

Approval

(產品規格確認書)

Approved By:	Checked By:	Prepared By :

Approved By:	Examined By:	Tested By :

Company's Stamp	
------------------------	--

Company's Stamp	
------------------------	--

Approval No. : _____

Product : NTC THERMISTOR

Mayloon Part No. : SMD05-104 J4100 H

Customer's Part No. : _____

Specifications : R₂₅ 100,000 Ω ± 5 %

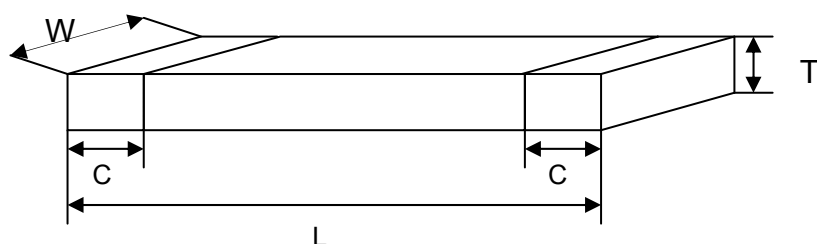
B₂₅₋₈₅ 4100 °K ± 3 %

Date : _____

Specification of SMD Chips Thermistor

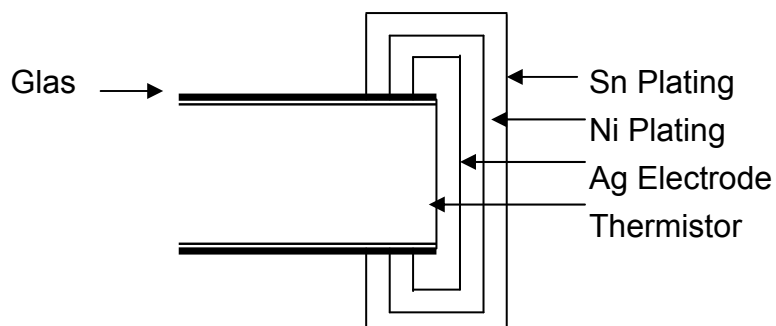
◆ PART NO. : SMD05-104J 4100H

◆ CHIP DIMENSIONS



Item	L(mm)	W(mm)	T(mm)	C(mm)
2125 (0805)	2.00 ±0.20	1.25 ±0.20	1.20±0.20	0.50±0.20

◆ CHIP STRUCTURE



◆ ELECTRICAL CHARACTERISTICS

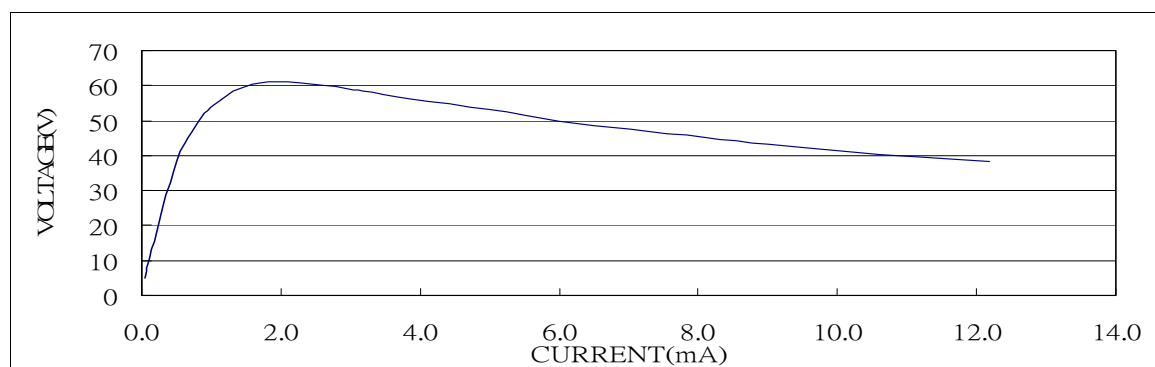
Style	Symbol	Condition	Specification
Resistance at 25°C	R25	T = 25 ± 0.1°C	100K Ω ± 5 %
B Constant	B	25°C to 85°C	4100 °K ± 3 %
Thermal Time Constant	T	T = 25 ± 0.1°C	Approx. 7.5 sec
Thermal Dissipation Constant	C	T = 25 ± 0.1°C	Approx. 4 mW/°C
Maximum Power Rating*	Pw	T = 25 ± 0.1°C	400 mW
Operation Temp. Range	--	--	-40°C ~ 125°C

