



NTC/SC. DJ-234. 02. 029-2016

版次:VER2. 10

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南京华巨电子有限公司

Sinochip(Nanjing)Electronics Co.,LTD

电动汽车轮毂电机用温度传感器

产 品 规 格 书

文件编号	NTC/SC. DJ-234. 02. 029-2016
产品名称	电机用 NTC 温度传感器
产品代码	234F4537FX
产品型号	DJNTC1-234F4537FX (B _{100/200} =4537) -L300-L#26
版 次	Ver2. 10

拟制: 王立志审核: 张建军批准: 唐成刚

2016 年 02 月 29 日发布

2016 年 02 月 29 日实施

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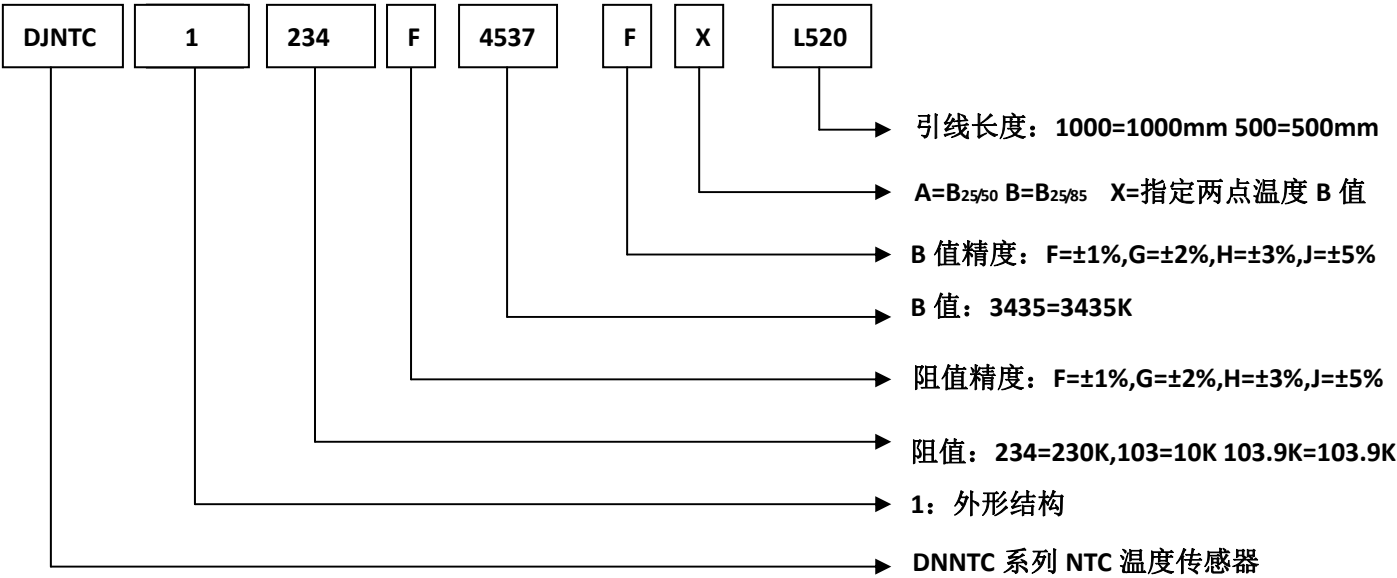
1、 产品名称、型号、代码、型号规则

名称：电机用 NTC 温度传感器

型号：DJNTC1-234F4537FX-L300-L#26

代码：234F4537FX-L520-L#22

型号规则：

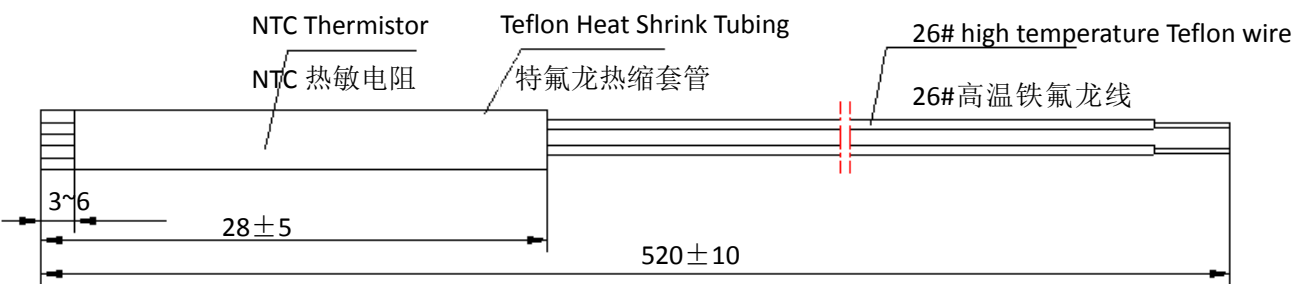


2、 主要参数

2.1 产品执行标准

IEC60134

2.2 外形尺寸、结构



2.3 Electrical characteristics 电性能

	Item 项目	Symbol 符号	Test Condition 测试条件	Min. 最小值	Nor. 正常值	Max. 最大值	Unit 单位
a	Resistance at 25°C 25°C 电阻值	R25	25±0.05°C	227.7	230	232.3	kΩ
b	Bvalue B 值	B100/200	$B=(\frac{1}{T_1}-\frac{1}{T_2})\ln\frac{RT_1}{RT_2}$	4492	4537	4582	k
c	Insulation resistance 绝缘电阻	/	1500VDC	100	/	/	MΩ
d	Thermal time constant 热时间常数	τ	in still air 静止空气中	/	/	20	sec
e	Thermal dissipation constant 热耗散系数	δ	in still air 静止空气中	2.0	/	/	mw/°C
f	Operating temperature range 使用温度范围	/	/	-50	/	300	°C

3、Reliability 可靠性

	Item 项目	Specification 技术说明	Method of Examination 测试条件及方法
5.1	high Temp. storage 高温存放	*ΔR25/ R25≤±2%	After storage at 250°C for 1000hrs 250°C 环境中放置 1000 小时
5.2	Low Temp. storage 低温存放		After storage at -40°C for 1000hrs -40°C 环境中放置 1000 小时
5.3	High temperature and humidity 耐湿热		After storage at 60°C 95%RH for 1000hrs 60°C 95%RH 存放 1000 小时
5.4	Thermal shock 耐温度冲击	*ΔR25/ R25≤±2%	100 cycles of following sequence -40°C 10min.---5min. room temp. ---200°C 10min.---5 min. room temp. 经历如下温度循环 100 次 -40°C10 分钟---常温 5 分钟---200°C10 分钟--- 常温 5 分钟

