



## GA50K6A1 SERIES I THERMISTORS

Thermally Conductive Epoxy Coating

Ø 2.4 mm Maximum Diameter

32 AWG Alloy 180 Leads

Four Temperature Tolerance Classifications Available

RoHS Compliant

### Features

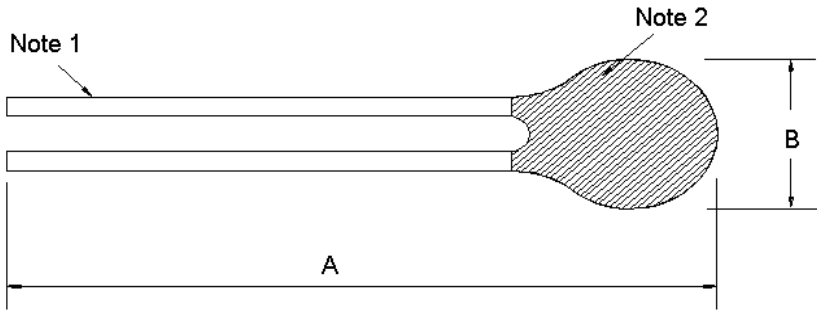
- Interchangeability
- Proven stability and reliability
- Rapid time response
- Alloy lead wires for reduced thermal conductivity ("stem effect")
- Thermally conductive epoxy coating
- Temperature range -40°C to +125°C
- Custom probe assemblies available

### Applications

- Temperature sensing, control and compensation
- Tight tolerance instrumentation
- General instrumentation applications

BetaCURVE series I thermistors are small epoxy coated devices with solid tin-plated lead wires. The series I offers a choice of precision temperature tolerance classifications for a wide variety of customer applications, such as temperature measurements, temperature indication, temperature control, and thermal compensation.

Mechanical Details



Dimensions

| A        | B           |
|----------|-------------|
| 76 ±2 mm | 2.4 mm max. |

**Note 1:** 32 AWG Solid Alloy 180 Leads  
**Note 2:** Blue Stycast 2850ft Epoxy

Performance Specs

| Parameters                                       | Units   | Value  |
|--------------------------------------------------|---------|--------|
| Nominal Resistance at +25°C                      | Ohms    | 50,000 |
| GA50K6A1A Resistance Tolerance from 0°C to +70°C | °C      | ±0.1   |
| GA50K6A1B Resistance Tolerance from 0°C to +70°C | °C      | ±0.2   |
| GA50K6A1C Resistance Tolerance from 0°C to +70°C | °C      | ±0.5   |
| GA50K6A1D Resistance Tolerance from 0°C to +70°C | °C      | ±1.0   |
| Alpha Value at +25°C                             | %/°C    | 4.68   |
| Beta Value 25/85                                 | K       | 4261   |
| Tolerance on Beta Value 25/85                    | %       | ±0.5   |
| Time Response in Liquids                         | Seconds | <1     |
| Dissipation Constant in Still Air                | mW/°C   | 0.75   |

## Resistance V Temperature Table

| Temp. °C | Ohms    |
|----------|---------|
| -40      | 2033476 |
| -39      | 1897553 |
| -38      | 1771522 |
| -37      | 1654608 |
| -36      | 1546100 |
| -35      | 1445347 |
| -34      | 1351752 |
| -33      | 1264768 |
| -32      | 1183890 |
| -31      | 1108657 |
| -30      | 1038644 |
| -29      | 973460  |
| -28      | 912745  |
| -27      | 856170  |
| -26      | 803428  |
| -25      | 754240  |
| -24      | 708347  |
| -23      | 665510  |
| -22      | 625510  |
| -21      | 588143  |
| -20      | 553222  |
| -19      | 520574  |
| -18      | 490038  |
| -17      | 461467  |
| -16      | 434724  |
| -15      | 409682  |
| -14      | 386224  |
| -13      | 364242  |
| -12      | 343634  |
| -11      | 324308  |
| -10      | 306178  |
| -9       | 289162  |
| -8       | 273187  |
| -7       | 258184  |
| -6       | 244088  |
| -5       | 230839  |
| -4       | 218384  |
| -3       | 206669  |
| -2       | 195647  |
| -1       | 185274  |
| 0        | 175508  |
| 1        | 166310  |

