

Approval

Approved By:	Checked By:	Prepared By :

Approved By:	Examined By:	Tested By :

Company's Stamp	
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Approval No. : _____
Product : NTC THERMISTOR
Mayloon Part No. : SMD02-101J 3150H
Customer's Part No. : _____
Specifications : R25 100 Ω ± 5 %
B25-85 3150 °K ± 3 %
Date : _____

Specification of SMD Chips Thermistor

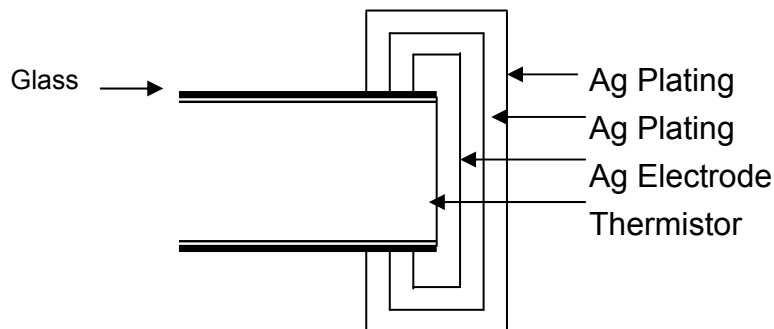
◆ **PART NO. : SMD02-101 J 3150H**

◆ **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**

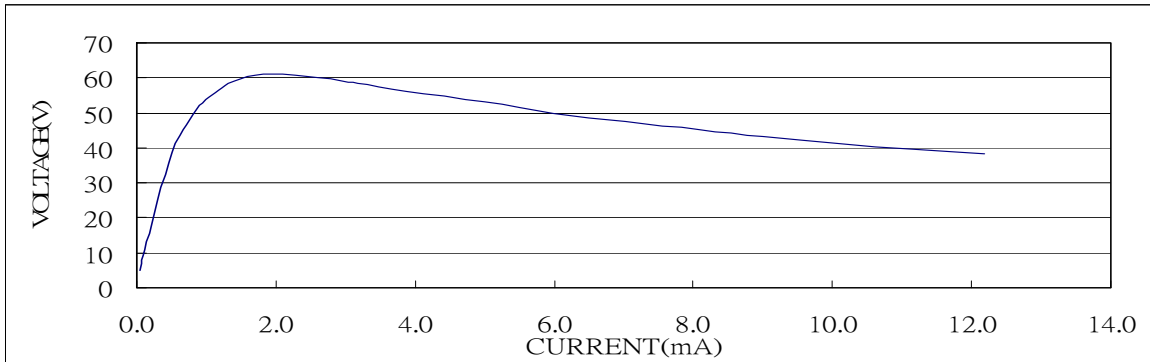
Style	Symbol	Condition	Specification
Resistance at 25°C	R ₂₅	T = 25 ± 0.1°C	100 Ω ± 5 %
B Constant	B	25°C to 85°C	3150 °K ± 3 %
Thermal Time Constant	T	T = 25 ± 0.1°C	Approx. 7.5 sec
Thermal Dissipation Constant	C	T = 25 ± 0.1°C	Approx. 4 mW/°C
Maximum Power Rating*	P _w	T = 25 ± 0.1°C	400 mW
Operation Temp. Range	--	--	-40°C ~ 125°C

