

### 617 Series, 5 × 20 mm, Fast-acting Fuse



#### Agency Approvals

| Agency                                                                              | Agency File Number | Ampere Range           |
|-------------------------------------------------------------------------------------|--------------------|------------------------|
|    | 2002010207024438   | 0.4A-6.3A              |
|    | E10480             | 0.4A-10A               |
|    | 29862              | 0.4A-6.3A              |
|   | 40014952           | 0.4A-6.3A<br>8A*, 10A* |
|  | N/A                | 0.4A-10A               |

\*Approval for cartridge versions only

#### Description

5×20mm fast-acting glass body cartridge fuse designed to IEC specification.

#### Features

- Designed to International (IEC) Standards for use globally
- Meets the IEC 60127-2, Sheet 2 specification for fast-acting fuses
- Available in cartridge and axial lead form
- RoHS compliant and lead-free

#### Applications

Used as supplementary protection in appliance or utilization equipment to provide individual protection for components or internal circuits.

#### Electrical Characteristics for Series

| % of Ampere Rating | Ampere Rating | Opening Time                  |
|--------------------|---------------|-------------------------------|
| 150%               | 0.4A-6.3A     | 60 minutes, Minimum           |
|                    | 8A-10A        | 30 minutes, Minimum           |
| 210%               | 0.4A-6.3A     | 30 minutes, Maximum           |
|                    | 8A-10A        | 30 minutes, Maximum           |
| 275%               | 0.4A-6.3A     | 0.05 sec., Min.; 2 sec. Max.  |
|                    | 8A-10A        | 0.05 sec., Min.; 2 sec. Max.  |
| 400%               | 0.4A-6.3A     | .01 sec., Min.; 0.3 sec. Max. |
|                    | 8A-10A        | .01 sec., Min.; 0.4 sec. Max. |
| 1000%              | 0.4A-6.3A     | .02 second, Maximum           |
|                    | 8A-10A        | .04 second, Maximum           |

