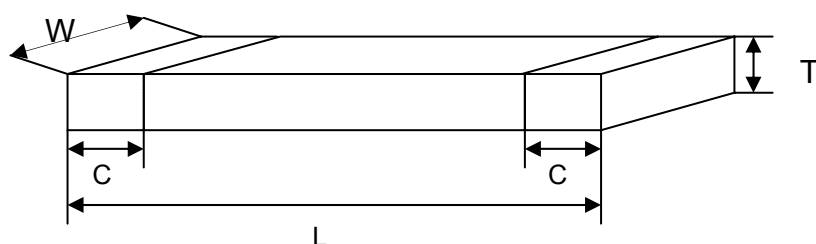


Specification of SMD Chips Thermistor

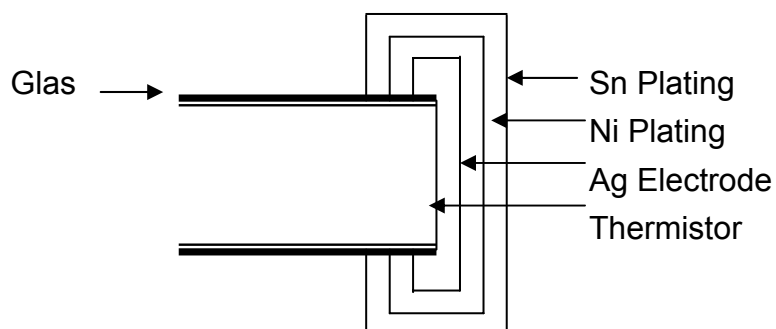
◆ PART NO. : SMD02-400 J 3250 H

◆ CHIP DIMENSIONS



Item	L(mm)	W(mm)	T(mm)	C(mm)
1005 (0402)	1.00 ±0.05	0.50 ±0.05	0.50±0.05	0.25±0.10

◆ CHIP STRUCTURE



◆ ELECTRICAL CHARACTERISTICS

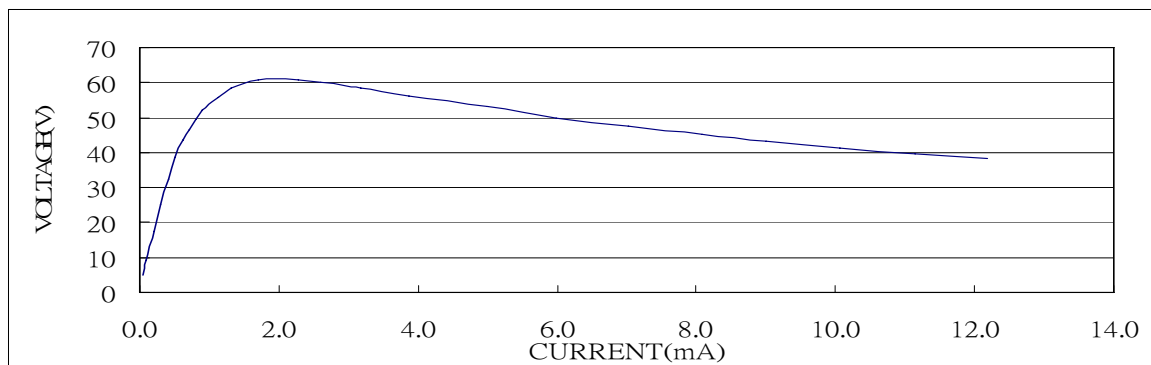
Style	Symbol	Condition	Specification
Resistance at 25°C	R25	T = 25 ± 0.1°C	100K Ω ± 3 %
B Constant	B	25°C to 85°C	4000 °K ± 1 %
Thermal Time Constant	T	T = 25 ± 0.1°C	Approx. 7.5 sec
Thermal Dissipation Constant	C	T = 25 ± 0.1°C	Approx. 4 mW/°C
Maximum Power Rating*	Pw	T = 25 ± 0.1°C	400 mW
Operation Temp. Range	--	--	-40°C ~ 125°C

