

# Axial Lead & Cartridge Fuses

5x20 mm > Medium-Acting > 234 Series

## 234 Series, 5x20 mm, Medium-Acting Fuse



### Description

5x20mm medium-acting glass/ceramic 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
- Glass body for 1-3.5A, Ceramic body for 4-10A
- RoHS compliant and lead-free

### Applications

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

### Additional Information



Datasheet



Resources








Samples



Accessories

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






### Agency Approvals

Agency	Agency File Number	Ampere Range
	Cartridge: NBK040609-JP1021A NBK040609-JP1021C	1A - 5A 6A - 10A
	Leaded: NBK040609-JP1021B NBK040609-JP1021D	1A - 5A 6A - 10A
	N/A	1A - 10A
	SU05001-3001	1A - 3.15A
	SU05001-4001	3.5A
	SU05001-2016	4A - 10A
	E10480	1A - 10A
	29862	1A - 10A

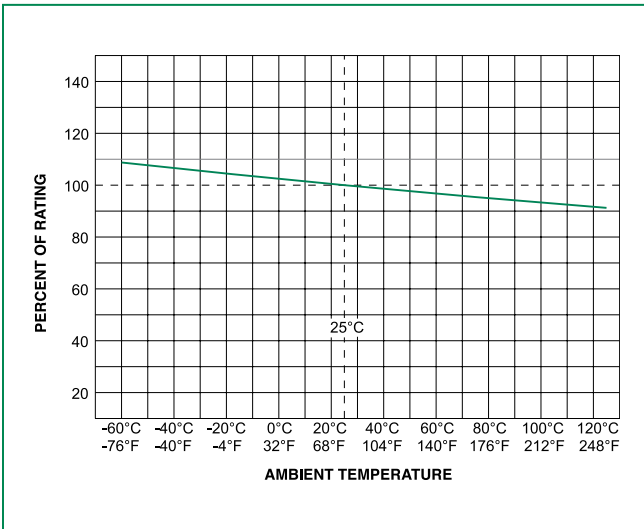
### Electrical Characteristics for Series

% of Ampere Rating	Ampere Rating	Opening Time
100%	1 - 3.5	4 hours, Minimum
	4 - 10	1 hour, Minimum
135%	1 - 3.5	3 sec., Min; 1 hr. Max
	4 - 10	3 sec., Min; 1 hr. Max
200%	1 - 3.5	400ms., Min; 2.25 sec. Max
	4 - 10	400ms., Min; 4 sec. Max

### Electrical Characteristic Specification by Item

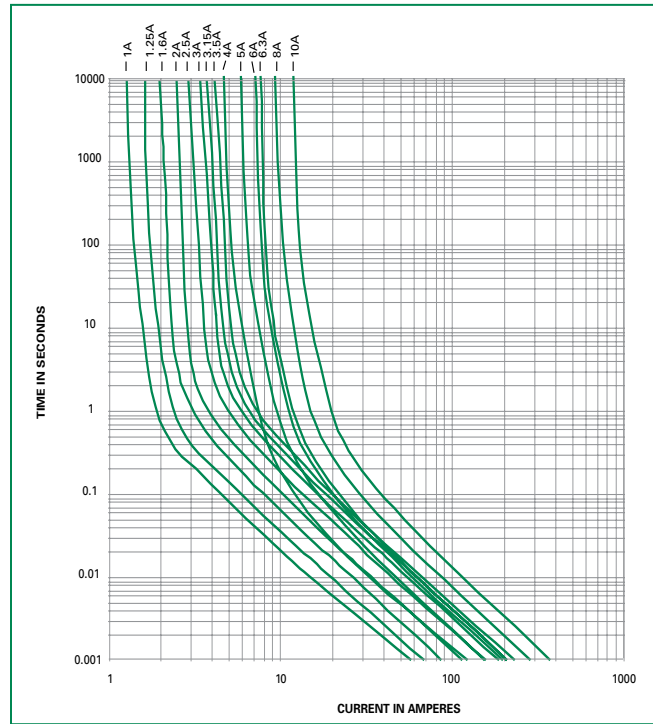
Amp Code	Ampere Rating (A)	Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I <sup>2</sup> t (A <sup>2</sup> sec)	Agency Approvals				
										
