编码(Coding)：JK/JXE220831005

南京时恒电子科技有限公司

Nanjing Shiheng Electronics Co.,Ltd.

规格承认书

APPROVAL SHEET

客户名称 CUSTOMER：	
产品名称 PART NAME：	MF58 玻壳型 NTC 热敏电阻器 MF58 Glass shell NTC Thermistor
产品规格 PART NUMBER：	MF58-103F3950
产品编号 PRODUCTCODE：	
版次 REV.NO：	B0
日期 DATE：	2022-8-31

确认

CONFIRM

客户 CLIENT			供货商/制造商 MANUFACTOR	
品保部 Quality Dep.			规格书制作 Design	吴迎丽
制造部 Production Dep.			业务部审核 Checked by sales	
工程部 Engineering Dep.			技术部审核 Checked by R&D	程鹏
			品质部审核 Checked by QA	李少媛

南京时恒电子科技有限公司

NANJING SHIHENG ELECTRONICS CO., LTD.

地址：南京市江宁区湖熟镇金阳路 18 号邮编 Postcode：211121

Address：No.18 Jinyang Road Hushu Town Jiangning District Nanjing China

TEL：025-52121868

Http: //www.shiheng.com.cn **E-MAIL:sales@shiheng.com.cn**

变 更 记 录 表

REVISED RECORD SHEET

版次 REV. NO	变更日期 REV.DATE	变更内容 CHANGE CONTENT	申请人 APPLICANT	批准人 APPROVED
A0	2015/10/11	版本制定。 Version formulation	吴仪	李少媛
B0	2022/4/1	更新规格书版本格式，增加版次管控，细化规格纸。 Update for version form of datasheet,add to management and control for number of edition,refine to PN and draw.	吴仪	李少媛

1、产品型号说明 Product model specification

MF58 103 F 3950

① ② ③ ④

① MF58：玻壳型 NTC 热敏电阻器系列 (Series Glass shell NTC Thermistor)

② 103： 25℃的零功率电阻值 10KΩ(Zero Power Resistance at 25℃is 10KΩ)

③ F：阻值精度代码 F-±1% G-±2% H-±3% J-±5%（Resistance precision code F-±1% G-±2% H-±3% J-±5%）

④ 3950：B25/50 值 3950K（B25/50:3950K）

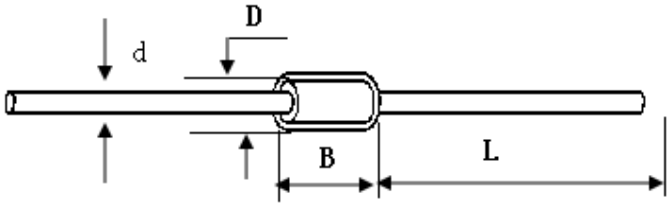
2、电气性能 Electrical Characteristics

No.	项目 Item	符号 Symbol	测试条件 Test conditions	单位 Unit	性能要求 Requirements
2.1	25℃的零功率电阻值 Zero Power Resistance at 25℃	$R_{25℃}$	Ta=25±0.01℃ Test Power≤0.1mW	KΩ	10KΩ±1%
2.2	B 值 B-value	$B_{25/50}$	$B=[(T_a \times T_b)/(T_b-T_a)] \times \ln(R_a/R_b)$ Ta=25±0.01℃ T_b=50℃ ±0.01℃	K	3950±1%
2.3	耗散系数 Thermal dissipation Coefficient	δ	静止空气中 In still air	mW/℃	≥2
2.4	时间常数 Thermal time constant	τ	静止空气中 In still air	sec	≤20
2.5	耐电压 withstand voltage	/	1500V/AC 1min	/	无击穿或飞弧 No breakthrough and flash over
2.6	绝缘电阻 Insulation resistance	/	500V/DC 1min	MΩ	≥500
2.7	工作温度范围 Operating temperature range	/	/	℃	-55℃～250℃
2.8	最大额定功率 Maximum rated power	Pmax	/	mW	50
2.9	阻温特性 R&T-table	/	/	/	见附表Ⅰ See attached table I
2.10	阻值误差&B 值误差 Resistance tolerance& B-value tolerance	/	/	/	见附表Ⅱ See attached table II

3、产品图纸 Product drawing

产品图纸 Product drawing		客户确认 Customer confirm	客户名称 Customer：			
			确认 Confirm		日期 DATE	
产品型号 MODEL NO.	MF58-103F3950		审核 Approve:		日期 DATE	

尺寸 Dimensions： （Unit：mm）



D±0.2	B±0.3	L±1.0	d±0.05
1.8	3.7	28	0.5

技术要求 Technical requirements：

1）零功率阻值：R25：10KΩ ±1%(Zero Power Resistance: R25：10KΩ±1%)；
2）B25/50 数值：3950K±1%(B-value:B25/50: 3950K ±1%)；
3) 引线：φ 0.5 镀锡铜包钢线（Φ 0.5tinned copper-weld steel wire)；
4) 封装：玻壳封装（Glass shell package）；
5）符合 RoHS 环保要求（Meet environmental protection requirements:RoHS）。

更新履历 Revised record sheet

版本 REV. NO	更新时间 REV.DATE	更新内容 Change content	申请人 Applicant	批准人 Approved
A0	2015/10/11	版本制定。 ersion formulation	吴仪	李少媛
B0	2022/4/1	更新规格书版本格式，增加版次管控 Update for version form of datasheet,add to management and control for number of edition	吴仪	李少媛

