



## 30K5A1I SERIES II

### Thermistor

#### SPECIFICATIONS

- Thermally conductive epoxy coating
- Ø 2.4 mm Maximum Diameter
- 30 AWG Solid Silver Plated Copper Leads with White PTFE Insulation
- Choice of 4 temperature tolerance classifications
- RoHS Compliant

The BetaCURVE Chip is Soldered to 30 AWG Solid Silver Plated Copper Leads with White PTFE Insulation Device is Encapsulated in Stycast Epoxy Resin.

## FEATURES

- Interchangeability
- Proven Stability and Reliability
- Rapid time response
- PTFE Insulated lead Wires
- Thermally Conductive Epoxy Coating
- Temperature range -40°C to +125°C

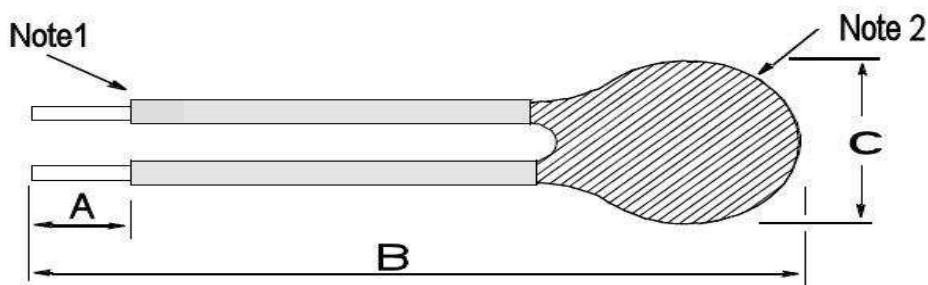
## APPLICATIONS

- 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 |
|-------------------------------------------------|---------|-------|
| Nominal Resistance at +25°C                     | Ohms    | 30000 |
| 30K5A1iA Resistance tolerance from 0°C to +70°C | °C      | ± 0.1 |
| 30K5A1iB Resistance tolerance from 0°C to +70°C | °C      | ± 0.2 |
| 30K5A1iC Resistance tolerance from 0°C to +70°C | °C      | ± 0.5 |
| 30K5A1iD Resistance tolerance from 0°C to +70°C | °C      | ± 1.0 |
| Alpha Value at +25°C                            | %/°C    | 4.30  |
| Beta Value 25/85                                | K       | 3942  |
| Tolerance on Beta Value 25/85                   | %       | ± 0.5 |
| Time response in Liquids                        | Seconds | <1    |
| Dissipation Constant in still air               | mW/°C   | 0.85  |

## MECHANICAL DETAILS



|               | Dimensions                                                        |          |           |
|---------------|-------------------------------------------------------------------|----------|-----------|
|               | A                                                                 | B        | C         |
|               | 10 ± 2mm                                                          | 76 ± 2mm | 2.4mm Max |
| <b>Note 1</b> | 30AWG Solid Silver Plated Copper Leads with White PTFE Insulation |          |           |
| <b>Note 2</b> | White Stycast 2850ft Epoxy                                        |          |           |

## RESISTANCE V TEMPERATURE TABLE

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

|     |        |
|-----|--------|
| -40 | 884198 |
| -39 | 830463 |
| -38 | 780301 |
| -37 | 733457 |
| -36 | 689693 |
| -35 | 648790 |
| -34 | 610546 |
| -33 | 574773 |
| -32 | 541299 |
| -31 | 509964 |
| -30 | 480620 |
| -29 | 453130 |
| -28 | 427367 |
| -27 | 403213 |
| -26 | 380560 |
| -25 | 359305 |
| -24 | 339357 |
| -23 | 320627 |
| -22 | 303035 |
| -21 | 286506 |
| -20 | 270969 |
| -19 | 256362 |
| -18 | 242622 |
| -17 | 229694 |
| -16 | 217526 |
| -15 | 206069 |
| -14 | 195278 |
| -13 | 185111 |
| -12 | 175529 |
| -11 | 166495 |
| -10 | 157975 |
| -9  | 149937 |
| -8  | 142352 |
| -7  | 135191 |
| -6  | 128429 |
| -5  | 122041 |
| -4  | 116006 |
| -3  | 110301 |
| -2  | 104907 |
| -1  | 99806  |
| 0   | 94980  |

