

东莞市源林电子科技有限公司
DG YuanLin Electronic Industrial Co.,Ltd

产品名称 Product Name	NTC 温度传感器组件 NTC Sensor Module	RoHS	
产品系列 Product series	TAA-103	版 次 REV. NO	A/2
产品型号 Product model	TAA103F3892FAH255	修定日期 REV. DATE	2023/5/25

NTC 温度传感器承认书
NTC Sensor Specification

客 户
customer

客户料号
Customer P/N

客户物料描述
Customer Description

编 制
Editor

日期
Date

审 核
Check

日期
Date

批 准
Approval

日期
Date

客户承认
Customer Confirm

日期
Date

公司名称:

东莞市源林电子科技有限公司

DG YuanLin Electronic Industrial Co.,Ltd

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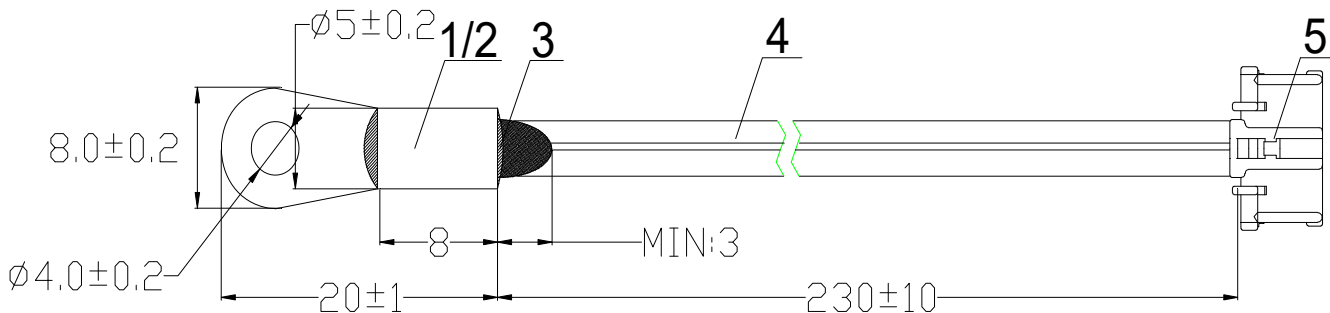
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1. 产品外形图(Product Drawing)

单位(Unit);mm



2. 材料清单(Material List)

NO.	材料名称 Material name	规格/型号 Type/model	数量 Quantity
2-1	外壳	5.0X8X20 (T=0.4MM) 电工端子(4.0)	1PCS
2-2	环氧树脂	黑色环氧树脂	/
2-3	NTC电阻	R25=10K $\Omega \pm 1\%$ B0/50=3892K $\pm 1\%$	1PCS
2-4	电线	UL10370 28AWG TS 1000V 200°C 黑色	2PCS
2-5	端子	MOLEX 0561349000或轩业XY20005-XXT3A	2PCS
	连接器	MOLEX 513820200 或轩业XY20005-02HL3A-B4-WH	1PCS

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3. 电气性能(Electrical Characteristic)

NO.	项目 Item	代号 Symbol	测试条件 Test Conditions	最小值 Min.	中心值 Nor.	最大值 Max.	单位 Unit
3-1	25°C电阻值 Resistance At 25°C	R25	Ta=25°C ±0.05°C P _T ≤ 0.1mW	9.90	10.00	10.10	KΩ
3-2	50°C电阻值 Resistance At 50°C	R50	Ta=85°C ±0.05°C P _T ≤ 0.1mW	/	3.588	/	KΩ
3-3	B值 B Value	B _{0/50}	(1779.707* LnK)	3853.1	3892.0	3930.9	K
3-4	耗散系数 dissipative coefficient	δ	Ta=25°C (in air)	/	5.0	/	mW/°C
3-5	响应时间-液体中 Response Time-In liquid	τ	25°C → 85°C T1=25+(85-25)*63.2%=62.92°C	/	/	8	Sec
3-6	耐压测试 Hi-Pot Test	/	DC3700V 60Sec	/	/	1.0	m A
3-7	环境电压 Normimal operationg voltage	/	DC800V	/	/	/	V
3-8	绝缘测试 Insulation test	/	DC500V 1Sec	100	/	/	MΩ