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

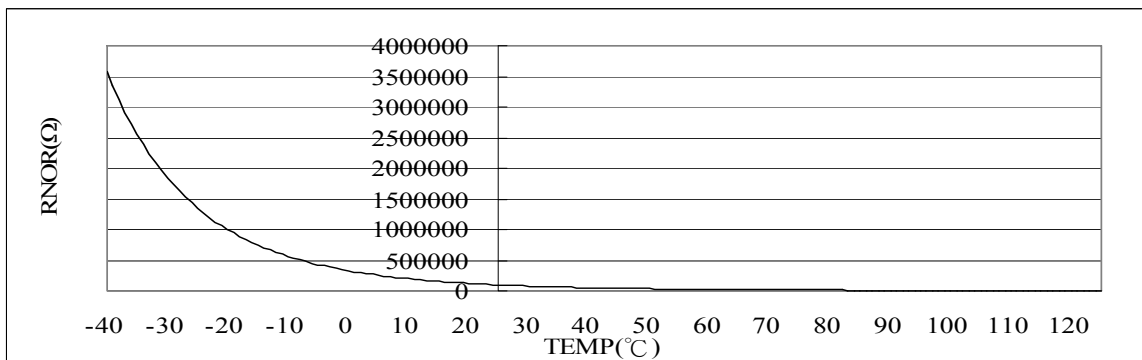
◆ RELIABILITY TEST

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 %
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

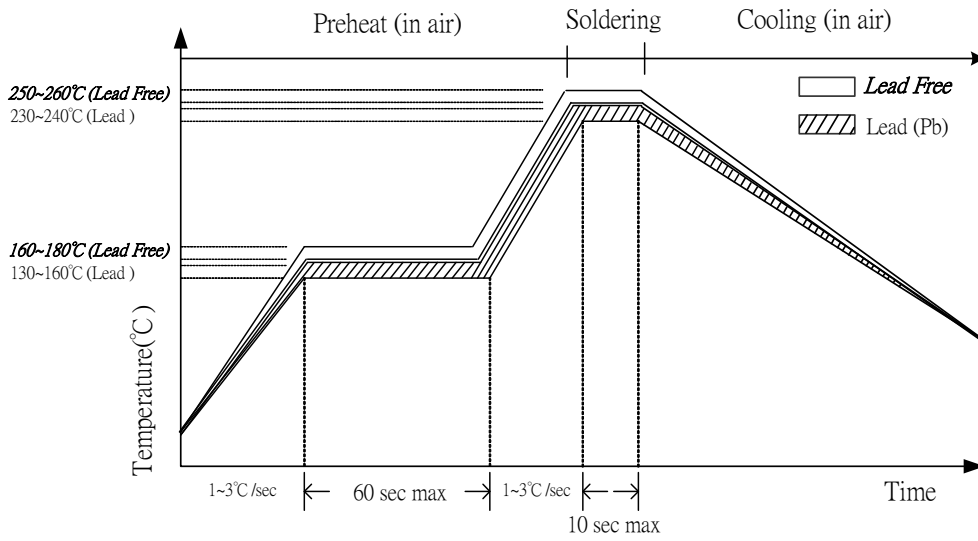
◆ VOLTAGE – CURRENT CURVE



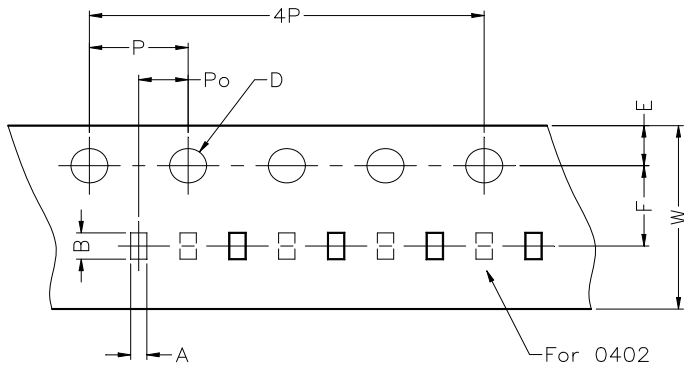
◆ RESISTANCE – TEMP CURVE



◆ REFLOW SOLDERING PROFILE



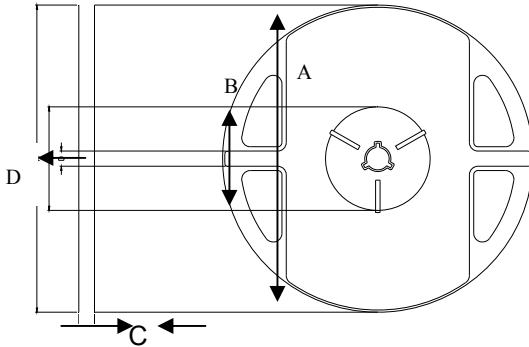
◆ TAPING DIMENSIONS



Unit: mm

Dimension	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
P _o	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 02 101 J 3150 H
 ① ② ③ ④ ⑤ ⑥

