

## 239 Series - 5x20mm Time Lag Glass Body Cartridge Fuse Designed to the UL Specification

Series: 239

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- [Fuse 239 Datasheet](#)
- [Symbols & Models](#)
- [Order Sample](#)

**Disclaimer Notice**

5x20mm Slo-Blo<sup>®</sup> glass body cartridge fuse designed to UL specification.

**Features:**

- Designed to UL/CSA/ ANCE 248 Standard
- Available in cartridge and axial lead format
- 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** | Agency Approvals | Environmental Info | Technical Resources | Related Products

Access specifications, certifications, check availability and order parts below

Catalog #	VAC (V)	Nominal Melting I <sup>2</sup> T (A <sup>2</sup> sec)	Resistance (Ω)	Opening	Operating Temperature	Symbols & Models	Partner ECAD Models	Stock	Samples	Compare
0239.080	250	0.025	28.175	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239.100	250	0.055	17.3425	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239.125	250	0.085	11.6	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239.150	250	0.13	8.1	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239.200	250	0.165	3.8725	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239.250	250	0.34	3.07	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239.300	250	0.615	2.3	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239.400	250	2.02	1.475	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239.500	250	1.985	0.909	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239.600	250	2.415	0.699	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239.700	250	4.12	0.5375	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239.750	250	5.425	0.471	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239.800	250	7.565	0.4155	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239001.	250	11.295	0.2965	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239002.	250	50.585	0.09425	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239003.	250	129.51	0.0487	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239004.	125	270.703	0.0312	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239005.	125	302.836	0.0199	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
0239007.	125	305.758	0.0144	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
023901.6	250	30.43	0.1205	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
023902.5	250	79.705	0.0583	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
023903.2	250	128.05	0.0385	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>		<input type="checkbox"/>
023903.5	250	128.05	0.037	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>		<input type="checkbox"/>
02391.25	250	19.525	0.198	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
02393.15	250	128.05	0.04135	Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>	<a href="#">Order</a>	<input type="checkbox"/>
02390003.				Slo-Blo/Time Lag (T)/Time Delay	-55° to 125°C			<a href="#">Check</a>		<input type="checkbox"/>
Obsolete: 2015 -04-02										

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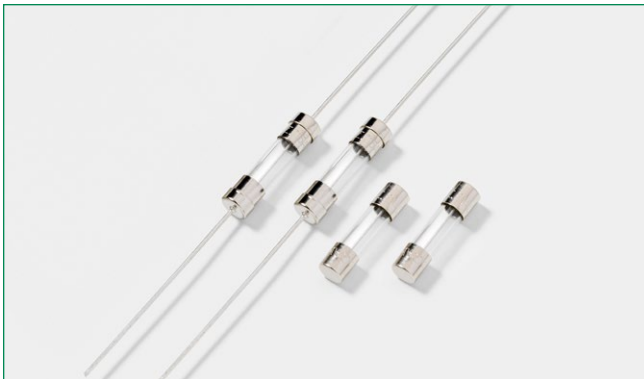
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### 239 Series, 5×20 mm, Slo-Blo® Fuse



#### Description

5×20mm Slo-Blo® glass body cartridge fuse designed to UL specification.

#### Features

- Designed to UL/CSA/ ANCE 248-1 and 248-14 Standards
- Available in cartridge and axial lead format
- RoHS compliant and lead-free

#### Applications

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

#### Agency Approvals

Agency	Agency File Number	Ampere Range
	Cartridge: NBK030609-JP1021A NBK190609-JP1021A NBK030609-JP1021B	1A – 3.5A 4A – 5A 7A
	Leaded: NBK030609-JP1021C NBK190609-JP1021B NBK030609-JP1021D	1A – 3.5A 4A – 5A 7A
	SU05001 – 2004A SU05001 – 2014A	0.200A – 3.15A 4A – 7A
	E10480	0.080A – 7A
	29862	0.200A – 3.15A 4A – 7A
	N/A	0.080A – 7A

#### Electrical Characteristics for Series

% of Ampere Rating	Ampere Ratings	Opening Time
100%	All Ratings	4 hours, Minimum
135%		1 hour, Maximum
200%		2 minutes, Maximum