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5.5	Vibration 振动	* no visible damage 无损伤 * $\Delta R_{25}/R_{25} \leq \pm 2\%$	After vibrate test , Frequence 10-500Hz 15min.max amplitude 1.5mm ,in X and Y directions 振幅 1.5mm 频率 10Hz 到 500Hz 元件受振动试验 X、Y 方向各 15 分钟
5.6	Pulling 引线强度	* no visible damage 无损伤 * $\Delta R_{25}/R_{25} \leq \pm 2\%$	After applying a force of 9.8N in the axial direction of thermistor, and maintain the force for 60sec. 引线沿轴向施加 9.8N 拉力, 并持续 60 秒
5.7	Fall down 跌落	* no visible damage 无损伤 * $\Delta R_{25}/R_{25} \leq \pm 2\%$	After dropped freely onto wood floor from 1 meter height for 10 times 从 1 米高度自由落下 10 次在规定的木板上

6、Outgoing Inspection 出厂检验

6.1 The product shall be inspected at every delivery lot inspection items, sampling quantities and sampling acceptable standard are as follows. 产品批量出厂前必须进行如下项目抽检, 抽样数及标准如下

Inspection Item 检验项目	Sampling acceptable Standard 抽样合格标准	Remarks 备注
Resistance value 电阻值	N=20,Ac=0,Re=1	4(a)
B value B 值	N=10,Ac=0,Re=1	4(b)
Insulation Resistance 绝缘电阻	N=5,Ac=0,Re=1	4(c)
Shape & dimensions 外形尺寸	N=5,Ac=0,Re=1	3
Appearance 外观	N=5,Ac=0,Re=1	3

6.2 Inspection data 检验数据



Inspection data will be issued for pay upon request. 检验数据必须保留以备索取。

TEMPERATURE VS RESISTANCE TABLE**Resistance** **230k Ohms at 25deg. C****Resistance Tolerance** **+ / -1%****B Value** **4537K at100/200 deg. C****B Value Tolerance** **+ / - 1%**

南京华巨电子有限公司

电话: 025-52153380

电话: 025-52153215

电话: 025-52157721

传真: 025-52157065

型号: **234F4537FX(B100/200)**

		Kohms		
R ₂₅ :	230.00	±		1%
B _{100/200} :	4537	°K	±	1%

网址: www.sinochip.net

Temperature	Resistance (Ω)			Temperture Coef.	Resist. Tolerance (%)		Temp. Tolerance (°C)	
(°C)	MIN.	CENTER	MAX.	(%/°C)	MIN.	MAX.	MIN.	MAX.
温度	阻值 (Ω)			温度系数	阻值精度偏差 (%)		测温精度偏差(°C)	
(°C)	上限值	中心值	下限值	(%/°C)	最小	最大	最小	最大
-55.0	27722.286	29394.032	31163.473	-8.04	-5.69	6.02	-0.75	0.71
-54.0	25608.977	27131.543	28741.759	-7.98	-5.61	5.93	-0.74	0.70
-53.0	23672.735	25060.274	26526.489	-7.91	-5.54	5.85	-0.74	0.70
-52.0	21897.431	23162.668	24498.560	-7.84	-5.46	5.77	-0.74	0.70
-51.0	20268.520	21422.905	22640.772	-7.78	-5.39	5.68	-0.73	0.69
-50.0	18772.875	19826.717	20937.625	-7.71	-5.32	5.60	-0.73	0.69
-49.0	17398.635	18361.228	19375.139	-7.65	-5.24	5.52	-0.72	0.69
-48.0	16135.081	17014.804	17940.697	-7.58	-5.17	5.44	-0.72	0.68
-47.0	14972.513	15776.928	16622.899	-7.52	-5.10	5.36	-0.71	0.68
-46.0	13902.147	14638.085	15411.439	-7.46	-5.03	5.28	-0.71	0.67
-45.0	12916.026	13589.658	14296.993	-7.40	-4.96	5.20	-0.70	0.67
-44.0	12006.931	12623.839	13271.117	-7.34	-4.89	5.13	-0.70	0.67
-43.0	11168.312	11733.549	12326.159	-7.28	-4.82	5.05	-0.69	0.66
-42.0	10394.221	10912.359	11455.181	-7.23	-4.75	4.97	-0.69	0.66
-41.0	9679.249	10154.435	10651.884	-7.17	-4.68	4.90	-0.68	0.65
-40.0	9018.480	9454.471	9910.549	-7.11	-4.61	4.82	-0.68	0.65
-39.0	8407.435	8807.642	9225.977	-7.06	-4.54	4.75	-0.67	0.64
-38.0	7842.039	8209.557	8593.440	-7.00	-4.48	4.68	-0.67	0.64
-37.0	7318.576	7656.217	8008.635	-6.95	-4.41	4.60	-0.66	0.63
-36.0	6833.655	7143.975	7467.641	-6.90	-4.34	4.53	-0.66	0.63



-35.0	6384.183	6669.508	6966.888	-6.85	-4.28	4.46	-0.65	0.62
-34.0	5967.335	6229.779	6503.116	-6.79	-4.21	4.39	-0.65	0.62
-33.0	5580.529	5822.019	6073.352	-6.74	-4.15	4.32	-0.64	0.62
-32.0	5221.403	5443.694	5674.881	-6.69	-4.08	4.25	-0.63	0.61
-31.0	4887.798	5092.489	5305.221	-6.64	-4.02	4.18	-0.63	0.60
-30.0	4577.734	4766.284	4962.103	-6.60	-3.96	4.11	-0.62	0.60
-29.0	4289.399	4463.139	4643.452	-6.55	-3.89	4.04	-0.62	0.59
-28.0	4021.132	4181.277	4347.365	-6.50	-3.83	3.97	-0.61	0.59
-27.0	3771.408	3919.068	4072.103	-6.45	-3.77	3.90	-0.61	0.58
-26.0	3538.827	3675.018	3816.068	-6.41	-3.71	3.84	-0.60	0.58
-25.0	3322.105	3447.754	3577.797	-6.36	-3.64	3.77	-0.59	0.57
-24.0	3120.062	3236.017	3355.946	-6.32	-3.58	3.71	-0.59	0.57
-23.0	2931.610	3038.649	3149.282	-6.27	-3.52	3.64	-0.58	0.56
-22.0	2755.753	2854.587	2956.669	-6.23	-3.46	3.58	-0.57	0.56
-21.0	2591.569	2682.850	2777.067	-6.18	-3.40	3.51	-0.57	0.55
-20.0	2438.213	2522.537	2609.517	-6.14	-3.34	3.45	-0.56	0.54
-19.0	2294.905	2372.820	2453.135	-6.10	-3.28	3.38	-0.56	0.54
-18.0	2160.923	2232.933	2307.111	-6.06	-3.22	3.32	-0.55	0.53
-17.0	2035.606	2102.171	2170.695	-6.01	-3.17	3.26	-0.54	0.53
-16.0	1918.340	1979.883	2043.196	-5.97	-3.11	3.20	-0.54	0.52
-15.0	1808.560	1865.471	1923.979	-5.93	-3.05	3.14	-0.53	0.51
-14.0	1705.744	1758.379	1812.457	-5.89	-2.99	3.08	-0.52	0.51
-13.0	1609.407	1658.095	1708.086	-5.85	-2.94	3.01	-0.52	0.50
-12.0	1519.103	1564.147	1610.366	-5.81	-2.88	2.95	-0.51	0.50
-11.0	1434.420	1476.097	1518.834	-5.77	-2.82	2.90	-0.50	0.49
-10.0	1354.973	1393.540	1433.061	-5.74	-2.77	2.84	-0.49	0.48
-9.0	1280.409	1316.101	1352.652	-5.70	-2.71	2.78	-0.49	0.48
-8.0	1210.399	1243.433	1277.241	-5.66	-2.66	2.72	-0.48	0.47
-7.0	1144.639	1175.215	1206.487	-5.62	-2.60	2.66	-0.47	0.46
-6.0	1082.846	1111.148	1140.076	-5.59	-2.55	2.60	-0.47	0.46
-5.0	1024.758	1050.956	1077.716	-5.55	-2.49	2.55	-0.46	0.45
-4.0	970.131	994.382	1019.138	-5.52	-2.44	2.49	-0.45	0.44
-3.0	918.740	941.189	964.090	-5.48	-2.39	2.43	-0.44	0.44
-2.0	870.375	891.155	912.340	-5.45	-2.33	2.38	-0.44	0.43
-1.0	824.840	844.075	863.672	-5.41	-2.28	2.32	-0.43	0.42
0.0	781.953	799.757	817.884	-5.38	-2.23	2.27	-0.42	0.41
1.0	741.547	758.024	774.790	-5.34	-2.17	2.21	-0.41	0.41
2.0	703.464	718.712	734.217	-5.31	-2.12	2.16	-0.41	0.40
3.0	667.556	681.665	696.003	-5.28	-2.07	2.10	-0.40	0.39
4.0	633.689	646.742	659.998	-5.24	-2.02	2.05	-0.39	0.38
5.0	601.734	613.808	626.061	-5.21	-1.97	2.00	-0.38	0.38
6.0	571.574	582.740	594.064	-5.18	-1.92	1.94	-0.38	0.37
7.0	543.097	553.421	563.884	-5.15	-1.87	1.89	-0.37	0.36



