



5K3A1 SERIES 1

Thermistor

SPECIFICATIONS

- **Thermally conductive epoxy coating**
- **Ø 2.4 mm Maximum Diameter**
- **32 AWG Alloy 180 Leads**
- **Choice of 4 temperature tolerance classifications**
- **RoHS Compliant**

The BetaCURVE Chip is Soldered to 32 AWG Alloy 180 Leads and Encapsulated in Stycast Epoxy Resin.

FEATURES

- Interchangeability
- Proven Stability and Reliability
- Rapid time response
- Alloy lead wires for reduced thermal conductivity ("stem effect")
- Thermally Conductive Epoxy Coating
- Temperature range -40 °C to +125°C

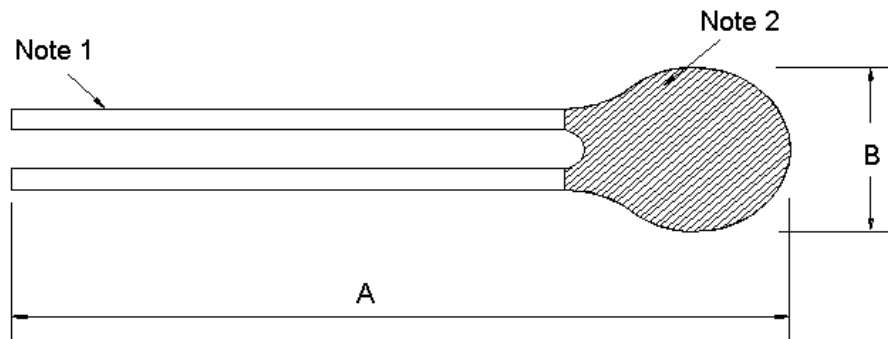
APPLICATIONS

- Temperature sensing, control and compensation
- Tight Tolerance Instrumentation
- Assembly into probes for a wide variety of applications
- General Instrumentation applications

PERFORMANCE SPECS

Parameters	Units	Value
Resistance @ +25°C	Ohms	5,000
5K3A1A Resistance tolerance from 0°C to +70°C	°C	0.1
5K3A1B Resistance tolerance from 0°C to +70°C	°C	0.2
5K3A1C Resistance tolerance from 0°C to +70°C	°C	0.5
5K3A1D Resistance tolerance from 0°C to +70°C	°C	1.0
Alpha Value @ 25°C	%/°C	4.39
Beta Value 25/85	K	3976
Tolerance on Beta Value 25/85	%	0.5
Time response in Liquids	Seconds	<1
Dissipation Constant in still air	mW/°C	0.75

MECHANICAL DETAILS



	Dimensions	
	A	B
	76 ± 2mm	2.4mm Max
Note 1	32 AWG Solid Alloy 180 Leads	
Note 2	Orange Stycast 2850ft Epoxy	

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RESISTANCE V TEMPERATURE TABLE

Temp. °C	Ohms
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-40	167862
-39	157111
-38	147117
-37	137820
-36	129169
-35	121114
-34	113611
-33	106620
-32	100102
-31	94022
-30	88349
-29	83054
-28	78107
-27	73486
-26	69166
-25	65127
-24	61348
-23	57811
-22	54499
-21	51397
-20	48490
-19	45765
-18	43210
-17	40812
-16	38562
-15	36450
-14	34465
-13	32601
-12	30848
-11	29200
-10	27649
-9	26191
-8	24817
-7	23524
-6	22306
-5	21158
-4	20075
-3	19055
-2	18092
-1	17183
0	16325

Temp. °C	Ohms
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1	15515
2	14750
3	14027
4	13344
5	12698
6	12086
7	11508
8	10961
9	10443
10	9952
11	9487
12	9046
13	8629
14	8233
15	7857
16	7501
17	7162
18	6841
19	6536
20	6247
21	5972
22	5710
23	5461
24	5225
25	5000
26	4786
27	4582
28	4388
29	4204
30	4028
31	3860
32	3701
33	3549
34	3403
35	3265
36	3133
37	3007
38	2887
39	2772
40	2662
41	2558

Temp. °C	Ohms
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42	2458
43	2362
44	2271
45	2183
46	2100
47	2020
48	1944
49	1870
50	1800
51	1733
52	1669
53	1608
54	1549
55	1493
56	1438
57	1387
58	1337
59	1289
60	1244
61	1200
62	1158
63	1117
64	1078
65	1041
66	1005
67	971
68	938
69	906
70	876
71	847
72	818
73	791
74	765
75	740
76	716
77	693
78	670
79	649
80	628
81	608
82	589
83	570

Temp. °C	Ohms
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84	553
85	535
86	519
87	503
88	487
89	472
90	458
91	444
92	431
93	418
94	406
95	394
96	382
97	371
98	360
99	349
100	339
101	330
102	320
103	311
104	302
105	294
106	285
107	277
108	270
109	262
110	255
111	248
112	241
113	235
114	228
115	222
116	216
117	211
118	205
119	200
120	194
121	189
122	184
123	180
124	175
125	170

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ORDERING INFORMATION

Part Number	Description	Ω @25°C	MOQ
5K3A1A	Series 1 Thermistor	5,000	1,000*
5K3A1B	Series 1 Thermistor	5,000	1,000*
5K3A1C	Series 1 Thermistor	5,000	1,000*
5K3A1D	Series 1 Thermistor	5,000	1,000*

* For quantities less than Minimum Order Quantity – Contact Distribution

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