*Maximum Power Rating = Thermal Dissipation Constant × (125°C-25°C)

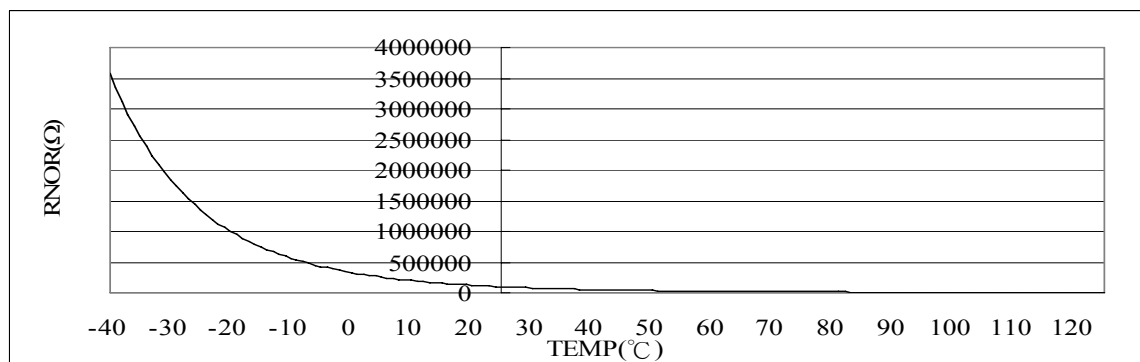
◆ RELIABILITY TEST

PERFORMANCE	TEST METHOD	APPRAISE
Life	MIL – STD – 202F , Method 108A 1000 hours at 125°C NTC WV intermittent	Within ±3 %
Humidity	MIL – STD – 202F , Method 103B 1000 hours at Temperature: 40°C Humidity: 95%	Within ±3 %
Thermal Shock	MIL – STD – 202F , Method 107 10 cycles, -40°C to +125°C	Within ±3 %
Solder ability	MIL – STD – 202F , Method 208 235°C for 2 seconds	95% min. coverage
Resistance to Soldering Heat	MIL – R – 55342D , Para 4.7.7 Soldered to test board at 260°C for 10 seconds	Within ±3 %
Bending Strength	JIS C 5202 6.1.4 Pressurizing rod at a rate at 1mm/sec for 1mm	Within ±3 %
Resistance to flexure of Substrate	JIS C 5202 6.2.1 Pressurizing force shall be 3kg (min.)	Over 3 kg
Insulation Resistance	MIL – STD – 202F , Method 302 DC 250V For 10 seconds	Over 1000MΩ
Dielectric Withstand Voltage	MIL – STD – 202F , Method 301 DC 250V For 10 seconds	Not Short

