

# G100K4000 Radial Glass Thermistor



- Glass hermetic encapsulation with high resistance to humid environments
- Wide operating temperature range
- High stability and performance in harsh environmental conditions
- Fast response time
- RoHS Compliant

## DESCRIPTION

The NTC Chip hermetically sealed in a glass encapsulation package

## FEATURES

- Hermetically sealed glass package
- Proven Stability and Reliability
- Available in  $\pm 1\%$ ,  $\pm 2\%$ ,  $\pm 3\%$ ,  $\pm 5\%$  and  $\pm 10\%$  tolerance @  $+25^\circ\text{C}$
- Fast time response
- Low cost
- Temperature range  $-40^\circ\text{C}$  to  $+250^\circ\text{C}$

## APPLICATIONS

- Air conditioning systems
- Refrigeration control
- Assembly into probes for a wide variety of applications
- In environments where thermal shock and humidity are present
- Hot water boiler systems
- Sensor for engine temperature control

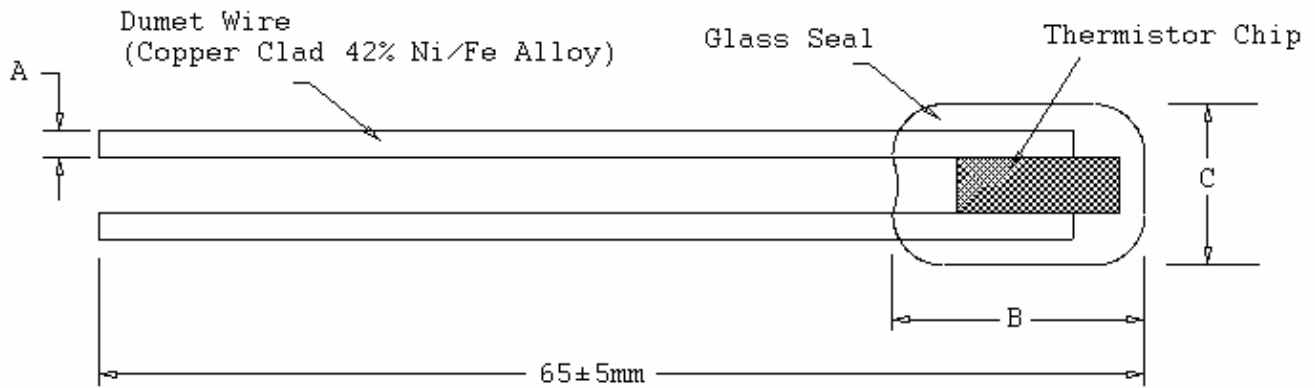
## PERFORMANCE SPECS

Parameters	Units	Value
Resistance @ $+25^\circ\text{C}$	Ohms	100,000
Resistance tolerance @ $25^\circ\text{C}$	%	$\pm 1$
Beta Value 25/85	K	4000
Tolerance on Beta Value 25/85	%	$\pm 2$
Series A Dissipation Constant in still air	mW/ $^\circ\text{C}$	1.3
Series B Dissipation Constant in still air	mW/ $^\circ\text{C}$	0.8
Series C Dissipation Constant in still air	mW/ $^\circ\text{C}$	0.5
Series A Time response in Liquids	Seconds	0.9~1.1
Series B Time response in Liquids	Seconds	0.3~0.4
Series C Time response in Liquids	Seconds	0.18~0.2

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Reliability Tests	Standard	Test Condition	Delta R
Storage in Dry Heat	IEC 60068-2-2	Storage temperature: +250°C Duration: 1000 hours	< 3%
Storage in Damp Heat	IEC 60068-2-3	Temperature of air is 50°C & RH 95% Duration: 56 days.	< 2%
Rapid Temperature Cycling	IEC 60068-2-14	Lower Test Temperature -55°C Upper Test Temperature +200°C Number of Cycles 1000	< 2%

## MECHANICAL DETAILS



Dimensions			
	A	B	C
Series A Thermistor	0.3mm	4mm Max	2.5mm Max
Series B Thermistor	0.2mm	3mm Max	1.5mm Max
Series C Thermistor	0.15mm	2mm Max	0.9mm Max

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## RESISTANCE V TEMPERATURE TABLE

Temp. °C	KOhms
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-40	3216
-39	3016
-38	2829
-37	2655
-36	2493
-35	2342
-34	2200
-33	2068
-32	1944
-31	1829
-30	1721
-29	1620
-28	1526
-27	1437
-26	1354
-25	1277
-24	1204
-23	1136
-22	1072
-21	1012
-20	955.4
-19	902.5
-18	852.8
-17	806.2
-16	762.3
-15	721.1
-14	682.4
-13	645.9
-12	611.6
-11	579.3
-10	548.8
-9	520.2
-8	493.2
-7	467.7
-6	443.7
-5	421.1
-4	399.7
-3	379.5
-2	360.5
-1	342.5
0	325.5
1	309.5

Temp. °C	KOhms
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2	294.3
3	280
4	266.4
5	253.6
6	241.4
7	229.9
8	219
9	208.7
10	198.9
11	189.7
12	180.9
13	172.5
14	164.6
15	157.1
16	150
17	143.3
18	136.8
19	130.7
20	125
21	119.4
22	114.2
23	109.2
24	104.5
<b>25</b>	<b>100</b>
26	95.71
27	91.63
28	87.75
29	84.05
30	80.53
31	77.17
32	73.97
33	70.92
34	68.01
35	65.23
36	62.58
37	60.06
38	57.65
39	55.34
40	53.14
41	51.04
42	49.04
43	47.12

