

#### RoHS PO

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

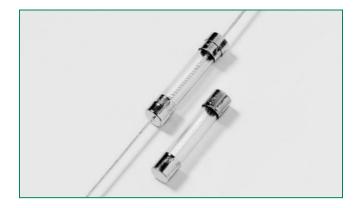












#### **Agency Approvals**

Agency	Agency File Number	Ampere Range		
(UL)	E10480	10mA - 10A**		
<b>(</b>	LR 29862	10mA - 10A**/15A**		
<b>71</b> °	E10480	10A - 30A		
PS	NBK 040205- E10480B/D/F/G/H	1A - 10A**/ 15A**		
	SU05001- 5007/5008/5009/6004	2.25A - 8A		
<b>(</b> E		10mA - 10A**/15A**		

#### **Description**

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

#### **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 by Series**

% of Ampere Rating	Ampere Rating	OpeningTime		
100%	10mA – 30A	4 hours, Minimum		
135%	10mA – 30A	1 hour, Maximum		
200%	10mA – 15A	5 sec., Min., 30 sec., Max		
20076	20A – 30A	5 sec., Min., 60 sec Max		

# Axial Lead & Cartridge Fuses 3AG > Time Lag > 313/315 Series



#### **Electrical Characteristic Specifications by Item**

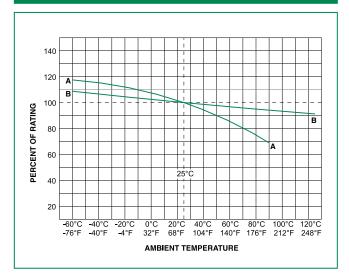
Code   Rating   Rating   Cohen   Coh		Ampere	Voltago		Nominal	Nominal	Agency Approvals					
0.31		Rating		Interrupting Rating	Resistance	Melting	(I)	<b>∰</b> .		<i>71</i>	PS	Œ
0.00	.010	0.01	250		4300.0000	0.000121	×	×				Х
100   100   101   102   100   101   100	.031	0.031	250		430.0000	0.00303	x	x				X
100	.040	0.04	250		300.0000	0.00630	x	x				X
1.125	.062	0.062	250		120.0000	0.0210	х	x				Х
150	.100	0.1	250		43.0000	0.0850	×	X				X
1.75	.125	0.125	250		30.0000	0.152	х	x				х
187	.150	0.15	250		20.0000	0.270	×	×				X
200	.175	0.175	250		8.6700	0.177	x	x				Х
250	.187	0.187	250		8.0100	0.230	х	х				X
300   0.3   250   3.1350   0.730   x   x   x   x   x   x   x   x   x	.200	0.2	250	35A@250Vac	6.5900	0.270	×	×				X
3.75	.250	0.25	250	10KA@125Vac	4.2700	0.385	×	Х				Х
1.8750	.300	0.3	250		3.1350	0.730	×	×				Х
1.2600	.375	0.375	250		2.0950	1.23	×	x				Х
0.9120	.400	0.4	250		1.8750	1.35	×	×				X
0.700	.500*	0.5	250		1.2600	2.55	х	х				Х
.750	.600	0.6	250		0.9120	4.00	×	х				X
8.00	.700	0.7	250		0.7000	5.90	Х	Х				Х
001.* 1 250 01.2 1.2 250 01.5 1.25 250 01.6 1.6 250 01.8 1.8 250 002.* 2 250 02.5 2.5 250 02.8 2.8 250 003.* 3 250 004.* 4 250 005.* 5 250 004.* 4 250 005.* 5 250 005.* 5 250 006.* 6 30 6.3 250 007.* 7 250 008.* 8 250 008.* 8 250 008.* 8 250 008.* 8 250 008.* 8 250 008.* 8 250 008.* 8 250 008.* 8 250 008.* 8 250 008.* 8 250 008.* 8 250 008.* 8 250 008.* 10 250 008.* 10 250 008.* 10 250 008.* 10 250 008.* 10 250 008.* 10 250 008.* 10 250 008.* 10 250 009.* 10 250 009.* 10 250 009.* 10 250 009.* 10 250 009.* 10 250 009.* 10 32 000.* 10 32 001.* 10 32 010.* 10 32 010.* 10 32 010.* 10 32 010.* 15 32 020. 20 32 020. 20 32 020. 20 32 020. 20 32 020. 20 32 020. 20 32 020. 20 32 020. 20 32 020. 20 32 020. 20 32 0.0017 16500 0.240 0.0174 1450 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	.750	0.75	250		0.6215	7.16	×	х				X
0.12	.800	0.8	250		0.5540	8.00	×	×				Х
1.25	001.*	1	250		0.3750	14.0	×	×			×	X
0.1.5*   1.5	01.2	1.2	250		0.2780	21.5	×	X			X	X
01.6	1.25	1.25	250		0.2600	24.0	×	×			X	X
01.8         1.8         250           002.*         2         250           100A@250Vac         0.1169         77.0         x         <	01.5*	1.5	250		0.1910	38.0	×	×			X	X
002.*         2         250         100A@250Vac 10KA@125Vac         0.1169         77.0         x	01.6	1.6	250		0.1710	49.6	×	×			×	×
002.*         2         250         10KA@125Vac         0.1169         77.0         x <td>01.8</td> <td>1.8</td> <td>250</td> <td></td> <td>0.1410</td> <td>58.0</td> <td>×</td> <td>×</td> <td></td> <td></td> <td>X</td> <td>X</td>	01.8	1.8	250		0.1410	58.0	×	×			X	X
2.25     2.25     250       02.5     2.5     250       02.8     2.8     250       003.*     3     250       03.2     3.2     250       004.*     4     250       005.*     5     250       6.25*     6.25     250       007.*     7     250       008.*     8     250       001.**     10     250       001.**     10     32       010.**     10     32       015.**     15     32       005.     20     32       000.0050     1870     0.0083       7     250       001.**     10     32       015.**     15     32       005.**     32       000.0050     1870     0.0050       000.0050     1870     0.0050       0.0050     0.0017     16500     0.0017       005.**     25     32	002.*	2	250		0.1169	77.0	×	×			×	X
02.8         2.8         250           003.*         3         250           03.2         3.2         250           004.*         4         250           005.*         5         250           06.3         6.25         250           06.3         250         10KA@125Vac           007.*         7         250           008.*         8         250           010.**         10         250           010.**         10         32           010.**         10         32           015.**         15         125           015.**         15         32           005.         32           000.020         20         32           000.0050         1870         x           x         x           0.0050         1870         x           x         x           0.0017         16500         x	2.25	2.25	250	IUNA@125Vac	0.0968	121	×	X	×		X	X
