315	0.3100
230	0.3483	0.3257	0.3045
231	0.3422	0.3199	0.2990
232	0.3362	0.3142	0.2937
233	0.3304	0.3087	0.2885
234	0.3246	0.3033	0.2834
235	0.3190	0.2980	0.2784
236	0.3135	0.2928	0.2735
237	0.3081	0.2878	0.2687
238	0.3029	0.2828	0.2640
239	0.2977	0.2779	0.2594
240	0.2927	0.2732	0.2549
241	0.2877	0.2685	0.2505
242	0.2829	0.2639	0.2462
243	0.2781	0.2594	0.2420
244	0.2734	0.2550	0.2379
245	0.2689	0.2507	0.2338
246	0.2644	0.2465	0.2298
247	0.2600	0.2424	0.2259
248	0.2557	0.2384	0.2221
249	0.2515	0.2344	0.2184
250	0.2474	0.2305	0.2148
251	0.2433	0.2267	0.2112
252	0.2394	0.2230	0.2077