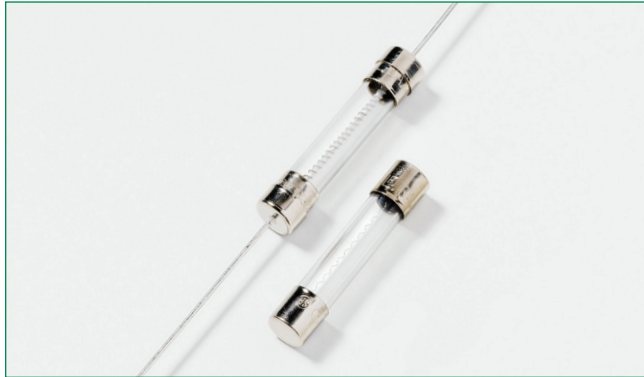


313/315 Series Lead-Free 3AG, Slo-Blo® Fuse



Description

The 3AG Slo-Blo® fuse solves a broad range of application requirements while offering reliable performance and cost-effective circuit protection.

The fuse catalog number with the suffix "ID" instantly identifies itself upon opening by showing a discoloration of its glass body. Guesswork and time consuming circuit testing are eliminated. This unique design offers the same quality performance characteristics as the standard 3AG Slo-Blo® Fuse design.

Agency Approvals

| Agency | Agency File Number | Ampere Range |
|--------|---|----------------------|
| | E10480 | 0.010A - 10A** |
| | 29862 | 0.010A - 10A**/15A** |
| | E10480 | 10A - 30A |
| | 313 Series (Cartridge): NBK060618-E10480A NBK060618-E10480C | 1-5A 6.25- 10A** |
| | 315 Series (Leaded): NBK060618-E10480B NBK060618-E10480D | 1-5A 6.25-10A** |
| | SU05001-6004 | 2.25-2.5A |
| | SU05001-5007 | 2.8A - 3.2A |
| | SU05001-5008 | 4A - 6.3A |
| | SU05001-5009 | 7A-8A |
| | N/A | 0.010A - 10A** |

** See note under Electrical Characteristics by item

Features

- Conforms to UL/CSA/ NMX 248-1 and UL/CSA/ NMX 248-14
- Available in cartridge and axial lead format and with various forming dimensions
- RoHS compliant and Lead-free
- Conforms to DENAN's Appendix 3

Applications

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

Additional Information



**Datasheet
313 Series**



**Resources
313 Series**



**Samples
313 Series**



**Accessories
313 & 315 Series**



**Datasheet
315 Series**



**Resources
315 Series**



**Samples
315 Series**

For recommended fuse accessories for this product series, see 'Recommended Accessories' section.

Electrical Characteristics by Series

| % of Ampere Rating | Ampere Rating | Opening Time |
|--------------------|---------------|----------------------------|
| 100% | 10mA – 30A | 4 hours, Minimum |
| 135% | 10mA – 30A | 1 hour, Maximum |
| 200% | 10mA – 15A | 5 sec., Min., 30 sec., Max |
| | 20A – 30A | 5 sec., Min., 60 sec Max |

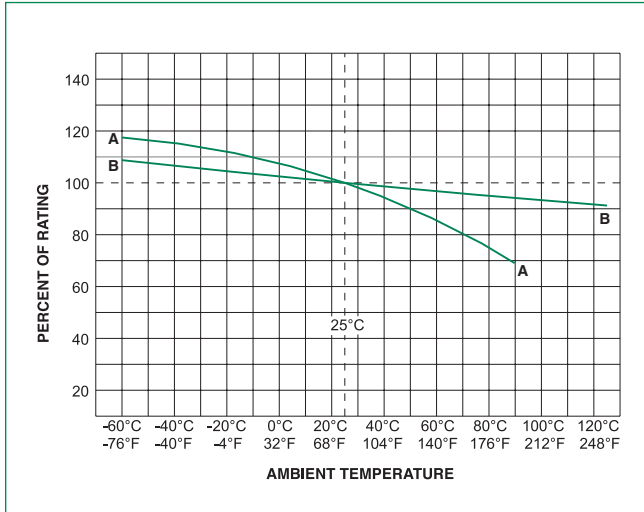
Electrical Characteristic Specifications by Item

