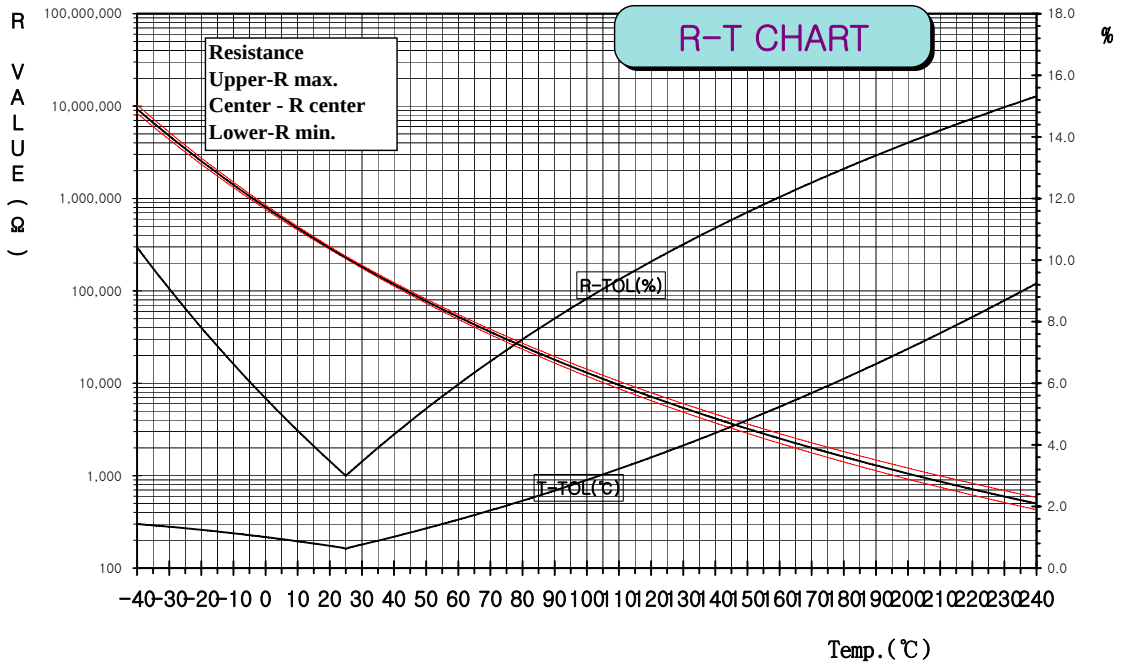
R-T Characteristics & Tolerance

Part Name NTC
Customer N/A
Part No. 234HI1, 4240K
Usage / Remark N/A
Recorder G.S.HAN

Center-Temp / R-Value 25.0℃/230000.00Ω
R-Tolerance of Center-Temp 3.00%
Test Conditon Zero Power
β-Range (25/85)℃
β-Value 4240.4K
β-Tolerance 2.00%



L : 0.0℃=806,150.00Ω
M : 25.0℃=230,000.00Ω
H : 85.0℃=21,231.00Ω

TEMP. (℃)	RESISTANCE (Ω) MIN	CENTER	MAX	RESIST.-TOL. (%) MAX	MIN	TEMP.-TOL. (℃) MAX	MIN
-40.0	8378458.20	9300973.00	10315769.26	10.91	9.92	1.50	1.36
-39.0	7831827.01	8682191.94	9616225.48	10.76	9.79	1.49	1.36
-38.0	7323955.11	8108074.63	8968065.26	10.61	9.67	1.48	1.35
-37.0	6851894.10	7575166.71	8367249.26	10.46	9.55	1.47	1.34
-36.0	6412933.84	7080297.38	7810074.86	10.31	9.43	1.46	1.33
-35.0	6004582.20	6620554.90	7293146.66	10.16	9.30	1.45	1.33
-34.0	5624546.52	6193264.30	6813349.61	10.01	9.18	1.44	1.32
-33.0	5270716.78	5795967.04	6367824.62	9.87	9.06	1.43	1.31
-32.0	4941150.27	5426402.59	5953946.38	9.72	8.94	1.42	1.30
-31.0	4634057.56	5082491.56	5569303.27	9.58	8.82	1.41	1.30
-30.0	4347789.74	4762320.45	5211678.96	9.44	8.70	1.40	1.29
-29.0	4080826.76	4464127.60	4879035.74	9.29	8.59	1.39	1.28
-28.0	3831766.79	4186290.53	4569499.36	9.15	8.47	1.37	1.27
-27.0	3599316.50	3927314.30	4281345.15	9.01	8.35	1.36	1.26
-26.0	3382282.18	3685820.93	4012985.44	8.88	8.24	1.35	1.25
-25.0	3179561.64	3460539.69	3762958.07	8.74	8.12	1.34	1.25
-24.0	2990136.75	3250298.33	3529915.89	8.60	8.00	1.33	1.24
-23.0	2813066.70	3054014.97	3312617.20	8.47	7.89	1.32	1.23
-22.0	2647481.73	2870690.75	3109917.05	8.33	7.78	1.31	1.22
-21.0	2492577.51	2699403.06	2920759.24	8.20	7.66	1.30	1.21

TEMP.	RESISTANCE (Ω)			RESIST.-TOL. (%)		TEMP.-TOL. (℃)	
(℃)	MIN	CENTER	MAX	MAX	MIN	MAX	MIN
-20.0	2347609.87	2539299.42	2744169.04	8.07	7.55	1.28	1.20
-19.0	2211890.06	2389591.81	2579246.58	7.94	7.44	1.27	1.19
-18.0	2084780.39	2249551.50	2425160.73	7.81	7.32	1.26	1.18
-17.0	1965690.15	2118504.34	2281143.54	7.68	7.21	1.25	1.17
-16.0	1854072.04	1995826.43	2146485.17	7.55	7.10	1.24	1.16
-15.0	1749418.70	1880940.13	2020529.25	7.42	6.99	1.22	1.15
-14.0	1651259.65	1773310.45	1902668.54	7.29	6.88	1.21	1.14
-13.0	1559158.45	1672441.68	1792341.13	7.17	6.77	1.20	1.13