8.0	516.200	525.743	535.409	-5.11	-1.82	1.84	-0.36	0.35
9.0	490.788	499.606	508.532	-5.08	-1.77	1.79	-0.35	0.35
10.0	466.770	474.916	483.156	-5.05	-1.72	1.73	-0.34	0.34
11.0	444.063	451.585	459.188	-5.02	-1.67	1.68	-0.34	0.33
12.0	422.587	429.530	436.543	-4.99	-1.62	1.63	-0.33	0.32
13.0	402.269	408.675	415.142	-4.96	-1.57	1.58	-0.32	0.32
14.0	383.042	388.949	394.908	-4.93	-1.52	1.53	-0.31	0.31
15.0	364.839	370.284	375.772	-4.90	-1.47	1.48	-0.30	0.30
16.0	347.603	352.617	357.669	-4.87	-1.42	1.43	-0.29	0.29
17.0	331.275	335.891	340.537	-4.85	-1.37	1.38	-0.29	0.28
18.0	315.804	320.049	324.319	-4.82	-1.33	1.33	-0.28	0.28
19.0	301.139	305.041	308.963	-4.79	-1.28	1.29	-0.27	0.27
20.0	287.236	290.819	294.417	-4.76	-1.23	1.24	-0.26	0.26
21.0	274.049	277.336	280.634	-4.73	-1.19	1.19	-0.25	0.25
22.0	261.540	264.552	267.571	-4.71	-1.14	1.14	-0.24	0.24
23.0	249.669	252.425	255.187	-4.68	-1.09	1.09	-0.23	0.23
24.0	238.400	240.920	243.442	-4.65	-1.05	1.05	-0.23	0.22
25.0	227.700	230.000	232.300	-4.63	-1.00	1.00	-0.22	0.22
26.0	217.337	219.633	221.932	-4.60	-1.05	1.05	-0.23	0.23
27.0	207.500	209.789	212.082	-4.57	-1.09	1.09	-0.24	0.24
28.0	198.161	200.438	202.721	-4.55	-1.14	1.14	-0.25	0.25
29.0	189.292	191.554	193.823	-4.52	-1.18	1.18	-0.26	0.26
30.0	180.865	183.109	185.363	-4.50	-1.23	1.23	-0.27	0.27
31.0	172.859	175.082	177.316	-4.47	-1.27	1.28	-0.29	0.28
32.0	165.248	167.448	169.660	-4.45	-1.31	1.32	-0.30	0.30
33.0	158.012	160.187	162.375	-4.42	-1.36	1.37	-0.31	0.31
34.0	151.131	153.278	155.440	-4.40	-1.40	1.41	-0.32	0.32
35.0	144.584	146.703	148.838	-4.37	-1.44	1.46	-0.33	0.33
36.0	138.355	140.444	142.550	-4.35	-1.49	1.50	-0.34	0.34
37.0	132.427	134.484	136.560	-4.32	-1.53	1.54	-0.36	0.35
38.0	126.783	128.808	130.852	-4.30	-1.57	1.59	-0.37	0.37
39.0	121.408	123.400	125.413	-4.28	-1.61	1.63	-0.38	0.38
40.0	116.288	118.247	120.227	-4.25	-1.66	1.67	-0.39	0.39
41.0	111.411	113.335	115.282	-4.23	-1.70	1.72	-0.41	0.40
42.0	106.762	108.652	110.565	-4.21	-1.74	1.76	-0.42	0.41
43.0	102.331	104.187	106.065	-4.19	-1.78	1.80	-0.43	0.43
44.0	98.106	99.927	101.771	-4.16	-1.82	1.85	-0.44	0.44
45.0	94.077	95.863	97.672	-4.14	-1.86	1.89	-0.46	0.45
46.0	90.234	91.984	93.759	-4.12	-1.90	1.93	-0.47	0.46
47.0	86.566	88.282	90.023	-4.10	-1.94	1.97	-0.48	0.47
48.0	83.066	84.747	86.453	-4.08	-1.98	2.01	-0.49	0.49
49.0	79.725	81.371	83.043	-4.05	-2.02	2.05	-0.51	0.50
50.0	76.535	78.147	79.785	-4.03	-2.06	2.10	-0.52	0.51