| Amp Code | Ampere Rating (A) | Voltage Rating (V) | Interrupting Rating | Nominal Cold Resistance (Ohms) | Nominal Melting P _t (A ² sec) | Agency Approvals | | | | | |
|----------|-------------------|--------------------|---------------------------|--------------------------------|---|------------------|-----|-----|----|------|----|
| | | | | | | UL | SEI | CCC | RU | PS E | CE |
| .010 | 0.01 | 250 | 35A@250Vac 10KA@125Vac | 4300.0000 | 0.000121 | x | x | - | - | - | x |
| .031 | 0.031 | 250 | | 430.0000 | 0.00303 | x | x | - | - | - | x |
| .040 | 0.04 | 250 | | 300.0000 | 0.00630 | x | x | - | - | - | x |
| .062 | 0.062 | 250 | | 120.0000 | 0.0210 | x | x | - | - | - | x |
| .100 | 0.1 | 250 | | 43.0000 | 0.0850 | x | x | - | - | - | x |
| .125 | 0.125 | 250 | | 30.0000 | 0.152 | x | x | - | - | - | x |
| .150 | 0.15 | 250 | | 20.0000 | 0.270 | x | x | - | - | - | x |
| .175 | 0.175 | 250 | | 8.6700 | 0.177 | x | x | - | - | - | x |
| .187 | 0.187 | 250 | | 8.0100 | 0.230 | x | x | - | - | - | x |
| .200 | 0.2 | 250 | | 6.5900 | 0.270 | x | x | - | - | - | x |
| .250 | 0.25 | 250 | | 4.2700 | 0.385 | x | x | - | - | - | x |
| .300 | 0.3 | 250 | | 3.1350 | 0.730 | x | x | - | - | - | x |
| .375 | 0.375 | 250 | | 2.0950 | 1.23 | x | x | - | - | - | x |
| .400 | 0.4 | 250 | | 1.8750 | 1.35 | x | x | - | - | - | x |
| .500* | 0.5 | 250 | | 1.2600 | 2.55 | x | x | - | - | - | x |
| .600 | 0.6 | 250 | | 0.9120 | 4.00 | x | x | - | - | - | x |
| .700 | 0.7 | 250 | | 0.7000 | 5.90 | x | x | - | - | - | x |
| .750 | 0.75 | 250 | | 0.6215 | 7.16 | x | x | - | - | - | x |
| .800 | 0.8 | 250 | | 0.5540 | 8.00 | x | x | - | - | - | x |
| 001.* | 1 | 250 | | 0.3750 | 14.0 | x | x | - | - | x | x |
| 01.2 | 1.2 | 250 | 0.2780 | 21.5 | x | x | - | - | x | x | |
| 1.25 | 1.25 | 250 | 0.2600 | 24.0 | x | x | - | - | x | x | |
| 01.5* | 1.5 | 250 | 0.1910 | 38.0 | x | x | - | - | x | x | |
| 01.6 | 1.6 | 250 | 0.1710 | 49.6 | x | x | - | - | x | x | |
| 01.8 | 1.8 | 250 | 0.1410 | 92.0 | x | x | - | - | x | x | |
| 002.* | 2 | 250 | 0.1169 | 77.0 | x | x | - | - | x | x | |
| 2.25 | 2.25 | 250 | 0.0968 | 121 | x | x | x | - | x | x | |
| 02.5 | 2.5 | 250 | 0.0811 | 199 | x | x | x | - | x | x | |
| 02.8 | 2.8 | 250 | 0.0675 | 269 | x | x | x | - | x | x | |
| 003.* | 3 | 250 | 0.0593 | 200 | x | x | x | - | x | x | |
| 03.2 | 3.2 | 250 | 0.0529 | 209 | x | x | x | - | x | x | |
| 004.* | 4 | 250 | 0.0311 | 76.1 | x | x | x | - | x | x | |
| 005.* | 5 | 250 | 0.0214 | 276 | x | x | x | - | x | x | |
| 6.25* | 6.25 | 250 | 0.0154 | 388 | x | x | x | - | x | x | |
| 06.3 | 6.3 | 250 | 0.0154 | 388 | x | x | x | - | x | x | |
| 007.* | 7 | 250 | 0.0128 | 547 | x | x | x | - | x | x | |
| 008.* | 8 | 250 | 0.0111 | 701 | x | x | x | - | x | x | |
| 010.** | 10 | 250 | 0.0083 | 1285 | x | x | - | - | x | x | |
| 010.* | 10 | 32 | 0.0083 | 1285 | - | - | - | x | - | - | |
| 012. | 12 | 32 | 0.0065 | 1200 | - | - | - | x | - | - | |
| 015. | 15 | 32 | 0.0050 | 2650 | - | - | - | x | - | - | |
| 020. | 20 | 32 | 0.0022 | 9560 | - | - | - | x | - | - | |
| 025. | 25 | 32 | 0.0017 | 16500 | - | - | - | x | - | - | |
| 030. | 30 | 32 | 0.0012 | 26900 | - | - | - | x | - | - | |

* For 313series, these ratings available with an indicating option. Add the "ID" designation to the series number. i.e. 313.500ID.