-12.0	1472710.08	1577874.35	1689026.77	7.04	6.66	1.19	1.12
-11.0	1391538.52	1489182.42	1592243.65	6.92	6.56	1.17	1.11
-10.0	1315294.58	1405970.68	1501545.36	6.80	6.45	1.16	1.10
-9.0	1243653.82	1327872.40	1416518.13	6.68	6.34	1.15	1.09
-8.0	1176314.73	1254547.14	1336778.32	6.55	6.24	1.13	1.08
-7.0	1112996.98	1185678.75	1261970.04	6.43	6.13	1.12	1.07
-6.0	1053439.84	1120973.53	1191763.09	6.32	6.02	1.11	1.06
-5.0	997400.74	1060158.52	1125850.94	6.20	5.92	1.09	1.05
-4.0	944653.88	1002979.99	1063948.93	6.08	5.82	1.08	1.03
-3.0	894989.07	949201.93	1005792.64	5.96	5.71	1.07	1.02
-2.0	848210.50	898604.79	951136.33	5.85	5.61	1.05	1.01
-1.0	804135.75	850984.23	899751.56	5.73	5.51	1.04	1.00
0.0	762594.79	806150.00	851425.87	5.62	5.40	1.03	0.99
1.0	723429.08	763924.93	805961.63	5.50	5.30	1.01	0.97
2.0	686490.75	724143.94	763174.88	5.39	5.20	1.00	0.96
3.0	651641.86	686653.18	722894.38	5.28	5.10	0.98	0.95
4.0	618753.64	651309.21	684960.66	5.17	5.00	0.97	0.94
5.0	587705.85	617978.25	649225.13	5.06	4.90	0.95	0.92
6.0	558386.23	586535.49	615549.31	4.95	4.80	0.94	0.91
7.0	530689.87	556864.45	583804.12	4.84	4.70	0.93	0.90
8.0	504518.72	528856.38	553869.14	4.73	4.60	0.91	0.89
9.0	479781.12	502409.71	525632.07	4.62	4.50	0.90	0.87
10.0	456391.35	477429.56	498988.06	4.52	4.41	0.88	0.86
11.0	434269.22	453827.25	473839.27	4.41	4.31	0.87	0.85
12.0	413339.68	431519.89	450094.29	4.30	4.21	0.85	0.83
13.0	393532.46	410429.96	427667.75	4.20	4.12	0.84	0.82
14.0	374781.80	390484.93	406479.86	4.10	4.02	0.82	0.80
15.0	357026.05	371616.96	386456.04	3.99	3.93	0.80	0.79
16.0	340207.48	353762.50	367526.54	3.89	3.83	0.79	0.78
17.0	324271.95	336862.09	349626.10	3.79	3.74	0.77	0.76
18.0	309168.74	320860.01	332693.70	3.69	3.64	0.76	0.75
19.0	294850.23	305704.06	316672.17	3.59	3.55	0.74	0.73
20.0	281271.78	291345.31	301508.01	3.49	3.46	0.73	0.72
21.0	268391.48	277737.89	287151.11	3.39	3.37	0.71	0.70
22.0	256169.98	264838.78	273554.51	3.29	3.27	0.69	0.69
23.0	244570.36	252607.62	260674.20	3.19	3.18	0.68	0.67
24.0	233557.90	241006.55	248468.93	3.10	3.09	0.66	0.66
25.0	223100.00	230000.00	236900.00	3.00	3.00	0.63	0.63
26.0	212770.09	219554.60	226351.55	3.10	3.09	0.67	0.67
27.0	202973.19	209638.99	216328.83	3.19	3.18	0.69	0.69
28.0	193679.21	200223.71	206803.07	3.29	3.27	0.72	0.71