4、可靠性 Reliability

No.	项目 Item	试验标准	试验条件及方法 Test conditions and methods	性能要求 Requirements
4.1	引出端强度 Terminal strength	IEC60068-2-21	固定电阻端，拉力：10±1 N，时间：10±1 秒 Fixed resistor end, Pull strength：10±1 N， time：10±1 sec	无可见性损伤 No obvious damage R_{25} ΔR/R≤±2%
4.2	可焊性 Solderability	IEC60068-2-20	温度 245±5℃时间 2-3 秒 temperature : 245±5℃ for 2-3sec	着锡面积≥95% Coverage area ≥ 95%.
4.3	耐焊接热 Withstand weiling temp	IEC60068-2-20	锡锅温度：260±5℃，浸入深度距电阻体 6mm，时间 5±1 秒 Temperature of tin pot:260±5℃, insert deepth from body of resistance 6mm, time 5±1senconds	R_{25} ΔR/R≤±2%
4.4	稳态湿热 Steady humidity and heat	IEC60068-2-78	温度：40℃±2℃，湿度：93±2%，时间：500 小时 Temp：40℃±2℃，humidity：93±2%， Time ： 500hrs	R_{25} ΔR/R≤±2%
4.5	温度快速变化 Rapid changes in temperature	IEC60068-2-14	-55℃30min→25℃5min→250℃ 30min→25℃5min，5cycles	R_{25} ΔR/R≤±2%
4.6	高温储存 High temperature storage	IEC60068-2-2	温度: 250℃±5℃ 时间:1000 小时 Temp : 250℃±5℃， Time :1000hrs	R_{25} ΔR/R≤±2%
4.7	低温储存 Low temperature storage	IEC60068-2-1	温度:-55℃时间:1000 小时 Temp : -55℃， Time :1000hrs	R_{25} ΔR/R≤±2%

▲注： 1）稳态湿热及温度快速变化试验结束后，样品需在常温环境下静置 2 小时后再做性能测试；

▲Note： 1) After the test of steady-state humid heat and rapid temperature change, the sample should be kept for 2 hours at room temperature before performance test ;

2）高温存储及低温存储结束后，需随测试环境自然恢复至常温，再取出做性能测试。

2) After the test of high - and low-temperature storage is complete, and then take it out for performance test when the test environment naturally regain to normal temperature.

