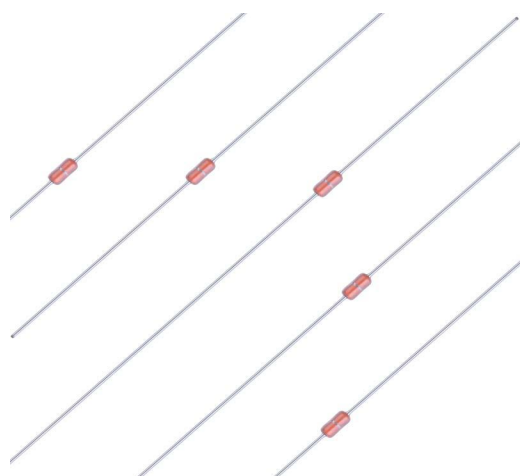


# 海谷科技

## 热敏电阻

MF58A103F3435 产品手册



## 1、Scope

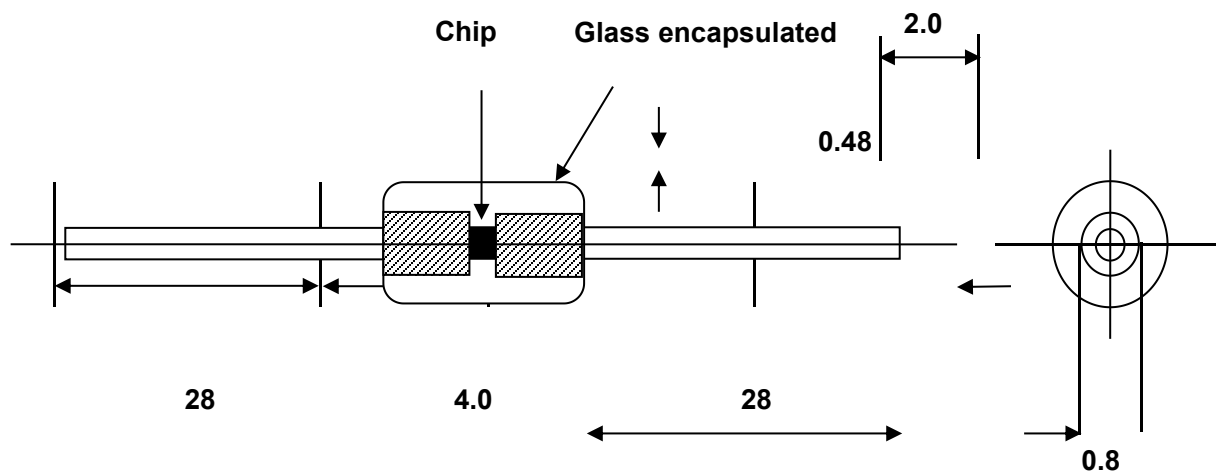
This specification deals with shape, dimensions, characteristics, inspection standard etc.

本说明包括产品外形尺寸、性能及出厂检验标准，产品型号、规格。

## 2、Specifications

MF58A103F3435					
NTC Thermistor	Resistance value		B value		
		<b>10KΩ</b>	<b>±1%</b>	<b>3435</b>	<b>±1%</b>

## 3、Shape and dimension 外形尺寸(Unit: mm)



## 4、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	<b>R25</b>	25±0.05°C	9.9	10.0	10.1	kΩ
b	Bvalue B 值	<b>B25/85</b>	$B = \left( \frac{1}{T_1} - \frac{1}{T_2} \right) \ln \frac{RT_1}{RT_2}$		3435		k
c	Insulation resistance 绝缘电阻	/	500VDC	100	/	/	MΩ
d	Thermal time constant 热时间常数	<b>τ</b>	in still air 静止空气中	/	/	20	sec
e	Thermal dissipation constant 热耗散系数	<b>δ</b>	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

## 5、Reliability 可靠性

	Item 项目	Specification 技术说明	Method of Examination 测试条件及方法
<b>5.1</b>	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
<b>5.2</b>	Low Temp. storage 低温存放		After storage at -40°C for 1000hrs -40°C 环境中放置 1000 小时
<b>5.3</b>	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
<b>5.4</b>	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
<b>5.5</b>	Vibration 振动	* no visible damage 无损伤 *ΔR25/ R25≤±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
<b>5.6</b>	Pulling 引线强度	* no visible damage 无损伤	After appling a force of 9.8N in the axial direction of thermistor, and maintain the force