29.0	184859.87	191281.08	197747.21	3.38	3.36	0.74	0.74
30.0	176488.62	182785.07	189135.78	3.47	3.44	0.77	0.76
31.0	168540.53	174711.20	180944.81	3.57	3.53	0.79	0.79
32.0	160992.13	167036.45	173151.72	3.66	3.62	0.82	0.81
33.0	153821.41	159739.15	165735.27	3.75	3.70	0.85	0.83
34.0	147007.63	152798.92	158675.42	3.85	3.79	0.87	0.86
35.0	140531.30	146196.56	151953.32	3.94	3.88	0.90	0.88
36.0	134374.09	139913.99	145551.17	4.03	3.96	0.92	0.91
37.0	128518.74	133934.19	139452.21	4.12	4.04	0.95	0.93
38.0	122948.99	128241.11	133640.62	4.21	4.13	0.98	0.96
39.0	117649.55	122819.62	128101.49	4.30	4.21	1.00	0.98
40.0	112606.01	117655.48	122820.73	4.39	4.29	1.03	1.01
41.0	107804.78	112735.23	117785.07	4.48	4.37	1.06	1.03
42.0	103233.07	108046.19	112981.95	4.57	4.45	1.09	1.06
43.0	98878.81	103576.41	108399.53	4.66	4.54	1.11	1.09
44.0	94730.63	99314.57	104026.62	4.74	4.62	1.14	1.11
45.0	90777.79	95250.03	99852.65	4.83	4.70	1.17	1.14
46.0	87010.18	91372.72	95867.63	4.92	4.77	1.20	1.16
47.0	83418.23	87673.12	92062.11	5.01	4.85	1.23	1.19
48.0	79992.93	84142.25	88427.15	5.09	4.93	1.25	1.21
49.0	76725.76	80771.63	84954.32	5.18	5.01	1.28	1.24

TEMP.	RESISTANCE (Ω)			RESIST.-TOL. (%)		TEMP.-TOL. (℃)	
(℃)	MIN	CENTER	MAX	MAX	MIN	MAX	MIN
50.0	73608.68	77553.22	81635.61	5.26	5.09	1.31	1.27
51.0	70634.08	74479.44	78463.46	5.35	5.16	1.34	1.29
52.0	67794.80	71543.11	75430.72	5.43	5.24	1.37	1.32
53.0	65084.03	68737.44	72530.60	5.52	5.32	1.40	1.35
54.0	62495.36	66056.02	69756.70	5.60	5.39	1.43	1.37
55.0	60022.73	63492.75	67102.92	5.69	5.47	1.46	1.40
56.0	57660.39	61041.88	64563.51	5.77	5.54	1.49	1.43
57.0	55402.92	58697.96	62133.00	5.85	5.61	1.52	1.46
58.0	53245.16	56455.83	59806.23	5.93	5.69	1.55	1.48
59.0	51182.26	54310.60	57578.28	6.02	5.76	1.58	1.51
60.0	49209.61	52257.64	55444.51	6.10	5.83	1.61	1.54
61.0	47322.84	50292.54	53400.49	6.18	5.90	1.64	1.57
62.0	45517.82	48411.15	51442.05	6.26	5.98	1.67	1.60
63.0	43790.63	46609.51	49565.20	6.34	6.05	1.70	1.62
64.0	42137.56	44883.89	47766.17	6.42	6.12	1.73	1.65
65.0	40555.10	43230.71	46041.38	6.50	6.19	1.76	1.68
66.0	39039.89	41646.63	44387.43	6.58	6.26	1.80	1.71
67.0	37588.78	40128.42	42801.09	6.66	6.33	1.83	1.74
68.0	36198.77	38673.05	41279.28	6.74	6.40	1.86	1.77
