

### 370 Series, TR5 Fuse, Fast Acting



#### Description

The 370 Series are sub-miniature TR5® fuses, fast acting type, 250V rated fuses, designed in accordance to IEC 60127-3.







#### Features

- Reduced PCB space requirements
- Direct solderable or plug-in versions
- Internationally approved
- Low internal resistance
- Shock safe casing
- Vibration resistant
- Lead-free, Halogen free and RoHS compliant
- Available from 0.040A to 6.3A

#### Applications

- Battery Chargers
- Consumer Electronics
- Power supplies
- Industrial Controllers

#### Agency Approvals

| Agency  | Agency File Number   | Ampere Range                      |
|---|--|-----------------------------------|
|    | License number:<br>5007679-1170-0001/82438   | 0.100A - 5A                       |
|    | License number:<br>5007679-1170-0001/97059<br>5007679-1170-0009/97069<br>5007679-1170-0002/82443 | 0.040A<br>0.050A - 0.080A<br>6.3A |
|   | 1506849  | 0.050A - 6.3A                     |
|  | E67006   | 0.040A - 6.3A                     |
|  | JET1896-31007-2002   | 1A - 5A                           |
|  | 2007010207240347   | 0.050A - 5A                       |

#### Additional Information



Datasheet



Resources








Samples

#### Electrical Characteristics

| % of Ampere Rating | Opening Time                             |
|--------------------|--|
| 150%               | 1 Hour, <b>Min.</b>                      |
| 210%               | 30 Minutes, <b>Max.</b>                  |
| 275%               | 10 ms, <b>Min.</b> ; 3 Sec., <b>Max.</b> |
| 400%               | 3 ms, <b>Min.</b> ; 300 ms, <b>Max.</b>  |
| 1000%              | 20 ms, <b>Max.</b>                       |

## Electrical Characteristics

| Amp Code | Rated Current | Voltage Rating | Breaking Capacity | Nominal Cold Resistance (Ohms) | Voltage Drop $1.0 \times I_N$ max. (mV) | Power Dissipation $1.5 \times I_N$ max. (mW) | Melting Integral $10 \times I_N$ max. (A <sup>2</sup> s) | Agency Approvals  |   |   |   |   |
|----------|---------------|----------------|-------------------|--------------------------------|---|--|--|---|---|---|---|---|
|          |               |                |                   |                                |   |  |  |  |  |  |  |  |
| 0040     | 40mA          | 250V           | 35A @ 250VAC      | 6.0000                         | 900                                     | 100  | 0.0002   | X   |   | X   |   |   |
| 0050     | 50mA          | 250V           |                   | 4.0224                         | 320                                     | 80   | 0.0004   | X   | X   | X   |   | X   |
| 0063     | 63mA          | 250V           |                   | 2.6740                         | 350                                     | 100  | 0.0005   | X   | X   | X   |   | X   |
| 0080     | 80mA          | 250V           |                   | 2.0000                         | 370                                     | 120  | 0.0014   | X   | X   | X   |   | X   |
| 0100     | 100mA         | 250V           |                   | 4.6100                         | 600                                     | 130  | 0.0038   | X   | X   | X   |   | X   |
| 0125     | 125mA         | 250V           |                   | 3.2400                         | 550                                     | 172  | 0.0066   | X   | X   | X   |   | X   |
| 0160     | 160mA         | 250V           |                   | 2.2520                         | 500                                     | 165  | 0.0140   | X   | X   | X   |   | X   |
| 0200     | 200mA         | 250V           |                   | 1.6900                         | 465                                     | 190  | 0.0300   | X   | X   | X   |   | X   |
| 0250     | 250mA         | 250V           |                   | 1.3420                         | 400                                     | 250  | 0.0510   | X   | X   | X   |   | X   |
| 0315     | 315mA         | 250V           |                   | 0.9300                         | 380                                     | 250  | 0.1000   | X   | X   | X   |   | X   |
| 0400     | 400mA         | 250V           |                   | 0.1610                         | 120                                     | 135  | 0.0250   | X   | X   | X   |   | X   |
| 0500     | 500mA         | 250V           |                   | 0.1210                         | 120                                     | 155  | 0.0420   | X   | X   | X   |   | X   |
| 0630     | 630mA         | 250V           |                   | 0.0920                         | 115                                     | 200  | 0.0760   | X   | X   | X   |   | X   |
| 0800     | 800mA         | 250V           |                   | 0.0760                         | 120                                     | 310  | 0.1200   | X   | X   | X   |   | X   |
| 1100     | 1.00A         | 250V           |                   | 0.0676                         | 110                                     | 310  | 0.2000   | X   | X   | X   | X   | X   |
| 1125     | 1.25A         | 250V           |                   | 0.0518                         | 100                                     | 360  | 0.3100   | X   | X   | X   | X   | X   |
| 1160     | 1.60A         | 250V           |                   | 0.0420                         | 100                                     | 600  | 0.5300   | X   | X   | X   | X   | X   |
| 1200     | 2.00A         | 250V           |                   | 0.0325                         | 85                                      | 500  | 0.9800   | X   | X   | X   | X   | X   |
| 1250     | 2.50A         | 250V           |                   | 0.0246                         | 80                                      | 660  | 1.8000   | X   | X   | X   | X   | X   |
| 1315     | 3.15A         | 250V           |                   | 0.0184                         | 90                                      | 950  | 3.1000   | X   | X   | X   | X   | X   |
| 1400     | 4.00A         | 250V           | 40A / 250VAC      | 0.0129                         | 80                                      | 920  | 6.7000   | X   | X   | X   | X   | X   |
| 1500     | 5.00A         | 250V           | 50A / 250VAC      | 0.0105                         | 80                                      | 1000   | 12.0000  | X   | X   | X   | X   | X   |
| 1630     | 6.30A*        | 250V           | 63A / 250VAC      | 0.0073                         | 70                                      | 1200   | 24.0000  | X   | X   | X   |   |   |