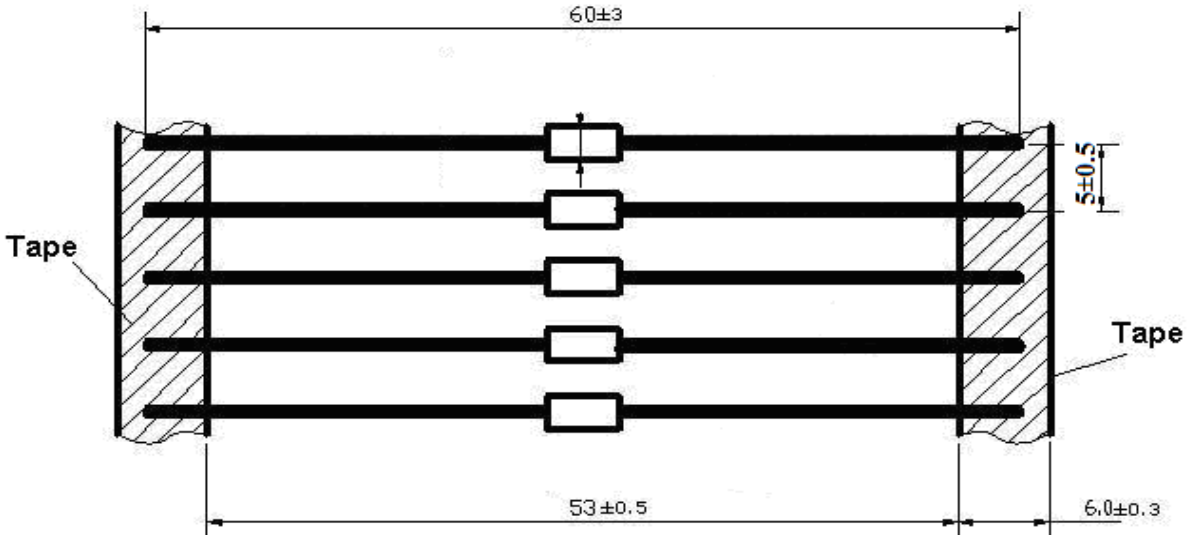
5、产品包装 Product packaging

5.1 包装方式 Packing Type

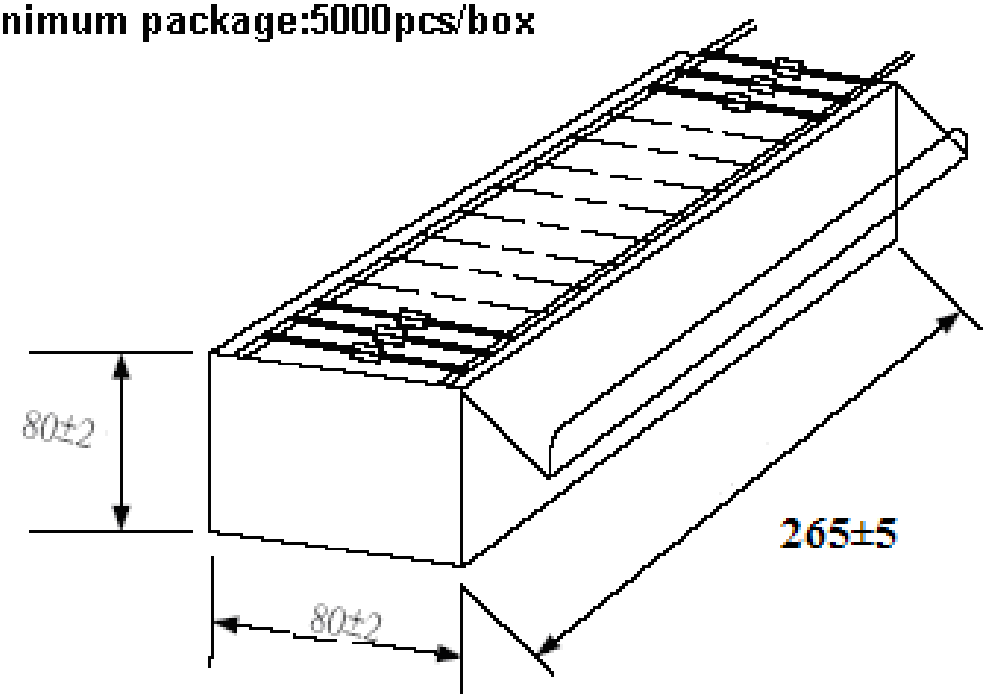
☑ 散装方式 Bulk Type ☐ 编编带方式 Reel Type

5.2 包装规格 Packing specification

No.	包装规格 Packing specification	包装材料、尺寸 Packing material, size	产品数量 Quantity
1	包装袋 Packing bag	自封口袋(self sealing bag) W×H＝125mm×90mm	**500**
2	编编带包装盒 Reel Packing box	265mm*80mm*75mm	**5000**



minimum package:5000pcs/box



编编带方式 Reel Type

6、安装&使用注意事项 Installation & Use precautions

6.1 本产品的用途：温度测量与控制；application:test and control for temperature

6.2 避免过大的电流引起元件自身发热而产生测量误差；

To avoid of testing tolerance caused by huge current upon the self-heat of component.

6.3 烙铁焊接时，焊接处距包封头部距离至少 2mm，焊接温度应低于 360℃，焊接时间＜3ses；

When welded by soldering iron,weld spot should be 2mm at least from head,weld temperature should be under 360℃,time＜3ses

6.4 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；

In case of lead bending,the dot of bending should be above 2mm from glass shell to avoid of damaging for glass shell.

6.5 储存温度：-10℃ ～ 40℃；储存湿度：≤75% RH；

storage temp:-10℃ ～ 40℃；storage humidity:≤75% RH

6.6 避免存放在具有腐蚀性气体及光照的环境下；To avoid of leaving with such environment as corrosive gases and illumination

6.6 包装打开后需重新密封保存，贮存期 1 年，超过贮存期，可按本标准规定的项目重新检验，如符合要求仍可使用；

The packing need to be resealed since opened,storage period 1 year.once valid,it should be retest according to regulated of criterion and can be still used if meet the requirement.

6.7 如在加工过程中需使用热缩管，热缩管热缩时不可使用电吹风进行吹制，建议热缩工艺，将套好热缩管后的产品放入恒温烘箱中，按 110℃/10-12min 进行热缩；

In case of useing heat-shrink tube,hair drier is prohibited.we suggest that put the product with heat shrink into constant-temperature box and heat shrink under 110℃/10-12min

7、产品认证 Product certification

No.	项目 Projects	产品认证 Product certification
8.1	质量管理体系认证 Quality Management System Certification	ISO9001:2015
		IATF16949：2016
8.2	环境管理体系认证 Environmental Management System Certification	ISO14001:2015
8.3	环保检测报告 Environmental test report	RoHS 2.0
8.4	CQC 认证 CQC certificate	
8.5	UL 认证 UL certificate	E240991
8.6	TUV 认证 UL certificate	R50245892
8.7	江苏省高新技术产品认证 High-tech product certificate in Jiangsu Province	
8.8	产品通过 AEC-Q200 测试 Passed by AECQ-200	

