



南京时恒电子科技有限公司

规格承认书

APPROVAL SHEET

客户名称:

CUSTOMER _____

产品名称:

PART NAME MF58 玻壳测温型 NTC 热敏电阻器

产品规格:

PART NUMBER MF58-503 J 3950 (UL: E240991)

日期:

DATE 2017年 07月 20日

确 认

CONFIRM

客户

品保部:

制造部:

工程部:

供货商/制造商

规格书制作: 鞠晓丽

技术部审核:

品质部审核:

生产部审核:

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南京时恒电子科技有限公司

MF58 玻壳测温型 NTC 热敏电阻器

型号: MF58-503J3950

本规格书提供了南京时恒电子科技有限公司生产的 MF58 系列 NTC 热敏电阻的结构尺寸、产品性能、试验条件、使用要求的描述, 敬请贵司确认。
对本规格书产生疑义时, 请速与我们联系 (025-52121868), 若无疑义请确认回传, 若无回传, 我司将视为默认。
贵公司改变使用用途, 作用方法时, 请与我们联系。

客户名称:

客户
确认

确认:
审核:

时间:
时间:

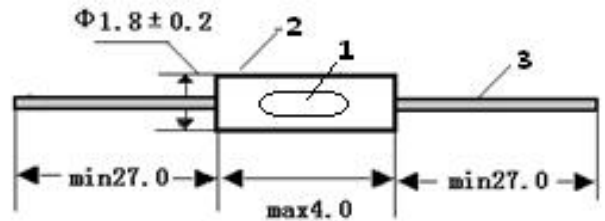
1. 电气性能

项目	符号	测试条件	单位	性能要求
1.1	R_{25}	$T_a=25 \pm 0.05^\circ\text{C}$ 测试功率 $\leq 0.1\text{mw}$	$\text{K}\Omega$	$50\text{K}\Omega \pm 5\%$
1.2	$B_{25/50}$	$B = \frac{(T_a \times T_b) / (T_b - T_a)}{\ln(R_a/R_b)}$ $T_b=50^\circ\text{C} \pm 0.05^\circ\text{C}$	K	$3950 \pm 1\%$
1.3	δ	静止空气中	$\text{mW}/^\circ\text{C}$	≥ 2
1.4	τ	静止空气中	sec	≤ 20
1.5	/	1500V/AC 1min	/	无击穿或飞弧
1.6	/	500V/DC 1min	$\text{M}\Omega$	≥ 500
1.7	/	/	$^\circ\text{C}$	-55~195
1.8	P_{max}	/	mW	50
1.9	/	/	/	见附表 1
1.10	/	/	/	见附表 2

2. 可靠性

项目	测试条件及方法	技术要求
2.1 引出端强度	固定电阻端, 拉力: $10 \pm 1\text{N}$, 时间: 10 ± 1 秒	无可见性损伤 $R_{25} \Delta R/R \leq \pm 2\%$
2.2 可焊性	温度 $245 \pm 5^\circ\text{C}$ 时间 2-3 秒	着锡面积 $\geq 95\%$
2.3 耐焊接热	锡锅温度: $260 \pm 5^\circ\text{C}$, 浸入深度距电阻体 6mm, 时间 5 ± 1 秒	$R_{25} \Delta R/R \leq \pm 2\%$
2.4 稳态湿热	温度: $40^\circ\text{C} \pm 2^\circ\text{C}$, 湿度: 93 \pm 2%, 时间: 500 小时	$R_{25} \Delta R/R \leq \pm 2\%$
2.5 温度快速变化	$-55^\circ\text{C} 30\text{min} \rightarrow 25^\circ\text{C} 5\text{min} \rightarrow 195^\circ\text{C} 30\text{min} \rightarrow 25^\circ\text{C} 5\text{min}$, 反复 5 次	$R_{25} \Delta R/R \leq \pm 2\%$
2.6 高温储存	温度: $195^\circ\text{C} \pm 5^\circ\text{C}$, 时间: 1000 小时	$R_{25} \Delta R/R \leq \pm 2\%$
2.7 低温储存	温度: $-55^\circ\text{C} \pm 5^\circ\text{C}$, 时间: 1000 小时	$R_{25} \Delta R/R \leq \pm 2\%$

