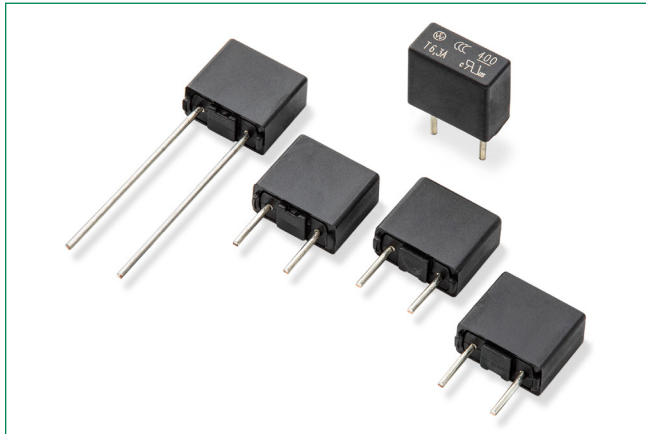


400 Series

TE5® Time-Lag Fuse



Description

The 400 Series TE5® Fuse is a Time-Lag type subminiature fuse that is designed for overcurrent protection. It is rated 250V and meets the requirements of IEC 60127-3.

Features & Benefits

- Halogen free, Lead-free and RoHS compliant
- Reduced PCB space requirements
- Direct solderable or plug-in versions
- Low internal resistance
- Shock safe casing
- Vibration resistant
- High Breaking Capacity up to 130A at 250VAC
- Internationally approved
- Recognized to UL/CSA/NMX 248-1 and UL/CSA/NMX 248-14
- Conforms to IEC/EN/J/K 60127-1 and EC/EN/J/K 60127-3

Additional Information



Resources



Accessories



Samples

Electrical Characteristics

| % of Ampere Rating | Opening Time |
|--------------------|------------------------------------|
| 150% | 1 Hour, Minimum |
| 210% | 120 Secs., Maximum |
| 275% | 400 ms, Minimum; 10 Secs., Maximum |
| 400% | 150 ms, Minimum; 3 Secs., Maximum |
| 1000% | 20 ms, Minimum; 150 ms, Maximum |

Applications

- Battery chargers
- Consumer electronics
- Power supplies
- Industrial controllers

Agency Approvals

| Agency | Agency File Number | Ampere Range |
|--------|---|--|
| | E67006 | 0.50A – 6.3A |
| | JD 60161567 | 1A - 6.3A |
| | 50532159 | 0.50A – 6.3A |
| | N/A | 0.5A - 6.3A |
| | 2020970207000059 | 0.50A – 6.3A |
| | SU05024-9004 SU05024-9003 SU05024-9001 SU05024-10003 SU05024-9002 | 0.50A – 0.80A 1A – 2.5A 3.15A 4A – 5A 6.3A |
| | N/A | 0.5A - 6.3A |

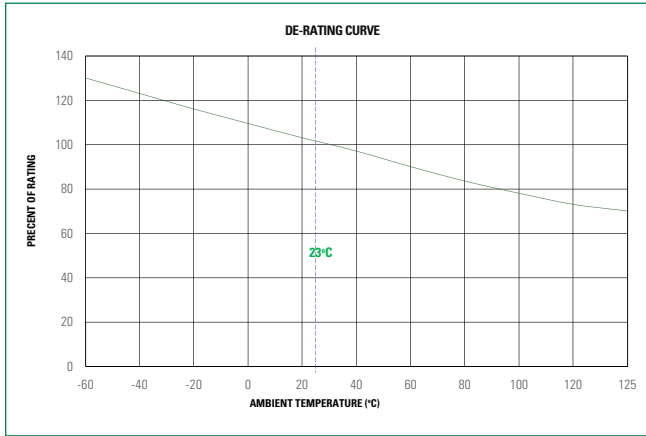
Electrical Characteristics

| Amp Code | Rated Current | Rated Voltage (V) | Breaking Capacity | Nominal Cold Resistance (Ohms) | Voltage Drop 1.0xI _N max. (mV) | Power Dissipation 1.0xI _N max. (mW) | Melting Integral 10xI _N max. (A ² s) | Agency Approvals | | | | | | |
|----------|---------------|-------------------|-------------------|--------------------------------|---|--|--|------------------|---|---|---|---|---|---|
| | | | | | | | | | | | | | | |
| 0.5 | 0.5A | 250 | 130A @250VAC | 0.1950 | 165 | 297 | 2.170 | x | - | x | x | x | x | x |
| 0800 | 0.8A | 250 | | 0.1003 | 116 | 387 | 6.720 | x | - | x | x | x | x | x |
| 1100 | 1.00A | 250 | | 0.0808 | 89 | 432 | 10.70 | x | x | x | x | x | x | x |
| 1125 | 1.25A | 250 | | 0.0562 | 76 | 411 | 14.44 | x | x | x | x | x | x | x |
| 1160 | 1.60A | 250 | | 0.0384 | 76 | 601 | 21.75 | x | x | x | x | x | x | x |
| 1200 | 2.00A | 250 | | 0.0292 | 75 | 758 | 46.00 | x | x | x | x | x | x | x |
| 1250 | 2.50A | 250 | | 0.0216 | 61 | 683 | 61.94 | x | x | x | x | x | x | x |
| 1315 | 3.15A | 250 | | 0.0167 | 55 | 921 | 101.61 | x | x | x | x | x | x | x |
| 1400 | 4.00A | 250 | | 0.0124 | 65 | 936 | 133.40 | x | x | x | x | x | x | x |
| 1500 | 5.00A | 250 | | 0.0098 | 56 | 948 | 216.50 | x | x | x | x | x | x | x |
| 1630 | 6.30A | 250 | | 0.0072 | 48 | 926 | 323.08 | x | x | x | x | x | x | x |