| Temp. °C | Ohms   |
|----------|--------|
| 2        | 157645 |
| 3        | 149478 |
| 4        | 141779 |
| 5        | 134519 |
| 6        | 127670 |
| 7        | 121206 |
| 8        | 115105 |
| 9        | 109344 |
| 10       | 103902 |
| 11       | 98761  |
| 12       | 93901  |
| 13       | 89307  |
| 14       | 84962  |
| 15       | 80852  |
| 16       | 76962  |
| 17       | 73280  |
| 18       | 69794  |
| 19       | 66492  |
| 20       | 63364  |
| 21       | 60400  |
| 22       | 57590  |
| 23       | 54925  |
| 24       | 52398  |
| 25       | 50000  |
| 26       | 47724  |
| 27       | 45564  |
| 28       | 43513  |
| 29       | 41565  |
| 30       | 39715  |
| 31       | 37956  |
| 32       | 36284  |
| 33       | 34695  |
| 34       | 33183  |
| 35       | 31745  |
| 36       | 30376  |
| 37       | 29074  |
| 38       | 27834  |
| 39       | 26654  |
| 40       | 25529  |
| 41       | 24458  |
| 42       | 23437  |
| 43       | 22463  |

| Temp. °C | Ohms  |
|----------|-------|
| 44       | 21536 |
| 45       | 20651 |
| 46       | 19807 |
| 47       | 19001 |
| 48       | 18233 |
| 49       | 17499 |
| 50       | 16799 |
| 51       | 16130 |
| 52       | 15491 |
| 53       | 14881 |
| 54       | 14297 |
| 55       | 13740 |
| 56       | 13207 |
| 57       | 12697 |
| 58       | 12209 |
| 59       | 11743 |
| 60       | 11297 |
| 61       | 10869 |
| 62       | 10460 |
| 63       | 10069 |
| 64       | 9694  |
| 65       | 9335  |
| 66       | 8990  |
| 67       | 8661  |
| 68       | 8345  |
| 69       | 8041  |
| 70       | 7751  |
| 71       | 7472  |
| 72       | 7205  |
| 73       | 6948  |
| 74       | 6702  |
| 75       | 6466  |
| 76       | 6239  |
| 77       | 6022  |
| 78       | 5812  |
| 79       | 5612  |
| 80       | 5419  |
| 81       | 5233  |
| 82       | 5055  |
| 83       | 4884  |
| 84       | 4719  |
| 85       | 4561  |

| Temp. °C | Ohms |
|----------|------|
| 86       | 4408 |
| 87       | 4262 |
| 88       | 4121 |
| 89       | 3985 |
| 90       | 3855 |
| 91       | 3729 |
| 92       | 3608 |
| 93       | 3492 |
| 94       | 3379 |
| 95       | 3271 |
| 96       | 3167 |
| 97       | 3067 |
| 98       | 2970 |
| 99       | 2877 |
| 100      | 2787 |
| 101      | 2700 |
| 102      | 2617 |
| 103      | 2536 |
| 104      | 2459 |
| 105      | 2384 |
| 106      | 2311 |
| 107      | 2241 |
| 108      | 2174 |
| 109      | 2109 |
| 110      | 2046 |
| 111      | 1985 |
| 112      | 1927 |
| 113      | 1870 |
| 114      | 1815 |
| 115      | 1762 |
| 116      | 1711 |
| 117      | 1662 |
| 118      | 1614 |
| 119      | 1568 |
| 120      | 1523 |
| 121      | 1480 |
| 122      | 1438 |
| 123      | 1398 |
| 124      | 1359 |
| 125      | 1321 |

## GA50K6A1

### SERIES I THERMISTORS

#### Ordering Information

| Part Number | Description         | $\Omega$ @25°C | MOQ*  |
|-------------|---------------------|----------------|-------|
| GA50K6A1A   | Series I thermistor | 50,000         | 1,000 |
| GA50K6A1B   | Series I thermistor | 50,000         | 1,000 |
| GA50K6A1C   | Series I thermistor | 50,000         | 1,000 |
| GA50K6A1D   | Series I thermistor | 50,000         | 1,000 |

\* For quantities less than MOQ (Minimum Order Quantity) contact Distribution

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