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

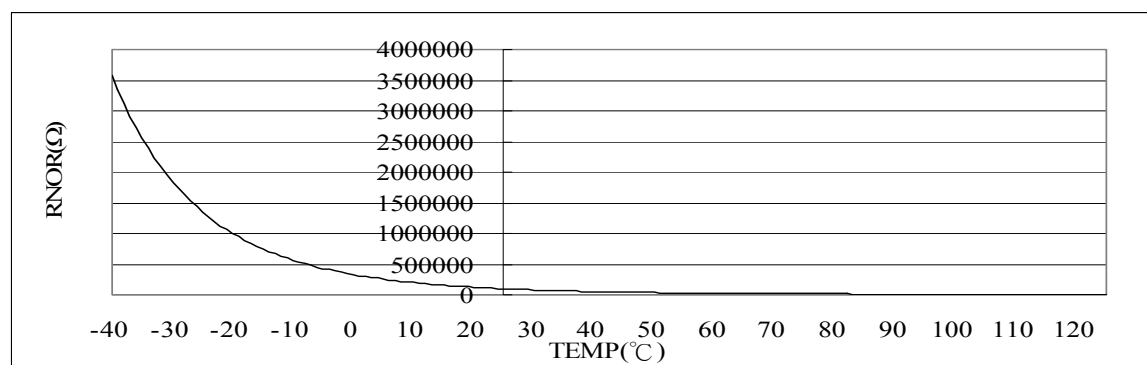
◆ RELIABILITY TEST

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

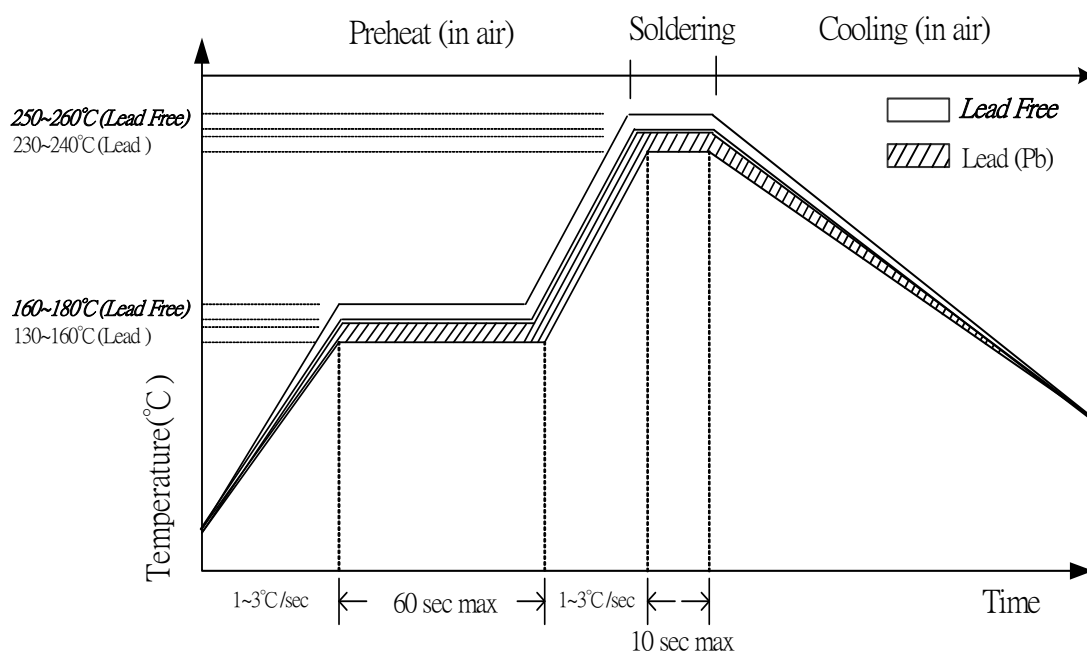
◆ VOLTAGE – CURRENT CURVE



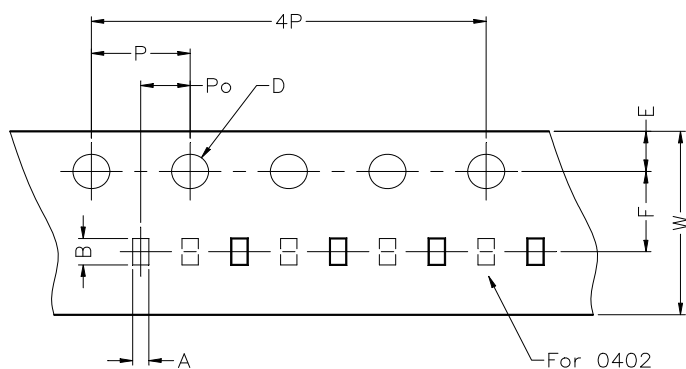
◆ RESISTANCE – TEMP CURVE



◆ REFLOW SOLDERING PROFILE



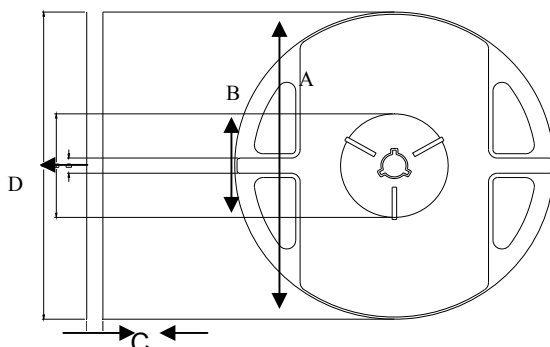
◆ TAPING DIMENSIONS



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 05 104 J 4100 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 : 104 = $10 \times 10^4 = 100,000$ 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. : SMD 05-104 J 4000 H

R : 100,000 ohms ± 5%
B : 4100°K ± 3%

Temperature (°C)	Resistance (Ω)			Temp. Coef. (%/°C)	Resist. Tolerance (%)		Temp. Tolerance (°C)	
	MIN.	CENTER	MAX.		MIN.	MAX.	MIN.	MAX.
-40	3050787	3575090	4179024	-6.86	-14.67	16.89	-2.46	2.14
-39	2855141	3338968	3895023	-6.81	-14.49	16.65	-2.45	2.13
-38	2673385	3120059	3632260	-6.76	-14.32	16.42	-2.43	2.12
-37	2504443	2916994	3389010	-6.70	-14.14	16.18	-2.41	2.11
-36	2347328	2728526	3163700	-6.65	-13.97	15.95	-2.40	2.10
-35	2201138	2553512	2954890	-6.60	-13.80	15.72	-2.38	2.09
-34	2065042	2390905	2761267	-6.56	-13.63	15.49	-2.36	2.08
-33	1938280	2239746	2581631	-6.51	-13.46	15.26	-2.35	2.07
