



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 :

产品规格 PART NUMBER :

产品编号 PRODUCTCODE:

版次 REV.NO:

日期 DATE:

MF52 测温型 NTC 热敏电阻器

MF52 Series Temp Measurement NTC Thermistor

MF52A 472F3950(A1)

B0

2023-8-16

确认

CONFIRM

客户 CLIENT		供货商/制造商 MANUFACTOR	
品保部 Quality Dep.		规格书制作 Design	刘星月
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

[illegible]

1、产品型号说明 Product model specification

MF52 A 472 F 3950 (A1)

① ② ③ ④ ⑤ ⑥

- ① MF52: 测温型 NTC 热敏电阻器系列 (Series Temp Measurement NTC Thermistor)
- ② A: 指引线为镀锡线 (Refers to tinned lead)
- ③ 472: 25℃ 的零功率电阻值 4.7KΩ (Zero Power Resistance at 25℃ is 4.7KΩ)
- ④ 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%)
- ⑤ 3950: B25/50 值 3950K (B25/50:3950K)
- ⑥ (A1): 线材规格: 引线外径 Φ0.3mm (Wire dimension: The outer diameter of lead wire is Φ0.3mm)

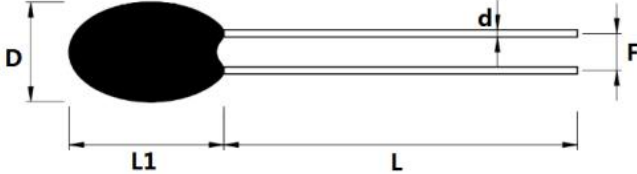
2、电气性能 Electrical Characteristics

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℃	$R_{25^{\circ}\text{C}}$	$T_a=25\pm0.01^{\circ}\text{C}$ Test Power $\leq 0.1\text{mW}$	KΩ	$4.7\text{K}\Omega\pm 1\%$
2.2	B 值 B-value	$B_{25/50}$	$B=[(T_a\times T_b)/(T_b-T_a)]\times \ln(R_a/R_b)$ $T_a=25\pm0.01^{\circ}\text{C}$ $T_b=50^{\circ}\text{C}\pm 0.01^{\circ}\text{C}$	K	$3950\pm 1\%$
2.3	耗散系数 Thermal dissipation Coefficient	δ	静止空气中 In still air	mW/℃	约 2
2.4	时间常数 Thermal time constant	τ	静止空气中 In still air	sec	约 7
2.5	绝缘电阻 Insulation resistance	/	100V/DC 1min	MΩ	≥ 100
2.6	工作温度范围 Operating temperature range	/	/	℃	$-55^{\circ}\text{C}\sim 125^{\circ}\text{C}$
2.7	最大额定功率 Maximum rated power	Pmax	/	mW	100
2.8	阻温特性 R&T-table	/	/	/	见附表 I See attached table I
2.9	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.	MF52A 472F3950(A1)	审核 Approve:		日期 DATE		

尺寸 Dimensions: (Unit: mm)



DMax	L1Max	L	d±0.05	F±0.5
2.5	4	Min25	0.3	1.7

技术要求 Technical requirements:

- 1) 零功率阻值: R25: $4.7K\Omega \pm 1\%$ (Zero Power Resistance: R25: $4.7K\Omega \pm 1\%$);
- 2) B25/50 数值: $3950K \pm 1\%$ (B-value: B25/50: $3950K \pm 1\%$);
- 3) 线材: $\Phi 0.3$ 镀锡铜包钢线 ($\Phi 0.3$ tinned copper-weld steel wire);
- 4) 封装: 黑色改性环氧树脂包封 (Black function improvement Epoxy resin);
- 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
B0		版本发行	王月婷	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: 5 ± 1 N, 时间: 10 ± 1 秒 Fixed resistor end, Pull strength: 5 ± 1 N, time: 10 ± 1 sec	无可见性损伤 No obvious damage $ \Delta R_{25}/R_{25} \leq 2\%$
4.2	可焊性 Solderability	IEC60068-2-20	温度 $245 \pm 5^\circ\text{C}$ 时间 2-3 秒 temperature : $245 \pm 5^\circ\text{C}$ for 2-3sec	着锡面积 $\geq 95\%$ Coverage area $\geq 95\%$.
4.3	耐焊接热 Withstand weiling temp	IEC60068-2-20	锡锅温度: $260 \pm 5^\circ\text{C}$, 浸入深度距电阻体 6mm, 时间 5 ± 1 秒 Temperature of tin pot: $260 \pm 5^\circ\text{C}$, insert depth from body of resistance 6mm, time 5 ± 1 seconds	$ \Delta R_{25}/R_{25} \leq 2\%$
4.3	稳态湿热 Steady humidity and heat	IEC60068-2-78	温度: $40^\circ\text{C} \pm 2^\circ\text{C}$, 湿度: $93 \pm 2\%$, 时间: 500 小时 Temp: $40^\circ\text{C} \pm 2^\circ\text{C}$, humidity: $93 \pm 2\%$, Time : 500hrs	$ \Delta R_{25}/R_{25} \leq 2\%$
4.4	温度快速变化 Rapid changes in temperature	IEC60068-2-14	-55°C 30min $\rightarrow$ 25°C 5min $\rightarrow$ 125°C 30min $\rightarrow$ 25°C 5min, 5cycles	$ \Delta R_{25}/R_{25} \leq 2\%$
4.5	高温储存 High temperature storage	IEC60068-2-2	温度: $125^\circ\text{C} \pm 5^\circ\text{C}$ 时间: 1000 小时 Temp : $125^\circ\text{C} \pm 5^\circ\text{C}$, Time : 1000hrs	$ \Delta R_{25}/R_{25} \leq 2\%$
4.6	低温储存 Low temperature storage	IEC60068-2-1	温度: -55°C 时间: 1000 小时 Temp : -55°C , Time : 1000hrs	$ \Delta R_{25}/R_{25} \leq 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) $W \times H = 11\text{mm} \times 12\text{mm}$	

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 储存温度：-10℃ ~ 40℃；储存湿度：≤75% RH；storage temp:-10℃ ~ 40℃；storage humidity:≤75% RH

6.5 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 (CQC07001019009) CQC certificate (CQC07001019009)	
8.5	江苏省高新技术产品认证 High-tech product certificate in Jiangsu Province	
8.7	UL 认证 (E240991) UL certificate (E240991)	
8.8	TUV 认证 (R50245892) TUV certificate (R50245892)	

附表 I (Attachment I)

南京时恒电子科技有限公司

R25=4.7K Ω 精度: $\pm 1\%$

B25/50=3950K 精度: $\pm 1\%$ (P213-2A)

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	329.485	347.95	366.415	5.306	-5.306	0.721	-0.721
-54	307.126	324.095	341.063	5.235	-5.235	0.718	-0.718
-53	286.599	302.21	317.821	5.165	-5.165	0.714	-0.714
-52	267.736	282.114	296.493	5.096	-5.096	0.71	-0.71
-51	250.384	263.642	276.9	5.028	-5.028	0.707	-0.707
-50	234.402	246.64	258.879	4.962	-4.962	0.703	-0.703
-49	219.661	230.971	242.28	4.896	-4.896	0.699	-0.699
-48	206.046	216.507	226.968	4.831	-4.831	0.695	-0.695
-47	193.451	203.136	212.821	4.767	-4.767	0.691	-0.691
-46	181.781	190.756	199.731	4.704	-4.704	0.687	-0.687
-45	170.952	179.275	187.599	4.642	-4.642	0.682	-0.682
-44	160.887	168.612	176.337	4.581	-4.581	0.678	-0.678
-43	151.519	158.693	165.868	4.52	-4.52	0.674	-0.674
-42	142.787	149.454	156.121	4.46	-4.46	0.669	-0.669
-41	134.636	140.835	147.033	4.401	-4.401	0.665	-0.665
-40	127.018	132.784	138.55	4.342	-4.342	0.66	-0.66
-39	119.888	125.254	130.62	4.283	-4.283	0.655	-0.655
-38	113.209	118.204	123.199	4.225	-4.225	0.651	-0.651
-37	106.943	111.595	116.247	4.168	-4.168	0.646	-0.646
-36	101.061	105.394	109.727	4.111	-4.111	0.641	-0.641
-35	95.533	99.57	103.607	4.054	-4.054	0.636	-0.636
-34	90.335	94.096	97.858	3.997	-3.997	0.631	-0.631
-33	85.441	88.947	92.453	3.941	-3.941	0.626	-0.626