#### Additional Information



**Datasheet**



**Samples**



**Resources**



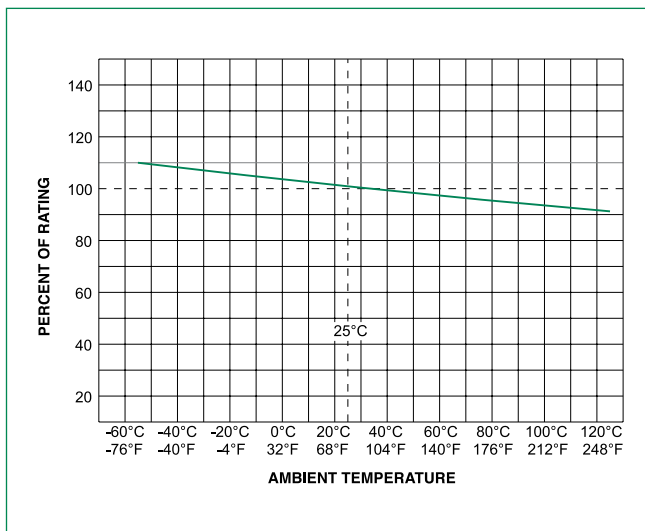
**Accessories**

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

## Electrical Characteristic Specification by Item

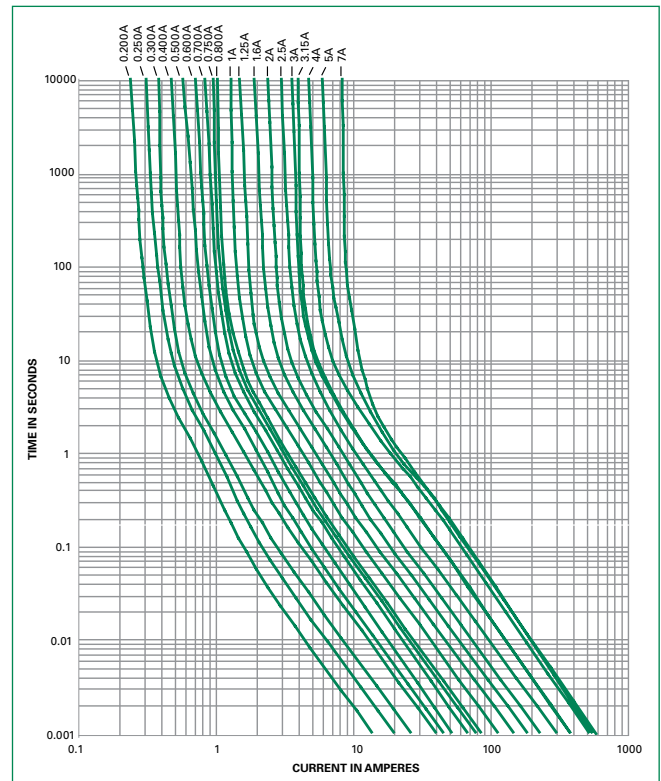
Amp Code	Amp Rating (A)	Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I²t (A² sec)	Agency Approvals				
						UL	SP	PS E	K	CE
.080	0.08	250	35A @ 250 VAC 10kA @ 125 VAC	28.1750	0.02500	x				x
.100	0.1	250		17.3425	0.05500	x				x
.125	0.125	250		11.6000	0.08500	x				x
.150	0.15	250		8.1000	0.13000	x				x
.200	0.2	250		3.8725	0.16500	x	x		x	x
.250	0.25	250		3.0700	0.34000	x	x		x	x
.300	0.3	250		2.3000	0.61500	x	x		x	x
.400	0.4	250		1.4750	2.02000	x	x		x	x
.500	0.5	250		0.9090	1.98500	x	x		x	x
.600	0.6	250		0.6990	2.41500	x	x		x	x
.700	0.7	250		0.5375	4.12000	x	x		x	x
.750	0.75	250		0.4710	5.42500	x	x		x	x
.800	0.8	250		0.4155	7.56500	x	x		x	x
001.	1	250		0.2965	11.29500	x	x	x	x	x
1.25	1.25	250		0.1980	19.52500	x	x	x	x	x
01.6	1.6	250		0.1205	30.43000	x	x	x	x	x
002.	2	250		0.0943	50.58500	x	x	x	x	x
02.5	2.5	250	0.0583	79.70500	x	x	x	x	x	
003.	3	250	0.04877	129.51000	x	x	x	x	x	
3.15	3.15	250	0.0414	128.05000	x	x	x	x	x	
03.2	3.2	250	0.0385	128.05000	x		x		x	
03.5	3.5	250	0.0370	128.05000	x		x		x	
004.	4	125	0.0312	270.703	x	x	x	x	x	
005.	5	125	0.0199	302.836	x	x	x	x	x	
007.	7	125	0.0114	305.758	x	x	x	x	x	
			10kA @ 125 VAC 100A @ 250 VAC							
			10kA @ 125 VAC							

