



### **Specifications**

#### **Time Constant**

1 sec max when suspended by their leads in a well-stirred oil bath. In still air, 10 sec max.

#### **Dissipation Constant**

8mW/ºC min when suspended by their leads in a well-stirred oil bath, or 1mW/ºC in still air.

#### **Stability**

TE thermistors are chemically stable and not significantly affected by aging or exposure to strong nuclear radiation.

### Resistance/Temperature Data

A <sup>o</sup>C resistance vs temperature table in 1 oC increments is available on www.te.com.

#### **Interchangeability Tolerance Data**

Tables on www.te.com show nominal resistance values, ohms per degree and tolerance at select temperatures over the operating range.

#### **Maximum Power**

30mW at 25 $^{\circ}$ C de-rated to zero power at 125 $^{\circ}$ C

# **44000RC SERIES**

# **Precision Epoxy NTC Thermistors**

Interchangeable Thermistors – TE Connectivity (TE) provides highly accurate and stable temperature sensing for measurement, control, indication and compensation. The tight interchangeability of our precision components allows precise measurement without calibration of circuitry to match individual components.

TE offers two interchangeability tolerances ±0.2°C and ±0.1°C.

Choose epoxy-encapsulated components for applications where cost, flexibility and a wide range of resistance values are important.

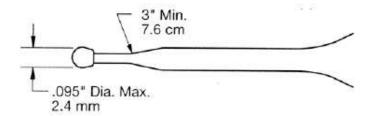
#### **Features**

- High sensitivity to detect small temperature changes
- High density ceramic sensor provides:
  - Stability
  - o ±0.2°, ±0.1° interchangeability

#### **Applications**

- ◆ Temperature control for DNA replication/analysis and cytology equipment
- ◆ Temperature control in photocopy machines and in photo reproduction and enlargement machines
- Temperature monitoring for telecommunications battery backup systems
- Temperature monitoring and control in clean rooms/controlled environments
- ◆ Temperature monitoring on the ocean floor
- ◆ Heater monitor/control for outdoor pool/spa
- ◆ Temperature monitoring for fruit growers

### **Mechanical Details**



## Performance Specifications

|         | Tolerance on Beta<br>Value | Time Response in Air | Dissipation Constant in Air | Insulation Resistance<br>(Min. of 100Mohms for 1 Sec.)<br>Volts |   |  |  |
|---------|----------------------------|----------------------|-----------------------------|---|---|--|--|
|         | %                          | Seconds              | mW/°C                       |   |   |  |  |
| 44001RC | 0.8                        | < 10                 | 1                           | 500   |   |  |  |
| 44002RC | 0.8                        | < 10                 | 1                           | 500   |   |  |  |
| 44003RC | 1.0                        | < 10                 | 1                           | 500   |   |  |  |
| 44004RC | 0.8                        | < 10                 | 1                           | 500   |   |  |  |
| 44005RC | 0.8                        | < 10                 | 1                           | 500   |   |  |  |
| 44007RC | 0.8                        | < 10                 | 1                           | 500   |   |  |  |
| 44016RC | 0.8                        | < 10                 | 1                           | 1 500 1   | I |  |  |
| 44006RC | 0.8                        | < 10                 | 1                           | 500   |   |  |  |
| 44008RC | 0.8                        | < 10                 | 1                           | 500   |   |  |  |
| 44011RC | 0.8                        | < 10                 | 1                           | 500   |   |  |  |
|         |                            |                      |                             |   |   |  |  |
| 44033RC | 0.4                        | < 10                 | 1                           | 500   |   |  |  |
| 44030RC | 0.4                        | < 10                 | 1                           | 500   |   |  |  |
| 44034RC | 0.4                        | < 10                 | 1                           | 500   |   |  |  |
| 44036RC | 0.4                        | < 10                 | 1                           | 500   |   |  |  |
| 44037RC | 0.4                        | < 10                 | 1                           | 500   |   |  |  |
| 44031RC | 0.4                        | < 10                 | 1                           | 500   |   |  |  |
| 44032RC | 0.4                        | < 10                 | 1                           | 500   |   |  |  |

### **Ordering Information**

| Parameters                                    | Ordering<br>Part<br>Number | Model<br>Number | Zero Power<br>Resistan<br>ce | Beta<br>0-50(K) | Ratio | Max<br>Working<br>Temp. | Best Storage & Working Temp. | Mix |
|---|----------------------------|-----------------|------------------------------|-----------------|-------|-------------------------|------------------------------|-----|
|   | 701001-M                   | 44001RC         | 100                          | 2854            | 11.49 | 100°C                   | -80°C to 50°C                | L   |
|   | 701002                     | 44002RC         | 300                          | 3118            | 15.15 | 100°C                   | -80°C to 50°C                | L   |
|   | 701003-M                   | 44003RC         | 1,000                        | 3217            | 17.33 | 100°C                   | -80°C to 50°C                | L   |
|   | 701004                     | 44004RC         | 2,252                        | 3891            | 29.26 | 150°C                   | -80°C to 120°C               | В   |
| ±0.2°C Interchangeability                     | 701005-M                   | 44005RC         | 3,000                        | 3891            | 29.26 | 150°C                   | -80°C to 120°C               | В   |
| Tolerance 0 to 70°C                           | 701007-M                   | 44007RC         | 5,000                        | 3891            | 29.26 | 150°C                   | -80°C to 120°C               | В   |
|   | 701016-M                   | 44016RC         | 10,000                       | 3891            | 29.26 | 150°C                   | -80°C to 120°C               | В   |
|   | 701006                     | 44006RC         | 10,000                       | 3574            | 23.51 | 150°C                   | -80°C to 120°C               | В   |
|   | 701008-M                   | 44008RC         | 30,000                       | 3810            | 29.15 | 150°C                   | -80°C to 120°C               | В   |
|   | 701011-M                   | 44011RC         | 100,000                      | 3988            | 34.82 | 150°C                   | -80°C to 120°C               | В   |
|   | <u> </u>                   |                 |                              |                 |       |                         |                              |     |
|   | 701033                     | 44033RC         | 2,252                        | 3891            | 29.26 | 75°C                    | -80°C to 75°C                | В   |
|   | 701030-M                   | 44030RC         | 3,000                        | 3891            | 29.26 | 75°C                    | -80°C to 75°C                | В   |
|   | 701034-M                   | 44034RC         | 5,000                        | 3891            | 29.26 | 75°C                    | -80°C to 75°C                | В   |
| ±0.1°C Interchangeability Tolerance 0 to 70°C | 701036-M                   | 44036RC         | 10,000                       | 3891            | 29.26 | 75°C                    | -80°C to 75°C                | В   |
|   | 701037-M                   | 44037RC         | 6,000                        | 3891            | 29.26 | 75°C                    | -80°C to 75°C                | В   |
|   | 701031-M                   | 44031RC         | 10,000                       | 3574            | 23.51 | 75°C                    | -80°C to 75°C                | Н   |
|   | 701032                     | 44032RC         | 30,000                       | 3810            | 29.15 | 75°C                    | -80°C to 75°C                | Н   |

#### **NORTH AMERICA**

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#### te.com/sensorsolutions

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