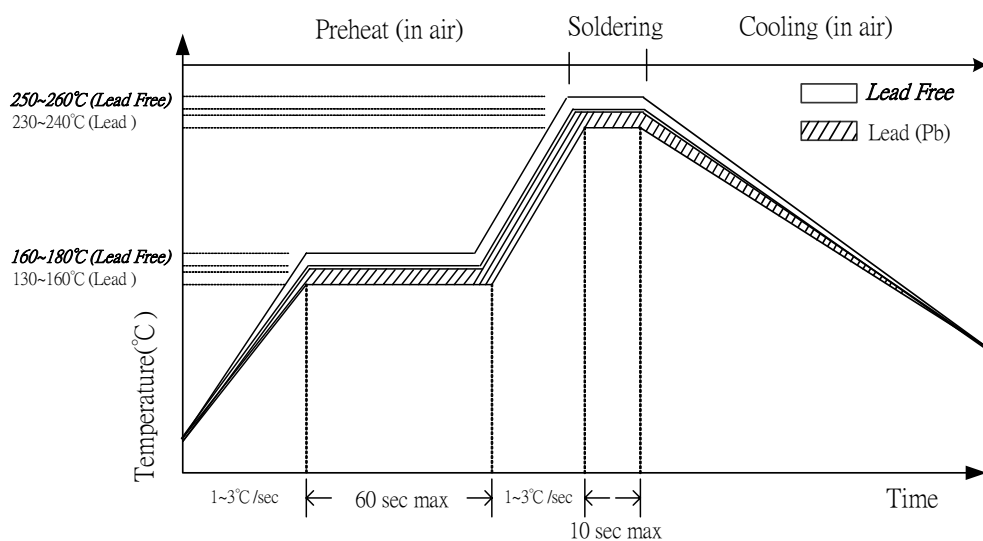
◆ VOLTAGE – CURRENT CURVE



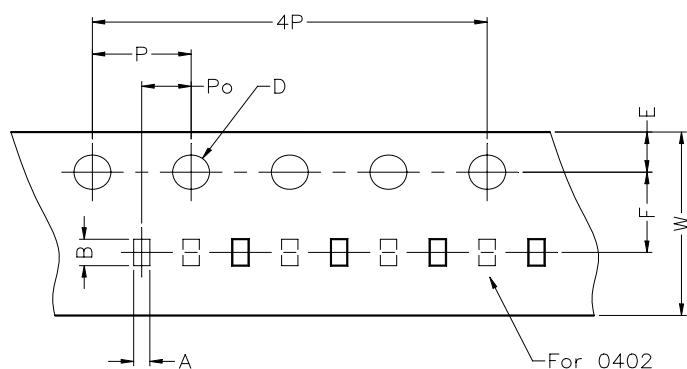
◆ RESISTANCE – TEMP CURVE



◆ REFLOW SOLDERING PROFILE



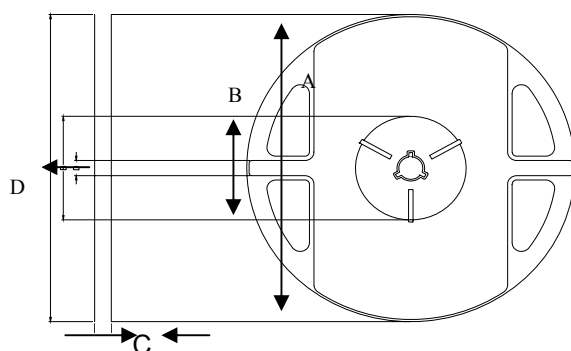
◆ TAPING DIMENSIONS



Unit: mm

Dimension	1206	0805	0603	0402
A	2.00 ± 0.05	1.50 ± 0.05	1.08 ± 0.05	0.66 ± 0.03
B	3.57 ± 0.05	2.30 ± 0.05	1.85 ± 0.05	1.15 ± 0.03
W	8.00 ± 0.02	8.00 ± 0.05	8.00 ± 0.05	8.00 ± 0.05
D	1.55 ± 0.05	1.50 ± 0.10	1.50 ± 0.10	1.50 ± 0.10
E	1.75 ± 0.10	1.75 ± 0.05	1.75 ± 0.05	1.75 ± 0.05
F	3.50 ± 0.05	3.50 ± 0.05	3.50 ± 0.05	3.50 ± 0.05
P	4.00 ± 0.10	4.00 ± 0.05	4.00 ± 0.05	4.00 ± 0.05
Po	2.00 ± 0.05	2.00 ± 0.05	2.00 ± 0.05	2.00 ± 0.05
4P	16.00 ± 0.05	16.00 ± 0.05	16.00 ± 0.05	16.00 ± 0.05

◆ REEL DIMENSIONS



Unit: mm

Item	A	B	C	D
Dimension	178.0 ±1.0	60.0 ±1.0	9.0 ±0.1	13.0 ±0.1

◆ ORDERING INFORMATION

SMD 02 400 J 3250 H
 ① ② ③ ④ ⑤ ⑥

1. Series SINLOON SMD Thermistor. (TH - Lead (Pb) ; TF – Lead Free)
2. Dimension : 06 (1206) , 05 (0805) , 03 (0603) , 02 (0402)
3. Resistance : 300 = 30 x 10 = 30 ohm
4. R Tolerance : F:±1% ; G:±2% ; H:±3% ; J:±5% ; K:±10%
5. B value : 3215, 3435, 3700, 7970, 4000, 4100,.....etc.
6. B Tolerance : F:±1% ; G:±2% ; H:±3%