附表Ⅰ（Attachment I）

南京时恒阻温特性表

R25=10KΩ 精度:±1% B25/50=3950K B25/85=3986K 精度:±1%(F4-17)							
温度(℃)	电阻(KΩ)			电阻精度(%)		温度精度(℃)	
	最小值	中心值	最大值	△R	-△R	△T	-△T
-55	1318.470	1399.250	1484.820	6.115	-5.772	0.724	-0.683
-54	1106.840	1172.570	1242.090	5.928	-5.606	0.722	-0.683
-53	944.750	999.260	1056.800	5.759	-5.455	0.720	-0.682
-52	818.224	864.178	912.621	5.605	-5.317	0.717	-0.681
-51	717.728	757.035	798.415	5.466	-5.192	0.715	-0.679
-50	636.617	670.669	706.472	5.338	-5.077	0.712	-0.677
-49	570.173	600.002	631.329	5.221	-4.971	0.709	-0.675
-48	514.985	541.371	569.051	5.112	-4.873	0.706	-0.673
-47	468.554	492.090	516.758	5.012	-4.782	0.702	-0.670
-46	429.016	450.165	472.310	4.919	-4.698	0.698	-0.667
-45	394.967	414.092	434.099	4.831	-4.618	0.695	-0.664
-44	365.335	382.723	400.899	4.749	-4.543	0.691	-0.661
-43	339.293	355.176	371.766	4.670	-4.471	0.686	-0.657
-42	316.197	330.764	345.967	4.596	-4.403	0.682	-0.653
-41	295.543	308.947	322.927	4.525	-4.338	0.677	-0.649
-40	276.930	289.300	302.192	4.456	-4.275	0.673	-0.645
-39	260.038	271.480	283.398	4.389	-4.214	0.668	-0.641
-38	244.611	255.217	266.257	4.325	-4.155	0.663	-0.637
-37	230.443	240.290	250.533	4.262	-4.097	0.658	-0.632
-36	217.365	226.520	236.036	4.201	-4.041	0.653	-0.628
-35	205.241	213.761	222.612	4.140	-3.985	0.648	-0.623

-34	193.957	201.893	210.133	4.081	-3.930	0.642	-0.619
-33	183.421	190.818	198.494	4.022	-3.876	0.637	-0.614
-32	173.554	180.452	187.606	3.964	-3.822	0.631	-0.609
-31	164.292	170.728	177.398	3.906	-3.769	0.626	-0.604
-30	155.581	161.587	167.807	3.849	-3.716	0.620	-0.599
-29	147.374	152.979	158.781	3.792	-3.663	0.614	-0.593
-28	139.631	144.862	150.275	3.736	-3.611	0.609	-0.588
-27	132.318	137.201	142.250	3.679	-3.559	0.603	-0.583
-26	125.405	129.963	134.672	3.623	-3.506	0.597	-0.578
-25	118.866	123.120	127.512	3.567	-3.454	0.591	-0.572
-24	112.678	116.647	120.743	3.511	-3.402	0.585	-0.567
-23	106.819	110.522	114.341	3.456	-3.350	0.579	-0.561
-22	101.271	104.725	108.286	3.400	-3.298	0.573	-0.555
-21	96.016	99.237	102.556	3.344	-3.246	0.566	-0.550
-20	91.038	94.042	97.135	3.289	-3.194	0.560	-0.544
-19	86.323	89.123	92.005	3.233	-3.142	0.554	-0.538
-18	81.857	84.467	87.151	3.178	-3.090	0.548	-0.532
-17	77.626	80.059	82.559	3.122	-3.038	0.541	-0.527
-16	73.620	75.886	78.214	3.067	-2.986	0.535	-0.521
-15	69.826	71.937	74.104	3.012	-2.934	0.528	-0.515
-14	66.233	68.199	70.216	2.957	-2.882	0.522	-0.508
-13	62.832	64.662	66.540	2.902	-2.830	0.515	-0.502
-12	59.612	61.316	63.062	2.848	-2.779	0.509	-0.496
-11	56.564	58.150	59.774	2.793	-2.727	0.502	-0.490
-10	53.678	55.155	56.665	2.739	-2.676	0.495	-0.484
-9	50.948	52.321	53.726	2.685	-2.624	0.488	-0.477
-8	48.364	49.641	50.948	2.631	-2.573	0.481	-0.471

-7	45.918	47.107	48.321	2.577	-2.522	0.475	-0.464
-6	43.604	44.709	45.838	2.523	-2.471	0.468	-0.458
-5	41.415	42.442	43.491	2.470	-2.420	0.461	-0.451
-4	39.343	40.298	41.272	2.417	-2.370	0.454	-0.445
-3	37.382	38.270	39.175	2.364	-2.319	0.447	-0.438
-2	35.527	36.352	37.192	2.312	-2.269	0.439	-0.431
-1	33.771	34.537	35.318	2.259	-2.219	0.432	-0.424
0	31.673	32.371	33.081	2.193	-2.156	0.427	-0.420
1	30.536	31.198	31.870	2.155	-2.120	0.418	-0.411
2	29.048	29.662	30.286	2.104	-2.070	0.410	-0.404
3	27.638	28.208	28.788	2.052	-2.021	0.403	-0.397
4	26.304	26.833	27.370	2.001	-1.972	0.395	-0.390
5	25.040	25.531	26.030	1.951	-1.923	0.388	-0.382
6	23.844	24.299	24.761	1.900	-1.875	0.380	-0.375
7	22.710	23.133	23.561	1.850	-1.826	0.373	-0.368
8	21.636	22.028	22.425	1.800	-1.778	0.365	-0.361
9	20.618	20.982	21.349	1.751	-1.730	0.357	-0.353
10	19.559	19.893	20.230	1.697	-1.678	0.351	-0.347
11	18.740	19.052	19.366	1.653	-1.636	0.342	-0.338
12	17.873	18.162	18.453	1.604	-1.589	0.334	-0.331
13	17.051	17.318	17.587	1.556	-1.542	0.326	-0.323
14	16.271	16.518	16.767	1.508	-1.495	0.318	-0.315
15	15.531	15.760	15.990	1.460	-1.449	0.310	-0.307
16	14.829	15.040	15.253	1.413	-1.403	0.302	-0.300
17	14.163	14.357	14.554	1.365	-1.357	0.294	-0.292
18	13.530	13.710	13.890	1.319	-1.311	0.285	-0.284
19	12.929	13.095	13.261	1.272	-1.266	0.277	-0.276

