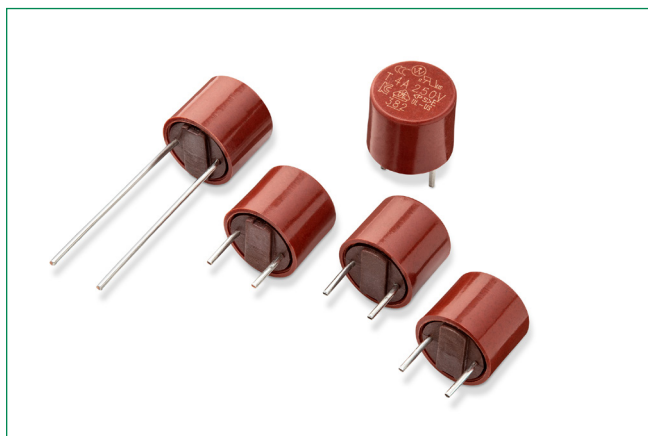


# 382 Series

## TR5® Fuse, Time-Lag



### Additional Information



Resources



Accessories



Samples

### Description

The 382 Series are TE5 Time-Lag type Fuses, 250V rated, with enhanced breaking capacity and designed in accordance to IEC 60127-3.

### Features & Benefits

- Halogen free, Lead-free and RoHS compliant
- Reduced PCB space requirements
- Direct solderable or plug-in versions
- 100A breaking capacity
- Internationally approved
- Low internal resistance
- Shock safe casing
- Vibration resistant
- Available from 1A to 10A
- UL Recognized to UL/CSA/NMX 248-1 and UL/CSA/NMX 248-14
- Conforms to EN/IEC 60127-1 and EN/IEC 60127-3
- Conforms to J60127-1 and J60127-3
- Conforms to K60127-1 and K60127-3
- Conforms to GB/T9364.1 and GB/T9364.3

### Applications

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

### Agency Approvals

| Agency | Agency File Number | Ampere Range |
|--------|--------------------|--------------|
|        | 40018249           | 1A - 4A      |
|        | 40018250           | 5A - 6.3A    |
|        | E67006             | 1A - 10A     |
|        | NBK040322-JP1021   | 1 - 5A       |
|        | NBK200122-JP1021   | 6.3 - 10A    |
|        | 2020970207000057   | 1A - 6.3A    |
|        | SU05024-7003       | 1-2.5A       |
|        | SU05024-7002       | 3.15A        |
|        | SU05024-7001       | 4A           |
|        | SU05024-7004       | 5A           |
|        | SU05024-7005       | 6.3A         |
|        | NA                 | 1A - 6.3A    |
|        | NA                 | 1A - 6.3A    |
|        | NA                 | 1A - 6.3A    |

### Electrical Characteristics

| % of Ampere Rating | Opening Time                    |                                |
|--------------------|---------------------------------|--------------------------------|
|                    | 1A - 6.3A                       | 8A - 10A                       |
| 150%               | 1 Hour, Min.                    | 1 Hour, Min.                   |
| 210%               | 2 Minutes, Max.                 | 300 s, Max.                    |
| 275%               | 400 ms, Min. ;<br>10 Sec., Max. | 1 s, Min. ; 20 s, Max.         |
| 400%               | 150 ms, Min. ;<br>3 Sec., Max.  | 150 ms, Min. ;<br>3 Sec., Max. |
| 1000%              | 20 ms, Min. ; 150 ms, Max.      | 20 ms, Min. ; 150 ms, Max.     |