4. 最大使用等级(Maximum use grade)

NO.	项目 Item	规格 Specification	单位 Unit
4-1	工作温度范围 Operation Temperature Range	-30 ~ +125	°C
4-2	NTC电阻工作温度范围 NTC Working Temp. Range	-40 ~ +125	°C

5. 机械性试验(Mechanical Tests)

NO.	项目 Item	技术要求 Pass Criteria	测试条件 Test Conditions
5-1	拉力测试 pull test	不松脱、不变形 Not loose, not deformed	加载9.8N (1kg) 1分钟 (Fasten body with a Load Applied to each lead 1.0 kg for 1min)
5-2	自由落体测试 Drop Test	无明显损伤 No visible damage	1米的高度, 让产品做自由落体运动, 下落到10mm厚的橡木板上, 5次(After 5 time natural fall to a maple board from 1M high)

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6. 可靠性测试(Reliability Tests)

NO.	项目 Item	技术要求 Pass Criteria	测试条件 Test Conditions
6-1	高温储存 High Temperature Storage Life Test	$\Delta R/R25 \leq \pm 3\%$ No visible damage	125±5℃, 1000±24 hrs
6-2	低温储存 low temperature storage		-30±5℃, 1000±24 hrs
6-3	恒温恒湿测试 Humidity test		40±2℃, 90%~95% RH, 1000H±24 hrs
6-4	温度冲击试验 Temp. cycle test		- 30℃×30min→25℃×5min→125℃×30min →25℃×5min, 10Cycles

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7.安装使用(Install and use)

1. 请在规定的温度范围内使用本产品

Use this product within the specified temperature range.

2. 温度过高时会导致产品特性或材料品质的恶化

Higher temperature may cause deterioration of the characteristics or the material quality of this product.

3. 安装本产品时，在焊接此产品时，不应在树脂头部溶化焊料，否则，可能造成引线断裂、短路、引线绝缘损坏

Do not melt the solder in resin head, when you solder this product. If you melt the solder in resin head, it has possibility that the break of wire, short and insulation damage.

4. 不要用烙铁碰触树脂头，否则会造成焊料在树脂头部溶化

Do not touch the resin head directly by solder iron. It may cause the melt of solder in resin head.

5. 在分开平行线时，至少要从树脂头部分开10mm以上

At least away from resin head 10mm above when lead dividing.

6. 如果从树脂头部切断长度小于10mm的引线，引线边缘的溶化焊料很容易通过引线传至树脂头部

In case you cut the lead wire of this product less than 10mm from resin head, the heat of melted solder at lead wire edge is propagated easily to the resin head along the lead wire.

7. 在弯曲引线时，引线弯曲半径大于1mm，当弯曲或切断引线时，建议固定组件引线

Radius of lead bending should be more than 1mm when lead bending.

Holding element by side lead wire is recommended when lead wire is bent or cut.

8. 不要对引线加过大的力，否则，可能会造成引线与元件之间的接合部断开或裂开

Do not apply an excessive force to the lead. Otherwise, it may cause junction between lead and element to break or crack.

9. 本产品在陶瓷元件属于易碎材料，使用时务必小心不要施加过大压力或冲击此类强力可能会造成产品破裂或破碎

The ceramic element of this product is fragile, and care must be taken not to load an excessive press-force or not to give a shock at handling. Such forces may cause cracking or chipping.

10. 对本产品进行树脂封膜时，请在使用前评估本产品的品质

If you mold by resin this product, please evaluate the quality of this product before you use it.

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8. 产品储存条件(Storage Conditions)

储存条件(Storage Conditions) :

1. 储存温度(Ambicnt Temperature): $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$
2. 相对湿度(Relative Humidity): $\leq 75\%RH$
3. 远离腐蚀和阳光照射(Keep away from corrosive atmosphere and sunlight)
4. 储存时间(Period of Storage): 1 year

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9. 注意事项 (Matters needing attention)

1. 腐蚀性气体或去氧气体 (氯气、硫化氢气体、氨气、硫酸气体、一氧化氮等)

Corrosive gas or deoxidizing gas (Chlorine gas, Hydrogen sulfide gas, Ammonia gas, Sulfuric acid gas, Nitric oxide gas, etc.)