69.0	34867.00	37277.64	39819.08	6.82	6.47	1.89	1.79
70.0	33590.77	35939.45	38417.73	6.90	6.54	1.92	1.82
71.0	32367.52	34655.86	37072.59	6.97	6.60	1.96	1.85
72.0	31194.80	33424.41	35781.14	7.05	6.67	1.99	1.88
73.0	30070.30	32242.74	34541.01	7.13	6.74	2.02	1.91
74.0	28991.82	31108.61	33349.92	7.20	6.80	2.05	1.94
75.0	27957.27	30019.91	32205.72	7.28	6.87	2.09	1.97
76.0	26964.67	28974.61	31106.35	7.36	6.94	2.12	2.00
77.0	26012.12	27970.78	30049.84	7.43	7.00	2.15	2.03
78.0	25097.84	27006.59	29034.35	7.51	7.07	2.19	2.06
79.0	24220.11	26080.30	28058.09	7.58	7.13	2.22	2.09
80.0	23377.31	25190.26	27119.38	7.66	7.20	2.26	2.12
81.0	22567.89	24334.88	26216.61	7.73	7.26	2.29	2.15
82.0	21790.40	23512.67	25348.23	7.81	7.32	2.32	2.18
83.0	21043.41	22722.18	24512.79	7.88	7.39	2.36	2.21
84.0	20325.61	21962.06	23708.90	7.95	7.45	2.39	2.24
85.0	19635.73	21231.00	22935.22	8.03	7.51	2.43	2.27
86.0	18972.55	20527.77	22190.48	8.10	7.58	2.46	2.30
87.0	18334.93	19851.18	21473.48	8.17	7.64	2.50	2.34
88.0	17721.77	19200.12	20783.06	8.24	7.70	2.53	2.37
89.0	17132.02	18573.49	20118.13	8.32	7.76	2.57	2.40
90.0	16564.69	17970.29	19477.62	8.39	7.82	2.60	2.43
91.0	16018.83	17389.54	18860.53	8.46	7.88	2.64	2.46
92.0	15493.54	16830.29	18265.92	8.53	7.94	2.68	2.49
93.0	14987.94	16291.66	17692.86	8.60	8.00	2.71	2.52
94.0	14501.22	15772.81	17140.47	8.67	8.06	2.75	2.56
95.0	14032.58	15272.92	16607.93	8.74	8.12	2.79	2.59
96.0	13581.29	14791.21	16094.43	8.81	8.18	2.82	2.62
97.0	13146.62	14326.95	15599.21	8.88	8.24	2.86	2.65
98.0	12727.89	13879.43	15121.54	8.95	8.30	2.90	2.69
99.0	12324.44	13447.98	14660.73	9.02	8.35	2.93	2.72
100.0	11935.66	13031.94	14216.11	9.09	8.41	2.97	2.75
101.0	11560.95	12630.71	13787.04	9.15	8.47	3.01	2.78
102.0	11199.74	12243.69	13372.91	9.22	8.53	3.05	2.82
103.0	10851.48	11870.32	12973.14	9.29	8.58	3.08	2.85
104.0	10515.66	11510.06	12587.16	9.36	8.64	3.12	2.88
105.0	10191.77	11162.39	12214.45	9.43	8.70	3.16	2.92
106.0	9879.35	10826.83	11854.49	9.49	8.75	3.20	2.95
107.0	9577.94	10502.89	11506.80	9.56	8.81	3.24	2.98
108.0	9287.11	10190.13	11170.90	9.62	8.86	3.28	3.02
109.0	9006.44	9888.12	10846.34	9.69	8.92	3.32	3.05
110.0	8735.53	9596.43	10532.69	9.76	8.97	3.35	3.08
111.0	8474.00	9314.68	10229.54	9.82	9.03	3.39	3.12
112.0	8221.49	9042.48	9936.50	9.89	9.08	3.43	3.15
