

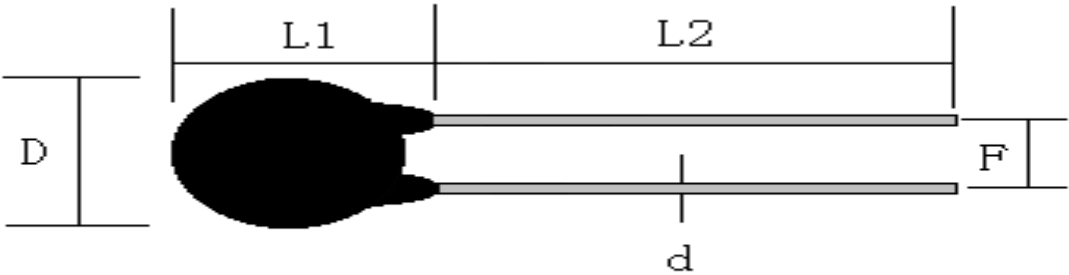
负温度系数热敏电阻器主要技术参数

(The Main Technical Parameters of NTC Thermistor)

型号 (Model) : 100KΩ±5% 3950K

1 、一般参数 (Common Parameters) :

(1) 尺寸 (mm) (Size)



D	L1	L2	d	F
±0.5	±0.5	min	±0.05	±0.5
2.3	3.0	25	0.40	2.0

2 、材料 (Materials)

①封装材料 (Wrapper) : 环氧树脂 (epoxy resin)

②引线 (Down-lead) : CP 线 (CP Wire)

③颜色 (Coating color) : 黑色 (Black)