1. Series SMD Thermistor. (TH - Lead (Pb) ; TF – Lead Free)
2. Dimension : 06 (1206) , 05 (0805) , 03 (0603) , 02 (0402)
3. Resistance : 101 = 100 ohm
4. R Tolerance : F:±1% ; G:±2% ; H:±3% ; J:±5% ; K:±10%
5. B value : 3215, 3250, 3435, 3700, 7970, 4000, 4100,.....etc.
6. B Tolerance : F:±1% ; G:±2% ; H:±3%

● **ACCESSORY : RESISTANCE-TEMPERATURE CHARACTERISTICS**

RESISTANCE-TEMPERATURE CHARACTERISTICS

SMD02-101 J 3150H

R: 100 ohms ± 5%

B: 3150 °K ± 3%

PART NO.:

Temperature (°C)	Resistance (Ω)			Temperture Coef.	Resist. Tolerance (%)		Temp. Tolerance (°C)	
	MIN.	CENTER	MAX.	(%/°C)	MIN.	MAX.	MIN.	MAX.
-40.0	1654	1902	2182	-5.79	-13.03	14.70	-2.54	2.25
-39.0	1564	1795	2056	-5.75	-12.88	14.50	-2.52	2.24
-38.0	1480	1695	1938	-5.70	-12.73	14.31	-2.51	2.24
-37.0	1400	1602	1828	-5.65	-12.59	14.11	-2.50	2.23
-36.0	1326	1514	1725	-5.60	-12.44	13.92	-2.49	2.22
-35.0	1256	1432	1629	-5.55	-12.29	13.73	-2.47	2.21
-34.0	1191	1355	1539	-5.51	-12.15	13.54	-2.46	2.21
-33.0	1129	1283	1454	-5.46	-12.00	13.35	-2.44	2.20
-32.0	1071	1215	1375	-5.42	-11.86	13.17	-2.43	2.19
-31.0	1016	1151	1301	-5.37	-11.71	12.99	-2.42	2.18
-30.0	965	1091	1231	-5.33	-11.57	12.80	-2.40	2.17
-29.0	916	1035	1165	-5.28	-11.43	12.62	-2.39	2.16
-28.0	871	982	1104	-5.24	-11.29	12.45	-2.37	2.15
-27.0	828	932	1046	-5.20	-11.15	12.27	-2.36	2.15
-26.0	787	885	992	-5.16	-11.01	12.10	-2.35	2.14
-25.0	749	840	941	-5.12	-10.88	11.92	-2.33	2.13
-24.0	713	799	893	-5.07	-10.74	11.75	-2.32	2.12
-23.0	679	759	847	-5.03	-10.61	11.58	-2.30	2.11
-22.0	647	722	805	-4.99	-10.47	11.42	-2.29	2.10
-21.0	616	687	764	-4.95	-10.34	11.25	-2.27	2.09
-20.0	587	654	727	-4.92	-10.20	11.09	-2.26	2.08
-19.0	560	623	691	-4.88	-10.07	10.92	-2.24	2.07
-18.0	534	593	657	-4.84	-9.94	10.76	-2.22	2.05
-17.0	510	565	625	-4.80	-9.81	10.60	-2.21	2.04
-16.0	487	539	595	-4.76	-9.68	10.44	-2.19	2.03
-15.0	465	514	567	-4.73	-9.55	10.29	-2.18	2.02
-14.0	444	490	540	-4.69	-9.43	10.13	-2.16	2.01
-13.0	424	468	515	-4.65	-9.30	9.98	-2.14	2.00
-12.0	406	447	491	-4.62	-9.17	9.82	-2.13	1.99
-11.0	388	427	468	-4.58	-9.05	9.67	-2.11	1.97
-10.0	371	408	446	-4.55	-8.92	9.52	-2.09	1.96