2. 挥发性或易燃性气体

Volatile or flammable gas

3. 在尘土飞扬的条件

Dusty conditions

4. 真空、高压或低压条件下

Under vacuum, or under high or low pressure

5. 潮湿场所, 不要直接浸泡在液体里面或者 使用液体清洗

Wet or humid locations; soak in the liquid or wash with liquid

6. 存放在盐水、油、化学液体或有机溶剂的场所, 不可直接与速干胶搭配使用

Places with salt water, oils, chemical liquids or organic solvents and do not use directly with quick-drying glue.

7. 强烈振动

Strong vibrations

8. 存在类似有害条件的其它场所

Other places where similar hazardous conditions exist

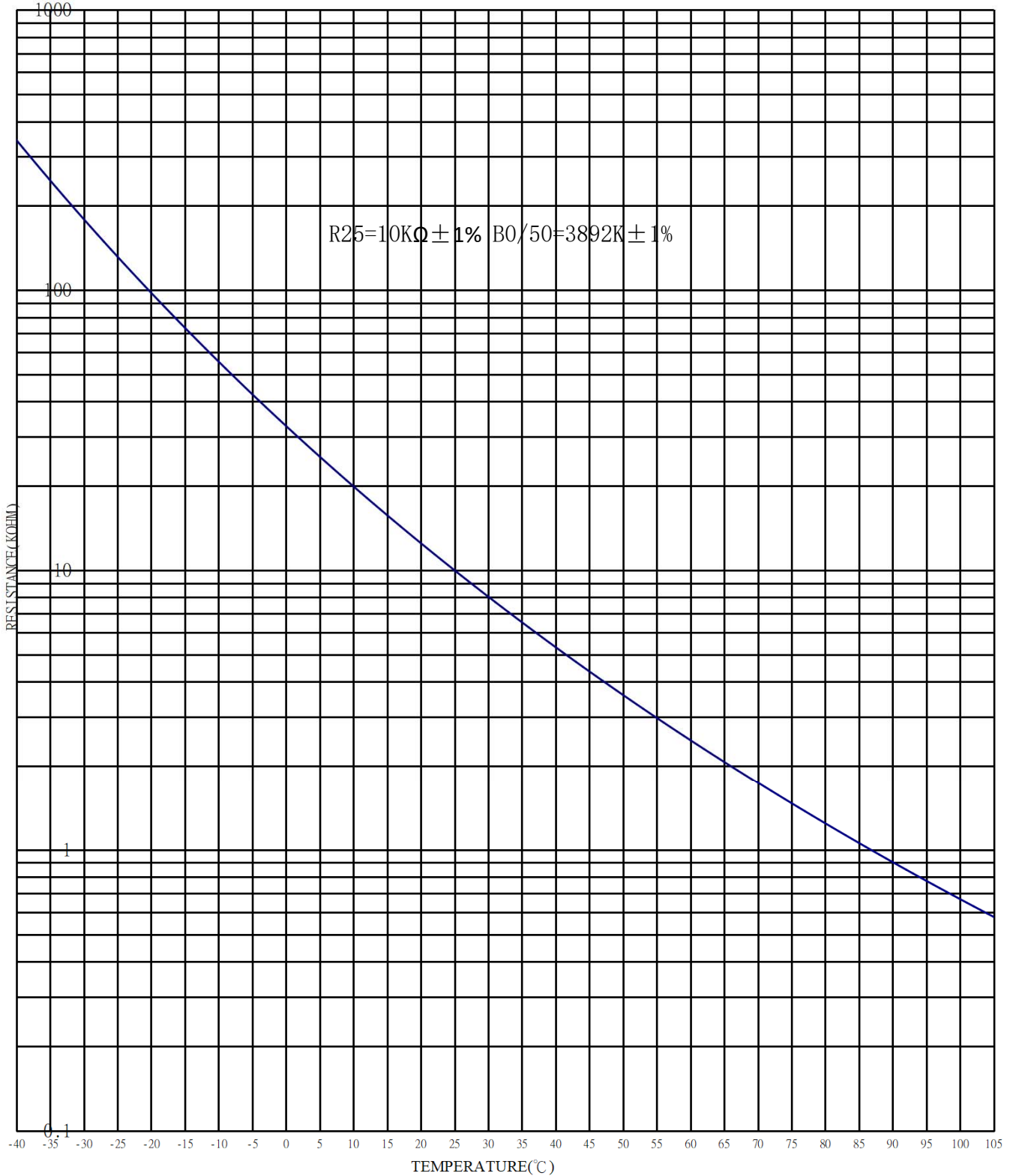
9. 请务必在您的产品上配备适当的自动保险功能, 以防止由我们产品的异常操作或者失效可能引起的继发损坏