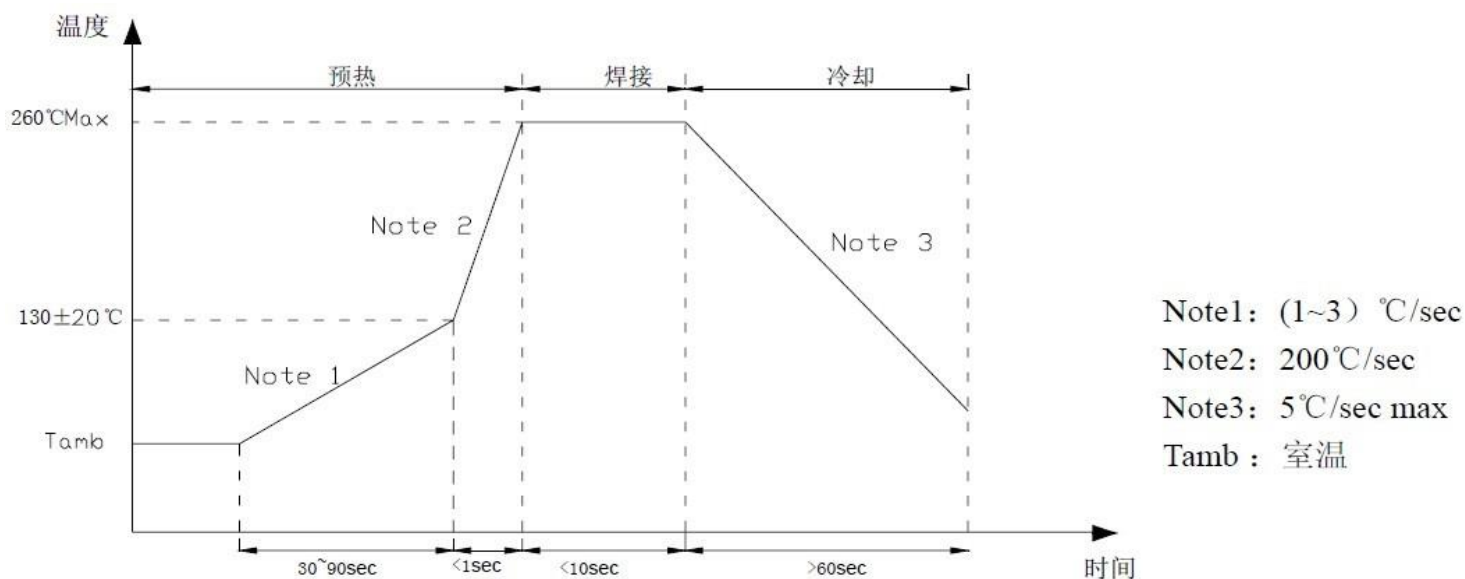
3、电气性能（Electrical Properties）：

项目 Items	符号 Symbol	测试条件 Testing Conditions	最小值 Minimum Value	正常值 Normal value	最大值 Maximum value	单位 Unit
25℃的电阻值	R25	Ta=25±0.05℃ PT≦0.1mw	95.000	100.000	105.000	K Ω
50℃的电阻值	R50	Ta=50±0.05℃ PT≦0.1mw	/	35.882	/	K Ω
B 值 B Value	B25/50	$B=LN\frac{R_{T1}}{R_{T2}} / (\frac{1}{T1} - \frac{1}{T2})$	/	3950	/	K
耗散系数 Dissipation Factor	σ	Ta=25±0.5℃	3	/	/	mw/℃
时间常数 Time Constant	τ	Ta=25±0.5℃ (在空气中 /In the air)	/	/	12	sec
绝缘电阻 Insulation Resistance	/	500VDC	50	/	/	M Ω
使用温度范围 Operating Temperature Range	/	/	-30	/	+ 125	℃

4、可靠性能试验（Reliability test）：

项目 Items	技 术 要 求 Technical Requirements	测试条件及方法 The test conditions and methods
可焊性 Solderability	引出端焊料自由流动和浸润良好, 上锡面积 95%以上 Terminal solder flow freely with good wetting, and Tin area covered is by more than 95%.	将引出端沾助焊剂后, 浸入温度为 230 ± 5 °C 锡槽中, 锡面距 NTC 本体下端 2-2.5mm 处, 持续 2 ± 0.5 S (参照 IEC60068-2-20 试验 Ta /GB2423.28 Ta) Immersed with terminal flux, temperature of 230 ± 5 °C in the tin bath, Tin surface from NTC ontology bottom 2-2.5 mm, lasts $2 + / - 0.5$ S. (With reference to IEC60068-2-20 test Ta/GB2423.28 Ta)
耐焊接热 Welding Heat Test	无可见性损伤 No visible damage $\Delta R/R_{25} \leq \pm 2\%$	将引出端浸入温度为 260 ± 5 °C 锡槽中, 锡面距 NTC 本体下端 2-2.5mm 处, 持续时间: 10 ± 1 S (参照 IEC60068-2-20 试验 Tb/GB2423.28 Tb) Terminal in temperature for $260 + 5$ °C in the tin bath, Tin surface from NTC ontology bottom 2-2.5 mm, duration: $10 + / - 1$ s (With reference to IEC60068-2-20 Tb/GB2423.28 Tb test)
引出端强度 Terminals Strength	无脱落 Shedding-free $\Delta R/R_{25} \leq \pm 2\%$	试验 Ua: 拉力 10N, 持续 10S; Test Ua: pull 10 n for 10 s; 试验 Ub: 弯曲 90 度, 拉力 5N, 连续两次; Ub test: bent 90 degrees, pull 5 n, for two consecutive times; (参照 IEC60068-2-21 / GB2423.29 U 试验) (Reference IEC60068-2-21 / GB2423.29 U test)
高温试验 High-Temperature Test	$\Delta R/R_{25} \leq \pm 2\%$	100 ± 5 °C, 通电 1000 ± 24 h, DC0.2mA 100 ± 5 °C, electricity to 1000 ± 24 hours, DC0.2 mA (参照 IEC60068-2-2/GB2423.2 试验) (Reference IEC60068-2-2 / GB2423.2 test)
低温试验 Low-Temperature Test	$\Delta R/R_{25} \leq \pm 2\%$	-40 ± 5 °C, 通电 1000 ± 24 h, DC0.2mA $-40 + / - 5$ °C, electricity to 1000 ± 24 hours, DC0.2 mA (参照 IEC60068-2-1/GB2423.1 试验) (Reference/GB2423.1 IEC60068-2-1 test)
耐潮湿试验 Resistance to moisture test	$\Delta R/R_{25} \leq \pm 2\%$	40 ± 2 °C, 90%-95%RH 环境下放置 1000 ± 24 h 40 ± 2 °C, 90% - 95% RH conditions placed 1000 ± 24 hours (参照 IEC60068-2-3/GB2423.3 试验) (Reference IEC60068-2-3 / GB2423.3 test)
温度冷热循环试验 The temperature of hot and cold cycling test	$\Delta R/R_{25} \leq \pm 2\%$	-40 °C $\times 30$ min $\rightarrow 30$ °C $\times 5$ min $\rightarrow 100$ °C $\times 30$ min $\rightarrow 30$ °C $\times 5$ min, 反复 5 次 (Repeated five times) (参照 IEC60068-2-14/GB2423.22 试验) (Reference IEC60068-2-14 / GB2423.22 test)

