

G50K3976 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

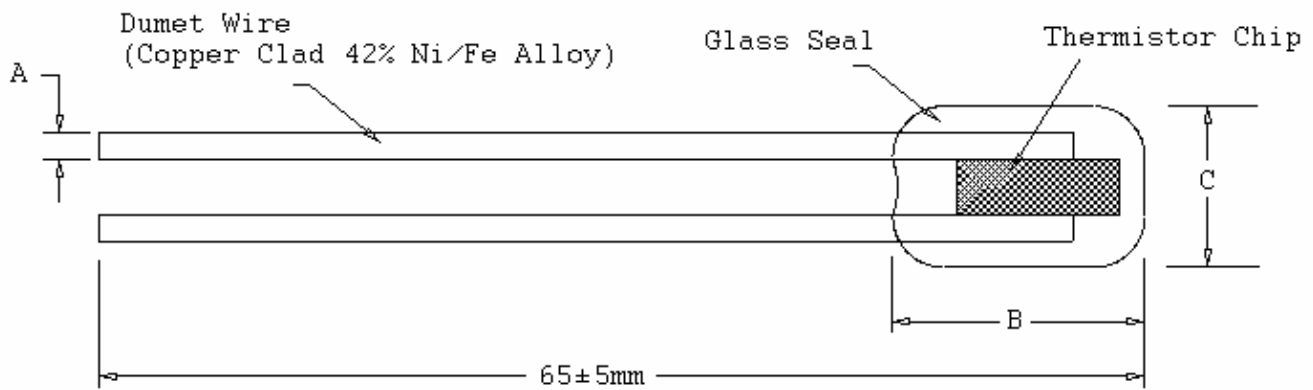
Parameters	Units	Value
Resistance @ $+25^\circ\text{C}$	Ohms	50,000
Resistance tolerance @ 25°C	%	± 1
Beta Value 25/85	K	3976
Tolerance on Beta Value 25/85	%	± 2
Series A Dissipation Constant in still air	mW/ $^\circ\text{C}$	1.3
Series B Dissipation Constant in still air	mW/ $^\circ\text{C}$	0.8
Series 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	1611	2	146.3	44	22.77	86	5.188
-39	1510	3	139.2	45	21.9	87	5.027
-38	1415	4	132.5	46	21.06	88	4.872
-37	1327	5	126.1	47	20.26	89	4.722
-36	1245	6	120.1	48	19.49	90	4.578
-35	1169	7	114.4	49	18.76	91	4.438
-34	1098	8	109	50	18.06	92	4.304
-33	1031	9	103.9	51	17.39	93	4.174
-32	969.3	10	99.07	52	16.74	94	4.049
-31	911.3	11	94.48	53	16.13	95	3.928
-30	857.2	12	90.12	54	15.54	96	3.812
-29	806.6	13	85.99	55	14.97	97	3.699
-28	759.3	14	82.07	56	14.43	98	3.59
-27	715	15	78.35	57	13.91	99	3.485
-26	673.6	16	74.82	58	13.41	100	3.384
-25	634.8	17	71.47	59	12.93	101	3.285
-24	598.5	18	68.29	60	12.47	102	3.191
-23	564.5	19	65.26	61	12.03	103	3.099
-22	532.6	20	62.39	62	11.61	104	3.01
-21	502.7	21	59.65	63	11.2	105	2.925
-20	474.6	22	57.06	64	10.81	106	2.842
-19	448.3	23	54.59	65	10.44	107	2.762
-18	423.6	24	52.23	66	10.08	108	2.684
-17	400.4	25	50	67	9.735	109	2.609
-16	378.6	26	47.87	68	9.404	110	2.536
-15	358.1	27	45.84	69	9.085	111	2.466
-14	338.8	28	43.91	70	8.778	112	2.398
-13	320.7	29	42.07	71	8.484	113	2.332
-12	303.7	30	40.32	72	8.201	114	2.269
-11	287.6	31	38.65	73	7.928	115	2.207
-10	272.5	32	37.06	74	7.666	116	2.147
-9	258.3	33	35.54	75	7.414	117	2.09
-8	244.9	34	34.09	76	7.171	118	2.034
-7	232.3	35	32.71	77	6.938	119	1.979
-6	220.4	36	31.39	78	6.713	120	1.927
-5	209.2	37	30.13	79	6.496	121	1.876
-4	198.6	38	28.93	80	6.288	122	1.826
-3	188.6	39	27.78	81	6.087	123	1.778
-2	179.1	40	26.69	82	5.894	124	1.732
-1	170.2	41	25.64	83	5.707	125	1.687
0	161.8	42	24.64	84	5.528	126	1.643
1	153.9	43	23.68	85	5.354	127	1.601

