

G10K3976 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°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

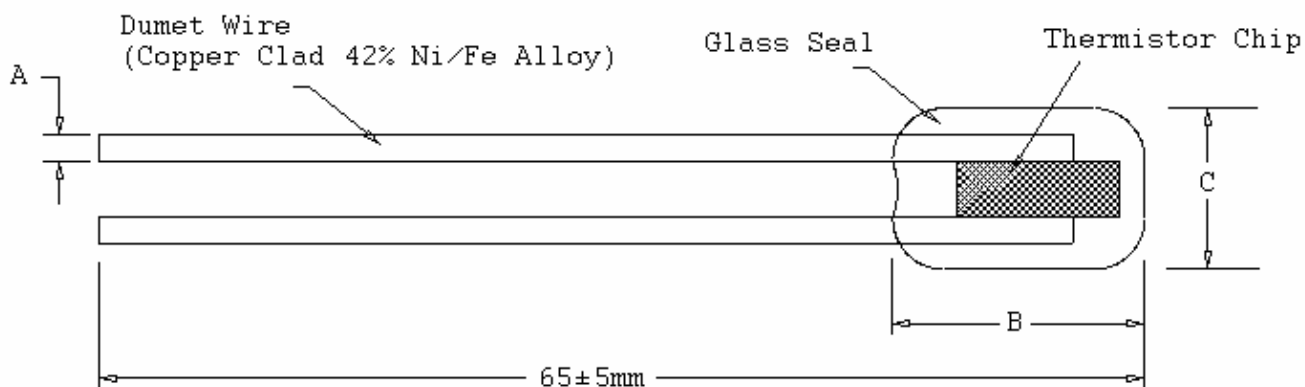
PERFORMANCE SPECS

Parameters	Units	Value
Resistance @ $+25^\circ\text{C}$	Ohms	10,000
Resistance tolerance @ 25°C	%	± 1
Beta Value 25/85	K	3976
Tolerance on Beta Value 25/85	%	± 2
Series A Dissipation Constant in still air	$\text{mW}/^\circ\text{C}$	1.3
Series B Dissipation Constant in still air	$\text{mW}/^\circ\text{C}$	0.8
Series C Dissipation Constant in still air	$\text{mW}/^\circ\text{C}$	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

G10K3976 Radial Glass Thermistor

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	337.1	2	29.53	44	4.542	86	1.039
-39	315.5	3	28.08	45	4.367	87	1.007
-38	295.4	4	26.71	46	4.2	88	0.9766
-37	276.7	5	25.41	47	4.041	89	0.9468
-36	259.3	6	24.19	48	3.888	90	0.9181
-35	243.2	7	23.03	49	3.742	91	0.8904
-34	228.1	8	21.93	50	3.602	92	0.8637
-33	214	9	20.9	51	3.468	93	0.8379
-32	200.9	10	19.91	52	3.339	94	0.813
-31	188.7	11	18.98	53	3.217	95	0.789
-30	177.3	12	18.1	54	3.099	96	0.7658
-29	166.7	13	17.26	55	2.986	97	0.7434
-28	156.7	14	16.47	56	2.878	98	0.7217
-27	147.5	15	15.72	57	2.774	99	0.7008
-26	138.8	16	15	58	2.675	100	0.6806
-25	130.7	17	14.33	59	2.58	101	0.661
-24	123.1	18	13.68	60	2.488	102	0.6421
-23	116	19	13.07	61	2.401	103	0.6239
-22	109.3	20	12.49	62	2.317	104	0.6062
-21	103.1	21	11.94	63	2.236	105	0.5892
-20	97.24	22	11.42	64	2.158	106	0.5727
-19	91.77	23	10.92	65	2.084	107	0.5567
-18	86.64	24	10.45	66	2.012	108	0.5413
-17	81.82	25	10	67	1.944	109	0.5263
-16	77.3	26	9.572	68	1.878	110	0.5119
-15	73.06	27	9.164	69	1.814	111	0.4979
-14	69.08	28	8.776	70	1.753	112	0.4843
-13	65.33	29	8.407	71	1.695	113	0.4712
-12	61.82	30	8.055	72	1.639	114	0.4585
-11	58.51	31	7.72	73	1.584	115	0.4462
-10	55.4	32	7.401	74	1.532	116	0.4343
-9	52.47	33	7.097	75	1.482	117	0.4227
-8	49.72	34	6.806	76	1.434	118	0.4115
-7	47.12	35	6.53	77	1.387	119	0.4007
-6	44.68	36	6.266	78	1.343	120	0.3902
-5	42.37	37	6.014	79	1.3	121	0.38
-4	40.2	38	5.773	80	1.258	122	0.3702
-3	38.16	39	5.544	81	1.218	123	0.3606
-2	36.23	40	5.325	82	1.18	124	0.3513
-1	34.4	41	5.115	83	1.143	125	0.3423
0	32.68	42	4.915	84	1.107	126	0.3336
1	31.06	43	4.724	85	1.073	127	0.3252