20	12.358	12.511	12.664	1.226	-1.221	0.269	-0.268
21	11.815	11.956	12.097	1.180	-1.176	0.260	-0.259
22	11.299	11.429	11.559	1.135	-1.132	0.252	-0.251
23	10.809	10.928	11.047	1.089	-1.087	0.243	-0.243
24	10.343	10.452	10.561	1.044	-1.043	0.235	-0.235
25	9.900	10.000	10.100	1.000	-1.000	0.226	-0.226
26	9.469	9.569	9.669	1.044	-1.043	0.238	-0.237
27	9.060	9.160	9.259	1.088	-1.086	0.249	-0.249
28	8.671	8.770	8.869	1.132	-1.129	0.261	-0.260
29	8.301	8.399	8.498	1.176	-1.172	0.273	-0.272
30	7.948	8.046	8.144	1.219	-1.214	0.285	-0.284
31	7.613	7.710	7.807	1.262	-1.257	0.297	-0.295
32	7.293	7.389	7.486	1.305	-1.298	0.309	-0.307
33	6.989	7.084	7.180	1.348	-1.340	0.321	-0.319
34	6.699	6.793	6.888	1.391	-1.381	0.333	-0.331
35	6.423	6.516	6.609	1.433	-1.423	0.345	-0.343
36	6.160	6.251	6.344	1.475	-1.463	0.358	-0.355
37	5.909	5.999	6.090	1.517	-1.504	0.370	-0.367
38	5.669	5.758	5.848	1.558	-1.544	0.383	-0.379
39	5.441	5.529	5.617	1.600	-1.584	0.395	-0.392
40	5.223	5.309	5.397	1.641	-1.624	0.408	-0.404
41	5.015	5.100	5.186	1.682	-1.664	0.421	-0.416
42	4.817	4.900	4.985	1.722	-1.703	0.434	-0.429
43	4.627	4.709	4.792	1.763	-1.742	0.446	-0.441
44	4.446	4.526	4.608	1.803	-1.781	0.459	-0.454
45	4.273	4.352	4.432	1.843	-1.820	0.473	-0.466
46	4.107	4.185	4.264	1.883	-1.858	0.486	-0.479

47	3.949	4.026	4.103	1.923	-1.896	0.499	-0.492
48	3.798	3.873	3.949	1.962	-1.934	0.512	-0.505
49	3.654	3.727	3.802	2.001	-1.972	0.525	-0.518
50	3.515	3.588	3.661	2.040	-2.009	0.539	-0.531
51	3.383	3.454	3.526	2.079	-2.046	0.552	-0.544
52	3.257	3.326	3.396	2.117	-2.083	0.566	-0.557
53	3.135	3.203	3.272	2.156	-2.120	0.580	-0.570
54	3.019	3.086	3.154	2.194	-2.157	0.593	-0.583
55	2.908	2.973	3.040	2.232	-2.193	0.607	-0.597
56	2.802	2.866	2.931	2.270	-2.229	0.621	-0.610
57	2.700	2.762	2.826	2.307	-2.265	0.635	-0.624
58	2.602	2.663	2.726	2.344	-2.300	0.649	-0.637
59	2.508	2.568	2.630	2.382	-2.336	0.663	-0.651
60	2.418	2.477	2.537	2.419	-2.371	0.678	-0.664
61	2.332	2.390	2.449	2.455	-2.406	0.692	-0.678
62	2.250	2.306	2.364	2.492	-2.441	0.706	-0.692
63	2.171	2.226	2.282	2.528	-2.476	0.721	-0.706
64	2.094	2.148	2.204	2.565	-2.510	0.735	-0.720
65	2.021	2.074	2.128	2.601	-2.544	0.750	-0.734
66	1.951	2.003	2.056	2.636	-2.578	0.764	-0.748
67	1.884	1.935	1.986	2.672	-2.612	0.779	-0.762
68	1.820	1.869	1.920	2.707	-2.646	0.794	-0.776
69	1.758	1.806	1.855	2.743	-2.679	0.809	-0.790
70	1.698	1.745	1.794	2.778	-2.712	0.824	-0.805
71	1.641	1.687	1.734	2.813	-2.745	0.839	-0.819
72	1.586	1.631	1.677	2.847	-2.778	0.854	-0.833
73	1.533	1.577	1.622	2.882	-2.811	0.869	-0.848

