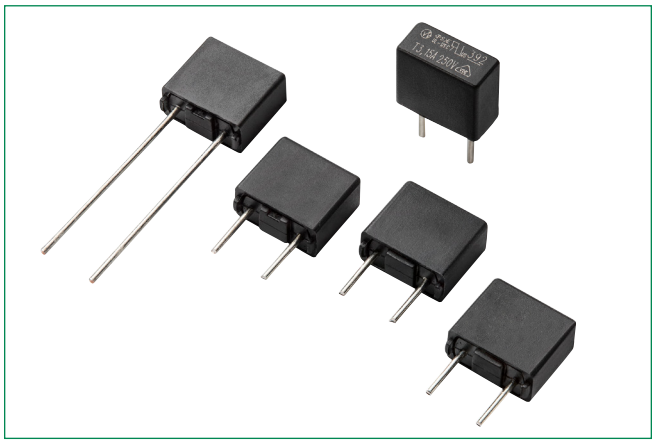
# 392 Series
## TE5 Time-Lag Fuse



## Description

The 392 Series is a TE5 Fuse. It is a time-lag fuse designed in accordance to IEC 60127-3, Standard Sheet 4.

## Features

- Reduced PCB space requirements
- Direct solderable or plug-in versions
- Internationally approved
- Low internal resistance
- Shock safe casing
- Vibration resistant
- Halogen free, Lead-free and RoHS compliant
- Red Phosphorus Free
- Conforms to EN/IEC/J/K 60127-1 and EN/IEC/J/K 60127-3
- Conforms to GB/T 9364.1 and GB/T 9364.3
- Recognized to UL/CSA/NMX 248-1 and UL/CSA/NMX 248-14

## Additional Information

Resources | Accessories | Samples

## Applications

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

### Agency Approvals

| Agency | Agency File Number | Ampere Range |
|---|---|---|
| VDE | 126983 | 0.28 A - 6.3 A* |
| cULus | E67006 | 0.28 A - 6.3 A |
| CE | N/A | 0.28 A - 6.3 A |
| CCC | 2020970207000069 | 0.5 A - 6.3 A |
| PSE | NBK291021-JP1021 | 1 A - 5 A |
| KC | SU05024 - 7013A<br>SU05024 - 7014B<br>SU05024 - 7015B<br>SU05024 - 7016B<br>SU05024 - 7017B<br>SU05024 - 7018B | 0.8 A<br>1 A - 2.5 A<br>3.15 A<br>4 A<br>5 A<br>6.3 A |

*Red Phosphorus Free from 0.28A to 5A.

### Electrical Characteristics for Series

| % of Ampere Rating | Opening Time |
|---|---|
| 150% | 1 Hour, **Min.** |
| 210% | 120 s, **Max.** |
| 275% | 400 ms **Min.** ; 10 Sec. **Max.** |
| 400% | 150 ms **Min.** ; 3 Sec. **Max.** |
| 1000% | 20 ms **Min.** ; 150 ms **Max.** |

### Electrical Characteristic Specifications by Item

| Rated Current | Amp Code | Voltage Rating | Breaking Capacity | Nominal Cold Resistance (Ohms)[3] | Voltage Drop 1.0x$I_N$ max. (mV) | Power Dissipation 1.5x$I_N$ max. (mW) | Melting Integral 10x$I_N$ max. ($A^2s$) | Agency Approvals | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | VDE | cULus | CCC | KC | CE | PSE |
| 280 mA | 280 | 250 V | 35A@250Vac[1]<br>130A@250Vac[2] | 0.33 | 115 | 168 | 0.048 | x | x | - | - | x | - |
| 500 mA | 500 | 250 V | | 0.163 | 105 | 125 | 2.175 | x | x | x | x | x | - |
| 800 mA | 800 | 250 V | | 0.096 | 110 | 280 | 5.12 | x | x | x | x | x | - |
| 1.0 A | 1100 | 250 V | | 0.0715 | 115 | 400 | 8.0 | x | x | x | x | x | x |
| 1.25 A | 1125 | 250 V | | 0.0569 | 100 | 500 | 11.95 | x | x | x | x | x | x |
| 1.6 A | 1160 | 250 V | | 0.04 | 95 | 600 | 18.43 | x | x | x | x | x | x |
| 2.0 A | 1200 | 250 V | | 0.0298 | 90 | 700 | 29.0 | x | x | x | x | x | x |
| 2.5 A | 1250 | 250 V | | 0.024 | 85 | 750 | 47.81 | x | x | x | x | x | x |
| 3.15 A | 1315 | 250 V | | 0.017 | 80 | 1100 | 78.39 | x | x | x | x | x | x |
| 4.0 A | 1400 | 250 V | 40A@250Vac[1]<br>50A@250Vac[2] | 0.0128 | 75 | 1200 | 126.4 | x | x | x | x | x | x |
| 5.0 A | 1500 | 250 V | 50A@250Vac[1,2] | 0.0101 | 70 | 1000 | 106.25 | x | x | x | x | x | x |
| 6.3 A | 1630 | 250 V | 63A@250Vac[1,2] | 0.0077 | 65 | 1200 | 160.74 | x | x | x | x | x | - |

