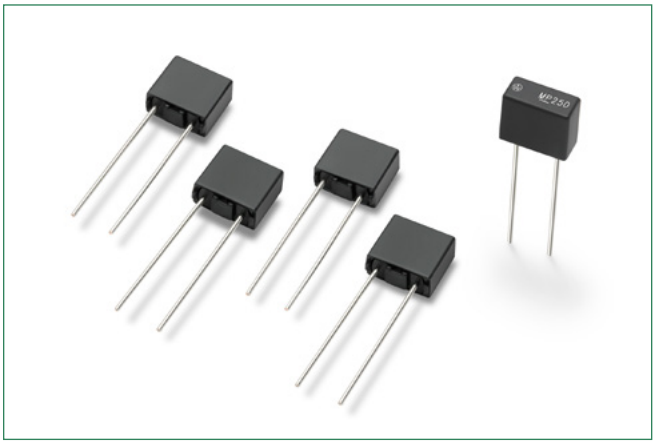
# 398 Series, TE5® Modul Protector® Fuse



## Description

The 398 Series TE5® Fuses are short circuit protectors, medium Time-Lag type, and 65V rated.

## Features

- Reduced PCB space requirements
- Highly defined cut-off times
- Low internal resistance
- Flame resistant encapsulated casing
- Available from 0.125A to 4A
- Halogen free, Lead-free and RoHS compliant

## Agency Approvals

| Agency | Agency File Number | Ampere Range |
|---|---|---|
| c UL us | E67006 | 0.125A - 4A |

## Applications

- Microprocessor protection

## Additional Information

Datasheet | Resources | Samples

## Electrical Characteristics

| % of Ampere Rating | Opening Time |
|---|---|
| 300 | 10 Seconds, **Max.** |

## Electrical Characteristics

| Amp Code | Rated Current | Marking Code* | Voltage Rating | Breaking Capacity | Nominal Cold Resistance (Ohms) | Cold Resistance $0.1xI_N$ typ. (mΩ) | Power Disspation $1.0xI_N$ max. (mW) | Melting Integral $10xI_N$ max. ($A^2s$) | Agency Approvals c UL us |
|---|---|---|---|---|---|---|---|---|---|
| 0125 | 125mA | MP13 | 65V | 50A@65 VAC/DC | 0.9610 | 900 | 50 | 0.036 | x |
| 0250 | 250mA | MP25 | 65V | | 0.3540 | 355 | 50 | 0.063 | x |
| 0315 | 315mA | MP32 | 65V | | 0.2600 | 261 | 60 | 0.08 | x |
| 0400 | 400mA | MP40 | 65V | | 0.1860 | 186 | 75 | 0.18 | x |
| 0500 | 500mA | MP50 | 65V | | 0.1540 | 155 | 90 | 0.33 | x |
| 0630 | 630mA | MP63 | 65V | | 0.1150 | 115 | 120 | 0.48 | x |
| 0800 | 800mA | MP80 | 65V | | 0.0850 | 85 | 140 | 1.02 | x |
| 1100 | 1.00A | MP100 | 65V | | 0.0640 | 65 | 170 | 1.10 | x |
| 1125 | 1.25A | MP125 | 65V | | 0.0480 | 48 | 210 | 2.34 | x |
| 1160 | 1.60A | MP160 | 65V | | 0.0340 | 34 | 320 | 4.66 | x |
| 1200 | 2.00A | MP200 | 65V | | 0.0260 | 26 | 425 | 8.40 | x |
| 1250 | 2.50A | MP250 | 65V | | 0.0210 | 21 | 550 | 14.81 | x |
| 1315 | 3.15A | MP315 | 65V | | 0.0155 | 16 | 650 | 29.27 | x |
| 1400 | 4.00A | MP400 | 65V | | 0.0120 | 12 | 1000 | 41.12 | 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.

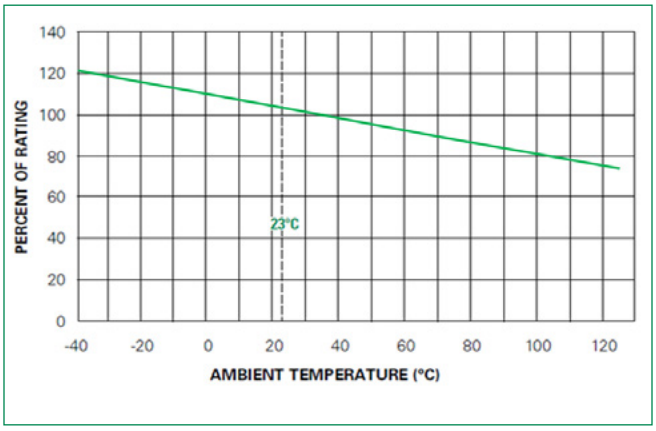
***** Physical Marking on top of the device


