



GA30K6A1 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

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.

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

MECHANICAL DETAILS



DIMENSIONS

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

Note 1: 32 AWG Solid Alloy 180 Leads

Note 2: Green Stycast 2850ft Epoxy

PERFORMANCE SPECS

| Parameters | Units | Value |
|--------------------------------------------------|---------|--------|
| Nominal Resistance at +25°C | Ohms | 30,000 |
| GA30K5A1A Resistance Tolerance from 0°C to +70°C | °C | ±0.1 |
| GA30K5A1B Resistance Tolerance from 0°C to +70°C | °C | ±0.2 |
| GA30K5A1C Resistance Tolerance from 0°C to +70°C | °C | ±0.5 |
| GA30K5A1D 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 | 1219114 |
| -39 | 1137677 |
| -38 | 1062161 |
| -37 | 992104 |
| -36 | 927079 |
| -35 | 866698 |
| -34 | 810604 |
| -33 | 758469 |
| -32 | 709991 |
| -31 | 664894 |
| -30 | 622924 |
| -29 | 583847 |
| -28 | 547448 |
| -27 | 513528 |
| -26 | 481906 |
| -25 | 452413 |
| -24 | 424895 |
| -23 | 399208 |
| -22 | 375221 |
| -21 | 352813 |
| -20 | 331871 |
| -19 | 312291 |
| -18 | 293977 |
| -17 | 276841 |
| -16 | 260801 |
| -15 | 245781 |
| -14 | 231711 |
| -13 | 218526 |
| -12 | 206164 |
| -11 | 194572 |
| -10 | 183696 |
| -9 | 173489 |
| -8 | 163905 |
| -7 | 154905 |
| -6 | 146449 |
| -5 | 138501 |
| -4 | 131028 |
| -3 | 124000 |
| -2 | 117388 |
| -1 | 111164 |
| 0 | 105305 |
| 1 | 99787 |

| Temp. °C | Ohms |
|----------|-------|
| 2 | 94588 |
| 3 | 89688 |
| 4 | 85069 |
| 5 | 80712 |
| 6 | 76603 |
| 7 | 72725 |
| 8 | 69064 |
| 9 | 65608 |
| 10 | 62343 |
| 11 | 59258 |
| 12 | 56342 |
| 13 | 53585 |
| 14 | 50978 |
| 15 | 48512 |
| 16 | 46178 |
| 17 | 43969 |
| 18 | 41877 |
| 19 | 39896 |
| 20 | 38019 |
| 21 | 36240 |
| 22 | 34554 |
| 23 | 32955 |
| 24 | 31439 |
| 25 | 30000 |
| 26 | 28635 |
| 27 | 27339 |
| 28 | 26108 |
| 29 | 24939 |
| 30 | 23828 |
| 31 | 22773 |
| 32 | 21770 |
| 33 | 20816 |
| 34 | 19909 |
| 35 | 19047 |
| 36 | 18225 |
| 37 | 17444 |
| 38 | 16700 |
| 39 | 15992 |
| 40 | 15317 |
| 41 | 14674 |
| 42 | 14062 |
| 43 | 13478 |

| Temp. °C | Ohms |
|----------|-------|
| 44 | 12921 |
| 45 | 12390 |
| 46 | 11884 |
| 47 | 11400 |
| 48 | 10939 |
| 49 | 10499 |
| 50 | 10079 |
| 51 | 9678 |
| 52 | 9294 |
| 53 | 8928 |
| 54 | 8578 |
| 55 | 8244 |
| 56 | 7924 |
| 57 | 7618 |
| 58 | 7325 |
| 59 | 7046 |
| 60 | 6778 |
| 61 | 6521 |
| 62 | 6276 |
| 63 | 6041 |
| 64 | 5816 |
| 65 | 5601 |
| 66 | 5394 |
| 67 | 5196 |
| 68 | 5007 |
| 69 | 4825 |
| 70 | 4651 |
| 71 | 4483 |
| 72 | 4323 |
| 73 | 4169 |
| 74 | 4022 |
| 75 | 3880 |
| 76 | 3744 |
| 77 | 3613 |
| 78 | 3488 |
| 79 | 3367 |
| 80 | 3251 |
| 81 | 3140 |
| 82 | 3033 |
| 83 | 2930 |
| 84 | 2832 |
| 85 | 2737 |

| Temp. °C | Ohms |
|----------|------|
| 86 | 2645 |
| 87 | 2557 |
| 88 | 2473 |
| 89 | 2392 |
| 90 | 2313 |
| 91 | 2238 |
| 92 | 2165 |
| 93 | 2095 |
| 94 | 2028 |
| 95 | 1963 |
| 96 | 1901 |
| 97 | 1841 |
| 98 | 1783 |
| 99 | 1727 |
| 100 | 1673 |
| 101 | 1621 |
| 102 | 1571 |
| 103 | 1522 |
| 104 | 1476 |
| 105 | 1431 |
| 106 | 1387 |
| 107 | 1345 |
| 108 | 1305 |
| 109 | 1266 |
| 110 | 1228 |
| 111 | 1192 |
| 112 | 1156 |
| 113 | 1123 |
| 114 | 1090 |
| 115 | 1058 |
| 116 | 1027 |
| 117 | 998 |
| 118 | 969 |
| 119 | 941 |
| 120 | 915 |
| 121 | 889 |
| 122 | 864 |
| 123 | 839 |
| 124 | 816 |
| 125 | 793 |

ORDERING INFORMATION

| Part Number | Description | Ω @25°C | MOQ* |
|--------------------|---------------------|----------------------------------|-------------|
| GA30K6A1A | Series I thermistor | 30,000 | 1,000 |
| GA30K6A1B | Series I thermistor | 30,000 | 1,000 |
| GA30K6A1C | Series I thermistor | 30,000 | 1,000 |
| GA30K6A1D | Series I thermistor | 30,000 | 1,000 |

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

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