51.0	73.488	75.066	76.670	-4.01	-2.10	2.14	-0.53	0.52
52.0	70.577	72.121	73.692	-3.99	-2.14	2.18	-0.55	0.54
53.0	67.796	69.307	70.845	-3.97	-2.18	2.22	-0.56	0.55
54.0	65.138	66.616	68.121	-3.95	-2.22	2.26	-0.57	0.56
55.0	62.597	64.043	65.516	-3.93	-2.26	2.30	-0.59	0.57
56.0	60.168	61.582	63.022	-3.91	-2.30	2.34	-0.60	0.59
57.0	57.844	59.227	60.636	-3.89	-2.33	2.38	-0.61	0.60
58.0	55.622	56.973	58.352	-3.87	-2.37	2.42	-0.63	0.61
59.0	53.496	54.817	56.164	-3.85	-2.41	2.46	-0.64	0.63
60.0	51.461	52.752	54.070	-3.83	-2.45	2.50	-0.65	0.64
61.0	49.513	50.775	52.063	-3.81	-2.48	2.54	-0.67	0.65
62.0	47.649	48.881	50.140	-3.79	-2.52	2.58	-0.68	0.67
63.0	45.863	47.067	48.298	-3.77	-2.56	2.62	-0.69	0.68
64.0	44.153	45.329	46.532	-3.75	-2.59	2.65	-0.71	0.69
65.0	42.515	43.664	44.839	-3.73	-2.63	2.69	-0.72	0.70
66.0	40.945	42.067	43.216	-3.72	-2.67	2.73	-0.73	0.72
67.0	39.440	40.536	41.659	-3.70	-2.70	2.77	-0.75	0.73
68.0	37.998	39.069	40.165	-3.68	-2.74	2.81	-0.76	0.74
69.0	36.616	37.661	38.732	-3.66	-2.78	2.84	-0.78	0.76
70.0	35.290	36.311	37.357	-3.64	-2.81	2.88	-0.79	0.77
71.0	34.018	35.015	36.037	-3.62	-2.85	2.92	-0.81	0.79
72.0	32.798	33.771	34.770	-3.61	-2.88	2.96	-0.82	0.80
73.0	31.628	32.578	33.553	-3.59	-2.92	2.99	-0.83	0.81
74.0	30.505	31.432	32.385	-3.57	-2.95	3.03	-0.85	0.83
75.0	29.426	30.332	31.262	-3.55	-2.99	3.07	-0.86	0.84
76.0	28.391	29.275	30.184	-3.54	-3.02	3.10	-0.88	0.85
77.0	27.397	28.260	29.148	-3.52	-3.05	3.14	-0.89	0.87
78.0	26.443	27.285	28.152	-3.50	-3.09	3.18	-0.91	0.88
79.0	25.526	26.348	27.195	-3.49	-3.12	3.21	-0.92	0.90
80.0	24.645	25.448	26.274	-3.47	-3.16	3.25	-0.94	0.91
81.0	23.798	24.582	25.389	-3.45	-3.19	3.28	-0.95	0.92
82.0	22.984	23.750	24.538	-3.44	-3.22	3.32	-0.97	0.94
83.0	22.202	22.949	23.719	-3.42	-3.26	3.35	-0.98	0.95
84.0	21.450	22.179	22.931	-3.40	-3.29	3.39	-1.00	0.97
85.0	20.727	21.439	22.173	-3.39	-3.32	3.43	-1.01	0.98
86.0	20.031	20.726	21.444	-3.37	-3.35	3.46	-1.03	0.99
87.0	19.362	20.041	20.741	-3.36	-3.39	3.50	-1.04	1.01
88.0	18.718	19.381	20.065	-3.34	-3.42	3.53	-1.06	1.02
89.0	18.099	18.746	19.414	-3.32	-3.45	3.56	-1.07	1.04
90.0	17.502	18.134	18.787	-3.31	-3.48	3.60	-1.09	1.05
91.0	16.928	17.545	18.183	-3.29	-3.52	3.63	-1.10	1.07
92.0	16.376	16.978	17.601	-3.28	-3.55	3.67	-1.12	1.08
93.0	15.844	16.432	17.040	-3.26	-3.58	3.70	-1.13	1.10



94.0	15.331	15.905	16.499	-3.25	-3.61	3.73	-1.15	1.11
95.0	14.837	15.398	15.978	-3.23	-3.64	3.77	-1.17	1.13
96.0	14.362	14.909	15.476	-3.22	-3.67	3.80	-1.18	1.14
97.0	13.904	14.438	14.992	-3.20	-3.70	3.83	-1.20	1.16
98.0	13.462	13.984	14.525	-3.19	-3.73	3.87	-1.21	1.17
99.0	13.036	13.546	14.074	-3.17	-3.76	3.90	-1.23	1.19
100.0	12.626	13.124	13.640	-3.16	-3.79	3.93	-1.24	1.20
101.0	12.230	12.716	13.221	-3.15	-3.83	3.97	-1.26	1.22
102.0	11.848	12.323	12.816	-3.13	-3.86	4.00	-1.28	1.23
103.0	11.480	11.944	12.426	-3.12	-3.89	4.03	-1.29	1.25
104.0	11.125	11.579	12.049	-3.10	-3.92	4.06	-1.31	1.26
105.0	10.783	11.225	11.685	-3.09	-3.95	4.10	-1.33	1.28
106.0	10.452	10.885	11.334	-3.08	-3.97	4.13	-1.34	1.29
107.0	10.133	10.556	10.995	-3.06	-4.00	4.16	-1.36	1.31
108.0	9.825	10.238	10.667	-3.05	-4.03	4.19	-1.38	1.32
109.0	9.528	9.931	10.351	-3.03	-4.06	4.22	-1.39	1.34
110.0	9.241	9.635	10.045	-3.02	-4.09	4.26	-1.41	1.35
111.0	8.964	9.349	9.750	-3.01	-4.12	4.29	-1.43	1.37
112.0	8.696	9.073	9.464	-2.99	-4.15	4.32	-1.44	1.39
113.0	8.438	8.806	9.189	-2.98	-4.18	4.35	-1.46	1.40
114.0	8.188	8.547	8.922	-2.97	-4.21	4.38	-1.48	1.42
115.0	7.947	8.298	8.664	-2.96	-4.23	4.41	-1.49	1.43
116.0	7.713	8.057	8.415	-2.94	-4.26	4.44	-1.51	1.45
117.0	7.488	7.824	8.174	-2.93	-4.29	4.47	-1.53	1.46
118.0	7.270	7.598	7.940	-2.92	-4.32	4.50	-1.54	1.48
119.0	7.059	7.380	7.715	-2.90	-4.35	4.53	-1.56	1.50
120.0	6.856	7.169	7.497	-2.89	-4.37	4.56	-1.58	1.51
121.0	6.659	6.965	7.286	-2.88	-4.40	4.59	-1.60	1.53
122.0	6.468	6.768	7.081	-2.87	-4.43	4.62	-1.61	1.54
123.0	6.284	6.577	6.883	-2.85	-4.46	4.65	-1.63	1.56
124.0	6.106	6.393	6.692	-2.84	-4.48	4.68	-1.65	1.58
125.0	5.933	6.214	6.507	-2.83	-4.51	4.71	-1.67	1.59
126.0	5.767	6.041	6.327	-2.82	-4.54	4.74	-1.68	1.61
127.0	5.605	5.873	6.154	-2.81	-4.57	4.77	-1.70	1.63
128.0	5.449	5.711	5.985	-2.79	-4.59	4.80	-1.72	1.64
129.0	5.297	5.554	5.822	-2.78	-4.62	4.83	-1.74	1.66
130.0	5.151	5.402	5.664	-2.77	-4.65	4.86	-1.75	1.68
131.0	5.009	5.255	5.511	-2.76	-4.67	4.89	-1.77	1.69
132.0	4.872	5.112	5.363	-2.75	-4.70	4.92	-1.79	1.71
133.0	4.739	4.974	5.220	-2.74	-4.72	4.95	-1.81	1.73
134.0	4.610	4.840	5.080	-2.72	-4.75	4.98	-1.83	1.74
135.0	4.485	4.710	4.945	-2.71	-4.78	5.00	-1.84	1.76
136.0	4.364	4.584	4.815	-2.70	-4.80	5.03	-1.86	1.78