5、波峰焊示意图（Wave soldering diagram）：



6、包装方式（Packaging）：

散装数量：500Pcs/袋 20 袋/盒 10 盒/箱

500 PCS/Plastic Bag 20 plastic bags/BOX 10 BOXES/Carton)

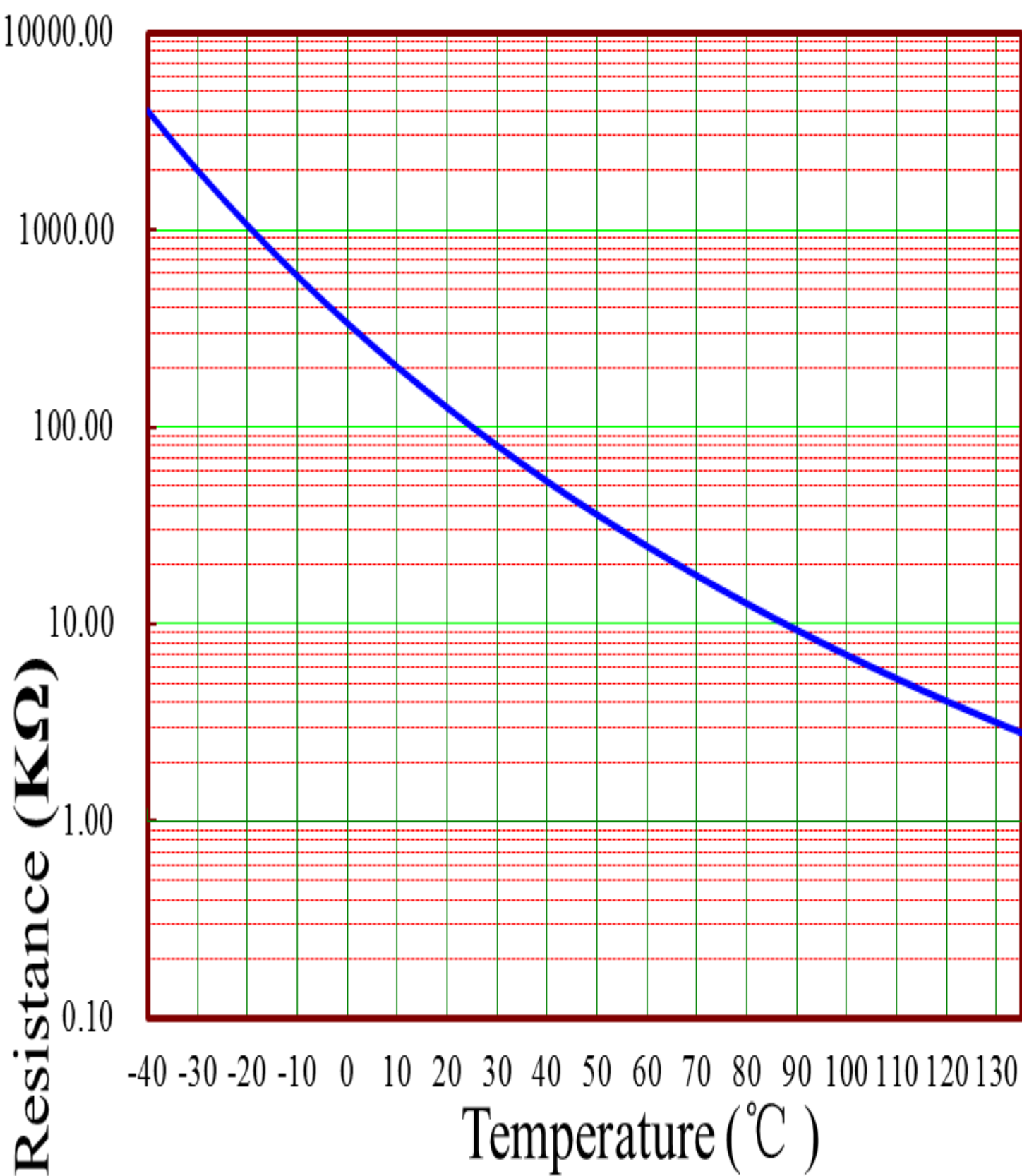
7、存储条件(Storage Conditions of Products):

