

514 Series Lead-Free 3AB, Fast-Acting Fuse



Description

The 514 Series fuses are 500VAC rated ceramic fuses with remarkable interrupting rating in a compact 6.3 x 32mm package. They are well suited for circuit protection in high energy applications.



Features

- Available in cartridge and axial lead form
- Compact form factor of 6.3mm x 32mm
- Lead-free, Halogen free, and RoHS compliant
- High Interrupting Rating

Applications

High energy and power efficient applications



Agency Approvals

| AGENCY | CERTIFICATE NUMBER | AMPERE RANGE |
|---|--------------------|--------------|
|  | E10480 | 0.4A - 12.5A |
|  | N/A | 0.4A - 12.5A |

Electrical Characteristics for Series

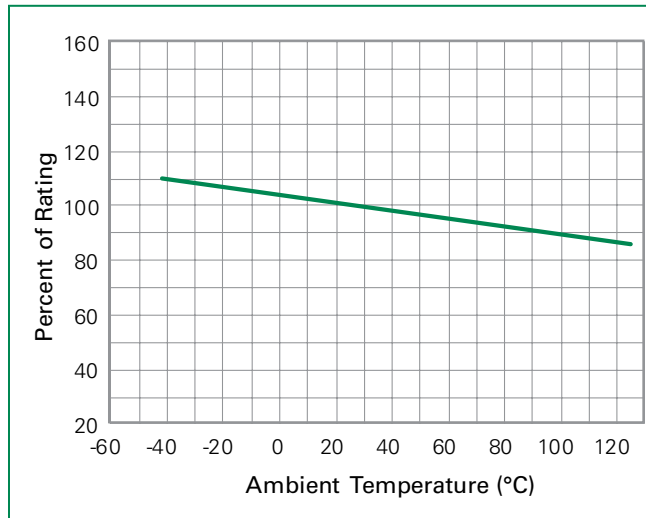
| % of Ampere Rating | Ampere Rating | Opening Time |
|--------------------|---------------|--------------|
| 100% | 1.6A - 12.5A | 4hours, Min |
| 200% | | 120 sec, Max |

Electrical Characteristics

| Amp Code | Amp Rating (A) | Max. Voltage Rating (V) | Interrupting Rating | Nominal Cold Resistance (mOhm) | Nominal Melting I ² t (A ² sec) | Agency Approvals | |
|----------|----------------|-------------------------|---------------------|--------------------------------|---|---|---|
| | | | | | |  |  |
| 01.6* | 1.6 | 500VAC | 5000A @500Vac | 214 | 1.92 | X* | X |
| 002. | 2 | | | 150 | 4.12 | X | X |
| 3.15 | 3.15 | | | 76 | 5.54 | X | X |
| 004. | 4 | | | 49 | 12.43 | X | X |
| 005. | 5 | | | 63.6 | 6.14 | X | X |
| 06.3 | 6.3 | | | 43 | 13.5 | X | X |
| 008. | 8 | | | 29 | 28.8 | X | X |
| 010. | 10 | | | 20.2 | 50.6 | X | X |
| 12.5 | 12.5 | | | 14.9 | 114 | X | X |

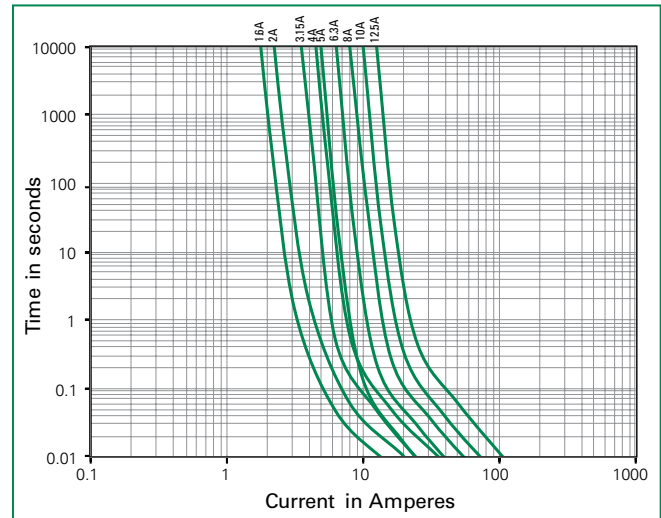
* 25KA@500VAC interrupting rating available for 1.6A