137.0	4.247	4.462	4.688	-2.69	-4.83	5.06	-1.88	1.79
138.0	4.133	4.344	4.565	-2.68	-4.85	5.09	-1.90	1.81
139.0	4.023	4.229	4.446	-2.67	-4.88	5.12	-1.92	1.83
140.0	3.916	4.118	4.330	-2.66	-4.90	5.15	-1.94	1.84
141.0	3.813	4.010	4.218	-2.65	-4.93	5.17	-1.95	1.86
142.0	3.712	3.906	4.109	-2.64	-4.95	5.20	-1.97	1.88
143.0	3.615	3.804	4.003	-2.63	-4.98	5.23	-1.99	1.90
144.0	3.520	3.706	3.901	-2.61	-5.00	5.26	-2.01	1.91
145.0	3.429	3.610	3.801	-2.60	-5.03	5.28	-2.03	1.93
146.0	3.340	3.518	3.705	-2.59	-5.05	5.31	-2.05	1.95
147.0	3.254	3.428	3.611	-2.58	-5.08	5.34	-2.07	1.97
148.0	3.170	3.341	3.520	-2.57	-5.10	5.37	-2.09	1.98
149.0	3.089	3.256	3.432	-2.56	-5.13	5.39	-2.11	2.00
150.0	3.010	3.174	3.346	-2.55	-5.15	5.42	-2.12	2.02
151.0	2.9340	3.0941	3.2626	-2.54	-5.17	5.45	-2.14	2.04
152.0	2.8598	3.0166	3.1817	-2.53	-5.20	5.47	-2.16	2.05
153.0	2.7878	2.9414	3.1032	-2.52	-5.22	5.50	-2.18	2.07
154.0	2.7178	2.8683	3.0268	-2.51	-5.25	5.53	-2.20	2.09
155.0	2.6499	2.7973	2.9527	-2.50	-5.27	5.55	-2.22	2.11
156.0	2.5839	2.7284	2.8806	-2.49	-5.29	5.58	-2.24	2.13
157.0	2.5199	2.6614	2.8106	-2.48	-5.32	5.61	-2.26	2.14
158.0	2.4576	2.5963	2.7425	-2.47	-5.34	5.63	-2.28	2.16
159.0	2.3972	2.5331	2.6764	-2.46	-5.36	5.66	-2.30	2.18
160.0	2.3384	2.4716	2.6121	-2.45	-5.39	5.68	-2.32	2.20
161.0	2.2814	2.4119	2.5496	-2.44	-5.41	5.71	-2.34	2.22
162.0	2.2259	2.3538	2.4888	-2.43	-5.43	5.74	-2.36	2.23
163.0	2.1720	2.2973	2.4297	-2.42	-5.46	5.76	-2.38	2.25
164.0	2.1196	2.2425	2.3722	-2.41	-5.48	5.79	-2.40	2.27
165.0	2.0686	2.1891	2.3163	-2.40	-5.50	5.81	-2.42	2.29
166.0	2.0191	2.1372	2.2620	-2.39	-5.53	5.84	-2.44	2.31
167.0	1.9710	2.0867	2.2091	-2.39	-5.55	5.86	-2.46	2.33
168.0	1.9241	2.0376	2.1576	-2.38	-5.57	5.89	-2.48	2.34
169.0	1.8786	1.9899	2.1075	-2.37	-5.59	5.91	-2.50	2.36
170.0	1.8343	1.9434	2.0588	-2.36	-5.61	5.94	-2.52	2.38
171.0	1.7912	1.8982	2.0114	-2.35	-5.64	5.96	-2.54	2.40
172.0	1.7493	1.8543	1.9653	-2.34	-5.66	5.99	-2.56	2.42
173.0	1.7085	1.8115	1.9204	-2.33	-5.68	6.01	-2.58	2.44
174.0	1.6689	1.7698	1.8767	-2.32	-5.70	6.04	-2.60	2.46
175.0	1.6303	1.7293	1.8341	-2.31	-5.72	6.06	-2.62	2.48
176.0	1.5927	1.6898	1.7927	-2.30	-5.75	6.09	-2.64	2.49
177.0	1.5561	1.6514	1.7523	-2.30	-5.77	6.11	-2.66	2.51
178.0	1.5206	1.6140	1.7130	-2.29	-5.79	6.14	-2.68	2.53