-9.0	355	390	426	-4.51	-8.80	9.37	-2.08	1.95
-8.0	340	372	407	-4.48	-8.67	9.22	-2.06	1.94
-7.0	326	356	389	-4.45	-8.55	9.08	-2.04	1.92
-6.0	312	341	371	-4.41	-8.43	8.93	-2.02	1.91
-5.0	299	326	355	-4.38	-8.31	8.79	-2.01	1.90
-4.0	287	312	339	-4.35	-8.19	8.65	-1.99	1.88
-3.0	275	299	324	-4.32	-8.07	8.51	-1.97	1.87
-2.0	264	286	310	-4.28	-7.95	8.37	-1.95	1.86
-1.0	253	274	297	-4.25	-7.83	8.23	-1.93	1.84
0.0	243	263	284	-4.22	-7.72	8.09	-1.92	1.83
1.0	233	252	272	-4.19	-7.60	7.95	-1.90	1.81
2.0	224	242	261	-4.16	-7.48	7.82	-1.88	1.80
3.0	215	232	250	-4.13	-7.37	7.69	-1.86	1.78
4.0	207	223	239	-4.10	-7.25	7.55	-1.84	1.77
5.0	198	214	230	-4.07	-7.14	7.42	-1.82	1.75
6.0	191	205	220	-4.04	-7.03	7.29	-1.80	1.74
7.0	184	197	211	-4.01	-6.92	7.16	-1.78	1.72
8.0	177	189	203	-3.99	-6.80	7.03	-1.76	1.71
9.0	170	182	195	-3.96	-6.69	6.90	-1.74	1.69
10.0	163	175	187	-3.93	-6.58	6.78	-1.73	1.68
11.0	157	168	179	-3.90	-6.47	6.65	-1.71	1.66
12.0	152	162	172	-3.87	-6.36	6.53	-1.69	1.64
13.0	146	156	166	-3.85	-6.25	6.40	-1.66	1.63
14.0	141	150	159	-3.82	-6.15	6.28	-1.64	1.61
15.0	136	144	153	-3.79	-6.04	6.16	-1.62	1.59
16.0	131	139	147	-3.77	-5.93	6.04	-1.60	1.57
17.0	126	134	142	-3.74	-5.83	5.92	-1.58	1.56
18.0	122	129	136	-3.72	-5.72	5.80	-1.56	1.54
19.0	117	124	131	-3.69	-5.62	5.69	-1.54	1.52
20.0	113	120	126	-3.67	-5.51	5.57	-1.52	1.50
21.0	109	115	122	-3.64	-5.41	5.45	-1.50	1.49
22.0	105	111	117	-3.62	-5.31	5.34	-1.48	1.47
23.0	102	107	113	-3.59	-5.20	5.22	-1.45	1.45
24.0	98	104	109	-3.57	-5.10	5.11	-1.43	1.43
25.0	95	100	105	-3.54	-5.00	5.00	-1.41	1.41
26.0	92	97	101	-3.52	-5.10	5.11	-1.45	1.45
27.0	88	93	98	-3.50	-5.20	5.22	-1.49	1.49
28.0	85	90	95	-3.47	-5.30	5.33	-1.54	1.53
29.0	82	87	92	-3.45	-5.40	5.44	-1.58	1.56