Revised: BO.11/14/20

# Radial Lead Fuses

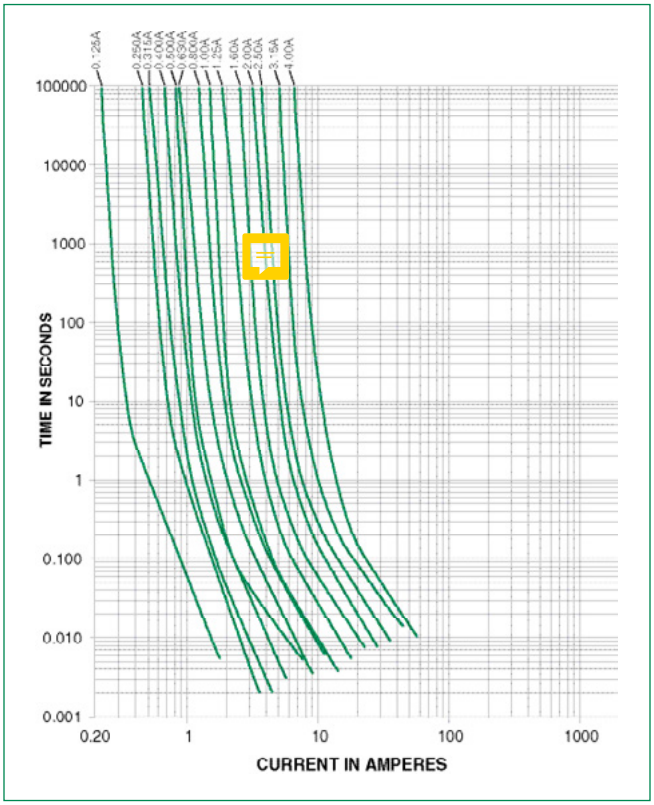
TE5® > Medium Time-Lag Fuse > 398 Series

## Temperature Re-rating Curve

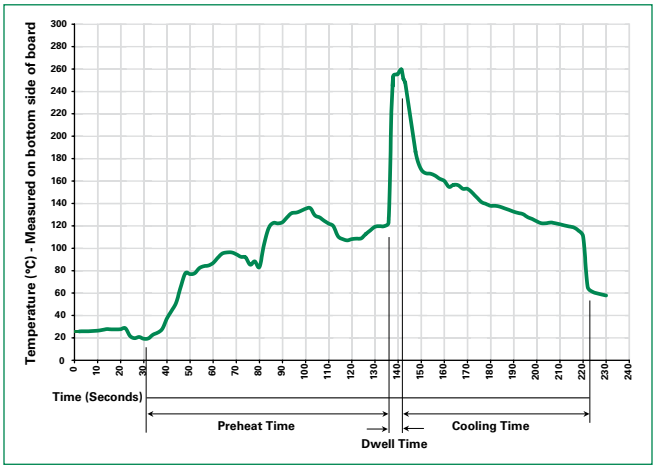



**Note:**
**1.** Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

## Average Time Current Curves




## Soldering Parameters - Wave Soldering




### Recommended Process Parameters:

| Wave Parameter | Lead-Free Recommendation |
|---|---|
| **Preheat:** (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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# Radial Lead Fuses

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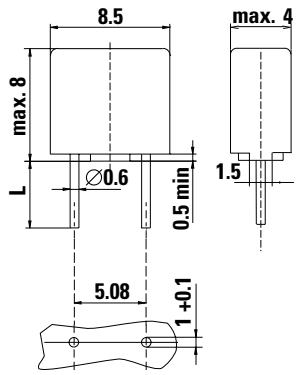
## Product Characteristics

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

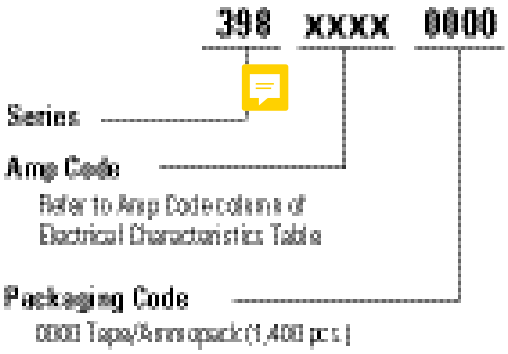
| | |
|---|---|
| **Operating Temperature** | -40°C to +125°C (Consider re-rating) |
| **Climatic Category** | -40°C to +85°C/21 days<br>(IEC 60068-1,-2-1,-2-2,-78) |
| **Stock Conditions** | +10°C to +60°C RH,<br>≤ 75% yearly average, without dew,<br>maximum value for 30 days-95% |
| **Vibration Resistance** | 24 cycles at 15 min. each<br>(IEC 60068-6)<br>10 - 60Hz at 0.75mm amplitude<br>60 - 2000Hz at 10g acceleration |

## Dimensions

Dimensions (mm)




## Part Numbering System




## Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code | Reel Size |
|---|---|---|---|---|
| **398 Series** | | | | |
| Tape & Ammopack | N/A | 1,400 | 0000 | N/A |