74	1.482	1.525	1.570	2.916	-2.843	0.885	-0.862
75	1.433	1.475	1.519	2.951	-2.876	0.900	-0.877
76	1.386	1.427	1.470	2.985	-2.908	0.915	-0.892
77	1.341	1.381	1.423	3.019	-2.940	0.931	-0.907
78	1.297	1.337	1.378	3.052	-2.971	0.947	-0.922
79	1.255	1.294	1.334	3.086	-3.003	0.962	-0.936
80	1.215	1.253	1.292	3.119	-3.034	0.978	-0.951
81	1.176	1.213	1.251	3.152	-3.066	0.994	-0.967
82	1.138	1.175	1.212	3.185	-3.097	1.010	-0.982
83	1.102	1.138	1.175	3.218	-3.127	1.026	-0.997
84	1.068	1.103	1.138	3.251	-3.158	1.042	-1.012
85	1.030	1.065	1.100	3.287	-3.192	1.057	-1.027
86	1.002	1.035	1.070	3.316	-3.219	1.074	-1.043
87	0.971	1.004	1.037	3.348	-3.249	1.091	-1.058
88	0.941	0.973	1.006	3.380	-3.279	1.107	-1.074
89	0.912	0.944	0.976	3.412	-3.309	1.123	-1.089
90	0.884	0.915	0.947	3.443	-3.338	1.140	-1.105
91	0.858	0.888	0.918	3.475	-3.368	1.157	-1.121
92	0.832	0.861	0.891	3.506	-3.397	1.173	-1.137
93	0.807	0.835	0.865	3.538	-3.426	1.190	-1.153
94	0.783	0.811	0.840	3.569	-3.455	1.207	-1.168
95	0.759	0.787	0.815	3.599	-3.484	1.224	-1.184
96	0.737	0.764	0.792	3.630	-3.513	1.241	-1.201
97	0.715	0.742	0.769	3.661	-3.541	1.258	-1.217
98	0.694	0.720	0.747	3.691	-3.569	1.275	-1.233
99	0.674	0.699	0.725	3.722	-3.598	1.292	-1.249
100	0.652	0.677	0.702	3.756	-3.630	1.309	-1.265

101	0.636	0.660	0.685	3.782	-3.654	1.327	-1.282
102	0.618	0.641	0.666	3.812	-3.681	1.344	-1.298
103	0.600	0.623	0.647	3.841	-3.709	1.362	-1.315
104	0.583	0.606	0.629	3.871	-3.736	1.380	-1.332
105	0.567	0.589	0.612	3.900	-3.763	1.397	-1.348
106	0.551	0.572	0.595	3.930	-3.791	1.415	-1.365
107	0.535	0.557	0.579	3.959	-3.817	1.433	-1.382
108	0.520	0.541	0.563	3.988	-3.844	1.451	-1.399
109	0.506	0.526	0.548	4.016	-3.871	1.469	-1.416
110	0.492	0.512	0.533	4.045	-3.897	1.487	-1.433
111	0.479	0.498	0.518	4.074	-3.924	1.505	-1.450
112	0.466	0.485	0.505	4.102	-3.950	1.523	-1.467
113	0.453	0.472	0.491	4.130	-3.976	1.542	-1.484
114	0.441	0.459	0.478	4.159	-4.002	1.560	-1.501
115	0.429	0.447	0.466	4.187	-4.028	1.579	-1.519
116	0.417	0.435	0.454	4.214	-4.054	1.597	-1.536
117	0.406	0.424	0.442	4.242	-4.079	1.616	-1.554
118	0.396	0.413	0.430	4.270	-4.104	1.635	-1.571
119	0.385	0.402	0.419	4.297	-4.130	1.653	-1.589
120	0.375	0.391	0.408	4.325	-4.155	1.672	-1.607
121	0.365	0.381	0.398	4.352	-4.180	1.691	-1.624
122	0.356	0.372	0.388	4.379	-4.205	1.710	-1.642
123	0.347	0.362	0.378	4.406	-4.229	1.729	-1.660
124	0.338	0.353	0.369	4.433	-4.254	1.748	-1.678
125	0.329	0.344	0.359	4.459	-4.279	1.768	-1.696
126	0.321	0.335	0.350	4.486	-4.303	1.787	-1.714
127	0.313	0.327	0.342	4.512	-4.327	1.806	-1.732