② 存储温度(Storage Temperature)： $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$

② 相对湿度(Relative Humidity)： $\leq 75\%RH$

③ 不要将本产品存放在有腐蚀性气体或是阳光直接照射的环境中保管
(Do not use this product in corrosive gases or direct sunlight environment preservation.)

8、R-T特性图



9、阻温特性表

R--T 表

R25= 100.000 Kohms ± 5% B25/50= 3950 K

温度 Temperature	阻值 Resistance (Ω)			温度系数 temperature coefficient	阻值精度偏差 Tolerance for the Resistance(%)		测温精度偏差 (℃) Tolerance for the testing temperature	
(℃)	下限值 lower limiting value	中心值 Central value	上限值 upper-limit value	(%/℃)	最小 Min.	最大 Max.	最小 Min	最大 Max.
-20.0	977852.51	1053846.90	1132907.88	-6.16	-7.21	7.50	-1.22	1.17
-19.0	920188.33	991092.65	1064791.80	-6.12	-7.15	7.44	-1.22	1.17
-18.0	866337.26	932523.94	1001257.75	-6.07	-7.10	7.37	-1.21	1.17
-17.0	816021.80	877833.76	941967.02	-6.02	-7.04	7.31	-1.21	1.17
-16.0	768986.34	826739.54	886608.10	-5.97	-6.99	7.24	-1.21	1.17
-15.0	724995.39	778981.08	834894.26	-5.93	-6.93	7.18	-1.21	1.17
-14.0	683831.82	734318.62	786561.50	-5.88	-6.88	7.11	-1.21	1.17
-13.0	645295.34	692531.15	741366.58	-5.84	-6.82	7.05	-1.21	1.17
-12.0	609201.09	653414.78	699085.26	-5.79	-6.77	6.99	-1.21	1.17
-11.0	575378.37	616781.36	659510.70	-5.75	-6.71	6.93	-1.21	1.17
-10.0	543669.45	582457.13	622452.05	-5.70	-6.66	6.87	-1.20	1.17
-9.0	513928.53	550281.58	587733.06	-5.66	-6.61	6.81	-1.20	1.17
-8.0	486020.75	520106.32	555190.92	-5.62	-6.55	6.75	-1.20	1.17
-7.0	459821.33	491794.13	524675.13	-5.58	-6.50	6.69	-1.20	1.17
-6.0	435214.73	465218.03	496046.52	-5.53	-6.45	6.63	-1.20	1.17
-5.0	412093.91	440260.47	469176.32	-5.49	-6.40	6.57	-1.20	1.16
-4.0	390359.70	416812.55	443945.33	-5.45	-6.35	6.51	-1.19	1.16
-3.0	369920.13	394773.36	420243.13	-5.41	-6.30	6.45	-1.19	1.16
-2.0	350689.89	374049.37	397967.41	-5.37	-6.25	6.39	-1.19	1.16
-1.0	332589.78	354553.77	377023.33	-5.33	-6.19	6.34	-1.19	1.16
0.0	315546.28	336206.04	357322.91	-5.29	-6.14	6.28	-1.19	1.16
1.0	299491.08	318931.38	338784.50	-5.26	-6.10	6.22	-1.18	1.16
2.0	284360.70	302660.34	321332.29	-5.22	-6.05	6.17	-1.18	1.16
3.0	270096.10	287328.36	304895.89	-5.18	-6.00	6.11	-1.18	1.16
4.0	256642.36	272875.40	289409.86	-5.14	-5.95	6.06	-1.18	1.16
5.0	243948.37	259245.62	274813.36	-5.11	-5.90	6.01	-1.18	1.16
6.0	231966.54	246387.08	261049.82	-5.07	-5.85	5.95	-1.17	1.15
7.0	220652.54	234251.37	248066.58	-5.03	-5.81	5.90	-1.17	1.15

