



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 :

MF52 测温型 NTC 热敏电阻器

产品名称 PART NAME :

MF52 Series Temp Measurement NTC Thermistor

产品规格 PART NUMBER :

MF52A 104F3950(A1) (UL:E240991)

产品编号 PRODUCTCODE:

版次 REV.NO:

B0

日期 DATE:

确认

CONFIRM

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

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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

MF52 **A** **104** **F** **3950** **(A1)**


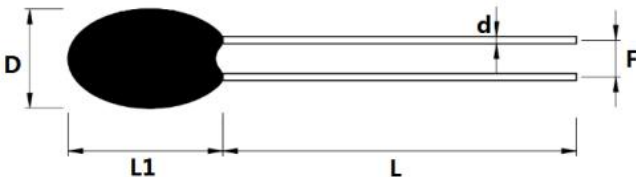
① ② ③ ④ ⑤ ⑥

- 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)
- ③ 104: 25℃ 的零功率电阻值 100KΩ (Zero Power Resistance at 25℃ is 100KΩ)
- 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 Φ 0.3mm (Wire dimension: The outer diameter of lead wire is Φ 0.3mm)

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℃}	T _a =25±0.01℃ Test Power≤0.1mW	KΩ	100KΩ±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±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	≤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℃ ~ 125℃
2.7	最大额定功率 Maximum rated power	P _{max}	/	mW	50
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 104F3950(A1)		审核 Approve:		日期 DATE	
尺寸 Dimensions:						
					(Unit: mm)	
						
D Max	L1 Max	L Min	d±0.05	F±0.5		
2.5	4.0	25	0.3	1.7		
技术要求 Technical requirements:						
1) 零功率阻值: R25: 100KΩ±1% (Zero Power Resistance: R25: 100KΩ±1%); 2) B25/50 数值: 3950K±1% (B-value: B25/50: 3950K±1%); 3) 线材: φ0.3 镀锡铜包钢线 (Φ0.3 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 $R_{25} \Delta R/R \leq \pm 2\%$
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	$R_{25} \Delta R/R \leq \pm 2\%$
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	$R_{25} \Delta R/R \leq \pm 2\%$
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	$R_{25} \Delta R/R \leq \pm 2\%$
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	$R_{25} \Delta R/R \leq \pm 2\%$
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	$R_{25} \Delta R/R \leq \pm 2\%$

▲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) $W \times H = 11\text{mm} \times 12\text{mm}$	500

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 using 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	江苏省高新技术产品认证 High-tech product certificate in Jiangsu Province	
8.6	产品通过 AEC-Q200 测试 Passed by AECQ-200	
8.7	UL 认证 UL certificate	E240991
8.8	TUV 认证 TUV certificate	

附表 I (Attachment I)

南京时恒阻温特性表 SHIHENG R-T Table

R25=100K Ω 精度: $\pm 1\%$ B25/50=3950K 精度: $\pm 1\%$ (P209-15A)							
温度($^{\circ}\text{C}$) TEMP($^{\circ}\text{C}$)	电阻(K Ω) RESISTANCE(K Ω)			电阻精度(%) RESISST-TOL(%)		温度精度($^{\circ}\text{C}$) TEMP-TOL($^{\circ}\text{C}$)	
	最小值	中心值	最大值	ΔR	$-\Delta R$	ΔT	$-\Delta T$
-55	8507.64	8989	9496.63	5.647	-5.354	0.734	-0.696
-54	7808.06	8242.68	8700.63	5.555	-5.272	0.731	-0.693
-53	7198.51	7592.96	8008.24	5.469	-5.195	0.727	-0.691
-52	6661.83	7021.38	7399.6	5.386	-5.12	0.723	-0.687
-51	6184.84	6513.75	6859.48	5.307	-5.049	0.719	-0.684
-50	5757.27	6059.06	6376.03	5.231	-4.98	0.715	-0.681
-49	5371.09	5648.68	5940.01	5.157	-4.914	0.711	-0.677
-48	5019.96	5275.8	5544.12	5.085	-4.849	0.706	-0.674
-47	4698.84	4935.02	5182.54	5.015	-4.785	0.702	-0.67
-46	4403.68	4621.99	4850.64	4.946	-4.723	0.698	-0.666
-45	4131.21	4333.22	4544.64	4.879	-4.661	0.693	-0.662
-44	3878.77	4065.84	4261.51	4.812	-4.601	0.688	-0.658
-43	3644.17	3817.52	3998.71	4.746	-4.54	0.684	-0.654
-42	3425.6	3586.31	3754.19	4.68	-4.481	0.679	-0.65
-41	3221.55	3370.6	3526.19	4.616	-4.421	0.674	-0.646
-40	3030.73	3169	3313.23	4.551	-4.362	0.669	-0.641
-39	2852.05	2980.33	3114.08	4.487	-4.304	0.664	-0.637
-38	2684.57	2803.6	2927.62	4.423	-4.245	0.659	-0.632
-37	2527.45	2637.91	2752.92	4.359	-4.187	0.654	-0.628
-36	2379.96	2482.47	2589.13	4.296	-4.129	0.649	-0.623
-35	2241.46	2336.58	2435.5	4.233	-4.071	0.643	-0.619
-34	2111.35	2199.62	2291.36	4.17	-4.013	0.638	-0.614