# 382 Series

## TR5® Fuse, Time-Lag

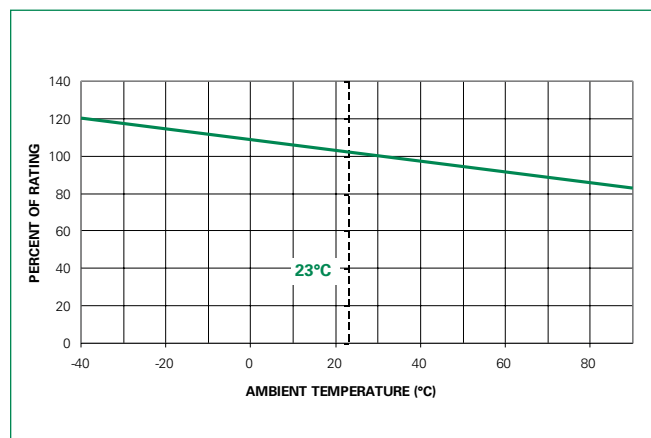
### Electrical Characteristics

| Amp Code | Rated Current | Voltage Rating | Breaking Capacity <sup>3</sup> | Nominal Cold Resistance (Ohms) <sup>2</sup> | Voltage Drop 1.0xI <sub>N</sub> max. (mV) | Power Dissipation 1.5xI <sub>N</sub> max. (mW) | Melting Integral 10xI <sub>N</sub> min. (A <sup>2</sup> s) | Agency Approvals |       |    |   |    |    |     |
|----------|---------------|----------------|--------------------------------|---------------------------------------------|-------------------------------------------|------------------------------------------------|------------------------------------------------------------|------------------|-------|----|---|----|----|-----|
|          |               |                |                                |                                             |                                           |                                                |                                                            | CE               | UK CA | DV | c | UL | PS | CCC |
| 1100     | 1.00 A        | 250 V          | 100A @250VAC                   | 0.0625                                      | 100                                       | 400                                            | 4.85                                                       | X                | X     | X  | X | X  | X  | X   |
| 1125     | 1.25 A        | 250 V          |                                | 0.0500                                      | 95                                        | 465                                            | 6.88                                                       | X                | X     | X  | X | X  | X  | X   |
| 1160     | 1.60 A        | 250 V          |                                | 0.0377                                      | 90                                        | 490                                            | 12.67                                                      | X                | X     | X  | X | X  | X  | X   |
| 1200     | 2.00 A        | 250 V          |                                | 0.0280                                      | 85                                        | 670                                            | 17.80                                                      | X                | X     | X  | X | X  | X  | X   |
| 1250     | 2.50 A        | 250 V          |                                | 0.0215                                      | 80                                        | 750                                            | 29.69                                                      | X                | X     | X  | X | X  | X  | X   |
| 1315     | 3.15 A        | 250 V          |                                | 0.0176                                      | 75                                        | 900                                            | 45.35                                                      | X                | X     | X  | X | X  | X  | X   |
| 1400     | 4.00 A        | 250 V          |                                | 0.0138                                      | 70                                        | 1200                                           | 72.00                                                      | X                | X     | X  | X | X  | X  | X   |
| 1500     | 5.00 A        | 250 V          |                                | 0.0108                                      | 65                                        | 1250                                           | 121.25                                                     | X                | X     | X  | X | X  | X  | X   |
| 1630     | 6.30 A        | 250 V          |                                | 0.0076                                      | 65                                        | 1400                                           | 148.84                                                     | X                | X     | X  | X | X  | X  | X   |
| 1800     | 8.00 A        | 250 V          |                                | 0.0059                                      | 63                                        | 1600                                           | 233.60                                                     | -                | -     | -  | X | X  | -  | -   |
| 2100     | 10.00 A       | 250 V          |                                | 0.0042                                      | 57                                        | 1600                                           | 365.00                                                     | -                | -     | -  | X | X  | -  | -   |

#### 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.
3. Breaking Capacity may differ based on Agency Approval. See Agency Approval certificate for more details.

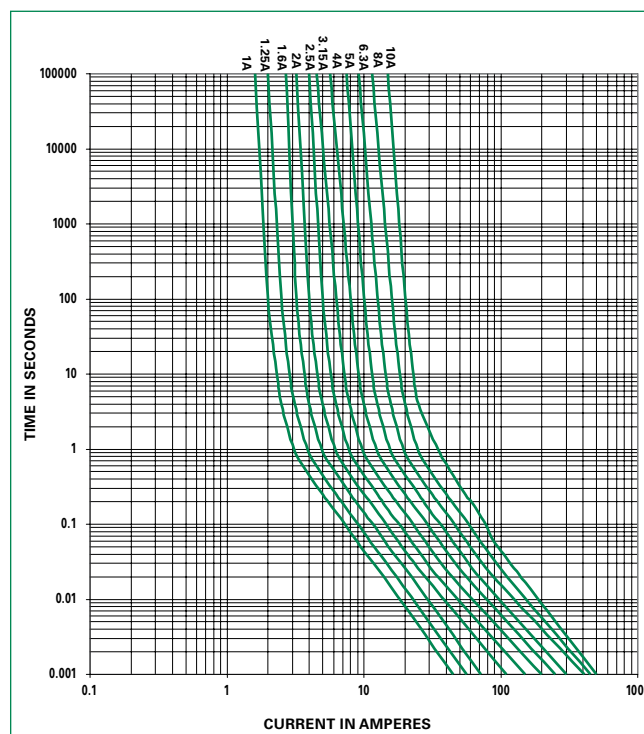
### Temperature Derating Curve



#### Note:

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

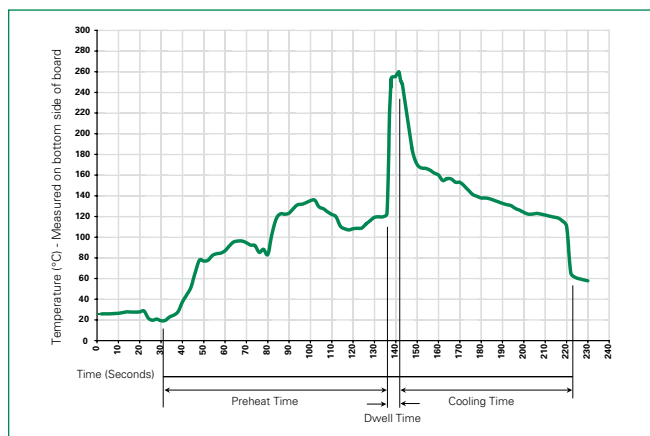
### Average Time Current Curves



# 382 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.

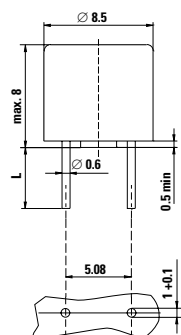
**Note:** These devices are not recommended for IR or Convection Reflow process.

### 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 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 10 g acceleration |

### Dimensions (mm)



Long Leads (L=18.8mm ±0.3)  
Short Leads (L=4.3mm ±0.3)

Holes in PCB

### Part Numbering System

**382** **xxxx** **0000**

**Series**

**Amp Code**

Refer to Amp Code column of  
Electrical Characteristics Table

**Packaging Code**

0000 Tape/Ammopack (1,000 pcs.)  
0410 Short Leads - Bulk (1,000 pcs.)  
0430 Short Leads - Bulk (200 pcs.)

### Packaging

| Packaging Option  | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|-------------------|-------------------------|----------|---------------------------|--------------|
| <b>382 Series</b> |                         |          |                           |              |
| Tape & Ammopack   | N/A                     | 1,000    | 0000                      | N/A          |
| Short Leads       | N/A                     | 1,000    | 0410                      | N/A          |
| Short Leads       | N/A                     | 200      | 0430                      | N/A          |

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