G10K3976 Radial Glass Thermistor

128	0.3169
129	0.309
130	0.3013
131	0.2938
132	0.2865
133	0.2794
134	0.2725
135	0.2659
136	0.2594
137	0.2531
138	0.247
139	0.2411
140	0.2353
141	0.2297
142	0.2243
143	0.219
144	0.2139
145	0.2089
146	0.204
147	0.1993
148	0.1947
149	0.1902
150	0.1859
151	0.1817
152	0.1775
153	0.1735
154	0.1696
155	0.1658
156	0.1622
157	0.1586
158	0.1551

159	0.1517
160	0.1483
161	0.1451
162	0.142
163	0.1389
164	0.1359
165	0.133
166	0.1302
167	0.1274
168	0.1247
169	0.1221
170	0.1195
171	0.117
172	0.1146
173	0.1122
174	0.1099
175	0.1077
176	0.1055
177	0.1033
178	0.1012
179	0.0992
180	0.0972
181	0.0952
182	0.0933
183	0.0915
184	0.0897
185	0.0879
186	0.0862
187	0.0845
188	0.0829
189	0.0813

190	0.0797
191	0.0782
192	0.0767
193	0.0752
194	0.0738
195	0.0724
196	0.071
197	0.0697
198	0.0684
199	0.0671
200	0.0659
201	0.0647
202	0.0635
203	0.0623
204	0.0612
205	0.0601
206	0.059
207	0.0579
208	0.0569
209	0.0559
210	0.0549
211	0.0539
212	0.053
213	0.052
214	0.0511
215	0.0502
216	0.0494
217	0.0485
218	0.0477
219	0.0468
220	0.046

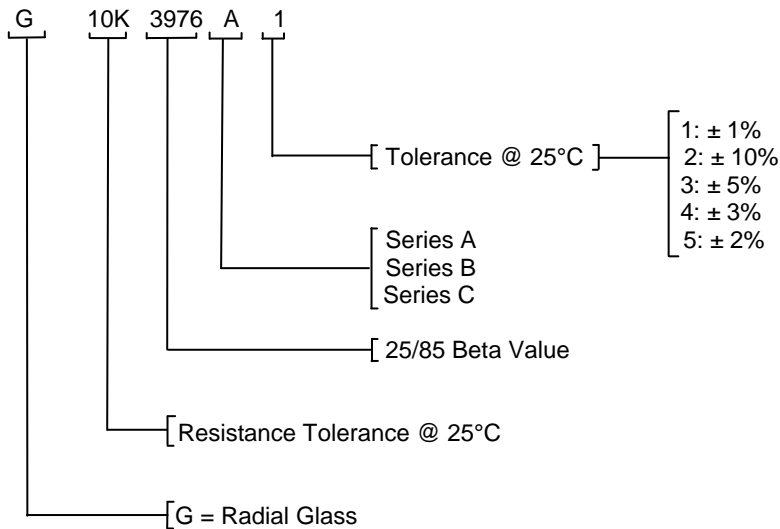
221	0.0453
222	0.0445
223	0.0437
224	0.043
225	0.0423
226	0.0416
227	0.0409
228	0.0402
229	0.0395
230	0.0389
231	0.0382
232	0.0376
233	0.037
234	0.0364
235	0.0358
236	0.0352
237	0.0347
238	0.0341
239	0.0336
240	0.033
241	0.0325
242	0.032
243	0.0315
244	0.031
245	0.0305
246	0.0301
247	0.0296
248	0.0291
249	0.0287
250	0.0283

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ORDERING INFORMATION

Part Number	Description	Ω @25°C	MOQ
G10K3976A1	Radial Glass Thermistor Series A	10,000	10,000*
G10K3976B1	Radial Glass Thermistor Series B	10,000	10,000*
G10K3976C1	Radial Glass Thermistor Series C	10,000	10,000*

* For quantities less than Minimum Order Quantity – Contact Distribution



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