

# G10K3435 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

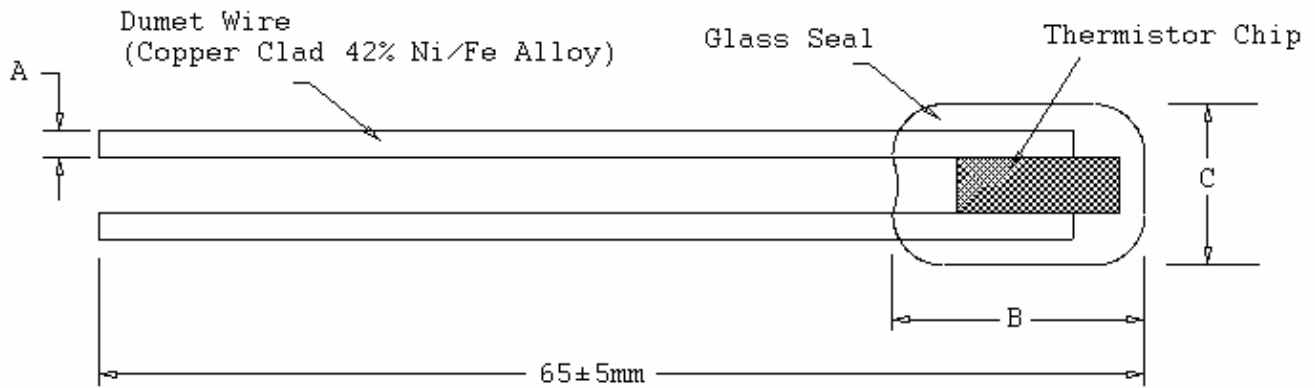
## PERFORMANCE SPECS

Parameters	Units	Value
Resistance @ $+25^\circ\text{C}$	Ohms	10,000
Resistance tolerance @ $25^\circ\text{C}$	%	$\pm 1$
Beta Value 25/85	K	3435
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	Temp. °C	KOhms	Temp. °C	KOhms	Temp. °C	KOhms
-40	186	2	25.11	44	5.061	86	1.39
-39	176.4	3	24.07	45	4.891	87	1.352
-38	167.4	4	23.07	46	4.729	88	1.315
-37	158.8	5	22.13	47	4.572	89	1.28
-36	150.7	6	21.22	48	4.421	90	1.245
-35	143.1	7	20.36	49	4.276	91	1.212
-34	135.9	8	19.53	50	4.137	92	1.18
-33	129.1	9	18.75	51	4.003	93	1.149
-32	122.7	10	18	52	3.873	94	1.118
-31	116.6	11	17.28	53	3.749	95	1.089
-30	110.8	12	16.6	54	3.629	96	1.06
-29	105.4	13	15.94	55	3.513	97	1.033
-28	100.2	14	15.32	56	3.402	98	1.006
-27	95.37	15	14.72	57	3.295	99	0.9801
-26	90.76	16	14.15	58	3.192	100	0.9549
-25	86.39	17	13.6	59	3.092	101	0.9305
-24	82.26	18	13.08	60	2.996	102	0.9069
-23	78.35	19	12.58	61	2.903	103	0.8839
-22	74.64	20	12.1	62	2.814	104	0.8616
-21	71.12	21	11.64	63	2.728	105	0.84
-20	67.79	22	11.21	64	2.645	106	0.819
-19	64.63	23	10.79	65	2.565	107	0.7987
-18	61.64	24	10.38	66	2.487	108	0.7789
-17	58.79	<b>25</b>	<b>10</b>	67	2.413	109	0.7597
-16	56.1	26	9.631	68	2.341	110	0.7411
-15	53.53	27	9.278	69	2.271	111	0.723
-14	51.1	28	8.94	70	2.204	112	0.7054
-13	48.8	29	8.615	71	2.139	113	0.6883
-12	46.6	30	8.304	72	2.076	114	0.6718
-11	44.52	31	8.006	73	2.016	115	0.6556
-10	42.54	32	7.72	74	1.957	116	0.64
-9	40.66	33	7.445	75	1.901	117	0.6248
-8	38.87	34	7.182	76	1.846	118	0.61
-7	37.17	35	6.929	77	1.794	119	0.5956
-6	35.55	36	6.687	78	1.743	120	0.5817
-5	34.01	37	6.454	79	1.693	121	0.5681
-4	32.55	38	6.23	80	1.645	122	0.5549
-3	31.15	39	6.015	81	1.599	123	0.542
-2	29.82	40	5.809	82	1.555	124	0.5295
-1	28.56	41	5.611	83	1.511	125	0.5174
0	27.35	42	5.42	84	1.47	126	0.5056
1	26.2	43	5.237	85	1.429	127	0.4941