001.	1	250	100A @ 250 VAC 10000A @ 125 VAC	0.1750	1.97500	x	x	x	x	x
1.25	1.25	250		0.1262	2.06000	x	x	x	x	x
01.6	1.6	250		0.0884	6.14000	x	x	x	x	x
002.	2	250		0.0684	9.97000	x	x	x	x	x
02.5	2.5	250		0.0521	17.04500	x	x	x	x	x
003.	3	250		0.0431	26.2400	x	x	x	x	x
3.15	3.15	250		0.0380	29.79500	x	x	x	x	x
03.5	3.5	250		0.0322	36.27500	x	x	x	x	x
004.	4	250		0.0304	10.37000	x	x	x	x	x
005.	5	250		0.0214	20.64500	x	x	x	x	x
006.	6	250	0.0194	33.01500	x	x	x	x	x	
06.3	6.3	250	0.0168	37.68500	x	x	x	x	x	
008.	8	250	0.0144	80.67500	x	x	x	x	x	
010.	10	250	0.0107	51.40000	x	x	x	x	x	

## Temperature Re-rating Curve

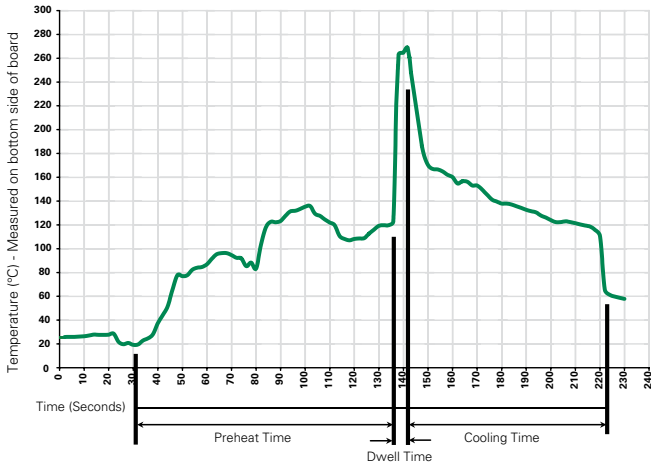


Note:  
Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

## Average Time Current Curves



## Soldering Parameters - Wave Soldering



### Recommended Process Parameters:

Wave Parameter	Lead-Free Recommendation
<b>Preheat:</b> (Depends on Flux Activation Temperature)	(Typical Industry Recommendation)
Temperature Minimum:	100°C
Temperature Maximum:	150°C
Preheat Time:	60-180 seconds
<b>Solder Pot Temperature:</b>	260°C Maximum
<b>Solder Dwell Time:</b>	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.**

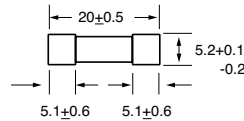
## Product Characteristics

<b>Materials</b>	Body: Glass(1A-3.5A), Ceramic(4A-10A) Cap: Nickel-plated brass Leads: Tin-plated Copper Filter: Sand (4A – 10A)
<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>Packaging</b>	Available in Bulk (V=5, H=100, M=1000 pcs/pkg) or on Tape/Reel (MRET1=1000 pcs/reel)

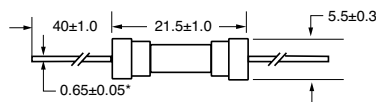
<b>Operating Temperature</b>	-55°C to +125°C
<b>Thermal Shock</b>	MIL-STD-202, Method 107, Test Condition B: (5 cycles -65°C to +125°C)
<b>Vibration</b>	MIL-STD-202 Method 201
<b>Humidity</b>	MIL-STD-202, Method 103, Test Condition A. high RH (95%) and elevated temp (40°C) for 240 hours
<b>Salt Spray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

## Dimensions

0234 000P



0234 000XEP



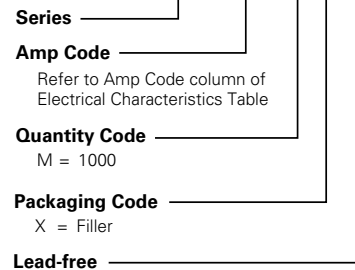
All dimensions in mm

Notes:

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

## Part Numbering System

0234 xxxx M X P



## Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width
<b>234 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=53mm (2.087")

## 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:

- Do not use in applications above rating.
- Please refer to fuseholder data sheet for specific re-rating information.
- Please contact factory for applications greater than the max voltage and amperage shown.