-32	80.832	84.1	87.367	3.885	-3.885	0.62	-0.62
-31	76.489	79.534	82.58	3.829	-3.829	0.615	-0.615
-30	72.393	75.232	78.071	3.773	-3.773	0.61	-0.61
-29	68.529	71.175	73.822	3.718	-3.718	0.605	-0.605
-28	64.882	67.349	69.816	3.663	-3.663	0.599	-0.599
-27	61.439	63.739	66.038	3.607	-3.607	0.594	-0.594
-26	58.188	60.331	62.475	3.552	-3.552	0.588	-0.588
-25	55.116	57.114	59.112	3.498	-3.498	0.582	-0.582
-24	52.214	54.076	55.938	3.443	-3.443	0.577	-0.577
-23	49.471	51.206	52.941	3.388	-3.388	0.571	-0.571
-22	46.878	48.495	50.112	3.334	-3.334	0.565	-0.565
-21	44.427	45.934	47.44	3.28	-3.28	0.559	-0.559
-20	42.11	43.514	44.917	3.225	-3.225	0.553	-0.553
-19	39.919	41.226	42.534	3.171	-3.171	0.547	-0.547
-18	37.847	39.065	40.283	3.118	-3.118	0.541	-0.541
-17	35.887	37.022	38.156	3.064	-3.064	0.535	-0.535
-16	34.034	35.091	36.147	3.01	-3.01	0.529	-0.529
-15	32.282	33.265	34.249	2.957	-2.957	0.523	-0.523
-14	30.624	31.54	32.456	2.904	-2.904	0.517	-0.517
-13	29.056	29.909	30.761	2.85	-2.85	0.51	-0.51
-12	27.573	28.366	29.16	2.797	-2.797	0.504	-0.504
-11	26.17	26.908	27.647	2.745	-2.745	0.497	-0.497
-10	24.842	25.53	26.217	2.692	-2.692	0.491	-0.491
-9	23.587	24.226	24.866	2.64	-2.64	0.484	-0.484
-8	22.399	22.994	23.589	2.587	-2.587	0.478	-0.478
-7	21.275	21.828	22.382	2.535	-2.535	0.471	-0.471
-6	20.211	20.726	21.241	2.484	-2.484	0.464	-0.464
-5	19.205	19.684	20.162	2.432	-2.432	0.458	-0.458
-4	18.252	18.698	19.143	2.38	-2.38	0.451	-0.451