4. 外形尺寸: (单位: mm)



序号	名称	材料规格	数量	备注
1	元件	NTC 热敏电阻	1	
2	外壳	玻璃	1	
3	导线	$\Phi 0.5 \pm 0.05$ 镀锡钢线	2	

5. 产品型号说明

MF58 503 J 3950

① ② ③ ④

- ① MF58: 玻壳测温型 NTC 热敏电阻
- ② 503: 25°C 的零功率电阻值 $50\text{K}\Omega$
- ③ H: 阻值精度代码 F- $\pm 1\%$ G- $\pm 2\%$ H- $\pm 3\%$ J- $\pm 5\%$
- ④ 3950: $B_{25/50}$ 值 3950K

6. 认证

- 6.1 质量管理体系认证 ISO9001:2008 (01115Q20270R5M)
ISO/TS16949: 2009 (0192416)
- 6.2 环境管理体系认证 ISO14001:2004 (01113E20060R2M)
- 6.3 环保检测报告 ROHS
- 6.4 产品 CQC 认证 (CQC09001033986)
- 6.5 江苏省高新技术产品认证 (150115G0377N)
- 6.6 安规认证 UL 1434 认证 (File # E240991)

3. 使用注意事项

- 3.1 本产品的用途: 温度测量与控制;
- 3.2 避免流过热敏电阻芯片的电流引起元件自身发热而产生测量误差;
- 3.3 烙铁焊接时, 焊接处距玻壳端距离至少 2mm, 焊接温度应低于 360°C , 焊接时间 $< 3\text{ses}$;
- 3.4 若引线弯曲时, 弯曲点应距玻壳端 2mm 以上, 以免造成玻壳损伤;
- 3.5 储存温度: $-10^\circ\text{C} \sim 40^\circ\text{C}$; 储存湿度: $\leq 75\% \text{RH}$;
- 3.6 避免存放在具有腐蚀性气体及光照的环境下;
- 3.7 包装打开后需重新密封保存。

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附表:1

南京时恒阻温特性表

R25=50K Ω 精度: $\pm 5\%$ B25/50=3950K B25/85=4055K 精度: $\pm 1\%$ (P214-9)

温度($^{\circ}\text{C}$)	电阻(k Ω)			电阻精度(%)		温度精度($^{\circ}\text{C}$)	
	最小值	中心值	最大值	ΔR	$-\Delta R$	ΔT	$-\Delta T$
-55	3463.300	3807.000	4174.340	9.649	-9.028	1.303	-1.219
-54	3145.610	3454.420	3784.060	9.542	-8.939	1.308	-1.225
-53	2886.320	3166.920	3466.120	9.447	-8.860	1.311	-1.230
-52	2670.140	2927.420	3201.470	9.361	-8.788	1.313	-1.233
-51	2486.060	2723.640	2976.470	9.282	-8.722	1.314	-1.235
-50	2326.090	2546.680	2781.210	9.209	-8.661	1.315	-1.236
-49	2184.390	2390.020	2608.460	9.139	-8.603	1.314	-1.237
-48	2056.670	2248.910	2452.960	9.073	-8.547	1.314	-1.238
-47	1939.820	2119.880	2310.870	9.009	-8.493	1.313	-1.237
-46	1831.580	2000.430	2179.390	8.945	-8.440	1.311	-1.237
-45	1730.320	1888.750	2056.540	8.883	-8.388	1.310	-1.237
-44	1634.900	1783.580	1940.910	8.820	-8.335	1.308	-1.236
-43	1544.530	1684.020	1831.510	8.758	-8.283	1.307	-1.236
-42	1458.660	1589.480	1727.690	8.695	-8.229	1.305	-1.235
-41	1376.950	1499.560	1629.010	8.632	-8.176	1.304	-1.235
-40	1299.140	1414.000	1535.150	8.568	-8.122	1.303	-1.235
-39	1225.100	1332.610	1445.940	8.504	-8.068	1.302	-1.235
-38	1154.700	1255.290	1361.230	8.439	-8.013	1.301	-1.235
-37	1087.880	1181.940	1280.910	8.374	-7.957	1.300	-1.235
-36	1024.560	1112.460	1204.890	8.308	-7.901	1.299	-1.235
-35	964.662	1046.790	1133.070	8.242	-7.845	1.298	-1.236
-34	908.105	984.819	1065.340	8.176	-7.789	1.298	-1.236
-33	854.796	926.440	1001.570	8.110	-7.733	1.297	-1.237
-32	804.630	871.537	941.648	8.044	-7.676	1.297	-1.238
-31	757.492	819.979	885.401	7.978	-7.620	1.297	-1.239
-30	713.255	771.623	832.682	7.912	-7.564	1.297	-1.239
-29	671.785	726.321	783.320	7.847	-7.508	1.296	-1.240
-28	632.944	683.915	737.143	7.782	-7.452	1.296	-1.241
-27	596.591	644.249	693.975	7.718	-7.397	1.296	-1.242
-26	562.581	607.163	653.639	7.654	-7.342	1.296	-1.243
-25	530.775	572.500	615.960	7.591	-7.288	1.295	-1.244
-24	501.033	540.105	580.768	7.528	-7.234	1.295	-1.244
-23	473.222	509.830	547.898	7.466	-7.180	1.294	-1.245
-22	447.210	481.531	517.190	7.405	-7.127	1.294	-1.245
-21	422.874	455.070	488.494	7.344	-7.075	1.293	-1.246
-20	400.097	430.318	461.666	7.284	-7.023	1.293	-1.246
-19	378.768	407.153	436.571	7.225	-6.971	1.292	-1.246
-18	358.783	385.459	413.083	7.166	-6.920	1.291	-1.246

