

Approval

Manufacturer:

Customer:

Approved By:	Checked By:	Prepared By :

Approved By:	Examined By:	Tested By :

Company's Stamp	
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Company's Stamp	
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Approval No. : _____

Product : NTC THERMISTOR

UNIX's Part No. : SMD05-103 J 3435 H

Customer's Part No. :

Specifications : R₂₅ 10,000 Ω ± 5 %

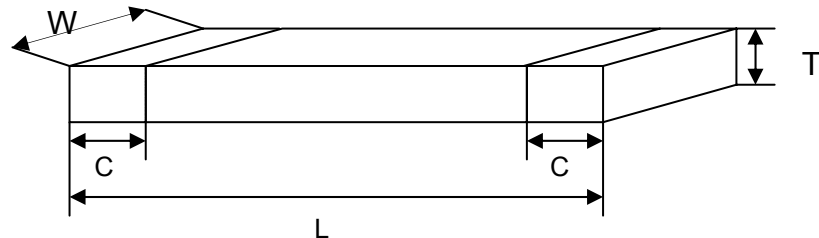
$$\text{B}_{25-85} \quad 3435 \quad ^\circ\text{K} \pm 3 \%$$

Date : _____

Specification of SMD Chips Thermistor

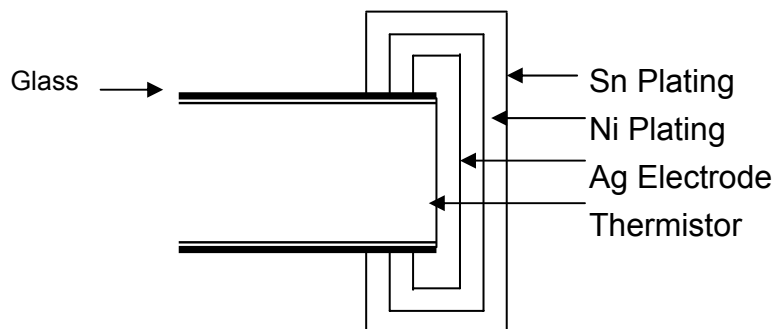
◆ **PART NO. : SMD05-103 J 3435 H**

◆ **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**

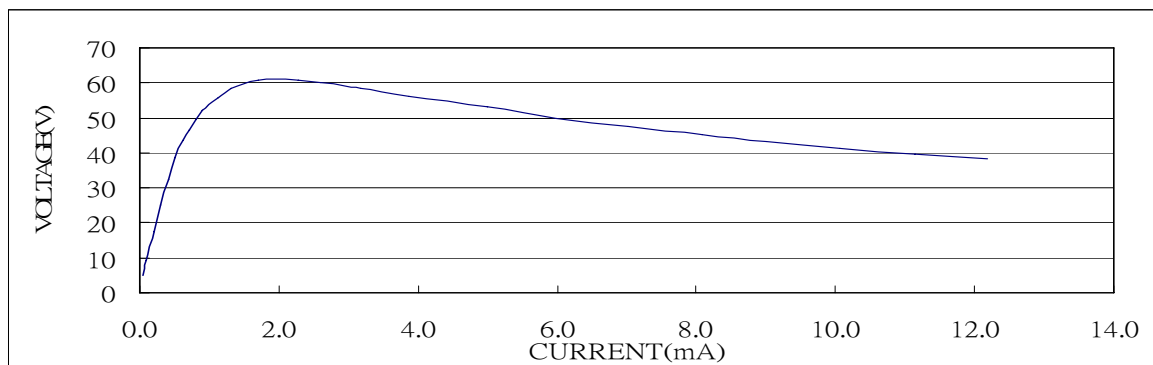
Style	Symbol	Condition	Specification
Resistance at 25°C	R ₂₅	T = 25 ± 0.1°C	10K Ω ± 5 %
B Constant	B	25°C to 85°C	3435 °K ± 3 %
Thermal Time Constant	T	T = 25 ± 0.1°C	Approx. 7.5 sec
Thermal Dissipation Constant	C	T = 25 ± 0.1°C	Approx. 4 mW/°C
Maximum Power Rating*	P _w	T = 25 ± 0.1°C	400 mW
Operation Temp. Range	--	--	-40°C ~ 125°C