-3	17.351	17.765	18.179	2.329	-2.329	0.444	-0.444
-2	16.498	16.882	17.267	2.278	-2.278	0.437	-0.437
-1	15.69	16.047	16.405	2.228	-2.228	0.43	-0.43
0	14.854	15.184	15.514	2.172	-2.172	0.424	-0.424
1	14.201	14.51	14.818	2.127	-2.127	0.416	-0.416
2	13.515	13.802	14.089	2.077	-2.077	0.409	-0.409
3	12.866	13.132	13.398	2.027	-2.027	0.402	-0.402
4	12.25	12.498	12.745	1.978	-1.978	0.394	-0.394
5	11.667	11.897	12.126	1.928	-1.928	0.387	-0.387
6	11.115	11.328	11.541	1.879	-1.879	0.38	-0.38
7	10.591	10.789	10.986	1.831	-1.831	0.372	-0.372
8	10.095	10.278	10.461	1.782	-1.782	0.365	-0.365
9	9.624	9.794	9.964	1.734	-1.734	0.357	-0.357
10	9.178	9.336	9.493	1.686	-1.686	0.35	-0.35
11	8.755	8.901	9.047	1.638	-1.638	0.342	-0.342
12	8.353	8.488	8.623	1.591	-1.591	0.334	-0.334
13	7.972	8.097	8.222	1.544	-1.544	0.326	-0.326
14	7.611	7.726	7.842	1.497	-1.497	0.319	-0.319
15	7.267	7.374	7.481	1.45	-1.45	0.311	-0.311
16	6.941	7.04	7.139	1.404	-1.404	0.303	-0.303
17	6.631	6.723	6.814	1.358	-1.358	0.295	-0.295
18	6.337	6.422	6.506	1.312	-1.312	0.287	-0.287
19	6.058	6.135	6.213	1.266	-1.266	0.279	-0.279
20	5.792	5.864	5.935	1.221	-1.221	0.271	-0.271
21	5.539	5.605	5.671	1.176	-1.176	0.263	-0.263
22	5.299	5.36	5.42	1.131	-1.131	0.255	-0.255
23	5.071	5.126	5.182	1.086	-1.086	0.248	-0.248
24	4.853	4.904	4.955	1.042	-1.042	0.243	-0.243
25	4.653	4.7	4.746	1	-1	0.235	-0.235



26	4.445	4.492	4.539	1.045	-1.045	0.232	-0.232
27	4.254	4.301	4.348	1.088	-1.088	0.247	-0.247
28	4.072	4.119	4.165	1.131	-1.131	0.26	-0.26
29	3.899	3.945	3.992	1.174	-1.174	0.272	-0.272
30	3.734	3.78	3.826	1.217	-1.217	0.284	-0.284
31	3.577	3.623	3.669	1.26	-1.26	0.296	-0.296
32	3.428	3.473	3.518	1.302	-1.302	0.308	-0.308
33	3.285	3.33	3.375	1.344	-1.344	0.32	-0.32
34	3.15	3.194	3.238	1.386	-1.386	0.332	-0.332
35	3.02	3.064	3.108	1.427	-1.427	0.344	-0.344
36	2.897	2.94	2.983	1.469	-1.469	0.357	-0.357
37	2.779	2.821	2.864	1.51	-1.51	0.369	-0.369
38	2.667	2.709	2.751	1.55	-1.55	0.381	-0.381
39	2.559	2.601	2.642	1.591	-1.591	0.394	-0.394
40	2.457	2.498	2.539	1.632	-1.632	0.406	-0.406
41	2.359	2.399	2.44	1.672	-1.672	0.419	-0.419
42	2.266	2.305	2.345	1.712	-1.712	0.432	-0.432
43	2.177	2.216	2.254	1.751	-1.751	0.444	-0.444
44	2.092	2.13	2.168	1.791	-1.791	0.457	-0.457
45	2.01	2.048	2.085	1.83	-1.83	0.47	-0.47
46	1.932	1.969	2.006	1.869	-1.869	0.483	-0.483
47	1.858	1.894	1.93	1.908	-1.908	0.496	-0.496
48	1.787	1.822	1.858	1.947	-1.947	0.509	-0.509
49	1.719	1.754	1.788	1.985	-1.985	0.522	-0.522
50	1.654	1.688	1.722	2.023	-2.023	0.535	-0.535
51	1.591	1.625	1.658	2.061	-2.061	0.548	-0.548
52	1.532	1.564	1.597	2.099	-2.099	0.562	-0.562
53	1.474	1.507	1.539	2.137	-2.137	0.575	-0.575
54	1.42	1.451	1.483	2.174	-2.174	0.589	-0.589





