

## DISCRETE THERMISTOR GA1K2A1IB

### Description

The NTC BetaCURVE Chip is soldered to 30 AWG solid silver-plated copper wire with white PTFE insulation.

Device is encapsulated in epoxy resin for mechanical protection and fast time-response.

### Features

- NTC thermistor with 1KOhm nominal resistance @ +25°C
- Ø 2.5mm maximum diameter
- 30 AWG solid silver-plated copper wire with white PTFE insulation.
- Proven stability and reliability
- Rapid time response
- Thermally conductive epoxy coating
- Temperature range -40°C to +100°C

### Specifications

- 1K Ohms Resistance @ +25°C
- $\pm 0.2$  °C Resistance Tolerance from 0°C to +25°C
- Rapid Time Response
- $\text{Beta}_{25/85} = 3348 \pm 1.0 \%$

### Applications

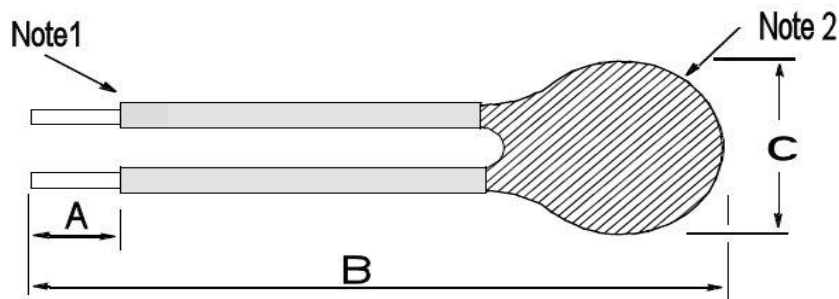
- Temperature sensing, control and compensation

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### Performance specifications

| Parameters                             | Units   | Value         |
|----------------------------------------|---------|---------------|
| Resistance @ +25°C                     | Ohms    | 1,000         |
| Resistance Tolerance from 0°C to +25°C | °C      | ±0.2          |
| Beta Value 25/85                       | K       | 3348          |
| Tolerance on Beta Value 25/85          | %       | ±1            |
| Operating Temperature                  | °C      | -40 to +100°C |
| Time response in well stirred liquid   | Seconds | <1.0          |
| Dissipation Constant in still air      | mW/°C   | 0.85          |

### Mechanical details



| Dimensions |            |               |
|------------|------------|---------------|
| A          | B          | C             |
| 10 +/- 1mm | 76 +/- 3mm | 2.5mm Maximum |

| Notes |                                                                    |
|-------|--------------------------------------------------------------------|
| 1     | 30 AWG solid silver-plated copper wire with white PTFE insulation. |
| 2     | Black thermally conductive epoxy resin                             |

## Resistance v temperature table

| Temp °C | Ohms    |
|---------|---------|
| -40     | 18641.3 |
| -39     | 17648.9 |
| -38     | 16715.5 |
| -37     | 15837.1 |
| -36     | 15010.1 |
| -35     | 14231.4 |
| -34     | 13497.7 |
| -33     | 12806.3 |
| -32     | 12154.5 |
| -31     | 11539.8 |
| -30     | 10959.8 |
| -29     | 10412.5 |
| -28     | 9895.7  |
| -27     | 9407.7  |
| -26     | 8946.7  |
| -25     | 8511.0  |
| -24     | 8099.0  |
| -23     | 7709.5  |
| -22     | 7341.0  |
| -21     | 6992.3  |
| -20     | 6662.1  |
| -19     | 6349.6  |
| -18     | 6053.5  |
| -17     | 5772.9  |
| -16     | 5507.0  |
| -15     | 5254.9  |
| -14     | 5015.8  |
| -13     | 4788.9  |
| -12     | 4573.6  |
| -11     | 4369.3  |
| -10     | 4175.2  |
| -9      | 3990.9  |
| -8      | 3815.8  |
| -7      | 3649.4  |
| -6      | 3491.2  |
| -5      | 3340.7  |

| Temp °C   | Ohms          |
|-----------|---------------|
| -4        | 3197.6        |
| -3        | 3061.5        |
| -2        | 2931.9        |
| -1        | 2808.5        |
| 0         | 2691.0        |
| 1         | 2579.1        |
| 2         | 2472.5        |
| 3         | 2370.9        |
| 4         | 2274.0        |
| 5         | 2181.6        |
| 6         | 2093.5        |
| 7         | 2009.5        |
| 8         | 1929.3        |
| 9         | 1852.7        |
| 10        | 1779.6        |
| 11        | 1709.8        |
| 12        | 1643.1        |
| 13        | 1579.4        |
| 14        | 1518.5        |
| 15        | 1460.3        |
| 16        | 1404.7        |
| 17        | 1351.4        |
| 18        | 1300.5        |
| 19        | 1251.8        |
| 20        | 1205.1        |
| 21        | 1160.5        |
| 22        | 1117.7        |
| 23        | 1076.8        |
| 24        | 1037.6        |
| <b>25</b> | <b>1000.0</b> |
| 26        | 964.0         |
| 27        | 929.5         |
| 28        | 896.4         |
| 29        | 864.6         |
| 30        | 834.2         |
| 31        | 804.9         |

| Temp °C | Ohms  |
|---------|-------|
| 32      | 776.9 |
| 33      | 750.0 |
| 34      | 724.1 |
| 35      | 699.3 |
| 36      | 675.5 |
| 37      | 652.6 |
| 38      | 630.6 |
| 39      | 609.5 |
| 40      | 589.2 |
| 41      | 569.6 |
| 42      | 550.8 |
| 43      | 532.8 |
| 44      | 515.4 |
| 45      | 498.7 |
| 46      | 482.6 |
| 47      | 467.1 |
| 48      | 452.2 |
| 49      | 437.8 |
| 50      | 424.0 |
| 51      | 410.7 |
| 52      | 397.8 |
| 53      | 385.5 |
| 54      | 373.5 |
| 55      | 362.0 |
| 56      | 351.0 |
| 57      | 340.3 |
| 58      | 330.0 |
| 59      | 320.0 |
| 60      | 310.4 |
| 61      | 301.2 |
| 62      | 292.3 |
| 63      | 283.6 |
| 64      | 275.3 |
| 65      | 267.3 |
| 66      | 259.5 |
| 67      | 252.0 |

| Temp °C | Ohms  |
|---------|-------|
| 68      | 244.8 |
| 69      | 237.8 |
| 70      | 231.0 |
| 71      | 224.5 |
| 72      | 218.1 |
| 73      | 212.0 |
| 74      | 206.1 |
| 75      | 200.4 |
| 76      | 194.9 |
| 77      | 189.5 |
| 78      | 184.3 |
| 79      | 179.3 |
| 80      | 174.5 |
| 81      | 169.8 |
| 82      | 165.2 |
| 83      | 160.8 |
| 84      | 156.6 |
| 85      | 152.4 |
| 86      | 148.4 |
| 87      | 144.6 |
| 88      | 140.8 |
| 89      | 137.2 |
| 90      | 133.6 |
| 91      | 130.2 |
| 92      | 126.9 |
| 93      | 123.7 |
| 94      | 120.5 |
| 95      | 117.5 |
| 96      | 114.6 |
| 97      | 111.7 |
| 98      | 109.0 |
| 99      | 106.3 |
| 100     | 103.7 |

### Ordering information

| Part Number | Description              | Resistance @ +25°C | MOQ    |
|-------------|--------------------------|--------------------|--------|
| GA1K2A1IB   | Insulated NTC Thermistor | 1,000              | 1,000* |

\*For orders less than MOQ, contact Sales

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