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

|    |              |
|----|--------------|
| 1  | 90413        |
| 2  | 86090        |
| 3  | 81996        |
| 4  | 78119        |
| 5  | 74445        |
| 6  | 70964        |
| 7  | 67663        |
| 8  | 64534        |
| 9  | 61565        |
| 10 | 58749        |
| 11 | 56076        |
| 12 | 53539        |
| 13 | 51129        |
| 14 | 48841        |
| 15 | 46667        |
| 16 | 44601        |
| 17 | 42637        |
| 18 | 40769        |
| 19 | 38993        |
| 20 | 37303        |
| 21 | 35696        |
| 22 | 34166        |
| 23 | 32709        |
| 24 | 31321        |
| 25 | <b>30000</b> |
| 26 | 28741        |
| 27 | 27541        |
| 28 | 26398        |
| 29 | 25307        |
| 30 | 24268        |
| 31 | 23276        |
| 32 | 22329        |
| 33 | 21426        |
| 34 | 20564        |
| 35 | 19741        |
| 36 | 18955        |
| 37 | 18204        |
| 38 | 17487        |
| 39 | 16801        |
| 40 | 16146        |
| 41 | 15519        |

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

|    |       |
|----|-------|
| 42 | 14920 |
| 43 | 14347 |
| 44 | 13799 |
| 45 | 13274 |
| 46 | 12772 |
| 47 | 12292 |
| 48 | 11831 |
| 49 | 11391 |
| 50 | 10968 |
| 51 | 10564 |
| 52 | 10176 |
| 53 | 9805  |
| 54 | 9449  |
| 55 | 9107  |
| 56 | 8780  |
| 57 | 8466  |
| 58 | 8164  |
| 59 | 7875  |
| 60 | 7597  |
| 61 | 7331  |
| 62 | 7075  |
| 63 | 6829  |
| 64 | 6593  |
| 65 | 6366  |
| 66 | 6148  |
| 67 | 5939  |
| 68 | 5738  |
| 69 | 5544  |
| 70 | 5358  |
| 71 | 5179  |
| 72 | 5007  |
| 73 | 4841  |
| 74 | 4682  |
| 75 | 4528  |
| 76 | 4381  |
| 77 | 4239  |
| 78 | 4102  |
| 79 | 3970  |
| 80 | 3843  |
| 81 | 3721  |
| 82 | 3603  |
| 83 | 3489  |

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

|     |      |
|-----|------|
| 84  | 3380 |
| 85  | 3274 |
| 86  | 3172 |
| 87  | 3074 |
| 88  | 2979 |
| 89  | 2888 |
| 90  | 2800 |
| 91  | 2715 |
| 92  | 2633 |
| 93  | 2554 |
| 94  | 2477 |
| 95  | 2403 |
| 96  | 2332 |
| 97  | 2263 |
| 98  | 2197 |
| 99  | 2132 |
| 100 | 2070 |
| 101 | 2010 |
| 102 | 1952 |
| 103 | 1896 |
| 104 | 1842 |
| 105 | 1789 |
| 106 | 1739 |
| 107 | 1690 |
| 108 | 1642 |
| 109 | 1596 |
| 110 | 1552 |
| 111 | 1509 |
| 112 | 1467 |
| 113 | 1427 |
| 114 | 1388 |
| 115 | 1350 |
| 116 | 1314 |
| 117 | 1278 |
| 118 | 1244 |
| 119 | 1211 |
| 120 | 1178 |
| 121 | 1147 |
| 122 | 1117 |
| 123 | 1087 |
| 124 | 1059 |
| 125 | 1031 |

**ORDERING INFORMATION**

| Part Number | Description                                                                                              | $\Omega$ @25°C | MOQ   |
|-------------|----------------------------------------------------------------------------------------------------------|----------------|-------|
| 30K5A1iA    | Series II Thermistor (Tol. $\pm 0.1^{\circ}\text{C}$ from $0^{\circ}\text{C}$ to $+70^{\circ}\text{C}$ ) | 30000          | 1000* |
| 30K5A1iB    | Series II Thermistor (Tol. $\pm 0.2^{\circ}\text{C}$ from $0^{\circ}\text{C}$ to $+70^{\circ}\text{C}$ ) | 30000          | 1000* |
| 30K5A1iC    | Series II Thermistor (Tol. $\pm 0.5^{\circ}\text{C}$ from $0^{\circ}\text{C}$ to $+70^{\circ}\text{C}$ ) | 30000          | 1000* |
| 30K5A1iD    | Series II Thermistor (Tol. $\pm 1.0^{\circ}\text{C}$ from $0^{\circ}\text{C}$ to $+70^{\circ}\text{C}$ ) | 30000          | 1000* |

\* For quantities less than Minimum Order Quantity – Contact Distribution

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