

**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.

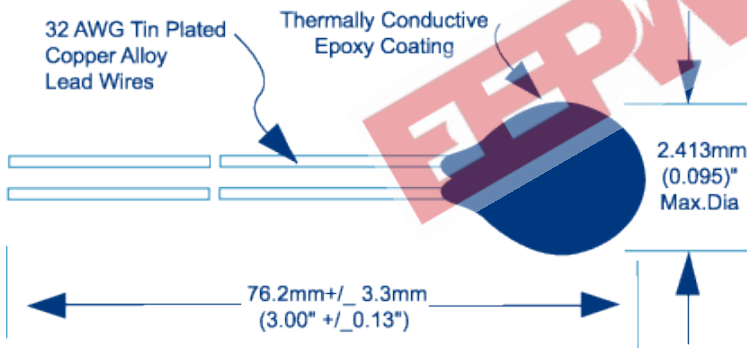
The BetaCURVE Series history of "long term" stability and reliability performance have been demonstrated in critical medical, scientific instrumentation, military/aerospace and industrial applications.

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  $0^{\circ}\text{C}$  to  $70^{\circ}\text{C}$ .

**Features**

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

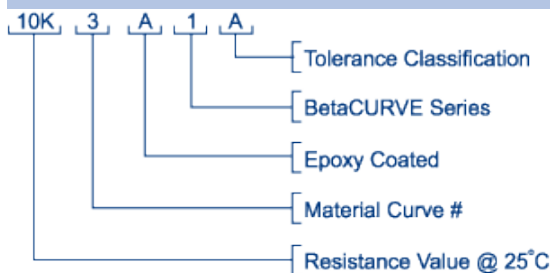
**Shape and Dimensions**



**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.

**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	
<a href="#">2.2K3A1A</a>	Brown	2252	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.39 %/°C	3892	<a href="#">3</a>
<a href="#">2.2K3A1B</a>	Brown	2252	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.39 %/°C	3892	<a href="#">3</a>
<a href="#">2.2K3A1C</a>	Brown	2252	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.39 %/°C	3892	<a href="#">3</a>
<a href="#">2.2K3A1D</a>	Brown	2252	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.39 %/°C	3892	<a href="#">3</a>
<a href="#">3K3A1A</a>	Red	3000	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.39 %/°C	3892	<a href="#">3</a>
<a href="#">3K3A1B</a>	Red	3000	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.39 %/°C	3892	<a href="#">3</a>
<a href="#">3K3A1C</a>	Red	3000	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.39 %/°C	3892	<a href="#">3</a>
<a href="#">3K3A1D</a>	Red	3000	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.39 %/°C	3892	<a href="#">3</a>
<a href="#">5K3A1A</a>	Orange	5000	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.39 %/°C	3892	<a href="#">3</a>
<a href="#">5K3A1B</a>	Orange	5000	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.39 %/°C	3892	<a href="#">3</a>
<a href="#">5K3A1C</a>	Orange	5000	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.39 %/°C	3892	<a href="#">3</a>
<a href="#">5K3A1D</a>	Orange	5000	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.39 %/°C	3892	<a href="#">3</a>
<a href="#">10K3A1A</a>	Yellow	10000	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.39 %/°C	3892	<a href="#">3</a>
<a href="#">10K3A1B</a>	Yellow	10000	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.39 %/°C	3892	<a href="#">3</a>
<a href="#">10K3A1C</a>	Yellow	10000	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.39 %/°C	3892	<a href="#">3</a>
<a href="#">10K3A1D</a>	Yellow	10000	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.39 %/°C	3892	<a href="#">3</a>
<a href="#">10K4A1A</a>	Black	10000	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.04 %/°C	3575	<a href="#">4</a>
<a href="#">10K4A1B</a>	Black	10000	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.04 %/°C	3575	<a href="#">4</a>
<a href="#">10K4A1C</a>	Black	10000	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.04 %/°C	3575	<a href="#">4</a>
<a href="#">10K4A1D</a>	Black	10000	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.04 %/°C	3575	<a href="#">4</a>
<a href="#">30K5A1A</a>	White	30000	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.30 %/°C	3811	<a href="#">5</a>
<a href="#">30K5A1B</a>	White	30000	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.30 %/°C	3811	<a href="#">5</a>
<a href="#">30K5A1C</a>	White	30000	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.30 %/°C	3811	<a href="#">5</a>
<a href="#">30K5A1D</a>	White	30000	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.30 %/°C	3811	<a href="#">5</a>
<a href="#">30K6A1A</a>	Green	30000	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.68 %/°C	4143	<a href="#">6</a>
<a href="#">30K6A1B</a>	Green	30000	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.68 %/°C	4143	<a href="#">6</a>
<a href="#">30K6A1C</a>	Green	30000	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.68 %/°C	4143	<a href="#">6</a>
<a href="#">30K6A1D</a>	Green	30000	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.68 %/°C	4143	<a href="#">6</a>
<a href="#">50K6A1A</a>	Blue	50000	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.68 %/°C	4143	<a href="#">6</a>
<a href="#">50K6A1B</a>	Blue	50000	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.68 %/°C	4143	<a href="#">6</a>
<a href="#">50K6A1C</a>	Blue	50000	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.68 %/°C	4143	<a href="#">6</a>
<a href="#">50K6A1D</a>	Blue	50000	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.68 %/°C	4143	<a href="#">6</a>
<a href="#">100K6A1A</a>	Violet	100000	± 0.25%	± 0.1 °C (0 to 70 °C)	-4.68 %/°C	4143	<a href="#">6</a>
<a href="#">100K6A1B</a>	Violet	100000	± 0.50%	± 0.2 °C (0 to 70 °C)	-4.68 %/°C	4143	<a href="#">6</a>
<a href="#">100K6A1C</a>	Violet	100000	± 1.00%	± 0.5 °C (0 to 70 °C)	-4.68 %/°C	4143	<a href="#">6</a>
<a href="#">100K6A1D</a>	Violet	100000	± 2.00%	± 1.0 °C (0 to 70 °C)	-4.68 %/°C	4143	<a href="#">6</a>

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



### Europe

Sales: [sales@betatherm.com](mailto:sales@betatherm.com)  
 Tel: +353 91 753238/753612  
 Fax: +353 91 770789/753615

### North America

Sales: [sales@betatherm-usa.com](mailto:sales@betatherm-usa.com)  
 Tel: 508 842 0516  
 Fax: 508 842 0748