		* $\Delta R_{25}/R_{25} \leq \pm 2\%$	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。

## 7、Packing 包装

Packing shall be done not to cause damage or soil during delivery 包装方式必须保证在运输过程中避免损伤及污染。

**TEMPERATURE VS RESISTANCE TABLE****Resistance 10k Ohms at 25deg. C****Resistance Tolerance + / - 1 %****B Value 3435K at 25/85deg. C****B Value Tolerance + / - 1 %**

Temp. (deg. C)	Rmax (k Ohms)	Rnor (k Ohms)	Rmin (k Ohms)
-50	386.7335	369.3315	352.6771
-49	363.3944	347.2565	331.8021
-48	341.6284	326.6568	312.3101
-47	321.3188	307.4238	294.1002
-46	302.3586	289.4577	277.0795
-45	284.6491	272.6667	261.1627
-44	268.0997	256.9663	246.2706
-43	252.6266	242.2784	232.3307
-42	238.1529	228.5310	219.2758
-41	224.6074	215.6578	207.0440
-40	211.9247	203.5975	195.5780
-39	200.0443	192.2937	184.8250
-38	188.9100	181.6939	174.7359
-37	178.4706	171.7498	165.2656
-36	168.6779	162.4166	156.3721
-35	159.4879	153.6530	148.0167
-34	150.8598	145.4205	140.1634
-33	142.7555	137.6837	132.7789
-32	135.1400	130.4096	125.8321
-31	127.9808	123.5676	119.2946
-30	121.2477	117.1293	113.1395
-29	114.9127	111.0685	107.3421
-28	108.9498	105.3606	101.8795
-27	103.3349	99.9830	96.7302
-26	98.0454	94.9145	91.8744
-25	93.0607	90.1355	87.2936
-24	88.3612	85.6277	82.9704
-23	83.9290	81.3740	78.8889
-22	79.7471	77.3586	75.0341
-21	75.8000	73.5667	71.3920
-20	72.0731	69.9845	67.9496
-19	68.5528	66.5992	64.6949
-18	65.2264	63.3989	61.6163
-17	62.0821	60.3722	58.7035
-16	59.1089	57.5088	55.9464
-15	56.2963	54.7988	53.3358
-14	53.6349	52.2332	50.8631
-13	51.1157	49.8035	48.5202
-12	48.7301	47.5016	46.2995

-11	46.4703	45.3202	44.1940
-10	44.3291	43.2521	42.1971
-9	42.2994	41.2909	40.3024
-8	40.3748	39.4304	38.5042
-7	38.5494	37.6649	36.7970
-6	36.8173	35.9890	35.1757
-5	35.1734	34.3976	33.6355
-4	33.6127	32.8860	32.1719
-3	32.1304	31.4498	30.7806
-2	30.7222	30.0848	29.4577
-1	29.3839	28.7870	28.1994
0	28.1118	27.5528	27.0022
1	26.9022	26.3787	25.8628
2	25.7516	25.2614	24.7781
3	24.6569	24.1980	23.7452
4	23.6150	23.1854	22.7613
5	22.6231	22.2210	21.8238
6	21.6786	21.3022	20.9303
7	20.7789	20.4267	20.0785
8	19.9216	19.5922	19.2662
9	19.1046	18.7964	18.4914
10	18.3257	18.0375	17.7521
11	17.5829	17.3135	17.0465
12	16.8744	16.6226	16.3730
13	16.1984	15.9632	15.7298
14	15.5532	15.3336	15.1155
15	14.9374	14.7323	14.5285
16	14.3493	14.1579	13.9677
17	13.7876	13.6091	13.4315
18	13.2510	13.0846	12.9189
19	12.7382	12.5831	12.4287
20	12.2481	12.1037	11.9598
21	11.7794	11.6451	11.5111
22	11.3313	11.2063	11.0816
23	10.9026	10.7865	10.6706
24	10.4925	10.3847	10.2770
25	10.1000	10.0000	9.9000
26	9.7316	9.6316	9.5317
27	9.3786	9.2788	9.1791
28	9.0403	8.9407	8.8414
29	8.7160	8.6168	8.5180
30	8.4050	8.3063	8.2080
31	8.1068	8.0087	7.9110
32	7.8207	7.7233	7.6263
33	7.5462	7.4496	7.3534
34	7.2828	7.1869	7.0916