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

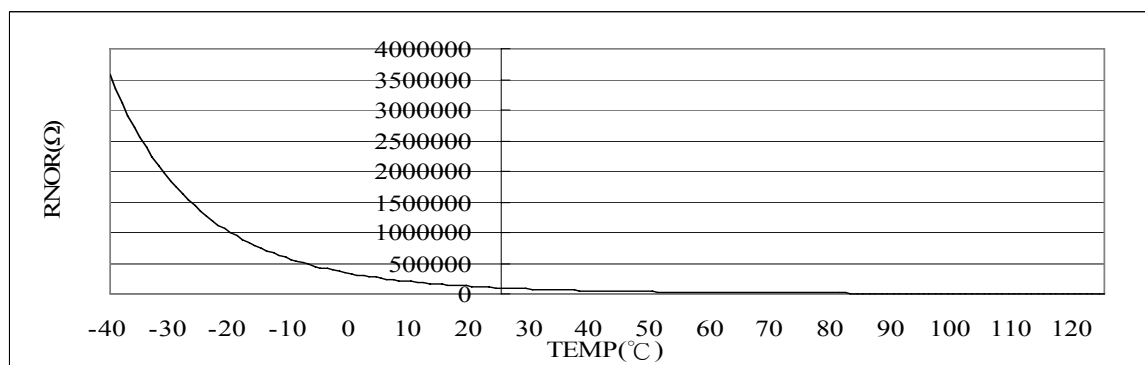
◆ RELIABILITY TEST

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 %
Solderability	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 1000M Ω
Dielectric Withstand Voltage	MIL – STD – 202F , Method 301 DC 250V For 10 seconds	Not Short