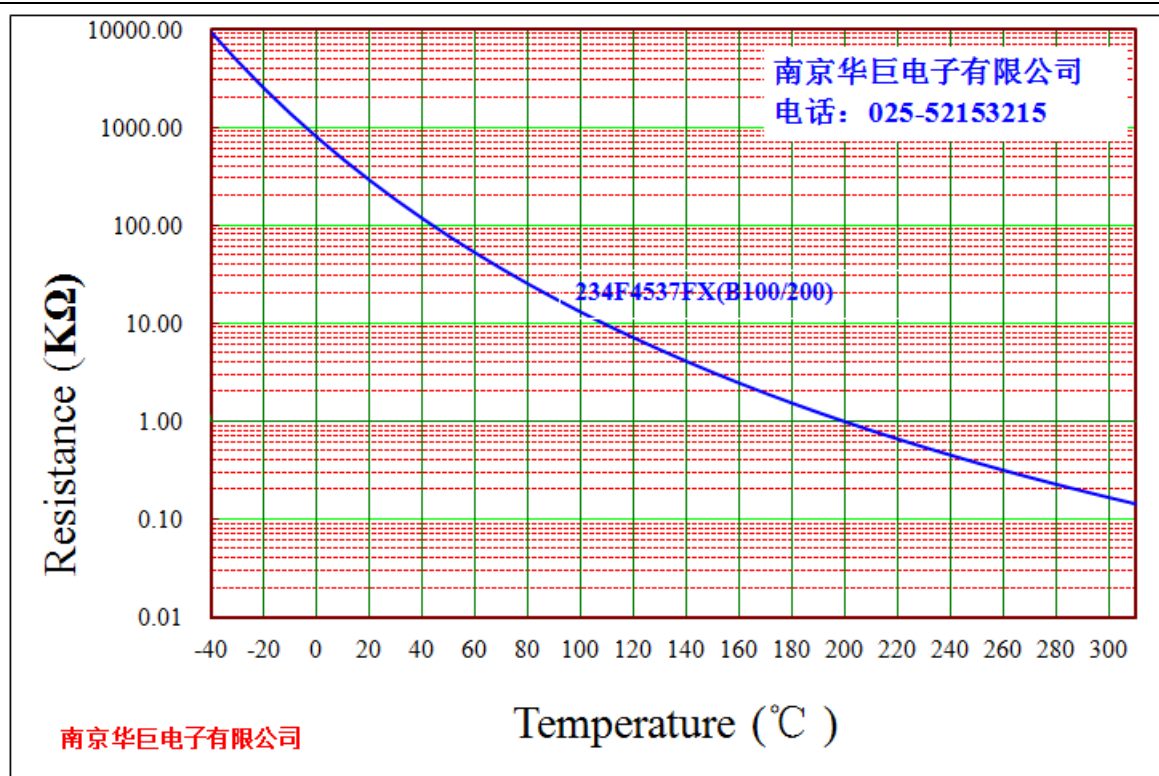
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181.0	1.4193	1.5076	1.6012	-2.26	-5.85	6.21	-2.75	2.59
182.0	1.3874	1.4740	1.5658	-2.25	-5.88	6.23	-2.77	2.61
183.0	1.3562	1.4412	1.5314	-2.24	-5.90	6.26	-2.79	2.63
184.0	1.3259	1.4093	1.4978	-2.24	-5.92	6.28	-2.81	2.65
185.0	1.2964	1.3782	1.4651	-2.23	-5.94	6.30	-2.83	2.67
186.0	1.2676	1.3479	1.4332	-2.22	-5.96	6.33	-2.85	2.69
187.0	1.2395	1.3184	1.4021	-2.21	-5.98	6.35	-2.87	2.71
188.0	1.2122	1.2896	1.3718	-2.20	-6.00	6.37	-2.89	2.73
189.0	1.1856	1.2616	1.3423	-2.19	-6.02	6.40	-2.92	2.75
190.0	1.1597	1.2343	1.3135	-2.19	-6.04	6.42	-2.94	2.76
191.0	1.1344	1.2076	1.2855	-2.18	-6.06	6.44	-2.96	2.78
192.0	1.1098	1.1817	1.2581	-2.17	-6.08	6.47	-2.98	2.80
193.0	1.0858	1.1564	1.2314	-2.16	-6.10	6.49	-3.00	2.82
194.0	1.0624	1.1317	1.2054	-2.15	-6.12	6.51	-3.02	2.84
195.0	1.0396	1.1076	1.1800	-2.15	-6.14	6.54	-3.05	2.86
196.0	1.0173	1.0842	1.1553	-2.14	-6.16	6.56	-3.07	2.88
197.0	0.9956	1.0613	1.1311	-2.13	-6.18	6.58	-3.09	2.90
198.0	0.9745	1.0389	1.1076	-2.12	-6.20	6.60	-3.11	2.92
199.0	0.9539	1.0172	1.0846	-2.11	-6.22	6.63	-3.13	2.94
200.0	0.9337	0.9959	1.0621	-2.11	-6.24	6.65	-3.16	2.96
201.0	0.9141	0.9752	1.0403	-2.10	-6.26	6.67	-3.18	2.98
202.0	0.8950	0.9550	1.0189	-2.09	-6.28	6.69	-3.20	3.00
203.0	0.8763	0.9353	0.9981	-2.08	-6.30	6.72	-3.22	3.02
204.0	0.8581	0.9160	0.9777	-2.08	-6.32	6.74	-3.25	3.05
205.0	0.8403	0.8972	0.9579	-2.07	-6.34	6.76	-3.27	3.07
206.0	0.8230	0.8789	0.9385	-2.06	-6.36	6.78	-3.29	3.09
207.0	0.8061	0.8610	0.9196	-2.05	-6.38	6.80	-3.31	3.11
208.0	0.7895	0.8435	0.9011	-2.05	-6.40	6.83	-3.34	3.13
209.0	0.7734	0.8265	0.8831	-2.04	-6.42	6.85	-3.36	3.15
210.0	0.7577	0.8098	0.8654	-2.03	-6.44	6.87	-3.38	3.17
211.0	0.7423	0.7935	0.8482	-2.02	-6.46	6.89	-3.40	3.19
212.0	0.7273	0.7777	0.8314	-2.02	-6.48	6.91	-3.43	3.21
213.0	0.7127	0.7622	0.8150	-2.01	-6.49	6.93	-3.45	3.23
214.0	0.6984	0.7470	0.7990	-2.00	-6.51	6.96	-3.47	3.25
215.0	0.6844	0.7322	0.7833	-2.00	-6.53	6.98	-3.50	3.27
216.0	0.6708	0.7178	0.7680	-1.99	-6.55	7.00	-3.52	3.29
217.0	0.6575	0.7037	0.7531	-1.98	-6.57	7.02	-3.54	3.31
218.0	0.6444	0.6899	0.7385	-1.97	-6.59	7.04	-3.57	3.34
219.0	0.6317	0.6764	0.7242	-1.97	-6.61	7.06	-3.59	3.36
220.0	0.6193	0.6633	0.7102	-1.96	-6.62	7.08	-3.61	3.38