Temp. °C	KOhms
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44	45.29
45	43.54
46	41.86
47	40.26
48	38.73
49	37.26
50	35.86
51	34.51
52	33.23
53	31.99
54	30.81
55	29.68
56	28.6
57	27.56
58	26.56
59	25.61
60	24.69
61	23.82
62	22.97
63	22.16
64	21.39
65	20.64
66	19.93
67	19.24
68	18.58
69	17.94
70	17.33
71	16.75
72	16.18
73	15.64
74	15.12
75	14.62
76	14.14
77	13.67
78	13.23
79	12.8
80	12.38
81	11.99
82	11.6
83	11.23
84	10.88
85	10.53

Temp. °C	KOhms
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86	10.2
87	9.885
88	9.578
89	9.282
90	8.996
91	8.72
92	8.455
93	8.198
94	7.951
95	7.712
96	7.481
97	7.259
98	7.044
99	6.836
100	6.636
101	6.442
102	6.255
103	6.074
104	5.899
105	5.73
106	5.567
107	5.409
108	5.256
109	5.109
110	4.966
111	4.827
112	4.694
113	4.564
114	4.439
115	4.317
116	4.2
117	4.086
118	3.976
119	3.869
120	3.766
121	3.666
122	3.569
123	3.475
124	3.384
125	3.295
126	3.21
127	3.127

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128	3.046
129	2.968
130	2.892
131	2.819
132	2.747
133	2.678
134	2.611
135	2.546
136	2.483
137	2.421
138	2.362
139	2.304
140	2.247
141	2.193
142	2.14
143	2.088
144	2.038
145	1.989
146	1.942
147	1.896
148	1.851
149	1.808
150	1.766
151	1.725
152	1.685
153	1.646
154	1.608
155	1.571
156	1.535
157	1.5
158	1.467

159	1.434
160	1.402
161	1.37
162	1.34
163	1.31
164	1.281
165	1.253
166	1.226
167	1.199
168	1.173
169	1.148
170	1.123
171	1.099
172	1.076
173	1.053
174	1.031
175	1.009
176	0.988
177	0.9674
178	0.9473
179	0.9277
180	0.9086
181	0.89
182	0.8718
183	0.854
184	0.8367
185	0.8198
186	0.8034
187	0.7873
188	0.7716
189	0.7562

190	0.7413
191	0.7267
192	0.7124
193	0.6985
194	0.6849
195	0.6716
196	0.6586
197	0.6459
198	0.6336
199	0.6215
200	0.6097
201	0.5981
202	0.5868
203	0.5758
204	0.565
205	0.5545
206	0.5442
207	0.5341
208	0.5243
209	0.5147
210	0.5052
211	0.496
212	0.487
213	0.4782
214	0.4696
215	0.4612
216	0.453
217	0.4449
218	0.437
219	0.4293
220	0.4217

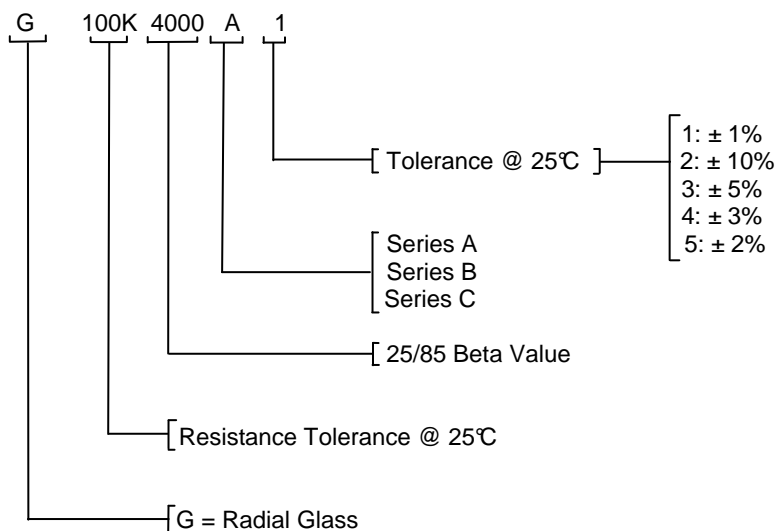
221	0.4143
222	0.4071
223	0.4
224	0.3931
225	0.3863
226	0.3797
227	0.3731
228	0.3668
229	0.3605
230	0.3544
231	0.3484
232	0.3426
233	0.3368
234	0.3312
235	0.3257
236	0.3203
237	0.315
238	0.3098
239	0.3048
240	0.2998
241	0.2949
242	0.2901
243	0.2854
244	0.2808
245	0.2763
246	0.2719
247	0.2676
248	0.2634
249	0.2592
250	0.2551

# G100K4000 Radial Glass Thermistor

## ORDERING INFORMATION

Part Number	Description	$\Omega$ @25°C	MOQ
G100K4000A1	Radial Glass Thermistor Series A	100,000	10,000*
G100K4000B1	Radial Glass Thermistor Series B	100,000	10,000*
G100K4000C1	Radial Glass Thermistor Series C	100,000	10,000*

\* For quantities less than Minimum Order Quantity – Contact Distribution



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