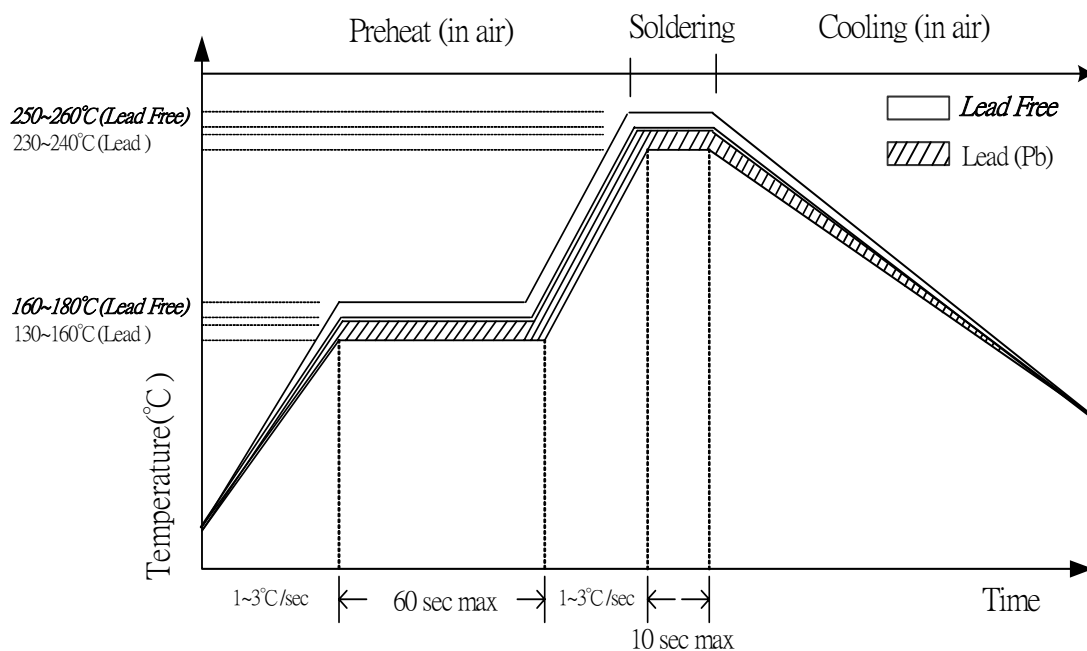
◆ VOLTAGE – CURRENT CURVE



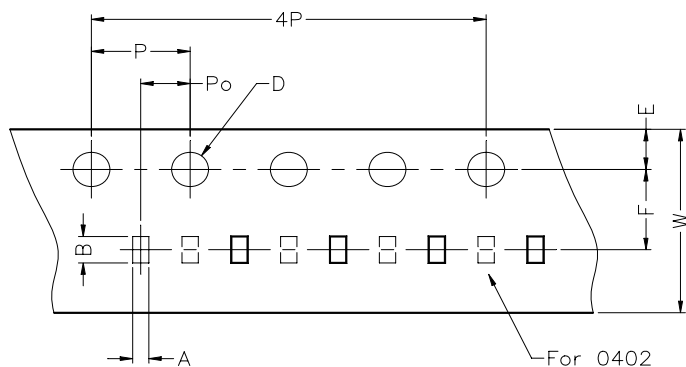
◆ RESISTANCE – TEMP CURVE



◆ REFLOW SOLDERING PROFILE



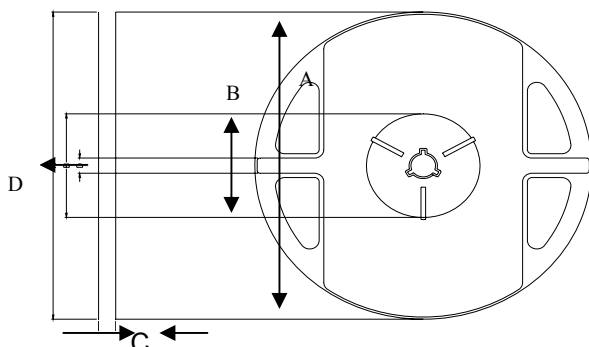
◆ TAPING DIMENSIONS



Unit: mm

Dimension	0805	0603	0402
A	1.50 ± 0.05	1.08 ± 0.05	0.66 ± 0.03
B	2.30 ± 0.05	1.85 ± 0.05	1.15 ± 0.03
W	8.00 ± 0.05	8.00 ± 0.05	8.00 ± 0.05
D	1.50 ± 0.10	1.50 ± 0.10	1.50 ± 0.10
E	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
P	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
4P	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 05 103 J 3435 H
 ① ② ③ ④ ⑤ ⑥

1. Series SINLOON SMD Thermistor. (TH - Lead (Pb) ; TF – Lead Free)
2. Dimension : 05 (0805) , 03 (0603) , 02 (0402)
3. Resistance : 103 = $10 \times 10^3 = 10,000$ 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.: **SMD05-103 J 3435 H**

R : 10,000 ohms $\pm 5\%$

B : 3435 $^{\circ}\text{K}$ $\pm 3\%$

Temperature ($^{\circ}\text{C}$)	Resistance (Ω)			Temperture Coef. ($\%/^{\circ}\text{C}$)	Resist. Tolerance (%)		Temp. Tolerance ($^{\circ}\text{C}$)	
	MIN.	CENTER	MAX.		MIN.	MAX.	MIN.	MAX.
-40.0	214196	248277	287060	-6.32	-13.73	15.62	-2.47	2.17
-39.0	201514	233136	269046	-6.27	-13.56	15.40	-2.46	2.16
-38.0	189681	219036	252302	-6.21	-13.40	15.19	-2.44	2.16
-37.0	178634	205897	236728	-6.16	-13.24	14.97	-2.43	2.15
-36.0	168316	193648	222235	-6.11	-13.08	14.76	-2.42	2.14
-35.0	158674	182221	208740	-6.06	-12.92	14.55	-2.40	2.13
-34.0	149657	171556	196167	-6.01	-12.76	14.35	-2.39	2.13
-33.0	141222	161596	184447	-5.96	-12.61	14.14	-2.37	2.12
-32.0	133326	152290	173516	-5.91	-12.45	13.94	-2.36	2.11
-31.0	125931	143590	163315	-5.86	-12.30	13.74	-2.35	2.10
-30.0	119003	135452	153791	-5.81	-12.14	13.54	-2.33	2.09
-29.0	112508	127837	144893	-5.76	-11.99	13.34	-2.32	2.08
-28.0	106416	120707	136576	-5.72	-11.84	13.15	-2.30	2.07
-27.0	100699	114028	128799	-5.67	-11.69	12.95	-2.28	2.06
-26.0	95332	107768	121522	-5.62	-11.54	12.76	-2.27	2.05
-25.0	90291	101898	114710	-5.58	-11.39	12.57	-2.25	2.04
-24.0	85554	96391	108330	-5.53	-11.24	12.39	-2.24	2.03
-23.0	81100	91222	102351	-5.49	-11.10	12.20	-2.22	2.02
-22.0	76911	86369	96747	-5.45	-10.95	12.02	-2.21	2.01
-21.0	72969	81809	91490	-5.40	-10.81	11.83	-2.19	2.00
-20.0	69258	77523	86557	-5.36	-10.66	11.65	-2.17	1.99
-19.0	65762	73492	81925	-5.32	-10.52	11.47	-2.16	1.98
-18.0	62469	69701	77575	-5.28	-10.38	11.30	-2.14	1.97
-17.0	59364	66132	73487	-5.24	-10.23	11.12	-2.12	1.95
-16.0	56436	62771	69644	-5.19	-10.09	10.95	-2.11	1.94
-15.0	53673	59606	66029	-5.15	-9.95	10.78	-2.09	1.93
-14.0	51065	56623	62628	-5.11	-9.82	10.61	-2.07	1.92
-13.0	48603	53810	59426	-5.08	-9.68	10.44	-2.06	1.91
-12.0	46277	51157	56411	-5.04	-9.54	10.27	-2.04	1.89
-11.0	44078	48654	53569	-5.00	-9.40	10.10	-2.02	1.88

