

618 Series, 5x20 mm, Time-Lag Fuse



Description

5x20mm Time-Lag glass body cartridge fuse designed to IEC specification.

Features

- Designed to International (IEC) Standards for use globally
- Meets the IEC 60127-2, Sheet 3 specification for Time-Lag 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 |
|-------------------------------------------------------------------------------------|--------------------|--------------|
|  | 2005010207170553 | 0.125A-6.3A |
|  | E10480 | 0.125A-10A |
|  | 29862 | 0.125A-10A |
|  | 40013496 | 0.125A – 10A |
|  | N/A | 0.125A-10A |

* Approval for Cartridge versions only

Additional Information



Datasheet



Resources



Samples

Electrical Characteristics

| % of Ampere Rating | Ampere Rating | Opening Time |
|--------------------|---------------|-----------------------------|
| 150% | 0.125A-6.3A | 60 minutes, Minimum |
| | 8A-10A | 30 minutes, Minimum |
| 210% | 0.125A-6.3A | 120 sec., Maximum |
| | 8A-10A | 120 sec., Maximum |
| 275% | 0.125A-6.3A | 600 ms., Min.; 10 sec. Max. |
| | 8A-10A | 600 ms., Min.; 10 sec. Max. |
| 400% | 0.125A-6.3A | 150 ms., Min.; 3 sec. Max. |
| | 8A-10A | 150 ms., Min.; 3 sec. Max. |
| 1000% | 0.125A-6.3A | 20 ms., Min.; 300 ms. Max. |
| | 8A-10A | 20 ms., Min.; 300 ms. Max. |

Axial Lead & Cartridge Fuses

5x20 mm > Time-Lag > 618 Series

Electrical Characteristics

| 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 | SF | CE | DE | |
| .125 | 0.125 | 250 | 35 A @ 250 VAC | 4.2000 | 0.1465 | 1900 | 1.6 | x | x | x | x | x | |
| .160 | 0.16 | 250 | | 3.7000 | 0.14400 | 1500 | 1.6 | x | x | x | x | x | |
| .200 | 0.2 | 250 | | 1.6000 | 0.3410 | 1300 | 1.6 | x | x | x | x | x | |
| .250 | 0.25 | 250 | | 1.0495 | 0.5405 | 1100 | 1.6 | x | x | x | x | x | |
| .315 | 0.315 | 250 | | 0.8475 | 1.1100 | 1000 | 1.6 | x | x | x | x | x | |
| .400 | 0.4 | 250 | | 0.5350 | 1.3250 | 900 | 1.6 | x | x | x | x | x | |
| .500 | 0.5 | 250 | | 0.3700 | 2.8250 | 300 | 1.6 | x | x | x | x | x | |
| .630 | 0.63 | 250 | | 0.2750 | 4.6750 | 250 | 1.6 | x | x | x | x | x | |
| .800 | 0.8 | 250 | | 0.0813 | 3.370 | 150 | 1.6 | x | x | x | x | x | |
| 001. | 1 | 250 | | 0.0613 | 6.730 | 150 | 1.6 | x | x | x | x | x | |
| 1.25 | 1.25 | 250 | | 0.0446 | 12.650 | 150 | 1.6 | x | x | x | x | x | |
| 01.6 | 1.6 | 250 | | 0.0336 | 23.350 | 150 | 1.6 | x | x | x | x | x | |
| 002. | 2 | 250 | | 0.0293 | 14.450 | 150 | 1.6 | x | x | x | x | x | |
| 02.5 | 2.5 | 250 | | 0.0219 | 23.250 | 120 | 1.6 | x | x | x | x | x | |
| 3.15 | 3.15 | 250 | | 0.0173 | 38.150 | 100 | 1.6 | x | x | x | x | x | |
| 004. | 4 | 250 | | 40 A @ 250 VAC | 0.0129 | 69.10 | 100 | 1.6 | x | x | x | x | x |
| 005. | 5 | 250 | | 50 A @ 250 VAC | 0.0104 | 111.00 | 100 | 1.6 | x | x | x | x | x |
| 06.3 | 6.3 | 250 | 63 A @ 250 VAC | 0.0076 | 198.50 | 100 | 1.6 | x | x | x | x | x | |
| 008. | 8 | 250 | 80 A @ 250 VAC | 0.0059 | 341.50 | 100 | 4 | | x | x | x | x | |
| 010. | 10 | 250 | 100 A @ 250 VAC | 0.0045 | 568.00 | 100 | 4 | | x | x | x | x | |

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 |

Dimensions

0618 000P



0618.125 XEP
to
0618010. 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 |
|-------------------|-------------------------|----------|---------------------------|------------------|
| 618 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 |

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