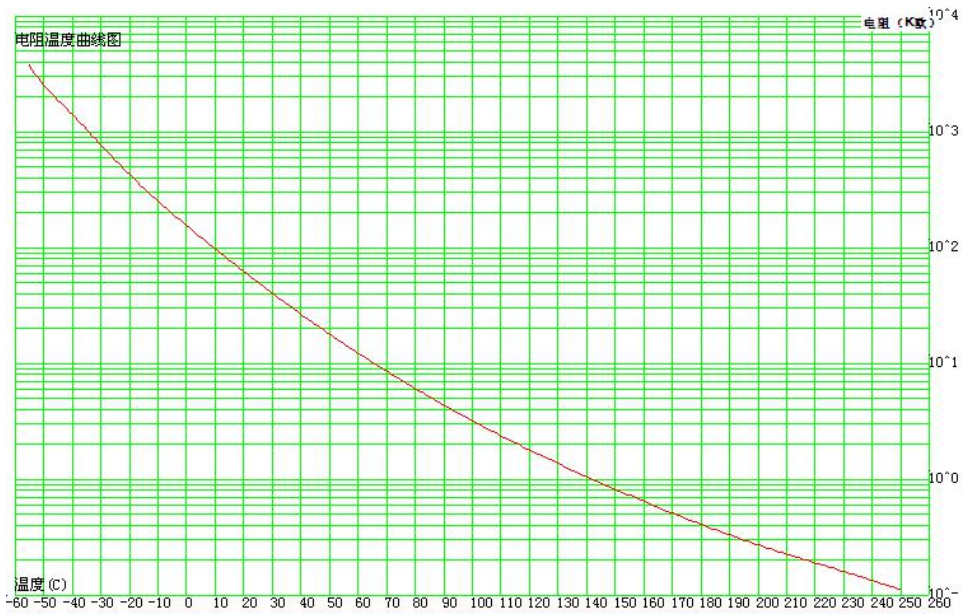
-17	340.044	365.129	391.084	7.108	-6.870	1.290	-1.246
-16	322.461	346.063	370.464	7.051	-6.820	1.288	-1.246
-15	305.949	328.169	351.122	6.994	-6.770	1.287	-1.246
-14	290.432	311.361	332.963	6.938	-6.721	1.285	-1.245
-13	275.837	295.560	315.902	6.882	-6.673	1.284	-1.245
-12	262.097	280.693	299.857	6.827	-6.624	1.282	-1.244
-11	249.153	266.694	284.756	6.772	-6.577	1.280	-1.243
-10	236.947	253.500	270.531	6.718	-6.529	1.278	-1.242
-9	225.428	241.054	257.120	6.664	-6.482	1.276	-1.241
-8	214.549	229.307	244.467	6.611	-6.435	1.273	-1.240
-7	204.266	218.209	232.520	6.558	-6.389	1.271	-1.238
-6	194.541	207.717	221.231	6.506	-6.343	1.268	-1.237
-5	185.335	197.791	210.556	6.453	-6.297	1.266	-1.235
-4	176.616	188.394	200.455	6.402	-6.251	1.263	-1.233
-3	168.353	179.493	190.892	6.350	-6.206	1.260	-1.231
-2	160.517	171.057	181.832	6.299	-6.161	1.257	-1.230
-1	153.083	163.056	173.245	6.248	-6.116	1.254	-1.227
0	146.026	155.466	165.101	6.197	-6.071	1.251	-1.225
1	139.324	148.260	157.374	6.147	-6.027	1.248	-1.223
2	132.957	141.418	150.041	6.097	-5.982	1.244	-1.221
3	126.906	134.918	143.077	6.047	-5.938	1.241	-1.219
4	121.152	128.740	136.462	5.997	-5.894	1.237	-1.216
5	115.680	122.868	130.177	5.948	-5.850	1.234	-1.214
6	110.474	117.284	124.203	5.899	-5.806	1.230	-1.211
7	105.520	111.973	118.523	5.849	-5.762	1.227	-1.208
8	100.805	106.920	113.123	5.801	-5.719	1.223	-1.206
9	96.316	102.112	107.986	5.752	-5.675	1.219	-1.203
10	91.823	97.302	102.849	5.701	-5.630	1.219	-1.204
11	87.972	93.180	98.450	5.655	-5.589	1.212	-1.198
12	84.094	89.033	94.025	5.607	-5.546	1.208	-1.195
13	80.401	85.083	89.814	5.559	-5.503	1.204	-1.192
14	76.881	81.322	85.805	5.511	-5.460	1.200	-1.189
15	73.528	77.740	81.988	5.464	-5.418	1.196	-1.186
16	70.332	74.328	78.354	5.417	-5.375	1.192	-1.183
17	67.285	71.076	74.893	5.369	-5.333	1.188	-1.180
18	64.382	67.979	71.597	5.323	-5.291	1.184	-1.177
19	61.613	65.027	68.458	5.276	-5.249	1.180	-1.174
20	58.974	62.213	65.467	5.229	-5.207	1.176	-1.171
21	56.457	59.532	62.618	5.183	-5.165	1.172	-1.168
22	54.056	56.976	59.903	5.137	-5.124	1.168	-1.165
23	51.767	54.539	57.316	5.091	-5.082	1.163	-1.161
24	49.583	52.215	54.850	5.045	-5.041	1.159	-1.158
25	47.500	50.000	52.500	5.000	-5.000	1.156	-1.156
26	45.472	47.886	50.302	5.045	-5.041	1.172	-1.171
27	43.539	45.871	48.206	5.090	-5.081	1.189	-1.187