Be sure to provide an appropriate fail-safe function on your product to prevent secondary damages that may be caused by the abnormal function or the failure of our product.

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R -T Table

R25=10K 1% B0/50=3892%

T(°C)	Rmin(k Ω)	Rcent(k Ω)	Rmax(k Ω)	DR(%)	DT(°C)
-50	459.661	482.657	506.754	5.0%	0.86
-49	434.162	455.620	478.090	4.9%	0.85
-48	410.103	430.124	451.078	4.9%	0.84
-47	387.405	406.084	425.621	4.8%	0.83
-46	365.990	383.416	401.632	4.8%	0.82
-45	345.787	362.043	379.027	4.7%	0.81
-44	326.727	341.892	357.725	4.6%	0.80
-43	308.747	322.893	337.652	4.6%	0.79
-42	291.785	304.979	318.738	4.5%	0.78
-41	275.783	288.089	300.915	4.5%	0.77
-40	260.687	272.165	284.120	4.4%	0.77
-39	246.445	257.150	268.293	4.3%	0.76
-38	233.009	242.992	253.379	4.3%	0.75
-37	220.332	229.643	239.323	4.2%	0.74
-36	208.372	217.055	226.077	4.2%	0.73
-35	197.087	205.184	213.593	4.1%	0.72
-34	186.439	193.990	201.826	4.0%	0.71
-33	176.391	183.432	190.736	4.0%	0.70
-32	166.908	173.474	180.281	3.9%	0.70
-31	157.959	164.082	170.425	3.9%	0.69
-30	149.513	155.222	161.133	3.8%	0.68
-29	141.541	146.864	152.372	3.8%	0.67
-28	134.015	138.978	144.111	3.7%	0.66
-27	126.910	131.538	136.321	3.6%	0.65
-26	120.202	124.517	128.974	3.6%	0.65
-25	113.868	117.891	122.044	3.5%	0.64
-24	107.887	111.638	115.507	3.5%	0.63
-23	102.237	105.735	109.340	3.4%	0.62
-22	96.902	100.162	103.522	3.4%	0.61
-21	91.861	94.901	98.031	3.3%	0.61
-20	87.099	89.932	92.849	3.2%	0.60
-19	82.599	85.241	87.958	3.2%	0.59
-18	78.347	80.809	83.341	3.1%	0.58
-17	74.328	76.623	78.982	3.1%	0.57
-16	70.529	72.668	74.865	3.0%	0.57
-15	66.938	68.932	70.978	3.0%	0.56
-14	63.542	65.400	67.306	2.9%	0.55
-13	60.330	62.062	63.838	2.9%	0.54