-33	1989.1	2071.02	2156.09	4.107	-3.955	0.633	-0.609
-32	1874.22	1950.23	2029.12	4.045	-3.897	0.627	-0.604
-31	1766.26	1836.79	1909.95	3.982	-3.839	0.622	-0.6
-30	1664.79	1730.23	1798.07	3.92	-3.782	0.616	-0.595
-29	1569.42	1630.15	1693.05	3.858	-3.725	0.611	-0.59
-28	1479.79	1536.14	1594.47	3.797	-3.667	0.605	-0.585
-27	1395.56	1447.84	1501.92	3.735	-3.61	0.6	-0.58
-26	1316.39	1364.9	1415.05	3.674	-3.554	0.594	-0.574
-25	1241.98	1287	1333.5	3.613	-3.497	0.588	-0.569
-24	1172.06	1213.82	1256.95	3.553	-3.44	0.582	-0.564
-23	1106.34	1145.09	1185.09	3.492	-3.384	0.576	-0.559
-22	1044.57	1080.53	1117.62	3.432	-3.328	0.571	-0.553
-21	986.513	1019.89	1054.29	3.372	-3.272	0.565	-0.548
-20	931.936	962.912	994.819	3.313	-3.216	0.559	-0.542
-19	880.628	909.379	938.974	3.254	-3.161	0.552	-0.537
-18	832.387	859.074	886.528	3.195	-3.106	0.546	-0.531
-17	787.025	811.797	837.266	3.137	-3.051	0.54	-0.525
-16	744.361	767.359	790.988	3.079	-2.996	0.534	-0.52
-15	704.229	725.581	747.505	3.021	-2.942	0.528	-0.514
-14	666.472	686.296	706.64	2.964	-2.888	0.521	-0.508
-13	630.94	649.348	668.227	2.907	-2.834	0.515	-0.502
-12	597.496	614.59	632.11	2.85	-2.781	0.508	-0.496
-11	566.008	581.883	598.144	2.794	-2.728	0.502	-0.49
-10	536.356	551.1	566.192	2.738	-2.675	0.495	-0.484
-9	508.424	522.117	536.126	2.683	-2.622	0.489	-0.478
-8	482.105	494.824	507.828	2.628	-2.57	0.482	-0.471
-7	457.299	469.113	481.185	2.573	-2.518	0.475	-0.465