55	1.367	1.398	1.429	2.212	-2.212	0.602	-0.602
56	1.317	1.347	1.378	2.249	-2.249	0.616	-0.616
57	1.269	1.299	1.328	2.285	-2.285	0.629	-0.629
58	1.223	1.252	1.281	2.322	-2.322	0.643	-0.643
59	1.179	1.207	1.236	2.359	-2.359	0.657	-0.657
60	1.136	1.164	1.192	2.395	-2.395	0.671	-0.671
61	1.095	1.123	1.15	2.431	-2.431	0.685	-0.685
62	1.056	1.083	1.11	2.467	-2.467	0.699	-0.699
63	1.019	1.045	1.071	2.503	-2.503	0.713	-0.713
64	0.983	1.009	1.034	2.538	-2.538	0.727	-0.727
65	0.949	0.974	0.999	2.573	-2.573	0.742	-0.742
66	0.916	0.94	0.965	2.608	-2.608	0.756	-0.756
67	0.884	0.908	0.932	2.643	-2.643	0.77	-0.77
68	0.853	0.877	0.9	2.678	-2.678	0.785	-0.785
69	0.824	0.847	0.87	2.713	-2.713	0.799	-0.799
70	0.796	0.818	0.841	2.747	-2.747	0.814	-0.814
71	0.769	0.791	0.813	2.781	-2.781	0.829	-0.829
72	0.743	0.764	0.786	2.816	-2.816	0.843	-0.843
73	0.718	0.739	0.76	2.849	-2.849	0.858	-0.858
74	0.694	0.714	0.735	2.883	-2.883	0.873	-0.873
75	0.671	0.691	0.711	2.917	-2.917	0.888	-0.888
76	0.648	0.668	0.688	2.95	-2.95	0.903	-0.903
77	0.627	0.646	0.666	2.983	-2.983	0.918	-0.918
78	0.606	0.625	0.644	3.016	-3.016	0.933	-0.933
79	0.587	0.605	0.624	3.049	-3.049	0.949	-0.949
80	0.568	0.586	0.604	3.082	-3.082	0.964	-0.964
81	0.549	0.567	0.585	3.114	-3.114	0.979	-0.979
82	0.532	0.549	0.566	3.146	-3.146	0.995	-0.995
83	0.515	0.532	0.548	3.179	-3.179	1.01	-1.01