-10.0	42000	46290	50891	-4.96	-9.27	9.94	-2.00	1.87
-9.0	40034	44058	48366	-4.92	-9.13	9.78	-1.99	1.86
-8.0	38174	41950	45983	-4.89	-9.00	9.62	-1.97	1.84
-7.0	36414	39957	43735	-4.85	-8.87	9.46	-1.95	1.83
-6.0	34747	38072	41612	-4.81	-8.73	9.30	-1.93	1.81
-5.0	33168	36290	39606	-4.78	-8.60	9.14	-1.91	1.80
-4.0	31671	34603	37712	-4.74	-8.47	8.98	-1.89	1.79
-3.0	30253	33006	35921	-4.71	-8.34	8.83	-1.88	1.77
-2.0	28907	31494	34227	-4.67	-8.21	8.68	-1.86	1.76
-1.0	27631	30062	32625	-4.64	-8.09	8.52	-1.84	1.74
0.0	26420	28704	31108	-4.60	-7.96	8.37	-1.82	1.73
1.0	25270	27417	29673	-4.57	-7.83	8.23	-1.80	1.71
2.0	24178	26197	28313	-4.54	-7.71	8.08	-1.78	1.70
3.0	23141	25039	27025	-4.50	-7.58	7.93	-1.76	1.68
4.0	22155	23940	25804	-4.47	-7.46	7.79	-1.74	1.67
5.0	21218	22897	24646	-4.44	-7.33	7.64	-1.72	1.65
6.0	20327	21906	23549	-4.41	-7.21	7.50	-1.70	1.64
7.0	19479	20964	22507	-4.38	-7.09	7.36	-1.68	1.62
8.0	18672	20070	21518	-4.35	-6.96	7.22	-1.66	1.60
9.0	17904	19219	20580	-4.31	-6.84	7.08	-1.64	1.59
10.0	17173	18410	19688	-4.28	-6.72	6.94	-1.62	1.57
11.0	16476	17641	18841	-4.25	-6.60	6.80	-1.60	1.55
12.0	15812	16909	18036	-4.22	-6.49	6.67	-1.58	1.54
13.0	15179	16212	17271	-4.20	-6.37	6.53	-1.56	1.52
14.0	14576	15548	16543	-4.17	-6.25	6.40	-1.54	1.50
15.0	14001	14916	15850	-4.14	-6.13	6.27	-1.51	1.48
16.0	13452	14313	15191	-4.11	-6.02	6.14	-1.49	1.46
17.0	12928	13739	14564	-4.08	-5.90	6.01	-1.47	1.45
18.0	12428	13192	13967	-4.05	-5.79	5.88	-1.45	1.43
19.0	11951	12669	13398	-4.02	-5.67	5.75	-1.43	1.41
20.0	11495	12171	12856	-4.00	-5.56	5.62	-1.41	1.39
21.0	11059	11696	12339	-3.97	-5.45	5.49	-1.38	1.37
22.0	10643	11242	11846	-3.94	-5.33	5.37	-1.36	1.35
23.0	10245	10809	11376	-3.92	-5.22	5.25	-1.34	1.33
24.0	9864	10395	10928	-3.89	-5.11	5.12	-1.32	1.31
25.0	9500	10000	10500	-3.86	-5.00	5.00	-1.29	1.29
26.0	9131	9622	10115	-3.84	-5.11	5.12	-1.33	1.33
27.0	8778	9261	9747	-3.81	-5.22	5.24	-1.37	1.37
28.0	8441	8916	9394	-3.79	-5.33	5.36	-1.42	1.41