#### Additional Information



Datasheet



Resources



Samples

# Axial Lead & Cartridge Fuses

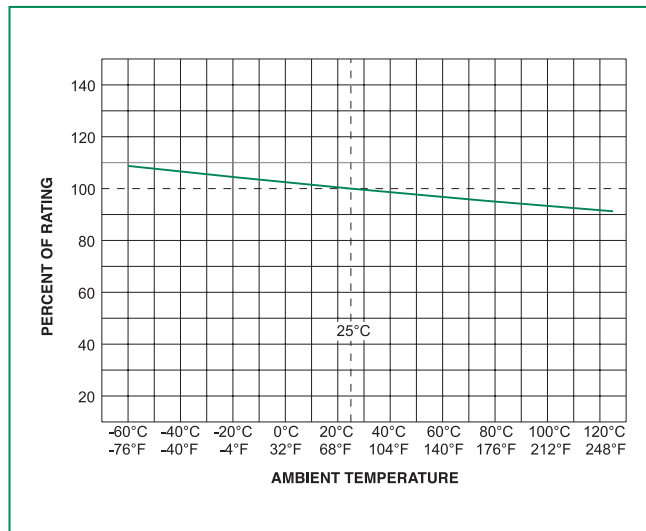
5x20 mm > Fast-Acting > 617 Series

## Electrical Characteristic Specifications by Item

| Amp Code | Amp Rating (A) | Voltage Rating (V) | Interrupting Rating | Nominal Cold Resistance (Ohms) | Nominal Melting I <sup>2</sup> t (A <sup>2</sup> sec) | Maximum Voltage Drop at Rated Current (mV) | Maximum Power Dissipation At 1.5I <sub>n</sub> (W) | Agency Approvals |    |    |    |     |
|----------|----------------|--------------------|---------------------|--------------------------------|-------------------------------------------------------|--------------------------------------------|----------------------------------------------------|------------------|----|----|----|-----|
|          |                |                    |                     |                                |                                                       |                                            |                                                    | CCC              | RU | SP | CE | DVE |
| .400     | 0.4            | 250                | 35A@250Vac          | 0.2770                         | 0.12500                                               | 1200                                       | 1.6                                                | x                | x  | x  | x  | x   |
| .500     | 0.5            | 250                |                     | 0.2065                         | 0.21500                                               | 1000                                       | 1.6                                                | x                | x  | x  | x  | x   |
| .630     | 0.63           | 250                |                     | 0.1900                         | 0.41000                                               | 650                                        | 1.6                                                | x                | x  | x  | x  | x   |
| .800     | 0.8            | 250                |                     | 0.1203                         | 0.85000                                               | 240                                        | 1.6                                                | x                | x  | x  | x  | x   |
| 001.     | 1              | 250                |                     | 0.0964                         | 1.04500                                               | 200                                        | 1.6                                                | x                | x  | x  | x  | x   |
| 1.25     | 1.25           | 250                |                     | 0.0701                         | 2.23000                                               | 200                                        | 1.6                                                | x                | x  | x  | x  | x   |
| 01.6     | 1.6            | 250                |                     | 0.0528                         | 4.61500                                               | 190                                        | 1.6                                                | x                | x  | x  | x  | x   |
| 002.     | 2              | 250                |                     | 0.0416                         | 5.73000                                               | 170                                        | 1.6                                                | x                | x  | x  | x  | x   |
| 02.5     | 2.5            | 250                |                     | 0.0334                         | 9.46000                                               | 170                                        | 1.6                                                | x                | x  | x  | x  | x   |
| 3.15     | 3.15           | 250                | 40A@250Vac          | 0.0224                         | 17.72000                                              | 150                                        | 2.5                                                | x                | x  | x  | x  | x   |
| 004.     | 4              | 250                |                     | 0.0165                         | 29.16500                                              | 130                                        | 2.5                                                | x                | x  | x  | x  | x   |
| 005.     | 5              | 250                |                     | 0.0137                         | 42.79500                                              | 130                                        | 2.5                                                | x                | x  | x  | x  | x   |
| 06.3     | 6.3            | 250                |                     | 0.0095                         | 62.46500                                              | 130                                        | 2.5                                                | x                | x  | x  | x  | x   |
| 008.     | 8              | 250                |                     | 0.0068                         | 198.16000                                             | 130                                        | 4                                                  |                  | x  |    | x  | x*  |
| 010.     | 10             | 250                |                     | 0.0063                         | 217.63500                                             | 130                                        | 4                                                  |                  | x  |    | x  | x*  |

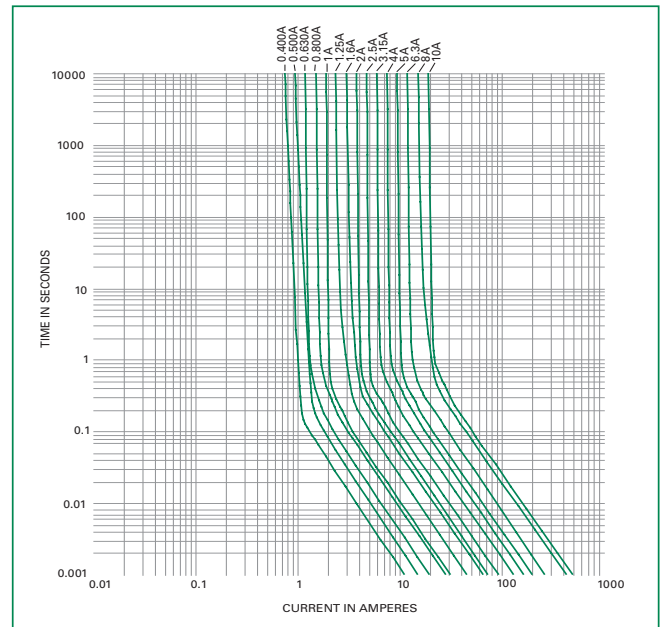
\* Approval for cartridge versions only.