-12	57.293	58.907	60.561	2.8%	0.53
-11	54.420	55.924	57.464	2.8%	0.53
-10	51.702	53.103	54.537	2.7%	0.52
-9	49.130	50.435	51.771	2.6%	0.51
-8	46.695	47.912	49.155	2.6%	0.50
-7	44.391	45.524	46.682	2.5%	0.49
-6	42.210	43.265	44.343	2.5%	0.49
-5	40.144	41.127	42.130	2.4%	0.48
-4	38.188	39.104	40.037	2.4%	0.47
-3	36.336	37.188	38.056	2.3%	0.46
-2	34.580	35.374	36.182	2.3%	0.45
-1	32.917	33.656	34.407	2.2%	0.44
0	31.341	32.028	32.727	2.2%	0.44
1	29.847	30.486	31.136	2.1%	0.43
2	28.431	29.025	29.630	2.1%	0.42
3	27.088	27.641	28.202	2.0%	0.41
4	25.814	26.328	26.850	2.0%	0.40
5	24.605	25.084	25.569	1.9%	0.40
6	23.459	23.903	24.354	1.9%	0.39
7	22.371	22.784	23.202	1.8%	0.38
8	21.339	21.722	22.110	1.8%	0.37
9	20.359	20.714	21.075	1.7%	0.36
10	19.428	19.758	20.092	1.7%	0.35
11	18.544	18.850	19.160	1.6%	0.35
12	17.704	17.989	18.275	1.6%	0.34
13	16.907	17.170	17.436	1.5%	0.33
14	16.149	16.393	16.639	1.5%	0.32
15	15.428	15.654	15.882	1.5%	0.31
16	14.743	14.952	15.163	1.4%	0.30
17	14.092	14.285	14.480	1.4%	0.30
18	13.473	13.651	13.831	1.3%	0.29
19	12.884	13.049	13.214	1.3%	0.28
20	12.323	12.475	12.628	1.2%	0.27
21	11.790	11.930	12.070	1.2%	0.26
22	11.282	11.411	11.540	1.1%	0.25
23	10.799	10.917	11.036	1.1%	0.24
24	10.338	10.447	10.556	1.0%	0.24
25	9.900	10.000	10.100	1.0%	0.23
26	9.474	9.574	9.674	1.0%	0.24
27	9.069	9.168	9.268	1.1%	0.25
28	8.683	8.782	8.881	1.1%	0.27
29	8.315	8.413	8.512	1.2%	0.28
30	7.965	8.063	8.161	1.2%	0.29
31	7.631	7.728	7.825	1.3%	0.30
32	7.313	7.409	7.506	1.3%	0.31
33	7.010	7.105	7.200	1.3%	0.33
34	6.721	6.815	6.909	1.4%	0.34
35	6.445	6.538	6.631	1.4%	0.35
36	6.182	6.274	6.366	1.5%	0.36
37	5.931	6.022	6.113	1.5%	0.37
38	5.692	5.781	5.871	1.6%	0.39
39	5.463	5.551	5.640	1.6%	0.40
40	5.245	5.332	5.419	1.6%	0.41