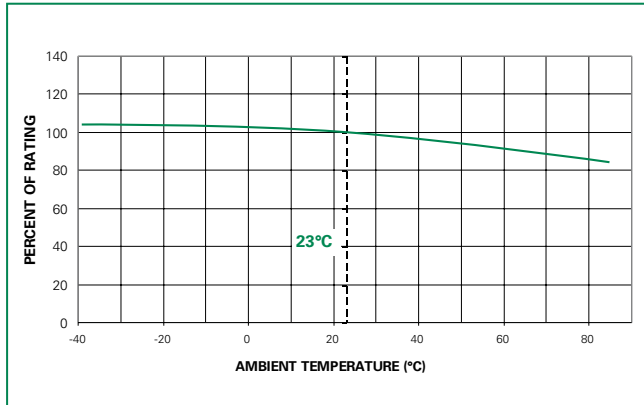
1 Per UL, approved breaking capacity is 50 A at 250 V.

\* Conducting path min. 0.2 mm<sup>2</sup>

Notes:

- 1.00 means the number one with two decimal places. 1,000 means the number one thousand.
- Resistance is measured at 10% of rated current, 25°C.

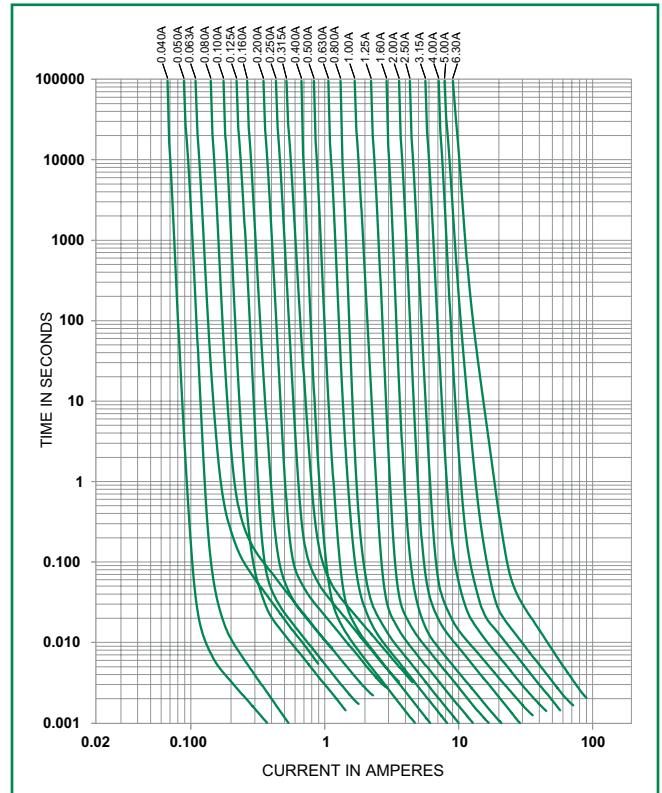
## Temperature Re-rating Curve



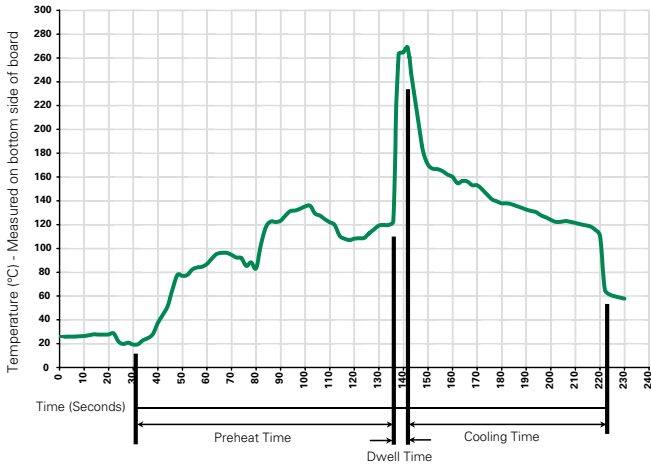
Note

1. Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

## Average Time Current Curves



**Soldering Parameters - Wave Soldering**



**Recommended Process Parameters:**

| Wave Parameter  | Lead-Free Recommendation          |
|---|-----------------------------------|
| <b>Preheat:</b><br>(Depends on Flux Activation Temperature) | (Typical Industry Recommendation) |
| Temperature Minimum:  | 100°C                             |
| Temperature Maximum:  | 150°C                             |
| Preheat Time:   | 60-180 Seconds                    |
| <b>Solder Pot Temperature:</b>                              | 260°C Maximum                     |
| <b>Solder Dwell Time:</b>                                   | 2-5 Seconds                       |

**Recommended Hand-Solder Parameters:**

Solder Iron Temperature: 350°C +/- 5°C  
Heating Time: 5 seconds max.

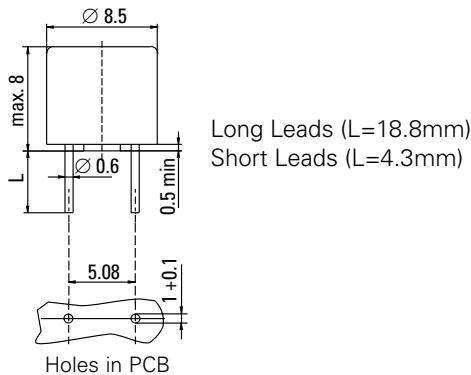
**Note: These devices are not recommended for IR or Convection Reflow process.**

**Product Characteristics**

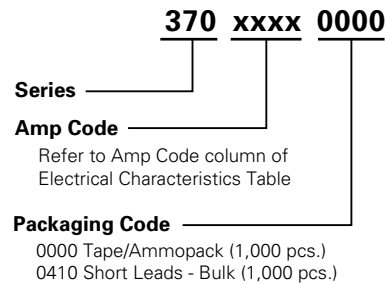