8.0	209965.04	222793.44	235814.62	-5.00	-5.76	5.84	-1.17	1.15
9.0	199865.52	211971.29	224248.28	-4.96	-5.71	5.79	-1.17	1.15
10.0	190318.06	201745.77	213325.01	-4.93	-5.66	5.74	-1.16	1.15
11.0	181289.12	192080.36	203005.17	-4.89	-5.62	5.69	-1.16	1.15
12.0	172747.41	182941.00	193251.76	-4.86	-5.57	5.64	-1.16	1.15
13.0	164663.68	174295.87	184030.27	-4.82	-5.53	5.58	-1.16	1.15
14.0	157010.64	166115.28	175308.50	-4.79	-5.48	5.53	-1.16	1.14
15.0	149762.75	158371.48	167056.37	-4.76	-5.44	5.48	-1.15	1.14
16.0	142896.14	151038.53	159245.78	-4.72	-5.39	5.43	-1.15	1.14
17.0	136388.48	144092.20	151850.48	-4.69	-5.35	5.38	-1.15	1.14
18.0	130218.87	137509.80	144845.93	-4.66	-5.30	5.33	-1.14	1.14
19.0	124367.75	131270.11	138209.15	-4.63	-5.26	5.29	-1.14	1.14
20.0	118816.81	125353.26	131918.68	-4.60	-5.21	5.24	-1.14	1.13
21.0	113548.86	119740.65	125954.39	-4.57	-5.17	5.19	-1.14	1.13
22.0	108547.83	114414.85	120297.47	-4.53	-5.13	5.14	-1.13	1.13
23.0	103798.64	109359.52	114930.28	-4.50	-5.08	5.09	-1.13	1.13
24.0	99287.12	104559.36	109836.29	-4.47	-5.04	5.05	-1.13	1.13
25.0	95000.00	100000.00	105000.00	-4.44	-5.00	5.00	-1.13	1.13
26.0	90844.33	95667.96	100495.86	-4.41	-5.04	5.05	-1.14	1.14
27.0	86896.33	91550.61	96213.03	-4.38	-5.08	5.09	-1.16	1.16
28.0	83144.44	87636.05	92139.38	-4.36	-5.13	5.14	-1.18	1.18
29.0	79577.79	83913.14	88263.47	-4.33	-5.17	5.18	-1.20	1.19
30.0	76186.18	80371.41	84574.58	-4.30	-5.21	5.23	-1.22	1.21
31.0	72960.01	77000.99	81062.62	-4.27	-5.25	5.27	-1.24	1.23
32.0	69890.27	73792.63	77718.09	-4.24	-5.29	5.32	-1.25	1.25
33.0	66968.49	70737.61	74532.07	-4.21	-5.33	5.36	-1.27	1.26
34.0	64186.70	67827.74	71496.14	-4.19	-5.37	5.41	-1.29	1.28
35.0	61537.41	65055.31	68602.39	-4.16	-5.41	5.45	-1.31	1.30
36.0	59013.55	62413.05	65843.35	-4.13	-5.45	5.50	-1.33	1.32
37.0	56608.50	59894.12	63212.01	-4.11	-5.49	5.54	-1.35	1.34
38.0	54315.98	57492.07	60701.74	-4.08	-5.52	5.58	-1.37	1.35
39.0	52130.11	55200.83	58306.29	-4.05	-5.56	5.63	-1.39	1.37
40.0	50045.34	53014.67	56019.78	-4.03	-5.60	5.67	-1.41	1.39
41.0	48056.42	50928.19	53836.64	-4.00	-5.64	5.71	-1.43	1.41
42.0	46158.43	48936.30	51751.64	-3.98	-5.68	5.75	-1.45	1.43
43.0	44346.70	47034.18	49759.81	-3.95	-5.71	5.80	-1.47	1.45
44.0	42616.84	45217.30	47856.49	-3.93	-5.75	5.84	-1.49	1.46
45.0	40964.71	43481.37	46037.26	-3.90	-5.79	5.88	-1.51	1.48
46.0	39386.38	41822.34	44297.94	-3.88	-5.82	5.92	-1.53	1.50
47.0	37878.16	40236.39	42634.59	-3.85	-5.86	5.96	-1.55	1.52
48.0	36436.55	38719.90	41043.48	-3.83	-5.90	6.00	-1.57	1.54
49.0	35058.25	37269.46	39521.08	-3.81	-5.93	6.04	-1.59	1.56
50.0	33740.14	35881.83	38064.06	-3.78	-5.97	6.08	-1.61	1.58
51.0	32479.27	34553.95	36669.25	-3.76	-6.00	6.12	-1.63	1.60
52.0	31272.84	33282.93	35333.66	-3.74	-6.04	6.16	-1.65	1.62

