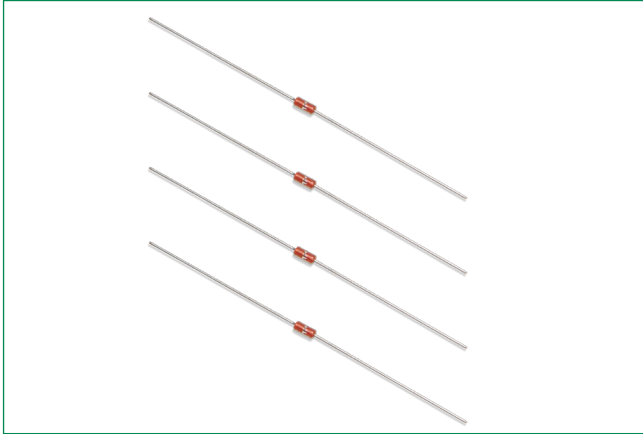


### DO-35 Standard Series Glass Encapsulated Thermistors



#### Description

Littelfuse low cost glass encapsulated thermistors are manufactured using super stable NTC chips which are hermetically sealed in a glass (DO-35 diode style) package. The result is a device which exhibits excellent long term reliability and stability even when subjected to severe environmental or thermal conditions. Their uniform dimensions and axial lead configuration make them especially suitable for use with automatic insertion equipment.

#### Options

- Special Lead Forms
- Non-standard resistance values and tolerances
- Point matched at specified temperatures
- Tape and Reel Packaging

#### Dimensions



Dimensions shown in inches.

| A  | B             | C             |
|--|---------------|---------------|
| 0.020" ±0.002"<br>24 AWG Tinned CCS<br>1.0" Long Min | 0.075"<br>Max | 0.160"<br>Max |

#### Features

- High temperature capability to +300°C
- Hermetically sealed glass package
- Low cost
- Excellent long-term stability
- High Voltage Insulation
- Tinned CSS Lead Wires are Solderable or Weldable

#### Part Numbering System



Note: Not all combinations of Part Number codes are available. Contact Littelfuse for details.

## DO-35 Standard Series Glass Encapsulated Thermistors

### Specifications

| Part Number | Resistance Ohms @25°C | *Resistance Tol. ± % @ 25°C | R-T Curve | Temperature Coefficient (%/°C) @ 25°C | Beta (K) 0-50°C | Beta (K) 25-85°C | Dissipation Constant, Nominal (mW/°C) | Thermal Time Constant, Max. - Still Air (seconds) | Thermal Time Constant, Max. - Well Stirred Oil (seconds) | Temperature Range (°C) |
|-------------|-----------------------|-----------------------------|-----------|---------------------------------------|-----------------|------------------|---------------------------------------|---|--|------------------------|
| 501BG1J     | 500                   | 5                           | B         | -3.31                                 | 2941            | —                | 2                                     | 5   | 0.5  | -55 to +220            |
| 501BG1K     | 500                   | 10                          | B         | -3.31                                 | 2941            | —                | 2                                     | 5   | 0.5  | -55 to +220            |
| 102BG1J     | 1000                  | 5                           | B         | -3.31                                 | 2941            | —                | 2                                     | 5   | 0.5  | -55 to +220            |
| 102BG1K     | 1000                  | 10                          | B         | -3.31                                 | 2941            | —                | 2                                     | 5   | 0.5  | -55 to +220            |
| 102EG1K     | 1000                  | 10                          | E         | -3.67                                 | 3263            | —                | 2                                     | 5   | 0.5  | -55 to +220            |
| 102PS1G     | 1000                  | 2                           | —         | —                                     | —               | —                | 2                                     | 8   | 1  | -55 to +150            |
| 102PS1J     | 1000                  | 5                           | —         | —                                     | —               | —                | 2                                     | 8   | 1  | -55 to +150            |
| 162PS1J     | 1600                  | 5                           | —         | —                                     | —               | —                | 2                                     | 8   | 1  | -55 to +300            |
| 182FG1K     | 1800                  | 10                          | F         | -3.86                                 | 3419            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 202FG1J     | 2000                  | 5                           | F         | -3.86                                 | 3419            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 202FG1K     | 2000                  | 10                          | F         | -3.86                                 | 3419            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 202PS1J     | 2000                  | 5                           | —         | —                                     | —               | —                | 2                                     | 8   | 1  | -55 to +300            |
| 252BG1K     | 2500                  | 10                          | B         | -3.3                                  | 2941            | —                | 2                                     | 5   | 0.5  | -55 to +220            |
| 252FG1J     | 2500                  | 5                           | F         | -3.86                                 | 3419            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 252FG1K     | 2500                  | 10                          | F         | -3.86                                 | 3419            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 282FG1K     | 2800                  | 10                          | F         | -3.86                                 | 3419            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 222E1G1K    | 2186                  | 10                          | E1        | -3.82                                 | 3320            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 302FG1K     | 3000                  | 10                          | F         | -3.86                                 | 3419            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 302JG1K     | 3000                  | 10                          | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 282FG1K     | 2800                  | 10                          | F         | -3.86                                 | 3419            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 302FG1K     | 3000                  | 10                          | F         | -3.86                                 | 3419            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 302JG1K     | 3000                  | 10                          | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |

\*Resistance tolerances of ± 1%, 2%, and 5% are available upon request

### DO-35 Standard Series Glass Encapsulated Thermistors

#### Specifications

| Part Number | Resistance Ohms @25°C | *Resistance Tol. ± % @ 25°C | R-T Curve | Temperature Coefficient (%/°C) @ 25°C | Beta (K) 0-50°C | Beta (K) 25-85°C | Dissipation Constant, Nominal (mW/°C) | Thermal Time Constant, Max. - Still Air (seconds) | Thermal Time Constant, Max. - Well Stirred Oil (seconds) | Temperature Range (°C) |
|-------------|-----------------------|-----------------------------|-----------|---------------------------------------|-----------------|------------------|---------------------------------------|---|--|------------------------|
| 332FG1K     | 3300                  | 10                          | F         | -3.86                                 | 3419            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 402FG4K     | 4000                  | 10                          | F13       | -3.88                                 | 3453            | 3540             | 2                                     | 5   | 0.5  | -55 to +300            |
| 502E1G1K    | 5000                  | 10                          | E1        | -3.82                                 | 3320            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 502FG1J     | 5000                  | 5                           | F         | -3.86                                 | 3419            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 502FG1K     | 5000                  | 10                          | F         | -3.86                                 | 3419            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 502JG1K     | 5000                  | 10                          | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 682JG1K     | 6800                  | 10                          | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 822JG1K     | 8200                  | 10                          | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 123GG1K     | 12000                 | 10                          | G         | -4.03                                 | 3575            | —                | 2                                     | 5   | 0.5  | -55 to +150            |
| 123JG1K     | 12000                 | 10                          | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +150            |
| 153JG1K     | 15000                 | 10                          | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 203JG1F     | 20000                 | 1                           | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 203JG1J     | 20000                 | 5                           | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 103E1G1F    | 10000                 | 1                           | E1        | —                                     | 3320            | 3435             | 2                                     | 5   | 0.5  | -55 to +250            |
| 103E1G1K    | 10000                 | 10                          | E1        | —                                     | 3320            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 103FG1K     | 10000                 | 10                          | F         | -3.86                                 | 3419            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 103GG1K     | 10000                 | 10                          | G         | -4.04                                 | 3575            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 103JG1F     | 10000                 | 1                           | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 103JG1G     | 10000                 | 2                           | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 103JG1J     | 10000                 | 5                           | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 103JG1K     | 10000                 | 10                          | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 103JG1KE    | 10000                 | 10                          | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |

\*Resistance tolerances of ± 1%, 2%, and 5% are available upon request

## DO-35 Standard Series Glass Encapsulated Thermistors

### Specifications

| Part Number | Resistance Ohms @25°C | *Resistance Tol. ± % @ 25°C | R-T Curve | Temperature Coefficient (%/°C) @ 25°C | Beta (K) 0-50°C | Beta (K) 25-85°C | Dissipation Constant, Nominal (mW/°C) | Thermal Time Constant, Max. - Still Air (seconds) | Thermal Time Constant, Max. - Well Stirred Oil (seconds) | Temperature Range (°C) |
|-------------|-----------------------|-----------------------------|-----------|---------------------------------------|-----------------|------------------|---------------------------------------|---|--|------------------------|
| 203JG1K     | 20000                 | 10                          | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 253JG1F     | 25000                 | 1                           | J         | —                                     | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 253JG1K     | 25000                 | 10                          | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 303HG1K     | 30000                 | 10                          | H         | -4.29                                 | 3810            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 303JG1F     | 30000                 | 1                           | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 303JG1J     | 30000                 | 5                           | J         | --4.4                                 | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 303JG1K     | 30000                 | 10                          | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 403GG1K     | 40000                 | 10                          | G         | -3.88                                 | 3575            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 503JG1F     | 50000                 | 1                           | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 503JG1J     | 50000                 | 5                           | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 503JG1K     | 50000                 | 10                          | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 683N1G1K    | 68000                 | 10                          | N1        | -4.5                                  | 3991            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 753JG1K     | 75000                 | 10                          | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 104JG1F     | 100000                | 1                           | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 104JG1H     | 100000                | 3                           | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 104JG1J     | 100000                | 5                           | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 104JG1K     | 100000                | 10                          | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 104LG2K     | 100000                | 10                          | L1        | -4.52                                 | 3920            | 4040             | 2                                     | 5   | 0.5  | -55 to +300            |
| 104N1G1K    | 100000                | 10                          | N1        | -4.5                                  | 3991            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 104RG1J     | 100000                | 5                           | R         | -4.68                                 | 4140            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 104RG1K     | 100000                | 10                          | R         | -4.68                                 | 4140            | —                | 2                                     | 5   | 0.5  | -55 to +300            |
| 224JG1K     | 220000                | 10                          | J         | -4.4                                  | 3892            | —                | 2                                     | 5   | 0.5  | -55 to +300            |

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