|                                  |   |
|----------------------------------|---|
| <b>Materials</b>                 | Base/Cap: Brown Thermoplastic Polyamide PA 6.6, UL 94 V-0<br>Round Pins: Copper, Tin-plated |
| <b>Lead Pull Strength</b>        | 10 N (IEC 60068-2-21)   |
| <b>Solderability</b>             | 260°C, ≤ 3s. (Wave)<br>350°C, ≤ 1s. (Soldering Iron)  |
| <b>Soldering Heat Resistance</b> | 260°C, 10s. (IEC 60068-2-20)<br>350°C, 3s. (Soldering Iron)                                 |

|                              |   |
|------------------------------|---|
| <b>Operating Temperature</b> | -40°C to +85°C (consider de-rating)   |
| <b>Climatic Category</b>     | -40°C to +85°C/21 days<br>(IEC 60068-1,-2-1,-2-2,-2-78)   |
| <b>Stock Conditions</b>      | +10°C to +60°C<br>RH ≤ 75% yearly average, without dew, maximum value for 30 days-95%                               |
| <b>Vibration Resistance</b>  | 24 cycles at 15 min. each<br>(IEC 60068-2-6)<br>10 - 60 Hz at 0.75 mm amplitude<br>60 - 2000 Hz at 10G acceleration |

**Dimensions**



**Part Numbering System**



**Packaging**

| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|------------------|-------------------------|----------|---------------------------|--------------|
| Tape & Ampopack  | N/A                     | 1,000    | 0000                      | N/A          |
| Short Leads      | N/A                     | 1,000    | 0410                      | N/A          |