28	41.696	43.948	46.205	5.135	-5.122	1.206	-1.203
29	39.939	42.113	44.295	5.180	-5.162	1.223	-1.219
30	38.262	40.362	42.471	5.225	-5.203	1.240	-1.235
31	36.663	38.691	40.730	5.269	-5.243	1.257	-1.251
32	35.137	37.096	39.068	5.313	-5.283	1.275	-1.268
33	33.680	35.574	37.480	5.358	-5.322	1.293	-1.284
34	32.290	34.120	35.963	5.401	-5.362	1.310	-1.301
35	30.963	32.732	34.514	5.445	-5.401	1.328	-1.317
36	29.697	31.405	33.129	5.489	-5.440	1.346	-1.334
37	28.487	30.139	31.806	5.532	-5.479	1.364	-1.351
38	27.332	28.928	30.541	5.576	-5.518	1.382	-1.368
39	26.228	27.771	29.332	5.619	-5.556	1.400	-1.385
40	25.174	26.666	28.176	5.662	-5.595	1.419	-1.402
41	24.166	25.609	27.070	5.704	-5.633	1.437	-1.419
42	23.203	24.598	26.012	5.747	-5.671	1.455	-1.436
43	22.283	23.632	25.000	5.789	-5.709	1.474	-1.454
44	21.402	22.707	24.032	5.832	-5.746	1.493	-1.471
45	20.561	21.823	23.105	5.874	-5.784	1.512	-1.489
46	19.756	20.977	22.218	5.915	-5.821	1.531	-1.506
47	18.986	20.167	21.369	5.957	-5.858	1.550	-1.524
48	18.249	19.392	20.555	5.999	-5.895	1.569	-1.542
49	17.544	18.650	19.777	6.040	-5.932	1.588	-1.559
50	16.869	17.940	19.031	6.081	-5.968	1.607	-1.577
51	16.223	17.259	18.316	6.122	-6.005	1.627	-1.595
52	15.604	16.607	17.631	6.163	-6.041	1.646	-1.613
53	15.011	15.983	16.975	6.204	-6.077	1.666	-1.632
54	14.444	15.385	16.345	6.244	-6.113	1.686	-1.650
55	13.900	14.811	15.742	6.285	-6.148	1.705	-1.668
56	13.380	14.262	15.164	6.325	-6.184	1.725	-1.687
57	12.880	13.735	14.609	6.365	-6.219	1.745	-1.705
58	12.402	13.229	14.077	6.405	-6.254	1.765	-1.724
59	11.943	12.745	13.566	6.445	-6.289	1.786	-1.742
60	11.504	12.280	13.077	6.484	-6.324	1.806	-1.761
61	11.082	11.835	12.607	6.523	-6.359	1.826	-1.780
62	10.678	11.407	12.156	6.563	-6.393	1.847	-1.799
63	10.290	10.997	11.723	6.602	-6.427	1.867	-1.818
64	9.918	10.603	11.307	6.641	-6.461	1.888	-1.837
65	9.560	10.225	10.908	6.679	-6.495	1.909	-1.856
66	9.218	9.862	10.524	6.718	-6.529	1.930	-1.876
67	8.889	9.513	10.156	6.756	-6.563	1.951	-1.895
68	8.573	9.179	9.802	6.795	-6.596	1.972	-1.914
69	8.270	8.857	9.463	6.833	-6.630	1.993	-1.934
70	7.979	8.549	9.136	6.870	-6.663	2.014	-1.953
71	7.699	8.252	8.822	6.908	-6.696	2.036	-1.973
72	7.431	7.967	8.520	6.946	-6.728	2.057	-1.993

