2AG > Slo-Blo® Fuse > 209 Series

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





# **Agency Approvals**

Agency	Agency File Number	Ampere Range			
c <b>'711</b> °us	E10480	0.25A - 7A			
	Cartridge				
PS	NBK200405-E10480C NBK110512-E10480A NBK190619-E10480A	1A - 3.5A 4A - 5A 6A - 7A			
E	Axial Leads				
	NBK200405-E10480D NBK110512-E10480B NBK190619-E10480B	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**

- Recognized to UL/CSA/ NMX 248-1 and UL/CSA/ NMX 248-14
- Conforms to DENAN's Appendix 3
- 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**











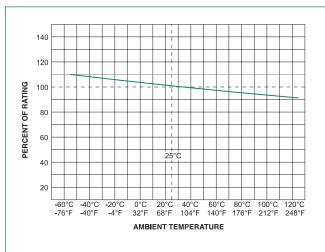
For recommended fuse accessories for this product series, see 'Recommended Accessories' section.

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# **Electrical Characteristic Specifications by Item**

	l	Rating Voltage Rating Interrupting (V) Rating	Nominal Cold	Nominal	Agency Approvals			
Amp A Code	Ampere Rating (A)			Resistance Melting (Ohms) I²t (A² sec)	c <b>AL</b> °us	PS E	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
.600	0.6	350		0.477	1.750	×	-	×
.750	0.75	350		0.340	2.950	×	-	×
.800	0.8	350		0.304	3.450	×	-	х
001.	1	350		0.210	5.640	×	×	×
1.25	1.25	350		0.1460	16.2	×	×	х
01.5	1.5	350	100A @ 350Vac	0.1077	20.8	×	×	х
002.	2	350	100A @ 350Vac	0.0689	30.0	×	×	х
2.25	2.25	350		0.0567	39.0	×	×	х
02.5	2.5	350		0.0502	70.0	×	х	х
003.	3	350		0.0383	77.0	×	×	×
03.5	3.5	350		0.0312	110	×	×	х
004.	4	350		0.0258	148	×	х	х
005.	5	350		0.0186	267	×	×	×
006.	6	350		0.0141	380	×	×	×
007.	7	350		0.0116	464	×	×	х

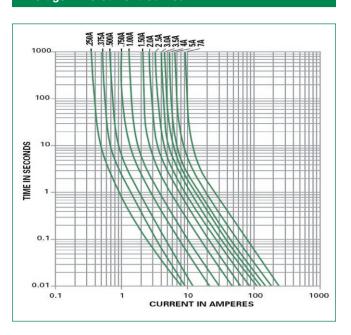
# **Temperature Re-rating Curve**



#### Note:

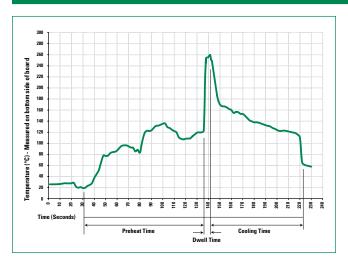
Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

# **Average Time Current Curves**



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# **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.

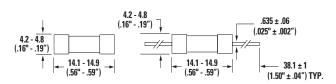
### **Product Characteristics**

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		

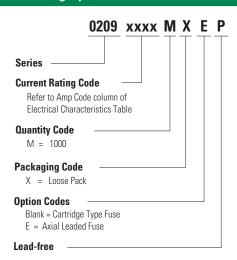
Operating Temperature:	−55°C to 125°C.
Thermal Shock:	MIL-STD-202, Method 107, Test Condition B (5 Cycles -65°C to +125°C).
Vibration	MIL-STD-202, Method 201
Humidity	MIL-STD-202, Method 103, Test Condition A: High RH (95%) and elevated temp (40°C) for 240 hours
Salt Spray	MIL-STD-202, Method 101, Test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

### **Dimensions**

## 209 000P Series 209 000EP Series



### **Part Numbering System**





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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 <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

Notes:

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.