** The 10A is designed for special voltage requirement. Available as 250Vac rated and the part number is 0313010.MX250P

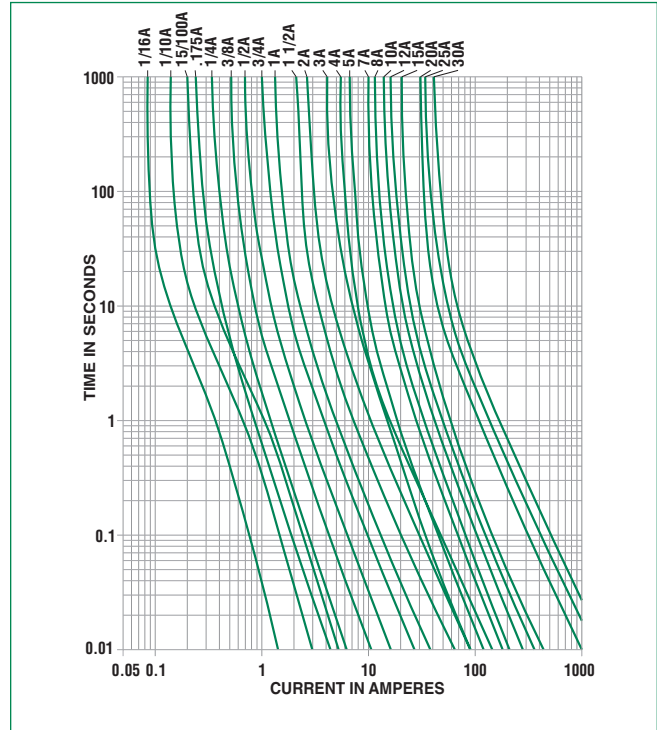
Temperature Re-rating Curve



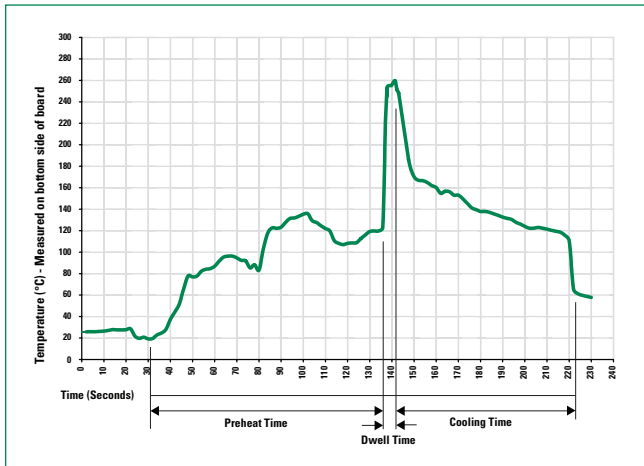
A - For 313/315 Series, from 10mA to 150mA
B - For all other ampere ratings of 313/315 series

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.

Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|-------------------|-------------------------|----------|---------------------------|--------------|
| 313 Series | | | | |
| Bulk | N/A | 1000 | MX | N/A |
| Bulk | N/A | 100 | HX | N/A |
| 315 Series | | | | |
| Bulk | N/A | 1000 | MX | N/A |
| Bulk | N/A | 100 | HX | N/A |
| Bulk | N/A | 1000 | MXB | N/A |

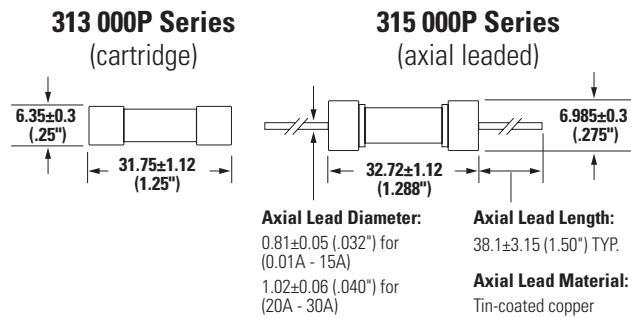
Product Characteristics

| | |
|--------------------------|---|
| Materials | 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: Series and agency approval marks |

| | |
|------------------------------|--|
| Operating Temperature | -60°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 |

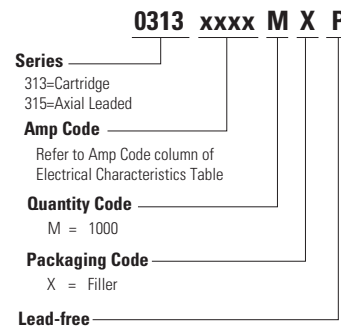
* See Temperature Re-rating Curve

Dimensions



Measurements displayed in millimeters (inches)

Part Numbering System



Recommended Accessories

| Accessory Type | Series | Description | Max Application Voltage | Max Application Amperage |
|----------------|------------------------|---|-------------------------|--------------------------|
| Holder | 155100 | Twist-Lock In-Line Fuseholder | 32 | 20 |
| | 342 | Traditional Panel Mount Fuseholder | 250 | 20 |
| | 346 | Panel Mount Flip-Top Shock-Safe Fuseholder | 250 | 15 |
| | 345 | Shock-Safe Fuseholder with PC Mount, Solder Mount and Panel Mount options | 250 | 16 |
| Block | 354 | Low Profile OMNI-BLOK® Fuse Block | 600 | 30 |
| | 359 | High Current Screw Terminal Fuse Block | | 30 |
| Clip | 122 | High Current Traditional PC Board Fuse Clip | 1000 | 30 |
| | 101 | 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.