

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



Description

The 312 and 318 Series are 3AG Fast-Acting fuses that solve 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

Agency Approvals

Agency	Agency File Number	Ampere Range
	E10480	0.062 - 10A
	E10480	12A-25A
	29862	312 Series: 0.062A - 30A 318 Series: 0.062A - 10A
	(312 Series) NBK060618-E10480A NBK060618-E10480C	1A - 5A 6A - 10A
	(318 Series) NBK060618-E10480B NBK060618-E10480D	1A - 5A 6A - 10A
	E10480	318 Series: 12A - 30A
	SU05001-6008 SU05001-5005 SU05001-5006	1A - 2A 3A - 6A 7A - 10A
	N/A	0.062A - 10A

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**



**Resources
312 Series**



**Samples
312 Series**



**Accessories
312 & 318 Series**



**Datasheet
318 Series**



**Resources
318 Series**



**Samples
318 Series**

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

Electrical Characteristic Specifications by Item

Amp Code	Ampere Rating (A)	Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I ² t (A ² sec)	Agency Approvals					
						UL	cULus	CCC	PSE	SP	CE
0.062	0.062	250	35A@250Vac 10KA@125Vac	24.7	0.000249	x	-	-	-	x	x
0.1	0.1	250		11.28	0.00171	x	-	-	-	x	x
0.125	0.125	250		7.145	0.00289	x	-	-	-	x	x
0.15	0.15	250		5.13	0.00550	x	-	-	-	x	x
0.175	0.175	250		3.875	0.00960	x	-	-	-	x	x
0.187	0.187	250		3.42	0.0128	x	-	-	-	x	x
0.2	0.2	250		3.02	0.0165	x	-	-	-	x	x
0.25	0.25	250		2.01	0.0355	x	-	-	-	x	x
0.3	0.3	250		1.405	0.0689	x	-	-	-	x	x
0.375	0.375	250		0.825	0.185	x	-	-	-	x	x
0.5	0.5	250		0.498	0.483	x	-	-	-	x	x
0.6	0.6	250		0.362	0.88	x	-	-	-	x	x
0.75	0.75	250		0.2445	1.84	x	-	-	-	x	x
1.0	1	250		0.19	0.76	x	-	x	x	x	x
1.25	1.25	250	100A@250Vac 10KA@125Vac	0.1385	1.45	x	-	x	x	x	x
1.5	1.5	250		0.1036	2.35	x	-	-	x	x	x
1.6	1.6	250		0.0934	2.8	x	-	x	x	x	x
1.75	1.75	250		0.0856	3.6	x	-	-	x	x	x
1.8	1.8	250		0.0825	3.85	x	-	-	x	x	x
2.0	2	250		0.0704	5.2	x	-	x	x	x	x
2.25	2.25	250		0.0594	7.2	x	-	x	x	x	x
2.5	2.5	250		0.0513	9.54	x	-	x	x	x	x
3.0	3	250		0.0427	14.0	x	-	x	x	x	x
4.0	4	250	200A@250Vac 10KA@125Vac	0.0293	28.5	x	-	x	x	x	x
5.0	5	250		0.0224	50.0	x	-	x	x	x	x
6.0	6	250		0.0178	118.0	x	-	x	x	x	x
7.0	7	250		0.0146	81.0	x	-	x	x	x	x
8.0	8	250		0.0122	166.0	x	-	x	x	x	x
10.0	10	250		0.0093	298.0	x	-	x	x	x	x
12.0	12	32	300A@32 Vac	0.0072	234.6	x†	x**	-	-	x†	-
15.0	15	32		0.0052	490.5	x†	x**	-	-	x†	-
20.0	20	32		0.0035	1414	x†	x**	-	-	x†	-
25.0	25	32		0.0024	2041	x†	x**	-	-	x†	-
30.0	30	32		0.0019	3717	-	x**	-	-	x†	-
35.0	35	32		0.0013	7531	-	-	-	-	-	-

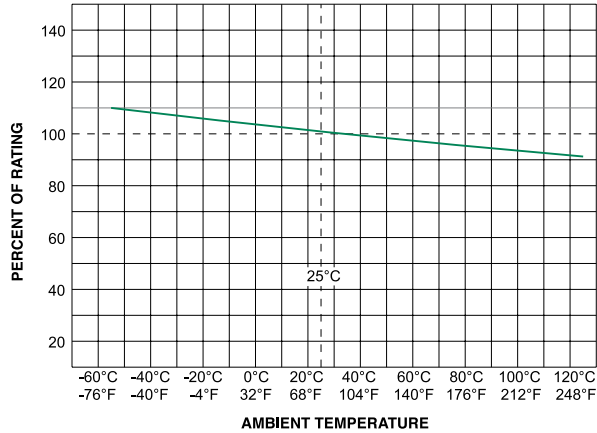
Notes:

* - For 312 and 318 Series: Listed for the US and Canada (cULus)

** - For 318 Series (12A-25A) and 312 Series (30A only): Recognized for the US and Canada (cURus).

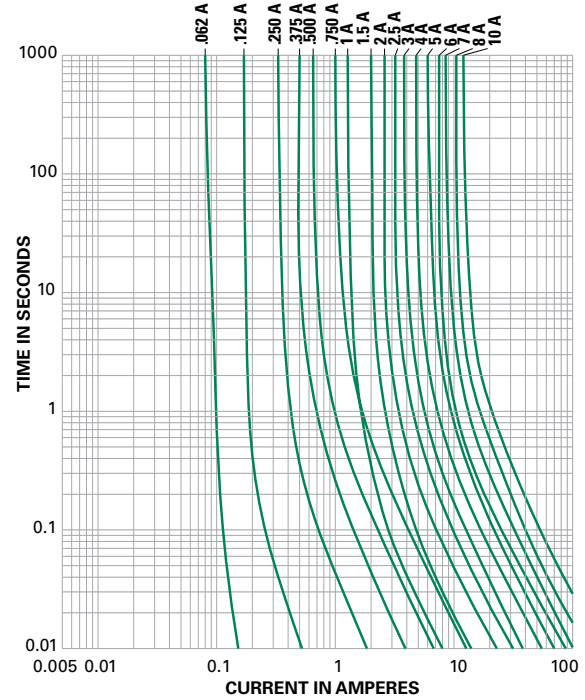
† - For 312 series only.

