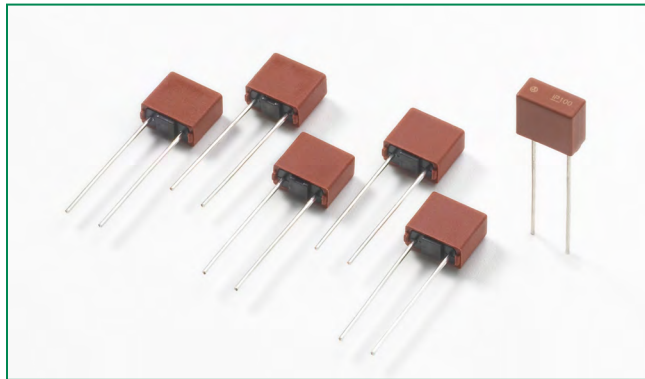




THE DATASHEET OF
39914000000



399 Series, TE5® Inrush Protector Fuse



Description

The 399 Series TE5 Fuses are Time-Lag type, and are 65V rated. For Short Circuit Protection of Sensitive Electronic Components and Assemblies.


Features

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

Applications

- IC Chip Protection

Agency Approvals

| Agency | Agency File Number | Ampere Range |
|-----------------------------------------------------------------------------------|--------------------|--------------|
|  | E67006 | 0.125A - 4A |

Additional Information



Datasheet



Resources




Samples

Electrical Characteristics

| % of Ampere Rating | Opening Time |
|--------------------|-------------------------|
| 300 | 20 Seconds, Max. |

Electrical Characteristics

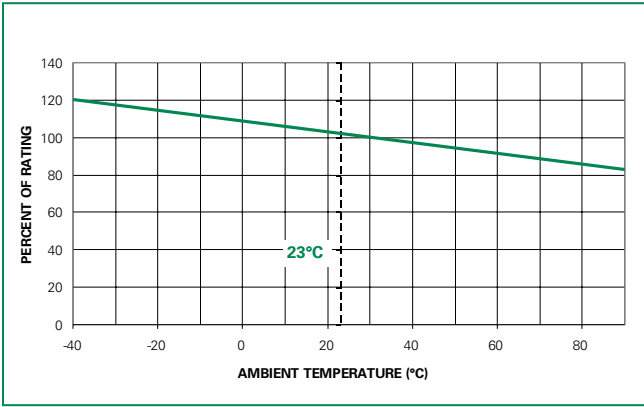
| Amp Code | Rated Current | Marking Code* | Voltage Rating | Breaking Capacity | Nominal Cold Resistance (Ohms) | Cold Resistance $0.1 \times I_N$ typ. (mΩ) | Power Dissipation $1.0 \times I_N$ max. (mW) | Melting Integral $10 \times I_N$ max. (A ² s) | Agency Approvals  |
|----------|---------------|---------------|----------------|-------------------|--------------------------------|--------------------------------------------|----------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| 0125 | 125 mA | IP13 | 65 V | 50A@65 VAC/ DC | 1.7450 | 1600 | 125 | 0.1461 | x |
| 0160 | 160 mA | IP16 | 65 V | | 1.1000 | 1103 | 140 | 0.2099 | x |
| 0200 | 200 mA | IP20 | 65 V | | 0.7800 | 775 | 155 | 0.30 | x |
| 0250 | 250 mA | IP25 | 65 V | | 0.5500 | 550 | 170 | 0.42 | x |
| 0315 | 315 mA | IP32 | 65 V | | 0.3810 | 382 | 190 | 0.62 | x |
| 0400 | 400 mA | IP40 | 65 V | | 0.2650 | 264 | 220 | 0.92 | x |
| 0500 | 500 mA | IP50 | 65 V | | 0.1900 | 191 | 240 | 1.40 | x |
| 0630 | 630 mA | IP63 | 65 V | | 0.1300 | 129 | 265 | 2.04 | x |
| 0800 | 800 mA | IP80 | 65 V | | 0.0920 | 92 | 300 | 3.33 | x |
| 1100 | 1.00 A | IP100 | 65 V | | 0.0650 | 66 | 330 | 4.30 | x |
| 1125 | 1.25 A | IP125 | 65 V | | 0.0470 | 46 | 370 | 6.88 | x |
| 1160 | 1.60 A | IP160 | 65 V | | 0.0330 | 33 | 420 | 12.03 | x |
| 1200 | 2.00 A | IP200 | 65 V | | 0.0230 | 25 | 460 | 14.00 | x |
| 1250 | 2.50 A | IP250 | 65 V | | 0.0170 | 18 | 520 | 23.13 | x |
| 1315 | 3.15 A | IP315 | 65 V | | 0.0132 | 13 | 580 | 44.65 | x |
| 1400 | 4.00 A | IP400 | 65 V | | 0.0095 | 10 | 650 | 76.80 | x |