73	7.173	7.693	8.230	6.983	-6.761	2.079	-2.013
74	6.925	7.430	7.952	7.020	-6.793	2.101	-2.033
75	6.687	7.177	7.684	7.058	-6.826	2.122	-2.053
76	6.458	6.934	7.426	7.094	-6.858	2.144	-2.073
77	6.238	6.700	7.178	7.131	-6.890	2.166	-2.093
78	6.027	6.475	6.939	7.168	-6.922	2.189	-2.113
79	5.823	6.259	6.710	7.204	-6.953	2.211	-2.134
80	5.628	6.051	6.489	7.240	-6.985	2.233	-2.154
81	5.440	5.851	6.276	7.277	-7.016	2.256	-2.175
82	5.259	5.658	6.072	7.312	-7.047	2.278	-2.196
83	5.085	5.473	5.875	7.348	-7.078	2.301	-2.216
84	4.918	5.294	5.685	7.384	-7.109	2.324	-2.237
85	4.757	5.123	5.503	7.419	-7.139	2.347	-2.258
86	4.602	4.957	5.327	7.454	-7.170	2.370	-2.279
87	4.452	4.798	5.157	7.489	-7.200	2.393	-2.300
88	4.309	4.645	4.994	7.524	-7.230	2.416	-2.322
89	4.171	4.497	4.837	7.559	-7.260	2.439	-2.343
90	4.037	4.355	4.686	7.594	-7.290	2.463	-2.364
91	3.909	4.218	4.540	7.628	-7.320	2.487	-2.386
92	3.785	4.086	4.399	7.662	-7.349	2.510	-2.408
93	3.666	3.959	4.263	7.696	-7.378	2.534	-2.429
94	3.552	3.836	4.132	7.730	-7.408	2.558	-2.451
95	3.441	3.718	4.006	7.764	-7.437	2.582	-2.473
96	3.335	3.604	3.885	7.798	-7.465	2.606	-2.495
97	3.232	3.494	3.767	7.831	-7.494	2.630	-2.517
98	3.133	3.388	3.654	7.864	-7.523	2.655	-2.539
99	3.037	3.285	3.545	7.897	-7.551	2.679	-2.562
100	2.945	3.187	3.439	7.930	-7.579	2.704	-2.584
101	2.856	3.091	3.337	7.963	-7.607	2.728	-2.606
102	2.770	2.999	3.239	7.996	-7.635	2.753	-2.629
103	2.687	2.910	3.144	8.028	-7.663	2.778	-2.652
104	2.607	2.825	3.053	8.060	-7.690	2.803	-2.674
105	2.530	2.742	2.964	8.092	-7.718	2.828	-2.697
106	2.456	2.662	2.878	8.124	-7.745	2.853	-2.720
107	2.384	2.585	2.796	8.156	-7.772	2.879	-2.743
108	2.314	2.510	2.716	8.188	-7.799	2.904	-2.766
109	2.247	2.438	2.639	8.220	-7.826	2.929	-2.789
110	2.182	2.368	2.564	8.251	-7.853	2.955	-2.812
111	2.120	2.301	2.492	8.282	-7.879	2.981	-2.836
112	2.059	2.236	2.422	8.313	-7.906	3.007	-2.859
113	2.000	2.173	2.354	8.344	-7.932	3.033	-2.883
114	1.944	2.112	2.289	8.375	-7.958	3.059	-2.906
115	1.889	2.053	2.226	8.406	-7.984	3.085	-2.930
116	1.836	1.996	2.164	8.436	-8.010	3.111	-2.954
117	1.785	1.941	2.105	8.467	-8.036	3.137	-2.978