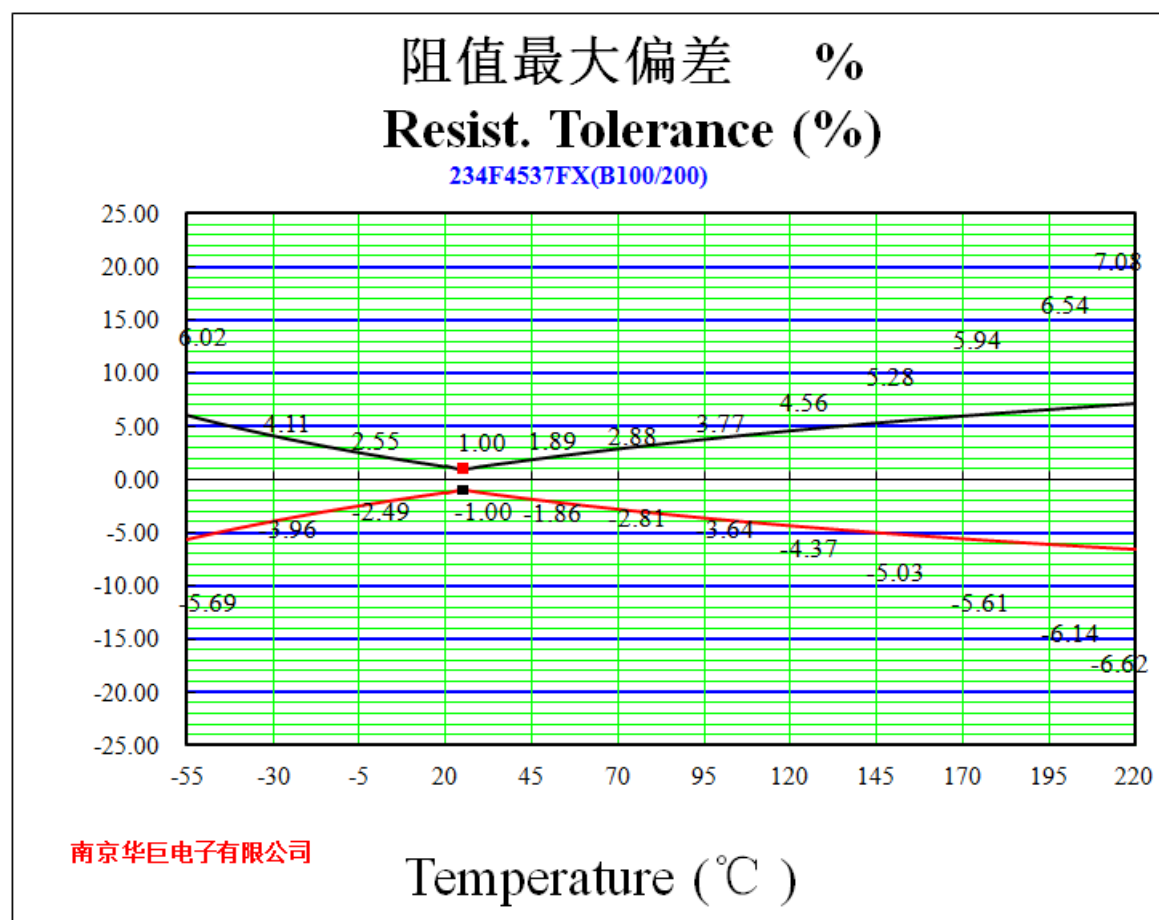
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223.0	0.5838	0.6256	0.6703	-1.94	-6.68	7.15	-3.68	3.44
224.0	0.5725	0.6136	0.6575	-1.93	-6.70	7.17	-3.71	3.46
225.0	0.5614	0.6018	0.6451	-1.93	-6.71	7.19	-3.73	3.48
226.0	0.5506	0.5904	0.6329	-1.92	-6.73	7.21	-3.75	3.51
227.0	0.5401	0.5791	0.6210	-1.91	-6.75	7.23	-3.78	3.53
228.0	0.5297	0.5682	0.6094	-1.91	-6.77	7.25	-3.80	3.55
229.0	0.5196	0.5575	0.5980	-1.90	-6.79	7.27	-3.82	3.57
230.0	0.5098	0.5470	0.5869	-1.89	-6.80	7.29	-3.85	3.59
231.0	0.5001	0.5367	0.5760	-1.89	-6.82	7.31	-3.87	3.61
232.0	0.4907	0.5267	0.5653	-1.88	-6.84	7.33	-3.90	3.64
233.0	0.4815	0.5169	0.5549	-1.87	-6.86	7.35	-3.92	3.66
234.0	0.4725	0.5073	0.5447	-1.87	-6.87	7.37	-3.95	3.68
235.0	0.4637	0.4980	0.5348	-1.86	-6.89	7.39	-3.97	3.70
236.0	0.4550	0.4888	0.5250	-1.86	-6.91	7.41	-3.99	3.72
237.0	0.4466	0.4798	0.5155	-1.85	-6.93	7.43	-4.02	3.75
238.0	0.4383	0.4711	0.5061	-1.84	-6.94	7.45	-4.04	3.77
239.0	0.4303	0.4625	0.4970	-1.84	-6.96	7.47	-4.07	3.79
240.0	0.4224	0.4541	0.4881	-1.83	-6.98	7.49	-4.09	3.81
241.0	0.4147	0.4458	0.4793	-1.82	-6.99	7.51	-4.12	3.83
242.0	0.4071	0.4378	0.4708	-1.82	-7.01	7.53	-4.14	3.86
243.0	0.3997	0.4299	0.4624	-1.81	-7.03	7.55	-4.17	3.88
244.0	0.3925	0.4222	0.4542	-1.81	-7.04	7.57	-4.19	3.90
245.0	0.3854	0.4147	0.4461	-1.80	-7.06	7.59	-4.22	3.92
246.0	0.3785	0.4073	0.4383	-1.79	-7.08	7.61	-4.24	3.95
247.0	0.3717	0.4001	0.4306	-1.79	-7.10	7.63	-4.27	3.97
248.0	0.3650	0.3930	0.4230	-1.78	-7.11	7.65	-4.29	3.99
249.0	0.3585	0.3860	0.4156	-1.78	-7.13	7.66	-4.32	4.01
250.0	0.3522	0.3793	0.4084	-1.77	-7.14	7.68	-4.34	4.04
251.0	0.3459	0.3726	0.4013	-1.76	-7.16	7.70	-4.37	4.06
252.0	0.3398	0.3661	0.3944	-1.76	-7.18	7.72	-4.39	4.08
253.0	0.3339	0.3597	0.3876	-1.75	-7.19	7.74	-4.42	4.10
254.0	0.3280	0.3535	0.3809	-1.75	-7.21	7.76	-4.44	4.13
255.0	0.3223	0.3474	0.3744	-1.74	-7.23	7.78	-4.47	4.15
256.0	0.3167	0.3414	0.3680	-1.74	-7.24	7.80	-4.49	4.17
257.0	0.3112	0.3355	0.3618	-1.73	-7.26	7.82	-4.52	4.20
258.0	0.3058	0.3298	0.3556	-1.72	-7.27	7.83	-4.54	4.22
259.0	0.3005	0.3242	0.3496	-1.72	-7.29	7.85	-4.57	4.24
260.0	0.2954	0.3187	0.3437	-1.71	-7.31	7.87	-4.60	4.27
261.0	0.2903	0.3133	0.3380	-1.71	-7.32	7.89	-4.62	4.29
262.0	0.2854	0.3080	0.3323	-1.70	-7.34	7.91	-4.65	4.31