30.0	79	84	89	-3.43	-5.50	5.55	-1.62	1.60
31.0	77	81	86	-3.41	-5.59	5.66	-1.66	1.64
32.0	74	78	83	-3.38	-5.69	5.77	-1.70	1.68
33.0	71	76	80	-3.36	-5.78	5.87	-1.75	1.72
34.0	69	73	78	-3.34	-5.88	5.98	-1.79	1.76
35.0	67	71	75	-3.32	-5.97	6.09	-1.83	1.80
36.0	65	69	73	-3.30	-6.07	6.19	-1.88	1.84
37.0	62	66	71	-3.27	-6.16	6.30	-1.92	1.88
38.0	60	64	68	-3.25	-6.25	6.40	-1.97	1.92
39.0	58	62	66	-3.23	-6.34	6.50	-2.01	1.96
40.0	56	60	64	-3.21	-6.43	6.61	-2.06	2.00
41.0	55	58	62	-3.19	-6.52	6.71	-2.10	2.04
42.0	53	57	60	-3.17	-6.61	6.81	-2.15	2.08
43.0	51	55	59	-3.15	-6.70	6.91	-2.19	2.13
44.0	49	53	57	-3.13	-6.79	7.01	-2.24	2.17
45.0	48	51	55	-3.11	-6.87	7.11	-2.29	2.21
46.0	46	50	53	-3.09	-6.96	7.21	-2.33	2.25
47.0	45	48	52	-3.07	-7.05	7.31	-2.38	2.29
48.0	44	47	50	-3.05	-7.13	7.41	-2.43	2.34
49.0	42	46	49	-3.04	-7.22	7.51	-2.47	2.38
50.0	41	44	48	-3.02	-7.30	7.61	-2.52	2.42
51.0	40	43	46	-3.00	-7.38	7.70	-2.57	2.46
52.0	38	42	45	-2.98	-7.47	7.80	-2.62	2.51
53.0	37	40	44	-2.96	-7.55	7.90	-2.67	2.55
54.0	36	39	42	-2.94	-7.63	7.99	-2.72	2.59
55.0	35	38	41	-2.93	-7.71	8.09	-2.76	2.64
56.0	34	37	40	-2.91	-7.79	8.18	-2.81	2.68
57.0	33	36	39	-2.89	-7.87	8.28	-2.86	2.72
58.0	32	35	38	-2.87	-7.95	8.37	-2.91	2.77
59.0	31	34	37	-2.86	-8.03	8.46	-2.96	2.81
60.0	30	33	36	-2.84	-8.11	8.56	-3.01	2.86
61.0	29	32	35	-2.82	-8.19	8.65	-3.07	2.90
62.0	29	31	34	-2.80	-8.27	8.74	-3.12	2.95
63.0	28	30	33	-2.79	-8.34	8.83	-3.17	2.99
64.0	27	29	32	-2.77	-8.42	8.92	-3.22	3.04
65.0	26	29	31	-2.75	-8.50	9.01	-3.27	3.08
66.0	25	28	30	-2.74	-8.57	9.10	-3.32	3.13
67.0	25	27	30	-2.72	-8.65	9.19	-3.38	3.18
68.0	24	26	29	-2.71	-8.72	9.28	-3.43	3.22

