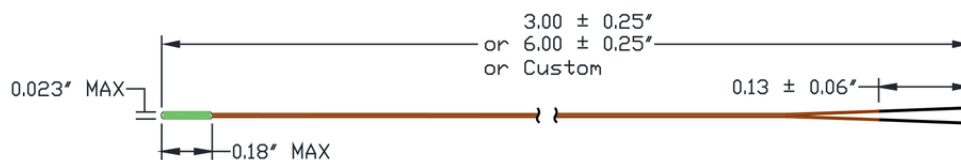
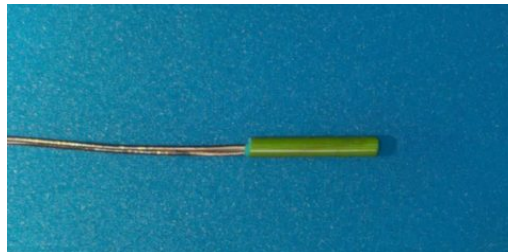




## 3XT Micro NTC Thermistor

### Description:

Micro chip thermistor encapsulated with epoxy in polyimide tube with brown polyesterimide insulated 38 AWG leads, parallel-bonded, with multiple overall length options.



(Drawing dimensions are typical)

### Features:

- **Small with low thermal mass**
- **Precise over a wide temperature band**
- **Rapid Time Constant (typ. <200 Milliseconds in liquids)**

The 3XT is the smallest leaded standard thermistor package that North Star Sensors offers. The 3XT is ideal for applications where a fast time response is desired and/ or mounting space is limited. The small size of the 3XT thermistor allows it to be encapsulated into a 20 gauge thin wall stainless steel tube. Pre-tinned leads and custom designs are available. Contact us at [info@northstarsensors.com](mailto:info@northstarsensors.com) for assistance with your unique application.

### Applications:

- **Low volume flow sensors (liquids or gas)**
- **Peltier temperature tracking**
- **Small package electronics**
- **Meteorological research**

## 3XT Micro NTC Thermistor

### Typical Configurations:

| Part Number  | Resistance at 25 °C | Overall Length   | Temperature Tolerance           | R/T Curve | 25 °C / 85 °C $\beta$ |
|--------------|---------------------|------------------|---------------------------------|-----------|-----------------------|
| 3AT103R44T2A | 10 k $\Omega$       | 3.00 $\pm$ 0.25" | $\pm$ 0.2 °C from 0 °C to 70 °C | 44        | 3978                  |
| 3BT103R44T2A | 10 k $\Omega$       | 6.00 $\pm$ 0.25" | $\pm$ 0.2 °C from 0 °C to 70 °C | 44        | 3978                  |
| 3AT103R44T1A | 10 k $\Omega$       | 3.00 $\pm$ 0.25" | $\pm$ 0.1 °C from 0 °C to 70 °C | 44        | 3978                  |

A wide variety of configurations are possible. Contact us at [info@northstarsensors.com](mailto:info@northstarsensors.com) for assistance with your unique application.

### Other Specifications:

|                                        |                                   |
|----------------------------------------|-----------------------------------|
| <b>Normal Operating Temperature</b>    | 0 °C to 70 °C                     |
| <b>Max Temperature</b>                 | 125 °C                            |
| <b>Recommended Measurement Current</b> | < 25 $\mu$ A                      |
| <b>Time Constant</b>                   | < 200 ms in stirred liquid        |
| <b>Dissipation Constant</b>            | $\sim$ 0.3 mW / °C in ambient air |
| <b>RoHS and REACH</b>                  | Compliant                         |

### Resistance vs Temperature Conversion Table

| °C  | CURVE 44       |        |
|-----|----------------|--------|
|     | $\Omega$ RATIO | NTC    |
|     | $R_T / R_{25}$ | (%/°C) |
| -10 | 5.5325         | -5.44  |
| -5  | 4.2325         | -5.27  |
| 0   | 3.2651         | -5.11  |
| 5   | 2.5393         | -4.95  |
| 10  | 1.9901         | -4.80  |
| 15  | 1.5712         | -4.66  |
| 20  | 1.2493         | -4.52  |
| 25  | 1.0000         | -4.39  |
| 30  | 0.80567        | -4.26  |
| 35  | 0.65314        | -4.14  |
| 40  | 0.53266        | -4.02  |
| 45  | 0.43689        | -3.91  |
| 50  | 0.36031        | -3.81  |
| 55  | 0.29857        | -3.71  |
| 60  | 0.24869        | -3.61  |
| 65  | 0.20816        | -3.51  |
| 70  | 0.17508        | -3.42  |
| 75  | 0.14793        | -3.33  |
| 80  | 0.12554        | -3.24  |
| 85  | 0.10700        | -3.16  |

Please visit  
[northstarsensors.com/temperature-curves](http://northstarsensors.com/temperature-curves)  
 for additional tables