29.0	8119	8585	9056	-3.76	-5.43	5.48	-1.46	1.44
30.0	7811	8269	8733	-3.74	-5.54	5.60	-1.50	1.48
31.0	7517	7967	8423	-3.71	-5.65	5.72	-1.54	1.52
32.0	7236	7678	8126	-3.69	-5.75	5.84	-1.58	1.56
33.0	6967	7400	7841	-3.66	-5.85	5.95	-1.62	1.60
34.0	6710	7135	7568	-3.64	-5.96	6.07	-1.67	1.64
35.0	6464	6881	7306	-3.62	-6.06	6.18	-1.71	1.68
36.0	6228	6637	7055	-3.59	-6.16	6.30	-1.75	1.71
37.0	6002	6403	6814	-3.57	-6.26	6.41	-1.80	1.75
38.0	5786	6179	6583	-3.55	-6.36	6.53	-1.84	1.79
39.0	5579	5965	6361	-3.53	-6.46	6.64	-1.88	1.83
40.0	5381	5759	6148	-3.50	-6.56	6.75	-1.93	1.87
41.0	5191	5561	5943	-3.48	-6.66	6.86	-1.97	1.91
42.0	5009	5372	5746	-3.46	-6.75	6.98	-2.02	1.95
43.0	4834	5189	5557	-3.44	-6.85	7.09	-2.06	1.99
44.0	4666	5015	5376	-3.42	-6.95	7.20	-2.11	2.03
45.0	4506	4847	5201	-3.39	-7.04	7.31	-2.15	2.08
46.0	4351	4686	5033	-3.37	-7.14	7.42	-2.20	2.12
47.0	4203	4531	4872	-3.35	-7.23	7.52	-2.24	2.16
48.0	4061	4382	4716	-3.33	-7.32	7.63	-2.29	2.20
49.0	3924	4239	4567	-3.31	-7.41	7.74	-2.34	2.24
50.0	3793	4101	4423	-3.29	-7.51	7.85	-2.39	2.28
51.0	3667	3969	4284	-3.27	-7.60	7.95	-2.43	2.32
52.0	3546	3842	4151	-3.25	-7.69	8.06	-2.48	2.37
53.0	3430	3719	4023	-3.23	-7.78	8.16	-2.53	2.41
54.0	3318	3601	3899	-3.21	-7.87	8.27	-2.58	2.45
55.0	3210	3488	3780	-3.19	-7.95	8.37	-2.62	2.49
56.0	3107	3379	3665	-3.17	-8.04	8.47	-2.67	2.54
57.0	3007	3274	3554	-3.15	-8.13	8.58	-2.72	2.58
58.0	2912	3172	3448	-3.13	-8.22	8.68	-2.77	2.62
59.0	2820	3075	3345	-3.11	-8.30	8.78	-2.82	2.67
60.0	2731	2981	3246	-3.09	-8.39	8.88	-2.87	2.71
61.0	2645	2890	3150	-3.08	-8.47	8.98	-2.92	2.75
62.0	2563	2803	3058	-3.06	-8.56	9.08	-2.97	2.80
63.0	2484	2719	2968	-3.04	-8.64	9.18	-3.02	2.84
64.0	2408	2638	2882	-3.02	-8.72	9.28	-3.07	2.89
65.0	2334	2559	2799	-3.00	-8.81	9.38	-3.12	2.93
66.0	2263	2484	2719	-2.99	-8.89	9.48	-3.17	2.98
67.0	2195	2411	2642	-2.97	-8.97	9.58	-3.23	3.02

