

# 44108 Thermistor with FEP Sheath



**FEP Sheath for Hostile Environments**  
**30,000 ohm Resistance @ 25°C**  
**Interchangeable  $\pm 0.2^{\circ}\text{C}$ ,  $0^{\circ}\text{C}$  to  $70^{\circ}\text{C}$ ,**  
**Pressed Disk Ceramic Sensor**  
**High sensitivity**  
**Thermally conductive epoxy coating**  
**32 AWG, 3" (7.6 cm) long Silver plated**  
**copper leads**  
**RoHS Compliant**

## DESCRIPTION

FEP sheathed epoxy encapsulated precision interchangeable NTC thermistor utilizing high stability pressed-disk ceramic sensor for use in harsh chemical environments. Sensor is protected by a 2" (51mm) FEP sheath for protection from harsh chemicals. One inner lead is sleeved with PTFE tubing for insulation. A nickel stiffening wire allows shaping of the sheath.

## FEATURES

- FEP Sheath
- 30,000 Ohm Resistance @ 25°C
- Interchangeability
- Good Long Term Stability
- High Sensitivity
- Thermally Conductive Epoxy Coating
- RoHS Compliance

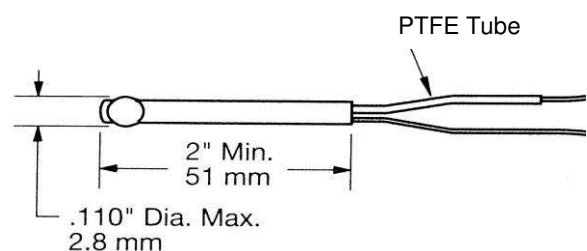
## APPLICATIONS

- Harsh Chemical Environments
- High-range Temperature Applications
- Tight Tolerance Applications
- General Applications Requiring Stability
- Applications Requiring Sensing Small Changes in Temperature
- Non-condensing Moisture Environments
- Allows use in Applications World-wide

## PERFORMANCE SPECS

| Parameter                                             | Units              | Value     |
|-------------------------------------------------------|--------------------|-----------|
| Resistance @ 25°C                                     | Ohms               | 30,000    |
| Tolerance $0^{\circ}\text{C}$ to $70^{\circ}\text{C}$ | $^{\circ}\text{C}$ | $\pm 0.2$ |
| Beta Value 25/85                                      | K                  | 3943      |
| Tolerance on Beta Value                               | %                  | 0.8       |
| Time response in air                                  | Seconds            | < 25      |
| Insulation Resistance (Min. of 100Mohms for 1 Sec.)   | Volts              | 500       |

## MECHANICAL DESIGN



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## RESISTANCE V TEMPERATURE TABLE