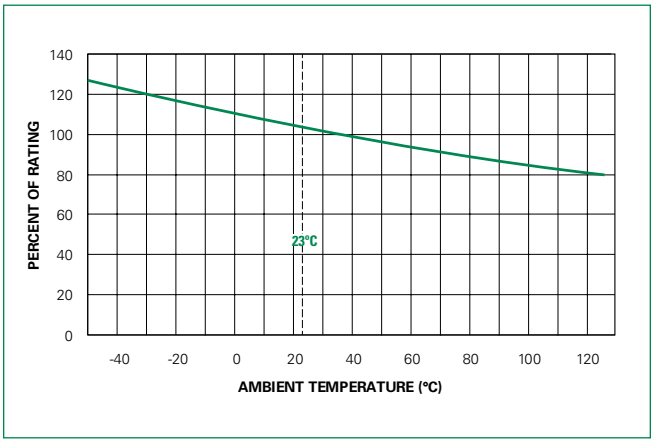
**Note:**
**1.** Per EN/IEC/J/K 60127-1 and EN/IEC/J/K 60127-3.
**2.** Per UL 248-1 and UL 248-14.
**3.** Resistance in measured at 10% of rated current, 25 °C.



Revised: GD. 08/05/22

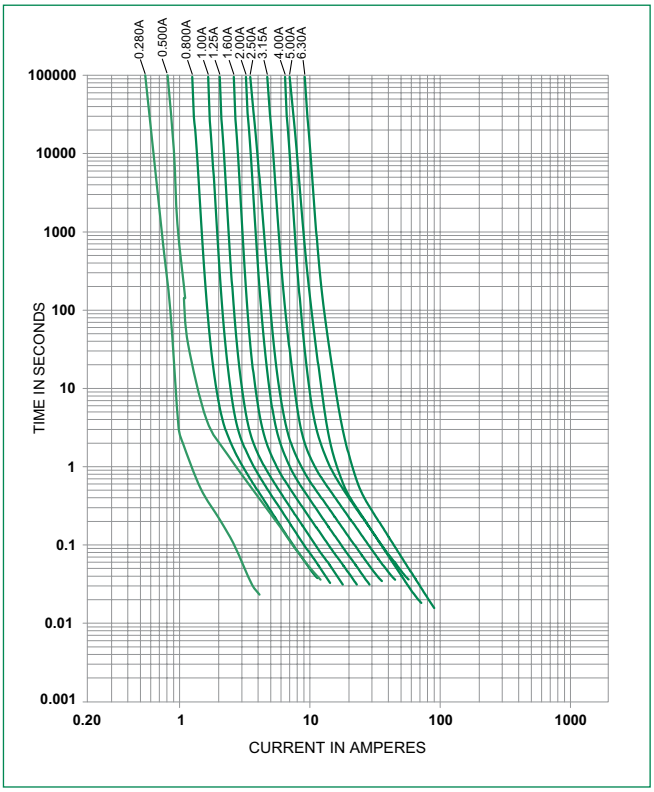
# 392 Series
## TE5 Time-Lag Fuse

### Temperature Re-rating Curve

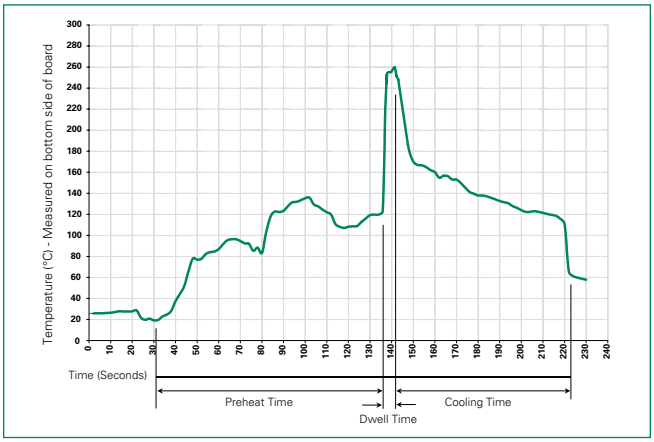



**Note:**
**1.** Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

### Average Time Current Curves




### Soldering Parameters - Wave Soldering




**Recommended Process Parameters:**

| Wave Parameter | Lead-Free Recommendation |
|---|---|
| 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.



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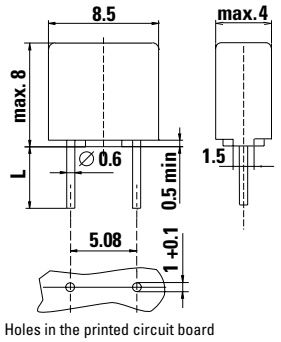
### Product Characteristics

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

| | |
|---|---|
| **Operating Temperature** | –40 °C to +125 °C (Consider re-rating) |
| **Climatic Category** | –40 °C to +85 °C/21 days<br>(IEC 60068-1, -2-1, -2-2, -2-78) |
| **Stock Condition** | +10 °C to +60 °C<br>Relative humidity ≤ 75% yearly average, without dew, maximum value for 30 days - 95% |
| **Vibration Resistance** | 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




Holes in the printed circuit board

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

### Part Numbering System

**392 xxxx 0000**

**Series**

**Amp Code**
Refer to Amp Code column of Electrical Characteristics Table

**Packaging Code**
0000 Tape/Ammopack (1,400 pcs.)
0440 Short Leads - Bulk (1,400 pcs.)

### Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|---|---|---|---|---|
| Tape and Ammopack | N/A | 1,400 | 0000 | N/A |
| Short Leads | N/A | 1,400 | 0440 | N/A |



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