68.0	2129	2341	2567	-2.95	-9.05	9.68	-3.28	3.07
69.0	2065	2273	2495	-2.93	-9.13	9.77	-3.33	3.11
70.0	2004	2207	2425	-2.92	-9.21	9.87	-3.38	3.16
71.0	1945	2144	2358	-2.90	-9.29	9.96	-3.44	3.20
72.0	1888	2083	2292	-2.88	-9.37	10.06	-3.49	3.25
73.0	1833	2024	2229	-2.87	-9.45	10.15	-3.54	3.29
74.0	1779	1967	2168	-2.85	-9.52	10.25	-3.60	3.34
75.0	1728	1912	2109	-2.83	-9.60	10.34	-3.65	3.39
76.0	1679	1858	2052	-2.82	-9.68	10.44	-3.70	3.43
77.0	1631	1807	1997	-2.80	-9.75	10.53	-3.76	3.48
78.0	1584	1757	1944	-2.79	-9.83	10.62	-3.81	3.53
79.0	1540	1709	1892	-2.77	-9.90	10.72	-3.87	3.58
80.0	1497	1662	1842	-2.75	-9.98	10.81	-3.92	3.62
81.0	1455	1617	1794	-2.74	-10.05	10.90	-3.98	3.67
82.0	1414	1574	1747	-2.72	-10.13	10.99	-4.04	3.72
83.0	1375	1532	1701	-2.71	-10.20	11.08	-4.09	3.77
84.0	1338	1491	1657	-2.69	-10.27	11.17	-4.15	3.81
85.0	1301	1451	1615	-2.68	-10.34	11.26	-4.20	3.86
86.0	1266	1413	1573	-2.66	-10.42	11.35	-4.26	3.91
87.0	1232	1376	1533	-2.65	-10.49	11.44	-4.32	3.96
88.0	1199	1340	1495	-2.63	-10.56	11.53	-4.38	4.01
89.0	1167	1305	1457	-2.62	-10.63	11.61	-4.43	4.06
90.0	1136	1272	1421	-2.60	-10.70	11.70	-4.49	4.11
91.0	1106	1239	1385	-2.59	-10.77	11.79	-4.55	4.16
92.0	1077	1208	1351	-2.58	-10.84	11.87	-4.61	4.21
93.0	1049	1177	1318	-2.56	-10.91	11.96	-4.67	4.26
94.0	1021	1147	1285	-2.55	-10.97	12.05	-4.73	4.31
95.0	995	1118	1254	-2.53	-11.04	12.13	-4.79	4.36
96.0	969	1091	1224	-2.52	-11.11	12.22	-4.85	4.41
97.0	945	1063	1194	-2.51	-11.18	12.30	-4.91	4.46
98.0	921	1037	1166	-2.49	-11.24	12.39	-4.97	4.51
99.0	897	1012	1138	-2.48	-11.31	12.47	-5.03	4.56
100.0	875	987	1111	-2.47	-11.38	12.55	-5.09	4.61
101.0	853	963	1085	-2.45	-11.44	12.64	-5.15	4.66
102.0	832	940	1059	-2.44	-11.51	12.72	-5.21	4.71
103.0	811	917	1035	-2.43	-11.57	12.80	-5.27	4.77
104.0	791	895	1011	-2.41	-11.63	12.88	-5.34	4.82
105.0	772	874	987	-2.40	-11.70	12.97	-5.40	4.87
106.0	753	853	965	-2.39	-11.76	13.05	-5.46	4.92

107.0	735	833	943	-2.38	-11.83	13.13	-5.52	4.97
108.0	717	814	921	-2.36	-11.89	13.21	-5.59	5.03
109.0	700	795	900	-2.35	-11.95	13.29	-5.65	5.08
110.0	683	776	880	-2.34	-12.01	13.37	-5.71	5.13
111.0	667	758	860	-2.33	-12.07	13.45	-5.78	5.19
112.0	651	741	841	-2.32	-12.13	13.53	-5.84	5.24
113.0	636	724	823	-2.30	-12.20	13.60	-5.91	5.29
114.0	621	708	804	-2.29	-12.26	13.68	-5.97	5.35
115.0	606	692	787	-2.28	-12.32	13.76	-6.04	5.40
116.0	592	676	770	-2.27	-12.38	13.84	-6.10	5.46
117.0	579	661	753	-2.26	-12.44	13.92	-6.17	5.51
118.0	565	646	737	-2.25	-12.49	13.99	-6.23	5.57
119.0	553	632	721	-2.23	-12.55	14.07	-6.30	5.62
120.0	540	618	705	-2.22	-12.61	14.15	-6.37	5.68
121.0	528	604	690	-2.21	-12.67	14.22	-6.43	5.73
122.0	516	591	676	-2.20	-12.73	14.30	-6.50	5.79
123.0	504	578	662	-2.19	-12.79	14.37	-6.57	5.84
124.0	493	566	648	-2.18	-12.84	14.45	-6.63	5.90
125.0	482	554	634	-2.17	-12.90	14.52	-6.70	5.95