Temperature Re-rating Curve



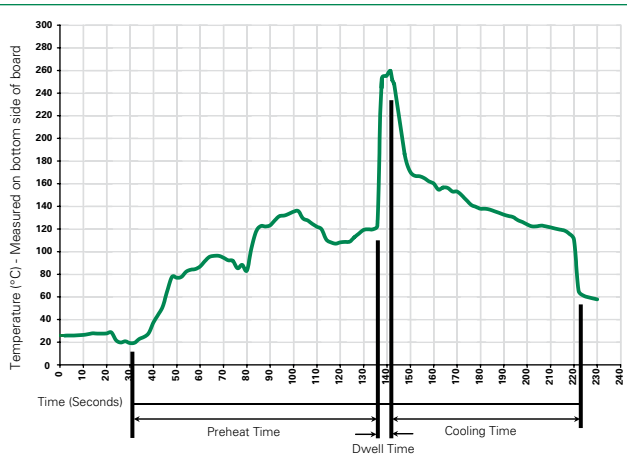
Note:
Derating depicted in this curve is in addition to the industry practice derating of 25% for continuous operation.

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.

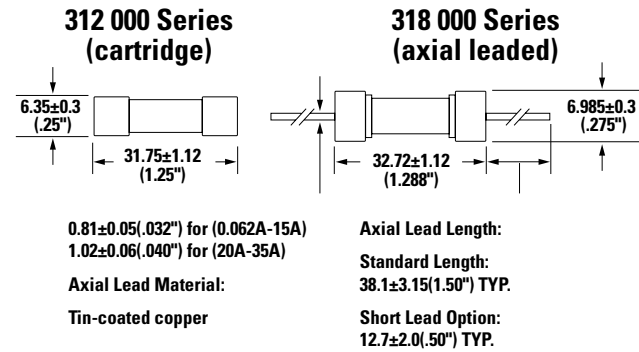
Product Characteristics

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

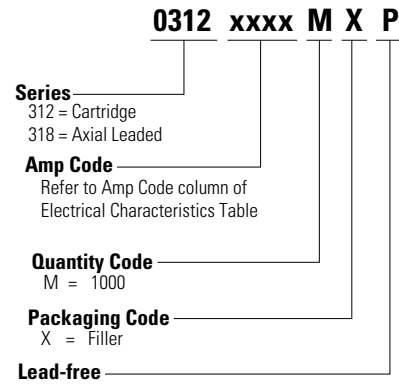
Operating Temperature	-55°C to +125°C
Thermal Shock	MIL-STD-202, Method 107, Test Condition B: (5 cycles -65°C to +125°C)
Vibration	MIL-STD-202, Method 201
Humidity	MIL-STD-202, Method 103, Test Condition A: High RH (95%), and Elevated temperature (40°C) for 240 hours
Salt Spray	MIL-STD-202, Method 101,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

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	20
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:

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.

Mouser Electronics

Authorized Distributor

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Littelfuse:

0312030.MXP	0312012.MXP	0312025.HXP	0312025.MXP	312003P	312004P	318003P	3121.25P	312002P
312005P	312010P	312025P	0312.250MXP	031201.5MXP	0312.375MXP	0318.375MXP	0312.175HXP	
0312.200MXP	0318.375HXP	0318003.HXP	0312002.MXP	0318.600HXP	0318001.MXP	0312.500HXP		
0318010.MXP	031202.5HXP	031201.8MXP	0312007.MXP	031201.5HXP	0318.200HXP	0312.600HXP		
0318.175MXP	0312.031VXP	0312006.MXP	0318.187MXP	0318008.MXP	031801.5HXP	031802.5HXP		
0318004.MXP	0312004.MXP	0312010.MXP	03121.75MXP	0312.300MXP	03181.25MXP	0318.300MXP		
0318.062HXP	031201.6MXP	0312.150MXP	0312.187MXP	031201.8HXP	0318001.HXP	03182.25MXP		
031202.5MXP	0312008.HXP	03181.75MXP	0318.125MXP	0318.500MXP	0312.750HXP	031801.8MXP		
031801.6MXP	031201.6HXP	0318.175HXP	0312.300HXP	0318006.MXP	0312.062MXP	0312001.MXP		
0312005.MXP	0318005.HXP	0312001.HXP	0318.200MXP	03181.25HXP	0312030.HXP	0312035.HXP		
0312035.MXP	0312015.MXP	0312020.MXP	0312015.HXP	31202.5P	312007P	312008P	312015P	312020P
0318.500HXP	0318.750HXP	0318002.MXP	0318006.HXP	0312.175MXP	0312004.HXP	0318010.HXP		
0318.187HXP	0318005.MXP	0318.125HXP	0318.300HXP	0312.600MXP	0312.062HXP	03122.25HXP		
031802.5MXP	0318007.MXP	0318.100HXP	0318.250HXP					