400 Series

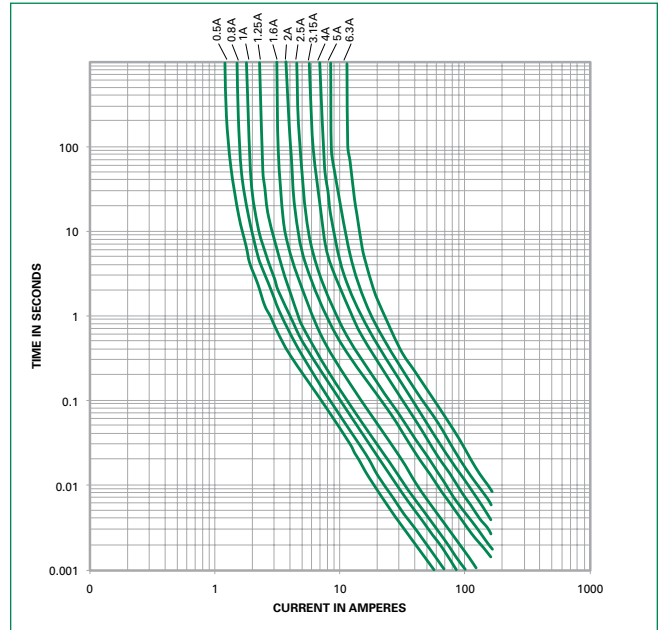
TE5® Time-Lag Fuse

Temperature Re-rating Curve

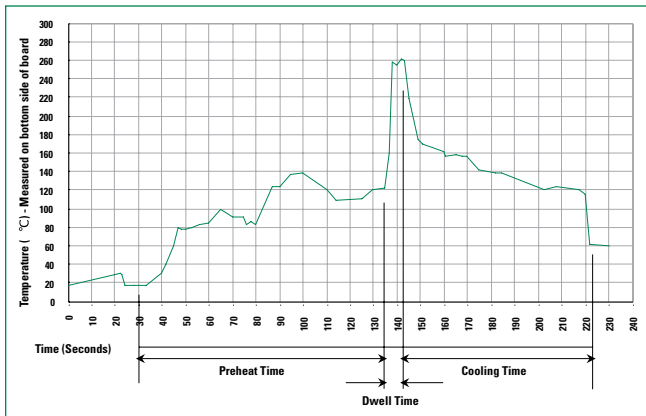


Note
1. Derating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

Average Time Current Curves



Soldering Parameters - Wave Soldering



Recommended Process Parameters:

| Wave Parameter | Lead-Free Recommendation |
|--|-----------------------------------|
| Preheat: (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.

400 Series

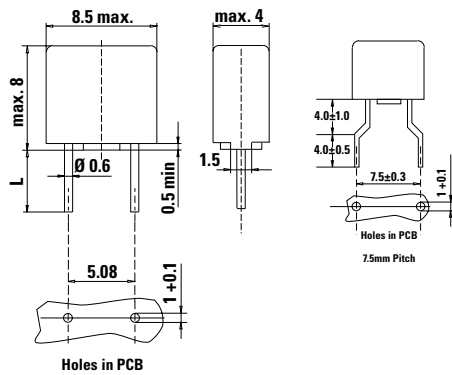
TE5® Time-Lag Fuse

Product Characteristics

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

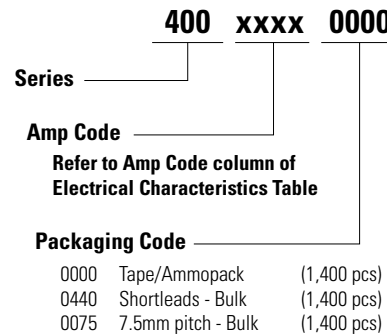
| | |
|------------------------------|---|
| Operating Temperature | -40°C to +125°C (Consider re-rating) |
| Climatic Category | -40°C to +125°C/21 days (IEC 60068-1, -2-1, -2-2, -2-78) |
| Stock Conditions | +10°C to +60°C relative humidity 75% yearly average, without dew, maximum value for 30 days – 95% |
| Vibration Resistance | 24 cycles at 15 min. each (IEC 60028-2-6) 10–60Hz at 0.75mm amplitude 20–2000Hz at 10g acceleration |

Dimensions



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

Part Numbering System



Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|------------------|-------------------------|----------|---------------------------|--------------|
| 400 Series | | | | |
| Tape & Ampopack | N/A | 1,400 | 0000 | N/A |
| Short Leads | N/A | 1,400 | 0440 | N/A |
| 7.5 mm Pitch | N/A | 1,400 | 0075 | N/A |

Disclaimer Notice - Littelfuse products are not designed for, and shall not be used for, any purpose (including, without limitation, automotive, military, aerospace, medical, life-saving, life-sustaining or nuclear facility applications, devices intended for surgical implant into the body, or any other application in which the failure or lack of desired operation of the product may result in personal injury, death, or property damage) other than those expressly set forth in applicable Littelfuse product documentation. Warranties granted by Littelfuse shall be deemed void for products used for any purpose not expressly set forth in applicable Littelfuse documentation. Littelfuse shall not be liable for any claims or damages arising out of products used in applications not expressly intended by Littelfuse as set forth in applicable Littelfuse documentation. The sale and use of Littelfuse products is subject to Littelfuse Terms and Conditions of Sale, unless otherwise agreed by Littelfuse. Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at www.littelfuse.com/disclaimer-electronics.