G50K3976 Radial Glass Thermistor

128	1.56
129	1.52
130	1.482
131	1.444
132	1.408
133	1.372
134	1.338
135	1.305
136	1.273
137	1.241
138	1.211
139	1.181
140	1.153
141	1.125
142	1.097
143	1.071
144	1.046
145	1.021
146	0.9965
147	0.973
148	0.9501
149	0.9279
150	0.9062
151	0.8852
152	0.8648
153	0.8449
154	0.8255
155	0.8067
156	0.7884
157	0.7705
158	0.7532

159	0.7363
160	0.7198
161	0.7038
162	0.6882
163	0.6731
164	0.6583
165	0.6439
166	0.6298
167	0.6162
168	0.6029
169	0.5899
170	0.5772
171	0.5649
172	0.5529
173	0.5412
174	0.5298
175	0.5187
176	0.5078
177	0.4972
178	0.4869
179	0.4769
180	0.467
181	0.4575
182	0.4481
183	0.439
184	0.4301
185	0.4214
186	0.413
187	0.4047
188	0.3966
189	0.3888

190	0.3811
191	0.3736
192	0.3662
193	0.3591
194	0.3521
195	0.3453
196	0.3386
197	0.3321
198	0.3257
199	0.3195
200	0.3134
201	0.3075
202	0.3017
203	0.296
204	0.2904
205	0.285
206	0.2797
207	0.2745
208	0.2695
209	0.2645
210	0.2597
211	0.2549
212	0.2503
213	0.2458
214	0.2413
215	0.237
216	0.2328
217	0.2286
218	0.2246
219	0.2206
220	0.2167

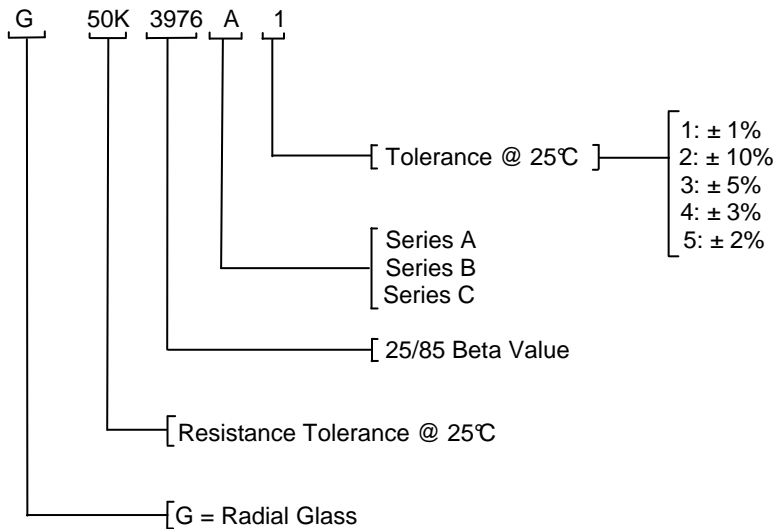
221	0.2129
222	0.2092
223	0.2055
224	0.2019
225	0.1984
226	0.195
227	0.1917
228	0.1884
229	0.1852
230	0.182
231	0.1789
232	0.1759
233	0.173
234	0.1701
235	0.1672
236	0.1645
237	0.1617
238	0.1591
239	0.1564
240	0.1539
241	0.1514
242	0.1489
243	0.1465
244	0.1441
245	0.1418
246	0.1395
247	0.1373
248	0.1351
249	0.133
250	0.1309

G50K3976 Radial Glass Thermistor

ORDERING INFORMATION

Part Number	Description	Ω @25°C	MOQ
G50K3976A1	Radial Glass Thermistor Series A	50,000	10,000*
G50K3976B1	Radial Glass Thermistor Series B	50,000	10,000*
G50K3976C1	Radial Glass Thermistor Series C	50,000	10,000*

* For quantities less than Minimum Order Quantity – Contact Distribution



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