## Temperature Re-rating Curve

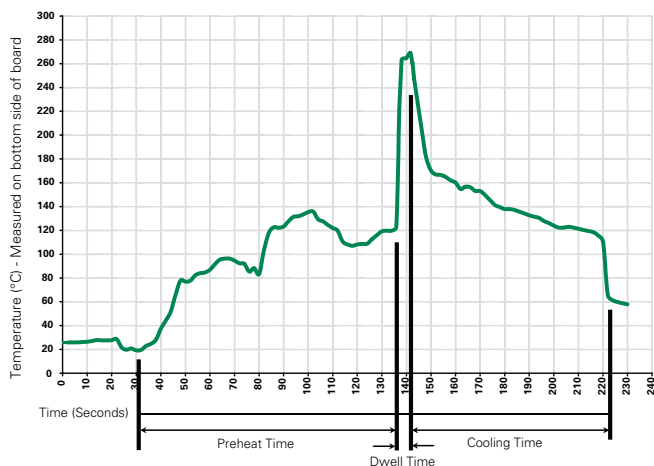


Note:  
Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

## Average Time Current Curves



## Soldering Parameters - Wave Soldering



### Recommended Process Parameters:

| Wave Parameter                                              | Lead-Free Recommendation          |
|-------------------------------------------------------------|-----------------------------------|
| <b>Preheat:</b><br>(Depends on Flux Activation Temperature) | (Typical Industry Recommendation) |
| Temperature Minimum:                                        | 100°C                             |
| Temperature Maximum:                                        | 150°C                             |
| Preheat Time:                                               | 60-180 seconds                    |
| <b>Solder Pot Temperature:</b>                              | 260°C Maximum                     |
| <b>Solder Dwell Time:</b>                                   | 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>Material</b>          | Body: Glass<br>Cap: Nickel-plated brass<br>Leads: Tin-plated Copper          |
| <b>Terminal Strength</b> | MIL-STD-202, Method 211, Test Condition A                                    |
| <b>Solderability</b>     | MIL-STD-202 method 208                                                       |
| <b>Product Marking</b>   | Cap1: Brand logo, current and voltage ratings<br>Cap2: Agency approval marks |
| <b>Packaging</b>         | Available in Bulk (M=1000 pcs/pkg) or on Tape/Reel (MRET1=1000 pcs/reel)     |

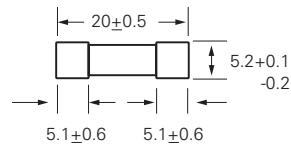
|                              |                                                                                                         |
|------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Operating Temperature</b> | -55°C to +125°C                                                                                         |
| <b>Thermal Shock</b>         | MIL-STD-202, Method 107, Test Condition B: (5 cycles -65°C to +125°C)                                   |
| <b>Vibration</b>             | MIL-STD-202, Method 201                                                                                 |
| <b>Humidity</b>              | MIL-STD-202, Method 103, Test Condition A. high RH (95%) and elevated temperature (40°C) for 240 hours. |
| <b>Salt Spray</b>            | MIL-STD-202, Method 101, Test Condition B                                                               |

# Axial Lead & Cartridge Fuses

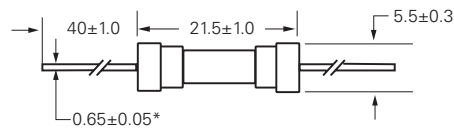
5×20 mm > Fast-Acting > 617 Series

## Dimensions

0617 000P



0617.400 XEP  
to  
0617010 XEP

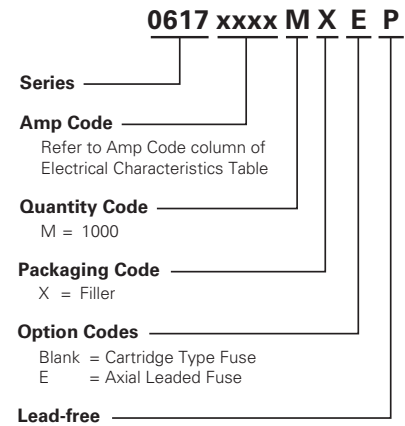


All dimensions in mm

Notes:

\* Ratings above 6.3A have 0.8±0.05 diameter lead.

## Part Numbering System



## Packaging

| Packaging Option  | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width     |
|-------------------|-------------------------|----------|---------------------------|------------------|
| <b>617 Series</b> |                         |          |                           |                  |
| Bulk              | N/A                     | 1000     | MX                        | N/A              |
| Bulk              | N/A                     | 1000     | MXE                       | N/A              |
| Reel and Tape     | EIA 296-E               | 1000     | MRET1                     | T1=53mm (2.087") |
| Bulk              | N/A                     | 1000     | MXG                       | N/A              |
| Bulk              | N/A                     | 1000     | MXB                       | N/A              |
| Bulk              | N/A                     | 100      | HX                        | N/A              |

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