113.0	7977.65	8779.47	9653.19	9.95	9.13	3.47	3.19
114.0	7742.15	8525.31	9379.24	10.02	9.19	3.51	3.22
115.0	7514.66	8279.65	9114.30	10.08	9.24	3.55	3.26
116.0	7294.88	8042.18	8858.05	10.14	9.29	3.59	3.29
117.0	7082.52	7812.59	8610.15	10.21	9.34	3.63	3.33
118.0	6877.30	7590.59	8370.31	10.27	9.40	3.67	3.36

TEMP.	RESISTANCE (Ω)			RESIST.-TOL. (%)		TEMP.-TOL. (℃)	
(℃)	MIN	CENTER	MAX	MAX	MIN	MAX	MIN
119.0	6678.95	7375.89	8138.23	10.34	9.45	3.71	3.40
120.0	6487.20	7168.23	7913.62	10.40	9.50	3.76	3.43
121.0	6301.82	6967.34	7696.22	10.46	9.55	3.80	3.47
122.0	6122.56	6772.98	7485.77	10.52	9.60	3.84	3.50
123.0	5949.19	6584.91	7282.00	10.59	9.65	3.88	3.54
124.0	5781.51	6402.90	7084.69	10.65	9.70	3.92	3.57
125.0	5619.30	6226.73	6893.60	10.71	9.76	3.96	3.61
126.0	5462.36	6056.18	6708.52	10.77	9.81	4.00	3.65
127.0	5310.49	5891.06	6529.22	10.83	9.86	4.05	3.68
128.0	5163.52	5731.17	6355.51	10.89	9.90	4.09	3.72
129.0	5021.26	5576.33	6187.19	10.95	9.95	4.13	3.75
130.0	4883.54	5426.35	6024.06	11.01	10.00	4.17	3.79
131.0	4750.21	5281.06	5865.95	11.08	10.05	4.22	3.83
132.0	4621.10	5140.30	5712.69	11.14	10.10	4.26	3.86
133.0	4496.07	5003.91	5564.10	11.20	10.15	4.30	3.90
134.0	4374.96	4871.73	5420.03	11.25	10.20	4.35	3.94
135.0	4257.64	4743.62	5280.31	11.31	10.24	4.39	3.97
136.0	4143.98	4619.44	5144.81	11.37	10.29	4.43	4.01
137.0	4033.85	4499.04	5013.37	11.43	10.34	4.48	4.05
138.0	3927.12	4382.31	4885.86	11.49	10.39	4.52	4.09
139.0	3823.68	4269.11	4762.14	11.55	10.43	4.57	4.12
140.0	3723.40	4159.32	4642.09	11.61	10.48	4.61	4.16
141.0	3626.19	4052.83	4525.59	11.66	10.53	4.65	4.20
142.0	3531.94	3949.52	4412.51	11.72	10.57	4.70	4.24
143.0	3440.53	3849.29	4302.74	11.78	10.62	4.74	4.28
144.0	3351.89	3752.04	4196.18	11.84	10.66	4.79	4.31
145.0	3265.91	3657.66	4092.71	11.89	10.71	4.83	4.35
146.0	3182.50	3566.05	3992.23	11.95	10.76	4.88	4.39
147.0	3101.58	3477.13	3894.65	12.01	10.80	4.92	4.43
148.0	3023.06	3390.81	3799.87	12.06	10.85	4.97	4.47
149.0	2946.86	3306.99	3707.80	12.12	10.89	5.02	4.51
150.0	2872.90	3225.60	3618.35	12.18	10.93	5.06	4.55
151.0	2801.11	3146.56	3531.44	12.23	10.98	5.11	4.59
152.0	2731.42	3069.80	3446.98	12.29	11.02	5.16	4.62
153.0	2663.76	2995.22	3364.90	12.34	11.07	5.20	4.66
