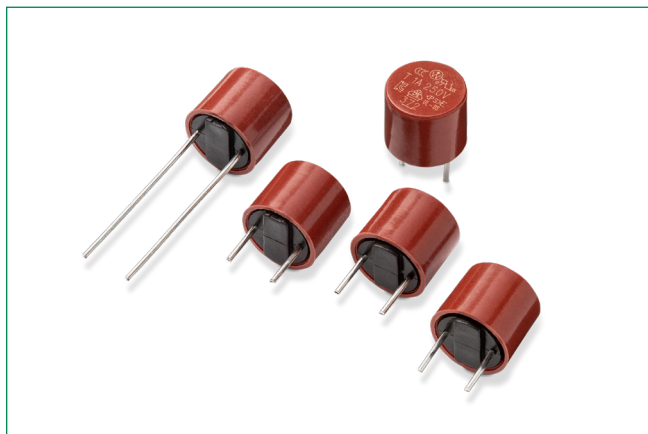


# 372 Series

## TR5 Fuse, Time Lag



### Description

The 372 Series are TR5® Fuses, Time-Lag type, 250V rated fuses, that are designed in accordance to IEC 60127-3.

### Features and Benefits

- Halogen free, Lead-free and RoHS compliant
- Reduced PCB space requirements
- Direct solderable or plug-in versions
- Internationally approved
- Low internal resistance
- Shock safe casing
- Vibration resistant
- Available from 0.040A to 6.3A
- Recognized to UL/CSA/NMX 248-1 and UL/CSA/NMX 248-14
- Conforms to EN/J/K 60127-1 and EN/J/K 60127-3
- Conforms to GB/T 9364.1 and GB/T 9364.3
- CE Mark indicates compliance with Low-Voltage and RoHS Directives.

### Additional Information



Resources



Accessories



Samples

### Applications

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

### Agency Approvals

| Agency  | Agency File/Certificate Number | Ampere Range             |
|---------|--------------------------------|--------------------------|
| UK CA   | NA                             | 40mA - 6.3A              |
| D'E     | 97187<br>116448                | 0.050A - 4A<br>5A - 6.3A |
| PS E    | NBK291021-JP1021               | 1A - 5A                  |
| C UL US | E67006                         | 0.040A - 6.3A            |
| CE      | N/A                            | 0.125A - 20A             |
| CCC     | SU05024-7010                   | 0.050 - 0.100A           |
|         | SU05024-7011                   | 0.125 - 0.800A           |
|         | SU05024-7006                   | 1A - 2.5A                |
|         | SU05024-7007                   | 3.15A                    |
|         | SU05024-7008                   | 4A                       |
|         | SU05024-7009                   | 5A                       |
|         | SU05024-7012                   | 6.3A                     |
| CCC     | 2020970207000055               | 0.040A - 6.3A            |

### Electrical Characteristics

| % of Ampere Rating | Opening Time                               |
|--------------------|--------------------------------------------|
| 150%               | 1 Hour, <b>Min.</b>                        |
| 210%               | 2 Minutes, <b>Max.</b>                     |
| 275%               | 400 ms, <b>Min.</b> ; 10 Sec., <b>Max.</b> |
| 400%               | 150 ms, <b>Min.</b> ; 3 Sec., <b>Max.</b>  |
| 1000%              | 20 ms, <b>Min.</b> ; 150 ms, <b>Max.</b>   |