* Physical Marking on top of the device

Notes:

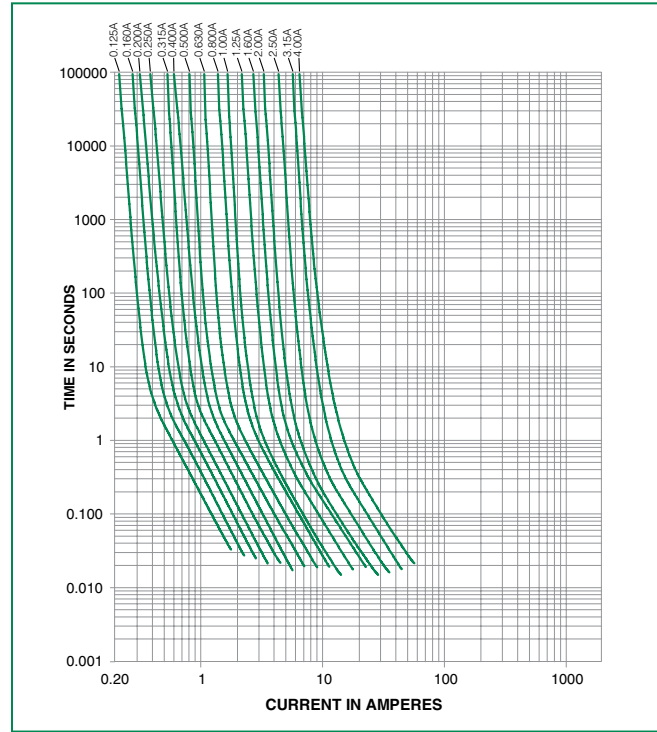
- 1) 1.00 means the number one with two decimal places. 1,000 means the number one thousand.
- 2) Resistance is measured at 10% of rated current, 25°C.

Temperature Re-rating Curve

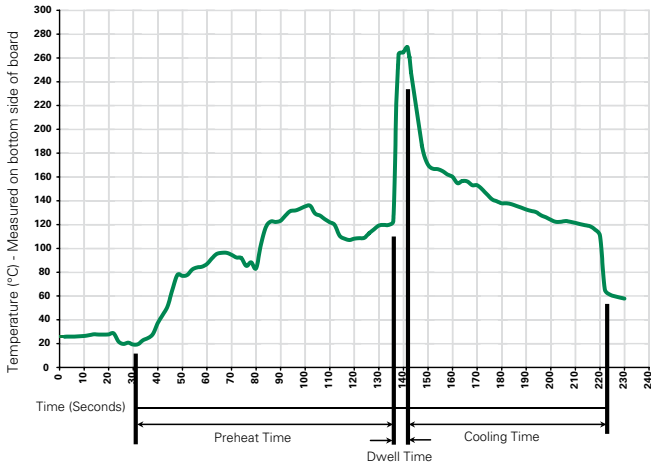


Note:
1. Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

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.

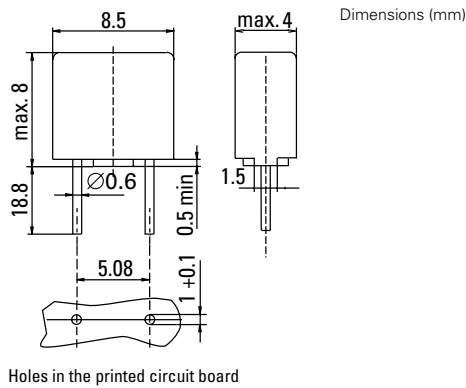
Note: These devices are not recommended for IR or Convection Reflow process.

Product Characteristics

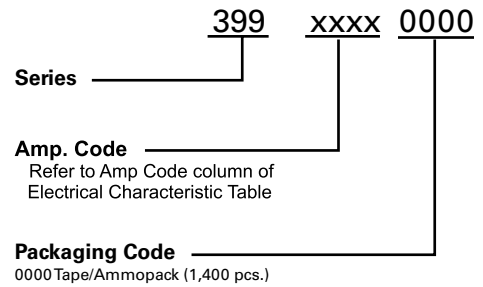
| | |
|----------------------------------|--------------------------------------------------------------------------------------------|
| Materials | Base/Cap: Brown Thermoplastic Polyamide PA 6.6, UL 94V-0 Round Pins: Copper, Tin-plated |
| Lead Pull Strength | 10 N (IEC 60068-2-21) |
| Solderability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

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

Dimensions



Part Numbering System



Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code | Reel Size |
|-------------------|-------------------------|----------|---------------------------|-----------|
| 399 Series | | | | |
| Tape & Ampopack | N/A | 1,400 | 0000 | N/A |

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