154.0	2598.06	2922.78	3285.12	12.40	11.11	5.25	4.70
155.0	2534.25	2852.39	3207.57	12.45	11.15	5.30	4.74
156.0	2472.28	2783.99	3132.17	12.51	11.20	5.34	4.78
157.0	2412.08	2717.51	3058.86	12.56	11.24	5.39	4.82
158.0	2353.60	2652.90	2987.58	12.62	11.28	5.44	4.86
159.0	2296.79	2590.10	2918.25	12.67	11.32	5.48	4.90
160.0	2241.58	2529.05	2850.82	12.72	11.37	5.53	4.94
161.0	2187.92	2469.69	2785.23	12.78	11.41	5.58	4.98
162.0	2135.78	2411.96	2721.42	12.83	11.45	5.63	5.02
163.0	2085.09	2355.83	2659.33	12.88	11.49	5.68	5.06
164.0	2035.81	2301.24	2598.92	12.94	11.53	5.73	5.10
165.0	1987.90	2248.13	2540.14	12.99	11.58	5.77	5.15
166.0	1941.32	2196.47	2482.92	13.04	11.62	5.82	5.19
167.0	1896.02	2146.21	2427.23	13.09	11.66	5.87	5.23
168.0	1851.96	2097.30	2373.01	13.15	11.70	5.92	5.27
169.0	1809.11	2049.72	2320.23	13.20	11.74	5.97	5.31
170.0	1767.42	2003.40	2268.84	13.25	11.78	6.02	5.35
171.0	1726.87	1958.32	2218.80	13.30	11.82	6.07	5.39
172.0	1687.41	1914.44	2170.06	13.35	11.86	6.12	5.44
173.0	1649.01	1871.72	2122.60	13.40	11.90	6.17	5.48
174.0	1611.64	1830.13	2076.36	13.45	11.94	6.22	5.52
175.0	1575.27	1789.63	2031.32	13.51	11.98	6.27	5.56
176.0	1539.87	1750.19	1987.44	13.56	12.02	6.32	5.60
177.0	1505.40	1711.77	1944.68	13.61	12.06	6.37	5.65
178.0	1471.85	1674.36	1903.02	13.66	12.09	6.42	5.69
179.0	1439.18	1637.91	1862.42	13.71	12.13	6.47	5.73
180.0	1407.36	1602.41	1822.84	13.76	12.17	6.53	5.77
181.0	1376.38	1567.82	1784.27	13.81	12.21	6.58	5.82
182.0	1346.20	1534.11	1746.67	13.86	12.25	6.63	5.86
183.0	1316.81	1501.26	1710.01	13.90	12.29	6.68	5.90
184.0	1288.17	1469.24	1674.26	13.95	12.32	6.73	5.95
185.0	1260.27	1438.04	1639.41	14.00	12.36	6.78	5.99

TEMP.	RESISTANCE (Ω)			RESIST.-TOL. (%)		TEMP.-TOL. (℃)	
(℃)	MIN	CENTER	MAX	MAX	MIN	MAX	MIN
186.0	1233.08	1407.62	1605.42	14.05	12.40	6.84	6.03
187.0	1206.59	1377.97	1572.27	14.10	12.44	6.89	6.08
188.0	1180.78	1349.06	1539.93	14.15	12.47	6.94	6.12
189.0	1155.62	1320.87	1508.39	14.20	12.51	6.99	6.16
190.0	1131.09	1293.38	1477.62	14.25	12.55	7.05	6.21
191.0	1107.18	1266.57	1447.60	14.29	12.58	7.10	6.25
192.0	1083.87	1240.42	1418.30	14.34	12.62	7.15	6.30
193.0	1061.14	1214.91	1389.72	14.39	12.66	7.21	6.34
194.0	1038.98	1190.03	1361.82	14.44	12.69	7.26	6.38
195.0	1017.37	1165.76	1334.59	14.48	12.73	7.32	6.43