118	1.735	1.887	2.048	8.497	-8.062	3.164	-3.002
119	1.687	1.836	1.992	8.527	-8.087	3.190	-3.026
120	1.641	1.785	1.938	8.557	-8.113	3.217	-3.050
121	1.596	1.737	1.886	8.587	-8.138	3.243	-3.074
122	1.552	1.690	1.836	8.617	-8.163	3.270	-3.098
123	1.510	1.644	1.787	8.646	-8.188	3.297	-3.122
124	1.469	1.600	1.739	8.676	-8.213	3.324	-3.147
125	1.429	1.558	1.693	8.705	-8.238	3.351	-3.171
126	1.391	1.516	1.649	8.735	-8.263	3.378	-3.196
127	1.354	1.476	1.605	8.764	-8.288	3.406	-3.221
128	1.317	1.437	1.563	8.793	-8.312	3.433	-3.245
129	1.282	1.399	1.523	8.822	-8.336	3.461	-3.270
130	1.249	1.363	1.483	8.851	-8.361	3.488	-3.295
131	1.216	1.327	1.445	8.880	-8.385	3.516	-3.320
132	1.184	1.292	1.408	8.908	-8.409	3.543	-3.345
133	1.153	1.259	1.372	8.937	-8.433	3.571	-3.370
134	1.123	1.227	1.337	8.965	-8.457	3.599	-3.395
135	1.094	1.195	1.303	8.994	-8.481	3.627	-3.420
136	1.065	1.164	1.270	9.022	-8.505	3.655	-3.446
137	1.038	1.135	1.237	9.050	-8.528	3.683	-3.471
138	1.011	1.106	1.206	9.078	-8.552	3.712	-3.496
139	0.985	1.078	1.176	9.106	-8.575	3.740	-3.522
140	0.960	1.051	1.147	9.134	-8.599	3.769	-3.548
141	0.936	1.024	1.118	9.162	-8.622	3.797	-3.573
142	0.912	0.999	1.090	9.190	-8.645	3.826	-3.599
143	0.889	0.974	1.063	9.217	-8.668	3.854	-3.625
144	0.867	0.949	1.037	9.245	-8.691	3.883	-3.651
145	0.845	0.926	1.012	9.272	-8.714	3.912	-3.677
146	0.824	0.903	0.987	9.300	-8.737	3.941	-3.703
147	0.803	0.881	0.963	9.327	-8.760	3.970	-3.729
148	0.783	0.859	0.939	9.354	-8.782	3.999	-3.755
149	0.764	0.838	0.917	9.381	-8.805	4.028	-3.781
150	0.745	0.818	0.894	9.408	-8.828	4.058	-3.807
151	0.727	0.798	0.873	9.435	-8.850	4.087	-3.834
152	0.709	0.778	0.852	9.462	-8.872	4.117	-3.860
153	0.692	0.760	0.832	9.489	-8.895	4.146	-3.887
154	0.675	0.741	0.812	9.515	-8.917	4.176	-3.913
155	0.659	0.723	0.793	9.542	-8.939	4.206	-3.940
156	0.643	0.706	0.774	9.568	-8.961	4.236	-3.967
157	0.627	0.689	0.756	9.595	-8.983	4.266	-3.994
158	0.612	0.673	0.738	9.621	-9.005	4.296	-4.020
159	0.598	0.657	0.721	9.647	-9.026	4.326	-4.047
160	0.584	0.642	0.704	9.673	-9.048	4.356	-4.074
161	0.570	0.627	0.687	9.699	-9.070	4.386	-4.102
162	0.556	0.612	0.671	9.725	-9.091	4.417	-4.129