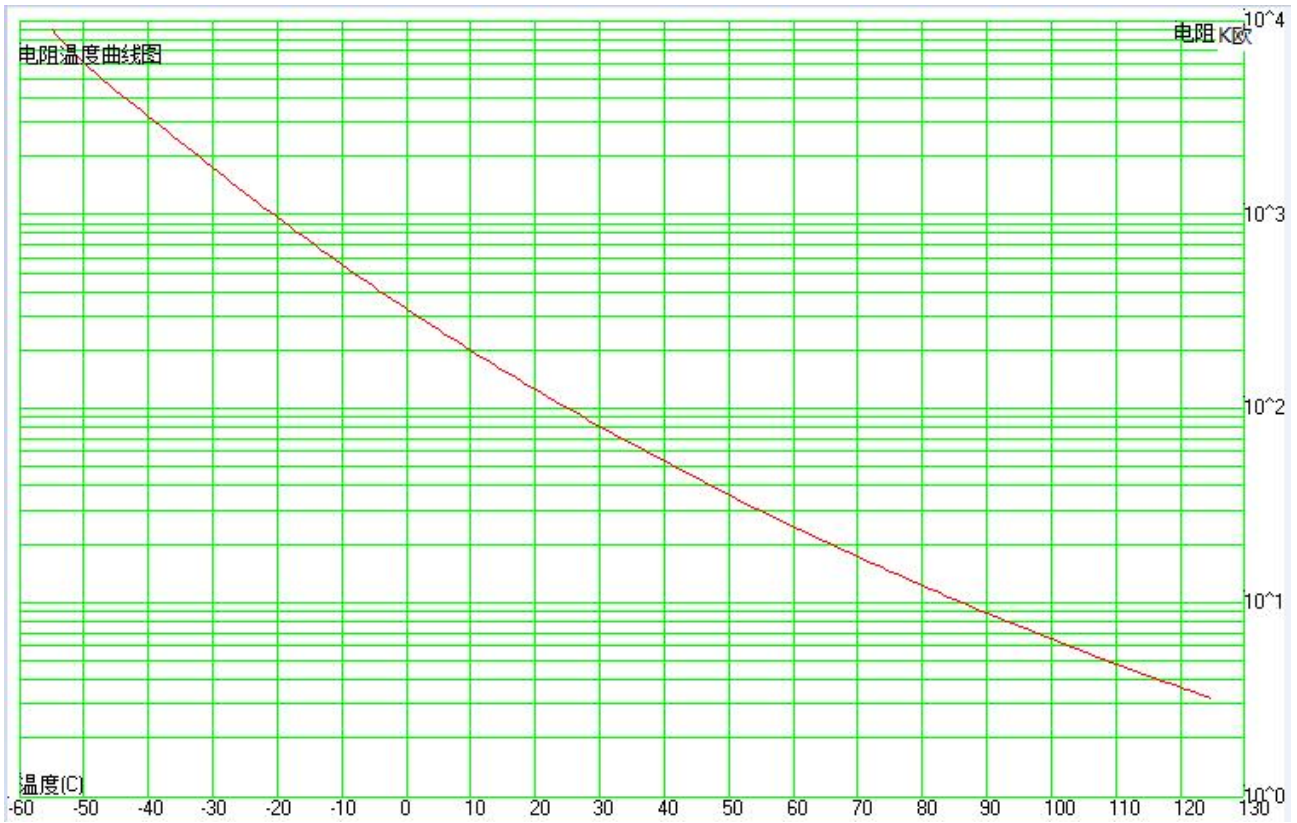
-6	433.912	444.886	456.092	2.518	-2.466	0.468	-0.459
-5	411.856	422.05	432.453	2.464	-2.415	0.461	-0.452
-4	391.048	400.518	410.175	2.411	-2.364	0.454	-0.446
-3	371.413	380.209	389.174	2.357	-2.313	0.447	-0.439
-2	352.878	361.048	369.37	2.305	-2.262	0.44	-0.432
-1	335.375	342.963	350.688	2.252	-2.212	0.433	-0.426
0	319.49	326.56	333.752	2.202	-2.164	0.426	-0.418
1	303.218	309.764	316.419	2.148	-2.113	0.419	-0.412
2	288.451	294.529	300.705	2.096	-2.063	0.412	-0.405
3	274.488	280.131	285.862	2.045	-2.014	0.404	-0.398
4	261.281	266.52	271.837	1.994	-1.965	0.397	-0.391
5	248.785	253.647	258.58	1.944	-1.917	0.389	-0.384
6	236.957	241.47	246.044	1.894	-1.868	0.382	-0.377
7	225.759	229.946	234.187	1.844	-1.82	0.374	-0.369
8	215.152	219.036	222.968	1.795	-1.773	0.367	-0.362
9	205.104	208.706	212.349	1.745	-1.725	0.359	-0.355
10	195.581	198.92	202.295	1.697	-1.678	0.351	-0.347
11	186.552	189.647	192.773	1.648	-1.631	0.343	-0.34
12	177.99	180.857	183.751	1.6	-1.584	0.335	-0.332
13	169.868	172.523	175.201	1.552	-1.538	0.327	-0.324
14	162.161	164.618	167.095	1.504	-1.492	0.319	-0.317
15	154.846	157.118	159.408	1.457	-1.446	0.311	-0.309
16	147.9	150	152.116	1.41	-1.4	0.303	-0.301
17	141.302	143.243	145.197	1.363	-1.355	0.295	-0.293
18	135.034	136.827	138.629	1.317	-1.309	0.287	-0.285
19	129.078	130.731	132.393	1.271	-1.264	0.278	-0.277
20	123.415	124.94	126.47	1.225	-1.22	0.27	-0.269

