

Series 1 BetaCurve Bare leaded Thermistors



Introduction

The BetaCURVE Thermistor Series I are small epoxy coated devices with solid tin plated lead wires. The series 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.

The BetaCURVE Series history of "long term" stability and reliability performance have been demonstrated in critical medical, scientific instrumentation, military/aerospace and industrial applications.

Thermistor interchangeability has become an important factor for cost efficiency in advanced thermal performance applications. The need for expensive individual thermistor calibration is not necessary. The BetaCURVE Series interchangeability means that each device will match the published Resistance–Temperature Characteristics for a given thermistor and will be within the specified deviation (tolerance, ie. $\pm 0.1^{\circ}\text{C}$, $\pm 0.2^{\circ}\text{C}$, $\pm 0.5^{\circ}\text{C}$ and $\pm 1.0^{\circ}\text{C}$) limits over the temperature range 0°C to 70°C .

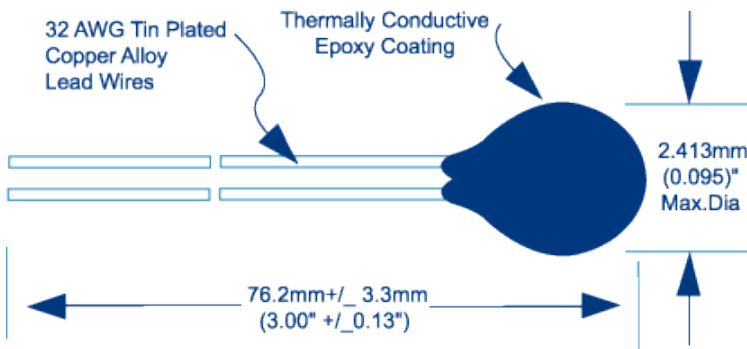
Features

- Fast time response (1 second typical in liquids).
- DC (Dissipation Constant) = $0.75 \text{ mW}/^{\circ}\text{C}$ typical in still air at 25°C .
- Available in custom probe assemblies.
- Tight tolerance available – $\pm 0.1^{\circ}\text{C}$ from $^{\circ}\text{C}$ to 70°C .
- Proven Stability and Reliability.
- Min./Max Temperature Exposure = -80°C to $+150^{\circ}\text{C}$.
- Alloy lead wires for reduced thermal conductivity ("stem effect").

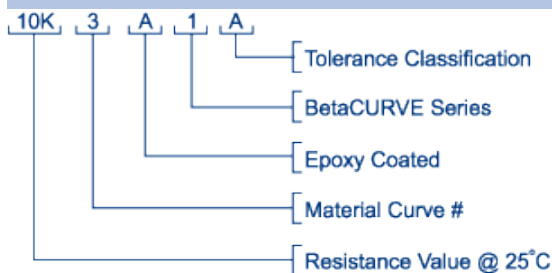
Applications

- Temperature sensing, control and compensation.
- Medical equipment and patient monitoring.
- Aerospace instrumentation and crystal oscillator compensation.
- Liquid or gas temperature control and monitoring.
- Assembly into probes for a wide variety of applications.

Shape and Dimensions



Part Numbering System



Electrical Specifications

Part	Color Code	Resistance @	Resistance	Temperature Tolerance and Range	Alpha	0/50 °C	Curve #
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Number		25°C (Ohms)	Tol. @ 25°C		@ 25°C	Beta Value	
2.2K3A1A	Brown	2252	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.39 %/°C	3892	3
2.2K3A1B	Brown	2252	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.39 %/°C	3892	3
2.2K3A1C	Brown	2252	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.39 %/°C	3892	3
2.2K3A1D	Brown	2252	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.39 %/°C	3892	3
3K3A1A	Red	3000	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.39 %/°C	3892	3
3K3A1B	Red	3000	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.39 %/°C	3892	3
3K3A1C	Red	3000	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.39 %/°C	3892	3
3K3A1D	Red	3000	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.39 %/°C	3892	3
5K3A1A	Orange	5000	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.39 %/°C	3892	3
5K3A1B	Orange	5000	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.39 %/°C	3892	3
5K3A1C	Orange	5000	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.39 %/°C	3892	3
5K3A1D	Orange	5000	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.39 %/°C	3892	3
10K3A1A	Yellow	10000	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.39 %/°C	3892	3
10K3A1B	Yellow	10000	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.39 %/°C	3892	3
10K3A1C	Yellow	10000	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.39 %/°C	3892	3
10K3A1D	Yellow	10000	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.39 %/°C	3892	3
10K4A1A	Black	10000	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.04 %/°C	3575	4
10K4A1B	Black	10000	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.04 %/°C	3575	4
10K4A1C	Black	10000	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.04 %/°C	3575	4
10K4A1D	Black	10000	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.04 %/°C	3575	4
30K5A1A	White	30000	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.30 %/°C	3811	5
30K5A1B	White	30000	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.30 %/°C	3811	5
30K5A1C	White	30000	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.30 %/°C	3811	5
30K5A1D	White	30000	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.30 %/°C	3811	5
30K6A1A	Green	30000	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.68 %/°C	4143	6
30K6A1B	Green	30000	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.68 %/°C	4143	6
30K6A1C	Green	30000	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.68 %/°C	4143	6
30K6A1D	Green	30000	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.68 %/°C	4143	6
50K6A1A	Blue	50000	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.68 %/°C	4143	6
50K6A1B	Blue	50000	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.68 %/°C	4143	6
50K6A1C	Blue	50000	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.68 %/°C	4143	6
50K6A1D	Blue	50000	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.68 %/°C	4143	6
100K6A1A	Violet	100000	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.68 %/°C	4143	6
100K6A1B	Violet	100000	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.68 %/°C	4143	6
100K6A1C	Violet	100000	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.68 %/°C	4143	6
100K6A1D	Violet	100000	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.68 %/°C	4143	6

For details on the minimum order quantity (MOQ) of this product, please contact BetaTHERM or your local BetaTHERM representative.



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