Temperature Re-rating Curve

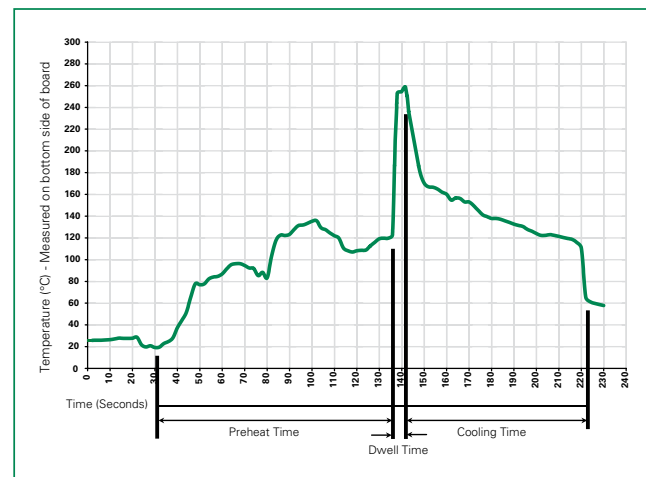


Note:
Derating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

Average Time Current Curves



Soldering Parameters - Wave Soldering



Recommended Process Parameters:

| Wave Parameter | Lead-Free Recommendation |
|---|--------------------------|
| Preheat: (Depends on Flux Activation Temperature) | |
| Temperature Minimum: | 100°C |
| Temperature Maximum: | 150°C |
| Preheat Time: | 60-180 seconds |
| Solder Pot Temperature: | 260°C Maximum |
| Solder Dwell Time: | 2 to 5 seconds |

Recommended Hand-Solder Parameters:

Solder Iron Temperature: 350°C +/- 5°C
Heating Time: 5 seconds max.

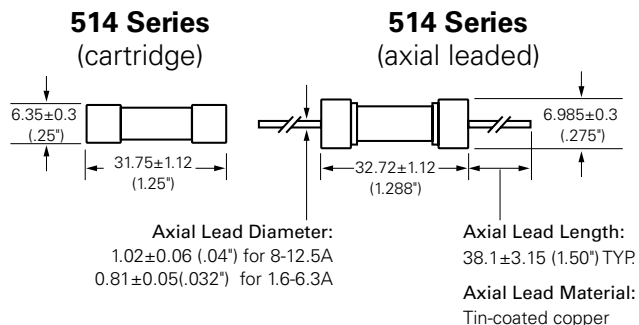
Note: These devices are not recommended for IR or Convection Reflow process.

Product Characteristics

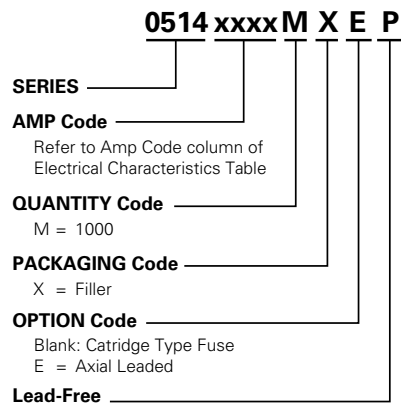
| | |
|--------------------------|---|
| Materials | Body : Ceramic Cap : Nickel Plated Brass Leads: Tin-plated copper |
| Terminal Strength | MIL-STD-202G, Method 211A, Test condition A |
| Solderability | Reference MIL-STD-202 Method 208 |
| Product Marking | Cap1 : Brand logo, current and voltage ratings Cap2 : Series and agency approval marks |

| | |
|------------------------------|--|
| Operating Temperature | -55°C to +125°C |
| Thermal Shock | MIL-STD-202G, Method 107G, Test condition B: (5 cycles -65°C to 125°C) |
| Vibration | MIL-STD-202G, Method 201A |
| Moisture Resistance | MIL-STD-202G, Method 103B, Test condition A |
| Salt Spray | MIL-STD-202G, Method 101E, Test condition B |

Dimensions



Part Numbering System



Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code | Reel Size |
|-------------------|-------------------------|----------|---------------------------|-----------|
| 514 Series | | | | |
| Bulk | N/A | 1000 | MX | N/A |
| Bulk | N/A | 1000 | MXE | N/A |

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