003.*         3         250           03.2         3.2         250           004.*         4         250           005.*         5         250           6.25*         6.25         250           06.3         250         10KA@125Vac           007.*         7         250           008.*         8         250           010.**         10         250           010.**         10         32           012.         12         32           015. **         15         32           020.         20         32           025.         25         32	02.5	2.5	250		0.0811	130	×	×	×		×	×
03.2         3.2         250         0.0529         209         x	02.8	2.8	250		0.0675	170	×	×	X		X	X
004.*         4         250           005.*         5         250           6.25*         6.25         250           06.3         6.3         250           007.*         7         250           008.*         8         250           010.**         10         250           010.*         10         32           012.         12         32           015.**         15         125           015.         15         32           020.         20         32           025.         25         32         Output   Description  Output  Description  Description  Output  Description  Description  Output  Description  Des	003.*	3	250		0.0593	200	×	×	×		X	×
005.*         5         250           6.25*         6.25         250           06.3         6.3         250           10KA@125Vac         0.0154         242         x         x         x         x           007.*         7         250         0.0154         242         x         x         x         x           008.*         8         250         0.011         445         x         x         x         x           010.**         10         250         0.0083         760         x         x         x         x           010.*         10         32         0.0083         760         x         x         x         x           015.***         15         125         0.0065         1200         x         x         x         x           020.         20         32         0.0050         1870         x         x         x           025.         25         32         0.0017         16500         x         x         x	03.2	3.2	250	•	0.0529	209	Х	Х	Х		Х	Х
6.25* 6.25 250 06.3 6.3 250 10KA@125Vac  0.0154 242 x x x x x x x x x x x x x x x x x	004.*	4	250		0.0311	76.1	×	х	×		X	X
06.3         6.3         250         10KA@125Vac         0.0154         242         x <td>005.*</td> <td>5</td> <td>250</td> <td></td> <td>0.0214</td> <td>140</td> <td>X</td> <td>Х</td> <td>Х</td> <td></td> <td>Х</td> <td>Х</td>	005.*	5	250		0.0214	140	X	Х	Х		Х	Х
06.3         6.3         250         10KA@125Vac         0.0154         242         x <td>6.25*</td> <td>6.25</td> <td>250</td> <td>200@250Vac</td> <td>0.0154</td> <td>242</td> <td>×</td> <td>×</td> <td>×</td> <td></td> <td>X</td> <td>Х</td>	6.25*	6.25	250	200@250Vac	0.0154	242	×	×	×		X	Х
007.*         7         250           008.*         8         250           010.**         10         250           010.*         10         32           012.         12         32           015.**         15         125           020.         20         32           025.         25         32           025.         25         32	06.3	6.3	250		0.0154	242	X	X	X		X	Х
008.*         8         250           010.**         10         250           010.*         10         32           012.         12         32           015.**         15         125           015.         15         32           020.         20         32           025.         25         32             0.0017         16500         X           0.0017         16500         X	007.*							l I	1			
010.**         10         250           010.*         10         32           012.         12         32           015.**         15         125           015.         15         32           020.         20         32           025.         25         32             0.0017         16500           0.0017         16500	008.*	8	250		0.0111	445		X				
010.*         10         32           012.         12         32           015.***         15         125           015.         15         32           020.         20         32           025.         25         32             0.0017         16500         x           0.0017         16500         x	010.**	10			-							
012.         12         32           015.***         15         125           015.         15         32           020.         20         32           025.         25         32             0.0017         16500         x           0.0017         16500         x	010.*	10								X		
015.**         15         125           015.         15         32           020.         20         32           025.         25         32             0.0050         1870         x           0.0050         1870         x           0.0022         9560         x           0.0017         16500         x												
015.     15     32       020.     20     32       025.     25     32         000.0022     9560     X       0.0017     16500     X		_		1				×			X	X
020.     20     32       025.     25     32       026.     32       027.     0.0017       028.     0.0017		+		300A@32Vac								
025. 25 32 0.0017 16500 x		_										
		_										
030   30   32     0.0012   26900       v	030.	30	32		0.0012	26900				X		