- ACCESSORY : RESISTANCE-TEMPERATURE CHARACTERISTICS

Resistance-Temperature Characteristics

Part No. : SMD02-400J 3250H

R : 40 ohms ± 5%

B : 3250 °K ± 3%

Temperature (°C)	Resistance (Ω)			Temp. Coef. (%/°C)	Resist. Tolerance (%)		Temp. Tolerance (°C)	
	MIN.	CENTER	MAX.		MIN.	MAX.	MIN.	MAX.
-40	680.859	783.600	899.590	-5.71	-13.11	14.80	-2.59	2.30
-39	644.293	740.252	848.376	-5.67	-12.96	14.61	-2.58	2.29
-38	609.937	699.592	800.419	-5.63	-12.82	14.41	-2.56	2.28
-37	577.643	661.438	755.494	-5.59	-12.67	14.22	-2.54	2.27
-36	547.276	625.620	713.391	-5.55	-12.52	14.03	-2.53	2.26
-35	518.710	591.981	673.914	-5.51	-12.38	13.84	-2.51	2.25
-34	491.825	560.376	636.886	-5.47	-12.23	13.65	-2.50	2.24
-33	466.514	530.670	602.139	-5.43	-12.09	13.47	-2.48	2.23
-32	442.675	502.736	569.519	-5.39	-11.95	13.28	-2.47	2.22
-31	420.214	476.459	538.882	-5.35	-11.80	13.10	-2.45	2.21
-30	399.042	451.731	510.098	-5.31	-11.66	12.92	-2.43	2.20
-29	379.078	428.450	483.042	-5.27	-11.52	12.74	-2.42	2.19
-28	360.246	406.524	457.601	-5.23	-11.38	12.56	-2.40	2.17
-27	342.475	385.866	433.668	-5.20	-11.25	12.39	-2.38	2.16
-26	325.699	366.395	411.145	-5.16	-11.11	12.21	-2.37	2.15
-25	309.856	348.035	389.941	-5.12	-10.97	12.04	-2.35	2.14
-24	294.889	330.717	369.971	-5.09	-10.83	11.87	-2.33	2.13
-23	280.743	314.375	351.155	-5.05	-10.70	11.70	-2.32	2.12
-22	267.370	298.948	333.420	-5.01	-10.56	11.53	-2.30	2.11
-21	254.723	284.380	316.697	-4.98	-10.43	11.36	-2.28	2.09
-20	242.757	270.618	300.923	-4.94	-10.30	11.20	-2.27	2.08
-19	231.432	257.613	286.038	-4.91	-10.16	11.03	-2.25	2.07
-18	220.710	245.318	271.987	-4.87	-10.03	10.87	-2.23	2.06
-17	210.556	233.690	258.718	-4.84	-9.90	10.71	-2.21	2.05
-16	200.935	222.690	246.184	-4.80	-9.77	10.55	-2.20	2.03
-15	191.817	212.279	234.338	-4.77	-9.64	10.39	-2.18	2.02
-14	183.172	202.424	223.140	-4.74	-9.51	10.23	-2.16	2.01
-13	174.973	193.090	212.549	-4.70	-9.38	10.08	-2.14	1.99
-12	167.195	184.247	202.530	-4.67	-9.25	9.92	-2.12	1.98
-11	159.814	175.867	193.049	-4.64	-9.13	9.77	-2.11	1.97
-10	152.806	167.922	184.072	-4.61	-9.00	9.62	-2.09	1.95
-9	146.151	160.388	175.572	-4.57	-8.88	9.47	-2.07	1.94