-32	1820151	2099158	2414882	-6.46	-13.29	15.04	-2.33	2.06
-31	1710013	1968334	2260014	-6.41	-13.12	14.82	-2.31	2.05
-30	1607276	1846535	2116106	-6.36	-12.96	14.60	-2.29	2.04
-29	1511394	1733080	1982315	-6.32	-12.79	14.38	-2.28	2.02
-28	1421869	1627348	1857864	-6.27	-12.63	14.17	-2.26	2.01
-27	1338238	1528762	1742046	-6.23	-12.46	13.95	-2.24	2.00
-26	1260078	1436797	1634206	-6.18	-12.30	13.74	-2.22	1.99
-25	1186995	1350967	1533746	-6.14	-12.14	13.53	-2.20	1.98
-24	1118630	1270824	1440116	-6.09	-11.98	13.32	-2.19	1.97
-23	1054649	1195957	1352809	-6.05	-11.82	13.12	-2.17	1.95
-22	994743	1125986	1271360	-6.01	-11.66	12.91	-2.15	1.94
-21	938628	1060562	1195339	-5.96	-11.50	12.71	-2.13	1.93
-20	886041	999360	1124353	-5.92	-11.34	12.51	-2.11	1.91
-19	836739	942083	1058037	-5.88	-11.18	12.31	-2.09	1.90
-18	790497	888455	996056	-5.84	-11.03	12.11	-2.07	1.89
-17	747106	838223	938101	-5.80	-10.87	11.92	-2.05	1.87
-16	706374	791150	883885	-5.76	-10.72	11.72	-2.04	1.86
-15	668121	747019	833145	-5.72	-10.56	11.53	-2.02	1.85
-14	632182	705628	785638	-5.68	-10.41	11.34	-2.00	1.83
-13	598404	666792	741139	-5.64	-10.26	11.15	-1.98	1.82
-12	566643	630337	699439	-5.60	-10.10	10.96	-1.96	1.80
-11	536767	596104	660345	-5.57	-9.95	10.78	-1.94	1.79