| Temp °C | K-Ohms | Temp °C | K-Ohms | Temp °C | K-Ohms | Temp °C | K-Ohms | Temp °C | K-Ohms |
|---------|--------|---------|--------|---------|--------|---------|--------|---------|--------|
| -40     | 884.6  | 0       | 94.98  | 40      | 16.15  | 80      | 3.843  | 120     | 1.176  |
| -39     | 830.9  | 1       | 90.41  | 41      | 15.52  | 81      | 3.720  | 121     | 1.145  |
| -38     | 780.8  | 2       | 86.09  | 42      | 14.92  | 82      | 3.602  | 122     | 1.114  |
| -37     | 733.9  | 3       | 81.99  | 43      | 14.35  | 83      | 3.489  | 123     | 1.085  |
| -36     | 690.2  | 4       | 78.11  | 44      | 13.80  | 84      | 3.379  | 124     | 1.057  |
| -35     | 649.3  | 5       | 74.44  | 45      | 13.28  | 85      | 3.273  | 125     | 1.029  |
| -34     | 611.0  | 6       | 70.96  | 46      | 12.77  | 86      | 3.172  | 126     | 1.002  |
| -33     | 575.2  | 7       | 67.66  | 47      | 12.29  | 87      | 3.073  | 127     | 0.9763 |
| -32     | 541.7  | 8       | 64.53  | 48      | 11.83  | 88      | 2.979  | 128     | 0.9511 |
| -31     | 510.4  | 9       | 61.56  | 49      | 11.39  | 89      | 2.887  | 129     | 0.9267 |
| -30     | 481.0  | 10      | 58.75  | 50      | 10.97  | 90      | 2.799  | 130     | 0.9030 |
| -29     | 453.5  | 11      | 56.07  | 51      | 10.57  | 91      | 2.714  | 131     | 0.8800 |
| -28     | 427.7  | 12      | 53.54  | 52      | 10.18  | 92      | 2.632  | 132     | 0.8577 |
| -27     | 403.5  | 13      | 51.13  | 53      | 9.807  | 93      | 2.552  | 133     | 0.8361 |
| -26     | 380.9  | 14      | 48.84  | 54      | 9.450  | 94      | 2.476  | 134     | 0.8150 |
| -25     | 359.6  | 15      | 46.67  | 55      | 9.109  | 95      | 2.402  | 135     | 0.7946 |
| -24     | 339.6  | 16      | 44.60  | 56      | 8.781  | 96      | 2.331  | 136     | 0.7748 |
| -23     | 320.9  | 17      | 42.64  | 57      | 8.467  | 97      | 2.262  | 137     | 0.7556 |
| -22     | 303.3  | 18      | 40.77  | 58      | 8.166  | 98      | 2.195  | 138     | 0.7369 |
| -21     | 286.7  | 19      | 38.99  | 59      | 7.876  | 99      | 2.131  | 139     | 0.7188 |
| -20     | 271.2  | 20      | 37.30  | 60      | 7.599  | 100     | 2.069  | 140     | 0.7012 |
| -19     | 256.5  | 21      | 35.70  | 61      | 7.332  | 101     | 2.009  | 141     | 0.6841 |
| -18     | 242.8  | 22      | 34.17  | 62      | 7.076  | 102     | 1.950  | 142     | 0.6675 |
| -17     | 229.8  | 23      | 32.71  | 63      | 6.830  | 103     | 1.894  | 143     | 0.6513 |
| -16     | 217.6  | 24      | 31.32  | 64      | 6.594  | 104     | 1.840  | 144     | 0.6356 |
| -15     | 206.2  | 25      | 30.00  | 65      | 6.367  | 105     | 1.788  | 145     | 0.6203 |
| -14     | 195.4  | 26      | 28.74  | 66      | 6.149  | 106     | 1.737  | 146     | 0.6055 |
| -13     | 185.2  | 27      | 27.54  | 67      | 5.940  | 107     | 1.688  | 147     | 0.5911 |
| -12     | 175.6  | 28      | 26.40  | 68      | 5.738  | 108     | 1.640  | 148     | 0.5771 |
| -11     | 166.6  | 29      | 25.31  | 69      | 5.545  | 109     | 1.594  | 149     | 0.5635 |
| -10     | 158.0  | 30      | 24.27  | 70      | 5.359  | 110     | 1.550  | 150     | 0.5502 |
| -9      | 150.0  | 31      | 23.28  | 71      | 5.180  | 111     | 1.507  |         |        |
| -8      | 142.4  | 32      | 22.33  | 72      | 5.007  | 112     | 1.465  |         |        |
| -7      | 135.2  | 33      | 21.43  | 73      | 4.842  | 113     | 1.425  |         |        |
| -6      | 128.5  | 34      | 20.57  | 74      | 4.682  | 114     | 1.386  |         |        |
| -5      | 122.1  | 35      | 19.74  | 75      | 4.529  | 115     | 1.348  |         |        |
| -4      | 116.0  | 36      | 18.96  | 76      | 4.381  | 116     | 1.311  |         |        |
| -3      | 110.3  | 37      | 18.21  | 77      | 4.239  | 117     | 1.276  |         |        |
| -2      | 104.9  | 38      | 17.49  | 78      | 4.102  | 118     | 1.241  |         |        |
| -1      | 99.80  | 39      | 16.80  | 79      | 3.970  | 119     | 1.208  |         |        |

## ORDERING INFORMATION

| Part Number | Description                   | Ω @25°C | MOQ |
|-------------|-------------------------------|---------|-----|
| 095407      | 44108 THERM, FEP ENCAPSULATED | 30,000  | 60  |

\* For quantities less than Minimum Order Quantity – contact distribution

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