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

<sup>\*\*</sup>These 2 ratings are designed for special voltage requirement. For 10A, it is available as 250Vac rated and the part number is 0313010. MX250P; for 15A, it is available as 125Vac rated and the part number is 0315015.MX125P.

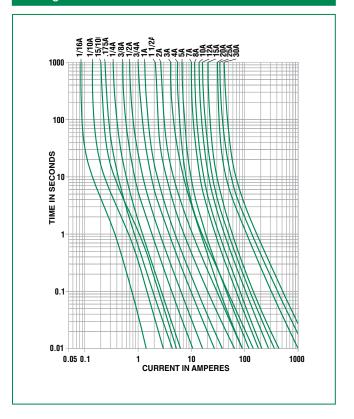


#### **Temperature Rerating Curve**

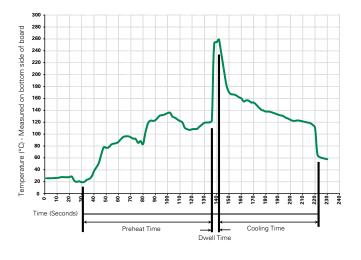


- A For 313/315 Series, from 10mA to 150mA
- B For all other ampere ratings of 313/315 series

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



#### **Soldering Parameters - Wave Soldering**



#### **Recommended Process Parameters:**

Wave Parameter	Lead-Free Recommendation		
Preheat:	(Taricellad etc. December define)		
(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 DwellTime:	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.

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## Axial Lead & Cartridge Fuses 3AG > Time Lag > 313/315 Series



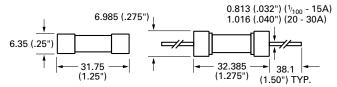
#### **Product Characteristics**

Materials	Body: Glass Cap: Nickel–plated brass Leads: Tin–plated Copper		
Terminal Strength	MIL-STD-202G, Method 211A, Test Condition A		
Solderability	Reference IEC 60127 Second Edition 2003-01 Annex A		
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-202G, Method 107G, Test Condition B: (5 cycles -65°C to +125°C)		
Vibration	MIL-STD-202G, Method 201 A		
Humidity	MIL-STD-202G, Method 103B, Test Condition A: High RH (95%) and Elevated temperature (40°C) for 240 hours		
Salt Spray	MIL- STD-202G, Method 101D, Test Condition B		

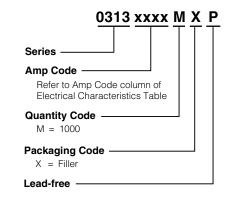
#### **Dimensions**

#### **313** 000P **Series 315** 000P **Series**



Axial Lead Material: Tin coated copper.

#### **Part Numbering System**



#### **Packaging**

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

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