196.0	996.29	1142.07	1308.01	14.53	12.76	7.37	6.47
197.0	975.73	1118.96	1282.07	14.58	12.80	7.42	6.52
198.0	955.67	1096.41	1256.74	14.62	12.84	7.48	6.56
199.0	936.11	1074.40	1232.01	14.67	12.87	7.53	6.61
200.0	917.02	1052.91	1207.86	14.72	12.91	7.59	6.65
201.0	898.39	1031.94	1184.28	14.76	12.94	7.64	6.70
202.0	880.21	1011.47	1161.25	14.81	12.98	7.70	6.75
203.0	862.48	991.48	1138.76	14.85	13.01	7.75	6.79
204.0	845.16	971.97	1116.79	14.90	13.05	7.81	6.84
205.0	828.27	952.91	1095.32	14.95	13.08	7.86	6.88
206.0	811.77	934.30	1074.36	14.99	13.11	7.92	6.93
207.0	795.67	916.13	1053.87	15.04	13.15	7.98	6.97
208.0	779.94	898.37	1033.86	15.08	13.18	8.03	7.02
209.0	764.59	881.03	1014.30	15.13	13.22	8.09	7.07
210.0	749.60	864.10	995.18	15.17	13.25	8.14	7.11
211.0	734.96	847.55	976.50	15.21	13.28	8.20	7.16
212.0	720.66	831.38	958.24	15.26	13.32	8.26	7.21
213.0	706.70	815.58	940.39	15.30	13.35	8.31	7.25
214.0	693.05	800.14	922.94	15.35	13.38	8.37	7.30
215.0	679.72	785.05	905.88	15.39	13.42	8.43	7.35
216.0	666.70	770.30	889.20	15.44	13.45	8.49	7.40
217.0	653.98	755.89	872.89	15.48	13.48	8.54	7.44
218.0	641.55	741.80	856.94	15.52	13.51	8.60	7.49
219.0	629.40	728.02	841.35	15.57	13.55	8.66	7.54
220.0	617.52	714.56	826.09	15.61	13.58	8.72	7.59
221.0	605.92	701.39	811.17	15.65	13.61	8.78	7.63
222.0	594.58	688.51	796.57	15.69	13.64	8.84	7.68
223.0	583.49	675.92	782.29	15.74	13.68	8.89	7.73
224.0	572.64	663.61	768.32	15.78	13.71	8.95	7.78
225.0	562.05	651.56	754.65	15.82	13.74	9.01	7.83
226.0	551.68	639.78	741.28	15.86	13.77	9.07	7.87
227.0	541.55	628.25	728.19	15.91	13.80	9.13	7.92
228.0	531.64	616.98	715.38	15.95	13.83	9.19	7.97
229.0	521.94	605.95	702.85	15.99	13.86	9.25	8.02
230.0	512.46	595.16	690.58	16.03	13.89	9.31	8.07
231.0	503.19	584.60	678.56	16.07	13.93	9.37	8.12
232.0	494.12	574.26	666.81	16.12	13.96	9.43	8.17
233.0	485.24	564.15	655.30	16.16	13.99	9.49	8.22
234.0	476.56	554.25	644.03	16.20	14.02	9.55	8.27
235.0	468.06	544.56	632.99	16.24	14.05	9.61	8.32
236.0	459.75	535.08	622.19	16.28	14.08	9.67	8.37
237.0	451.61	525.79	611.60	16.32	14.11	9.74	8.42
238.0	443.65	516.70	601.24	16.36	14.14	9.80	8.47
239.0	435.86	507.80	591.09	16.40	14.17	9.86	8.52
240.0	428.23	499.09	581.15	16.44	14.20	9.92	8.57