-8	139.829	153.241	167.518	-4.54	-8.75	9.32	-2.05	1.93
-7	133.822	146.458	159.886	-4.51	-8.63	9.17	-2.03	1.91
-6	128.111	140.019	152.651	-4.48	-8.50	9.02	-2.01	1.90
-5	122.681	133.905	145.790	-4.45	-8.38	8.88	-1.99	1.88
-4	117.516	128.097	139.281	-4.42	-8.26	8.73	-1.98	1.87
-3	112.602	122.579	133.105	-4.39	-8.14	8.59	-1.96	1.85
-2	107.925	117.333	127.242	-4.36	-8.02	8.45	-1.94	1.84
-1	103.472	112.346	121.675	-4.33	-7.90	8.30	-1.92	1.82
0	99.232	107.602	116.386	-4.30	-7.78	8.16	-1.90	1.81
1	95.192	103.089	111.362	-4.27	-7.66	8.02	-1.88	1.79
2	91.343	98.794	106.586	-4.24	-7.54	7.89	-1.86	1.78
3	87.673	94.705	102.045	-4.21	-7.42	7.75	-1.84	1.76
4	84.175	90.812	97.727	-4.18	-7.31	7.61	-1.82	1.75
5	80.838	87.103	93.618	-4.16	-7.19	7.48	-1.80	1.73
6	77.655	83.569	89.709	-4.13	-7.08	7.35	-1.78	1.71
7	74.617	80.201	85.987	-4.10	-6.96	7.21	-1.76	1.70
8	71.717	76.989	82.443	-4.07	-6.85	7.08	-1.74	1.68
9	68.948	73.927	79.067	-4.05	-6.73	6.95	-1.72	1.66
10	66.304	71.006	75.851	-4.02	-6.62	6.82	-1.70	1.65
11	63.777	68.218	72.785	-3.99	-6.51	6.70	-1.68	1.63
12	61.363	65.557	69.863	-3.97	-6.40	6.57	-1.66	1.61
13	59.055	63.017	67.076	-3.94	-6.29	6.44	-1.64	1.60
14	56.848	60.591	64.418	-3.91	-6.18	6.32	-1.61	1.58
15	54.738	58.273	61.881	-3.89	-6.07	6.19	-1.59	1.56
16	52.719	56.058	59.460	-3.86	-5.96	6.07	-1.57	1.54
17	50.787	53.942	57.149	-3.84	-5.85	5.95	-1.55	1.52
18	48.938	51.918	54.942	-3.81	-5.74	5.82	-1.53	1.51
19	47.167	49.983	52.834	-3.79	-5.63	5.70	-1.51	1.49
20	45.472	48.132	50.820	-3.76	-5.53	5.58	-1.48	1.47
21	43.848	46.360	48.894	-3.74	-5.42	5.47	-1.46	1.45
22	42.292	44.665	47.054	-3.71	-5.31	5.35	-1.44	1.43
23	40.800	43.042	45.294	-3.69	-5.21	5.23	-1.42	1.41
24	39.371	41.488	43.611	-3.67	-5.10	5.12	-1.40	1.39
25	38.000	40.000	42.000	-3.64	-5.00	5.00	-1.37	1.37
26	36.606	38.574	40.547	-3.62	-5.10	5.11	-1.41	1.41
27	35.271	37.208	39.153	-3.59	-5.21	5.23	-1.45	1.45
28	33.993	35.898	37.815	-3.57	-5.31	5.34	-1.50	1.49
29	32.769	34.642	36.532	-3.55	-5.41	5.45	-1.54	1.52
30	31.596	33.438	35.299	-3.53	-5.51	5.57	-1.58	1.56
31	30.472	32.283	34.116	-3.50	-5.61	5.68	-1.62	1.60
32	29.395	31.175	32.979	-3.48	-5.71	5.79	-1.66	1.64