## Temperature Re-rating Curve

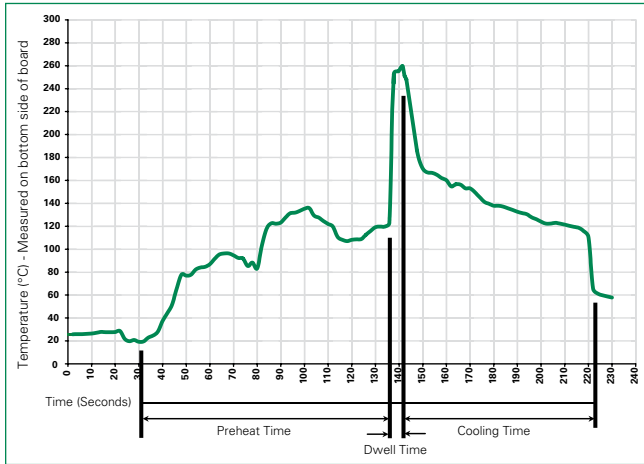


**Note:**  
Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

## Average Time Current Curves



### 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.**

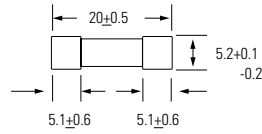
### Product Characteristics

<b>Materials</b>	Body: Glass Cap: Nickel-plated brass Leads: Tin-plated Copper
<b>Terminal Strength</b>	MIL-STD-202, Method 211, Test Condition A
<b>Solderability</b>	MIL-STD-202 Method 208
<b>Product Marking</b>	Cap 1: Brand logo, current and voltage rating Cap 2: Series and agency approval markings

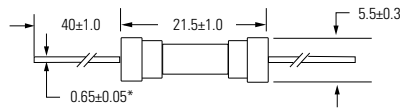
<b>Operating Temperature</b>	-55°C to +125°C
<b>Thermal Shock</b>	MIL-STD-202, Method 107, Test Condition B: (5 cycles -65°C to +125°C)
<b>Vibration</b>	MIL-STD-202, Method 201
<b>Humidity</b>	MIL-STD-202, Method 103, Test Condition A. high RH (95%) and elevated temp (40°C) for 240 hours
<b>Salt Spray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

### Dimensions

0239 000P



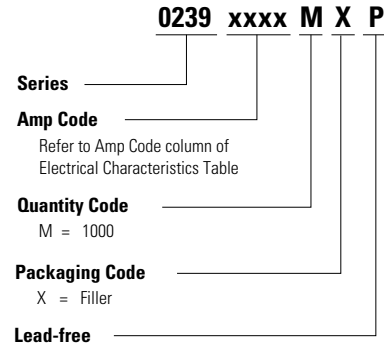
0239 000XEP



Notes:  
\* Ratings above 6.3A have 0.8±0.05 diameter lead.

All dimensions in mm

### Part Numbering System



### Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width
<b>239 Series</b>				
Bulk	N/A	1000	MX	N/A
Bulk	N/A	1000	MXE	N/A
Reel and Tape	EIA 296-E	1000	MRET1	T1=52mm (2.062")
Bulk	N/A	1000	MXB	N/A
Bulk	N/A	100	HX	N/A
Bulk	N/A	100	HXE	N/A

### Recommended Accessories

Accessory Type	Series	Description	Max Application Voltage	Max Application Amperage
Holder	<a href="#">345_ISF</a>	Panel Mount Shock-Safe Fuseholder	250	10
	<a href="#">345</a>	Shock-Safe Fuseholder with PC Mount, Solder Mount and Panel Mount options		20
	<a href="#">830</a>	PC Mount Shock-Safe Miniature Fuseholder		16
Block	<a href="#">520</a>	Metric OMNI-BLOK® Fuse Block		10
	<a href="#">646</a>	PC Mount Miniature Fuse Block		6.3
	<a href="#">658</a>	Surface Mount Miniature Fuse Block		10
Clip	<a href="#">520_W</a>	PC Mount Miniature Fuse Clip		6.3
	<a href="#">111</a>	PC Board Mount Fuse Clip		10
	<a href="#">445</a>	PC Board Mount Fuse Clip		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.

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