53.0	30118.21	32066.03	34054.46	-3.71	-6.07	6.20	-1.67	1.64
54.0	29012.89	30900.66	32828.98	-3.69	-6.11	6.24	-1.69	1.66
55.0	27954.50	29784.36	31654.66	-3.67	-6.14	6.28	-1.71	1.67
56.0	26940.80	28714.81	30529.11	-3.65	-6.18	6.32	-1.73	1.69
57.0	25969.68	27689.80	29450.04	-3.62	-6.21	6.36	-1.75	1.71
58.0	25039.11	26707.24	28415.28	-3.60	-6.25	6.40	-1.78	1.73
59.0	24147.19	25765.15	27422.79	-3.58	-6.28	6.43	-1.80	1.75
60.0	23292.11	24861.65	26470.61	-3.56	-6.31	6.47	-1.82	1.77
61.0	22472.16	23994.96	25556.90	-3.54	-6.35	6.51	-1.84	1.79
62.0	21685.71	23163.39	24679.90	-3.52	-6.38	6.55	-1.86	1.81
63.0	20931.22	22365.33	23837.94	-3.50	-6.41	6.58	-1.88	1.83
64.0	20207.23	21599.25	23029.45	-3.47	-6.44	6.62	-1.91	1.85
65.0	19512.34	20863.72	22252.93	-3.45	-6.48	6.66	-1.93	1.88
66.0	18845.23	20157.36	21506.93	-3.43	-6.51	6.70	-1.95	1.90
67.0	18204.66	19478.85	20790.12	-3.41	-6.54	6.73	-1.97	1.92
68.0	17589.42	18826.96	20101.19	-3.39	-6.57	6.77	-1.99	1.94
69.0	16998.40	18200.51	19438.91	-3.37	-6.60	6.80	-2.02	1.96
70.0	16430.50	17598.37	18802.13	-3.35	-6.64	6.84	-2.04	1.98
71.0	15884.71	17019.48	18189.73	-3.34	-6.67	6.88	-2.06	2.00
72.0	15360.06	16462.83	17600.65	-3.32	-6.70	6.91	-2.08	2.02
73.0	14855.63	15927.44	17033.89	-3.30	-6.73	6.95	-2.11	2.04
74.0	14370.52	15412.39	16488.48	-3.28	-6.76	6.98	-2.13	2.06
75.0	13903.90	14916.82	15963.53	-3.26	-6.79	7.02	-2.15	2.08
76.0	13454.98	14439.89	15458.15	-3.24	-6.82	7.05	-2.18	2.11
77.0	13023.00	13980.80	14971.52	-3.22	-6.85	7.09	-2.20	2.13
78.0	12607.22	13538.80	14502.86	-3.20	-6.88	7.12	-2.22	2.15
79.0	12206.97	13113.16	14051.40	-3.19	-6.91	7.15	-2.25	2.17
80.0	11821.59	12703.20	13616.43	-3.17	-6.94	7.19	-2.27	2.19
81.0	11450.45	12308.27	13197.28	-3.15	-6.97	7.22	-2.29	2.21
82.0	11092.95	11927.74	12793.27	-3.13	-7.00	7.26	-2.32	2.23
83.0	10748.53	11561.00	12403.80	-3.11	-7.03	7.29	-2.34	2.26
84.0	10416.64	11207.51	12028.27	-3.10	-7.06	7.32	-2.36	2.28
85.0	10096.77	10866.71	11666.12	-3.08	-7.09	7.36	-2.39	2.30
86.0	9788.42	10538.08	11316.79	-3.06	-7.11	7.39	-2.41	2.32
87.0	9491.13	10221.14	10979.77	-3.05	-7.14	7.42	-2.44	2.35
88.0	9204.43	9915.40	10654.58	-3.03	-7.17	7.45	-2.46	2.37
89.0	8927.91	9620.42	10340.74	-3.01	-7.20	7.49	-2.49	2.39
90.0	8661.14	9335.77	10037.79	-3.00	-7.23	7.52	-2.51	2.41
91.0	8403.75	9061.04	9745.31	-2.98	-7.25	7.55	-2.54	2.44
92.0	8155.36	8795.83	9462.88	-2.96	-7.28	7.58	-2.56	2.46
93.0	7915.60	8539.77	9190.11	-2.95	-7.31	7.62	-2.58	2.48
94.0	7684.15	8292.49	8926.63	-2.93	-7.34	7.65	-2.61	2.50
95.0	7460.66	8053.67	8672.08	-2.91	-7.36	7.68	-2.63	2.53
96.0	7244.83	7822.96	8426.10	-2.90	-7.39	7.71	-2.66	2.55
97.0	7036.36	7600.05	8188.37	-2.88	-7.42	7.74	-2.69	2.57