21	118.031	119.435	120.844	1.179	-1.175	0.262	-0.261
22	112.91	114.202	115.497	1.134	-1.131	0.253	-0.253
23	108.037	109.225	110.414	1.089	-1.087	0.245	-0.244
24	103.4	104.491	105.582	1.044	-1.043	0.236	-0.236
25	99	100	101	1	-1	0.228	-0.228
26	94.7	95.699	96.698	1.044	-1.043	0.238	-0.238
27	90.622	91.617	92.614	1.088	-1.086	0.25	-0.249
28	86.74	87.731	88.724	1.132	-1.129	0.262	-0.261
29	83.044	84.028	85.017	1.175	-1.172	0.273	-0.273
30	79.524	80.501	81.483	1.219	-1.214	0.285	-0.284
31	76.171	77.14	78.114	1.262	-1.256	0.297	-0.296
32	72.976	73.936	74.901	1.305	-1.298	0.309	-0.308
33	69.931	70.881	71.837	1.348	-1.34	0.321	-0.319
34	67.029	67.968	68.913	1.39	-1.381	0.333	-0.331
35	64.261	65.188	66.123	1.433	-1.422	0.346	-0.343
36	61.621	62.537	63.459	1.475	-1.463	0.358	-0.355
37	59.103	60.006	60.916	1.517	-1.504	0.37	-0.367
38	56.7	57.59	58.488	1.558	-1.544	0.383	-0.379
39	54.407	55.283	56.168	1.6	-1.585	0.395	-0.391
40	52.218	53.08	53.952	1.641	-1.625	0.408	-0.404
41	50.127	50.976	51.834	1.682	-1.664	0.421	-0.416
42	48.131	48.965	49.809	1.723	-1.704	0.433	-0.428
43	46.223	47.044	47.874	1.764	-1.743	0.446	-0.441
44	44.401	45.207	46.023	1.805	-1.782	0.459	-0.453
45	42.659	43.451	44.252	1.845	-1.821	0.472	-0.466
46	40.994	41.771	42.559	1.885	-1.86	0.485	-0.479
47	39.402	40.165	40.938	1.925	-1.898	0.498	-0.491

48	37.88	38.628	39.387	1.965	-1.937	0.511	-0.504
49	36.423	37.157	37.902	2.004	-1.975	0.525	-0.517
50	35.03	35.75	36.48	2.044	-2.013	0.538	-0.53
51	33.696	34.402	35.119	2.083	-2.05	0.551	-0.543
52	32.42	33.112	33.814	2.122	-2.088	0.565	-0.556
53	31.198	31.876	32.565	2.161	-2.125	0.579	-0.569
54	30.028	30.692	31.367	2.2	-2.162	0.592	-0.582
55	28.908	29.558	30.219	2.238	-2.199	0.606	-0.595
56	27.834	28.471	29.119	2.276	-2.235	0.62	-0.609
57	26.806	27.429	28.064	2.314	-2.272	0.634	-0.622
58	25.82	26.43	27.052	2.352	-2.308	0.648	-0.635
59	24.875	25.472	26.081	2.39	-2.344	0.662	-0.649
60	23.969	24.554	25.15	2.428	-2.38	0.676	-0.662
61	23.1	23.672	24.256	2.465	-2.416	0.69	-0.676
62	22.267	22.827	23.398	2.503	-2.451	0.704	-0.69
63	21.468	22.016	22.575	2.54	-2.486	0.719	-0.704
64	20.701	21.237	21.784	2.577	-2.522	0.733	-0.717
65	19.965	20.489	21.025	2.613	-2.557	0.748	-0.731
66	19.259	19.771	20.295	2.65	-2.591	0.762	-0.745
67	18.581	19.082	19.595	2.686	-2.626	0.777	-0.759
68	17.93	18.42	18.921	2.723	-2.66	0.792	-0.773
69	17.304	17.784	18.274	2.759	-2.694	0.806	-0.787
70	16.704	17.172	17.652	2.795	-2.728	0.821	-0.802
71	16.127	16.585	17.054	2.831	-2.762	0.836	-0.816
72	15.572	16.02	16.479	2.866	-2.796	0.851	-0.83
73	15.039	15.477	15.926	2.902	-2.829	0.866	-0.845
74	14.527	14.955	15.394	2.937	-2.863	0.882	-0.859

