



10K4A1 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

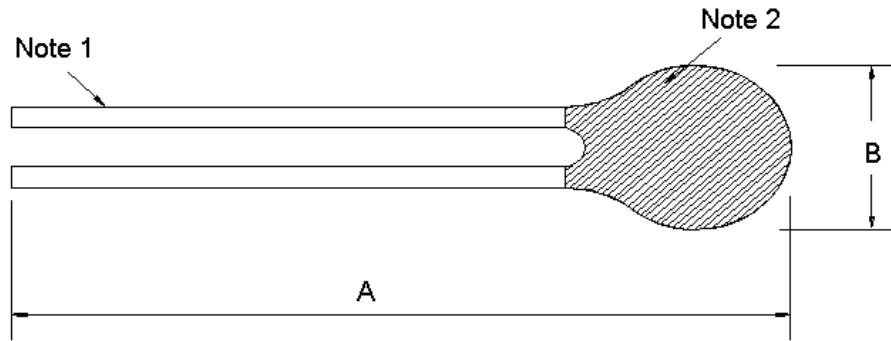
APPLICATIONS

- 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 | 10,000 |
| 10K4A1A Resistance tolerance from 0°C to +70°C | °C | 0.1 |
| 10K4A1B Resistance tolerance from 0°C to +70°C | °C | 0.2 |
| 10K4A1C Resistance tolerance from 0°C to +70°C | °C | 0.5 |
| 10K4A1D Resistance tolerance from 0°C to +70°C | °C | 1.0 |
| Alpha Value @ 25°C | %/°C | 4.04 |
| Beta Value 25/85 | K | 3694 |
| 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 |
| $76 \pm 2\text{mm}$ | 2.4mm Max |
| Note 1 | 32 AWG Solid Alloy 180 Leads |
| Note 2 | Black Stycast 2850ft Epoxy |

RESISTANCE V TEMPERATURE TABLE

| Temp. °C | Ohms |
|----------|------|
|----------|------|

| | |
|-----|--------|
| -40 | 239828 |
| -39 | 226103 |
| -38 | 213243 |
| -37 | 201188 |
| -36 | 189885 |
| -35 | 179282 |
| -34 | 169331 |
| -33 | 159991 |
| -32 | 151219 |
| -31 | 142978 |
| -30 | 135233 |
| -29 | 127952 |
| -28 | 121104 |
| -27 | 114661 |
| -26 | 108598 |
| -25 | 102889 |
| -24 | 97513 |
| -23 | 92448 |
| -22 | 87675 |
| -21 | 83174 |
| -20 | 78930 |
| -19 | 74926 |
| -18 | 71148 |
| -17 | 67581 |
| -16 | 64212 |
| -15 | 61031 |
| -14 | 58024 |
| -13 | 55182 |
| -12 | 52495 |
| -11 | 49954 |
| -10 | 47549 |
| -9 | 45274 |
| -8 | 43119 |
| -7 | 41079 |
| -6 | 39147 |
| -5 | 37316 |
| -4 | 35580 |
| -3 | 33935 |
| -2 | 32375 |
| -1 | 30895 |
| 0 | 29490 |

| Temp. °C | Ohms |
|----------|------|
|----------|------|

| | |
|----|-------|
| 1 | 28157 |
| 2 | 26891 |
| 3 | 25689 |
| 4 | 24547 |
| 5 | 23462 |
| 6 | 22431 |
| 7 | 21450 |
| 8 | 20518 |
| 9 | 19631 |
| 10 | 18787 |
| 11 | 17983 |
| 12 | 17219 |
| 13 | 16490 |
| 14 | 15797 |
| 15 | 15136 |
| 16 | 14506 |
| 17 | 13906 |
| 18 | 13334 |
| 19 | 12788 |
| 20 | 12268 |
| 21 | 11771 |
| 22 | 11297 |
| 23 | 10845 |
| 24 | 10413 |
| 25 | 10000 |
| 26 | 9606 |
| 27 | 9229 |
| 28 | 8869 |
| 29 | 8525 |
| 30 | 8196 |
| 31 | 7882 |
| 32 | 7581 |
| 33 | 7293 |
| 34 | 7018 |
| 35 | 6754 |
| 36 | 6501 |
| 37 | 6260 |
| 38 | 6028 |
| 39 | 5806 |
| 40 | 5594 |
| 41 | 5390 |

| Temp. °C | Ohms |
|----------|------|
|----------|------|

| | |
|----|------|
| 42 | 5195 |
| 43 | 5007 |
| 44 | 4828 |
| 45 | 4656 |
| 46 | 4490 |
| 47 | 4332 |
| 48 | 4180 |
| 49 | 4034 |
| 50 | 3893 |
| 51 | 3759 |
| 52 | 3629 |
| 53 | 3505 |
| 54 | 3386 |
| 55 | 3271 |
| 56 | 3160 |
| 57 | 3054 |
| 58 | 2952 |
| 59 | 2854 |
| 60 | 2760 |
| 61 | 2669 |
| 62 | 2582 |
| 63 | 2498 |
| 64 | 2417 |
| 65 | 2339 |
| 66 | 2264 |
| 67 | 2191 |
| 68 | 2122 |
| 69 | 2055 |
| 70 | 1990 |
| 71 | 1928 |
| 72 | 1868 |
| 73 | 1810 |
| 74 | 1754 |
| 75 | 1700 |
| 76 | 1648 |
| 77 | 1598 |
| 78 | 1550 |
| 79 | 1503 |
| 80 | 1458 |
| 81 | 1414 |
| 82 | 1372 |
| 83 | 1332 |

| Temp. °C | Ohms |
|----------|------|
|----------|------|

| | |
|-----|------|
| 84 | 1293 |
| 85 | 1255 |
| 86 | 1218 |
| 87 | 1183 |
| 88 | 1149 |
| 89 | 1116 |
| 90 | 1084 |
| 91 | 1053 |
| 92 | 1023 |
| 93 | 994 |
| 94 | 967 |
| 95 | 940 |
| 96 | 913 |
| 97 | 888 |
| 98 | 864 |
| 99 | 840 |
| 100 | 817 |
| 101 | 795 |
| 102 | 774 |
| 103 | 753 |
| 104 | 733 |
| 105 | 713 |
| 106 | 694 |
| 107 | 676 |
| 108 | 658 |
| 109 | 641 |
| 110 | 624 |
| 111 | 608 |
| 112 | 592 |
| 113 | 577 |
| 114 | 562 |
| 115 | 548 |
| 116 | 534 |
| 117 | 521 |
| 118 | 507 |
| 119 | 495 |
| 120 | 482 |
| 121 | 470 |
| 122 | 459 |
| 123 | 448 |
| 124 | 437 |
| 125 | 426 |

10K4A1 SERIES 1

Thermistor

ORDERING INFORMATION

| Part Number | Description | Ω @25°C | MOQ |
|-------------|---------------------|----------------|--------|
| 10K4A1A | Series 1 Thermistor | 10,000 | 1,000* |
| 10K4A1B | Series 1 Thermistor | 10,000 | 1,000* |
| 10K4A1C | Series 1 Thermistor | 10,000 | 1,000* |
| 10K4A1D | Series 1 Thermistor | 10,000 | 1,000* |

* For quantities less than Minimum Order Quantity – Contact Distribution

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