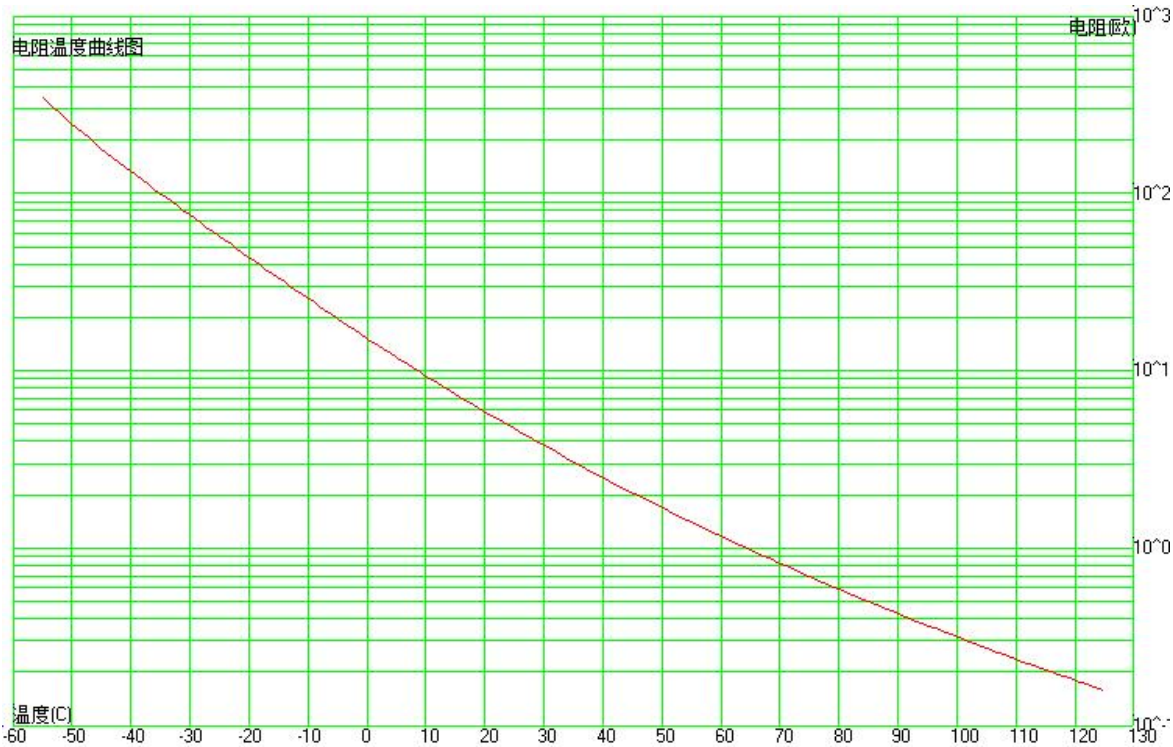




84	0.498	0.515	0.531	3.211	-3.211	1.026	-1.026
85	0.482	0.499	0.515	3.242	-3.242	1.042	-1.042
86	0.467	0.483	0.499	3.274	-3.274	1.058	-1.058
87	0.453	0.468	0.484	3.305	-3.305	1.073	-1.073
88	0.439	0.454	0.469	3.337	-3.337	1.089	-1.089
89	0.425	0.44	0.455	3.368	-3.368	1.105	-1.105
90	0.412	0.426	0.441	3.399	-3.399	1.121	-1.121
91	0.399	0.413	0.428	3.43	-3.43	1.138	-1.138
92	0.387	0.401	0.415	3.46	-3.46	1.154	-1.154
93	0.375	0.389	0.402	3.491	-3.491	1.17	-1.17
94	0.364	0.377	0.39	3.521	-3.521	1.186	-1.186
95	0.353	0.366	0.379	3.552	-3.552	1.203	-1.203
96	0.342	0.355	0.368	3.582	-3.582	1.219	-1.219
97	0.332	0.345	0.357	3.611	-3.611	1.236	-1.236
98	0.322	0.335	0.347	3.641	-3.641	1.253	-1.253
99	0.313	0.325	0.337	3.671	-3.671	1.269	-1.269
100	0.304	0.315	0.327	3.7	-3.7	1.286	-1.286
101	0.295	0.306	0.318	3.73	-3.73	1.303	-1.303
102	0.286	0.297	0.309	3.759	-3.759	1.32	-1.32
103	0.278	0.289	0.3	3.788	-3.788	1.337	-1.337
104	0.27	0.281	0.291	3.817	-3.817	1.354	-1.354
105	0.262	0.273	0.283	3.845	-3.845	1.371	-1.371
106	0.255	0.265	0.275	3.874	-3.874	1.388	-1.388
107	0.248	0.258	0.268	3.902	-3.902	1.406	-1.406
108	0.241	0.25	0.26	3.931	-3.931	1.423	-1.423
109	0.234	0.243	0.253	3.959	-3.959	1.44	-1.44
110	0.227	0.237	0.246	3.987	-3.987	1.458	-1.458
111	0.221	0.23	0.239	4.015	-4.015	1.475	-1.475
112	0.215	0.224	0.233	4.043	-4.043	1.493	-1.493



113	0.209	0.218	0.227	4.07	-4.07	1.511	-1.511
114	0.203	0.212	0.22	4.098	-4.098	1.529	-1.529
115	0.198	0.206	0.215	4.125	-4.125	1.547	-1.547
116	0.192	0.2	0.209	4.153	-4.153	1.564	-1.564
117	0.187	0.195	0.203	4.18	-4.18	1.582	-1.582
118	0.182	0.19	0.198	4.207	-4.207	1.601	-1.601
119	0.177	0.185	0.193	4.234	-4.234	1.619	-1.619
120	0.172	0.18	0.188	4.261	-4.261	1.637	-1.637
121	0.168	0.175	0.183	4.288	-4.288	1.655	-1.655
122	0.163	0.17	0.178	4.314	-4.314	1.673	-1.673
123	0.159	0.166	0.173	4.341	-4.341	1.692	-1.692
124	0.155	0.162	0.169	4.368	-4.368	1.71	-1.71
125	0.15	0.157	0.164	4.394	-4.394	1.729	-1.729



附表 II (Attachment II)