-10	508653	563943	623680	-5.53	-9.80	10.59	-1.92	1.77
-9	482188	533718	589278	-5.49	-9.65	10.41	-1.90	1.76
-8	457263	505300	556987	-5.45	-9.51	10.23	-1.88	1.74
-7	433782	478571	526664	-5.42	-9.36	10.05	-1.86	1.73
-6	411651	453420	498179	-5.38	-9.21	9.87	-1.83	1.71
-5	390786	429746	471409	-5.34	-9.07	9.69	-1.81	1.70
-4	371107	407453	446241	-5.31	-8.92	9.52	-1.79	1.68
-3	352539	386453	422570	-5.27	-8.78	9.35	-1.77	1.66
-2	335014	366663	400299	-5.24	-8.63	9.17	-1.75	1.65
-1	318466	348007	379336	-5.21	-8.49	9.00	-1.73	1.63
0	302836	330412	359598	-5.17	-8.35	8.83	-1.71	1.61
1	288068	313814	341005	-5.14	-8.20	8.66	-1.69	1.60
2	274109	298149	323486	-5.10	-8.06	8.50	-1.66	1.58
3	260911	283360	306971	-5.07	-7.92	8.33	-1.64	1.56
4	248427	269393	291398	-5.04	-7.78	8.17	-1.62	1.54
5	236615	256198	276708	-5.01	-7.64	8.01	-1.60	1.53
6	225435	243727	262846	-4.97	-7.51	7.84	-1.58	1.51
7	214849	231938	249760	-4.94	-7.37	7.68	-1.55	1.49
8	204824	220788	237402	-4.91	-7.23	7.52	-1.53	1.47
9	195325	210241	225729	-4.88	-7.09	7.37	-1.51	1.45
10	186323	200259	214698	-4.85	-6.96	7.21	-1.49	1.44
11	177789	190809	204271	-4.82	-6.82	7.06	-1.46	1.42
12	169696	181861	194411	-4.79	-6.69	6.90	-1.44	1.40
13	162018	173384	185084	-4.76	-6.56	6.75	-1.42	1.38
14	154732	165352	176259	-4.73	-6.42	6.60	-1.39	1.36
15	147816	157738	167905	-4.70	-6.29	6.45	-1.37	1.34
16	141250	150519	159996	-4.67	-6.16	6.30	-1.35	1.32
17	135013	143672	152504	-4.64	-6.03	6.15	-1.32	1.30
18	129087	137175	145407	-4.61	-5.90	6.00	-1.30	1.28
19	123455	131010	138680	-4.58	-5.77	5.85	-1.28	1.26
20	118101	125157	132302	-4.56	-5.64	5.71	-1.25	1.24
21	113010	119599	126255	-4.53	-5.51	5.57	-1.23	1.22
22	108168	114319	120518	-4.50	-5.38	5.42	-1.20	1.20
23	103560	109302	115074	-4.47	-5.25	5.28	-1.18	1.17
24	99175	104534	109906	-4.45	-5.13	5.14	-1.16	1.15
25	95000	100000	105000	-4.42	-5.00	5.00	-1.13	1.13
26	90784	95689	100606	-4.39	-5.13	5.14	-1.17	1.17
27	86779	91587	96420	-4.37	-5.25	5.28	-1.21	1.20
28	82972	87684	92432	-4.34	-5.37	5.41	-1.25	1.24

