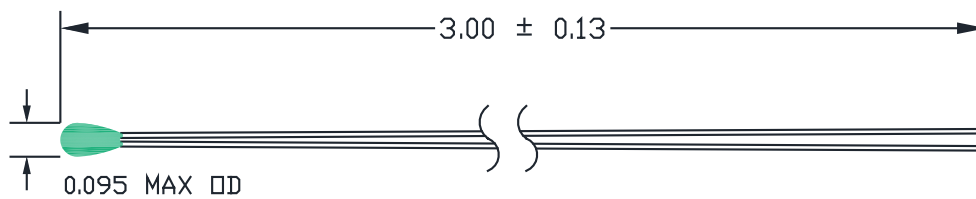
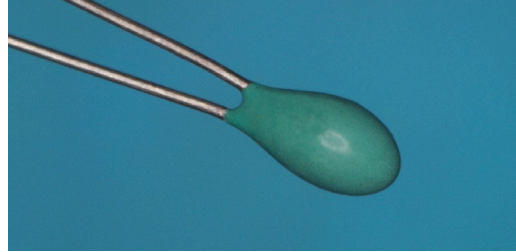




## 1DE NTC Thermistor

### Description:

Epoxy-coated NTC thermistor with 32 AWG solid tin-plated copper-nickel Alloy 180 leads, radial configuration, 3 in (72.6 mm) overall length



(Drawing dimensions are typical)

### Features:

- R25 values from 50  $\Omega$  to 100,000  $\Omega$
- Cost-effective
- Available in point-matched and interchangeable temperature tolerances
- Available in all R/T Curves

The 1DE NTC thermistor series offers low-cost, rugged temperature sensors suitable for many design applications. Because of the variety of options in this configuration, the 1DE series is an ideal temperature sensor for the temperature range of -50 °C to +125 °C. Contact us at [info@northstarsensors.com](mailto:info@northstarsensors.com) for assistance with your unique application.

### Applications:

- Electronic thermometers
- Industrial controls
- Food processing
- Battery technology
- HVAC
- Cold junction compensation



## 1DE NTC Thermistor

### Typical Configurations:

Part Number	Resistance at 25 °C	Temperature Tolerance	R/T Curve	25 °C / 85 °C B
1DE103R44T1A	10 kΩ	± 0.1 °C from 0 °C to 70 °C	44	3978
1DE222R44T1M	2252 Ω	± 0.1 °C from 35 °C to 40 °C	44	3978
1DE351R38P2	350 Ω	± 2% Ω at 25 °C	38	3486
1DE303R43T2A	30 kΩ	± 0.2 °C from 0 °C to 70 °C	43	3943
1DE104R47T5A	100 kΩ	± 0.5 °C from 0 °C to 70 °C	47	4262

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:

Recommended Operating Temperature	-50 °C to 100 °C
Max Temperature	125 °C
Recommended Measurement Current	< 50 μA
Time Constant	~ 1 second in stirred liquid
Dissipation Constant	~ 1 mW / °C in ambient air
RoHS and REACH	Compliant

### Resistance vs Temperature Conversion Tables

°C	CURVE 38		CURVE 43		CURVE 44	
	Ω RATIO R <sub>T</sub> / R <sub>25</sub>	NTC (%/°C)	Ω RATIO R <sub>T</sub> / R <sub>25</sub>	NTC (%/°C)	Ω RATIO R <sub>T</sub> / R <sub>25</sub>	NTC (%/°C)
0	2.815	-4.46	3.1660	-4.94	3.2651	-5.11
5	2.260	-4.33	2.4815	-4.80	2.5393	-4.95
10	1.826	-4.20	1.9583	-4.67	1.9901	-4.80
15	1.485	-4.07	1.5556	-4.54	1.5712	-4.66
20	1.215	-3.95	1.2434	-4.42	1.2493	-4.52
25	1.000	-3.84	1.0000	-4.30	1.0000	-4.39
30	0.8276	-3.73	0.80892	-4.18	0.80567	-4.26
35	0.6885	-3.63	0.65804	-4.07	0.65314	-4.14
40	0.5758	-3.53	0.53820	-3.97	0.53266	-4.02
45	0.4840	-3.43	0.44249	-3.87	0.43689	-3.91
50	0.4087	-3.33	0.36563	-3.77	0.36031	-3.81
55	0.3467	-3.24	0.30357	-3.67	0.29857	-3.71
60	0.2954	-3.16	0.25323	-3.58	0.24869	-3.61
65	0.2528	-3.07	0.21219	-3.49	0.20816	-3.51
70	0.2172	-2.99	0.17858	-3.41	0.17508	-3.42

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