33	28.363	30.111	31.887	-3.46	-5.81	5.90	-1.70	1.68
34	27.373	29.091	30.838	-3.44	-5.90	6.01	-1.75	1.72
35	26.424	28.110	29.830	-3.42	-6.00	6.12	-1.79	1.76
36	25.513	27.169	28.861	-3.40	-6.10	6.23	-1.83	1.80
37	24.639	26.265	27.928	-3.37	-6.19	6.33	-1.88	1.84
38	23.800	25.396	27.032	-3.35	-6.29	6.44	-1.92	1.87
39	22.995	24.562	26.170	-3.33	-6.38	6.55	-1.97	1.91
40	22.221	23.759	25.340	-3.31	-6.47	6.65	-2.01	1.95
41	21.478	22.988	24.541	-3.29	-6.57	6.76	-2.05	2.00
42	20.765	22.246	23.773	-3.27	-6.66	6.86	-2.10	2.04
43	20.079	21.532	23.033	-3.25	-6.75	6.97	-2.14	2.08
44	19.420	20.846	22.320	-3.23	-6.84	7.07	-2.19	2.12
45	18.787	20.185	21.634	-3.21	-6.93	7.18	-2.24	2.16
46	18.177	19.549	20.973	-3.19	-7.02	7.28	-2.28	2.20
47	17.592	18.937	20.335	-3.17	-7.11	7.38	-2.33	2.24
48	17.028	18.348	19.721	-3.15	-7.20	7.48	-2.37	2.28
49	16.486	17.781	19.129	-3.13	-7.28	7.59	-2.42	2.32
50	15.964	17.234	18.559	-3.11	-7.37	7.69	-2.47	2.37
51	15.462	16.707	18.008	-3.09	-7.46	7.79	-2.52	2.41
52	14.978	16.200	17.477	-3.08	-7.54	7.89	-2.56	2.45
53	14.512	15.710	16.965	-3.06	-7.63	7.99	-2.61	2.49
54	14.064	15.239	16.471	-3.04	-7.71	8.08	-2.66	2.54
55	13.632	14.784	15.994	-3.02	-7.79	8.18	-2.71	2.58
56	13.215	14.345	15.533	-3.00	-7.88	8.28	-2.76	2.62
57	12.814	13.922	15.089	-2.98	-7.96	8.38	-2.81	2.67
58	12.427	13.514	14.659	-2.97	-8.04	8.47	-2.86	2.71
59	12.054	13.120	14.245	-2.95	-8.12	8.57	-2.91	2.75
60	11.695	12.740	13.844	-2.93	-8.21	8.67	-2.96	2.80
61	11.348	12.373	13.457	-2.91	-8.29	8.76	-3.01	2.84
62	11.013	12.019	13.083	-2.90	-8.37	8.86	-3.06	2.89
63	10.690	11.677	12.722	-2.88	-8.45	8.95	-3.11	2.93
64	10.379	11.346	12.372	-2.86	-8.52	9.05	-3.16	2.98
65	10.078	11.027	12.034	-2.85	-8.60	9.14	-3.21	3.02
66	9.788	10.718	11.708	-2.83	-8.68	9.23	-3.26	3.07
67	9.507	10.420	11.391	-2.81	-8.76	9.32	-3.31	3.11
68	9.237	10.132	11.086	-2.80	-8.83	9.42	-3.37	3.16
69	8.975	9.853	10.790	-2.78	-8.91	9.51	-3.42	3.20
70	8.722	9.584	10.504	-2.76	-8.99	9.60	-3.47	3.25
71	8.478	9.323	10.226	-2.75	-9.06	9.69	-3.53	3.30
72	8.242	9.071	9.958	-2.73	-9.14	9.78	-3.58	3.34
73	8.014	8.827	9.698	-2.72	-9.21	9.87	-3.63	3.39