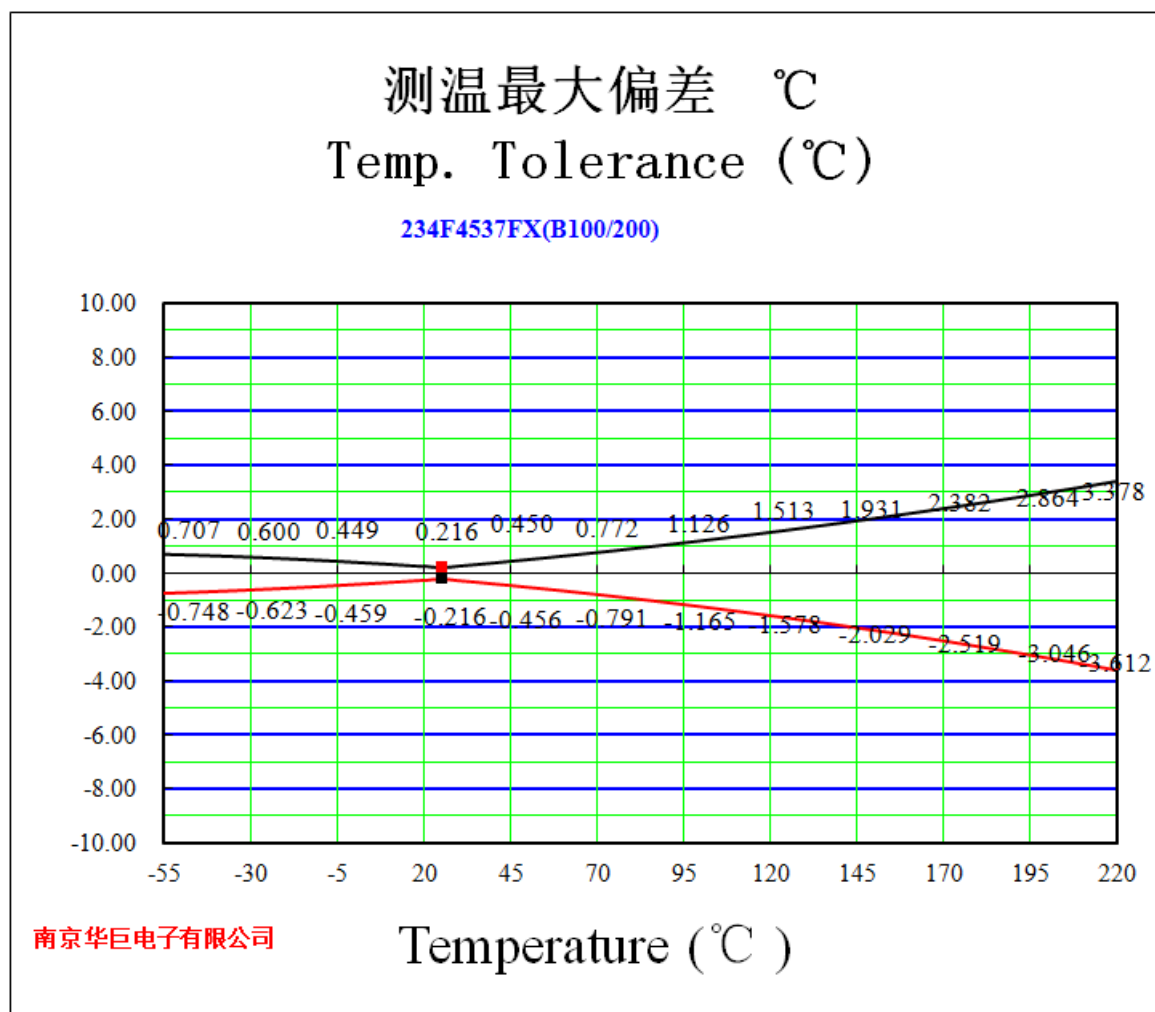
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265.0	0.2711	0.2927	0.3160	-1.69	-7.38	7.96	-4.73	4.38
266.0	0.2665	0.2878	0.3108	-1.68	-7.40	7.98	-4.75	4.41
267.0	0.2620	0.2830	0.3057	-1.67	-7.42	8.00	-4.78	4.43
268.0	0.2577	0.2783	0.3007	-1.67	-7.43	8.02	-4.80	4.45
269.0	0.2534	0.2737	0.2957	-1.66	-7.45	8.04	-4.83	4.48
270.0	0.2491	0.2692	0.2909	-1.66	-7.46	8.05	-4.86	4.50
271.0	0.2450	0.2648	0.2862	-1.65	-7.48	8.07	-4.88	4.52
272.0	0.2410	0.2605	0.2816	-1.65	-7.49	8.09	-4.91	4.55
273.0	0.2370	0.2562	0.2770	-1.64	-7.51	8.11	-4.94	4.57
274.0	0.2331	0.2521	0.2725	-1.64	-7.52	8.12	-4.96	4.60
275.0	0.2293	0.2480	0.2682	-1.63	-7.54	8.14	-4.99	4.62
276.0	0.2255	0.2440	0.2639	-1.63	-7.55	8.16	-5.02	4.64
277.0	0.2219	0.2400	0.2597	-1.62	-7.57	8.18	-5.04	4.67
278.0	0.2183	0.2362	0.2555	-1.62	-7.58	8.19	-5.07	4.69
279.0	0.2147	0.2324	0.2515	-1.61	-7.60	8.21	-5.10	4.72
280.0	0.2113	0.2287	0.2475	-1.61	-7.61	8.23	-5.12	4.74
281.0	0.2079	0.2251	0.2436	-1.60	-7.63	8.25	-5.15	4.76
282.0	0.2046	0.2215	0.2398	-1.60	-7.64	8.26	-5.18	4.79
283.0	0.2013	0.2180	0.2360	-1.59	-7.66	8.28	-5.21	4.81
284.0	0.1981	0.2146	0.2324	-1.59	-7.67	8.30	-5.23	4.84
285.0	0.1950	0.2112	0.2287	-1.58	-7.69	8.32	-5.26	4.86
286.0	0.1919	0.2079	0.2252	-1.58	-7.70	8.33	-5.29	4.89
287.0	0.1888	0.2046	0.2217	-1.57	-7.72	8.35	-5.31	4.91
288.0	0.1859	0.2014	0.2183	-1.57	-7.73	8.37	-5.34	4.94
289.0	0.1830	0.1983	0.2149	-1.56	-7.74	8.38	-5.37	4.96
290.0	0.1801	0.1953	0.2117	-1.56	-7.76	8.40	-5.40	4.99
291.0	0.1773	0.1922	0.2084	-1.55	-7.77	8.42	-5.43	5.01
292.0	0.1745	0.1893	0.2053	-1.55	-7.79	8.43	-5.45	5.03
293.0	0.1718	0.1864	0.2021	-1.54	-7.80	8.45	-5.48	5.06
294.0	0.1692	0.1835	0.1991	-1.54	-7.82	8.47	-5.51	5.08
295.0	0.1666	0.1807	0.1961	-1.53	-7.83	8.48	-5.54	5.11
296.0	0.1640	0.1780	0.1931	-1.53	-7.84	8.50	-5.56	5.13
297.0	0.1615	0.1753	0.1902	-1.52	-7.86	8.52	-5.59	5.16
298.0	0.1591	0.1727	0.1874	-1.52	-7.87	8.53	-5.62	5.18
299.0	0.1567	0.1701	0.1846	-1.51	-7.89	8.55	-5.65	5.21
300.0	0.1543	0.1675	0.1819	-1.51	-7.90	8.57	-5.68	5.24



附: 图1



附: 图2



附：图3

3、包装

产品放入塑料袋内，并放入质检证后塑封；

包装箱内附有检验报告、送货单。

其中包含下列项目：

- a) 公司商标、名称
- b) 生产批号
- c) 产品代码



d) 数量

e) 生产日期

