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### **Axial Lead & Cartridge Fuses** 3AG > Fast Acting > 312/318 Series

### 312/318 Series Lead-Free 3AG, Fast-Acting Fuse

















### **Agency Approvals**

Agency	Agency File Number	Ampere Range		
(II)	E10480	312 Series: 0.062A - 30A 318 Series: 0.062A - 10A		
<b>(</b>	29862	312 Series: 0.062A - 30A 318 Series: 0.062A - 10A		
PS	NBK040205-E10480B/F NBK040205-E10480D/H	312/318 Series 1A-5A 312/318 Series 6A-10A		
c <b>FL</b> °us	E10480	318 Series: 12A - 30A		
	SU05001-6008 SU05001-5005 SU05001-5006	312/318 Series: 1-2A 312/318 Series: 3-6A 312/318 Series: 7-10A		
Œ	N/A	312 Series: 0.062A - 10A 318 Series: 0.062A - 10A		

#### **Description**

The 3AG Fast-Acting Fuse solves a broad range of application requirements while offering reliable performance and cost-effective circuit protection.

#### **Features**

- In accordance with UL Standard 248-14
- Available in cartridge and axial lead format and with various forming dimensions
- RoHS compliant and Lead-free

#### **Applications**

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

#### **Electrical Characteristics for Series**

% of Ampere Rating	Ampere Rating	Opening Time
100%	0.062A - 35A	4 hours, Minimum
135%	0.062A - 35A	1 hour, Maximum
	0.062A - 10A	5 sec., Maximum
200%	12A – 30A	10 sec., Maximum
	35A	20 sec., Maximum

#### **Additional Information**



**Datasheet** 312 Series



**Datasheet** 318 Series



Resources 312 Series



Resources 318 Series



Samples 312 Series



Samples 318 Series

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

# Axial Lead & Cartridge Fuses 3AG > Fast Acting > 312/318 Series



#### **Electrical Characteristic Specifications by Item** Nominal Agency Approvals Voltage Nominal Ampere **Amp** Interrupting Cold Rating Melting **(**E c **FN** us PSE Code Rating (A) Resistance Rating I2t (A2 sec) (Ohms) 250 24.7000 0.062 0.000249 .062 Х Χ Х .100 0.1 250 11.2800 0.00171 Χ Χ Χ .125 0.125 250 7.1450 0.00289 Х Х Х .150 0.15 250 5.1300 0.00550 Х Х Х 3.8750 .175 0.175 250 0.00960 Χ Χ 0.187 250 3.4200 .187 0.0128 Χ Χ Χ .200 0.2 250 3.0200 0.0165 Х Х Х 35A@250Vac 10KA@125Vac .250 0.25 250 2.0100 0.0355 х Х Х .300 0.3 250 1.4050 0.0689 Χ Χ Χ 0.375 .375 250 0.8250 0.185 Χ Х 0.5 0.4980 0.483 .500 250 Χ Х Х .600 0.3620 0.880 .6 250 х Х Х .750 0.75 250 0.2445 1.84 Χ Χ Χ 001. 250 0.1900 0.760 1 Х Χ Χ Χ Χ 1.25 1.25 0.1385 1.45 250 Χ Х Х 01.5 1.5 250 0.1036 2.35 Х Х Х Χ 0.0934 01.6 1.6 250 2.80 Χ Χ Χ Χ Χ 1.75 1.75 250 0.0856 3.60 х Х Х 100A@250Vac 01.8 1.8 0.0825 3.85 250 Χ Χ Χ Χ 10KA@125Vac 002. 2 250 0.0704 5.20 Χ Х Х Χ Χ 2.25 2.25 250 0.0594 7.20 Х Х Х Х Х 9.54 02.5 2.5 250 0.0513 Х Χ Χ Х Χ 003. 3 250 0.0427 14.0 Χ Χ Χ 004. 4 250 0.0293 28.5 Х Х Χ Х Χ 005. 5 250 0.0224 50.0 Х Χ Х Х Χ 006. 6 250 0.0178 118.0 200A@250Vac X Х Х X Х 10KA@125Vac 007. 7 250 0.0146 81.0 Χ Х Х Χ Х 008 8 250 0.0122 166.0 Х Х 10 010. 250 0.0093 298.0 Х Χ Χ Χ Х 012.\* 12 32 0.0072 234.6 X\*\* Х Х X\*\* 015.\* 15 32 0.0052 490.5 Χ X\*\* 0.0035 020.\* 20 32 1414 Χ Χ 300A@32 Vac

0.0024

0.0019

0.0013

2041

3717

7531

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X\*\*

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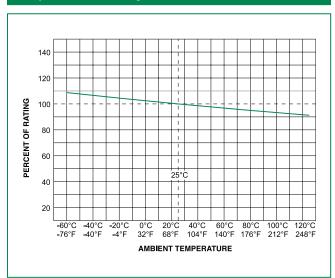
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<sup>\*\*</sup> For 318 Series 12A to 30A, the agency approval is only cURus.

# Axial Lead & Cartridge Fuses 3AG > Fast Acting > 312/318 Series

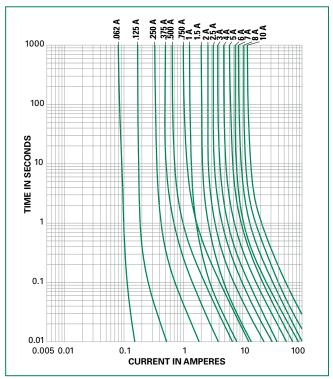
#### **Temperature Re-rating Curve**



#### Note:

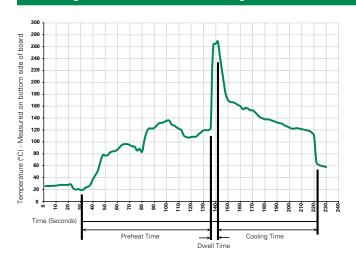
Rerating depicted in this curve is in addition to the industry practice derating of 25% for continuous operation.

#### **Average Time Current Curves**



Please contact Littelfuse for more details on those T-C Curves of other ampere ratings which are not published.

#### **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.



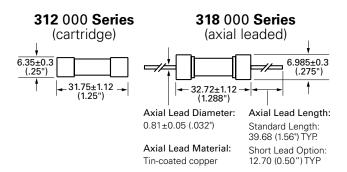
#### **Product Characteristics**

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		

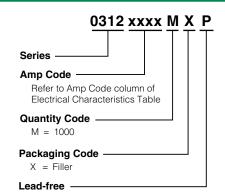
Operating Temperature	−55°C to +125°C		
Thermal Shock	MIL-STD-202, Method 107, Test Condition B: (5 cycles -65°C to +125°C)		
Vibration	MIL-STD-202, Method 201		
Humidity  MIL-STD-202, Method 103, Test Condition A: High RH (95%), and Elevated temperature (40°C) for 240 hou			
Salt Spray	MIL-STD-202,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

#### **Dimensions**

Measurements displayed in millimeters (inches)



#### **Part Numbering System**



### **Packaging**

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width
312 Series				
Bulk	N/A	1000	MX	N/A
Bulk	N/A	100	HX	N/A
318 Series				
Bulk	N/A	1000	MX	N/A
Bulk	N/A	100	HX	N/A
Bulk	N/A	1000	MXB	N/A



### **Axial Lead & Cartridge Fuses** 3AG > Fast Acting > 312/318 Series

#### **Recommended Accessories**

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

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.