69.0	23	26	28	-2.69	-8.79	9.37	-3.48	3.27
70.0	23	25	27	-2.68	-8.87	9.46	-3.53	3.31
71.0	22	24	27	-2.66	-8.94	9.54	-3.59	3.36
72.0	22	24	26	-2.64	-9.01	9.63	-3.64	3.41
73.0	21	23	25	-2.63	-9.08	9.72	-3.70	3.46
74.0	20	23	25	-2.61	-9.16	9.80	-3.75	3.50
75.0	20	22	24	-2.60	-9.23	9.89	-3.81	3.55
76.0	19	21	24	-2.58	-9.30	9.98	-3.86	3.60
77.0	19	21	23	-2.57	-9.37	10.06	-3.92	3.65
78.0	18	20	22	-2.55	-9.44	10.15	-3.97	3.69
79.0	18	20	22	-2.54	-9.51	10.23	-4.03	3.74
80.0	17	19	21	-2.53	-9.58	10.31	-4.08	3.79
81.0	17	19	21	-2.51	-9.64	10.40	-4.14	3.84
82.0	17	18	20	-2.50	-9.71	10.48	-4.20	3.89
83.0	16	18	20	-2.48	-9.78	10.56	-4.25	3.94
84.0	16	17	19	-2.47	-9.85	10.64	-4.31	3.99
85.0	15	17	19	-2.46	-9.91	10.73	-4.37	4.04
86.0	15	17	18	-2.44	-9.98	10.81	-4.43	4.09
87.0	15	16	18	-2.43	-10.04	10.89	-4.48	4.14
88.0	14	16	18	-2.42	-10.11	10.97	-4.54	4.19
89.0	14	15	17	-2.40	-10.17	11.05	-4.60	4.24
90.0	14	15	17	-2.39	-10.24	11.13	-4.66	4.29
91.0	13	15	16	-2.38	-10.30	11.21	-4.72	4.34
92.0	13	14	16	-2.36	-10.37	11.29	-4.78	4.39
93.0	13	14	16	-2.35	-10.43	11.37	-4.84	4.44
94.0	12	14	15	-2.34	-10.49	11.44	-4.90	4.49
95.0	12	13	15	-2.32	-10.56	11.52	-4.96	4.54
96.0	12	13	15	-2.31	-10.62	11.60	-5.02	4.59
97.0	11	13	14	-2.30	-10.68	11.68	-5.08	4.65
98.0	11	13	14	-2.29	-10.74	11.75	-5.14	4.70
99.0	11	12	14	-2.27	-10.80	11.83	-5.20	4.75
100.0	11	12	13	-2.26	-10.86	11.91	-5.26	4.80
101.0	10	12	13	-2.25	-10.92	11.98	-5.33	4.85
102.0	10	11	13	-2.24	-10.98	12.06	-5.39	4.91
103.0	10	11	13	-2.23	-11.04	12.13	-5.45	4.96
104.0	10	11	12	-2.21	-11.10	12.21	-5.51	5.01
105.0	10	11	12	-2.20	-11.16	12.28	-5.58	5.07
106.0	9	10	12	-2.19	-11.22	12.36	-5.64	5.12
107.0	9	10	12	-2.18	-11.28	12.43	-5.70	5.17

108.0	9	10	11	-2.17	-11.34	12.50	-5.77	5.23
109.0	9	10	11	-2.16	-11.39	12.58	-5.83	5.28
110.0	8	10	11	-2.15	-11.45	12.65	-5.89	5.34
111.0	8	9	11	-2.13	-11.51	12.72	-5.96	5.39
112.0	8	9	10	-2.12	-11.56	12.79	-6.02	5.45
113.0	8	9	10	-2.11	-11.62	12.86	-6.09	5.50
114.0	8	9	10	-2.10	-11.68	12.94	-6.16	5.56
115.0	8	9	10	-2.09	-11.73	13.01	-6.22	5.61
116.0	7	8	10	-2.08	-11.79	13.08	-6.29	5.67
117.0	7	8	9	-2.07	-11.84	13.15	-6.35	5.72
118.0	7	8	9	-2.06	-11.90	13.22	-6.42	5.78
119.0	7	8	9	-2.05	-11.95	13.29	-6.49	5.83
120.0	7	8	9	-2.04	-12.00	13.36	-6.55	5.89
121.0	7	8	9	-2.03	-12.06	13.43	-6.62	5.95
122.0	7	7	8	-2.02	-12.11	13.50	-6.69	6.00
123.0	6	7	8	-2.01	-12.16	13.56	-6.76	6.06
124.0	6	7	8	-2.00	-12.22	13.63	-6.83	6.12
125.0	6	7	8	-1.99	-12.27	13.70	-6.89	6.17