

617 Series, 5 x 20 mm, Fast-acting Fuse



Description

5x20mm 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.

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 8A*, 10A* |
|  | N/A | 0.4A-10A |

*Approval for cartridge versions only

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



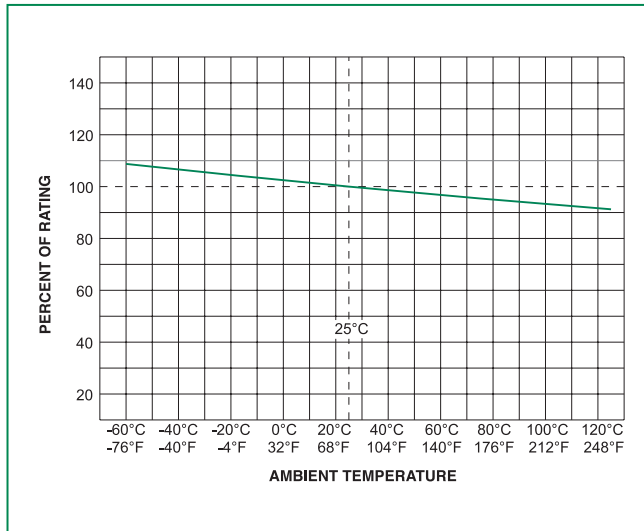
Samples

Electrical Characteristic Specifications by Item

| Amp Code | Amp Rating (A) | Voltage Rating (V) | Interrupting Rating | Nominal Cold Resistance (Ohms) | Nominal Melting I ² t (A ² sec) | Maximum Voltage Drop at Rated Current (mV) | Maximum Power Dissipation At 1.5In(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 | | 0.0224 | 17.72000 | 150 | 2.5 | x | x | x | x | x |
| 004. | 4 | 250 | 40A@250Vac | 0.0165 | 29.16500 | 130 | 2.5 | x | x | x | x | x |
| 005. | 5 | 250 | 50A@250Vac | 0.0137 | 42.79500 | 130 | 2.5 | x | x | x | x | x |
| 06.3 | 6.3 | 250 | 63A@250Vac | 0.0095 | 62.46500 | 130 | 2.5 | x | x | x | x | x |
| 008. | 8 | 250 | 80A@250Vac | 0.0068 | 198.16000 | 130 | 4 | | x | | x | x* |
| 010. | 10 | 250 | 100A@250Vac | 0.0063 | 217.63500 | 130 | 4 | | x | | x | x* |

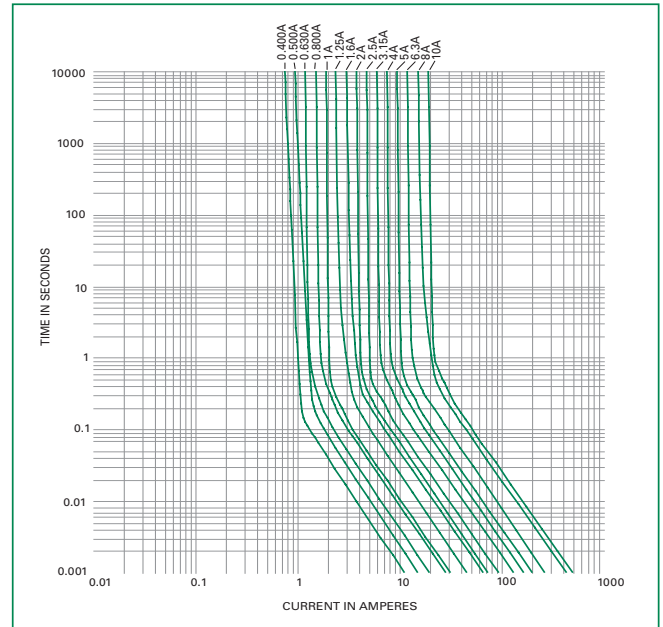
* Approval for cartridge versions only.

Temperature Re-rating Curve

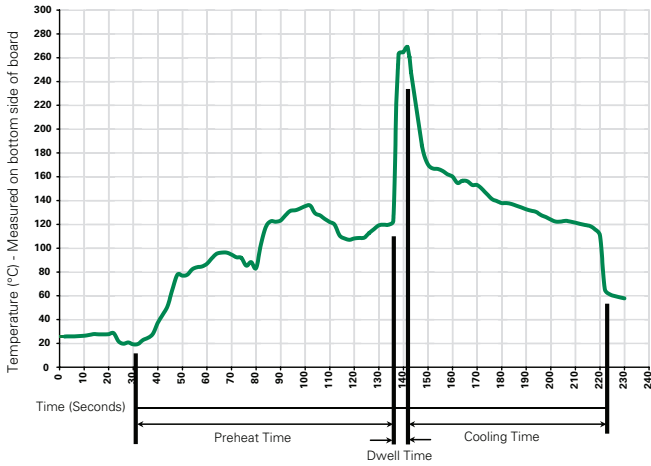


Note:
 Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

Average Time Current Curves



Soldering Parameters - Wave Soldering



Recommended Process Parameters:

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

| | |
|--------------------------|--|
| Material | Body: Glass Cap: Nickel-plated brass Leads: Tin-plated Copper |
| Terminal Strength | MIL-STD-202, Method 211, Test Condition A |
| Solderability | MIL-STD-202 method 208 |
| Product Marking | Cap1: Brand logo, current and voltage ratings Cap2: Agency approval marks |
| Packaging | Available in Bulk (M=1000 pcs/pkg) or on Tape/Reel (MRET1=1000 pcs/reel) |

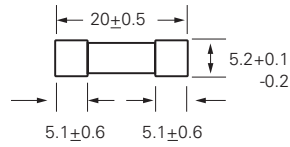
| | |
|------------------------------|---|
| Operating Temperature | -55°C to +125°C |
| Thermal Shock | MIL-STD-202, Method 107, Test Condition B: (5 cycles -65°C to +125°C) |
| Vibration | MIL-STD-202, Method 201 |
| Humidity | MIL-STD-202, Method 103, Test Condition A. high RH (95%) and elevated temperature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

Axial Lead & Cartridge Fuses

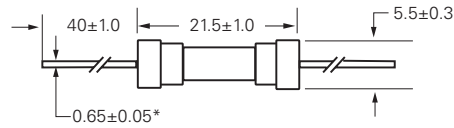
5x20 mm > Fast-Acting > 617 Series

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

0617 xxxx M X E P

Series

Amp Code

Refer to Amp Code column of
Electrical Characteristics Table

Quantity Code

M = 1000

Packaging Code

X = Filler

Option Codes

Blank = Cartridge Type Fuse
E = Axial Leaded Fuse

Lead-free

Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|-------------------|-------------------------|----------|---------------------------|------------------|
| 617 Series | | | | |
| 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 |