

### 508 Series Lead-Free 3AB Fuse



#### Description

A 1000Vac/Vdc rated ceramic fuse with remarkable interrupting rating in a compact 6.3×32mm package, which is well suited for circuit protection in high energy applications.

#### Features

- In accordance with Underwriter's Laboratories Standard UL 248-14
- Available in cartridge and axial lead
- RoHS compliant and Lead-free
- Superior Interrupting rating of 10,000 Amperes
- Compact form factor of 6.3×32mm

#### Applications

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

#### Additional Information



**Datasheet**



**Resources**



**Samples**



**Accessories**

For recommended fuse accessories for this product series, see '[Recommended Accessories](#)' section.

#### Agency Approvals

| Agency | Agency File Number | Ampere Range |
|--------|--------------------|--------------|
|        | E10480             | 0.315A - 1A  |
|        | N/A                | 0.315A - 1A  |

#### Electrical Characteristics

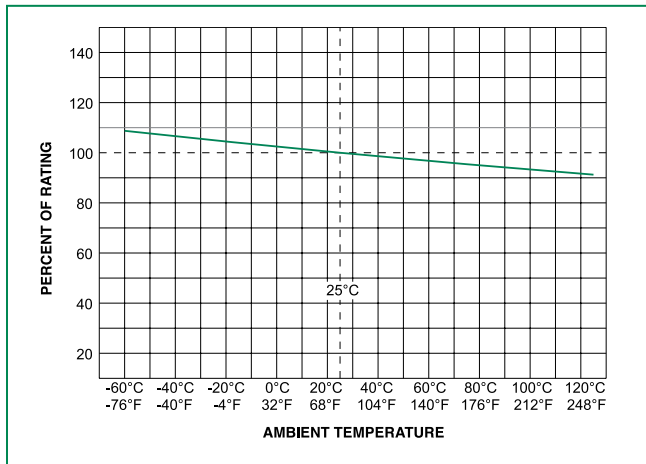
| % of Ampere Rating | Ampere Rating | Opening Time         |
|--------------------|---------------|----------------------|
| 100%               | 0.315A - 1A   | 4 Hours, Minimum     |
| 135%               |               | 1 Hour, Maximum      |
| 200%               |               | 120 Seconds, Maximum |

#### Electrical Characteristic

| Amp Code | Amp Rating | Voltage Rating | Interrupting Rating              | Nominal Cold Resistance (mohms) | Nominal Melting I <sup>2</sup> t (A <sup>2</sup> sec.) | Agency Approvals |   |
|----------|------------|----------------|----------------------------------|---------------------------------|--------------------------------------------------------|------------------|---|
|          |            |                |                                  |                                 |                                                        |                  |   |
| .315     | 0.315      | 1000           | 10kA @ 1000Vac<br>10kA @ 1000Vdc | 9200                            | 0.071                                                  | x                | x |
| .500     | 0.5        | 1000           |                                  | 3572                            | 0.259                                                  | x                | x |
| 001      | 1          | 1000           |                                  | 1580                            | 0.449                                                  | x                | x |

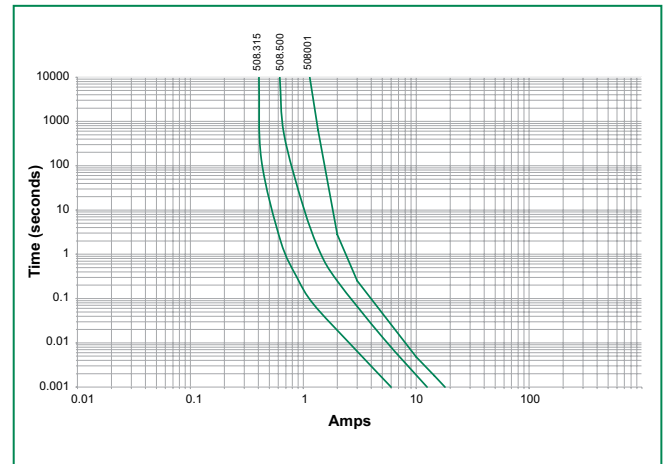
\* 10KA@600Vac/dc also cULRus approved. Add suffix "6". Example: 0508.315MX6P.