163	0.543	0.598	0.656	9.751	-9.112	4.447	-4.156
164	0.530	0.584	0.641	9.777	-9.134	4.478	-4.183
165	0.518	0.570	0.626	9.802	-9.155	4.509	-4.211
166	0.506	0.557	0.612	9.828	-9.176	4.540	-4.238
167	0.494	0.544	0.598	9.853	-9.197	4.571	-4.266
168	0.483	0.532	0.585	9.879	-9.218	4.602	-4.294
169	0.472	0.520	0.572	9.904	-9.239	4.633	-4.322
170	0.461	0.508	0.559	9.929	-9.260	4.664	-4.349
171	0.451	0.497	0.546	9.954	-9.280	4.695	-4.377
172	0.440	0.486	0.534	9.979	-9.301	4.727	-4.405
173	0.431	0.475	0.522	10.000	-9.321	4.758	-4.434
174	0.421	0.464	0.511	10.020	-9.341	4.790	-4.462
175	0.411	0.454	0.500	10.050	-9.362	4.822	-4.490
176	0.402	0.444	0.489	10.070	-9.382	4.854	-4.519
177	0.393	0.434	0.478	10.100	-9.402	4.886	-4.547
178	0.385	0.425	0.468	10.120	-9.422	4.918	-4.576
179	0.376	0.416	0.458	10.150	-9.441	4.950	-4.604
180	0.368	0.407	0.448	10.170	-9.461	4.982	-4.633
181	0.360	0.398	0.439	10.190	-9.481	5.015	-4.662
182	0.353	0.390	0.429	10.220	-9.500	5.047	-4.691
183	0.345	0.381	0.420	10.240	-9.519	5.080	-4.720
184	0.338	0.373	0.412	10.260	-9.539	5.113	-4.749
185	0.331	0.366	0.403	10.290	-9.558	5.146	-4.779
186	0.324	0.358	0.395	10.310	-9.577	5.179	-4.808
187	0.317	0.351	0.387	10.330	-9.596	5.212	-4.838
188	0.310	0.343	0.379	10.360	-9.614	5.245	-4.867
189	0.304	0.336	0.371	10.380	-9.633	5.279	-4.897
190	0.298	0.330	0.364	10.400	-9.651	5.312	-4.927
191	0.292	0.323	0.357	10.420	-9.670	5.346	-4.957
192	0.286	0.316	0.350	10.450	-9.688	5.380	-4.987
193	0.280	0.310	0.343	10.470	-9.706	5.413	-5.017
194	0.274	0.304	0.336	10.490	-9.724	5.447	-5.047
195	0.269	0.298	0.329	10.510	-9.742	5.482	-5.078



附表:2

南京时恒电阻误差曲线图