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128	0.4829
129	0.472
130	0.4614
131	0.4511
132	0.4411
133	0.4313
134	0.4218
135	0.4125
136	0.4035
137	0.3947
138	0.3862
139	0.3778
140	0.3697
141	0.3618
142	0.3541
143	0.3466
144	0.3392
145	0.3321
146	0.3252
147	0.3184
148	0.3118
149	0.3053
150	0.299
151	0.2929
152	0.2869
153	0.2811
154	0.2754
155	0.2698
156	0.2644
157	0.2591
158	0.2539

159	0.2489
160	0.244
161	0.2392
162	0.2345
163	0.2299
164	0.2255
165	0.2211
166	0.2168
167	0.2127
168	0.2086
169	0.2046
170	0.2007
171	0.197
172	0.1932
173	0.1896
174	0.1861
175	0.1826
176	0.1793
177	0.1759
178	0.1727
179	0.1696
180	0.1665
181	0.1634
182	0.1605
183	0.1576
184	0.1548
185	0.152
186	0.1493
187	0.1467
188	0.1441
189	0.1415

190	0.1391
191	0.1366
192	0.1343
193	0.1319
194	0.1297
195	0.1274
196	0.1253
197	0.1231
198	0.121
199	0.119
200	0.117
201	0.115
202	0.1131
203	0.1112
204	0.1094
205	0.1076
206	0.1058
207	0.1041
208	0.1024
209	0.1007
210	0.0991
211	0.0975
212	0.0959
213	0.0944
214	0.0929
215	0.0914
216	0.0899
217	0.0885
218	0.0871
219	0.0858
220	0.0844

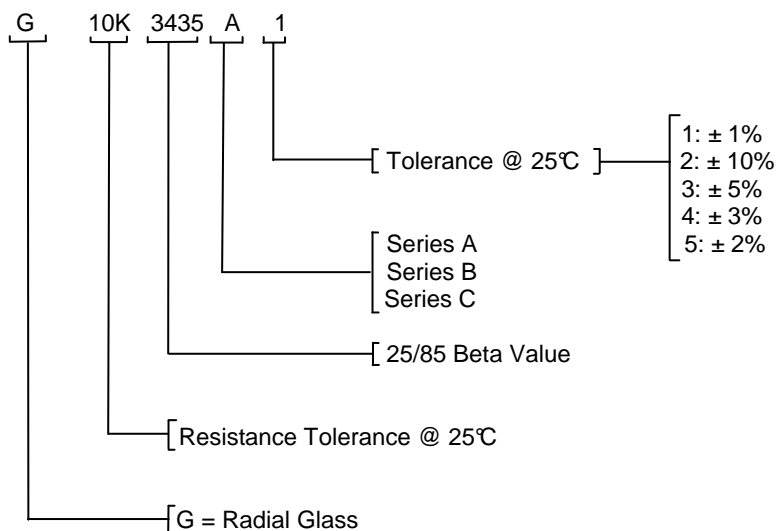
221	0.0831
222	0.0818
223	0.0806
224	0.0793
225	0.0781
226	0.0769
227	0.0757
228	0.0746
229	0.0735
230	0.0724
231	0.0713
232	0.0702
233	0.0692
234	0.0681
235	0.0671
236	0.0661
237	0.0652
238	0.0642
239	0.0633
240	0.0624
241	0.0615
242	0.0606
243	0.0597
244	0.0589
245	0.058
246	0.0572
247	0.0564
248	0.0556
249	0.0548
250	0.054

# G10K3435 Radial Glass Thermistor

## ORDERING INFORMATION

Part Number	Description	$\Omega$ @25°C	MOQ
G10K3435A1	Radial Glass Thermistor Series A	10,000	10,000*
G10K3435B1	Radial Glass Thermistor Series B	10,000	10,000*
G10K3435C1	Radial Glass Thermistor Series C	10,000	10,000*

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



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