29	79354	83970	88632	-4.32	-5.50	5.55	-1.29	1.27
30	75914	80433	85008	-4.29	-5.62	5.69	-1.33	1.31
31	72642	77065	81553	-4.27	-5.74	5.82	-1.37	1.35
32	69529	73856	78257	-4.24	-5.86	5.96	-1.41	1.38
33	66566	70799	75113	-4.22	-5.98	6.09	-1.45	1.42
34	63746	67885	72113	-4.19	-6.10	6.23	-1.49	1.46
35	61061	65107	69248	-4.17	-6.22	6.36	-1.53	1.49
36	58503	62458	66514	-4.14	-6.33	6.49	-1.57	1.53
37	56067	59931	63902	-4.12	-6.45	6.63	-1.61	1.57
38	53745	57520	61407	-4.09	-6.56	6.76	-1.65	1.60
39	51532	55219	59023	-4.07	-6.68	6.89	-1.69	1.64
40	49422	53023	56744	-4.05	-6.79	7.02	-1.73	1.68
41	47410	50926	54565	-4.02	-6.90	7.15	-1.78	1.72
42	45490	48923	52482	-4.00	-7.02	7.28	-1.82	1.75
43	43659	47009	50490	-3.98	-7.13	7.40	-1.86	1.79
44	41911	45181	48584	-3.96	-7.24	7.53	-1.90	1.83
45	40242	43433	46760	-3.93	-7.35	7.66	-1.95	1.87
46	38649	41763	45015	-3.91	-7.46	7.79	-1.99	1.91
47	37127	40165	43343	-3.89	-7.56	7.91	-2.03	1.94
48	35673	38637	41743	-3.87	-7.67	8.04	-2.08	1.98
49	34284	37175	40210	-3.85	-7.78	8.16	-2.12	2.02
50	32956	35777	38742	-3.82	-7.88	8.29	-2.17	2.06
51	31686	34438	37335	-3.80	-7.99	8.41	-2.21	2.10
52	30472	33156	35986	-3.78	-8.09	8.54	-2.26	2.14
53	29311	31929	34694	-3.76	-8.20	8.66	-2.30	2.18
54	28200	30753	33454	-3.74	-8.30	8.78	-2.35	2.22
55	27137	29627	32265	-3.72	-8.40	8.90	-2.39	2.26
56	26120	28548	31125	-3.70	-8.51	9.02	-2.44	2.30
57	25146	27514	30030	-3.68	-8.61	9.14	-2.49	2.34
58	24213	26523	28980	-3.66	-8.71	9.26	-2.53	2.38
59	23320	25572	27972	-3.64	-8.81	9.38	-2.58	2.42
60	22464	24661	27005	-3.62	-8.91	9.50	-2.63	2.46
61	21644	23786	26075	-3.60	-9.01	9.62	-2.67	2.50
62	20858	22948	25183	-3.58	-9.10	9.74	-2.72	2.54
63	20105	22142	24325	-3.56	-9.20	9.86	-2.77	2.58
64	19383	21370	23501	-3.54	-9.30	9.98	-2.82	2.62
65	18690	20628	22710	-3.52	-9.39	10.09	-2.86	2.67
66	18026	19915	21948	-3.51	-9.49	10.21	-2.91	2.71
67	17388	19231	21217	-3.49	-9.58	10.32	-2.96	2.75