# 372 Series

## TR5 Fuse, Time Lag

### 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 $10 \times I_N$ min. (A <sup>2</sup> s) | Agency Approvals                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|----------|---------------|----------------|-------------------|--------------------------------|-----------------------------------------|----------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|          |               |                |                   |                                |                                         |                                              |                                                          |  |  |  |  |  |  |  |
| 0040     | 40mA          | 250V           | 35A@250VAC        | 10.1650                        | 900                                     | 90                                           | 0.0090                                                   | -                                                                                   | X                                                                                   | -                                                                                   | X                                                                                   | -                                                                                   | X                                                                                   | X                                                                                   |
| 0050     | 50mA          | 250V           |                   | 6.4950                         | 500                                     | 70                                           | 0.0108                                                   | X                                                                                   | X                                                                                   | -                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 0063     | 63mA          | 250V           |                   | 3.8000                         | 400                                     | 80                                           | 0.0278                                                   | X                                                                                   | X                                                                                   | -                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 0080     | 80mA          | 250V           |                   | 2.8750                         | 370                                     | 100                                          | 0.0384                                                   | X                                                                                   | X                                                                                   | -                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 0100     | 100mA         | 250V           |                   | 1.7030                         | 300                                     | 110                                          | 0.0800                                                   | X                                                                                   | X                                                                                   | -                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 0125     | 125mA         | 250V           |                   | 1.3500                         | 260                                     | 120                                          | 0.1094                                                   | X                                                                                   | X                                                                                   | -                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 0160     | 160mA         | 250V           |                   | 0.7780                         | 200                                     | 130                                          | 0.1792                                                   | X                                                                                   | X                                                                                   | -                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 0200     | 200mA         | 250V           |                   | 0.5750                         | 170                                     | 140                                          | 0.3120                                                   | X                                                                                   | X                                                                                   | -                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 0250     | 250mA         | 250V           |                   | 0.4000                         | 150                                     | 150                                          | 0.4938                                                   | X                                                                                   | X                                                                                   | -                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 0315     | 315mA         | 250V           |                   | 0.2760                         | 140                                     | 160                                          | 0.3969                                                   | X                                                                                   | X                                                                                   | -                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 0400     | 400mA         | 250V           |                   | 0.2050                         | 130                                     | 170                                          | 1.4080                                                   | X                                                                                   | X                                                                                   | -                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 0500     | 500mA         | 250V           |                   | 0.1550                         | 125                                     | 180                                          | 2.0000                                                   | X                                                                                   | X                                                                                   | -                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 0630     | 630mA         | 250V           |                   | 0.1150                         | 120                                     | 200                                          | 3.0958                                                   | X                                                                                   | X                                                                                   | -                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 0800     | 800mA         | 250V           |                   | 0.1000                         | 110                                     | 220                                          | 5.7600                                                   | X                                                                                   | X                                                                                   | -                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 1100     | 1.00A         | 250V           |                   | 0.0790                         | 110                                     | 360                                          | 7.5000                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 1125     | 1.25A         | 250V           |                   | 0.0550                         | 95                                      | 450                                          | 13.7500                                                  | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 1160     | 1.60A         | 250V           |                   | 0.0420                         | 95                                      | 450                                          | 19.9680                                                  | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 1200     | 2.00A         | 250V           |                   | 0.0300                         | 85                                      | 600                                          | 30.0000                                                  | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 1250     | 2.50A         | 250V           |                   | 0.0220                         | 80                                      | 700                                          | 35.0000                                                  | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 1315     | 3.15A         | 250V           |                   | 0.0173                         | 80                                      | 1100                                         | 77.3955                                                  | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 1400     | 4.00A         | 250V           | 40A / 250 VAC     | 0.0129                         | 75                                      | 1200                                         | 126.4000                                                 | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 1500     | 5.00A         | 250V           | 50A / 250 VAC     | 0.0094                         | 80                                      | 1300                                         | 115.0000                                                 | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |
| 1630     | 6.30A*        | 250V           |                   | 0.0070                         | 58                                      | 1250                                         | 138.9150                                                 | X                                                                                   | X                                                                                   | -                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   | X                                                                                   |

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

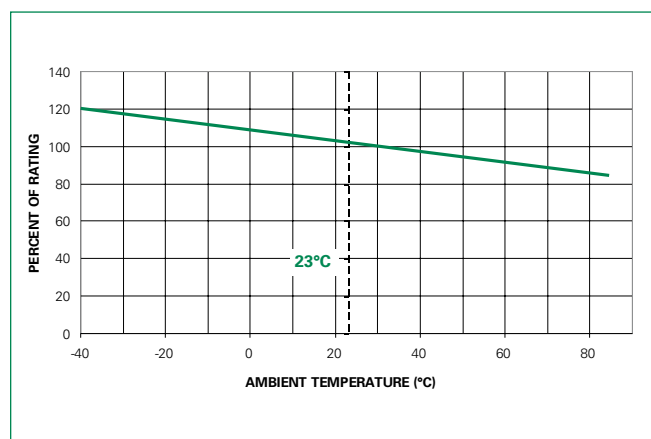
\* Conducting path min. 0.2 mm<sup>2</sup>

#### Notes:

1) 1.00 means the number one with two decimal places. 1,000 means the number one thousand.

2) Resistance is measured at 10% of rated current, 25°C.