35	7.0300	6.9350	6.8405
36	6.7873	6.6931	6.5997
37	6.5542	6.4610	6.3685
38	6.3303	6.2381	6.1466
39	6.1152	6.0241	5.9337
40	5.9085	5.8184	5.7291
41	5.7099	5.6209	5.5327
42	5.5190	5.4311	5.3441
43	5.3354	5.2487	5.1628
44	5.1589	5.0733	4.9886
45	4.9891	4.9046	4.8211
46	4.8258	4.7425	4.6601
47	4.6686	4.5865	4.5054
48	4.5173	4.4364	4.3565
49	4.3717	4.2920	4.2133
50	4.2315	4.1530	4.0755
51	4.0966	4.0192	3.9429
52	3.9666	3.8904	3.8153
53	3.8413	3.7663	3.6924
54	3.7207	3.6468	3.5741
55	3.6044	3.5317	3.4602
56	3.4923	3.4208	3.3505
57	3.3843	3.3140	3.2448
58	3.2801	3.2110	3.1429
59	3.1797	3.1117	3.0448
60	3.0828	3.0159	2.9502
61	2.9893	2.9236	2.8590
62	2.8992	2.8345	2.7710
63	2.8122	2.7486	2.6862
64	2.7282	2.6657	2.6044
65	2.6471	2.5857	2.5254
66	2.5688	2.5085	2.4493
67	2.4932	2.4339	2.3758
68	2.4203	2.3620	2.3048
69	2.3497	2.2925	2.2363
70	2.2816	2.2253	2.1702
71	2.2158	2.1605	2.1064
72	2.1522	2.0979	2.0447
73	2.0907	2.0373	1.9851
74	2.0313	1.9788	1.9276
75	1.9738	1.9223	1.8719
76	1.9182	1.8676	1.8182
77	1.8645	1.8148	1.7662
78	1.8125	1.7637	1.7160
79	1.7622	1.7142	1.6674
80	1.7135	1.6664	1.6205

81	1.6664	1.6202	1.5750
82	1.6208	1.5754	1.5311
83	1.5767	1.5321	1.4886
84	1.5340	1.4901	1.4474
85	1.4926	1.4496	1.4076
86	1.4525	1.4103	1.3691
87	1.4137	1.3722	1.3318
88	1.3761	1.3354	1.2957
89	1.3397	1.2997	1.2607
90	1.3044	1.2651	1.2268
91	1.2702	1.2316	1.1940
92	1.2371	1.1991	1.1622
93	1.2049	1.1677	1.1314
94	1.1738	1.1372	1.1016
95	1.1436	1.1076	1.0727
96	1.1143	1.0790	1.0447
97	1.0859	1.0512	1.0175
98	1.0583	1.0242	0.9912
99	1.0316	0.9981	0.9656
100	1.0056	0.9728	0.9408
101	0.9805	0.9482	0.9168
102	0.9560	0.9243	0.8935
103	0.9323	0.9011	0.8709
104	0.9093	0.8787	0.8490
105	0.8869	0.8569	0.8277
106	0.8652	0.8357	0.8070
107	0.8442	0.8151	0.7870
108	0.8237	0.7952	0.7675
109	0.8038	0.7758	0.7486
110	0.7845	0.7569	0.7303
111	0.7657	0.7386	0.7125
112	0.7475	0.7209	0.6951
113	0.7298	0.7036	0.6783
114	0.7125	0.6868	0.6620
115	0.6958	0.6705	0.6461
116	0.6795	0.6547	0.6307
117	0.6637	0.6393	0.6157
118	0.6483	0.6243	0.6012
119	0.6333	0.6098	0.5870
120	0.6188	0.5956	0.5733
121	0.6046	0.5819	0.5599
122	0.5909	0.5685	0.5469
123	0.5775	0.5554	0.5342
124	0.5644	0.5428	0.5219
125	0.5517	0.5305	0.5100