74	7.794	8.591	9.447	-2.70	-9.28	9.96	-3.69	3.44
75	7.580	8.363	9.203	-2.69	-9.36	10.05	-3.74	3.48
76	7.374	8.142	8.967	-2.67	-9.43	10.14	-3.80	3.53
77	7.175	7.928	8.739	-2.66	-9.50	10.22	-3.85	3.58
78	6.982	7.721	8.517	-2.64	-9.57	10.31	-3.91	3.63
79	6.795	7.520	8.302	-2.63	-9.65	10.40	-3.96	3.67
80	6.614	7.326	8.094	-2.61	-9.72	10.49	-4.02	3.72
81	6.439	7.138	7.892	-2.60	-9.79	10.57	-4.07	3.77
82	6.270	6.955	7.697	-2.58	-9.86	10.66	-4.13	3.82
83	6.106	6.779	7.507	-2.57	-9.93	10.74	-4.19	3.87
84	5.947	6.607	7.323	-2.55	-10.00	10.83	-4.24	3.92
85	5.793	6.441	7.144	-2.54	-10.06	10.91	-4.30	3.97
86	5.644	6.280	6.971	-2.52	-10.13	11.00	-4.36	4.02
87	5.500	6.124	6.803	-2.51	-10.20	11.08	-4.42	4.06
88	5.360	5.973	6.640	-2.50	-10.27	11.16	-4.47	4.11
89	5.224	5.826	6.481	-2.48	-10.33	11.25	-4.53	4.16
90	5.093	5.684	6.328	-2.47	-10.40	11.33	-4.59	4.21
91	4.965	5.546	6.178	-2.45	-10.47	11.41	-4.65	4.26
92	4.841	5.411	6.033	-2.44	-10.53	11.49	-4.71	4.32
93	4.722	5.281	5.893	-2.43	-10.60	11.58	-4.77	4.37
94	4.605	5.155	5.756	-2.41	-10.66	11.66	-4.83	4.42
95	4.492	5.032	5.623	-2.40	-10.73	11.74	-4.89	4.47
96	4.383	4.913	5.494	-2.39	-10.79	11.82	-4.95	4.52
97	4.277	4.798	5.368	-2.37	-10.86	11.90	-5.01	4.57
98	4.174	4.685	5.247	-2.36	-10.92	11.98	-5.07	4.62
99	4.074	4.576	5.128	-2.35	-10.98	12.06	-5.13	4.67
100	3.977	4.470	5.013	-2.34	-11.04	12.13	-5.19	4.73
101	3.882	4.367	4.901	-2.32	-11.11	12.21	-5.26	4.78
102	3.791	4.267	4.792	-2.31	-11.17	12.29	-5.32	4.83
103	3.702	4.170	4.686	-2.30	-11.23	12.37	-5.38	4.88
104	3.615	4.076	4.583	-2.29	-11.29	12.45	-5.44	4.94
105	3.531	3.984	4.483	-2.27	-11.35	12.52	-5.51	4.99
106	3.450	3.894	4.385	-2.26	-11.41	12.60	-5.57	5.04
107	3.371	3.807	4.290	-2.25	-11.47	12.68	-5.63	5.10
108	3.294	3.723	4.198	-2.24	-11.53	12.75	-5.70	5.15
109	3.219	3.641	4.108	-2.23	-11.59	12.83	-5.76	5.21
110	3.146	3.561	4.020	-2.21	-11.65	12.90	-5.83	5.26
111	3.075	3.483	3.935	-2.20	-11.71	12.98	-5.89	5.31
112	3.006	3.407	3.852	-2.19	-11.77	13.05	-5.96	5.37
113	2.939	3.334	3.771	-2.18	-11.82	13.13	-6.02	5.42
114	2.874	3.262	3.693	-2.17	-11.88	13.20	-6.09	5.48

115	2.811	3.192	3.616	-2.16	-11.94	13.27	-6.15	5.53
116	2.749	3.124	3.541	-2.15	-12.00	13.35	-6.22	5.59
117	2.690	3.058	3.468	-2.13	-12.05	13.42	-6.29	5.65
118	2.631	2.994	3.398	-2.12	-12.11	13.49	-6.35	5.70
119	2.574	2.931	3.328	-2.11	-12.16	13.56	-6.42	5.76
120	2.519	2.870	3.261	-2.10	-12.22	13.64	-6.49	5.81
121	2.465	2.810	3.195	-2.09	-12.27	13.71	-6.56	5.87
122	2.413	2.752	3.131	-2.08	-12.33	13.78	-6.62	5.93
123	2.362	2.696	3.069	-2.07	-12.38	13.85	-6.69	5.98
124	2.312	2.641	3.008	-2.06	-12.44	13.92	-6.76	6.04
125	2.264	2.587	2.949	-2.05	-12.49	13.99	-6.83	6.10