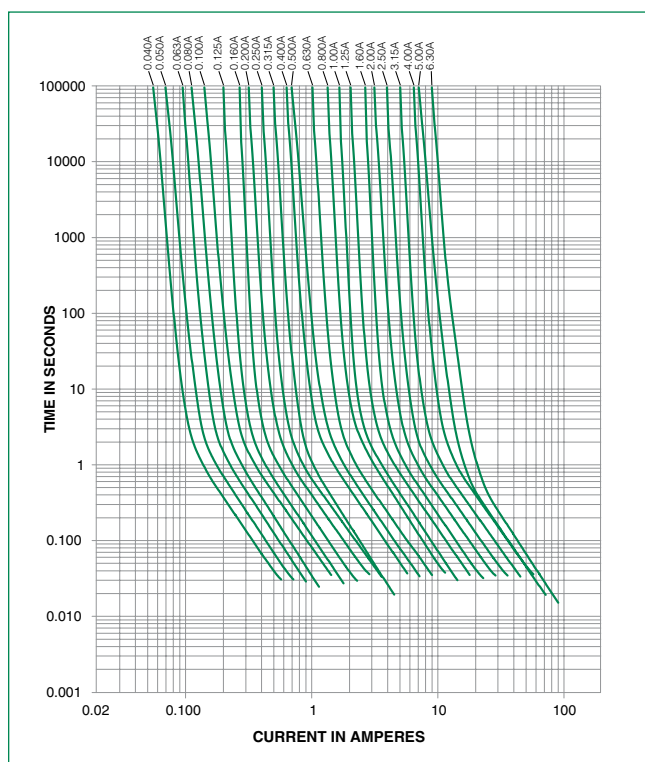
### Temperature Re-rating Curve



#### Note

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

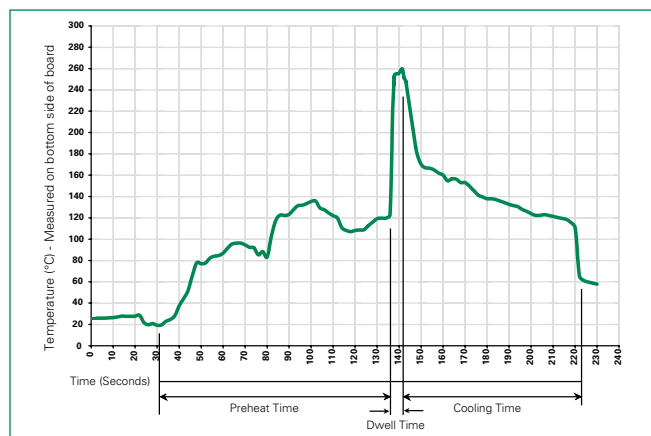
### Average Time Current Curves



# 372 Series

## TR5 Fuse, Time Lag

### Soldering Parameters - Wave Soldering



### Recommended Process Parameters:

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

### Recommended Hand-Solder Parameters:

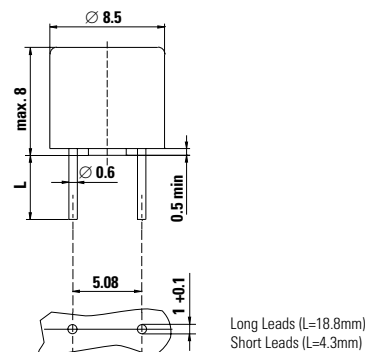
Solder Iron Temperature: 350°C +/- 5°C  
Heating Time: 5 seconds max.

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

### Product Characteristics

|                                  |                                                                                                                       |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>Materials</b>                 | Base/Cap: Brown Thermoplastic<br>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 re-rating)                                                                                   |
| <b>Climatic Category</b>         | -40°C/+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,<br>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's acceleration |

### Dimensions (mm)



### Packaging

| Packaging Option  | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|-------------------|-------------------------|----------|---------------------------|--------------|
| <b>372 Series</b> |                         |          |                           |              |
| Tape & Ammopack   | N/A                     | 1,000    | 0001                      | N/A          |
| Short Leads       | N/A                     | 1,000    | 0411                      | N/A          |
| Short Leads       | N/A                     | 200      | 0431                      | N/A          |
| 3.3mm Leads       | N/A                     | 1,000    | 0511                      | N/A          |

### Part Numbering System

|                       |                                                                                                                                                                                |             |             |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------|
|                       | <b>372</b>                                                                                                                                                                     | <b>xxxx</b> | <b>0001</b> |
| <b>Series</b>         |                                                                                                                                                                                |             |             |
| <b>Amp Code</b>       |                                                                                                                                                                                |             |             |
|                       | Refer to Amp Code column of Electrical Characteristics Table                                                                                                                   |             |             |
| <b>Packaging Code</b> |                                                                                                                                                                                |             |             |
|                       | 0001 Tape/Ammopack (1,000 pcs.)<br>0411 Short Leads - Bulk (1,000 pcs.)<br>0431 Short Leads - Bulk (200 pcs.)<br>0511 3.3 mm Leads - Bulk (1000 pcs.)<br>0075 7.5mm lead pitch |             |             |

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