Axial Lead & Cartridge Fuses 2AG > Slo-Blo® Fuse > 209 Series

209 Series Lead-Free 2AG, Slo-Blo® Fuse





Agency Approvals

| Agency | Agency File Number | Ampere Range | | | |
|-----------------|---|---------------------------------|--|--|--|
| c FL °us | E10480 | 0.375A - 10A | | | |
| | Cartridge | | | | |
| PS E | NBK200405-E10480C NBK110512-E10480A BNK210405-E10480E | 1A - 3.5A 4A - 5A 6A - 7A | | | |
| | Axial Leads | | | | |
| | NBK200405-E10480D NBK110512-E10480B BNK210405-E10480F | 1A - 3.5A 4A - 5A 6A -7A | | | |
| Œ | N/A | 0.250A - 7A | | | |

Description

Littelfuse 209 Series (2AG) 350V, Slo-Blo® Fuses are available in cartridge form or with axial leads. This series provides the same performance characteristics as its 3AG counterpart, while occupying one-third the space. Sleeved fuses are available.

Features

- In accordance with Underwriter's Laboratories Standard UL 248-14
- Available in cartridge and axial lead form and
- with various forming dimensions
- RoHS compliant and Lead-free

Applications

• Electronic Lighting Ballasts

Electrical Characteristics for Series

| % of Ampere Rating | Opening Time |
|-----------------------|--|
| 100% | 4 Hours, Min . |
| 135% | 1 Hour, Max . |
| 200% | 3 Sec. Min. ; 20 Sec. Max. |

Additional Information





see 'Recommended Accessories' section.





 Datasheet
 Resources
 Samples
 Accessories

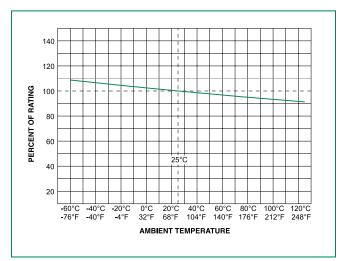
 For recommended fuse accessories for this product series,



Electrical Characteristic Specifications by Item

| | Ampere Voltage Rating Rating (A) (V) | Voltage | Interrupting Resi | Nominal Cold Nominal | Agency Approvals | | | |
|-------------|--|---------|-------------------|----------------------|-------------------|------------------|-----|---|
| Amp Code | | Rating | | Resistance (Ohms) | esistance Melting | c 71 2 us | PSE | Œ |
| .250 | 0.25 | 350 | | 2.410 | 0.216 | Х | | х |
| .375 | 0.375 | 350 | | 1.170 | 0.87 | × | | х |
| .500 | 0.5 | 350 | | 0.688 | 1.60 | х | | х |
| .600 | 0.6 | 350 | | 0.477 | 1.750 | × | | х |
| .750 | 0.75 | 350 | | 0.340 | 2.950 | Х | | х |
| .800 | 0.8 | 350 | | 0.304 | 3.450 | х | | × |
| 001. | 1 | 350 | | 0.210 | 5.640 | х | х | × |
| 1.25 | 1.25 | 350 | | 0.1460 | 16.2 | х | х | × |
| 01.5 | 1.5 | 350 | 100A @ | 0.1077 | 20.8 | х | × | × |
| 002 | 2 | 350 | 350Vac | 0.0689 | 30.0 | х | х | × |
| 2.25 | 2.25 | 350 | | 0.0567 | 39.0 | X | × | × |
| 02.5 | 2.5 | 350 | | 0.0502 | 70.0 | х | х | × |
| 003 | 3 | 350 | | 0.0383 | 77.0 | х | × | × |
| 03.5 | 3.5 | 350 | | 0.0312 | 110 | х | х | × |
| 004 | 4 | 350 | | 0.0258 | 148 | х | х | × |
| 005 | 5 | 350 | | 0.0186 | 267 | × | х | × |
| 006 | 6 | 350 | | 0.0141 | 380 | × | х | × |
| 007 | 7 | 350 | | 0.0116 | 464 | Х | × | х |

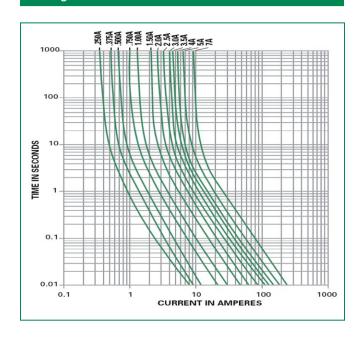
Temperature Re-rating Curve



Note

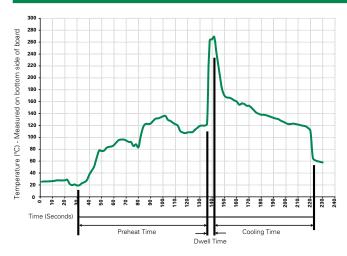
Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

Average Time Current Curves



Axial Lead & Cartridge Fuses 2AG > Slo-Blo® Fuse > 209 Series

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.

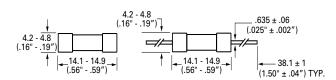
Product Characteristics

| 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 | | | |

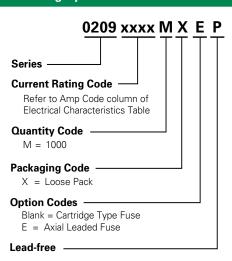
| Operating Temperature: | −55°C to 125°C. |
|---------------------------|---|
| Thermal Shock: | MIL-STD-202, Method 107, Test Condition B (5 Cycles -65°C to +125°C). |
| Vibration | MIL-STD-202, Method 201 |
| Humidity | MIL-STD-202, Method 103, Test Condition A: High RH (95%) and elevated temp (40°C)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

Dimensions

209 000P Series 209 000EP Series



Part Numbering System



Axial Lead & Cartridge Fuses

2AG > Special Fuse > 220 Series



| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|------------------|-------------------------|----------|------------------------------|------------------|
| 209 Series | | | | |
| Bulk | N/A | 1000 | MX | N/A |
| Bulk | N/A | 1000 | MXE | N/A |
| Reel and Tape | EIA 296-E | 1500 | DRT1 | T1=53mm (2.087") |

Recommended Accessories

| Accessory Type | Series | Description | Max Application Voltage | Max Application Amperage |
|-------------------|------------|--|-------------------------------|--------------------------------|
| Holdor | <u>150</u> | In-Line Fuseholder | 350 | 10 |
| Holder 286 | <u>286</u> | Panel Mount Flip-Top Shock-Safe Fuseholder | 250 | 10 |
| Block | <u>254</u> | OMNI-BLOK® Fuse Block | 400 | 10 |
| Clip | <u>111</u> | PC Board Mount Fuse Clip | 250 | 10 |

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

Disclaimer Notice - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at: www.littelfuse.com/disclaimer-electronics.