41	5.037	5.122	5.208	1.7%	0.42
42	4.838	4.921	5.006	1.7%	0.44
43	4.648	4.730	4.813	1.8%	0.45
44	4.4662	4.547	4.629	1.8%	0.46
45	4.2926	4.3720	4.452	1.8%	0.47
46	4.1267	4.2047	4.2837	1.9%	0.49
47	3.9681	4.0446	4.1222	1.9%	0.50
48	3.8164	3.8915	3.9677	2.0%	0.51
49	3.6713	3.7450	3.8198	2.0%	0.53
50	3.5325	3.605	3.6781	2.0%	0.54
51	3.3996	3.4705	3.5425	2.1%	0.55
52	3.2725	3.3420	3.4126	2.1%	0.57
53	3.1507	3.2188	3.2881	2.2%	0.58
54	3.0342	3.1009	3.1688	2.2%	0.59
55	2.9225	2.9879	3.0545	2.2%	0.61
56	2.8156	2.8797	2.9449	2.3%	0.62
57	2.7131	2.7759	2.8398	2.3%	0.64
58	2.6150	2.6764	2.7390	2.3%	0.65
59	2.5208	2.5810	2.6424	2.4%	0.66
60	2.4306	2.4895	2.5496	2.4%	0.68
61	2.3441	2.4018	2.4606	2.5%	0.69
62	2.2611	2.3175	2.3752	2.5%	0.71
63	2.1814	2.2367	2.2932	2.5%	0.72
64	2.1051	2.1592	2.2144	2.6%	0.73
65	2.0317	2.0847	2.1388	2.6%	0.75
66	1.9614	2.0132	2.0662	2.6%	0.76
67	1.8938	1.9445	1.9964	2.7%	0.78
68	1.8289	1.8785	1.9293	2.7%	0.79
69	1.7666	1.8151	1.8648	2.7%	0.81
70	1.7067	1.7542	1.8029	2.8%	0.82
71	1.6492	1.6957	1.7433	2.8%	0.84
72	1.5939	1.6394	1.6860	2.8%	0.85
73	1.5407	1.5852	1.6308	2.9%	0.87
74	1.4896	1.5332	1.5778	2.9%	0.88
75	1.4405	1.4831	1.5268	2.9%	0.90
76	1.3933	1.4349	1.4777	3.0%	0.91
77	1.3478	1.3886	1.4304	3.0%	0.93
78	1.3041	1.3439	1.3849	3.0%	0.94
79	1.2620	1.3010	1.3411	3.1%	0.96
80	1.2214	1.2596	1.2988	3.1%	0.98
81	1.1824	1.2198	1.2582	3.1%	0.99
82	1.1449	1.1814	1.2190	3.2%	1.01
83	1.1087	1.1445	1.1812	3.2%	1.02
84	1.0739	1.1088	1.1448	3.2%	1.04
85	1.0403	1.0745	1.1098	3.3%	1.06
86	1.0080	1.0414	1.0759	3.3%	1.07
87	0.9768	1.0096	1.0433	3.3%	1.09
88	0.9468	0.9788	1.0118	3.4%	1.10
89	0.9178	0.9491	0.9815	3.4%	1.12
90	0.8899	0.9205	0.9522	3.4%	1.14
91	0.8629	0.8929	0.9239	3.5%	1.15
92	0.8369	0.8663	0.8966	3.5%	1.17
93	0.8119	0.8406	0.8703	3.5%	1.19

94	0.7877	0.8158	0.8449	3.6%	1.20
95	0.7643	0.7919	0.8203	3.6%	1.22
96	0.7418	0.7687	0.7966	3.6%	1.24
97	0.7200	0.7464	0.7737	3.7%	1.26
98	0.6990	0.7248	0.7515	3.7%	1.27
99	0.6787	0.7040	0.7302	3.7%	1.29
100	0.6591	0.6839	0.7095	3.7%	1.31
101	0.6402	0.6644	0.6895	3.8%	1.32
102	0.6219	0.6456	0.6702	3.8%	1.34
103	0.6042	0.6274	0.6515	3.8%	1.36
104	0.5871	0.6098	0.6334	3.9%	1.38
105	0.5706	0.5928	0.6159	3.9%	1.40
106	0.5546	0.5764	0.5990	3.9%	1.41
107	0.5391	0.5605	0.5827	4.0%	1.43
108	0.5242	0.5451	0.5668	4.0%	1.45
109	0.5097	0.5302	0.5515	4.0%	1.47
110	0.4958	0.5158	0.5367	4.0%	1.48
111	0.4822	0.5019	0.5223	4.1%	1.50
112	0.4691	0.4884	0.5084	4.1%	1.52
113	0.4565	0.4753	0.4949	4.1%	1.54
114	0.4442	0.4627	0.4819	4.2%	1.56
115	0.4323	0.4504	0.4693	4.2%	1.58
116	0.4208	0.4386	0.4570	4.2%	1.60
117	0.4097	0.4271	0.4452	4.2%	1.61
118	0.3989	0.4159	0.4337	4.3%	1.63
119	0.3884	0.4051	0.4225	4.3%	1.65
120	0.3783	0.3947	0.4117	4.3%	1.67
121	0.3685	0.3845	0.4012	4.3%	1.69
122	0.3590	0.3747	0.3911	4.4%	1.71
123	0.3497	0.3652	0.3812	4.4%	1.73
124	0.3408	0.3559	0.3717	4.4%	1.75
125	0.3321	0.3470	0.3624	4.5%	1.77