### Temperature Re-rating Curve

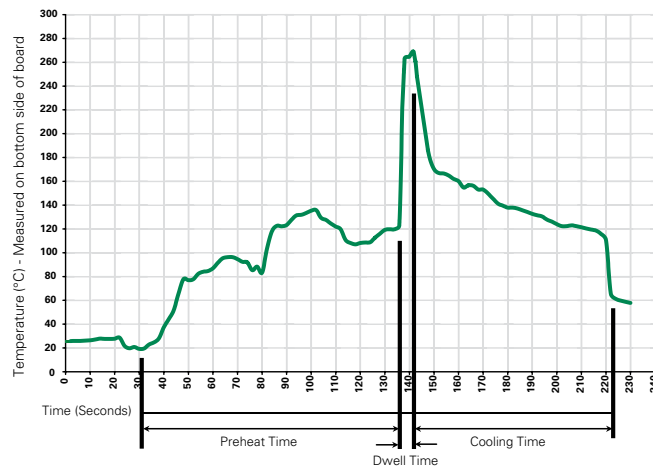


Note:  
Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

### Average Time Current Curves



### Soldering Parameters - Wave Soldering



### Recommended Process Parameters:

| Wave Parameter                           | Lead-Free Recommendation          |
|------------------------------------------|-----------------------------------|
| <b>Preheat:</b>                          |                                   |
| (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.**

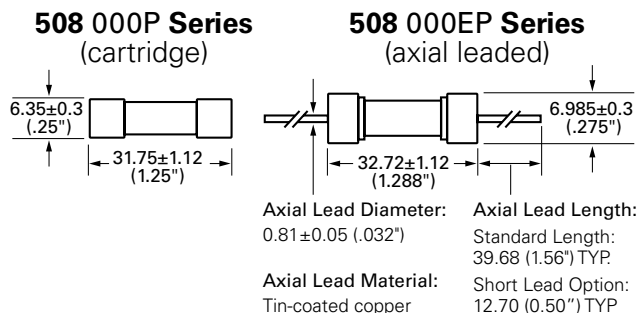
### Product Characteristics

|                          |                                                                                           |
|--------------------------|-------------------------------------------------------------------------------------------|
| <b>Materials</b>         | Body : Ceramic<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 : Series and agency approval marks |

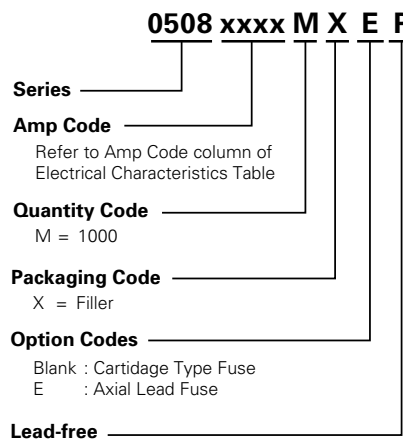
|                               |                                                                                                                |
|-------------------------------|----------------------------------------------------------------------------------------------------------------|
| <b>Operating 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 relative humidity (95%) and elevated temp (40°C) for 240 hours |
| <b>Salt Spray</b>             | MIL-STD-202, Method 101, Test Condition B                                                                      |

### Dimensions

Measurements displayed in millimeters (inches)



### Part Numbering System



### Packaging

| Packaging Option  | Packaging Specification | Quantity | Quantity & Packaging Code | Reel Size |
|-------------------|-------------------------|----------|---------------------------|-----------|
| <b>508 Series</b> |                         |          |                           |           |
| Bulk              | N/A                     | 1000     | MX                        | N/A       |
| Bulk              | N/A                     | 1000     | MXE                       | N/A       |

### Recommended Accessories

| Accessory Type | Series                 | Description                                 | Max Application Voltage | Max Application Amperage |
|----------------|------------------------|---------------------------------------------|-------------------------|--------------------------|
| Holder         | <a href="#">150322</a> | In-Line Fuseholder                          | 500                     | 15                       |
| Block          | <a href="#">354</a>    | Low Profile OMNI-BLOK® Fuse Block           | 600                     | 30                       |
|                | <a href="#">359</a>    | High Current Screw Terminal Fuse Block      |                         | 30                       |
| Clip           | <a href="#">122</a>    | High Current Traditional PC Board Fuse Clip | 1000                    | 30                       |
|                | <a href="#">101</a>    | Rivet/Eyelet Type Fuse Clip                 | 1000                    | 15                       |

Notes:

- Do not use in applications above rating.
- Please refer to fuseholder data sheet for specific re-rating information.
- Please contact factory for applications greater than the max voltage and amperage shown.