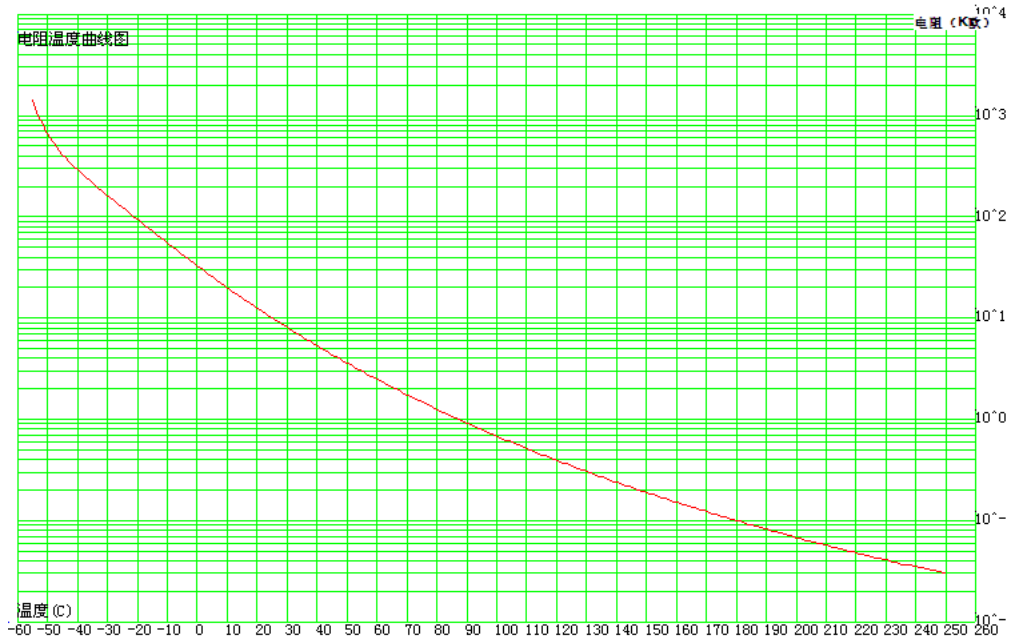
128	0.305	0.319	0.333	4.539	-4.351	1.826	-1.750
129	0.297	0.311	0.325	4.565	-4.375	1.846	-1.769
130	0.290	0.303	0.317	4.591	-4.399	1.865	-1.787
131	0.283	0.296	0.309	4.617	-4.423	1.885	-1.806
132	0.276	0.289	0.302	4.643	-4.446	1.905	-1.824
133	0.269	0.282	0.295	4.669	-4.470	1.925	-1.843
134	0.262	0.275	0.288	4.694	-4.493	1.945	-1.861
135	0.256	0.268	0.281	4.720	-4.516	1.965	-1.880
136	0.250	0.262	0.274	4.745	-4.540	1.985	-1.899
137	0.244	0.255	0.268	4.770	-4.563	2.005	-1.918
138	0.238	0.249	0.261	4.795	-4.585	2.025	-1.936
139	0.232	0.243	0.255	4.820	-4.608	2.045	-1.955
140	0.227	0.238	0.249	4.845	-4.631	2.066	-1.974
141	0.221	0.232	0.244	4.870	-4.653	2.086	-1.994
142	0.216	0.227	0.238	4.895	-4.676	2.107	-2.013
143	0.211	0.222	0.232	4.919	-4.698	2.128	-2.032
144	0.206	0.216	0.227	4.944	-4.720	2.148	-2.051
145	0.201	0.211	0.222	4.968	-4.743	2.169	-2.071
146	0.197	0.207	0.217	4.992	-4.765	2.190	-2.090
147	0.192	0.202	0.212	5.017	-4.786	2.211	-2.110
148	0.188	0.197	0.207	5.041	-4.808	2.232	-2.129
149	0.183	0.193	0.203	5.065	-4.830	2.253	-2.149
150	0.179	0.189	0.198	5.088	-4.851	2.274	-2.168
151	0.175	0.184	0.194	5.112	-4.873	2.296	-2.188
152	0.171	0.180	0.189	5.136	-4.894	2.317	-2.208
153	0.167	0.176	0.185	5.159	-4.916	2.338	-2.228
154	0.164	0.172	0.181	5.183	-4.937	2.360	-2.248

155	0.160	0.169	0.177	5.206	-4.958	2.382	-2.268
156	0.157	0.165	0.173	5.229	-4.979	2.403	-2.288
157	0.153	0.161	0.170	5.252	-5.000	2.425	-2.308
158	0.150	0.158	0.166	5.275	-5.020	2.447	-2.328
159	0.147	0.154	0.163	5.298	-5.041	2.469	-2.349
160	0.143	0.151	0.159	5.321	-5.062	2.491	-2.369
161	0.140	0.148	0.156	5.344	-5.082	2.513	-2.390
162	0.137	0.145	0.152	5.366	-5.103	2.535	-2.410
163	0.134	0.142	0.149	5.389	-5.123	2.557	-2.431
164	0.131	0.139	0.146	5.411	-5.143	2.579	-2.451
165	0.129	0.136	0.143	5.434	-5.163	2.602	-2.472
166	0.126	0.133	0.140	5.456	-5.183	2.624	-2.493
167	0.123	0.130	0.137	5.478	-5.203	2.647	-2.514
168	0.121	0.127	0.134	5.500	-5.223	2.669	-2.535
169	0.118	0.125	0.132	5.522	-5.243	2.692	-2.555
170	0.116	0.122	0.129	5.544	-5.262	2.715	-2.577
171	0.113	0.120	0.126	5.566	-5.282	2.737	-2.598
172	0.111	0.117	0.124	5.587	-5.301	2.760	-2.619
173	0.109	0.115	0.121	5.609	-5.321	2.783	-2.640
174	0.106	0.112	0.119	5.631	-5.340	2.806	-2.661
175	0.104	0.110	0.116	5.652	-5.359	2.829	-2.683
176	0.102	0.108	0.114	5.673	-5.378	2.853	-2.704
177	0.100	0.106	0.112	5.695	-5.397	2.876	-2.726
178	0.098	0.104	0.110	5.716	-5.416	2.899	-2.747
179	0.096	0.102	0.108	5.737	-5.435	2.923	-2.769
180	0.094	0.100	0.105	5.758	-5.454	2.946	-2.791
181	0.092	0.098	0.103	5.779	-5.473	2.970	-2.812