75	14.034	14.453	14.882	2.972	-2.896	0.897	-0.874
76	13.56	13.97	14.39	3.007	-2.929	0.912	-0.888
77	13.105	13.505	13.916	3.042	-2.962	0.928	-0.903
78	12.667	13.058	13.46	3.077	-2.995	0.943	-0.918
79	12.245	12.628	13.02	3.111	-3.027	0.959	-0.933
80	11.84	12.213	12.598	3.146	-3.059	0.974	-0.948
81	11.449	11.815	12.19	3.18	-3.092	0.99	-0.962
82	11.073	11.431	11.798	3.214	-3.124	1.006	-0.978
83	10.712	11.061	11.42	3.248	-3.155	1.022	-0.993
84	10.363	10.705	11.056	3.282	-3.187	1.038	-1.008
85	10.028	10.362	10.705	3.315	-3.219	1.054	-1.023
86	9.705	10.031	10.367	3.349	-3.25	1.07	-1.038
87	9.394	9.712	10.041	3.382	-3.281	1.086	-1.054
88	9.094	9.405	9.727	3.415	-3.312	1.102	-1.069
89	8.805	9.11	9.424	3.448	-3.343	1.119	-1.084
90	8.527	8.824	9.132	3.481	-3.374	1.135	-1.1
91	8.258	8.549	8.85	3.514	-3.404	1.152	-1.116
92	8	8.284	8.578	3.547	-3.435	1.168	-1.131
93	7.75	8.028	8.316	3.579	-3.465	1.185	-1.147
94	7.51	7.782	8.063	3.612	-3.495	1.202	-1.163
95	7.278	7.544	7.819	3.644	-3.525	1.218	-1.179
96	7.054	7.314	7.583	3.676	-3.555	1.235	-1.195
97	6.838	7.093	7.356	3.708	-3.585	1.252	-1.211
98	6.63	6.879	7.136	3.739	-3.614	1.269	-1.227
99	6.429	6.673	6.924	3.771	-3.644	1.286	-1.243
100	6.236	6.474	6.72	3.802	-3.673	1.304	-1.259
101	6.049	6.281	6.522	3.834	-3.702	1.321	-1.275

102	5.868	6.096	6.331	3.865	-3.731	1.338	-1.292
103	5.694	5.916	6.147	3.896	-3.759	1.356	-1.308
104	5.526	5.743	5.969	3.927	-3.788	1.373	-1.325
105	5.363	5.576	5.797	3.957	-3.816	1.391	-1.341
106	5.207	5.415	5.631	3.988	-3.845	1.408	-1.358
107	5.055	5.259	5.47	4.018	-3.873	1.426	-1.374
108	4.909	5.108	5.315	4.049	-3.901	1.444	-1.391
109	4.768	4.963	5.165	4.079	-3.928	1.462	-1.408
110	4.632	4.822	5.021	4.109	-3.956	1.48	-1.425
111	4.5	4.687	4.881	4.138	-3.983	1.498	-1.442
112	4.373	4.555	4.745	4.168	-4.011	1.516	-1.459
113	4.25	4.428	4.614	4.197	-4.038	1.534	-1.476
114	4.131	4.306	4.488	4.227	-4.065	1.553	-1.493
115	4.016	4.187	4.366	4.256	-4.091	1.571	-1.511
116	3.905	4.073	4.247	4.285	-4.118	1.59	-1.528
117	3.798	3.962	4.133	4.313	-4.144	1.608	-1.545
118	3.694	3.855	4.022	4.342	-4.171	1.627	-1.563
119	3.594	3.751	3.915	4.37	-4.197	1.646	-1.58
120	3.497	3.651	3.812	4.398	-4.223	1.664	-1.598
121	3.404	3.555	3.712	4.427	-4.248	1.683	-1.616
122	3.313	3.461	3.615	4.454	-4.274	1.702	-1.633
123	3.226	3.371	3.522	4.482	-4.299	1.721	-1.651
124	3.141	3.283	3.431	4.51	-4.324	1.74	-1.669
125	3.059	3.199	3.344	4.537	-4.349	1.76	-1.687



附表 II (Attachment II)