68	16776	18574	20513	-3.47	-9.68	10.44	-3.01	2.79
69	16189	17943	19836	-3.45	-9.77	10.55	-3.06	2.83
70	15626	17336	19185	-3.43	-9.87	10.67	-3.11	2.87
71	15084	16753	18559	-3.41	-9.96	10.78	-3.16	2.92
72	14565	16192	17956	-3.40	-10.05	10.89	-3.21	2.96
73	14065	15653	17376	-3.38	-10.14	11.01	-3.26	3.00
74	13586	15134	16817	-3.36	-10.23	11.12	-3.31	3.04
75	13125	14635	16279	-3.34	-10.32	11.23	-3.36	3.09
76	12681	14155	15761	-3.33	-10.41	11.34	-3.41	3.13
77	12256	13693	15262	-3.31	-10.50	11.45	-3.46	3.17
78	11846	13249	14781	-3.29	-10.59	11.56	-3.51	3.22
79	11452	12821	14318	-3.27	-10.68	11.67	-3.57	3.26
80	11073	12409	13871	-3.26	-10.76	11.78	-3.62	3.30
81	10709	12012	13441	-3.24	-10.85	11.89	-3.67	3.35
82	10358	11630	13026	-3.22	-10.94	12.00	-3.72	3.39
83	10021	11262	12626	-3.21	-11.02	12.11	-3.77	3.44
84	9696	10907	12240	-3.19	-11.11	12.22	-3.83	3.48
85	9383	10566	11868	-3.18	-11.19	12.32	-3.88	3.53
86	9082	10236	11509	-3.16	-11.28	12.43	-3.93	3.57
87	8792	9919	11162	-3.14	-11.36	12.54	-3.99	3.61
88	8512	9612	10828	-3.13	-11.45	12.64	-4.04	3.66
89	8243	9317	10505	-3.11	-11.53	12.75	-4.10	3.70
90	7984	9032	10193	-3.10	-11.61	12.85	-4.15	3.75
91	7734	8758	9892	-3.08	-11.69	12.96	-4.21	3.79
92	7493	8493	9602	-3.07	-11.77	13.06	-4.26	3.84
93	7260	8237	9321	-3.05	-11.86	13.17	-4.32	3.89
94	7036	7990	9050	-3.04	-11.94	13.27	-4.37	3.93
95	6820	7752	8788	-3.02	-12.02	13.37	-4.43	3.98
96	6612	7521	8535	-3.01	-12.10	13.48	-4.48	4.02
97	6411	7299	8290	-2.99	-12.17	13.58	-4.54	4.07
98	6217	7085	8054	-2.98	-12.25	13.68	-4.60	4.12
99	6029	6877	7825	-2.96	-12.33	13.78	-4.65	4.16
100	5849	6677	7604	-2.95	-12.41	13.88	-4.71	4.21
101	5674	6484	7390	-2.93	-12.49	13.98	-4.77	4.26
102	5506	6297	7183	-2.92	-12.56	14.08	-4.82	4.30
103	5343	6116	6983	-2.90	-12.64	14.18	-4.88	4.35
104	5186	5941	6790	-2.89	-12.71	14.28	-4.94	4.40
105	5034	5772	6602	-2.88	-12.79	14.38	-5.00	4.45
106	4887	5609	6421	-2.86	-12.87	14.48	-5.06	4.49

107	4746	5451	6246	-2.85	-12.94	14.58	-5.12	4.54
108	4609	5298	6076	-2.84	-13.01	14.67	-5.17	4.59
109	4476	5151	5911	-2.82	-13.09	14.77	-5.23	4.64
110	4348	5008	5752	-2.81	-13.16	14.87	-5.29	4.69
111	4225	4869	5598	-2.80	-13.23	14.97	-5.35	4.73
112	4105	4735	5448	-2.78	-13.31	15.06	-5.41	4.78
113	3989	4606	5304	-2.77	-13.38	15.16	-5.47	4.83
114	3877	4480	5163	-2.76	-13.45	15.25	-5.53	4.88
115	3769	4359	5027	-2.74	-13.52	15.35	-5.59	4.93
116	3664	4241	4896	-2.73	-13.59	15.44	-5.66	4.98
117	3563	4127	4768	-2.72	-13.66	15.54	-5.72	5.03
118	3465	4016	4644	-2.71	-13.73	15.63	-5.78	5.08
119	3370	3910	4524	-2.69	-13.80	15.72	-5.84	5.13
120	3278	3806	4408	-2.68	-13.87	15.82	-5.90	5.18
121	3189	3705	4295	-2.67	-13.94	15.91	-5.96	5.23
122	3103	3608	4186	-2.66	-14.01	16.00	-6.03	5.28
123	3019	3514	4079	-2.64	-14.08	16.10	-6.09	5.33
124	2938	3422	3976	-2.63	-14.15	16.19	-6.15	5.38
125	2860	3334	3876	-2.62	-14.21	16.28	-6.22	5.43