98.0	6834.97	7384.64	7958.58	-2.87	-7.44	7.77	-2.71	2.60
99.0	6640.37	7176.45	7736.42	-2.85	-7.47	7.80	-2.74	2.62
100.0	6452.32	6975.20	7521.60	-2.84	-7.50	7.83	-2.76	2.64
101.0	6270.55	6780.62	7313.85	-2.82	-7.52	7.86	-2.79	2.67
102.0	6094.83	6592.46	7112.90	-2.81	-7.55	7.89	-2.81	2.69
103.0	5924.93	6410.49	6918.49	-2.79	-7.57	7.92	-2.84	2.71
104.0	5760.63	6234.46	6730.39	-2.78	-7.60	7.95	-2.86	2.74
105.0	5601.73	6064.16	6548.35	-2.76	-7.63	7.98	-2.89	2.76
106.0	5448.00	5899.37	6372.16	-2.75	-7.65	8.01	-2.92	2.78
107.0	5299.27	5739.89	6201.60	-2.73	-7.68	8.04	-2.94	2.81
108.0	5155.36	5585.53	6036.47	-2.72	-7.70	8.07	-2.97	2.83
109.0	5016.07	5436.09	5876.56	-2.70	-7.73	8.10	-3.00	2.86
110.0	4881.24	5291.40	5721.69	-2.69	-7.75	8.13	-3.02	2.88
111.0	4750.71	5151.29	5571.68	-2.68	-7.78	8.16	-3.05	2.91
112.0	4624.32	5015.58	5426.35	-2.66	-7.80	8.19	-3.08	2.93
113.0	4501.93	4884.13	5285.53	-2.65	-7.83	8.22	-3.10	2.95
114.0	4383.38	4756.77	5149.07	-2.64	-7.85	8.25	-3.13	2.98
115.0	4268.54	4633.37	5016.80	-2.62	-7.87	8.28	-3.16	3.00
116.0	4157.27	4513.77	4888.59	-2.61	-7.90	8.30	-3.18	3.03
117.0	4049.46	4397.85	4764.28	-2.59	-7.92	8.33	-3.21	3.05
118.0	3944.97	4285.48	4643.75	-2.58	-7.95	8.36	-3.24	3.08
119.0	3843.68	4176.53	4526.86	-2.57	-7.97	8.39	-3.27	3.10
120.0	3745.50	4070.89	4413.48	-2.56	-7.99	8.42	-3.29	3.13