182	0.090	0.096	0.101	5.800	-5.491	2.993	-2.834
183	0.089	0.094	0.099	5.820	-5.510	3.017	-2.856
184	0.087	0.092	0.097	5.841	-5.528	3.041	-2.878
185	0.085	0.090	0.096	5.862	-5.546	3.065	-2.900
186	0.084	0.089	0.094	5.882	-5.565	3.089	-2.922
187	0.082	0.087	0.092	5.902	-5.583	3.113	-2.944
188	0.080	0.085	0.090	5.923	-5.601	3.137	-2.967
189	0.079	0.084	0.089	5.943	-5.619	3.161	-2.989
190	0.077	0.082	0.087	5.963	-5.637	3.186	-3.011
191	0.076	0.080	0.085	5.983	-5.655	3.210	-3.034
192	0.074	0.079	0.084	6.003	-5.673	3.234	-3.056
193	0.073	0.077	0.082	6.023	-5.690	3.259	-3.079
194	0.072	0.076	0.081	6.043	-5.708	3.284	-3.102
195	0.070	0.075	0.079	6.063	-5.726	3.308	-3.124
196	0.069	0.073	0.078	6.082	-5.743	3.333	-3.147
197	0.068	0.072	0.076	6.102	-5.760	3.358	-3.170
198	0.066	0.071	0.075	6.122	-5.778	3.383	-3.193
199	0.065	0.069	0.074	6.141	-5.795	3.408	-3.216
200	0.064	0.068	0.072	6.160	-5.812	3.433	-3.239
201	0.063	0.067	0.071	6.180	-5.829	3.458	-3.262
202	0.062	0.066	0.070	6.199	-5.846	3.483	-3.285
203	0.061	0.064	0.068	6.218	-5.863	3.508	-3.308
204	0.059	0.063	0.067	6.237	-5.880	3.534	-3.332
205	0.058	0.062	0.066	6.256	-5.897	3.559	-3.355
206	0.057	0.061	0.065	6.275	-5.914	3.585	-3.378
207	0.056	0.060	0.064	6.294	-5.930	3.610	-3.402
208	0.055	0.059	0.063	6.312	-5.947	3.636	-3.426

209	0.054	0.058	0.062	6.331	-5.963	3.662	-3.449
210	0.053	0.057	0.060	6.350	-5.980	3.688	-3.473
211	0.052	0.056	0.059	6.368	-5.996	3.714	-3.497
212	0.052	0.055	0.058	6.387	-6.012	3.740	-3.521
213	0.051	0.054	0.057	6.405	-6.029	3.766	-3.545
214	0.050	0.053	0.056	6.423	-6.045	3.792	-3.568
215	0.049	0.052	0.055	6.441	-6.061	3.818	-3.593
216	0.048	0.051	0.055	6.459	-6.077	3.844	-3.617
217	0.047	0.050	0.054	6.478	-6.093	3.871	-3.641
218	0.046	0.049	0.053	6.495	-6.109	3.897	-3.665
219	0.046	0.049	0.052	6.513	-6.124	3.924	-3.689
220	0.045	0.048	0.051	6.531	-6.140	3.950	-3.714
221	0.044	0.047	0.050	6.549	-6.156	3.977	-3.738
222	0.043	0.046	0.049	6.567	-6.171	4.004	-3.763
223	0.043	0.045	0.049	6.584	-6.187	4.031	-3.787
224	0.042	0.045	0.048	6.602	-6.202	4.058	-3.812
225	0.041	0.044	0.047	6.619	-6.217	4.085	-3.837
226	0.041	0.043	0.046	6.636	-6.233	4.112	-3.862
227	0.040	0.043	0.045	6.654	-6.248	4.139	-3.887
228	0.039	0.042	0.045	6.671	-6.263	4.166	-3.911
229	0.039	0.041	0.044	6.688	-6.278	4.194	-3.936
230	0.038	0.041	0.043	6.705	-6.293	4.221	-3.962
231	0.037	0.040	0.043	6.722	-6.308	4.248	-3.987
232	0.037	0.039	0.042	6.739	-6.323	4.276	-4.012
233	0.036	0.039	0.041	6.756	-6.338	4.304	-4.037
234	0.036	0.038	0.041	6.772	-6.352	4.331	-4.063
235	0.035	0.037	0.040	6.789	-6.367	4.359	-4.088

236	0.034	0.037	0.039	6.806	-6.381	4.387	-4.113
237	0.034	0.036	0.039	6.822	-6.396	4.415	-4.139
238	0.033	0.036	0.038	6.839	-6.410	4.443	-4.165
239	0.033	0.035	0.038	6.855	-6.425	4.471	-4.190
240	0.032	0.035	0.037	6.871	-6.439	4.499	-4.216
241	0.032	0.034	0.036	6.888	-6.453	4.528	-4.242
242	0.031	0.034	0.036	6.904	-6.467	4.556	-4.268
243	0.031	0.033	0.035	6.920	-6.481	4.584	-4.294
244	0.030	0.033	0.035	6.936	-6.495	4.613	-4.320
245	0.030	0.032	0.034	6.952	-6.509	4.641	-4.346
246	0.030	0.032	0.034	6.967	-6.523	4.670	-4.372
247	0.029	0.031	0.033	6.983	-6.537	4.699	-4.398
248	0.029	0.031	0.033	6.999	-6.550	4.728	-4.425
249	0.028	0.030	0.032	7.014	-6.564	4.757	-4.451
250	0.028	0.030	0.032	7.030	-6.577	4.786	-4.478



附表Ⅱ（**Attachment Ⅱ**）

南京时恒电阻误差曲线图

Nanjing The curve of resistance tolerance